ATTENTION

The City Council meeting will be held in a hybrid format that may include both in-person AND virtual attendance via Zoom. Unless they have cause to appear virtually, Councilmembers will attend the meeting in person in Council Chambers, second floor of City Hall, 220 N. 27th Street. In order to honor the Right of Participation and the Right to Know in Article II, Sections 8 and 9, of the Montana Constitution, the City of Billings and City Council are making every effort to meet the requirements of the open meeting laws.

Citizens are invited to:

- Review the Agenda Packet on the City's website at: www.billingsmt.gov and click on "Your Government," "City Council," and "Agendas & Minutes".
- View the meeting:
  - On Community 7 TV - Channel 7 or Channel 507 -- Spectrum Cable. *(On evenings when there is a conflict with School District No. 2 Board meetings, the City Council meeting will be broadcast on Channel 8 - Spectrum Cable.)* Channel 7 or Channel 978 - TDS Fiber.
  - Online at www.comm7tv.com and click on the "Watch Live" icon. Community 7 also has links to their Facebook page and YouTube channel.
  - On the City's website at www.billingsmt.gov and click on "Watch Meetings Online" on the homepage.
  - In-Person.

Citizens may submit public comment via the following methods:

- Mail: City Clerk, P.O. Box 1178, Billings, MT 59103
- Email: Council@billingsmt.gov.
  - Emails received after 3:00 PM on the day of the meeting, may be posted on the Council's webpage the following day for public viewing.
- Attend the meeting in person

Please contact Denise Bohlman, City Clerk, at bohlmand@billingsmt.gov, or at 406.657.8210, with any questions.

CITY OF Billings

VISION STATEMENT:
"The Magic City: A diverse, welcoming community where people prosper and business succeeds."

CITY COUNCIL
REGULAR BUSINESS MEETING
AGENDA

COUNCIL CHAMBERS | APRIL 8, 2024 | 5:30 P.M.

CONSENT AGENDA 1D REVISED
(NEW ATTACHMENTS)

CALL TO ORDER: Mayor Cole

PLEDGE OF ALLEGIANCE: Mayor Cole

INVOCATION: Councilmember Kennedy

ROLL CALL: Councilmembers present on roll call were: ☐ Shaw, ☐ Gulick, ☐ Neese, ☐ Owen, ☐ Joy, ☐ Kennedy, ☐ Aspenlieder, ☐ Tidswell, ☐ Boyett, ☐ Rupsis

MINUTES: March 25, 2024 - Pending

COURTESIES:

PROCLAMATIONS:

COUNCIL REPORTS:

ADMINISTRATOR REPORTS - CHRIS KUKULSKI

PUBLIC COMMENT on "NON-PUBLIC HEARING" Agenda Items: 1, 4 and 5 ONLY. Speaker sign-in required. (Comments are limited to three (3) minutes or as set by the Mayor. Please sign the roster at the cart located at the back of the Council chambers or at the podium. Comments on items listed as public hearing items will be heard ONLY during the designated public hearing time for each respective item. For items not on this agenda, public comment will be taken at the end of the agenda.)

1. CONSENT AGENDA -- Separations:

A. Bid Awards:

1. **W.O. 23-33: Grandview Park Irrigation System Replacement.** (Opened 3/19/24) Recommend Good Earth Works Co., Inc.
2. **W.O. 24-01: Contract 3, Cedar Park Water Main Replacement.** (Opened 3/19/24) Recommend Askin Construction, LLC.
3. **W.O. 24-27: 2024 Water Service Repairs.** (Opened 3/5/24) Recommend Sunset Excavation.
4. **Aviation Place Road Rehabilitation.** (Opened 3/19/24) Recommend Asphalt Plus, Inc.
5. **MET Transit Office Addition and Remodel.** (Opened 3/19/24) Recommend Swank Enterprises.
6. **Pioneer Park Tennis Court Replacement.** (Opened 3/19/24) Recommend Good Earth Works Co., Inc.

B. **Contract** for New City Hall Audio / Visual Equipment with TeleData Technologies.

C. **Agreement** with Yellowstone County Sheriff's Department for FY2025 data processing services.

D. **Memorandum of Understanding** with Hoodies 4 Heroes for a memorial at Dehler Park.

E. **Amend Park Community Garden Grant** to the Parks and Recreation Department.

F. **Safe Routes to School Plan Update, Phase 2** Recommendation to Policy Coordinating Committee.

G. **Boundary Line Relocation** between City Parking Lot and Grand Building located at 100 N. 27th St,

H. **Resolution** authorizing the issuance and private sale for refunding of the Series 2013A tax increment bonds.

I. **Second/Final Reading Ordinance** expanding Ward IV (Annexation 24-01). *Quasi-Judicial

J. **Second/Final Reading Ordinance** expanding Ward V (Annexation 24-02). *Quasi-Judicial

K. **Second/Final Reading Ordinance for Zone Change 1043:** located at 4190 S. Frontage Road. *Quasi-Judicial

L. **Second/Final Reading Ordinance for Zone Change 1044:** located at 5900 block of Grand Avenue. *Quasi-Judicial

M. **Second/Final Reading Ordinance for Zone Change 1045:** located at 4524 Central Avenue. *Quasi-Judicial

N. **Second/Final Reading Ordinance for Zone Change 1046:** located at 1202 West Wicks Lane. *Quasi-Judicial

O. **Bills for the Weeks of:**

1. March 4, 2024
2. March 12, 2024

Recommended Motion: I move to approve the items of the Consent Agenda as submitted, with the exception of items moved for separation.

REGULAR AGENDA:

2. **PUBLIC HEARING** for Land Use Contrary to Zoning: HomeFront Duplex in an NX3 Zone, located at 302 Sioux Lane. No action necessary.

3. **PUBLIC HEARING AND FIRST READING ORDINANCES** amending Billings, Montana City Code, Sections:

a. **18-300, Nuisances**

Recommended Motion: Having conducted a public hearing, considered written and spoken testimony, I move to approve the first reading ordinance amending Billings, Montana City Code, Sections 18-300, Nuisances, as recommended by staff.

b. **18-1100, Graffiti**

Recommended Motion: Having conducted a public hearing, considered written and spoken testimony, I move to approve the first reading ordinance amending Billings, Montana City Code, Section 18-1100, Graffiti, as recommended by staff.

c. **18-1400, Boarded Up Structures**

Recommended Motion: Having conducted a public hearing, considered written and spoken testimony, I move to approve the first reading ordinance amending Billings, Montana City Code, Section 18-1400, Boarded Up Structures, as recommended by staff.

4. **RESOLUTION** establishing a graffiti fund, as recommended by staff.

   Recommended Motion: I move to approve a Resolution establishing a graffiti fund, as recommended by staff.

5. **COTTONWOOD PARK MASTER PLAN.** Staff recommends approval.

   Recommended Motion: I move to approve the Cottonwood Park Master Plan, as recommended by staff.

PUBLIC COMMENT on "NON-AGENDA ITEMS". Speaker Sign-in required. (*Restricted to ONLY items not on this printed agenda. Comments are limited to 3 minutes or as set by the Mayor. Please sign the roster at the cart located at the back of the Council chambers or at the podium.)*

COUNCIL INITIATIVES:

ADJOURN:

Council Chambers are readily accessible to individuals with physical disabilities.

For more information or to make requests for special arrangements, please contact the City Clerk's Office at 657-8210 or e-mail bohlmand@billingsmt.gov, 72 hours prior to the meeting date.

~ ~ ~

City Council Regular

Date:	04/08/2024
Title:	W.O. 23-33 Grandview Park Irrigation System Replacement
Presented by:	John Gayvert
Department:	Parks/Rec/Public Lands
Presentation:	No
Legal Review:	No
Project Number:	W.O. 23-33

RECOMMENDATION

Staff recommends the City Council award a contract for W.O. 23-33: Grandview Park Irrigation System Replacement, to the Good Earth Works Co. Inc. in the amount of $313,062.00.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

This project was approved in Parks FY23 CIP.

W.O. 23-33, Grandview Park Irrigation System Replacement, is intended to replace the aging irrigation system at Grandview Park. Grandview Park is located south of Poly Drive between Montana State University Billings and Intermountain Health. The new improvements include installation of an irrigation system, pump station, and electrical upgrades.

The existing irrigation system is aging and is operated manually. The manual irrigation system requires a park attendant to operate the system and disrupts activities during the day. An automated system will free up the attendant to focus on other duties and enable irrigation operations to occur overnight, opening up more hours during the day for recreation and activities. Furthermore, irrigating overnight will save water due to daytime evaporation.

Additionally, this project includes an alternate to replace the underground piping from the BBWA canal that provides the inlet suction water to the irrigation pump.

This project was originally bid on May 2nd, 2023, and June 20th, 2023. No bids were received from either posting.

The project was advertised on February 23rd, March 1st, March 8th, and March 15, 2024, in the Yellowstone County News and on the City's website. Bids were opened on March 19th, 2024 and three bids were received. The Good Earth Works Co. Inc. submitted the lowest, responsible bid. The bid was reviewed by staff and the project consultant. The bid unit prices appear competitive given market labor and material conditions.

ALTERNATIVES

City Council may:

- Award W.O. 23-33, Grandview Park Irrigation System Replacement to The Good Earth Works Co. Inc. in the amount of $313,062.00; or,
- Not award a contract and reject the bid. If the project is not awarded, Grandview Park will continue to be irrigated manually during the day, leaving large portions of the park unable to be utilized. In addition, the irrigation system will continue to be maintenance and labor-intensive.

FISCAL EFFECTS

The following bids were received; Good Earth Works base bid of $289,582.00 for irrigation system, $23,480.00 add alternate #1 pump supply line replacement. Jake Theusen Landscape base bid of $391,830.00 for irrigation system replacement, $58,225.00 add alternate #1 pump supply line replacement. R&P- Lawn Ranger base bid of $695,200.00 for irrigation system, $27,500.00 add alternate #1 pump supply line replacement.

This project was budgeted in FY23 using Park District 1 funds. The amount budgeted for approved FY23 CIP Multiple Parks Irrigation Automation is $924,750. There is adequate budget to award the project. Remaining funds will be used for subsequent park irrigation automation projects within other City parks.

Attachments

Bid Tab
Good Earth Works Bid
Jake Thuesen Bid
Lawn Ranger Bid
Irrigation Automation CIP
Grandview Specs
Grandview Drawings
Legal Ad

Jeremy Hauge
haugej@billingsmt.gov

BID TABULATION SUMMARY

PROJECT NAME: **W.O. 23-33: Grandview Park Irrigation System Replacement**

3/19/2024

NAME OF BIDDER	Good Earth Works	Jake Theusen Landscape	R & P - Lawn Ranger
STATE	**MT**	**MT**	**MT**
Type of Security	Bond	Bond	Check
Addendum(s)	1	1	1
Base Bid	$289,582.00	$391,830.00	$695,200.00
Alternate 1	$23,480.00	$58,225.00	$27,500.00

INVITATION TO BID

Separate sealed bids for the construction of W.O. 23-33: Grandview Park Irrigation System Replacement will be received by the Billings City Clerk, 210 N. 27th Street, Billings, MT or P.O. Box 1178, Billings, MT 59103 or bids@billingsmt.gov until 2:00 p.m. local time on Tuesday, March 19, 2024, and then publicly opened and read aloud. The bid opening will be via Facebook Live on the City's Facebook page: Billings MT City Government.

The project consists of: removal of existing irrigation equipment, pump, concrete vault, and the installation of a new irrigation system, pump station, and electrical upgrades.

Complete digital project bidding documents are available at QuestCDN. You may download the digital plan documents for a fee**.** You may also access them at www.questcdn.com by inputting Quest **project # 8984973** on the QuestCDN project search page. The plans, specifications and the official plan holders list may be examined through this site for no charge. In addition, the Drawings and Project Manual may also be examined at www.montanabid.com.

There will be a non-mandatory Pre-Bid meeting at 390 N. 23rd Street, Billings, MT 59101 at 3:00 p.m. on March 12, 2024. Interested CONTRACTORS are encouraged to attend. Contact Jed Vissia by telephone at (406) 252-5545 x11 or by email at jed@steinerthuesen.net for more information on the Pre-Bid meeting.

CONTRACTOR and any of the CONTRACTOR'S subcontractors bidding or doing work on this project will be required to be registered with the Montana Department of Labor and Industry (DLI). Forms for registration are available from the Department of Labor and Industry, P.O. Box 8011, 1805 Prospect, Helena, Montana 59604-8011. Information on registration can be obtained by calling 1-406-444-7734. All laborers and mechanics employed by CONTRACTOR or subcontractors in performance of the construction work shall be paid wages at rates as may be required by the laws of Yellowstone County and the state of Montana. The CONTRACTOR must ensure that employees and applicants for employment are not discriminated against because of their race, color, religion, sex or national origin.

Each bid or proposal must be accompanied by a Certified Check, Cashier's Check, or Bid Bond payable to the "City of Billings, MT" in an amount not less than ten percent (10%) of the total amount of the bid. Successful BIDDERS shall furnish an approved Performance Bond and a Labor and Materials Payment Bond, each in the amount of one hundred percent (100%) of the contract amount. Insurance as required shall be provided by the successful BIDDER(s) and a certificate(s) of that insurance shall be provided. Bids submitted via email shall have the bid bond scanned and included with the bid. Bids submitted via mail shall have any of the bid securities included.

No bid may be withdrawn after the scheduled time for the public opening of bids, which is 2:00 p.m. local time, Tuesday, March 19, 2024.

For further information concerning this project, please contact Jedidiah Vissia with STEINER THUESEN, PLLC by telephone at (406) 252-5545 ext. 11 or Jeremy Hauge, PE at the Office of the City Engineer, 2224 Montana Ave., Billings, MT 59101, by telephone at (406) 237-6158 or by email at haugej@billingsmt.gov.

The right is reserved to reject any or all proposals received, to waive informalities, to postpone the award of the contract for a period of not to exceed sixty (60) days, and to accept the lowest responsive and responsible bid which is in the best interest of the OWNER.

The City of Billings is an Equal Opportunity Employer.

Published on February 23, March 1, 8, and 15, 2024.

Denise R. Bohlman
Billings City Clerk
P.O. Box 1178
Billings, MT 59103

Dept: PW-ENGR
Published: February 23, 2024
March 1, 2024
March 8, 2024
March 15, 2024

STEINER THUESEN PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

W.O. 23-33

BID SUBMITTAL PACKAGE

Grandview Park Irrigation System Replacement

BID SUBMITTED BY:

The Good Earth Works Co., Inc.

THESE DOCUMENTS MUST BE EXECUTED FOR BID

- [ ] **BID FORM (COMPLETED)**
- [ ] **ADDENDUMS (ACKNOWLEDGED IN BID FORM)**
- [ ] **10% BID SECURITY (ENCLOSED)**
- [ ] **UNIT PRICES PER SP-44 (COMPLETED)**
- [ ] **QUALIFICATIONS PER SP-45 (COMPLETED)**

- Bids submitted via email shall have the **bid bond** scanned and included with the bid. Emailed bids should be sent to bids@billingsmt.gov
- Bids submitted via mail shall have any of the bid securities included. Mailed bids should be sent to City of Billings, PO Box 1178, Billings, MT 59103.
- Bids submitted via hand delivery shall have any of the bid securities included. Hand delivered bids should be delivered to City of Billings at the Office of the City Clerk, 210 N. 27th Street, Billings, MT 59101.

SECTION 00300

BID FORM

PROJECT IDENTIFICATION:

W.O. 23-33 Grandview Park Irrigation System Replacement

(Name of Project)

2902 Elevation Ave.
Billings, Montana 59101

(Location)

CONTRACT IDENTIFICATION AND NUMBER:

W.O. 23-33 Grandview Park Irrigation System Replacement

THIS BID SUBMITTED TO:

City of Billings
bids@billingsmt.gov

or

City of Billings
P.O. Box 1178
Billings, MT 59103

1.01 The undersigned Bidder proposes and agrees if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents, to perform and furnish all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

2.01 Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid, and Instructions to Bidders, including without limitations those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance for sixty (60) days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

3.01 In submitting this Bid, Bidder represents, as set forth in the Agreement, that:

A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of all which is hereby acknowledged:

Addendum No.	Addendum Date
One	3/12/2024

STEINER THUESEN PLLC

GOLF COURSE ARCHITECTURE • IRRIGATION DESIGN • LANDSCAPE ARCHITECTURE

W.O. 23-33 Grandview Park Irrigation System Replacement
ADDENDUM #1
March 12, 2024

CLARIFICATIONS:

1. Work associated with Alternate #1 is anticipated to take place after October 15 following shut down of the BBWA canal. If the Alternate is accepted, 14 calendar days will be provided for completion of the alternate. Existing vault to remain intact until new supply line from canal ins installed. Route line from existing supply line to pump through wall of vault as required. Following installation of the new supply line from the canal, the existing vault shall be removed and the z-pipe and drain on the inlet side of the pump shall be adjusted to match the depth of the new supply line. The cost for these adjustments shall be included in the bid amount for Alternate #1. In the event that the canal is low enough during installation of the irrigation system to complete the boring work and the necessary forces are available, the work is expected to be completed.

CHANGES TO PRIOR ADDENDA: none

BIDDING REQUIREMENTS: none

CONDITIONS OF THE CONTRACT:

1. SP- 43 Insurance: Delete paragraph and replace with the following:
    a. Listing of the Engineer/Architect and the Engineer/Architect's Consultants as additional insured under this section shall conform to the Insurance Services Office (ISO) endorsement CG 2031 and GC 2032 "Additional Insured – Engineers, Architects or Surveyors Not Engaged by the Named Insured". Copies of the additional insured endorsement shall be provided to the Engineer/Architect for approval prior to execution of the contract.

SPECIFICATIONS: none

DRAWINGS: none

Attachments: Pre-Bid Sign In Sheet

THIS ADDENDUM IS HEREBY ATTACHED TO AND MADE A PART OF THE CONTRACT DOCUMENTS, AND EACH BIDDER SHALL ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN WRITING ON HIS BID.

END ADDENDUM #1

1925 GRAND AVE. SUITE 105 P.O. BOX 22943 BILLINGS, MT 59104 406/252-5545 FAX 245-9855

EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER *(Name and Address)*:
The Good Earth Works Co., Inc.
4215 Highway 312
Billings, MT 59105
SURETY *(Name, and Address of Principal Place of Business)*:
Swiss Re Corporate Solutions America Insurance Corporation
1200 Main Street, Suite 800
Kansas City, MO 64105
OWNER *(Name and Address)*:
City of Billings
PO Box 1178
Billings, MT 59103

BID
Bid Due Date: March 19, 2024
Description: W.O. 23-33 Grandview Park Irrigation System Replacement, Billings, MT.

BOND
Bond Number: Bid Bond
Date: March 12, 2024
Penal sum Ten Percent of Amount Bid $ 10%
(Words) (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER
The Good Earth Works Co., Inc. (Seal)
Bidder's Name and Corporate Seal
By: _____
Signature
John S. Spray
Print Name
Vice-President
Title
Attest: _____
Signature
NURSERY EMPLOYEE
Title

SURETY
Swiss Re Corporate Solutions America Insurance Corporation (Seal)
Surety's Name and Corporate Seal
By: _____
Signature (Attach Power of Attorney)
Naomi Gerber
Print Name
Attorney-in-Fact
Title
Attest: _____
Signature
Debra Zimbelman Witness
Title

Note: Addresses are to be used for giving any required notice.
Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or

3.2 All Bids are rejected by Owner, or

3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall

govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

SWISS RE CORPORATE SOLUTIONS

SWISS RE CORPORATE SOLUTIONS AMERICA INSURANCE CORPORATION ("SRCSAIC")
SWISS RE CORPORATE SOLUTIONS PREMIER INSURANCE CORPORATION ("SRCSPIC")

GENERAL POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, THAT SRCSAIC, a corporation duly organized and existing under laws of the State of Missouri, and having its principal office in the City of Kansas City, Missouri, and SRCSPIC, a corporation organized and existing under the laws of the State of Missouri and having its principal office in the City of Kansas City, Missouri, each does hereby make, constitute, and appoint: **Naomi Gerber**

Principal: The Good Earth Works Co., Inc.
Obligee: City of Billings
Bond Description: W.O. 23-33 Grandview Park Irrigation System Replacement, Billings, MT.
Bond Number: Bid Bond
Bond Amount: See Bond Form

Its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its act and deed, bonds or other writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of:

FIFTY MILLION ($50,000,000.00) DOLLARS

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both SRCSAIC and SRCSPIC at meetings duly called and held on the 9th of May 2012:

"RESOLVED, that any two of the President, any Managing Director, any Senior Vice President, any Vice President, the Secretary or any Assistant Secretary be, and each or any of them hereby is, authorized to execute a Power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Corporation bonds, undertakings and all contracts of surety, and that each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Corporation; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Corporation may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be binding upon the Corporation when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached."

SWISS RE CORPORATE SOLUTIONS AMERICA INSURANCE CORPORATION CORPORATE SEAL 1973 MISSOURI

SWISS RE CORPORATE SOLUTIONS PREMIER INSURANCE CORPORATION CORPORATE SEAL MISSOURI

By _____
Erik Janssens, Senior Vice President of SRCSAIC & Senior Vice President of SRCSPIC

By _____
Gerald Jagrowski, Vice President of SRCSAIC & Vice President of SRCSPIC

IN WITNESS WHEREOF, SRCSAIC and SRCSPIC have caused their official seals to be hereunto affixed, and these presents to be signed by their authorized officers this 10TH day of NOVEMBER, 20 22

Swiss Re Corporate Solutions America Insurance Corporation
Swiss Re Corporate Solutions Premier Insurance Corporation

State of Illinois
County of Cook SS

On this 10TH day of NOVEMBER, 20 22, before me, a Notary Public personally appeared Erik Janssens, Senior Vice President of SRCSAIC and Senior Vice President of SRCSPIC and Gerald Jagrowski, Vice President of SRCSAIC and Vice President of SPCSPIC, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.

OFFICIAL SEAL
CHRISTINA MANISCO
NOTARY PUBLIC, STATE OF ILLINOIS
My Commission Expires March 28, 2025

Christina Manisco
Christina Manisco, Notary

I, Jeffrey Goldberg, the duly elected Senior Vice President and Assistant Secretary of SRCSAIC and SRCSPIC, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney given by said SRCSAIC and SRCSPIC, which is still in full force and effect.
IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this 12th day of March, 2024.

Jeffrey Goldberg, Senior Vice President & Assistant Secretary of SRCSAIC and SRCSPIC

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work

C. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Special Provisions as provided in paragraph 4.02 of the General Conditions, and (2) reports and drawings of a Hazard Environmental Condition, if any, which has been identified in the Special Provisions as provided in paragraph 4.06 of the General Conditions.

E. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.

F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of the Work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies and data with the Bidding Documents.

I. Bidder has given Engineer/Architect written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer/Architect is acceptable to Bidder .

J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

4.01 Bidder further represents that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

The Bidder certifies that no official of the Owner, Engineer/Architect or any member of such officials immediate family, has direct or indirect interest in the pecuniary profits or Contracts of the Bidder.

5.01 The Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

LUMP SUM BID

Base Bid:

TOTAL LUMP SUM BID PRICE$ 289,582.00
(Figures)

TOTAL LUMP SUM BID PRICE Two hundred & Eighty Nine Thousand & Five hundred & Eighty Two dollars
(Words)

Alternate No. 1: HDPE Supply Line

TOTAL LUMP SUM BID PRICE$ 23,480.00
(Figures)

TOTAL LUMP SUM BID PRICE Twenty-Three Thousand & Five hundred Eighty dollars
(Words)

A. Lump Sum Prices have been computed in accordance with 11.01 of the General Conditions.

B. The OWNER reserves the right to reject any or all bids.

6.01 Bidder agrees that the Work will be substantially completed and competed and ready for final payment in accordance with 14.07 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified above, which shall be stated in the Agreement.

7.01 The following documents are attached to and made a condition of the Bid:

A. Required Bid security in the amount of 10% of the maximum Bid price including alternates, if any, and in the form identified in the Instructions To Bidders.

B. Unit Prices, See Special Provisions.

C. Irrigation Contractor Qualifications, see Special Provisions.

8.01 The terms used in this Bid with the initial capital letters have the meanings indicated in the Instructions To Bidders, General Conditions, and the Supplementary Conditions.

SUBMITTED on March 19, 2024.
(Date)

Montana Contractor's Registration # (if any) 31625

Montana Contractor's Gross Receipts Account # 4045313004
(Example: XXXXXX-XXX-CGR)
Employer's Tax ID No. 81-0529137

If BIDDER is:

An Individual: _____
(Name typed or printed)
By: _____
(Individual's Signature)
Doing business as: _____

Business Address: _____

_____

Phone No.: _____ FAX No: _____

A Partnership: _____
(Partnership Name)
By: _____
(Signature)
_____
(Name, typed or printed)
Business Address: _____

_____

Phone No.: _____ FAX No: _____

A Corporation: The Good Earth Works Co., Inc.
(Corporation Name)

State of Incorporation: Montana

Type (General Business, Professional, Service, Limited Liability): Service

By: _____
(Signature of person authorized to sign)

Title: Vice-President

Attest: Lisa Norby
(Signature)

Business Address: 4215 Hwy 312
Billings, MT 59105

Phone No.: 406-373-5155 FAX No: 406-373-5706

Date of Qualification To Do Business Is: 11/26/1999

_____
(Corporate Seal)

A Joint Venture: Each Joint Venture Must Sign

Joint Venturer Name: _____
(Name)

By: _____
(Signature of Joint Venture Partner)

Name: _____
(Name, printed or typed)

Title: _____

Business Address: _____

_____

Phone No.: _____ FAX No: _____

Joint Venturer Name:_____
(Name)

By:_____
(Signature of Joint Venture Partner)

Name:_____
(Name, printed or typed)

Title:_____

Business Address:_____

_____

Phone No.:_____FAX No: _____

Address of Joint Venture for Receipt of Official Communication:
Address:_____

_____

Phone No.:_____FAX No: _____

(Each Joint Venture must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above.)

END OF SECTION

UNIT	ITEM DESCRIPTION	UNIT COST
SF	TRENCH RESTORATION WITH SEED	1.00
EA	6504 SERIES ROTOR WITH SWING JOINT	150.00
EA	AIR RELIEF VALVE AS DETAILED	1,200.00
EA	3" ISOLATION VALVE AS DETAILED	825.00
EA	MAINLINE DRAIN VALVE AS DETAILED	785.00
EA	44 NP QUICK COUPLING VALVE AS DETAILED	775.00
EA	1" ELECTRIC CONTROL VALVE AS DETAILED	1,500.00
EA	1-1/2" ELECTRIC CONTROL VALVE AS DETAILED	1,500.00
EA	2" ELECTRIC CONTROL VALVE AS DETAILED	1,500.00
EA	1-1/2" MASTER VALVE WITH 1-1/2" FLOW SENSOR AND GATE VALVE ASSEMBLY AS DETAILED.	6,000.00
EA	60 STATION SATELLITE CONTROLLER INSTALLED AS DETAILED	15,000.00
EA	RAIN SENSOR AS SPECIFIED	200.00
EA	GROUNDING GRID AS DETAILED	750.00
LF	3" CL 200 PVC MAINLINE PIPE	9.35
LF	3" CL 200 PVC LATERAL PIPE	8.30
LF	2" CL 200 PVC LATERAL PIPE	4.00
LF	1-1/2" CL 200 PVC LATERAL PIPE	2.35
LF	1" CL 200 PVC LATERAL PIPE	1.20
LF	6" SCH 40 PVC SLEEVE	30.00
LF	4" SCH 40 PVC SLEEVE	20.00
LF	3" SCH 40 PVC SLEEVE	10.00
LF	2-WIRE COMMUNICATIONS CABLE IN CONDUIT	1.20
EA	IVM-SOL INSTALLED	300.00
EA	IVM-OUT INSTALLED	885.00
EA	IVM-SEN INSTALLED	885.00
EA	IVM-SD INSTALLED WITH GROUND ROD	400.00
LF	1" SCH 40 PVC CONDUIT	1.70
LF	1-1/2" SCH 40 PVC CONDUIT	3.00
LF	2" SCH 40 PVC CONDUIT	7.00
LS	PREFABRICATED PUMP STATION AS SPECIFIED	107,250.00
LS	DEMO AND REMOVAL OF EXISTING CONCRETE VAULT AT PUMP STATION	1,500.00
LS	PROJECT SIGN	1,000.00
LS	ELECTRICAL UPGRADES AND ROUTING TO PUMP STATION	12,474.00

LF	BORING FOR 6" SLEEEVE	50.00
LF	1" CONDUIT UNDER ROAD	10.00
LF	BORING FOR 6" HDPE PIPE	50.00
LF	6" HDPE FUSED PIPE	14.00
LF	BORING IN ROCK	150.00

SP-45 IRRIGATION CONTRACTOR QUALIFICATIONS

Time is of the essence of this project. Additionally, the project must be completed according to the contract documents and the best current trade practices. Any Contractor proposing to do work on the irrigation system will be required to submit documentation and evidence of successful completion of irrigation construction experience similar in size and scope. **General Contractors are required to submit the following information as it relates to their sub-contractors with their Bid.** The same requirements apply if the General Contractor is performing the work themselves. Information for each trade shall be separate from other trades.

The Owner shall determine which bidders are responsible in accordance with the submitted Contractor Qualifications. The contract shall be awarded to the lowest responsible bidder whose bid meets the requirements of this section.

The Owner reserves the right to reject bid submissions, if it is determined that a contractor is not qualified to perform the work. Bidders shall complete this form, and return it with their sealed bid for review by the City.

A. Provide contact information for the irrigation contractor/sub-contractor.

Legal Name of Business:	The Good Earth Works Co, Inc.		
Name:	John S. Spray	Phone number:	406-373-5155
Title:	Vice-President	Email address:	john@goodearthworks.net
Business address of corporate office:	4215 Hwy 312 Billings, MT 59105		

B. Provide information that will identify the overall size and capacity of the Business.

Average number of current full-time employees:	8
Estimate of revenue for current year (2023):	6,000,000.00

Estimate of revenue for the prior year (2022):	4,600,000.00

C. Provide information regarding the Business's previous contracting experience.

Years of experience with projects like the proposed project:				
As a general contractor:		As a joint venturer:		
Has the Business:				
Been disqualified as a bidder by any local, state, or federal agency within the last 5 years? ☐ Yes ☐ No				
Been barred from contracting by any local, state, or federal agency within the last 5 years? ☐ Yes ☐ No				
Been released from a bid in the past 5 years? ☐ Yes ☐ No				
Defaulted on a project or failed to complete any contract awarded to it? ☐ Yes ☐ No				
Refused to construct or refused to provide materials defined in the contract documents or in a change order? ☐ Yes ☐ No				
Been a party to any currently pending litigation or arbitration? ☐ Yes ☐ No				
Provide full details in a separate attachment if the response to any of these questions is Yes.				

D. Provide information regarding public contracts currently under construction or completed within the past five years.

Project Name:	Contract Value:
Project Owner:	
Address:	
Telephone:	
Was contract completed within the contract time frame? ☐ Yes ☐ No	
Were liquidated damages assessed? ☐ Yes ☐ No	

Project Name:	Contract Value:
Project Owner:	
Address:	
Telephone:	
Was contract completed within the contract time frame? ☐ Yes ☐ No	
Were liquidated damages assessed? ☐ Yes ☐ No	

Project Name:	Contract Value:
Project Owner:	
Address:	

The Good Earth Works Co, Inc.
Creating Custom Landscape Environments

PARTIAL LIST OF PROJECTS COMPLETED

BY THE GOOD EARTH WORKS CO., INC.

Arlene Corridor Phase Two
Landscape, Irrigation & Retaining Walls
Owner – City of Billings
Contract Amount: 275,575.00
Carl Thuesen, ASLA
Andy Mattie 406-657-8231

Heights Wal-Mart
Landscape Construction
Owner – Wal-Mart
Contract Amount: 157,216.00
Hardy Construction
Andy Wick 406-252-0510

Mile City, CBOC
Irrigation System Reconstruction
Owner-Dept. of Veterans Affairs
Contract Amount: 215,000.00
FBO Health
Ken 406-447-7371

Yellowstone Family Park
General Contractor – Park
Owner –City of Billings
Contract Amount: 820,000.00
Land Design
Michael Verseman 406-655-3550

City Operation Center
Landscape, Boulder & Irrigation
Owner – City of Billings
Contract Amount: 193,377.00
Land Design
Stacy Robinson 406-655-3550

VOA Elderly Housing
Landscape & Irrigation
Owner – Volunteers of America
Contract Amount: 92,265.00
SBG Architects
Mark Brown 916-373-9300

Kelly Inn
New Hotel Landscape & Irrigation
Owner – Kelly Inn
Contract Amount: 82,000.00
Pro Built Management, Inc.
Jeannette Bailey 406-671-3538

Pompey's Pillar Road & River Walk
Concrete Walks, Irrigation & Landscape
Owner – BLM Billings
Contract Amount: 310,535.00
Peaks to Plains Design
Wendy Warren 406-853-2072

Forsyth Cemetery Irrigation
Irrigation System
Owner – Rosebud County
Contract Amount: 87,610.00
County Commissioner
Joann Stahl 406-356-2251

Pryor Creek Golf Course
Nine Hole Sprinkler System
Pryor Creek Golf
Contract Amount: 657,800.00
2-M Co.
Steve Hackman 406-348-3900

Saint Labre Plaza
Water Feature, Lighting, Concrete & Landscape
Owner – Saint Labre Indian School
Contract Amount: 429,181.00
CTA Architect
Gary Sievers 406-248-7455

Orchard Elementary School
Playground – Phase One, Two & Three
Owner – School District #2
Contract Amount: 912,966.00
Foley Group 406-294-4477

Advanced Care Hospital of Montana
Landscape & Irrigation System
Ernest Health, Inc.
Contract Amount: 186,257.00
M. J. Harris, Inc.
Matt Lewis 205-966-3081

Faith Chapel New Building
Landscape Planting & Irrigation
Owner – Faith Chapel
Contract Amount: 329,903.00
Jones Construction
Dan Jones 406-252-8235

MSU-Billings COT Site Improvements
Irrigation, Central Control & Landscape
Contract Amount: 407,553.00
Land Design – Michael Verseman
MSU – Ken Billman 406-670-0585

Billings Clinic Cancer Center
Landscape Development
Owner – Billings Clinic
Contract Amount 228,435.00
Land Design
Stacy Robinson 406-655-3550

CTA Office Building
Landscape, Irrigation & Roof Garden
Owner – CTA Architects
Contract Amount: 84,150.00
CTA Architect / Engineers
Neil Kiner 406-248-7455

Laurel Middle School
Site Irrigation
Owner – Laurel Public Schools
Contract Amount: 231,474.00
Carl Thuesen, ASLA 406-252-5545

Stockman Bank Addition
Landscape Renovation
Owner – Stockman Bank
Contract Amount: 78,869.00
CTA LandWorks
Eirik Heikes 406-248-7455

Livingston Soccer Complex
Irrigatio & Construction of Fields
Owner – City of Livingston
Contract Amount: 543,000.00
Carl Thuesen, ASLA
Jeff Dickerson

Pioneer & Castle Rock Tennis Courts
New Post Tensioned Tennis Courts
Contract Amount: 605,000.00
Hellas – Michael Burke
City Parks-Mark Jarvis 406-657-8367

Lake Hills Stormwater / Ponds
Golf Course Irrigation, Grading & Seeding
Owner – City of Billings
Contract Amount 210,000.00
Interstate Engineering
Kevin Bonk 406-252-9244

The Good Earth Works Co, Inc.

Creating Custom Landscape Environments

National Guard Readiness Center
Landscape & Irrigation
Owner – Department of Military Affairs
Contract Amount: 421,500.00
Jackson Group, Inc.
Foley Group

U.S. Federal Courthouse-Billings
Irrigation, Landscape & Rooftop Garden
Owner – US General Services
Contract Amount: 267,230.00
M.A. Mortenson Construction
Richard Haag Ass. – Anne James

Medicine Crow Middle School
Landscape & Irrigation
Owner – School District #2
Contract Amount: 323,939.00
Dick Anderson Construction
A&E Architects

Shadow Home – Billings
Landscape, Irrigation & Lighting
Owner – Aaron Sparboe
Contract Amount: 956,225.00
Langlas & Associates
Land Design

Bench Blvd. – Hilltop
Planting and Seeding
Owner – Montana Dept. of Transportation
Contract Amount: 194,950.00
Sanderson / Stewart

Wyndstone Senior Living BP2
Irrigation, Grading & Plantings
Owner – ST. John's Lutheran Ministries
Contract Amount: 232,752.00
General Contractor: Dick Anderson
CTA Architects

Shiloh Conservation Area
Irrigation, Boulder & Rock Weirs
Owner – City of Billings
Contract Amount: 834,610.00
CMG Construction
Land Design

Lambert Sports Complex
Football Complex
Lambert School District
Contract Amount: 468,214.00
James Talcott Construction
Aaron Wall 406-761-0018

8th – Robinson Red Lodge
MSE Wall, Landscape & Irrigation
Owner: State of Montana
Contract Amount: 261,955.00
General: Goran, Inc.
MDT-Construction Bureau

Ben Steel Middle School
Landscape and Irrigation
Owner – School District #2
Contract Amount: 664,523.00
Langlas & Associates
A&E Architects

Ave. C Apartments
Landscape, Pavers & Irrigation
Owner – Ave. C Partners
Contract Amount: 192,201.00
General: Jackson Contractor Group

Gallatin Heights Central Park & Trails
Irrigation, Grading, Landscape & Trails
Owner – Sunrise Homes
Contract Amount: 392,237.00
Land Design / GEW

4215 Hwy 312 • Billings, MT 59105 • Phone (406) 373-5155 • Fax (406) 373-5706

Hysham Rest Area
Landscape, Irrigation and Seeding
Owner – Montana Dept. of Transportation
Contract Amount: 51,393.00
General Contractor: CDM Smith
Design Build

ICU Addition – St. Vincent Hospital
Retaining Wall, Irrigation & Landscape
Owner – St. Vincent Healthcare
Contract Amount: 158,321.00
General Contractor: Saunders
CTA Architects

Veterans Park
Install Irrigation System Existing Park
Owner – City of Billings
Contract Amount: 343,000.00
General Contractor: GEW
Stiner Thuesen

Ben Steele Middle School
Landscape & Irrigation
Owner – School District #2
Contract Amount: 664,523.00
General Contractor: Langlas & Ass.
A&E Architects

Lewistown Soccer Complex
Irrigation for Three Soccer Fields
Owner-Lewistown Soccer Ass.
Contract Amount: 285,000.00
GEW
Land Design

Poly Vista Park
Irrigation for Four Existing Ball Fields
Owner – City of Billings
Contract Amount: 316,808.00
Weave Construction
Land Design

Lutheran Church of The Good Shepherd
Landscape
Owner – Good Shepherd Church
Contract Amount: 38,763.00
General Contractor: Fisher Construction
Design Build

Medicine Crow – Pond Construction
Grading, Landscape & Irrigation
Owner – School District #2
Contract Amount: 83,865.00
General Contractor: GEW
Design Build

Shiloh Roundabouts
Rock Wall and Plantings
Owner – City of Billings
Contract Amount: 1,200,435.00
General Contractor: GEW
Land Design

Castle Rock Soccer Fields
Import Topsoil, Irrigation & Seed
School District #2
Contract Amount: 451,250.00
General Contractor: First Mark
Sanderson / Strewart

North Park Irrigation System
New Irrigation in Existing Park
Owner – City of Billings
Contract Amount: 435,202.00
GEW
Steiner / Thuesen

Winifred School
Landscape & Irrigation New School
Owner – Winifred School District
Contract Amount: 372,198.00
Dick Anderson Construction
A&E

The Good Earth Works Co, Inc.

Creating Custom Landscape Environments

Ponderosa Irrigation Replacement
Install New Irrigation System
Owner – City of Billings
Contract Amount: 260,550.00
GEW
Steiner / Thuesen

KOA Corp. Headquarters
Landscape, Stonework & Irrigation
Owner – KOA
Contract Amount: 295,805.00

Costco – Billings
Irrigation & Landscape
Owner – Costco
Contract Amount: 2,203,276.00
Lydig Construction
Wiesmen Design Group

Central Tennis Courts
New Tennis courts
Owner – City of Billings
Contract Amount: 794,930.00

4215 Hwy 312 • Billings, MT 59105 • Phone (406) 373-5155 • Fax (406) 373-5706

Billings PARKS AND RECREATION

PUBLIC WORKS

CITY OF BILLINGS ENGINEERING

STEINER THUESEN PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE, SUITE 105
P.O. BOX 22945
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

W.O. 23-33

BID SUBMITTAL PACKAGE

Grandview Park Irrigation System Replacement

BID SUBMITTED BY:

Jake Thuesen, Thuesen Landscape LLC.

THESE DOCUMENTS MUST BE EXECUTED FOR BID

- [✓] **BID FORM (COMPLETED)**
- [✓] **ADDENDUMS (ACKNOWLEDGED IN BID FORM)**
- [✓] **10% BID SECURITY (ENCLOSED)**
- [✓] **UNIT PRICES PER SP-44 (COMPLETED)**
- [✓] **QUALIFICATIONS PER SP-45 (COMPLETED)**

- Bids submitted via email shall have the **bid bond** scanned and included with the bid. Emailed bids should be sent to bids@billingsmt.gov
- Bids submitted via mail shall have any of the bid securities included. Mailed bids should be sent to City of Billings, PO Box 1178, Billings, MT 59103.
- Bids submitted via hand delivery shall have any of the bid securities included. Hand delivered bids should be delivered to City of Billings at the Office of the City Clerk, 210 N. 27th Street, Billings, MT 59101.

SECTION 00300

BID FORM

PROJECT IDENTIFICATION:

W.O. 23-33 Grandview Park Irrigation System Replacement

(Name of Project)

2902 Elevation Ave.
Billings, Montana 59101

(Location)

CONTRACT IDENTIFICATION AND NUMBER:

W.O. 23-33 Grandview Park Irrigation System Replacement

THIS BID SUBMITTED TO:

City of Billings
bids@billingsmt.gov

or

City of Billings
P.O. Box 1178
Billings, MT 59103

1.01 The undersigned Bidder proposes and agrees if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents, to perform and furnish all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

2.01 Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid, and Instructions to Bidders, including without limitations those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance for sixty (60) days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

3.01 In submitting this Bid, Bidder represents, as set forth in the Agreement, that:

A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of all which is hereby acknowledged:

Addendum No.	Addendum Date
1	3|12|2024

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work

C. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Special Provisions as provided in paragraph 4.02 of the General Conditions, and (2) reports and drawings of a Hazard Environmental Condition, if any, which has been identified in the Special Provisions as provided in paragraph 4.06 of the General Conditions.

E. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.

F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of the Work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies and data with the Bidding Documents.

I. Bidder has given Engineer/Architect written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer/Architect is acceptable to Bidder .

J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

4.01 Bidder further represents that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

The Bidder certifies that no official of the Owner, Engineer/Architect or any member of such officials immediate family, has direct or indirect interest in the pecuniary profits or Contracts of the Bidder.

5.01 The Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

LUMP SUM BID

Base Bid:

TOTAL LUMP SUM BID PRICE$ $391,830.00
(Figures)

TOTAL LUMP SUM BID PRICE Three hundred ninety-one thousand eight hundred thirty
(Words)

Alternate No. 1: HDPE Supply Line

TOTAL LUMP SUM BID PRICE$ $58,225.00
(Figures)

TOTAL LUMP SUM BID PRICE fifty eight thousand two hundred twenty five
(Words)

A. Lump Sum Prices have been computed in accordance with 11.01 of the General Conditions.

B. The OWNER reserves the right to reject any or all bids.

6.01 Bidder agrees that the Work will be substantially completed and competed and ready for final payment in accordance with 14.07 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified above, which shall be stated in the Agreement.

7.01 The following documents are attached to and made a condition of the Bid:

A. Required Bid security in the amount of 10% of the maximum Bid price including alternates, if any, and in the form identified in the Instructions To Bidders.

B. Unit Prices, See Special Provisions.

C. Irrigation Contractor Qualifications, see Special Provisions.

8.01 The terms used in this Bid with the initial capital letters have the meanings indicated in the Instructions To Bidders, General Conditions, and the Supplementary Conditions.

SUBMITTED on March 19, 2024.
(Date)

Montana Contractor's Registration # (if any) 2645460

Montana Contractor's Gross Receipts Account # _____
(Example: XXXXXX-XXX-CGR)
Employer's Tax ID No. 87-4102423

If BIDDER is:

An Individual: Jake Thuesen
(Name typed or printed)

By: _____
(Individual's Signature)

Doing business as: Thuesen Landscape LLC

Business Address: 609 Nelson Dr
Billings MT 59102

Phone No.: 406-855-2771 FAX No: n/a

A Partnership: n/a
(Partnership Name)

By: _____
(Signature)

_____
(Name, typed or printed)

Business Address: _____

_____

Phone No.: _____ FAX No: _____

A Corporation: n/a
(Corporation Name)

State of Incorporation: _____

Type (General Business, Professional, Service, Limited Liability): _____

By: _____
(Signature of person authorized to sign)

Title: _____

Attest: _____
(Signature)

Business Address: _____

_____

Phone No.: _____ FAX No: _____

Date of Qualification To Do Business Is: _____

_____
(Corporate Seal)

A Joint Venture: Each Joint Venture Must Sign

Joint Venturer Name: n/a
(Name)

By: _____
(Signature of Joint Venture Partner)

Name: _____
(Name, printed or typed)

Title: _____

Business Address: _____

_____

Phone No.: _____ FAX No: _____

Joint Venturer Name: n/a
(Name)

By: _____
(Signature of Joint Venture Partner)

Name: _____
(Name, printed or typed)

Title: _____

Business Address: _____

_____

Phone No.: _____ FAX No: _____

Address of Joint Venture for Receipt of Official Communication:
Address: _____

_____

Phone No.: _____ FAX No: _____

(Each Joint Venture must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above.)

END OF SECTION

BID BOND

BID BOND
(Percentage)

Bond No. 66991206

KNOW ALL PERSONS BY THESE PRESENTS, That we Thuesen Landscape, LLC of _____, hereinafter referred to as the Principal, and WESTERN SURETY COMPANY as Surety, are held and firmly bound unto City of Billings of _____, hereinafter referred to as the Obligee, in the amount of Ten Percent of the Amount Bid (10%), for the payment of which we bind ourselves, our legal representatives, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has submitted or is about to submit a proposal to Obligee on a contract for Grandview Park Irrigation System Replacement.

NOW, THEREFORE, if the said contract be awarded to Principal and Principal shall, within such time as may be specified, enter into the contract in writing and give such bond or bonds as may be specified in the bidding or contract documents with surety acceptable to Obligee; or if Principal shall fail to do so, pay to Obligee the damages which Obligee may suffer by reason of such failure not exceeding the penalty of this bond, then this obligation shall be void; otherwise to remain in full force and effect.

SIGNED, SEALED AND DATED this 19th day of March, 2024.

Principal

Thuesen Landscape, LLC

BY: [signature] Owner

Surety

WESTERN SURETY COMPANY

BY: Deanna M Darnielle
Deanna M Darnielle, Attorney-in-Fact

WESTERN SURETY COMPANY CORPORATE SEAL SOUTH DAKOTA

Form F4595-8-2001

Western Surety Company

POWER OF ATTORNEY - CERTIFIED COPY

Bond No. 66991206

Know All Men By These Presents, that WESTERN SURETY COMPANY, a corporation duly organized and existing under the laws of the State of South Dakota, and having its principal office in Sioux Falls, South Dakota (the "Company"), does by these presents make, constitute and appoint Deanna M Darnielle

its true and lawful attorney(s)-in-fact, with full power and authority hereby conferred, to execute, acknowledge and deliver for and on its behalf as Surety, bonds for:

Principal: Thuesen Landscape, LLC

Obligee: City of Billings

Amount: $1,000,000.00

and to bind the Company thereby as fully and to the same extent as if such bonds were signed by the Vice President, sealed with the corporate seal of the Company and duly attested by its Secretary, hereby ratifying and confirming all that the said attorney(s)-in-fact may do within the above stated limitations. Said appointment is made under and by authority of the following bylaw of Western Surety Company which remains in full force and effect.

"Section 7. All bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, any Assistant Secretary, Treasurer, or any Vice President or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or agents who shall have authority to issue bonds, policies, or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

If Bond No. 66991206 is not issued on or before midnight of June 17th, 2024, all authority conferred in this Power of Attorney shall expire and terminate.

In Witness Whereof, Western Surety Company has caused these presents to be signed by its Vice President, Larry Kasten, and its corporate seal to be affixed this 19th day of March, 2024.

WESTERN SURETY COMPANY

Larry Kasten, Vice President

STATE OF SOUTH DAKOTA }
COUNTY OF MINNEHAHA } ss

On this 19th day of March, in the year 2024, before me, a notary public, personally appeared Larry Kasten, who being to me duly sworn, acknowledged that he signed the above Power of Attorney as the aforesaid officer of WESTERN SURETY COMPANY and acknowledged said instrument to be the voluntary act and deed of said corporation.

S. GREEN
NOTARY PUBLIC
SOUTH DAKOTA
SEAL SEAL

Notary Public - South Dakota

My Commission Expires February 12, 2027

I the undersigned officer of Western Surety Company, a stock corporation of the State of South Dakota, do hereby certify that the attached Power of Attorney is in full force and effect and is irrevocable, and furthermore, that Section 7 of the bylaws of the Company as set forth in the Power of Attorney is now in force.

In testimony whereof, I have hereunto set my hand and seal of Western Surety Company this 19th day of March, 2024.

WESTERN SURETY COMPANY

Larry Kasten, Vice President

To validate bond authenticity, go to www.cnasurety.com > Owner/Obligee Services > Validate Bond Coverage.

Form F5306-5-2023

UNIT	ITEM DESCRIPTION	UNIT COST
SF	TRENCH RESTORATION WITH SEED	$2.50
EA	6504 SERIES ROTOR WITH SWING JOINT	$350.00
EA	AIR RELIEF VALVE AS DETAILED	$1,340.00
EA	3" ISOLATION VALVE AS DETAILED	$1400.00
EA	MAINLINE DRAIN VALVE AS DETAILED	$2,700.00
EA	44 NP QUICK COUPLING VALVE AS DETAILED	$1,100.00
EA	1" ELECTRIC CONTROL VALVE AS DETAILED	$1,200.00
EA	1-1/2" ELECTRIC CONTROL VALVE AS DETAILED	$1,400.00
EA	2" ELECTRIC CONTROL VALVE AS DETAILED	$1,500.00
EA	1-1/2" MASTER VALVE WITH 1-1/2" FLOW SENSOR AND GATE VALVE ASSEMBLY AS DETAILED.	$5,130.00
EA	60 STATION SATELLITE CONTROLLER INSTALLED AS DETAILED	$5,300.00
EA	RAIN SENSOR AS SPECIFIED	$600.00
EA	GROUNDING GRID AS DETAILED	$2,100.00
LF	3" CL 200 PVC MAINLINE PIPE	$28.25
LF	3" CL 200 PVC LATERAL PIPE	$14.00
LF	2" CL 200 PVC LATERAL PIPE	$4.50
LF	1-1/2" CL 200 PVC LATERAL PIPE	$4.50
LF	1" CL 200 PVC LATERAL PIPE	$3.00
LF	6" SCH 40 PVC SLEEVE	$180.00
LF	4" SCH 40 PVC SLEEVE	$180.00
LF	3" SCH 40 PVC SLEEVE	$100.00
LF	2-WIRE COMMUNICATIONS CABLE IN CONDUIT	$2.10
EA	IVM-SOL INSTALLED	$200.00
EA	IVM-OUT INSTALLED	$280.00
EA	IVM-SEN INSTALLED	$525.00
EA	IVM-SD INSTALLED WITH GROUND ROD	$290.00
LF	1" SCH 40 PVC CONDUIT	$3.00
LF	1-1/2" SCH 40 PVC CONDUIT	$6.00
LF	2" SCH 40 PVC CONDUIT	$10.00
LS	PREFABRICATED PUMP STATION AS SPECIFIED	$48,390.00
LS	DEMO AND REMOVAL OF EXISTING CONCRETE VAULT AT PUMP STATION	$6000.00
LS	PROJECT SIGN	$500.00
LS	ELECTRICAL UPGRADES AND ROUTING TO PUMP STATION	$14,000.00

LF	BORING FOR 6" SLEEEVE	$125.00
LF	1" CONDUIT UNDER ROAD	$5.00
LF	BORING FOR 6" HDPE PIPE	$53.50
LF	6" HDPE FUSED PIPE	$30.00
LF	BORING IN ROCK	$168.00

SP-45 IRRIGATION CONTRACTOR QUALIFICATIONS

Time is of the essence of this project. Additionally, the project must be completed according to the contract documents and the best current trade practices. Any Contractor proposing to do work on the irrigation system will be required to submit documentation and evidence of successful completion of irrigation construction experience similar in size and scope. **General Contractors are required to submit the following information as it relates to their sub-contractors with their Bid.** The same requirements apply if the General Contractor is performing the work themselves. Information for each trade shall be separate from other trades.

The Owner shall determine which bidders are responsible in accordance with the submitted Contractor Qualifications. The contract shall be awarded to the lowest responsible bidder whose bid meets the requirements of this section.

The Owner reserves the right to reject bid submissions, if it is determined that a contractor is not qualified to perform the work. Bidders shall complete this form, and return it with their sealed bid for review by the City.

A. Provide contact information for the irrigation contractor/sub-contractor.

Legal Name of Business:	Thuesen Landscape LLC		
Name:	Jake Thuesen	Phone number:	406-855-2771
Title:	owner	Email address:	thuesenlandscape@icloud.com
Business address of corporate office:	609 Nelson Dr. Billings MT 59102		

B. Provide information that will identify the overall size and capacity of the Business.

Average number of current full-time employees:	4
Estimate of revenue for current year (2023):	$800,000

Estimate of revenue for the prior year (2022):	$800,000

C. Provide information regarding the Business's previous contracting experience.

Years of experience with projects like the proposed project:	1			
As a general contractor:	Ø	As a joint venturer:	1	Working under Highlandline.
Has the Business:				
Been disqualified as a bidder by any local, state, or federal agency within the last 5 years? ☐ Yes ☒ No				
Been barred from contracting by any local, state, or federal agency within the last 5 years? ☐ Yes ☒ No				
Been released from a bid in the past 5 years? ☐ Yes ☒ No				
Defaulted on a project or failed to complete any contract awarded to it? ☐ Yes ☒ No				
Refused to construct or refused to provide materials defined in the contract documents or in a change order? ☐ Yes ☒ No				
Been a party to any currently pending litigation or arbitration? ☐ Yes ☒ No				
Provide full details in a separate attachment if the response to any of these questions is Yes.				

D. Provide information regarding public contracts currently under construction or completed within the past five years.

Project Name: N/A	Contract Value:
Project Owner:	
Address:	
Telephone:	
Was contract completed within the contract time frame? ☐ Yes ☐ No	
Were liquidated damages assessed? ☐ Yes ☐ No	

Project Name: N/A	Contract Value:
Project Owner:	
Address:	
Telephone:	
Was contract completed within the contract time frame? ☐ Yes ☐ No	
Were liquidated damages assessed? ☐ Yes ☐ No	

Project Name: N/A	Contract Value:
Project Owner:	
Address:	

Telephone:
Was contract completed within the contract time frame? ☐ Yes ☐ No
Were liquidated damages assessed? ☐ Yes ☐ No

Project Name: N|A	Contract Value:
Project Owner:	
Address:	
Telephone:	
Was contract completed within the contract time frame? ☐ Yes ☐ No	
Were liquidated damages assessed? ☐ Yes ☐ No	

Project Name: N|A	Contract Value:
Project Owner:	
Address:	
Telephone:	
Was contract completed within the contract time frame? ☐ Yes ☐ No	
Were liquidated damages assessed? ☐ Yes ☐ No	

***Use separate attachment if necessary to list additional projects.

E. Is the company currently working beyond the contact completion date on any public contract?
☐ Yes ☒ No

F. Provide information regarding equipment and manpower that will be assigned to the project with consideration given to other projects in progress.

Equipment to be assigned to project:	
Excavator .12 ton	Attachments:
2x Ditch Witch	6" wide trencher
skid steer	pipe puller
	trench closer
	forks | buckets
	sidewalk boring attachment

Manpower that will be assigned to the project:	
5 full-time employees	
3 seasonal laborers	

F. Provide information regarding the experience of job foreman.

Name: Jake Thuesen
Years of experience with current company: 10 years owner/operator
Years of experience with previous companies: 4 years
Summary of relevant experience: 14 years experience managing sprinkler install, maintenance and service.

G. Provide information to demonstrate that the Business has completed a minimum of three (3) irrigation systems of similar size and scope in the last five (5) years. Provide references for each project that is listed.

Reference Project 1 *Required*

Project Name: Nines Subdivision Parks	Contract Value $210,000/both parks
Project Owner: P3 Coleman Property Development	
Address: 6316 O'Donnell Ln Billings MT 59106	
Telephone: 406-252-0574	
Project Size in Acres: 5	
Project description: Built 2 parks, 5 acres & one 4 acres, including dirtwork, irrigation and hydroseed. Sprinkler system consists of 2" mainline with 30 50 gal/min. zones.	

Reference Name and Title: Kelly Coleman
Reference Telephone Number: 406 252 0576

Reference Project 2 *Required*

Project Name: (2012) New Bighorn HighSchool	Contract Value: unknown
Project Owner: Sheridan School District 1	
Address: 333 Wy-335 Big Horn WY 82801	
Telephone: 307-655-9541	
Project Size in Acres: 3	
Project description: Irrigation Foreman for new construction. Installed 3" gasketed mainline. Extensive mainline sleve work. Completed final irrigation walkthrough architect and city inspector.	
Reference Name and Title: Mark Bede	
Reference Telephone Number: 307-751-0965	

Reference Project 3 *Required*

Project Name: (2012) Meadowlark Elementary	Contract Value: unknown
Project Owner: Sheridan School District	
Address: 1410 DeSmet Ave Sheridan WY 82801	
Telephone: 307-655-9541	
Project Size in Acres: 5	
Project description: Sprinkler service/installer for gasketed mainline including back flow regulator. Installed 2 wire controller an wiring.	
Reference Name and Title: Mark Bede	
Reference Telephone Number: 307-751-0965	

H. Provide information regarding other relevant irrigation experience completed by the Business.

Project Name: Rim Rock Mall	Contract Value: service contract
Project Size in Acres: n/a	
Project description: Repair 3" mainline and valves as needed. System runs at max capasity.	

Project Name: UCROSS Foundation	Contract Value: unknown
Project Size in Acres: unknown	
Project description: Worked with Huppert Brothers Construction. Installing gravity feed inlet and concrete wet well. This included self cleaning screen of Piney Creek. Running 12" pipe into 20' deep wet well.	

Project Name: UCROSS Foundations	Contract Value: unknown
Project Size in Acres: unknown	
Project description: Pump Station - Installed automated pump station including VFD pump self flushing filter to Run 10 acre irrigation system.	

Project Name: Winterholler Dentistry	Contract Value: $120,000
Project Size in Acres: n/a	
Project description: New Construction project. Complete landscape using architech plans, approved by City of Billings. This included all irrigation needs	

Project Name: n/a	Contract Value:
Project Size in Acres:	
Project description:	

Project Name: n/a	Contract Value:
Project Size in Acres:	
Project description:	

Project Name: n/a	Contract Value:
Project Size in Acres:	
Project description:	

***Use separate attachment if necessary to list additional projects.

END OF SECTION

STEINER
THUESEN
PLLC

GOLF COURSE ARCHITECTURE • IRRIGATION DESIGN • LANDSCAPE ARCHITECTURE

W.O. 23-33 Grandview Park Irrigation System Replacement
ADDENDUM #1
March 12, 2024

CLARIFICATIONS:

1. Work associated with Alternate #1 is anticipated to take place after October 15 following shut down of the BBWA canal. If the Alternate is accepted, 14 calendar days will be provided for completion of the alternate. Existing vault to remain intact until new supply line from canal ins installed. Route line from existing supply line to pump through wall of vault as required. Following installation of the new supply line from the canal, the existing vault shall be removed and the z-pipe and drain on the inlet side of the pump shall be adjusted to match the depth of the new supply line. The cost for these adjustments shall be included in the bid amount for Alternate #1. In the event that the canal is low enough during installation of the irrigation system to complete the boring work and the necessary forces are available, the work is expected to be completed.

CHANGES TO PRIOR ADDENDA: none

BIDDING REQUIREMENTS: none

CONDITIONS OF THE CONTRACT:

1. SP- 43 Insurance: Delete paragraph and replace with the following:
    a. Listing of the Engineer/Architect and the Engineer/Architect's Consultants as additional insured under this section shall conform to the Insurance Services Office (ISO) endorsement CG 2031 and GC 2032 "Additional Insured – Engineers, Architects or Surveyors Not Engaged by the Named Insured". Copies of the additional insured endorsement shall be provided to the Engineer/Architect for approval prior to execution of the contract.

SPECIFICATIONS: none

DRAWINGS: none

Attachments: Pre-Bid Sign In Sheet

THIS ADDENDUM IS HEREBY ATTACHED TO AND MADE A PART OF THE CONTRACT DOCUMENTS, AND EACH BIDDER SHALL ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN WRITING ON HIS BID.

END ADDENDUM #1

1925 GRAND AVE. SUITE 105 P.O. BOX 22943 BILLINGS, MT 59104 406/252-5545 FAX 245-9855

PreBid Meeting
Sign In
March 12, 2024

W.O. 23-33 GRANDVIEW PARK IRRIGATION SYSTEM REPLACEMENT

Billings, Montana

Representative	Company	Phone	Fax	Email
Nathan Steiner	STEINER THUESEN PLLC	406-252-5545	406-245-9855	nathan@steinerthuesen.net
Jed Vissia	STEINER THUESEN PLLC	406-252-5546 ex 11	406-245-9856	jed@steinerthuesen.net
Jeremy Hauge	COB-Engineering	406-237-6158		hauge@billingsmt.gov
JEFF SPOONER	GEW	406-373-5155	373-5706	JWS@GOODEARTHWORKS.NET
John Spray	GEW	406-860-1436	373-5706	john@goodearthworks.net
Jake Thuesen	Thuesen Landscape	406-855-2771		thuesenlandscape@icloud.com
Cole McQuillan	PRPL	406-794-5974		mcquillanc@billingsmtgov
John Gayvert	PRPL	406-384-9765		gayvertj@billings.gov
SCOTT STOPPEL	LAUON RANGER	406 690 5066		SSTOPPEL@LAUONRANGER.NET
BEAU WRIGHT	PRPL	406-413-5498		WRIGHTB@BILLINGSMT.GOV

Billings PARKS AND RECREATION

CITY OF BILLINGS PUBLIC WORKS ENGINEERING

STEINER THUESEN PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE, SUITE 105
P.O. BOX 22945
BILLINGS, MT 59104
406/252-5545 FAX 245-9555

W.O. 23-33

BID SUBMITTAL PACKAGE

Grandview Park Irrigation System Replacement

BID SUBMITTED BY:

B & T PC DBA Lawn Ranger

THESE DOCUMENTS MUST BE EXECUTED FOR BID

- [ ] **BID FORM (COMPLETED)**
- [ ] **ADDENDUMS (ACKNOWLEDGED IN BID FORM)**
- [ ] **10% BID SECURITY (ENCLOSED)**
- [ ] **UNIT PRICES PER SP-44 (COMPLETED)**
- [ ] **QUALIFICATIONS PER SP-45 (COMPLETED)**

- Bids submitted via email shall have the **bid bond** scanned and included with the bid. Emailed bids should be sent to bids@billingsmt.gov
- Bids submitted via mail shall have any of the bid securities included. Mailed bids should be sent to City of Billings, PO Box 1178, Billings, MT 59103.
- Bids submitted via hand delivery shall have any of the bid securities included. Hand delivered bids should be delivered to City of Billings at the Office of the City Clerk, 210 N. 27th Street, Billings, MT 59101.

SECTION 00300

BID FORM

PROJECT IDENTIFICATION:

W.O. 23-33 Grandview Park Irrigation System Replacement

(Name of Project)

2902 Elevation Ave.
Billings, Montana 59101

(Location)

CONTRACT IDENTIFICATION AND NUMBER:

W.O. 23-33 Grandview Park Irrigation System Replacement

THIS BID SUBMITTED TO:

City of Billings
bids@billingsmt.gov

or

City of Billings
P.O. Box 1178
Billings, MT 59103

1.01 The undersigned Bidder proposes and agrees if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents, to perform and furnish all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

2.01 Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid, and Instructions to Bidders, including without limitations those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance for sixty (60) days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

3.01 In submitting this Bid, Bidder represents, as set forth in the Agreement, that:

A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of all which is hereby acknowledged:

Addendum No.	Addendum Date
#1	3/12/24

The Bidder certifies that no official of the Owner, Engineer/Architect or any member of such officials immediate family, has direct or indirect interest in the pecuniary profits or Contracts of the Bidder.

5.01 The Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

LUMP SUM BID

Base Bid:

TOTAL LUMP SUM BID PRICE$ 695,200.00
(Figures)

TOTAL LUMP SUM BID PRICE SIX HUNDRED NINETY FIVE THOUSAND TWOO HUNDRED DOLLARS
(Words)

Alternate No. 1: HDPE Supply Line

TOTAL LUMP SUM BID PRICE$ 27,500.00
(Figures)

TOTAL LUMP SUM BID PRICE TWENTY SEVEN THOUSAND FIVE HUNDRED DOLLARS NO/100
(Words)

A. Lump Sum Prices have been computed in accordance with 11.01 of the General Conditions.

B. The OWNER reserves the right to reject any or all bids.

6.01 Bidder agrees that the Work will be substantially completed and competed and ready for final payment in accordance with 14.07 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified above, which shall be stated in the Agreement.

7.01 The following documents are attached to and made a condition of the Bid:

A. Required Bid security in the amount of 10% of the maximum Bid price including alternates, if any, and in the form identified in the Instructions To Bidders.

B. Unit Prices, See Special Provisions.

C. Irrigation Contractor Qualifications, see Special Provisions.

A Corporation: R&T PC DBA LAWN RANGER
(Corporation Name)

State of Incorporation: MONTANA

Type (General Business, Professional, Service, Limited Liability): GENERAL

By: _____
(Signature of person authorized to sign)

Title: MANAGER/OWNER

Attest: _____
(Signature)

Business Address: PO BOX 22434

_____

Phone No.: 406-690-3066 FAX No: _____

Date of Qualification To Do Business Is: 3/15/1995

_____
(Corporate Seal)

A Joint Venture: Each Joint Venture Must Sign

Joint Venturer Name: _____
(Name)

By: _____
(Signature of Joint Venture Partner)

Name: _____
(Name, printed or typed)

Title: _____

Business Address: _____

_____

Phone No.: _____ FAX No: _____

UNIT	ITEM DESCRIPTION	UNIT COST
SF	TRENCH RESTORATION WITH SEED	
EA	6504 SERIES ROTOR WITH SWING JOINT	
EA	AIR RELIEF VALVE AS DETAILED	
EA	3" ISOLATION VALVE AS DETAILED	
EA	MAINLINE DRAIN VALVE AS DETAILED	
EA	44 NP QUICK COUPLING VALVE AS DETAILED	
EA	1" ELECTRIC CONTROL VALVE AS DETAILED	
EA	1-1/2" ELECTRIC CONTROL VALVE AS DETAILED	
EA	2" ELECTRIC CONTROL VALVE AS DETAILED	
EA	1-1/2" MASTER VALVE WITH 1-1/2" FLOW SENSOR AND GATE VALVE ASSEMBLY AS DETAILED.	
EA	60 STATION SATELLITE CONTROLLER INSTALLED AS DETAILED	
EA	RAIN SENSOR AS SPECIFIED	
EA	GROUNDING GRID AS DETAILED	
LF	3" CL 200 PVC MAINLINE PIPE	
LF	3" CL 200 PVC LATERAL PIPE	
LF	2" CL 200 PVC LATERAL PIPE	
LF	1-1/2" CL 200 PVC LATERAL PIPE	
LF	1" CL 200 PVC LATERAL PIPE	
LF	6" SCH 40 PVC SLEEVE	
LF	4" SCH 40 PVC SLEEVE	
LF	3" SCH 40 PVC SLEEVE	
LF	2-WIRE COMMUNICATIONS CABLE IN CONDUIT	
EA	IVM-SOL INSTALLED	
EA	IVM-OUT INSTALLED	
EA	IVM-SEN INSTALLED	
EA	IVM-SD INSTALLED WITH GROUND ROD	
LF	1" SCH 40 PVC CONDUIT	
LF	1-1/2" SCH 40 PVC CONDUIT	
LF	2" SCH 40 PVC CONDUIT	
LS	PREFABRICATED PUMP STATION AS SPECIFIED	
LS	DEMO AND REMOVAL OF EXISTING CONCRETE VAULT AT PUMP STATION	
LS	PROJECT SIGN	
LS	ELECTRICAL UPGRADES AND ROUTING TO PUMP STATION	

LF	BORING FOR 6" SLEEEVE	
LF	1" CONDUIT UNDER ROAD	
LF	BORING FOR 6" HDPE PIPE	
LF	6" HDPE FUSED PIPE	
LF	BORING IN ROCK	

SP-45 IRRIGATION CONTRACTOR QUALIFICATIONS

Time is of the essence of this project. Additionally, the project must be completed according to the contract documents and the best current trade practices. Any Contractor proposing to do work on the irrigation system will be required to submit documentation and evidence of successful completion of irrigation construction experience similar in size and scope. **General Contractors are required to submit the following information as it relates to their sub-contractors with their Bid.** The same requirements apply if the General Contractor is performing the work themselves. Information for each trade shall be separate from other trades.

The Owner shall determine which bidders are responsible in accordance with the submitted Contractor Qualifications. The contract shall be awarded to the lowest responsible bidder whose bid meets the requirements of this section.

The Owner reserves the right to reject bid submissions, if it is determined that a contractor is not qualified to perform the work. Bidders shall complete this form, and return it with their sealed bid for review by the City.

A. Provide contact information for the irrigation contractor/sub-contractor.

Legal Name of Business:			
Name:		Phone number:	
Title:		Email address:	
Business address of corporate office:			

B. Provide information that will identify the overall size and capacity of the Business.

Average number of current full-time employees:	
Estimate of revenue for current year (2023):	

Estimate of revenue for the prior year (2022):	

C. Provide information regarding the Business's previous contracting experience.

Years of experience with projects like the proposed project:				
As a general contractor:		As a joint venturer:		
Has the Business:				
Been disqualified as a bidder by any local, state, or federal agency within the last 5 years? ☐ Yes ☐ No				
Been barred from contracting by any local, state, or federal agency within the last 5 years? ☐ Yes ☐ No				
Been released from a bid in the past 5 years? ☐ Yes ☐ No				
Defaulted on a project or failed to complete any contract awarded to it? ☐ Yes ☐ No				
Refused to construct or refused to provide materials defined in the contract documents or in a change order? ☐ Yes ☐ No				
Been a party to any currently pending litigation or arbitration? ☐ Yes ☐ No				
Provide full details in a separate attachment if the response to any of these questions is Yes.				

D. Provide information regarding public contracts currently under construction or completed within the past five years.

Project Name:	Contract Value:
Project Owner:	
Address:	
Telephone:	
Was contract completed within the contract time frame? ☐ Yes ☐ No	
Were liquidated damages assessed? ☐ Yes ☐ No	

Project Name:	Contract Value:
Project Owner:	
Address:	
Telephone:	
Was contract completed within the contract time frame? ☐ Yes ☐ No	
Were liquidated damages assessed? ☐ Yes ☐ No	

Project Name:	Contract Value:
Project Owner:	
Address:	

Telephone:
Was contract completed within the contract time frame? ☐ Yes ☐ No
Were liquidated damages assessed? ☐ Yes ☐ No

Project Name:	Contract Value:
Project Owner:	
Address:	
Telephone:	
Was contract completed within the contract time frame? ☐ Yes ☐ No	
Were liquidated damages assessed? ☐ Yes ☐ No	

Project Name:	Contract Value:
Project Owner:	
Address:	
Telephone:	
Was contract completed within the contract time frame? ☐ Yes ☐ No	
Were liquidated damages assessed? ☐ Yes ☐ No	

***Use separate attachment if necessary to list additional projects.

E. Is the company currently working beyond the contact completion date on any public contract?
☐ Yes ☐ No

F. Provide information regarding equipment and manpower that will be assigned to the project with consideration given to other projects in progress.

Equipment to be assigned to project:	

Manpower that will be assigned to the project:	

F. Provide information regarding the experience of job foreman.

Name:
Years of experience with current company:
Years of experience with previous companies:
Summary of relevant experience:

G. Provide information to demonstrate that the Business has completed a minimum of three (3) irrigation systems of similar size and scope in the last five (5) years. Provide references for each project that is listed.

Reference Project 1 *Required*

Project Name:	Contract Value:
Project Owner:	
Address:	
Telephone:	
Project Size in Acres:	
Project description:	

Reference Name and Title:
Reference Telephone Number:

Reference Project 2 *Required*

Project Name:	Contract Value:
Project Owner:	
Address:	
Telephone:	
Project Size in Acres:	
Project description:	
Reference Name and Title:	
Reference Telephone Number:	

Reference Project 3 *Required*

Project Name:	Contract Value:
Project Owner:	
Address:	
Telephone:	
Project Size in Acres:	
Project description:	
Reference Name and Title:	
Reference Telephone Number:	

H. Provide information regarding other relevant irrigation experience completed by the Business.

Project Name:	Contract Value:
Project Size in Acres:	
Project description:	

Project Name:	Contract Value:
Project Size in Acres:	
Project description:	

Project Name:	Contract Value:
Project Size in Acres:	
Project description:	

Project Name:	Contract Value:
Project Size in Acres:	
Project description:	

Project Name:	Contract Value:
Project Size in Acres:	
Project description:	

Project Name:	Contract Value:
Project Size in Acres:	
Project description:	

Project Name:	Contract Value:
Project Size in Acres:	
Project description:	

***Use separate attachment if necessary to list additional projects.

END OF SECTION

BID BOND

THIS DOCUMENT CONTAINS A TRUE WATERMARK - HOLD TO LIGHT TO VIEW

OFFICIAL CHECK

840063920

93-524/929

Details on Back. Security Features Included.

REMITTER

Lawn Ranger WO 23-33

DATE March 19, 2024

PAY TO THE ORDER OF City of Billings $ 72,270.00

Seventy-Two Thousand Two Hundred Seventy and 00/100 DOLLARS

Stockman Bank
1-877-300-9369 (Customer Service)
1-888-669-0724 (Telebank)
www.stockmanbank.com

VOID AFTER 90 DAYS

AUTHORIZED SIGNATURE

⑈840063920⑈ ⑆092905249⑆ 10120935 22⑈

OFFICIAL CHECK

840063920

IMPORTANT NOTICE - STOP PAYMENT INVOLVING A DISPUTE: Under the Uniform Commercial Code, we cannot stop payment on this check, due to a dispute between you and another party, unless you obtain a court injunction ordering us to do so. CHECK LOST OR STOLEN: If this check is lost or stolen you may request a replacement check or have your account recredited, but there will be a 90 day waiting period from the issue date of the check before we can issue the replacement check or recredit your account. If the proper owner of the check presents it within the 90 day period, we must honor the check. In such a case, your account would not be recredited nor would a replacement check be re-issued.

REMITTER

Lawn Ranger WO 23-33

March 19, 2024

PAYABLE TO

City of Billings

72,270.00

Seventy-Two Thousand Two Hundred Seventy and 00/100

MEMORANDUM

FOR

NOT NEGOTIABLE

Stockman Bank
1-877-300-9369 (Customer Service)
1-888-669-0724 (Telebank)
www.stockmanbank.com

HARLAND CLARKE M17217 30176937

NOT NEGOTIABLE

SECTION 00500

AGREEMENT FORM

This Agreement is dated as of MARCH 19TH 2024, by and between "City of Billings," hereinafter called Owner, and R&T PC DBA LAWN RANGER hereinafter called Contractor. Owner and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

Article 1. WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: Removal of existing irrigation equipment, pump, concrete vault, and the installation of a new irrigation system, pump station, and electrical upgrades.

Article 2. THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows: W.O. 23-33 Grandview Park Irrigation System Replacement.

Article 3. ENGINEER/ARCHITECT

3.01 The Project has been designed by: STEINER THUESEN PLLC who is hereinafter called Engineer/Architect and who is to act as Owner's representative, assume all duties and responsibilities and have the rights and authority assigned to Engineer/Architect in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

Article 4. CONTRACT TIME

4.01 Time of the Essence.

A. All the time limits for milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 Days to achieve Substantial and Final Completion.

A. The Work at all locations shall be substantially complete within 60 calendar days after the date when the Contract Time commences to run as provided in paragraph 2.03 of the General Conditions.

B. Final completion of the Work shall be within 14 calendar days after the date of Substantial Completion.

4.03 Liquidated damages.

A. OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the Work is not completed within the times specified in paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense and difficulties involved in

of all payments due the Contractor and shall transmit such monies to the Montana Department of Revenue.

2. Upon Substantial Completion and at the Owner's discretion, the amount of retainage may be further reduced if requested by the Contractor.

6.03 Final Payment:

A. Upon final completion and acceptance of the Work in accordance with paragraph 14.07 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer/Architect as provided in said paragraph 14.07.

Article 7. INTEREST:

7.01 All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at a rate of up to 1% per month.

Article 8. CONTRACTOR'S REPRESENTATION:

8.01 In order to induce Owner to enter into this Agreement, Contractor makes the following representations:

A. Contractor has examined and carefully studied the Contract Documents (including all Addenda) listed in paragraph 9 and the other related data identified in the Bidding Documents

B. Contractor has visited the site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, performance or furnishing of the Work.

C. Contractor is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.

D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in the Special Provisions as provided in paragraph 4.02 of the General Conditions and (2) reports and drawings of a Hazardous Environmental Condition, if any, at the Site which has been identified in the Special Provisions as provided in paragraph 4.06 of the General Conditions. Contractor acknowledges that such reports and drawings are not Contract Documents and may not be complete for Contractor's purposes. Contractor acknowledges that Owner and Engineer/Architect do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to Underground Facilities at or contiguous to the site.

E. Contractor has obtained and carefully studied (or assumes responsibility for having done so) all such additional supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise, which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction

b. Contractor's Bid (pages _____ to ____, inclusive);

c. Documentation submitted by Contractor prior to Notice of Award (pages_____ to _____, inclusive);

d. Notice of Award

12. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
    a. Written Amendments;
    b. Work Change Directives;
    c. Change Order(s).
    d. Any Notice of Partial Utilization
    e. Notice of Substantial Completion
    f. Lien Waivers
    g. Notice of Final Completion and Acceptance
13. Certificates of Insurance
14. Wage Rates
15. Special Provisions (Section 00900 of Std Mods and project specific)
16. Montana Public Works Standard Specifications, Sixth Edition, dated April 2010, including the City of Billings Standard Modifications thereof.

B. The documents listed in paragraph 9.01.A. are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified or supplemented as provided in paragraphs 3.04 of the General Conditions.

Article 10. MISCELLANEOUS:

10.01 Terms.

A. Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.

10.02 Assignment of Contract.

A. No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically, but without limitation, moneys that may come due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 Successors and Assigns

A. Owner and Contractor each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents.

IN WITNESS WHEREOF, Owner and Contractor have signed copies of Agreement. Documents have been signed or identified by Owner and Contractor or by Engineer/Architect on their behalf.

This Agreement will be effective on _____, _____ (which is the effective date of the Agreement).

This Agreement shall not be effective unless and until concurred by Funding Agency's (if any) designated representative.

City of Billings

By _____
William A. Cole, Mayor

Attest _____
Denise R. Bohlman, City Clerk

Approved as to form _____
City Attorney

Address for giving notices:
2224 Montana Avenue
Billings, MT 59101

Phone No. (406) 657-8231

FAX No. (406) 237-6291

Contractor _____

By _____
(Signature)

Attest _____
(Signature)

Address for giving notices:
_____

_____

Phone No. _____

FAX No. _____

(CORPORATE SEAL)

(If OWNER is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of Owner - Contractor Agreement.

(SEAL)

Contractor Registration No.

Agent for service of process:

_____

_____
(If CONTRACTOR is a corporation or a partnership, attach evidence of authority to sign.)

STEINER
THUESEN
PLLC

GOLF COURSE ARCHITECTURE • IRRIGATION DESIGN • LANDSCAPE ARCHITECTURE

W.O. 23-33 Grandview Park Irrigation System Replacement
ADDENDUM #1
March 12, 2024

CLARIFICATIONS:

1. Work associated with Alternate #1 is anticipated to take place after October 15 following shut down of the BBWA canal. If the Alternate is accepted, 14 calendar days will be provided for completion of the alternate. Existing vault to remain intact until new supply line from canal ins installed. Route line from existing supply line to pump through wall of vault as required. Following installation of the new supply line from the canal, the existing vault shall be removed and the z-pipe and drain on the inlet side of the pump shall be adjusted to match the depth of the new supply line. The cost for these adjustments shall be included in the bid amount for Alternate #1. In the event that the canal is low enough during installation of the irrigation system to complete the boring work and the necessary forces are available, the work is expected to be completed.

CHANGES TO PRIOR ADDENDA: none

BIDDING REQUIREMENTS: none

CONDITIONS OF THE CONTRACT:

1. SP- 43 Insurance: Delete paragraph and replace with the following:
    a. Listing of the Engineer/Architect and the Engineer/Architect's Consultants as additional insured under this section shall conform to the Insurance Services Office (ISO) endorsement CG 2031 and GC 2032 "Additional Insured – Engineers, Architects or Surveyors Not Engaged by the Named Insured". Copies of the additional insured endorsement shall be provided to the Engineer/Architect for approval prior to execution of the contract.

SPECIFICATIONS: none

DRAWINGS: none

Attachments: Pre-Bid Sign In Sheet

THIS ADDENDUM IS HEREBY ATTACHED TO AND MADE A PART OF THE CONTRACT DOCUMENTS, AND EACH BIDDER SHALL ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN WRITING ON HIS BID.

END ADDENDUM #1

1925 GRAND AVE. SUITE 105 P.O. BOX 22943 BILLINGS, MT 59104 406/252-5545 FAX 245-9855

PreBid Meeting
Sign In
March 12, 2024

W.O. 23-33 GRANDVIEW PARK IRRIGATION SYSTEM REPLACEMENT

Billings, Montana

Representative	Company	Phone	Fax	Email
Nathan Steiner	STEINER THUESEN PLLC	406-252-5545	406-245-9855	nathan@steinerthuesen.net
Jed Vissia	STEINER THUESEN PLLC	406-252-5546 ex 11	406-245-9856	jed@steinerthuesen.net
Jeremy Hauge	COB-Engineering	406-237-6158		hauge j@billingsmt.gov
JEFF SPOONER	GEW	406-373-5155	373-5706	JWS@GOODEARTHWORKS.NET
John Spray	GEW	406-860-1438	373-5706	john@goodearthworks.net
Jake Thuesen	Thuesen Landscape	406-855-2771		Thuesen Landscape@icloud.com
Cole McQuillan	PRPL	406-794-5474		mcquillanc@billingsmtgov
John Gayvert	PRPL	406-384-9765		gayvertj@billings.gov
SCOTT STOPPEL	LAWN RANGER	406-690-5066		SSTOPPEL@LAWNRANGERMT.COM
BEAU WRIGHT	PRPL	406-413-5498		WRIGHTB@BILLINGSMT.GOV

Department: *PRPL* **FY23 - FY27 CIP**

Project Category: *Parks* **Project Title:** *Multiple Parks Irrigation Automation*

Project Description/Location:

This project will fund the replacement of the existing irrigation systems with an automated one.

Justification:

Currently these parks have an antiquated manual irrigation system that waters the parks. It requires an attendant to be on site to operate and move the irrigation heads. Out of necessity irrigation is done during working hours preventing park use. A new automated irrigation system would water at night allowing the park to be used during the day and would free up the park attendant to do other tasks.

Grandview Park $119,500 (includes pump station)
Gorham Park $200,850 (includes pump station)
Millice Park $182,500 (includes pump station)
Evergreen Park $111,800 (includes pump station)
Burlington Park $148,400
Boulder Park $161,700

CIP Status	Project Type
☑ Modify Existing	☑ Renewal/ Replacement
☐ New Project	☐ Enhancement/ New

Operating Budget Impact:

Reduce seasonal labor.

Comments:

Insert Picture(s) or Map Here

Estimated Project Cost(s)	Prior Years	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	Future	Total Cost
Planning, Design, & Engineering		120,217						$ 120,217
Land Acquisition								$ -
Construction		804,533						$ 804,533
Equipment								$ -
Other								$ -
Total Project Cost	**$ -**	**$ 924,750**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 924,750**

Project Funding	Prior Years	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	Future	Total Cost
Park District 1		924,750						$ 924,750
Cash-in-Lieu								$ -
Amend Park Fund								$ -
NRDP/YRRP								$ -
SBURA								$ -
								$ -
								$ -
								$ -
								$ -
								$ -
								$ -
								$ -
								$ -
								$ -
Total Project Funding	**$ -**	**$ 924,750**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 924,750**

W.O. 23-33 PROJECT MANUAL

Grandview Park Irrigation System Replacement

Billings
PARKS
AND RECREATION

CITY OF BILLINGS
PUBLIC WORKS
ENGINEERING

Prepared by:

STEINER
THUESEN
PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE

June 1, 2023

Set No. _____

W.O. 23-33 PROJECT MANUAL

Grandview Park Irrigation System Replacement

STEINER THUESEN PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855



Prepared By: STEINER THUESEN PLLC
Consultant Project No.: N/A
Date: June 1, 2023

TABLE OF CONTENTS

INVITATION TO BID

INSTRUCTIONS TO BIDDERS

BID SUBMITTAL PACKAGE (TO BE EXECUTED AND SUBMITTED FOR BID BY CONTRACTOR)

- BID SUBMITTAL PACKAGE (COVER PAGE)
- BID FORM
- BID BOND

AGREEMENT FORM

MONTANA STATEWIDE PREVAILING WAGE RATES

SPECIAL PROVISIONS

TECHNICAL SPECIFICATIONS

DIVISION 1 - GENERAL REQUIREMENTS
- 011000 - Summary, Alternates
- 012500 - Products and Substitutions
- 013100 - Procedures and Controls
- 013200 - Schedules, Reports, Payments
- 013300 - Submittals
- 014200 - Definitions and Standards
- 015000 - Temporary Facilities
- 017700 - Project Closeout

DIVISION 2 - EXISTING CONDITIONS
- 024119 - Selective Demolition

DIVISION 3 - TO DIVISION 21
- None in this project

DIVISION 22 - PLUMBING
- 221125 - Pump Station

DIVISION 23 - TO DIVISION 25
- None in this project

DIVISION 26 - ELECTRICAL
- 260500 - Electrical

DIVISION 27 - TO DIVISION 30

None in this project

DIVISION 31 - EARTHWORK

312334 - Irrigation Trenching & Backfilling

DIVISION 32 - EXTERIOR IMPROVEMENTS

316330 - Horizontal Directional Drilling HDPE Pipe

328400 - Irrigation System

DIVISION 33 - UTILITIES

None in this project

ADDITIONAL PROJECT SPECIFIC SECTIONS

SUBSTITUTION REQUEST FORM

CONTRACT PLANS – BOUND SEPERATELY

	Cover
I1.1	Irrigation Plan
I1.2	Irrigation Details
I1.3	Irrigation Details
I1.4	Pump Detail
I1.5	Supply Line Alternate

SECTION 00100

INVITATION TO BID

Separate sealed bids for the construction of Grandview Park Irrigation System Replacement will be received by the Billings City Clerk, 210 N. 27th Street, Billings, MT or P.O. Box 1178, Billings, MT 59103 or bids@billingsmt.gov until 2:00 p.m. local time on Tuesday, June 20, 2023, and then publicly opened and read aloud. The bid opening will be via Facebook Live on the City's Facebook page: Billings MT City Government.

The project consists of: Removal of existing irrigation equipment, pump, concrete vault, and the installation of a new irrigation system, pump station, and electrical upgrades.

Complete digital project bidding documents are available at QuestCDN. You may download the digital plan documents for a fee**.** You may also access them at www.questcdn.com by inputting Quest **project # 8536155** on the QuestCDN project search page. The plans, specifications and the official plan holders list may be examined through this site for no charge. In addition, the Drawings and Project Manual may also be examined at www.montanabid.com.

There will be a non-mandatory Pre-Bid meeting at 390 N. 23rd Street, Billings MT 59101 at 10:00 a.m. on June 12, 2023. Interested CONTRACTORS are encouraged to attend. Contact Jed Vissia by telephone at (406) 252-5545 x11 or by email at jed@steinerthuesen.net for more information on the Pre-Bid meeting.

CONTRACTOR and any of the CONTRACTOR'S subcontractors bidding or doing work on this project will be required to be registered with the Montana Department of Labor and Industry (DLI). Forms for registration are available from the Department of Labor and Industry, P.O. Box 8011, 1805 Prospect, Helena, Montana 59604-8011. Information on registration can be obtained by calling 1-406-444-7734. All laborers and mechanics employed by CONTRACTOR or subcontractors in performance of the construction work shall be paid wages at rates as may be required by the laws of Yellowstone County and the state of Montana. The CONTRACTOR must ensure that employees and applicants for employment are not discriminated against because of their race, color, religion, sex or national origin.

Each bid or proposal must be accompanied by a Certified Check, Cashier's Check, or Bid Bond payable to the "City of Billings, MT" in an amount not less than ten percent (10%) of the total amount of the bid. Successful BIDDERS shall furnish an approved Performance Bond and a Labor and Materials Payment Bond, each in the amount of one hundred percent (100%) of the contract amount. Insurance as required shall be provided by the successful BIDDER(s) and a certificate(s) of that insurance shall be provided. Bids submitted via email shall have the bid bond scanned and included with the bid. Bids submitted via mail shall have any of the bid securities included.

No bid may be withdrawn after the scheduled time for the public opening of bids, which is 2:00 p.m. local time, Tuesday, June 20, 2023.

For further information concerning this project, please contact Jedidiah Vissia with STEINER THUESEN PLLC by telephone at (406) 252-5545 ext. 11 or Jeremy Hauge, PE at the Office of the City Engineer, 2224 Montana Ave, Billings, MT 59101, by telephone at (406) 237-6158 or by email at haugej@billingsmt.gov.

The right is reserved to reject any or all proposals received, to waive informalities, to postpone the award of the contract for a period of not to exceed sixty (60) days, and to accept the lowest responsive and responsible bid which is in the best interest of the OWNER.

The City of Billings is an Equal Opportunity Employer.

Published on June 2, June 9, and June 16, 2023.

Denise R. Bohlman
Billings City Clerk
P.O. Box 1178
Billings, MT 59103

Dept:	PW-ENGR
Published:	June 2, 2023
	June 9, 2023
	June 16, 2023

SECTION 00200

INSTRUCTIONS TO BIDDERS

Instructions to Bidders per the Montana Public Works Standard Specifications, 6th Edition, as Modified by the City of Billings Standard Modifications and as modified below:

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

Revise 2.1 Complete sets of Bidding Documents may be obtained as stated in the Invitation to Bid.

Delete 2.3

ARTICLE 5 – PRE-BID CONFERENCE

Insert 5.2 The pre-bid meeting will be held at 390 N. 23rd Street, Billings MT 59101 at 10:00 a.m. on June 12, 2023. Contractors are encouraged to attend.

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

Modify 7.1 Revise second sentence to read "Interpretations or clarifications considered necessary by ENGINEER/ARCHITECT in response to such questions will be issued by Addenda. Addenda will be available at QuestCDN. Planholders may download the Addenda at no additional cost**.** In addition, Addenda may also be examined at www.montanabid.com."

ARTICLE 13 – PREPARATION OF BID

Modify 13.1 Revise first sentence to read "The Bid Form is included with the Bidding Documents; additional copies are available at QuestCDN."

Modify 13.11 Add after the first sentence: Montana Contractor's Registration is not required until project award.

Delete 13.12 in the City of Billings Standard Modifications (dated January 2021).

ARTICLE 15 – SUBMITTAL OF BID

Add to 15.1 Only Section 00300 Cover Page, Section 00300 Bid Form, and any bid securities are required to be submitted.

Replace 15.2 Bids can either be submitted via email, regular mail, or hand delivered. If using email, the bid must be submitted with a scanned copy of the bid bond. If submitting bid via regular mail or hand delivered, a cashier's check, Certified check or bid bond must be included.

Add to 15.3C. Telecommunication systems as used in this section does not include email.

ARTICLE 17 – OPENING OF BIDS

Insert 17.2 Bids will be opened on a live video broadcast on the City's Facebook page: Billings MT City Government. Bids will not be opened at a location that is open to the public.

ARTICLE 22 – STATE LAWS AND REGULATIONS

Modify 22.1 Delete reference to employment preference to Montana contractors and residents and contractor's registration.

STEINER THUESEN PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

W.O. 23-33

BID SUBMITTAL PACKAGE

Grandview Park Irrigation System Replacement

BID SUBMITTED BY:

_____

THESE DOCUMENTS MUST BE EXECUTED FOR BID

- **[ ] BID FORM (COMPLETED)**
- **[ ] ADDENDUMS (ACKNOWLEDGED IN BID FORM)**
- **[ ] 10% BID SECURITY (ENCLOSED)**
- **[ ] UNIT PRICES PER SP-44 (COMPLETED)**
- **[ ] QUALIFICATIONS PER SP-45 (COMPLETED)**

- Bids submitted via email shall have the **bid bond** scanned and included with the bid. Emailed bids should be sent to bids@billingsmt.gov
- Bids submitted via mail shall have any of the bid securities included. Mailed bids should be sent to City of Billings, PO Box 1178, Billings, MT 59103.
- Bids submitted via hand delivery shall have any of the bid securities included. Hand delivered bids should be delivered to City of Billings at the Office of the City Clerk, 210 N. 27th Street, Billings, MT 59101.

SECTION 00300

BID FORM

PROJECT IDENTIFICATION:

W.O. 23-33 Grandview Park Irrigation System Replacement

(Name of Project)

2902 Elevation Ave.
Billings, Montana 59101

(Location)

CONTRACT IDENTIFICATION AND NUMBER:

W.O. 23-33 Grandview Park Irrigation System Replacement

THIS BID SUBMITTED TO:

City of Billings
bids@billingsmt.gov

or

City of Billings
P.O. Box 1178
Billings, MT 59103

1.01 The undersigned Bidder proposes and agrees if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents, to perform and furnish all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

2.01 Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid, and Instructions to Bidders, including without limitations those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance for sixty (60) days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

3.01 In submitting this Bid, Bidder represents, as set forth in the Agreement, that:

A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of all which is hereby acknowledged:

Addendum No.	Addendum Date
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work

C. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Special Provisions as provided in paragraph 4.02 of the General Conditions, and (2) reports and drawings of a Hazard Environmental Condition, if any, which has been identified in the Special Provisions as provided in paragraph 4.06 of the General Conditions.

E. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.

F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of the Work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies and data with the Bidding Documents.

I. Bidder has given Engineer/Architect written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer/Architect is acceptable to Bidder .

J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

4.01 Bidder further represents that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

The Bidder certifies that no official of the Owner, Engineer/Architect or any member of such officials immediate family, has direct or indirect interest in the pecuniary profits or Contracts of the Bidder.

5.01 The Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

LUMP SUM BID

Base Bid:

TOTAL LUMP SUM BID PRICE$_____
(Figures)

TOTAL LUMP SUM BID PRICE_____
(Words)

Alternate No. 1: HDPE Supply Line

TOTAL LUMP SUM BID PRICE$_____
(Figures)

TOTAL LUMP SUM BID PRICE_____
(Words)

A. Lump Sum Prices have been computed in accordance with 11.01 of the General Conditions.

B. The OWNER reserves the right to reject any or all bids.

6.01 Bidder agrees that the Work will be substantially completed and competed and ready for final payment in accordance with 14.07 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified above, which shall be stated in the Agreement.

7.01 The following documents are attached to and made a condition of the Bid:

A. Required Bid security in the amount of 10% of the maximum Bid price including alternates, if any, and in the form identified in the Instructions To Bidders.

B. Unit Prices, See Special Provisions.

C. Irrigation Contractor Qualifications, see Special Provisions.

8.01 The terms used in this Bid with the initial capital letters have the meanings indicated in the Instructions To Bidders, General Conditions, and the Supplementary Conditions.

SUBMITTED on _____ , _____.
(Date)

Montana Contractor's Registration # (if any) _____

Montana Contractor's Gross Receipts Account # _____
(Example: XXXXXX-XXX-CGR)
Employer's Tax ID No. _____

If BIDDER is:

An Individual: _____
(Name typed or printed)
By: _____
(Individual's Signature)
Doing business as: _____

Business Address: _____

_____

Phone No.: _____ FAX No: _____

A Partnership: _____
(Partnership Name)
By: _____
(Signature)
_____
(Name, typed or printed)
Business Address: _____

_____

Phone No.: _____ FAX No: _____

A Corporation: _____

(Corporation Name)

State of Incorporation: _____

Type (General Business, Professional, Service, Limited Liability): _____

By: _____

(Signature of person authorized to sign)

Title: _____

Attest: _____

(Signature)

Business Address: _____

_____

Phone No.: _____ FAX No: _____

Date of Qualification To Do Business Is: _____

_____

(Corporate Seal)

A Joint Venture: Each Joint Venture Must Sign

Joint Venturer Name: _____

(Name)

By: _____

(Signature of Joint Venture Partner)

Name: _____

(Name, printed or typed)

Title: _____

Business Address: _____

_____

Phone No.: _____ FAX No: _____

Joint Venturer Name: _____
(Name)

By: _____
(Signature of Joint Venture Partner)

Name: _____
(Name, printed or typed)

Title: _____

Business Address: _____

_____

Phone No.: _____ FAX No: _____

Address of Joint Venture for Receipt of Official Communication:
Address: _____

_____

Phone No.: _____ FAX No: _____

(Each Joint Venture must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above.)

END OF SECTION

BID BOND

CONTRACTOR INSERT BID BOND HERE AND REMOVE THIS PAGE

SECTION 00500

AGREEMENT FORM

This Agreement is dated as of _____, by and between "City of Billings," hereinafter called Owner, and _____, hereinafter called Contractor. Owner and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

Article 1. WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: Removal of existing irrigation equipment, pump, concrete vault, and the installation of a new irrigation system, pump station, and electrical upgrades.

Article 2. THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows: W.O. 23-33 Grandview Park Irrigation System Replacement.

Article 3. ENGINEER/ARCHITECT

3.01 The Project has been designed by: STEINER THUESEN PLLC who is hereinafter called Engineer/Architect and who is to act as Owner's representative, assume all duties and responsibilities and have the rights and authority assigned to Engineer/Architect in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

Article 4. CONTRACT TIME

4.01 Time of the Essence.

A. All the time limits for milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 Days to achieve Substantial and Final Completion.

A. The Work at all locations shall be substantially complete within 60 calendar days after the date when the Contract Time commences to run as provided in paragraph 2.03 of the General Conditions.

B. Final completion of the Work shall be within 14 calendar days after the date of Substantial Completion.

4.03 Liquidated damages.

A. OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the Work is not completed within the times specified in paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense and difficulties involved in

proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay Owner Five Hundred dollars ($500.00) for each day that expires after the time specified in paragraph 4.02 for Substantial Completion until the Work is substantially complete and Five Hundred dollars ($500.00) for each day that expires after the time specified in paragraph 4.02 for Final completion. The liquidated damages specified herein include unscheduled employment.

Article 5. CONTRACT PRICE

Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount equal to the sum of the established Base Bid amount and any accepted Alternates. Payment will be lump sum. The Bid Form is attached to this Agreement.

Article 6. PAYMENT PROCEDURES

6.01 Submittal and Processing of Payments:

A. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer/Architect as provided in the Contract Documents.

6.02 Progress Payments; Retainage:

A. Owner shall make progress payments in accordance with Article 14 of the General Conditions on account of the Contract Price on the basis of Contractor's Applications for Payment as recommended by Engineer/Architect, once each month during construction as provided below. All progress payments will be on the basis of the progress of the Work measured by the number of units of each bid item completed times the bid unit price in the Unit Price Schedule of the Bid Form for that item or for lump sum bid items payment will be made on the percentage of actual work complete based on the schedule of values break down for the lump sum bid item.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the sum of the unit price items less the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer/Architect may determine or Owner may withhold, in accordance with paragraph 14.02 of the General Conditions.

    a. The Owner shall retain five percent (5%) of the amount of each payment until final completion and acceptance of all Work covered by the Contract Documents.

    b. Retainage will be five percent (5%) of materials and equipment not incorporated in the Work (but delivered, suitably stored and accompanied by documentation satisfactory to Owner as provided in paragraph 14.02 of the General Conditions).

    c. In accordance with Title 15, Chapter 50, MCA, the Owner shall withhold, in addition to other amounts withheld as provided by law or specified herein, one percent (1%)

of all payments due the Contractor and shall transmit such monies to the Montana Department of Revenue.

2. Upon Substantial Completion and at the Owner's discretion, the amount of retainage may be further reduced if requested by the Contractor.

6.03 Final Payment:

A. Upon final completion and acceptance of the Work in accordance with paragraph 14.07 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer/Architect as provided in said paragraph 14.07.

Article 7. INTEREST:

7.01 All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at a rate of up to 1% per month.

Article 8. CONTRACTOR'S REPRESENTATION:

8.01 In order to induce Owner to enter into this Agreement, Contractor makes the following representations:

A. Contractor has examined and carefully studied the Contract Documents (including all Addenda) listed in paragraph 9 and the other related data identified in the Bidding Documents

B. Contractor has visited the site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, performance or furnishing of the Work.

C. Contractor is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.

D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in the Special Provisions as provided in paragraph 4.02 of the General Conditions and (2) reports and drawings of a Hazardous Environmental Condition, if any, at the Site which has been identified in the Special Provisions as provided in paragraph 4.06 of the General Conditions. Contractor acknowledges that such reports and drawings are not Contract Documents and may not be complete for Contractor's purposes. Contractor acknowledges that Owner and Engineer/Architect do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to Underground Facilities at or contiguous to the site.

E. Contractor has obtained and carefully studied (or assumes responsibility for having done so) all such additional supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise, which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction

to be employed by Contractor including applying the specific means, methods, techniques, sequences and procedures of construction, if any, expressly required by the Contract Documents to be employed by the Contractor, and safety precautions and programs incident thereto.

F. Contractor does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the performance and furnishing of the Work at the Contract Price, within the Contract Times and in accordance with the other terms and conditions of the Contract Documents.

G. Contractor is aware of the general nature of work to be performed by Owner and others at the site that relates to the Work as indicated in the Contract Documents.

H. Contractor has correlated the information known to Contractor, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.

I. Contractor has given Engineer/Architect written notice of all conflicts, errors, ambiguities or discrepancies that Contractor has discovered in the Contract Documents and the written resolution thereof by Engineer /Architect is acceptable to Contractor.

J. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

Article 9. CONTRACT DOCUMENTS:

9.01 Contents

A. The Contract Documents consist of the following:
   1. This Agreement (Pages 1 to , inclusive);
   2. Performance Bond (pages 1 to , inclusive);
   3. Payment Bond (pages 1 to , inclusive);
   4. Other Bonds (pages 1 to , inclusive);
      a. (pages to , inclusive);
      b. (pages to , inclusive);
      c. (pages to , inclusive);
   5. General Conditions (pages 1 to , inclusive);
   6. Supplementary Conditions (pages 1 to , inclusive);
   7. Special Provisions (pages 1 to , inclusive);
   8. Specifications as listed in the table of contents of the Project Manual;
   9. Drawings consisting of a cover sheet and sheets numbered ___ through __ with each sheet bearing the following general title:_____ _____;
   10. Addenda (Numbers _____to _____, inclusive);
   11. Exhibits to this Agreement (enumerated as follows):
      a. Notice To Proceed (pages 1 to ___ , inclusive);

b. Contractor's Bid (pages _____ to ____, inclusive);

c. Documentation submitted by Contractor prior to Notice of Award (pages_____ to _____, inclusive);

d. Notice of Award

12. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:

a. Written Amendments;

b. Work Change Directives;

c. Change Order(s).

d. Any Notice of Partial Utilization

e. Notice of Substantial Completion

f. Lien Waivers

g. Notice of Final Completion and Acceptance

13. Certificates of Insurance
14. Wage Rates
15. Special Provisions (Section 00900 of Std Mods and project specific)
16. Montana Public Works Standard Specifications, Sixth Edition, dated April 2010, including the City of Billings Standard Modifications thereof.

B. The documents listed in paragraph 9.01.A. are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified or supplemented as provided in paragraphs 3.04 of the General Conditions.

Article 10. MISCELLANEOUS:

10.01 Terms.

A. Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.

10.02 Assignment of Contract.

A. No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically, but without limitation, moneys that may come due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 Successors and Assigns

A. Owner and Contractor each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents.

10.04 Severability

A. Any provision of part of the Contract Documents held to be void or unenforceable under and Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

IN WITNESS WHEREOF, Owner and Contractor have signed copies of Agreement. Documents have been signed or identified by Owner and Contractor or by Engineer/Architect on their behalf.

This Agreement will be effective on _____, _____ (which is the effective date of the Agreement).

This Agreement shall not be effective unless and until concurred by Funding Agency's (if any) designated representative.

City of Billings

By _____
William A. Cole, Mayor

Attest _____
Denise R. Bohlman, City Clerk

Approved as to form _____
City Attorney

Address for giving notices:
2224 Montana Avenue
Billings, MT 59101

Phone No. (406) 657-8231

FAX No. (406) 237-6291

Contractor _____

By _____
(Signature)

Attest _____
(Signature)

Address for giving notices:
_____
_____

Phone No. _____

FAX No. _____

(CORPORATE SEAL)

(If OWNER is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of Owner - Contractor Agreement.

(SEAL)

Contractor Registration No.

Agent for service of process:

_____

_____

(If CONTRACTOR is a corporation or a partnership, attach evidence of authority to sign.)

Owner's Designated Representative:	Contractor's Designated Representative:
Name: Jeremy Hauge	Name:
Title: Staff Engineer	Title:
Address: 2224 Montana Avenue	Address:
Billings, MT 59101	
Phone No.: (406) 237-6158	Phone No.:
FAX No.: (406) 237-6291	FAX No.:

AGENCY CONCURANCE:

As lender or insurer of funds to defray the costs of this Contract, and without liability for any payments thereunder, the Agency hereby concurs in the form, content, and execution of this Agreement.

By: _____
(Agency Official's Signature)

Title: _____

Date: _____

END OF SECTION

MONTANA STATEWIDE PREVAILING WAGE RATES

MONTANA
PREVAILING WAGE RATES FOR HEAVY CONSTRUCTION SERVICES 2023

Effective: January 14, 2023

Greg Gianforte, Governor
State of Montana

Laurie Esau, Commissioner
Department of Labor & Industry

To obtain copies of prevailing wage rate schedules, or for information relating to public works projects and payment of prevailing wage rates, visit ERD at erd.dli.mt.gov/labor-standards or contact:

Employment Standards Division
Montana Department of Labor and Industry
P. O. Box 8011
Helena, MT 59601
Phone 406-444-6543

The department welcomes questions, comments, and suggestions from the public. In addition, we'll do our best to provide information in an accessible format, upon request, in compliance with the Americans with Disabilities Act.

MONTANA PREVAILING WAGE REQUIREMENTS

The Commissioner of the Department of Labor and Industry, in accordance with Sections 18-2-401 and 18-2-402 of the Montana Code Annotated (MCA), has determined the standard prevailing rate of wages for the occupations listed in this publication.

The wages specified herein control the prevailing rate of wages for the purposes of Section 18-2-401, et seq., MCA. It is required each employer pay (as a minimum) the rate of wages, including fringe benefits, travel allowance, zone pay and per diem applicable to the district in which the work is being performed as provided in the attached wage determinations.

All Montana Prevailing Wage Rates are available on the internet at erd.dli.mt.gov/labor-standards or by contacting the department at (406) 444-6543.

In addition, this publication provides general information concerning compliance with Montana's Prevailing Wage Law and the payment of prevailing wages. For detailed compliance information relating to public works contracts and payment of prevailing wage rates, please consult the regulations on the internet at erd.dli.mt.gov/labor-standards or contact the department at (406) 444-6543.

LAURIE ESAU
Commissioner
Department of Labor and Industry
State of Montana

TABLE OF CONTENTS

MONTANA PREVAILING WAGE REQUIREMENTS:

A. Date of Publication 3
B. Definition of Heavy Construction 3
C. Definition of Public Works Contract 3
D. Prevailing Wage Schedule 3
E. Rates to Use for Projects 3
F. Wage Rate Adjustments for Multiyear Contracts 3
G. Fringe Benefits 4
H. Dispatch City 4
I. Zone Pay 4
J. Computing Travel Benefits 4
K. Per Diem 4
L. Apprentices 4
M. Posting Notice of Prevailing Wages 5
N. Employment Preference 5
O. Projects of a Mixed Nature 5
P. Occupations Definitions Website 5
Q. Welder Rates 5
R. Foreman Rates 5
S Proper Classification for Pipefitter and Laborer/Pipelayer Work on Water and Waste Water Treatment Plants 5

WAGE RATES:

BOILERMAKERS 6
BRICK, BLOCK, AND STONE MASONS 6
CARPENTERS 6
CEMENT MASONS AND CONCRETE FINISHERS 6
CONSTRUCTION EQUIPMENT OPERATORS
- OPERATORS GROUP 1 7
- OPERATORS GROUP 2 7
- OPERATORS GROUP 3 8
- OPERATORS GROUP 4 8
- OPERATORS GROUP 5 8
- OPERATORS GROUP 6 8
- OPERATORS GROUP 7 9

CONSTRUCTION LABORERS
- LABORERS GROUP 1 9
- LABORERS GROUP 2 9
- LABORERS GROUP 3 10
- LABORERS GROUP 4 10

DIVER TENDERS 10
DIVERS 11
ELECTRICIANS 11
INSULATION WORKERS - MECHANICAL (HEAT AND FROST) 11
IRONWORKERS - REINFORCING IRON AND REBAR WORKERS 12
IRONWORKERS - STRUCTURAL IRON AND STEEL WORKERS 12
LINE CONSTRUCTION
- EQUIPMENT OPERATORS 12
- GROUNDMAN 12
- LINEMAN 13

MILLWRIGHTS 13
PAINTERS 13
PILE BUCKS 13
PILOT CAR DRIVERS 13
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS 14
SPRINKLERFITTERS 14
TRUCK DRIVERS 15

A. Date of January 14, 2023

B. Definition of Heavy Construction

The Administrative Rules of Montana (ARM), 24.17.501(4) – (4)(a), states *"Heavy construction projects include, but are not limited to, those projects that are not properly classified as either 'building construction', or 'highway construction.'*

Heavy construction projects include, but are not limited to, antenna towers, bridges (major bridges designed for commercial navigation), breakwaters, caissons (other than building or highway), canals, channels, channel cut-offs, chemical complexes or facilities (other than buildings), cofferdams, coke ovens, dams, demolition (not incidental to construction), dikes, docks, drainage projects, dredging projects, electrification projects (outdoor), fish hatcheries, flood control projects, industrial incinerators (other than building), irrigation projects, jetties, kilns, land drainage (not incidental to other construction), land leveling (not incidental to other construction), land reclamation, levees, locks and waterways, oil refineries (other than buildings), pipe lines, ponds, pumping stations (prefabricated drop-in units – not buildings), railroad construction, reservoirs, revetments, sewage collection and disposal lines, sewers (sanitary, storm, etc.), shoreline maintenance, ski tows, storage tanks, swimming pools (outdoor), subways (other than buildings), tipples, tunnels, unsheltered piers and wharves, viaducts (other than highway), water mains, waterway construction, water supply lines (not incidental to building), water and sewage treatment plants (other than buildings) and wells."

C. Definition of Public Works Contract

Section 18-2-401(11)(a), MCA defines "public works contract" as *"…a contract for construction services let by the state, county, municipality, school district, or political subdivision or for nonconstruction services let by the state, county, municipality, or political subdivision in which the total cost of the contract is in excess of $25,000…"*.

D. Prevailing Wage Schedule

This publication covers only Heavy Construction occupations and rates in the specific localities mentioned herein. These rates will remain in effect until superseded by a more current publication. Current prevailing wage rate schedules for Building Construction, Highway Construction and Nonconstruction Services occupations can be found on the internet at www.mtwagehourbopa.com or by contacting the department at (406) 444-6543.

E. Rates to Use for Projects

ARM, 24.17.127(1)(c), states *"The wage rates applicable to a particular public works project are those in effect at the time the bid specifications are advertised."*

F. Wage Rate Adjustments for Multiyear Contracts

Section 18-2-417, MCA states:

"(1) Any public works contract that by the terms of the original contract calls for more than 30 months to fully perform must include a provision to adjust, as provided in subsection (2), the standard prevailing rate of wages to be paid to the workers performing the contract.

(2) The standard prevailing rate of wages paid to workers under a contract subject to this section must be adjusted 12 months after the date of the award of the public works contract. The amount of the adjustment must be a 3% increase. The adjustment must be made and applied every 12 months for the term of the contract.

(3) Any increase in the standard rate of prevailing wages for workers under this section is the sole responsibility of the contractor and any subcontractors and not the contracting agency."

G. Fringe Benefits

Section 18-2-412, MCA states:

"(1) To fulfill the obligation…a contractor or subcontractor may:

(a) pay the amount of fringe benefits and the basic hourly rate of pay that is part of the standard prevailing rate of wages directly to the worker or employee in cash;

(b) make an irrevocable contribution to a trustee or a third person pursuant to a fringe benefit fund, plan, or program that meets the requirements of the Employee Retirement Income Security Act of 1974 or that is a bona fide program approved by the U. S. department of labor; or

(c) make payments using any combination of methods set forth in subsections (1)(a) and (1)(b) so that the aggregate of payments and contributions is not less than the standard prevailing rate of wages, including fringe benefits and travel allowances, applicable to the district for the particular type of work being performed.

(2) The fringe benefit fund, plan, or program described in subsection (1)(b) must provide benefits to workers or employees for health care, pensions on retirement or death, life insurance, disability and sickness insurance, or bona fide programs that meet the requirements of the Employee Retirement Income Security Act of 1974 or that are approved by the U. S. department of labor."

Fringe benefits are paid for all hours worked (straight time and overtime hours). However, fringe benefits are not to be considered a part of the hourly rate of pay for calculating overtime, unless there is a collectively bargained agreement in effect that specifies otherwise.

H. Dispatch City

ARM, 24.17.103(11), defines dispatch city as *"…the courthouse in the city from the following list which is closest to the center of the job: Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, Miles City, Missoula and Sidney."*

I. Zone Pay

Zone pay is not travel pay. ARM, 24.17.103(25), defines zone pay as *"…an amount added to the base pay; the combined sum then becomes the new base wage rate to be paid for all hours worked on the project. Zone pay must be determined by measuring the road miles one way over the shortest practical maintained route from the dispatch city to the center of the job."* See section H above for a list of dispatch cities.

J. Computing Travel Benefits

ARM, 24.17.103(23), states *" 'Travel pay,' also referred to as 'travel allowance,' is and must be paid for travel both to and from the job site, except those with special provisions listed under the classification. The rate is determined by measuring the road miles one direction over the shortest practical maintained route from the dispatch city or the employee's home, whichever is closer, to the center of the job."* See section H above for a list of dispatch cities.

K. Per Diem

ARM, 24.17.103(19), states *" 'Per diem' typically covers costs associated with board and lodging expenses. Per diem is paid when an employee is required to work at a location outside the daily commuting distance and is required to stay at that location overnight or longer."*

L. Apprentices

Wage rates for apprentices registered in approved federal or state apprenticeship programs are contained in those programs. Additionally, Section 18-2-416(2), MCA states, *"…The full amount of any applicable fringe benefits must be paid to the apprentice while the apprentice is working on the public works contract."* Apprentices not registered in approved federal or state apprenticeship programs will be paid the appropriate journey level prevailing wage rate when working on a public works contract.

M. Posting Notice of Prevailing Wages

Section 18-2-406, MCA, provides that contractors, subcontractors, and employers who are *"...performing work or providing construction services under public works contracts, as provided in this part, shall post in a prominent and accessible site on the project or staging area, not later than the first day of work and continuing for the entire duration of the project, a legible statement of all wages and fringe benefits to be paid to the employees."*

N. Employment Preference

Sections 18-2-403 and 18-2-409, MCA require contractors to give preference to the employment of bona fide Montana residents in the performance of work on public works contracts.

O. Projects of a Mixed Nature

Section 18-2-408, MCA states:

"(1) The contracting agency shall determine, based on the preponderance of labor hours to be worked, whether the public works construction services project is classified as a highway construction project, a heavy construction project, or a building construction project.

(2) Once the project has been classified, employees in each trade classification who are working on that project must be paid at the rate for that project classification"

P. Occupations Definitions

You can find definitions for these occupations on the following Bureau of Labor Statistics website:
http://www.bls.gov/oes/current/oes_stru.htm

Q. Welder Rates

Welders receive the rate prescribed for the craft performing an operation to which welding is incidental.

R. Foreman Rates

Rates are no longer set for foremen. However, if a foreman performs journey level work, the foreman must be paid at least the journey level rate.

S. Proper Classification for Pipefitter and Laborer/Pipelayer Work on Water and Waste Water Treatment Plants The proper classification for the following work is Pipefitter, when it is performed inside a building structure or performed at a location which will later be inside of a building: Joining steel pipe larger than 12 inches in diameter with bolted flange connections that has been pre-fabricated off site and does not require any modification such as cutting, grinding, welding, or other fabrication in order to be installed. All other work previously classified as pipefitter remains in that classification. The proper classification for that work when it is at a location that will always be outside a building is Pipelayer, which is under the Laborer Group 3 classification.

WAGE RATES

BOILERMAKERS

Wage	Benefit
$34.12	$31.68

Duties Include:
Construct, assemble, maintain, and repair stationary steam boilers, boiler house auxiliaries, process vessels, pressure vessels and penstocks. Bulk storage tanks and bolted steel tanks.

Travel:
All Districts
0-120 mi. free zone
>120 mi. federal mileage rate/mi.

Special Provision:
Travel is paid only at the beginning and end of the job.

Per Diem:
All Districts
0-70 mi. free zone
>70-120 mi. $65.00/day
>120 mi. $80.00/day

↑ Back to Table of Contents

BRICK, BLOCK, AND STONE MASONS

Wage	Benefit
$32.32	$16.78

Travel:
0-70 mi. free zone
>70-90 mi. $60.00/day
>90 mi. $80.00/day

↑ Back to Table of Contents

CARPENTERS

Wage	Benefit
$33.50	$14.07

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $4.00/hr.
>60 mi. base pay + $6.00/hr.

↑ Back to Table of Contents

CEMENT MASONS AND CONCRETE FINISHERS

No Rate Established

Duties Include:
Smooth and finish surfaces of poured concrete, such as floors, walks, sidewalks, or curbs. Align forms for sidewalks, curbs, or gutters.

Zone Pay:
No zone pay established.

↑ Back to Table of Contents

CONSTRUCTION EQUIPMENT OPERATORS GROUP 1

Wage	Benefit
$29.11	$13.80

This group includes but is not limited to:
Air Compressor; Auto Fine Grader; Belt Finishing; Boring Machine (Small); Cement Silo; Crane, A-Frame Truck Crane; Crusher Conveyor; DW-10, 15, and 20 Tractor Roller; Farm Tractor; Forklift; Form Grader; Front-End Loader, under 1 cu. yd; Oiler, Herman Nelson Heater; Mucking Machine; Oiler, All Except Cranes/Shovels; Pumpman.

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $3.50/hr.
>60 mi. base pay + $5.50/hr.

↑ Back to Table of Contents

CONSTRUCTION EQUIPMENT OPERATORS GROUP 2

Wage	Benefit
$29.70	$13.80

This group includes but is not limited to:
Air Doctor; Backhoe\Excavator\Shovel, up to and incl. 3 cu. yds; Bit Grinder; Bitunimous Paving Travel Plant; Boring Machine, Large; Broom, Self-Propelled; Concrete Travel Batcher; Concrete Float & Spreader; Concrete Bucket Dispatcher; Concrete Finish Machine; Concrete Conveyor; Distributor; Dozer, Rubber-Tired, Push, & Side Boom; Elevating Grader\Gradall; Field Equipment Serviceman; Front-End Loader, 1 cu. yd up to and incl. 5 cu. yds; Grade Setter; Heavy Duty Drills, All Types; Hoist\Tugger, All; Hydralift Forklifts & Similar; Industrial Locomotive; Motor Patrol (except finish); Mountain Skidder; Oiler, Cranes\Shovels; Pavement Breaker, EMSCO; Power Saw, Self-Propelled; Pugmill; Pumpcrete\Grout Machine; Punch Truck; Roller, other than Asphalt; Roller, Sheepsfoot (Self-Propelled); Roller, 25 tons and over; Ross Carrier; Rotomill, under 6 ft; Trenching Machine; Washing /Screening Plant

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $3.50/hr.
>60 mi. base pay + $5.50/hr.

↑ Back to Table of Contents

CONSTRUCTION EQUIPMENT OPERATORS GROUP 3

Wage	Benefit
$30.65	$13.80

This group includes but is not limited to:
Asphalt Paving Machine; Asphalt Screed; Backhoe\Excavator\Shovel, over 3 cu. yds; Cableway Highline; Concrete Batch Plant; Concrete Curing Machine; Concrete Pump; Cranes, Creter; Cranes, Electric Overhead; Cranes, 24 tons and under; Curb Machine\Slip Form Paver; Finish Dozer; Front-End Loader, over 5 cu. yds; Mechanic\Welder; Pioneer Dozer; Roller Asphalt (Breakdown & Finish); Rotomill, over 6 ft; Scraper, Single, Twin, or Pulling Belly-Dump; YO-YO Cat.

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $3.50/hr.
>60 mi. base pay + $5.50/hr.

↑ Back to Table of Contents

CONSTRUCTION EQUIPMENT OPERATORS GROUP 4

Wage	Benefit
$31.65	$13.80

This group includes but is not limited to:
Asphalt\Hot Plant Operator; Cranes, 25 tons up to and incl. 44 tons; Crusher Operator; Finish Motor Patrol; Finish Scraper.

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $3.50/hr.
>60 mi. base pay + $5.50/hr.

↑ Back to Table of Contents

CONSTRUCTION EQUIPMENT OPERATORS GROUP 5

Wage	Benefit
$31.75	$13.80

This group includes but is not limited to:
Cranes, 45 tons up to and incl. 74 tons.

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $3.50/hr.
>60 mi. base pay + $5.50/hr.

↑ Back to Table of Contents

CONSTRUCTION EQUIPMENT OPERATORS GROUP 6

Wage	Benefit
$32.75	$13.80

This group includes but is not limited to:
Cranes, 75 tons up to and incl. 149 tons; Cranes, Whirley (All).

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $3.50/hr.
>60 mi. base pay + $5.50/hr.

↑ Back to Table of Contents

CONSTRUCTION EQUIPMENT OPERATORS GROUP 7

Wage	Benefit
$33.75	$13.80

This group includes but is not limited to:
Cranes, 150 tons up to and incl. 250 tons; Cranes, over 250 tons—add $1.00 for every 100 tons over 250 tons; Crane, Tower (All); Crane Stiff-Leg or Derrick; Helicopter Hoist.

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $3.50/hr.
>60 mi. base pay + $5.50/hr.

↑ Back to Table of Contents

CONSTRUCTION LABORERS GROUP 1/FLAG PERSON FOR TRAFFIC CONTROL

Wage	Benefit
$23.08	$11.82

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $3.05/hr.
>60 mi. base pay + $4.85/hr.

↑ Back to Table of Contents

CONSTRUCTION LABORERS GROUP 2

Wage	Benefit
$26.40	$11.82

This group includes but is not limited to:
General Labor; Asbestos Removal; Burning Bar; Bucket Man; Carpenter Tender; Caisson Worker; Cement Mason Tender; Cement Handler (dry); Chuck Tender; Choker Setter; Concrete Worker; Curb Machine-lay Down; Crusher and Batch Worker; Heater Tender; Fence Erector; Landscape Laborer; Landscaper; Lawn Sprinkler Installer; Pipe Wrapper; Pot Tender; Powderman Tender; Rail and Truck Loaders and Unloaders; Riprapper; Sign Erection; Guardrail and Jersey Rail; Spike Driver; Stake Jumper; Signalman; Tail Hoseman; Tool Checker and Houseman and Traffic Control Worker.

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $3.05/hr.
>60 mi. base pay + $4.85/hr.

↑ Back to Table of Contents

CONSTRUCTION LABORERS GROUP 3

Wage	Benefit
$26.07	$12.44

This group includes but is not limited to:
Concrete Vibrator; Dumpman (Grademan); Equipment Handler; Geotextile and Liners; High-Pressure Nozzleman; Jackhammer (Pavement Breaker) Non-Riding Rollers; Pipelayer; Posthole Digger (Power); Power Driven Wheelbarrow; Rigger; Sandblaster; Sod Cutter-Power and Tamper.

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $3.05/hr.
>60 mi. base pay + $4.85/hr.

↑ Back to Table of Contents

CONSTRUCTION LABORERS GROUP 4

Wage	Benefit
$26.76	$11.82

This group includes but is not limited to:
Hod Carrier***; Water Well Laborer; Blaster; Wagon Driller; Asphalt Raker; Cutting Torch; Grade Setter; High-Scaler; Power Saws (Faller & Concrete);
Powderman; Rock & Core Drill; Track or Truck Mounted Wagon Drill and Welder incl. Air Arc

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $3.05/hr.
>60 mi. base pay + $4.85/hr.

***Hod Carriers will receive the same amount of travel and/or subsistence pay as bricklayers when requested to travel.

↑ Back to Table of Contents

DIVER TENDERS

Wage	Benefit
$43.98	$17.84

The tender shall receive 2 hours at the straight time pay rate per shift for dressing and/or undressing a Diver when work is done under hyperbaric conditions.

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $4.00/hr.
>60 mi. base pay + $6.00/hr.

↑ Back to Table of Contents

DIVERS

	Wage	Benefit
Stand-By	$44.98	$17.84
Diving	$89.96	$17.84

Depth Pay (Surface Diving)

0-20 ft.	free zone
>20-100 ft.	$2.00 per ft.
>100-150 ft.	$3.00 per ft.
>150-220 ft.	$4.00 per ft.
>220 ft.	$5.00 per ft.

Diving In Enclosures

0-25 ft.	free zone
>25-300 ft.	$1.00 per ft.

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $4.00/hr.
>60 mi. base pay + $6.00/hr.

↑ Back to Table of Contents

ELECTRICIANS

Wage	Benefit
$36.69	$16.93

Travel:
No mileage due when traveling in employer's vehicle.

The following travel allowance is applicable when traveling in employee's vehicle:

0-18 mi. free zone
>18-60 mi. federal mileage rate/mi.
>60 mi. $75.00/day

↑ Back to Table of Contents

INSULATION WORKERS - MECHANICAL (HEAT AND FROST)

Wage	Benefit
$41.07	$19.87

Duties Include:
Insulate pipes, ductwork or other mechanical systems.

Travel:
All Districts
0-30 mi. free zone
>30-40 mi. $25.00/day
>40-50 mi. $35.00/day
>50-60 mi. $50.00/day
>60 mi. $60.00/day plus
- $0.56/mi. if transportation is not provided.
- $0.20/mi. if in company vehicle.

>60 mi. $105.00/day on jobs requiring an overnight stay plus
- $0.56/mi. if transportation is not provided.
- $0.20/mi. if in company vehicle.

↑ Back to Table of Contents

IRONWORKERS – REINFORCING IRON AND REBAR WORKERS

Wage	Benefit
$30.53	$27.91

Duties Include:
Cut, bend, tie, and place rebar.

Travel:
0-45 mi. free zone
>45-60 mi. $50.00/day
>60-100 mi. $75.00/day
>100 mi. $95.00/day

Special Provision:
When the employer provides transportation, travel will not be paid. However, when an employee is required to travel over 70 miles one way, the employee may elect to receive the travel pay in lieu of the transportation.

↑ Back to Table of Contents

IRONWORKERS – STRUCTURAL IRON AND STEEL WORKERS

Wage	Benefit
$30.53	$27.91

Duties Include:
Structural steel erection; assemble prefabricated metal buildings; energy producing windmill type towers; metal bleacher seating; handrail fabrication and ornamental steel.

Travel:
0-45 mi. free zone
>45-60 mi. $50.00/day
>60-100 mi. $75.00/day
>100 mi. $95.00/day

Special Provision:
When the employer provides transportation, travel will not be paid. However, when an employee is required to travel over 70 miles one way, the employee may elect to receive the travel pay in lieu of the transportation.

↑ Back to Table of Contents

LINE CONSTRUCTION – EQUIPMENT OPERATORS

Wage	Benefit
$37.26	$17.93

Duties Include:
All work on substations

Travel:
No Free Zone
$60.00/day

↑ Back to Table of Contents

LINE CONSTRUCTION – GROUNDMAN

Wage	Benefit
$29.09	$17.24

Duties Include:
All work on substations

Travel:
No Free Zone
$60.00/day

↑ Back to Table of Contents

LINE CONSTRUCTION – LINEMAN

Wage	Benefit
$48.65	$19.06

Duties Include:
All work on substations

Travel:
No Free Zone
$60.00/day

↑ Back to Table of Contents

MILLWRIGHTS

Wage	Benefit
$42.58	$14.57

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $4.00/hr.
>60 mi. base pay + $6.00/hr.

↑ Back to Table of Contents

PAINTERS

Wage	Benefit
$25.00	$0.00

Travel:
No travel or per diem established.

↑ Back to Table of Contents

PILE BUCKS

Wage	Benefit
$33.50	$14.07

Duties Include:
Set up crane; set up hammer; weld tips on piles; set leads; insure piles are driven straight with the use of level or plum bob. Give direction to crane operator as to speed, and direction of swing. Cut piles to grade.

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $4.00/hr.
>60 mi. base pay + $6.00/hr.

↑ Back to Table of Contents

PILOT CAR DRIVERS

No Rate Established

Zone Pay:
No zone pay established.

↑ Back to Table of Contents

PLUMBERS, PIPEFITTERS, AND STEAMFITTERS

Wage	Benefit
$38.56	$20.61

Duties Include:
Assemble, install, alter, and repair pipe-lines or pipe systems that carry water, steam, air, other liquids or gases. Testing of piping systems, commissioning and retro-commissioning. Workers in this occupation may also install heating and cooling equipment and mechanical control systems.

Travel:
0-70 free zone
>70 mi.

- On jobs when employees do not work consecutive days: $0.55/mi. if employer doesn't provide transportation. Not to exceed two trips.
- On jobs when employees work any number of consecutive days: $110.00/day.
-

↑ Back to Table of Contents

SPRINKLER FITTERS

Wage	Benefit
$35.66	$24.29

Duties Include:
Duties Include but not limited to any and all fire protection systems: Installation, dismantling, inspection, testing, maintenance, repairs, adjustments, and corrections of all fire protection and fire control systems, including both overhead and underground water mains, all piping, fire hydrants, standpipes, air lines, tanks, and pumps used in connection with sprinkler and alarm systems.

Travel
All Districts
The following travel allowance is applicable when traveling in employee's vehicle.

0-60 mi. free zone
>60-80 mi. $21.00/day
>80-100 mi. $31.00/day
>100 mi. $115.00/day + the IRS rate per mile and $8.92 for every 15 miles traveled for one trip out and one trip back

No travel allowance required when in employer's vehicle.

Per Diem
No per diem is applicable when traveling in employer's vehicle

The following per diem is applicable when traveling in employee's vehicle.

0-100 mi. free zone
>100 mi. $105.00/day + the IRS rate per mile and $8.92 for every 15 miles traveled for one trip out and one trip back.
>100 mi. $115.00/day

↑ Back to Table of Contents

TRUCK DRIVERS

	Wage	Benefit
Truck Driver	$31.28	$11.96

Truck drivers include but are not limited to:
Combination Truck and Concrete Mixer and Transit Mixer; Dry Batch Trucks; Distributor Driver; Dumpman; Dump Trucks and similar equipment; Dumpster; Flat Trucks; Lumber Carriers; Lowboys; Pickup; Powder Truck Driver; Power Boom; Serviceman; Service Truck/Fuel Truck/Tireperson; Truck Mechanic; Trucks with Power Equipment; Warehouseman, Partsman, Cardex and Warehouse Expeditor; Water Trucks.

Zone Pay:
All Districts
0-30 mi. free zone
>30-60 mi. base pay + $3.05/hr.
>60 mi. base pay + .$4.85/hr.

↑ Back to Table of Contents

SECTION 00910

SPECIAL PROVISIONS

Table of Contents

SP-1 FORMAT 2

SP-2 SUBSTANTIAL COMPLETION 2

SP-3 PROJECT COORDINATION 3

SP-4 FIELD ENGINEERING 3

SP-5 CONTRACT SCHEDULE 3

SP-6 MEASUREMENT & PAYMENT 3

A. General 3

B. Measurement & Payment Items 3

SP-7 COMPACTION REQUIREMENTS
SP-8 MATERIALS TESTING AND CONTROL
SP-9 PROTECTION OF EXISTING UTILITIES
SP-10 UNDERGROUND UTILITY CROSSINGS
SP-11 TEMPORARY CONTROLS
SP-12 PUBLIC ACCESS
SP-13 PERMITS
SP-14 SURVEY MARKERS AND MONUMENTS
SP-15 UNSCHEDULED EMPLOYMENT OF THE ENGINEER/ ARCHITECT
SP-16 PAYMENT OF CHANGE ORDERS
SP-17 STAGING AREA
SP-18 CONSTRUCTION ACCESS
SP-19 PROTECTION, PRESERVATION, AND REPAIR
SP-20 COPIES OF DOCUMENTS
SP-21 MATERIALS SOURCES AND DELIVERY.
SP-22 MATERIALS
SP-23 DISPOSAL AREAS
SP-24 SITE MAINTENANCE
SP-25 PROJECT SUPERINTENDENT
SP-26 CONTRACTOR'S COMMUNICATION SERVICES
SP-27 CONTRACTOR'S RESPONSIBILITY
SP-28 DEWATERING
SP-29 EXCAVATION
SP-30 REMOVAL AND DISPOSAL OF EXISTING MATERIAL, ETC.
SP-31 SECURING WORK AREAS AND PEDESTRIAN TRAFFIC
SP-32 TRAFFIC CONTROL AT SIDEWALKS
SP-33 SUBSTITUTION REQUESTS
SP-34 PROTECTION OF WORK

SP-35 SITE SAFETY AND SECURITY
SP-36 DEMOLITION OF EXISTING IRRIGATION EQUIPMENT
SP-37 IRRIGATION SYSTEM LAYOUT
SP-38 IRRIGATION SYSTEM TRENCHING & PULLING
SP-39 IRRIGATION SYSTEM TRENCH/PULL LINE RESTORATION
SP-40 SEEDING MAINLINE TRENCHES, POT HOLES, ETC.
SP-41 IRRIGATION CONTROL SYSTEM PROGRAMMING
SP-42 PROTECTION OF TREES.
SP-43 INSURANCE
SP-44 UNIT PRICES
SP-45 IRRIGATION CONTRACTOR QUALIFICATIONS

SP-1 FORMAT

The specifications for this project include by reference the following two documents. Although they are not printed in this Project Manual, they are still made part of these Contract Documents and the Contractor must comply with any and all such regulations, unless modified herein.

Document	*Available From*
Montana Public Works Standard Specifications (MPWSS) Sixth Edition, April 2010	Montana Contractors Association 1717 11th Avenue PO Box 4519 Helena, MT 59604 406-442-4162
City of Billings Standard Modifications to MPWSS Sixth Edition, January 2021	City of Billings Public Works Department Engineering Division 2224 Montana Avenue Billings, MT 59101 406-657-8231 *– or online at –* https://www.billingsmtpublicworks.gov/DocumentCenter/View/105/Standard-Mods-January-2021-PDF

The following Special Provisions include additional requirements that are specific to this project. In case of a conflict, the hierarchal order of precedence is as listed in City of Billings Standard Modifications to MPWSS.

SP-2 SUBSTANTIAL COMPLETION

60 Calendar days from date established in the Notice to Proceed. Project shall be complete no later than May 15, 2024.

SP-3 PROJECT COORDINATION

N /A

SP-4 FIELD ENGINEERING

The Contractor is responsible for all layout and staking for construction of the project.

The Contractor is responsible for all construction stakes to give measurements, lines, locations, and grades necessary for construction. Work shall be performed in conformity with these stakes. The Contractor shall protect all bench marks and reference stakes including construction stakes, from damage or removal. Stakes destroyed or removed by the Contractor will be replaced.

1. Horizontal layout.
2. As needed to facilitate construction.

SP-5 CONTRACT SCHEDULE

Work is anticipated to start as early as July 5 but no later than September 1, 2023 and be substantially complete in October 2023. The project shall be completed no later than May 15, 2024.

Project schedule shall be provided a minimum of 14 days prior to beginning work.

SP-6 MEASUREMENT & PAYMENT

A. General

1. Refer to the City of Billings Standard Modifications, Section 00900, Article 3 for general measurement and payment requirements.

2. For certain items on the Bid Form, additional quantities may have been added to the actual takeoff quantities from the Drawings to account for unknown underground conditions.

B. Measurement & Payment Items

1. Item 101 – Mobilization/Demobilization (LS): See City of Billings Standard Modifications, Section 00900, Article 4.

SP-7 COMPACTION REQUIREMENTS

Refer to 312334 - Irrigation Trenching & Backfilling and drawings for compaction requirements.

SP-8 MATERIALS TESTING AND CONTROL

The Owner will hire a testing agency to provide QA testing. All testing completed on the Project will be coordinated by the Contractor and paid by the Owner in accordance with the City of Billings Standard Modifications.

Refer to City of Billings Standard Modifications & MPWSS for more information regarding minimum testing requirements, Contractor Quality Control (QC), and Owner Quality Assurance (QA). Refer to individual specification sections for additional information regarding testing requirements.

SP-9 PROTECTION OF EXISTING UTILITIES

Existing underground installations such as water mains, gas mains, sewers, telephone lines, power lines, fiber optics lines, and buried structures in the vicinity of the work to be done hereunder are indicated on the Drawings only to the extent such information has been made available to or discovered in preparing the Drawings. There is no guarantee as to the accuracy or completeness of such information, and all responsibility for the accuracy and completeness thereof is expressly disclaimed.

Utility service connections are generally shown on the Drawings, but the Contractor shall be solely responsible for locating all existing underground installations, including service connections, in advance of excavating or trenching, by contacting the Owners thereof and prospecting. This requirement applies to private on-site utilities as well. The Contractor shall use his own information and shall not rely solely upon information shown on the Drawings concerning existing underground installations. The Contractor shall repair all damage to existing utilities or property at his own expense. The Contractor shall pay all costs associated with having utility company representatives on the site for this work and shall include these costs in the price bid for related items of work.

The Contractor is hereby cautioned that all utility services shall be operative and available at all times.

Contractor shall be responsible for coordinating operations with utility providers. In the event underground utilities are damage the Contractor shall notify the Engineer /Architect immediately.

SP-10 UNDERGROUND UTILITY CROSSINGS

The Contractor shall be responsible for checking with the owners of the underground utilities such as the City, power, gas, and telephone companies, etc., as to the location of their underground installations in the project area. The Contractor shall be solely responsible for any damage done to these installations due to failure to locate them or to properly protect them when their location is known.

It shall be solely the responsibility of the Contractor to fully coordinate Contractor's work with the agencies and to keep them informed of Contractor's construction activities so that these vital installations are fully protected at all times.

A Montana One-Call system (1-800-424-555) has been established to facilitate requests for underground facility location information. The Contractor is cautioned that all utilities may not be on this system.

Type 1 Bedding Material and Type A Trench Backfill shall be utilized to replace material under and around such municipal and private utility lines. Compaction above the bedding material and under the utility line crossing is critical and must be maintained. No separate measurement and payment shall be made for this item. All costs shall be considered an integral part of and be included in the price bid for items complete-in-place.

The relocating, bracing, raising, or supporting of facilities as required by this construction will be the responsibility of the Contractor. The Contractor shall schedule Contractor's operations and establish such coordination with the respective owners as necessary so that any conflicts are avoided.

The Contractor shall have full agreement and understanding with the affected utility companies on what the existing conditions are and what will be necessary to be changed for the Contractor's construction. The Contractor will obtain any permits, agreements, or insurance required. No separate measurement and payment shall be made for this item, unless specifically noted. All costs shall be considered an integral part of and be included in the price bid for pipe complete-in-place.

SP-11 TEMPORARY CONTROLS

A. General

Temporary service shall be provided by the Contractor during any period when utility lines are disturbed unless the Contractor makes other arrangements with the Owners. Service of existing utility lines, if interrupted, shall be restored as quickly as possible.

B. Air and Water Pollution Control

1. Rubbish:
Keep project neat, orderly, and in a safe condition at all times. Provide on-site containers for collection of rubbish and dispose of it at frequent intervals during the progress of work.

2. Road, Parking Lot, and Sidewalk Cleaning:
It shall be the sole responsibility of the contractor to keep all roads, parking lots, and sidewalks free from mud, gravel, cobbles or other contaminants generated as a result of construction activities. It shall be the responsibility of the contractor to clean all foreign matter form roads, parking areas, and sidewalks in a reasonable amount of time as determined by the Owner & Engineer /Architect. All costs incurred to meet road, parking lot, and sidewalk cleaning requirements are incidental to other items of the contract and no separate payment shall be made.

Specific areas of roads, parking lots, and sidewalks may be closed temporarily to the public. Contractor shall provide adequate signage and take precautionary measures to protect the public. Roads, parking lots, and sidewalks shall be made open to the public in a reasonable amount of time.

3. Erosion Control Measures:
Temporary erosion and sediment control measures includes the installation and maintenance of temporary structural control measures to reduce or eliminate the erosion of soil and transport of sediment offsite as result of construction activities. This may include, but not be limited to, silt fences, ditch checks, sediment basins, erosion control mats, stabilized construction entrance, temporary diversions, inlet protection, sediment traps, and slope drains. If erosion control measures are required, it shall be the responsibility of the contractor to install and maintain them throughout the construction. All costs incurred to meet erosion control requirements are incidental to other items of the contract and no separate payment shall be made.

C. Noise Impact:
To minimize construction noise impacts on the local residents, no mechanized construction activities will be allowed other than between the hours of 7:00 A.M. and 6:00 P.M. unless explicitly allowed by the Owners Representative in writing.

D. Failure to Provide Service:
If the contractor fails to provide adequate service on the above listed items, the Owner reserves the right to contract these activities to a third party, the cost of which will be deducted from the contract amount at the time of the next pay request.

SP-12 PUBLIC ACCESS
Areas not under active construction shall be open to the public. Parking areas around the park shall remain open to the public during construction except in those areas where active construction is in progress.

SP-13 PERMITS

The Contractor shall be responsible for obtaining all permits necessary for the completion of this work. The costs for all permits shall be considered incidental to construction and shall be included in the price bid for related items of work. Investigative work required to determine necessary permits is the responsibility of the Contractor. Example of permits that may be required follows:

- Building
- Electrical
- Boring

This project is subject to Montana Department of Environmental Quality Storm Water General Discharge Permit authorization. The Contractor shall pay the application fee, the first annual fee, and additional annual fees until termination of the permit has been granted by the State. Contractor is responsible for securing and administering the permit, and installation and maintenance of the erosion control structures.

Contractor shall complete and submit a Notice of Intent (NOI) and a Storm Water Pollution Prevention Plan (SWPPP) as required. The NOI shall be completed with the Contractor listed as Operator #1 and the Owner as Operator #2. Operator #1 is responsible for achieving final stabilization and submitting the Notice of Termination (NOT).

Once the NOI and SWPPP have been completed by the Contractor, Contractor shall submit the entire submittal package to the Owner for review and signature. Owner shall respond within five working days following receipt of the submittal.

Contractor shall comply with all requirements and conditions of the General Permit and the SWPPP. Failure to do so will result in issuance of an order to suspend work, in addition to any fines that may be assessed by the State.

The Contractor's responsibilities regarding maintenance of erosion control structures, after final project acceptance, will be limited to the areas disturbed by construction for this project only. The Contractor will not be responsible for erosion control beyond the disturbed areas of this project due to adjacent construction. It is the Contractor's responsibility to document the extent of disruption due to construction activities directly related to this project. The documentation should include pictures with a date stamp that is concurrent with the date of final acceptance.

All forms may be found on the internet at the Montana Department of Environmental Quality web site.

SP-14 SURVEY MARKERS AND MONUMENTS

The Contractor shall protect and not disturb any survey markers or monuments, such as lot or block corners, property pins, intersection of street monuments, or section corners or section breakdown corners. Any survey marker or monument that is disturbed or destroyed by the Contractor shall be replaced at no cost to the Owner by a licensed land surveyor.

SP-15 UNSCHEDULED EMPLOYMENT OF THE ENGINEER/ ARCHITECT

Damages for the unscheduled employment of the Engineer/Architect and/or Inspector will be assessed against the Contractor necessitated by: (1) the Contractor working beyond the specified contract time; (2) the Contractor working more than 8 hours per day, (or 40 hours per week if four ten hour shifts are run) or on Saturdays, Sundays, and Federal Holidays; (3) the Contractor utilizing material, supplies, or equipment that requires the redesign of the project; (4) the Contractor destroying or disturbing baselines benchmarks or reference stakes; (5) the failure of the Contractor to maintain acceptable as-built records, (6) review of submittals that were returned to the Contractor requiring revision or resubmittal, and (7) delay in final completion beyond the time stipulated in the agreement.

Damages for the unscheduled employment of the Engineer/ Architect and/or Inspector will be determined based on the following hourly rates:

Straight Time	
Landscape Architect (Principal)	$118.00/Hour
Senior Landscape Architect	$110.00/Hour
Landscape Architect	$68.00/Hour
Draftsman	$70.00/Hour
Clerical	$50.00/Hour
Mileage	$0.72/Mile
GPS Rental	$400.00/Day

The rates listed herein are subject to changes on January 1st of each year.
Out of pocket expenses for materials, equipment, supplies, transportation, and subsistence will be billed at cost plus fifteen percent. Damages for unscheduled employment of the Engineer/ Architect and/or Inspector will be deducted from monthly progress payments and the final payment as the damages are incurred. Damages for unscheduled employment of the Engineer/ Architect are independent from liquidated damages for delay as described in the agreement.
Any other personnel not listed above will be billed at their customer rates.

SP-16 PAYMENT OF CHANGE ORDERS

The City of Billings will no longer process change orders for construction without a signed change order or contract amendment signed by the City Administrator prior to the start of any work.

Any work that has begun prior to obtaining the signed change order will not be paid for by the City and will not be added to the contract. Should Contractor have any questions concerning this matter, please do not hesitate to contact the City of Billings.

A reconciling change order showing final in-place quantity over-runs and under-runs will be prepared before the final payment to the Contractor. The unit prices will remain unchanged. This reconciling change order shall be prepared before authorization of final payment to the Contractor.

SP-17 STAGING AREA

The staging areas for this project shall be sized and located as agreed to by the Engineer/ Architect and the Contractor at the Pre-Construction Meeting. Contractor shall notify adjacent private property owners of any disruption in access to private property. Any agreements made between Contractor and private property owners shall be in writing executed by the property owner and an executed copy shall be filed with the Owner and Architect/Engineer, prior to Contractor occupancy of land.

It shall be understood that the responsibility for protection and safekeeping of equipment and materials on or near the site will be entirely that of the Contractor and that no claim shall be made against the Owner by reason of any act of an employee or trespasser.

SP-18 CONSTRUCTION ACCESS

In order to leave the site in its original condition, the Contractor shall repair any damaged concrete and/or asphalt, and shall broom clean areas of adjacent roadways, sidewalks, and/or driveways at the Contractor's expense. Any damage to existing surfaces or existing landscaping will be repaired at the Contractor's expense.

SP-19 PROTECTION, PRESERVATION, AND REPAIR

A. Existing Structures

The Contractor shall take any photos, measurements, and/or assessments necessary to accurately document the preconstruction condition of potentially impacted structures, and provide a copy of all such documentation to the Owner upon request.

Where construction will be required adjacent to existing structures, the Contractor shall be solely responsible to maintain the structural integrity of the existing structures. The Contractor shall take whatever means necessary to ensure that the existing structure is not damaged and, if necessary, shall install shoring, sheet piling, or other means of supporting the utility or structure, or change the size or type of construction equipment. The Contractor shall protect, and in the case of any damage, repair the existing structures at the Contractor's expense. Any fences damaged during construction shall be repaired to the satisfaction of the Owner. Any delay, additional work, or extra cost to the Contractor caused by existing underground installations shall not constitute a claim for extra work, additional payment, or damages.

B. Asphalt Pavement

The Contractor is responsible for the protection of, and the cost to repair or replace to the satisfaction of the Owner, any and all asphalt damaged due to any construction or travel (hauling, storage, unloading, etc.) operations that is outside of the construction limits identified on the plans. This requirement shall include damage caused by trench sloughing. The Contractor shall familiarize themselves with the existing surfacing sections in the project area and consider self-imposed load restrictions conforming to those sections. The Contractor shall use equipment sized and equipped to protect the asphalt. The Contractor shall make their own assessment of the conditions and adjust their bid accordingly.

C. Miscellaneous Improvements

Any permanent, semi-permanent, or portable improvements whether privately or publicly owned, shall be preserved by the Contractor. Any damage to any of these improvements shall be the responsibly of the Contractor. The cost to replace, remove, relocate, or reset existing items shall be incidental to all other bid items, whether the items are noted on the Drawings for relocation or are removed and reset for the Contractor's convenience.

SP-20 COPIES OF DOCUMENTS

Owner shall furnish to Contractor with three copies of the project documents. All other copies of the project documents are the responsibility of the Contractor.

SP-21 MATERIALS SOURCES AND DELIVERY.

It shall be the responsibility of the Contractor to fully investigate and satisfy himself as to the availability of all materials required under this Contract.

SP-22 MATERIALS

All materials provided by the Contractor for this project shall be new material. Materials required for a complete installation but not specifically described in the specifications or on the plans shall be as selected by the Contractor subject to approval by the Owners Representative.

SP-23 DISPOSAL AREAS

All waste materials of this contract shall be disposed of in a legal manner in a location off site as selected by the Contractor.

SP-24 SITE MAINTENANCE

The Contractor shall coordinate with PRPL to allow mowing, irrigation, and typical park maintenance to take place throughout construction as needed. Existing pump and irrigation to remain operational as much as possible to allow Park to be irrigated. Do not operate new system until new pump station and filter are online.

SP-25 PROJECT SUPERINTENDENT

The Contractor shall designate a project superintendent, approved in advance by the Owner's Representative, who shall be present on the job at all times work is in progress. The superintendent shall direct and be responsible for all work performed under the contract and shall be the day to day contact within the Contractor's organization regarding the contract.

The superintendent shall be knowledgeable and qualified to evaluate the quality of not only the general construction work but especially the systems and installations of subcontract work.

The superintendent shall:

- Aggressively evaluate on a day-to-day basis and be responsible for the quality and acceptability of all work.
- Make the first determination as to the fitness and compliance of all work performed.
- Be the initiator in regard to rejection of unfit work.
- Not passively default or abdicated, in the first analysis, these duties to the Owner or Engineer/ Architect.

The superintendent shall be in a position to direct the work and make decisions either directly or through immediate contract with superintendent’s superior. Absence or incompetence of the superintendent shall be reason for the Owner to stop all work on the project.

The superintendent or Contractor's designated representative shall maintain, at the project site, a "Record Set of Drawings" showing field changes, as-built elevations, unusual conditions encountered during construction, manufacturer's catalog number of equipment supplied, and other data as required to provide the Owner with an accurate "as-constructed" set of drawings. An approval by the Engineer/ Architect shall not be given on the final payment request until complete record drawings are submitted to the Engineer/ Architect.

The project superintendent may only be changed by the Contractor with advance written permission of the Owner's Representative. Any replacement superintendent shall be equally qualified and must be acceptable to the Owner's Representative.

The project superintendent must continue to perform in a manner satisfactory and acceptable to the Engineer/ Architect. If the project superintendent fails to perform satisfactorily the Engineer/ Architect may request removal of the superintendent and immediate replacement with another qualified supervisor who must be acceptable to the Engineer/ Architect. The Contractor agrees to Architect/Engineer Representative.

SP-26 CONTRACTOR'S COMMUNICATION SERVICES

The Contractor shall maintain a local telephone number where the project superintendent or a qualified assistant may normally be reached during business hours. The Contractor shall also maintain a 24 hour telephone number where he may be reached during an emergency. Failure to answer these telephones, failure to respond to calls, or negligence in carrying out the provisions of this contract may result in cancellation of the contract or forfeiture of remaining contract payments by the Owner.

SP-27 CONTRACTOR'S RESPONSIBILITY

The Contractor agrees and recognizes that he is responsible to and shall comply with the reasonable requests and directions of the Engineer/ Architect throughout the term of the contract.

The Contractor shall enforce strict discipline and good order among Contractor's employees and other persons carrying out the Agreement. The Contractor shall not permit employment of unfit persons not skilled in tasks assigned to them. The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on performance of the work.

The Contractor shall coordinate all phases of the work with Owner's use of the facility to minimize or avoid conflict, protect all existing work adjacent to new construction, and repair any damage and leave premises in original condition, except where otherwise specified by the Engineer/ Architect. Contractor agrees to attend or be represented at bi-weekly team meetings

during the term of the project to assure coordination with the other project participants if required.

SP-28 DEWATERING

Contractor shall be responsible for all necessary dewatering and providing and maintaining a construction site suitable to accommodate proposed construction. Contractor shall repair to pre-construction activity any damage done resulting from the construction activities.

SP-29 EXCAVATION

All excavation is unclassified. Cost for all excavation and backfill, regardless of materials or conditions encountered, shall be included in the bid amount.

Topsoil removed during excavation and trenching operations shall be kept separate from other material. At the completion of backfill operation, the topsoil shall be replaced.

SP-30 REMOVAL AND DISPOSAL OF EXISTING MATERIAL, ETC.

Excess material of any kind generated by the work shall be hauled to an off-site location of the Contractor's choice and be legally disposed of. The costs associated with hauling and disposing of excess material shall be incidental to the bid items specified for material removal, and shall be at the Contractor's expense.

SP-31 SECURING WORK AREAS AND PEDESTRIAN TRAFFIC

The Contractor is reminded of the importance of securing all work areas during and after construction work hours to prevent pedestrian and bicycle access. Costs associated shall be included in related bid items.

SP-32 TRAFFIC CONTROL AT SIDEWALKS

Pedestrian traffic control measures shall be put in place at sidewalks that run adjacent to the project as required by the American with Disabilities Act and according to all local, state, and federal requirements. Contractor shall be responsible for the installation and maintenance of any installed measures through the duration of the project.

SP-33 SUBSTITUTION REQUESTS

All requests for substitution of materials for incorporation in the work of this contract shall be made and approved or rejected prior to bid date. All requests for substitution shall be made as required by Division 1 Section 012500 Substitutions of this specification. Incomplete or non-

conforming requests shall be rejected. All substitution requests shall be accompanied by a "Substitution/Equal Project Request Form".

All requests for substitution shall be delivered to the Engineer /Architect ten days prior to the Bid Date. Proposal requests arriving after said date and time will not be considered. The Architect shall review all requests received and issue written notice of approval or rejection to the submitting entity. Opinion of the Architect shall be final.

Written notice of approved substitutions shall be issued to all planholders by addendum.

SP-34 PROTECTION OF WORK

The Contractor shall exercise the necessary measures to protect all work from vandalism. Work will not be accepted for payment that has been defaced or deformed.

SP-35 SITE SAFETY AND SECURITY

Safety and security of the site is the responsibility of the Contractor until completion of the project. Security/safety shall be provided as required to prevent any unauthorized access and as required by the City of Billings.

Trenches shall be backfilled and closed each day at the end of work. Trenches or excavations that are left open overnight shall be fenced off to prevent access. It is the Contractor's responsibility to ensure the safety of all park users during construction.

SP-36 DEMOLITION OF EXISTING IRRIGATION EQUIPMENT

Contractor shall provide miscellaneous demolition of existing irrigation equipment as part of the site demolition. Perform all demolition in a workmanlike manner so that existing facilities designated to remain are not damaged.

Demolition to include the following:

- The Owner will remove any equipment that is needed for salvage.
- The Contractor shall remove the existing pump and controls to facilitate the installation of the new pump station.

All other equipment to be abandoned in place. Any irrigation equipment or piping that is brought to the surface during construction shall be removed from the site. Any low spots created by removal of equipment shall be backfilled and sodded.

SP-37 IRRIGATION SYSTEM LAYOUT

Contractor shall perform all layout of system. Layout piping essentially as shown, except that adjustments to work around existing vegetation, site features, and to respond to ballfield layout, shall be permissible with advance permission of the Architect/Engineer.

Contractor acknowledges the schematic nature of the plans and that some adjustment may be needed in order to achieve full and complete coverage, as intended, under actual field conditions. Contractor shall make field adjustments in consultation with the Architect/Engineer. No additional payment shall be made for in-field layout adjustments.

SP-38 IRRIGATION SYSTEM TRENCHING & PULLING

The Contractor shall bear all responsibility for the safety of trenches at all times. Erect temporary fencing and signing as deemed necessary to prevent injury to all persons using the property during construction. Close all trenches as soon as practical following completion of work.

All mainlines shall be installed by open trenching. All laterals in existing lawn areas shall be installed by pulling to the fullest extent possible.

If the laterals are pulled (existing lawn areas only), the Contractor must demonstrate that his equipment and installation methods shall result in installation of lateral piping and equipment as specified to the complete satisfaction of the Architect/Engineer. The Architect/Engineer shall issue written acceptance of pulling for lateral installation before any pulling shall commence.

SP-39 IRRIGATION SYSTEM TRENCH/PULL LINE RESTORATION

A. Trenching:

All trenches shall be backfilled as specified in this project manual. Trenches shall be closed and surfaces restored as each section of the project is completed, prior to installation of laterals.

The top 8" minimum of trench backfill shall be made with topsoil. Topsoil from the trench excavations shall be acceptable provided that it is segregated during trenching. All backfill shall be settled/compacted to preclude trench settlement.

B. Pulling:

All pull lines shall be rolled with a self-propelled vibratory roller as necessary immediately following completion of pipe installation. Finished pull lines shall be at the same grade as adjacent undisturbed areas. Pull restoration shall satisfy the Architect/Engineer at all times. Where unsatisfactory pull restoration is identified by the Architect/Engineer, Contractor shall

make all additional restorative efforts, as directed, until satisfactory restoration conditions are achieved.

SP-40 SEEDING MAINLINE TRENCHES, POT HOLES, ETC.

All existing turf grassed surfaces including but not limited to mainline trenches, pot holes, and all other areas disturbed during construction shall be restored by seeding by the Contractor, unless noted otherwise below. Contractor shall provide backfill, compaction and finish grading as specified by Division 31 of this specification. Contractor shall notify Architect /Engineer when trenches are prepared and ready to receive seed.

Seed shall be broadcast, lightly raked and then rolled to press seed into the surface. A standard bluegrass seed mix shall be used and sown at a rate of 4 lbs./1,000 square feet. The seed shall be provided by the Contractor and is considered incidental to the project.

SP-41 IRRIGATION CONTROL SYSTEM PROGRAMMING

The Contractor shall perform all in-field system programming as necessary for testing and system operation verification and demonstration. Contractor shall arrange and pay for all Manufacturer technical support as may be required to complete programming successfully. Upon system acceptance, the Contractor shall perform all final station assignments. Prior to final completion, the contractor shall facilitate uploading of programming to the owners IQ Platform. Provide manufacturer technical support as required to complete uploading and operation.

Contractor shall coordinate with manufacturer to ensure proper site survey is performed prior to ordering equipment. Coordinate with manufacturer to establish communications between the controller and the Owner's existing central irrigation control system.

SP-42 PROTECTION OF TREES.

The Contractor working on public rights-of-way or properties shall be responsible for the prevention of damage to trees located within or infringing on the public rights-of-way and properties. The Contractor shall exercise care in driving or working on the root zone area of trees to prevent excessive compaction of the soil. Nails, bolts, or other fastening materials shall not be imbedded into the trunk or limbs of a tree. Ropes, wires, or other hanging materials shall not be attached to a tree in such a manner that the bark may be damaged or cause undue stress to the plant structure.

Owner's approval is required for any work within 10' of the trunk of any tree. No pipe pulling or mechanical trenching shall take place within 10' of any tree. Work within 10' of any tree shall be accomplished by hand. Piping that is installed within 10' of any tree shall be installed perpendicular to the tree to the extent possible to minimize root damage. Unnecessary pulling

or mechanical trenching within 10’ of any tree may result in a financial damage assessment by the Owner to the Contractor as noted in the next paragraph. Contractor shall anticipate adjustments to the piping and system layout to work with existing trees.

Any overhanging branches or underlying roots which may be crushed, scarred, broken, or damaged in any way due to unavoidable construction activity shall be reported to the City Forester so that preventive action may be taken to minimize tree damage. **Any trees damaged shall be the responsibility of the Contractor to repair or replace as determined by the City Forester and the valuation shall be determined by "Landscape Trees, Shrubs and Other Plants," published by International Society of Arboriculture.** Any financial damage assessments will be deducted from the Contractor’s pay request.

Prior to backfilling any trench or ditch the City Forester shall be notified to inspect any repairs made to damaged roots. All exposed roots shall be pruned, or trimmed using a hand pruner or hand saw. Axe cuts will not be allowed.

Upon completion of construction, the Contractor shall notify the City Forester for a final inspection of the trees whether or not any damage occurred. Any damage found to have been caused by the construction activity of the Contractor shall be the remedial responsibility of the Contractor.

SP-43 INSURANCE

Listing of the Engineer/Architect and the Engineer/Architect’s Consultants as additional insured under this section shall conform to the Insurance Services Office (ISO) endorsement CG 2032 “Additional Insured – Engineers, Architects or Surveyors Not Engaged by the Named Insured”. Copies of the additional insured endorsement shall be provided to the Engineer/Architect for approval prior to execution of the contract.

SP-44 UNIT PRICES

The following unit prices may be used to adjust the contract sum in the event the Owner desires to increase or decrease the scope of work. The Contractor understands the Owner reserves the right to select any, all or none of the unit prices, and to adjust the contract amount accordingly.

All unit prices shall be for all work required to furnish and install, including incidentals, complete-in-place systems. Unit price items may or may not be included in base bid work. No adjustment to base bid and alternative amounts shall be made without written authorization prior to commencement of the work.

These unit prices are to be filled out and provided with the Bid. Bids received without this section filled out may be considered non-responsive.

UNIT	ITEM DESCRIPTION	UNIT COST
SF	TRENCH RESTORATION WITH SEED	
EA	6504 SERIES ROTOR WITH SWING JOINT	
EA	AIR RELIEF VALVE AS DETAILED	
EA	3" ISOLATION VALVE AS DETAILED	
EA	MAINLINE DRAIN VALVE AS DETAILED	
EA	44 NP QUICK COUPLING VALVE AS DETAILED	
EA	1" ELECTRIC CONTROL VALVE AS DETAILED	
EA	1-1/2" ELECTRIC CONTROL VALVE AS DETAILED	
EA	2" ELECTRIC CONTROL VALVE AS DETAILED	
EA	1-1/2" MASTER VALVE WITH 1-1/2" FLOW SENSOR AND GATE VALVE ASSEMBLY AS DETAILED.	
EA	60 STATION SATELLITE CONTROLLER INSTALLED AS DETAILED	
EA	RAIN SENSOR AS SPECIFIED	
EA	GROUNDING GRID AS DETAILED	
LF	3" CL 200 PVC MAINLINE PIPE	
LF	3" CL 200 PVC LATERAL PIPE	
LF	2" CL 200 PVC LATERAL PIPE	
LF	1-1/2" CL 200 PVC LATERAL PIPE	
LF	1" CL 200 PVC LATERAL PIPE	
LF	6" SCH 40 PVC SLEEVE	
LF	4" SCH 40 PVC SLEEVE	
LF	3" SCH 40 PVC SLEEVE	
LF	2-WIRE COMMUNICATIONS CABLE IN CONDUIT	
EA	IVM-SOL INSTALLED	
EA	IVM-OUT INSTALLED	
EA	IVM-SEN INSTALLED	
EA	IVM-SD INSTALLED WITH GROUND ROD	
LF	1" SCH 40 PVC CONDUIT	
LF	1-1/2" SCH 40 PVC CONDUIT	
LF	2" SCH 40 PVC CONDUIT	
LS	PREFABRICATED PUMP STATION AS SPECIFIED	
LS	DEMO AND REMOVAL OF EXISTING CONCRETE VAULT AT PUMP STATION	
LS	PROJECT SIGN	
LS	ELECTRICAL UPGRADES AND ROUTING TO PUMP STATION	

LF	BORING FOR 6" SLEEEVE	
LF	1” CONDUIT UNDER ROAD	
LF	BORING FOR 6” HDPE PIPE	
LF	6” HDPE FUSED PIPE	
LF	BORING IN ROCK	

SP-45 IRRIGATION CONTRACTOR QUALIFICATIONS

Time is of the essence of this project. Additionally, the project must be completed according to the contract documents and the best current trade practices. Any Contractor proposing to do work on the irrigation system will be required to submit documentation and evidence of successful completion of irrigation construction experience similar in size and scope. **General Contractors are required to submit the following information as it relates to their sub-contractors with their Bid.** The same requirements apply if the General Contractor is performing the work themselves. Information for each trade shall be separate from other trades.

The Owner shall determine which bidders are responsible in accordance with the submitted Contractor Qualifications. The contract shall be awarded to the lowest responsible bidder whose bid meets the requirements of this section.

The Owner reserves the right to reject bid submissions, if it is determined that a contractor is not qualified to perform the work. Bidders shall complete this form, and return it with their sealed bid for review by the City.

A. Provide contact information for the irrigation contractor/sub-contractor.

Legal Name of Business:			
Name:		Phone number:	
Title:		Email address:	
Business address of corporate office:			

B. Provide information that will identify the overall size and capacity of the Business.

Average number of current full-time employees:	
Estimate of revenue for current year (2023):	

Estimate of revenue for the prior year (2022):	

C. Provide information regarding the Business's previous contracting experience.

Years of experience with projects like the proposed project:				
As a general contractor:		As a joint venturer:		
Has the Business:				
Been disqualified as a bidder by any local, state, or federal agency within the last 5 years? ☐ Yes ☐ No				
Been barred from contracting by any local, state, or federal agency within the last 5 years? ☐ Yes ☐ No				
Been released from a bid in the past 5 years? ☐ Yes ☐ No				
Defaulted on a project or failed to complete any contract awarded to it? ☐ Yes ☐ No				
Refused to construct or refused to provide materials defined in the contract documents or in a change order? ☐ Yes ☐ No				
Been a party to any currently pending litigation or arbitration? ☐ Yes ☐ No				
Provide full details in a separate attachment if the response to any of these questions is Yes.				

D. Provide information regarding public contracts currently under construction or completed within the past five years.

Project Name:	Contract Value:
Project Owner:	
Address:	
Telephone:	
Was contract completed within the contract time frame? ☐ Yes ☐ No	
Were liquidated damages assessed? ☐ Yes ☐ No	

Project Name:	Contract Value:
Project Owner:	
Address:	
Telephone:	
Was contract completed within the contract time frame? ☐ Yes ☐ No	
Were liquidated damages assessed? ☐ Yes ☐ No	

Project Name:	Contract Value:
Project Owner:	
Address:	

Telephone:
Was contract completed within the contract time frame? ☐ Yes ☐ No
Were liquidated damages assessed? ☐ Yes ☐ No

Project Name:	Contract Value:
Project Owner:	
Address:	
Telephone:	
Was contract completed within the contract time frame? ☐ Yes ☐ No	
Were liquidated damages assessed? ☐ Yes ☐ No	

Project Name:	Contract Value:
Project Owner:	
Address:	
Telephone:	
Was contract completed within the contract time frame? ☐ Yes ☐ No	
Were liquidated damages assessed? ☐ Yes ☐ No	

***Use separate attachment if necessary to list additional projects.

E. Is the company currently working beyond the contact completion date on any public contract?
☐ Yes ☐ No

F. Provide information regarding equipment and manpower that will be assigned to the project with consideration given to other projects in progress.

Equipment to be assigned to project:	

Manpower that will be assigned to the project:	

F. Provide information regarding the experience of job foreman.

Name:
Years of experience with current company:
Years of experience with previous companies:
Summary of relevant experience:

G. Provide information to demonstrate that the Business has completed a minimum of three (3) irrigation systems of similar size and scope in the last five (5) years. Provide references for each project that is listed.

Reference Project 1 *Required*

Project Name:	Contract Value:
Project Owner:	
Address:	
Telephone:	
Project Size in Acres:	
Project description:	

Reference Name and Title:
Reference Telephone Number:

Reference Project 2 *Required*

Project Name:	Contract Value:
Project Owner:	
Address:	
Telephone:	
Project Size in Acres:	
Project description:	
Reference Name and Title:	
Reference Telephone Number:	

Reference Project 3 *Required*

Project Name:	Contract Value:
Project Owner:	
Address:	
Telephone:	
Project Size in Acres:	
Project description:	
Reference Name and Title:	
Reference Telephone Number:	

H. Provide information regarding other relevant irrigation experience completed by the Business.

Project Name:	Contract Value:
Project Size in Acres:	
Project description:	

Project Name:	Contract Value:
Project Size in Acres:	
Project description:	

Project Name:	Contract Value:
Project Size in Acres:	
Project description:	

Project Name:	Contract Value:
Project Size in Acres:	
Project description:	

Project Name:	Contract Value:
Project Size in Acres:	
Project description:	

Project Name:	Contract Value:
Project Size in Acres:	
Project description:	

Project Name:	Contract Value:
Project Size in Acres:	
Project description:	

***Use separate attachment if necessary to list additional projects.

END OF SECTION

TECHNICAL SPECIFICATIONS

SECTION 011000 - SUMMARY, ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to work of this section.

1.2 PROJECT/WORK IDENTIFICATION:

A. General: Name of project is "W.O. 23-33 Grandview Park Irrigation Replacement" on contract documents by the Landscape Architect, STEINER THUESEN PLLC, 1925 Grand Avenue #105, Billings, MT 59102.

B. Contract Documents indicate the work to be carried out under a single prime Contract.

C. Summary by References: Work of Contract can be summarized by reference to the Contract, General Conditions, Supplementary Conditions, specification sections as listed in the "Index of Specification Sections" bound herewith, drawings as listed in "Schedule of Drawings", addenda and modifications to the contract documents issued subsequent to the initial printing of this project manual, and including but not necessarily limited to printed matter referenced by any of these. It is recognized that work of Contract is also unavoidably affected or influenced by governing regulations, natural phenomenon including weather conditions, and other forces outside the contract documents.

D. Abbreviated Written Summary: Briefly, and without force and effect upon contract documents, work of Contract can be summarized as follows:

Removal of existing irrigation equipment, pump, concrete vault, and the installation of a new irrigation system, pump station, and electrical upgrades.

1.3 ALTERATIONS AND COORDINATION:

A. General: The work of this Contract includes coordination of entire work of project, including preparation of general coordination

drawings/diagrams/schedules, and control of site utilization; from the beginning of activity, through the project close-out and warranty periods.

B. Alterations: Where applicable, requirements of contract documents apply for alteration work in same manner as for new work. Refer to drawings for specific requirements of alteration work.

1.4 ALTERNATES:

A. Definitions: Alternates are defined as alternate products, materials, equipment, installations or systems for the work which may, at Owner's option and under terms established by Instructions to Bidders, be selected and recorded in the Contract (Owner-Contractor Agreement) to either supplement or displace corresponding basic requirements of contract documents.

B. General Provisions: A "Schedule of Alternates" is included at end of this section. Each alternate is defined by abbreviated language, recognizing that drawings and specification sections document the requirements. Coordination of related work as required to ensure that work affected by each selected alternate is complete and properly interfaced with work of alternates.

C. Notification: Immediately following award of Contract prepare and distribute to each entity to be involved in performance of the work, a notification of status of each alternate.

1.5 MISCELLANEOUS AND GENERAL PROVISIONS

Cutting and Patching:

1. Definition: Includes cutting and patching of both previously existing work and nominally completed portions of Contract work. Excludes shop fabrication of work, and normal installation procedures including the drilling of holes to install fasteners. Excludes special categories of work identified as alterations, demolition, excavating, grading, planting, cleaning, removal/replacement of noncomplying work and similar activities; although some of these activities may require cutting and patching.

2. General: Specific requirements and limitations for cutting and patching are shown and specified for certain types of work, and specified in other

sections of Division 1 as required quality control procedures for general application to performance of the work.

PART 2 - PRODUCTS (not applicable)

PART 3 - EXECUTION (not applicable)

PART 4 - ALTERNATES

4.1 SCHEDULE OF ALTERNATES:

A. Contractors: Submit with their proposals the amount to be added to their Base Proposal for the following Alternates. Include any modification of adjacent work that Contractor may be required to perform by reason of acceptance of Alternate.

B. All work required by Alternates: Completed in strict accordance with drawings, applicable sections of this specification.

C. ALTERNATES:

1. Alternate No. 1

Install a 6" HDPE fusion welded supply line from the pump station north across Poly Drive to canal (approximately 265 lf). Refer to the specifications for additional requirements. The supply line shall be installed adjacent to the existing supply line. The line shall run directly under Poly Drive, sleeve is not required. The Contractor shall be responsible for all utility locates, permits, etc. required for the successful completion of the installation. The specifications note that the line is to be installed 36" deep. It will be the Contractors responsibility to determine the final depth such that no damage to the existing parking lot will be expected. This shall be considered incidental to the bid.

END OF SECTION 011000

SECTION 012500 - PRODUCTS AND SUBSTITUTIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to work of this section.

1.2 DESCRIPTION OF REQUIREMENTS:

A. Definitions:

"Products" is defined to include purchased items for incorporation into the work, regardless of whether specifically purchased for project or taken from Contractor's stock of previously purchased products.

"Materials," is defined as products which must be substantially cut, shaped, worked, mixed, finished, refined or otherwise fabricated, processed, installed or applied to form units of work.

"Equipment" is defined as products with operational parts, regardless of whether motorized or manually operated, and particularly including products with service connections (wiring, piping, etc.).

Definitions in this paragraph are not intended to negate the meaning of other terms used in contract documents, including "specialties", "systems", "structure", "finishes", "accessories", "furnishings", "special construction", and similar terms, which are self-explanatory and have recognized meanings in the construction industry.

B. Substitutions: The requirements for substitutions do not apply to specified Contractor options on products and construction methods. Revisions to contract documents, where requested by Owner, Architect or Engineer, are "changes" not "substitutions."

Requested substitutions during bidding period, which have been accepted prior to Contract Date, are included in contract document and are not subject to requirements for substitutions as specified herein. Contractor's determination of

and compliance with governing regulations and orders issued by governing authorities do not constitute "substitutions" and do not constitute a basis for change orders, except as provided for in contract documents.

Otherwise, Contractor's requests for changes in products, materials and methods of construction required by contract documents are considered requests for "substitutions", and are subject to requirements hereof.

C. Standards: Refer to Division 1 section, "Definitions and Standards", for applicability of industry standards to products of project, and for acronyms used in text of specification sections.

1.3 QUALITY ASSURANCE:

A. Source Limitations: To the greatest extent possible, for each unit of work provide products, materials or equipment of a singular generic kind and from a single source.

B. Compatibility of Options: Where more than one choice is available as options for Contractor's selection of a product or material, select an option which is compatible with other products and materials already selected. Total compatibility among options is not assured by limitations within contract documents, but must be provided by Contractor. Compatibility is a basic general requirement of product/material selections.

1.4 SUBMITTALS:

Requests for Substitutions: Submit 3 copies, fully identified for product or method being replaced by substitution, including related specification section and drawing number(s), and fully documented to show compliance with requirements for substitutions. Include product data/drawings, description of methods, samples where applicable, Contractor's detailed comparison of significant qualities between specified item and proposed substitution, statement of effect on construction time and coordination with other affected work, cost information or proposal, and Contractor's statement to the effect that proposed substitution will result in overall work equal to or better than work originally indicated.

1.5 PRODUCT DELIVERY, STORAGE, HANDLING:

General: Deliver, handle and store products in accordance with manufacturer's recommendations and by methods and means which will prevent damage, deterioration, and loss including theft. Control delivery schedules to minimize long-term storage of products at site and over-crowding of construction spaces. In particular, provide delivery/installation coordination to ensure minimum holding or storage times for products recognized to be flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other sources of loss.

1.6 WARRANTIES (GUARANTEES):

A. Categories of Specific Warranties: Warranties on the work are in several categories, including those of General Conditions, and including (but not necessarily limited to) the following specific categories related to individual units of work specified in sections of Divisions 2 through 16 of these specifications:

1. Special Project Warranty (Guarantee): A warranty specifically written and signed by Contractor for a defined portion of the work and, where required, countersigned by subcontractor, installer, manufacturer or other entity engaged by Contractor.

2. Specified Product Warranty: A warranty which is required by contract documents, to be provided for a manufactured product incorporated into the work, regardless of whether manufacturer has published a similar warranty without regard for specific incorporation of product into the work, or has written and executed a special project warranty as a direct result of contract document requirements.

3. Coincidental Product Warranty: A warranty which is not specifically required by contract documents (other than as specified in this Section) but which is available on a product incorporated into the work by virtue of the fact that manufacturer of product has published warranty in connection with purchases and uses of product without regard for specific applications except as otherwise limited by terms of warranty.

B. Refer to individual sections of Divisions 2 through 16 for the determination of units of work which are required to be specifically or individually warranted, and for the specific requirements and terms of those warranties (or guarantees).

C. For product warranties not specifically described in Divisions 2 through 16, the Contractor shall and does hereby warrant and/or guarantee the following:

For a period of two years from date of substantial completion all moveable or adjustable work shall remain in perfect working order, including hardware, doors, windows, drawers, apparatus, machinery, electrical equipment, valves, appliances, controls, devices, and all equipment to which this heading is applicable.

D. General Limitations: It is recognized that specific warranties are intended primarily to protect Owner against failure of the work to perform as required, and against deficient, defective and faulty materials and workmanship, regardless of sources. Except as otherwise indicated, specific warranties do not cover failures in the work which result from: 1) unusual and abnormal phenomena of the elements; 2) the Owner's misuse, maltreatment or improper maintenance of the work; 3) vandalism after time of substantial completion: or 4) insurrection or acts of aggression including war.

E. Related Damages and Losses: In connection with Contractor's correction of warranted work which has failed, remove and replace other work of project which has been damaged as a result of such failure, or must be removed and replaced to provide access for correction of warranted work.

1. The Contractor shall respond within seven (7) calendar days after notice of observed defects has been given and he shall proceed to immediately remedy these defects.

2. Should the Contractor fail to respond to the notice or not remedy those defects, the Owner will have this work corrected at the expense of the Contractor.

F. Reinstatement of Warranty Period: Except as otherwise indicated, when work covered by a special project warranty or product warranty has failed and has been corrected by replacement or restoration, reinstate warranty by written endorsement, starting on date of acceptance of replaced or restored work, for a period of time ending upon date original warranty would have expired if there had been no failure.

G. Replacement Cost, Obligations: Except as otherwise indicated, costs of replacing or restoring failing warranted units or Products is Contractor's obligation, without regard for whether Owner has already benefited from use through a portion of anticipated useful service lives.

H. Contractor's Procurement Obligations: Do not purchase, subcontract for, or allow others to purchase or sub-subcontract for materials or units of work for project where a special project warranty, specified product warranty, certification or similar commitment is required, until it has been determined that entities required to countersign such commitments are willing to do so.

PART 2 - PRODUCTS

2.1 GENERAL PRODUCT COMPLIANCES:

A. General: The compliance requirements, for individual products as indicated in contract documents, are multiple in nature and may include generic, descriptive, proprietary, performance, prescriptive, compliance with standards, compliance with codes, conformance with graphic details and other similar forms and methods of indicating requirements, all of which must be complied with. No extension of time or substitution of material will be allowed because of ill-timed procurement procedures.

B. Material and Product Selection: It is the Contractor's responsibility to ascertain that all materials and products selected by him or for him by his subcontractors and material suppliers, conform with requirements of the Contract Documents. Proposals shall be based only upon materials, products and equipment as specified or approved by written addendum issued by Architect prior to receipt of proposal. No substitution will be considered due to failure to comply with this requirement. Contractor's options for selecting products are limited by contract document requirements, and governing regulations, and are not controlled by industry traditions or procedures experienced by Contractor on previous construction projects. Required procedures include, but are not necessarily limited to, the following for various indicated methods of specifying:

1. Single Product/Manufacturer Name: Provide product indicated, except advise Architect/Engineer before proceeding, where known that named product is not a feasible or acceptable selection.

2. Two or More Product/Manufacturer Names: Provide one of the named products, at Contractor's option; but excluding products which do not comply with requirements. Do not provide or offer to provide an unnamed product, except where none of named products comply with

requirements or are a feasible selection; advise Architect/Engineer before proceeding.

3. "Or Approved": Where named products in specifications text are accompanied by the term "or approved" or other language of similar effect, comply with those contract document provisions concerning "substitutions" for obtaining Architect's/Engineer's approval to provide an unnamed product.

4. "Named", except as otherwise indicated, is defined to mean manufacturer's name for product, as recorded in published product literature, of latest issue as of date of contract documents. Refer requests to use products of a later (or earlier) model to Architect/Engineer for acceptance before proceeding.

5. Standards, Codes and Regulations: Where only compliance with an imposed standard, code or regulation is required, selection from among products which comply with requirements including those standards, codes and regulations, is Contractor's option.

6. Performance Requirements: Provide products which comply with specific performances indicated, and which are recommended by manufacturer (in published product literature or by individual certification) for application indicated. Overall performance of a product is implied where that product is specified with only certain specific performance requirements.

7. Visual Matching: Where matching with an established sample is required, final judgment of whether a product proposed by Contractor matches sample satisfactorily is Architect's judgment. Where no product within specified cost category is available which matches sample satisfactorily and complies with requirements, comply with contract document provisions concerning "substitutions" and "change orders" for selection of a matching product outside established cost category or of a product not complying with requirements.

8. Visual Selection: Except as otherwise indicated, where specified product requirements include "...as selected from manufacturer's standard colors, patterns, textures..." or words of similar effect, the selection of manufacturer and basic product (complying with requirements) is

Contractor's option, and subsequent selection of color, pattern and texture is Architect's selection. Where specified product requirements include "...as selected from standard colors, patterns, textures available within the industry...". or words to that effect. selection of product (complying with requirements, and within established cost category) is Architect's selection, including designation of manufacturer where necessary to obtain desired color, pattern or texture.

2.2 SUBSTITUTIONS:

A. Conditions: Contractor's request for substitution will be received and considered when extensive revisions to contract documents are not required and changes are in keeping with general intent of contract documents; when timely, fully documented and properly submitted; and when one or more of following conditions is satisfied, all as judged by Architect/Engineer. Otherwise, requests will be returned without action except to record non-compliance with these requirements.

1. Where request is directly related to an "or equal" clause or other language of same effect in contract documents.

2. Where required product, material or method cannot be provided within Contract Time, but not as a result of Contractor's failure to pursue the work promptly or to coordinate various activities properly.

3. Where required product, material or method cannot be provided in a manner which is compatible with other materials of the work, or cannot be properly coordinated therewith, or cannot be warranted as required, or cannot be used without adversely affecting Owner's insurance coverage on completed work, or will encounter other substantial non-compliances which are not possible to otherwise overcome except by making requested substitution, which Contractor thereby certifies to overcome such non-compatibility, non-coordination, non-warranty, non-insurability or other non-compliance as claimed.

4. Where required product, material or method cannot receive required approval by a governing authority, and requested substitution can be so approved.

B. By making requests for substitutions, the Contractor:

1. represents that he has personally investigated the proposed product and determined that it is equal or superior in all respects to that specified;

2. represents that he will provide the same warranty for the substitution that he would for that specified;

3. certifies that the cost data presented is complete and includes all related costs under this Contract and includes all related costs under separate contracts but excludes the Architect's redesign costs, and waives all claims for additional costs related to the substitution which subsequently become apparent; and

4. will coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.

C. Work-Related Submittals: Contractor's submittal of, and Architect's/Engineer's acceptance of, shop drawings, product data or samples which relate to work not complying with requirements of contract documents does not constitute an acceptable and valid request for a substitution nor approval thereof.

2.3 GENERAL PRODUCT REQUIREMENTS:

A. General: Provide products which comply with requirements, and which are undamaged and unused at time of installation, and which are complete with accessories, trim, finish, safety guards and other devices and details needed for a complete installation and for intended use and effect.

1. Standard Products: Where available, provide standard products of types that have been produced and used previously and successfully on other projects and in similar applications.

2. Continued Availability: Where additional amounts of a product, by nature of its application, are likely to be needed by Owner at a later date for maintenance and repair or replacement work, provide a standard, domestically produced product which is likely to be available to Owner at such later date.

B. Nameplates: Except as otherwise indicated for required approval labels and operating data, do not permanently attach or imprint manufacturer's or

producer's nameplates or trademarks on exposed surfaces of products which will be exposed to view either in occupied spaces or on exterior of the work.

1. Labels: Locate required labels and stamps on a concealed surface or, where required for observation after installation, on an accessible surface which, in occupied spaces, is not conspicuous.

2. Equipment Nameplates: Provide permanent nameplate on each item of service-connected or power operated equipment. Indicate manufacturer, product name, model number, serial number, capacity, speed, ratings and similar essential operating data. Locate nameplates on an easily accessed surface which, in occupied spaces, is not conspicuous.

END OF SECTION 012500

SECTION 013100 - PROCEDURES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to work of this section.

1.2 DESCRIPTION OF WORK:

The types of minimum requirements for procedures and performance or control work of a general nature include but are not necessarily limited to the following categories:

Coordination and meetings.
Administrative/supervisory personnel.
Surveys and records or reports.
Limitations for use of site.
Special reports.
Tradespeople and workmanship standards.
Inspections, tests and reports.
General installation provisions.
Cutting and patching.
Cleaning and protection.
Conservation and salvage.

1.3 COORDINATION AND MEETINGS:

A. General: Contractor shall prepare a written memorandum of general instructions on required coordination activities including notices/reports/meetings, and shall distribute memorandum to each major subcontractor, and to each other separate contractor where interfacing of work is required.

B. Monthly Coordination Meeting: In addition to specific preinstallation meetings and coordination meetings for each major element of work, Contractor shall schedule and hold monthly general project coordination meetings. Require representation at meeting by every major subcontractor currently involved in the

Work. Conduct meetings in a manner which will resolve coordination problems. Record results of meetings and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

1.4 ADMINISTRATIVE/SUPERVISORY PERSONNEL:

A. General: In addition to a General Superintendent and other administrative and supervisory personnel required for performance of the work, provide specific coordinating personnel as specified herein.

B. Project Coordinator: Provide a Project Coordinator who is experienced in administration and supervision of site work construction including mechanical and electrical work, and who is hereby authorized to act as the general coordinator of all subcontractors and phases of work.

1.5 SURVEYS AND RECORDS/REPORTS:

Establish and maintain bench marks and other dependable markers to set lines and levels for the work as needed to properly locate each element of entire project. Calculate, measure and verify that required dimensions are correct as shown. Advise Architect promptly upon detection of any deviations.

1.6 LIMITATIONS FOR USE OF SITE:

A. General: In addition to site utilization limitations and requirements shown on drawings, and indicated by other contract documents, administer allocation of available space equitably among entities needing access and space, so as to produce best overall efficiency in performance of total work of project. Schedule deliveries so as to minimize space and time requirements for storage of materials and equipment on site.

B. Construction Personnel Parking: Contractor shall advise all employees, subcontractors and other entities that parking must occur only on the immediate project site.

C. Disposal of Waste Materials: Do not dispose of waste materials on the site, either by burial or burning.

1.7 INSPECTIONS, TESTS AND REPORT:

A. General: Required inspection and testing services are intended to assist in determination of probable compliances of work with requirements, but do not relieve Contractor of responsibility for those compliances, or for general fulfillment of requirements of contract documents. Specified inspections and tests are not intended to limit Contractor's quality control program. Afford reasonable access to agencies performing tests and inspections.

B. Owner's Tests: Where tests or inspections are indicated as Owner's responsibility, Owner will engage independent testing agency to perform required services.

Contractor shall pay for all retests to meet standards specified; be responsible for and pay cost of delivery of test samples to agency's laboratory. Advise Architect promptly upon detection of any deviations.

C. Where tests are indicated as Contractor's responsibility, engage independent commercial testing laboratory; pay for all tests, retests and test sample delivery costs.

D. Reports: Submit test/inspection reports, in duplicate to Architect/Engineer except as otherwise indicated.

PART 2 - PRODUCTS (not applicable)

PART 3 - EXECUTION

3.1 GENERAL INSTALLATION PROVISIONS:

A. Installer's Inspection of Conditions: Require Installer of each major unit of work to inspect substrate to receive work, and conditions under which work will be performed, and to report (in writing) unsatisfactory conditions. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to Installer.

B. Manufacturer's Instructions: Where installations include manufactured products, comply with manufacturer's applicable instructions and recommendations for installation, to extent these are more explicit or more stringent than requirements indicated in contract documents.

C. Inspect each item of materials or equipment immediately prior to installation, and reject damaged and defective items.

D. Provide attachment and connection devices and methods of securing work properly as it is installed; true to line and level, and within recognized industry tolerances if not otherwise indicated. Allow for expansions and movements. Provide uniform joint widths in exposed work, organized for best possible visual effect. Refer questionable visual-effect choices to Architect for final decision.

E. Recheck measurements and dimensions of the work, as an integral step of starting each installation.

F. Install work-during conditions of temperature, humidity, exposure, forecasted weather, and status of project completion which will ensure best possible results for each unit of work, in coordination with entire work. Isolate each unit of work from non-compatible work, as required to prevent deterioration.

G. Coordinate enclosure of work with required inspections and tests, so as to minimize necessity of uncovering work for that purpose.

H. Mounting Heights: Where mounting heights are not indicated, mount individual units of work at industry-recognized standard mounting heights for applications indicated. Refer questionable mounting height choices to Architect/Engineer for final decision.

3.2 CUTTING AND PATCHING

A. General: Submit proposed cutting and patching to Architect/Engineer for approval before proceeding. Do not cut-and-patch operational elements and safety-related components in a manner resulting in reduction of capacities to perform in manner intended or resulting in decreased operational life, increased maintenance, or decreased safety.

Do not cut-and-patch work which is exposed on exterior or exposed in occupied spaces, in a manner resulting in reduction of visual qualities or resulting in substantial evidence of cut-and-patch work, both as judged solely by Architect. Remove and replace work judged by Architect to be cut-and-patched in a visually unsatisfactory or otherwise objectionable manner.

B. Materials: Except as otherwise indicated or approved by Architect/Engineer, provide materials for cutting-and-patching which will result in equal-or-better work than work being cut-and-patched; in terms of performance characteristics and including visual effect where applicable. Use materials identical with original materials where feasible and where recognized that satisfactory results can be produced thereby.

C. Temporary Support and Protection: Provide adequate temporary support for work to be cut, to prevent failure. Do not endanger other work. Provide adequate protection of other work during cutting and patching, to prevent damage; and provide protection of the work from adverse weather exposure.

D. Cut work by methods least likely to damage work to be retained and work adjoining.

1. Where physical cutting action is required, cut work with sawing and grinding tools, not with hammering and chopping tools. Core drill openings through concrete work.

2. Comply with the requirements of applicable sections of Division 2 where cutting-and-patching requires excavating and backfilling.

E. Patch with seams which are durable and as invisible as possible. Comply with specified tolerances for the work. Where feasible, inspect and test patched areas to demonstrate integrity of work.

F. Restore exposed finishes of patched areas; and, where necessary extend finish restoration onto retained work adjoining, in a manner which will eliminate evidence of patching.

3.3 CLEANING AND PROTECTION:

A. General: During handling and installation of work at project site clean and protect work in progress and adjoining work on a basis of perpetual maintenance. Apply suitable protective covering on newly installed work where reasonably required to ensure freedom from damage or deterioration at time of substantial completion; otherwise, clean and perform maintenance on newly installed work as frequently as necessary through remainder of construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

B. Limiting Exposure of Work: To extent possible through reasonable control and protection methods, supervise performance of work in a manner and by means which will ensure that none of the work, whether completed or in progress, will be subjected to harmful, dangerous, damaging, or otherwise deleterious exposures during construction period.

END OF SECTION 013100

SECTION 013200 - SCHEDULES, REPORTS, PAYMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to work of this section.

1.2 COORDINATION:

Coordinate timing and the listing of reports/activities required. In particular, provide close coordination of progress schedule, schedule of values, listing of subcontracts, schedule of submittals, progress reports, and payment requests.

1.3 PROGRESS SCHEDULE:

A. Bar-Chart Schedule: Within 5 days after contract award, submit a comprehensive bar-chart type progress schedule indicating (by stage-coded symbols) a time bar for each major category or unit of work to be performed at site, and including minor units which are, nevertheless, involved in overall sequencing of the work. Arrange schedule to graphically show major sequences required in intermeshing of work, and to show how substantial completion is scheduled to allow for Architect's certification thereto. Prepare and maintain schedule on sufficiently wide sheet or series of sheets, of stable transparency or other reproducible stock, to show required data clearly for entire Construction Time, and to permit reproduction for required distribution.

1. Individual Work Stages: By uniform targeted symbols and cross-hatched bars, show significant stages for each category or unit of work, including (where applicable), but not necessarily limited to, subcontract letting, submittals, purchases, mock-ups, fabrication, sample testing, deliveries, installation, testing, adjusting, curing, start up and placement into final use and operation. As each unit of work progresses, mark each bar with a contrasting mark to show actual percentage-of-completion.

2. Area Separations: Arrange schedule with an individual time bar for each major area of construction of each major category or unit of work where it must be sequenced or intermeshed with other work as needed for

structural completion, permanent space enclosure, and completion of mechanical/electrical work for overall work in that area.

3. Cost Correlation: Immediately below date line at heading of chart, provide a double-line cost correlation line ("precalculated" and "actual") to show dollar-volume of work performed as of same dates used for preparation of payment requests. Refer to subsequent article for cost reporting and payment procedures. Use those same dates as primary vertical lines of schedule. In so far as it is practical to do so, use same units of work in progress schedule as indicated in the "schedule of values" required by General Conditions and further specified herein.

   Superimpose an S-curve on schedule (only first sheet for multiple-sheet schedule) to show "precalculated" dollar-volume against time at any point during Contract Time; with a double column of figures in left-hand margin ranging from zero dollars to Contract Sum, and from zero percent to 100. As work progresses and on each date used in payment requests, plot a second S-curve showing "actual" dollar-volume of work performed.

4. Distribution: Following initial submittal to and response by Architect/Engineer, print and distribute progress schedule to Architect/Engineer (2 copies). Owner, separate contractors (if any), principal subcontractors and suppliers or fabricators, and others with a need-to-know schedule-compliance requirement. Post copies in field (temporary) offices. Distribute and post subsequent updated issues to same entities, when revisions are made; except delete entities from distribution when they have completed assigned work and are no longer involved in performance of scheduled work.

B. CPM progress scheduling or other approved methods may be substituted for bar-chart specified, at Contractor's option.

1.4 PRE-CONSTRUCTION CONFERENCE:

A. The Architect shall schedule a pre-construction meeting as soon after contract award as possible. This meeting shall be attended by representatives of the Owner, the Contractor, the major subcontractors, and the Architect.

B. Purpose of meeting will be to review each entity's present and future needs, discuss proposed work schedules, and requirements of the contract documents.

1.5 SCHEDULE OF VALUES:

A. General: Prepare schedule of values, as required by General Conditions, in coordination with preparation of progress schedule. Correlate line items with other administrative schedules and forms required for the work, including progress schedule, payment request form, listing of subcontractors, schedule of alternates, listing of products and principal suppliers and fabricators. Provide breakdown of Contract Sum in sufficient detail to facilitate continued evaluation of payment requests and progress reports. Break down principal subcontract amounts into several line items. Round off to nearest whole dollar, but with total equal to Contract Sum. Submit 3 copies of schedule of values to Architect/Engineer.

B. Time Coordination: In coordination of initial submittals and other administrative "start-up" activities, submit schedule of values to Architect/Engineer at earliest feasible date, but in no case later than 7 days before initial payment request is to be submitted.

C. Listing: Arrange schedule with columns to indicate generic name of item, related specification sections, subcontractor, supplier/manufacturer/fabricator, change orders (numbers) which have affected value, dollar value of item, and percentage of Contract Sum (to nearest one-hundredth percent and adjusted to total 100 percent).

D. Margins of Cost: Show line items of indirect costs, and margins on actual costs, only to extent such items will be individually listed in payment requests. In general, establish each item in schedule of values (and in payment requests) to be complete with its total expenses and proportionate share of general overhead and profit margin. Except as otherwise indicated, major cost items, which are not directly cost of actual work-in-place, such as distinct temporary facilities, may be either shown as line items in schedule of values or distributed as general overhead expense, at Contractor's option.

E. Schedule Updating: Update and resubmit schedule of values only if actual performance of the work involves necessary changes of substance to values previously listed. Submit approved change order amounts as a new line item.

1.6 PAYMENT REQUESTS:

A. General: Except as otherwise indicated, sequence of progress payments is to be regular, and each must be consistent with previous applications and payments. It is recognized that certain applications involve extra requirements, including initial application, application at times of substantial completion, and final payment application.

B. Payment Application Times: The date for each progress payment is indicated in Owner-Contractor Agreement. The period of construction work covered by each payment request is period indicated in Owner-Contractor Agreement.

C. Payment Application Forms: Use forms provided in this specification. Copies available from the Architect.

D. Application Preparation: Except as otherwise indicated, complete every entry provided for on the form, including notarization and execution by authorized persons. Incomplete applications will be returned by Architect/Engineer without action. Entries must match current data of schedule of values and progress schedule and report.

E. Initial Payment Application: The principal administrative actions and submittals which must precede or coincide with submittal of first payment application can be summarized as follows, but not necessarily by way of limitation:

Listing of subcontractors and principal suppliers and fabricators.

Schedule of values.

Progress schedule (preliminary if not final).

Schedule of principal products and manufacturers.

Copies of acquired building permits and similar authorizations and licenses from governing authorities for current performance of the work.

F. Final Payment Application: The administrative actions and submittals which must precede or coincide with submittal of final payment application can be summarized as follows, but not necessarily by way of limitation:

1. Warranties, (guarantees) maintenance agreements and similar provisions of contract documents.

2. Test/adjust/balance records, maintenance instructions, meter readings, start-up performance reports, and similar change-over information germane to Owner's occupancy, use, operation and maintenance of completed work.

3. Completion of project closeout requirements.

4. Completion of items specified for completion beyond time of substantial completion.

5. Removal of temporary facilities, services, surplus materials, rubbish and similar elements.

6. Change over of door locks and other Contractor's access provisions to Owner's property.

7. Consent of surety for final payment and payment certifications.

G. Application Transmittal: Submit one executed copies of each payment application.

END OF SECTION 013200

SECTION 013300 - SUBMITTALS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to work of this section.

1.2 DESCRIPTION OF REQUIREMENTS:

A. The types of submittal requirements specified in this section include shop drawings, product data, samples and miscellaneous work-related submittals. Individual submittal requirements are specified in applicable sections for each unit of work. Refer to other Division-l sections and other contract documents for requirements of administrative submittals.

B. Definitions: Work-related submittals of this section are categorized for convenience as follows:

1. Shop drawings include specially-prepared technical data for this project, including drawings, diagrams, performance curves, data sheets, schedules, templates, patterns, reports, calculations, instructions, measurements and similar information not in standard printed form for general application to a range of similar projects.

2. Product data include standard printed information on materials, products and systems; not specially-prepared for this project, other than the designation of selections from among available choices printed therein.

3. Samples include both fabricated and unfabricated physical examples of materials, products and units of work; both as complete units and as smaller portions of units of work; either for limited visual inspection or (where indicated) for more detailed testing and analysis.

C. Miscellaneous submittals related directly to the work (non-administrative) include warranties, maintenance agreements, workmanship bonds, project photographs, survey data and reports, physical work records, quality testing and certifying reports, copies of industry standards, record drawings, field

measurement data, operating and maintenance materials, overrun stock, and similar information, devices and materials applicable to the work and not processed as shop drawings, product data or samples.

1.3 GENERAL SUBMITTAL REQUIREMENTS:

A. Coordination and Sequencing: Coordinate preparation and processing of submittals with performance of the work so that work will not be delayed by submittals. Coordinate and sequence different categories of submittals for same work so that one will not be delayed for coordination of A/E's review with another.

B. Preparation of Submittals: Provide permanent marking on each submittal to identify project, date, Contractor, subcontractor, submittal information. Show Contractor's executed review and approval marking and provide space for Architect's/Engineer's "Action" marking.

1.4 SPECIFIC-CATEGORY SUBMITTAL REQUIREMENTS:

A. Shop Drawings: Provide newly prepared information, on reproducible sheets with graphic information at accurate scale. Show dimensions and notes which are based on field measurement. Identify materials and products in the work shown. Indicate compliance with standards, and special coordination requirements. Do not allow shop drawing copies without appropriate final "Action" markings by Architect/Engineer to be used in connection with the work.

1. Initial Submittal: One correctable translucent reproducible print and one blue-line or black-line print: reproducible will be returned.

2. Final Submittal: 4 prints, plus 2 additional prints where required for maintenance manuals; 2 will be retained and remainder will be returned, one of which is to be marked-up and maintained by Contractor as "Record Document".

B. Product Data: Collect required data into one submittal for each unit of work or system; and mark each copy to show which choices and options are applicable to project. Include manufacturer's standard printed recommendations for application and use, compliance with standards, application of labels and seals, notation of field measurements which have been checked, and special coordination requirements.

1. Submittals: Do not submit product data, or allow its use on the project, until compliance with requirements of contract documents has been confirmed by the Contractor. Submittal is for information and record, unless otherwise indicated. Initial submittal is final submittal unless returned promptly by Architect/Engineer, marked with an "Action" which indicates an observed noncompliance. Submit 4 copies, plus 2 additional copies (which will be returned) where required for maintenance manuals.

2. Installer's Copy: Do not proceed with installation of materials, products or systems until final copy of applicable product data is in possession of Installer.

C. Samples: Provide units identical with final condition of proposed materials or products for the work. Include "range" samples (not less than 3 units) where unavoidable variations must be expected. Samples are submitted for review and confirmation of color, pattern, texture and "kind" by the Architect/ Engineer. Architect/Engineer will not "test" samples (except as otherwise indicated) for compliance with other requirements, which are therefore the exclusive responsibility of Contractor.

D. Inspection and Test Reports: Classify each as either "shop drawing" or "product data" depending upon whether report is uniquely prepared for project or a standard publication of workmanship control testing at point of production, and process accordingly.

E. Warranties: Refer to "Products" section for specific general requirements on warranties, product/workmanship bonds, and maintenance agreements.

F. Closeout Submittals: Refer to individual work sections and to "closeout" sections for specific requirements on submittal of closeout information, materials, tools and similar items.

1. Record Document Copies: Furnish one set.

2. Maintenance/Operating Manuals: Furnish 4 bound copies.

3. Materials and Tools: Refer to individual work sections for required quantities of spare parts, extra and overrun stock, maintenance tools and devices, keys, and similar physical units to be submitted.

G. General Distribution: Provide additional distribution of submittals (not included in foregoing copy submittal requirements) to subcontractors, suppliers, fabricators, installers, and others as necessary for proper performance of the work. Include such additional copies in transmittal to Architect/Engineer where required to receive "Action" marking before final distribution. Record distributions on transmittal forms.

1.5 ACTION ON SUBMITTALS:

A. Architect's/Engineer's Action: Where action and return is required or requested, Architect/Engineer will review each submittal, mark with "Action", and where possible, return within two weeks of receipt. Where submittal must be held for coordination, Contractor will be so advised by A/E without delay.

B. Action Stamp: Architect's/Engineer's action stamp, for use on submittals to be returned to Contractor, is self-explanatory as marked.

END OF SECTION 013300

SECTION 014200 - DEFINITIONS AND STANDARDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to work of this section.

1.2 DEFINITIONS:

A. General Explanation: A substantial amount of specification language constitutes definitions for terms found in other contract documents, including drawings which must be recognized as diagrammatic in nature and not completely descriptive of requirements indicated thereon. Certain terms used in contract documents are defined generally in this article. Definitions and explanations of this section are not necessarily either complete or exclusive, but are general for the work to extent not stated more explicitly in another provision of contract documents.

1. General Requirements: The provisions or requirements of Division 1 sections. General Requirements apply to entire work of Contract and, where so indicated, to other elements which are included in project.

2. Indicated: The term "Indicated" is a cross-reference to details, notes or schedules on drawings, to other paragraphs or schedules in the specifications, and to similar means of recording requirements in contract documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used in lieu of "indicated," it is for purpose of helping reader locate cross-reference, and no limitation of location is intended except as specifically noted.

3. Directed, Requested, etc.: Where not otherwise explained, terms such as "directed," "requested," "authorized," "selected," "approved," "required," "accepted," and "permitted" mean "directed by Architect/Engineer," "requested by Architect/Engineer," etc. However, no such implied meaning will be interpreted to extend Architect's/Engineer's responsibility into Contractor's area of construction supervision.

4. Approve: Where used in conjunction with Architect's/Engineer's response to submittals, requests, applications, inquiries, reports and claims by Contractor, the meaning of term "approved" will be held to limitations of Architect's/Engineer's responsibilities and duties as specified in General and Supplementary Conditions. In no case will "approval" by Architect/Engineer be interpreted as a release of Contractor from responsibilities to fulfill requirements of contract documents.

5. Project Site: The space available to Contractor for performance of the work, either exclusively or in conjunction with others performing other work as part of the project. The extent of project site is shown on drawings, and may or may not be identical with description of land upon which project is to be built.

6. Furnish: Except as otherwise defined in greater detail, term "furnish" is used to mean supply and deliver to project site, ready for unloading, unpacking, assembly, installation, etc., as applicable in each instance.

7. Install: Except as otherwise defined in greater detail, term "install" is used to describe operations at project site including unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing protecting, cleaning and similar operations, as applicable in each instance.

8. Provide: Except as otherwise defined in greater detail, term "provide" means furnish and install, complete and ready for intended use, as applicable in each instance.

9. Installer: The entity (person or first engaged by Contractor or its subcontractor or sub-subcontractor for performance of a particular unit of work at project site, including installation, erection, application and similar required operations. It is a general requirement that such entities (Installers) be expert in operations they are engaged to perform.

10. Testing Laboratory: An independent entity engaged to perform specific inspections or tests of the work, either at project site or elsewhere; and to report and (if required) interpret results of those inspections or tests.

11. Owner's Representative: Architect/Engineer.

1.3 FORMAT AND SPECIFICATION EXPLANATIONS:

A. Specification Production: None of these explanations will be interpreted to modify substance of requirements. Portions of these specifications have been produced by Architect's/Engineer's standard methods of editing master specifications, and may contain minor deviations from traditional writing formats. Such deviations are a normal result of this production technique. and no other meaning will be implied or permitted.

B. Format Explanation: The format of principal portions of these specifications can be described as follows; although other portions may not fully comply and no particular significance will be attached to such compliance or non-compliance:

Sections and Divisions: For convenience, basic unit of specification text is a "section," each unit of which is named and numbered. These are organized into related families of sections, and various families of sections are organized into "divisions," which are recognized as the present industry-consensus on uniform organization and sequencing of specifications. The section title is not intended to limit meaning or content of section, nor to be fully descriptive of requirements specified therein, nor to be an integral part of text.

C. Overlapping and Conflicting Requirements: Where compliance with 2 or more standards or sets of requirements is specified, or drawn and overlapping of those different standards or requirements establishes different or conflicting minimums or levels of quality, most stringent requirement (which is generally recognized to be also most costly) is intended and will be enforced, unless specifically detailed language written into contract documents (not by way of reference to an industry standard) clearly indicates that a less stringent requirement is to be fulfilled. Refer apparently-equal-but-different requirements, and uncertainties as to which level of quality is more stringent, to Architect/Engineer for a decision before proceeding.

Contractor's Options: Except for overlapping or conflicting requirements, where more than one set of requirements are specified for a particular unit of work, option is intended to be Contractor's regardless of whether specifically indicated as such.

D. Minimum Quality/Quantity: In every instance, quality level or quantity shown or specified is intended as minimum for the work to be performed or provided. Except as otherwise specifically indicated, actual work may either comply

exactly with that minimum (within specified tolerances), or may exceed that minimum within reasonable limits. In complying with requirements, indicated numeric values are either minimums or maximums as noted or as appropriate for context of requirements. Refer instances of uncertainty to Architect/Engineer for decision before proceeding.

E. Trades: Except as otherwise indicated, the use of titles such as "carpentry" in specification text, implies neither that the work must be performed by an accredited or unionized tradesperson of corresponding generic name (such as "carpenter"), nor that specified requirements apply exclusively to work by tradesperson of that corresponding generic name.

F. Abbreviations: The language of specifications and other contract documents is of the abbreviated type in certain instances, and implies words and meanings which will be appropriately interpreted. Actual word abbreviations of a self-explanatory nature have been included in texts. Specific abbreviations have been established, principally for lengthy technical terminology and primarily in conjunction with coordination of specification requirements with notations on drawings and in schedules. These are frequently defined in section at first instance of use. Trade association names and titles of general standards are frequently abbreviated. Singular words will be interpreted as plural and plural words will be interpreted as singular where applicable and where full context of the contract documents so indicates.

1.4 DRAWING SYMBOLS:

General: Except as otherwise indicated, graphic symbols used on drawings are those symbols recognized in the construction industry for purposes indicated. Refer instances of uncertainty to Architect/Engineer before proceeding.

1.5 INDUSTRY STANDARDS:

A. General Applicability of Standards: Applicable standards of construction industry have same force and effect (and are made a part of contract documents by reference) as if copied directly into contract documents, or as if published copies were bound herewith.

1. Referenced standards (referenced directly in contract documents or by governing regulations) have precedence over non-referenced standards which are recognized in industry for applicability to work.

2. Non-referenced standards recognized in the construction industry are hereby defined, except as otherwise limited in contract documents, to have direct applicability to the work, and will be so enforced for performance of the work.

B. Publication Dates: Except as otherwise indicated, where compliance with an industry standard is required, comply with standard in effect as of date of contract documents.

C. Abbreviations and Names: Where acronyms or abbreviations are used in specifications or other contract documents they are defined to mean the industry recognized name of trade association, standards generating organization, governing authority or other applicable to context of text provision. Refer to "Encyclopedia of Associations," published by Gale Research Co.

D. Abbreviations and Names: The following acronyms or abbreviations as referenced in contract documents are defined to mean the associated names. Both names and addresses are subject to change, and are believed to be, but are not assured to be, accurate and up-to-date as of date of contract documents:

AA Aluminum Association
818 Connecticut Ave. NW; Washington DC 20006: 202/862-5100

AAMA Architectural Aluminum Manufacturers Association
35 E. Wacker Drive; Chicago, IL 60601; 312/782-8256

ACI American Concrete Institute
Box 19150; Detroit, MI 48219; 313/532-2600

ACIL American Council of Independent Laboratories
1725 K Street, NW; Washington, DC 20006; 202/659-3766

AGA American Gas Association
1515 Wilson Blvd.; Arlington, VA 22209; 703/841-8400

AIA American Institute of Architects
1735 New York Ave. NW; Washington, DC 20006; 202/626-7474

AISC American Institute of Steel Construction, Inc.

400 N. Michigan Ave.; Chicago, IL 60611: 312/670-2400

AITC American Institute of Timber Construction
333 W Hampden Ave.; Englewood, CO 80110; 303/761-3212

ANSI American National Standards Institute
1430 Broadway; New York, NY 10018; 212/354-3300

APA American Plywood Association
P.O. Box 11700; Tacoma, WA 98411; 206/565-6600

ASGCA American Society of Golf Course Architects
221 N. LaSalle St., Chicago, IL 60601; 312/372-7090

ASHRAE American Society of Heating, Refrigerating & Air-Conditioning Engineers
1791 Tullie Circle, NE; Atlanta, GA 30329: 404/636-8400

ASLA American Society of Landscape Architects
1733 Connecticut Ave., N. W. Washington, DC 20009; 202/466-7730

ASME American Society of Mechanical Engineers
345 East 47th St.; New York, NY 10017; 212/705-7722

ASTM American Society for Testing and Materials
1916 Race St.; Philadelphia, PA 19103; 215/299-5400

AWI Architectural Woodwork Institute
2310 S. Walter Reed Dr.; Arlington, VA 22206; 703/671-9100

AWPA American Wood-Preservers' Association
7735 Old Georgetown Rd.; Bethesda, MD 20814; 301/652-3109

AWPB American Wood Preservers Bureau
P.O. Box 6085; Arlington, VA 22206: 703/931-8180

AWS American Welding Society
P.O. Box 351040; Miami, FL 33135; 305/642-7090

CRSI Concrete Reinforcing Steel Institute

	933 Plum Grove Rd.; Schaumburg, IL 60195; 312/372-5059
CS	Commercial Standard of NBS (US Dept. of Commerce) Government Printing Office; Washington DC 20402
FHA	Federal Housing Administration (U.S. Dept. of HUD) 451 - 7th St. SW; Washington, DC 20201
FM	Factory Mutual Engineering Corp. 1151 Boston-Providence Turnpike; Norwood, MA 02062 617/762-4300
FS	Federal Specification (General Services Admin.) Bldg. 197, Washington Navy Yard SE; Washington DC 20407
GA	Gypsum Association 1603 Orrington Ave.; Evanston; IL 60201; 312/491-1744
GCSAA	Golf Course Superintendents Association of America 1617 St. Andrews Drive, Lawrence, KS 66046; 913/841-2240
IES	Illuminating Engineering Society of North America 345 E. 47th St.: New York NY 10017; 212/644-7926
NAAMM	National Association of Architectural Metal Mfrs. 221 N. La Salle St.; Chicago, IL 60601; 312/346-1600
NBS	National Bureau of Standards (U.S. Dept. of Commerce) Gaithersburg, MD 20234; 301/921-1000
NEC	National Electrical Code (by NFPA)
NEMA	National Electrical Manufacturers Association 2101 L St. NW; Washington DC 20037; 202/457-8400
NFPA	National Fire Protection Association 470 Atlantic Ave.; Boston MA 02210; 617/482-8755
NHLA	National Hardwood Lumber Association P.O. Box 34518; Memphis, TN 38104: 901/377-1818

NPA	National Particleboard Association 2306 Perkins Pl.; Silver Spring, MD 20910; 301/587-2204
NWMA	National Woodwork Manufacturers Association 205 West Touhy Ave.; Park Ridge, IL 60068; 312/823-6747
OSHA	Occupational Safety & Health Administration (U.S. Dept. of Labor) Government Printing Office: Washington, DC 20402
SD.I.	Steel Door Institute 712 Lakewood Cnt. N.; Cleveland, OH 44107; 216/226-7700
SIGMA	Sealed Insulating Glass Manufacturers Association 111 E. Wacker Dr.; Chicago, IL 60601; 312/644-6610
SMACNA	Sheet Metal & Air Conditioning Contractors' National Association P.O. Box 70; Merrifield, VA 22116
SPIB	Southern Pine Inspection Bureau (Grading Rules) 4709 Scenic Hgy.; Pensacola, FL 32504; 904/434-2611
TIMA	Thermal Insulation Manufacturers Association 7 Kirby Plaza: Mt. Kisco, NY 10549: 914/241-2284
TPI	Truss Plate Institute 100 W. Church St.; Frederick, MD 21701; 301/694-6100
UL	Underwriters Laboratories 333 Pfingsten Rd., Northbrook, IL 60062: 312/272-8800
WCLIB	West Coast Lumber Inspection Bureau (Grading Rules) PO Box 23145; Portland, OR 97223; 503/639-0651
WRI	Wire Reinforcement Institute 7900 Westpark Drive; McLean, VA 22102: 703/790-9790
WWPA	Western Wood Products Association (Grading Rules) 1500 Yeon Blg.: Portland, OR 97204: 503/224-3930

W.W.P.A. Woven Wire Products Association
108 W. Lake St.; Chicago, IL 60601; 312/332-6502

1.6 SUBMITTALS:

Permits, Licenses and Certificates: For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of the work.

PART 2 - PRODUCTS (not applicable)

PART 3 - EXECUTION (not applicable)

END OF SECTION 014200

SECTION 015000 - TEMPORARY FACILITIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to work of this section.

1.2 DESCRIPTION OF REQUIREMENTS:

Specific administrative and procedural minimum actions are specified in this section, as extensions of provisions in General Conditions and other contract documents. These requirements have been included for special purposes as indicated. Nothing in this section is intended to limit types and amounts of temporary work required, and no omission from this section will be recognized as an indication by Architect/Engineer that such temporary activity is not required for successful completion of the work and compliance with requirements of contract documents. Provisions of this section are applicable to, but not by way of limitation, utility services, construction facilities, security/protection provisions, and miscellaneous facilities.

1.3 QUALITY ASSURANCE:

A. Comply with governing regulations and rules/recommendations of franchised utility companies, local ordinances and regulations.

B. Standards: Comply with the requirements of NFPA Code 241, "Building Construction and Demolition Operations", the ANSI-AlO Series standards for "Safety Requirements for Construction and Demolition" and the NECA National Joint Guideline NJG-6 "Temporary Job Utilities and Services".

1.4 JOB CONDITIONS:

A. Establish and initiate use of each temporary facility at time first reasonably required for proper performance of the work. Terminate use and remove facilities at earliest reasonable time, when no longer needed or when permanent facilities have, with authorized use, replaced the need.

B. Conditions of Use: Install, operate, maintain and protect temporary facilities in a manner and at locations that will be safe, non-hazardous, sanitary and protective of persons and property, and free of deleterious effects.

PARTS 2 and 3 - PRODUCTS AND EXECUTION

2.1 TEMPORARY UTILITY SERVICES:

A. Arrange for local service companies to extend utilities indicated to the project site. Comply with service companies' recommendations on materials and methods, or engage service companies to install services. Locate services to minimize interference with construction operations. Types of temporary services include, but not by way of limitation, the following:

1. Telephone Service in temporary construction office.
2. Water Service and Distribution.
3. Temporary Heating Fuel.
4. Electrical Power.

B. Metering: Provide meters for water and electrical power services. Read meters and record readings weekly, and include in progress report to Architect/Engineer at monthly intervals. Cost of temporary services paid by Contractor.

2.2 TEMPORARY CONSTRUCTION FACILITIES:

A. The types of temporary construction facilities required may include, but not by way of limitation, water distribution, drainage, dewatering equipment, enclosure of work, heat, ventilation, electrical power distribution, lighting, hoisting facilities, stairs, ladders, and roads. Provide facilities reasonably required to perform construction operations properly and adequately and in compliance with governing regulations.

B. Temporary Water: Provide water service and distribution piping of sizes and pressures adequate for construction purposes until permanent service is completed. Provide hose lengths sufficient to reach entire area of construction work, not less than 3/4" hose size. Prevent freezing of water distribution by either prompt drainage after each use, or by suitable protection. Maintain 30 PSI minimum water pressure at hose outlets. Protect water source from contamination, provide vacuum breaker.

C. Temporary Enclosure: Provide temporary enclosure to ensure adequate workmanship and protection from weather and unsatisfactory ambient conditions for the work, including enclosure where temporary heat is used. Provide lumber and plywood. Provide tarpaulins with UL label and flame spread of 15 or less; provide translucent type (nylon reinforced polyethylene) where day lighting of enclosed space would be beneficial for workmanship, and reduce use of temporary lighting.

At all times provide protection against weather which includes, but not by way of limitation, rain, snow, wind, storms, frost and heat so as to maintain all work, materials, apparatus and fixtures free from injury or damage. Provide all pumps, pipes, equipment and enclosures to secure this protection. At the end of day's work, all new work likely to be damaged shall be covered or otherwise protected.

D. Temporary Heat: Provide temporary heat to protect, dry all work during cold and/or wet weather, to maintain temperatures, conditions indicated by other specification sections for each type of work to be performed.

1. Prior to enclosure provide, maintain self-contained heaters bearing UL or FM approved labels and known to be safe and without deleterious effect on work in place. Vent heaters and equip all units with individual space thermostatic controls. Open fuel oil salamanders, coal, coke or wood burning heaters will not be permitted.

E. Temporary Mechanical Ventilation: Where natural ventilation of work in progress is not sufficient for proper workmanship, either with or without temporary heating, provide power ventilators in conjunction with openings in temporary (or permanent) enclosure work. Provide and operate either exhaust or supply fans/blowers, or both, sufficient to ventilate work adequately.

F. Temporary Electrical Power: Provide weatherproof, grounded, power distribution system sufficient to accommodate construction operations requiring power, use of power tools, lighting, and start-up testing of permanent electric-powered equipment prior to its permanent connection to electrical system. Comply with National Electrical Code (NFPA 70).

G. Temporary Lighting: Provide sufficient temporary lighting to ensure proper workmanship everywhere; by combined use of daylight, general lighting, and

portable plug-in task lighting. Provide general lighting with local switching which will enable energy conservation during periods of varying activity (work-in-progress, traffic only, security check, lock-up, etc.). Provide additional lighting on an "as-needed" basis for satisfactory performance of the work.

H. Temporary Access Provisions: Provide ramps, stairs, ladders and similar temporary access elements as reasonably required to perform the work and facilitate its inspection during installation. When permanent stairs are available for access during construction, cover finished surfaces with sufficient protection to ensure freedom from damage and deterioration at time of substantial completion.

2.3 SECURITY/PROTECTION PROVISIONS:

A. The types of temporary security and protection provisions required include, but not by way of limitation, fire protection, barricades, warning signs/lights, enclosure/lockup, environmental protection, weather protection and similar provisions intended to minimize property losses, personal injuries and claims for damages at project site. Provide security/protection services and systems in coordination with activities and in a manner to achieve 24-hour, 7-day-per-week effectiveness.

B. Fire Extinguishers: Provide types, sizes, numbers and locations to comply with local ordinances or recommendations of NFPA No. 10.

C. Barricades, Warning Signs and Lights:

General: Comply with recognized standards and code requirements for the erection of substantial, structurally adequate barricades where needed to prevent injury and losses. Paint with appropriate colors, graphics and warning signs to inform personnel at the site and the public, of the hazard being protected against. Provide lighting where appropriate and needed, including flashing red lights where appropriate.

D. Enclosure and Lockup: At earliest possible date, secure against unauthorized entrance at times when personnel are not working. Provide secure temporary enclosures at locations of possible entry, with locked entrances.

E. Environmental Protection Procedures: Provide facilities, establish procedures, and conduct construction activities in a manner that will ensure compliance with

regulations controlling construction activities. Enforce strict discipline on activities related to generation of wastes, pollution of air/water/soil, generation of noise, and similar effects that might violate regulations or reasonably irritate persons at or in vicinity of project site.

Provide dust suppression controls during all earth work.

2.4 TEMPORARY MISCELLANEOUS FACILITIES:

A. The types of miscellaneous temporary facilities required may include, but not by way of limitation, field offices, storage sheds, sanitary facilities, first aid facilities, thermometer, project identification signs, and similar miscellaneous general services, all as may be reasonably required for proficient performance of the work and accommodation of personnel at the site including Owner's and Architect's/ Engineer's personnel. Discontinue and remove temporary support facilities, and make incidental similar use of permanent work of the project, only when and in manner authorized by Architect/ Engineer.

B. Temporary Field Office: Provide adequate office space for field office personnel plus one spare work station for incidental use by subcontractor's, Architect/Engineer's personnel. Provide walls with tack-board material for posting of notices, progress schedule and similar information; shelf space adequate for storage of specifications, shop drawings, manufacturer's data, samples.

C. Temporary Sheds: The Contractor shall provide temporary shed or mobile storage unit for storage, fabrication and similar purposes. Sheds: located where indicated or other suitable arrangements made.

D. Temporary Sanitary Facilities: Beginning at time of start of work, provide and maintain self-contained toilet units of type acceptable to governing authorities, adequate for use by personnel at project site. Provide facilities for male and female personnel when both sexes are working at project site.

E. First Aid Facilities: Provide appropriate first aid kits on site, furnish personnel trained in first aid procedures.

F. Thermometer: Provide accurate thermometer graduated in degrees Fahrenheit; mount on temporary office.

G. Drinking Water: Provide dispenser-type drinking water units with potable water. Furnish paper cups and waste receptacles.

END OF SECTION 015000

SECTION 017700 - PROJECT CLOSEOUT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to work of this section.

1.2 DESCRIPTION OF REQUIREMENTS:

Definitions: "Closeout" is hereby defined to include general requirements near end of Contract Time in preparation for final acceptance, final payment, normal termination of contract, occupancy by Owner and similar actions evidencing completion of the work. Specific requirements for individual units of work are specified in sections of Divisions 2 through 16. Time of closeout is directly related to "Substantial Completion", and therefore may be either a single time period for entire work or a series of time periods for individual parts of the work which have been certified as substantially complete at different dates. That time variation (if any) shall be applicable to other provisions of this section.

1.3 PREREQUISITES TO SUBSTANTIAL COMPLETION:

A. General: Prior to requesting Architect/Engineer's inspection for certification of substantial completion (for either entire work or portions thereof), complete the following and list known exceptions in request:

1. In progress payment request, coincident with or first following date claimed, show either 100% completion for portion of work claimed as "substantially complete", or list incomplete items, value of incompletion, and reasons for being incomplete.

2. Advise Owner of pending insurance change over requirements.

3. Submit specific warranties, workmanship/maintenance bonds, maintenance agreements, final certifications and similar documents.

4. Obtain and submit releases enabling Owner's full and unrestricted use of the work and access to services and utilities, including (where required) occupancy permits, operating certificates, and similar releases.

5. Deliver tools, spare parts, extra stocks of materials, and similar physical items to Owner.

6. Make final change over of locks and transmit keys to Owner, and advise Owner's personnel of change over in security provisions.

7. Complete start-up testing of systems, and instructions of Owner's operating/maintenance personnel. Discontinue (or change over) and remove from project site temporary facilities and services, along with construction tools and facilities, mock ups, and similar elements.

8. Complete final cleaning up requirements, including touch-up painting of marred surfaces.

B. Inspection Procedures: Upon receipt of Contractor's request, Architect/Engineer will either proceed with inspection or advise Contractor of prerequisites not fulfilled. Following initial inspection, Architect/Engineer will either prepare certificate of substantial completion, or advise Contractor of work which must be performed prior to issuance of certificate; and repeat inspection when requested and assured that work has been substantially completed. Results of completed inspection will form initial "punch-list" for final acceptance.

1.4 PREREQUISITES TO FINAL ACCEPTANCE:

A. General: Prior to requesting Architect/Engineer's final inspection for certification of final acceptance and final payment, as required by General Conditions, complete the following and list known exceptions (if any) in request:

1. Submit final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.

2. Submit final meter readings for utilities, and similar data as of time of substantial completion or when Owner took possession of and responsibility for corresponding elements of the work.

3. Submit consent of surety.

4. Submit Affidavit on Behalf of Contractor.

B. Re-inspection Procedure: Upon receipt of Contractor's notice that the work has been completed, including punch-list items resulting from earlier inspections, and excepting incomplete items delayed because of acceptable circumstances, Architect/Engineer will re-inspect the work. Upon completion of re-inspection, Architect/Engineer will either prepare certificate of final acceptance or advise Contractor of work not completed or obligations not fulfilled as required for final acceptance.

1.5 RECORD DOCUMENT SUBMITTALS:

A. Record Drawings: Maintain a white-print set (blue-line or black-line) of contract drawings and shop drawings in clean, undamaged condition, with mark-up of actual installations which vary substantially from the work as originally shown. Mark whichever drawing is most capable of showing "field" condition fully and accurately: however, where shop drawings are used for mark-up, record a cross-reference at corresponding location on working drawings. Mark with red erasable pencil and, where feasible, use other colors to distinguish between variations in separate categories of work. Mark up new information that is recognized to be of importance to the Owner, but was for some reason not shown on either contract drawings or shop drawings. Give particular attention to concealed work, which would be difficult to measure and record at a later date. Note related change order numbers where applicable. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on cover of each set.

B. Maintenance Manuals: Organize maintenance-and-operating manual information into suitable sets of manageable size, and bind into individual binders properly identified and indexed (thumb tabbed). Include emergency instructions, spare parts listing, copies of warranties, wiring diagrams, recommended "turn-around" cycles, inspection procedures, shop drawings, product data, and similar applicable information. Bind each manual of each set in a heavy-duty 2", 3-ring vinyl-covered binder, and include pocket folders for folded sheet information. Mark identification on both front and spine of each binder.

PART 2 - PRODUCTS (not applicable)

PART 3 - EXECUTION

3.1 CLOSEOUT PROCEDURES:

General Operating/Maintenance Instructions: Arrange for each installer of work requiring continuing maintenance or operation, to meet with Owner's personnel, at project site, to provide basic instructions needed for proper operation and maintenance of entire work. Include instructions by manufacturer's representatives where installers are not expert in the required procedures. Review maintenance manuals, record documentation, tools, spare parts and materials, lubricants, fuels, identification system, control sequences, hazards, cleaning and similar procedures and facilities. For operational equipment, demonstrate start-up, shut-down, emergency operations, noise and vibration adjustments, safety, economy/efficiency adjustments, energy effectiveness and similar operations. Review maintenance and operations in relation with applicable warranties, agreements to maintain, bonds, and similar continuing commitments.

3.2 FINAL CLEANING:

A. General: Special cleaning for specific units of work is specified in sections of Divisions 2 through 16. General cleaning during progress of work is specified in General Conditions and as temporary services in "Temporary Facilities" section of this Division. Provide final cleaning of the work, at time indicated, consisting of cleaning each surface or unit of work to normal "clean" condition expected for a first-class building cleaning and maintenance program. Comply with manufacturer's instructions for cleaning operations. The following are examples, but not by way of limitation, of cleaning levels required:

1. Remove labels which are not required as permanent labels.

2. Clean transparent materials, including mirrors and window/door glass, to a polished condition, removing substances that are noticeable as vision-obscuring materials. Replace broken glass and damaged transparent materials.

3. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of dust, stains, films and similar noticeable distracting

substances. Except as otherwise indicated, avoid disturbance of natural weathering of exterior surfaces. Restore reflective surfaces to original reflective condition.

4. Wipe surfaces of mechanical and electrical equipment clean, remove excess lubrication and other substances. Clean fans, coils, and replace dirty filters.

5. Remove debris and surface dust from limited-access spaces including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics and similar spaces.

6. Clean concrete floors in non-occupied spaces broom clean.

7. Clean plumbing fixtures free of stains, including those resulting from water exposure.

8. Clean light fixtures and lamps so as to function with full efficiency.

9. Clean project site (yard and grounds), including landscape development areas, of litter and foreign substances.

B. Removal of Protection: Except as otherwise indicated or requested by Architect/Engineer, remove temporary protection devices and facilities which were installed during course of the work to protect previously completed work during remainder of construction period.

C. Compliances: Comply with safety standards and governing regulations for cleaning operations. Do not burn waste materials at site, or bury debris or excess materials on Owner's property, or discharge volatile or other harmful or dangerous materials into drainage systems; remove waste materials from site and dispose of in a lawful manner.

END OF SECTION 017700

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 – GENERAL

1.1 DESCRIPTION:

A. Work Included: Carefully demolish and remove from the site those items scheduled to be demolished and removed.
B. Related Work:
   1. Documents affecting work of this Section include, but are not necessarily limited to Proposal and Contract Documents and Sections in Division 1 of these Specifications.

1.2 QUALITY ASSURANCE:

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

3.1 SURFACE CONDITIONS:

A. By careful study of the Contract Documents, determine the location and extent of selective demolition to be performed.
B. Visit the site and verify the extent and location of selective demolition required.
   1. Carefully identify limits of selective demolition.
   2. Mark interface surfaces as required to enable workmen also to identify items to be removed and items to be left in place intact.
C. Prepare and follow an organized plan for demolition and removal of items.
   1. Shut off, cap and otherwise protect existing public utility lines in accordance with the requirements of the public agency or utility having jurisdiction.

2. Completely remove items scheduled to be so demolished and removed, leaving surfaces clean, solid and ready to receive new materials specified elsewhere.
3. In all activities, comply with pertinent regulations of governmental agencies having jurisdiction.

D. Demolished material shall be considered to be property of the Contractor and shall be completely removed from the job site unless otherwise specified.
E. Use means necessary to prevent dust becoming a nuisance to the public, to neighborhoods and to other work being performed on or near the site.

3.2 REPLACEMENTS:

A. In the event of demolition of items not so schedule to be demolished, promptly replace such items to the approval of the Owner at no additional cost to the Owner.

END OF SECTION 024119

SECTION 221125 - PUMP STATION

PART 1 - GENERAL

1.1 SCOPE:

A. General

It is the intention of this specification to describe a self-enclosed automatic, prefabricated pump station for turf irrigation systems. Design, fabrication, testing and service shall be the sole responsibility of the pump station manufacturer. The pump station shall provide water while simultaneously maintaining a constant discharge pressure by using a prefabricated pump station with a variable frequency drive (VFD) for pressure regulation, under varying flow conditions up to the maximum specified capacity.

This shall be accomplished by using a completely prefabricated pump station conforming to the following specifications. Supply shall be from the BBWA Canal. The water supply type shall be identified in the accompanying Drawings and shall call incoming pressure in pounds per square inch, (PSI)

B. Work Included

Furnishing and installing the pump station.

1.2 RELATED WORK SPECIFIED ELSEWHERE:

Electrical	- Section 260500
Irrigation System	- Section 328400

1.3 QUALITY ASSURANCE:

A. Qualifications of Installers

Previous experience and installation of pumping systems of similar design.

Provide at least one person who shall be present at all times during execution of this portion of the work and who shall be thoroughly familiar with the type of materials being installed and material manufacturer's recommended methods of installation and who shall direct all work performed under this section.

B. Codes and Standards

In addition to complying with all pertinent codes and regulations, comply with the latest rules of the National Electric Code for all electrical work and materials.

Where provisions of pertinent codes and standards conflict with the requirements of this section of these specifications, the more stringent provisions shall govern.

1.4 APPLICABLE STANDARDS:

A. National Sanitation Foundation.

B. A.W.W.A. C110-52-ASA, C500 and C400 53T.

C. AASHTO M189-60.

1.5 SUBMITTALS:

A. Substitutions

Submit samples and sufficient descriptive literature for any material submitted as "equal" substitutions. Make submittals as specified by Special Provisions and applicable Division 01 specification sections of this specification.

Substitution requests shall include a full feature by feature or equipment by equipment comparison clearly indicating how proposed product is equal to or superior to specified product. Requests not including this information will not be reviewed.

B. Shop Drawings

Shop drawings shall be furnished by the manufacturer within two weeks after receipt of order. Drawings shall indicate pump station alignment, discharge piping size, and electrical services required.

Manufacture of the pump station shall not commence until one set of approved or corrected drawings is returned to the Manufacturer from the Owner's Representative.

1.6 EXISTING UTILITIES:

A. Electric Power

Primary power shall be available as specified and shown on the drawings. Extend power to all new loads.

Verify the exact location of all utilities on the site, prior to beginning work. Protect from damage and interruption of service. Repair all damage in a manner satisfactory to the affected utility and adjust locations if required to complete the work in an approved manner.

1.7 GENERAL SPECIFICATIONS:

The pump station performance at enclosure limits shall be as noted in the technical specifications. The capacity, discharge pressure, pump inlet pressure shall be per the technical specifications. The pump shall operate at no more than 3600 RPM. The power supply to the station shall be as noted in the technical specifications.

The station shall be completely wired, piped, dynamically flow and pressure tested prior to shipment.

Operational sequence: The pump shall activate automatically upon detecting a drop in pressure in the irrigation main line, by recognizing flow, or a remote start signal. Operation shall be maintained at an adjustable minimum demand. The pump shall be automatically retired when the demand falls below the minimum adjustable set point for an adjustable time delay.

Construction shall be of modular form utilizing a base structurally adequate to support pumps, piping, and electrical equipment as a single integral assembly. All nuts, bolts washers, and fasteners shall be stainless steel, zinc or cadmium plated for corrosion resistance.

The pumping station shall be **WaterMax Model Number WMFV-5000-7A-15-480-3-75-81** as manufactured by WATERTRONICS, INC. 525 Industrial Drive, P.O. Box 530, Hartland, Wisconsin 53029-0530, www.watertronics.com, or equal approved in advance by the Owner's Representative. For consideration of

approval as an equal, the following information must be furnished to the Landscape Architect 10 days before the Bid date:

A. A complete specification and submittal of all major components for the proposed pump station with individual pump performance verification.

B. A detailed pump station proposal drawing complete with component location, sizes and dimensions specific to the installation.

C. A complete electrical schematic for all high and low voltage circuits showing breaker/fuse sizing, wire numbering and color.

D. Feature by feature or equipment by equipment comparison clearly indicating how proposed product is equal to or superior to specified product. Requests not including this information will not be reviewed.

E. Pump station manufacturer's U.L. file number for the electrical controls.

F. A copy of the manufacturer's certificate of insurance.

G. Product support technicians shall be capable of accessing all information pertaining to the pumping equipment, e.g. electrical schematics, pump curves, program data, bill of materials, etc. The manufacturer shall have no less than two technicians on call seven days a week.

H. The pump station manufacturer shall provide factory authorized or factory direct service personnel for the set, start-up, preventative maintenance and general service of the pump system. A factory authorized or factory direct service technician must be located within a five hundred (500) mile radius of the project site. The pump systems technician must have a minimum of 5 years experience. The pump station manufacturer shall provide technical phone support twenty-four hours a day seven days a week.

1.8 WARRANTY

All materials, controls and installation will be guaranteed by the Contractor for one (1) year from the date of substantial completion of the project from defects in materials and workmanship, regardless of manufacturers' stated warranty.

PART 2 - MATERIALS

2.1 PUMP AND MOTOR:

A. Pump

Pump shall be electric motor driven, horizontal centrifugal with mechanical shaft seal, volute case and impeller.

The shaft seal shall be a self-adjusting mechanical type to prevent leakage and eliminate the need for a drain piping. The volute case shall be precision machined from gray cast iron and engineered to modern hydraulic standards. It shall be possible to rotate the discharge connection to any of four positions. A heavy cast iron bracket shall maintain alignment between the motor and volute case.

The impeller shall be an enclosed type and balanced to provide smooth operation. The impeller shall be keyed to the shaft and locked with a special cap screw and washer. The motor shaft is to be manufactured from high grade steel and of reduced length to increase shaft rigidity, extend bearing life, and reduce the overall length of the pump and motor assembly. The pump shaft shall be protected with a replaceable stainless steel sleeve.

The pump, motor and impeller shall be removable from the back of volute case for service without disturbing the plumbing.

B. Motor

Pump motor shall be a squirrel cage induction horizontal solid shaft type. The pump impeller shall be direct mounted and keyed to the motor shaft with a stainless steel protective sleeve. The temperature rise of the motor shall be to NEMA Standard for class B or Class F insulation. Radial and thrust bearings of ample capacity to accommodate the hydraulic thrust of the pump shall be incorporated into the motor.

2.2 PIPING MANIFOLD, VALVES, GAUGES AND OTHER MECHANICAL EQUIPMENT:

A. Fabricated Piping

All fabricated piping shall conform to ASTM specifications A53 for Grade B welded or seamless schedule 40 pipe. All welded flanges shall be forged steel, slip-on or weld neck type. All welded fittings shall be seamless, ASTM Specification A234, with pressure rating not less than 150 PSI.

B. Check Valve

On flooded suction and booster stations the pump check valve shall be cast iron bodied with a spring loaded single disc. Check valves shall be sized according to the maximum discharge flow of the pump. Pressure drop across the check valve shall not exceed 2.5 PSI at full flow. On suction lift stations the check valve will be removed and a pressure rated foot valve will be supplied to attach on the end of the suction pipe.

C. Station Discharge Isolation Valve

Pump shall be isolated by means of a butterfly valve after the check valve and before the piping exits the station enclosure. Isolation valves shall be butterfly type with ten position lever, rated for 200 PSI WOG working pressure. Trim shall include stainless steel stem, bronze or nickel coated iron streamlined disk with full faced resilient seat design to eliminate need for flange gaskets.

D. Drain Valves

Drains shall be provided from all low points in the system and shall consist of 1/4" petcocks or ball valves.

E. Pressure Gauges

Pressure gauges shall be located upstream and downstream of the pump for easy reading of the intake and discharge pressure. Pressure gauges shall be 304 stainless steel case and bezel construction. Gauges shall be 2-1/2" diameter, liquid filled. Pressure sensing connection shall be 1/4" NPT lower gauge connection.

F. VAF V-200 Stainless Steel Filter

A Valve & Filter (VAF) automatic flush filter shall be provided. Filter will have a 500 micron screen. Flushing sequence will be controlled through the pump station PLC.

2.3 ELECTRICAL CONTROLS:

A. Main Station Disconnect And Fusing

A three-pole, service rated main station disconnect shall be mounted in a separate NEMA 4 enclosure outside the pump station enclosure to completely isolate the pump station electrical system from incoming power.

B. Pump Thermal Switch

The temperature of the pump shall be sensed by a thermal switch. The thermal switch shall be located on the pump volute. Externally mounted snap disc type thermal switches will not be accepted. The thermal switch shall activate upon a temperature rise above 120 degrees Fahrenheit.

C. Flow Sensor

The pump station discharge manifold shall incorporate an insertion type, pulse frequency output flow sensor for continuous output to pump station controls. The flow sensor output pulse shall be conditioned and fed directly to the processor for conversion and display in Gallons Per Minute and totalize. Flow sensor accuracy shall be no less than 2% for flow velocities ranging from 1 - 30 feet per second.

D. Pressure Transducer

A solid state pressure transducer shall provide a noise free, linear output proportional to discharge pressure. Transducer shall be solid state, strain gauge type with integral voltage regulating and output accuracy not less than 0.5%. Transducer shall be constructed of stainless steel and rated for the maximum pump station discharge pressure.

E. Variable Frequency Drive (VFD)

The variable frequency drive shall be IGBT based with selectable carrier frequency up to 15 KHZ. The VFD shall include terminals for incoming power, motor output power and control terminals. The VFD shall generate a sine-coded, variable voltage/frequency, three-phase output for optimum speed control. The VFD shall incorporate power loss ride-through. VFD protective features shall include current limit, short circuit protection, electronic motor overload

protection and ground fault protection. The VFD shall have push button programming display for easy access to operation parameters. VFD must be designed for operation in 50 degree C temperature condition.

F. 120 V 1PH Power

120V 1PH power shall be provided for customer irrigation controller. Controller to be mounted on outside of pump station, by customer.

G. National Electrical Code Standards

Electrical controls shall conform to National Electrical Code Standards.

2.4 CONTROL ALARMS:

A. Low System Pressure Safety Shutdown

When the station discharge pressure remains below an adjustable set point for the time called out in the Technical Specifications, the pumps will be de-energized and remain so until the alarm is manually reset. The Low Pressure alarm will be indicated on the processor display.

B. High System Pressure Safety Shutdown

When the station discharge pressure remains above an adjustable set point for the time called out in the Technical Specifications, the pumps will be de-energized and remain so until the alarm is manually reset. The High Pressure alarm will be indicated on the processor display.

C. High Pump Volute Temperature Shutdown

If the pump volute case temperature rises above 120 degrees F. for the pre-programmed time, the pump will be de-energized and remain so until the alarm is manually reset. The High Temperature alarm will be indicated on the processor display.

D. Motor Overload Shutdown

If the over current condition lasts longer than the pre-programmed limit the motor will be de-energized and remain so until the alarm is manually reset. The overload alarm will be indicated on the processor display.

E. Phase Loss

The controls will sense a phase loss on the incoming power supply. If the phase loss is for longer than the drive ride through time, the motor will be de-energized and remain so until the alarm is manually reset. The Phase Loss alarm will be indicated on the processor display.

F. VFD Fault Shutdown

The VFD shall sense additional internal faults that will cause the VFD to shut down for system protection. These faults will be indicated on the processor display.

G. Lightning Arrestor

The main power supply to the pump station shall be equipped with a secondary lighting arrestor having a breakdown current rating of not less than 60,000 Amps at 14,000 Volts discharge. Power supplies 300 Volts and less shall use a 300 Volt arrestor with an 800 Volt spark-over Voltage. Power supplies up to 600 Volts shall use a 600 Volt rated arrestor with a 1,000 Volt spark-over Voltage.

H. Corrosion Inhibiting Modules

Corrosion inhibiting modules shall be installed in the main electrical control enclosure in accordance with the manufacture's recommendations.

I. Programmable Logic Controller

The pump sequence controller shall be an industrial grade PLC with diagnostic LED for monitoring of discrete inputs and outputs. Not less than two additional analog inputs and outputs shall be standard for monitoring and control purposes. The PLC shall contain communication ports for monitoring and programming purposes. The PLC shall contain an EEPROM, battery backed RAM and non volatile memory for storage of critical configuration data.

J. Operator Interface – 3.4″ Color Touchscreen

The operator interface shall display pump system running status including timer status and alarm status on a 3.5” color touchscreen. For security, the operator interface shall have password protection to prohibit unauthorized access to certain parameters. The interface shall also have a built-in diagnostics function for the status of the programmable controller.

2.5 MOUNTING BASE AND ENCLOSURE:

A. Mounting Base – Marine Grade Aluminum (Unpainted)

Construction shall include a fabricated base assembly to support all components during shipping and to serve as the installed mounting base. Pump station base shall be formed from a single sheet of 1/4" plate resulting in a seamless, one piece base with rounded edges and corners. The base shall be strategically reinforced beneath as required to provide additional support and strength. The base shall be drilled and tapped allowing the pump to be secured to the base.

B. Enclosure – Marine Grade Aluminum (Unpainted)

Construction shall include a weather resistant, 14 gauge or equivalent, all metal enclosure. The front side of the enclosure shall have oversized cooling vents. The enclosure is to be supplied with a two internally mounted gas struts that shall extend to keep the access door open. All components are to be accessible from top and front sides with the door completely open. Enclosure is to be suitable for mounting to the pump station base and shall include openings for suction and discharge piping.

C. Exhaust Fan

For the purpose of cooling the pump motor, switchgear and control logic, an exhaust fan shall be located inside the pump enclosure, mounted to the enclosure lid. The exhaust fan shall be activated upon pump start and shall run until the pump stops. The fan shall be black die-cast aluminum construction with UL94V-0 rated polycarbonate propeller and rated for not less than 240 CFM. Fan motor shall be permanent split capacitor type with stainless steel ball bearings, class B insulation and automatic thermal protection.

2.6 Painting – Piping:

Painting shall consist of a multi-step coating system which includes metal preparation, rust inhibitive baked epoxy prime coat, and a two part ultraviolet light insensitive baked polyurethane finish having total dry film thickness of not less than 5 mils. Prime coat and finish coat shall be baked at 165 degrees for not less than 30 minutes to achieve a high gloss, corrosion resistant finish. Color shall be Sandstone.

2.7 ADDITIONAL EQUIPMENT:

A. Service Disconnect

The incoming high voltage disconnect can be supplied as a Dead Front style.

B. Drop Pipes

The inlet and discharge piping system will be attached to dual 90 degree drop pipes to provide below grade connection to a suction pipe or city water supply pipe or below grade connection to a discharge main line. Drop pipe sizes, connection fitting style and depth of bury will be shown on the project drawings

C. Pump Enclosure Heater

The pump station enclosure will include a thermostatically controlled 500-watt heater. The heater will include its own fan for air movement. The heater will have circuit protection.

D. Sound Attenuating Foam

The pump station enclosure interior will include 1" thick close cell foam. The foam will be cut and shaped to cover as much of the interior surface as possible. Vent louvers will remain open.

2.7 TESTING:

The pump station and all its component parts shall undergo a complete hydraulic and electrical test prior to shipment from the factory. Testing shall be dynamic and include operation over the entire flow range of the pump station under specified suction and net discharge pressure conditions. A plot containing actual flow, pressure, KW consumption and motor RPM shall be furnished as part of the owner's manual.

2.8 MANUFACTURER'S WARRANTY:

The manufacturer shall warrant the pump station to be free of defects for two-years from date of startup or twenty-seven months after shipment, whichever occurs first. Failures caused by lightning strikes, power surges, vandalism, operator abuse, or acts of God are excluded from warranty coverage.

2.9. ON-SITE START-UP:

Off-loading & setting of the pump station is the responsibility of the Contractor. Crane to off-load and set the pump station on the concrete slab is to be provided by the Contractor.

Technical start up shall be furnished by the pump station manufacturer or a qualified service agency. Location and mounting details shall be furnished by the pump station manufacturer. Electrical connection, by Contractor, shall consist of a single conduit from electrical supply disconnect to the pump station main disconnect. Additional Contractor responsibility shall include confirming correct motor rotation and securing local inspection / approval.

Technical start up procedures by the pump station manufacturer shall include the following:

a. Station start up and pressurization
b. Pressure, flow and programming adjustments
c. Preparation of duplicate program
d. Monitoring of complete irrigation cycle
e. Minimum four hours customer training
f. Presentation of owner's manual

Provide copies of the operation and maintenance manuals at time of startup and initial training. Owner will receive training specific to this station as specified.

2.10 OTHER MATERIALS

All other materials not called out on the drawings shall be new, first quality, as selected by the Contractor subject to the approval in advance by the Owner's Representative.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS:

A. Inspection

Prior to all work of this section, carefully inspect installation work of other trades and verify that a such work is complete to the point that installation of edging may properly commence.

B. Discrepancies

In the event of discrepancy, immediately notify the Owner's Representative.

Do not proceed with installation in areas of discrepancy until all such discrepancies have been resolved.

Beginning of installation means acceptance of existing conditions by installer.

3.2 CONCRETE INSTALLATION:

A. Concrete

4,000 PSI concrete slab shall be installed with reinforcing. Install according to good trade practices and conforming to UBC requirements.

B. Notify responsible trades of schedules for concrete pours so as to allow adequate time for installation of their work. Schedule work with other trades, areas of work and seasons of the year to provide a continuous effort.

3.3 PUMPING PLANT:

A. Pumping plant control systems shall operate as specified.

B. Provide complete installation, including all mechanical and electrical work, etc. as required and shown on the drawings.

C. When all systems are functioning properly, demonstrate the complete pumping system to the Owner's Representative. Demonstrate all functions in both manual and automatic modes.

3.4 OPERATION AND MAINTENANCE MANUALS

A. Operation and maintenance manuals shall be furnished at time of startup. Complete start up instructions shall be provided by the manufacturer.

B. Manuals

Furnish two hard copies and two digital copies of manuals as specified by Section 017700 of this specification for operation and maintenance of all pumping and control systems installed including operation of all components and controls, component drawings and schedule of parts, emergency procedures and adjustments.

3.5 PUMPHOUSE CLEANING

A. Immediately prior to substantial completion inspection thoroughly clean the entire pumping plant as specified by section 017700.

END OF SECTION 221125

SECTION 260500 - ELECTRICAL

PART 1: GENERAL REQUIREMENTS

1.1 SCOPE:

A. See General Conditions.

B. Provide all items for complete and successful operation of all electrical systems.

C. Electrical drawings are diagrammatic only.

D. Work of this section shall include provision of all raceways, conductors and wiring, for all 120 v and 480 v. circuits.

E. Related Work Specified Elsewhere:

Irrigation System	- Section 328400

1.2 STANDARDS:

A. All electrical materials shall be new, in first class condition, and Underwriter's Laboratories, Inc., approved, except as indicated or specified otherwise.

B. Comply with all applicable local and state ordinances and National Electrical Code, and with requirements of the Utility Company furnishing services.

C. Procure and pay for all permits, licenses, and liability insurance, etc.

1.3 GUARANTEE:

A. Replace any work or material installed or furnished under this contract which develops any defects, within one year after completion.

1.4 ELECTRICAL SERVICE:

A. 480 volt, three phase, power will be provided by the Owner and available at the existing locations indicated on the plans.

B. Provide all conduit, wiring, etc. from source to all load points.

1.5 GROUNDING:

A. Ground entire electrical conduit system and neutral conductors to ground with approved clamps.

B. All wiring must be installed so as to maintain a complete grounded system throughout.

C. Provide green grounding jumper from the grounding screw to a box grounding screw or clip on all grounding type devices, or use approved auto-ground devices.

D. Provide green ground conductor in all flexible, or non-metallic raceways.

E. Provide 5/8" x 8' copper ground rods with cadweld and #6 bare copper wire at each controller. Refer to Section 328400 of this specification.

1.6 SUBMITTALS:

A. Material List

Before any materials are delivered to the job site, submit to the Owner's Representative a complete list of all materials proposed to be furnished and installed.

Show manufacturer's name and catalog number for each item, furnish complete catalog cuts and technical data, and furnish the manufacturer's recommendations as to method of installation.

Do not permit any component to be brought onto the job site until it has been approved by Owner's Representative.

PART 2: MATERIALS

2.1 RACEWAY SYSTEM:

A. Electrical metallic tubing as required, indoors.

B. PVC conduits outdoors. Locate pull boxes as required. Rigid Nonmetallic (PVC) Conduit - N.E.C., Article 347:

1. Rigid, heavywall, Schedule 40 or 80, polyvinyl chloride plastic as manufactured by Borg-Warner, Carlon, Ethyl, Krayloy, Triangle or approved equal.

2. Schedule 80 PVC shall be provided where exposed, below streets, alleys, and drive approaches.

3. Couplings and joint cement as recommended by manufacturer.

C. Not used

D. Concealed raceways wherever possible.

E. Raceway and outlet supports:

1. Toggle bolts in hollow masonry.

2. Expansion bolts in concrete or brick.

3. Machine screws on metal surfaces.

4. Wood screws on wood construction.

F. Seal-tite flexible conduit where equipment connections are made.

G. Provide sleeves for conduits passing through masonry or concrete at the time of construction.

H. Provide junction and pull boxes as herein specified and shown on drawings and in accordance with N.E.C. Article 370.

2.2 WIRE:

A. Minimum size No. 12 except for control circuits which may be No. 14, or signal circuits which shall be as indicated. Refer to controller power diagram and details on the plans.

2.3 Marker Tape:

A. Provide 6" wide, brightly colored plastic marker tape. Marker tape to be labeled "buried power cable".

PART 3: INSTALLATION

3.1 EXISTING CONDITIONS:

A. Inspection

Prior to all work of this section, carefully inspect installation work of other trades and verify that such work is complete to the point that installation of work included in this section may properly commence.

B. Discrepancies

In the event of discrepancy, immediately notify the Owner's Representative.

Do not proceed with installation in areas of discrepancy until all such discrepancies have been resolved.

Beginning of installation means acceptance of existing conditions by installer.

3.2 RACEWAYS:

A. Provide all raceways where indicated with sizes in accordance with N.E.C. requirements for quantities and sizes of wires installed.

1. Size of non-metallic, raceways shall include the ground conductor.

B. Install plastic raceways in a manner which will permit thermal expansion of raceway.

C. Install exterior below grade raceways carrying 120 volt conductors 30 inches minimum below grade and in accordance with N.E.C.

3.3 EQUIPMENT WIRING AND CONNECTIONS

A. Electrical equipment furnished by Contractor.

B. Irrigation controllers furnished by Contractor.

C. Install feeder circuits to irrigation controllers and make all connections.

3.4 AS BUILT DRAWINGS:

A. Maintain a separate set of contract drawings, not to be used for construction, at site to show changes or deviations from original drawings.

1. Neatly mark changes in contrasting colors. Keep current with job progress with daily notations.

2. Make available for inspection by Owner's Representative.

3. Deliver to Owner's Representative at time of substantial completion inspection.

3.5 OPERATIONS AND MAINTENANCE MANUALS:

B. Supply complete manuals, as specified by Division 1, for all equipment installed. State normal maintenance procedures, adjustments and troubleshooting procedures.

3.6 APPROVALS

A. Upon completion, demonstrate the entire system to the Owner's Representative for approval.

END SECTION 260500

SECTION 312334 - IRRIGATION TRENCHING AND BACKFILL

PART 1 - GENERAL

1.1 DESCRIPTION:

Work in this section consists of all labor, materials, and equipment necessary to do all work and related items as shown on the drawings, specified herein or incidental to proper execution of the work, including trenching, boring under driveways, walks, and curbs, installation of pipe sleeves, and backfilling.

1.2 RELATED WORK DESCRIBED ELSEWHERE:

Irrigation System - Section 328400

1.3 QUALITY ASSURANCE:

For actual prosecution of the work, use only personnel who are skilled in the work required, familiar with recommended methods of installation, and thoroughly familiar with the requirements of this work.

1.4 UNDERGROUND OBSTRUCTIONS:

The Contractor shall contact all utilities for locations of their installations prior to initiating work.

The Contractor shall preserve, intact, any underground pipes or other utilities encountered during construction. In case any such utilities or other structures are accidentally broken or damaged, they shall be immediately replaced in a condition at least equal to that in which they were found, all at the expense of the Contractor.

PART 2 - MATERIALS

2.1 PIPE SLEEVES:

Pipe sleeves shall be Schedule 40 PVC pipe, 3" diameter, or equal approved by the Owner's Representative.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS:

A. Inspection

Prior to all work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.

Verify that trenching may be completed in accordance with the original design and the referenced standards.

B. Discrepancies

In the event of discrepancy, immediately notify the Owner's Representative.

Do not proceed with installation in areas of discrepancy until all discrepancies have been fully resolved.

Beginning of installation means acceptance of existing conditions by installer.

3.2 TRENCHING:

A. General

Perform all trenching required for the installation of items where the trenching is not specifically described in other sections of these Specifications.

Make all trenches in accordance with OSHA Requirements with sufficient width to provide free working space at both sides of the trench and around the installed item as required for gluing, joining, backfilling, and compacting while minimizing width of trenches.

B. Depth

Trench as required to provide the elevations shown on the Plans.

Trench to sufficient depth to give a minimum of 18 inches of fill above the top of the pipe measured from the adjacent finished grade under driveways and sidewalks.

All mainline shall have a minimum cover of 18" above the pipe. All laterals shall have a minimum cover of 12" above the pipe.

C. Correction of Faulty Grades

Where trench excavation is inadvertently carried below proper elevations, backfill with material approved by the Owner's Representative and then compact to provide a firm and unyielding subgrade to the approval of the Owner's Representative and at no additional cost to the Owner.

D. Trench Bracing

Properly support all trenches in strict accordance with all pertinent rules and regulations.

Brace, sheet, and support trench walls in such a manner that they will be safe and that the ground alongside the excavation will not slide or settle, and that all existing improvements of every kind will be fully protected from damage.

In the event of damage to such improvements, immediately make all repairs and replacements necessary to the approval of the Owner's Representative and at no additional cost to the Owner.

Arrange all bracing, sheeting and shoring so as to not place stress on any portion of the completed work until the general construction thereof has proceeded far enough to provide sufficient strength.

E. Removal of Trench Bracing

Exercise care in the drawing and removal of sheeting, shoring, bracing, and timbering to prevent collapse or caving of the excavation faces being supported.

F. Grading and Stockpiling Trenched Material

Control the stockpiling of trenched material in a manner to prevent water from running into the excavations.

Do not obstruct surface drainage but provide means whereby storm and waste waters are diverted into existing gutters, other surface drains, or temporary drains.

G. Methods

All trench excavation shall be made by open cut. During excavation, material suitable for backfilling shall be piled in an orderly manner a sufficient distance from the banks of the trench to avoid overloading, and to prevent slides or cave-ins. All material not required for backfill or not suitable for backfill, shall be removed from the site by the Contractor. Banks of trenches shall be kept as nearly vertical as possible, and shall be properly sheeted and braced as may be necessary to prevent caving.

Trench widths in paved streets or in areas where proximity to other structures require vertical cuts, shall not be wider than is required for proper handling, jointing and bedding of the pipe.

The bottom of the trenches shall be accurately graded to line and grade, and provide uniform bearing and support for each section of the pipe on undisturbed soil, at every point along its entire length. Depressions for joints shall be dug after the trench bottom has been graded, and shall be only of such length, depth and width as required for properly making the particular type joint. Care shall be taken not to excavate below the depths indicated.

Where rock occurs in trench excavation, the rock shall be removed to a depth of six (6) inches below the established grade line, and to a width of twelve (12) inches greater than the outside diameter of the pipe to be installed in the trench.

H. Pavement Removal

Where excavation of trenches requires the removal of asphaltic pavement, the pavement shall be cut in a straight line along the edge of the excavation by use of a spade-bitted air hammer, concrete saw or similar approved equipment to obtain straight, square and clean break; and, after backfilling and subgrade preparations are completed, hot plant mix asphaltic concrete shall be replaced and compacted.

Excess material, including rock, broken concrete, bituminous materials, debris or other materials not suitable for backfill, shall be removed from the site and disposed of by the Contractor.

3.3 BORING:

A. Locations

Boring shall be used to route pipe, wiring, or both under concrete structures such as walks or curbs where trenching is impractical. Sleeves shall be installed in all bored holes.

B. Method

Boring shall be accomplished with a drill, auger, water jet, or any other instrument approved by the Owner's Representative capable of producing a precise hole. Boring shall not disturb overlaying structures or cause settlement and damage to those structures.

3.4 SLEEVES:

A. Locations

Sleeves shall be installed wherever routing of a pipe, wiring, or both crosses a paved area or passes through a bored hole.

B. Methods

Sleeves laid in open trenches shall be uniformly and evenly supported by undisturbed soil on the trench bottom. Backfill shall conform to standards hereinafter specified.

Sleeves installed in borings shall be forced through and shall have a snug fit throughout the length of the bored hole. Sleeves cracked or broken shall not be accepted.

3.5 BACKFILL:

A. Inspection

The trenching shall not be backfilled until inspection has been completed and the pipe installation, including the grade, alignment and jointing has been found to be in compliance with the requirements of the plans and specifications.

B. Around and Over Pipe

Select backfill material consisting of sand, fine gravel or select earth, free of large lumps or rocks larger than 3/4 inch shall be used in backfilling around and over the installed pipe.

The select material shall be obtained from the excavation material removed from the trench and shall be processed by screening, sifting, or selective sorting, so as to produce the type of backfill herein specified. The Contractor may at his option and own expense provide an acceptable imported material.

This backfill material shall be carefully deposited around and over the pipe in layers not more than six (6) inches thick, loose measurement, unless otherwise permitted by the Owner's Representative, wetted to optimum moisture content and uniformly compacted to at least 95 percent of the maximum density obtainable at optimum moisture content as determined by AASHTO T99 Method A or D (latest revision), until the pipe has a cover depth of at least one (1) foot.

C. Remainder of Trench Backfill

The remaining depth of the trench shall be backfilled with excavation material removed from the trench, which shall be wetted or dried to near optimum moisture content.

Inclusion of a limited amount of stones and rocks will be permitted. Stones and rocks shall in no case be larger than two inches diameter, and they shall be placed so that each piece is completely surrounded with material compacted to the density hereinafter specified. The size and amount of rocks used in backfill shall be such that they will not interfere with proper compaction.

This material shall be carefully deposited in layers of a thickness suitable to the equipment selected by the Contractor for proper compaction and compacted to at least 95 percent of the maximum density as determined by AASHTO T99 Method A or D (latest revisions). The method of compaction selected by the Contractor shall not cause damage of any nature to the installed pipe.

The use of a water puddling of this portion of the trench backfilling may be used if the specified density can be obtained and the backfill material is suitable for this type of trench compaction.

3.6 PAVEMENT REPLACEMENT:

Pavement replacement shall utilize the same materials and design as the original pavement.

3.7 CLEANUP:

Upon completion of the work, the entire site shall be cleared of all debris, and ground surfaces shall be finished to smooth, uniform slopes and shall present a neat and workmanlike appearance. Cleanup shall be considered an incidental item, and no additional payment shall be made for any cleanup item. All fences, culverts, gravel driveways or other obstructions removed during construction, shall be replaced in a condition at least equal to their existing condition.

3.8 MAINTENANCE:

The Contractor shall, for a period of one (1) year after completion and final acceptance of the work, maintain and repair any trench or boring settlement which may occur, and shall make suitable repairs to any pavements, sidewalks, or other structures which may become damaged as a result of settlement. All such maintenance and repair shall be at the Contractor's expense.

END OF SECTION 312334

SECTION 316330 – HORIZONTAL DIRECTIONAL DRILLING HDPE PIPE

PART 1 - GENERAL

1.1 DESCRIPTION:

This section defines the acceptable methods and materials for installing irrigation supply lines by horizontal directional drilling and the requirements for high density polyethylene (HDPE) pipe installed by directional drilling or in open cut trenches.

1.2 RELATED WORK DESCRIBED ELSEWHERE:

Trenching and Backfilling	- Section 312334

1.3 QUALITY ASSURANCE:

A. Qualifications of Installer

All work associated with directional drilling and pipe installation shall be completed by an experienced Contractor specializing in directional drilling and whose key personnel have at least three (3) years experience in this work. The individual who performs the butt-fusion shall have written certification from an HDPE pipe manufacturer stating he/she has successfully completed an 8-hour (minimum) certification class on butt–fusion techniques and procedures.

B. Codes and Standards

Complying with all pertinent codes and regulations. Where provisions of pertinent codes and standards conflict with the requirements of this section of these Specifications, the more stringent provisions shall govern.

All standards and specifications referenced shall be the latest edition and version thereof. This includes AWWA, ASTM, ANSI, NSF, and any other applicable standards.

1.4 SUBMITTALS:

A. Material List

Before any materials are delivered to the job site, submit to the Owner's Representative a complete list of all supply line materials proposed to be furnished and installed. A minimum of three copies of the submittal shall be provided.

Show manufacturer's name and catalog number for each item, furnish complete catalog cuts and technical data, and furnish the manufacturer's recommendations as to method of installation. Mark each copy to show which choices and options are applicable to project.

Do not permit any materials to be brought onto the job site until it has been approved by Owner's Representative.

B. Variations in Plan or Profile

The Contractor may request changes to the proposed vertical and horizontal alignment of the installation and the location of the entry and exit points. Proposed changes shall be submitted in writing to the Owner's Representative and receive approval at least 7 days prior to mobilizing equipment.

C. Equipment and Personnel

Submit a listing of major equipment and supervisory personnel and a description of the methods to be used during execution of the work. Listing to be submitted prior to or during the preconstruction meeting.

D. Certification

1. Provide written certification from an HDPE pipe manufacturer stating successful completion of an 8-hour (minimum) certification class on butt–fusion techniques and procedures.
2. The pipe supplier shall certify in writing that the Contractor is qualified to join, lay, and pull the pipe or representative of the pipe manufacturer shall be on site to oversee the pipe joining process. Expense for the representative shall be paid for by the Contractor.

1.5 PRODUCT HANDLING:

A. Protection

Use all means necessary to protect supply line materials before, during, and after installation and to protect the installed work and materials of all other trades.

B. Replacements

In the event of damage, immediately make all repairs and replacements necessary to the approval of the Owner's Representative and at no additional cost to the Owner.

1.6 TECHNICAL ASSISTANCE:

A. Responsibility

Contractor shall provide all manufacturer and other technical assistance as required for installation and adjustment of the supply line and associated equipment as specified.

PART 2 - MATERIALS

2.1 PIPE:

A. General

Pipe shall be manufactured from a PE 4710 resin listed with the Plastic Pipe Institute (PPI) as TR-4. The resin material will meet the specifications of ASTM D3350-05 with a cell classification of PE 445474C. Pipe shall be manufactured to the dimensions and requirements of ASTM F714. Pipe shall be DR-11 (200 psi WPR) unless otherwise specified on the plans. The pipe shall contain no recycled compounds except that generated in the manufacturer's own plant from resin of the same specification from the same raw material. All HDPE pipe shall be in straight lengths. (2" HDPE pipe can be in coils if contractor straightens and re-rounds pipe with a Line Tamer Machine).

Approved pipe manufacturers:

1. ISCO Industries, LLC. 800-345-ISCO.
2. WL Plastics 307-472-6000.
3. Or equal approved in advance.

2.2 PROCEDURES:

A. General

All polyethylene pipe shall be cut, fabricated, and installed in strict conformance with the pipe manufacturer's recommendations. Joining, laying, and pulling of polyethylene pipe shall be accomplished by personnel experienced in working with polyethylene pipe.

B. Transportation

Care shall be taken during transportation of the pipe to ensure that it is not cut, kinked, or otherwise damaged.

C. Storage

Pipes shall be stored on level ground, preferably turf or sand, free of sharp objects which could damage the pipe. Stacking of the polyethylene pipe shall be limited to a height that will not cause excessive deformation of the bottom layers of pipes under anticipated temperature condition. Where necessary due to ground conditions, the pipe shall be stored on wooden sleepers, spaced suitably and of such widths as not to allow deformation of the pipe at the point of contact with the sleeper or between supports.

D. Handling Pipe

The handling of the joined pipeline shall be in such a manner that the pipe is not damaged by dragging it over sharp and cutting objects. Ropes, fabric, or rubber-protected slings and straps shall be used when handling pipes. Chains, cables, or hooks inserted into the pipe ends shall not be used. Two slings spread apart shall be used for lifting each length of pipe. Pipe or fittings shall not be dropped onto rocky or unprepared ground. Slings for handling the pipeline shall not be positioned at butt-fused joints. Sections of the pipes with cuts and gouges exceeding 10 percent of the pipe wall thickness or kinked sections shall be removed and the ends rejoined.

The open ends of all sections of joined and/or installed pipe shall be plugged at night to prevent animals or foreign material from entering the pipe line or pipe section.

Where possible, the pipe shall be raised and supported at a suitable distance

back from the open end such that the open end will be below the level of the pipe at the point of support.

2.3 FITTINGS:

A. Butt Fusion Fittings

Fittings shall be made from HDPE pipe resin meeting ASTM D 3350 with a minimum cell classification of 445574C. Molded butt fusion fittings shall have a manufacturing standard of ASTM D 3261. Fabricated fittings shall have the same pressure rating as the pipe or higher unless otherwise specified on the plans. Fabricated fittings are to be manufactured using a Data Logger to record temperature, fusion pressure, and a graphic representation of the fusion cycle shall be part of the Quality Control records.

B. Electrofusion Fittings

Fittings shall be made from resin or pipe meeting ASTM D 3350 with a minimum cell classification of 445574C. Electrofusion Fittings shall meet the manufacturing standard of ASTM F 1055. Fittings shall have the same pressure rating as the pipe or higher unless otherwise specified on the plans.

C. Flanged and Mechanical Joint Adapters

Flanged and Mechanical Joint Adapters shall be made from materials containing resin that meets ASTM D 3350 with a minimum cell classification of 445574C.

D. Thrust Anchor

Anchor material shall be the same as HDPE water line with an internal diamater equal to the water line. The outside diameter shall be 5 inches greater than the water line. Shear strength of the anchor shall be equal to or greater than the tensile strength of the adjacent pipe. Fabrication of the anchor shall be butt fusion. Extrusion bead welding is not allowed.

2.4 LOCATION DETECTION WIRES:

A. Materials

One continuous, insulated 10-gauge copper wire. Wire to be rated for direct bury installation.

B. Installation

Wires shall be attached to the centerline of the HDPE pipe every 5-feet. Wires shall terminate at top of each valve box and be capable of extending 12-inches (305-mm) above the top of the box in a manner so as not to interfere with valve operation. Valve boxes shall be located at 500 feet maximum spacing.

C. Testing Requirements

Contractor shall perform a continuity test on all tracer wire in the presence of the Owner's Representative. Contractor shall repair or replace any failed segment of the wire at no cost to the Owner.

2.6 CONCRETE:

All concrete shall be 4,000 psi at 28 days, transit mixed. Provide certifications with each delivery.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS:

A. Inspection

Prior to all work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.

Verify that piping may be installed in strict accordance with all pertinent codes and regulations, the original design, the referenced standards, and the manufacturer's recommendations.

B. Discrepancies

In the event of discrepancy, immediately notify the Owner's Representative.

Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

Beginning of installation means acceptance of existing conditions by installer.

3.2 FIELD MEASUREMENTS:

Make all necessary measurements in the field to ensure precise fit of items in accordance with the original design.

3.3 TRENCHING AND BACKFILLING:

A. General

Perform all trenching and backfilling as specified by Section 312334 of this Specification.

3.4 INSTALLATION:

A. General

1. The Contractor shall install the pipelines by means of horizontal directional drilling. The Contractor shall assemble, support, and pretest the pipeline prior to installation in the directional drill tunnel.

2. Horizontal directional drilling shall consist of the drilling of a small diameter pilot hole from one end of the alignment to the other, followed by enlarging the hole diameter for the pipeline insertion. The exact method and techniques for completing the directionally drilled installation will be determined by the Contractor, subject to the requirements of these Specifications.

3. The Contractor shall prepare and submit a plan to the Owner's Representative for approval for insertion of the HDPE pipe into the opened bore hole. This plan shall include pullback procedure, ballasting, use of rollers, side booms and side rollers, coating protection, internal cleaning, internal gauging, hydrostatic tests, dewatering, and purging.

4. The required piping shall be assembled in a manner that does not obstruct adjacent roadways or public activities. The Contractor shall erect temporary fencing around the entry and exit pipe staging areas.

B. Joining Pipe Sections

1. Each length of pipe shall be inspected and cleaned as necessary to be free of debris immediately prior to joining.

2. Pipes shall be joined to one another by means of thermal butt-fusion. Polyethylene pipe lengths to be joined by thermal butt-fusion shall be of the same type, grade, and class of polyethylene compound and supplied from the same raw material supplier.

3. Mechanical connections of the polyethylene pipe to auxiliary equipment shall be through flanged connections which shall consist of the following:

   a. A polyethylene "sub end" shall be thermally butt-fused to the ends of the pipe.

   b. Provide ASTM A240, Type 304 stainless steel backing flange, 125-pound, ANSI B16.1 standard, and gaskets as required by the manufacturer.

   c. Stainless Steel bolts and nuts of sufficient length to show a minimum of three complete threads when the joint is made and tightened to the manufacturer's standard. Retorque the nuts after 4 hours.

   d. Butt-Fusion Joining: Butt-fusion of pipes shall be performed in accordance with the manufacturer's recommendations as to equipment and technique. Butt-fusion joining shall be 100% efficient offering a joint weld strength equal to or greater than the tensile strength of the pipe.

C. Tolerances:

1. Pipe installed by the directional drilled method shall be located in plan as shown on the Drawings, and shall be no shallower than shown on the Drawings unless otherwise approved. The Contractor shall plot the actual horizontal and vertical alignment of the pilot bore at intervals not exceeding 30 feet. This "as built" plan and profile shall be updated as the pilot bore is advanced. The Contractor shall at all times provide and maintain instrumentation that will accurately locate the pilot hole and measure drilling fluid flow and pressure. The Contractor shall grant the Owner's

Representative access to all data and readout pertaining to the position of the borehead and the fluid pressures and flows.

When requested, the Contractor shall provide explanations of the position monitoring and steering equipment. The Contractor shall employ experienced personnel to operate the directional drilling equipment and, in particular, the position monitoring and steering equipment.

D. Ream and Pullback:

1. Reaming: Reaming operations shall be conducted to enlarge the pilot after acceptance of the pilot bore. The number and size of such reaming operations shall be conducted at the discretion of the Contractor.

2. Pulling Loads: The maximum allowable pull exerted on the HDPE pipelines shall be measured continuously and limited to the maximum allowed by the pipe manufacturer so that the pipe or joints are not over stressed.

3. Torsion and Stresses: A swivel shall be used to connect the pipeline to the drill pipe to prevent torsional stresses from occurring in the pipe.

4. The lead end of the pipe shall be closed during the pullback operation.

5. Pipeline Support: The pipelines shall be adequately supported by rollers and side booms as required and monitored during installation so as to prevent over stressing or buckling during the pullback operation. Such support/rollers shall be spaced at a maximum of 60 feet on centers, and the rollers to be comprised of a non-abrasive material arranged in a manner to provide support to the bottom and bottom quarter points of the pipeline allowing for free movement of the pipeline during pullback. Surface damage shall be repaired by the Contractor before pulling operations resume.

6. The contractor shall at all times handle the HDPE pipe in a manner that does not over stress the pipe. Vertical and horizontal curves shall be limited so that wall stresses do not exceed 50% of yield stress for flexural bending of the HDPE pipe. If the pipe is buckled or otherwise damaged, the damaged section shall be removed and replaced by the Contractor at his expense. The Contractor shall take appropriate steps during pullback to ensure that the HDPE pipe will be installed without damage.

E. Handling Drilling Fluids and Cuttings:

1. During the drilling, reaming, or pullback operations, the Contractor shall make adequate provisions for handling the drilling fluids, or cuttings at the entry and exit pits. To the greatest extent practical, these fluids must not be discharged into the waterway. When the Contractor's provisions for storage of the fluids or cuttings on site are exceeded, these materials shall be hauled away to a suitable legal disposal site. The Contractor shall conduct his directional drilling operation in such a manner that drilling fluids are not forced through the subbottom into the waterway. After completion of the directional drilling work, the entry and exit pit locations shall be restored to original conditions. The Contractor shall comply with all permit provisions.

2. Pits constructed at the entry or exit point area shall be so constructed to completely contain the drill fluid and prevent its escape to the waterway.

3. The Contractor shall utilize drilling tools and procedures which will minimize the discharge of any drill fluids. The Contractor shall provide and comply with all standard mitigation measures and those listed in the required permits and elsewhere in these Specifications.

4. To the extent practical, the Contractor shall maintain a closed loop drilling fluid system.

5. The Contractor shall minimize drilling fluid disposal quantities by utilizing a drilling fluid cleaning system which allows the returned fluids to be reused.

3.5 DRILLING OPERATIONS:

A. General

All required support, including drilling tool suppliers, survey systems, mud cleaning, mud disposal, and other required support systems used during this operation shall be provided by the Contractor.

The position of the drill string shall be monitored by the Contractor with the downhole survey instruments. Contractor shall compute the position in the X, Y and Z axis relative to ground surface from downhole survey data a minimum of once per length of each drilling pipe (approximately 31 foot interval).

During the entire operation, waste and leftover drilling fluids from the pits and cuttings shall be dewatered and disposed of in accordance with all permits and regulatory agencies requirements. Remaining water shall be cleaned by Contractor to meet standard/permit requirements.

B. Environmental Provisions

The Horizontal Directional Drilling operation is to be operated in a manner to eliminate the discharge of water, drilling mud and cuttings to the adjacent creek or land areas involved during the construction process. The Contractor shall provide equipment and procedures to maximize the recirculation or reuse of drilling mud to minimize waste. All excavated pits used in the drilling operation shall be lined by Contractor with heavy duty plastic sheeting with sealed joints to prevent the migration of drilling fluids and/or ground water.

The Contractor shall visit the site and must be aware of all structures and site imitations and provide the Owner's Representative with a drilling plan outlining procedures to prevent drilling fluid from adversely affecting the surrounding area.

The general work areas on the entry and exit sides of the drilling shall be enclosed by a berm to contain unplanned spills or discharge. Waste cuttings and drilling mud shall be processed through a solids control plant comprised as a minimum of sumps, pumps, tanks, desalter/desander, centrifuges, material handlers, and haulers all in a quantity sufficient to perform the cleaning/separating operation without interference with the drilling program. The cuttings and excess drilling fluids shall be dewatered and dried by the Contractor to the extent necessary for disposal in offsite landfills. Water from the dewatering process shall be treated by the Contractor to meet standard/permit requirements and disposed of locally. The cuttings and water for disposal are subject to being sampled and tested. The construction site and adjacent areas will be checked frequently for signs of unplanned leaks or seeps.

Equipment (graders, shovels, etc.) and materials (such as groundsheets, hay bales, booms, and absorbent pads) for cleanup and contingencies shall be provided in sufficient quantities by the Contractor and maintained at all sites for use in the event of inadvertent leaks, seeps or spills. Waste drilling mud and cuttings shall be dewatered, dried, and stock piled such that it can be loaded by a front end loader, transferred to a truck and hauled offsite to a suitable legal

disposal site. The maximum allowed water content of these solids is 50% of weight.

Due to a limited storage space at the worksites, dewatering and disposal work shall be concurrent with drilling operations to the extent possible.

3.6 TESTING AND INSPECTION:

A. Closing-in Uninspected Work

Do not allow or cause any of the work in this section to be covered up or enclosed until it has been inspected, tested, and approved by the Owner's Representative.

Where trenches are not closed at the end of the day Contractor shall accept all liability for any damage or injury that may result from open trenches. Provide barricades and warning tape as necessary around all open trenches.

B. Flushing

Completely flush and test the supply line and repair all leaks prior to backfilling operations.

C. Testing

Pressure testing shall be conducted in accordance with the ASTM F 2164, Field Leak Testing of Polyethylene Pressure Piping Systems Using Hydrostatic Pressure. The HDPE pipe shall be filled with water, raised to test pressure and allowed to stabilize. The test pressure shall be a minimum of 150 PSI. The pipe shall pass if the final pressure is within 5% of the test pressure after 1 hour of testing.

Furnish all necessary testing equipment and personnel.

Correct all leaks and retest until acceptance by the Owner's Representative.

D. Final Inspection

Thoroughly clean, adjust, and balance all systems.

Demonstrate the entire installation to the Owner's Representative.

3.7 INSTRUCTIONS:

A. Record Drawings

Record accurately on one set of black and white prints of the site plan all installed work that differs from the plans.

Upon completion of each increment of work, transfer all such information and dimensions to the print. The dimensions shall be recorded in a legible and workmanlike manner. Maintain as-built drawings on site at all times.

Make all notes on drawing in pencil (no ball point pen). When the work has been completed, transfer all information from the field record print to a set of reproducible drawings.

Dimension from two permanent points of reference (buildings, monuments, sidewalks, curbs, pavement, etc.). Locations shown on as-built drawings shall be kept day to day as the project is being installed. All dimensions noted on drawings shall be 1/8-inch in size (minimum).

D. Operation and Maintenance Manuals

Prepare and deliver to the Owner's Representative within ten calendar days prior to completion of construction, all required and necessary descriptive material in complete detail and sufficient quantity, properly prepared in three individually bound copies of the operations and maintenance manual. Manuals are to be indexed (thumb- tabbed). The manual shall describe the material installed and shall be in sufficient detail to permit operating personnel to understand, operate and maintain all equipment. Spare parts lists and related manufacturer information shall be included for each equipment item installed. Each complete, bound manual shall include the following information.

1. Index sheet stating Contractor's address and telephone number, duration of guarantee period, list of equipment with names and addresses of local manufacturer representatives.
2. Product Data: One copy of each Product Data submittal required by Contract Documents.
3. Complete operating and maintenance instructions on all major equipment.

4. Complete parts lists and tables for all major equipment installed.
5. Written warranty.

In addition to the above maintenance manuals, provide the maintenance personnel with instructions for system operation and show written evidence to the Owner at the conclusion of the project that this service has been rendered.

3.8 GUARANTEE PERIOD:

A. Guarantee

The entire supply line and associated equipment shall be guaranteed to give satisfactory service for a period of one year from date of acceptance by the Owner.

Should any trouble develop within the time specified above due to inferior or faulty materials or workmanship, the trouble shall be corrected at no expense to the Owner.

Any and all damages resulting from faulty materials or workmanship shall be repaired by the Contractor to the satisfaction of the Owner, at no cost to the Owner.

END OF SECTION 316330

manufacturer information shall be included for each equipment item installed. Each complete, bound manual shall include the following information.

1. Index sheet stating Contractor's address and telephone number, duration of guarantee period, list of equipment with names and addresses of local manufacturer representatives.
2. Product Data: One copy of each Product Data submittal required by Contract Documents.
3. Complete operating and maintenance instructions on all major equipment.
4. Complete parts lists and tables for all major equipment installed.
5. Written warranty.

In addition to the above maintenance manuals, provide the maintenance personnel with instructions for system operation and show written evidence to the Owner at the conclusion of the project that this service has been rendered.

3.8 GUARANTEE PERIOD:

A. Guarantee

The entire supply line and associated equipment shall be guaranteed to give satisfactory service for a period of one year from date of acceptance by the Owner.

Should any trouble develop within the time specified above due to inferior or faulty materials or workmanship, the trouble shall be corrected at no expense to the Owner.

Any and all damages resulting from faulty materials or workmanship shall be repaired by the Contractor to the satisfaction of the Owner, at no cost to the Owner.

END OF SECTION 316330

SECTION 02760 - IRRIGATION SYSTEM

PART 1 - GENERAL

1.1 DESCRIPTION:

The work of this section consists of all items necessary to install the irrigation system required as indicated on the plans and includes, but not necessarily limited to:

Lawn and Tree Sprinkler System
Automatic Controller and Remote Control Valves

1.2 RELATED WORK DESCRIBED ELSEWHERE:

Irrigation Trenching and Backfill - Section 312334

1.3 QUALITY ASSURANCE:

A. Qualifications of Installer

Provide at least one person who shall be present at all times during execution of this portion of the work and who shall be thoroughly familiar with the type of materials being installed and material manufacturer's recommended methods of installation and who shall direct all work performed under this section.

Prior to beginning work on the irrigation system, all individuals involved in the irrigation portion of the project shall submit evidence of having satisfactorily completed the following training courses.

1. Solvent cement manufacturer’s full training to include seminar module, field practice module, and bonder module, or approved equal.
2. Contractor shall participate in manufacturer provided 2-wire installation orientation workshop prior to beginning work on the control system. Course is to be coordinated by the Contractor and conducted prior to any work taking place on the control system.

B. Coordination of Work

All work of this section, and the installation of all lawns and all plant materials shall be performed by one Contractor.

C. Codes and Standards

In addition to complying with all pertinent codes and regulations, comply with the latest rules of the National Electrical Code for all electrical work and materials.

Where provisions of pertinent codes and standards conflict with the requirements of this section of these Specifications, the more stringent provisions shall govern.

1.4 SUBMITTALS:

A. Material List

Before any irrigation system materials are delivered to the job site, submit to the Owner's Representative a complete list of all irrigation system materials proposed to be furnished and installed. All submittals shall be in digital PDF format.

Show manufacturer's name and catalog number for each item, furnish complete catalog cuts and technical data, and furnish the manufacturer's recommendations as to method of installation. Mark each submittal to show which choices and options are applicable to project. Unmarked submittals will be returned for correction.

Do not permit any irrigation system component to be brought onto the job site until it has been approved by Owner's Representative.

B. Certifications

Provide copies of certifications required by this specification.

1.5 PRODUCT HANDLING:

A. Protection

Use all means necessary to protect irrigation system materials before, during, and after installation and to protect the installed work and materials of all other trades.

B. Replacements

In the event of damage, immediately make all repairs and replacements necessary to the approval of the Owner's Representative and at no additional cost to the Owner.

1.6 TECHNICAL ASSISTANCE:

A. Responsibility

Contractor shall provide all manufacturer and other technical assistance as required for installation and adjustment of the complete irrigation system as specified.

1.7 GROUNDING AND WIRING STANDARDS:

A. Grounding

All grounding for irrigation control system to fully comply with local codes, the American Society of Irrigation Consultants (ASIC) Guideline 100-2002 and control equipment manufacturer’s specifications. All grounds shall be tested and certified test results shall be submitted to the Owner’s Representative before the control system is energized.

B. Wire and Cable Color Code

All wiring for irrigation control system to fully comply with local codes, the American Society of Irrigation Consultants (ASIC) Guideline 102-2004 and control equipment manufacturer’s specifications.

C. Communications Cables

All communications cables to be used in association with the irrigation control system to fully comply with local codes, the American Society of Irrigation Consultants (ASIC) Guideline 101-2003 and equipment manufacturer’s specifications.

PART 2 - MATERIALS

2.1 MATERIALS SUMMARY

A. The following equipment is standard equipment for the City of Billings. No substitutions will be allowed.
- Irrigation controller
- Electric control valves
- Sprinkler heads
- Quick coupling valves

B. All other materials in this section are as specified or approved equal. When evaluating substitution requests as equals to the specified products, the attributes of the specified product shall be the basis for comparison.

2.2 PIPE:

A. Plastic Pipe

Plastic pipe shall be rigid unplasticized PVC-200 as indicated on the plans, conforming to ASTM D-1784 and D-2241 standard specifications for PVC plastic pipe. The pipe shall be homogeneous throughout and free from visible cracks, holes, foreign materials, blisters, deleterions, wrinkles, and dents.

All pipes shall be continuously and permanently marked with the following information.

Manufacturer's name or trademark, size, schedule and type of pipe, working pressure at 73 degrees F. and National Sanitation Foundation (N.S.F.) approval.

All mainlines shall be installed with gasketed pipe. All laterals shall be installed with solvent weld pipe joints.

2.3 RISERS:

A. Rotor Pop-up Sprinklers

All 1" inlet rotor pop-up sprinklers shall have an adjustable pre-assembled double swing joint riser. Swing joints shall be Rain Bird model TSJ-12 or equal

approved in advance by the Owner's Representative. Swing joints shall be 1" x 12" and shall be threaded both ends.

B. Quick Coupling Valves

All quick coupling valves shall have an adjustable pre-assembled double swing joint riser. Swing joints shall be Lasco model G13S-218 or equal approved in advance by the Owner's Representative. Swing joints shall be 1" x 18" and shall be threaded both ends. The swing joint riser shall be of proper pipe size to match quick coupling valve threads and shall include a special safety locking mechanism to retain the valve.

2.4 MANUAL VALVES:

A. Gate Valves

All manual gate valves shall be 200 PSI rated.

All manual gate valves, sizes 2-1/2 inch and smaller, shall be 304 or 316 stainless steel, solid wedge type with integral taper seats and with non-rising stem, 200 WOG and shall be Leemco LGT-Series or equal accepted in advance by the Owner's Representative. Wheel handle shall be installed on all hand operated valves, cross handle shall be installed on all drain valves.

All manual gate valves of 3 inch size or larger shall be iron body, brass trimmed, resilient wedge type with integral taper seats and with non-rising stems, and shall be Leemco LMV-BB Series, Matco 10 RT Series or equal accepted in advance by the Owner's Representative.

2.5 VALVE BOXES:

A. General

All remote control valves, manual control valves, zone shut-off valves, gate valves or globe valves, quick coupling valves, grounding rods, air relief valves, flow sensors, and 120 volt and communication wiring splices, unless otherwise indicated, shall be installed in valve access box of proper size as required for easy access to the valve. All covers to be T-Cover type and locking. All valve boxes shall be of the same manufacturer. Locking bolts shall be installed under the lid for future use by the Owner. Do not use locking bolts to hold lids in place

unless directed otherwise by the Owner's Representative or if needed to prevent vandalism during construction.

B. Grounding Rods

Standard box for all ground rod installations to be AEP 910L-1GY2GY, NDS 312BCB ELEC, or Rain Bird VB-10RND-H with black or gray cover.

C. Lateral, Isolation, Quick Coupling, and Drain Valves

Standard box for all lateral, isolation, quick coupling, and drain valves to be AEP 910L-1G2G, NDS 312BCB, or Rain Bird VB-10RND-H with locking green cover. Provide 4" PVC pipe sleeve valve box extensions as required.

D. Control Valves, Flow Sensors, and Blowout Devices

Standard box for all electric control valves, flow sensors, and blowout devices shall be AEP 1015T-1G2G, NDS 314BCB, or Rain Bird VB-STD-H with locking green cover. Provide matching valve box extensions as required. One control valve per box.

E. Air Relief Valves

Standard box for air relief valves shall be AEP 1320-1G-2G, NDS 318BCB, or Rain Bird VB-STD-H with locking green cover. Provide matching valve box extensions as required.

F. Pull Boxes

Standard box for all electrical and communication cable pull boxes shall be AEP 1015T-1B2B, NDS 314BCB ELEC, or Rain Bird VB-STDBK-H with locking black or gray cover, electrical marking. Provide matching valve box extensions as required.

2.6 SPRINKLER HEADS:

A. General

Sprinkler heads and bubblers shall be of the types and sizes as indicated on the plans. They shall be constructed of bronze, brass, stainless steel, cast iron and/or non-metallic materials.

All heads of a particular type and for a particular function in the system shall be of the same manufacture and shall be marked with the manufacturer's name and identification, in such a position that they can be identified without being removed from the system.

2.7 AUTOMATIC IRRIGATION CONTROLLERS:

Field controllers shall be model numbers and manufacturers as shown on the plans, no substitutions allowed.

Field controllers shall be installed on approved concrete bases in accordance with the manufacturer's recommendations as shown on the Drawings.

Field controllers shall be installed with manufacturer's lightning and surge protection.

2.8 AUTOMATIC REMOTE CONTROL VALVES:

All remote control valves shall be of the same manufacturer as the selected automatic irrigation controller and shall be globe or angle pattern in type and model numbers as indicated on the plans. All valves shall be 24-volt, with epoxy-sealed solenoid coils and throttling stem.

2.9 DECODER TWO-WIRE PATH:

MAXI Wire, Hardwire Communications: the MAXI Type Communication wire for the Two-Wire paths shall be double jacketed, two-conductor cable intended for control of the Communications Signal and Feed-back Signal for the Rain Bird Central Computerized Control Systems. The cable shall be suitable for direct burial in the earth and also may be installed in ducts or conduits. Conductors: the Conductors shall be tin coated (for good mechanical bonding), soft drawn, annealed solid copper conforming to the requirements of ASTM-33. Each conductor shall be insulated with 4/64" (minimum) thick PVC conforming to the requirements of U.L. Standard #493 for thermoplastic insulated underground feeder cables (TYPE UF).

The two (2) conductors shall be color coded with one conductor black and the other red. Both conductors shall be of the same size and shall be of sizes as specified and/or shown on the drawings and a required for the proper operation of the Satellite and Decoder units connected to it.

Outer Jacket: the two (2) conductors shall be laid parallel and covered with a Solid Color, HIGH DENSITY, sunlight resistant polyethylene outer jacket, of the color coding specified and conforming to the requirements of ICEA S-61-402 and NEMA WC 5. The MINIMUM jacket thickness, when measured at any point in contact with the PVC insulation of the copper conductor and to the outer surface of the outer jacket, shall be 3/64" thick. The outer jacket shall be PRESSURE EXTRUDED so as to COMPLETELY FILL the interstices between the two insulated wires. The polyethylene outer jacket shall conform to the following:

The entire outer polyethylene jacket shall be of the color specified for easy identification of the Two-Wire path. Each Two-Wire Path on the system shall have a different color outer jacket for easy identification after installation and for easily distinguishing between the various Two-Wire paths on the system. Standard colors for the outer jacket color-coding shall be White, Red, Green, Blue, Yellow, Orange and Black.

The MAXI® Type Cable SHALL be marked on the jacket as follows - MAXI TYPE COMMUNICATION CABLE - 2/C ## AWG, along with the manufacturer's name and identification number (which is mandatory) and other designations, such as, voltage rating, etc., as may be appropriate. The wire shall not be marked with any other designation, except as noted above.

The manufacturer shall also certify in writing that the POLYETHELENE outer jacket is of minimum thickness (3/64") throughout the entire length of the cable and that it does meet and conform to the requirements of ICEA S – 61 – 402 and NEMA WC 5 as outlined above for both Electrical Properties and Physical Properties.

The cable shall be shipped on non-returnable wood reels, in the lengths and color-coding outer jacket color as specified.

All 2-wire decoder control wire shall be Paige model number P7072D, 14 AWG, or equal approved in advance by the Owner's Representative. If more than one control wire path is used, each wire path shall be designated by a different color. Color-coding is mandatory. Refer to drawings for individual wire path colors.

Verification of wire types and installation procedures shall be checked to conform to local codes.

2.10 DECODERS:

Control valve solenoids shall include an integral decoder – IVM-SOL.

Sensors shall be connected to the 2-wire path with an IVM-SEN.

Non Rain Bird control valves shall be connected to the 2-wire path with an IVM-OUT.

2.11 DECODER WIRE PATH SPLICES:

All connections and splices in the red/blue two-wire path shall be made with 3M Company DBY-6, DBR-6, or approved equal waterproof connectors. All 2-wire path connectors shall be UL listed for 600V. All 2-wire path splices shall be made only in valve boxes. Provide a minimum 5-foot loop of slack decoder wire at all splices.

Use DBY-6 for all connections between 2-wire path and decoders.

Use DBR-6 for all connections at tees in 2-wire path, and all connections to ground wire.

Use standard 30V rated DBY splices at all connections between decoders and control valves or sensors. Connect decoder leads directly to valve or sensor leads. Secure decoder near valve or sensor so that all wires between the devices are slack and unstrained.

2.12 120 VOLT WIRING:

Refer to Electrical Specifications.

Irrigation controllers are to be earth grounded only. Do not ground irrigation controllers to 120-volt power system ground.

2.13 SURGE PROTECTION

Install an IVM-SD Surge Protector on the 2-wire communication path immediately where it can be taken to ground at each controller location.

Install an IVM-SD Surge Protection on the 2-wire path every 500 feet or every 16 decoders, whichever is smaller. An IVM-SD Surge Protector shall be installed at the termination of the 2-wire path in a STAR configuration.

Connect each IVM-SD Surge Protector to a grounding system (ground rods, plates, cables, or combination) with a ground resistance of ten (10) ohms or less.

2.14 GROUNDING:

A. General

All controllers and decoders shall be properly grounded. All grounding shall comply with the referenced standards and manufacturer specifications and installation details.

All grounding materials shall comply with the minimum requirements of the NEC and local codes.

Contractor has the option of using ground rods or ground plates or a combination of the two to achieve the specified grounding requirements.

B. Ground Rods

All ground rods shall be 5/8" x 10' copper clad steel, stamped as UL listed. All ground rods shall be Paige Electric part number 182007, or equal approved in advance by the Owner's Representative. All ground rods shall be housed in valve box as specified.

C. Ground Wire

Ground wires shall be #6 AWG bare copper wire, solid strand. Ground wires shall be attached to ground rods and ground plates with Cadweld "One Shot" connectors. Ground wires from LSP-1 Surge Protectors shall be connected to ground rods with a

The wires are to be installed in as straight a line as possible. If it is necessary to make a turn or a bend, it shall be done in a sweeping curve with a minimum radius of 8″ and a minimum included angle of 90°.

D. Grounding Plates

All grounding plates for use with controllers shall meet the minimum requirements of section 250 of the NEC. They shall be made of a copper alloy intended for grounding applications and will have minimum dimensions of 4″ x 96″ x 0.0625″. A 25-foot continuous length of 6 AWG solid bare copper wire shall be attached to the plate using an approved welding process. Controller grounding plates shall be Paige Electric part number 182199L, or equal approved in advance by the Owner's Representative.

All grounding plates for use with decoders shall meet the minimum requirements of section 250 of the NEC. They shall be made of a copper alloy intended for grounding applications and will have minimum dimensions of 4″ x 36″ x 0.0625″. A 10-foot continuous length of 6 AWG solid bare copper wire shall be attached to the plate using an approved welding process. Controller grounding plates shall be Paige Electric part number 182201, or equal approved in advance by the Owner's Representative.

E. Earth Contact Improvement

All earth contact improvement material shall be PowerSet® earth contact material, Paige Electric part number 1820058, or equal approved in advance by the Owner's Representative. Salts, fertilizers and other chemicals shall not to be used in an attempt to improve soil conductivity.

2.15 FLOW SENSOR

A. Flow sensor shall be Flomec QS200 Insertion Ultrasonic Flowmeter, or equal approved in advance by the Owner's Representative.

2.16 FITTINGS:

A. General

All plastic pipefittings shall be permanently marked with the following information:

Manufacturer's name or trademark, size, schedule and type of pipe, working pressure at 73 degrees F. and National Sanitation Foundation (N.S.F.) approval.

All plastic pipefittings to be installed shall be molded fittings manufactured of the same material as the pipe and shall be suitable for solvent weld, slip joint ring-tite seal, or screwed connections. Marlex fittings shall not be permitted.

Slip fitting socket taper shall be so sized that a dry unsoftened pipe end, conforming to these special provisions, can be inserted no more than halfway into the socket. Plastic flange fittings will not be permitted. **Only schedule 80 fittings may be threaded.**

When connection is plastic to metal, plastic male adaptors shall be used. The male adaptor shall be hand tightened, plus one turn with a strap wrench. Joint compound shall be Teflon Tape.

B. Fittings- Solvent Weld

All lateral line fittings shall be schedule 40 solvent weld fittings.

Fittings shall be manufactured by Lasco, Spears, or acceptable equal.

C. Fittings- Gasketed

All mainline fittings shall be gasketed ductile iron unless noted otherwise on the plans.

Fittings shall be manufactured by Harco, Leemco, or acceptable equal.

D. Fittings- Mainline to Lateral

Connection between mainline and lateral control valve shall be made using a gasketed ductile iron service tee and a ductile iron swivel 90 or L90 MPT series outlet adapter.

Fittings shall be manufactured by Harco, Leemco, or acceptable equal.

E. Fittings- Saddle Tees

Shall not be permitted.

F. Polyethylene Encasement

All ductile iron pipe and fittings shall be wrapped in polyethylene sheeting for external corrosion protection. Sheeting shall meet or exceed AWWA C105. Sheeting shall be a linear low density polyethylene encasement with a density of 0.910 – 0.935 and a minimum thickness of .008 inches (8MIL). Color shall be black and contain less than 2% carbon black. Approved Products: Polyethylene Poly Wrap by Infinity Plastics, LLC 507-263-4469, Polyethylene Encasement by Harco (434) 845-7094, or equal approved in advance. Provide submittal for review. Installation shall be according to the "Polyethylene Encasement Installation Guide" at www.dipria.org.

2.17 SOLVENT CEMENT

All solvent cement and primer shall be manufactured by the same manufacturer for use together. Cement and primer products shall be manufactured with all virgin materials only. Solvent cement shall be NSF listed and shall meet or exceed ASTM D-2564. Solvent cement shall be heavy bodied, medium setting, and high strength. Solvent cement shall be Weld-On 711 PVC, Rectorseal Homer 828L, or equal. Primer shall be NSF listed and shall meet or exceed ASTM F-656. Primer color shall be purple.

2.18 CONCRETE:

All concrete shall be minimum 3,000 PSI at 28 days.

If transit mixed, provide certifications with each delivery. If pre-mixed dry product is used, comply with all instructions for mixing printed on the manufacturer's packaging.

2.19 OTHER MATERIALS:

A. Materials to be Furnished

Supply as part of this contract the following parts and tools:

Two keys for each automatic controller.
Four quick coupler valve keys with matching hose swivels.

Two isolation valve keys for each type of valve installed.
Five heads of each type installed with nozzles.
One automatic control valve for each size and type installed.
Two complete sets of service tools for each type sprinkler installed.

The above equipment shall be turned over to the Owner at the conclusion of the project. Before final inspection can occur, evidence that the Owner has received materials must be shown to the Owner's Representative.

All other materials, not specifically described but required for a complete and proper irrigation system installation, shall be new, first quality of their respective kinds, and subject to the approval of the Owner's Representative.

B. Valve ID Tags

Identification tags shall be installed at all remote control valves. Tags shall be yellow in color and approximately 2.25" x 2.75". Tags shall be Christy's model No. ID-STD-Y1, or equal approved in advance. Manufacturer shall be T. Christy Enterprises, Inc., 714-507-3300.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS:

A. Inspection

Prior to all work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.

Verify that irrigation system may be installed in strict accordance with all pertinent codes and regulations, the original design, the referenced standards, and the manufacturer's recommendations.

Verify available pressure and flow.

Test and verify operation of the backflow prevention device.

B. Discrepancies

In the event of discrepancy, immediately notify the Owner's Representative.

Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

Beginning of installation means acceptance of existing conditions by installer.

3.2 FIELD MEASUREMENTS:

Make all necessary measurements in the field to ensure precise fit of items in accordance with the original design.

3.3 TRENCHING AND BACKFILLING:

A. General

Perform all trenching and backfilling as specified by Section 02225 of this Specification.

3.4 INSTALLATION OF PIPING:

A. General

Layout the piping system in strict accordance with the plans.

Where piping is shown on the plans to be under paved areas but running parallel and adjacent to planted areas, the intention is to install the piping in the planted areas.

B. Pipe Depth

All mainlines shall be installed with 18" minimum cover over the pipe. All laterals shall be installed with 12" minimum cover over the pipe.

C. Line Clearance

All lines shall have a minimum clearance of 4 inches from each other, and 6 inches from lines of other trades, except through pipe sleeves.

Parallel lines shall not be installed directly over one another.

D. Inspection of Pipe and Fittings

Carefully inspect all pipe and fittings before installation, removing all dirt, scale, and burrs and reaming as required; install all pipes with all markings up for visual inspection and verification.

E. Plastic Pipe

Plastic pipe shall be installed in a manner so as to provide for expansion and contraction as recommended by the manufacturer.

All plastic joints shall be solvent-weld joints or slip seal joints. Only the solvent cement recommended by the pipe manufacturer shall be used. All plastic pipe and fittings shall be installed as outlined and instructed by the pipe manufacturer and it shall be the Contractor's responsibility to make arrangements with the pipe manufacturer for any field assistance that may be necessary. The Contractor shall assume full responsibility for the correct installation.

Slip seal gasketed joints shall be used on all pipe 3" and larger.

All plastic to metal joints shall be made with plastic male adaptors.

The solvent-weld joints shall be made dry.

The solvent-weld joints shall be allowed to set at least 24 hours before pressure is applied to the system on PVC pipe.

F. Thrust Blocks

Provide concrete thrust blocks for all pipe as required by the schedule on the drawings.

All thrust blocks shall bear directly on undisturbed earth. Center the pipe in the middle of the thrust block.

G. ***All mainlines*** shall have “marking tape” installed minimum of 6” above the line during backfilling operations.

3.5 INSTALLATION OF EQUIPMENT:

A. General

All fittings, valves, etc. shall be carefully placed in the trenches as shown on the plans.

All decoders shall be clearly labeled by station using permanent weatherproof material. All remote control valves shall be clearly labeled using a valve ID tag attached to the valve with a cable zip tie. Station/valve identification shall be clearly marked on the tag.

All sprinklers, having adjustable nozzles, shall be adjusted for proper and adequate distribution of the water over the coverage pattern of the sprinkler.

All nozzles on stationary pop-up sprinklers or stationary spray heads shall be tightened after installation. All sprinklers having an adjusting screw, adjusting stem or adjusting friction collars shall be adjusted as required for the proper arc of coverage, radius, diameter and/or gallonage discharge.

B. Lawn Sprinkler Heads

Install lawn sprinkler heads where indicated on the plans and in strict accordance with the manufacturer's recommendations.

Along walks and driveways where finished grade is established, set all heads 1/4" below surface of pavement at time of installation and 1-1/2" from pavement.

Set all heads to final grade where sod will be installed. Top of head shall be approximately ½" above finish grade prior to sod installation. Adjust height based on sod thickness. Top of head to be even or just below finish grade of sod.

Upon completion of maintenance period, reset all lawn sprinkler heads that have settled flush with grade and firmly anchor with soil.

C. Remote Control Valves

Install one valve per valve box.

3.6 GROUNDING

A. General

All grounding hardware shall always be connected and placed at right angles to the run of the two-wire path.

Do not run power cables and decoder cable parallel. Plan installation in advance to avoid routing conflicts. If a high voltage cable must be crossed, it shall be crossed at right angles.

Both the controller and the decoders shall be grounded, as specified, and all grounds shall have less than 10 Ohms resistance to ground, as measured with a "megger" type instrument. A "clamp on meter" cannot be used for ground measurement. The electrician shall measure all grounds in the presence of the Owner's Representative and shall provide written certification that all grounds comply strictly with this specification.

If any ground exhibits more that 10 Ohms resistance, additional grounding materials shall be installed until the resistance to ground comes within specifications.

Place all ground electrodes in irrigated soil areas. The soil surrounding copper ground electrodes shall be kept at a minimum moisture level of 15% at all times.

B. Controller Grounding

Ground the satellite controller directly to earth ground. Do not ground controller to the 120V power system ground.

At the very minimum, the grounding circuit for controllers will include three copper clad steel ground rods, a copper ground plate and 100 pounds of PowerSet® earth contact material, or a combination of ground rods and ground plates.

The ground plate shall be installed to a minimum depth of 30", or below the frost line if it is lower than 30", at a location 15 to 20 feet from the ground rod, electronic equipment and wires and cables. Two 50-pound bags of PowerSet® earth contact material shall be spread so that it completely surrounds the copper plate evenly along its length within a 6" wide trench.

Install all grounding circuit components in straight lines. When it is necessary to make bends, do not make sharp turns. To prevent the electrode-discharged energy from re-entering the underground wires and cables, all electrodes shall be installed away from wires and cables. The spacing between any two electrodes shall be 15 to 20 feet minimum.

Upon completion, the earth-to-ground resistance shall be measured as specified. Continue installing additional grounding materials until the specified earth-to-ground resistance is achieved.

C. Decoder Grounding

At the very minimum, the grounding circuit for a decoder will include a copper ground plate and 50 pounds of PowerSet® earth contact material.
The ground plate shall be installed to a minimum depth of 30", or below the frost line if it is lower than 30", at location 15 to 20 feet electronic equipment and wires and cables. One 50-pound bag of PowerSet® earth contact material shall be spread so that it completely surrounds the copper plate evenly along its length within a 6" wide trench.

Install all grounding circuit components in straight lines. When it is necessary to make bends, do not make sharp turns. To prevent the electrode-discharged energy from re-entering the underground wires and cables, all electrodes shall be installed 6 – 8 feet away from wires and cables. The spacing between any two electrodes shall be 15 to 20 feet minimum.

Upon completion, the earth-to-ground resistance shall be measured as specified. Continue installing additional grounding materials until the specified earth-to-ground resistance is achieved.

Earth ground shall be connected at every 15th decoder, or maximum every 500 ft of wire run, whichever is shorter. The final decoder in any wire path shall also be grounded. This includes the final decoders in each of the different arms of a wire path "T".

One lightning surge protector, shall be provided on each wire path between the controller and the first decoder. Locate grounded decoder as close to the controller as reasonably practical.

If the 2-wire path is stubbed out for future extension, the ends of all conductors shall be terminated with DBY-6 waterproof connectors.

3.7 PROGRAMMING DECODERS

Program output and sensor decoders according to the manufacturer's recommendations.

3.8 TESTING AND INSPECTION:

A. Closing-in Uninspected Work

Do not allow or cause any of the work in this section to be covered up or enclosed until it has been inspected, tested, and approved by the Owner's Representative.

Where trenches are not closed at the end of the day Contractor shall accept all liability for any damage or injury that may result from open trenches. Provide barricades and warning tape as necessary around all open trenches.

B. Flushing

Before backfilling the mainline, and with all control valves in place, but before lateral pipes are connected, completely flush and test the mainline and repair for all leaks. Thoroughly flush out each section of lateral pipe before sprinkler heads are attached.

C. Testing

Make all necessary provisions for thoroughly bleeding the line of air and debris.

Before testing, fill the line with water for a period of at least 24 hours.

After valves have been installed, test all live water lines for leaks at a pressure of 100 PSI for a period of two hours, with all couplings exposed and with all pipe sections center loaded.

Furnish all necessary testing equipment and personnel. Pressurize with water only, do not use air pressure for testing.

Correct all leaks and retest until acceptance by the Owner's Representative.

D. Final Inspection

Thoroughly clean, adjust, and balance all systems.

The Contractor shall operate, maintain and adjust the irrigation system a minimum of 10 calendar days before substantial completion inspection can occur. Observe the system operation and make all adjustments necessary. Present the system at substantial completion fully operational and properly adjusted, as specified.

Demonstrate the entire system to the Owner's Representative, proving that all remote control valves are properly balanced, that all heads are properly adjusted for radius and arc of coverage, and that the installed system is workable, clean, and efficient.

3.9 INSTRUCTIONS:

A. Record Drawings

Record accurately on one set of black and white prints of the site plan all installed work including both pressure and non-pressure lines.

Upon completion of each increment of work, transfer all such information and dimensions to the print. The dimensions shall be recorded in a legible and workmanlike manner. Maintain as-built drawings on site at all times.

All payment requests shall be accompanied by interim record drawings showing all work completed to that date. No payment request will be processed without an acceptable interim record drawing. Finished record drawings must be received and approved by the Owner's Representative before final payment will be approved.

Make all notes on drawing in pencil (no ball point pen). When the work has been completed, transfer all information from the field record print to a set of reproducible drawings.

Dimension from two permanent points of reference (buildings, monuments, sidewalks, curbs, pavement, etc.). Locations shown on as-built drawings shall

be kept day-to-day as the project is being installed. All dimensions noted on drawings shall be 1/8-inch in size (minimum).

Show locations and depths of the following items:

Point of connection
Routing of sprinkler pressure lines
(Dimension maximum 200 feet along routing and at all changes in direction)
Gate valves
Sprinkler control valves
Quick coupling valves
Routing of control and power wires
Sprinkler heads
Other related equipment

Final as-built drawings shall be prepared from the field drawing compiled during construction.

B. Controller Charts

Controller charts shall be created by landscape architect based on contractor's as-built drawings.

C. Operation and Maintenance Manuals

Initial operations and maintenance manuals shall be in a digital PDF format for review. After accepted, prepare and deliver to the Owner's Representative within ten calendar days prior to completion of construction, all required and necessary descriptive two individually bound copies of the operations and maintenance manual in additional to one final PDF copy. Manuals are to be indexed (thumb- tabbed). The manual shall describe the material installed and shall be in sufficient detail to permit operating personnel to understand, operate and maintain all equipment. Spare parts lists and related manufacturer information shall be included for each equipment item installed. Each complete, bound manual shall include the following information.

1. Index sheet stating Contractor's address and telephone number, duration of guarantee period, list of equipment with names and addresses of local manufacturer representatives.

2. Product Data: One copy of each Product Data submittal required by Contract Documents.
3. Complete operating and maintenance instructions on all major equipment.
4. Complete parts lists and tables for all major equipment installed.
5. Table showing all measured resistance-to-ground values as measured at all grounding locations.
6. Print outs showing initial programming settings.
7. Step by step instructions for winterization.
8. Step by step instructions for spring start up.

In addition to the above maintenance manuals, provide the maintenance personnel with instructions for system operation and show written evidence to the Owner at the conclusion of the project that this service has been rendered.

3.10 MAINTENANCE:

A. System Operation

During and following installation of the irrigation system, the Contractor shall operate the irrigation system as required to maintain healthy turf.

The Contractor shall continue to operate the irrigation system until the project is substantially complete as determined by the Owner's Representative.

3.11 GUARANTEE PERIOD:

A. Guarantee

The entire irrigation and water system shall be guaranteed to give satisfactory service for a period of one year from date of acceptance by the Owner.

Should any trouble develop within the time specified above due to inferior or faulty materials or workmanship, the trouble shall be corrected at no expense to the Owner.

Any and all damages resulting from faulty materials or workmanship shall be repaired by the Contractor to the satisfaction of the Owner, at no cost to the Owner.

B. Guarantee Period Services

The Contractor shall winterize the system and perform spring start-up of the system during the initial season of operation. If the project extends beyond one construction season, the Contractor shall provide winterization and spring start-up as required until the system has been awarded substantial completion at which time the guarantee period services will begin and the standard winterization and spring start-up will be provided. These functions shall be coordinated in advance with the Owner, and the Owner's personnel shall be encouraged to participate. The guarantee period begins following substantial completion. Winterization and spring start-up is the Contractor's responsibility during construction.

Upon re-energizing the system, the Contractor shall repair any leaks or breaks and shall check each head and valve, making any adjustment necessary. Resistance-to-ground shall also be measured at all ground locations and recorded upon spring start-up, and needed grounding improvements shall be made by the Contractor.

END OF SECTION 328400

ADDITIONAL PROJECT SPECIFIC SECTIONS

Substitution/Equal Product Request Form

PROJECT NAME**:** _____

TO: _____

FROM: _____

DATE: _____ BID DATE: _____

Specification Title & Section: _____

Specified Product: _____

Proposed Substitution: _____

The Undersigned certifies that:

1. The proposed substitution/equal product has been fully investigated and determined to be equal or superior in all respects to specified product.
2. The same warranty will be furnished for proposed product as for specified product.
3. The same maintenance service and source of replacement parts, as applicable, is available.
4. The proposed product will have no adverse effect on other trades and will not affect or delay progress schedule.
5. The proposed substitution does not affect dimensions and functional clearances.
6. Payment will be made by proposer for any changes to design, detailing, and construction costs caused by substitution.

The following attachments are to be included:

1. Product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request with applicable portions of the data clearly identified.
2. Feature by feature comparison clearly indicating how proposed product is equal to or superior to specified product.
3. Attached data also to include a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

PROPOSER'S SIGNATURE: _____

PRINTED NAME:_____

COMPANY: _____

ADDRESS: _____

TELEPHONE: _____ EMAIL: _____

A/E REVIEW & ACTION

- ☐ APPROVED
- ☐ APPROVED AS NOTED
- ☐ NOT APPROVED (Use specified product)
- ☐ NOT REVIEWED (Submission received too late. Use specified products)

ADDITIONAL COMMENTS:

REVIEWED BY: _____ DATE: _____

W.O. 23-33 GRANDVIEW PARK IRRIGATION SYSTEM REPLACEMENT

BILLINGS, MONTANA

JUNE 1, 2023

SHEET INDEX

I1.1	IRRIGATION PLAN
I1.2	IRRIGATION DETAILS
I1.3	IRRIGATION DETAILS
I1.4	PUMP DETAIL
I1.5	SUPPLY LINE ALTERNATE



GENERAL NOTES:

1. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. UTILITIES ARE INDICATED ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE SURVEY. ACCURACY OF INFORMATION IS NOT GUARANTEED. SERVICE LINES MAY NOT BE IN STRAIGHT LINES OR AS INDICATED ON THE PLANS.
3. ALL EXISTING IMPROVEMENTS TO REMAIN AND BE PROTECTED UNLESS NOTED OTHERWISE.
4. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE PREPARED AND SEEDED AS SPECIFIED. A DISTURBED AREA IS DEFINED AS AN AREA WHERE CONSTRUCTION ACTIVITIES INCLUDING DEMOLITION, TRENCHING, EARTHWORK, MATERIAL STORAGE, STAGING, PARKING, OR ANY FORM OF EXCAVATION, COMPACTION, OR TRAFFIC RESULTS IN THE REMOVAL OR DISPLACEMENT OF EXISTING GROUND COVER OR GRADE. CONTRACTOR SHALL REVIEW ALL OTHER CONTRACT DOCUMENTS AND CONTRACTED WORK BY OTHERS TO DETERMINE FULL SCOPE OF POTENTIAL SITE DISTURBANCE TO BE RECLAIMED.
5. REFER TO ALL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

MONTANA NATHAN STEINER 1625 REGISTERED LANDSCAPE ARCHITECT

811 Know what's below. Call before you dig.

PREPARED FOR:

PARKS AND BILLINGS RECREATION

PREPARED BY:

STEINER THUESEN PLLC

GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE

1925 GRAND AVE, SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855



LEGEND:

SYMBOL	DESCRIPTION	SIZE	MANUF.	MODEL NUMBER
	ROTOR SPRINKLER	45' RADIUS	RAINBIRD	6504-6 6.0 GPM, @ 60 PSI (BLUE)
	AIR RELIEF VALVE	2"	BERMAD	C10-SP
	ISOLATION VALVE	LINE SIZE	AS SPECIFIED	
	MAINLINE DRAIN VALVE		AS SPECIFIED	
	QUICK COUPLING VALVE	1"	RAINBIRD	44NP
	RAIN/FREEZE SENSOR		RAINBIRD	WR2-RFC
	ELECTRIC CONTROL VALVE	AS NOTED	RAINBIRD	IVM-PESB
	SATELLITE CONTROLLER	60 STATION	RAINBIRD	ESP=LXIVM-IQNCC4G W/ LXMMSS
	MASTER VALVE/FLOW SENSOR	1-1/2"/1-1/2"	SUPERIOR/FLOMEC	3300150 W/ DC LATCHING SOLENOID/ QS200-15
	PUMP STATION	AS SPECIFIED		
	IRRIGATION MAIN- PVC	3"		CLASS 200
	LATERAL LINE - PVC	AS SHOWN		CLASS 200
	SLEEVES - PVC	SEE NOTES		SCHEDULE 40

A1 / 50.0 — Zone # / GPM

GENERAL NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES ON SITE OR ADJACENT PROPERTY SHALL BE CONTRACTOR'S RESPONSIBILITY.
2. IRRIGATION PLAN IS DIAGRAMMATIC IN NATURE. FIELD ADJUSTMENT OF IRRIGATION COMPONENTS MAY BE NECESSARY TO AVOID CONFLICTS WITH EXISTING SITE FEATURES. REASONABLE CHANGES IN PIPE LAYOUT MAY BE MADE BY THE CONTRACTOR WITH THE ADVANCE APPROVAL OF THE ARCHITECT. LINES SHOWN BELOW PAVEMENT ADJACENT TO TURF AREAS ARE TO BE LOCATED IN TURF AREAS.
3. SCHEDULE 40 PVC SLEEVES ARE REQUIRED UNDER ALL HARD AND GRAVEL SURFACES, EXISTING AND PROPOSED. LOCATION AND NUMBER OF SLEEVES IS THE RESPONSIBILITY OF THE CONTRACTOR FOR INSTALLATION OF THE IRRIGATION SYSTEM AS SHOWN. ALL PIPE SLEEVES TO BE 2 PIPE SIZES LARGER THAN PIPE TO BE INSTALLED THROUGH SLEEVE. PROVIDE SEPARATE SLEEVES FOR BOTH 120 V. AND 24 V. WIRING. WIRE SLEEVES TO BE 4" MIN. ANY SLEEVES INDICATED ON THE PLAN ARE FOR THE CONVENIENCE OF THE CONTRACTOR.
4. CONTRACTOR SHALL PROVIDE ALL DEVICES, WIRING AND PROGRAMMING FOR A COMPLETE OPERATIONAL SYSTEM.
5. LOCATIONS OF MAINLINE DRAINS MAY VARY. ACTUAL LOCATIONS SHALL BE IN ALL LOW SPOTS ALONG THE MAINLINE IN APPROXIMATE LOCATIONS AS SHOWN.
6. LOCATIONS OF AIR RELIEF VALVES MAY VARY. ACTUAL LOCATIONS SHALL BE IN ALL HIGH SPOTS ALONG THE MAINLINE IN APPROXIMATE LOCATIONS AS SHOWN.
7. CONTRACTOR SHALL MAINTAIN AN ACCURATE, CURRENT AS-BUILT ON THE JOB AT ALL TIMES.
8. ZONES WITH FLOWS THROUGH 60 GPM TO HAVE 1-1/2" CONTROL VALVES. ZONES WITH FLOWS 61 GPM AND GREATER TO HAVE 2" CONTROL VALVES.
9. CONTRACTOR SHALL COORDINATE AND PAY FOR TECHNICAL SUPPORT NEEDS WITH CONTROL SYSTEM MANUFACTURER AND SERVICE PROVIDERS AS REQUIRED FOR COMPLETE AND FUNCTIONAL SYSTEM.
10. ALL CONDUIT TO BE 1" MINIMUM, UNLESS NOTED OTHERWISE. CONCEAL OR BURY WHEREVER POSSIBLE. ALL VISIBLE CONDUITS SHALL BE ROUTED AS DIRECTED AND PAINTED TO MATCH MOUNTING SURFACES. ALL BURIED CONDUITS SHALL BE ELECTRICAL GRADE SCHEDULE 40 PVC. ALL CONDUITS ABOVE GRADE SHALL BE SCHEDULE 80 PVC.
11. ADJUST ALL HEADS AS REQUIRED TO PREVENT OVERSPRAY ONTO BUILDINGS AND STREETS.
12. CONTROLLER LOCATION TO BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
13. DESIGN BASED ON 0.28"/DAY WATER REQUIREMENT, 5 DAYS/WEEK WITH AN 8 HOUR WATER WINDOW WITH 60 PSI AT ALL 6504 IRRIGATION HEADS. OVERALL SYSTEM REQUIREMENTS AT THE PUMP STATION DISCHARGE HEAD ARE 75 GPM @ 81 PSI. (INCLUDES FILTER FLUSH)
14. POWER FOR CONTROLLER TO BE SUPPLIED AT PUMP STATION.
15. OWNER'S APPROVAL REQUIRED FOR WORK WITHIN 10' OF ANY TREE, SEE SPECIAL PROVISIONS.
16. REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

KEY NOTES:

1. IRRIGATION CONTROLLER TO BE MOUNTED ON EXTERIOR OF PUMP STATION ENCLOSURE, SEE I1.4. POWER FOR CONTROLLER TO BE SUPPLIED FROM PUMP STATION.
2. APPROXIMATE LOCATION OF NEW METER. COORDINATE WITH OWNERS REP. REFER TO 3/I1.4 FOR INFORMATION REGARDING ELECTRICAL SERVICE.
3. EXISTING 3" PVC SUPPLY LINE THAT RUNS TO THE CANAL. EXISTING DEPTH IS APPROX. 6". FOLLOWING CONNECTION TO EXISTING SUPPLY LINE, ADJUST PIPE DEPTH TO 18" BURY DEPTH AND ROUTE TO PUMP STATION INLET. SEE 1/I1.4. INSTALL MAINLINE DRAIN PRIOR TO PUMP STATION INLET. CONNECT DRAIN TO MANHOLE/BOULDER PIT.
4. OBTAIN NECESSARY PERMITS AND LOCATE ALL UTILITIES IN NORTH 30TH STREET PRIOR TO BORING FOR MAINLINE AND CONTROL WIRES. COORDINATE WITH PUBLIC WORKS DEPARTMENT TO OBTAIN PERMITS AND NECESSARY APPROVALS. INSTALL A 6" SLEEVE FOR MAINLINE AND 1" CONDUIT FOR WIRE.
5. REMOVE EXISTING CONCRETE VAULT AND BACKFILL.
6. DEMO EXISTING CONCRETE PUMP VAULT AND BACKFILL. DISPOSE OF IRRIGATION EQUIPMENT.
7. MOUNT RAIN/FREEZE SENSOR TO EXISTING UTILITY POLE.
8. INSTALL MAINLINE DRAIN AT LOW POINT OF STREET CROSSING. MAINLINE TO SLOPE TO DRAIN.
9. TRANSITION TO SOLVENT WELD MAINLINE INSIDE OF SLEEVE.
10. APPROXIMATE LOCATION OF MANHOLE/BOULDER PIT, SEE 2/ I1.4.

0 10' 20' 40'

NORTH

MONTANA NATHANIEL G STEINER 13 REGISTERED LANDSCAPE ARCHITECT

THIS DRAWING IS THE PROPERTY OF THE LANDSCAPE ARCHITECT. IT HAS BEEN PREPARED SPECIFICALLY FOR THIS SITE AND IS NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION, OR OWNER WITHOUT WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT.

W.O. 23-33 GRANDVIEW PARK IRRIGATION SYSTEM REPLACEMENT

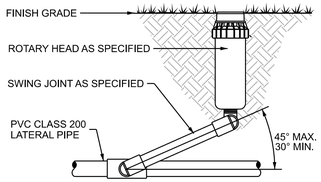
IRRIGATION PLAN

COPYRIGHT 2023
STEINER THUESEN PLLC

STEINER THUESEN PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

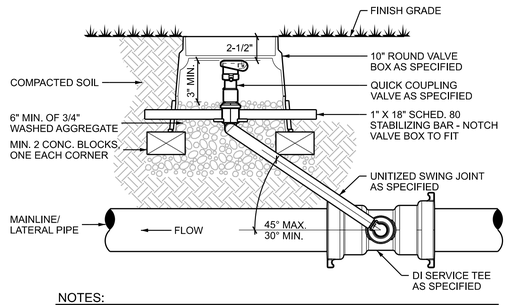
DRAWN BY: JAV
DATE: 6/1/23
CHECKED BY: NGS
DATE: 6/1/23
REV: -
REV: -
FILE: I1.1 IRRIGATION PLAN.DGN

SHEET
I1.1



1 TYPICAL ROTOR HEAD

NOT TO SCALE

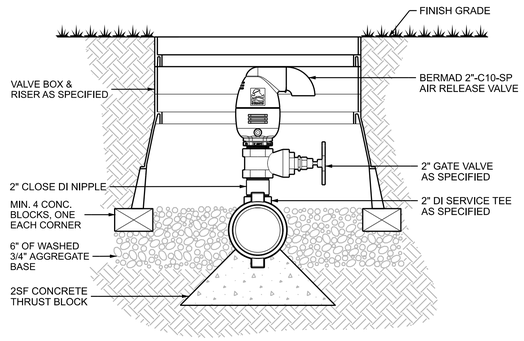


NOTES:

1. DO NOT DRIVE REBAR THROUGH TABS ON SWING JOINT, STABILIZING BAR TO BE USED.

2 TYPICAL QUICK COUPLER

NOT TO SCALE

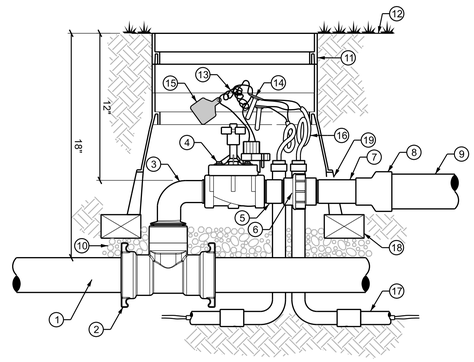


NOTES:

1. ROTATE TEE ON MAINLINE AS NECESSARY TO ENSURE CLEARANCE IS PROVIDED BETWEEN LID AND TOP OF AIR RELEASE VALVE.
2. PROVIDE 1" MIN. SPACE BETWEEN BOTTOM OF VALVE BOX AND TOP OF MAINLINE.

3 AIR RELIEF VALVE

NOT TO SCALE



LEGEND:

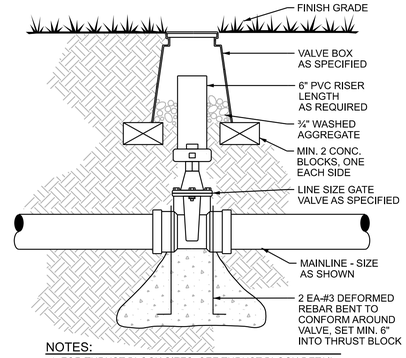
1. MAINLINE.
2. HARCO D.I. SWIVEL TEE.
3. 2" HARCO LATERAL 90° SWIVEL.
4. ELECTRIC VALVE AS SPECIFIED.
5. 2" X 2" T.B.E. SCH 80 NIPPLE.
6. 2" - T X T SCH. 80 UNION.
7. 2" X 4" SCH. 80 T.O.E. NIPPLE.
8. 3" X 2" SCH 80 1 PIECE REDUCER COUPLING.
9. SOLVENT WELD PIPE TO LATERALS.
10. 6" OF WASHED 3/4" AGGREGATE BASE, MAINTAIN 2" CLEARANCE BELOW VALVE.
11. VALVE BOX AS SPECIFIED, RISER AS REQUIRED.
12. FINISH GRADE.
13. PROVIDE 20 EXPANSION COILS EACH WIRE.
14. DBY WIRE CONNECTORS AS SPECIFIED, MAKE ALL SPLICES IN VALVE BOX.
15. VALVE ID TAG, AS SPECIFIED.
16. PROVIDE 3' MINIMUM OF 2-WIRE CABLE ON EACH LEG COILED UP NEATLY IN VALVE BOX.
17. 2-WIRE CONTROL CABLE IN CONDUIT, 1" MIN. SEAL ENDS WITH DUCT SEALANT.
18. MIN. 4 CONC. BLOCKS, ONE EACH CORNER.
19. 1" MIN. SPACE BETWEEN LATERAL AND VALVE BOX.

NOTES:

1. ADJUST SIZE OF LATERAL 90°. AND PVC FITTINGS TO MATCH ELECTRIC VALVE SIZE CALLED FOR ON PLANS.

4 TYPICAL ELECTRIC CONTROL VALVE - IVM

NOT TO SCALE

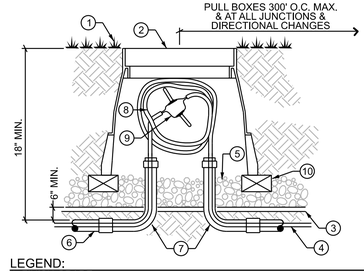


NOTES:

1. FOR THRUST BLOCK SIZES, SEE THRUST BLOCK DETAIL AND SIZE THRUST BLOCK BASED ON TEES OF SAME SIZE AS ISOLATION VALVE.
2. THIS DETAIL FOR VALVES 3" AND LARGER.

5 MAINLINE ISOLATION VALVE

NOT TO SCALE



LEGEND:

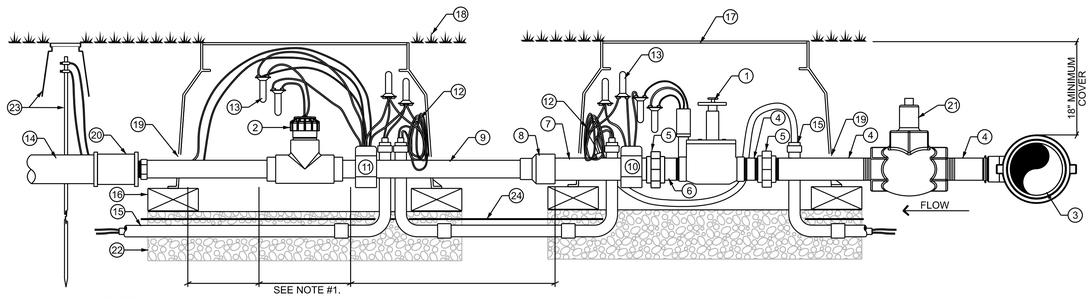
1. FINISH GRADE
2. CARSON 1419-12 BOX & 1419-3B GREY COVER, ELECTRICAL MARKING.
3. PANDUIT HTDU 3R-E MARKER TAPE CONTINUOUS.
4. 2-WIRE COMM CABLE TO CONTROLLERS AND DECODERS.
5. MIN. 4" DEPTH CRUSHED AGGREGATE.
6. PVC SCHED 40 CONDUIT SIZE AS REQUIRED, 1" MIN.
7. 90° SWEEP ELL.
8. MIN. 60" LOOP OF CONDUCTORS IN PULL BOX.
9. SPLICES MADE WITH DBY SPLICE KITS. FIELD SPLICES PERMITTED ONLY AT DECODERS.
10. CONC. SUPPORT BLOCK EACH CORNER.

NOTES:

1. AT PULL/SPLICE LOCATIONS EXTEND CONDUIT TO WITHIN 6" OF CARSON BOX COVER AND CLOSE CONDUIT WITH DUCT SEALANT.
2. INCLUDE PULL/SPLICE BOXES ON AS-BUILT DRAWINGS.

6 2-WIRE CONTROL PULL / SPLICE BOX

NOT TO SCALE



LEGEND:

1. MASTER VALVE.
2. FLOW SENSOR.
3. DI SERVICE TEE ON MAINLINE, REPLACE SERVICE TEE WITH DI TAPPED CAP AS REQUIRED.
4. DI NIPPLE, SIZE TO MATCH MASTER VALVE.
5. SCH 80 PVC UNION.
6. SCH 80 TOE NIPPLE.
7. PVC PIPE, SAME SIZE AS MASTER VALVE.
8. SCH 80 PVC REDUCER AS REQUIRED.
9. PIPE SIZE TO MATCH SIZE OF FLOW SENSOR.
10. IVM-OUT FIELD DECODER WITH WIRES TO MASTER VALVE AND 2-WIRE PATH.
11. IVM-SEN SENSOR DECODER WITH WIRES TO FLOW SENSOR, 2-WIRE PATH & GROUND ROD.
12. SLACK DECODER PATH WIRE, AS SPECFIED.
13. WIRE CONNECTORS, AS SPECIFIED.
14. SUBMAINLINE PIPE TO CONTROL VALVES. SEE PLAN FOR SIZE.
15. 2-WIRE PATH TO CONTROLLER/DECODERS IN CONDUIT, 1" MIN.
16. MIN. 4 CONCRETE BLOCKS, TWO EACH SIDE
17. VALVE BOX AND EXTENSION, AS SPECIFIED.
18. FINISH GRADE.
19. 1" MINIMUM SPACE BETWEEN LATERAL AND VALVE BOX.
20. DI TAPPED CAP.
21. GATE VALVE, SAME SIZE AS MASTER VALVE.
22. 3/4" WASHED AGGREGATE
23. GROUND ROD, ACORN CLAMP, AND VALVE BOX.
24. MARKER TAPE OVER 2-WIRE PATH IN CONDUIT.

NOTES:

1. INLET PIPE LENGTH OF FLOW SENSOR MUST BE MIN. 10X PIPE DIA. STRAIGHT, CLEAN RUN OF PIPE, NO FITTINGS OR TURNS. OUTLET PIPE LENGTH OF FLOW SENSOR MUST BE MIN. 5X PIPE DIA. OF STRAIGHT CLEAN RUN OF PIPE, NO FITTINGS OR TURNS.
2. REFER TO LEGEND ON PLAN SHEETS FOR ADDITIONAL INFORMATION FOR MASTER VALVE AND FLOW SENSOR.

7 MASTER VALVE & FLOW SENSOR

NOT TO SCALE

MONTANA
NATHANIEL G. STEINER
REGISTERED LANDSCAPE ARCHITECT

THIS DRAWING IS THE PROPERTY OF THE LANDSCAPE ARCHITECT. IT HAS BEEN PREPARED SPECIFICALLY FOR THIS SITE AND IS NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION, OR OWNER WITHOUT WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT.

W.O. 23-33 GRANDVIEW PARK IRRIGATION SYSTEM REPLACEMENT

IRRIGATION DETAILS

COPYRIGHT 2023
STEINER THUESEN PLLC

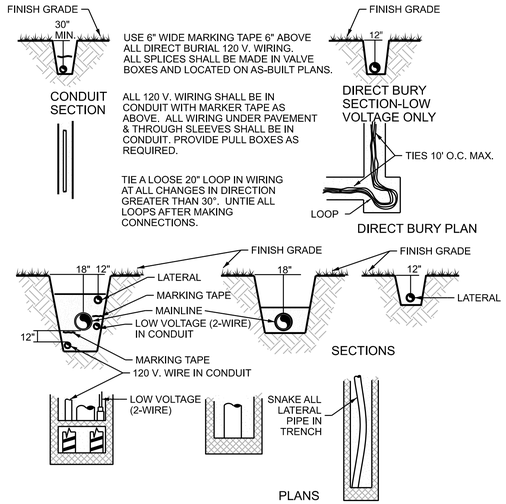
STEINER THUESEN PLLC

GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE

1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

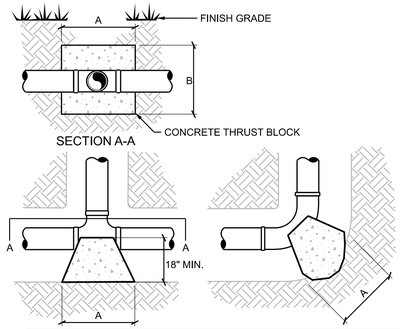
DRAWN BY: JAV
DATE: 6/1/23
CHECKED BY: NGS
DATE: 6/1/23
REV: -
REV: -
FILE: I1.2 IRRIGATION DETAILS.DGN

SHEET
I1.2



NOTES:
1. 120 V. WIRE TO BE INSTALLED ON THE SIDE OF THE MAINLINE AS SHOWN ON THE PLANS, SEE ELECTRICAL.
2. LOW VOLTAGE WIRE TO BE INSTALLED IN 1" CONDUIT (MIN.) INSTALLED OPPOSITE THE 120 V. WIRE AT MAINLINE PIPE DEPTH.

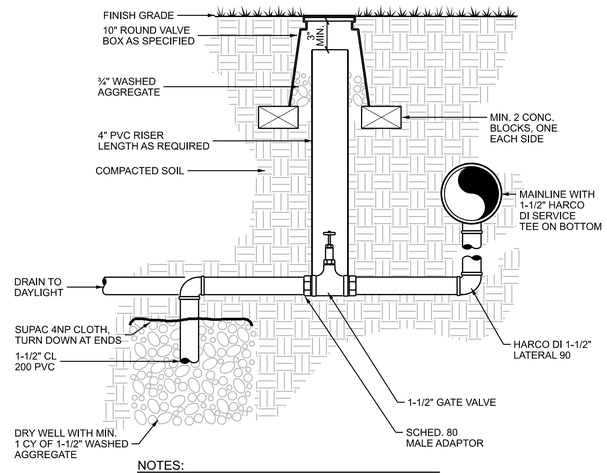
1 TRENCHING DETAILS — NOT TO SCALE



PIPE SIZE	TEES & PLUGS		ELBOWS					
			22-1/2°		45°		90°	
	A	B	A	B	A	B	A	B
3-4"	24"	12"	9"	12"	12"	17"	21"	18"
6"	33"	18"	12"	18"	24"	18"	32"	24"
8"	40"	24"	16"	24"	30"	24"	45"	30"
10"	50"	30"	20"	30"	40"	30"	61"	36"
12"	61"	36"	28"	30"	56"	30"	87"	36"

NOTES:
1. ALL PIPES TO BE CENTERED ON THRUST BLOCKS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING ADEQUATE THRUST BLOCKS IN ALL PIPING INSTALLATION.
3. THRUST BLOCKS NOT REQUIRED ON 2-1/2" & SMALLER PIPE.

2 TYPICAL THRUST BLOCKS — NOT TO SCALE

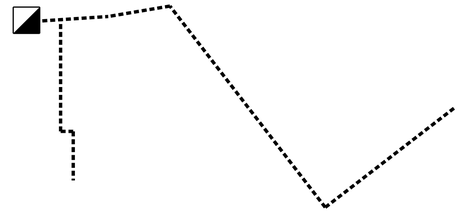


NOTES:
1. DRAIN TO DAYLIGHT WHEREVER POSSIBLE. TRANSITION TO STEEL PIPE 36" BEFORE END OF PIPE.

3 TYP. MAINLINE DRAIN — NOT TO SCALE

NOTES:
1. ALL WIRE SHALL BE INSTALLED IN CONDUIT, 1" MIN. ALONG MAINLINE. INSTALL MARKER TAPE OVER 2-WIRE PATH.

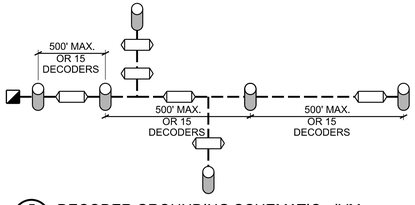
LEGEND:
- SATELLITE CONTROLLER
- WIRE PATH A1 (BLUE)



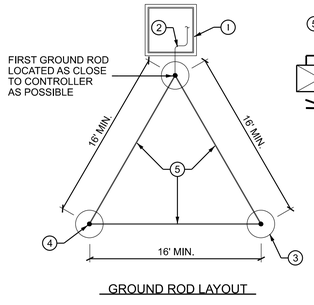
4 2- WIRE COMMUNICATIONS CABLE PATH SCHEMATIC — NOT TO SCALE

LEGEND:
- CONTROLLER
- LXIVMSD SURGE DEVICE
- DECODER/SOLENOID
- 2-WIRE PATH

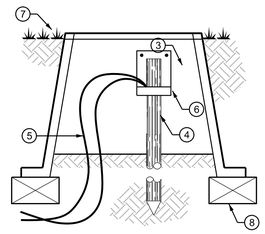
NOTES:
1. CONTRACTOR SHALL SUBMIT GROUNDING PLAN FOR REVIEW PRIOR TO BEGINNING WORK.
2. INSTALL LSP-1 EVERY 500' OR EVERY 15 DECODERS, WHICHEVER IS SMALLER.
3. LSP-1 TO BE CONNECTED TO GROUND ROD(S) WITH ACORN CLAMP. RESISTANCE TO BE 10 OHMS OR LESS.
4. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.



5 DECODER GROUNDING SCHEMATIC - IVM — NOT TO SCALE



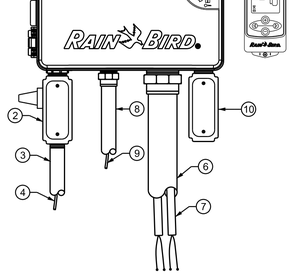
GROUND ROD LAYOUT



GROUND ROD ASSEMBLY

LEGEND:
1. CONTROL EQUIPMENT
2. SOLID BARE COPPER WIRE (#6 AWG) FROM GROUNDING ROD TO SATELLITE, MAKE WIRE AS SHORT AND STRAIGHT AS POSSIBLE.
3. COVER GROUNDING ROD WITH 10" ROUND VALVE BOX.
4. 5/8" X 8' COPPER CLAD UL LISTED GROUNDING ROD. INSTALL RODS IN SOIL IN A TRIANGULAR PATTERN SPACED A MINIMUM OF 16' APART FROM EACH OTHER. GROUNDING GRID TO HAVE A RESISTANCE OF TEN (10) OHMS OR LESS.
5. BARE COPPER WIRE (#6 AWG) BETWEEN GROUNDING RODS.
6. CADWELD CONNECTOR
7. FINISH GRADE.
8. MIN. 2 CONC. SUPPORT BLOCKS.

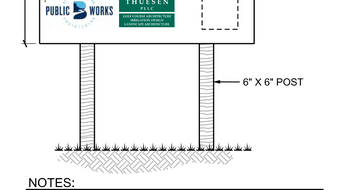
6 GROUNDING GRID — NOT TO SCALE



KEY NOTES:
1. WALL MOUNT CONTROLLER AS SPECIFIED.
2. 120 V. JUNCTION BOX WITH INTERMATIC #AG-2401 120 V SURGE ARRESTOR.
3. 1" CONDUIT AND FITTINGS TO POWER SUPPLY.
4. 120 V. POWER SUPPLY WIRE.
5. RAIN SENSOR CONTROLLER INTERFACE WITH CABLE HARNESS. MOUNT INSIDE OF PUMP STATION ENCLOSURE.
6. 2" CONDUIT AND FITTINGS FOR TWO-WIRE CABLE.
7. MAXICABLE 2-WIRE PATH TO DECODERS USE A DIFFERENT CABLE JACKET COLOR FOR EACH PATH.
8. 1" CONDUIT AND FITTINGS TO GROUNDING GRID.
9. #10 BARE COPPER WIRE TO GROUNDING GRID.
10. 1" MIN. LB CONNECTOR WITH SENSOR WIRE TO RAIN SENSOR CONTROLLER. SEAL CONNECTOR CONNECTION AT PUMP ENCLOSURE.

NOTES:
1. SEAL ALL PENETRATIONS.
2. PROVIDE ALL FITTINGS AS REQUIRED FOR PROPER INSTALLATION.
3. ALL CONDUIT SHALL BE INSTALLED IN A NEAT AND CLEAN MANNER AND BE SECURED TO ALL SURFACES.
4. VERIFY SIGNAL STRENGTH FOLLOWING INSTALLATION OF ANTENNA.

7 CONTROLLER — NOT TO SCALE



NOTES:
1. PROVIDE COLOR SHOP DRAWING FOR APPROVAL.
2. BACKGROUND TO BE WHITE.
3. PROJECT TITLE TO BE GREEN.
4. "OWNER", "LANDSCAPE ARCHITECT", AND "CONTRACTOR" TO BE BLACK.
5. LOGOS TO BE FULL COLOR.
6. LOCATION TO BE DETERMINED.
7. REMOVE AT END OF PROJECT.

8 PROJECT SIGN — NOT TO SCALE

MONTANA NATHANIEL G STEINER 13 REGISTERED LANDSCAPE ARCHITECT

THIS DRAWING IS THE PROPERTY OF THE LANDSCAPE ARCHITECT. IT HAS BEEN PREPARED SPECIFICALLY FOR THIS SITE AND IS NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION, OR OWNER WITHOUT WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT.

W.O. 23-33 GRANDVIEW PARK IRRIGATION SYSTEM REPLACEMENT
IRRIGATION DEAILS

COPYRIGHT 2023
STEINER THUESEN PLLC

STEINER THUESEN PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

DRAWN BY: JAV
DATE: 6/1/23
CHECKED BY: NGS
DATE: 6/1/23
REV: -
REV: -
FILE: I1.3 IRRIGATION DETAILS.DGN

SHEET I1.3

PUMP STATION SPECIFICATIONS:

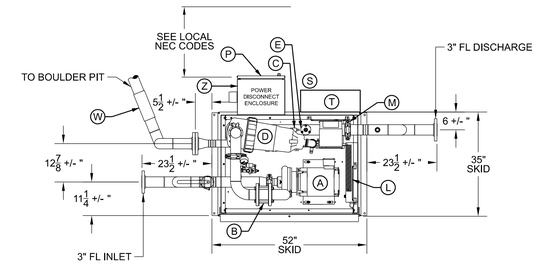
NAME: GRANDVIEW PARK
STATION MODEL: WMFV-5000-7A-15-480-3-75-81
STATION TOTAL PERFORMANCE: 75 GPM @ 81 PSI
POSITIVE HEAD AVAILABLE: 5 PSI
PUMP HORSEPOWER: NO.1: 15 HP (3600 RPM)
CHECK VALVE SIZE: PUMP NO. 1: 3"
ISOLATION VALVE SIZES:
DISCHARGE ISOLATION VALVE SIZE: 3"
DISCHARGE MANIFOLD SIZE: 3"
EXHAUST FAN REQUIREMENTS: STANDARD FAN

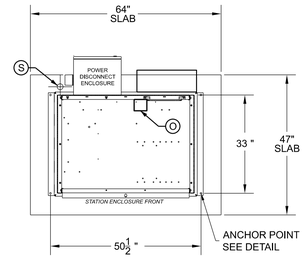
POWER REQUIREMENTS: 480 VOLTS, 3 PHASE, 60 HERTZ, 20 FLA (EST.)
POWER TO BE VERIFIED BY CONTRACTOR

STATION COMPONENTS:

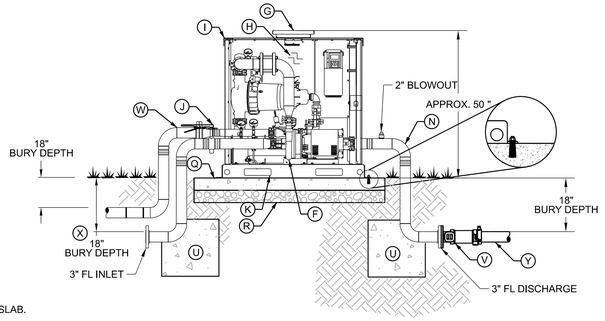
- (A) PUMP AND MOTOR
- (B) CHECK VALVE
- (C) PRESSURE TRANSDUCER WITH GAUGE
- (D) VAF V200 STAINLESS STEEL AUTO FLUSH FILTER - 500 MICRON
- (E) FLOW SENSOR
- (F) TEMP SENSOR
- (G) STATION FAN HOOD MOUNTED
- (H) INTERNAL SOUND DAMPENING INSULATION
- (I) MARINE GRADE ALUMINUM ENCLOSURE (UNPAINTED)
- (J) STATION INLET ISOLATION VALVE
- (K) MARINE GRADE ALUMINUM BASE (UNPAINTED)
- (L) 500 WATT THERMOSTATICALLY CONTROLLED HEATER
- (M) STATION DISCHARGE ISOLATION VALVE
- (N) DISCHARGE DROP PIPE W/ 3" FLG CONNECTION
- (O) 120V 1PH RECEPTACLE (4A MAX)
- (P) DEAD FRONT DISCONNECT PANEL
- (Q) 6" THICK M-4000 CONCRETE PAD WITH #5 REBAR @ 12" O.C., BOTH WAYS
- (R) 6" OF COMPACTED 1-1/2" MINUS AGGREGATE OVER COMPACTED SUB-GRADE
- (S) CONDUITS FOR POWER, CONTROL CABLE, GROUNDING, ETC. SHALL PENETRATE SLAB.
- (T) IRRIGATION CONTROLLER MOUNTED TO ENCLOSURE, COORDINATE WITH PUMP STATION MANUFACTURER
- (U) CONCRETE THRUST BLOCK, 2X SCHEDULE SIZE.
- (V) 3" D.I. FLG X BELL ADAPTER W/ FITTING TO PIPE RESTRAINT
- (W) 3" FLANGE FILTER FLUSH LINE. INSTALL 3" FLANGE AND 3" SCH 40 STEEL PIPE TO BELOW SURFACE. TRANSITION TO CLASS 200 PVC AND ROUTE TO BOULDER PIT, SLOPE TO DRAIN
- (X) ADJUST BURY DEPTH/INLET PIPE TO ACCOMODATE HDPE SUPPLY LINE ALTERNATE
- (Y) MAINLINE
- (Z) 480 / 120 V TRANSFORMER INSIDE OF DISCONNECT PANEL

NOTES:
1. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES ON SITE OR ADJACENT PROPERTY SHALL BE CONTRACTOR'S RESPONSIBILITY.
2. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK. ALL DIMENSIONS, LOCATION OF EXISTING EQUIPMENT, ETC. SHALL BE VERIFIED PRIOR TO SUBMITTING PUMP STATION SHOP DRAWINGS.
3. EXISTING PUMP AND CONTROL EQUIPMENT TO BE REMOVED BY CONTRACTOR.
4. SEAL ALL PENETRATIONS.
5. PROVIDE DEDICATED 120 V. CIRCUIT TO CONTROLLER.
6. CONCRETE PAD IS RECOMMENDED MINIMUM. TRANSFORMER, AND DISCONNECT MAY CHANGE POSITIONS.
7. REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.



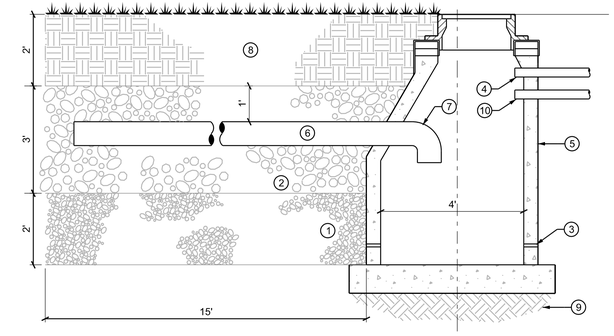


BASE & SLAB DETAIL



1 PUMP STATION DETAIL

NOT TO SCALE



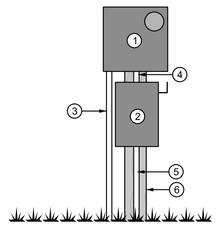
KEY NOTES:

1. BACKFILL BOTTOM 3' OF MANHOLE WITH BEDDING ROCK, ALL SIDES.
2. BOULDER PIT (15' LONG, 4' WIDE, 3' DEEP) FILL WITH WASHED COBBLE OR ROCK. WRAP TOP, BOTTOM, AND ALL SIDES OF BOULDER PIT WITH 8 OZ. NON-WOVEN GEO-TEXTILE FABRIC.
3. PROVIDE 1" DRAIN HOLES 12" O.C., 6" FROM BOTTOM.
4. PENETRATION FOR WASTE FROM PUMP FILTER.
5. 4' DIAMETER PRECAST CONCRETE MANHOLE WITH MANHOLE RING, COVER, ADJUSTING RINGS (1 MIN. 3 MAX), AND BASE. 4" MIN. WALL SECTION.
6. 15 LF OF 8" DIAMETER PERFORATED PVC PIPE.
7. 90° ELBOW WITH VENT HOLE.
8. NATIVE BACKFILL OVER BOULDER PIT. SEPERATE TOPSOIL FROM SUBGRADE MATERIAL DURING EXCAVATION AND PLACE ON TOP OF SUBGRADE DURING BACKFILLING OPERATIONS.
9. COMPACTED SUBGRADE.
10. PENETRATION FROM MAINLINE DRAIN ON INLET SIDE OF PUMP STATION.

NOTES:
1. SEAL ALL PENETRATIONS.
2. PROVIDE SUBMITTALS ON MANHOLE, PIPE, ROCK AND FABRIC.

2 FILTER DISCHARGE MANHOLE/BOULDER PIT

NOT TO SCALE



KEY NOTES:

1. 200 AMP METER AND BASE. METER BY UTILITY PROVIDER. CONTRACTOR SUPPLIED METER PANEL TO BE APPROVED BY UTILITY PROVIDER PRIOR TO ORDERING.
2. 60A, 600V, 3PH, NEMA 3R FUSED DISCONNECT.
3. CONDUCTORS IN CONDUIT FROM MAIN TRANSFORMER/POLE BY UTILITY PROVIDER. CONTRACTOR TO PROVIDE CONDUIT, 3" MIN. COORDINATE WITH UTILITY PROVIDER.
4. CONDUCTORS IN CONDUIT FROM METER TO DISCONNECT.
5. CONDUCTORS IN CONDUIT TO PUMP STATION DISCONNECT.
6. ALL NEW ELECTRICAL EQUIPMENT SHALL BE MOUNTED ON AN 8" SQ PRESSURE TREATED TIMBER.

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS. DAMAGE TO ANY EXISTING UTILITIES OR EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. REMOVE EXISTING METER/BASE AND DISCONNECT FEEDING EXISTING PUMP AND CONTROLS. COORDINATE WITH UTILITY PROVIDER TO ENSURE PARK LIGHTS ARE NOT AFFECTED.
3. REMOVE ANY UNUSED ELECTRICAL EQUIPMENT (EXISTING DISCONNECT, MOTOR STARTER AND MOTOR CIRCUIT).
4. ALL EQUIPMENT TO BE GROUNDED PER NEC.
5. COORDINATE WITH UTILITY PROVIDER AS REQUIRED.
6. COORDINATE LOCATION OF METER AND DISCONNECT WITH OWNER'S REPRESENTATIVE. DISCONNECT CAN BE INSTALLED ON OPPOSITE SIDE OF POST FROM METER.
7. EXPOSED CONDUIT SHALL BE RIGID METAL CONDUIT.
8. ALL ELECTRICAL WORK TO BE DONE PER THE NEC.
9. ELECTRICAL SERVICE TO BE 480 V, 3PH.

3 ELECTRICAL SERVICE UPGRADE SCHEMATIC

NOT TO SCALE

THIS DRAWING IS THE PROPERTY OF THE LANDSCAPE ARCHITECT. IT HAS BEEN PREPARED SPECIFICALLY FOR THIS SITE AND IS NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION, OR OWNER WITHOUT WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT.

W.O. 23-33 GRANDVIEW PARK IRRIGATION SYSTEM REPLACEMENT
PUMP DETAIL

COPYRIGHT 2023
STEINER THUESEN PLLC

STEINER THUESEN PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

DRAWN BY: JAV
DATE: 6/1/23
CHECKED BY: NGS
DATE: 6/1/23
REV: -
REV: -
FILE: I1.4 PUMP DETAIL.DGN

SHEET
I1.4

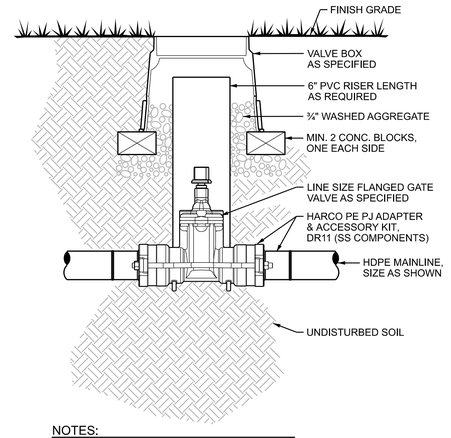


KEY NOTES:

1. EXISTING 3" SUPPLY LINE TO THE CANAL. ABANDON IN PLACE.
2. OBTAIN NECESSARY PERMITS AND LOCATE ALL UTILITIES IN NORTH 30TH STREET PRIOR TO BORING FOR MAINLINE AND CONTROL WIRES. COORDINATE WITH PUBLIC WORKS DEPARTMENT TO OBTAIN PERMITS AND NECESSARY APPROVALS.
3. CONNECTION TO EXISTING BOX SCREEN WITH FLANGE FITTING, FIELD VERIFY. SIZE PRIOR TO ORDERING PARTS.
4. PROPOSED 6" HDPE SUPPLY LINE. SLOPE TO DRAIN TOWARD PUMP STATION.
5. MAINLINE DRAIN ON BOTTOM OF HDPE SUPPLY LINE. PLUMB INTO CONCRETE VAULT.
6. TERMINATE HDPE LINE W/ 6"X 3" REDUCER, 6" STIFFENER, 3" SPIGOT FLANGE, BACKUP RINGS, AND NUT BOLT GASKET KIT.
7. INSTALL THRUST ANCHORS ON HDPE SUPPLY LINE, SEE 2/I1.5
8. PROVIDE ALL TRANSITION FITTINGS AS REQUIRED AT GATE VALVE, SEE 1/I1.5.
9. ADJUST LENGTH/DEPTH OF PUMP STATION DROP PIPE TO ACCOMODATE HDPE SUPPLY LINE.
10. EXISTING BOX SCREEN TO REMAIN AND BE PROTECTED.
11. REMOVE EXISTING VAULTS, EQUIPMENT, ETC. UNDER BASE BID.

NOTES:

1. COORDINATE WITH BRIAN MACKEY (406-657-2309) OF MSU-B 2 WEEKS PRIOR TO BEGINNING WORK ON NORTH SIDE OF POLY DRIVE. BRIAN WILL LOCATE IRRIGATION AND OTHER EQUIPMENT IN BORING PATH.

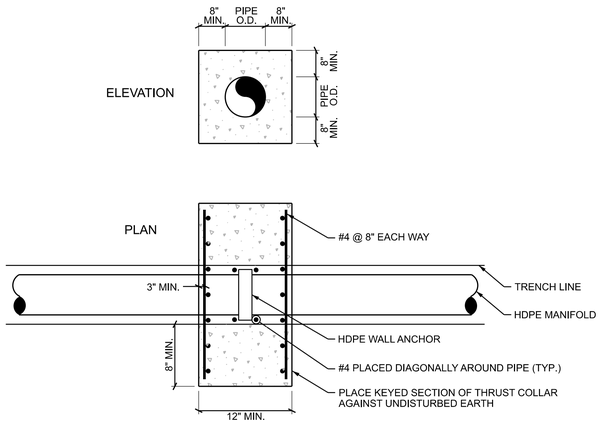


NOTES:

1. THIS DETAIL FOR VALVES 2"- 12" AND LARGER.

1 MAINLINE ISOLATION VALVE

NOT TO SCALE



2 CONCRETE THRUST RESTRAINT DETAIL

NOT TO SCALE

0 10' 20' 40'

NORTH

MONTANA
NATHANIEL G. STEINER
REGISTERED LANDSCAPE ARCHITECT

THIS DRAWING IS THE PROPERTY OF THE LANDSCAPE ARCHITECT. IT HAS BEEN PREPARED SPECIFICALLY FOR THIS SITE AND IS NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION, OR OWNER WITHOUT WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT.

W.O. 23-33 GRANDVIEW PARK IRRIGATION SYSTEM REPLACEMENT

SUPPLY LINE ALTERNATE

COPYRIGHT 2023
STEINER THUESEN PLLC

STEINER THUESEN PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

DRAWN BY: JAV
DATE: 6/1/23
CHECKED BY: NGS
DATE: 6/1/23
REV: -
REV: -
FILE: I1.5 SUPPLY LINE ALTERNATE.DGN

SHEET
I1.5

W.O. 23-33 GRANDVIEW PARK IRRIGATION SYSTEM REPLACEMENT

BILLINGS, MONTANA

JUNE 1, 2023

SHEET INDEX

I1.1	IRRIGATION PLAN
I1.2	IRRIGATION DETAILS
I1.3	IRRIGATION DETAILS
I1.4	PUMP DETAIL
I1.5	SUPPLY LINE ALTERNATE



GENERAL NOTES:

1. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. UTILITIES ARE INDICATED ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE SURVEY. ACCURACY OF INFORMATION IS NOT GUARANTEED. SERVICE LINES MAY NOT BE IN STRAIGHT LINES OR AS INDICATED ON THE PLANS.
3. ALL EXISTING IMPROVEMENTS TO REMAIN AND BE PROTECTED UNLESS NOTED OTHERWISE.
4. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE PREPARED AND SEEDED AS SPECIFIED. A DISTURBED AREA IS DEFINED AS AN AREA WHERE CONSTRUCTION ACTIVITIES INCLUDING DEMOLITION, TRENCHING, EARTHWORK, MATERIAL STORAGE, STAGING, PARKING, OR ANY FORM OF EXCAVATION, COMPACTION, OR TRAFFIC RESULTS IN THE REMOVAL OR DISPLACEMENT OF EXISTING GROUND COVER OR GRADE. CONTRACTOR SHALL REVIEW ALL OTHER CONTRACT DOCUMENTS AND CONTRACTED WORK BY OTHERS TO DETERMINE FULL SCOPE OF POTENTIAL SITE DISTURBANCE TO BE RECLAIMED.
5. REFER TO ALL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

MONTANA NATHAN STEINER 1625 REGISTERED LANDSCAPE ARCHITECT

811 Know what's below. Call before you dig.

PREPARED FOR:

PARKS AND BILLINGS RECREATION

PREPARED BY:

STEINER THUESEN PLLC

GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE

1925 GRAND AVE, SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855



LEGEND:

SYMBOL	DESCRIPTION	SIZE	MANUF.	MODEL NUMBER
	ROTOR SPRINKLER	45' RADIUS	RAINBIRD	6504-6 6.0 GPM, @ 60 PSI (BLUE)
	AIR RELIEF VALVE	2"	BERMAD	C10-SP
	ISOLATION VALVE	LINE SIZE	AS SPECIFIED	
	MAINLINE DRAIN VALVE		AS SPECIFIED	
	QUICK COUPLING VALVE	1"	RAINBIRD	44NP
	RAIN/FREEZE SENSOR		RAINBIRD	WR2-RFC
	ELECTRIC CONTROL VALVE	AS NOTED	RAINBIRD	IVM-PESB
	SATELLITE CONTROLLER	60 STATION	RAINBIRD	ESP=LXIVM-IQNCC4G W/ LXMMSS
	MASTER VALVE/FLOW SENSOR	1-1/2"/1-1/2"	SUPERIOR/FLOMEC	3300150 W/ DC LATCHING SOLENOID/ QS200-15
	PUMP STATION	AS SPECIFIED		
	IRRIGATION MAIN- PVC	3"		CLASS 200
	LATERAL LINE - PVC	AS SHOWN		CLASS 200
	SLEEVES - PVC	SEE NOTES		SCHEDULE 40

A1 / 50.0 — Zone # / GPM

GENERAL NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES ON SITE OR ADJACENT PROPERTY SHALL BE CONTRACTOR'S RESPONSIBILITY.
2. IRRIGATION PLAN IS DIAGRAMMATIC IN NATURE. FIELD ADJUSTMENT OF IRRIGATION COMPONENTS MAY BE NECESSARY TO AVOID CONFLICTS WITH EXISTING SITE FEATURES. REASONABLE CHANGES IN PIPE LAYOUT MAY BE MADE BY THE CONTRACTOR WITH THE ADVANCE APPROVAL OF THE ARCHITECT. LINES SHOWN BELOW PAVEMENT ADJACENT TO TURF AREAS ARE TO BE LOCATED IN TURF AREAS.
3. SCHEDULE 40 PVC SLEEVES ARE REQUIRED UNDER ALL HARD AND GRAVEL SURFACES, EXISTING AND PROPOSED. LOCATION AND NUMBER OF SLEEVES IS THE RESPONSIBILITY OF THE CONTRACTOR FOR INSTALLATION OF THE IRRIGATION SYSTEM AS SHOWN. ALL PIPE SLEEVES TO BE 2 PIPE SIZES LARGER THAN PIPE TO BE INSTALLED THROUGH SLEEVE. PROVIDE SEPARATE SLEEVES FOR BOTH 120 V. AND 24 V. WIRING. WIRE SLEEVES TO BE 4" MIN. ANY SLEEVES INDICATED ON THE PLAN ARE FOR THE CONVENIENCE OF THE CONTRACTOR.
4. CONTRACTOR SHALL PROVIDE ALL DEVICES, WIRING AND PROGRAMMING FOR A COMPLETE OPERATIONAL SYSTEM.
5. LOCATIONS OF MAINLINE DRAINS MAY VARY. ACTUAL LOCATIONS SHALL BE IN ALL LOW SPOTS ALONG THE MAINLINE IN APPROXIMATE LOCATIONS AS SHOWN.
6. LOCATIONS OF AIR RELIEF VALVES MAY VARY. ACTUAL LOCATIONS SHALL BE IN ALL HIGH SPOTS ALONG THE MAINLINE IN APPROXIMATE LOCATIONS AS SHOWN.
7. CONTRACTOR SHALL MAINTAIN AN ACCURATE, CURRENT AS-BUILT ON THE JOB AT ALL TIMES.
8. ZONES WITH FLOWS THROUGH 60 GPM TO HAVE 1-1/2" CONTROL VALVES. ZONES WITH FLOWS 61 GPM AND GREATER TO HAVE 2" CONTROL VALVES.
9. CONTRACTOR SHALL COORDINATE AND PAY FOR TECHNICAL SUPPORT NEEDS WITH CONTROL SYSTEM MANUFACTURER AND SERVICE PROVIDERS AS REQUIRED FOR COMPLETE AND FUNCTIONAL SYSTEM.
10. ALL CONDUIT TO BE 1" MINIMUM, UNLESS NOTED OTHERWISE. CONCEAL OR BURY WHEREVER POSSIBLE. ALL VISIBLE CONDUITS SHALL BE ROUTED AS DIRECTED AND PAINTED TO MATCH MOUNTING SURFACES. ALL BURIED CONDUITS SHALL BE ELECTRICAL GRADE SCHEDULE 40 PVC. ALL CONDUITS ABOVE GRADE SHALL BE SCHEDULE 80 PVC.
11. ADJUST ALL HEADS AS REQUIRED TO PREVENT OVERSPRAY ONTO BUILDINGS AND STREETS.
12. CONTROLLER LOCATION TO BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
13. DESIGN BASED ON 0.28"/DAY WATER REQUIREMENT, 5 DAYS/WEEK WITH AN 8 HOUR WATER WINDOW WITH 60 PSI AT ALL 6504 IRRIGATION HEADS. OVERALL SYSTEM REQUIREMENTS AT THE PUMP STATION DISCHARGE HEAD ARE 75 GPM @ 81 PSI. (INCLUDES FILTER FLUSH)
14. POWER FOR CONTROLLER TO BE SUPPLIED AT PUMP STATION.
15. OWNER'S APPROVAL REQUIRED FOR WORK WITHIN 10' OF ANY TREE, SEE SPECIAL PROVISIONS.
16. REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

KEY NOTES:

1. IRRIGATION CONTROLLER TO BE MOUNTED ON EXTERIOR OF PUMP STATION ENCLOSURE, SEE I1.4. POWER FOR CONTROLLER TO BE SUPPLIED FROM PUMP STATION.
2. APPROXIMATE LOCATION OF NEW METER. COORDINATE WITH OWNERS REP. REFER TO 3/I1.4 FOR INFORMATION REGARDING ELECTRICAL SERVICE.
3. EXISTING 3" PVC SUPPLY LINE THAT RUNS TO THE CANAL. EXISTING DEPTH IS APPROX. 6". FOLLOWING CONNECTION TO EXISTING SUPPLY LINE, ADJUST PIPE DEPTH TO 18" BURY DEPTH AND ROUTE TO PUMP STATION INLET. SEE 1/I1.4. INSTALL MAINLINE DRAIN PRIOR TO PUMP STATION INLET. CONNECT DRAIN TO MANHOLE/BOULDER PIT.
4. OBTAIN NECESSARY PERMITS AND LOCATE ALL UTILITIES IN NORTH 30TH STREET PRIOR TO BORING FOR MAINLINE AND CONTROL WIRES. COORDINATE WITH PUBLIC WORKS DEPARTMENT TO OBTAIN PERMITS AND NECESSARY APPROVALS. INSTALL A 6" SLEEVE FOR MAINLINE AND 1" CONDUIT FOR WIRE.
5. REMOVE EXISTING CONCRETE VAULT AND BACKFILL.
6. DEMO EXISTING CONCRETE PUMP VAULT AND BACKFILL. DISPOSE OF IRRIGATION EQUIPMENT.
7. MOUNT RAIN/FREEZE SENSOR TO EXISTING UTILITY POLE.
8. INSTALL MAINLINE DRAIN AT LOW POINT OF STREET CROSSING. MAINLINE TO SLOPE TO DRAIN.
9. TRANSITION TO SOLVENT WELD MAINLINE INSIDE OF SLEEVE.
10. APPROXIMATE LOCATION OF MANHOLE/BOULDER PIT, SEE 2/ I1.4.

0 10' 20' 40'

NORTH

MONTANA NATHANIEL G STEINER 13 REGISTERED LANDSCAPE ARCHITECT

THIS DRAWING IS THE PROPERTY OF THE LANDSCAPE ARCHITECT. IT HAS BEEN PREPARED SPECIFICALLY FOR THIS SITE AND IS NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION, OR OWNER WITHOUT WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT.

W.O. 23-33 GRANDVIEW PARK IRRIGATION SYSTEM REPLACEMENT

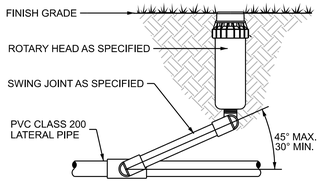
IRRIGATION PLAN

COPYRIGHT 2023
STEINER THUESEN PLLC

STEINER THUESEN PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

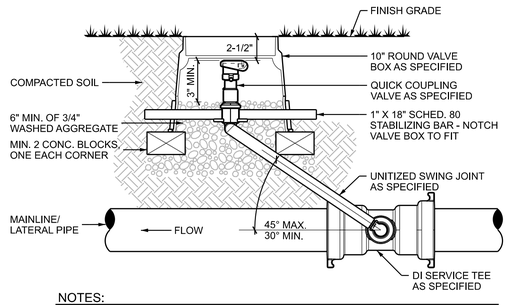
DRAWN BY: JAV
DATE: 6/1/23
CHECKED BY: NGS
DATE: 6/1/23
REV: -
REV: -
FILE: I1.1 IRRIGATION PLAN.DGN

SHEET
I1.1



1 TYPICAL ROTOR HEAD

NOT TO SCALE

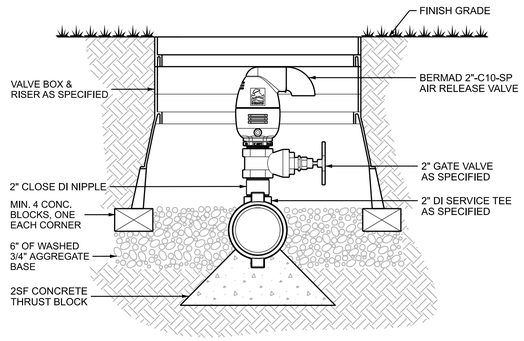


NOTES:

1. DO NOT DRIVE REBAR THROUGH TABS ON SWING JOINT, STABILIZING BAR TO BE USED.

2 TYPICAL QUICK COUPLER

NOT TO SCALE

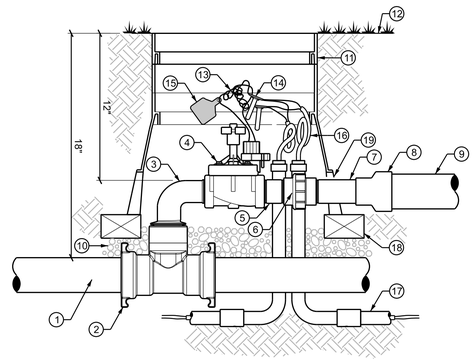


NOTES:

1. ROTATE TEE ON MAINLINE AS NECESSARY TO ENSURE CLEARANCE IS PROVIDED BETWEEN LID AND TOP OF AIR RELEASE VALVE.
2. PROVIDE 1" MIN. SPACE BETWEEN BOTTOM OF VALVE BOX AND TOP OF MAINLINE.

3 AIR RELIEF VALVE

NOT TO SCALE



LEGEND:

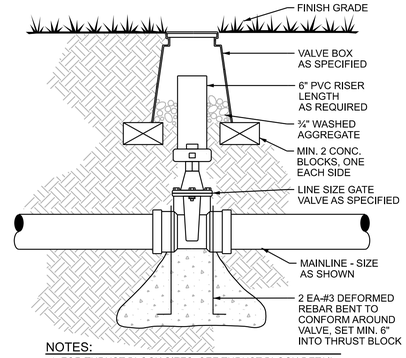
1. MAINLINE.
2. HARCO D.I. SWIVEL TEE.
3. 2" HARCO LATERAL 90° SWIVEL.
4. ELECTRIC VALVE AS SPECIFIED.
5. 2" X 2" T.B.E. SCH 80 NIPPLE.
6. 2" - T X T SCH. 80 UNION.
7. 2" X 4" SCH. 80 T.O.E. NIPPLE.
8. 3" X 2" SCH 80 1 PIECE REDUCER COUPLING.
9. SOLVENT WELD PIPE TO LATERALS.
10. 6" OF WASHED 3/4" AGGREGATE BASE, MAINTAIN 2" CLEARANCE BELOW VALVE.
11. VALVE BOX AS SPECIFIED, RISER AS REQUIRED.
12. FINISH GRADE.
13. PROVIDE 20 EXPANSION COILS EACH WIRE.
14. DBY WIRE CONNECTORS AS SPECIFIED, MAKE ALL SPLICES IN VALVE BOX.
15. VALVE ID TAG, AS SPECIFIED.
16. PROVIDE 3' MINIMUM OF 2-WIRE CABLE ON EACH LEG COILED UP NEATLY IN VALVE BOX.
17. 2-WIRE CONTROL CABLE IN CONDUIT, 1" MIN. SEAL ENDS WITH DUCT SEALANT.
18. MIN. 4 CONC. BLOCKS, ONE EACH CORNER.
19. 1" MIN. SPACE BETWEEN LATERAL AND VALVE BOX.

NOTES:

1. ADJUST SIZE OF LATERAL 90°. AND PVC FITTINGS TO MATCH ELECTRIC VALVE SIZE CALLED FOR ON PLANS.

4 TYPICAL ELECTRIC CONTROL VALVE - IVM

NOT TO SCALE

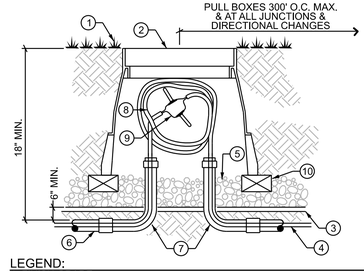


NOTES:

1. FOR THRUST BLOCK SIZES, SEE THRUST BLOCK DETAIL AND SIZE THRUST BLOCK BASED ON TEES OF SAME SIZE AS ISOLATION VALVE.
2. THIS DETAIL FOR VALVES 3" AND LARGER.

5 MAINLINE ISOLATION VALVE

NOT TO SCALE



LEGEND:

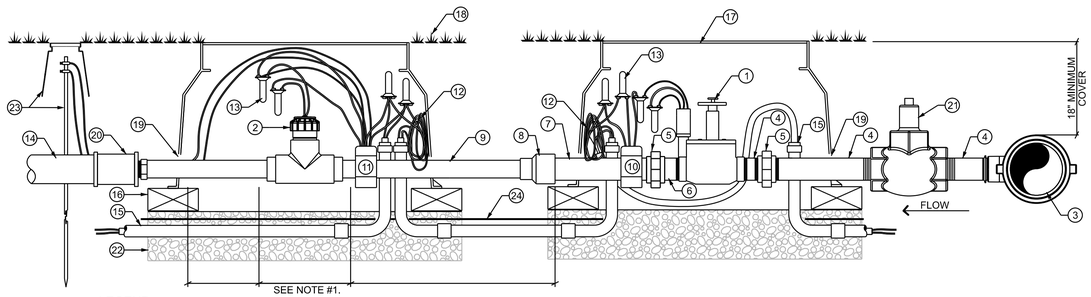
1. FINISH GRADE
2. CARSON 1419-12 BOX & 1419-3B GREY COVER, ELECTRICAL MARKING.
3. PANDUIT HTDU 3R-E MARKER TAPE CONTINUOUS.
4. 2-WIRE COMM CABLE TO CONTROLLERS AND DECODERS.
5. MIN. 4" DEPTH CRUSHED AGGREGATE.
6. PVC SCHED 40 CONDUIT SIZE AS REQUIRED, 1" MIN.
7. 90° SWEEP ELL.
8. MIN. 60" LOOP OF CONDUCTORS IN PULL BOX.
9. SPLICES MADE WITH DBY SPLICE KITS. FIELD SPLICES PERMITTED ONLY AT DECODERS.
10. CONC. SUPPORT BLOCK EACH CORNER.

NOTES:

1. AT PULL/SPLICE LOCATIONS EXTEND CONDUIT TO WITHIN 6" OF CARSON BOX COVER AND CLOSE CONDUIT WITH DUCT SEALANT.
2. INCLUDE PULL/SPLICE BOXES ON AS-BUILT DRAWINGS.

6 2-WIRE CONTROL PULL / SPLICE BOX

NOT TO SCALE



LEGEND:

1. MASTER VALVE.
2. FLOW SENSOR.
3. DI SERVICE TEE ON MAINLINE, REPLACE SERVICE TEE WITH DI TAPPED CAP AS REQUIRED.
4. DI NIPPLE, SIZE TO MATCH MASTER VALVE.
5. SCH 80 PVC UNION.
6. SCH 80 TOE NIPPLE.
7. PVC PIPE, SAME SIZE AS MASTER VALVE.
8. SCH 80 PVC REDUCER AS REQUIRED.
9. PIPE SIZE TO MATCH SIZE OF FLOW SENSOR.
10. IVM-OUT FIELD DECODER WITH WIRES TO MASTER VALVE AND 2-WIRE PATH.
11. IVM-SEN SENSOR DECODER WITH WIRES TO FLOW SENSOR, 2-WIRE PATH & GROUND ROD.
12. SLACK DECODER PATH WIRE, AS SPECFIED.
13. WIRE CONNECTORS, AS SPECIFIED.
14. SUBMAINLINE PIPE TO CONTROL VALVES. SEE PLAN FOR SIZE.
15. 2-WIRE PATH TO CONTROLLER/DECODERS IN CONDUIT, 1" MIN.
16. MIN. 4 CONCRETE BLOCKS, TWO EACH SIDE
17. VALVE BOX AND EXTENSION, AS SPECIFIED.
18. FINISH GRADE.
19. 1" MINIMUM SPACE BETWEEN LATERAL AND VALVE BOX.
20. DI TAPPED CAP.
21. GATE VALVE, SAME SIZE AS MASTER VALVE.
22. 3/4" WASHED AGGREGATE
23. GROUND ROD, ACORN CLAMP, AND VALVE BOX.
24. MARKER TAPE OVER 2-WIRE PATH IN CONDUIT.

NOTES:

1. INLET PIPE LENGTH OF FLOW SENSOR MUST BE MIN. 10X PIPE DIA. STRAIGHT, CLEAN RUN OF PIPE, NO FITTINGS OR TURNS. OUTLET PIPE LENGTH OF FLOW SENSOR MUST BE MIN. 5X PIPE DIA. OF STRAIGHT CLEAN RUN OF PIPE, NO FITTINGS OR TURNS.
2. REFER TO LEGEND ON PLAN SHEETS FOR ADDITIONAL INFORMATION FOR MASTER VALVE AND FLOW SENSOR.

7 MASTER VALVE & FLOW SENSOR

NOT TO SCALE

MONTANA
NATHANIEL G. STEINER
REGISTERED LANDSCAPE ARCHITECT

THIS DRAWING IS THE PROPERTY OF THE LANDSCAPE ARCHITECT. IT HAS BEEN PREPARED SPECIFICALLY FOR THIS SITE AND IS NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION, OR OWNER WITHOUT WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT.

W.O. 23-33 GRANDVIEW PARK IRRIGATION SYSTEM REPLACEMENT

IRRIGATION DETAILS

COPYRIGHT 2023
STEINER THUESEN PLLC

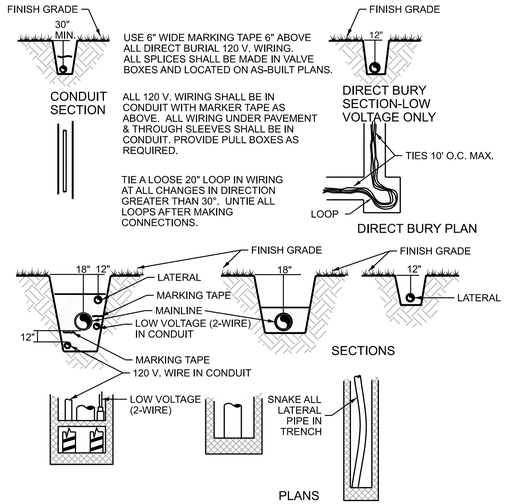
STEINER THUESEN PLLC

GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE

1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

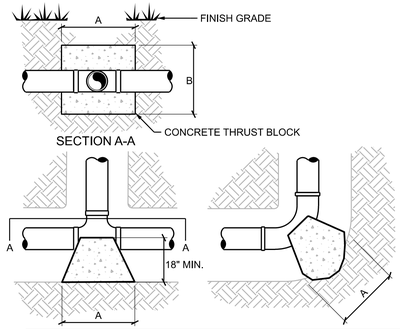
DRAWN BY: JAV
DATE: 6/1/23
CHECKED BY: NGS
DATE: 6/1/23
REV: -
REV: -
FILE: I1.2 IRRIGATION DETAILS.DGN

SHEET
I1.2



NOTES:
1. 120 V. WIRE TO BE INSTALLED ON THE SIDE OF THE MAINLINE AS SHOWN ON THE PLANS, SEE ELECTRICAL.
2. LOW VOLTAGE WIRE TO BE INSTALLED IN 1" CONDUIT (MIN.) INSTALLED OPPOSITE THE 120 V. WIRE AT MAINLINE PIPE DEPTH.

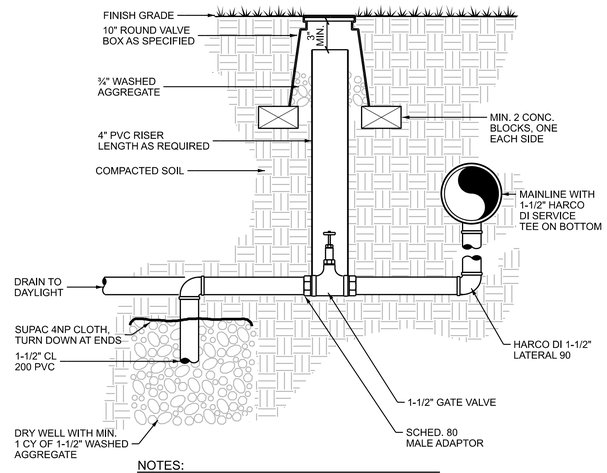
1 TRENCHING DETAILS — NOT TO SCALE



PIPE SIZE	TEES & PLUGS		ELBOWS					
			22-1/2°		45°		90°	
	A	B	A	B	A	B	A	B
3-4"	24"	12"	9"	12"	12"	17"	21"	18"
6"	33"	18"	12"	18"	24"	18"	32"	24"
8"	40"	24"	16"	24"	30"	24"	45"	30"
10"	50"	30"	20"	30"	40"	30"	61"	36"
12"	61"	36"	28"	30"	56"	30"	87"	36"

NOTES:
1. ALL PIPES TO BE CENTERED ON THRUST BLOCKS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING ADEQUATE THRUST BLOCKS IN ALL PIPING INSTALLATION.
3. THRUST BLOCKS NOT REQUIRED ON 2-1/2" & SMALLER PIPE.

2 TYPICAL THRUST BLOCKS — NOT TO SCALE

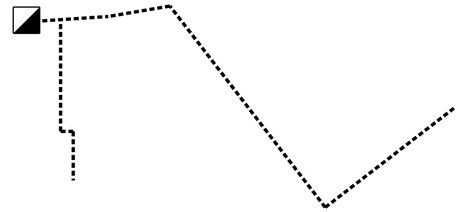


NOTES:
1. DRAIN TO DAYLIGHT WHEREVER POSSIBLE. TRANSITION TO STEEL PIPE 36" BEFORE END OF PIPE.

3 TYP. MAINLINE DRAIN — NOT TO SCALE

NOTES:
1. ALL WIRE SHALL BE INSTALLED IN CONDUIT, 1" MIN. ALONG MAINLINE. INSTALL MARKER TAPE OVER 2-WIRE PATH.

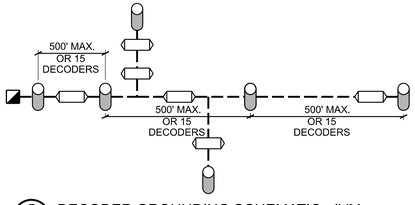
LEGEND:
- SATELLITE CONTROLLER
- WIRE PATH A1 (BLUE)



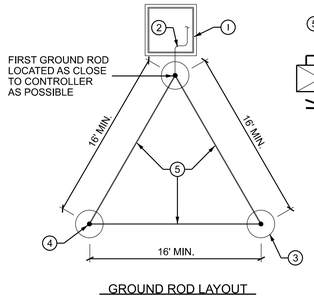
4 2- WIRE COMMUNICATIONS CABLE PATH SCHEMATIC — NOT TO SCALE

LEGEND:
- CONTROLLER
- LXIVMSD SURGE DEVICE
- DECODER/SOLENOID
- 2-WIRE PATH

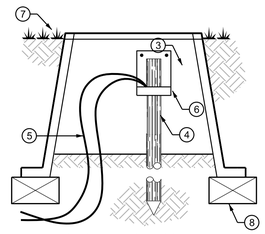
NOTES:
1. CONTRACTOR SHALL SUBMIT GROUNDING PLAN FOR REVIEW PRIOR TO BEGINNING WORK.
2. INSTALL LSP-1 EVERY 500' OR EVERY 15 DECODERS, WHICHEVER IS SMALLER.
3. LSP-1 TO BE CONNECTED TO GROUND ROD(S) WITH ACORN CLAMP. RESISTANCE TO BE 10 OHMS OR LESS.
4. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.



5 DECODER GROUNDING SCHEMATIC - IVM — NOT TO SCALE



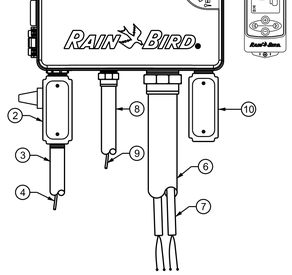
GROUND ROD LAYOUT



GROUND ROD ASSEMBLY

LEGEND:
1. CONTROL EQUIPMENT
2. SOLID BARE COPPER WIRE (#6 AWG) FROM GROUNDING ROD TO SATELLITE, MAKE WIRE AS SHORT AND STRAIGHT AS POSSIBLE.
3. COVER GROUNDING ROD WITH 10" ROUND VALVE BOX.
4. 5/8" X 8' COPPER CLAD UL LISTED GROUNDING ROD. INSTALL RODS IN SOIL IN A TRIANGULAR PATTERN SPACED A MINIMUM OF 16' APART FROM EACH OTHER. GROUNDING GRID TO HAVE A RESISTANCE OF TEN (10) OHMS OR LESS.
5. BARE COPPER WIRE (#6 AWG) BETWEEN GROUNDING RODS.
6. CADWELD CONNECTOR
7. FINISH GRADE.
8. MIN. 2 CONC. SUPPORT BLOCKS.

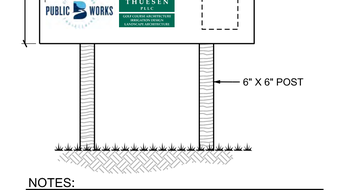
6 GROUNDING GRID — NOT TO SCALE



KEY NOTES:
1. WALL MOUNT CONTROLLER AS SPECIFIED.
2. 120 V. JUNCTION BOX WITH INTERMATIC #AG-2401 120 V SURGE ARRESTOR.
3. 1" CONDUIT AND FITTINGS TO POWER SUPPLY.
4. 120 V. POWER SUPPLY WIRE.
5. RAIN SENSOR CONTROLLER INTERFACE WITH CABLE HARNESS. MOUNT INSIDE OF PUMP STATION ENCLOSURE.
6. 2" CONDUIT AND FITTINGS FOR TWO-WIRE CABLE.
7. MAXICABLE 2-WIRE PATH TO DECODERS USE A DIFFERENT CABLE JACKET COLOR FOR EACH PATH.
8. 1" CONDUIT AND FITTINGS TO GROUNDING GRID.
9. #10 BARE COPPER WIRE TO GROUNDING GRID.
10. 1" MIN. LB CONNECTOR WITH SENSOR WIRE TO RAIN SENSOR CONTROLLER. SEAL CONNECTOR CONNECTION AT PUMP ENCLOSURE.

NOTES:
1. SEAL ALL PENETRATIONS.
2. PROVIDE ALL FITTINGS AS REQUIRED FOR PROPER INSTALLATION.
3. ALL CONDUIT SHALL BE INSTALLED IN A NEAT AND CLEAN MANNER AND BE SECURED TO ALL SURFACES.
4. VERIFY SIGNAL STRENGTH FOLLOWING INSTALLATION OF ANTENNA.

7 CONTROLLER — NOT TO SCALE



NOTES:
1. PROVIDE COLOR SHOP DRAWING FOR APPROVAL.
2. BACKGROUND TO BE WHITE.
3. PROJECT TITLE TO BE GREEN.
4. "OWNER", "LANDSCAPE ARCHITECT", AND "CONTRACTOR" TO BE BLACK.
5. LOGOS TO BE FULL COLOR.
6. LOCATION TO BE DETERMINED.
7. REMOVE AT END OF PROJECT.

8 PROJECT SIGN — NOT TO SCALE

MONTANA NATHANIEL G STEINER 13 REGISTERED LANDSCAPE ARCHITECT

THIS DRAWING IS THE PROPERTY OF THE LANDSCAPE ARCHITECT. IT HAS BEEN PREPARED SPECIFICALLY FOR THIS SITE AND IS NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION, OR OWNER WITHOUT WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT.

W.O. 23-33 GRANDVIEW PARK IRRIGATION SYSTEM REPLACEMENT
IRRIGATION DEAILS

COPYRIGHT 2023
STEINER THUESEN PLLC

STEINER THUESEN PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

DRAWN BY: JAV
DATE: 6/1/23
CHECKED BY: NGS
DATE: 6/1/23
REV: -
REV: -
FILE: I1.3 IRRIGATION DETAILS.DGN

SHEET I1.3

PUMP STATION SPECIFICATIONS:

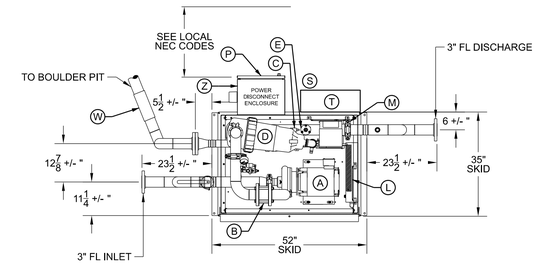
NAME: GRANDVIEW PARK
STATION MODEL: WMFV-5000-7A-15-480-3-75-81
STATION TOTAL PERFORMANCE: 75 GPM @ 81 PSI
POSITIVE HEAD AVAILABLE: 5 PSI
PUMP HORSEPOWER: NO.1: 15 HP (3600 RPM)
CHECK VALVE SIZE: PUMP NO. 1: 3"
ISOLATION VALVE SIZES:
DISCHARGE ISOLATION VALVE SIZE: 3"
DISCHARGE MANIFOLD SIZE: 3"
EXHAUST FAN REQUIREMENTS: STANDARD FAN

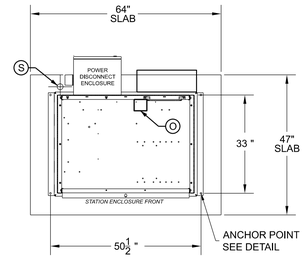
POWER REQUIREMENTS: 480 VOLTS, 3 PHASE, 60 HERTZ, 20 FLA (EST.)
POWER TO BE VERIFIED BY CONTRACTOR

STATION COMPONENTS:

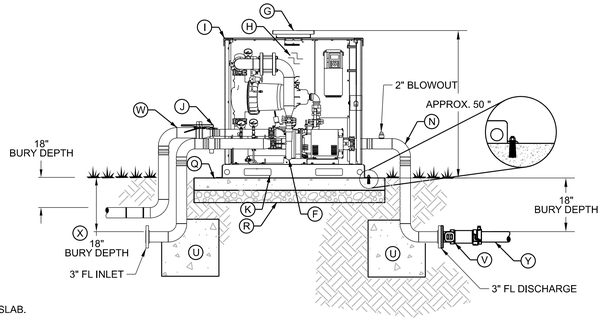
- (A) PUMP AND MOTOR
- (B) CHECK VALVE
- (C) PRESSURE TRANSDUCER WITH GAUGE
- (D) VAF V200 STAINLESS STEEL AUTO FLUSH FILTER - 500 MICRON
- (E) FLOW SENSOR
- (F) TEMP SENSOR
- (G) STATION FAN HOOD MOUNTED
- (H) INTERNAL SOUND DAMPENING INSULATION
- (I) MARINE GRADE ALUMINUM ENCLOSURE (UNPAINTED)
- (J) STATION INLET ISOLATION VALVE
- (K) MARINE GRADE ALUMINUM BASE (UNPAINTED)
- (L) 500 WATT THERMOSTATICALLY CONTROLLED HEATER
- (M) STATION DISCHARGE ISOLATION VALVE
- (N) DISCHARGE DROP PIPE W/ 3" FLG CONNECTION
- (O) 120V 1PH RECEPTACLE (4A MAX)
- (P) DEAD FRONT DISCONNECT PANEL
- (Q) 6" THICK M-4000 CONCRETE PAD WITH #5 REBAR @ 12" O.C., BOTH WAYS
- (R) 6" OF COMPACTED 1-1/2" MINUS AGGREGATE OVER COMPACTED SUB-GRADE
- (S) CONDUITS FOR POWER, CONTROL CABLE, GROUNDING, ETC. SHALL PENETRATE SLAB.
- (T) IRRIGATION CONTROLLER MOUNTED TO ENCLOSURE, COORDINATE WITH PUMP STATION MANUFACTURER
- (U) CONCRETE THRUST BLOCK, 2X SCHEDULE SIZE.
- (V) 3" D.I. FLG X BELL ADAPTER W/ FITTING TO PIPE RESTRAINT
- (W) 3" FLANGE FILTER FLUSH LINE. INSTALL 3" FLANGE AND 3" SCH 40 STEEL PIPE TO BELOW SURFACE. TRANSITION TO CLASS 200 PVC AND ROUTE TO BOULDER PIT, SLOPE TO DRAIN
- (X) ADJUST BURY DEPTH/INLET PIPE TO ACCOMODATE HDPE SUPPLY LINE ALTERNATE
- (Y) MAINLINE
- (Z) 480 / 120 V TRANSFORMER INSIDE OF DISCONNECT PANEL

NOTES:
1. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES ON SITE OR ADJACENT PROPERTY SHALL BE CONTRACTOR'S RESPONSIBILITY.
2. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK. ALL DIMENSIONS, LOCATION OF EXISTING EQUIPMENT, ETC. SHALL BE VERIFIED PRIOR TO SUBMITTING PUMP STATION SHOP DRAWINGS.
3. EXISTING PUMP AND CONTROL EQUIPMENT TO BE REMOVED BY CONTRACTOR.
4. SEAL ALL PENETRATIONS.
5. PROVIDE DEDICATED 120 V. CIRCUIT TO CONTROLLER.
6. CONCRETE PAD IS RECOMMENDED MINIMUM. TRANSFORMER, AND DISCONNECT MAY CHANGE POSITIONS.
7. REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.



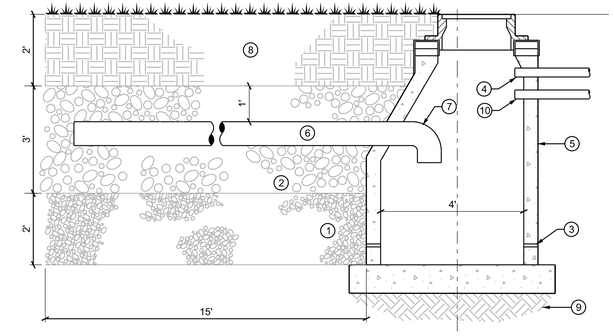


BASE & SLAB DETAIL



1 PUMP STATION DETAIL

NOT TO SCALE



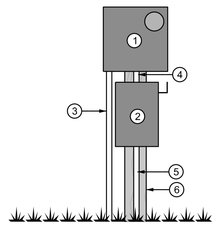
KEY NOTES:

1. BACKFILL BOTTOM 3' OF MANHOLE WITH BEDDING ROCK, ALL SIDES.
2. BOULDER PIT (15' LONG, 4' WIDE, 3' DEEP) FILL WITH WASHED COBBLE OR ROCK. WRAP TOP, BOTTOM, AND ALL SIDES OF BOULDER PIT WITH 8 OZ. NON-WOVEN GEO-TEXTILE FABRIC.
3. PROVIDE 1" DRAIN HOLES 12" O.C., 6" FROM BOTTOM.
4. PENETRATION FOR WASTE FROM PUMP FILTER.
5. 4' DIAMETER PRECAST CONCRETE MANHOLE WITH MANHOLE RING, COVER, ADJUSTING RINGS (1 MIN. 3 MAX), AND BASE. 4" MIN. WALL SECTION.
6. 15 LF OF 8" DIAMETER PERFORATED PVC PIPE.
7. 90° ELBOW WITH VENT HOLE.
8. NATIVE BACKFILL OVER BOULDER PIT. SEPERATE TOPSOIL FROM SUBGRADE MATERIAL DURING EXCAVATION AND PLACE ON TOP OF SUBGRADE DURING BACKFILLING OPERATIONS.
9. COMPACTED SUBGRADE.
10. PENETRATION FROM MAINLINE DRAIN ON INLET SIDE OF PUMP STATION.

NOTES:
1. SEAL ALL PENETRATIONS.
2. PROVIDE SUBMITTALS ON MANHOLE, PIPE, ROCK AND FABRIC.

2 FILTER DISCHARGE MANHOLE/BOULDER PIT

NOT TO SCALE



KEY NOTES:

1. 200 AMP METER AND BASE. METER BY UTILITY PROVIDER. CONTRACTOR SUPPLIED METER PANEL TO BE APPROVED BY UTILITY PROVIDER PRIOR TO ORDERING.
2. 60A, 600V, 3PH, NEMA 3R FUSED DISCONNECT.
3. CONDUCTORS IN CONDUIT FROM MAIN TRANSFORMER/POLE BY UTILITY PROVIDER. CONTRACTOR TO PROVIDE CONDUIT, 3" MIN. COORDINATE WITH UTILITY PROVIDER.
4. CONDUCTORS IN CONDUIT FROM METER TO DISCONNECT.
5. CONDUCTORS IN CONDUIT TO PUMP STATION DISCONNECT.
6. ALL NEW ELECTRICAL EQUIPMENT SHALL BE MOUNTED ON AN 8" SQ PRESSURE TREATED TIMBER.

NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS. DAMAGE TO ANY EXISTING UTILITIES OR EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. REMOVE EXISTING METER/BASE AND DISCONNECT FEEDING EXISTING PUMP AND CONTROLS. COORDINATE WITH UTILITY PROVIDER TO ENSURE PARK LIGHTS ARE NOT AFFECTED.
3. REMOVE ANY UNUSED ELECTRICAL EQUIPMENT (EXISTING DISCONNECT, MOTOR STARTER AND MOTOR CIRCUIT).
4. ALL EQUIPMENT TO BE GROUNDED PER NEC.
5. COORDINATE WITH UTILITY PROVIDER AS REQUIRED.
6. COORDINATE LOCATION OF METER AND DISCONNECT WITH OWNER'S REPRESENTATIVE. DISCONNECT CAN BE INSTALLED ON OPPOSITE SIDE OF POST FROM METER.
7. EXPOSED CONDUIT SHALL BE RIGID METAL CONDUIT.
8. ALL ELECTRICAL WORK TO BE DONE PER THE NEC.
9. ELECTRICAL SERVICE TO BE 480 V, 3PH.

3 ELECTRICAL SERVICE UPGRADE SCHEMATIC

NOT TO SCALE

THIS DRAWING IS THE PROPERTY OF THE LANDSCAPE ARCHITECT. IT HAS BEEN PREPARED SPECIFICALLY FOR THIS SITE AND IS NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION, OR OWNER WITHOUT WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT.

W.O. 23-33 GRANDVIEW PARK IRRIGATION SYSTEM REPLACEMENT
PUMP DETAIL

COPYRIGHT 2023
STEINER THUESEN PLLC

STEINER THUESEN PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

DRAWN BY: JAV
DATE: 6/1/23
CHECKED BY: NGS
DATE: 6/1/23
REV: -
REV: -
FILE: I1.4 PUMP DETAIL.DGN

SHEET
I1.4

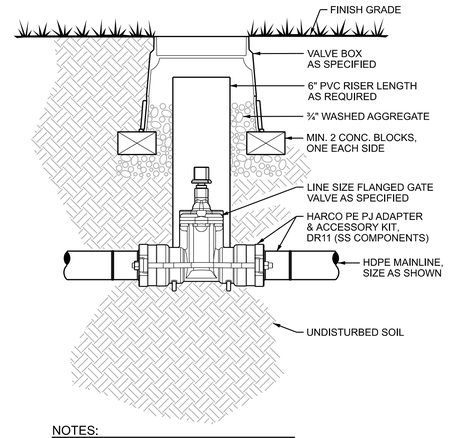


KEY NOTES:

1. EXISTING 3" SUPPLY LINE TO THE CANAL. ABANDON IN PLACE.
2. OBTAIN NECESSARY PERMITS AND LOCATE ALL UTILITIES IN NORTH 30TH STREET PRIOR TO BORING FOR MAINLINE AND CONTROL WIRES. COORDINATE WITH PUBLIC WORKS DEPARTMENT TO OBTAIN PERMITS AND NECESSARY APPROVALS.
3. CONNECTION TO EXISTING BOX SCREEN WITH FLANGE FITTING, FIELD VERIFY. SIZE PRIOR TO ORDERING PARTS.
4. PROPOSED 6" HDPE SUPPLY LINE. SLOPE TO DRAIN TOWARD PUMP STATION.
5. MAINLINE DRAIN ON BOTTOM OF HDPE SUPPLY LINE. PLUMB INTO CONCRETE VAULT.
6. TERMINATE HDPE LINE W/ 6"X 3" REDUCER, 6" STIFFENER, 3" SPIGOT FLANGE, BACKUP RINGS, AND NUT BOLT GASKET KIT.
7. INSTALL THRUST ANCHORS ON HDPE SUPPLY LINE, SEE 2/I1.5
8. PROVIDE ALL TRANSITION FITTINGS AS REQUIRED AT GATE VALVE, SEE 1/I1.5.
9. ADJUST LENGTH/DEPTH OF PUMP STATION DROP PIPE TO ACCOMODATE HDPE SUPPLY LINE.
10. EXISTING BOX SCREEN TO REMAIN AND BE PROTECTED.
11. REMOVE EXISTING VAULTS, EQUIPMENT, ETC. UNDER BASE BID.

NOTES:

1. COORDINATE WITH BRIAN MACKEY (406-657-2309) OF MSU-B 2 WEEKS PRIOR TO BEGINNING WORK ON NORTH SIDE OF POLY DRIVE. BRIAN WILL LOCATE IRRIGATION AND OTHER EQUIPMENT IN BORING PATH.

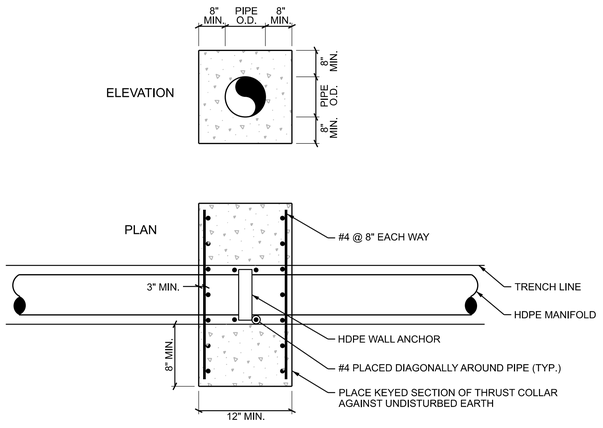


NOTES:

1. THIS DETAIL FOR VALVES 2"- 12" AND LARGER.

1 MAINLINE ISOLATION VALVE

NOT TO SCALE



2 CONCRETE THRUST RESTRAINT DETAIL

NOT TO SCALE

0 10' 20' 40'

NORTH

MONTANA
NATHANIEL G. STEINER
REGISTERED LANDSCAPE ARCHITECT

THIS DRAWING IS THE PROPERTY OF THE LANDSCAPE ARCHITECT. IT HAS BEEN PREPARED SPECIFICALLY FOR THIS SITE AND IS NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION, OR OWNER WITHOUT WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT.

W.O. 23-33 GRANDVIEW PARK IRRIGATION SYSTEM REPLACEMENT

SUPPLY LINE ALTERNATE

COPYRIGHT 2023
STEINER THUESEN PLLC

STEINER THUESEN PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

DRAWN BY: JAV
DATE: 6/1/23
CHECKED BY: NGS
DATE: 6/1/23
REV: -
REV: -
FILE: I1.5 SUPPLY LINE ALTERNATE.DGN

SHEET
I1.5

Affidavit of Publication

STATE OF MONTANA

County of Yellowstone

Jonathan McNiven

Being duly sworn, deposes and says:

That he is the Legal Advertising Clerk of Yellowstone County News, a newspaper of general circulation published weekly in the town of Huntley, in the County of Yellowstone, State of Montana, and that the **(7)** folio Legal, **Invitation to Bid,** a true copy of which is hereto **Included**, was published in said newspaper on the following dates:

March 1, 2024; March 1, 2024; March 8, 2024; March 15, 2024;

making in all **(4)** publication(s).

Jonathan McNiven

STATE OF MONTANA

County of Yellowstone

On this 14th day of March 2024, before me, the undersigned, a Notary Public for the State of Montana, personally appeared Jonathan McNiven, known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal that day and year first above written.

Tana McNiven

Tana McNiven

NOTARY PUBLIC for the State of Montana, residing

at Huntley, MT.

My commission expires: August 23, 2024

TANA MCNIVEN NOTARIAL SEAL STATE OF MONTANA

TANA MCNIVEN
NOTARY PUBLIC for the
State of Montana
Residing at Huntley, Montana
My Commission Expires
August 23, 2024

INVITATION TO BID

Separate sealed bids for the construction of W.O. 23-33: Grandview Park Irrigation System Replacement will be received by the Billings City Clerk, 210 N. 27th Street, Billings, MT or P.O. Box 1178, Billings, MT 59103 or bids@billingsmt.gov until 2:00 p.m. local time on Tuesday, March 19, 2024, and then publicly opened and read aloud. The bid opening will be via Facebook Live on the City's Facebook page: Billings MT City Government.

The project consists of: removal of existing irrigation equipment, pump, concrete vault, and the installation of a new irrigation system, pump station, and electrical upgrades.

Complete digital project bidding documents are available at QuestCDN. You may download the digital plan documents for a fee. You may also access them at www.questcdn.com by inputting Quest **project # 8984973** on the QuestCDN project search page. The plans, specifications and the official plan holders list may be examined through this site for no charge. In addition, the Drawings and Project Manual may also be examined at www.montanabid.com.

There will be a non-mandatory Pre-Bid meeting at 390 N. 23rd Street, Billings, MT 59101 at 3:00 p.m. on March 12, 2024. Interested CONTRACTORS are encouraged to attend. Contact Jed Vissia by telephone at (406) 252-5545 x11 or by email at jed@steinerthuesen.net for more information on the Pre-Bid meeting.

CONTRACTOR and any of the CONTRACTOR'S subcontractors bidding or doing work on this project will be required to be registered with the Montana Department of Labor and Industry (DLI). Forms for registration are available from the Department of Labor and Industry, P.O. Box 8011, 1805 Prospect, Helena, Montana 59604-8011. Information on registration can be obtained by calling 1-406-444-7734. All laborers and mechanics employed by CONTRACTOR or subcontractors in performance of the construction work shall be paid wages at rates as may be required by the laws of Yellowstone County and the state of Montana. The CONTRACTOR must ensure that employees and applicants for employment are not discriminated against because of their race, color, religion, sex or national origin.

Each bid or proposal must be accompanied by a Certified Check, Cashier's Check, or Bid Bond payable to the "City of Billings, MT" in an amount not less than ten percent (10%) of the total amount of the bid. Successful BIDDERS shall furnish an approved Performance Bond and a Labor and Materials Payment Bond, each in the amount of one hundred percent (100%) of the contract amount. Insurance as required shall be provided by the successful BIDDER(s) and a certificate(s) of that insurance shall be provided. Bids submitted via email shall have the bid bond scanned and included with the bid. Bids submitted via mail shall have any of the bid securities included.

No bid may be withdrawn after the scheduled time for the public opening of bids, which is 2:00 p.m. local time, Tuesday, March 19, 2024.

For further information concerning this project, please contact Jedidiah Vissia with STEINER THUESEN, PLLC by telephone at (406) 252-5545 ext. 11 or Jeremy Hauge, PE at the Office of the City Engineer, 2224 Montana Ave., Billings, MT 59101, by telephone at (406) 237-6158 or by email at haugej@billingsmt.gov.

The right is reserved to reject any or all proposals received, to waive informalities, to postpone the award of the contract for a period of not to exceed sixty (60) days, and to accept the lowest responsive and responsible bid which is in the best interest of the OWNER.

The City of Billings is an Equal Opportunity Employer.

Published on February 23, March 1, 8, and 15, 2024.

Denise R. Bohlman
Billings City Clerk
P.O. Box 1178
Billings, MT 59103

2/23, 3/1, 3/8, 3/15 2024
MNAXLP

City Council Regular

Date: 04/08/2024
Title: W.O. 24-01: Contract 3, Cedar Park Water Main Replacement
Presented by: Debi Meling
Department: Public Works
Presentation: No
Legal Review: Not Applicable
Project Number: N/A

RECOMMENDATION

Staff recommends that City Council award a contract for W.O. 24-01, Contract 3: Cedar Park Water Main Replacement, Zone 1 and Zone 2 to Askin Construction, LLC. in the amount of $3,369,916.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

W.O. 24-01 Contract 3, Cedar Park Water Main Replacement, will replace approximately 7,930 feet of existing water main. Water mains being replaced were selected based on several criteria including age, break history, lead joint pipe, fire flow deficiency, and undersized water mains. This project will replace the water mains in Cedar Park Subdivision. The existing ductile iron water mains have been prone to frequent breaks due to highly corrosive soils. In many instances, the existing water main is located in the boulevard underneath other utilities, causing repairs to be lengthy and expensive. Furthermore, when water main breaks occur in this subdivision, large portions of the subdivision are without water until repairs are completed. The new PVC water main will be located in the street and won't be damaged by the corrosive soils, which will result in the reduction of maintenance costs from water main breaks. A significant reduction in water main breaks will reduce the amount of time Cedar Park Subdivision has water outages.

The project was advertised on March 1, March 8, and March 15, 2024, in the Yellowstone County News and on the City's website. Bids were opened on March 19, 2024, and four bids were received. For the total of Zones 1 and Zone 2, Askin Construction, LLC. submitted the lowest, responsible bid.

ALTERNATIVES

City Council may:

- Award W.O. 24-01, Contract 3: Cedar Park Water Main Replacement, to Askin Construction, LLC. in the amount of $3,369,916 for Zone 1 and Zone 2; or,
- Do not award a contract and reject all bids. If the project is not awarded, the City's water mains in these areas will continue to be unreliable, undersized, and will experience ongoing maintenance problems and expenses.

FISCAL EFFECTS

The following bids were received:

Contractor	Zone 1	Zone 2	**Total Bid Price**
Askin Construction	$3,187,100.00	$182,816.00	**$3,369,916.00**
Western Municipal Construction	$3,121,500.00	$260,836.00	**$3,382,336.00**
Grade A Civil LLC	$3,236,555.00	$162,343.00	**$3,398,898.00**
COP Construction	$3,243,690.00	$173,959.00	**$3,417,649.00**

The project was budgeted in FY24 using Water Funds, ARPA Grant Funds, and Montana Department of Commerce Infrastructure Grant Funds. There is sufficient budget to award all schedules of the contract.

City Council Regular

Date: 04/08/2024
Title: WO 24-27 - 2024 Water Service Repairs
Presented by: Debi Meling
Department: Public Works
Presentation: No
Legal Review: Not Applicable
Project Number: N/A

RECOMMENDATION

Staff recommends that Council award a contract for WO 24-27 - 2024 Water Service Repairs to Sunset Excavation in the amount of $112,635.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

The annual water service repair program is necessary for the continued operation of various water services throughout the City of Billings. This program replaces failing water service valves (either leaking or broken), as well as the replacement of bent water valve box extensions that prohibit City Staff from accessing and operating water service valves. Staff anticipates about 70 services will be repaired or replaced in this contract.

The project was advertised on February 16, February 23, and March 1, 2024, in the Yellowstone County News and on the City's website. Bids were opened March 5, 2024. Three (3) bids were received. Sunset Excavation submitted the lowest, responsible bid.

ALTERNATIVES

City Council may:

- Award a contract for WO 24-27 - 2024 Water Service Repairs to Sunset Excavation in the amount of $112,635; or,
- Not award a contract to repair failing water services and valve boxes. If the contract is not awarded, the water services will continue to leak and remain inoperable by City Staff.

FISCAL EFFECTS

The following bids were received:

CONTRACTOR	BID
Sunset Excavation	$112,635.00
Earth Movers Excavation	$178,197.00
Hample Excavation	$263,094.00

The bid from Sunset Excavation was significantly lower than the other two but was determined to be a responsible bid. The City has had experience working with Sunset Excavation and has no reason to deem the bid invalid. Funding for WO 24-27 - 2024 Water Service Repairs was budgeted in FY24 using Water Service Repair Funds. Adequate funding is available to award the contract.

City Council Regular

Date:	04/08/2024
Title:	Approval of the Aviation Place Road Rehabilitation Project
Presented by:	Shane Ketterling, Assistant Director of Aviation and Transit
Department:	Airport
Presentation:	No
Legal Review:	Yes
Project Number:	N/A

RECOMMENDATION

Staff recommends that the City Council approve and award the Aviation Place Road Rehabilitation Project to Asphalt Plus, Inc. for $899,883.19.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

Included in the Airport's Capital Improvement Plan and FY 24 budget is a project to rehabilitate an existing airport service road that is 25 feet wide by 2,450 feet long and used by tenants and Airport staff to access the airfield through five security access control gates. Aviation Place is also the primary road for all emergency vehicles including fire, ambulance and police to access the east side of the Airport which includes Edwards Jet Center, Rocky Mountain College Flight School, Cape Air Maintenance Facility, fuel farm, private aviation businesses and numerous aircraft hangars. The contractor will mill 2 inches of the existing asphalt surface off and replace with a new 2-inch asphalt overlay. The project will also include utility modifications, installation of conduit, pull-boxes and fiber-optic cables and pavement markings. The existing road is at the end of its useful life, over 20 years old and needs to be replaced. The work will take 45 days to complete and will be done this summer.

This project was advertised in the Yellowstone County News on March 1, 8, 15 and posted on the City and Airport's websites. On March 19, 2024, the following bids were received:

Contractor	Bid
Asphalt Plus, Inc.	$899,883.19
Askin Construction	$913,177.00
Knife River Construction	$1,068,291.00

ALTERNATIVES

City Council may:

- Approve the award of the Aviation Place Road Rehabilitation Project to Asphalt Plus, Inc. for $899,883.19; or,
- Not Approve the award, reject all bids, and delay the project.

FISCAL EFFECTS

The total cost of this project is $899,883.19. This project will be funded at 90% with Federal Aviation Administration (FAA) Airport Improvement Program (AIP) entitlement grant funds and 10% with local match funds. The FAA's grant funding will be $809,894.87 and the local match will be $89,988.32. The local match funds are budgeted and available in the Airport's Capital Account.

City Council Regular

Date:	04/08/2024
Title:	MET Transit Office Addition and Remodel Project (Opened 03/19/2024) - Recommend Swank Enterprises; $3,376,643
Presented by:	Rusty Logan
Department:	Transit
Presentation:	No
Legal Review:	Template Contract
Project Number:	N/A

RECOMMENDATION

Staff recommends the City Council approve and award the MET Transit Office Addition and Remodel Construction Project to Swank Enterprises for $3,376,643.00

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

On March 14, 2022 the City of Billings MET Transit system was notified by the Federal Transit Administration of its successful application and award of competitive Section 5339 Bus and Bus Facility funding in support of facility remodel and refurbishment in the amount of $1,600,000 federal funds requiring at least $400,000 in local match. On July 10, 2023, the City Council approved Ammendment 10 with the Aviation and Transit Department's contracted A&E firm for the design, engineering, and construction project management of an office expansion and remodel project for MET's primary facility, the METroplex, which is located at 1705 Monad Rd. This project consists of the remodel of existing building space with the addition of offices and large conference room to the administrative area, refurbishment of facility items in need of repair, and various building system updates. The expansion and layout remodel will allow for centralization of MET Transit daily operations, provide additional offices for existing personnel and expansion, provide a large meeting space, improve the customer lobby area, and provide a dedicated classroom to support the requirements of the Entry Level Driver Training and Public Transit Agency Safety Plan regulations. Facility repair items primarily include removal and refurbishment of facility skylights that currently cause water penetration throughout the facility and repair of previous building addition joints that also allow for moisture penetration. Various building systems will also be updated including HVAC systems and the addition of secure access control. Through this project, MET Transit will extend the useful life of its 40+ year old primary facility, ensuring continued usability into the future by not only improving current functionality in accordance with required Federal programs, but also adding additional space to be utilized for future expansion and opportunities.

This project was advertised in the *Yellowstone County News* on February 16, 2024, February 23, 2024 and March 01, 2024 with a revised notice published on March 08, 2024 and March 15, 2024. On March 19, 2024, the following bids were received:

CONTRACTOR	BID
Swank Enterprises	$3,376,643
TW Ridley, LLC	$3,692,888

ALTERNATIVES

City Council may:

- Approve the award of the MET Transit Office Addition and Remodel Project to Swank Enterprises for $3,376,643; or,
- Not Approve the award, reject all bids, and delay the project.

FISCAL EFFECTS

The MET Office Addition and Remodel project will be executed using a combination of Federal funding and local funding. MET has adequate capital reserves to execute this project and will be utilizing a combination of Section 5339(B) competitive federal funds and Section 5339(A) formula federal funds; this project was budgeted and approved in the FY24 Capital Improvement Plan. Funding details as follows:

Total	Federal (56%)	Local(44%)
$3,376,643	$1,879,397	$1,497,246

As legislative funding action has been delayed at the federal level, MET may utilize additional federal funds using pre-award authority in support of this project once the City is informed of the Federal Fiscal Year 2024 formula capital award; in anticipation of this, MET has programmed additional funds for facility support in the recently adopted Transportation Improvement Plan.

City Council Regular

Date:	04/08/2024
Title:	Pioneer Park Tennis Court Replacement Project
Presented by:	John Gayvert
Department:	Parks/Rec/Public Lands
Presentation:	No
Legal Review:	No
Project Number:	N/A

RECOMMENDATION

Staff recommends the City Council award a contract for the base bid and alternate #1 for the Pioneer Park Tennis Court Replacement Project, to The Good Earth Works Co. Inc., in the amount of $1,124,654.00.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

This project was approved in the Parks FY24 CIP.

This project is intended to replace the six existing tennis courts and associated fencing south of the restroom facilities at Pioneer Park. These tennis courts have reached the end of their useful life, resulting in the closure of two of the courts. Replacement of these courts will assure a safe playing surface and ADA accessibility.

In addition to the tennis court replacement, an ADA-accessible sidewalk will be added to the west side of the courts to provide access to the playing surfaces.

The project was advertised on February 23rd, March 1st, March 8th, and March 15th, 2024, in the Yellowstone County News and on the City's website. Bids were opened on March 19th, 2024, and two bids were received.

STAKEHOLDERS

City of Billings Parks and Recreation.

ALTERNATIVES

City Council may approve the bid from The Good Earth Works Co. Inc., or reject all bids and not approve.

FISCAL EFFECTS

The following bids were received; The Good Earth Works Co. base bid of $1,087,381.00 for tennis courts, $37,392.00 add alternate #1 upgrade to coated fencing. Hellas Construction Inc. base bid of $1,439,020.00 for tennis courts, $51,282.00 add alternate #1 upgrade to coated fencing.

Parks FY24 CIP designated $1,200,000.00 for "Pioneer Park 6 Tennis Courts Replacement."

Attachments

Bid Tab
Good Earth Works Bid
Hellas Bid
Pioneer Park CIP
Pioneer Park Specs
Pioneer Park Drawings
Legal Ad
Addendum #1
Addendum #2

Brad Wright
wrightb@billingsmt.gov

BID TABULATION SUMMARY

PROJECT NAME: **Pioneer Park Tennis Courts Replacement**

3/19/2024

NAME OF BIDDER	Good Earth Works	Hellas Construction
STATE	**MT**	**TX**
Type of Security	Bond	Bond
Addendum(s)	2	2
Base Bid	$1,087,381.00	$1,439,020.00
Alternate 1	$37,392.00	$51,282.00

INVITATION TO BID

Separate sealed bids for the construction of Pioneer Park Tennis Courts Replacement will be received by the Billings City Clerk, P.O. Box 1178, Billings, MT 59103 or bids@billingsmt.gov until 2:00 p.m. local time on Tuesday, March 19, 2024, and then publicly opened and read aloud. The bid opening will be via Facebook Live on the City's Facebook page: Billings MT City Government.

The project consists of: Demolition of existing tennis courts and fencing, earthwork, sidewalk, post tension concrete tennis courts, and fencing.

The bidding documents consisting of Drawings and Project Manual may be examined or obtained at the office of STEINER THUESEN, PLLC; 1925 Grand Avenue, Suite 105, Billings, MT 59102 in accordance with Article 2.1 of Instructions To Bidders. Required deposit is $100.00 per set, which is not refundable. There is no charge for digital copies. Bidders submitting bids as a General Contractor must obtain a set of plans from the Landscape Architect and be listed on the Landscape Architect's Planholders list in accordance with Article 2.4 of the Instructions to Bidders. Bidding documents may also be examined at City of Billings PRPL, 390 N. 23rd Street, Billings, MT 59101, and www.montanabid.com

There will be a non-mandatory Pre-Bid meeting at 390 N. 23rd Street, Billings, MT 59101 at 2:00 p.m. on March 5, 2024. Interested CONTRACTORS are encouraged to attend. Contact Jed Vissia with STEINER THUESEN, PLLC by telephone at (406) 252-5545 or by email jed@steinerthuesen.net for more information on the Pre-Bid meeting.

CONTRACTOR and any of the CONTRACTOR'S subcontractors bidding or doing work on this project will be required to be registered with the Montana Department of Labor and Industry (DLI). Forms for registration are available from the Department of Labor and Industry, P.O. Box 8011, 1805 Prospect, Helena, Montana 59604-8011. Information on registration can be obtained by calling 1-406-444-7734. All laborers and mechanics employed by CONTRACTOR or subcontractors in performance of the construction work shall be paid wages at rates as may be required by the laws of Yellowstone County and the state of Montana. The CONTRACTOR must ensure that employees and applicants for employment are not discriminated against because of their race, color, religion, sex or national origin.

Each bid or proposal must be accompanied by a Certified Check, Cashier's Check, or Bid Bond payable to the "City of Billings, MT" in an amount not less than ten percent (10%) of the total amount of the bid. Successful BIDDERS shall furnish an approved Performance Bond and a Labor and Materials Payment Bond, each in the amount of one hundred percent (100%) of the contract amount. Insurance as required shall be provided by the successful BIDDER(s) and a certificate(s) of that insurance shall be provided. Bids submitted via email shall have the bid bond scanned and included with the bid. Bids submitted via mail shall have any of the bid securities included.

No bid may be withdrawn after the scheduled time for the public opening of bids, which is 2:00 p.m. local time, Tuesday, March 19, 2024.

For further information concerning this project, please contact Jed Vissia with STEINER THUESEN, PLLC by telephone at (406) 252-5545 or by email jed@steinerthuesen.net or John Gayvert with Parks, Recreation, and Public Lands by telephone 406-657-8369 or by email GayvertJ@billingsmt.gov or Brad Wright with Parks, Recreation, and Public Lands by telephone 406-237-6132 or by email wrightb@billingsmt.gov at 390 N. 23rd St, Billings, MT 59101. End of day on Thursday, March 14, 2024 is the last day for questions.

The right is reserved to reject any or all proposals received, to waive informalities, to postpone the award of the contract for a period of not to exceed sixty (60) days, and to accept the lowest responsive and responsible bid which is in the best interest of the OWNER.

The City of Billings is an Equal Opportunity Employer.

Published on February 23, March 1, 8, and 15, 2024.

Denise R. Bohlman
Billings City Clerk
P.O. Box 1178
Billings, MT 59103

Dept:	PRPL
Published:	February 23, 2024
	March 1, 2024
	March 8, 2024
	March 15, 2024

Billings
PARKS
AND RECREATION

STEINER
THUESEN
PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

BID SUBMITTAL PACKAGE

Pioneer Park Tennis Courts Replacement

BID SUBMITTED BY:

The Good Earth Works Co., Inc.

THESE DOCUMENTS MUST BE EXECUTED FOR BID

- [ ] **BID FORM (COMPLETED)**
- [ ] **ADDENDA (ACKNOWLEDGED IN BID FORM)**
- [ ] **10% BID SECURITY (ENCLOSED)**
- [ ] **UNIT PRICES PER SP-40 (COMPLETED)**
- [ ] **QUALIFICATIONS CHECKLIST PER SP-41 & SP-42 (COMPLETED)**

- Bids submitted via email shall have the **bid bond** scanned and included with the bid. Emailed bids should be sent to bids@billingsmt.gov
- Bids submitted via mail shall have any of the bid securities included. Mailed bids should be sent to City of Billings, PO Box 1178, Billings, MT 59103.
- Bids submitted via hand delivery shall have any of the bid securities included. Hand delivered bids should be delivered to City of Billings at the Office of the City Clerk, 210 N. 27th Street, Billings, MT 59101.

SECTION 00300

BID FORM

PROJECT IDENTIFICATION:

Pioneer Park Tennis Courts Replacement

(Name of Project)

3rd St W & Parkhill Dr
Billings, Montana 59102

(Location)

CONTRACT IDENTIFICATION AND NUMBER:

Pioneer Park Tennis Courts Replacement

THIS BID SUBMITTED TO:

City of Billings
bids@billingsmt.gov

or

City of Billings
P.O. Box 1178
Billings, MT 59103

1.01 The undersigned Bidder proposes and agrees if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents, to perform and furnish all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

2.01 Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid, and Instructions to Bidders, including without limitations those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance for sixty (60) days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

3.01 In submitting this Bid, Bidder represents, as set forth in the Agreement, that:

A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of all which is hereby acknowledged:

Addendum No.	Addendum Date
ONE	2/23/2024
TWO	3/11/2024

STEINER THUESEN PLLC

GOLF COURSE ARCHITECTURE • IRRIGATION DESIGN • LANDSCAPE ARCHITECTURE

PIONEER PARK TENNIS COURTS REPLACEMENT
ADDENDUM #1
February 23, 2024

CLARIFICATIONS: none

CHANGES TO PRIOR ADDENDA: none

BIDDING REQUIREMENTS:

1. SECTION 00100 - INVITATION TO BID:
    a. Change Bid Opening date from 2:00 P.M. local time on Tuesday, March 12, 2024 to 2:00 P.M. local time on Tuesday, March 19, 2024.
    b. Paragraph 8: Change the last sentence as follows: End of day on Thursday, March 14, 2024 is the last day for questions.
    c. Change publishing dates from February 16, February 23, and March 1, 2024 to February 23, March 1, March 8, and March 15, 2024.

CONDITIONS OF THE CONTRACT: none

SPECIFICATIONS:

2. SECTION 116823
    a. Add the following under 1.3 Submittals, Paragraph C
        C. Operation and Maintenance Data: Provide manufacturer's recommendations for operation and maintenance of all tennis equipment. Information to be included in the project operations and maintenance manual.
3. SECTION 321823
    a. Add the following under 1.5 Submittals, Paragraph F
        F. Operation and Maintenance Data: Provide manufacturer's recommendations for proper maintenance of the tennis court surfacing. Information to be included in the project operations and maintenance manual.

DRAWINGS: none

Attachments: Planholders List

1925 GRAND AVE. SUITE 105 P.O. BOX 22943 BILLINGS, MT 59104 406/252-5545 FAX 245-9855

PIONEER PARK TENNIS
COURTS REPLACEMENT

Addendum #1

2/23/24

THIS ADDENDUM IS HEREBY ATTACHED TO AND MADE A PART OF THE CONTRACT DOCUMENTS, AND EACH BIDDER SHALL ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN WRITING ON HIS BID.

END ADDENDUM #1

STEINER THUESEN PLLC

GOLF COURSE ARCHITECTURE • IRRIGATION DESIGN • LANDSCAPE ARCHITECTURE

PIONEER PARK TENNIS COURTS REPLACEMENT
ADDENDUM #2
March 11, 2024

CLARIFICATIONS: none

CHANGES TO PRIOR ADDENDA: none

BIDDING REQUIREMENTS: none

CONDITIONS OF THE CONTRACT: none

SPECIFICATIONS:

1. SP-36
    a. Add the following sentence
        01. Contractor shall provide safety/security fencing to prevent access to the site by the public. If sidewalks are to be closed, necessary approval and permits shall be obtained from the City of Billings.
2. SECTION 033800
    a. Add the following under 3.2 Paragraph H
        01. Curing requirements can be discussed with the successful contractor following the project award. However, at this point, there is no change anticipated.
3. SECTION 321823
    a. Add the following under 2.1, Paragraph E
        01. Structural fill specifications fall within the MPWSS specifications for 3" minus sub base course (02234 2.4 A)
4. SECTION 321823
    a. Add the following under 2.1, Paragraph E
        01. Material being excavated and stockpiled for use in the project can be piled in the parking lane adjacent to the park along 3rd street temporarily. Individual stockpiles can remain on the street for no more than 3 days before it is removed. Prior to stockpiling any material on the street, the Owner is to be notified so that they can let the necessary City department know that work will be taking place in the street right-of-way. Ensure that proper SWPPP

1925 GRAND AVE. SUITE 105 P.O. BOX 22943 BILLINGS, MT 59104 406/252-5545 FAX 245-9855

procedures are in place. Contact the City street departments for additional information.

DRAWINGS:

1. Detail 6/L1.4: The following fittings are approved for use on fencing.
    a. Pressed steel loop cap is approved for use at top of line posts. Not to be used at corners and gate posts.
    b. Pressed steel line clamp is approved for use at fence brace rails on line posts.

Attachments: Planholders List
Pre-Bid Meeting Sign-In
Pioneer Park Irrigation As-Built

THIS ADDENDUM IS HEREBY ATTACHED TO AND MADE A PART OF THE CONTRACT DOCUMENTS, AND EACH BIDDER SHALL ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN WRITING ON HIS BID.

END ADDENDUM #2

EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER *(Name and Address)*:
The Good Earth Works Co., Inc.
4215 Highway 312
Billings, MT 59105
SURETY *(Name, and Address of Principal Place of Business)*:
Swiss Re Corporate Solutions America Insurance Corporation
1200 Main Street, Suite 800
Kansas City, MO 64105
OWNER *(Name and Address)*:
City of Billings
PO Box 1178
Billings, MT 59103

BID
Bid Due Date: March 19, 2024
Description: Pioneer Park Tennis Court Replacement, Billings, MT.

BOND
Bond Number: Bid Bond
Date: March 12, 2024
Penal sum Ten Percent of Amount Bid $ 10%
(Words) (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER
The Good Earth Works Co., Inc. (Seal)
Bidder's Name and Corporate Seal

By: _____
Signature
John S. Spray
Print Name
Vice-President
Title

Attest: _____
Signature
NURSERY EMPLOYEE
Title

SURETY
Swiss Re Corporate Solutions America Insurance Corporation (Seal)
Surety's Name and Corporate Seal

By: _____
Signature (Attach Power of Attorney)
Naomi Gerber
Print Name
Attorney-in-Fact
Title

Attest: _____
Signature
Debra Zimbelman Witness
Title

Note: Addresses are to be used for giving any required notice.
Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or

3.2 All Bids are rejected by Owner, or

3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall

govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

SWISS RE CORPORATE SOLUTIONS

SWISS RE CORPORATE SOLUTIONS AMERICA INSURANCE CORPORATION ("SRCSAIC")
SWISS RE CORPORATE SOLUTIONS PREMIER INSURANCE CORPORATION ("SRCSPIC")

GENERAL POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, THAT SRCSAIC, a corporation duly organized and existing under laws of the State of Missouri, and having its principal office in the City of Kansas City, Missouri, and SRCSPIC, a corporation organized and existing under the laws of the State of Missouri and having its principal office in the City of Kansas City, Missouri, each does hereby make, constitute, and appoint: **Naomi Gerber**

Principal: The Good Earth Works Co., Inc.
Obligee: City of Billings
Bond Description: Pioneer Park Tennis Court Replacement, Billings, MT.
Bond Number: Bid Bond
Bond Amount: See Bond Form

Its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its act and deed, bonds or other writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of:

FIFTY MILLION ($50,000,000.00) DOLLARS

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both SRCSAIC and SRCSPIC at meetings duly called and held on the 9th of May 2012:

"RESOLVED, that any two of the President, any Managing Director, any Senior Vice President, any Vice President, the Secretary or any Assistant Secretary be, and each or any of them hereby is, authorized to execute a Power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Corporation bonds, undertakings and all contracts of surety, and that each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Corporation; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Corporation may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be binding upon the Corporation when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached."

SWISS RE CORPORATE SOLUTIONS AMERICA INSURANCE CORPORATION CORPORATE SEAL 1973 MISSOURI

SWISS RE CORPORATE SOLUTIONS PREMIER INSURANCE CORPORATION CORPORATE SEAL MISSOURI

By _____
Erik Janssens, Senior Vice President of SRCSAIC & Senior Vice President of SRCSPIC

By _____
Gerald Jagrowski, Vice President of SRCSAIC & Vice President of SRCSPIC

IN WITNESS WHEREOF, SRCSAIC and SRCSPIC have caused their official seals to be hereunto affixed, and these presents to be signed by their authorized officers this 10TH day of NOVEMBER, 20 22

Swiss Re Corporate Solutions America Insurance Corporation
Swiss Re Corporate Solutions Premier Insurance Corporation

State of Illinois
County of Cook ss

On this 10TH day of NOVEMBER, 20 22, before me, a Notary Public personally appeared Erik Janssens, Senior Vice President of SRCSAIC and Senior Vice President of SRCSPIC and Gerald Jagrowski, Vice President of SRCSAIC and Vice President of SPCSPIC, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.

OFFICIAL SEAL
CHRISTINA MANISCO
NOTARY PUBLIC, STATE OF ILLINOIS
My Commission Expires March 28, 2026

Christina Manisco
Christina Manisco, Notary

I, Jeffrey Goldberg, the duly elected Senior Vice President and Assistant Secretary of SRCSAIC and SRCSPIC, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney given by said SRCSAIC and SRCSPIC, which is still in full force and effect.
IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this 12th day of March 2024.

SEAL

Jeffrey Goldberg, Senior Vice President & Assistant Secretary of SRCSAIC and SRCSPIC

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work

C. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Special Provisions as provided in paragraph 4.02 of the General Conditions, and (2) reports and drawings of a Hazard Environmental Condition, if any, which has been identified in the Special Provisions as provided in paragraph 4.06 of the General Conditions.

E. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.

F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of the Work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies and data with the Bidding Documents.

I. Bidder has given Engineer/Architect written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer/Architect is acceptable to Bidder .

J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

4.01 Bidder further represents that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

The Bidder certifies that no official of the Owner, Engineer/Architect or any member of such official's immediate family, has direct or indirect interest in the pecuniary profits or Contracts of the Bidder.

5.01 The Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

LUMP SUM BID

Base Bid:

TOTAL LUMP SUM BID PRICE$ 1,087,381.00
(Figures)

TOTAL LUMP SUM BID PRICE One Million, Eighty Seven Thousand & Three hundred & Eighty One dollars
(Words)

Additive [or Deductive] Alternate(s):

Add Alternate #1: Polymer Coated Fencing

TOTAL LUMP SUM ALTERNATE BID PRICE

$ 37,392.00
(Figures)

TOTAL LUMP SUM ALTERNATE BID PRICE

Thirty Seven Thousand, Three hundred & Ninety Two dollars
(Words)

A. Lump Sum Prices have been computed in accordance with 11.01 of the General Conditions.

B. The OWNER reserves the right to reject any or all bids.

6.01 Bidder agrees that the Work will be substantially completed and competed and ready for final payment in accordance with 14.07 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified above, which shall be stated in the Agreement.

7.01 The following documents are attached to and made a condition of the Bid:

A. Required Bid security in the amount of 10% of the maximum Bid price including alternates, if any, and in the form identified in the Instructions To Bidders.

B. Unit Prices, See Special Provisions.

C. Post-Tensioned Tennis Court Contractor Qualifications, see Special Provisions.

D .Tennis Court Surfacing Installer Qualifications, see Special Provisions.

8.01 The terms used in this Bid with the initial capital letters have the meanings indicated in the Instructions To Bidders, General Conditions, and the Supplementary Conditions.

SUBMITTED on March 19, 2024.
(Date)

Montana Contractor's Registration # (if any) 31625

Montana Contractor's Gross Receipts Account # 4045313004
(Example: XXXXXX-XXX-CGR)
Employer's Tax ID No. 81-0529137

If BIDDER is:

An Individual: _____
(Name typed or printed)
By: _____
(Individual's Signature)
Doing business as: _____

Business Address: _____

_____

Phone No.: _____ FAX No: _____

A Partnership: _____
(Partnership Name)
By: _____
(Signature)
_____
(Name, typed or printed)
Business Address: _____

_____

Phone No.: _____ FAX No: _____

A Corporation: The Good Earth Works Co., Inc.
(Corporation Name)

State of Incorporation: Montana

Type (General Business, Professional, Service, Limited Liability): Service

By: [signature]
(Signature of person authorized to sign)

Title: Vice-President

Attest: [signature]
(Signature)

Business Address: 4215 Hwy 312
Billings, MT 59105

Phone No.: 406-373-5155 FAX No: 406-373-5706

Date of Qualification To Do Business Is: 11/26/1999

(Corporate Seal)

A Joint Venture: Each Joint Venture Must Sign

Joint Venturer Name: _____
(Name)

By: _____
(Signature of Joint Venture Partner)

Name: _____
(Name, printed or typed)

Title: _____

Business Address: _____

_____

Phone No.: _____ FAX No: _____

Joint Venturer Name:_____
(Name)

By:_____
(Signature of Joint Venture Partner)

Name:_____
(Name, printed or typed)

Title:_____

Business Address:_____

_____

Phone No.:_____FAX No: _____

Address of Joint Venture for Receipt of Official Communication:
Address:_____

_____

Phone No.:_____FAX No: _____

(Each Joint Venture must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above.)

END OF SECTION

SP-40 UNIT PRICES

The following unit prices may be used to adjust the contract sum in the event the Owner desires to increase or decrease the scope of work. The Contractor understands the Owner reserves the right to select any, all or none of the unit prices, and to adjust the contract amount accordingly.

All unit prices shall be for all work required to furnish and install, including incidentals, complete-in-place systems. Unit price items may or may not be included in base bid work. No adjustment to base bid and alternative amounts shall be made without written authorization prior to commencement of the work.

These unit prices are to be filled out and provided with the Bid. Bids received without this section filled out may be considered non-responsive.

UNIT	ITEM DESCRIPTION	UNIT COST
SF	Remove and dispose of existing tennis court	0.60
LF	Remove and dispose of existing fencing	9.00
LS	Locate and remove irrigation equipment	3,500.00
SF	Remove and dispose of existing sod	2.00
CY	Strip and stockpile topsoil	18.00
CY	Excavate subgrade at tennis court and dispose of	29.00
CY	Remove existing gravel base at tennis court and replace following placement of geotextile fabric	5.50
SF	Geotextile fabric in place	0.70
CY	Import and place gravel base material at tennis court	29.00
SF	Poly sheeting	0.19
CY	Sand leveling course	50.00
LS	Post tension concrete slab	485,000.00
SF	Court surfacing	1.60
EA	Court striping	400.00
EA	Tennis netting standards and nets	1,180.00
LF	Chain link fencing- 10' high	105.00
EA	Chain link walk through gates- 4' wide	780.00
EA	Chain link service gate- 8' wide	1155.00
SF	Concrete sidewalk	27.00
CY	Site grading	10.00
CY	Place topsoil from stockpile	10.00
SF	Finish grade topsoil	0.15

SF	Sod	1.00
EA	Relocate sprinkler head	100.00
EA	Project sign	1000.00
LS	Stormwater Pollution Prevention Plan	3,500.00

SP-41 POST-TENSIONED TENNIS COURT CONTRACTOR QUALIFICATIONS

Tennis court construction shall be performed by a qualified tennis court contractor. The tennis court contractor shall perform and be responsible for all aspects of the tennis court construction.

Minimum Contractor Qualifications: Fill out the below section regarding contractor qualifications and submit with Bid.

Required Qualifications	Yes	No
Contractor has been continuously operating under the same company name for the past five (5) years.	yes	
Contractor has successfully completed five (5) projects of similar size and scope within the last three (3) years.	yes	
Contractor has the capability to provide the required performance and payment bonds.	yes	
Contractor is a member in good standing of the American Sports Builders Association.	yes	

SP-42 TENNIS COURT SURFACING INSTALLER QUALIFICATIONS

All installations shall be performed by a qualified installation specialist. The installer shall perform and be responsible for all aspects of the installation.

Minimum Installer Qualifications: Fill out the below section regarding installer qualifications and submit with Bid.

Required Qualifications	Yes	No
Installer shall be regularly engaged in the installation of Tennis Court Systems.	yes	
Installer shall have continuously operated under the same company name for the past five (5) years.	yes	
Reference list from the installer of at least ten (10) projects of similar scope done in the last three (3) years.	yes	
Installer shall be an Authorized Applicator of the specified surface system.	yes	
Installer shall be a builder member of the ASBA.	yes	

END OF SECTION

REFERENCES

renner
A Tarkett Sports Company

Post Tensioned Concrete Pickleball Courts

- **Riverview Park – Provo, UT**

  Owner: Provo City – Contact: John Bunderson 801-852-6643
  New construction of 2 post tensioned concrete tennis courts and 8 post tensioned pickleball courts
  Complete with finish grade, fence, and sport equipment

- **Edgemont Park Pickleball Courts – Provo, UT**

  Owner: Provo City – Contractor – Stratton and Bratt - Contact: Perry Bratt 801-602-9997
  New construction of 4 post tensioned concrete pickle ball courts
  Complete with finish grade, fence, and sport equipment

- **Mountain Ridge Park – Highland, UT**

  Owner: Highland City – Contact: Andy Spencer – 801-367-4387
  New construction of 8 post tensioned concrete pickleball courts and 1 post tensioned basketball court
  Complete with all finish grade, fence, and sport equipment

- **Primrose Park Pickleball Courts – Driggs, ID**

  Owner: Driggs City – Contact: Doug Self – 208-354-2362
  Design/build of 6 post tensioned concrete pickleball courts
  Complete with all subgrade, fence and sport equipment

- **Elton Park Pickleball Courts PH1, PH2 – Tooele, UT**

  Owner: Tooele City – Contact: Darwin Cook- 435-841-7708
  Design/build of 12 post tensioned concrete tennis courts and 4 post tensioned concrete pickleball courts
  Complete with all subgrade, fence and sport equipment.

- **Kent Smith Memorial Park – Morgan, UT**

  Owner: Morgan County – Contact: Bret Heiner – 801-763-9862
  Design/build of 2 post tensioned concrete tennis courts and 4 post tensioned concrete pickleball courts
  Complete with all subgrade, fence and sport equipment.

- **Payson City Memorial Park – Payson, UT**

  Owner: Payson City – Contact: Karl Teemant
  Design/build of 6 post tensioned concrete tennis courts and 4 post tensioned concrete pickleball courts
  Complete with all subgrade, fence and sport equipment.

- **Art Dye Pickleball Courts – American Fork, UT**

  Owner: Payson City – Contact: Karl Teemant
  Design/build of 6 post tensioned concrete tennis courts and 4 post tensioned concrete pickleball courts
  Complete with all subgrade, fence and sport equipment.

REFERENCES

renner
A Tarkett Sports Company

- **City of Alpine Park – Alpine, UT**

  Owner: City of Alpine – Contact: Shane Sorenson – 801-763-9862
  Design/build of 2 post tensioned concrete tennis courts and 4 post tensioned concrete pickleball courts
  Complete with all subgrade, fence and sport equipment.

- **Salt Lake County SW Regional Park**

  Owner: Salt Lake County
  Contact: Jon Ruedas
  New construction of 16 post tensioned concrete pickleball courts and 1 basketball court.
  Complete with finish grade, post tensioned concrete slabs, fence, playing equipment and acrylic surface.

- **Lodestone Park, South Jordan, UT**

  Contact: Project Manager: SLCO Parks&Recreation, Angelo Calacino, 385-468- 1818
  Built 2 post tensioned concrete tennis courts, 1 PT basketball court and 2 PT pickleball courts
  complete with all fence and equipment.

- **Frontier Field, Twin Falls, ID**

  Contact: Stacy Mcclintock – Recreation Supervisor – 208-749-9107
  New Construction of 6 post tensioned concrete pickleball courts
  complete with grading, concrete, fence, surface and pickle ball equipment.

- **Weber State College Pickleball Courts**

  Owner: Weber State College - Contact: Randy Bourdrero, MHTN Architects
  New construction of 4 post tensioned concrete pickleball courts on top of their commons building. Open play is allowed by all faculty and student body.

- **11th Ave Park**

  Owner: Salt Lake City Parks and Recreation
  Contact: Ron Salisbury, City Engineer-
  New construction of (6) post tensioned concrete tennis courts and (6) pickleball courts
  complete with finish grade, concrete, fencing, surface and all equipment.

- **Brigham City 2016 Pickleball Complex**

  Owner: Brigham City
  Contact: Tyler Pugsley- 435-230-0422
  New construction of (9) post tensioned concrete pickleball courts
  complete with finish grade, concrete, fencing, surface and all equipment.

AMERICAN SPORTS BUILDERS ASSOCIATION

Through Its Certification Board
Has Conferred Upon

Colin Donovan, CTCB

The Designation

CERTIFIED TENNIS COURT BUILDER



FOR EFFORTS TO RAISE THE PROFESSIONAL STANDARDS OF TENNIS COURT CONSTRUCTION AND FOR HAVING SUCCESSFULLY FULFILLED THE CONDIDTIONS OF ELIGIBILITY AND PASSED THE REQUIRED EXAMINATION

In witness whereof we have set our hands on

this 31st *day of* December, 2022

Certification expires: December 31, 2025

Executive Director

Certification Chairman

MEMBER AMERICAN SPORTS BUILDERS ASSOCIATION

Certificate of Membership

This is to certify that

L.E.R., Inc. dba Renner Sports Surfaces
Is a Member of the Builder Division
of the

American Sports Builders Association

a nonprofit association, is a national organization for builders, designers, and suppliers of materials for tennis courts, running tracks, synthetic turf fields, indoor and outdoor synthetic sports surfaces. It is recognized as a centralized source for technical information, including construction guidelines.



The membership hereby conferred entitles the above named to use the name and membership mark of the Association on all proper forms, notices, and advertising subject to the conditions set forth in the By-Laws of the Association.

In Witness Whereof, The American Sports Builders Association has caused this certificate to be executed and its seal affixed by the Chairman and Secretary on September 15, 1998.

Secretary

Chairman


pti
CERTIFIED
Level 2 Unbonded PT Inspector
MOISES N. LARIOS
Certification ID #01393433
Expires on: 04/13/2025
Post-Tensioning.org

ORIGINAL

Proposal for

City of Billings Parks and Recreation

Pioneer Park Tennis Courts Replacement

Due: March 19, 2024 at 2:00 PM

CORPORATE HQ | 12000 West Parmer Lane | Austin, TX 78613 | T: (512) 250-2910 | F: (512) 250-1960 | hellasconstruction.com

TABLE OF CONTENTS

1. Bid Submittal Package
2. Bid Form
3. Unit Prices (SP-40)
4. Bid Bond
5. Qualifications Checklist (SP-41 & SP-42)

Billings
PARKS
AND RECREATION

1. Bid Submittal Package

CORPORATE HQ | 12000 West Parmer Lane | Austin, TX 78613 | T: (512) 250-2910 | F: (512) 250-1960 | hellasconstruction.com

Billings PARKS AND RECREATION

STEINER THUESEN PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

BID SUBMITTAL PACKAGE

Pioneer Park Tennis Courts Replacement

BID SUBMITTED BY:

_____

THESE DOCUMENTS MUST BE EXECUTED FOR BID

- [✓] **BID FORM (COMPLETED)**
- [✓] **ADDENDA (ACKNOWLEDGED IN BID FORM)**
- [✓] **10% BID SECURITY (ENCLOSED)**
- [✓] **UNIT PRICES PER SP-40 (COMPLETED)**
- [✓] **QUALIFICATIONS CHECKLIST PER SP-41 & SP-42 (COMPLETED)**

- Bids submitted via email shall have the **bid bond** scanned and included with the bid. Emailed bids should be sent to bids@billingsmt.gov
- Bids submitted via mail shall have any of the bid securities included. Mailed bids should be sent to City of Billings, PO Box 1178, Billings, MT 59103.
- Bids submitted via hand delivery shall have any of the bid securities included. Hand delivered bids should be delivered to City of Billings at the Office of the City Clerk, 210 N. 27th Street, Billings, MT 59101.

2. Bid Form

CORPORATE HQ | 12000 West Parmer Lane | Austin, TX 78613 | T: (512) 250-2910 | F: (512) 250-1960 | hellasconstruction.com

SECTION 00300

BID FORM

PROJECT IDENTIFICATION:

Pioneer Park Tennis Courts Replacement

(Name of Project)

3rd St W & Parkhill Dr
Billings, Montana 59102

(Location)

CONTRACT IDENTIFICATION AND NUMBER:

Pioneer Park Tennis Courts Replacement

THIS BID SUBMITTED TO:

City of Billings bids@billingsmt.gov	or	City of Billings P.O. Box 1178 Billings, MT 59103

1.01 The undersigned Bidder proposes and agrees if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents, to perform and furnish all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

2.01 Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid, and Instructions to Bidders, including without limitations those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance for sixty (60) days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

3.01 In submitting this Bid, Bidder represents, as set forth in the Agreement, that:

A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of all which is hereby acknowledged:

Addendum No.	Addendum Date
1	02/23/2024
2	03/11/2024

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work

C. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Special Provisions as provided in paragraph 4.02 of the General Conditions, and (2) reports and drawings of a Hazard Environmental Condition, if any, which has been identified in the Special Provisions as provided in paragraph 4.06 of the General Conditions.

E. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.

F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of the Work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies and data with the Bidding Documents.

I. Bidder has given Engineer/Architect written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer/Architect is acceptable to Bidder .

J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

4.01 Bidder further represents that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

The Bidder certifies that no official of the Owner, Engineer/Architect or any member of such official's immediate family, has direct or indirect interest in the pecuniary profits or Contracts of the Bidder.

5.01 The Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

LUMP SUM BID

Base Bid:

TOTAL LUMP SUM BID PRICE$ 1,439,020.00
(Figures)

TOTAL LUMP SUM BID PRICE One Million Four Hundred Thirty Nine Thousand Twenty Dollars
(Words)

Additive [or Deductive] Alternate(s):

Add Alternate #1: Polymer Coated Fencing

TOTAL LUMP SUM ALTERNATE BID PRICE

$ 51,282.00
(Figures)

TOTAL LUMP SUM ALTERNATE BID PRICE

Fifty One Thousand Two Hundred Eighty Two Dollars
(Words)

A. Lump Sum Prices have been computed in accordance with 11.01 of the General Conditions.

B. The OWNER reserves the right to reject any or all bids.

6.01 Bidder agrees that the Work will be substantially completed and competed and ready for final payment in accordance with 14.07 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified above, which shall be stated in the Agreement.

7.01 The following documents are attached to and made a condition of the Bid:

A. Required Bid security in the amount of 10% of the maximum Bid price including alternates, if any, and in the form identified in the Instructions To Bidders.

B. Unit Prices, See Special Provisions.

C. Post-Tensioned Tennis Court Contractor Qualifications, see Special Provisions.

D .Tennis Court Surfacing Installer Qualifications, see Special Provisions.

8.01 The terms used in this Bid with the initial capital letters have the meanings indicated in the Instructions To Bidders, General Conditions, and the Supplementary Conditions.

SUBMITTED on March 19 , 2024.
(Date)

Montana Contractor's Registration # (if any) _____

Montana Contractor's Gross Receipts Account # 4168300-004-CGR
(Example: XXXXXX-XXX-CGR)
Employer's Tax ID No. 27-0074538

If BIDDER is:

An Individual: _____
(Name typed or printed)
By: _____
(Individual's Signature)
Doing business as: _____

Business Address: _____

_____

Phone No.: _____ FAX No: _____

A Partnership: _____
(Partnership Name)
By: _____
(Signature)
_____
(Name, typed or printed)
Business Address: _____

_____

Phone No.: _____ FAX No: _____

A Corporation: Hellas Construction, Inc.
(Corporation Name)

State of Incorporation: Texas

Type (General Business, Professional, Service, Limited Liability): C-Corp

By: _____
(Signature of person authorized to sign)

Title: Tyler Pufahl, Chief Estimator

Attest: _____
Christopher Crenshaw (Signature)

Business Address: 12000 West Parmer Lane

Austin, Texas 78613

Phone No.: 512-250-2910 FAX No: 512-250-1960

Date of Qualification To Do Business Is: December 13, 2003

HELLAS CONSTRUCTION, INC. TEXAS SEAL 2003 CORPORATE

_____
(Corporate Seal)

A Joint Venture: Each Joint Venture Must Sign

Joint Venturer Name: _____
(Name)

By: _____
(Signature of Joint Venture Partner)

Name: _____
(Name, printed or typed)

Title: _____

Business Address: _____

_____

Phone No.: _____ FAX No: _____

Joint Venturer Name:_____

(Name)

By:_____

(Signature of Joint Venture Partner)

Name:_____

(Name, printed or typed)

Title:_____

Business Address:_____

_____

Phone No.:_____FAX No: _____

Address of Joint Venture for Receipt of Official Communication:
Address:_____

_____

Phone No.:_____FAX No: _____

(Each Joint Venture must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above.)

END OF SECTION

March 19, 2024

Pioneer Park Tennis Courts Replacement
3rd Street West & Parkhill Drive
Billings, Montana 59102

RE: Tennis Courts and Fence Proposal

Hellas Construction, Inc. is pleased to provide this Scope of Work and Proposal for the above referenced project, based on plans by Steiner Thuesen PLLC. dated 02/16/2024.

General Conditions

Hellas will:

1. Provide project Insurance, Bonds, Supervision and Mobilization.
2. Provide layout and staking from survey, by others.
3. Provide, prior to construction, all required submittals.
4. Provide, prior to construction, tennis striping drawings.
5. Provide installation, maintenance and removal of erosion control measures related to work described in this proposal.
6. Provide final punch-out and clean-up of the completed project.
7. This proposal assumes summer 2024 construction. Pricing to be adjusted if the start date is rescheduled to a later date or if weather dictates additives and winter protection of concrete.

Existing Conditions and Sitework

Hellas scope of work:

1. Install project signs.
2. Remove old fence.
3. Remove, retrofit and protect in place irrigation system around court areas.
4. Remove and haul off existing asphalt paving and sidewalk.
5. Remove existing granular base (9” depth) from north court, stockpile on south court.
6. Remove existing soil (9” depth) from north court, stockpile for use on south court.
7. Compact existing subgrade, install Mirafi fabric over the north court subgrade (loose laid overlap only, no sewing/stitching included).
8. Import stockpiled granular from south court back onto north court, compact.
9. Cut additional gravel (9” depth) from south court, place on north court and compact to subgrade elevation for concrete.

10. Remove up to 18” of existing remaining rock from the south court and stockpile on the north court.
11. Excavate to subgrade for up to two additional feet of tennis court, import up to 50 tons of gravel, lay mirafi fabric and compact.
12. Import stockpiled soil from north court, grade and compact up to within 18” of subgrade for conc rete.
13. Compact subgrade, install Mirafi fabric (loose laid overlap, no sewing/stitching included).
14. Import, grade and compact stockpiled granular from north court onto south court.
15. Estimate is based on using ALL material from site without haul off and disposal of spoils.

Concrete

Hellas scope of work:

1. Install concrete flatwork sidewalks from courts to existing city sidewalks.
2. Demo existing tennis court, prepare subgrade for new court.
3. Provide and place 1” of compacted fines for a leveling course under new post tensioned slabs.
4. Provide and place 6mil vapor barrier as noted in 033800, *note error in detail 8/S1.2 which mentions 60 mill poly sheeting above leveling course.*
5. Construct approximately 42,282 square feet of post tensioned slab including pour-back strip (3’ wide) between banks.
6. Furnish and install chain link fences and gates as shown. Note, it is highly recommended to separate fence footings in outside perimeter “mow band” that isolates footings from post tensioned slab. This mow curb would be installed with expansion joint and caulking between curb and post tensioned slab.

Athletic Equipment

Hellas will:

1. Furnish and install six (6) Premier XS Series Tennis Posts by Douglas Industries, Inc. with required footings.
2. Furnish and install six (6) TN-45 Tennis Net by Douglas Industries, Inc.

Tennis Court Surfacing

Hellas will:

1. Clean off each court with a pressure washer and blower to remove all dirt and debris and acid wash the new concrete surface. All bird baths will be patched with TPS 5000® Rhinofill crack filler.
2. Apply one (1) coat of TPS 5000® Acrylic Surface at a rate of 0.7 gal/SY. Silica sand shall be mixed to achieve a medium to slow ball speed.
3. Apply two (2) coats of TPS 5000® Fortified Acrylic Color Coating.

4. Layout and paint 2” wide lines using Line Tape Sealer as a primer coat to ensure razor sharp edges. Paint shall be TPS 5000® White Line Paint and painted in accordance to USTA specifications.

Base Proposal Price **$1,439,020.00**

Hellas will require 70 degrees and rising temperatures for concrete pouring and surfacing operations. No winter protection, heat blankets, etc..

EXCLUSIONS

1. Any item of work not specifically listed above.
2. Demo, grading, cut/fill, subgrade stabilization, drainage.
3. Geotechnical Investigation, Engineering.
4. Rock excavation or haul off.
5. Any embankment or processing of imported soils.
6. SWPPP/Erosion control installation.
7. Any concrete work outside of PT slabs.
8. Winter protection or additives due to cold temperatures.
9. Any asphalt paving, including but not limited to repair of existing parking lot.
10. Any electrical or lighting work.
11. Construction materials inspection and testing.
12. Supply or installation of perimeter safety, construction fencing, site security.
13. Any Allowances or Contingencies.
14. Gross Receipts Tax (taxes are included as 7% at point of purchase on material cost only)
15. Prevailing or union wages.
16. Any permits or fees, including any utility impact fees generated by construction improvements.
17. Owner shall provide laydown area, ingress/egress for ALL personnel, equipment and materials. Typical construction traffic shall be expected for the duration of this contract. Contractor NOT responsible for damage due to typical construction traffic ingress/egress to the construction site or laydown area for Hellas materials.

    Notwithstanding anything to the contrary in any of the Contract documents, under no circumstances shall the Performance bonds, maintenance bonds or the obligations of the Surety be liable for any warranty obligations that exceed 1 year from the date of substantial completion as defined in the Contract documents.

Hellas Construction, Inc. looks forward to the award of this project, and is eager to work with you.
Pricing valid for 14 days from date of this proposal.

Shannon Kelley
Vice President of Estimating

3. Unit Prices (SP-40)

CORPORATE HQ | 12000 West Parmer Lane | Austin, TX 78613 | T: (512) 250-2910 | F: (512) 250-1960 | hellasconstruction.com

SP-40 UNIT PRICES

The following unit prices may be used to adjust the contract sum in the event the Owner desires to increase or decrease the scope of work. The Contractor understands the Owner reserves the right to select any, all or none of the unit prices, and to adjust the contract amount accordingly.

All unit prices shall be for all work required to furnish and install, including incidentals, complete-in-place systems. Unit price items may or may not be included in base bid work. No adjustment to base bid and alternative amounts shall be made without written authorization prior to commencement of the work.

These unit prices are to be filled out and provided with the Bid. Bids received without this section filled out may be considered non-responsive.

UNIT	ITEM DESCRIPTION	UNIT COST
SF	Remove and dispose of existing tennis court	$75.00
LF	Remove and dispose of existing fencing	$20.00
LS	Locate and remove irrigation equipment	$10,320.00
SF	Remove and dispose of existing sod	$1.00
CY	Strip and stockpile topsoil	$55.00
CY	Excavate subgrade at tennis court and dispose of	$77.00
CY	Remove existing gravel base at tennis court and replace following placement of geotextile fabric	$77.00
SF	Geotextile fabric in place	$0.29
CY	Import and place gravel base material at tennis court	$78.00
SF	Poly sheeting	$0.44
CY	Sand leveling course	$60.00
LS	Post tension concrete slab	$756,475.00
SF	Court surfacing	$70,000.00
EA	Court striping	incl. above
EA	Tennis netting standards and nets	$4280.00 (ls)
LF	Chain link fencing- 10' high	$80.00
EA	Chain link walk through gates- 4' wide	$750.00
EA	Chain link service gate- 8' wide	$2500.00
SF	Concrete sidewalk	$10.00
CY	Site grading	$55.00
CY	Place topsoil from stockpile	$75.00
SF	Finish grade topsoil	$0.50

SF	Sod	$1.00
EA	Relocate sprinkler head	T&M
EA	Project sign	$7000.00
LS	Stormwater Pollution Prevention Plan	$12,500.00

4. Bid Bond

Document A310™ – 2010

Conforms with The American Institute of Architects AIA Document 310

Bid Bond

CONTRACTOR:
(Name, legal status and address)

Hellas Construction, Inc.

12000 West Parmer Lane

Austin, TX 78613

SURETY:
(Name, legal status and principal place of business)

Liberty Mutual Insurance Company

175 Berkeley Street

Boston, MA 02116

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

OWNER:
(Name, legal status and address)

City of Billings

P.O. Box 1178

Billings, MT 59103

BOND AMOUNT: $ Ten Percent of the Total Amount Bid (10%)

PROJECT:
(Name, location or address, and Project number, if any)

Pioneer Park Tennis Courts Replacement - Billings, MT

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 18th day of March, 2024

(Witness) Chris Crenshaw

Hellas Construction, Inc.
(Principal) *(Seal)*

(Title) Tyler Purahl, Chief Estimator

HELLAS CONSTRUCTION, INC. CORPORATE SEAL 2003 TEXAS

(Witness) Taylor Fogle

Liberty Mutual Insurance Company
(Surety) *(Seal)*

(Title) Ginger Hoke, Attorney-in-Fact

LIBERTY MUTUAL INSURANCE COMPANY INCORPORATED 1912 MASSACHUSETTS

Seal No. 4684

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: 8206213-969499

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Ginger Hoke; Mark R. Dewitt

all of the city of Dallas state of TX each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 31st day of August, 2021.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By: _____
David M. Carey, Assistant Secretary

State of PENNSYLVANIA
County of MONTGOMERY ss

On this 31st day of August, 2021 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.

Commonwealth of Pennsylvania - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2025
Commission number 1126044
Member, Pennsylvania Association of Notaries

By: _____
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS: Section 12. Power of Attorney.
Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts: Section 5. Surety Bonds and Undertakings.
Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 18th day of March, 2024.

By: _____
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-8240 or email

5. Qualifications Checklist (SP-41 & SP-42)

CORPORATE HQ | 12000 West Parmer Lane | Austin, TX 78613 | T: (512) 250-2910 | F: (512) 250-1960 | hellasconstruction.com

SP-41 POST-TENSIONED TENNIS COURT CONTRACTOR QUALIFICATIONS

Tennis court construction shall be performed by a qualified tennis court contractor. The tennis court contractor shall perform and be responsible for all aspects of the tennis court construction.

Minimum Contractor Qualifications: Fill out the below section regarding contractor qualifications and submit with Bid.

Required Qualifications	Yes	No
Contractor has been continuously operating under the same company name for the past five (5) years.	✓	
Contractor has successfully completed five (5) projects of similar size and scope within the last three (3) years.	✓	
Contractor has the capability to provide the required performance and payment bonds.	✓	
Contractor is a member in good standing of the American Sports Builders Association.	✓	

SP-42 TENNIS COURT SURFACING INSTALLER QUALIFICATIONS

All installations shall be performed by a qualified installation specialist. The installer shall perform and be responsible for all aspects of the installation.

Minimum Installer Qualifications: Fill out the below section regarding installer qualifications and submit with Bid.

Required Qualifications	Yes	No
Installer shall be regularly engaged in the installation of Tennis Court Systems.	✓	
Installer shall have continuously operated under the same company name for the past five (5) years.	✓	
Reference list from the installer of at least ten (10) projects of similar scope done in the last three (3) years.	✓	
Installer shall be an Authorized Applicator of the specified surface system.	✓	
Installer shall be a builder member of the ASBA.	✓	

END OF SECTION

Thank you for your consideration!

Prepared By: Christopher Crenshaw, Sales Process Specialist

ccrenshaw@hellasconstruction.com

Justin Rose, Regional Vice President of Sales West Coast & Pacific Northwest

jrose@hellasconstruction.com

Shannon Kelley, Vice President of Estimating

skelley@hellasconstruction.com

Billings
PARKS
AND RECREATION

Department: *PRPL* **FY24 - FY28 CIP**

Project Category: *Parks* **Project Title:** *Pioneer Park 6 Tennis Courts Replacement*

Project Description/Location:

Replace the existing six tennis courts next to the restroom facility

Justification:

The existing six tennis courts next to the restroom facility have developed significant surface cracking and has necessitated the closure of two courts. Replacement of these courts will assure a safe playing surface and ADA accessibility.

CIP Status	Project Type
☐ Modify Existing	☑ Renewal/ Replacement
☑ New Project	☐ Enhancement/ New

Operating Budget Impact:

Comments:

Insert Picture(s) or Map Here

Estimated Project Cost(s)	Prior Years	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	Future	Total Cost
Planning, Design, & Engineering								$ -
Land Acquisition								$ -
Construction		1,200,000						$ 1,200,000
Equipment								$ -
Other								$ -
Total Project Cost	**$ -**	**$ 1,200,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,200,000**

Project Funding	Prior Years	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	Future	Total Cost
Park District 1								$ -
Cash-in-Lieu								$ -
Amend Park Fund								$ -
NRDP/YRRP								$ -
SBURA								$ -
Bonding		1,200,000						$ 1,200,000
								$ -
								$ -
								$ -
								$ -
								$ -
								$ -
								$ -
								$ -
								$ -
Total Project Funding	**$ -**	**$ 1,200,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,200,000**

Project Manual for

Pioneer Park Tennis Courts Replacement

Billings
PARKS
AND RECREATION

Prepared by:

STEINER
THUESEN
PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE

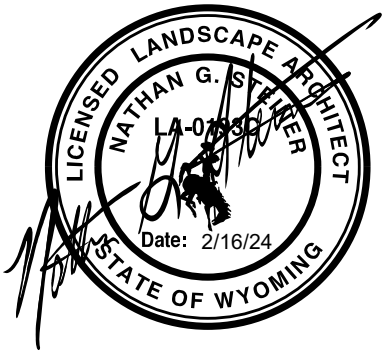
February 16, 2024

Set No. _____

Billings
PARKS
AND RECREATION

Project Manual for

Pioneer Park Tennis Courts Replacement



STEINER
THUESEN
PLLC

GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE

1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

Prepared By: STEINER THUESEN PLLC
Consultant Project No.: N/A
Date: February 16, 2024

TABLE OF CONTENTS

INVITATION TO BID

INSTRUCTIONS TO BIDDERS

BID SUBMITTAL PACKAGE (TO BE EXECUTED AND SUBMITTED FOR BID BY CONTRACTOR)

- BID SUBMITTAL PACKAGE (COVER PAGE)
- BID FORM
- BID BOND

AGREEMENT FORM

MONTANA STATEWIDE PREVAILING WAGE RATES

SPECIAL PROVISIONS

TECHNICAL SPECIFICATIONS

DIVISION 1 - GENERAL REQUIREMENTS
- 011000 - Summary, Alternates
- 012500 - Products and Substitutions
- 013100 - Procedures and Controls
- 013200 - Schedules, Reports, Payments
- 013300 - Submittals
- 014200 - Definitions and Standards
- 015000 - Temporary Facilities
- 017700 - Project Closeout

DIVISION 2 - EXISTING CONDITIONS
- 024119 - Selective Demolition

DIVISION 3 - CONCRETE
- 033000 - Cast In Place Concrete - PTS
- 033800 - Post-Tensioned Concrete Tennis Courts

DIVISION 4 - TO DIVISION 10

None in this project

DIVISION 11 - ATHLETIC EQUIPMENT
- 116823 - Tennis Equipment

DIVISION 12 - TO DIVISION 30

None in this project

DIVISION 31 - EARTHWORK

310000 - Earthwork
311000 - Site Preparation
312334 - Irrigation Trenching & Backfilling
313219 - Geotextile Reinforcement

DIVISION 32 - EXTERIOR IMPROVEMENTS

321823 - Tennis Court Surfacing
321824 - Tennis Court Markings
323113 - Chain Link Fences and Gates
328400 - Irrigation System
329204 - Sod Lawns

DIVISION 33 - UTILITIES

None in this project

GEOTECHNICAL REPORT

ADDITIONAL PROJECT SPECIFIC SECTIONS

SUBSTITUTION REQUEST FORM

CONTRACT PLANS – BOUND SEPERATELY

C1.1 Survey
L1.1 Demolition Plan
L1.2 Layout & Materials Plan
L1.3 Grading Plan
L1.4 Details
S1.1 Slab Plan
S1.2 Slab & Foundation Details

SECTION 00100

INVITATION TO BID

Separate sealed bids for the construction of Pioneer Park Tennis Courts Replacement will be received by the Billings City Clerk, P.O. Box 1178, Billings, MT 59103 or bids@billingsmt.gov until 2:00 p.m. local time on Tuesday, March 12, 2024, and then publicly opened and read aloud. The bid opening will be via Facebook Live on the City's Facebook page: Billings MT City Government.

The project consists of: Demolition of existing tennis courts and fencing, earthwork, sidewalk, post tension concrete tennis courts, and fencing.

The bidding documents consisting of Drawings and Project Manual may be examined or obtained at the office of STEINER THUESEN PLLC; 1925 Grand Avenue Suite 105, Billings, MT 59102 in accordance with Article 2.1 of Instructions To Bidders. Required deposit is $100.00 per set, which is not refundable. There is no charge for digital copies. Bidders submitting bids as a General Contractor must obtain a set of plans from the Landscape Architect and be listed on the Landscape Architect's Planholders list in accordance with Article 2.4 of the Instructions to Bidders. Bidding documents may also be examined at City of Billings PRPL, 390 N. 23rd Street Billings, MT 59101, and www.montanabid.com

There will be a non-mandatory Pre-Bid meeting at 390 N. 23rd Street, Billings MT 59101 at 2:00 p.m. on March 5, 2024. Interested CONTRACTORS are encouraged to attend. Contact Jed Vissia with STEINER THUESEN PLLC by telephone at (406) 252-5545 or by email jed@steinerthuesen.net for more information on the Pre-Bid meeting.

CONTRACTOR and any of the CONTRACTOR'S subcontractors bidding or doing work on this project will be required to be registered with the Montana Department of Labor and Industry (DLI). Forms for registration are available from the Department of Labor and Industry, P.O. Box 8011, 1805 Prospect, Helena, Montana 59604-8011. Information on registration can be obtained by calling 1-406-444-7734. All laborers and mechanics employed by CONTRACTOR or subcontractors in performance of the construction work shall be paid wages at rates as may be required by the laws of Yellowstone County and the state of Montana. The CONTRACTOR must ensure that employees and applicants for employment are not discriminated against because of their race, color, religion, sex or national origin.

Each bid or proposal must be accompanied by a Certified Check, Cashier's Check, or Bid Bond payable to the "City of Billings, MT" in an amount not less than ten percent (10%) of the total amount of the bid. Successful BIDDERS shall furnish an approved Performance Bond and a Labor and Materials Payment Bond, each in the amount of one hundred percent (100%) of the contract amount. Insurance as required shall be provided by the successful BIDDER(s) and a certificate(s)

of that insurance shall be provided. Bids submitted via email shall have the bid bond scanned and included with the bid. Bids submitted via mail shall have any of the bid securities included.

No bid may be withdrawn after the scheduled time for the public opening of bids, which is 2:00 p.m. local time, Tuesday, March 12, 2024.

For further information concerning this project, please contact Jed Vissia with STEINER THUESEN PLLC by telephone at (406) 252-5545 or by email jed@steinerthuesen.net or John Gayvert with Parks, Recreation, and Public Lands by telephone 406-657-8369 or by email GayvertJ@billingsmt.gov or Brad Wright with Parks, Recreation, and Public Lands by telephone 406-237-6132 or by email wrightb@billingsmt.gov at 390 N 23rd St, Billings, MT 59101. End of day on Thursday, March 7, 2024 is the last day for questions.

The right is reserved to reject any or all proposals received, to waive informalities, to postpone the award of the contract for a period of not to exceed sixty (60) days, and to accept the lowest responsive and responsible bid which is in the best interest of the OWNER.

The City of Billings is an Equal Opportunity Employer.

Published on February 16, February 23, and March 1, 2024.

Denise R. Bohlman
Billings City Clerk
P.O. Box 1178
Billings, MT 59103

Dept: PRPL
Published: February 16, 2024
February 23, 2024
March 1, 2024

SECTION 00200

INSTRUCTIONS TO BIDDERS

Instructions to Bidders per the Montana Public Works Standard Specifications, 6th Edition, as Modified by the City of Billings Standard Modifications and as modified below:

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

Revise 2.1 Complete sets of Bidding Documents may be obtained as stated in the Invitation to Bid.

Delete 2.3

Insert 2.4 Bidders submitting bids as a General Contractor must obtain a set of plans from the Landscape Architect and be listed on the Landscape Architect's Planholders list. Bids received from General Contractors that are not on the Planholders list will be considered non-responsive and rejected.

ARTICLE 5 – PRE-BID CONFERENCE

Insert 5.2 The pre-bid meeting will be held at 390 N. 23rd Street, Billings MT 59101 at 2:00 p.m. on March 5, 2024. Contractors are encouraged to attend.

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

Modify 7.1 Revise second sentence to read "Interpretations or clarifications considered necessary by ENGINEER/ARCHITECT in response to such questions will be issued by Addenda. Addenda will be available for all Planholders on ENGINEER/ARCHITECT's Planholder List. In addition, Addenda may also be examined at www.montanabid.com."

ARTICLE 13 – PREPARATION OF BID

Modify 13.1 Revise first sentence to read "The Bid Form is included with the Bidding Documents."

Modify 13.11 Add after the first sentence: Montana Contractor's Registration is not required until project award.

Delete 13.12 in the City of Billings Standard Modifications (dated January 2021).

ARTICLE 15 – SUBMITTAL OF BID

Add to 15.1 Only Section 00300 Cover Page, Section 00300 Bid Form, and any bid securities are required to be submitted.

Replace 15.2 Bids can either be submitted via email, regular mail, or hand delivered. If using email, the bid must be submitted with a scanned copy of the bid bond. If submitting bid via regular mail or hand delivered, a cashier's check, Certified check or bid bond must be included.

Add to 15.3C. Telecommunication systems as used in this section does not include email.

ARTICLE 17 – OPENING OF BIDS

Insert 17.2 Bids will be opened on a live video broadcast on the City's Facebook page: Billings MT City Government. Bids will not be opened at a location that is open to the public.

ARTICLE 22 – STATE LAWS AND REGULATIONS

Modify 22.1 Delete reference to employment preference to Montana contractors and residents and contractor's registration.

Billings PARKS AND RECREATION

STEINER THUESEN PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

BID SUBMITTAL PACKAGE

Pioneer Park Tennis Courts Replacement

BID SUBMITTED BY:

_____

THESE DOCUMENTS MUST BE EXECUTED FOR BID

- **[ ] BID FORM (COMPLETED)**
- **[ ] ADDENDA (ACKNOWLEDGED IN BID FORM)**
- **[ ] 10% BID SECURITY (ENCLOSED)**
- **[ ] UNIT PRICES PER SP-40 (COMPLETED)**
- **[ ] QUALIFICATIONS CHECKLIST PER SP-41 & SP-42 (COMPLETED)**

- Bids submitted via email shall have the **bid bond** scanned and included with the bid. Emailed bids should be sent to bids@billingsmt.gov
- Bids submitted via mail shall have any of the bid securities included. Mailed bids should be sent to City of Billings, PO Box 1178, Billings, MT 59103.
- Bids submitted via hand delivery shall have any of the bid securities included. Hand delivered bids should be delivered to City of Billings at the Office of the City Clerk, 210 N. 27th Street, Billings, MT 59101.

SECTION 00300

BID FORM

PROJECT IDENTIFICATION:

Pioneer Park Tennis Courts Replacement

(Name of Project)

3rd St W & Parkhill Dr
Billings, Montana 59102

(Location)

CONTRACT IDENTIFICATION AND NUMBER:

Pioneer Park Tennis Courts Replacement

THIS BID SUBMITTED TO:

City of Billings bids@billingsmt.gov	or	City of Billings P.O. Box 1178 Billings, MT 59103

1.01 The undersigned Bidder proposes and agrees if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents, to perform and furnish all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

2.01 Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid, and Instructions to Bidders, including without limitations those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance for sixty (60) days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

3.01 In submitting this Bid, Bidder represents, as set forth in the Agreement, that:

A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of all which is hereby acknowledged:

Addendum No.	Addendum Date
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work

C. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Special Provisions as provided in paragraph 4.02 of the General Conditions, and (2) reports and drawings of a Hazard Environmental Condition, if any, which has been identified in the Special Provisions as provided in paragraph 4.06 of the General Conditions.

E. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.

F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of the Work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies and data with the Bidding Documents.

I. Bidder has given Engineer/Architect written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer/Architect is acceptable to Bidder .

J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

4.01 Bidder further represents that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

The Bidder certifies that no official of the Owner, Engineer/Architect or any member of such official's immediate family, has direct or indirect interest in the pecuniary profits or Contracts of the Bidder.

5.01 The Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

LUMP SUM BID

Base Bid:

TOTAL LUMP SUM BID PRICE$_____

(Figures)

TOTAL LUMP SUM BID PRICE_____

(Words)

Additive [or Deductive] Alternate(s):

Add Alternate #1: Polymer Coated Fencing

TOTAL LUMP SUM ALTERNATE BID PRICE

$_____

(Figures)

TOTAL LUMP SUM ALTERNATE BID PRICE

_____

(Words)

A. Lump Sum Prices have been computed in accordance with 11.01 of the General Conditions.

B. The OWNER reserves the right to reject any or all bids.

6.01 Bidder agrees that the Work will be substantially completed and competed and ready for final payment in accordance with 14.07 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified above, which shall be stated in the Agreement.

7.01 The following documents are attached to and made a condition of the Bid:

A. Required Bid security in the amount of 10% of the maximum Bid price including alternates, if any, and in the form identified in the Instructions To Bidders.

B. Unit Prices, See Special Provisions.

C. Post-Tensioned Tennis Court Contractor Qualifications, see Special Provisions.

D .Tennis Court Surfacing Installer Qualifications, see Special Provisions.

8.01 The terms used in this Bid with the initial capital letters have the meanings indicated in the Instructions To Bidders, General Conditions, and the Supplementary Conditions.

SUBMITTED on _____ , _____.
(Date)

Montana Contractor's Registration # (if any) _____

Montana Contractor's Gross Receipts Account # _____
(Example: XXXXXX-XXX-CGR)
Employer's Tax ID No. _____

If BIDDER is:

An Individual: _____
(Name typed or printed)
By: _____
(Individual's Signature)
Doing business as: _____

Business Address: _____

_____

Phone No.: _____ FAX No: _____

A Partnership: _____
(Partnership Name)
By: _____
(Signature)
_____
(Name, typed or printed)
Business Address: _____

_____

Phone No.: _____ FAX No: _____

A Corporation: _____

(Corporation Name)

State of Incorporation: _____

Type (General Business, Professional, Service, Limited Liability): _____

By: _____

(Signature of person authorized to sign)

Title: _____

Attest: _____

(Signature)

Business Address: _____

_____

Phone No.: _____ FAX No: _____

Date of Qualification To Do Business Is: _____

_____

(Corporate Seal)

A Joint Venture: Each Joint Venture Must Sign

Joint Venturer Name: _____

(Name)

By: _____

(Signature of Joint Venture Partner)

Name: _____

(Name, printed or typed)

Title: _____

Business Address: _____

_____

Phone No.: _____ FAX No: _____

Joint Venturer Name:_____

(Name)

By:_____

(Signature of Joint Venture Partner)

Name:_____

(Name, printed or typed)

Title:_____

Business Address:_____

_____

Phone No.:_____FAX No: _____

Address of Joint Venture for Receipt of Official Communication:
Address:_____

_____

Phone No.:_____FAX No: _____

(Each Joint Venture must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above.)

END OF SECTION

BID BOND

CONTRACTOR INSERT BID BOND HERE AND REMOVE THIS PAGE

SECTION 00500

AGREEMENT FORM

This Agreement is dated as of _____, by and between "City of Billings," hereinafter called Owner, and _____, hereinafter called Contractor. Owner and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

Article 1. WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: Demolition of existing tennis courts and fencing, earthwork, sidewalk, post tension concrete tennis courts, and fencing.

Article 2. THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows: Pioneer Park Tennis Courts Replacement.

Article 3. ENGINEER/ARCHITECT

3.01 The Project has been designed by: STEINER THUESEN PLLC who is hereinafter called Engineer/Architect and who is to act as Owner's representative, assume all duties and responsibilities and have the rights and authority assigned to Engineer/Architect in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

Article 4. CONTRACT TIME

4.01 Time of the Essence.

A. All the time limits for milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 Days to achieve Substantial and Final Completion.

A. The Work at all locations shall be substantially complete within 60 calendar days after the date when the Contract Time commences to run as provided in paragraph 2.03 of the General Conditions.

B. Final completion of the Work shall be within 14 calendar days after the date of Substantial Completion.

4.03 Liquidated damages.

A. OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the Work is not completed within the times specified in

paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay Owner Five Hundred dollars ($500.00) for each day that expires after the time specified in paragraph 4.02 for Substantial Completion until the Work is substantially complete and Five Hundred dollars ($500.00) for each day that expires after the time specified in paragraph 4.02 for Final completion. The liquidated damages specified herein include unscheduled employment.

Article 5. CONTRACT PRICE

Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount equal to the sum of the established Base Bid amount and any accepted Alternates. Payment will be lump sum. The Bid Form is attached as Exhibit A to this Agreement.

Article 6. PAYMENT PROCEDURES

6.01 Submittal and Processing of Payments:

A. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer/Architect as provided in the Contract Documents.

6.02 Progress Payments; Retainage:

A. Owner shall make progress payments in accordance with Article 14 of the General Conditions on account of the Contract Price on the basis of Contractor's Applications for Payment as recommended by Engineer/Architect, once each month during construction as provided below. All progress payments will be on the basis of the progress of the Work measured by the number of units of each bid item completed times the bid unit price in the Unit Price Schedule of the Bid Form for that item or for lump sum bid items payment will be made on the percentage of actual work complete based on the schedule of values break down for the lump sum bid item.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the sum of the unit price items less the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer/Architect may determine or Owner may withhold, in accordance with paragraph 14.02 of the General Conditions.

    a. The Owner shall retain five percent (5%) of the amount of each payment until final completion and acceptance of all Work covered by the Contract Documents.

    b. Retainage will be five percent (5%) of materials and equipment not incorporated in the Work (but delivered, suitably stored and accompanied by documentation satisfactory to Owner as provided in paragraph 14.02 of the General Conditions).

    c. In accordance with Title 15, Chapter 50, MCA, the Owner shall withhold, in addition to other amounts withheld as provided by law or specified herein, one percent (1%)

of all payments due the Contractor and shall transmit such monies to the Montana Department of Revenue.

2. Upon Substantial Completion and at the Owner's discretion, the amount of retainage may be further reduced if requested by the Contractor.

6.03 Final Payment:

A. Upon final completion and acceptance of the Work in accordance with paragraph 14.07 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer/Architect as provided in said paragraph 14.07.

Article 7. INTEREST:

7.01 All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at a rate of up to 1% per month.

Article 8. CONTRACTOR'S REPRESENTATION:

8.01 In order to induce Owner to enter into this Agreement, Contractor makes the following representations:

A. Contractor has examined and carefully studied the Contract Documents (including all Addenda) listed in paragraph 9 and the other related data identified in the Bidding Documents

B. Contractor has visited the site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, performance or furnishing of the Work.

C. Contractor is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.

D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in the Special Provisions as provided in paragraph 4.02 of the General Conditions and (2) reports and drawings of a Hazardous Environmental Condition, if any, at the Site which has been identified in the Special Provisions as provided in paragraph 4.06 of the General Conditions. Contractor acknowledges that such reports and drawings are not Contract Documents and may not be complete for Contractor's purposes. Contractor acknowledges that Owner and Engineer/Architect do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to Underground Facilities at or contiguous to the site.

E. Contractor has obtained and carefully studied (or assumes responsibility for having done so) all such additional supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise, which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor including applying the specific means, methods, techniques,

sequences and procedures of construction, if any, expressly required by the Contract Documents to be employed by the Contractor, and safety precautions and programs incident thereto.

F. Contractor does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the performance and furnishing of the Work at the Contract Price, within the Contract Times and in accordance with the other terms and conditions of the Contract Documents.

G. Contractor is aware of the general nature of work to be performed by Owner and others at the site that relates to the Work as indicated in the Contract Documents.

H. Contractor has correlated the information known to Contractor, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.

I. Contractor has given Engineer/Architect written notice of all conflicts, errors, ambiguities or discrepancies that Contractor has discovered in the Contract Documents and the written resolution thereof by Engineer /Architect is acceptable to Contractor.

J. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

Article 9. CONTRACT DOCUMENTS:

9.01 Contents

A. The Contract Documents consist of the following:
1. This Agreement (Pages 1 to , inclusive);
2. Performance Bond (pages 1 to , inclusive);
3. Payment Bond (pages 1 to , inclusive);
4. Other Bonds (pages 1 to , inclusive);
   a. (pages to , inclusive);
   b. (pages to , inclusive);
   c. (pages to , inclusive);
5. General Conditions (pages 1 to , inclusive);
6. Supplementary Conditions (pages 1 to , inclusive);
7. Special Provisions (pages 1 to , inclusive);
8. Specifications as listed in the table of contents of the Project Manual, including the Geotechnical Report;
9. Drawings consisting of a cover sheet and sheets numbered ___ through __ with each sheet bearing the following general title:_____ _____;
10. Addenda (Numbers _____to _____, inclusive);
11. Exhibits to this Agreement (enumerated as follows):
    a. Notice To Proceed (pages 1 to ___ , inclusive);
    b. Contractor's Bid (pages _____ to ____, inclusive);

c. Documentation submitted by Contractor prior to Notice of Award (pages_____ to _____, inclusive);

d. Notice of Award

12. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:

a. Written Amendments;

b. Work Change Directives;

c. Change Order(s).

d. Any Notice of Partial Utilization

e. Notice of Substantial Completion

f. Lien Waivers

g. Notice of Final Completion and Acceptance

13. Certificates of Insurance
14. Wage Rates
15. Special Provisions (Section 00900 of Std Mods and project specific)
16. Montana Public Works Standard Specifications, Sixth Edition, dated April 2010, including the City of Billings Standard Modifications thereof.

B. The documents listed in paragraph 9.01.A. are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified or supplemented as provided in paragraphs 3.04 of the General Conditions.

Article 10. MISCELLANEOUS:

10.01 Terms.

A. Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.

10.02 Assignment of Contract.

A. No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically, but without limitation, moneys that may come due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 Successors and Assigns

A. Owner and Contractor each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents.

10.04 Severability

A. Any provision of part of the Contract Documents held to be void or unenforceable under and Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

IN WITNESS WHEREOF, Owner and Contractor have signed copies of Agreement. Documents have been signed or identified by Owner and Contractor or by Engineer/Architect on their behalf.

This Agreement will be effective on _____, _____ (which is the effective date of the Agreement).

This Agreement shall not be effective unless and until concurred by Funding Agency's (if any) designated representative.

City of Billings

By _____
William A. Cole, Mayor

Attest _____
Denise R. Bohlman, City Clerk

Approved as to form _____
City Attorney

Address for giving notices:
2224 Montana Avenue
Billings, MT 59101

Phone No. (406) 657-8231

FAX No. (406) 237-6291

Contractor _____

By _____
(Signature)

Attest _____
(Signature)

Address for giving notices:
_____
_____

Phone No. _____

FAX No. _____

(CORPORATE SEAL)

(If OWNER is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of Owner - Contractor Agreement.

(SEAL)

Contractor Registration No.

Agent for service of process:

_____

_____

(If CONTRACTOR is a corporation or a partnership, attach evidence of authority to sign.)

Owner's Designated Representative:	Contractor's Designated Representative:
Name: Cole McQuillan	Name:
Title: Parks Supervisor	Title:
Address: 390 N 23rd St	Address:
Billings, MT 59101	
Phone No.: (406) 657-8367	Phone No.:
FAX No.:	FAX No.:

AGENCY CONCURANCE:

As lender or insurer of funds to defray the costs of this Contract, and without liability for any payments thereunder, the Agency hereby concurs in the form, content, and execution of this Agreement.

By: _____
(Agency Official's Signature)

Title: _____

Date: _____

END OF SECTION

MONTANA STATEWIDE PREVAILING WAGE RATES

MONTANA
PREVAILING WAGE RATES FOR HEAVY CONSTRUCTION SERVICES 2024

Effective: January 13, 2024

Greg Gianforte, Governor
State of Montana

Sarah Swanson, Commissioner
Department of Labor & Industry

To obtain copies of prevailing wage rate schedules, or for information relating to public works projects and payment of prevailing wage rates, visit ERD at erd.dli.mt.gov/labor-standards or contact:

Employment Relations Division
Montana Department of Labor and Industry
P. O. Box 8011
Helena, MT 59620-1503
Phone 406-444-6543

The department welcomes questions, comments, and suggestions from the public. In addition, we'll do our best to provide information in an accessible format, upon request, in compliance with the Americans with Disabilities Act.

MONTANA PREVAILING WAGE REQUIREMENTS

The Commissioner of the Department of Labor and Industry, in accordance with Sections 18-2-401 and 18-2-402 of the Montana Code Annotated (MCA), has determined the standard prevailing rate of wages for the occupations listed in this publication.

The wages specified herein control the prevailing rate of wages for the purposes of Section 18-2-401, et seq., MCA. It is required each employer pay (as a minimum) the rate of wages, including fringe benefits, travel allowance, zone pay and per diem applicable to the district in which the work is being performed as provided in the attached wage determinations.

All Montana Prevailing Wage Rates are available on the internet at erd.dli.mt.gov/labor-standards or by contacting the department at (406) 444-6543.

In addition, this publication provides general information concerning compliance with Montana's Prevailing Wage Law and the payment of prevailing wages. For detailed compliance information relating to public works contracts and payment of prevailing wage rates, please consult the regulations on the internet at erd.dli.mt.gov/labor-standards or contact the department at (406) 444-6543.

SARAH SWANSON
Commissioner
Department of Labor and Industry
State of Montana

TABLE OF CONTENTS

MONTANA PREVAILING WAGE REQUIREMENTS:

A. Date of Publication 3
B. Definition of Heavy Construction 3
C. Definition of Public Works Contract 3
D. Prevailing Wage Schedule 3
E. Rates to Use for Projects 3
F. Wage Rate Adjustments for Multiyear Contracts 3
G. Fringe Benefits 4
H. Dispatch City 4
I. Zone Pay 4
J. Computing Travel Benefits 4
K. Per Diem 4
L. Apprentices 4
M. Posting Notice of Prevailing Wages 5
N. Employment Preference 5
O. Projects of a Mixed Nature 5
P. Occupations Definitions Website 5
Q. Welder Rates 5
R. Foreman Rates 5
S Proper Classification for Pipefitter and Laborer/Pipelayer Work on Water and Waste Water Treatment Plants 5

WAGE RATES:

BOILERMAKERS 6
BRICK, BLOCK, AND STONE MASONS 6
CARPENTERS 6
CEMENT MASONS AND CONCRETE FINISHERS 6
CONSTRUCTION EQUIPMENT OPERATORS
OPERATORS GROUP 1 7
OPERATORS GROUP 2 7
OPERATORS GROUP 3 8
OPERATORS GROUP 4 8
OPERATORS GROUP 5 8
OPERATORS GROUP 6 8
OPERATORS GROUP 7 9
CONSTRUCTION LABORERS
LABORERS GROUP 1 9
LABORERS GROUP 2 9
LABORERS GROUP 3 10
LABORERS GROUP 4 10
DIVERS 10
DIVER TENDERS 11
ELECTRICIANS 11
INSULATION WORKERS - MECHANICAL (HEAT AND FROST) 11
IRONWORKERS - STRUCTURAL STEEL AND REBAR PLACERS 12
LINE CONSTRUCTION
EQUIPMENT OPERATORS 12
GROUNDMAN 12
LINEMAN 12
MILLWRIGHTS 13
PAINTERS 13
PILE BUCKS 13
PLUMBERS, PIPEFITTERS, AND STEAMFITTERS 13
SPRINKLERFITTERS 14
TRUCK DRIVERS 14

A. Date of January 13, 2024

B. Definition of Heavy Construction

The Administrative Rules of Montana (ARM), 24.17.501(4) – (4)(a), states *"Heavy construction projects include, but are not limited to, those projects that are not properly classified as either 'building construction', or 'highway construction.'*

Heavy construction projects include, but are not limited to, antenna towers, bridges (major bridges designed for commercial navigation), breakwaters, caissons (other than building or highway), canals, channels, channel cut-offs, chemical complexes or facilities (other than buildings), cofferdams, coke ovens, dams, demolition (not incidental to construction), dikes, docks, drainage projects, dredging projects, electrification projects (outdoor), fish hatcheries, flood control projects, industrial incinerators (other than building), irrigation projects, jetties, kilns, land drainage (not incidental to other construction), land leveling (not incidental to other construction), land reclamation, levees, locks and waterways, oil refineries (other than buildings), pipe lines, ponds, pumping stations (prefabricated drop-in units – not buildings), railroad construction, reservoirs, revetments, sewage collection and disposal lines, sewers (sanitary, storm, etc.), shoreline maintenance, ski tows, storage tanks, swimming pools (outdoor), subways (other than buildings), tipples, tunnels, unsheltered piers and wharves, viaducts (other than highway), water mains, waterway construction, water supply lines (not incidental to building), water and sewage treatment plants (other than buildings) and wells."

C. Definition of Public Works Contract

Section 18-2-401(11)(a), MCA defines "public works contract" as *"…a contract for construction services let by the state, county, municipality, school district, or political subdivision or for nonconstruction services let by the state, county, municipality, or political subdivision in which the total cost of the contract is in excess of $25,000…"*.

D. Prevailing Wage Schedule

This publication covers only Heavy Construction occupations and rates in the specific localities mentioned herein. These rates will remain in effect until superseded by a more current publication. Current prevailing wage rate schedules for Building Construction, Highway Construction and Nonconstruction Services occupations can be found on the internet at www.mtwagehourbopa.com or by contacting the department at (406) 444-6543.

E. Rates to Use for Projects

ARM, 24.17.127(1)(c), states *"The wage rates applicable to a particular public works project are those in effect at the time the bid specifications are advertised."*

F. Wage Rate Adjustments for Multiyear Contracts

Section 18-2-417, MCA states:

"(1) Any public works contract that by the terms of the original contract calls for more than 30 months to fully perform must include a provision to adjust, as provided in subsection (2), the standard prevailing rate of wages to be paid to the workers performing the contract.

(2) The standard prevailing rate of wages paid to workers under a contract subject to this section must be adjusted 12 months after the date of the award of the public works contract. The amount of the adjustment must be a 3% increase. The adjustment must be made and applied every 12 months for the term of the contract.

(3) Any increase in the standard rate of prevailing wages for workers under this section is the sole responsibility of the contractor and any subcontractors and not the contracting agency."

G. Fringe Benefits

Section 18-2-412, MCA states:

"(1) To fulfill the obligation…a contractor or subcontractor may:

(a) pay the amount of fringe benefits and the basic hourly rate of pay that is part of the standard prevailing rate of wages directly to the worker or employee in cash;

(b) make an irrevocable contribution to a trustee or a third person pursuant to a fringe benefit fund, plan, or program that meets the requirements of the Employee Retirement Income Security Act of 1974 or that is a bona fide program approved by the U. S. department of labor; or

(c) make payments using any combination of methods set forth in subsections (1)(a) and (1)(b) so that the aggregate of payments and contributions is not less than the standard prevailing rate of wages, including fringe benefits and travel allowances, applicable to the district for the particular type of work being performed.

(2) The fringe benefit fund, plan, or program described in subsection (1)(b) must provide benefits to workers or employees for health care, pensions on retirement or death, life insurance, disability and sickness insurance, or bona fide programs that meet the requirements of the Employee Retirement Income Security Act of 1974 or that are approved by the U. S. department of labor."

Fringe benefits are paid for all hours worked (straight time and overtime hours). However, fringe benefits are not to be considered a part of the hourly rate of pay for calculating overtime, unless there is a collectively bargained agreement in effect that specifies otherwise.

H. Dispatch City

ARM, 24.17.103(11), defines dispatch city as *"…the courthouse in the city from the following list which is closest to the center of the job: Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, Miles City, Missoula and Sidney."*

I. Zone Pay

Zone pay is not travel pay. ARM, 24.17.103(24), defines zone pay as *"…an amount added to the base pay; the combined sum then becomes the new base wage rate to be paid for all hours worked on the project. Zone pay must be determined by measuring the road miles one way over the shortest practical maintained route from the dispatch city to the center of the job."* See section H above for a list of dispatch cities.

J. Computing Travel Benefits

ARM, 24.17.103(22), states *" 'Travel pay,' also referred to as 'travel allowance,' is and must be paid for travel both to and from the job site, except those with special provisions listed under the classification. The rate is determined by measuring the road miles one direction over the shortest practical maintained route from the dispatch city or the employee's home, whichever is closer, to the center of the job."* See section H above for a list of dispatch cities.

K. Per Diem

ARM, 24.17.103(19), states *" 'Per diem' typically covers costs associated with board and lodging expenses. Per diem is paid when an employee is required to work at a location outside the daily commuting distance and is required to stay at that location overnight or longer."*

L. Apprentices

Wage rates for apprentices registered in approved federal or state apprenticeship programs are contained in those programs. Additionally, Section 18-2-416(2), MCA states, *"…The full amount of any applicable fringe benefits must be paid to the apprentice while the apprentice is working on the public works contract."* Apprentices not registered in approved federal or state apprenticeship programs will be paid the appropriate journey level prevailing wage rate when working on a public works contract.

M. Posting Notice of Prevailing Wages

Section 18-2-406, MCA, provides that contractors, subcontractors, and employers who are *"...performing work or providing construction services under public works contracts, as provided in this part, shall post in a prominent and accessible site on the project or staging area, not later than the first day of work and continuing for the entire duration of the project, a legible statement of all wages and fringe benefits to be paid to the employees."*

N. Employment Preference

Sections 18-2-403 and 18-2-409, MCA require contractors to give preference to the employment of bona fide Montana residents in the performance of work on public works contracts.

O. Projects of a Mixed Nature

Section 18-2-408, MCA states:

"(1) The contracting agency shall determine, based on the preponderance of labor hours to be worked, whether the public works construction services project is classified as a highway construction project, a heavy construction project, or a building construction project.

(2) Once the project has been classified, employees in each trade classification who are working on that project must be paid at the rate for that project classification"

P. Occupations Definitions

You can find definitions for these occupations on the following Bureau of Labor Statistics website:
http://www.bls.gov/oes/current/oes_stru.htm

Q. Welder Rates

Welders receive the rate prescribed for the craft performing an operation to which welding is incidental.

R. Foreman Rates

Rates are no longer set for foremen. However, if a foreman performs journey level work, the foreman must be paid at least the journey level rate.

S. Proper Classification for Pipefitter and Laborer/Pipelayer Work on Water and Waste Water Treatment Plants The proper classification for the following work is Pipefitter, when it is performed inside a building structure or performed at a location which will later be inside of a building: Joining steel pipe larger than 12 inches in diameter with bolted flange connections that has been pre-fabricated off site and does not require any modification such as cutting, grinding, welding, or other fabrication in order to be installed. All other work previously classified as pipefitter remains in that classification. The proper classification for that work when it is at a location that will always be outside a building is Pipelayer, which is under the Laborer Group 3 classification.

WAGE RATES

BOILERMAKERS

Wage	Benefit
$35.30	$30.94

Duties Include:
Construct, assemble, maintain, and repair stationary steam boilers, boiler house auxiliaries, process vessels, pressure vessels and penstocks. Bulk storage tanks and bolted steel tanks.

Travel and Per Diem:
No travel or per diem established.

↑ Back to Table of Contents

BRICK, BLOCK, AND STONE MASONS

Wage	Benefit
$32.32	$16.78

Travel:
0-70 mi. free zone
>70-90 mi. $60.00/day
>90 mi. $80.00/day

↑ Back to Table of Contents

CARPENTERS

Wage	Benefit
$34.50	$14.07

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $4.00/hr.
>60 mi. base pay + $6.00/hr.

↑ Back to Table of Contents

CEMENT MASONS AND CONCRETE FINISHERS

No Rate Established

Duties Include:
Smooth and finish surfaces of poured concrete, such as floors, walks, sidewalks, or curbs. Align forms for sidewalks, curbs, or gutters.

↑ Back to Table of Contents

CONSTRUCTION EQUIPMENT OPERATORS GROUP 1

Wage	Benefit
$30.76	$14.40

This group includes but is not limited to:
Air Compressor; Auto Fine Grader; Belt Finishing; Boring Machine (Small); Cement Silo; Crane, A-Frame Truck Crane; Crusher Conveyor; DW-10, 15, and 20 Tractor Roller; Farm Tractor; Forklift; Form Grader; Front-End Loader, under 1 cu. yd; Oiler, Herman Nelson Heater; Mucking Machine; Oiler, All Except Cranes/Shovels; Pumpman.

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $3.50/hr.
>60 mi. base pay + $5.50/hr.

↑ Back to Table of Contents

CONSTRUCTION EQUIPMENT OPERATORS GROUP 2

Wage	Benefit
$31.55	$14.10

This group includes but is not limited to:
Air Doctor; Backhoe\Excavator\Shovel, up to and incl. 3 cu. yds; Bit Grinder; Bitunimous Paving Travel Plant; Boring Machine, Large; Broom, Self-Propelled; Concrete Travel Batcher; Concrete Float & Spreader; Concrete Bucket Dispatcher; Concrete Finish Machine; Concrete Conveyor; Distributor; Dozer, Rubber-Tired, Push, & Side Boom; Elevating Grader\Gradall; Field Equipment Serviceman; Front-End Loader, 1 cu. yd up to and incl. 5 cu. yds; Grade Setter; Heavy Duty Drills, All Types; Hoist\Tugger, All; Hydralift Forklifts & Similar; Industrial Locomotive; Motor Patrol (except finish); Mountain Skidder; Oiler, Cranes\Shovels; Pavement Breaker, EMSCO; Power Saw, Self-Propelled; Pugmill; Pumpcrete\Grout Machine; Punch Truck; Roller, other than Asphalt; Roller, Sheepsfoot (Self-Propelled); Roller, 25 tons and over; Ross Carrier; Rotomill, under 6 ft; Trenching Machine; Washing /Screening Plant

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $3.50/hr.
>60 mi. base pay + $5.50/hr.

↑ Back to Table of Contents

CONSTRUCTION EQUIPMENT OPERATORS GROUP 3

Wage	Benefit
$37.00	$15.93

This group includes but is not limited to:
Asphalt Paving Machine; Asphalt Screed; Backhoe\Excavator\Shovel, over 3 cu. yds; Cableway Highline; Concrete Batch Plant; Concrete Curing Machine; Concrete Pump; Cranes, Creter; Cranes, Electric Overhead; Cranes, 24 tons and under; Curb Machine\Slip Form Paver; Finish Dozer; Front-End Loader, over 5 cu. yds; Mechanic\Welder; Pioneer Dozer; Roller Asphalt (Breakdown & Finish); Rotomill, over 6 ft; Scraper, Single, Twin, or Pulling Belly-Dump; YO-YO Cat Haul Truck, Articulating Trucks, Vac Truck.

Per Diem:
0-75 mi. free zone
>75 mi. $110.00/Day

↑ Back to Table of Contents

CONSTRUCTION EQUIPMENT OPERATORS GROUP 4

Wage	Benefit
$37.00	$15.93

This group includes but is not limited to:
Asphalt\Hot Plant Operator; Cranes, 25 tons up to and incl. 44 tons; Crusher Operator; Finish Motor Patrol; Finish Scraper.

Per Diem:
0-75 mi. free zone
>75 mi. $110.00/Day

↑ Back to Table of Contents

CONSTRUCTION EQUIPMENT OPERATORS GROUP 5

Wage	Benefit
$37.00	$15.93

This group includes but is not limited to:
Cranes, 45 tons up to and incl. 74 tons.

Per Diem:
0-75 mi. free zone
>75 mi. $110.00/Day

↑ Back to Table of Contents

CONSTRUCTION EQUIPMENT OPERATORS GROUP 6

Wage	Benefit
$38.00	$15.93

This group includes but is not limited to:
Cranes, 75 tons up to and incl. 149 tons; Cranes, Whirley (All).

Per Diem:
0-75 mi. free zone
>75 mi. $110.00/Day

↑ Back to Table of Contents

CONSTRUCTION EQUIPMENT OPERATORS GROUP 7

Wage	Benefit
$39.00	$15.93

This group includes but is not limited to:
Cranes, 150 tons up to and incl. 250 tons; Cranes, over 250 tons—add $1.00 for every 100 tons over 250 tons; Crane, Tower (All); Crane Stiff-Leg or Derrick; Helicopter Hoist.

Per Diem:
0-75 mi. free zone
>75 mi. $110.00/Day

↑ Back to Table of Contents

CONSTRUCTION LABORERS GROUP 1/FLAG PERSON FOR TRAFFIC CONTROL

Wage	Benefit
$23.08	$11.82

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $3.05/hr.
>60 mi. base pay + $4.85/hr.

↑ Back to Table of Contents

CONSTRUCTION LABORERS GROUP 2

Wage	Benefit
$26.57	$11.82

This group includes but is not limited to:
General Labor; Asbestos Removal; Burning Bar; Bucket Man; Carpenter Tender; Caisson Worker; Cement Mason Tender; Cement Handler (dry); Chuck Tender; Choker Setter; Concrete Worker; Curb Machine-lay Down; Crusher and Batch Worker; Heater Tender; Fence Erector; Landscape Laborer; Landscaper; Lawn Sprinkler Installer; Pipe Wrapper; Pot Tender; Powderman Tender; Rail and Truck Loaders and Unloaders; Riprapper; Sign Erection; Guardrail and Jersey Rail; Spike Driver; Stake Jumper; Signalman; Tail Hoseman; Tool Checker and Houseman and Traffic Control Worker.

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $3.05/hr.
>60 mi. base pay + $4.85/hr.

↑ Back to Table of Contents

CONSTRUCTION LABORERS GROUP 3

	Wage	Benefit
	$26.07	$11.82

This group includes but is not limited to:
Concrete Vibrator; Dumpman (Grademan); Equipment Handler; Geotextile and Liners; High-Pressure Nozzleman; Jackhammer (Pavement Breaker) Non-Riding Rollers; Pipelayer; Posthole Digger (Power); Power Driven Wheelbarrow; Rigger; Sandblaster; Sod Cutter-Power and Tamper.

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $3.05/hr.
>60 mi. base pay + $4.85/hr.

↑ Back to Table of Contents

CONSTRUCTION LABORERS GROUP 4

	Wage	Benefit
	$26.76	$11.82

This group includes but is not limited to:
Hod Carrier***; Water Well Laborer; Blaster; Wagon Driller; Asphalt Raker; Cutting Torch; Grade Setter; High-Scaler; Power Saws (Faller & Concrete);
Powderman; Rock & Core Drill; Track or Truck Mounted Wagon Drill and Welder incl. Air Arc

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $3.05/hr.
>60 mi. base pay + $4.85/hr.

***Hod Carriers will receive the same amount of travel and/or subsistence pay as bricklayers when requested to travel.

↑ Back to Table of Contents

DIVERS

	Wage	Benefit
Stand-By	$48.51	$16.05
Diving	$97.52	$16.05

Depth Pay (Surface Diving)

0-20 ft.	free zone
>20-100 ft.	$2.00 per ft.
>100-150 ft.	$3.00 per ft.
>150-220 ft.	$4.00 per ft.
>220 ft.	$5.00 per ft.

Diving In Enclosures

0-25 ft.	free zone
>25-300 ft.	$1.00 per ft.

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $4.00/hr.
>60 mi. base pay + $6.00/hr.

↑ Back to Table of Contents

DIVER TENDERS

Wage	Benefit
$47.55	$16.05

The tender shall receive 2 hours at the straight time pay rate per shift for dressing and/or undressing a Diver when work is done under hyperbaric conditions.

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $4.00/hr.
>60 mi. base pay + $6.00/hr.

↑ Back to Table of Contents

ELECTRICIANS

Wage	Benefit
$38.86	$17.75

Travel:
No mileage due when traveling in employer's vehicle.

The following travel allowance is applicable when traveling in employee's vehicle:

0-18 mi. free zone
>18-60 mi. federal mileage rate/mi.

Per Diem
District 4
>60 mi. $80.00/day
Per Diem in Big Sky and West Yellowstone $125/day.

↑ Back to Table of Contents

INSULATION WORKERS - MECHANICAL (HEAT AND FROST)

Wage	Benefit
$42.26	$21.99

Duties Include:
Insulate pipes, ductwork or other mechanical systems.

Travel:
0-30 mi. free zone
>30-40 mi. $25.00/day
>40-50 mi. $35.00/day
>50-60 mi. $45.00/day
>60 mi. $130.00/day plus
- $0.56/mi. if transportation is not provided.
- $0.20/mi. if in company vehicle.

↑ Back to Table of Contents

IRONWORKERS – REINFORCING IRON AND REBAR WORKERS

Wage	Benefit
$33.95	$24.50

Duties Include:
Structural steel erection; assemble prefabricated metal buildings; cut, bend, tie, and place rebar; energy producing windmill type towers; metal bleacher seating; handrail fabrication and ornamental steel.

Travel:
All Districts
0-45 mi. free zone
>45-85 mi. $100.00/day
>85 mi. $150.00/day

↑ Back to Table of Contents

IRONWORKERS – STRUCTURAL IRON AND STEEL WORKERS

Wage	Benefit
$33.95	$24.50

Duties Include:
Structural steel erection; assemble prefabricated metal buildings; cut, bend, tie, and place rebar; energy producing windmill type towers; metal bleacher seating; handrail fabrication and ornamental steel.

Travel:
All Districts
0-45 mi. free zone
>45-85 mi. $100.00/day
>85 mi. $150.00/day

LINE CONSTRUCTION – EQUIPMENT OPERATORS

Wage	Benefit
$38.56	$17.93

Duties Include:
All work on substations

Travel:
No Free Zone
$60.00/day

↑ Back to Table of Contents

LINE CONSTRUCTION – GROUNDMAN

Wage	Benefit
$30.11	$17.44

Duties Include:
All work on substations

Travel:
No Free Zone
$60.00/day

↑ Back to Table of Contents

LINE CONSTRUCTION – LINEMAN

Wage	Benefit
$50.35	$19.54

Duties Include:
All work on substations

Travel:
No Free Zone
$60.00/day

↑ Back to Table of Contents

MILLWRIGHTS

Wage	Benefit
$40.49	$18.84

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $4.00/hr.
>60 mi. base pay + $6.00/hr.

↑ Back to Table of Contents

PAINTERS

Wage	Benefit
$25.00	$0.00

Travel and Per Diem:
No travel or per diem established.

↑ Back to Table of Contents

PILE BUCKS

Wage	Benefit
$34.50	$14.07

Duties Include:
Set up crane; set up hammer; weld tips on piles; set leads; insure piles are driven straight with the use of level or plum bob. Give direction to crane operator as to speed, and direction of swing. Cut piles to grade.

Zone Pay:
0-30 mi. free zone
>30-60 mi. base pay + $4.00/hr.
>60 mi. base pay + $6.00/hr.

↑ Back to Table of Contents

PLUMBERS, PIPEFITTERS, AND STEAMFITTERS

Wage	Benefit
$40.06	$20.71

Duties Include:
Assemble, install, alter, and repair pipe-lines or pipe systems that carry water, steam, air, other liquids or gases. Testing of piping systems, commissioning and retro-commissioning. Workers in this occupation may also install heating and cooling equipment and mechanical control systems.

Travel:
District 4
0-70 free zone
>70 mi.

- On jobs when employees do not work consecutive days: $0.55/mi. if employer doesn't provide transportation. Not to exceed two trips.
- On jobs when employees work any number of consecutive days: $110.00/day.

↑ Back to Table of Contents

SPRINKLER FITTERS

Wage	Benefit
$39.06	$25.39

Duties Include:
Duties Include but not limited to any and all fire protection systems: Installation, dismantling, inspection, testing, maintenance, repairs, adjustments, and corrections of all fire protection and fire control systems, including both overhead and underground water mains, all piping, fire hydrants, standpipes, air lines, tanks, and pumps used in connection with sprinkler and alarm systems.

Travel

The following travel allowance is applicable when traveling in employee's vehicle.

0-60 mi. free zone
>60-80 mi. $23.00/day
>80-100 mi. $33.00/day
>100 mi. $125.00/day + the IRS rate per mile and $8.92 for every 15 miles traveled for one trip out and one trip back

No travel allowance required when in employer's vehicle except when staying the night.
>100 mi. $125.00/day

↑ Back to Table of Contents

TRUCK DRIVERS

	No Rate Established	
	Wage	**Benefit**
Truck Driver	$31.00	$9.37

Truck drivers include but are not limited to:
Combination Truck and Concrete Mixer and Transit Mixer; Dry Batch Trucks; Distributor Driver; Dumpman; Dump Trucks and similar equipment; Dumpster; Flat Trucks; Lumber Carriers; Lowboys; Pickup; Powder Truck Driver; Power Boom; Serviceman; Service Truck/Fuel Truck/Tireperson; Truck Mechanic; Trucks with Power Equipment; Warehouseman, Partsman, Cardex and Warehouse Expeditor; Water Trucks.

Zone Pay:
All Districts
0-30 mi. free zone
>30-60 mi. base pay + $3.05/hr.
>60 mi. base pay + .$4.85/hr.

Special Provision:
Zone pay only applies to the Truck Driver classification. No zone pay was established for Pilot Car Driver.

↑ Back to Table of Contents

SECTION 00910

SPECIAL PROVISIONS

Table of Contents

SP-1 FORMAT 2

SP-2 SUBSTANTIAL COMPLETION 2

SP-3 PROJECT COORDINATION 3

SP-4 FIELD ENGINEERING 3

SP-5 CONTRACT SCHEDULE 3

SP-6 MEASUREMENT & PAYMENT 3

A. General 3

B. Measurement & Payment Items 3

SP-7 COMPACTION REQUIREMENTS
SP-8 MATERIALS TESTING AND CONTROL
SP-9 PROTECTION OF EXISTING UTILITIES
SP-10 UNDERGROUND UTILITY CROSSINGS
SP-11 TEMPORARY CONTROLS
SP-12 PUBLIC ACCESS
SP-13 PERMITS
SP-14 SURVEY MARKERS AND MONUMENTS
SP-15 UNSCHEDULED EMPLOYMENT OF THE ENGINEER/ ARCHITECT
SP-16 PAYMENT OF CHANGE ORDERS
SP-17 STAGING AREA
SP-18 CONSTRUCTION ACCESS
SP-19 PROTECTION, PRESERVATION, AND REPAIR
SP-20 COPIES OF DOCUMENTS
SP-21 MATERIALS SOURCES AND DELIVERY.
SP-22 MATERIALS
SP-23 DISPOSAL AREAS
SP-24 SITE MAINTENANCE
SP-25 PROJECT SUPERINTENDENT
SP-26 CONTRACTOR'S COMMUNICATION SERVICES
SP-27 CONTRACTOR'S RESPONSIBILITY
SP-28 DEWATERING
SP-29 EXCAVATION
SP-30 REMOVAL AND DISPOSAL OF EXISTING MATERIAL, ETC.
SP-31 SECURING WORK AREAS AND PEDESTRIAN TRAFFIC
SP-32 TRAFFIC CONTROL AT SIDEWALKS
SP-33 SUBSTITUTION REQUESTS
SP-34 SITE RESTORATION
SP-35 PROTECTION OF WORK

SP-36 SITE SAFETY AND SECURITY
SP-37 EXISTING IRRIGATION SYSTEM
SP-38 INSURANCE
SP-39 NOT USED
SP-40 UNIT PRICES
SP-41 POST-TENSIONED TENNIS COURT CONTRACTOR QUALIFICATIONS
SP-42 TENNIS COURT SURFACING INSTALLER QUALIFICATIONS

SP-1 FORMAT

The specifications for this project include by reference the following two documents. Although they are not printed in this Project Manual, they are still made part of these Contract Documents and the Contractor must comply with any and all such regulations, unless modified herein.

Document	*Available From*
Montana Public Works Standard Specifications (MPWSS) Sixth Edition, April 2010	Montana Contractors Association 1717 11th Avenue PO Box 4519 Helena, MT 59604 406-442-4162
City of Billings Standard Modifications to MPWSS Sixth Edition, January 2021	City of Billings Public Works Department Engineering Division 2224 Montana Avenue Billings, MT 59101 406-657-8231 *– or online at –* https://www.billingsmtpublicworks.gov/DocumentCenter/View/105/Standard-Mods-January-2021-PDF

The following Special Provisions include additional requirements that are specific to this project. In case of a conflict, the hierarchal order of precedence is as listed in City of Billings Standard Modifications to MPWSS.

SP-2 SUBSTANTIAL COMPLETION

The project shall be Substantially Complete within 60 Calendar days from date established in the Notice to Proceed.

SP-3 PROJECT COORDINATION

N /A

SP-4 FIELD ENGINEERING

The Contractor is responsible for all layout and staking for construction of the project.

The Contractor is responsible for all construction stakes to give measurements, lines, locations, and grades necessary for construction. Work shall be performed in conformity with these stakes. The Contractor shall protect all bench marks and reference stakes including construction stakes, from damage or removal. Stakes destroyed or removed by the Contractor will be replaced.

1. Horizontal layout.
2. Grade stakes or slope stakes for excavation and fill.
3. Subgrade bluetops.
4. Base gravel bluetops.
5. As needed to facilitate construction.

A Montana licensed surveyor shall be employed by the Contractor.

SP-5 CONTRACT SCHEDULE

Project schedule shall be provided a minimum of 14 days prior to beginning work.

SP-6 MEASUREMENT & PAYMENT

A. General

1. Refer to the City of Billings Standard Modifications, Section 00900, Article 3 for general measurement and payment requirements.

2. For certain items on the Bid Form, additional quantities may have been added to the actual takeoff quantities from the Drawings to account for unknown underground conditions.

B. Measurement & Payment Items

1. Item 101 – Mobilization/Demobilization (LS): See City of Billings Standard Modifications, Section 00900, Article 4.

SP-7 COMPACTION REQUIREMENTS

All work beneath the tennis courts shall be compacted to 95 percent of maximum dry density as determined by the standard proctor method ASTM (D-698). The Contractor shall refer to the Geotechnical Report for additional compaction requirements.

SP-8 MATERIALS TESTING AND CONTROL

The Owner will hire a testing agency to provide QA testing. All testing completed on the Project will be coordinated by the Contractor and paid by the Owner in accordance with the City of Billings Standard Modifications.

Refer to City of Billings Standard Modifications & MPWSS for more information regarding minimum testing requirements, Contractor Quality Control (QC), and Owner Quality Assurance (QA). Refer to individual specification sections for additional information regarding testing requirements.

SP-9 PROTECTION OF EXISTING UTILITIES

Existing underground installations such as water mains, gas mains, sewers, telephone lines, power lines, fiber optics lines, and buried structures in the vicinity of the work to be done hereunder are indicated on the Drawings only to the extent such information has been made available to or discovered in preparing the Drawings. There is no guarantee as to the accuracy or completeness of such information, and all responsibility for the accuracy and completeness thereof is expressly disclaimed.

Utility service connections are generally shown on the Drawings, but the Contractor shall be solely responsible for locating all existing underground installations, including service connections, in advance of excavating or trenching, by contacting the Owners thereof and prospecting. This requirement applies to private on-site utilities as well. The Contractor shall use his own information and shall not rely solely upon information shown on the Drawings concerning existing underground installations. The Contractor shall repair all damage to existing utilities or property at his own expense. The Contractor shall pay all costs associated with having utility company representatives on the site for this work and shall include these costs in the price bid for related items of work. The Contractor is and the Owner is not responsible for any damage as a result of abandoned utilities.

The Contractor is hereby cautioned that all utility services shall be operative and available at all times.

Contractor shall be responsible for coordinating operations with utility providers. In the event underground utilities are damage the Contractor shall notify the Engineer /Architect immediately.

SP-10 UNDERGROUND UTILITY CROSSINGS

The Contractor shall be responsible for checking with the owners of the underground utilities such as the City, power, gas, and telephone companies, etc., as to the location of their underground installations in the project area. The Contractor shall be solely responsible for any damage done to these installations due to failure to locate them or to properly protect them when their location is known.

It shall be solely the responsibility of the Contractor to fully coordinate Contractor's work with the agencies and to keep them informed of Contractor's construction activities so that these vital installations are fully protected at all times.

A Montana One-Call system (1-800-424-555) has been established to facilitate requests for underground facility location information. The Contractor is cautioned that all utilities may not be on this system.

Type 1 Bedding Material and Type A Trench Backfill shall be utilized to replace material under and around such municipal and private utility lines. Compaction above the bedding material and under the utility line crossing is critical and must be maintained. No separate measurement and payment shall be made for this item. All costs shall be considered an integral part of and be included in the price bid for items complete-in-place.

The relocating, bracing, raising, or supporting of facilities as required by this construction will be the responsibility of the Contractor. The Contractor shall schedule Contractor's operations and establish such coordination with the respective owners as necessary so that any conflicts are avoided.

The Contractor shall have full agreement and understanding with the affected utility companies on what the existing conditions are and what will be necessary to be changed for the Contractor's construction. The Contractor will obtain any permits, agreements, or insurance required. No separate measurement and payment shall be made for this item, unless specifically noted. All costs shall be considered an integral part of and be included in the price bid for pipe complete-in-place.

SP-11 TEMPORARY CONTROLS

A. General

Temporary service shall be provided by the Contractor during any period when utility lines are disturbed unless the Contractor makes other arrangements with the Owners. Service of existing utility lines, if interrupted, shall be restored as quickly as possible.

B. Air and Water Pollution Control

1. Rubbish:

Keep project neat, orderly, and in a safe condition at all times. Provide on-site containers for collection of rubbish and dispose of it at frequent intervals during the progress of work.

2. Road, Parking Lot, and Sidewalk Cleaning:
It shall be the sole responsibility of the contractor to keep all roads, parking lots, and sidewalks free from mud, gravel, cobbles or other contaminants generated as a result of construction activities. It shall be the responsibility of the contractor to clean all foreign matter form roads, parking areas, and sidewalks in a reasonable amount of time as determined by the Owner & Engineer /Architect. All costs incurred to meet road, parking lot, and sidewalk cleaning requirements are incidental to other items of the contract and no separate payment shall be made.

Specific areas of roads, parking lots, and sidewalks may be closed temporarily to the public. Contractor shall provide adequate signage and take precautionary measures to protect the public. Roads, parking lots, and sidewalks shall be made open to the public in a reasonable amount of time.

3. Erosion Control Measures:
Temporary erosion and sediment control measures includes the installation and maintenance of temporary structural control measures to reduce or eliminate the erosion of soil and transport of sediment offsite as result of construction activities. This may include, but not be limited to, silt fences, ditch checks, sediment basins, erosion control mats, stabilized construction entrance, temporary diversions, inlet protection, sediment traps, and slope drains. If erosion control measures are required, it shall be the responsibility of the contractor to install and maintain them throughout the construction. All costs incurred to meet erosion control requirements are incidental to other items of the contract and no separate payment shall be made.

C. Noise Impact:
To minimize construction noise impacts on the local residents, no mechanized construction activities will be allowed other than between the hours of 7:00 A.M. and 6:00 P.M. unless explicitly allowed by the Owners Representative in writing.

D. Failure to Provide Service:
If the contractor fails to provide adequate service on the above listed items, the Owner reserves the right to contract these activities to a third party, the cost of which will be deducted from the contract amount at the time of the next pay request.

SP-12 PUBLIC ACCESS
During construction, coordinate with the Owner to provide access to areas adjacent to the Tennis Courts at the highest degree possible. Parking areas around the park and the ADA parking lot shall remain open to the public during construction accept in those areas where active construction is in progress.

SP-13 PERMITS

The Contractor shall be responsible for obtaining all permits necessary for the completion of this work. The costs for all permits shall be considered incidental to construction and shall be included in the price bid for related items of work. Investigative work required to determine necessary permits is the responsibility of the Contractor. Example of permits that may be required follows:

- Building
- Noise Ordinance Waiver

SP-14 SURVEY MARKERS AND MONUMENTS

The Contractor shall protect and not disturb any survey markers or monuments, such as lot or block corners, property pins, intersection of street monuments, or section corners or section breakdown corners. Any survey marker or monument that is disturbed or destroyed by the Contractor shall be replaced at no cost to the Owner by a licensed land surveyor.

SP-15 UNSCHEDULED EMPLOYMENT OF THE ENGINEER/ ARCHITECT

Damages for the unscheduled employment of the Engineer/Architect and/or Inspector will be assessed against the Contractor necessitated by: (1) the Contractor working beyond the specified contract time; (2) the Contractor working more than 8 hours per day, (or 40 hours per week if four ten hour shifts are run) or on Saturdays, Sundays, and Federal Holidays; (3) the Contractor utilizing material, supplies, or equipment that requires the redesign of the project; (4) the Contractor destroying or disturbing baselines benchmarks or reference stakes; (5) the failure of the Contractor to maintain acceptable as-built records, (6) review of submittals that were returned to the Contractor requiring revision or resubmittal, and (7) delay in final completion beyond the time stipulated in the agreement.

Damages for the unscheduled employment of the Engineer/ Architect and/or Inspector will be determined based on the following hourly rates:

Straight Time	
Landscape Architect (Principal)	$122.00/Hour
Senior Landscape Architect	$113.00/Hour
Landscape Architect	$70.00/Hour
Draftsman	$70.00/Hour
Clerical	$ 50.00/Hour

Mileage	$ 0.74/Mile
GPS Rental	$450.00/Day

The rates listed herein are subject to changes on January 1st of each year.
Out of pocket expenses for materials, equipment, supplies, transportation, and subsistence will be billed at cost plus fifteen percent. Damages for unscheduled employment of the Engineer/ Architect and/or Inspector will be deducted from monthly progress payments and the final payment as the damages are incurred. Damages for unscheduled employment of the Engineer/ Architect are independent from liquidated damages for delay as described in the agreement. Any other personnel not listed above will be billed at their customer rates.

SP-16 PAYMENT OF CHANGE ORDERS

The City of Billings will no longer process change orders for construction without a signed change order or contract amendment signed by the City Administrator prior to the start of any work.

Any work that has begun prior to obtaining the signed change order will not be paid for by the City and will not be added to the contract. Should Contractor have any questions concerning this matter, please do not hesitate to contact the City of Billings.

A reconciling change order showing final in-place quantity over-runs and under-runs will be prepared before the final payment to the Contractor. The unit prices will remain unchanged. This reconciling change order shall be prepared before authorization of final payment to the Contractor.

SP-17 STAGING AREA

The staging areas for this project shall be sized and located as agreed to by the Engineer/ Architect and the Contractor at the Pre-Construction Meeting. Contractor shall notify adjacent private property owners of any disruption in access to private property. Any agreements made between Contractor and private property owners shall be in writing executed by the property owner and an executed copy shall be filed with the Owner and Architect/Engineer, prior to Contractor occupancy of land.

It shall be understood that the responsibility for protection and safekeeping of equipment and materials on or near the site will be entirely that of the Contractor and that no claim shall be made against the Owner by reason of any act of an employee or trespasser.

Use of existing lawn areas as a stockpile location for gravel base to be re-used in the project is not allowed. Similar restrictions apply to topsoil stockpiling. The Contractor shall apply for a Traffic Control Permit as required to allow material to be stockpiled in the parking lane along 3rd

Street West. Refer to MPWSS Section 01570 for additional requirements related to Construction Traffic Control.

SP-18 CONSTRUCTION ACCESS

In order to leave the site in its original condition, the Contractor shall repair any damaged concrete and/or asphalt, and shall broom clean areas of adjacent roadways, sidewalks, and/or driveways at the Contractor's expense. Any damage to existing surfaces or existing landscaping will be repaired at the Contractor's expense.

SP-19 PROTECTION, PRESERVATION, AND REPAIR

A. Existing Structures

The Contractor shall take any photos, measurements, and/or assessments necessary to accurately document the preconstruction condition of potentially impacted structures, and provide a copy of all such documentation to the Owner upon request.

Where construction will be required adjacent to existing structures, the Contractor shall be solely responsible to maintain the structural integrity of the existing structures. The Contractor shall take whatever means necessary to ensure that the existing structure is not damaged and, if necessary, shall install shoring, sheet piling, or other means of supporting the utility or structure, or change the size or type of construction equipment. The Contractor shall protect, and in the case of any damage, repair the existing structures at the Contractor's expense. Any fences damaged during construction shall be repaired to the satisfaction of the Owner. Any delay, additional work, or extra cost to the Contractor caused by existing underground installations shall not constitute a claim for extra work, additional payment, or damages.

B. Asphalt & Concrete Pavement

The Contractor is responsible for the protection of, and the cost to repair or replace to the satisfaction of the Owner, any and all asphalt or concrete damaged due to any construction or travel (hauling, storage, unloading, etc.) operations that is outside of the construction limits identified on the plans. This requirement shall include damage caused by trench sloughing. The Contractor shall familiarize themselves with the existing surfacing sections in the project area and consider self-imposed load restrictions conforming to those sections. The Contractor shall use equipment sized and equipped to protect the asphalt and concrete. The Contractor shall make their own assessment of the conditions and adjust their bid accordingly.

C. Miscellaneous Improvements

Any permanent, semi-permanent, or portable improvements whether privately or publicly owned, shall be preserved by the Contractor. Any damage to any of these improvements shall

be the responsibly of the Contractor. The cost to replace, remove, relocate, or reset existing items shall be incidental to all other bid items, whether the items are noted on the Drawings for relocation or are removed and reset for the Contractor's convenience.

SP-20 COPIES OF DOCUMENTS

Owner shall furnish to Contractor with three hard copies of the project documents. All other copies of the project documents are the responsibility of the Contractor.

SP-21 MATERIALS SOURCES AND DELIVERY.

It shall be the responsibility of the Contractor to fully investigate and satisfy himself as to the availability of all materials required under this Contract.

SP-22 MATERIALS

All materials provided by the Contractor for this project shall be new material. Materials required for a complete installation but not specifically described in the specifications or on the plans shall be as selected by the Contractor subject to approval by the Owners Representative.

SP-23 DISPOSAL AREAS

All waste materials of this contract shall be disposed of in a legal manner in a location off site as selected by the Contractor.

SP-24 SITE MAINTENANCE

The Contractor shall coordinate with PRPL to allow mowing, irrigation, and typical park maintenance to take place throughout construction as needed.

SP-25 PROJECT SUPERINTENDENT

The Contractor shall designate a project superintendent, approved in advance by the Owner's Representative, who shall be present on the job at all times work is in progress. The superintendent shall direct and be responsible for all work performed under the contract and shall be the day to day contact within the Contractor's organization regarding the contract.

The superintendent shall be knowledgeable and qualified to evaluate the quality of not only the general construction work but especially the systems and installations of subcontract work.

The superintendent shall:

- Aggressively evaluate on a day-to-day basis and be responsible for the quality and acceptability of all work.

- Make the first determination as to the fitness and compliance of all work performed.

- Be the initiator in regard to rejection of unfit work.

- Not passively default or abdicated, in the first analysis, these duties to the Owner or Engineer/ Architect.

The superintendent shall be in a position to direct the work and make decisions either directly or through immediate contract with superintendent's superior. Absence or incompetence of the superintendent shall be reason for the Owner to stop all work on the project.

The superintendent or Contractor's designated representative shall maintain, at the project site, a "Record Set of Drawings" showing field changes, as-built elevations, unusual conditions encountered during construction, manufacturer's catalog number of equipment supplied, and other data as required to provide the Owner with an accurate "as-constructed" set of drawings. An approval by the Engineer/ Architect shall not be given on the final payment request until complete record drawings are submitted to the Engineer/ Architect.

The project superintendent may only be changed by the Contractor with advance written permission of the Owner's Representative. Any replacement superintendent shall be equally qualified and must be acceptable to the Owner's Representative.

The project superintendent must continue to perform in a manner satisfactory and acceptable to the Engineer/ Architect. If the project superintendent fails to perform satisfactorily the Engineer/ Architect may request removal of the superintendent and immediate replacement with another qualified supervisor who must be acceptable to the Engineer/ Architect. The Contractor agrees to Architect/Engineer Representative.

SP-26 CONTRACTOR'S COMMUNICATION SERVICES

The Contractor shall maintain a local telephone number where the project superintendent or a qualified assistant may normally be reached during business hours. The Contractor shall also maintain a 24 hour telephone number where he may be reached during an emergency. Failure to answer these telephones, failure to respond to calls, or negligence in carrying out the provisions of this contract may result in cancellation of the contract or forfeiture of remaining contract payments by the Owner.

SP-27 CONTRACTOR'S RESPONSIBILITY

The Contractor agrees and recognizes that he is responsible to and shall comply with the reasonable requests and directions of the Engineer/ Architect throughout the term of the contract.

The Contractor shall enforce strict discipline and good order among Contractor's employees and other persons carrying out the Agreement. The Contractor shall not permit employment of unfit persons not skilled in tasks assigned to them. The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on performance of the work.

The Contractor shall coordinate all phases of the work with Owner's use of the facility to minimize or avoid conflict, protect all existing work adjacent to new construction, and repair any damage and leave premises in original condition, except where otherwise specified by the Engineer/ Architect. Contractor agrees to attend or be represented at bi-weekly team meetings during the term of the project to assure coordination with the other project participants if required.

SP-28 DEWATERING

Contractor shall be responsible for all necessary dewatering and providing and maintaining a construction site suitable to accommodate proposed construction. Contractor shall repair to pre-construction activity any damage done resulting from the construction activities.

SP-29 EXCAVATION

All excavation is unclassified. Cost for all excavation and backfill, regardless of materials or conditions encountered, shall be included in the bid amount.

Topsoil removed during excavation and trenching operations shall be kept separate from other material. At the completion of backfill operation, the topsoil shall be replaced.

SP-30 REMOVAL AND DISPOSAL OF EXISTING MATERIAL, ETC.

Excess material of any kind generated by the work shall be hauled to an off-site location of the Contractor's choice and be legally disposed of. The costs associated with hauling and disposing of excess material shall be incidental to the bid items specified for material removal, and shall be at the Contractor's expense.

SP-31 SECURING WORK AREAS AND PEDESTRIAN TRAFFIC

The Contractor is reminded of the importance of securing all work areas during and after construction work hours to prevent pedestrian and bicycle access. Costs associated shall be included in related bid items.

SP-32 TRAFFIC CONTROL AT SIDEWALKS

Pedestrian traffic control measures shall be put in place at sidewalks that run adjacent to the project as required by the American with Disabilities Act and according to all local, state, and federal requirements. Contractor shall be responsible for the installation and maintenance of any installed measures through the duration of the project.

SP-33 SUBSTITUTION REQUESTS

All requests for substitution of materials for incorporation in the work of this contract shall be made and approved or rejected prior to bid date. All requests for substitution shall be made as required by Division 1 Section 012500 Substitutions of this specification. Incomplete or non-conforming requests shall be rejected. All substitution requests shall be accompanied by a "Substitution/Equal Project Request Form".

All requests for substitution shall be delivered to the Engineer /Architect ten days prior to the Bid Date. Proposal requests arriving after said date and time will not be considered. The Architect shall review all requests received and issue written notice of approval or rejection to the submitting entity. Opinion of the Architect shall be final.

Written notice of approved substitutions shall be issued to all planholders by addendum.

SP-34 SITE RESTORATION

The Contractor shall be responsible for repair and/or revegetation of any and all areas that are disturbed by construction activities as part of this contract. Sodding related to site restoration of construction damage shall be considered an incidental cost included within the base bid and alternate prices.

All such repairs must meet the approval of the Engineer/Architect before final payment will be released.

SP-35 PROTECTION OF WORK

The Contractor shall exercise the necessary measures to protect all work from vandalism. Work will not be accepted for payment that has been defaced or deformed.

SP-36 SITE SAFETY AND SECURITY

Safety and security of the site is the responsibility of the Contractor until completion of the project. Security/safety shall be provided as required to prevent any unauthorized access and as required by the City of Billings.

Trenches shall be backfilled and closed each day at the end of work. Trenches or excavations that are left open overnight shall be fenced off to prevent access. It is the Contractor's responsibility to ensure the safety of all park users during construction.

SP-37 EXISTING IRRIGATION SYSTEM

All pipe, control valves, wire, and sprinklers within the construction limits shall be potholed or otherwise located prior to beginning work. Equipment found to be in conflict with the new construction shall be adjusted so that it is not impacted by the improvements. Piping that runs adjacent to the tennis courts shall be moved a minimum of 12" away from the edge of the courts. Sprinkler heads shall be set 36" from the edge of the courts as well. Heads that are relocated shall be installed on a prefabricated, unitized swing joint.

Any damage to the existing irrigation system shall be brought to the attention of the Engineer/Architect. All repairs shall be approved prior to backfilling.

As-built drawings of all irrigation adjustments shall be provided by the Contractor.

SP-38 INSURANCE

Listing of the Engineer/Architect and the Engineer/Architect's Consultants as additional insured under this section shall conform to the Insurance Services Office (ISO) endorsement CG 2031 and GC 2032 "Additional Insured – Engineers, Architects or Surveyors Not Engaged by the Named Insured". Copies of the additional insured endorsement shall be provided to the Engineer/Architect for approval prior to execution of the contract.

SP-39 Not Used

SP-40 UNIT PRICES

The following unit prices may be used to adjust the contract sum in the event the Owner desires to increase or decrease the scope of work. The Contractor understands the Owner reserves the right to select any, all or none of the unit prices, and to adjust the contract amount accordingly.

All unit prices shall be for all work required to furnish and install, including incidentals, complete-in-place systems. Unit price items may or may not be included in base bid work. No adjustment to base bid and alternative amounts shall be made without written authorization prior to commencement of the work.

These unit prices are to be filled out and provided with the Bid. Bids received without this section filled out may be considered non-responsive.

UNIT	ITEM DESCRIPTION	UNIT COST
SF	Remove and dispose of existing tennis court	
LF	Remove and dispose of existing fencing	
LS	Locate and remove irrigation equipment	
SF	Remove and dispose of existing sod	
CY	Strip and stockpile topsoil	
CY	Excavate subgrade at tennis court and dispose of	
CY	Remove existing gravel base at tennis court and replace following placement of geotextile fabric	
SF	Geotextile fabric in place	
CY	Import and place gravel base material at tennis court	
SF	Poly sheeting	
CY	Sand leveling course	
LS	Post tension concrete slab	
SF	Court surfacing	
EA	Court striping	
EA	Tennis netting standards and nets	
LF	Chain link fencing- 10' high	
EA	Chain link walk through gates- 4' wide	
EA	Chain link service gate- 8' wide	
SF	Concrete sidewalk	
CY	Site grading	
CY	Place topsoil from stockpile	
SF	Finish grade topsoil	

SF	Sod	
EA	Relocate sprinkler head	
EA	Project sign	
LS	Stormwater Pollution Prevention Plan	

SP-41 POST-TENSIONED TENNIS COURT CONTRACTOR QUALIFICATIONS

Tennis court construction shall be performed by a qualified tennis court contractor. The tennis court contractor shall perform and be responsible for all aspects of the tennis court construction.

Minimum Contractor Qualifications: Fill out the below section regarding contractor qualifications and submit with Bid.

Required Qualifications	**Yes**	**No**
Contractor has been continuously operating under the same company name for the past five (5) years.		
Contractor has successfully completed five (5) projects of similar size and scope within the last three (3) years.		
Contractor has the capability to provide the required performance and payment bonds.		
Contractor is a member in good standing of the American Sports Builders Association.		

SP-42 TENNIS COURT SURFACING INSTALLER QUALIFICATIONS

All installations shall be performed by a qualified installation specialist. The installer shall perform and be responsible for all aspects of the installation.

Minimum Installer Qualifications: Fill out the below section regarding installer qualifications and submit with Bid.

Required Qualifications	**Yes**	**No**
Installer shall be regularly engaged in the installation of Tennis Court Systems.		
Installer shall have continuously operated under the same company name for the past five (5) years.		
Reference list from the installer of at least ten (10) projects of similar scope done in the last three (3) years.		
Installer shall be an Authorized Applicator of the specified surface system.		
Installer shall be a builder member of the ASBA.		

END OF SECTION

TECHNICAL SPECIFICATIONS

SECTION 011000 – SUMMARY, ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 PROJECT/WORK IDENTIFICATION

A. General: Name of project is “Pioneer Park Tennis Courts Replacement " on contract documents by the Landscape Architect, STEINER THUESEN PLLC, 1925 Grand Avenue #105, Billings, MT 59102.

B. Contract Documents indicate the work to be carried out under a single prime Contract.

C. Summary by References: Work of Contract can be summarized by reference to the Contract, General Conditions, Supplementary Conditions, specification sections as listed in the "Index of Specification Sections" bound herewith, drawings as listed in "Schedule of Drawings", addenda and modifications to the contract documents issued subsequent to the initial printing of this project manual, and including but not necessarily limited to printed matter referenced by any of these. It is recognized that work of Contract is also unavoidably affected or influenced by governing regulations, natural phenomenon including weather conditions, and other forces outside the contract documents.

D. Abbreviated Written Summary: Briefly, and without force and effect upon contract documents, work of Contract can be summarized as follows:

1. Demolition of existing tennis courts and fencing, earthwork, sidewalks, post tension concrete tennis courts, and fencing.

1.3 ALTERATIONS AND COORDINATION:

A. General: The work of this Contract includes coordination of entire work of project, including preparation of general coordination drawings/diagrams/schedules, and control of site utilization; from the beginning of activity, through the project close-out and warranty periods.

B. Alterations: Where applicable, requirements of contract documents apply for alteration work in same manner as for new work. Refer to drawings for specific requirements of alteration work.

1.4 ALTERNATES:

A. Definitions: Alternates are defined as alternate products, materials, equipment, installations or systems for the work which may, at Owner's option and under terms established by Instructions to Bidders, be selected and recorded in the Contract (Owner-Contractor Agreement) to either supplement or displace corresponding basic requirements of contract documents.

B. General Provisions: A "Schedule of Alternates" is included at end of this section. Each alternate is defined by abbreviated language, recognizing that drawings and specification sections document the requirements. Coordination of related work as required to ensure that work affected by each selected alternate is complete and properly interfaced with work of alternates.

C. Notification: Immediately following award of Contract prepare and distribute to each entity to be involved in performance of the work, a notification of status of each alternate.

1.5 MISCELLANEOUS AND GENERAL PROVISIONS

A. Cutting and Patching:

1. Definition: Includes cutting and patching of both previously existing work and nominally completed portions of Contract work. Excludes shop fabrication of work, and normal installation procedures including the drilling of holes to install fasteners. Excludes special categories of work identified as alterations, demolition, excavating, grading, planting, cleaning, removal/replacement of noncomplying work and similar activities; although some of these activities may require cutting and patching.
2. General: Specific requirements and limitations for cutting and patching are shown and specified for certain types of work, and specified in other sections of Division 1 as required quality control procedures for general application to performance of the work.

PART 2 - PRODUCTS (not applicable)

PART 3 - EXECUTION (not applicable)

PART 4 - ALTERNATES

4.1 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if the Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents. Include any modification of

adjacent work that Contractor may be required to perform by reason of acceptance of Alternate.

1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternates into the Work. No other adjustments are made to the Contract Sum.

4.2 PROCEDURES

A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include, as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation, whether or not indicated as part of alternate.

B. Execute accepted alternates under the same conditions as other Work of the Contract.

4.3 SCHEDULE OF ALTERNATES

A. Contractors: Submit with their proposals the amount to be added to their Base Proposal for the following Alternates. Include any modification of adjacent work that Contractor may be required to perform by reason of acceptance of Alternate.

B. All work required by Alternates: Completed in strict accordance with drawings, applicable sections of this specification.

C. Alternate No. 1: Polymer Coated Fencing

1. Base Bid: The Base Bid includes galvanized fencing and equipment.
2. Alternate: Propose a price to add black bonded coating to all chain link fencing and equipment per the following specification.
    a. COLORBOND® Polymer Coating as manufactured by Merchant Metals or equal, approved in advance.
    b. COLOR BOND® Polymer Coated Steel Fabric: ASTM F668, wire gauge specified is that of the metallic coated steel core wire.
    c. Class 2b fused and adhered
    d. Color: Black in compliance with ASTM F934.
    e. COLORBOND® Polymer Coated Pipe: Polymer coated pipe shall have a PVC coating fused and adhered to the exterior zinc coating of the galvanized pipe in accordance with ASTM F1043. The minimum thickness of the PVC coating shall be 10-mils. Color to match fabric black per ASTM F934.
    f. COLORBOND® Polymer Coated Steel Tension Wire: 7 gauge core wire complying with ASTM F1664. Color to match fabric color unless noted otherwise.
    g. Class 2b, fused and adhered,
    h. COLORBOND® Polymer Coated Color Fittings: In compliance with ASTM F626, minimum coating thickness 0.006 in. fused and adhered to the zinc coated fittings. Color to match fabric.

i. COLORBOND® Polymer Coated Tie Wire and Hog Rings, match the coating, class and color to that of the chain link fabric.

j. COLORBOND® Polymer coated gate frames and gateposts; match the coating type and color to that specified for the fence framework. Moveable parts such as hinges, latches and drop rods may be field coated using a liquid polymer touch up.

k. Coated fencing materials shall be protected from any and all damage during delivery, storage, and installation. Any damaged, scraped, scuffed, etc. fencing materials shall be removed from the site and replaced at no cost to the Owner.

END OF SECTION 011000

SECTION 012500 - PRODUCTS AND SUBSTITUTIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to work of this section.

1.2 DESCRIPTION OF REQUIREMENTS

A. Definitions:

1. "Products" is defined to include purchased items for incorporation into the work, regardless of whether specifically purchased for project or taken from Contractor's stock of previously purchased products.
2. "Materials," is defined as products which must be substantially cut, shaped, worked, mixed, finished, refined or otherwise fabricated, processed, installed or applied to form units of work.
3. "Equipment" is defined as products with operational parts, regardless of whether motorized or manually operated, and particularly including products with service connections (wiring, piping, etc.).
4. Definitions in this paragraph are not intended to negate the meaning of other terms used in contract documents, including "specialties", "systems", "structure", "finishes", "accessories", "furnishings", "special construction", and similar terms, which are self-explanatory and have recognized meanings in the construction industry.

B. Substitutions: The requirements for substitutions do not apply to specified Contractor options on products and construction methods. Revisions to contract documents, where requested by Owner, Architect or Engineer, are "changes" not "substitutions."

1. Requested substitutions during bidding period, which have been accepted prior to Contract Date, are included in contract document and are not subject to requirements for substitutions as specified herein. Contractor's determination of and compliance with governing regulations and orders issued by governing authorities do not constitute "substitutions" and do not constitute a basis for change orders, except as provided for in contract documents.
2. Otherwise, Contractor's requests for changes in products, materials and methods of construction required by contract documents are considered requests for "substitutions", and are subject to requirements hereof.

C. Standards: Refer to Division 1 section, "Definitions and Standards", for applicability of industry standards to products of project, and for acronyms used in text of specification sections.

1.3 QUALITY ASSURANCE

A. Source Limitations: To the greatest extent possible, for each unit of work provide products, materials or equipment of a singular generic kind and from a single source.

B. Compatibility of Options: Where more than one choice is available as options for Contractor's selection of a product or material, select an option which is compatible with other products and materials already selected. Total compatibility among options is not assured by limitations within contract documents, but must be provided by Contractor. Compatibility is a basic general requirement of product/material selections.

1.4 SUBMITTALS

A. Requests for Substitutions: Submit 1 digital PDF copy, fully identified for product or method being replaced by substitution, including related specification section and drawing number(s), and fully documented to show compliance with requirements for substitutions. Include product data/drawings, description of methods, samples where applicable, Contractor's detailed comparison of significant qualities between specified item and proposed substitution, statement of effect on construction time and coordination with other affected work, cost information or proposal, and Contractor's statement to the effect that proposed substitution will result in overall work equal to or better than work originally indicated.

1.5 PRODUCT DELIVERY, STORAGE, HANDLING

A. General: Deliver, handle and store products in accordance with manufacturer's recommendations and by methods and means which will prevent damage, deterioration, and loss including theft. Control delivery schedules to minimize long-term storage of products at site and over-crowding of construction spaces. In particular, provide delivery/installation coordination to ensure minimum holding or storage times for products recognized to be flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other sources of loss.

1.6 WARRANTIES (GUARANTEES)

A. Categories of Specific Warranties: Warranties on the work are in several categories, including those of General Conditions, and including (but not necessarily limited to) the following specific categories related to individual units of work specified in sections of Divisions 2 through 33 of these specifications:

1. Special Project Warranty (Guarantee): A warranty specifically written and signed by Contractor for a defined portion of the work and, where required, countersigned by subcontractor, installer, manufacturer or other entity engaged by Contractor.
2. Specified Product Warranty: A warranty which is required by contract documents, to be provided for a manufactured product incorporated into the work, regardless of whether manufacturer has published a similar warranty without regard for specific incorporation of product into the work, or has written and executed a special project warranty as a direct result of contract document requirements.

3. Coincidental Product Warranty: A warranty which is not specifically required by contract documents (other than as specified in this Section) but which is available on a product incorporated into the work by virtue of the fact that manufacturer of product has published warranty in connection with purchases and uses of product without regard for specific applications except as otherwise limited by terms of warranty.

B. Refer to individual sections of Divisions 2 through 16 for the determination of units of work which are required to be specifically or individually warranted, and for the specific requirements and terms of those warranties (or guarantees).

C. For product warranties not specifically described in Divisions 2 through 33, the Contractor shall and does hereby warrant and/or guarantee the following:

1. **For a period of two years from date of substantial completion all moveable or adjustable work shall remain in perfect working order, including hardware, doors, windows, drawers, apparatus, machinery, electrical equipment, valves, appliances, controls, devices, and all equipment to which this heading is applicable**.

D. General Limitations: It is recognized that specific warranties are intended primarily to protect Owner against failure of the work to perform as required, and against deficient, defective and faulty materials and workmanship, regardless of sources. Except as otherwise indicated, specific warranties do not cover failures in the work which result from: 1) unusual and abnormal phenomena of the elements; 2) the Owner's misuse, maltreatment or improper maintenance of the work; 3) vandalism after time of substantial completion: or 4) insurrection or acts of aggression including war.

E. Related Damages and Losses: In connection with Contractor's correction of warranted work which has failed, remove and replace other work of project which has been damaged as a result of such failure, or must be removed and replaced to provide access for correction of warranted work.

1. The Contractor shall respond within seven (7) calendar days after notice of observed defects has been given and he shall proceed to immediately remedy these defects.
2. Should the Contractor fail to respond to the notice or not remedy those defects, the Owner will have this work corrected at the expense of the Contractor.

F. Reinstatement of Warranty Period: Except as otherwise indicated, when work covered by a special project warranty or product warranty has failed and has been corrected by replacement or restoration, reinstate warranty by written endorsement, starting on date of acceptance of replaced or restored work, for a period of time ending upon date original warranty would have expired if there had been no failure.

G. Replacement Cost, Obligations: Except as otherwise indicated, costs of replacing or restoring failing warranted units or Products is Contractor's obligation, without regard for whether Owner has already benefited from use through a portion of anticipated useful service lives.

H. Contractor's Procurement Obligations: Do not purchase, subcontract for, or allow others to purchase or sub-subcontract for materials or units of work for project where a special project warranty, specified product warranty, certification or similar commitment is

required, until it has been determined that entities required to countersign such commitments are willing to do so.

PART 2 - PRODUCTS

2.1 GENERAL PRODUCT COMPLIANCES

A. General: The compliance requirements, for individual products as indicated in contract documents, are multiple in nature and may include generic, descriptive, proprietary, performance, prescriptive, compliance with standards, compliance with codes, conformance with graphic details and other similar forms and methods of indicating requirements, all of which must be complied with. No extension of time or substitution of material will be allowed because of ill-timed procurement procedures.

B. Material and Product Selection: It is the Contractor's responsibility to ascertain that all materials and products selected by him or for him by his subcontractors and material suppliers, conform with requirements of the Contract Documents. Proposals shall be based only upon materials, products and equipment as specified or approved by written addendum issued by Architect prior to receipt of proposal. No substitution will be considered due to failure to comply with this requirement. Contractor's options for selecting products are limited by contract document requirements, and governing regulations, and are not controlled by industry traditions or procedures experienced by Contractor on previous construction projects. Required procedures include, but are not necessarily limited to, the following for various indicated methods of specifying:

1. Single Product/Manufacturer Name: Provide product indicated, except advise Architect/Engineer before proceeding, where known that named product is not a feasible or acceptable selection.
2. Two or More Product/Manufacturer Names: Provide one of the named products, at Contractor's option; but excluding products which do not comply with requirements. Do not provide or offer to provide an unnamed product, except where none of named products comply with requirements or are a feasible selection; advise Architect/Engineer before proceeding.
3. "Or Approved": Where named products in specifications text are accompanied by the term "or approved" or other language of similar effect, comply with those contract document provisions concerning "substitutions" for obtaining Architect's/Engineer's approval to provide an unnamed product.
4. "Named", except as otherwise indicated, is defined to mean manufacturer's name for product, as recorded in published product literature, of latest issue as of date of contract documents. Refer requests to use products of a later (or earlier) model to Architect/Engineer for acceptance before proceeding.
5. Standards, Codes and Regulations: Where only compliance with an imposed standard, code or regulation is required, selection from among products which comply with requirements including those standards, codes and regulations, is Contractor's option.
6. Performance Requirements: Provide products which comply with specific performances indicated, and which are recommended by manufacturer (in published product literature or by individual certification) for application indicated. Overall performance of a product is implied where that product is specified with only certain specific performance requirements.
7. Visual Matching: Where matching with an established sample is required, final judgment of whether a product proposed by Contractor matches sample

satisfactorily is Architect's judgment. Where no product within specified cost category is available which matches sample satisfactorily and complies with requirements, comply with contract document provisions concerning "substitutions" and "change orders" for selection of a matching product outside established cost category or of a product not complying with requirements.

8. Visual Selection: Except as otherwise indicated, where specified product requirements include "...as selected from manufacturer's standard colors, patterns, textures..." or words of similar effect, the selection of manufacturer and basic product (complying with requirements) is Contractor's option, and subsequent selection of color, pattern and texture is Architect's selection. Where specified product requirements include "...as selected from standard colors, patterns, textures available within the industry...". or words to that effect. selection of product (complying with requirements, and within established cost category) is Architect's selection, including designation of manufacturer where necessary to obtain desired color, pattern or texture.

2.2 SUBSTITUTIONS

A. Conditions: Contractor's request for substitution will be received and considered when extensive revisions to contract documents are not required and changes are in keeping with general intent of contract documents; when timely, fully documented and properly submitted; and when one or more of following conditions is satisfied, all as judged by Architect/Engineer. Otherwise, requests will be returned without action except to record non-compliance with these requirements.

1. Where request is directly related to an "or equal" clause or other language of same effect in contract documents.
2. Where required product, material or method cannot be provided within Contract Time, but not as a result of Contractor's failure to pursue the work promptly or to coordinate various activities properly.
3. Where required product, material or method cannot be provided in a manner which is compatible with other materials of the work, or cannot be properly coordinated therewith, or cannot be warranted as required, or cannot be used without adversely affecting Owner's insurance coverage on completed work, or will encounter other substantial non-compliances which are not possible to otherwise overcome except by making requested substitution, which Contractor thereby certifies to overcome such non-compatibility, non-coordination, non-warranty, non-insurability or other non-compliance as claimed.
4. Where required product, material or method cannot receive required approval by a governing authority, and requested substitution can be so approved.

B. By making requests for substitutions, the Contractor:

1. represents that he has personally investigated the proposed product and determined that it is equal or superior in all respects to that specified;
2. represents that he will provide the same warranty for the substitution that he would for that specified;
3. certifies that the cost data presented is complete and includes all related costs under this Contract and includes all related costs under separate contracts but excludes the Architect's redesign costs, and waives all claims for additional costs related to the substitution which subsequently become apparent; and

4. will coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.

C. Work-Related Submittals: Contractor's submittal of, and Architect's/Engineer's acceptance of, shop drawings, product data or samples which relate to work not complying with requirements of contract documents does not constitute an acceptable and valid request for a substitution nor approval thereof.

2.3 GENERAL PRODUCT REQUIREMENTS

A. General: Provide products which comply with requirements, and which are undamaged and unused at time of installation, and which are complete with accessories, trim, finish, safety guards and other devices and details needed for a complete installation and for intended use and effect.

1. Standard Products: Where available, provide standard products of types that have been produced and used previously and successfully on other projects and in similar applications.
2. Continued Availability: Where additional amounts of a product, by nature of its application, are likely to be needed by Owner at a later date for maintenance and repair or replacement work, provide a standard, domestically produced product which is likely to be available to Owner at such later date.

B. Nameplates: Except as otherwise indicated for required approval labels and operating data, do not permanently attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products which will be exposed to view either in occupied spaces or on exterior of the work.

1. Labels: Locate required labels and stamps on a concealed surface or, where required for observation after installation, on an accessible surface which, in occupied spaces, is not conspicuous.
2. Equipment Nameplates: Provide permanent nameplate on each item of service-connected or power operated equipment. Indicate manufacturer, product name, model number, serial number, capacity, speed, ratings and similar essential operating data. Locate nameplates on an easily accessed surface which, in occupied spaces, is not conspicuous.

END OF SECTION 012500

SECTION 013100 - PROCEDURES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to work of this section.

1.2 DESCRIPTION OF WORK

A. The types of minimum requirements for procedures and performance or control work of a general nature include but are not necessarily limited to the following categories:

1. Coordination and meetings.
2. Request for Information
3. Administrative/supervisory personnel.
4. Surveys and records or reports.
5. Limitations for use of site.
6. Special reports.
7. Tradespeople and workmanship standards.
8. Inspections, tests and reports.
9. General installation provisions.
10. Cutting and patching.
11. Cleaning and protection.
12. Conservation and salvage.

1.3 COORDINATION AND MEETINGS

A. General: Contractor shall prepare a written memorandum of general instructions on required coordination activities including notices/reports/meetings, and shall distribute memorandum to each major subcontractor, and to each other separate contractor where interfacing of work is required.

B. Monthly Coordination Meeting: In addition to specific preinstallation meetings and coordination meetings for each major element of work, Contractor shall schedule and hold monthly general project coordination meetings. Require representation at meeting by every major subcontractor currently involved in the Work. Conduct meetings in a manner which will resolve coordination problems. Record results of meetings and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

1.4 REQUEST FOR INFORMATION (RFI)

A. General: Immediately on discovery of the need for additional information, clarification, or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI on a form acceptable to the Architect/Engineer.

1. Architect will return without response those RFIs submitted to Architect by other entities controlled by Contractor.
2. Coordinate and submit RFIs in a prompt manner to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following as appropriate:

1. Project name.
2. Owner name.
3. Name of Architect.
4. Date.
5. Name of Contractor.
6. RFI number, numbered sequentially.
7. RFI subject.
8. Specification Section number and title and related paragraphs, as appropriate.
9. Drawing number and detail references, as appropriate.
10. Field dimensions and conditions, as appropriate.
11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
12. Contractor's signature.
13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.

    a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.

C. RFI Forms: Software-generated form with substantially the same content as indicated above, and acceptable to Architect.

1. Attachments shall be electronic files in PDF format.

D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow 7 days for Architect's response for each RFI.

1. The following Contractor-generated RFIs will be returned without action:

    a. Requests for approval of submittals.
    b. Requests for approval of substitutions.
    c. Requests for approval of Contractor's means and methods.
    d. Requests for coordination information already indicated in the Contract Documents.
    e. Requests for adjustments in the Contract Time or the Contract Sum.
    f. Requests for interpretation of Architect's actions on submittals.
    g. Incomplete RFIs or inaccurately prepared RFIs.

2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt by Architect of additional information.

E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log when requested.

F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect 3 days if Contractor disagrees with response.

1.5 ADMINISTRATIVE/SUPERVISORY PERSONNEL

A. General: In addition to a General Superintendent and other administrative and supervisory personnel required for performance of the work, provide specific coordinating personnel as specified herein.

B. Project Coordinator: Provide a Project Coordinator who is experienced in administration and supervision of site work construction including mechanical and electrical work, and who is hereby authorized to act as the general coordinator of all subcontractors and phases of work.

1.6 SURVEYS AND RECORDS/REPORTS

Establish and maintain bench marks and other dependable markers to set lines and levels for the work as needed to properly locate each element of entire project. Calculate, measure and verify that required dimensions are correct as shown. Advise Architect promptly upon detection of any deviations.

1.7 LIMITATIONS FOR USE OF SITE

A. General: In addition to site utilization limitations and requirements shown on drawings, and indicated by other contract documents, administer allocation of available space equitably among entities needing access and space, so as to produce best overall efficiency in performance of total work of project. Schedule deliveries so as to minimize space and time requirements for storage of materials and equipment on site.

B. Construction Personnel Parking: Contractor shall advise all employees, subcontractors and other entities that parking must occur only on the immediate project site.

C. Disposal of Waste Materials: Do not dispose of waste materials on the site, either by burial or burning.

1.8 INSPECTIONS, TESTS AND REPORT

A. General: Required inspection and testing services are intended to assist in determination of probable compliances of work with requirements, but do not relieve Contractor of responsibility for those compliances, or for general fulfillment of requirements of contract documents. Specified inspections and tests are not intended to limit Contractor's quality control program. Afford reasonable access to agencies performing tests and inspections.

B. Owner's Tests: Where tests or inspections are indicated as Owner's responsibility, Owner will engage independent testing agency to perform required services.

C. Contractor shall pay for all retests to meet standards specified; be responsible for and pay cost of delivery of test samples to agency's laboratory. Advise Architect promptly upon detection of any deviations.

D. Where tests are indicated as Contractor's responsibility, engage independent commercial testing laboratory; pay for all tests, retests and test sample delivery costs.

E. Reports: Submit test/inspection reports, in duplicate to Architect/Engineer except as otherwise indicated.

PART 2 - PRODUCTS (not applicable)

PART 3 - EXECUTION

3.1 GENERAL INSTALLATION PROVISIONS

A. Installer's Inspection of Conditions: Require Installer of each major unit of work to inspect substrate to receive work, and conditions under which work will be performed, and to report (in writing) unsatisfactory conditions. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to Installer.

B. Manufacturer's Instructions: Where installations include manufactured products, comply with manufacturer's applicable instructions and recommendations for installation, to extent these are more explicit or more stringent than requirements indicated in contract documents.

C. Inspect each item of materials or equipment immediately prior to installation, and reject damaged and defective items.

D. Provide attachment and connection devices and methods of securing work properly as it is installed; true to line and level, and within recognized industry tolerances if not otherwise indicated. Allow for expansions and movements. Provide uniform joint widths in exposed work, organized for best possible visual effect. Refer questionable visual-effect choices to Architect for final decision.

E. Recheck measurements and dimensions of the work, as an integral step of starting each installation.

F. Install work-during conditions of temperature, humidity, exposure, forecasted weather, and status of project completion which will ensure best possible results for each unit of work, in coordination with entire work. Isolate each unit of work from non-compatible work, as required to prevent deterioration.

G. Coordinate enclosure of work with required inspections and tests, so as to minimize necessity of uncovering work for that purpose.

H. Mounting Heights: Where mounting heights are not indicated, mount individual units of work at industry-recognized standard mounting heights for applications indicated. Refer questionable mounting height choices to Architect/Engineer for final decision.

3.2 CUTTING AND PATCHING

A. General: Submit proposed cutting and patching to Architect/Engineer for approval before proceeding. Do not cut-and-patch operational elements and safety-related components in a manner resulting in reduction of capacities to perform in manner intended or resulting in decreased operational life, increased maintenance, or decreased safety.

1. Do not cut-and-patch work which is exposed on exterior or exposed in occupied spaces, in a manner resulting in reduction of visual qualities or resulting in substantial evidence of cut-and-patch work, both as judged solely by Architect. Remove and replace work judged by Architect to be cut-and-patched in a visually unsatisfactory or otherwise objectionable manner.

B. Materials: Except as otherwise indicated or approved by Architect/Engineer, provide materials for cutting-and-patching which will result in equal-or-better work than work being cut-and-patched; in terms of performance characteristics and including visual effect where applicable. Use materials identical with original materials where feasible and where recognized that satisfactory results can be produced thereby.

C. Temporary Support and Protection: Provide adequate temporary support for work to be cut, to prevent failure. Do not endanger other work. Provide adequate protection of other work during cutting and patching, to prevent damage; and provide protection of the work from adverse weather exposure.

D. Cut work by methods least likely to damage work to be retained and work adjoining.

1. Where physical cutting action is required, cut work with sawing and grinding tools, not with hammering and chopping tools. Core drill openings through concrete work.
2. Comply with the requirements of applicable sections of Division 2 where cutting-and-patching requires excavating and backfilling.

E. Patch with seams which are durable and as invisible as possible. Comply with specified tolerances for the work. Where feasible, inspect and test patched areas to demonstrate integrity of work.

F. Restore exposed finishes of patched areas; and, where necessary extend finish restoration onto retained work adjoining, in a manner which will eliminate evidence of patching.

3.3 CLEANING AND PROTECTION:

A. General: During handling and installation of work at project site clean and protect work in progress and adjoining work on a basis of perpetual maintenance. Apply suitable protective covering on newly installed work where reasonably required to ensure freedom from damage or deterioration at time of substantial completion; otherwise, clean and perform maintenance on newly installed work as frequently as necessary through remainder of construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

B. Limiting Exposure of Work: To extent possible through reasonable control and protection methods, supervise performance of work in a manner and by means which will ensure that none of the work, whether completed or in progress, will be subjected to harmful, dangerous, damaging, or otherwise deleterious exposures during construction period.

END OF SECTION 013100

SECTION 013200 - SCHEDULES, REPORTS, PAYMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to work of this section.

1.2 COORDINATION

A. Coordinate timing and the listing of reports/activities required. In particular, provide close coordination of progress schedule, schedule of values, listing of subcontracts, schedule of submittals, progress reports, and payment requests.

1.3 PROGRESS SCHEDULE

A. Bar-Chart Schedule: Within 5 days after contract award, submit a comprehensive bar-chart type progress schedule indicating (by stage-coded symbols) a time bar for each major category or unit of work to be performed at site, and including minor units which are, nevertheless, involved in overall sequencing of the work. Arrange schedule to graphically show major sequences required in intermeshing of work, and to show how substantial completion is scheduled to allow for Architect's certification thereto. Prepare and maintain schedule on sufficiently wide sheet or series of sheets, of stable transparency or other reproducible stock, to show required data clearly for entire Construction Time, and to permit reproduction for required distribution.

1. Individual Work Stages: By uniform targeted symbols and cross-hatched bars, show significant stages for each category or unit of work, including (where applicable), but not necessarily limited to, subcontract letting, submittals, purchases, mock-ups, fabrication, sample testing, deliveries, installation, testing, adjusting, curing, start up and placement into final use and operation. As each unit of work progresses, mark each bar with a contrasting mark to show actual percentage-of-completion.
2. Area Separations: Arrange schedule with an individual time bar for each major area of construction of each major category or unit of work where it must be sequenced or intermeshed with other work as needed for structural completion, permanent space enclosure, and completion of mechanical/electrical work for overall work in that area.
3. Cost Correlation: Immediately below date line at heading of chart, provide a double-line cost correlation line ("precalculated" and "actual") to show dollar-volume of work performed as of same dates used for preparation of payment requests. Refer to subsequent article for cost reporting and payment procedures. Use those same dates as primary vertical lines of schedule. In so far as it is practical to do so, use same units of work in progress schedule as indicated in the "schedule of values" required by General Conditions and further specified herein.
4. Superimpose an S-curve on schedule (only first sheet for multiple-sheet schedule) to show "precalculated" dollar-volume against time at any point during Contract

Time; with a double column of figures in left-hand margin ranging from zero dollars to Contract Sum, and from zero percent to 100. As work progresses and on each date used in payment requests, plot a second S-curve showing "actual" dollar-volume of work performed.

5. Distribution: Following initial submittal to and response by Architect/Engineer, print and distribute progress schedule to Architect/Engineer (2 copies). Owner, separate contractors (if any), principal subcontractors and suppliers or fabricators, and others with a need-to-know schedule-compliance requirement. Post copies in field (temporary) offices. Distribute and post subsequent updated issues to same entities, when revisions are made; except delete entities from distribution when they have completed assigned work and are no longer involved in performance of scheduled work.

B. CPM progress scheduling or other approved methods may be substituted for bar-chart specified, at Contractor's option.

1.4 PRE-CONSTRUCTION CONFERENCE

A. The Architect shall schedule a pre-construction meeting as soon after contract award as possible. This meeting shall be attended by representatives of the Owner, the Contractor, the major subcontractors, and the Architect.

B. Purpose of meeting will be to review each entity's present and future needs, discuss proposed work schedules, and requirements of the contract documents.

1.5 SCHEDULE OF VALUES

A. General: Prepare schedule of values, as required by General Conditions, in coordination with preparation of progress schedule. Correlate line items with other administrative schedules and forms required for the work, including progress schedule, payment request form, listing of subcontractors, schedule of alternates, listing of products and principal suppliers and fabricators. Provide breakdown of Contract Sum in sufficient detail to facilitate continued evaluation of payment requests and progress reports. Break down principal subcontract amounts into several line items. Round off to nearest whole dollar, but with total equal to Contract Sum. Submit 3 copies of schedule of values to Architect/Engineer.

B. Time Coordination: In coordination of initial submittals and other administrative "start-up" activities, submit schedule of values to Architect/Engineer at earliest feasible date, but in no case later than 7 days before initial payment request is to be submitted.

C. Listing: Arrange schedule with columns to indicate generic name of item, related specification sections, subcontractor, supplier/manufacturer/fabricator, change orders (numbers) which have affected value, dollar value of item, and percentage of Contract Sum (to nearest one-hundredth percent and adjusted to total 100 percent).

D. Margins of Cost: Show line items of indirect costs, and margins on actual costs, only to extent such items will be individually listed in payment requests. In general, establish each item in schedule of values (and in payment requests) to be complete with its total expenses and proportionate share of general overhead and profit margin. Except as otherwise indicated, major cost items, which are not directly cost of actual work-in-

place, such as distinct temporary facilities, may be either shown as line items in schedule of values or distributed as general overhead expense, at Contractor's option.

E. Schedule Updating: Update and resubmit schedule of values only if actual performance of the work involves necessary changes of substance to values previously listed. Submit approved change order amounts as a new line item.

1.6 PAYMENT REQUESTS

A. General: Except as otherwise indicated, sequence of progress payments is to be regular, and each must be consistent with previous applications and payments. It is recognized that certain applications involve extra requirements, including initial application, application at times of substantial completion, and final payment application.

B. Payment Application Times: The date for each progress payment is indicated in Owner-Contractor Agreement. The period of construction work covered by each payment request is period indicated in Owner-Contractor Agreement.

C. Payment Application Forms: Use forms provided in this specification. Copies available from the Architect.

D. Application Preparation: Except as otherwise indicated, complete every entry provided for on the form, including notarization and execution by authorized persons. Incomplete applications will be returned by Architect/Engineer without action. Entries must match current data of schedule of values and progress schedule and report.

E. Initial Payment Application: The principal administrative actions and submittals which must precede or coincide with submittal of first payment application can be summarized as follows, but not necessarily by way of limitation:

1. Listing of subcontractors and principal suppliers and fabricators.
2. Schedule of values.
3. Progress schedule (preliminary if not final).
4. Schedule of principal products and manufacturers.
5. Copies of acquired building permits and similar authorizations and licenses from governing authorities for current performance of the work.
6. Submittal process shall be complete unless agreed to in advance.

F. Final Payment Application: The administrative actions and submittals which must precede or coincide with submittal of final payment application can be summarized as follows, but not necessarily by way of limitation:

1. Warranties, (guarantees) maintenance agreements and similar provisions of contract documents.
2. Test/adjust/balance records, maintenance instructions, meter readings, start-up performance reports, and similar change-over information germane to Owner's occupancy, use, operation and maintenance of completed work.
3. Completion of project closeout requirements.
4. Completion of items specified for completion beyond time of substantial completion.
5. Removal of temporary facilities, services, surplus materials, rubbish and similar elements.

6. Change over of door locks and other Contractor's access provisions to Owner's property.
7. Consent of surety for final payment and payment certifications.

G. Application Transmittal: Submit one executed copies of each payment application. Format shall be electronic PDF.

END OF SECTION 013200

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to work of this section.

1.2 DESCRIPTION OF REQUIREMENTS

A. The types of submittal requirements specified in this section include shop drawings, product data, samples and miscellaneous work-related submittals. Individual submittal requirements are specified in applicable sections for each unit of work. Refer to other Division-l sections and other contract documents for requirements of administrative submittals.

B. Definitions: Work-related submittals of this section are categorized for convenience as follows:

1. Shop drawings include specially-prepared technical data for this project, including drawings, diagrams, performance curves, data sheets, schedules, templates, patterns, reports, calculations, instructions, measurements and similar information not in standard printed form for general application to a range of similar projects.
2. Product data include standard printed information on materials, products and systems; not specially-prepared for this project, other than the designation of selections from among available choices printed therein.
3. Samples include both fabricated and unfabricated physical examples of materials, products and units of work; both as complete units and as smaller portions of units of work; either for limited visual inspection or (where indicated) for more detailed testing and analysis.

C. Miscellaneous submittals related directly to the work (non-administrative) include warranties, maintenance agreements, workmanship bonds, project photographs, survey data and reports, physical work records, quality testing and certifying reports, copies of industry standards, record drawings, field measurement data, operating and maintenance materials, overrun stock, and similar information, devices and materials applicable to the work and not processed as shop drawings, product data or samples.

1.3 GENERAL SUBMITTAL REQUIREMENTS

A. Coordination and Sequencing: Coordinate preparation and processing of submittals with performance of the work so that work will not be delayed by submittals. Coordinate and sequence different categories of submittals for same work so that one will not be delayed for coordination of Architect/Engineer's review with another.

B. Preparation of Submittals: Provide permanent marking on each submittal to identify project, date, Contractor, subcontractor, submittal information. Show Contractor's executed review and approval marking and provide space for Architect's/Engineer's "Action" marking.

1.4 SPECIFIC-CATEGORY SUBMITTAL REQUIREMENTS

A. Shop Drawings: Provide newly prepared information, with graphic information at accurate scale. Show dimensions and notes which are based on field measurement. Identify materials and products in the work shown. Indicate compliance with standards, and special coordination requirements. Do not allow shop drawing copies without appropriate final "Action" markings by Architect/Engineer to be used in connection with the work.

1. Initial Submittal: One electronic PDF file.
2. Final Submittal: One electronic PDF file.

B. Product Data: Collect required data into one submittal for each unit of work or system; and mark each copy to show which choices and options are applicable to project. Include manufacturer's standard printed recommendations for application and use, compliance with standards, application of labels and seals, notation of field measurements which have been checked, and special coordination requirements.

1. Submittals: Do not submit product data, or allow its use on the project, until compliance with requirements of contract documents has been confirmed by the Contractor. Submittal is for information and record, unless otherwise indicated. Initial submittal is final submittal unless returned promptly by Architect/Engineer, marked with an "Action" which indicates an observed noncompliance. Submit one electronic PDF file.
2. Installer's Copy: Do not proceed with installation of materials, products or systems until final copy of applicable product data is in possession of Installer.

C. Samples: Provide units identical with final condition of proposed materials or products for the work. Include "range" samples (not less than 3 units) where unavoidable variations must be expected. Samples are submitted for review and confirmation of color, pattern, texture and "kind" by the Architect/ Engineer. Architect/Engineer will not "test" samples (except as otherwise indicated) for compliance with other requirements, which are therefore the exclusive responsibility of Contractor.

D. Inspection and Test Reports: Classify each as either "shop drawing" or "product data" depending upon whether report is uniquely prepared for project or a standard publication of workmanship control testing at point of production, and process accordingly.

E. Warranties: Refer to "Products" section for specific general requirements on warranties, product/workmanship bonds, and maintenance agreements.

F. Closeout Submittals: Refer to individual work sections and to "closeout" sections for specific requirements on submittal of closeout information, materials, tools and similar items.

1. Record Document Copies: Furnish one set.

2. Operation & Maintenance Manuals: Furnish electronic PDF file for review. Furnish final electronic PDF file and up to 2 hard copies.
3. Materials and Tools: Refer to individual work sections for required quantities of spare parts, extra and overrun stock, maintenance tools and devices, keys, and similar physical units to be submitted.

G. General Distribution: Provide additional distribution of submittals (not included in foregoing copy submittal requirements) to subcontractors, suppliers, fabricators, installers, and others as necessary for proper performance of the work. Include such additional copies in transmittal to Architect/Engineer where required to receive "Action" marking before final distribution. Record distributions on transmittal forms.

1.5 ACTION ON SUBMITTALS

A. Architect's/Engineer's Action: Where action and return is required or requested, Architect/Engineer will review each submittal, mark with "Action", and where possible, return within two weeks of receipt. Where submittal must be held for coordination, Contractor will be so advised by Architect/Engineer without delay.

B. Response Form: Architect's/Engineer's submittal response form, for use on submittals to be returned to Contractor, is self-explanatory as marked.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013300

SECTION 014200 - DEFINITIONS AND STANDARDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to work of this section.

1.2 DEFINITIONS

A. General Explanation: A substantial amount of specification language constitutes definitions for terms found in other contract documents, including drawings which must be recognized as diagrammatic in nature and not completely descriptive of requirements indicated thereon. Certain terms used in contract documents are defined generally in this article. Definitions and explanations of this section are not necessarily either complete or exclusive, but are general for the work to extent not stated more explicitly in another provision of contract documents.

1. General Requirements: The provisions or requirements of Division 1 sections. General Requirements apply to entire work of Contract and, where so indicated, to other elements which are included in project.
2. Indicated: The term "Indicated" is a cross-reference to details, notes or schedules on drawings, to other paragraphs or schedules in the specifications, and to similar means of recording requirements in contract documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used in lieu of "indicated," it is for purpose of helping reader locate cross-reference, and no limitation of location is intended except as specifically noted.
3. Directed, Requested, etc.: Where not otherwise explained, terms such as "directed," "requested," "authorized," "selected," "approved," "required," "accepted," and "permitted" mean "directed by Architect/Engineer," "requested by Architect/Engineer," etc. However, no such implied meaning will be interpreted to extend Architect's/Engineer's responsibility into Contractor's area of construction supervision.
4. Approve: Where used in conjunction with Architect's/Engineer's response to submittals, requests, applications, inquiries, reports and claims by Contractor, the meaning of term "approved" will be held to limitations of Architect's/Engineer's responsibilities and duties as specified in General and Supplementary Conditions. In no case will "approval" by Architect/Engineer be interpreted as a release of Contractor from responsibilities to fulfill requirements of contract documents.
5. Project Site: The space available to Contractor for performance of the work, either exclusively or in conjunction with others performing other work as part of the project. The extent of project site is shown on drawings, and may or may not be identical with description of land upon which project is to be built.
6. Furnish: Except as otherwise defined in greater detail, term "furnish" is used to mean supply and deliver to project site, ready for unloading, unpacking, assembly, installation, etc., as applicable in each instance.
7. Install: Except as otherwise defined in greater detail, term "install" is used to describe operations at project site including unloading, unpacking, assembly,

erection, placing, anchoring, applying, working to dimension, finishing, curing protecting, cleaning and similar operations, as applicable in each instance.

8. Provide: Except as otherwise defined in greater detail, term "provide" means furnish and install, complete and ready for intended use, as applicable in each instance.
9. Installer: The entity (person or first engaged by Contractor or its subcontractor or sub-subcontractor for performance of a particular unit of work at project site, including installation, erection, application and similar required operations. It is a general requirement that such entities (Installers) be expert in operations they are engaged to perform.
10. Testing Laboratory: An independent entity engaged to perform specific inspections or tests of the work, either at project site or elsewhere; and to report and (if required) interpret results of those inspections or tests.
11. Owner's Representative: Architect/Engineer.

1.3 FORMAT AND SPECIFICATION EXPLANATIONS

A. Specification Production: None of these explanations will be interpreted to modify substance of requirements. Portions of these specifications have been produced by Architect's/Engineer's standard methods of editing master specifications, and may contain minor deviations from traditional writing formats. Such deviations are a normal result of this production technique. and no other meaning will be implied or permitted.

B. Format Explanation: The format of principal portions of these specifications can be described as follows; although other portions may not fully comply and no particular significance will be attached to such compliance or non-compliance:

C. Sections and Divisions: For convenience, basic unit of specification text is a "section," each unit of which is named and numbered. These are organized into related families of sections, and various families of sections are organized into "divisions," which are recognized as the present industry-consensus on uniform organization and sequencing of specifications. The section title is not intended to limit meaning or content of section, nor to be fully descriptive of requirements specified therein, nor to be an integral part of text.

D. Overlapping and Conflicting Requirements: Where compliance with 2 or more standards or sets of requirements is specified, or drawn and overlapping of those different standards or requirements establishes different or conflicting minimums or levels of quality, most stringent requirement (which is generally recognized to be also most costly) is intended and will be enforced, unless specifically detailed language written into contract documents (not by way of reference to an industry standard) clearly indicates that a less stringent requirement is to be fulfilled. Refer apparently-equal-but-different requirements, and uncertainties as to which level of quality is more stringent, to Architect/Engineer for a decision before proceeding.

1. Contractor's Options: Except for overlapping or conflicting requirements, where more than one set of requirements are specified for a particular unit of work, option is intended to be Contractor's regardless of whether specifically indicated as such.

E. Minimum Quality/Quantity: In every instance, quality level or quantity shown or specified is intended as minimum for the work to be performed or provided. Except as

otherwise specifically indicated, actual work may either comply exactly with that minimum (within specified tolerances), or may exceed that minimum within reasonable limits. In complying with requirements, indicated numeric values are either minimums or maximums as noted or as appropriate for context of requirements. Refer instances of uncertainty to Architect/Engineer for decision before proceeding.

F. Trades: Except as otherwise indicated, the use of titles such as "carpentry" in specification text, implies neither that the work must be performed by an accredited or unionized tradesperson of corresponding generic name (such as "carpenter"), nor that specified requirements apply exclusively to work by tradesperson of that corresponding generic name.

G. Abbreviations: The language of specifications and other contract documents is of the abbreviated type in certain instances, and implies words and meanings which will be appropriately interpreted. Actual word abbreviations of a self-explanatory nature have been included in texts. Specific abbreviations have been established, principally for lengthy technical terminology and primarily in conjunction with coordination of specification requirements with notations on drawings and in schedules. These are frequently defined in section at first instance of use. Trade association names and titles of general standards are frequently abbreviated. Singular words will be interpreted as plural and plural words will be interpreted as singular where applicable and where full context of the contract documents so indicates.

1.4 DRAWING SYMBOLS

A. General: Except as otherwise indicated, graphic symbols used on drawings are those symbols recognized in the construction industry for purposes indicated. Refer instances of uncertainty to Architect/Engineer before proceeding.

1.5 INDUSTRY STANDARDS

A. General Applicability of Standards: Applicable standards of construction industry have same force and effect (and are made a part of contract documents by reference) as if copied directly into contract documents, or as if published copies were bound herewith.

1. Referenced standards (referenced directly in contract documents or by governing regulations) have precedence over non-referenced standards which are recognized in industry for applicability to work.
2. Non-referenced standards recognized in the construction industry are hereby defined, except as otherwise limited in contract documents, to have direct applicability to the work, and will be so enforced for performance of the work.

B. Publication Dates: Except as otherwise indicated, where compliance with an industry standard is required, comply with standard in effect as of date of contract documents.

C. Abbreviations and Names: Where acronyms or abbreviations are used in specifications or other contract documents they are defined to mean the industry recognized name of trade association, standards generating organization, governing authority or other applicable to context of text provision. Refer to "Encyclopedia of Associations," published by Gale Research Co.

D. Abbreviations and Names: The following acronyms or abbreviations as referenced in contract documents are defined to mean the associated names. Both names and addresses are subject to change, and are believed to be, but are not assured to be, accurate and up-to-date as of date of contract documents:

AA Aluminum Association
818 Connecticut Ave. NW; Washington DC 20006: 202/862-5100

AAMA Architectural Aluminum Manufacturers Association
35 E. Wacker Drive; Chicago, IL 60601; 312/782-8256

ACI American Concrete Institute
Box 19150; Detroit, MI 48219; 313/532-2600

ACIL American Council of Independent Laboratories
1725 K Street, NW; Washington, DC 20006; 202/659-3766

AGA American Gas Association
1515 Wilson Blvd.; Arlington, VA 22209; 703/841-8400

AIA American Institute of Architects
1735 New York Ave. NW; Washington, DC 20006; 202/626-7474

AISC American Institute of Steel Construction, Inc.
400 N. Michigan Ave.; Chicago, IL 60611: 312/670-2400

AITC American Institute of Timber Construction
333 W Hampden Ave.; Englewood, CO 80110; 303/761-3212

ANSI American National Standards Institute
1430 Broadway; New York, NY 10018; 212/354-3300

APA American Plywood Association
P.O. Box 11700; Tacoma, WA 98411; 206/565-6600

ASGCA American Society of Golf Course Architects
221 N. LaSalle St., Chicago, IL 60601; 312/372-7090

ASHRAE American Society of Heating, Refrigerating & Air-Conditioning Engineers
1791 Tullie Circle, NE; Atlanta, GA 30329: 404/636-8400

ASLA American Society of Landscape Architects
1733 Connecticut Ave., N. W. Washington, DC 20009; 202/466-7730

ASME American Society of Mechanical Engineers
345 East 47th St.; New York, NY 10017; 212/705-7722

ASTM American Society for Testing and Materials
1916 Race St.; Philadelphia, PA 19103; 215/299-5400

AWI Architectural Woodwork Institute
2310 S. Walter Reed Dr.; Arlington, VA 22206; 703/671-9100

AWPA American Wood-Preservers' Association
7735 Old Georgetown Rd.; Bethesda, MD 20814; 301/652-3109

AWPB American Wood Preservers Bureau
P.O. Box 6085; Arlington, VA 22206: 703/931-8180

AWS American Welding Society
P.O. Box 351040; Miami, FL 33135; 305/642-7090

CRSI Concrete Reinforcing Steel Institute
933 Plum Grove Rd.; Schaumburg, IL 60195; 312/372-5059

CS Commercial Standard of NBS (US Dept. of Commerce)
Government Printing Office; Washington DC 20402

FHA Federal Housing Administration (U.S. Dept. of HUD)
451 - 7th St. SW; Washington, DC 20201

FM Factory Mutual Engineering Corp.
1151 Boston-Providence Turnpike; Norwood, MA 02062 617/762-4300

FS Federal Specification (General Services Admin.)
Bldg. 197, Washington Navy Yard SE; Washington DC 20407

GA Gypsum Association
1603 Orrington Ave.; Evanston; IL 60201; 312/491-1744

GCSAA Golf Course Superintendents Association of America
1617 St. Andrews Drive, Lawrence, KS 66046; 913/841-2240

IES Illuminating Engineering Society of North America
345 E. 47th St.: New York NY 10017; 212/644-7926

NAAMM National Association of Architectural Metal Mfrs.
221 N. La Salle St.; Chicago, IL 60601; 312/346-1600

NBS National Bureau of Standards (U.S. Dept. of Commerce)
Gaithersburg, MD 20234; 301/921-1000

NEC National Electrical Code (by NFPA)

NEMA National Electrical Manufacturers Association
2101 L St. NW; Washington DC 20037; 202/457-8400

NFPA National Fire Protection Association
470 Atlantic Ave.; Boston MA 02210; 617/482-8755

NHLA National Hardwood Lumber Association
P.O. Box 34518; Memphis, TN 38104: 901/377-1818

NPA National Particleboard Association
2306 Perkins Pl.; Silver Spring, MD 20910; 301/587-2204

NWMA	National Woodwork Manufacturers Association 205 West Touhy Ave.; Park Ridge, IL 60068; 312/823-6747
OSHA	Occupational Safety & Health Administration (U.S. Dept. of Labor) Government Printing Office: Washington, DC 20402
SD.I.	Steel Door Institute 712 Lakewood Cnt. N.; Cleveland, OH 44107; 216/226-7700
SIGMA	Sealed Insulating Glass Manufacturers Association 111 E. Wacker Dr.; Chicago, IL 60601; 312/644-6610
SMACNA	Sheet Metal & Air Conditioning Contractors' National Association P.O. Box 70; Merrifield, VA 22116
SPIB	Southern Pine Inspection Bureau (Grading Rules) 4709 Scenic Hgy.; Pensacola, FL 32504; 904/434-2611
TIMA	Thermal Insulation Manufacturers Association 7 Kirby Plaza: Mt. Kisco, NY 10549: 914/241-2284
TPI	Truss Plate Institute 100 W. Church St.; Frederick, MD 21701; 301/694-6100
UL	Underwriters Laboratories 333 Pfingsten Rd., Northbrook, IL 60062: 312/272-8800
WCLIB	West Coast Lumber Inspection Bureau (Grading Rules) PO Box 23145; Portland, OR 97223; 503/639-0651
WRI	Wire Reinforcement Institute 7900 Westpark Drive; McLean, VA 22102: 703/790-9790
WWPA	Western Wood Products Association (Grading Rules) 1500 Yeon Blg.: Portland, OR 97204: 503/224-3930
W.W.P.A.	Woven Wire Products Association 108 W. Lake St.; Chicago, IL 60601; 312/332-6502

1.6 SUBMITTALS:

A. Permits, Licenses and Certificates: For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of the work.

PART 2 - PRODUCTS (not applicable)

PART 3 - EXECUTION (not applicable)

END OF SECTION 014200

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to work of this section.

1.2 DESCRIPTION OF REQUIREMENTS

A. Specific administrative and procedural minimum actions are specified in this section, as extensions of provisions in General Conditions and other contract documents. These requirements have been included for special purposes as indicated. Nothing in this section is intended to limit types and amounts of temporary work required, and no omission from this section will be recognized as an indication by Architect/Engineer that such temporary activity is not required for successful completion of the work and compliance with requirements of contract documents. Provisions of this section are applicable to, but not by way of limitation, utility services, construction facilities, security/protection provisions, and miscellaneous facilities.

1.3 QUALITY ASSURANCE

A. Comply with governing regulations and rules/recommendations of franchised utility companies, local ordinances and regulations.

B. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

C. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

D. Accessible Temporary Egress: Comply with applicable ADA provisions in United States Access Boards ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1 and local jurisdiction requirements.

E. Standards: Comply with the requirements of NFPA Code 241, "Building Construction and Demolition Operations", the ANSI-AlO Series standards for "Safety Requirements for Construction and Demolition" and the NECA National Joint Guideline NJG-6 "Temporary Job Utilities and Services".

1.4 JOB CONDITIONS

A. Establish and initiate use of each temporary facility at time first reasonably required for proper performance of the work. Terminate use and remove facilities at earliest reasonable time, when no longer needed or when permanent facilities have, with authorized use, replaced the need.

B. Conditions of Use: Install, operate, maintain and protect temporary facilities in a manner and at locations that will be safe, non-hazardous, sanitary and protective of persons and property, and free of deleterious effects.

PART 2 - PART 3 - PRODUCTS AND EXECUTION

2.1 TEMPORARY UTILITY SERVICES

A. Arrange for local service companies to extend utilities indicated to the project site. Comply with service companies' recommendations on materials and methods, or engage service companies to install services. Locate services to minimize interference with construction operations. Types of temporary services include, but not by way of limitation, the following:

1. Telephone Service in temporary construction office.
2. Water Service and Distribution.
3. Temporary Heating Fuel.
4. Electrical Power.

B. Metering: Provide meters for water and electrical power services. Read meters and record readings weekly, and include in progress report to Architect/Engineer at monthly intervals. Cost of temporary services paid by Contractor.

2.2 TEMPORARY CONSTRUCTION FACILITIES

A. The types of temporary construction facilities required may include, but not by way of limitation, water distribution, drainage, dewatering equipment, enclosure of work, heat, ventilation, electrical power distribution, lighting, hoisting facilities, stairs, ladders, and roads. Provide facilities reasonably required to perform construction operations properly and adequately and in compliance with governing regulations.

B. Temporary Water: Provide water service and distribution piping of sizes and pressures adequate for construction purposes until permanent service is completed. Provide hose lengths sufficient to reach entire area of construction work, not less than 3/4" hose size. Prevent freezing of water distribution by either prompt drainage after each use, or by suitable protection. Maintain 30 PSI minimum water pressure at hose outlets. Protect water source from contamination, provide vacuum breaker.

C. Temporary Enclosure: Provide temporary enclosure to ensure adequate workmanship and protection from weather and unsatisfactory ambient conditions for the work, including enclosure where temporary heat is used. Provide lumber and plywood. Provide tarpaulins with UL label and flame spread of 15 or less; provide translucent type (nylon reinforced polyethylene) where day lighting of enclosed space would be beneficial for workmanship, and reduce use of temporary lighting.

1. At all times provide protection against weather which includes, but not by way of limitation, rain, snow, wind, storms, frost and heat so as to maintain all work, materials, apparatus and fixtures free from injury or damage. Provide all pumps, pipes, equipment and enclosures to secure this protection. At the end of day's work, all new work likely to be damaged shall be covered or otherwise protected.

D. Temporary Heat: Provide temporary heat to protect, dry all work during cold and/or wet weather, to maintain temperatures, conditions indicated by other specification sections for each type of work to be performed.

1. Prior to enclosure provide, maintain self-contained heaters bearing UL or FM approved labels and known to be safe and without deleterious effect on work in place. Vent heaters and equip all units with individual space thermostatic controls. Open fuel oil salamanders, coal, coke or wood burning heaters will not be permitted.

E. Temporary Mechanical Ventilation: Where natural ventilation of work in progress is not sufficient for proper workmanship, either with or without temporary heating, provide power ventilators in conjunction with openings in temporary (or permanent) enclosure work. Provide and operate either exhaust or supply fans/blowers, or both, sufficient to ventilate work adequately.

F. Temporary Electrical Power: Provide weatherproof, grounded, power distribution system sufficient to accommodate construction operations requiring power, use of power tools, lighting, and start-up testing of permanent electric-powered equipment prior to its permanent connection to electrical system. Comply with National Electrical Code (NFPA 70).

G. Temporary Lighting: Provide sufficient temporary lighting to ensure proper workmanship everywhere; by combined use of daylight, general lighting, and portable plug-in task lighting. Provide general lighting with local switching which will enable energy conservation during periods of varying activity (work-in-progress, traffic only, security check, lock-up, etc.). Provide additional lighting on an "as-needed" basis for satisfactory performance of the work.

H. Temporary Access Provisions: Provide ramps, stairs, ladders and similar temporary access elements as reasonably required to perform the work and facilitate its inspection during installation. When permanent stairs are available for access during construction, cover finished surfaces with sufficient protection to ensure freedom from damage and deterioration at time of substantial completion.

2.3 SECURITY/PROTECTION PROVISIONS

A. The types of temporary security and protection provisions required include, but not by way of limitation, fire protection, barricades, warning signs/lights, enclosure/lockup, environmental protection, weather protection and similar provisions intended to minimize property losses, personal injuries and claims for damages at project site. Provide security/protection services and systems in coordination with activities and in a manner to achieve 24-hour, 7-day-per-week effectiveness.

B. Fire Extinguishers: Provide types, sizes, numbers and locations to comply with local ordinances or recommendations of NFPA No. 10.

C. Barricades, Warning Signs and Lights:

1. General: Comply with recognized standards and code requirements for the erection of substantial, structurally adequate barricades where needed to prevent injury and losses. Paint with appropriate colors, graphics and warning signs to

inform personnel at the site and the public, of the hazard being protected against. Provide lighting where appropriate and needed, including flashing red lights where appropriate.

D. Enclosure and Lockup: At earliest possible date, secure against unauthorized entrance at times when personnel are not working. Provide secure temporary enclosures at locations of possible entry, with locked entrances.

E. Environmental Protection Procedures: Provide facilities, establish procedures, and conduct construction activities in a manner that will ensure compliance with regulations controlling construction activities. Enforce strict discipline on activities related to generation of wastes, pollution of air/water/soil, generation of noise, and similar effects that might violate regulations or reasonably irritate persons at or in vicinity of project site.

1. Provide dust suppression controls during all earth work.

2.4 TEMPORARY MISCELLANEOUS FACILITIES

A. The types of miscellaneous temporary facilities required may include, but not by way of limitation, field offices, storage sheds, sanitary facilities, first aid facilities, thermometer, project identification signs, and similar miscellaneous general services, all as may be reasonably required for proficient performance of the work and accommodation of personnel at the site including Owner's and Architect's/ Engineer's personnel. Discontinue and remove temporary support facilities, and make incidental similar use of permanent work of the project, only when and in manner authorized by Architect/ Engineer.

B. Temporary Field Office: Provide adequate office space for field office personnel plus one spare work station for incidental use by subcontractor's, Architect/Engineer's personnel. Provide walls with tack-board material for posting of notices, progress schedule and similar information; shelf space adequate for storage of specifications, shop drawings, manufacturer's data, samples.

C. Temporary Sheds: The Contractor shall provide temporary shed or mobile storage unit for storage, fabrication and similar purposes. Sheds: located where indicated or other suitable arrangements made.

D. Temporary Sanitary Facilities: Beginning at time of start of work, provide and maintain self-contained toilet units of type acceptable to governing authorities, adequate for use by personnel at project site. Provide facilities for male and female personnel when both sexes are working at project site.

E. First Aid Facilities: Provide appropriate first aid kits on site, furnish personnel trained in first aid procedures.

F. Thermometer: Provide accurate thermometer graduated in degrees Fahrenheit; mount on temporary office.

G. Drinking Water: Provide dispenser-type drinking water units with potable water. Furnish paper cups and waste receptacles.

END OF SECTION 015000

SECTION 017700 - PROJECT CLOSEOUT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to work of this section.

1.2 DESCRIPTION OF REQUIREMENTS

A. Definitions: "Closeout" is hereby defined to include general requirements near end of Contract Time in preparation for final acceptance, final payment, normal termination of contract, occupancy by Owner and similar actions evidencing completion of the work. Specific requirements for individual units of work are specified in sections of Divisions 2 through 33. Time of closeout is directly related to "Substantial Completion", and therefore may be either a single time period for entire work or a series of time periods for individual parts of the work which have been certified as substantially complete at different dates. That time variation (if any) shall be applicable to other provisions of this section.

1.3 PREREQUISITES TO SUBSTANTIAL COMPLETION

A. General: Prior to requesting Architect/Engineer's inspection for certification of substantial completion (for either entire work or portions thereof), complete the following and list known exceptions in request:

1. In progress payment request, coincident with or first following date claimed, show either 100% completion for portion of work claimed as "substantially complete", or list incomplete items, value of incompletion, and reasons for being incomplete.
2. Advise Owner of pending insurance change over requirements.
3. Submit specific warranties, workmanship/maintenance bonds, maintenance agreements, final certifications and similar documents.
4. Obtain and submit releases enabling Owner's full and unrestricted use of the work and access to services and utilities, including (where required) occupancy permits, operating certificates, and similar releases.
5. Deliver tools, spare parts, extra stocks of materials, and similar physical items to Owner.
6. Make final change over of locks and transmit keys to Owner, and advise Owner's personnel of change over in security provisions.
7. Complete start-up testing of systems, and instructions of Owner's operating/maintenance personnel. Discontinue (or change over) and remove from project site temporary facilities and services, along with construction tools and facilities, mock ups, and similar elements.
8. Complete final cleaning up requirements, including touch-up painting of marred surfaces.

B. Inspection Procedures: Upon receipt of Contractor's request, Architect/Engineer will either proceed with inspection or advise Contractor of prerequisites not fulfilled. Following initial inspection, Architect/Engineer will either prepare certificate of substantial completion, or advise Contractor of work which must be performed prior to issuance of certificate; and repeat inspection when requested and assured that work has been substantially completed. Results of completed inspection will form initial "punch-list" for final acceptance.

1.4 PREREQUISITES TO FINAL ACCEPTANCE

A. General: Prior to requesting Architect/Engineer's final inspection for certification of final acceptance and final payment, as required by General Conditions, complete the following and list known exceptions (if any) in request:

1. Submit final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
2. Submit final meter readings for utilities, and similar data as of time of substantial completion or when Owner took possession of and responsibility for corresponding elements of the work.
3. Submit Consent of Surety.
4. Submit Affidavit on Behalf of Contractor.

B. Re-inspection Procedure: Upon receipt of Contractor's notice that the work has been completed, including punch-list items resulting from earlier inspections, and excepting incomplete items delayed because of acceptable circumstances, Architect/Engineer will re-inspect the work. Upon completion of re-inspection, Architect/Engineer will either prepare certificate of final acceptance or advise Contractor of work not completed or obligations not fulfilled as required for final acceptance.

1.5 RECORD DOCUMENT SUBMITTALS

A. Record Drawings: Maintain a white-print set (blue-line or black-line) of contract drawings and shop drawings in clean, undamaged condition, with mark-up of actual installations which vary substantially from the work as originally shown. Mark whichever drawing is most capable of showing "field" condition fully and accurately: however, where shop drawings are used for mark-up, record a cross-reference at corresponding location on working drawings. Mark with red erasable pencil and, where feasible, use other colors to distinguish between variations in separate categories of work. Mark up new information that is recognized to be of importance to the Owner, but was for some reason not shown on either contract drawings or shop drawings. Give particular attention to concealed work, which would be difficult to measure and record at a later date. Note related change order numbers where applicable. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on cover of each set. Electronic PDF files are acceptable when approved in advance by the Architect/Engineer.

B. Operations & Maintenance Manuals: Organize maintenance-and-operating manual information into suitable sets of manageable size, and bind into individual binders properly identified and indexed (thumb tabbed). Include emergency instructions, spare parts listing, copies of warranties, wiring diagrams, recommended "turn-around" cycles,

inspection procedures, shop drawings, product data, and similar applicable information. Bind each manual of each set in a heavy-duty 2", 3-ring vinyl-covered binder, and include pocket folders for folded sheet information. Mark identification on both front and spine of each binder.

1. Initial submittal for review shall be electronic PDF file(s).
2. Following any necessary revisions, a final electronic PDF version shall be submitted.
3. Submit up to 2 hard copies following approval of electronic PDF manuals.

C. Refer to individual specification section for specific record document requirements.

PART 2 - PRODUCTS (not applicable)

PART 3 - EXECUTION

3.1 CLOSEOUT PROCEDURES:

A. General Operating/Maintenance Instructions: Arrange for each installer of work requiring continuing maintenance or operation, to meet with Owner's personnel, at project site, to provide basic instructions needed for proper operation and maintenance of entire work. Include instructions by manufacturer's representatives where installers are not expert in the required procedures. Review maintenance manuals, record documentation, tools, spare parts and materials, lubricants, fuels, identification system, control sequences, hazards, cleaning and similar procedures and facilities. For operational equipment, demonstrate start-up, shut-down, emergency operations, noise and vibration adjustments, safety, economy/efficiency adjustments, energy effectiveness and similar operations. Review maintenance and operations in relation with applicable warranties, agreements to maintain, bonds, and similar continuing commitments.

3.2 FINAL CLEANING:

A. General: Special cleaning for specific units of work is specified in sections of Divisions 2 through 33. General cleaning during progress of work is specified in General Conditions and as temporary services in "Temporary Facilities" section of this Division. Provide final cleaning of the work, at time indicated, consisting of cleaning each surface or unit of work to normal "clean" condition expected for a first-class building cleaning and maintenance program. Comply with manufacturer's instructions for cleaning operations. The following are examples, but not by way of limitation, of cleaning levels required:

1. Remove labels which are not required as permanent labels.
2. Clean transparent materials, including mirrors and window/door glass, to a polished condition, removing substances that are noticeable as vision-obscuring materials. Replace broken glass and damaged transparent materials.
3. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of dust, stains, films and similar noticeable distracting substances. Except as

otherwise indicated, avoid disturbance of natural weathering of exterior surfaces. Restore reflective surfaces to original reflective condition.

4. Wipe surfaces of mechanical and electrical equipment clean, remove excess lubrication and other substances. Clean fans, coils, and replace dirty filters.
5. Remove debris and surface dust from limited-access spaces including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics and similar spaces.
6. Clean concrete floors in non-occupied spaces broom clean.
7. Clean plumbing and pumping fixtures free of stains, including those resulting from water exposure.
8. Clean light fixtures and lamps so as to function with full efficiency.
9. Clean project site (yard and grounds), including landscape development areas, of litter and foreign substances.

B. Removal of Protection: Except as otherwise indicated or requested by Architect/Engineer, remove temporary protection devices and facilities which were installed during course of the work to protect previously completed work during remainder of construction period.

C. Compliances: Comply with safety standards and governing regulations for cleaning operations. Do not burn waste materials at site, or bury debris or excess materials on Owner's property, or discharge volatile or other harmful or dangerous materials into drainage systems; remove waste materials from site and dispose of in a lawful manner.

END OF SECTION 017700

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 DESCRIPTION

A. The Owner will remove any existing equipment that is to be salvaged prior to the beginning of construction.

B. Work Included: Carefully demolish and remove from the site those items scheduled to be demolished and removed.

C. Related Work:

1. Documents affecting work of this Section include, but are not necessarily limited to Proposal and Contract Documents and Sections in Division 1 of these Specifications.

1.2 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS:

A. By careful study of the Contract Documents, determine the location and extent of selective demolition to be performed.

B. Visit the site and verify the extent and location of selective demolition required.

1. Carefully identify limits of selective demolition.
2. Mark interface surfaces as required to enable workmen also to identify items to be removed and items to be left in place intact.

C. Prepare and follow an organized plan for demolition and removal of items.

1. Shut off, cap and otherwise protect existing public utility lines in accordance with the requirements of the public agency or utility having jurisdiction.

2. Completely remove items scheduled to be so demolished and removed, leaving surfaces clean, solid and ready to receive new materials specified elsewhere.
3. In all activities, comply with pertinent regulations of governmental agencies having jurisdiction.

D. Demolished material shall be considered to be property of the Contractor and shall be completely removed from the job site unless otherwise specified.

E. Use means necessary to prevent dust becoming a nuisance to the public, to neighborhoods and to other work being performed on or near the site.

3.2 REPLACEMENTS:

A. In the event of demolition of items not so schedule to be demolished, promptly replace such items to the approval of the Owner at no additional cost to the Owner.

END OF SECTION 024119

SECTION 033000 - CAST-IN-PLACE CONCRETE - PTS

PART 1 - GENERAL

1.0 THIS SECTION REFERS TO CONCRETE FOR THE POST TENTIONED SLAB. All other site concrete shall be per MPWSS and City' standard modifications to the MPWSS.

1.1 REFERENCED DOCUMENTS:

A. Drawings and General Provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to work specified in this Section.
B. ACI 318-19(22)

1.2 DESCRIPTION OF WORK:

A. Work Included: Furnish all materials, equipment, transportation and facilities, and perform all labor necessary for the following:
   1. Furnishing and placing cast-in-place concrete.
   2. Finishing and curing of concrete.
   3. Concrete mix designs.
B. Related Work Specified Elsewhere:
   1. Paving, curbs, gutters, sidewalks, fencing, and net foundations.
   2. Refer to MPWSS 01400 and City of Billings Standard Modifications to Montana Public Works Standard Specifications Sixth Edition.
   3. Refer to City's standard modifications for additional requirements related to cast-in-place concrete specified in this section. Where conflicts exist, the more stringent requirements shall take precedence.

1.3 SUBMITTALS:

A. Submit, to Owner's Testing Laboratory, two copies of proposed mix designs prepared in accordance with ACI 318. Each proposed mix design shall be accompanied by a complete standard deviation analysis based on at least 20 consecutive strength tests, or by three laboratory trial mixtures with confirmation tests.
B. Construction Joints: Submit a diagram of proposed construction joints other than those indicated on the Drawings.

1.4 CONCRETE MIX DESIGNS:

A. Selection of Proportions: Proportions of ingredients for concrete mixes shall be determined by an independent testing laboratory or qualified concrete supplier, in accordance with the requirements of ACI 318, "Standard Specifications for Structural Concrete for Buildings.
   1. General: Concrete shall be composed of Portland Cement, fine aggregate, coarse aggregate, water, water reducing admixture, and an air-entraining admixture where specified. Proportions of ingredients shall produce a mixture which will work readily into corners and angles of forms and bond to reinforcement without segregation or excessive bleed water forming on the surface. Proportioning of materials shall be in accordance with ACI 211.1-22 Selecting Proportions for Normal-Density and High Density-Concrete - Guide

2. Required average strength above specified strength: Determinations shall be based on the standard deviation record of production facility, in accordance with ACI 318. If a suitable record of strength test performance is not available, proportions shall be selected to produce an average strength f'cr greater than the specified strength 4,000 psi.
3. All concrete mix designs shall include the following information:
   a. Proportions of cement, fine and coarse aggregates, and water.
   b. Maximum water/cement ration, design strength, maximum slump, and air content.
   c. Type of cement and aggregates.
   d. Type and dosage of all admixtures.
   e. Special requirements for pumping.
   f. Range of ambient temperature and humidity for which the design is valid.
   g. Maximum elapsed time before discharge after introduction of water and cement.
   h. Maximum and minimum permissible concrete temperatures at time of placement.
   i. Any special characteristics of the mix which require precautions in the mixing, placing, or finishing techniques to achieve the finished product specified.
4. Each mix design shall be accompanied by one of the following, prepared in accordance with ACI 318.
   a. Complete standard deviation analysis based on a suitable record of field tests on a similar mix produced by the plant within the past 12 months and spanning a period of at least 60 calendar days.
   b. Documentation for required average compressive strength (f'cr) where an adequate record of strength tests is unavailable. Documentation shall consist of field test data or confirmation cylinders from three trial batches prepared by an independent testing laboratory.
5. If a testing laboratory provides concrete mix designs, it shall be selected by the Contractor, approved by the Engineer/Architect and paid for by the Contractor.

1.5 QUALITY CONTROL:

A. Materials and operations shall be tested and inspected as work progresses. Failure to detect defective work shall not prevent rejection when defect is discovered, nor shall it obligate the Engineer/Architect for final acceptance.
B. Owner will engage for laboratory testing and inspection.
C. Contractor Shall Provide and Pay for the Following Additional Testing Laboratory Services:
   1. Qualification of proposed materials and the establishment of mix designs in accordance with ACI 301, when trial batches are required.
   2. Other testing services needed or required by the Contractor.
   3. All testing on work/materials that have been rejected and need to be retested.
D. To Facilitate Testing and Inspection, the Contractor Shall:
   1. Furnish necessary labor to assist testing agency in obtaining and handling samples at jobsite.
   2. Advise testing agency sufficiently in advance of operations to allow for assignment of testing personnel and testing equipment.
   3. Provide and maintain, for the use of the testing agency, adequate facilities for proper curing of concrete test specimens on the project site, in accordance with ASTM C 31-19, "Standard Practice for Making and Curing Concrete Test Specimens in the Field."

E. Evaluation and Acceptance:
   1. Strength level of concrete will be considered satisfactory if averages of all sets of three consecutive strength test results equal or exceed specified strength and no individual test result (average of two cylinders) is below specified strength by more than 500 psi.
   2. When strength level of concrete for any portion of the structure, as indicated by cylinder tests, is below specified requirements, the Contractor shall provide improved curing conditions of temperature and moisture and/or propose adjustments to mix design, to secure required strength. Also, if average strength of laboratory control cylinders should fall so low as to be deemed unacceptable, Contractor shall, at his expense, follow the core test procedure set forth in ACI 318 in locations approved by the Engineer/Architect. If results of core tests indicate, in opinion of the Engineer/Architect, that strength of the structure in inadequate, such replacement, load testing or strengthening as may be ordered by the Engineer/Architect shall be provided by the Contractor without cost to the Owner.

F. Latest adopted edition of all standards referenced in this Section shall apply, unless noted otherwise. In case of conflict between these Contract Documents and a referenced standard, Contract Documents shall govern. In case of conflict between these Contract Documents and the Building Code, the more stringent shall govern.
   1. Comply with the provisions of the following codes, Specifications and standards:
      a. "Specifications for Structural Concrete," ACI 301.
      b. "Building Code Requirements for Structural Concrete and Commentary," ACI 318.
      c. "Standard Specification for Ready-Mixed Concrete," ASTM C94.
      d. "Specification for Hot Weather Concreting," ACI 305.1.
      e. "Guide to Cold Weather Concreting," ACI 306.4.1.
      f. "Guide for Measuring, Mixing, Transporting, and Placing Concrete," ACI 304R.
      g. "Guide for Consolidation of Concrete," ACI 309.
      h. "Guide to External Curing of Concrete," ACI 308.
      i. "Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete," ACI 211.1.
      j. "Guide for Use of Admixtures in Concrete," ACI 212.2.
      k. "Guide to Evaluation of Strength Test Results of Concrete," ACI 214.
      l. "Guide to Concrete Floor and Slab Construction," ACI 302.1.
      m. "Guide to Placing Concrete by Pumping Methods," ACI 304.2.
      n. "Specification for Unbonded Single Strand Tendons Used for Slab-On-Grad Construction," PTI M10.6.
      o. "Design, Construction, and Maintenance of Post-Tensioned Concrete Courts," PTI DC10.3-20.
   2. Field Reference Manual: Contractor shall have available in field office "Specifications for Structural Concrete for Buildings," ACI Field Reference Manual, MNL-15.

PART 2 – PRODUCTS

2.1 MATERIALS FOR STRUCTURAL CONCRETE:

A. Portland Cement shall conform to requirements of ASTM C 150 or ASTM C 595. Only one brand of cement shall be used throughout work. Type shall be I-II.
B. Fine aggregate shall conform to applicable requirements of the current edition of ASTM C 33, and shall be natural bank or river sand, washed and screened,

consisting of hard, durable, uncoated particles free of deleterious matter, and shall be so graded from coarse to fine, as to produce a minimum percentage of voids.

C. Coarse aggregate shall conform to the applicable requirements of the current edition of ASTM C 33, shall be gravel or crushed stone suitably processed, washed and screened, and shall consist of hard, durable particles without adherent coatings.

D. Concrete Admixtures: Provide admixtures produced and serviced by established, reputable manufacturers' and use in compliance with manufacturer's recommendations. Do not use admixtures which have not been incorporated and tested in accepted mixes. All admixtures are subject to approval by the Engineer/Architect.
   1. Air-entraining agent, conforming to ASTM C 260. Use of air entrainment and corresponding reduction in water/cement ratio shall be noted on the mix designs.
   2. Water-reducing Admixtures: ASTM C 494, Type A.
   3. Set-controlling Admixtures: ASTM C 494, and as follows:
      a. Type C, Accelerating.
      b. Type D, Water-reducing and Retarding.
      c. Type E, Water-reducing and Accelerating.
      d. Type F, Water-reducing, high-range (superplasticizer).
      e. Type G, Water-reducing, high-range and retarding (superplasticizer).
      f. Field Service: When requested a qualified concrete technician employed by the manufacturer shall be available to assist in proportioning concrete materials for optimum use, to advise on proper use of admixture and adjustment of concrete mix proportions to meet jobsite and climatic conditions.
      g. Obtain approval of the Engineer/Architect, in writing, before using set-controlling admixtures.
   4. Calcium chloride, thiocyanates, and admixtures containing chloride ions shall not be used in the concrete mix. Written certification of maximum chloride ion content in admixtures shall accompany mix design.

2.2 WATER:

A. Use Potable Water.

2.3 CURING MATERIALS:

A. Moisture retaining cover. Cover concrete surfaces with moisture retaining cover for curing concrete, placed in the widest practical width, with sides and ends lapped at least 12" and sealed with waterproof tape or adhesive. Cure for not less than 7 days. Immediately repair any holes or tears during the curing period using cover material and waterproof tape.

2.4 MISCELLANEOUS MATERIALS:

A. Drilled anchor bolts shall be one of the following (no substitutions):
   1. Strong-Bolt, Simpson Strong-Tie Co., Pleasanton, CA
   2. Power-Stud+SD1, Powers Fasteners, Brewster, NY
   3. Kwik Bolt TZ, Hilti Fastening Systems, Tulsa, OK

2.5 NON-SHRINK GROUT:

A. Non-shrink Grout: Pre-mixed, non-shrinking, non-metallic grout. Compressive strength in 28 days shall be 5000 psi minimum. Grout shall conform to ASTM C 1107, Grade B when tested at fluid consistency.

2.6 ADHESIVE ANCHORS:

A. Drilled Adhesive Anchors in Concrete Shall Be One of the Following Anchoring Systems:
   1. SET-XP Epoxy Anchoring System, Simpson Strong-Tie Co., Pleasanton, CA
   2. PE1000+ Standard Set Adhesive Anchoring System, Powers Fasteners, Brewster, NY
   3. HIT-HY150 MAX SD Adhesive Anchoring System, Hilti Fastening Systems, Tulsa, OK
   4. HIT-RE500-SD Adhesive Anchoring System, Hilti Fastening Systems, Tulsa, OK

   Engineer/Architect shall be present during initial installation.

2.7 ANCHORING CEMENT:

A. Anchoring cement for grouting drilled in anchor bolts and dowels shall be "SUPER PRO-ROK (Exterior Anchoring Cement)," or approval equal as manufactured by Minwax Construction Products Division, Montvale, New Jersey.

2.8 SAND-CEMENT GROUT:

A. Sand-cement grout shall be a mixture of 1 part Type I Portland Cement and 2 ½ parts clean, natural sand, conforming to ASTM C 33. Water content shall be 5 ½ gallons per sack of cement, maximum.

PART 3 - EXECUTION

3.1 PRODUCTION OF CONCRETE:

A. Concrete shall not be mixed for placing in work until mix designs and corresponding strength tests reflect that each proposed mix will develop the strengths required, nor before the mix design for each class of concrete has been approved by the Engineer/Architect for use on the project.
B. Measuring Ingredients:
   1. Ingredients for concrete shall be measured separately for each batch.
   2. Proportions of aggregates to cement shall be such as to produce concrete that will work readily into corners and angles of forms and around reinforcement and inserts without excessive vibration, puddling or spading, and without permitting ingredients to separate or free water to collect on surface of concrete. Combined aggregates shall be of such sizes as not to produce harshness in placing or honeycombing in the structure. Ratio between fine and coarse aggregates shall be as directed by testing laboratory, but may be modified, when and as directed, in order to obtain a denser or more workable mix without altering ratios (between cement and combined aggregates) prescribed by the testing laboratory.
   3. Water shall be so measured as to assure uniform proportions, in required quantities, throughout successive batches. Methods employed for measuring water shall be such as to permit close and positive control over ratio of water to cement and shall afford ready check by testing laboratory. Water shall be limited

to minimum quantity required to produce concrete of workable consistency. Effect of cement-dispersing agent to be used shall be taken into consideration in determining amount of water to be use. Maximum quantity of water specified shall include free moisture content retained by aggregates. Accumulation of water on surface of concrete during placing shall be prevented by making appropriate adjustments in mixture.

C. Mixing: Ready-mixed concrete, conforming to requirements of ASTM C 94, shall be used in lieu of concrete mixed at jobsite. Agency supplying ready-mixed concrete shall have a batching plant of sufficient capacity, and adequate transportation equipment, to assure continuous delivery at rate required. Frequency of deliveries to the location of the work must be such as to provide for placing the concrete continuously throughout any one pour.
D. Delivered concrete mixture shall conform to limits given on Drawings and on approved mix design for each class of concrete. When approved by the laboratory inspector, water may be added to the truck to adjust slump, but water content shall not exceed maximum specified water/cement ratio for the mix. Concrete shall not be placed when its slump or temperature are outside limits given on Drawings and on approved mix design.
E. Mixing Time: Unless otherwise approved by laboratory inspector, discharge of concrete shall be completed within 1 ½ hours, or before the drum has revolved 300 revolutions, whichever comes first, after the introduction of mixing water to the cement or cement to the aggregates. In hot weather, reduce mixing time as required to prevent excessive stiffening of the mix.

3.2 PLACING CONCRETE:

A. Preparation:
   1. Equipment for chuting, pumping, and pneumatically conveying concrete shall be of such size and design as to assure a practically continuous flow of concrete at delivery end without separation of materials, and all of details thereof shall be submitted to Engineer/Architect for approval in advance of use of such equipment. Use of gravity-flow or aluminum chutes or conveyors for transporting concrete horizontally will not be permitted.
   2. Inserts: Give various trades and subcontractors ample notification and opportunity to install any and all anchors, nailers, pipes, conduits, boxes, inserts, thimbles, sleeves, frames, vents, wires, supports, or other items required to be built into concrete by provisions of Drawings or of Specifications governing the work of such trades and subcontractors, or as may be necessary for proper execution of their work. Obtain suitable templates or instructions for installation of such items as are not required to be actually placed in the forms by the affected trades or subcontractors themselves.
   3. Contractor shall provide access for delivery and sufficient equipment and manpower to rapidly place all concrete.
      a. All work shall be in accordance with ACI 304 R, “Guide for Measuring, Mixing, Transporting, and Placing Concrete.”
      b. Formwork shall have been completed. Snow, ice, water, and debris shall have been removed from within forms.
      c. Expansion joint material, anchors and all embedded items shall have been positioned.
      d. Subgrades shall be sprinkled sufficiently to eliminate water loss from the concrete.
      e. Concrete shall not be placed on frozen ground.
   4. Thoroughly wet all forms and contact surfaces before pouring concrete.

5. Anchor Bolts: Install anchor bolts for anchoring other materials to concrete as shown on approved shop drawings for those materials. Obtain bolts, templates and setting instructions from trade requiring them, well in advance of concrete placement. Use templates to set all anchor bolts and secure in proper position before placing concrete. Stabbing in bolts will not be permitted. Anchor bolts shall be placed within the following tolerances measured after concrete placement:
   a. Spacing within bolt group 1/8″
   b. Location of bolt group (center) 1/4″
   c. Rotation of bolt group 5 degrees
   d. Angle off vertical 5 degrees
   e. Bolt projection ± 3/8″

B. Conveying Concrete:
   1. Convey concrete from mixer to place of final deposit by methods which prevent separation or loss of ingredients. Concrete to be conveyed by pumping will require approval of Engineer/Architect for each class of concrete specified before being used.
   2. Pump primping grout must be discarded, not used in the structure.

C. Depositing Concrete:
   1. General: Piling up on concrete in forms, in such manner as to cause separation or loss of any of its ingredients, will not be permitted. Concrete which has partially set or hardened shall not, under any circumstances, be deposited in work. Place concrete in forms as nearly in its final position as is practical to avoid rehandling. Exercise special care to prevent splashing forms or reinforcement with concrete. Remove hardened or partially hardened concrete which has accumulated on forms or reinforcement before work proceeds. Do not place concrete on previously deposited concrete which has hardened sufficiently to cause formation of seams or planes of weakness within respective member or section, except as hereinafter specified. Do no permit concrete to drop freely any distance greater than 3′-0″. Where longer drops are necessary, use a chute, tremie, or other approved conveyance to assist concrete into place without segregation. Do not pour concrete directly into excavations where water is standing.
   2. Vibration: As soon as concrete is deposited, thoroughly agitate by means of mechanical vibrators and suitable hand tools, so manipulated as to work mixture well into all parts and corners of forms and entirely around reinforcement and inserts. Mechanical vibrators shall have a minimum frequency of 7000 revolutions per minute and shall be operated by competent workmen. Over vibrating and use of vibrators to transport concrete within forms shall not be allowed. Vibrators shall be inserted and withdrawn at regular intervals, from 18″ to 30″ apart. At each insertion duration shall not be sufficient to cause segregation, generally from 5 seconds to 15 seconds duration. A spare vibrator shall be kept on the jobsite during all concrete placing operations. Do not insert vibrator into lower courses that have begun to set.
   3. Bonding: Before depositing any new concrete on or against previously deposited concrete which has partially or entirely set, surfaces of the latter shall be thoroughly roughened and cleaned of all foreign matter, scum, and laitance. Forms shall be retightened and surface of previously deposited concrete shall be slushed with a water cement slurry or bonding agent. Work shall be performed in such a manner as to assure complete bonding of newly poured concrete to that previously place.
   4. Construction Joints: Except as otherwise specifically indicated on Drawings each footing, pier, pilaster, beam, and slab shall be considered a single unit of

operation and concrete for same shall be placed continuously in order that unit will be monolithic in construction. Should construction joints prove to be absolutely unavoidable, the same shall be approved by the Engineer/Architect. Additional construction joints shall not be made under any circumstances without written approval of the Engineer/Architect.

D. Weather Conditions:
   1. Cold Weather: Temperature of concrete delivered at the jobsite shall conform to the following minimum:

Air Temperature	Concrete Temperature
30 to 45 degrees F.	55 to 90 degrees F.
0 to 30 degrees F.	60 to 90 degrees F.
Below 0 degrees F.	65 to 95 degrees F.

      Water heated to above 100 degrees F. shall be combined with aggregates before cement is added. Cement shall not be added to water or aggregates having a temperature greater than 100 degrees F.
      a. All work shall be in accordance with ACI 306R, "Guide to Cold Weather Concreting."
      b. When the outdoor temperature is less than 40 degrees F. temperature of the concrete shall be maintained at not less than 50 degrees F. for the required curing time.
   2. Hot Weather: Temperature of concrete delivered at the jobsite shall not exceed 95 degrees F. Ingredients shall be cooled before mixing to prevent concrete temperature in excess of 95 degrees F.
      a. All work shall be in accordance with ACI 305, "Specification for Hot Weather Concreting."
      b. Provisions shall be made for windbreaks, shading, fog spraying, sprinkling, or wet cover when necessary.
      c. Use specified moisture retaining cover to prevent rapid drying of surface during finishing.

3.3 INSTALLATION OF NON-SHRINK GROUT (under base plates):

A. Grout under all bearing plates, immediately after setting plates, before additional load is applied. For proprietary grout materials, comply with manufacturer's instructions regarding mixing and placement. Do not dry pack.
B. Preparatory Work: Clean slab, or foundation with liberal amounts of water. Remove all oil, grease, and paint from areas of base plates or foundations to be grouted. Roughen slab and remove all waste materials, dirt, chips, oil and excess water from anchor bolts, slab or foundation. Have all necessary tools and materials as near area to be grouted as possible to permit rapid and continuous work with grout. Anchor all forms securely to prevent movement during placing or curing. Adequate clearance must be allowed between forms and base plates.
C. Mixing: A mechanical mixer should be used. Add only enough water to make placeable. Do not mix more grout than can be placing in 20 minutes. Under no circumstances should grout be re-tempered.

D. Grout Temperatures: Grout temperatures should be maintained at 50 – 90 degrees Fahrenheit for a period of 48 hours after placing. Care should be exercised so that extremes of hot or cold temperatures are avoided.
E. Placing: As grouting procedure begins, placement and compaction should be continuous until completed. Lengths of banding strap placed in forms before placing grout will assist in compacting grout and eliminating air pockets. Strap should be worked in quick, short strokes and be removed before initial set occurs. Grout should be placed form one end or side only to avoid excessive air entrapment and assure good compaction. Wherever possible, grout bolt holes first. Do not overwork grout as this causes segregation, bleeding, and breakdown of initial set. If machines or equipment are being used nearby, consider shutting them down until grout takes final set.

3.4 FINISHING CONCRETE SLAB SURFACES:

A. General: Concrete slabs shall be finished as specified below, within tolerances specified elsewhere in this Section. Dusting of slab surfaces with dry materials will not be permitted.
   1. Forms shall be properly leveled, in good condition and securely anchored, including special attention to ends and transitions.
   2. Bearing surfaces for straightedges, such as form edges or previously poured slabs, shall be kept clean of laitance, sand, gravel, or other foreign elements.
   3. Screeds shall be maintained in good condition with straight cutting edges and, where applicable, true round rolling wheels. Use of optical sighting equipment, such as lasers, is recommended for checking levelness and straightness. Contractor shall promptly adjust or replace equipment when test results indicate substandard work.
   4. Highway straightedges are recommended for use in lieu of bullfloats for all slab placement and finishing operations.
B. Screeding: Immediately after placing, slab shall be vibrated and struck off true by double screeding to the required level, at or below elevation or grade of finished slabs as indicated on Drawings. Do not use vibrator to spread concrete. Low spots left behind shall immediately be filled with additional concrete, carefully avoiding segregation, and screeded to the required elevation.
C. Floating: Immediately after screeding, before any excess moisture or bleeding water is present on the surface, float the surface using long-handled bull floats or darbies to fill in any surface voids and slightly embed the coarse aggregate.
D. Edging and jointing, where required, shall be done after bleeding water has gone and before further finishing.
E. Trowel Finish:
   1. Locations:
      a. Concrete surfaces at tennis courts:
   2. Method of Finishing: After concrete has stiffened sufficiently to permit the operation, and water sheen has disappeared, the surface shall be hand or machine floated, followed immediately by steel troweling at least twice with hand or machine trowels. Final troweling shall produce a smooth, dense, burnished finish and cause a ringing sound from the trowel.

3.5 CONCRETE FINISH MEASUREMENT AND TOLERANCES:

A. All slabs are subject to measurement for flatness and levelness and shall comply with the following:

1. Slabs shall be flat within a tolerance of 1/4" in 10'-0" when tested with a ten foot long free-standing straightedge. Apply straightedge to slab at 3'-0" intervals in both directions, lapping straightedge 3'-0" on areas previously checked. Low spots shall not exceed the above dimension anywhere along the straightedge. Flatness shall be checked the next work day after finishing.
2. Slabs shall be level within a tolerance of ±1/4" in 10'-0", not to exceed 1/2" total variation, anywhere on the floor, from elevations indicated on Drawings. Levelness shall be checked on a 10'-0" grid using a telescopic or laser level after removal of forms.

B. Slabs Tolerance Envelope: In addition to satisfying profile tolerances, the acceptable tolerance envelope for absolute elevation of slab-on-grade construction is ±1/2", with respect to the elevation shown on the Drawings.

C. Remedial Measures for Slab Finish Construction Not Meeting Specified Tolerances:
   1. Modification of Existing Surface:
      a. If, in the opinion of the Engineer/Architect or Owner's Representative, all or any portion of substandard work can be repaired without sacrifice to appearance or serviceability of the area, then the Contractor shall immediately undertake the approved repair method.
      b. Contractor shall submit for review and approval a detailed work plan of proposed repair showing areas to be repaired, method of repair, and time to affect the repair.
      c. Repair method(s), at the sole discretion of the Engineer/Architect or Owner's Representative, may include grinding (floor stoning), planning, retopping with specified floor leveling compound or polymer concrete, or any combination of the above.
      d. All repair work shall be performed at no additional cost to the Owner and with no extension to the construction schedule.
   2. Removal and Replacement:
      a. If, in the opinion of the Engineer/Architect or the Owner's Representative, all or any portion of the substandard work cannot be satisfactorily repaired without sacrifice to the appearance or serviceability of the area, then the Contractor shall immediately commence to remove and replace the defective work as directed.
      b. Replacement sections may be retested for compliance at the discretion of the Construction Manager or Owner's Representative.
      c. All replacement work shall be performed at no additional cost to the Owner and with no extension to the construction schedule.

3.6 FINISHING EXPOSED FORMED CONCRETE SURFACES:

A. General: The intent of these Specifications is to provide for exposed-to-view concrete formed surfaces of such quality as to require a minimum of pointing. Exercise care in the forming, mixing, and placing of concrete to assure uniform, dense surfaces, free from blemishes or defects. In the event of unsightly voids, honeycombs, etc., repaired using approved methods as soon as possible. Fins and other projections shall be neatly dressed off. Form offsets greater than ¼" shall be ground down to a smooth plane. Holes larger than ¼" in any dimension shall be drenched with clean water and properly patched with Portland Cement and sand mortar of color and texture to match surrounding concrete.

3.7 CURING, PROCTECTING AND SEALING:

A. Protect all freshly placed concrete from washing by rain, flowing water, etc. Do not allow concrete to dry out from time it is deposited in forms until expiration of curing period hereinafter specified. Methods of curing shall be as specified in the following paragraphs, unless otherwise authorized by the Construction Manager.
B. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.
C. Cure concrete according to ACI 308.1, by one or a combination of the following methods:
    1. Moisture Curing: Keep surfaces continuously moist for not less than seven days.
    2. Moisture-Retaining-Cover Curing: Cover concrete surface with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using core material and waterproof tape.

3.8 CLEANUP:

A. Imperfect or damaged work or material damaged or determined to be defective before final completion and acceptance of entire job, shall be satisfactorily replaced at Contractor's expense and in conformity will all requirements of Drawings and Specifications. Removal and replacement of concrete work shall be done in such manner as not to impair the appearance or strength of structure in any way.
B. Cleaning: Upon completion of work all forms, equipment, protective coverings and any rubbish resulting therefrom shall be removed from site. After sweeping with an ordinary broom and removing all mortar, concrete droppings, loose dirt, mud, etc., wash all concrete slabs with soapsuds and scrub with a stiff fiber brush. Mop up suds and flush surfaces with clean water. Any damage to slabs shall be promptly, effectively and satisfactorily repaired. Finished concrete surfaces shall be left in a clean and perfect condition, satisfactory to the Owner.

END OF SECTION 033000

SECTION 033800 - POST-TENSIONED CONCRETE TENNIS COURTS

PART 1 – GENERAL

1.1 WORK INCLUDED:

A. This section specifies the requirements for all materials, equipment, labor, services and procedures required for the construction of post-tensioned concrete tennis courts and surfacing in accordance with the drawings, these specifications and approved shop drawings.

1.2 RELATED WORK:

A. Section 033000 – Cast-in-Place Concrete
B. Section 116823 – Tennis Equipment
C. Section 310000 – Earthwork
D. Section 323113 – Chain Link Fence and Gates

1.3 REFERENCE STANDARDS:

A. All standards referenced are latest edition, unless otherwise noted.
   1. American Concrete Institute (ACI)
      a. ACI 318 “Building Code Requirements for Structural Concrete”
      b. ACI 301 “Specifications for Structural Concrete”
      c. ACI 302 “Guide to Concrete Floor and Slab Construction”
      d. ACI 304 “Recommended Practice for Measuring, Mixing, and Placing Concrete”
   2. Post-Tensioning Institute (PTI)
      a. “Post-Tensioning Manual” PTI Tab.1-06
      b. “Specification for Unbonded Single Strand Tendons for Slab-on-Ground Constructions” M10.6-15
      c. “Design, Construction and Maintenance of Concrete Courts” PTI Doc 10.3-20
      d. “Construction and Maintenance Manual for PT Slab-on-Ground Construction.” DC 10.2-17
   3. American Society for Testing and Materials (ASTM)
      a. ASTM A416 “Standard Specification for Steel Strand, Uncoated Seven Wire Stress-Relieved for Prestressed Concrete,” including the Supplement for Low Relaxation Strand.
      b. ASTM C150 “Portland Cement”
      c. ASTM C94 “Standard Specification for Ready-Mixed Concrete”

1.4 POST-TENSIONING SYSTEM QUALIFICATIONS:

A. The post-tensioning system shall be an unbonded monostrand system manufactured and supplied by a recognized manufacturer with minimum of five years experience in the manufacture and fabrication of post-tensioning systems. The post-tensioning system manufacturer shall be submitted to the Engineer/Architect for approval.

B. The post-tensioning system shall be installed by a firm regularly engaged in the installation of post-tensioning systems with successful experience with the construction of projects of similar size and scope for a minimum of 5 years. The post-tensioning system installed shall be submitted to the Engineer/Architect for approval.

1.5 POST-TENSIONED TENNIS COURT CONTRACTOR QUALIFICATIONS:

A. Tennis court construction shall be performed by a qualified tennis court contractor with a certified A.S.P.A. builder on staff. The tennis court contractor shall perform and be responsible for all aspects of the tennis court construction.

B. Minimum Contractor Qualifications:
   1. Contractor shall have continuously operated under the same company name for the past five (5) years.
   2. Contractor shall have successfully completed five (5) projects of similar size and scope within the last three (3) years.
   3. Contractor shall have capability to provide the required performance and payment bonds.
   4. Contractor shall be a member in good standing of the American Sports Builders Association.

C. All post-tensioned concrete work must be under the immediate control of a person qualified to direct the work. This individual must maintain rigid control of the operations to ensure full compliance with work requirements. The individual shall furnish his resume to the Engineer/Architect for approval.

1.6 SUBMITTALS:

A. Fabrication and installation of the post-tensioning system shall not commence until submittals have been reviewed by the Construction Manager.
   1. Post-Tensioning System Manufacturer/Supplier: Submit the name and qualifications of the firm supplying the post-tensioning system.
   2. Post-Tensioning System Installer: Submit the name and qualifications of the firm installing the post-tensioning system.
   3. Tennis Court Contractor: Submit qualification information as specified in paragraph 1.5.B above.
   4. Shop Drawings: Submit a layout drawing of the post-tensioning system indicating required tendon support locations and heights, method of support, locations of anchorages, required elongations and stressing sequence. Show any proposed details that differ from those shown on the construction documents. If the shop drawings include or show any deviations from the layout and details shown on the construction drawings, such deviations shall be noted on the shop drawings and the shop drawings shall bear the seal of a professional engineer currently licensed in the State of Montana.

5. Certificates:
   a. Provide calibration curves for all jacks and pressure gauges to be used for stressing of tendons on the project. Calibration curves and data shall be prepared and certified by an independent testing laboratory. Calibration reports shall include the jack and gauge serial or identification numbers. The date of the jack and gauge calibration shall be within 60 days of the date of usage on the project.
   b. Submit mill certificates, prepared and certified by an independent testing laboratory located in the United States, showing the physical properties (cross sectional area, modulus of elasticity, weight, percent elongations, and ultimate strengths) for each mill heat of prestressing steel used on the project. Indicate where tendons from each mill heat are to be used within the project construction. Mill certificates shall be submitted a minimum of 48 hours prior to stressing of tendons.
   c. Certification of evidence that the Contractor can provide the required performance and payment bonds.
   d. Contractor shall be a member in good standing of the American Sports Builders Association.
   e. Certification that all phases of the tennis court construction will be done by a qualified tennis court contractor.
   f. Jack and Gauge calibration certificates. Calibration shall be performed within 90 days of stressing.
   g. Certification that the jack used for stressing is equipped with a wedge seating device.
6. Concrete Design Mix: Submit test data and mix design for the specified concrete. Test data shall be certified by an independent testing laboratory. The mix design shall indicate all materials, quantities, proportions and admixtures proposed for the concrete mix, the proposed water/cement ratio and design slump.
7. Concrete Pour Sequence: Proposed layout and location of concrete construction joints and proposed pour and stressing sequences for the project. The concrete pour sequence is to be submitted prior to or concurrently with the post-tensioning shop drawings.
8. Post-Tensioning Records: Submit two copies of the post-tensioning records to the Engineer/Architect after completion of the stressing of each member or slab pour. No tendons shall be cut until the records have been submitted and reviewed by the Construction Manager. Records shall be submitted promptly upon completion of the stressing operations. Delays in construction due to failure of the Contractor to promptly submit the stressing records for review will be the responsibility of the Contractor.
9. Reinforcement at Stressing Anchorages: It shall be the responsibility of the post-tensioning supplier to design and detail any reinforcing steel, beyond that shown on the drawings, deemed necessary at the stressing or dead end anchorages. Reinforcing details shall be submitted to the Engineer/Architect for review with the shop drawings.
10. Proposed Method of Curing:
11. Tendon Support Chair Product Data and a Sample Chair:

12. Court Surfacing Product Data and Installation Instructions:
13. Product Data as Required by the Construction Drawings:

1.7 INSPECTION:

A. The court subgrade and earthwork shall be inspected for proper preparation and compaction as required by the drawings and other sections of these specifications.

B. Subgrade and earthwork elevations shall be inspected to ensure proper slab thicknesses and proper slope of the finished court surface as shown in the drawings.

1.8 WARRANTY:

A. The tennis court construction specified herein and as shown in the drawings shall be warranted for a period of two (2) years from date of acceptance of the construction by the owner against defects that render the courts unserviceable or unplayable, or causing an objectionable appearance due to the use of defective or nonconforming materials and/or workmanship labor. The warranty shall include the entire cost of materials and labor, at the Contractor's expense, necessary to repair the defects.

B. Defects shall include, but not be limited to:

1. Appearance of grease spots or other discoloration at the surface of the courts after construction.
2. Ponding of water at the court surface. See Section 033000 for level requirements.
3. Delamination or other failure of the surfacing and/or striping.
4. Excessive, in the opinion or judgment of the Engineer/Architect, cracking of court slabs.

PART 2 – PRODUCTS

2.1 MATERIALS:

A. Forms: Use straight wooden or metal forms. Set forms to the lines and grades shown on the drawings. Secure the forms to support tendon anchorages and concrete.

B. Concrete:

1. Unless otherwise noted on the drawings, proportioning, mixing, placing, curing and testing of concrete shall be performed in accordance with the requirements of Section 033000 – Cast-in-Place Concrete.
2. The concrete mix for the tennis court construction shall be designed to minimize shrinkage while providing good placeability and workability. The maximum permissible water/cement ratio is 0.45. A mid-range water reducing admixture shall be sued to limit the water/cement ratio and maintain placeability and workability.
3. Cement – Cement shall conform to the requirements of ASTM C150 "Portland Cement." The use of fly ash will be permitted for concrete used in the tennis

court construction, subject to approval of type and amount by the Engineer/Architect.

4. Air Entrainment – Air entrainment by total volume of concrete shall be 5% +/- 1%.
5. Aggregate – To minimize shrinkage, the concrete mix shall be designed to use the largest coarse aggregate size practical and by using well-grade coarse aggregate. The use of gap graded aggregate is not permissible.
6. Post-tensioned concrete shall be normal weight concrete with a minimum 28-day compressive strength of 4,000 PSI, 1500 PSI prior to initial partial stressing of tendons, and a minimum compressive strength of 2,250 PSI prior to final stressing of tendons.
7. Concrete water/cement ratios shall be monitored during concrete mixing and delivery. Under no circumstances shall the water/cement ratio exceed that specified in the approved design mix. Slump shall be in accordance with the approved design mix.
8. Concrete slab and slab edge thicknesses shall be as shown on the drawings.
9. Joints – Metal keyed joints required for screeding or for top of slab elevation control shall be galvanized metal of the appropriate height. Metal keyed joints shall be located along the net line of each court and at the mid-point between courts. Tendons shall be continuous through the keyed metal joints. Except as noted on the drawings, no vertical or horizontal joints shall be permitted.

C. Post-Tensioning System:
   1. Tendons shall be 1/2 inch diameter, seven wire, and low relaxation strand conforming to ASTM A416 with a minimum ultimate strength of 270 KSI.
   2. Tendons shall be unbonded. Strand shall be coated with a rust preventive lubricant and encased in an extruded plastic slippage sheathing.
   3. Tendons shall be produced in a PTI certified plant.
   4. All components of the post-tensioning system shall meet the requirements of the "Guide Specifications for Post-Tensioning Materials" and/or PTI DC10.6 " Specifications for Unbonded Single Strand Tendons Used for Slab-on-Ground Construction" of the Post-Tensioning Institute's Post-Tensioning Manual, latest Edition.
   5. Jacks and gauges.
      a. Jacks and gauges shall be calibrated as a unit within 90 days of the stressing of the tendons. A calibration chart shall accompany each jack and gauge unit.
      b. To minimize seating losses, jacks shall be equipped with a wedge seating device, either hydraulic or spring operated. The use of "residential" type jacks without wedge seaters shall not be permitted.

D. Non-Shrink Grout: Stressing pockets are to be filled with a non-shrink, non-metallic, high strength grout capable for providing a minimum 28-day compressive strength of 8,000 PSI. Grout shall be blended of carefully graded silica aggregate, select Portland cement and expansive agents of admixtures. Product shall be suitable for use at consistencies ranging from fluid to plastic without segregation.

E. Polyethylene Sheeting:

1. Polyethylene sheeting shall consist of a single ply membrane of 6 mil minimum thickness.
2. All sheeting joints shall be lapped a minimum of 12 inches.
3. Sheeting seams and joints shall be sealed with an approved heat seal machine, or with 4 inch wide polyethylene adhesive tape with a minimum thickness of 5 mils.
4. Two layers of polyethylene membrane shall be installed over the sand cushion subgrade under all slabs. The polyethylene layers shall be placed perpendicular to each other. The membrane shall extend beyond the limits of the concrete slabs by a minimum of 12 inches.

F. Fine Grading Material: Fine grading, if required, shall be accomplished using compactable crushed limestone fines or select fill.

G. Sealant:
1. Joint sealant at expansion and isolation joints shall consist of a precompressed, self-expanding, polyurethane, closed cell foam sealant tape with adhesive at sides designed to seal against weather and moisture. Acceptable product is Willseal 600 as manufactured by Illbruck, Inc. of Minneapolis, Minnesota, or an approved alternate.
2. Joint Sealant tape width shall be twice the joint width.

PART 3 – EXECUTION

3.1 GENERAL:

A. Coordinate the work and material availability so that the various phases of the work will proceed smoothly and follow a continuous schedule from start to finish.

B. Contractor shall coordinate the work with other trades, disciplines and features, including the installation of electrical conduit, plumbing, piers, and other under slab work.

C. Contractor shall be responsible for laying out the work from the base line and bench marks shown on the drawings. The work shall be laid out to the lines and grades shown.

D. Coordination is required between the concrete installer and the acrylic surface installer to ensure the proper concrete finish required for a mechanical bond with the tennis court surface material being used.

3.2 INSTALLATION:

A. Subgrade: The prepared subgrade shall be finished to a tolerance of +0/-3/4 inch measured from the bottom of the slab. Fine grading may be accomplished using compacted crushed limestone fines or select fill. Depth of fine grading shall not exceed 1 1/2 inches. The use of sand for fine grading shall not be permitted. Place and compact fine grading material using a light steel wheel or pneumatic roller or a vibratory plate compactor. Final top surface of the subgrade shall be smooth and free of ruts, ridges or other sharp surface irregularities.

B. Polyethylene Membrane: Following completion of subgrade preparation and placement of the sand cushion, two layers of polyethylene membrane are to be installed over the subgrade. The membrane layers are to be installed normal to each other. Each layer shall provide continuous coverage of the subgrade and shall extend a minimum of 12 inches beyond the limits of the slab. Membrane shall be lapped at joints a minimum of 6 inches and the joints sealed continuously with a heat machine, joint adhesive or tape. Membranes shall be cut accurately around penetrations and sealed. Any membrane punctures shall be shealed prior to placement of concrete. Care should be used to install the membranes such that they provide a smooth, even surface. Bunching of the membrane shall not be permissible. Excess membrane shall be smoothed out, or cut out and removed as necessary.
C. Formwork: Formwork must be sufficiently rigid to maintain the lines of the slabs, to support the tendon anchorages, and to prevent displacement of tendons and concrete. Forms shall remain in place until concrete has achieved it final set.
D. Installation of Tendons: Tendons shall be installed in conformance with the requirements shown on the drawings.
    1. Tendon stressing anchorages shall be installed straight and level. Tendons at stressing ends shall be perpendicular to the edge of slab. Conventional reinforcement shall be installed behind anchorages as shown on the drawings, or detailed by the post-tensioning supplier. It shall be the Contractor's responsibility to coordinate the need, fabrication, and supply of required reinforcing steel around the stressing anchorages.
    2. Where openings or penetrations of the slab do not fit between tendons, then the tendons shall be curbed smoothly around the opening or penetration. Tendons shall not be curved directly adjacent openings or penetrations. Tendons shall be provided with a 2'-0" straight run either side of the opening. Tendons shall be curved around openings over a minimum length equal to 12 times the required lateral displacement necessary to clear the opening. Maintain a minimum clearance of 6 inches between the tendon and opening. Refer to the drawings for details.
E. Concrete Placement:
    1. Upon completion of the tendon installation and prior to concrete placement notify the Engineer. Concrete shall not be placed until the tendon and formwork installation has been reviewed by the Engineer. The Engineer shall be provided with a minimum of 24 hours' notice prior to scheduling of concrete placement to allow time for inspection and necessary adjustments or corrections of the post-tensioning installation.
    2. Concrete shall be transported, placed and spread without segregation of the aggregates or displacement of the tendons. Each pour shall be placed in one continuous, monolithic operation without construction or cold joints. Placement of the concrete shall be by pump. Pump reach shall be such that concrete can be placed without horizontal runs of hose or pipe that may result in displacement of tendons during concrete placement. Concrete shall be spread, consolidated, screeded, bull-floated and finished in accordance with ACI 302 "Guide to Concrete Floor and Slab Construction."

3. Extra care should be used to vibrate and consolidate concrete at tendon anchorages to prevent voids and anchorage blowouts during stressing operations. Avoid contact between vibrators and tendons and anchorages during concrete placement.

F. Finishing: When concrete is sufficiently set to withstand foot pressure with only a 1/4 inch indentation and the water sheen has left the surface, the slab shall be uniformly troweled using a triple trowel rotary finisher or other method proposed by the contractor and approved by the engineer. Final finish texture shall be determined by the type of surface required by the manufacturer of the Tennis Court Surfacing. Wetting of the surface of the concrete by machine, brush or other means during finishing will not be permitted.

G. Surface Tolerance: The concrete surface shall be flat to within 1/4 inch under a 10 foot straightedge in a direction perpendicular to the slope, and to within 1/8 inch under a 10 foot straightedge in the direction of the slope.

H. Curing: Immediately after finishing, the concrete shall be moist cured for a minimum of seven (7) days by fogging or misting and covering with polyethylene film or absorptive mats or fabrics kept continuously wet or by sprinkling or ponding. Spray-on membrane forming liquid compounds will <u>not</u> be permitted on tennis courts.

3.3 STRESSING AND ANCHORING OF TENDONS:

A. Unless otherwise noted on the drawings, tendon stressing, anchoring and finishing shall be in accordance with the "Design, Construction and Maintenance of Post-Tensioned concrete courts", PTI DC10.3-20.

B. Concrete Strength:
   1. Initial stressing shall not commence until the concrete has attained a compressive strength of 1.500 PSI as confirmed by tests on concrete cylinders. Initial stressing shall be limited to 30% of the final stressing force per tendon.
   2. Final stressing shall not commence until the concrete has attained a compressive strength of 2,250 PSI as confirmed by tests on concrete cylinders.
   3. Cylinders made and tested to determine concrete strength for stressing purposes shall be cured under the same conditions as the slabs. Cylinders and testing for these purposes shall be at the Contractor's expense.

C. Stressing:
   1. Prior to stressing tendons, mark the tendon with spray paint at a relatively constant reference dimension from the slab edge. If tendons are to be stressed from both ends, it is imperative that both ends are marked before stressing is commenced. Use care to avoid overspray which could affect accuracy of measurements.
   2. Elongation measurements should be made from the edge of slab to the mark. All elongation measurements for a single pour should be made by the same person. Provide a means of measuring tendon elongations to the nearest 1/16 inch.
   3. Care should be taken to ensure that jacks and pressure gauges are properly mated in accordance with the calibration reports for the equipment. Jacks used

for stressing should have provisions for the hydraulic seating of anchorage wedges, or a seating valve.

4. Take all necessary precautions to ensure that stressing operations are conducted safely. All unnecessary personnel shall be kept clear of the stressing area.
5. Keep jacks and grippers clean during stressing operations. Ensure that all obstacles are removed from the rear of the jack. Jacks shall be provided with a clear path for operation.
6. Stressing shall not commence until the testing laboratory is present to observe the stressing operations. The testing laboratory shall be notified 24 hours minimum in advance of stressing operations.
7. Tendons shall be stressed to the specified jacking force. The final jacking force should be held for 1 minute prior to seating the wedges.
8. Initial stressing should be performed within 3 days of date of concrete placement. Final stressing should be performed as soon as practical following confirmation of attained concrete strength, but under no circumstances shall the time to final stressing exceed 7 days from the date of the pour.

D. Stressing Records:
   1. Post-tensioning stressing records shall be kept by the post-tensioning installer. Records shall be promptly submitted to the Engineer for review upon completion of final stressing for each slab pour.
   2. At the commencement of final stressing operations, elongation measurements for the first few tendons shall be compared to the computed required elongations. If the actual measured elongations are within 7 percent of the computed elongations, stressing operations may proceed. Should elongation measurements fall outside of the permissible variance, the Engineer should be notified and the stressing operations suspended until the elongation variances are reconciled by the Contractor.

E. Following Review of the stressing records by the Engineer, tendons shall be cut at the stressing pockets. Tendons shall be cut as far inside the stressing pockets as possible. Install a flared plastic protection cap over the cut end of the tendon inside the stressing pocket and fill the pocket flush with the outside face of concrete with non-shrink, non-metallic grout mixed in strict accordance with the manufacturer's recommendations. Grout shall completely fill the stressing pocket. Pockets observed to have voids or cracks shall be regrouted at the Contractor's expense. Plastic caps shall be specifically manufactured for the protection of post-tensioning tendon ends, and shall have a minimum length of 1 inch.

3.4 SEALANT:

A. Sealant shall be installed in strict accordance with the manufacturer's instructions and recommendations. Joints shall be thoroughly and properly cleaned prior to installation of the sealant.
B. Contractor shall take care to form the depth of the joint to the sealant thickness or depth, and to cut sealant tape to the proper length at circular isolation joints.

END OF SECTION 033800

SECTION 116823 - TENNIS EQUIPMENT

PART 1 - GENERAL

1.1 SECTION INCLUDES:

A. Tennis court net posts, nets, with center straps

1.2 RELATED WORK:

A. Section 03 38 00 – Post-Tensioned Concrete
B. Section 32 18 23 – Tennis Court Surfacing
C. Section 32 31 13 – Chain Link Fences and Gates

1.3 SUBMITTALS:

A. Product Data: Submit schedules, charts, literature, and illustrations to indicate the performance, fabrication procedures, product variations, and accessories.
B. Shop Drawings: Indicate size, material, and finish. Show locations and installation procedures. Include details of joints, attachments, and clearances.

1.4 COORDINATION:

A. Cooperation by Contractor of Work of this Section with all work of contractors performing work of post tensioned concrete tennis courts, and tennis court surfacing so that all phases of work may be properly coordinated without delays or damage to parts of any work.
B. The Contractor shall furnish tennis court net post ground sleeves and center anchors to contractor performing work of post-tensioned concrete tennis courts for timely and proper insertion in work.

1.5 WARRANTY:

A. Warranty the Work specified for two (2) years against becoming unserviceable or causing an objectionable appearance resulting from either defective or nonconforming materials or workmanship.
B. Manufacturer's standard five (5) year warranty on equipment shall be provided.

PART 2 - PRODUCTS

2.1 APPROVED MANUFACTURERS:

A. Equipment specified in this section is based on the Owner's standard equipment. Substitutions will not be accepted.

2.2 NET POSTS AND NETS:

A. Posts:

1. Type: 3 inch round 11 Gauge Steel posts with an internal brass winder mechanism and removable handle. The 3-1/4" Brass Pulley and axle to keep nets tight and Worm Gear that will not recoil, Lacing Rods 3/16" welded to posts to allow net lacing to give perfect alignment and appearance. Anchor end post has 2-5/16" hooks welded for net cable anchoring. Complete with manufacturer's galvanized ground sleeves and center anchor. **Matching sleeve covers to be provided.**
2. Coordination: Coordinate ground sleeve installation with post-tension concrete slab installation.
3. Finish/Color: Zinc dipped for rust protection inside and out Polyester Powder Coated finish to be chip and fade resistant. Color to be black. Provide submittals for final approval.
4. Number/Location: One (1) pair of posts per tennis court as shown on drawings.
5. Approved Tennis Product/Manufacturers:
    A. "Premier XS Series Tennis Posts" manufactured by Douglas Industries, Inc., Eldridge, IA 800-553-8907

B. Nets:
1. Type: Extra heavy duty headband .85 mm Double Layer White Vinyl Coated Polyester with five (5) rows of double mesh at the top with UV inhibitors. The body is 3.5mm High Density Polyethylene Braided, knotted 1-3/4" polyethylene twine mesh supported by a 47' 5mm Steel PVC-coated Aircraft cable with 3700 lb. breaking strength and with an extra-heavy-duty bottom tape to resist court abrasion. Thick pockets allow side sticks to be inserted for a professional appearance. Extra Heavy Duty Black Vinyl Coated Polyester side and bottom tapes with 2 rows of Black Polyester UV treated thread. Brass side grommets, and Black Polyester Twine for lacing. Side Pockets allow the insertion of provided 5/8" Fiberglass Dowels to be inserted for a professional appearance. Provide center net strap.
2. Coordination: Tennis Posts and nets to pull the net down from 39 inches to 32 inches from top of center net to court surface.
3. Warranty: Manufacturer's five (3) year warranty.
4. Number/Location: One (1) per court, plus one (1) extra tennis net to Owner.
5. Approved Tennis Net Product/Manufacturers:
    A. "TN-45 Tennis Net" manufactured by Douglas Industries, Inc., Eldridge, IA 800-553-8907

PART 3 - EXECUTION:

3.1 INSTALLATION:

A. Install items in accordance with manufacturer's instructions and as shown on drawings.
B. Install items in locations shown on drawings, or as directed by the Owner's Representative.
C. Net Post Sleeves and Foundations: Net post sleeves and foundation shall be set prior to post tension concrete slab placement. Post foundation shall have minimum

dimensions as shown on the drawings. Set top of sleeve flush with finish concrete surface. Sleeve to set plumb so net post will be true and plumb and support a net 42 inches above the court surface.

D. Center Strap Anchor: Set center strap anchor where centerline of the court meets centerline of the net. Foundation shall have minimum dimensions as shown on the drawings. Set tubular anchor plumb and flush with finish concrete.
E. Tennis Nets: Install tennis nets in accordance with manufacturer's printed instructions.

END OF SECTION 116823

SECTION 310000 - EARTHWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. Drawings, General Conditions of the Contract for Construction, Supplementary Conditions (if any) and Division 1 - General Requirements will apply to Work of this Section.
B. Refer to the Geotechnical Engineering Report dated January 17, 2024 prepared by Rimrock Engineering, Inc. for additional information and requirements.

1.2 SECTIONS INCLUDES:

A. Preparing subgrades for slab-on-grade.
B. Excavating and backfilling for utilities and structures.
C. Excavating and backfilling trenches for utilities and pits for buried utility structures.

1.3 DEFINITIONS:

A. Backfill: Soil material or controlled low-strength material used to fill an excavation.
    1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support side of pipe.
    2. Final Backfill: Backfill placed over initial backfill to fill a trench.
B. Borrow: Satisfactory soil imported from off-site for use as fill or backfill.
C. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
    1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Engineer/Architect. Authorized additional excavation and replacement material will be paid for according to Contract Provisions for changes in the Work.
    2. Unauthorized Additional Excavation: Excavation below subgrade elections or beyond indicated lines and dimensions without direction by Engineer/Architect. Unauthorized excavation, as well as remedial work directed by Engineer/Architect, shall be without additional compensation.
D. Subbase: Granular materials used to raise existing grades.
E. Structures: Footings, foundations, slabs, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
F. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.
G. Utilities: On-site underground pipes, conduits, ducts, and cables.

1.4 INFORMATIONAL SUBMITTALS:

A. Storm Water Pollution Prevention: Contractor shall submit a plan to the Engineer/Architect meeting all federal, state, and local regulations.
B. Material Test Reports: For each on-site and borrow soil material proposed for subbase, fill and backfill as follows:

    1. Classification according to ASTM D 2487 of each borrow soil material proposed for fill and backfill.
    2. Laboratory compaction curve according to ASTM D 698 for each on-site or borrow soil material proposed for fill and backfill.

3. Aggregate

C. Utility Locator Service: Notify utility locator service for area where Project is located before beginning earthmoving operations.

1.5 QUALITY ASSURANCE:

A. Geotechnical Testing Agency Qualification: Qualified according to ASTM E329 and ASTM D3740 for testing indicated.

PART 2 - PRODUCTS:

2.1 SOIL MATERIALS:

A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
B. Satisfactory Soils: Soil Classification Groups GC, SC, GW, GP, GM, SW, SP, CL, ML, and SM according to ASTM D 2487, or a combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
    1. Liquid Limit: 25
    2. Plasticity Index: 5 - 15
    3. Percent Retained on No. 4 Sieve: 25 - 50%
    4. Percent Retained on No. 40 Sieve: 50 - 85%
C. Unsatisfactory Soils: Soil Classification Groups OL, CH, MG, OH, and PT according to ASTM D 2487, or a combination of these groups.
    1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
D. Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D2940
E. Structural Fill Under Post Tension Slab: Crushed aggregate meeting the following criteria:

Gradation	Percent Finer by Weight (ASTM C136)
3"	100
No. 4 Sieve	30-75
No. 200 Sieve	15 (max)
Liquid Limit	25 (max)
Plasticity Index	6 (max)

F. Sand: ASTM C 33; fine aggregate.

PART 3 - EXECUTION

3.1 PREPARATION:

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth-moving operations.
B. Protect and maintain erosion and sedimentation controls during earthmoving operations.
C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

3.2 DEWATERING:

A. Prevent surface water and groundwater from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
    1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

3.3 EXCAVATION, GENERAL:

A. Unclassified Excavation: Excavate to subgrade elevations as per geotechnical report regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
    1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.

3.4 EXCAVATION FOR TENNIS COURTS:

A. The north tennis courts have approximately 9" of existing gravel base beneath them. The south tennis courts have approximately 27" of gravel base beneath them. A minimum of 18" of geotextile reinforced structural fill is required under the tennis courts. Excavate approximately 9" of existing gravel base from north courts and approximately 18" from the south courts. Existing gravels shall be stockpiled on-site for use as structural fill under new tennis courts. Excavated material shall be reviewed by the Geotechnical Engineer for approval for re-use in the project.
B. Excavate additional material on north court to allow for installation of 18" of structural fill. Dispose of material that does not meet the requirements for structural fill. Adjust excavation depths as required to provide grades indicated on the drawings.
C. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch. If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.

3.5 SUBGRADE INSPECTION:

A. Notify Engineer/Architect when excavations have reached required subgrade.
B. If Engineer/Architect determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
C. All subgrade material shall be scarified 12" deep.
D. Subgrade material shall be moisture conditioned to near optimum moisture content and compacted to at least 95% of maximum dry density per ASTM D698. Do not proof-roll wet or saturated subgrades.
    1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph.
    2. Excavate soft sports, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Engineer/Architect, and replace with compacted backfill or fill as directed.

D. Authorized additional excavation and replacement material will be paid for according to Contact provisions for changes in the Work.
E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Engineer/Architect, without additional compensation.

3.6 UNAUTHORIZED EXCAVATION:

A. Fill unauthorized excavation with approved fill material. Lean concrete fill, with 28-day compressive strength of 2500 psi, may be used when approved by Engineer/Architect.
    1. Fill unauthorized excavations under other construction, pipe, or conduit as directed by Engineer/Architect.

3.7 STORAGE OF SOIL MATERIALS:

A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
    1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.
    2. Stockpiled materials shall not be stored on existing lawn areas.

3.8 GEOTEXTILE REINFORCEMENT:

A. Following completion of subgrade preparation, geotextile reinforcement shall be installed as specified in Section 313219.

3.9 BACKFILL:

A. Place and compact structural fill in excavations promptly, but not before completing the following:
    1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and utilities footings.
    2. Surveying locations of underground utilities for Record Comments.
    3. Testing and inspecting underground utilities.
    4. Removing trash and debris.
B. Place backfill on geotextile reinforcement over subgrades free of mud, frost of mud, frost, snow, or ice.

3.10 SOIL FILL:

A. Place and compact fill material in layers to required elevations.
B. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.10 MOISTURE CONTROL:
A. Uniformly moisten or aerate each subsequent fill or backfill layer before compaction to within 2 percent of the optimum moisture content.
    1. Do not place fill or fill soil material on surfaces that are muddy, frozen or contain frost or ice.
    2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.11 COMPACTION OF SOIL BACKFILL AND FILLS:

A. Place backfill and fill soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.
B. Place backfill and fill soil materials evenly on all sides of slab to required elevations, and uniformly along the full length.
C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 698:
    1. Under post tension concrete slab each layer of backfill or fill soil material at 98%..

3.12 GRADING:

A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross-sections, lines, and elevations indicated.
    1. Provide a smooth transition between adjacent existing grades and new grades.
    2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
B. Site Rough Grading: Slope grades to direct water away from construction areas to prevent ponding. Finish subgrades to required elevations within the following tolerances:
C. Grading slab boundaries: Finish subgrade to a tolerance of ½ inch when tested with a 10-foot straightedge.

3.13 FIELD QUALITY CONTROL:

A. Testing Agency: Owner will engage a qualified Geotechnical Engineering testing agency to perform tests and inspections.
B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.
C. Testing agency will test compaction of soils in place according to ASTM D 698, 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:
    1. Slab Areas; At subgrade and at each compacted fill and backfill layer, at least one test for every 2000 sq. ft. or less of slab.
    2. Trench Backfill: At each compacted initial and final backfill layer, at least one test for every 150 feet or less of trench length, but no fewer than two tests.
D. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained. Costs for retesting of failed tests will be the responsibility of the Contractor.

3.14 PROTECTION:

A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they have lost compaction due to subsequent construction operations or weather conditions.
    1. Scarify or remove and replace soil material to depth as directed by Engineer/Architect; reshape and recompact.

3.15 DISPOSAL OF SURPLUS AND WASTE MATERIALS:

A. Remove existing asphalt, surplus soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 310000

SECTION 311000 - SITE PREPARATION

PART 1 – GENERAL

1.01 DESCRIPTION:

A. Perform site preparation work as shown and specified. The work includes:
   1. Protecting existing trees to remain.
   2. Removing trees and other vegetation.
   3. Removing designated site improvements.

1.02 QUALITY ASSURANCE:

A. Notify all contractor employees and subcontractors of provisions of this Section.
B. Council of Tree and Landscape Appraisers.

PART 2 – PRODUCTS

2.01 MATERIALS:

A. Materials and Equipment: As selected by the Contractor except as noted.
B. Tree Protection: Wood fencing, snow fencing.

PART 3 – EXECUTION

3.01 TREE PROTECTION:

A. Protect all existing trees against injury or damage, including cutting, breaking or skinning of roots, trunks or branches; smothering by stockpiled construction materials, excavated materials or vehicular traffic within branch spread.
   1. Protect trees within the construction limits with temporary wood or vinyl snow fence enclosure. Provide a minimum 12’0” radius from center of tree trunk. Increase enclosure size as directed for large trees up to and including the drip line.
   2. Erect temporary fencing before commencing site preparation work. Maintain fencing during full construction period. Remove temporary fencing when acceptable to Owner’s Representative.
   3. Repair trees schedule to remain and damaged by construction operations in a manner acceptable to the Owner’s Representative. Repair damaged trees promptly to prevent progressive deterioration caused by damage.
   4. Replace trees scheduled to remain and damaged beyond repair by construction operations as determined by the Owner’s Representative with trees of similar size and species of equal dollar value. Cost for tree replacement shall be determined in accordance with the “Guide for Establishing the Value of Trees and Other Plants,” published by the Council of Tree and Landscape Appraisers.
   5. Tree replacement as required by paragraph 4 shall be approved by the Engineer/Architect prior to installation.
   6. Replacement of trees scheduled to remain and damaged by construction operations during construction operations, and securing an opinion as to the tree or plant’s health and value, shall be at contractor’s expense.
   7. Tree loss appraisal shall be in accordance with the “Guide for Establishing the Values of Trees and Other Plants,” by the Council of Tree and Landscape Appraisers.

3.02 CLEARING:

A. Locate and suitably identify trees and improvements indicated to remain.
B. Clear and grub areas within contract limits as required for site and execution of the work.
C. Remove only trees as designated on the plans and with the approval of the Owner's Representative.

3.03 STRIPPING TOPSOIL:

A. Strip topsoil to a minimum depth of 6 inches in all areas to be re-graded, resurfaced or paved within contract limit work area. Additional topsoil can be stripped if needed to achieve an adequate quantity for all lawn and planting areas.
B. Stockpile topsoil in a location acceptable to the Owner's Representative for use in finish grading and preparation of lawns and planting beds.
   1. Grade and slope stockpiles for proper drainage and to prevent erosion.
   2. No topsoil shall be removed from the site.
C. Protect all areas which are not to be resurfaced or re-graded and adjacent areas outside of the contract limits from damage due to site preparation work.

3.04 SITE IMPROVEMENTS:

A. Existing Utilities: Contractor must call 811 for utility location.
   1. Information on the drawings relating to existing utility lines and services is from the best sources presently available. All such information is furnished only for information and is not guaranteed. Excavate test pits as required to determine exact locations of existing utilities.
   2. Call utility provider for utility staking not City owned.
   3. Call Owner's Representative to coordinate City maintained utility staking.

3.05 DISPOSAL OF WASTE MATERIALS:

A. Stockpile, haul from site and legally dispose of waste materials and debris. Accumulation is not permitted.
B. Maintain disposal routes clear, clean, and free of debris.
C. On-site burning of combustible cleared materials is allowed with proper permit and burn pit.

3.06 CLEANING:

A. Upon completion of site preparation work, clean area within contract limits, remove tools and equipment. Provide site clear, clean and free of materials and debris and suitable for site work operations.

END OF SECTION 311000

SECTION 312334 – IRRIGATION TRENCHING AND BACKFILL

PART 1 - GENERAL

1.1 DESCRIPTION

A. Work in this section consists of all labor, materials, and equipment necessary to do all work and related items as shown on the drawings, specified herein or incidental to proper execution of the work, including trenching, boring under driveways, walks, and curbs, installation of pipe sleeves, and backfilling.

1.2 RELATED WORK DESCRIBED ELSEWHERE

A. Irrigation System - Section 328400

1.3 QUALITY ASSURANCE

A. For actual prosecution of the work, use only personnel who are skilled in the work required, familiar with recommended methods of installation, and thoroughly familiar with the requirements of this work.

1.4 UNDERGROUND OBSTRUCTIONS

A. The Contractor shall contact all utilities for locations of their installations prior to initiating work.

B. The Contractor shall preserve, intact, any underground pipes or other utilities encountered during construction. In case any such utilities or other structures are accidentally broken or damaged, they shall be immediately replaced in a condition at least equal to that in which they were found, all at the expense of the Contractor.

PART 2 - MATERIALS

2.1 PIPE SLEEVES

A. Pipe sleeves shall be Schedule 40 PVC pipe, 3" diameter, or equal approved by the Owner's Representative. Refer to Drawing for additional information on sleeve sizing.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Inspection

1. Prior to all work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
2. Verify that trenching may be completed in accordance with the original design and the referenced standards.

B. Discrepancies

1. In the event of discrepancy, immediately notify the Owner's Representative.
2. Do not proceed with installation in areas of discrepancy until all discrepancies have been fully resolved.
3. Beginning of installation means acceptance of existing conditions by installer.

3.2 TRENCHING

A. General

1. Perform all trenching required for the installation of items where the trenching is not specifically described in other sections of these Specifications.
2. Make all trenches in accordance with OSHA Requirements with sufficient width to provide free working space at both sides of the trench and around the installed item as required for gluing, joining, backfilling, and compacting while minimizing width of trenches.

B. Depth

1. Trench as required to provide the elevations shown on the Plans.
2. Trench to sufficient depth to give a minimum of 18 inches of fill above the top of the pipe measured from the adjacent finished grade under driveways and sidewalks.
3. All mainline shall have a minimum cover of 18" above the pipe. All laterals shall have a minimum cover of 12" above the pipe.

C. Correction of Faulty Grades

1. Where trench excavation is inadvertently carried below proper elevations, backfill with material approved by the Owner's Representative and then compact to provide a firm and unyielding subgrade to the approval of the Owner's Representative and at no additional cost to the Owner.

D. Trench Bracing

1. Properly support all trenches in strict accordance with all pertinent rules and regulations.
2. Brace, sheet, and support trench walls in such a manner that they will be safe and that the ground alongside the excavation will not slide or settle, and that all existing improvements of every kind will be fully protected from damage.
3. In the event of damage to such improvements, immediately make all repairs and replacements necessary to the approval of the Owner's Representative and at no additional cost to the Owner.

4. Arrange all bracing, sheeting and shoring so as to not place stress on any portion of the completed work until the general construction thereof has proceeded far enough to provide sufficient strength.

E. Removal of Trench Bracing

1. Exercise care in the drawing and removal of sheeting, shoring, bracing, and timbering to prevent collapse or caving of the excavation faces being supported.

F. Grading and Stockpiling Trenched Material

1. Control the stockpiling of trenched material in a manner to prevent water from running into the excavations.
2. Do not obstruct surface drainage but provide means whereby storm and waste waters are diverted into existing gutters, other surface drains, or temporary drains.

G. Methods

1. All trench excavation shall be made by open cut. During excavation, material suitable for backfilling shall be piled in an orderly manner a sufficient distance from the banks of the trench to avoid overloading, and to prevent slides or cave-ins. All material not required for backfill or not suitable for backfill, shall be removed from the site by the Contractor. Banks of trenches shall be kept as nearly vertical as possible, and shall be properly sheeted and braced as may be necessary to prevent caving.
2. Trench widths in paved streets or in areas where proximity to other structures require vertical cuts, shall not be wider than is required for proper handling, jointing and bedding of the pipe.
3. The bottom of the trenches shall be accurately graded to line and grade, and provide uniform bearing and support for each section of the pipe on undisturbed soil, at every point along its entire length. Depressions for joints shall be dug after the trench bottom has been graded, and shall be only of such length, depth and width as required for properly making the particular type joint. Care shall be taken not to excavate below the depths indicated.
4. Where rock occurs in trench excavation, the rock shall be removed to a depth of six (6) inches below the established grade line, and to a width of twelve (12) inches greater than the outside diameter of the pipe to be installed in the trench.

H. Pavement Removal

1. Where excavation of trenches requires the removal of asphaltic pavement, the pavement shall be cut in a straight line along the edge of the excavation by use of a spade-bitted air hammer, concrete saw or similar approved equipment to obtain straight, square and clean break; and, after backfilling and subgrade preparations are completed, hot plant mix asphaltic concrete shall be replaced and compacted.
2. Excess material, including rock, broken concrete, bituminous materials, debris or other materials not suitable for backfill, shall be removed from the site and disposed of by the Contractor.

3.3 BORING

A. Locations

1. Boring shall be used to route pipe, wiring, or both under concrete structures such as walks or curbs where trenching is impractical. Sleeves shall be installed in all bored holes.

B. Method

1. Boring shall be accomplished with a drill, auger, water jet, or any other instrument approved by the Owner's Representative capable of producing a precise hole. Boring shall not disturb overlaying structures or cause settlement and damage to those structures.

3.4 SLEEVES

A. Locations

1. Sleeves shall be installed wherever routing of a pipe, wiring, or both crosses a paved area or passes through a bored hole.

B. Methods

1. Sleeves laid in open trenches shall be uniformly and evenly supported by undisturbed soil on the trench bottom. Backfill shall conform to standards hereinafter specified.
2. Sleeves installed in borings shall be forced through and shall have a snug fit throughout the length of the bored hole. Sleeves cracked or broken shall not be accepted.

3.5 BACKFILL

A. Inspection

1. The trenching shall not be backfilled until inspection has been completed and the pipe installation, including the grade, alignment and jointing has been found to be in compliance with the requirements of the plans and specifications.

B. Around and Over Pipe

1. Select backfill material consisting of sand, fine gravel or select earth, free of large lumps or rocks larger than 3/4 inch shall be used in backfilling around and over the installed pipe.
2. The select material shall be obtained from the excavation material removed from the trench and shall be processed by screening, sifting, or selective sorting, so as to produce the type of backfill herein specified. The Contractor may at his option and own expense provide an acceptable imported material.
3. This backfill material shall be carefully deposited around and over the pipe in layers not more than six (6) inches thick, loose measurement, unless otherwise permitted by the Owner's Representative, wetted to optimum moisture content and uniformly compacted to at least 95 percent of the maximum density obtainable at optimum moisture content as determined by AASHTO T99 Method A or D (latest revision), until the pipe has a cover depth of at least one (1) foot.

C. Remainder of Trench Backfill

1. The remaining depth of the trench shall be backfilled with excavation material removed from the trench, which shall be wetted or dried to near optimum moisture content.
2. Inclusion of a limited amount of stones and rocks will be permitted. Stones and rocks shall in no case be larger than two inches diameter, and they shall be placed so that each piece is completely surrounded with material compacted to the density hereinafter specified. The size and amount of rocks used in backfill shall be such that they will not interfere with proper compaction.
3. This material shall be carefully deposited in layers of a thickness suitable to the equipment selected by the Contractor for proper compaction and compacted to at least 95 percent of the maximum density as determined by AASHTO T99 Method A or D (latest revisions). The method of compaction selected by the Contractor shall not cause damage of any nature to the installed pipe.
4. The use of a water puddling of this portion of the trench backfilling may be used if the specified density can be obtained and the backfill material is suitable for this type of trench compaction.

3.6 PAVEMENT REPLACEMENT

1. Pavement replacement shall utilize the same materials and design as the original pavement.

3.7 CLEANUP

1. Upon completion of the work, the entire site shall be cleared of all debris, and ground surfaces shall be finished to smooth, uniform slopes and shall present a neat and workmanlike appearance. Cleanup shall be considered an incidental item, and no additional payment shall be made for any cleanup item. All fences, culverts, gravel driveways or other obstructions removed during construction, shall be replaced in a condition at least equal to their existing condition.

3.8 MAINTENANCE

A. The Contractor shall, for a period of one (1) year after completion and final acceptance of the work, maintain and repair any trench or boring settlement which may occur, and shall make suitable repairs to any pavements, sidewalks, or other structures which may become damaged as a result of settlement. All such maintenance and repair shall be at the Contractor's expense.

END OF SECTION 312334

SECTON 313219 – GEOTEXTILE REINFORCEMENT

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Geotextile to stabilize and reinforce an aggregate cover material (subbase, base, select embankment, etc.) of an unpaved or paved roadway.

1.2 RELATED SECTIONS

A. Section 31 00 00 - Earthwork

1.3 REFERENCES

A. AASHTO Standards:

1. T088-10-UL - Particle Size Analysis of Soils
2. T090-00-UL - Determining the Plastic Limit and Plasticity Index of Soils
3. T099-10-UL - The Moisture-Density Relations of Soils Using a 5.5lb (2.5 kg) Rammer and a 12in (305 mm) Drop.
4. M288-15 - Geotextile Specification for Highway Applications

B. American Society for Testing and Materials (ASTM):

1. D123 - Standard Terminology Relating to Textiles
2. D276 - Test Method for Identification of Fibers in Textiles
3. D422 - Standard Test Method for Particle-Size Analysis of Soils
4. D4354 - Practice for Sampling of Geosynthetics for Testing
5. D4355 - Test Method for Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Xenon-Arc Type Apparatus)
6. D4439 - Terminology for Geotextiles
7. D4491 - Test Methods for Water Permeability of Geotextiles by Permittivity
8. D4595 - Test Method for Tensile Properties of Geotextiles by the Wide-Width Strip Method
9. D4751 - Test Method for Determining Apparent Opening Size of a Geotextile
10. D4759 - Practice for Determining the Specification Conformance of Geosynthetics
11. D4884 - Standard Test Method for Strength of Sewn or Thermally Bonded Seams of Geotextiles
12. D4873 - Guide for Identification, Storage, and Handling of Geotextiles
13. D5321 - Test Method for Determining the Coefficient of Soil and Geosynthetic or Geosynthetic and Geosynthetic Friction by the Direct Shear Method
14. D6241 - Standard Test Method for the Static Puncture Strength of Geotextiles and Geotextile-Related Products Using a 50-mm Probe
15. D6706 - Standard Test Method for Measuring Geosynthetic Pullout Resistance in Soil

D. Geosynthetic Accreditation Institute (GAI) - Laboratory Accreditation

Program (LAP)

E. International Standards Organization (ISO) - 9001:2008

F. National Transportation Product Evaluation Program (NTPEP)

1.4 DEFINITIONS

A. Minimum Average Roll Value (MARV): Property value calculated as typical minus two standard deviations. Statistically, it yields a 97.7 percent degree of confidence that any sample taken during quality assurance testing will exceed value reported.

1.5 SUBMITTALS

A. Submit the following:

1. Certification: The contractor shall provide to the Engineer/Architect a certificate stating the name of the manufacturer, product name, style number, and chemical composition of the filaments or yarns and other pertinent information to fully describe the geotextile. The Certification shall state that the furnished geotextile meets MARV requirements of the specification as evaluated under the Manufacturer's quality control program. The Certification shall be attested to by a person having legal authority to bind the Manufacturer. Certifications from Private Label distributors will not be accepted.

2. If an alternate product is submitted full scale performance testing performed by an Independent testing agency shall be provided that quantifies the structural benefit of the geotextile. The benefit must meet or exceed the benefit of the design geotextile.

3. Coefficient of Interaction (C_I) test results performed by a lab with GRI accreditation should be provided to confirm conformance to the specified value.

4. Manufacturer’s installation Guidelines shall be provided.

5. One 1’ x 1’sample shall be provided.

6. Quality Standards: The contractor shall provide to the Engineer the Manufacturer’s Quality Control Plan along with their current GAI-LAP, and ISO 9001:2008 certificates.

7. Alternate products must be submitted 10 days prior to bid date to Engineer/Architect and shall include information on five similar projects in size and scope.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications:

1. The geotextile Manufacturer shall have all the following credentials:

a. ISO 9001:2008 Quality Management System

b. Geosynthetic Accreditation Institute (GAI) Laboratory Accreditation Program (LAP)

B. The geotextile Manufacturer shall have a GAI-LAP accredited laboratory at the location of production capable of performing the ASTM tests as outlined in the specification.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Geotextile labeling, shipment, and storage shall follow ASTM D4873. Product labels shall be color-coded to specifically identify each product and clearly show the Manufacturer's name, style name, and roll number.

B. Each geotextile roll shall be wrapped with a material that will protect the geotextile from damage due to shipment, water, sunlight, and contaminants.

C. During storage, geotextile rolls shall be elevated off the ground and adequately covered to protect them from the following: site construction damage, precipitation, extended ultraviolet radiation including sunlight, chemicals that are strong acids or strong bases, flames including welding sparks, excess temperatures, and any other environmental conditions that may damage the physical property values of the geotextile.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. TenCate Geosynthetics Americas
365 South Holland Drive
Pendergrass, GA, USA 30567
1-800-685-9990
1-706-693-2226
1-706-693-4400, fax
www.mirafi.com
or equal approved prior to bidding.

2.2 MATERIALS

A. Geotextile:

1. The geotextile with orange identification yarns and super high-tenacity polypropylene yarns with a weave pattern to maximize strength, water flow, soil interaction and soil retention. The yarns shall be from high-tenacity long-chain synthetic polymers composed of at least 95 percent by weight of polyolefins or polyesters. They shall form a stable network such that the filaments or yarns retain their dimensional stability relative to each other, including selvages.

2. The geotextile shall meet the requirements of Table 1. All numeric values in Table 1 except AOS represent MARV in the specified direction. Values

for AOS represent maximum average roll values.

3. All geotextile products shall have a separation factor of 0.9 or higher per ASTM D422, Modified.

TABLE 1 - SUBGRADE STABILIZATION GEOTEXTILE

Mechanical Properties	Test Method	Unit	Typical Roll Value	Minimum Average Roll Value
Tensile Strength @ 2% strain (MD)	ASTM D4595	lbs/ft (kN/m)	720 (10.5)	600 (8.8)
Tensile Strength at 2% Strain (CD)	ASTM D4595	lbs/ft (kN/m)	1200 (17.5)	1020 (14.9)
Tensile Strength @ 5% strain (MD)	ASTM D4595	lbs/ft (kN/m)	2100 (30.6)	1800 (26.3)
Tensile Strength @ 5% strain (CD)	ASTM D4595	lbs/ft (kN/m)	2580 (37.6)	2256 (32.9)
Flow Rate	ASTM D4491	gal/min/ft^2 (l/min/m^2)	85 (3463)	75 (3056)[1]
Permittivity	ASTM D4491	sec^{-1}	1.2	0.9[1]
			Typical Roll Value	
Pore Size O_{95}	ASTM D6767	microns	365	
Pore Size O_{50}	ASTM D6767	microns	185	
Index Properties			Maximum Opening Size	
Apparent Opening Size (AOS)	ASTM D4751	U.S. Sieve (mm)	50 (0.30)	40 (0.425)
			Minimum Test Value	
Interaction Coefficient[2]	ASTM D6706	--	0.89	
Factory Sewn Seam	ASTM D4884	lbs/ft (kN/m)	2700 (39.4)	
UV Resistance (at 500 hours)	ASTM D4355	% strength retained	90	

[1] Minimum Roll Value
[2] Interaction Coefficient value is for sand or gravel based on testing conducted by SGI Testing Services.

When sewn, seams are required refer to Section 3 - Execution.

4. Approved geotextiles are as follows:

Mirafi® RS380i

2.3 QUALITY CONTROL

A. Manufacturing Quality Control: Testing shall be performed at an on-site laboratory accredited by GAI-LAP for tests required for the geotextile, at frequency meeting or exceeding ASTM D4354.

B. Manufacturer's certifications and testing of quality assurance samples obtained using Procedure B of ASTM D4354. A lot size for conformance or quality

assurance sampling shall be the shipment quantity of the given product or a truckload of the given product, whichever is smaller.

PART 3 - EXECUTION

3.1 Installation shall be according to the manufacturer's recommendations. Manufacturer's installation guidelines shall be provided in the submittal package.

END OF SECTION 313219

SECTION 321823 - TENNIS COURT SURFACING

PART 1 – GENERAL

1.1 GENERAL DESCRIPTION:

A. This specification covers the application of a new surface for Tennis Court Surfacing on new or existing concrete tennis courts that have a well-drained base of sufficient thickness and stability. The courts should be sloped to one inch every ten feet across one true plane in accordance with the American Sports Builders Association and United States Tennis Association specifications.

The success of the Tennis Court Surfacing System is dependent upon a sound base with good drainage. The concrete surface shall be prepared in accordance to the following specifications. Great care needs to be taken to provide an appropriate vapor barrier of a minimum thickness of 6-millimeter polyethylene sheeting beneath the post-tension concrete slab.

1.2 RELATED WORK:

A. Section 033000 – Cast-in-Place Concrete
B. Section 033800 – Post-Tension Concrete
C. Section 116823 – Athletic equipment
D. Section 321824 –Tennis Court Markings

1.3 REFERENCE STANDARDS:

A. National Asphalt Paving Association (NAPA)
B. United States Tennis Association (USTA)
C. International Tennis Federation (ITF)
D. American Sport Builders Association (ASBA)

1.4 QUALITY ASSURANCE:

A. Surfacing shall conform to the guidelines of the ASBA for planarity.
B. All surface coatings products shall be supplied by a single manufacturer.
C. The contractor shall record the batch number of each product used on the site and maintain it through the warranty period.
D. The contractor shall provide the inspector, upon request, an estimate of the volume of each product to be used on the site.
E. The installer shall be an authorized applicator of the specified system.
F. The manufacturer's representative shall be available to help resolve material questions.

1.5 SUBMITTALS:

A. Manufacturer specifications for components, color chart and installation instructions. Provide graphic representation of tennis court and selected colors for final selection.
B. Authorized Applicator certificate from the surface system manufacturer.
C. ITF classification certificate for the system to be installed.
D. Current Material Safety Data Sheets (MSDS).
E. Product Substitution: If other than the product specified, the contractor shall submit a complete type written list of proposed substitutions with sufficient data, drawings,

samples, and literature to demonstrate to the Owners satisfaction that the proposed substitution is of equal quality and utility to that originally specified.

1.6 MATERIAL HANDLING AND STORAGE:

A. Store materials in accordance with manufacturer specifications and MSDS.
B. Deliver product to the site in original unopened containers with proper labels attached.
C. All surfacing materials shall be non-flammable.

1.7 WARRANTY:

A. Provide a guarantee against defects in the materials for a period of five (5) years from the date of substantial completion.
B. Provide a guarantee against defects in the workmanship for a period of two (2) years from the date of substantial completion.

1.8 INSTALLER QUALIFICATIONS:

A. Installer shall be regularly engaged in the installation of Tennis Court Systems.
B. Installer shall have continuously operated under the same company name for the past five (5) years.
C. Reference list from the installer of at least ten (10) projects of similar scope done in the last three (3) years.
D. Installer shall be an Authorized Applicator of the specified surface system.
E. Installer shall be a builder member of the ASBA.

1.9 MANUFACTURER QUALIFICATIONS:

A. System manufacturer must provide a medium pace surface.
B. System manufacturer shall be a US owned company.
C. System manufacturer shall be a member of the ASBA.

PART 2 – PRODUCTS

2.1 APPROVED MANUFACTURERS:

A. Specifications are based on products of named manufacturer. Other manufacturers must have a minimum of five (5) years experience manufacturing products equivalent to those specified and comply with 1.5.E above.
B. Approved Product/Manufacturers:
    A. “Plexipave Standard” manufactured by California Products Corporation, Andover, MA 978-623-9980
    B. “Laykold ColorCoat” manufactured by Advanced Polymer Technology, APT, Harmony, PA 724-452-1330
    C. “SportMaster ColorPlus System” manufactured by SportMaster Sport Surfaces, Sandusky, OH 800-395-7325
    D. or Owner approved equal

2.2 MATERIALS:

A. Muriatic Acid – 31.45% Hydrochloric Acid, HCI
B. Concrete Primer

C. Patch Binder
D. Acrylic Resurfacer
E. Acrylic Color Coatings
F. Line Tape Sealer
G. White Line Paint

2.3 COLORS:

A. Surfacing colors shall be as follows:
   a. Court: As indicated on the Drawings
   b. Border: As indicated on the Drawings.
   c. Submit color samples and graphics for final selection and approval.

PART 3 – EXECUTION

3.1 INSTALLATION:

A. Surface Preparation: The concrete shall have a medium broom finish. DO NOT INSTALL A STEEL TROWEL SMOOTH FINISH. DO NOT ALLOW ANY CURING AGENTS OF HARDNERS TO BE APPLIED. Concrete must cure for a minimum of 28 days. Thoroughly remove all dirt, dust, mud oil or any other debris.
B. Muriatic Acid: Concrete surface must be acid etched with a mix of muriatic acid and water (5 parts water to 1 part acid). After drying, all latent material shall be removed and cleaned with a 3500 PSI pressure washer.
C. Depressions: The court will be flooded and any standing water that remains after one hour at 70 degrees and rising, in direct sunlight that covers a US nickel will then be patched with Patch Binder. After the surface has dried use a primer mix consisting of RPB mixed 1:2 with water. Then fill each depression with Patch Binder according to the following mix:

   100 lbs. of 30 mesh silica sand
   2-3 gallons of Patch Binder
   1-2 gallons of Portland Cement

D. Primer and surfacing shall be applied within approximately 4" of the chain link fencing. Tape surface to protect non-surfaced areas while applying court surfacing materials.
E. Primer Coat: Mix and apply Concrete Primer to entire court area.
F. Acrylic Resurfacer: One coat of Acrylic Resurfacer shall be applied to court using the following mix:

   Acrylic Resurfacer – 50 gals
   Silica Sand (30 mesh) – 400 lbs.
   Water – 20 to 30 gals

G. Color Coating: A heavily bodied, multipurpose acrylic coating fortified with mineral fillers, fibers and high-quality pigments that provide a long lasting, attractive recreational surface. The Color Coatings can be used as a textured surface containing silica sand, as well as, a non-textured surface coating. Color Coatings can be adjusted to control the speed of play by using a variety of silica sand sizes and quantities to meet players of all levels needs. A minimum of two coats shall be applied to each court.
H. The finished surface shall have a uniform appearance and shall be free of ridges.
I. Playing Lines: Line tape sealer shall be applied as a prime coat between the masking tape to ensure razor sharp line edges. Textured white line paint shall be applied by

brush or roller 2″ wide. The lines will be accurately marked and applied in strict accordance with USTA and ASPA specifications for doubles play.

J. No part of the application of the Coating System shall be applied when rainfall is imminent. The air temperature must be 50 degrees F and rising. Do not apply when the surface temperature is in excess of 140 degrees F. Protect the Coating System from freezing. The Coating System will not prevent surface or structural cracks from reoccurring.

END OF SECTION 321823

SECTION 321824 - TENNIS COURT MARKINGS

PART 1 - GENERAL

1.1 DESCRIPTION:

The work of this section consists of furnishing and installing court markings, including but not necessarily limited to the following:

A. Application of line striping on the finished surface

B. Clean-up and restoration of the construction site

The Contractor shall use manufacturer's approved methods for all products installed, and shall obtain and pay for all manufacturer's technical assistance required for proper installation of the materials selected.

This specification section is a part of the entire set of Contract Documents and shall be coordinated with the applicable provisions of the other parts.

1.2 REFERENCE STANDARDS:

All work shall be done in accordance with American Sports Builders Association (A.S.B.A.).

1.3 QUALITY ASSURANCE:

A. Qualifications of Workmen

Provide at least one person who shall be thoroughly trained and experienced in the skills required, who shall be completely familiar with the design and application of the work described for the section, and who shall be present at all times during progress of the work of this section and shall direct all work performed under this section.

For actual application of materials and operation of the required equipment, use only personnel thoroughly trained and experienced in the skills required.

B. References

Provide references for a minimum of 12 previously completed jobs of similar scope and extent. For each reference provide the Owner's name, contact person's name, address, telephone number, date the work was completed, approximate cost and a brief description of the work.

All reference materials shall accompany the bid submittal at the time of bid opening.

C. Schedules and Coordination With Others

The Contractor shall submit a construction schedule showing anticipated work dates and lengths of curing times for approval by the Owner's Representative a minimum of 30 days prior to beginning work on the tennis courts.

Schedule all work of this section with that of all other contractors working on the job to assure a smooth progression of work efforts. Particular attention shall be devoted to coordination of net post footings and center strap anchor installation with the paving contractor.

Notify Owner's Representative of all applications a minimum of 48 hours prior to installation.

1.4 PROTECTION:

A. Protection

Use all means necessary to protect all resurfacing materials before, during and after installation and to protect the installed work and materials of all other trades.

B. Replacements

In the event of damage to existing installations, immediately make all repairs and replacements necessary to the approval of the Owner's Representative at no additional cost to the Owner.

PART 2 - MATERIALS

2.1 GENERAL:

All materials used on this project shall be as specified below. Products shall not be intermixed, and the same brand shall be used throughout the work.

A. Containers

All brand name materials used on this project shall be delivered to the site in the original unopened containers bearing the manufacturer's trade name, type of materials, and the date of manufacture or date of filling the container. Bulk materials shall be accepted only when all deliveries are accompanied by certified delivery tickets, and such tickets are accepted by the Owner's Representative before the materials are incorporated in the work.

Materials which have exceeded the manufacturer's shelf life shall be rejected. No containers shall be removed from the job site until they have been inspected and released by the Owner's Representative.

B. Submittals

Before any surfacing materials are delivered to the job site, submit to the Owner's Representative a complete list of all resurfacing materials proposed to be furnished and installed.

Show manufacturer's name and catalog number for each item, furnish complete catalog cuts and technical data, and furnish the manufacturer's recommendations as to method of installation.

Sample of line marking paint shall be supplied for tennis lines and the 60' tennis lines indicating the full color and the 25% blended reduction.

Do not permit any resurfacing material to be brought onto the job site until it has been approved by Owner's Representative.

2.2 PLAYING LINES:

All prime and paint for playing line markings shall be of the same manufacturer as the court surfacing, or equal approved in advance by the Owner's Representative.

Tennis court lines shall be white; 60' tennis court lines shall be blended white 25% lighter than tennis lines creating a light green appearance. Provide samples for approval.

2.4 OTHER MATERIALS:

All other materials not specified shall be as selected by the Contractor, subject to approval in advance by the Owner's Representative. All other materials shall be new, first quality, and specifically manufactured for the intended use and application.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS:

A. Inspection

Prior to all work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.

Verify that tennis court resurfacing may be installed in strict accordance with the original design, all pertinent codes and regulations, and all manufacturer's recommended procedures.

B. Discrepancies

In the event of discrepancy, immediately notify the Owner's Representative.

Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

Beginning of installation means acceptance of existing conditions by installer.

3.2 EQUIPMENT:

A. General

All mixing, application and spreading equipment shall conform to material manufacturer's installation specifications.

3.3 LINE MARKINGS:

Upon completion and acceptance of the tennis surface, this Contractor shall prepare and paint lines for tennis.

Locate, mark and paint 2" wide white tennis court lines as shown on the plans. All lines are to be applied by painting between masking tape with a paintbrush or roller, according to U.S.T.A specifications.

Lines for 60′ tennis shall be white and blended to approximately 25% lighter than tennis court lines.

Prime masked lines. Allow application to dry.

Paint lines with textured line paint. Allow application to dry.

Remove masking tape immediately after lines are dry. Protect striping until fully cured.

Protect adjacent areas and structures (fences, posts, sidewalks, buildings, etc.), which are not to be coated. In the event that coatings are applied to above, remove immediately before drying is complete.

3.4 CLEAN UP:

A. Daily Requirements

The Contractor shall maintain the job site in a neat and orderly condition on a daily basis. Prior to leaving the job site at the end of each workday, all loose materials, containers, tools, and equipment shall be removed, or stored within the confines of the tennis court area, and the access gate locked.

B. Public Safety

Appropriate warning signs and barricades shall be erected by the Contractor for the duration of the construction as needed to protect the public using the site areas near the work zone. The court is to be left secure so as to prevent vandalism.

C. Project Completion

Prior to the substantial completion walk through, remove all construction materials, equipment and waste from the work area. Clean all surfaces and make all adjustments needed in order to present a neat and functional appearance.

3.9 WARRANTY:

In addition to all Manufacturer's warranties, the Contractor shall warrant all products, materials and labor to be free from defects for a period of two (2) years from date of Substantial Completion.

END OF SECTION 321823

SECTION 323113 - CHAIN-LINK FENCES AND GATES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS:

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.

1.2 SUMMARY:

A. This section includes the following:
   1. Galvanized steel chain-link fabric.
   2. Galvanized steel framework.
   3. Grounding and bonding.
B. Related Sections include the following:
   1. Division 3 Section 033000 – Cast-In-Place Concrete for concrete equipment bases/pads and post footings.
   2. Division 32 Section 310000 – Earthwork: for filling and for grading work.

1.3 DEFINITIONS:

A. CLFMI: Chain Link Fence Manufacturers Institute.

1.4 SUBMITTALS:

A. Product Data: Material descriptions, construction details, dimensions of individual components and profiles, and finishes for the following:
   1. Fence and gate posts, rails, and fittings.
   2. Chain-link fabric, reinforcements, and attachments.
   3. Gates and hardware.
B. Shop Drawings: Show locations of fence, each gate, posts, rails, and tension wires and details of extended posts, extension arms, gate swing, or other operation, hardware, and accessories. Indicate materials, dimensions, sizes, weights, and finishes of components. Include plans, elevations, sections, gate swing and other required installation and operational clearances, and details of post anchorage and attachment and bracing.
C. Product Certificates: Signed by manufacturers of chain-link fences and gates certifying that products furnished comply with requirements.
D. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Construction Managers and owners, and other information specified.
E. Field Test Reports: Indicate and interpret test results for compliance of chain-link fence and gate grounding and bonding with performance requirements.

1.5 QUALITY ASSURANCE:

A. Installer Qualifications: An experienced installer who has completed chain-link fences and gates similar in material, design, and extent to those indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

B. Source Limitations for Chain-Link Fences and Gates: Obtain each color, grade, finish, type, and variety of component for chain-link fences and gates from one source with resources to provide chain-link fences and gates of consistent quality in appearance and physical properties.

1.6 PROJECT CONDITIONS:

A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
   1. Notify Construction Manager not less than 7 days in advance of proposed utility interruptions.
   2. Do not proceed with utility interruptions without Construction Manager's written permission.
B. Field Measurements: Verify layout information for chain-link fences and gates shown on Drawings in relation to property survey and existing structures. Verify dimensions by field measurements.

PART 2 – PRODUCTS

DO NOT USE BARBED WIRE

2.1 CHAIN-LINK FENCE FABRIC:

A. Steel Chain-Link Fence Fabric: Height indicated on Drawings. Provide fabric fabricated in one-piece widths for fencing in height of 12 feet (3.6 m) and less. Comply with CLFMI's "Product Manual" and with requirements indicated below.
   1. Mesh and Wire Size: 1-3/4 inch mesh, 0.148 inch (3.76 mm) diameter, 9 gauge.
   2. Zinc-Coated Fabric: ASTM A 392, with zinc coating applied to steel wire mesh fabric after weaving with the following minimum coating weight:
      a. Class 1: Not less than 1.2 oz./sq. ft. (366 g/sq. m) of uncoated wire surface.

2.2 INDUSTRIAL FENCE FRAMING:

A. Round Steel Pipe: Standard Weight, Schedule 40 or SS40, galvanized steel pipe complying with ASTM F 1083. Comply with ASTM F 1043, Material Design Group IC, external and internal coating Type A, consisting of not less than 1.8 oz./sq. ft. (0.55 kg/sq. m) zinc; and the following strength and stiffness requirements.
   1. Line, End, Corner, and Pull Posts and Top Rail: Per requirements for Light Industrial Fence and as per plans.
B. Post Brace Rails: Match top rail for coating and strength and stiffness requirements. Provide brace rail with truss rod assembly for each gate, end, and pull post. Provide two brace rails extending in opposing directions, each with truss rod assembly, for each corner post and for pull posts. Provide rail ends and clamps for attaching rails to posts.
C. Top Rails: Fabricate top rail from lengths 21 feet (6.4 m) or longer, with swedged-end or fabricated for expansion-type coupling, forming a continuous rail along top of chain-link fabric.
D. Intermediate Rails: Match top rail for coating and strength and stiffness requirements.
E. Bottom Rails: Match top rail for coating and strength and stiffness requirements.

2.3 INDUSTRIAL SWING GATES:

A. General: Comply with ASTM F 900 for the following swing-gate types:
   1. Single Gate.
   2. Double Gate.
B. Metal Pipe and Tubing: Galvanized steel. Comply with ASTM F 1083 and ASTM F 1043 for materials and protective coatings.
C. Frames and Bracing: Fabricate members from round galvanized steel tubing with outside dimension and weight according to ASTM F 900 for the following gate fabric height.
D. Frame Corner Construction: As follows:
   1. Welded.
E. Gate Posts: Fabricate members from round galvanized steel pipe with outside dimension and weight according to ASTM F 900 for the following gate fabric heights and leaf widths.
F. Hardware: Latches permitting operation from both sides of gate, hinges, center gate stops and, for each gate leaf more than 5 feet (1.5 m) wide, keepers. Fabricate latches with integral eye openings for padlocking; padlock accessible from both sides of gate.

2.5 FITTINGS:

A. General: Provide fittings for a complete fence installation, including special fittings for corners. Comply with ASTM F 626.

2.8 GROUT AND ANCHORING CEMENT:

A. Nonshrink, Nonmetallic Grout: Premixed, factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout, recommended in writing by manufacturer, for exterior applications.

PART 3 – EXECUTION

3.1 EXAMINATION:

A. Examine areas and conditions, with Installer present, for compliance with requirements for a verified survey of property lines and legal boundaries, site clearing, earthwork, pavement work, and other conditions affecting performance.
   1. Do not begin installation before final grading is completed, unless otherwise permitted by Construction Manager.
B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION:

A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet (152.5 m) or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

3.3 INSTALLATION, GENERAL:

A. General: Install chain-link fencing to comply with ASTM F 567 and more stringent requirements specified.
   1. Install fencing on established boundary lines inside property line.

B. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacings indicated, in firm, undisturbed or compacted soil.
C. Post Setting: Hand-excavate holes for post foundations in firm, undisturbed or compacted soil where needed. Set terminal, line, gate posts in concrete footing. Protect portion of posts above ground from concrete splatter. Place concrete around posts and vibrate or tamp for consolidation. Using mechanical devices to set line posts per ASTM F 567 is not permitted. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during placement and finishing operations until concrete is sufficiently cured.
   1. Dimensions and Profile: As indicated on Drawings.
   2. Exposed Concrete Footings: Extend concrete 2 inches (50 mm) above grade, smooth, and shape to shed water.

3.4 CHAIN-LINK FENCE INSTALLATION:

A. Terminal Posts: Locate terminal end, corner, and gate posts per ASTM F 567 and terminal pull posts at changes in horizontal or vertical alignment of 15 degrees or more.
B. Line Posts: Space line posts uniformly at maximum 8 feet (3.05 m) o.c.
C. Post Balancing Assemblies: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Install braces at end and gate posts and at both sides of corner and pull posts. Locate horizontal braces at mid-height of fabric on fences with top rail and at two-thirds fabric height on fences without top rail. Install so posts are plumb when diagonal rod is under proper tension.
D. Top Rail: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Run rail continuously through line post caps, bending to radius for curved runs and terminating into rail end attached to posts or post caps fabricated to receive rail at terminal posts. Provide expansion couplings as recommended by fencing manufacturer.
E. Intermediate Rails: Install in one piece at post-height center span, spanning between posts, using fittings, special offset fittings, and accessories.
F. Bottom Rails: Install, spanning between posts, using fittings and accessories.
G. Chain-Link Fabric: Apply fabric to outside of enclosing framework. Leave 2 inches (50 mm) between finish grade or surface and bottom selvage, unless otherwise indicated. Pull fabric taut and tie to posts, rails, and tension wires. Anchor to framework so fabric remains under tension after pulling force is released.
H. Tension or Stretcher Bars: Thread through fabric and secure to end, corner, pull, and gate posts with tension bands spaced not more than 15 inches (380 mm) o.c.
I. Fasteners: Install nuts for tension bands and carriage bolts on the side of the fence opposite the fabric side with all bolt ends, fastener ends, and sharp edges facing away from all athletic fields. Peen ends of bolts or score threads to prevent removal of nuts.
J. Tennis Court Fencing: Construct tennis court fence according ASTM F 969.

3.5 GATE INSTALLATION:

A. General: Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach fabric as for fencing. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

3.7 ELECTRICAL GROUNDING

A. Contractor shall determine whether or not electrical grounding of the fencing system is warranted based on sound installation practices. The cost for grounding shall be considered incidental.

3.8 FIELD QUALITY CONTROL:

A. Ground-Resistance Testing: If resistance to ground exceeds desired value, notify Construction Manager promptly. Include recommendations to reduce ground resistance and proposal to accomplish recommended work.
B. Ground-Resistance Tests: Subject completed grounding system to a megger test at each grounding location. Measure ground resistance not less than two full days after last trace of precipitation, without soil having been moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance. Perform tests by two-point method according to IEEE 81.
C. Desired Maximum Grounding Resistance Value: 25 ohms.
D. Excessive Ground Resistance: If resistance to ground exceeds desired value, notify Construction Manager promptly. Include recommendations to reduce ground resistance and proposal to accomplish recommended work.
E. Report: Prepare test reports, certified by testing agency, of ground resistance at each test location. Include observations of weather and other phenomena that may affect test results.

3.9 ADJUSTING:

A. Gate: Adjust gate to operate smoothly, easily, and quietly, free from binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.
B. Lubricate hardware and other moving parts.

3.10 DEMONSTRATION:

A. Engage a factory-authorized service representative to train Owner's personnel to adjust, operate, and maintain gates.
    1. Test and adjust hardware, and other operable components. Replace damaged or malfunctioning operable components.

END OF SECTION 323113

SECTION 328400 - IRRIGATION SYSTEM

PART 1 - GENERAL

1.1 DESCRIPTION:

The work of this section consists of all items necessary required for any irrigation adjustments necessary to facilitate construction of the proposed improvements.

1.2 RELATED WORK DESCRIBED ELSEWHERE:

Irrigation System, Trenching, and Backfilling	- Section 312334

1.3 QUALITY ASSURANCE:

A. Qualifications of Installer

Provide at least one person who shall be present at all times during execution of this portion of the work and who shall be thoroughly familiar with the type of materials being installed and material manufacturer's recommended methods of installation and who shall direct all work performed under this section.

B. Coordination of Work

All work of this section, and the installation of all lawns and all plant materials shall be performed by one Contractor.

C. Codes and Standards

In addition to complying with all pertinent codes and regulations, comply with the latest rules of the National Electrical Code for all electrical work and materials.

Where provisions of pertinent codes and standards conflict with the requirements of this section of these Specifications, the more stringent provisions shall govern.

1.4 SUBMITTALS:

A. Not Required

1.5 PRODUCT HANDLING:

A. Protection

Use all means necessary to protect irrigation system materials before, during, and after installation and to protect the installed work and materials of all other trades.

B. Replacements

In the event of damage, immediately make all repairs and replacements necessary to the approval of the Owner's Representative and at no additional cost to the Owner.

1.6 TECHNICAL ASSISTANCE:

A. Responsibility

Contractor shall provide all manufacturer and other technical assistance as required for installation and adjustment of the complete irrigation system as specified.

PART 2 - MATERIALS

2.1 PIPE:

A. Plastic Pipe

Plastic pipe shall be rigid unplasticized or PVC-200 as indicated on the plans, conforming to ASTM D-1784 and D-2241 standard specifications for PVC plastic pipe. The pipe shall be homogeneous throughout and free from visible cracks, holes, foreign materials, blisters, deleterions, wrinkles, and dents.

All pipe shall be continuously and permanently marked with the following information.

Manufacturer's name or trademark, size, schedule and type of pipe, working pressure at 73 degrees F. and National Sanitation Foundation (N.S.F.) approval.

2.2 RISERS:

A. Stationary Spray Heads

All stationary spray heads shall have Rain Bird model SA125050 pre-manufactured swing assemblies or equal approved in advance by the Owner's Representative. Swing assembly shall be 1/2"x 1/2"x 12" NPT.

B. Rotor Pop-up Sprinklers

All 1" inlet rotor pop-up sprinklers shall have an adjustable pre-assembled double swing joint riser. Swing joints shall be Rain Bird model TSJ-12 or equal approved in advance by the Owner's Representative. Swing joints shall be 1" x 12" and shall be threaded both ends.

All 3/4" inlet rotor pop-up sprinklers shall have an adjustable pre-assembled swing assembly risers. Swing assemblies shall be Rain Bird model TSJ-12075 or

equal approved in advance by the Owner's Representative. Swing assemblies shall be 3/4" x 12" and shall be threaded both ends.

2.3 MANUAL VALVES:

A. Gate Valves

All manual gate valves shall be 200 PSI rated.

All manual gate valves, sizes 2-1/2 inch and smaller, shall be 304 or 316 stainless steel, solid wedge type with integral taper seats and with non-rising stem, 200 WOG and shall be Leemco LGT-Series or equal accepted in advance by the Owner's Representative. Wheel handle shall be installed on all hand operated valves, cross handle shall be installed on all drain valves.

All manual gate valves of 3 inch size or larger shall be iron body, brass trimmed, resilient wedge type with integral taper seats and with non-rising stems, and shall be Leemco LMV-BB Series, Matco 10 RT Series or equal accepted in advance by the Owner's Representative.

2.4 SPRINKLER HEADS:

A. General

Any damaged sprinkler heads shall be replaced with the same manufacturer and model.

2.5 AUTOMATIC REMOTE CONTROL VALVES:

Any damaged remote control valves shall be replaced with the same manufacturer and model.

2.6 CONTROL CABLE:

All electrical control and ground wire shall be irrigation control cable as manufactured by Paige Electric Co., Box 368, Union, NJ 07083, telephone 800-327-2443 or equal approved in advance by the Owner's Representative. All control cable shall be 14-gauge and all common cable shall be 12-gauge unless otherwise indicated on the drawings, and rated for direct burial applications.

All wiring to be used for connecting the automatic remote control valve to the automatic controllers shall be 600 volt, soft drawn solid copper single conductor wire meeting the requirements of ASTM B-3 or B-8, -55° C to +60° C temperature rated with 0.045" polyethylene insulation. All control cable shall be marked with manufacturer identification, voltage rating, size and type and shall bear UL file number.

All cables shall be tested physically and electrically in accordance with UL Standard 493, and 83, paragraphs 28.1, 29.1 and 29.2. All reels and cartons shall bear UL labels.

All control or "hot" wires shall be of one color (black) and all common or "ground" wires shall be of another color (white). When more than one valve is operated by a single controller station provide separate control wire from the controller to each valve. All control cable shall run continuously from the controller to the valve without splicing.

Connection to remote control valve solenoid shall be made with 3M DBY/DBR Splice kits and located in valve the box.

Verification of wire types and installation procedures shall be checked to conform to local codes.

2.7 FITTINGS:

A. General

All plastic pipe fittings shall be permanently marked with the following information:

Manufacturer's name or trademark, size, schedule and type of pipe, working pressure at 73 degrees F. and National Sanitation Foundation (N.S.F.) approval.

All plastic pipe fittings to be installed shall be molded fittings manufactured of the same material as the pipe and shall be suitable for solvent weld, slip joint ring-tite seal, or screwed connections. Marlex fittings shall not be permitted.

Slip fitting socket taper shall be so sized that a dry unsoftened pipe end, conforming to these special provisions, can be inserted no more than halfway into the socket. Plastic flange fittings will not be permitted. Only schedule 80 fittings may be threaded.

When connection is plastic to metal, plastic male adaptors shall be used. The male adaptor shall be hand tightened, plus one turn with a strap wrench. Joint compound shall be Teflon Tape.

B. Fittings- Solvent Weld

All lateral line fittings and mainline fittings 2-1/2" and smaller shall be schedule 40 solvent weld fittings.

Fittings shall be manufactured by Lasco, Spears, or acceptable equal.

C. Fittings- Gasketed

All mainline fittings larger than 2-1/2" shall be gasketed ductile iron.

Fittings shall be manufactured by Harco, Leemco, or acceptable equal.

D. Fittings- Saddle Tees

Shall not be permitted.

2.8 SOLVENT CEMENT

All solvent cement and primer shall be manufactured by the same manufacturer for use together. Cement and primer products shall be manufactured with all virgin materials only. Solvent cement shall be NSF listed and shall meet or exceed ASTM D-2564. Solvent cement shall be heavy bodied, medium setting, and high strength. Solvent cement shall be Weld-On 711 PVC, Rectorseal Homer 828L, or equal. Primer shall be NSF listed and shall meet or exceed ASTM F-656. Primer color shall be purple.

2.9 CONCRETE:

All concrete shall be 3,000 psi at 28 days, transit mixed. Provide certifications with each delivery.

2.14 OTHER MATERIALS:

A. Materials to be Furnished

All other materials, not specifically described but required for a complete and proper repair or adjustment to the existing irrigation system installation, shall be new, first quality of their respective kinds, and subject to the approval of the Owner's Representative.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS:

A. Inspection

Prior to all work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.

Verify that irrigation system may be installed in strict accordance with all pertinent codes and regulations, the original design, the referenced standards, and the manufacturer's recommendations.

B. Discrepancies

In the event of discrepancy, immediately notify the Owner's Representative.

Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

Beginning of installation means acceptance of existing conditions by installer.

3.2 FIELD MEASUREMENTS:

Make all necessary measurements in the field to ensure precise fit of items in accordance with the original design.

3.3 TRENCHING AND BACKFILLING:

A. General

Perform all trenching and backfilling as specified by Section 312334 of this Specification.

3.4 INSTALLATION OF PIPING:

A. General

Layout the piping as required to facilitate the improvements.

B. Pipe Depth

All mainlines shall be installed with 18" minimum cover over the pipe. All laterals shall be installed with 12" minimum cover over the pipe.

C. Line Clearance

All lines shall have a minimum clearance of 4 inches from each other, and 6 inches from lines of other trades, except through pipe sleeves.

Parallel lines shall not be installed directly over one another.

D. Inspection of Pipe and Fittings

Carefully inspect all pipe and fittings before installation, removing all dirt, scale, and burrs and reaming as required; install all pipe with all markings up for visual inspection and verification.

E. Plastic Pipe

Plastic pipe shall be installed in a manner so as to provide for expansion and contraction as recommended by the manufacturer.

All plastic joints shall be solvent-weld joints or slip seal joints. Only the solvent cement recommended by the pipe manufacturer shall be used. All plastic pipe and fittings shall be installed as outlined and instructed by the pipe

manufacturer and it shall be the Contractor's responsibility to make arrangements with the pipe manufacturer for any field assistance that may be necessary. The Contractor shall assume full responsibility for the correct installation.

Slip seal gasketed joints may be used on all pipe 3" and larger.

All plastic to metal joints shall be made with plastic male adaptors.

The solvent-weld joints shall be made dry.

The solvent-weld joints shall be allowed to set at least 24 hours before pressure is applied to the system on PVC pipe.

F. Thrust Blocks

Provide concrete thrust blocks are required on all pipe 3” and larger.

All thrust blocks shall bear directly on undisturbed earth. Center pipe in the middle of thrust block.

3.5 INSTALLATION OF EQUIPMENT:

A. General

All fittings, valves, etc. shall be carefully placed in the trenches.

All sprinklers, having adjustable nozzles, shall be adjusted for proper and adequate distribution of the water over the coverage pattern of the sprinkler.

All nozzles on stationary pop-up sprinklers or stationary spray heads shall be tightened after installation. All sprinklers having an adjusting screw, adjusting stem or adjusting friction collars shall be adjusted as required for the proper arc of coverage, radius, diameter and/or gallonage discharge.

B. Lawn Sprinkler Heads

Install lawn sprinkler heads in strict accordance with the manufacturer's recommendations.

Along walks and driveways where finished grade is established, set all heads 1/4" below surface of pavement at time of installation and 1-1/2" from pavement. Sprinklers shall be installed 12” off the edge of the tennis court.

Set all heads to final grade where sod lawn will be installed. Top of head shall be approximately ½” above finish grade prior to sod installation. Adjust height based on sod thickness. Top of head to be even or just below finish grade of sod.

Upon completion of maintenance period, reset all lawn sprinkler heads flush with grade and firmly anchor with soil.

3.6 TESTING AND INSPECTION:

A. Closing-in Uninspected Work

Do not allow or cause any of the work in this section to be covered up or enclosed until it has been inspected, tested, and approved by the Owner's Representative.

Where trenches are not closed at the end of the day Contractor shall accept all liability for any damage or injury that may result from open trenches. Provide barricades and warning tape as necessary around all open trenches.

B. Flushing

Flush out each section of lateral pipe before sprinkler heads are attached.

C. Final Inspection

Thoroughly clean, adjust, and balance all systems.

Demonstrate all repaired sections to the Owner's Representative.

3.7 INSTRUCTIONS:

A. Record Drawings

Record accurately on one set of black and white prints of the site plan any adjustments made to the irrigation system.

Upon completion of each increment of work, transfer all such information and dimensions to the print. The dimensions shall be recorded in a legible and workmanlike manner. Maintain as-built drawings on site at all times.

Make all notes on drawing in pencil (no ball point pen). When the work has been completed, transfer all information from the field record print to a set of reproducible drawings.

Dimension from two permanent points of reference (buildings, monuments, sidewalks, curbs, pavement, etc.). Locations shown on as-built drawings shall be kept day to day as the project is being installed. All dimensions noted on drawings shall be 1/8-inch in size (minimum).

Show locations and depths of the following items if adjusted during construction:

Routing of sprinkler pressure lines (dimension maximum 200 feet along routing and at all changes in direction)
Gate valves
Sprinkler control valves
Quick coupling valves
Routing of control and power wires
Sprinkler heads
Other related equipment

3.8 ADJUSTMENT AND BREAK IN:

A. System Operation

During and following installation of the irrigation system, the Contractor shall operate the irrigation system as required to maintain healthy turf for a minimum of two weeks. During this period the irrigation system shall be proofed, adjusted, programmed and thoroughly tested.

The substantial completion inspection shall only be performed following completion of this requirement. The Contractor shall continue to operate the irrigation system until the project is substantially complete as determined by the Owner's Representative.

3.9 GUARANTEE PERIOD:

A. Guarantee

All irrigation repairs shall be guaranteed to give satisfactory service for a period of two (2) years from date of acceptance by the Owner.

Should any trouble develop within the time specified above due to inferior or faulty materials or workmanship, the trouble shall be corrected at no expense to the Owner.

Any and all damages resulting from faulty materials or workmanship shall be repaired by the Contractor to the satisfaction of the Owner, at no cost to the Owner.

END OF SECTION 328400

SECTION 329204 – SOD LAWNS

PART 1 - GENERAL

1.1 DESCRIPTION

A. Work in this section consists of furnishing all plant, labor, equipment, and performing all operations in connection with finish grading of topsoil and preparation thereof to receive sod, maintenance and protection of all sodded areas.

B. All exterior lawn areas disturbed during construction shall be sodded.

1.2 RELATED WORK DESCRIBED ELSEWHERE

A. Irrigation System - Section 328400

1.3 QUALITY ASSURANCE

A. Qualifications of Workmen

1. Provide at least one person who shall be present at all times during execution of this portion of the work and who shall be thoroughly familiar with the type of materials being installed and the best methods for their installation and who shall direct all work performed under this section.

1.4 PRODUCT HANDLING

A. Protection

1. Upon delivery of sod to the work site use all means necessary to protect and maintain the sod before, during, and after installation and to protect the installed work and materials of all other trades.

B. Replacements

1. In the event of rejection of the sod, immediately make all replacements necessary to the approval of the Owner's Representative and at no additional cost to the Owner.

C. Notice to Proceed

1. The Contractor shall not proceed with sodding operations until the irrigation system has been tested and approved by the Owner's Representative and the finish grade has been approved by the Owner's Representative.

1.5 SUBMITTALS

A. Not Required

PART 2 - MATERIALS

2.1 SOD

A. General

1. Grass and sod shall be well established lawn grass turf of approved grasses. It shall be vigorous, well-rooted, healthy turf, free from disease, insect pests, weeds, other grasses, stones, and any other harmful or deleterious matter. Cut sod in uniformly wide strips, uniformly 1-1/2 inches thick with clean cut edges. Sod shall be rolled or folded prior to lifting. Handling of sod shall be done in a manner that will prevent tearing, breaking, drying, or any other damage.
2. Sod shall be installed in place on the site not more than 24 hours after cutting.

B. Material

1. Minimum 75 percent bluegrass and not less than 85 percent permanent grass suitable to the climate; not more than 5 percent weed and undesirable grasses; free from roots, stones, and foreign materials. Subject to approval by the Owner's Representative.

2.2 FERTILIZER

A. General

1. Fertilizer to be spread on areas to be sodded shall be commercially prepared and shall contain the following percentages by weight:

a. 16% Nitrogen
b. 16% Phosphoric Acid
c. 16% Potash

2. Commercial fertilizer shall be complete, uniform in composition, dry and free-flowing. The fertilizer shall be delivered to the site in the original waterproof containers, each bearing the manufacturer's statement of analysis.

B. Protection

1. If stored at the site, protect fertilizer from the elements at all times.

2.3 TOPSOIL

A. Stockpiled Topsoil

1. The topsoil to be spread shall be the stockpiled topsoil material available on site. All topsoil shall be in an unfrozen and non-muddy condition and must meet the approval of the Owner's Representative.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Inspection

1. Prior to all work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
2. Verify that seeding may be completed in accordance with the original design and the referenced standards.

B. Discrepancies

1. In the event of discrepancy, immediately notify the Owner's Representative.
2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.
3. Beginning of installation means acceptance of existing conditions by installer.

3.2 TOPSOIL PLACEMENT

A. Compaction Prevention

1. The Use of heavy equipment will not be permitted on the site when soil conditions are wet to prevent compaction of topsoil and subsoil. In the event of wet weather, the Owner's Representative shall determine whether or not the use of heavy equipment will be permitted. Decision of the Owner's Representative shall be final.

B. Spreading Topsoil

1. Spread topsoil to a uniform compacted depth of six inches minimum. Topsoil and subgrade shall be in a dry condition before spreading. Topsoil shall be free flowing. Grading tolerance shall be plus or minus 0.1 foot for all spread topsoil. Do not excessively work topsoil. Compaction shall be 80 to 85%, which can be achieved through placing and leveling operations without rolling.

3.3 FERTILIZER AND AMENDMENT INCORPORATON

A. Apply fertilizer at label rate.

B. Incorporate fertilizer into top 3 to 4 inches of prepared seedbed.

3.4 GRADING

A. Finish Grading

1. Grade lawn areas to finish grades, filling as needed or removing surplus dirt and floating areas to a smooth uniform grade. All lawn areas shall slope to drain. Where no grades are shown, surfaces shall have a smooth and continual grade between existing or fixed controls (such as walks, curbs, catch basins, elevations at steps or building).
2. Roll, scarify, rake and level as necessary to obtain true even lawn surfaces. Prior to sodding, finish grade of compacted topsoil shall be 1" below all paved surfaces.
3. All finish grades shall meet approval of the Owner's Representative before sod is laid.

B. Fine Grading

1. Upon completion of finish grading, perform all fine grading required in planting areas, using topsoil obtained from the site.

3.5 SODDING

A. Preparation

1. Bed preparation shall pertain to the preparation of the surface of the ground to receive the sod. The ground shall be hand or machine raked so as to remove all debris, clods, stones, or other foreign matter larger than 1 inch. Such debris, clods, rocks, and other material so removed shall be disposed of off the immediate property. Bed preparation shall not commence until the moisture conditions make the soil friable.
2. If there has been a time lapse since the placement of the topsoil to allow it to become settled and compacted on the surface, the area to be planted shall be thoroughly worked to a depth of 3 to 4 inches so as to provide a surface of such condition that it will allow application of the sod in compliance with those specifications.
3. Beds should be permitted to settle or should be firmed by rolling before sodding.

B. Application

1. Sod may be placed at any time when the ground is not frozen and the irrigation system is operational and will remain so for 6 weeks minimum.
2. Sod is to be layed without netting, no exceptions.
3. A string or line of boards may be used as a guide for setting the first line of sod across the area. Sods of the next course are matched against the edge of this first line in such a way that the joints between the individual sod pieces in the two lines do not coincide. Successive courses are matched against the last line laid, in the same manner. All work should be done on boards laid on top of the sod to avoid footprints or other injuries to the surface.
4. All sod is to be laid on topsoiled areas. The joint shall be closely laid. Lay sod across slope. Roll or firmly but lightly, tamp with suitable wooden or metal tamper, all new sod sufficiently to set or press sod into underlying soil.

5. After sodding is completed, clean up and thoroughly moisten newly sodded areas.

C. Protection

1. Protect all sod by erecting temporary fences, barriers, signs, etc. as necessary to prevent traffic. Barriers shall remain in place for at least six (6) weeks unless other arrangements are made with the Owner's Representative.

3.6 MAINTENANCE

A. General

1. Maintain all lawn areas until final completion of the job but in no case less than 30 days.

B. Work Included

1. All areas shall be watered as required.
2. All areas shall be watched closely so that they are not permitted to dry out or to form puddles of water, or to be washed by over-application.
3. Mow all lawn at 1 1/2" each time its height reaches 2".

C. Replacements

1. Any area that fails to produce an adequate stand of grass shall be resodded by the Contractor at no additional expense to the Owner.
2. Replacements required because of vandalism or other causes beyond the control of the Contractor are not part of the Contract.

D. Extension of Maintenance Period

1. Continue the maintenance period at no additional cost to the Owner until all previously noted deficiencies have been corrected, at which time the final inspection shall be made.

END OF SECTION 329204

GEOTECHNICAL REPORT

RIMROCK
ENGINEERING, INC.

GEOTECHNICAL ENGINEERING REPORT

Pioneer Park Tennis Courts
Pioneer Park
Billings, Montana

January 17, 2024
Project No. G23214

Prepared for:

Steiner Thuesen PLLC
1925 Grand Avenue, Ste. 105
Billings, Montana 59102

Prepared by:

Rimrock Engineering, Inc.
5440 Holiday Avenue
Billings, Montana 59101

RIMROCK ENGINEERING, INC.

5440 Holiday Avenue · Billings, Montana 59101: · Phone: 406.294.8400 · www.rimrock.biz

January 17, 2024

Mr. Nathan Steiner
Steiner Thuesen PLLC
1925 Grand Avenue, Ste. 105
Billings, Montana 59102

Re: Geotechnical Engineering Report
Pioneer Park Tennis Courts
Pioneer Park
Billings, Montana

Dear Nathan:

Rimrock Engineering, Inc. has completed the geotechnical engineering services for the referenced project. The attached report presents the results of our findings. Our work consisted of subsurface exploration, laboratory testing, engineering analyses, and preparation of this report.

We appreciate this opportunity to be of service to you and are prepared to provide construction materials testing services during the construction phase of the project. If you have any questions regarding this report or need additional information or services, please contact us.

Sincerely,
RIMROCK ENGINEERING, INC.



Matt Geering, P.E.
Principal/Vice President

Wade Reynolds
Principal/President

TABLE OF CONTENTS

PAGE

EXECUTIVE SUMMARY I

1.0 INTRODUCTION AND SCOPE 1
1.1 Project Description 1
1.2 Purpose and Scope of Work 1

2.0 INVESTIGATION 1
2.1 Field Exploration 1
2.2 Laboratory Testing 2

3.0 SITE & SUBSURFACE CONDITIONS 2
3.1 Site Conditions 2
3.2 Subsurface Soil Conditions 2
3.3 Groundwater Conditions 3
3.4 Laboratory Test Results 3

4.0 RECOMMENDATIONS 4
4.1 Geotechnical Concerns/Considerations 4
4.2 Earthwork 4
4.2.1 Site and Subgrade Preparation 4
4.2.2 Material Requirements 5
4.2.3 Compaction Requirements 5
4.2.4 Site Drainage 6
4.2.5 Construction Considerations 6
4.3 Post-Tensioned Concrete Slabs 6
4.4 Corrosion Protection 7

5.0 ADDITIONAL SERVICES 7

6.0 LIMITATIONS 8

APPENDICES

Appendix A Vicinity/Site Map, Logs, USCS Description/Log Key
Appendix B Laboratory Test Results

EXECUTIVE SUMMARY

Rimrock Engineering has completed the geotechnical engineering services for the Pioneer Park Tennis Courts Project located within Pioneer Park in Billings, Montana. Based on the results of our geotechnical investigation, the site can be developed for the proposed project consistent with the recommendations provided in this report. The following geotechnical conditions and considerations were identified:

- Based on the materials encountered in our borings, underlying about 3 inches of asphalt surfacing and 9 to 27 inches of base course, the subsurface profile generally consists medium stiff to stiff sandy silt, silty clay with sand, and lean clay soils. Apparent fill materials comprised mainly of silty, clayey sand soils were encountered in borings drilled within the north courts. Groundwater was not encountered while drilling or for the short duration the borings were allowed to remain open.

- Due to existing subgrade conditions, we recommend a minimum of 1.5 feet of geotextile-reinforced structural fill be used beneath the post-tensioned concrete slabs to reduce the zone of frost susceptibility and provide a stable base for the new post-tensioned slab. Existing base course may be reused provided it meets structural fill requirements within.

It should be noted that specific project details were not fully developed or included in this section. The information provided in this executive summary should be used in conjunction with the entire report for design purposes.

GEOTECHNICAL ENGINEERING REPORT

Pioneer Park Tennis Courts
Pioneer Park
Billings, Montana

1.0 INTRODUCTION AND SCOPE

1.1 Project Description

The project consists of rehabilitation/reconstruction of the tennis courts located at Pioneer Park in Billings, Montana. We understand the courts have significant cracking and are expected to be rebuilt using post-tensioned concrete slabs. Existing materials are being considered for possible reuse.

1.2 Purpose and Scope of Work

The purpose of this study is to evaluate the feasibility of the proposed development with respect to the observed subsurface conditions and to provide information, opinions, and geotechnical engineering recommendations relative to:

- General site, soil and groundwater conditions
- Existing court conditions
- Site and subgrade preparation
- Posts-tensioned concrete slab considerations
- Corrosivity of site soils
- General earthwork and site drainage

Our scope of services consisted of background review, site reconnaissance, field exploration, laboratory testing, engineering analyses, and preparation of this report.

2.0 INVESTIGATION

2.1 Field Exploration

The subsurface exploration consisted of drilling four (4) borings on December 19, 2023 to approximately 11 feet below existing grades. The borings were drilled using our truck mounted drill rig equipped with solid flight augers. Groundwater levels were measured during drilling operations, if encountered. Upon completion of drilling and/or groundwater measurements, the borings were backfilled with drill cuttings and patched with asphalt cold patch.

Logs of the borings along with a Vicinity/Site Map are included in Appendix A. The borings were located in the field by Rimrock Engineering based on the site plan provided. Estimated ground

surface elevations were set at 100 for purposes of this investigation. The locations and elevations of the borings should be considered accurate only to the degree implied by the means and methods used to define them.

Rimrock Engineering personnel logged the soil conditions encountered in the borings. At selected intervals, samples of the subsurface materials were taken by driving split-spoon samplers, pushing Shelby tube samplers, and collecting auger cuttings. Penetration resistance measurements were obtained by driving the samplers into the subsurface materials with a 140-pound automatic hammer falling 30 inches. The penetration resistance value is a useful index in estimating the relative density, or consistency, of the materials encountered. The sample was tagged for identification, sealed to reduce moisture loss, and taken to our laboratory for further examination, testing, and classification.

2.2 Laboratory Testing

The purpose of the laboratory testing is to assess the physical and engineering properties of the soil samples collected in the field to be used in our geotechnical evaluations and analyses. Laboratory testing was performed on selected soil samples to assess the following:

- Visual classification (USCS)
- Moisture content
- Sieve analysis
- Atterberg limits
- Consolidation/swell
- Moisture/density relationship
- California Bearing Ratio (CBR)
- Water soluble sulfate, pH & resistivity

The soil descriptions presented on the boring logs are in accordance with the Unified Soil Classification System (USCS). Individual laboratory test results can be found in Appendix B at the end of this report.

3.0 SITE & SUBSURFACE CONDITIONS

3.1 Site Conditions

The project site is located within Pioneer Park along 3rd Street West in Billings, Montana. The site consists of the existing tennis courts and other park features. The site is relatively flat with slight drainage to the south and east. The surrounding areas consist mainly of residential development.

3.2 Subsurface Soil Conditions

Based on the materials encountered in our borings, underlying about 3 inches of asphalt surfacing and 9 to 27 inches of base course, the subsurface profile generally consists medium stiff to stiff sandy silt, silty clay with sand, and lean clay soils. Apparent fill materials comprised mainly of silty, clayey sand soils were encountered in borings drilled within the north courts.

The subsurface silt and clay soils had Standard Penetration Test (SPT) N-values in the range of 5 to 13 blows per foot with values usually less than 7 which indicates the soils to be medium stiff in consistency, have relatively high compressibility, and low shear strength characteristics. For a more detailed description of the subsurface conditions, please refer to the individual boring logs provided in Appendix A.

3.3 Groundwater Conditions

The borings were observed while drilling and after completion for the presence and level of groundwater. Groundwater was not encountered while drilling or for the short duration the borings were allowed to remain open. These observations represent groundwater conditions at the time of the field exploration and may not be indicative of other times, or at other locations. Groundwater can be expected to fluctuate with varying seasonal and weather conditions and other factors not evident at the time of the investigation. Evaluation of the factors that affect groundwater fluctuations is beyond the scope of this report.

3.4 Laboratory Test Results

The site soils were tested for grain size distribution (sieve analysis) and Atterberg Limits. Atterberg limits are a basic measure of the critical water contents of a fine-grained soils. The fine-grained soils encountered in the borings generally have low to medium plasticity. Results are summarized below:

Location	Depth (ft)	USCS	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Gravel (%)	Sand (%)	Clay/Silt (%)
B-1	7.5	CL-ML	25	18	7	6.4	15.8	77.8
B-2	2.5	SC-SM	25	18	7	9.1	48.2	42.7
B-3	4.5	ML	20	18	2	0.0	46.8	53.2

A sample of the site soils was tested for consolidation/swell potential. The sample was allowed to consolidate under a confining pressure of 1,000 pounds per square foot (psf). Once consolidation under the surcharge load was complete, the sample was inundated with water and allowed to swell/collapse. After movement from the addition of water ceased, incremental loads were then applied to further consolidate the sample.

Consolidation/swell test results indicate that the site soils exhibit high compressibility (See Consolidation Tests in Appendix B). Results are summarized below:

Location	Depth (ft)	Material	Dry Unit Weight (pcf)	Strain @ 2,000 psf (%)	Collapse(-)/Swell(+) (%)
B-2	2.5	SC-SM	98	4.0	-

A representative sample of the near surface fine grained soils was collected for Moisture-Density Relationship (M/D) and California Bearing Ratio (CBR) testing. The results are summarized in the following table:

Location	Depth, (ft)	Material	Maximum Dry Density (pcf)	Optimum Moisture Content (%)	CBR
B-1 to B-4	2-5	SC-SM/ML	116.7	11.0	3.5

4.0 RECOMMENDATIONS

4.1 Geotechnical Concerns/Considerations

Variable subgrade conditions are present across the courts. Medium stiff silt and clay soils were encountered beneath the base course and apparent fill materials. Because even low plasticity clay soils shrink and swell to some extent with normal variations in moisture content, some movements normally occur and should be expected and anticipated in any case. Clay and silt soils are typically considered poor materials for pavement support and are susceptible to seasonal frost and heave cycles. Silty soils tend to be moisture sensitive and often are unstable and pump with excessive moisture content.

Due to existing subgrade conditions, we recommend a minimum of 1.5 feet of geotextile-reinforced structural fill be used beneath the post-tensioned concrete slabs to reduce the zone of frost susceptibility and provide a stable base for the new post-tensioned slab. Existing base course may be reused provided it meets structural fill requirements within.

4.2 Earthwork

The following sections present recommendations for site and subgrade preparation and placement of fill materials on the project. Earthwork on the project should be observed and tested by Rimrock Engineering.

4.2.1 Site and Subgrade Preparation

Existing asphalt, existing utilities (if present), and other unsuitable materials (e.g. debris, desiccated soil, frozen soil, etc.) should be removed from the proposed construction area. It is anticipated that general excavations for the proposed construction can be accomplished with conventional earthmoving equipment such as tractor mounted backhoes and tracked excavators.

Prior to placement of base gravel and asphalt concrete, we recommend the subgrade soils be scarified a minimum of 12 inches, moisture conditioned to near optimum moisture content, and compacted to at least 95 percent of the maximum dry density per ASTM D698. This process will help to delineate soft or disturbed areas. Unstable areas identified during scarification and re-compaction should either be stabilized or undercut to expose stable material. If isolated soft or unstable areas are encountered, it may be necessary to place a layer of crushed stone to stabilize

the subgrade and help expedite construction. If extensive soft or unstable conditions are encountered during site preparation, additional stabilization of the soils may be required. Rimrock Engineering can assist with developing appropriate stabilization procedures based on conditions encountered during construction, if warranted.

As previously stated, we recommend a minimum of 1.5 feet of geotextile-reinforced structural fill beneath the post-tensioned concrete slabs to reduce the zone of frost susceptibility and provide a stable base for the new post-tensioned slabs. Once the subgrade soils are property prepared, we recommend the separation/stabilization geotextile Mirafi RS380i be placed at the interface between the subgrade soils and the base materials to help stabilize the subgrade as well as keep the subgrade soils from intruding into the base materials.

4.2.2 Material Requirements

It is anticipated that excavated materials will be used to the extent practical as base materials and backfill. The material suitability should be evaluated by the geotechnical engineer prior to use. Moisture conditioning and processing of on-site soils will likely be required.

Structural fill should be a crushed aggregate and meet the criteria outlined below:

Gradation	**Percent finer by weight (ASTM C136)**
3"	100
No. 4 Sieve	30-75
No. 200 Sieve	15 (max)
Liquid Limit	25 (max)
Plasticity Index	6 (max)

4.2.3 Compaction Requirements

Fill materials should be placed and compacted in loose lift thicknesses of 8 inches or less when heavy, self-propelled compaction equipment is used. When hand-guided equipment such as jumping jack or plate compactor is used, loose lift thicknesses should be on the order of 4 to 6 inches.

The following table lists the compaction requirements for the different types of fill recommended in this report.

Item	Description
Compaction Requirement (ASTM D698)	**Scarified Subgrade Soils:** 95% **Aggregate Base/Structural Fill:** 98% **Trench Backfill:** 97% beneath pavements, 95% elsewhere

Item	Description
Moisture Content (ASTM D698)	±3 % of optimum

4.2.4 Site Drainage

Positive drainage should be provided during construction and maintained throughout the life of the proposed project. Infiltration of water into utility excavations must be prevented during construction. All grades must provide effective drainage away from the structure during and after construction. Water permitted to pond next to the structure can result in greater soil movements than those discussed in this report. Estimated movements described in this report are based on effective drainage for the life of the structure and cannot be relied upon if effective drainage is not maintained.

4.2.5 Construction Considerations

Although the exposed subgrade is anticipated to be relatively stable upon initial exposure, unstable subgrade conditions could develop during general construction operations, particularly if the soils are wetted and/or subjected to repetitive construction traffic. The use of light, rubber-tracked construction equipment would aid in reducing subgrade disturbance. Should unstable subgrade conditions develop, our geotechnical engineer should review conditions and provide recommendations for stabilization.

The site should be graded to prevent ponding of surface water on, or direction of runoff toward, the prepared subgrades or excavations. If the subgrade should become frozen, desiccated, saturated, or disturbed, the affected material should be removed.

As a minimum, all temporary excavations should be sloped or braced as required by Occupational Health and Safety Administration (OSHA) regulations to provide stability and safe working conditions. The grading contractor, by his contract, is usually responsible for designing and constructing stable, temporary excavations and should shore, slope or bench the sides of the excavations, as required, to maintain stability of both the excavation sides and bottom. All excavations should comply with applicable local, state and federal safety regulations, including the current OSHA Excavation and Trench Safety Standards.

Rimrock Engineering should be retained during the construction phase of the project to observe earthwork and to perform necessary tests and observations during construction.

4.3 Post-Tensioned Concrete Slabs

We understand post-tensioned concrete slabs will be utilized for reconstruction of the tennis courts. We recommend that post-tensioned concrete slabs bear on a zone of at least 1.5 feet of geotextile-reinforced structural fill over reconditioned site soils due to potential for seasonal frost and heave cycles. If needed, a coefficient of friction value of 0.45 can be used for slabs on

granular/structural fill. A modulus of subgrade reaction of 250 psi/in can be used for structural fill for point loading conditions.

Provided the slabs are properly constructed, the total movement is expected to be minimal. Movement will depend upon the subgrade preparation, timeliness of structural fill placement, and the quality of the earthwork operations. Additional movements could occur if water from any source infiltrates the foundation soils; therefore, proper drainage should be provided in the final design, during construction, and for the life of the project.

The base of all excavations should be free of water and loose material prior to placing geotextiles, structural fill or concrete. Geotextile-reinforced structural fill and concrete should be placed soon after subgrade preparation to reduce bearing surface disturbance. Should the clay/silt bearing surface become excessively dry, disturbed, saturated, or frozen, the affected material should be removed and replaced with additional depth structural fill material prior to placing concrete.

4.4 Corrosion Protection

A soil sample was submitted for water soluble sulfate, pH and resistivity testing. The results are summarized in the following table:

Location	Depth (ft)	Material	Soluble Sulfate Content (%)	Resistivity (ohm-cm)	pH
B-4	2.5	ML	<0.01	2,020	7.3

Water soluble sulfate values less than 0.10 are considered to have negligible attack potential on normal strength concrete. As a result, Type I-II Portland cement can be specified for all project concrete. However, if additional protection in this regard is desired, Type V or other sulfate resistant cement should be specified.

Resistivity values between 1,000 and 3,000 are considered to be strongly aggressive with regard to corrosion of buried metals. If corrosion of buried metal is critical, it should be protected using a non-corrosive backfill, wrapping, coating, sacrificial anodes, or a combination of these methods, as designed by a qualified corrosion engineer.

5.0 ADDITIONAL SERVICES

The recommendations made in this report assume that an adequate program of tests and observations will be made during construction to verify compliance with these recommendations. The review of plans and specifications and the field observation and testing by Rimrock Engineering are an integral part of the conclusions and recommendations made in this report. If we are not retained for these services, the Client agrees to assume Rimrock Engineering's responsibility for any potential claims that may arise during construction.

6.0 LIMITATIONS

Recommendations contained in this report are based on our field explorations, laboratory tests, and our understanding of the proposed construction. The study was performed using a mutually agreed upon scope of work. It is our opinion that this study was a cost-effective method to evaluate the subject site and evaluate some of the potential geotechnical concerns. More detailed, focused, and/or thorough investigations can be conducted. Further studies will tend to increase the level of assurance; however, such efforts will result in increased costs. If the Client wishes to reduce the uncertainties beyond the level associated with this study, Rimrock Engineering should be contacted for additional consultation.

The soils data used in the preparation of this report were obtained from borings made for this investigation. It is possible that variations in soils exist between the points explored. The nature and extent of soil variations may not be evident until construction occurs. If any soil conditions are encountered at this site which is different from those described in this report, our firm should be immediately notified so that we may make any necessary revisions to our recommendations. In addition, if the scope of the proposed project changes, our firm should be notified. This report has been prepared for design purposes for specific application to this project in accordance with the generally accepted standards of practice at the time the report was written. No warranty, express or implied, is made.

Other standards or documents referenced in any given standard cited in this report, or otherwise relied upon by the authors of this report, are only mentioned in the given standard; they are not incorporated into it or “included by reference,” as that latter term is used relative to contracts or other matters of law.

This report may be used only by the Client and for the purposes stated, within a reasonable time from its issuance. Land use, site conditions (both on- and off-site), or other factors including advances in man’s understanding of applied science may change over time and could materially affect our findings. Therefore, this report should not be relied upon after 36 months from its issue. Rimrock Engineering should be notified if the project is delayed by more than 24 months from the date of this report so that a review of site conditions can be made, and recommendations revised if appropriate.

It is the Client’s responsibility to see that all parties to the project including the designer, contractor, subcontractors, etc., are made aware of this report in its entirety. The use of information contained in this report for bidding purposes should be done at the Contractor’s option and risk. Any party other than the Client who wishes to use this report shall notify Rimrock Engineering of such intended use. Based on the intended use of the report, Rimrock Engineering may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the Client or anyone else will release Rimrock Engineering from any liability resulting from the use of this report by any unauthorized party.

APPENDIX A

Field Exploration



Rimrock Engineering, Inc.
5440 Holiday Avenue
Billings, MT 59101 Tel. (406) 294-8400

PROJECT NO. G23214

VICINITY/SITE MAP

PIONEER PARK TENNIS COURTS
Pioneer Park
Billings, Montana

N

BORING NUMBER B-1

Rimrock Engineering, Inc.
5440 Holiday Avenue
Billings, MT 59101

CLIENT Steiner Thuesen
PROJECT NAME Pioneer Park Tennis Courts
PROJECT NUMBER G23214
PROJECT LOCATION Billings, MT
DATE STARTED 12/19/24 **COMPLETED** 12/19/24
GROUND ELEVATION 100 ft **HOLE SIZE** 5 inches
DRILLING CONTRACTOR Rimrock Engineering, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger
AT TIME OF DRILLING ---
LOGGED BY G.J. **CHECKED BY** M.G.
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		ASPHALT SURFACING ~3"										
		BASE COURSE ~9"										
		(SC-SM) APPARENT FILL Silty, Clayey Sand - Brown, medium dense, low plasticity, some fine gravel.										
			SPT	100	3-5-7 (12)			18				
5			SPT	100	14-14-15 (29)			4				
		(CL-ML) SILTY CLAY with SAND Brown, medium stiff, fine sand, trace fine gravel.	SPT	100	2-2-3 (5)			17	25	18	7	78
10			SPT	100	3-2-3 (5)			19				

Bottom of borehole at 11.0 feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 1/17/24 10:32 - G:\PROJECTS\2023\G23214.GPJ

BORING NUMBER B-2

Rimrock Engineering, Inc.
5440 Holiday Avenue
Billings, MT 59101

CLIENT Steiner Thuesen
PROJECT NAME Pioneer Park Tennis Courts
PROJECT NUMBER G23214
PROJECT LOCATION Billings, MT
DATE STARTED 12/19/24 **COMPLETED** 12/19/24
GROUND ELEVATION 100 ft **HOLE SIZE** 5 inches
DRILLING CONTRACTOR Rimrock Engineering, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger
AT TIME OF DRILLING ---
LOGGED BY G.J. **CHECKED BY** M.G.
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		ASPHALT SURFACING ~3"										
		BASE COURSE ~9"										
		(SC-SM) APPARENT FILL Silty, Clayey Sand - Brown, medium dense, low plasticity, some fine gravel.	ST	100			98	15	25	18	7	43
5		(CL-ML) SILTY CLAY with SAND Brown, stiff, fine sand, trace fine gravel.	SPT	100	5-3-4 (7)			20				
			SPT	100	5-6-7 (13)			16				
10			SPT	100	5-4-5 (9)			19				

Bottom of borehole at 11.0 feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 1/17/24 10:32 - G:\PROJECTS\2023\G23214.GPJ

BORING NUMBER B-3

Rimrock Engineering, Inc.
5440 Holiday Avenue
Billings, MT 59101

CLIENT Steiner Thuesen
PROJECT NAME Pioneer Park Tennis Courts
PROJECT NUMBER G23214
PROJECT LOCATION Billings, MT
DATE STARTED 12/19/24 **COMPLETED** 12/19/24
GROUND ELEVATION 100 ft **HOLE SIZE** 5 inches
DRILLING CONTRACTOR Rimrock Engineering, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger
AT TIME OF DRILLING ---
LOGGED BY G.J. **CHECKED BY** M.G.
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		ASPHALT SURFACING ~3"										
		BASE COURSE ~27"										
		(ML) SANDY SILT Brown, medium stiff, fine sand, some clay lenses.	SPT	100	3-2-3 (5)			18				
5			SPT	100	2-3-3 (6)			17	20	18	2	53
			SPT	100	2-3-3 (6)			17				
		(CL) LEAN CLAY Brown, medium stiff, medium plasticity.										
10			SPT	100	2-2-3 (5)			18				

Bottom of borehole at 11.0 feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 1/17/24 10:32 - G:\PROJECTS\2023\G23214.GPJ

BORING NUMBER B-4

Rimrock Engineering, Inc.
5440 Holiday Avenue
Billings, MT 59101

CLIENT Steiner Thuesen
PROJECT NAME Pioneer Park Tennis Courts
PROJECT NUMBER G23214
PROJECT LOCATION Billings, MT
DATE STARTED 12/19/24 **COMPLETED** 12/19/24
GROUND ELEVATION 100 ft **HOLE SIZE** 5 inches
DRILLING CONTRACTOR Rimrock Engineering, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger
AT TIME OF DRILLING ---
LOGGED BY G.J. **CHECKED BY** M.G.
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		ASPHALT SURFACING ~3"										
		BASE COURSE ~27"										
		(ML) SANDY SILT Brown, medium stiff, fine sand, some clay lenses.	SPT	100	3-2-2 (4)			19				
5			SPT	100	3-2-2 (4)			22				
		(CL) LEAN CLAY Brown, medium stiff to stiff, medium plasticity.	SPT	100	4-3-3 (6)			27				
10			SPT	100	3-3-4 (7)			26				

Bottom of borehole at 11.0 feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 1/17/24 10:32 - G:\PROJECTS\2023\G23214.GPJ

KEY TO SYMBOLS

Rimrock Engineering, Inc.
5440 Holiday Avenue
Billings, MT 59101

CLIENT Steiner Thuesen
PROJECT NAME Pioneer Park Tennis Courts
PROJECT NUMBER G23214
PROJECT LOCATION Billings, MT

LITHOLOGIC SYMBOLS
(Unified Soil Classification System)

- ASPHALT: Asphalt
- CL: USCS Low Plasticity Clay
- CL-ML: USCS Low Plasticity Silty Clay
- GW: USCS Well-graded Gravel
- ML: USCS Silt
- SC-SM: USCS Clayey Sand

SAMPLER SYMBOLS

- Standard Penetration Test
- Shelby Tube

WELL CONSTRUCTION SYMBOLS

ABBREVIATIONS

LL - LIQUID LIMIT (%)
PI - PLASTIC INDEX (%)
W - MOISTURE CONTENT (%)
DD - DRY DENSITY (PCF)
NP - NON PLASTIC
-200 - PERCENT PASSING NO. 200 SIEVE
PP - POCKET PENETROMETER (TSF)
TV - TORVANE
PID - PHOTOIONIZATION DETECTOR
UC - UNCONFINED COMPRESSION
ppm - PARTS PER MILLION
Water Level at Time Drilling, or as Shown
Water Level at End of Drilling, or as Shown
Water Level After 24 Hours, or as Shown

KEY TO SYMBOLS - GINT STD US LAB.GDT - 1/17/24 10:32 - G:\PROJECTS\2023\G23214.GPJ

APPENDIX B

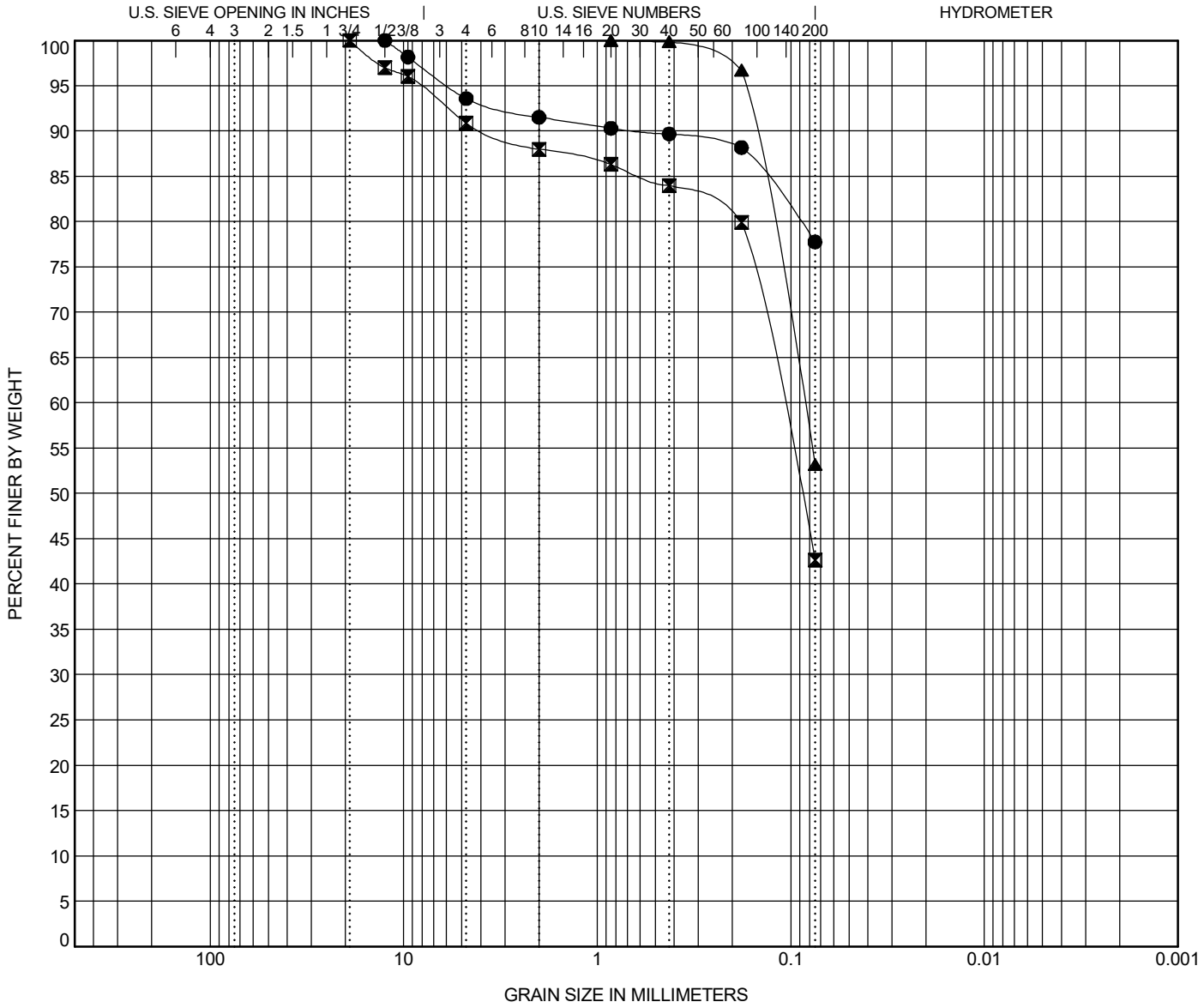
Laboratory Test Results

GRAIN SIZE DISTRIBUTION

Rimrock Engineering, Inc.
5440 Holiday Avenue
Billings, MT 59101

CLIENT Steiner Thuesen **PROJECT NAME** Pioneer Park Tennis Courts

PROJECT NUMBER G23214 **PROJECT LOCATION** Billings, MT



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	BOREHOLE	DEPTH	Classification	LL	PL	PI	Cc	Cu
●	**B-1**	**7.5**	**SILTY CLAY with SAND(CL-ML)**	**25**	**18**	**7**		
⊠	**B-2**	**2.5**	**SILTY, CLAYEY SAND(SC-SM)**	**25**	**18**	**7**		
▲	**B-3**	**4.5**	**SANDY SILT(ML)**	**20**	**18**	**2**		

	BOREHOLE	DEPTH	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**B-1**	**7.5**	**12.5**				**6.4**	**15.8**	**77.8**	
⊠	**B-2**	**2.5**	**19**	**0.113**			**9.1**	**48.2**	**42.7**	
▲	**B-3**	**4.5**	**0.85**	**0.086**			**0.0**	**46.8**	**53.2**	

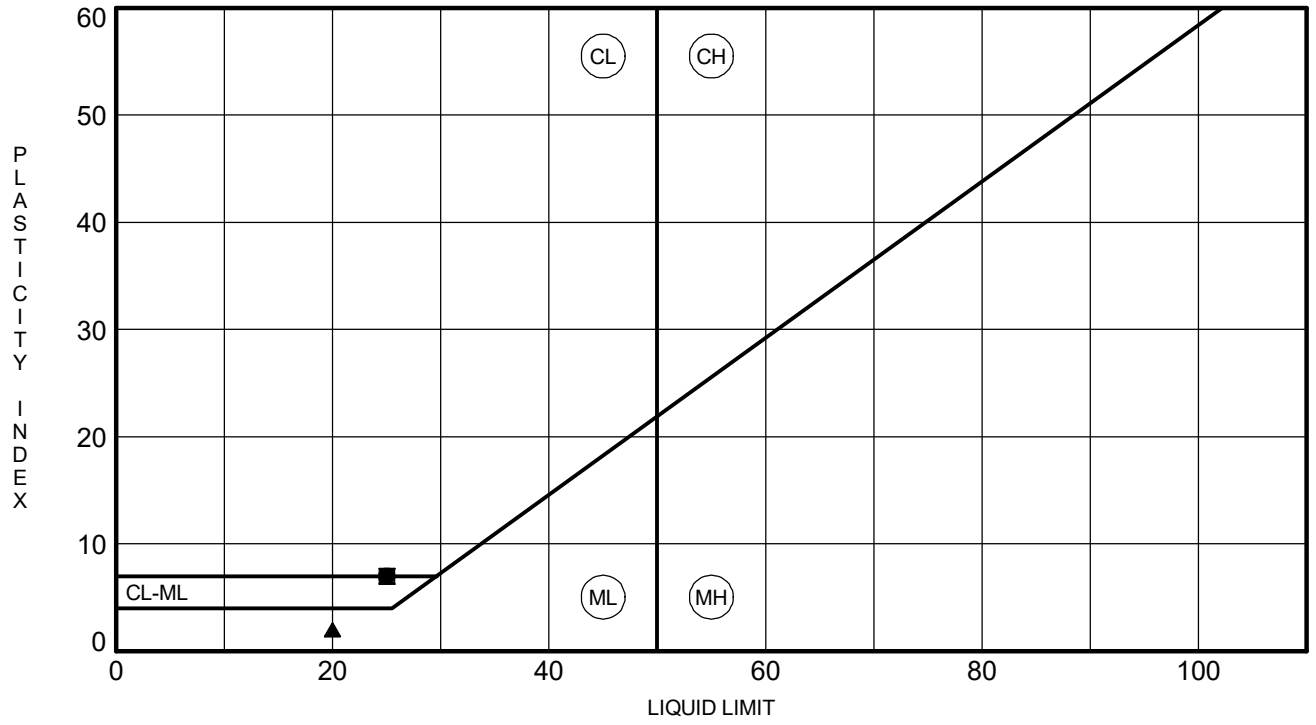
GRAIN SIZE - GINT STD US LAB.GDT - 1/17/24 09:56 - G:\PROJECTS\2023\G23214.GPJ

ATTERBERG LIMITS' RESULTS

Rimrock Engineering, Inc.
5440 Holiday Avenue
Billings, MT 59101

CLIENT Steiner Thuesen **PROJECT NAME** Pioneer Park Tennis Courts

PROJECT NUMBER G23214 **PROJECT LOCATION** Billings, MT



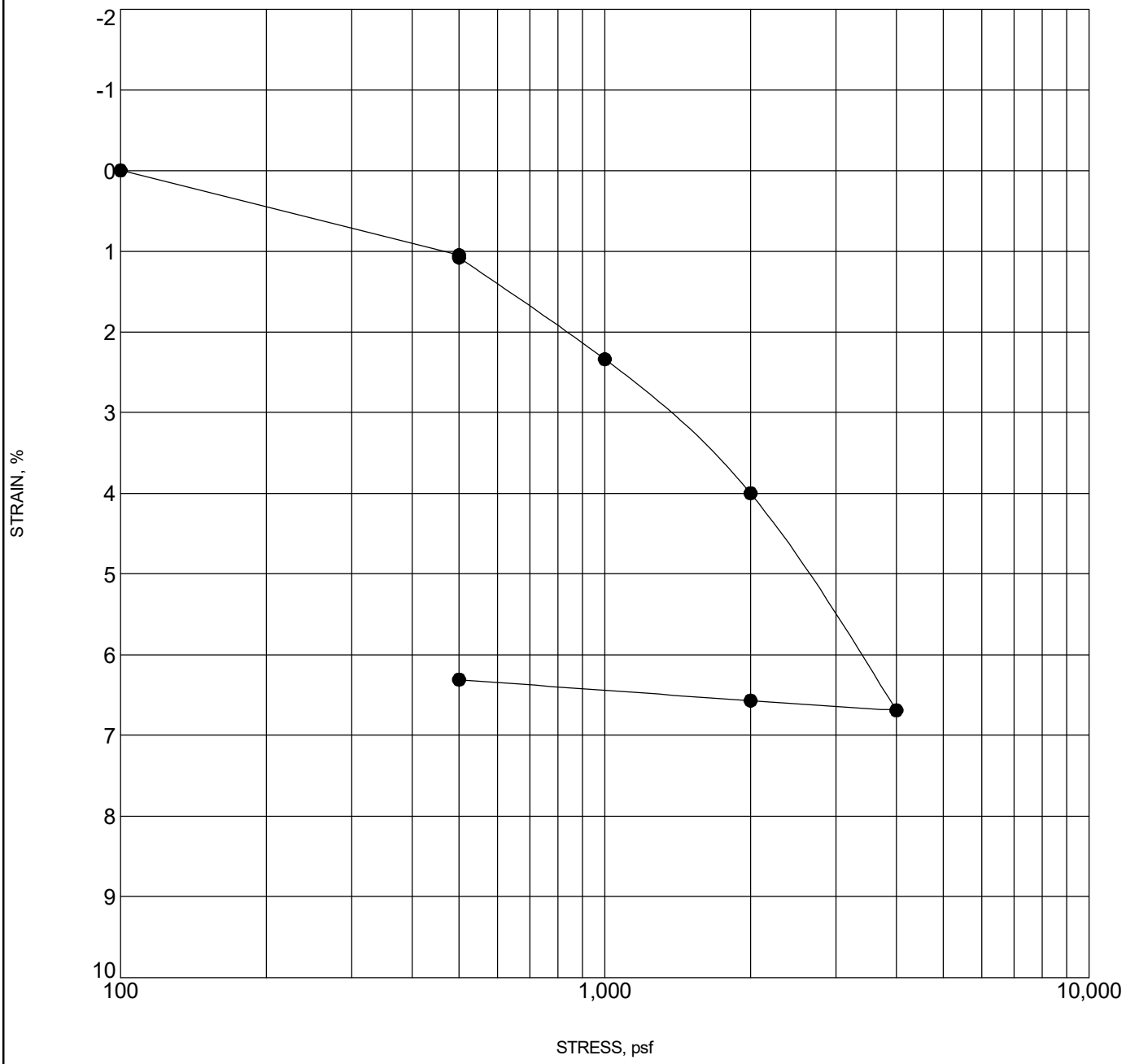
	BOREHOLE	DEPTH	LL	PL	PI	Fines	Classification
●	**B-1**	**7.5**	**25**	**18**	**7**	**78**	**SILTY CLAY with SAND(CL-ML)**
⊠	**B-2**	**2.5**	**25**	**18**	**7**	**43**	**SILTY, CLAYEY SAND(SC-SM)**
▲	**B-3**	**4.5**	**20**	**18**	**2**	**53**	**SANDY SILT(ML)**

CONSOLIDATION TEST

Rimrock Engineering, Inc.
5440 Holiday Avenue
Billings, MT 59101

CLIENT Steiner Thuesen **PROJECT NAME** Pioneer Park Tennis Courts

PROJECT NUMBER G23214 **PROJECT LOCATION** Billings, MT



BOREHOLE	DEPTH	Classification	γ_d	MC%
● B-2	2.5	**SILTY, CLAYEY SAND(SC-SM)**	**98**	**15**

CONSOL STRAIN - GINT STD US LAB.GDT - 1/17/24 09:56 - G:\PROJECTS\2023\G23214.GPJ

ADDITIONAL PROJECT SPECIFIC SECTIONS

Substitution/Equal Product Request Form

PROJECT NAME**:** _____

TO: _____

FROM: _____

DATE: _____ BID DATE: _____

Specification Title & Section: _____

Specified Product: _____

Proposed Substitution: _____

The Undersigned certifies that:

1. The proposed substitution/equal product has been fully investigated and determined to be equal or superior in all respects to specified product.
2. The same warranty will be furnished for proposed product as for specified product.
3. The same maintenance service and source of replacement parts, as applicable, is available.
4. The proposed product will have no adverse effect on other trades and will not affect or delay progress schedule.
5. The proposed substitution does not affect dimensions and functional clearances.
6. Payment will be made by proposer for any changes to design, detailing, and construction costs caused by substitution.

The following attachments are to be included:

1. Product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request with applicable portions of the data clearly identified.
2. Feature by feature comparison clearly indicating how proposed product is equal to or superior to specified product.
3. Attached data also to include a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

PROPOSER'S SIGNATURE: _____

PRINTED NAME:_____

COMPANY: _____

ADDRESS: _____

TELEPHONE: _____ EMAIL: _____

A/E REVIEW & ACTION

- ☐ APPROVED
- ☐ APPROVED AS NOTED
- ☐ NOT APPROVED (Use specified product)
- ☐ NOT REVIEWED (Submission received too late. Use specified products)

ADDITIONAL COMMENTS:

REVIEWED BY: _____ DATE: _____

PIONEER PARK
TENNIS COURTS REPLACEMENT
BILLINGS, MONTANA
FEBRUARY 16, 2024

SHEET INDEX

C1.1 EXISTING CONDITIONS
L1.1 DEMOLITION PLAN
L1.2 LAYOUT & MATERIALS PLAN
L1.3 GRADING PLAN
L1.4 DETAILS
S1.1 SLAB PLAN
S1.2 SLAB & FOUNDATION DETAILS

VICINITY MAP



GENERAL NOTES:

1. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES ON-SITE OR ADJACENT PROPERTY SHALL BE THE CONTRACTOR'S RESPONSIBILITY. UTILITIES ARE INDICATED ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE SURVEY. ACCURACY OF INFORMATION IS NOT GUARANTEED. SERVICE LINES MAY NOT BE IN STRAIGHT LINES OR AS INDICATED ON THE PLANS.
3. ALL EXISTING IMPROVEMENTS TO REMAIN AND BE PROTECTED UNLESS NOTED OTHERWISE.
4. CONTRACTOR SHALL PROVIDE EROSION AND SEDIMENTATION CONTROL MEASURES THROUGHOUT CONSTRUCTION AND UNTIL NEW VEGETATION HAS BEEN ESTABLISHED.
5. CONTRACTOR TO PROVIDE ALL LAYOUT AND GRADE STAKING AS SPECIFIED.
6. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE PREPARED AND SODDED AS SPECIFIED. A DISTURBED AREA IS DEFINED AS AN AREA WHERE CONSTRUCTION ACTIVITIES INCLUDING DEMOLITION, TRENCHING, EARTHWORK, MATERIAL STORAGE, STAGING, PARKING, OR ANY FORM OF EXCAVATION, COMPACTION, OR TRAFFIC RESULTS IN THE REMOVAL OR DISPLACEMENT OF EXISTING GROUND COVER OR GRADE. CONTRACTOR SHALL REVIEW ALL OTHER CONTRACT DOCUMENTS TO DETERMINE FULL SCOPE OF POTENTIAL SITE DISTURBANCE TO BE RECLAIMED.
7. STANDARD SHEET SIZE IS 22" X 34", ADJUST DRAWING SCALE AS APPROPRIATE FOR SHEETS PRINTED AT OTHER SIZES.
8. REFER TO ALL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

MONTANA NATHANIEL STEINER LA-3 REGISTERED LANDSCAPE ARCHITECT

PREPARED FOR:

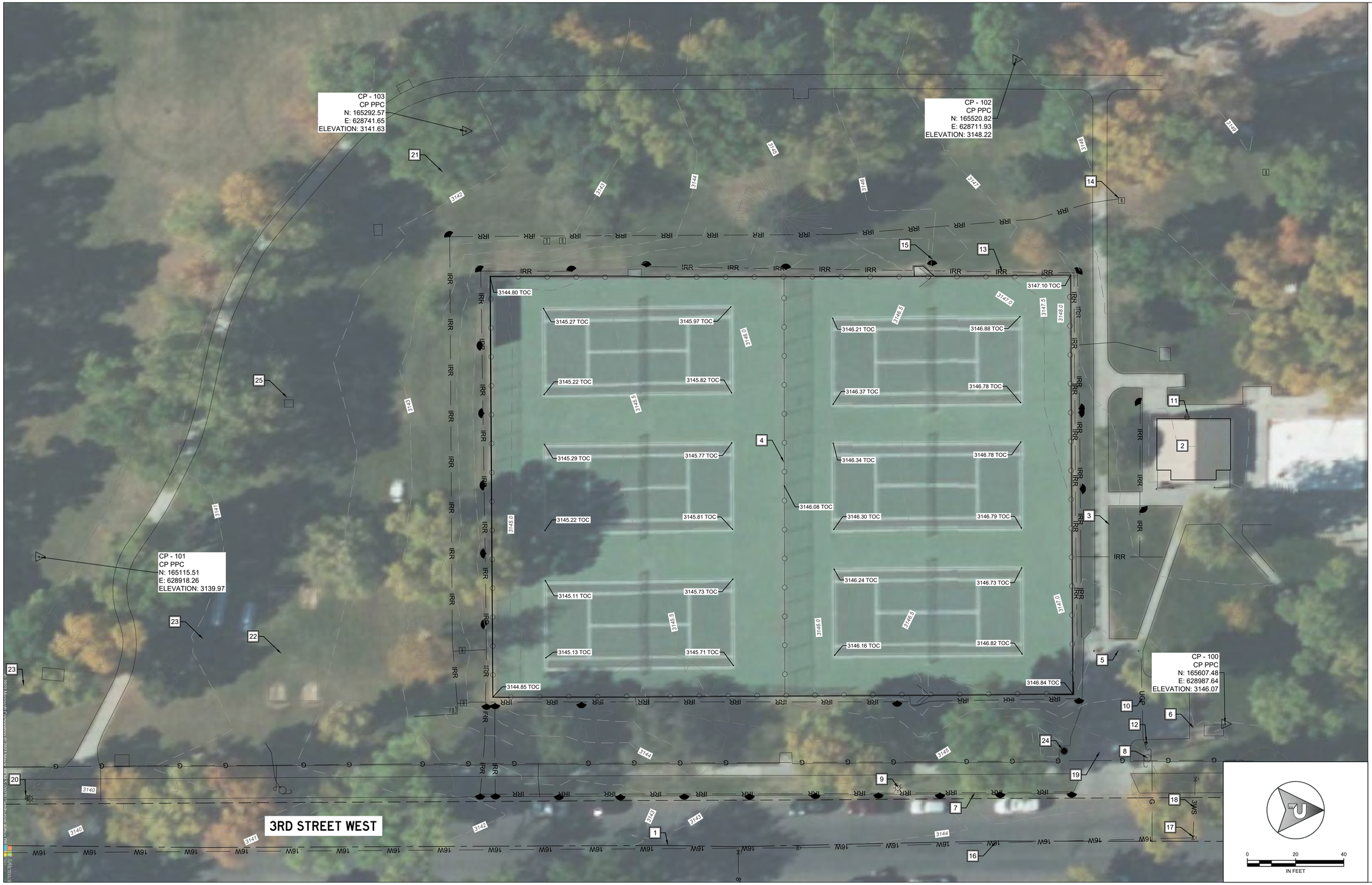
Billings PARKS AND RECREATION

PREPARED BY:

STEINER THUESEN PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

811 Know what's below. Call before you dig.

PE STANDARD.CTB
1/6/2024 1:39:04 PM
C:\Users\Taylor\PEC Billings Dropbox\Steiner Thuesen\2023-136 Pioneer Park Tennis Court\CAD\DWG\Plans\23-136 Existing Site Map & Control Abstract.dwg



1. CENTERLINE ROADWAY
2. EXISTING BUILDING, TYP.
3. EXISTING CONCRETE SIDEWALK, TYP.
4. FENCE, TYP.
5. BOLLARD, TYP.
6. SIGN, TYP.
7. EXISTING CURB AND GUTTER
8. UTILITY POLE, TYP.
9. LIGHT POLE, TYP.
10. UNDERGROUND POWER, TYP.
11. ELECTRIC UTILITY METER
12. GUY WIRE
13. IRRIGATION LINE
14. IRRIGATION CONTROL BOX, TYP.
15. SPRINKLER HEAD
16. 16" WATER MAIN
17. WATER VALVE, TYP.
18. 3" WATER SERVICE
19. NATURAL GAS PIPELINE
20. ELECTRIC MANHOLE
21. DISC GOLF CAGE
22. HORSE SHOE AREA
23. GRILL, TYP.
24. STORM INLET
25. DISC GOLF TEE BOX / CONCRETE PAD

REVISIONS				
NO.	DESCRIPTION	DATE	BY	CHECKED BY
1	#	#	#	#
2	#	#	#	#
3	#	#	#	#
4	#	#	#	#
5	#	#	#	#
6	#	#	#	#

EXISTING TOPOGRAPHY

PERFORMANCE ENGINEERING
608 NORTH 29TH STREET (406) 384-0080
BILLINGS, MT 59101 performance-ec.com

KT
DESIGNED BY

JW
DRAWN BY

1/6/24
DATE

QUALITY ASSURANCE

TJK
CHECKED BY

1/6/24
DATE

PIONEER PARK TENNIS COURT REPLACEMENT

3RD STREET WEST BILLINGS, MT 59101

EXISTING CONDITIONS

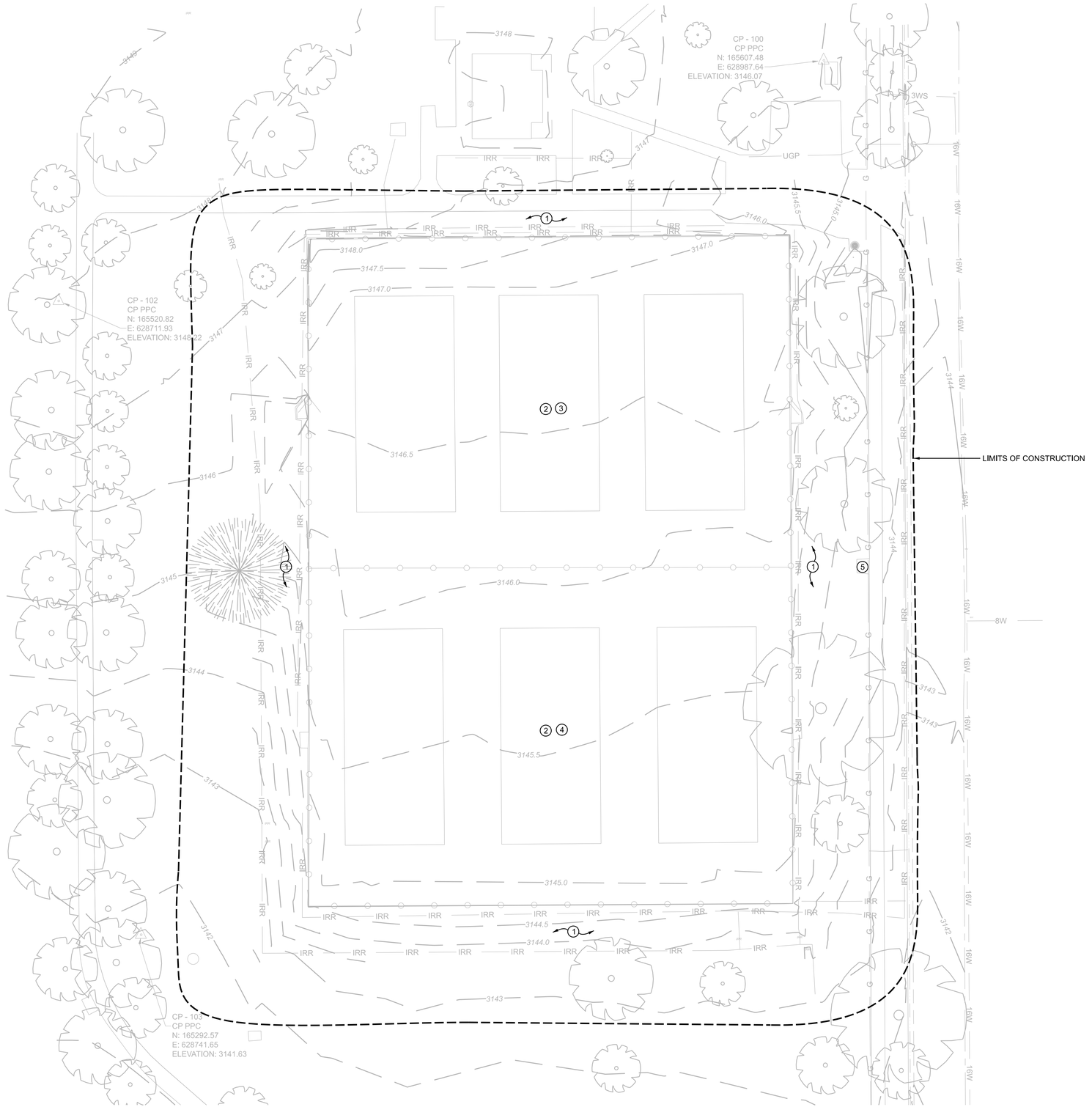
SITE MAP

PROJECT NUMBER
23-136

SHEET NUMBER
1 OF 1

DRAWING NUMBER
C1.00

COPYRIGHT 2024 ©



LEGEND:

- G — GAS LINE
- UGP — UNDERGROUND POWER
- 3WS — WATER LINE
- 16W — WATER MAIN
- IRR — IRRIGATION LINE (MAINLINE AND LATERAL)
- SPRINKLER HEAD
- 3152.228 — EXISTING SPOT GRADE
- 3146 — EXISTING CONTOUR (6" INTERVAL ON COURT, 1' ELSEWHERE)
- EXISTING FENCE

NOTES:

1. CONTRACTOR TO VERIFY EXISTING CONDITIONS AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES ON-SITE OR ADJACENT PROPERTY SHALL BE CONTRACTOR'S RESPONSIBILITY.
2. UTILITIES ARE INDICATED ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE SURVEY. ACCURACY OF INFORMATION IS NOT GUARANTEED. SERVICE LINES MAY NOT BE IN STRAIGHT LINES OR AS INDICATED ON THE PLANS.
3. ALL EXISTING IMPROVEMENTS TO REMAIN AND BE PROTECTED UNLESS NOTED OTHERWISE. REPAIR BACK TO ORIGINAL CONDITION IF DAMAGE OCCURS DURING CONSTRUCTION.
4. ALL TREES TO REMAIN AND BE PROTECTED. WORK WITHIN THE DRIPLINE SHALL BE MINIMIZED.
5. PROVIDE ALL DEMOLITION INCIDENTAL TO OR REQUIRED FOR NEW CONSTRUCTION WHETHER OR NOT IT IS SPECIFICALLY NOTED. THIS INCLUDES ALL APPURTENANCES OF ITEMS INDICATED TO BE REMOVED. REVIEW ALL DRAWINGS TO DETERMINE EXTENT OF DEMOLITION WORK TO BE PERFORMED.
6. SALVAGEABLE TOPSOIL TO BE REMOVED AND STOCKPILED FOR USE IN RESTORATION EFFORTS.
7. ALL DEMOLITION MATERIAL TO BE PROPERLY DISPOSED OF OFF-SITE.
8. REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

KEY NOTES:

1. LOCATE ALL IRRIGATION VALVE BOXES, LATERALS AND SPRINKLER HEADS PRIOR TO BEGINNING WORK. ALL IRRIGATION EQUIPMENT TO REMAIN AND BE PROTECTED, UNLESS NOTED OTHERWISE.
2. REMOVE EXISTING ASPHALT SURFACING (APPROX. 3"), FENCE, POSTS & FOOTINGS, NET POSTS, WOODEN EDGING, CONCRETE FLATWORK, ETC. AND ALL APPURTENANCES ASSOCIATED WITH THE EXISTING TENNIS COURTS.
3. REMOVE APPROXIMATELY 9" (NORTH COURTS) OF EXISTING GRAVEL BASE MATERIAL AND STOCKPILE FOR REUSE AS SPECIFIED.
4. REMOVE APPROXIMATELY 18" (SOUTH COURTS) OF EXISTING GRAVEL BASE MATERIAL AND STOCKPILE FOR REUSE AS SPECIFIED.
5. SAW CUT AND REMOVE EXISTING CONCRETE APPROACH.

0 10' 20' 40'

NORTH

NATHANIEL G. STEINER
LICENSED
LANDSCAPE ARCHITECT
MONTANA

THIS DRAWING IS THE PROPERTY OF THE LANDSCAPE ARCHITECT. IT HAS BEEN PREPARED SPECIFICALLY FOR THIS SITE AND IS NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION, OR OWNER WITHOUT WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT.

PIONEER PARK
TENNIS COURTS REPLACEMENT
DEMOLITION PLAN

COPYRIGHT
2024
STEINER THUESEN PLLC

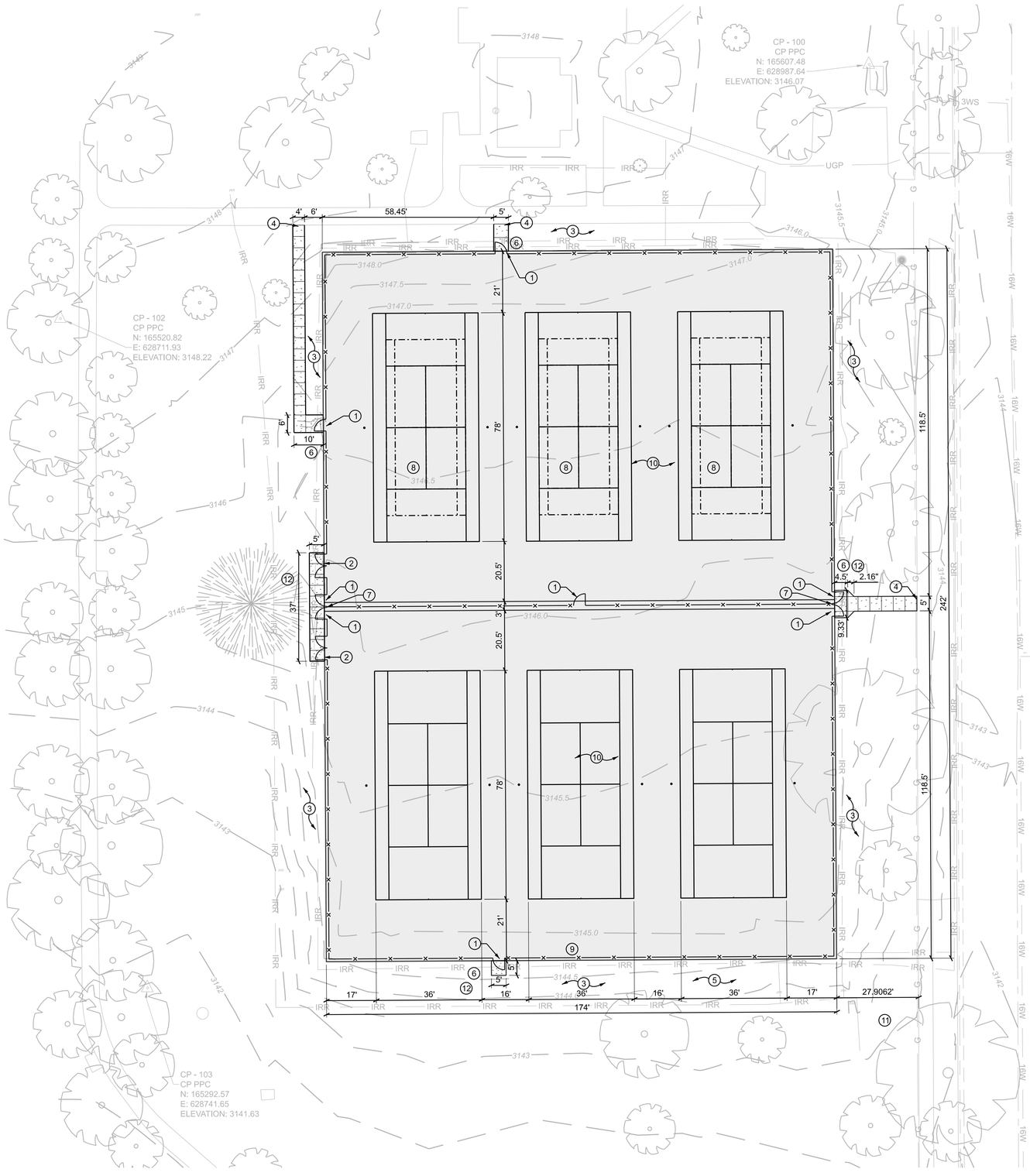
STEINER THUESEN PLLC

GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE

1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

DRAWN BY:	JAV
DATE:	2/16/24
CHECKED BY:	NGS
DATE:	2/16/24
REV:	-
REV:	-
FILE:	L1.1 DEMOLITION.DGN

SHEET
L1.1



LEGEND:

- G — GAS LINE
- UGP — UNDERGROUND POWER
- 3WS — WATER LINE
- 16W — WATER MAIN
- IRR — IRRIGATION LINE (MAINLINE AND LATERAL)
- SPRINKLER HEAD
- 3152.228 — EXISTING SPOT GRADE
- 3146 — EXISTING CONTOUR (6" INTERVAL ON COURT, 1' ELSEWHERE)
- EXISTING FENCE
- 10' HIGH CHAINLINK FENCE AS SPECIFIED, SEE 6/L1.4 & 7, L1.4.
- POST -TENSION CONCRETE SLAB, SEE STRUCTURAL.
- CONCRETE WALKWAY: 4" OF CONCRETE OVER 4" OF 1-1/2" MINUS COMPACTED AGGREGATE AS SPECIFIED, SEE 4/L1.4.

NOTES:

1. CONTRACTOR TO VERIFY EXISTING CONDITIONS AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES ON-SITE OR ADJACENT PROPERTY SHALL BE CONTRACTOR'S RESPONSIBILITY.
2. EXISTING AGGREGATE BASE AT TENNIS COURT TO REMOVED, STOCKPILED, REPLACED, AND COMPACTED AS SPECIFIED.
3. ADJUST FULL CIRCLE SPRINKLERS SPRAYING TOWARD TENNIS COURTS TO PREVENT OVERSPRAY ONTO COURTS. ADJUST SPRINKLERS ADJACENT TO CONCRETE SLAB TO PREVENT BACKSPRAY ON COURTS.
4. NOT ALL SPRINKLER LOCATIONS SHOWN ON PLAN, FIELD VERIFY.
5. REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

KEY NOTES:

1. 4' WIDE WALK-THROUGH GATE.
2. 8' WIDE SERVICE GATE. PROVIDE IN-GROUND KEEPER AS REQUIRED WHEN CLOSED.
3. LOCATE ALL SPRINKLERS AND PIPING, RAISE OR LOWER AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION. ADJUST SPRINKLERS SO THEY ARE 36" MIN. FROM EDGE OF CONCRETE ON SOUTH END.
4. CONNECT TO EXISTING CONCRETE WITH DOWELS SIMILIAR TO NEW CONSTRUCTION, SEE 4/L1.4.
5. ADJUST IRRIGATION LATERALS TO BE 36" MIN. AWAY FROM TENNIS COURT SLABS AND 18" MIN. AWAY FROM CONCRETE SIDEWALKS.
6. INSTALL EXISTING AND NEW IRRIGATION PIPE THROUGH SLEEVE UNDER CONCRETE.
7. 4' GATES TO CLOSE ON SHARED POST.
8. PROVIDE BLENDED YOUTH COURT STRIPING ON NORTH COURTS. SEE 2, L1.4.
9. NEW POST TENSION SLAB WILL EXTEND 2' BEYOND EXISTING COURTS SLAB.
10. INSTALL GEOTEXTILE FABRIC AT POST TENSIONED CONCRETE SLABS PRIOR TO REPLACING GRAVEL BASE. COMPACT GRAVEL BASE AS SPECIFIED.
11. PROJECT SIGN, SEE DETAIL 8/L1.4.
12. ADJUST ROUTING OF IRRIGATION LATERALS 12"- 18" FROM EDGE OF WALKWAY. ADJUST SPRINKLERS SO THEY ARE APPROXIMATELY 6" FROM EDGE OF WALKWAY.

MONTANA
NATHANIEL G. STEINER
LANDSCAPE ARCHITECT
REGISTERED

THIS DRAWING IS THE PROPERTY OF THE LANDSCAPE ARCHITECT. IT HAS BEEN PREPARED SPECIFICALLY FOR THIS SITE AND IS NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION, OR OWNER WITHOUT WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT.

PIONEER PARK TENNIS COURTS REPLACEMENT

LAYOUT & MATERIALS PLAN

COPYRIGHT 2024
STEINER THUESEN PLLC

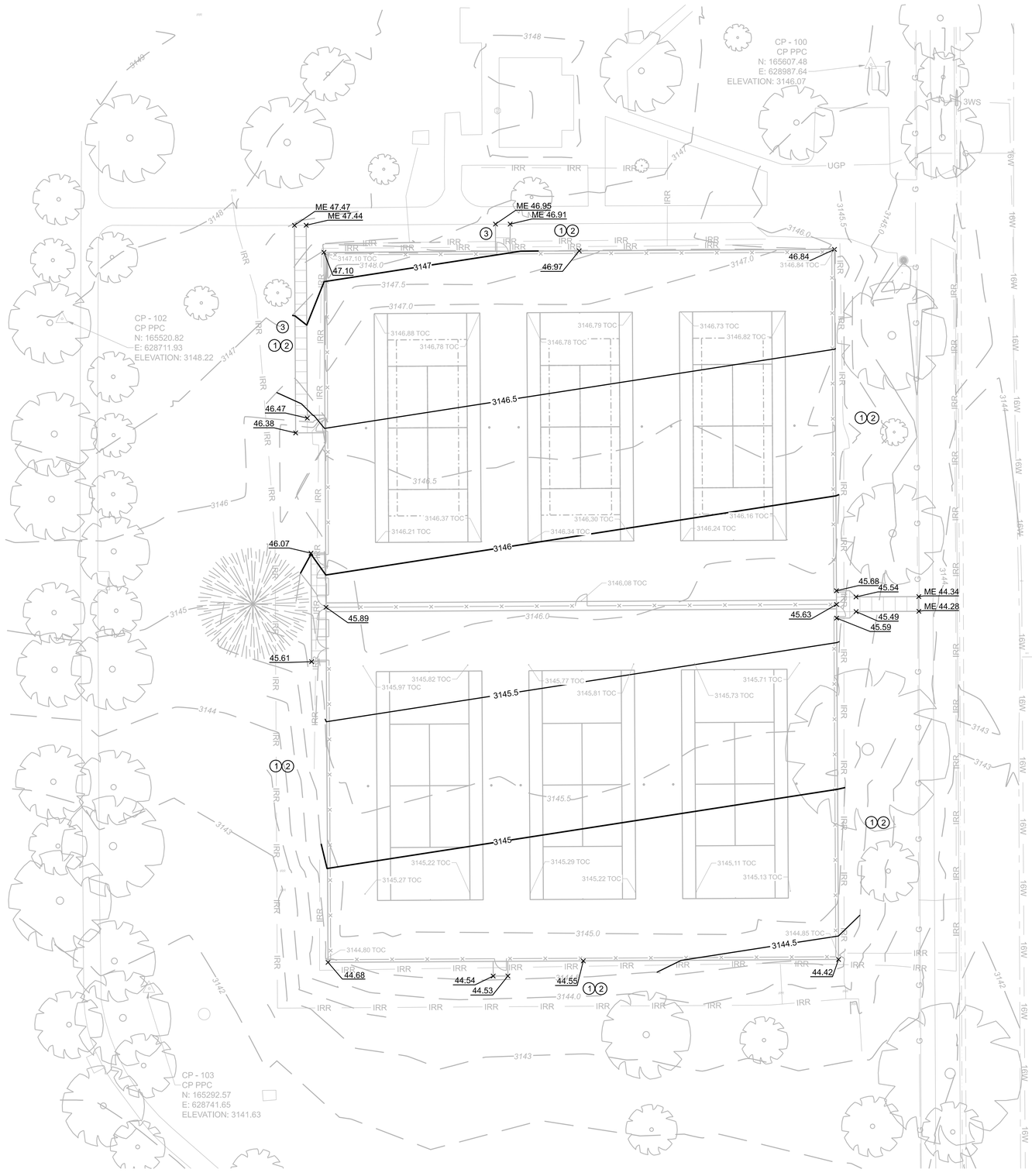
STEINER THUESEN PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

DRAWN BY:	JAV
DATE:	2/16/24
CHECKED BY:	NGS
DATE:	2/16/24
REV:	-
REV:	-
FILE:	L1.2 LAYOUT & MATERIALS.DGN

0 10' 20' 40'

NORTH

SHEET
L1.2



LEGEND:

G	GAS LINE
UGP	UNDERGROUND POWER
3WS	WATER LINE
16W	WATER MAIN
IRR	IRRIGATION LINE (MAINLINE AND LATERAL)
	SPRINKLER HEAD
3152.228	EXISTING SPOT GRADE
3146	EXISTING CONTOUR (6" INTERVAL ON COURT, 1' ELSEWHERE)
	EXISTING FENCE
3152	PROPOSED CONTOUR (6" INTERVAL ON COURT, 12" ELSEWHERE)
53.32	FINISH SPOT GRADE
ME	MATCH EXISTING GRADE

NOTES:

1. CONTRACTOR TO VERIFY EXISTING CONDITIONS AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES ON-SITE OR ADJACENT PROPERTY SHALL BE CONTRACTOR'S RESPONSIBILITY.
2. STRIP SOD AND TOPSOIL AS REQUIRED TO ACCOMMODATE CONSTRUCTION.
3. PROVIDE 1.5% CROSS SLOPE ON WALKWAYS.
4. ALL DISTURBED AREA SHALL BE RESTORED WITH LIKE MATERIALS. (CRUSHED AGGREGATE, SOD, ETC.)
5. THE TRANSITION BETWEEN EXISTING LAWN AREAS AND RESTORED LAWN AREAS SHALL BE SMOOTH WITHOUT ABRUPT EDGES, ETC.
6. ALL DISTURBED LAWN AREAS SHALL BE RESTORED WITH SOD. USE SOD CUTTER TO CREATE SMOOTH AND UNIFORM TRANSITION FROM EXISTING TO NEW SOD.
7. FINISH GRADE ALONG CONCRETE TO BE 1-1/2" BELOW TOP OF CONCRETE PRIOR TO INSTALLING SOD. FINISH GRADE WHERE NO SOD WILL BE INSTALLED SHALL BE 1" BELOW TOP OF CONCRETE.
8. REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

KEY NOTES:

1. TIE BACK TO EXISTING GRADES AT 15:1 SLOPE MAX.
2. RAISE IRRIGATION HEADS AS REQUIRED TO ACCOMMODATE NEW GRADES.
3. WALKWAY SLOPES SHALL MEET THE FOLLOWING ADA REQUIREMENTS:
   -LONGITUDINAL SLOPE: 1:20 MAX. (5%)
   -CROSS SLOPE: 1:48 MAX. (2%)

0 10' 20' 40'

NORTH

MONTANA
NATHANIEL G. STEINER
LICENSED
REGISTERED
LANDSCAPE ARCHITECT

THIS DRAWING IS THE PROPERTY OF THE LANDSCAPE ARCHITECT. IT HAS BEEN PREPARED SPECIFICALLY FOR THIS SITE AND IS NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION, OR OWNER WITHOUT WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT.

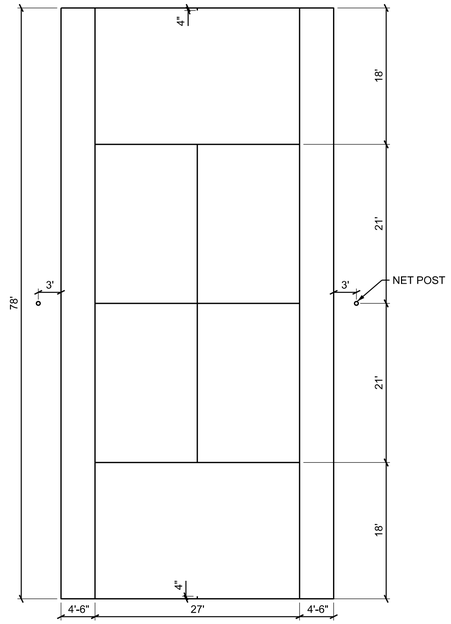
PIONEER PARK
TENNIS COURTS REPLACEMENT
GRADING PLAN

COPYRIGHT
2024
STEINER THUESEN PLLC

STEINER THUESEN PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE, SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

DRAWN BY:	JAV
DATE:	2/16/24
CHECKED BY:	NGS
DATE:	2/16/24
REV:	-
REV:	-
FILE:	L1.3 GRADING.DGN

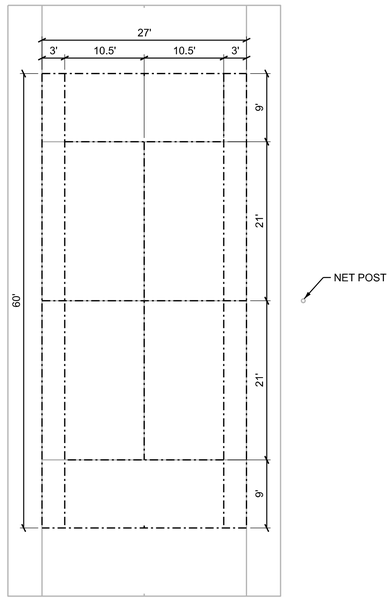
SHEET
L1.3



NOTES:
1. TENNIS COURT SIZE TO BE AS SHOWN (36' X 78').
2. TENNIS DIMENSIONS SHALL BE PER USTA REGULATIONS.
3. ALL DIMENSIONS ARE TO THE OUTSIDE EDGE OF LINES.
4. ALL STRIPING SHALL BE 2" WIDE.
5. COLOR FOR MAIN TENNIS LINES TO BE WHITE.

1 TENNIS COURT STRIPING

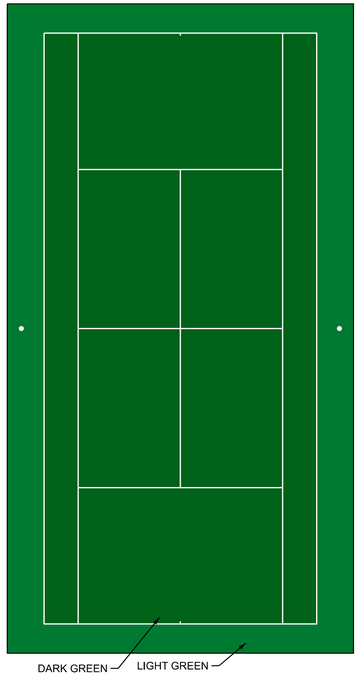
NOT TO SCALE



NOTES:
1. YOUTH TENNIS COURT SIZE TO BE AS SHOWN. (27' X 60')
2. TENNIS DIMENSIONS SHALL BE PER USTA REGULATIONS.
3. ALL DIMENSIONS ARE TO THE OUTSIDE EDGE OF LINES.
4. ALL STRIPING SHALL BE 2" WIDE.
5. COLOR FOR YOUTH TENNIS LINES TO BE BLENDED.

2 TENNIS COURT W/ YOUTH BLENDED LINES STRIPING

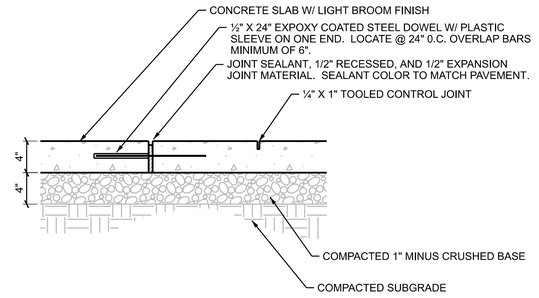
NOT TO SCALE



NOTES:
1. SURFACING MATERIAL SHALL NOT BE APPLIED UNTIL WRITTEN APPROVAL HAS BEEN PROVIDED FOR COURT COLOR SCHEME SUBMITTAL.

3 TENNIS COURT COLOR SCHEME

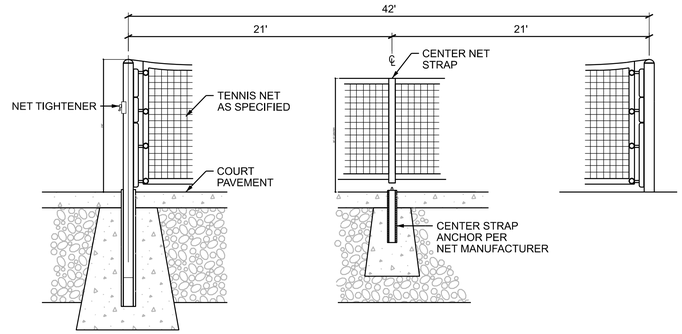
NOT TO SCALE



NOTES:
1. SAWCUT JOINTS ARE NOT ALLOWED.
2. DOWELS REQUIRED AT CONNECTION TO EXISTING WALKWAY AND POST TENSION SLAB.

4 CONCRETE FLATWORK

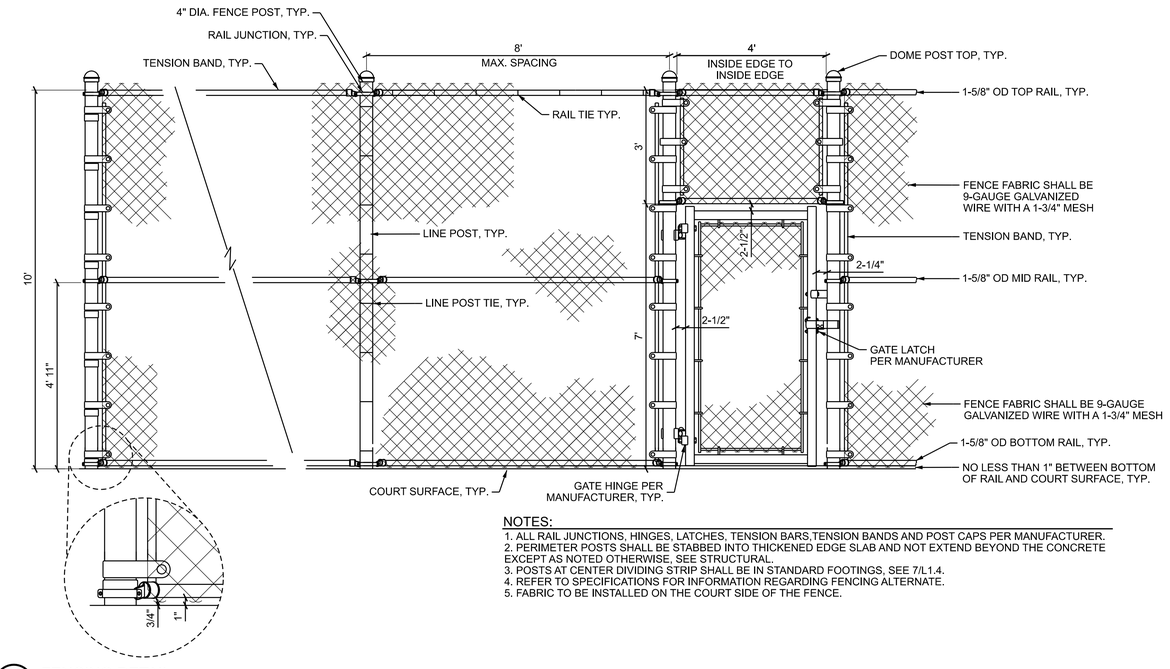
NOT TO SCALE



NOTES:
1. REFER TO STRUCTURAL FOR ADDITIONAL INFORMATION.

5 POST & NET DETAIL

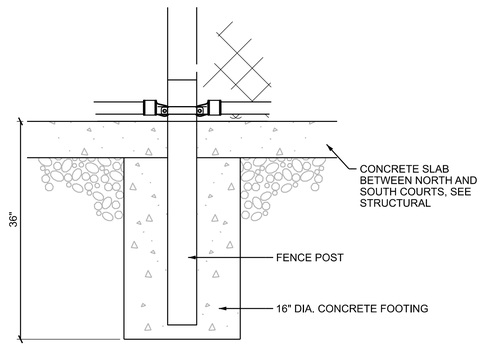
NOT TO SCALE



NOTES:
1. ALL RAIL JUNCTIONS, HINGES, LATCHES, TENSION BARS,TENSION BANDS AND POST CAPS PER MANUFACTURER.
2. PERIMETER POSTS SHALL BE STABBED INTO THICKENED EDGE SLAB AND NOT EXTEND BEYOND THE CONCRETE EXCEPT AS NOTED OTHERWISE, SEE STRUCTURAL.
3. POSTS AT CENTER DIVIDING STRIP SHALL BE IN STANDARD FOOTINGS, SEE 7/L1.4.
4. REFER TO SPECIFICATIONS FOR INFORMATION REGARDING FENCING ALTERNATE.
5. FABRIC TO BE INSTALLED ON THE COURT SIDE OF THE FENCE.

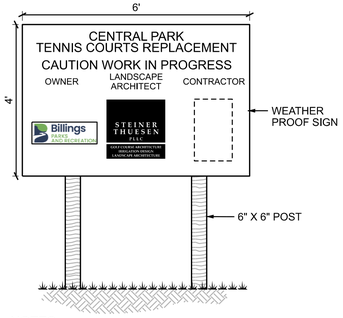
6 FENCING DETAIL

NOT TO SCALE



7 FENCE POST FOOTING AT CENTER DIVIDING STRIP

NOT TO SCALE



NOTES:
1. PROVIDE COLOR SHOP DRAWING FOR APPROVAL.
2. BACKGROUND TO BE WHITE.
3. PROJECT TITLE TO BE GREEN.
4. "OWNER", "LANDSCAPE ARCHITECT", AND "CONTRACTOR" TO BE BLACK.
5. LOGOS TO BE FULL COLOR.
6. LOCATION TO BE DETERMINED.
7. REMOVE AT END OF PROJECT.

8 PROJECT SIGN

NOT TO SCALE

MONTANA
NATHANIEL G. STEINER
LICENSED
REGISTERED
LANDSCAPE ARCHITECT

THIS DRAWING IS THE PROPERTY OF THE LANDSCAPE ARCHITECT. IT HAS BEEN PREPARED SPECIFICALLY FOR THIS SITE AND IS NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION, OR OWNER WITHOUT WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT.

PIONEER PARK TENNIS COURTS REPLACEMENT

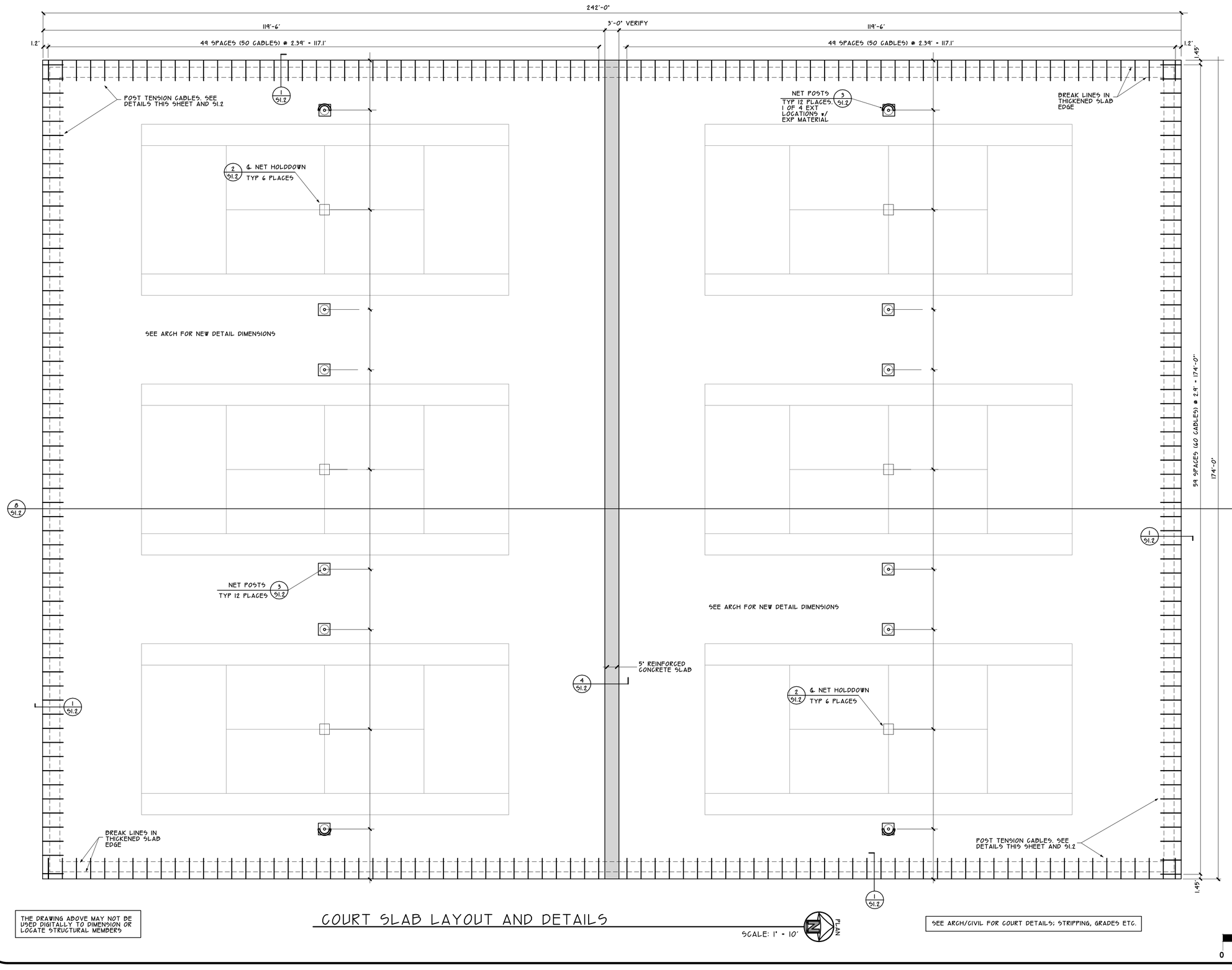
DETAILS

COPYRIGHT 2024
STEINER THUESEN PLLC

STEINER THUESEN PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

DRAWN BY: JAV
DATE: 2/16/24
CHECKED BY: NGS
DATE: 2/16/24
REV: -
REV: -
FILE: L1.4 DETAILS.DGN

SHEET
L1.4



GRADING NOTES:
AFTER REMOVAL OF THE EXISTING ASPHALT SURFACE, EXCAVATE THE EXISTING GRANULAR SUBBASE, SHAPE THE SUBGRADE, INSTALL THE GEO-TEXTILE AND SHAPE THE AGGREGATE SURFACE TO FIT THE REQUIRED GRADES. THIS WILL REQUIRE ADDING AMOUNTS OF GRANULAR MATERIAL. THE FINAL SURFACE SHALL BE PROOF ROLLED AND COMPACTED TO 95% ASTM D698. AFTER THIS IS COMPLETED, THE 2 LAYERS OF POLYETHYLENE SHALL BE PLACED.

SEE ARCH FOR SIDEWALKS, GATES, FENCING AND RAMP DETAILS.

THE DRAWING ABOVE MAY NOT BE USED DIGITALLY TO DIMENSION OR LOCATE STRUCTURAL MEMBERS

COURT SLAB LAYOUT AND DETAILS

SCALE: 1" = 10'

SEE ARCH/CIVIL FOR COURT DETAILS; STRIPPING, GRADES ETC.

0 10' 20' 40'

NORTH

MONTANA WILLIAM R. BAKER 2016 REGISTERED PROFESSIONAL ENGINEER

THIS DRAWING IS THE PROPERTY OF THE LANDSCAPE ARCHITECT. IT HAS BEEN PREPARED SPECIFICALLY FOR THIS SITE AND IS NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION, OR OWNER WITHOUT WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT.

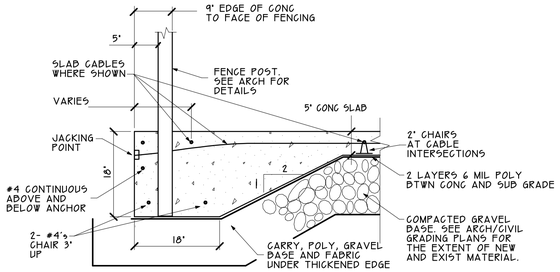
PIONEER PARK
TENNIS COURTS REPLACEMENT
SLAB PLAN

COPYRIGHT 2024
STEINER THUESEN PLLC

STEINER THUESEN PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE, SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

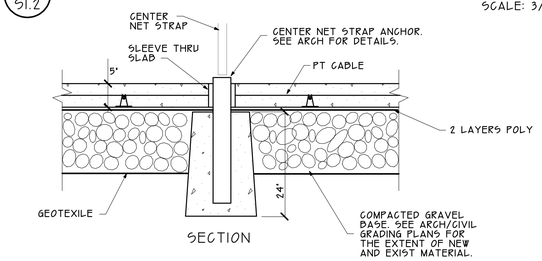
DRAWN BY:	WO
DATE:	2-16-24
CHECKED BY:	WRO
DATE:	2-16-24
REV:	
REV:	-
FILE:	-

SHEET
S1.1

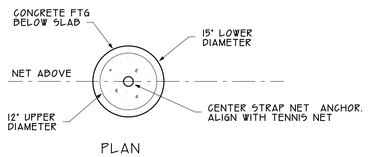


1 / S1.2 THICKENED EDGE - TYP ALL AROUND EXT.

SCALE: 3/4" = 1'-0"



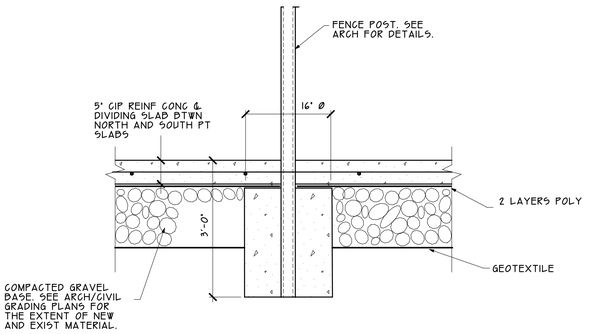
SECTION



PLAN

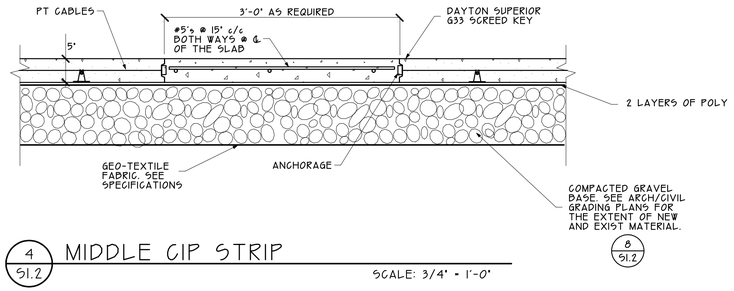
2 / S1.2 ℄ NET TIE DOWN ANCHOR - 6 PLACES

SCALE: 3/4" = 1'-0"



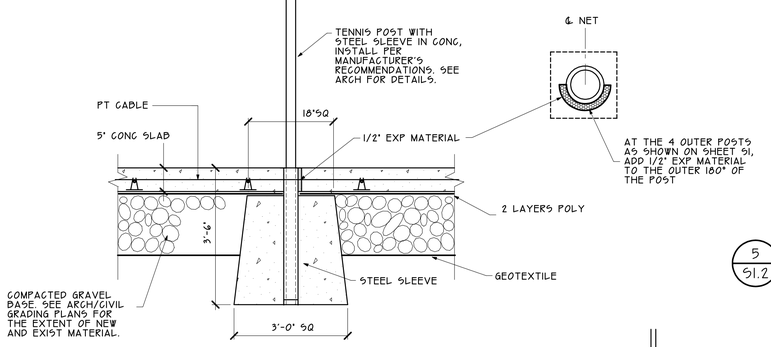
3a / S1.2 FENCE POSTS - ℄ DIVIDING STRIP

SCALE: 3/4" = 1'-0"

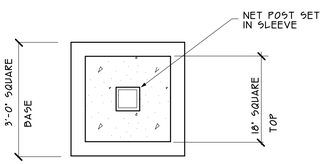


4 / S1.2 MIDDLE CIP STRIP

SCALE: 3/4" = 1'-0"



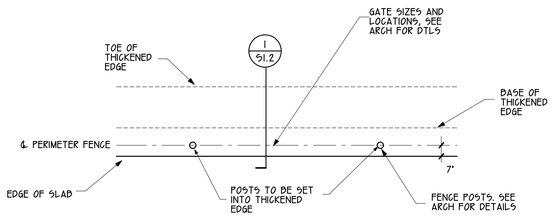
SECTION



PLAN

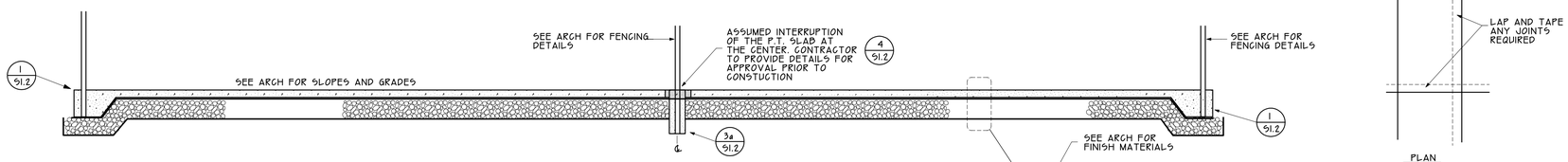
3 / S1.2 NET POSTS - 12 PLACES

SCALE: 3/4" = 1'-0"



5 / S1.2 PLAN COURT FENCING AND GATES

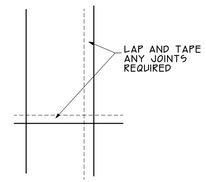
SCALE: 1/4" = 1'-0"



TYP SUBGRADE PROFILE

8 / S1.2 NORTH/SOUTH SLAB CROSS SECTION

NTS



PLAN

POLY PLACEMENT DETAIL

STAGGER JOINTS BETWEEN LAYERS

GENERAL NOTES

MATERIALS:

1. ALL POST-TENSIONING TENDONS, ANCHORS AND OTHER HARDWARE SHALL CONFORM TO THE "SPECIFICATIONS FOR UNBONDED SINGLE STRAND TENDONS FOR SLAB ON GRADE CONSTRUCTION" BY THE POST-TENSIONING INSTITUTE.
2. ALL POST-TENSIONING MATERIALS, ANCHORS AND OTHER HARDWARE SHALL BE OBTAINED FROM A PLANT CURRENTLY CERTIFIED BY THE POST-TENSIONING INSTITUTES PROGRAM FOR CERTIFICATION OF PLANTS PRODUCING UNBONDED SINGLE STRAND TENDONS.
3. ALL TENDONS SHALL BE FABRICATED FROM 1/2", 270KSI LOW RELAXATION STRAND IN ACCORDANCE WITH ASTM A416. TENDONS SHALL BE GREASED WITH A CORROSION INHIBITOR AND PROTECTED WITH A PLASTIC SHEATH.
4. STRAND LENGTHS SHALL BE THE RESPONSIBILITY OF THE SUPPLIER.
5. CONCRETE SHALL BE NORMAL WEIGHT, TRANSIT MIXED AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000PSI. CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318, 301 AND ASTM C94. SLAB SHALL BE PARTIALLY STRESSED WITHIN 48 HOURS AND FULLY STRESSED WITHIN 7 TO 10 DAYS AFTER CONCRETE PLACEMENT.
6. WATER CONTENT SHALL BE MINIMIZED IN ACCORDANCE WITH ACI STANDARDS FOR MINIMAL SHRINKAGE.
7. ALL CONVENTIONAL REINFORCING SHALL BE ASTM A615 GRADE 60.

SITE PREPARATION NOTES:

1. EXCAVATIONS SHALL CONFORM TO THE LINES AND GRADES SHOWN SHOWN ON THE ARCH AND SITE PLANS.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE EXISTING UTILITIES PRIOR TO EXCAVATING. THE CONTRACTOR SHALL EXERCISE CAUTION WHILE EXCAVATING TO AVOID CUTTING OR DAMAGING EXISTING UNDERGROUND UTILITIES. THE CONTRACTOR SHALL INFORM THE UTILITY OWNERS IN ADVANCE TO ENABLE THEM TO IDENTIFY, LOCATE AND REROUTE THEIR UTILITIES WITHOUT DAMAGE.
3. ALL FOUNDATION EXCAVATION SHALL BE MONITORED TO ENSURE THAT NEW AND EXISTING SUBGRADES ARE SUITABLE FOR THE WORK ANTICIPATED.
4. EXPOSED SOILS SHOULD BE PROTECTED AGAINST EXCESSIVE WETTING AND DRYING.
5. FIELD DENSITY AND MOISTURE CONTENT WILL BE VERIFIED BY AN INDEPENDENT SOILS TESTING FIRM AT APPROPRIATE TIMES DURING CONSTRUCTION. WORK WILL NOT CONTINUE UNTIL ALL SOILS PARAMETERS ARE WITHIN PROPER LIMITS.

CONSTRUCTION NOTES:

1. SITE GRADING AND DRAINAGE AROUND THE FOUNDATION SHALL BE MAINTAINED AT ALL TIMES THAT SURFACE OR GROUND WATER WILL NOT COLLECT AROUND THE SLAB. A MINIMUM SLOPE OF 5% DURING CONSTRUCTION WILL BE CREATED AROUND THE PERIMETER OF THE SLAB TO LEAD THE WATER AWAY.
2. 2 LAYERS OF 6 MIL POLYETHYLENE WITH LAPPED AND TAPED JOINTS ARE REQUIRED UNDER THE SLAB.
3. TENDONS AND BARS SHALL BE SPACED AND TIED AT ALL INTERSECTIONS TO PREVENT MOVEMENT DURING CONCRETE PLACEMENT. S-HOOKS MAY NOT BE USED FOR TENDON TIES.
4. CONCRETE SHALL BE VIBRATED AROUND TENDONS AND ANCHORS TO ENSURE CONSOLIDATION.
5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD AND NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANGIES.

CABLE NOTES:

1. EACH STRAND IN FINAL STRESSING OPERATION SHALL BE ULTIMATELY STRESSED TO 33 KIPS AND SEATED AT 28.9 KIPS.
2. WHERE CRUSHABLE EXPANSION MATERIAL IS SHOWN TO PROVIDE SEPARATION OF A POST OR IMBED FROM THE SLAB, IT SHALL BE CAPABLE OF PROVIDING A 1/2" FREE MOVEMENT WITHOUT BINDING THE SLAB.

MONTANA
WILLIAM R. OAKES
29116 E
REGISTERED PROFESSIONAL ENGINEER

THIS DRAWING IS THE PROPERTY OF THE LANDSCAPE ARCHITECT. IT HAS BEEN PREPARED SPECIFICALLY FOR THIS SITE AND IS NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION, OR OWNER WITHOUT WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT.

PIONEER PARK
TENNIS COURTS REPLACEMENT
SLAB AND FOUNDATION DETAILS

COPYRIGHT
2024
STEINER THUESEN PLLC

STEINER THUESEN PLLC
GOLF COURSE ARCHITECTURE
IRRIGATION DESIGN
LANDSCAPE ARCHITECTURE
1925 GRAND AVE. SUITE 105
P.O. BOX 22943
BILLINGS, MT 59104
406/252-5545 FAX 245-9855

DRAWN BY:	WO
DATE:	2-16-24
CHECKED BY:	WRO
DATE:	2-16-24
REV:	-
REV:	-
FILE:	-

SHEET
S1.2

SECTION 00100

INVITATION TO BID

Separate sealed bids for the construction of Pioneer Park Tennis Courts Replacement will be received by the Billings City Clerk, P.O. Box 1178, Billings, MT 59103 or bids@billingsmt.gov until 2:00 p.m. local time on Tuesday, March 12, 2024, and then publicly opened and read aloud. The bid opening will be via Facebook Live on the City's Facebook page: Billings MT City Government.

The project consists of: Demolition of existing tennis courts and fencing, earthwork, sidewalk, post tension concrete tennis courts, and fencing.

The bidding documents consisting of Drawings and Project Manual may be examined or obtained at the office of STEINER THUESEN PLLC; 1925 Grand Avenue Suite 105, Billings, MT 59102 in accordance with Article 2.1 of Instructions To Bidders. Required deposit is $100.00 per set, which is not refundable. There is no charge for digital copies. Bidders submitting bids as a General Contractor must obtain a set of plans from the Landscape Architect and be listed on the Landscape Architect's Planholders list in accordance with Article 2.4 of the Instructions to Bidders. Bidding documents may also be examined at City of Billings PRPL, 390 N. 23rd Street Billings, MT 59101, and www.montanabid.com

There will be a non-mandatory Pre-Bid meeting at 390 N. 23rd Street, Billings MT 59101 at 2:00 p.m. on March 5, 2024. Interested CONTRACTORS are encouraged to attend. Contact Jed Vissia with STEINER THUESEN PLLC by telephone at (406) 252-5545 or by email jed@steinerthuesen.net for more information on the Pre-Bid meeting.

CONTRACTOR and any of the CONTRACTOR'S subcontractors bidding or doing work on this project will be required to be registered with the Montana Department of Labor and Industry (DLI). Forms for registration are available from the Department of Labor and Industry, P.O. Box 8011, 1805 Prospect, Helena, Montana 59604-8011. Information on registration can be obtained by calling 1-406-444-7734. All laborers and mechanics employed by CONTRACTOR or subcontractors in performance of the construction work shall be paid wages at rates as may be required by the laws of Yellowstone County and the state of Montana. The CONTRACTOR must ensure that employees and applicants for employment are not discriminated against because of their race, color, religion, sex or national origin.

Each bid or proposal must be accompanied by a Certified Check, Cashier's Check, or Bid Bond payable to the "City of Billings, MT" in an amount not less than ten percent (10%) of the total amount of the bid. Successful BIDDERS shall furnish an approved Performance Bond and a Labor and Materials Payment Bond, each in the amount of one hundred percent (100%) of the contract amount. Insurance as required shall be provided by the successful BIDDER(s) and a certificate(s) of that insurance shall be provided. Bids submitted via email shall have the bid bond scanned and included with the bid. Bids submitted via mail shall have any of the bid securities included.

No bid may be withdrawn after the scheduled time for the public opening of bids, which is 2:00 p.m. local time, Tuesday, March 12, 2024.

For further information concerning this project, please contact Jed Vissia with STEINER THUESEN PLLC by telephone at (406) 252-5545 or by email jed@steinerthuesen.net or John Gayvert with Parks, Recreation, and Public Lands by telephone 406-657-8369 or by email GayvertJ@billingsmt.gov or Brad Wright with Parks, Recreation, and Public Lands by telephone 406-237-6132 or by email wrightb@billingsmt.gov at 390 N 23rd St, Billings, MT 59101. End of day on Thursday, March 7, 2024 is the last day for questions.

The right is reserved to reject any or all proposals received, to waive informalities, to postpone the award of the contract for a period of not to exceed sixty (60) days, and to accept the lowest responsive and responsible bid which is in the best interest of the OWNER.

The City of Billings is an Equal Opportunity Employer.

Published on February 16, February 23, and March 1, 2024.

Denise R. Bohlman
Billings City Clerk
P.O. Box 1178
Billings, MT 59103

Dept:	PRPL
Published:	February 16, 2024
	February 23, 2024
	March 1, 2024

STEINER THUESEN PLLC

GOLF COURSE ARCHITECTURE • IRRIGATION DESIGN • LANDSCAPE ARCHITECTURE

PIONEER PARK TENNIS COURTS REPLACEMENT
ADDENDUM #1
February 23, 2024

CLARIFICATIONS: none

CHANGES TO PRIOR ADDENDA: none

BIDDING REQUIREMENTS:

1. SECTION 00100 - INVITATION TO BID:
    a. Change Bid Opening date from 2:00 P.M. local time on Tuesday, March 12, 2024 to 2:00 P.M. local time on Tuesday, March 19, 2024.
    b. Paragraph 8: Change the last sentence as follows: End of day on Thursday, March 14, 2024 is the last day for questions.
    c. Change publishing dates from February 16, February 23, and March 1, 2024 to February 23, March 1, March 8, and March 15, 2024.

CONDITIONS OF THE CONTRACT: none

SPECIFICATIONS:

2. SECTION 116823
    a. Add the following under 1.3 Submittals, Paragraph C
        C. Operation and Maintenance Data: Provide manufacturer's recommendations for operation and maintenance of all tennis equipment. Information to be included in the project operations and maintenance manual.
3. SECTION 321823
    a. Add the following under 1.5 Submittals, Paragraph F
        F. Operation and Maintenance Data: Provide manufacturer's recommendations for proper maintenance of the tennis court surfacing. Information to be included in the project operations and maintenance manual.

DRAWINGS: none

Attachments: Planholders List

1925 GRAND AVE. SUITE 105 P.O. BOX 22943 BILLINGS, MT 59104 406/252-5545 FAX 245-9855

PIONEER PARK TENNIS
COURTS REPLACEMENT

Addendum #1 2/23/24

THIS ADDENDUM IS HEREBY ATTACHED TO AND MADE A PART OF THE CONTRACT DOCUMENTS, AND EACH BIDDER SHALL ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN WRITING ON HIS BID.

END ADDENDUM #1

Planholders List

PIONEER PARK TENNIS COURTS REPLACEMENT
Billings, MT

2/20/2024

First Name	Last Name	Company	Address	City	State	Zip	Phone	Fax	Set
John	Gayvert	Billings PRPL	390 N 23rd St.	Billings	MT	59101	406-657-8369		1
Brad	Wright	Billings PRPL	390 N 23rd St.	Billings	MT	59101	406-237-6132		2
Jed	Vissia	STEINER THUESEN PLLC	1925 Grand Ave, Suite 105	Billings	MT	59102	406-252-5545	406-245-9855	3
Bill	Oakey	William Oakey PE Structural Engineers LLC		Billings	MT		406-696-3911		4
John	Spray	The Good Earth Works Co, Inc.	4215 Hwy 312	Billings	MT	59105	406-860-1438		E1
Eric	VanHemelryck	WEAVE	2348 N Frontage RD	Billings	MT	59101	406-245-8833	406-245-3232	E2
Dylan	Bird	Renner Sports	3096 S Davis Dr.	Salt Lake City	UT	84115	801-381-8385		E3
William	Barrlow	Bar 10 LLC	PO Box 236	Columbus	MT	59019	406-224-2945		E4-D

STEINER THUESEN PLLC

GOLF COURSE ARCHITECTURE • IRRIGATION DESIGN • LANDSCAPE ARCHITECTURE

PIONEER PARK TENNIS COURTS REPLACEMENT
ADDENDUM #2
March 11, 2024

CLARIFICATIONS: none

CHANGES TO PRIOR ADDENDA: none

BIDDING REQUIREMENTS: none

CONDITIONS OF THE CONTRACT: none

SPECIFICATIONS:

1. SP-36
    a. Add the following sentence
        01. Contractor shall provide safety/security fencing to prevent access to the site by the public. If sidewalks are to be closed, necessary approval and permits shall be obtained from the City of Billings.
2. SECTION 033800
    a. Add the following under 3.2 Paragraph H
        01. Curing requirements can be discussed with the successful contractor following the project award. However, at this point, there is no change anticipated.
3. SECTION 321823
    a. Add the following under 2.1, Paragraph E
        01. Structural fill specifications fall within the MPWSS specifications for 3" minus sub base course (02234 2.4 A)
4. SECTION 321823
    a. Add the following under 2.1, Paragraph E
        01. Material being excavated and stockpiled for use in the project can be piled in the parking lane adjacent to the park along 3rd street temporarily. Individual stockpiles can remain on the street for no more than 3 days before it is removed. Prior to stockpiling any material on the street, the Owner is to be notified so that they can let the necessary City department know that work will be taking place in the street right-of-way. Ensure that proper SWPPP

1925 GRAND AVE. SUITE 105 P.O. BOX 22943 BILLINGS, MT 59104 406/252-5545 FAX 245-9855

procedures are in place. Contact the City street departments for additional information.

DRAWINGS:

1. Detail 6/L1.4: The following fittings are approved for use on fencing.
    a. Pressed steel loop cap is approved for use at top of line posts. Not to be used at corners and gate posts.
    b. Pressed steel line clamp is approved for use at fence brace rails on line posts.

Attachments: Planholders List
Pre-Bid Meeting Sign-In
Pioneer Park Irrigation As-Built

THIS ADDENDUM IS HEREBY ATTACHED TO AND MADE A PART OF THE CONTRACT DOCUMENTS, AND EACH BIDDER SHALL ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN WRITING ON HIS BID.

END ADDENDUM #2

Planholders List

PIONEER PARK TENNIS COURTS REPLACEMENT
Billings, MT

3/5/2024

First Name	Last Name	Company	Address	City	State	Zip	Phone	Fax	Set
John	Gayvert	Billings PRPL	390 N 23rd St.	Billings	MT	59101	406-657-8369		1
Brad	Wright	Billings PRPL	390 N 23rd St.	Billings	MT	59101	406-237-6132		2
Jed	Vissia	STEINER THUESEN PLLC	1925 Grand Ave, Suite 105	Billings	MT	59102	406-252-5545	406-245-9855	3
Bill	Oakey	William Oakey PE Structural Engineers LLC		Billings	MT		406-696-3911		4
John	Spray	The Good Earth Works Co, Inc.	4215 Hwy 312	Billings	MT	59105	406-860-1438		E1
Eric	VanHemelryck	WEAVE	2348 N Frontage RD	Billings	MT	59101	406-245-8833	406-245-3232	E2
Dylan	Bird	Renner Sports	3096 S Davis Dr.	Salt Lake City	UT	84115	801-381-8385		E3
William	Barrlow	Bar 10 LLC	PO Box 236	Columbus	MT	59019	406-224-2945		E4-D
Elijah	Harris	SportsEdge	PO Box 837	Troutman	NC	28166	912-650-9890		E5
Joy	Sayre	ConstructConnect	3825 Edwards Road	Cincinnati	OH	45209	323-602-5079	866-570-8187	E6
Christina	Alden	Construction Industry Center	2771 Plant St.	Rapid City	SD	57702	605-343-5252	605-343-4591	E7
Brie	Kidwell	Plan Center Northwest	PO Box 2486	Clackamas	OR	97015	503-650-0148		E8

PreBid Meeting
Sign In
March 5, 2024

PIONEER PARK TENNIS COURTS REPLACEMENT
Billings, Montana

Representative	Company	Phone	Fax	Email
Nathan Steiner	STEINER THUESEN PLLC	406-252-5545	406-245-9855	nathan@steinerthuesen.net
Jed Vissia	STEINER THUESEN PLLC	406-252-5546 ex 11	406-245-9856	jed@steinerthuesen.net
ERIC VAN HEMERICK	WEAVE CONSTRUCTION	406-633-0853	406-245-3232	evanhemerick@weaveind.com
William Barlow	BAR 1D LLC	406-224-2945		bar1d2023LLC@outlook.com
ALAN DOBSON	DOBSON GRADING + UTILITY LLC	406 426 8484		adobson@dobsongrading.com
JEFF SPOONER	GEW	406-373-5155	406-373-5406	JEFF.S@GOODEARTHWORKS.NET
John Spray	GEW	406-860-1438	406-373-5116	john@goodearthworks.net
BRAD WRIGHT	PRPL	406-413-5498		WRIGHTB@BILLINGSMT.GOV
Cole McQuillan	PRPL	406-657-8367		mcquillanc@billingsmtgov
Bill Dakof	Sprague + Co	406-696-3911	—	MERLEYBILL@.0390@gmail.com.

Pump / Water Source

Normally Closed

Normally Closed

Pump / Water Source

Pump / Water Source

Pump / Water Source

Creek Bed

Building

Parking Lot

Play Ground

Play Ground

Play Ground

Play Ground

Tennis Court

Sculpture Garden

Building

Parking Lot

Legend

Equipment

Type, Model

- Air Vent
- Valve
- Controller
- Electric Valve
- Flow Meter, Master Valve, Backflow Valve Assy
- Ground Rod
- Lateral Zone Valve
- Manifold Union
- Manifold Isolation
- Quick Coupler
- Sprinkler/Rainbird 5000, 12
- Sprinkler/Rainbird 5000, 8
- Sprinkler/Rainbird 700, 6
- Sprinkler/T32 T-6+6

Type, Flow, Zone

- Flow Sensor Line
- Lateral A
- Lateral B
- Lateral C
- Mainline
- Control Wire
- Base Map Line Feature

Description

- Tree/Deciduous
- Tree/Evergreen
- Base Map Huge Tree
- Other

Description

- Play Ground
- Sidewalk
- Base Map Park Perimeter (Estimated)

Copyright 2004
Hysham Enterprises

GPS Data Collected and Map Created By

Hysham Enterprises
1925 Grand Ave, Suite 103
Billings, MT 59102
(406) 860-5196

In Association With

CARL THUESEN
A S L A
GOLF COURSE ARCHITECTURE
LANDSCAPE ARCHITECTURE
1925 GRAND AVE, SUITE 103
P.O. BOX 22943
BILLINGS, MT 59104
406/252-1545 FAX 245-5055

0 20 40 80 Feet

Pioneer Park 2003 Irrigation Replacement Project As-Built –Page 1 of 2

Normally Closed

Pump / Water Source

Building

Parking Lot

Play Ground

Play Ground

Play Ground

Play Ground

Tennis Court

Sculpture Garden

Building

Parking Lot

Tennis Court

Creek Edge

Fence

Baseball Field

Building

Pump / Water Source

Legend

Equipment

Type, Route

- Air Vent
- QCv
- Combo
- Electric Valve
- Flow Meter, Master Valve, Isolation Valve Assy
- Ground Rod
- Lateral Gate Valve
- Manifold Drain
- Manifold Isolation
- Quick Coupler
- Sprinkler/Rainbird 2100, 12
- Sprinkler/Rainbird 7000, 4
- Sprinkler/Rainbird 7000, 8
- Sprinkler/T32 T-Bird

Type, Flow_Zone

- Pilot Return Line
- Lateral: A
- Lateral: B
- Lateral: C
- Mainline
- Control Wire
- Base Map Line Feature

Description

- Tree/Deciduous
- Tree/Evergreen
- Base Map Huge Tree
- Other

Description

- Play Ground
- Sidewalk
- Base Map Park Perimeter (Estimated)

Copyright 2004
Hysham Enterprises

GPS Data Collected and Map Created By

Hysham Enterprises
1925 Grand Ave, Suite 103
Billings, MT 59102
(406) 860-6196

In Association With

CARL THUESEN
A S L A
GOLF COURSE ARCHITECTURE
LANDSCAPE ARCHITECTURE
1925 GRAND AVE, SUITE 103
P.O. BOX 23943
BILLINGS, MT 59102
406/252-1505 FAX 745-9855

0 20 40 80 Feet

Pioneer Park 2003 Irrigation Replacement Project As-Built – Page 2 of 2

Date:	04/08/2024
Title:	New City Hall Audio Visual Systems
Presented by:	John Caterino, Facilities Manager
Department:	City Hall Administration
Presentation:	No
Legal Review:	Yes
Project Number:	N/A

RECOMMENDATION

Staff recommends that Council approve and award a contract for procurement and professional installation of Audio Visual infrastructure, equipment, and systems in New City Hall to TeleData Technologies for $697,359.41

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

New City Hall will have modern A/V equipment and systems installed in the Council Chambers, Courtrooms, Jury Deliberation rooms, Police interview rooms, and select conference rooms. There will also be digital public displays on each floor.

An Invitation for Bid (IFB) was advertised on 10/27/2023 and 11/03/2023 in *Yellowstone County News* and on the City's Website. Only one bid was received. The recommendation for the 12/11/2023 Council Meeting was to reject the bid and readvertise.

Subsequently to garner more interest a Request for Proposal (RFP) was advertised on 12/29/2023 and 1/5/2024 in *Yellowstone County News* and on the City's Website. Three (3) proposals were received. A review committee unanimously selected TeleData Technologies based on the following criteria:

- Thoroughness of response
- Firm experience with projects of similar scope and magnitude
- Project team
- Qualifications
- Approach and methodology for implementation

ALTERNATIVES

City Council may:

- Approve; or,
- Not Approve

FISCAL EFFECTS

The overall total construction budget is $24 million which includes an Owner allowance of $600,000 for Audio Visual procurement and install. We are also appropriating funds from savings realized on the security equipment bid pack to bring the total to $700,000.

The cost of the contract will be funded by the New City Hall construction fund, which is primarily covered by the General Fund.

Attachments

TeleData Contract

SERVICES AGREEMENT

THIS AGREEMENT is made and entered into _____, by and between the **CITY OF BILLINGS, MONTANA,** a municipal corporation organized and existing under the laws of the State of Montana, P.O. Box 1178, Billings, Montana 59103, hereinafter referred to as "**CITY**," and **TELEDATA TECHNOLOGIES**, of 5301 Longley Lane, #A11, Reno, NV 89511 hereinafter referred to as "**CONTRACTOR**."

In consideration of the mutual covenants and agreements herein contained, the receipt and sufficiency whereof being hereby acknowledged, the parties hereto agree as follows:

1. **PURPOSE: CITY** agrees to hire **CONTRACTOR** as an independent contractor to perform the services of procurement and professional installation of audio-visual systems described in the Scope of Work attached hereto as Exhibit "A" and by this reference made a part hereof.

2. **EFFECTIVE DATE:** This **AGREEMENT** is effective upon the date of its execution and will terminate on December 31, 2024. The parties may extend this **AGREEMENT**, by mutual concurrence, for sixty days, in writing prior to its termination.

3. **SCOPE OF WORK:** The **CONTRACTOR** shall perform the services outlined in Exhibit "A". In performing these services, the **CONTRACTOR** shall at all times comply with all federal, state and local statutes, rules and ordinances applicable. These services and all duties incidental or necessary therefor, shall be performed diligently and completely and in accordance with professional standards of conduct and performance.

4. **INCORPORATION BY REFERENCE:** All exhibits and addenda attached hereto, as well as any bid or proposal referenced, are hereby incorporated into this **AGREEMENT** and made a part hereof. If there is any conflict between such exhibits or addenda and the terms of this **AGREEMENT**, the terms of this **AGREEMENT** shall control.

5. **PAYMENT: CITY** agrees to pay **CONTRACTOR** six hundred ninety-seven thousand three hundred fifty nine dollars and forty one cents ($697,359.41) for the work described in the Scope of Work in Exhibit "A". Any alteration or deviation from the described work that involves extra costs will be executed only upon written request by the **CITY** to **CONTRACTOR** and will become an extra charge over and above the contract amount. The parties must agree upon any extra charges in writing.

Except as otherwise specified herein, the **CONTRACTOR** shall invoice the **CITY** monthly (or on such other basis as the Parties may mutually determine) for all services rendered pursuant to this **AGREEMENT**. Such invoices shall specify the services provided to the **CITY** during the preceding month and identify the applicable fees, and shall be accompanied by reasonable documentation or other reasonable explanations supporting such charges.

Except as otherwise specified herein, the **CITY** shall pay, net of applicable withholding tax, if any, the **CONTRACTOR** for said invoice within thirty (30) days after receipt.

If partial payment is requested by **CONTRACTOR**, it shall be made upon invoice and said estimate being proportioned to the work completed by the **CONTRACTOR**. **CITY** shall deduct five percent (5%) from each pay estimate to be held until the completion of the final scope of work. The final payment shall be made only after acceptance of final invoice by the **CITY**, and determination has been made by the **CITY** that the scope of work has been satisfactorily completed.

The prices established in this **AGREEMENT** may be extended to other political subdivisions within the State of Montana solely at the **CONTRACTOR'S** discretion.

6. **LIQUIDATED DAMAGES:** If **CONTRACTOR** does not complete the work by the designated contract date(s), liquidated damages will be assessed in the form of a daily charge for each day, except Saturdays, Sundays, and legal holidays which exceed the contract date.

   The daily charge(s) are stipulated to be reasonable quantifications of the damages incurred by the **CITY**:

   - Liquidated damages for failure to complete project: $150.00 per day.
   - The charge(s) will be deducted from money due the **CONTRACTOR**.

7. **INDEPENDENT CONTRACTOR STATUS:** The parties agree that **CONTRACTOR** is an independent contractor for purposes of this **AGREEMENT** and is not to be considered an employee of the **CITY** for any purpose. **CONTRACTOR** is not subject to the terms and provisions of the **CITY**'s personnel policies handbook and may not be considered a **CITY** employee for workers' compensation or any other purpose. **CONTRACTOR** is not authorized to represent the **CITY** or otherwise bind the **CITY** in any dealings between **CONTRACTOR** and any third parties.

8. INDEMNITY:

The **CONTRACTOR** SHALL:

A. Indemnify and hold **CITY**, its officers, agents and employees harmless from any and all losses, damage and liability to the extent caused by any intentional or negligent act on the part of **CONTRACTOR** or its agents or employees.

B. Not indemnify and hold the **CITY** harmless from claims, causes of action, lawsuits, damages, judgments, liabilities, and litigation costs and expenses or reasonable attorneys' fees and costs to the extent caused by the wrongful or negligent acts, error or omission of the **CITY** occurring during the course of or as a result of the performance of the **AGREEMENT**.

C. Where claims, lawsuits or liability, including reasonable attorneys' fees and costs arise from any wrongful or negligent act of both the **CITY** and the **CONTRACTOR**, the **CONTRACTOR** shall indemnify and hold the **CITY** harmless from only that portion of claims, causes of action, lawsuits, damages, judgments, liabilities, and litigation costs and expenses including reasonable attorneys' fees and costs, to the extent caused by the **CONTRACTOR'S** or any subcontractor's wrongful or negligent acts occurring as a result from the **CONTRACTOR'S** performance pursuant to this **AGREEMENT**.

The **CITY** SHALL:

D. Indemnify and hold **CONTRACTOR**, its officers, agents and employees harmless from any and all losses, damage and liability to the extent caused by any intentional or negligent act on the part of **CITY** or its agents or employees.

E. Not indemnify and hold the **CONTRACTOR** harmless from claims, causes of action, lawsuits, damages, judgments, liabilities, and litigation costs and expenses or reasonable attorneys' fees and costs to the extent caused by the wrongful or negligent acts, error or omission of the **CONTRACTOR** occurring during the course of or as a result of the performance of the **AGREEMENT**.

F. Where claims, lawsuits or liability, including reasonable attorneys' fees and costs arise from any wrongful or negligent act of both the **CONTRACTOR** and the **CITY**, the **CITY** shall indemnify and hold the **CONTRACTOR** harmless from only that portion of claims, causes of action, lawsuits, damages, judgments, liabilities, and litigation costs and expenses including attorneys' fees and costs, to the extent caused by the

CITY'S or any subcontractor's wrongful or negligent acts occurring as a result from the **CITY'S** performance pursuant to this **AGREEMENT**.

9. INSURANCE:

A. The **CONTRACTOR** shall maintain in good standing the insurance described in this Section. Before rendering any services under this **AGREEMENT**, the **CONTRACTOR** shall furnish the **CITY** with proof of insurance in accordance with this Section.

The **CONTRACTOR** shall provide the following insurance:

1. Workers' compensation and employer's liability coverage as required by Montana law.
2. Commercial general liability, including contractual liability assumed under an insured agreement and personal injury coverage's -- $750,000 per claim and $1,500,000 per occurrence.
3. Automobile liability -- $1,500,000 per accident.

Each policy of insurance required by this Section shall provide for no less than 30 days' advance written notice to the **CITY** prior to cancellation.

The **CITY** shall be listed as an additional insured on all policies except Worker's Compensation Policies.

CONTRACTOR shall comply with the applicable requirements of the Workers' Compensation Act, Title 39, Chapter 71, MCA, and the Occupational Disease Act of Montana, Title 39, Chapter 71, MCA.

CONTRACTOR shall maintain workers' compensation insurance coverage for all members and employees of **CONTRACTOR's** business, except for those members who are exempted as independent contractors under the provisions of §39-71-401, MCA.

CONTRACTOR shall furnish **CITY** with copies showing one of the following: **(1)** proof of registration as a registered contractor under Title 39, Chapter 9, MCA; **(2)** a binder for workers' compensation coverage by an insurer licensed and authorized to provide workers' compensation insurance in the State of Montana; or **(3)** proof of exemption from workers' compensation granted by law for independent contractors.

CONTRACTOR shall furnish an approved Performance Bond and, each in the amount of one hundred percent (100%) of the contract amount.

10. PERMITTING AND INSPECTIONS:

A. **CONTRACTOR** to obtain all required permits before beginning construction. Cost of permits shall be billed to the **CITY** as a reimbursable expense with no mark-up.

B. **CONTRACTOR** to obtain all required inspections during construction and at final completion.

11. EQUIPMENT AND MATERIALS CUSTODY:

A. **CITY** shall not be responsible for any equipment or materials until it is installed and commissioned.

B. If materials or equipment go missing for any reason before they are installed and commissioned, they shall be replaced at no cost to **CITY**.

C. All equipment and materials shall be secured and stored by **CONTRACTOR** in a location approved by the **CITY** or offsite.

D. If arrangements are made to store onsite **CITY** shall not be responsible for any missing items.

E. **CITY** will not take delivery of any equipment or materials.

F. All equipment and materials must be brought onsite by **CONTRACTOR**.

12. EQUIPMENT AND MATERIALS INVENTORY:

A. A detailed inventory list shall be provided by **CONTRACTOR** to **CITY** upon **CONTRACTOR** mobilization or project commencement.

B. Inventory list to include material information (make, model, etc.), and quantity.

C. When an item is installed and commissioned it shall be deducted from the inventory list.

13. WARRANTY: CONTRACTOR warrants that all services and work will be performed in a good workman-like manner. **CONTRACTOR** acknowledges that it will be liable for any breach of this warranty for the lesser period of one (1) year from the time services are completed or any warranty described in the Scope of Work in Exhibit “A”.

14. COMPLIANCE WITH LAWS: CONTRACTOR agrees to comply with all federal, state, and local laws, ordinances, rules, and regulations. **CONTRACTOR** agrees to purchase a **CITY** business license.

15. PREVAILING WAGE RATES: Unless superseded by federal law, Montana law requires that contractors and subcontractors give preference to the employment of Montana residents for any public works contract in excess of $25,000 for construction or nonconstruction services in accordance with sections 18-2-401 through 18-2-432, MCA, and all administrative rules adopted pursuant thereto. Unless superseded by federal law, each contractor shall ensure that at least 50%

of the contractor's workers performing labor on a construction project are bona fide Montana residents. The Commissioner of the Montana Department of Labor and Industry has established the resident requirements in accordance with sections 18-2-403 and 18-2-409, MCA. Any and all questions concerning prevailing wage and Montana resident issues should be directed to the Montana Department of Labor and Industry.

In addition, unless superseded by federal law, all employees working on a public works contract shall be paid prevailing wage rates in accordance with sections 18-2-401 through 18-2-432, MCA, and all administrative rules adopted pursuant thereto. Montana law requires that all public works contracts, as defined in section 18-2-401, MCA, in which the total cost of the contract is in excess of $25,000, contain a provision stating for each job classification the standard prevailing wage rate, including fringe benefits, travel, per diem, and zone pay that the contractors, subcontractors, and employers shall pay during the public works contract.

Section 18-2-406, MCA, requires that all contractors, subcontractors, and employers who are performing work or providing services under a public works contract post in a prominent and accessible site on the project staging area or work area, no later than the first day of work and continuing for the entire duration of the contract, a legible statement of all wages and fringe benefits to be paid to the employees in compliance with section 18-2-423, MCA. Section 18-2-423, MCA, requires that employees receiving an hourly wage must be paid on a weekly basis.

Furthermore, Section 18-2-417, requires allowance for a 3% annual increase in wages for a multiyear contract. (1) Any public works contract that by the terms of the original contract calls for more than 30 months to fully perform must include a provision to adjust, as provided in subsection (2), the standard prevailing rate of wages to be paid to the workers performing the contract. (2) The standard prevailing rate of wages paid to workers under a contract subject to this section must be adjusted 12 months after the date of the award of the public works contract. The amount of the adjustment must be a 3% increase. The adjustment must be made and applied every 12 months for the term of the contract. (3) Any increase in the standard rate of prevailing wages for workers under this section is the sole responsibility of the contractor and any subcontractors and not the contracting agency.

Each contractor, subcontractor, and employer must maintain payroll records in a manner readily capable of being certified for submission under section 18-2-423, MCA, for not less than three years after the contractor's, subcontractor's, or employer's completion of work on the public works contract.

The nature of the work performed or services provided under this contract meets the statutory definition of a "public works contract" under section 18-2-401(11)(a), MCA, The booklet is attached and may also be found at http://erd.dli.mt.gov/labor-standards/state-prevailing-wage-rates.

16. **CONTRACTORS' GROSS RECEIPTS TAX: CONTRACTOR** understands that all contractors or subcontractors working on a publicly funded construction project, including any work requiring the installation, addition, placement, replacement, or removal of any equipment, parts, structures, or materials of any kind whatsoever, are required to pay or have withheld from earnings one percent (1%) of the gross contract price if the gross contract price is Eighty Thousand Dollars ($80,000) or more.

17. **NONDISCRIMINATION:**

A. **CONTRACTOR** shall, in performance of work under this **AGREEMENT**, fully comply with all applicable federal, state, or local laws, rules, regulations, and executive orders including but not limited to, the Montana Human Rights Act, the Equal Pay Act of 1963, the Civil Rights Act of 1964, the Age Discrimination Act of 1975, the Americans with Disabilities Act of 1990, and Section 504 of the Rehabilitation Act of 1973. **CONTRACTOR** is the employer for the purpose of providing healthcare benefits and paying any applicable penalties, fees and taxes under the Patient Protection and Affordable Care Act [P.L. 111-148, 124 Stat. 119]. Any subletting or subcontracting by **CONTRACTOR** subjects subcontractors to the same provisions. In accordance with 49-3-207, MCA, and Executive Order No. 04-2016. **CONTRACTOR** agrees that the hiring of persons to perform this Contract will be made on the basis of merit and qualifications and there will be no discrimination based on race, color, sex, pregnancy, childbirth or medical conditions related to pregnancy or childbirth, political or religious affiliation or ideas, culture, creed, social origin or condition, genetic information, sexual orientation, gender identity or expression, national origin, ancestry, age, disability, military service or veteran status, or marital status by the persons performing this **AGREEMENT**.

B. The **CONTRACTOR** shall state, in all solicitations or advertisements for employees to work on jobs, that all qualified applicants will receive equal consideration for employment without regard to race, color, religion, national origin, ancestry, age, sex or marital status, or mental or physical impairment/disability.

The **CONTRACTOR** and subcontractor shall abide by the requirements of 41 CFR 60-300.5(a) and 41 CFR 60-741.5(a), which prohibit discrimination against qualified protected veterans and/or qualified individuals on the basis of disability, and requires affirmative action by covered prime contractors and subcontractors to employ and advance in employment qualified protected veterans and individuals with disabilities.

The **CONTRACTOR** and any subcontractor shall abide by the requirements of 41 CRF 60-1.4, which states employees or applicants may not be

discharged or in any other manner discriminated against because they have inquired about, discussed, or disclosed their own pay or the pay of another employee or applicant. However, employees who have access to the compensation information of other employees or applicants as a part of their essential job functions cannot disclose the pay of other employees or applicants to individuals who do not otherwise have access to compensation information, unless the disclosure is (a) in response to a formal complaint or charge, (b) in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or (c) consistent with the **CONTRACTOR'S** legal duty to furnish information.

C. The **CONTRACTOR** shall comply with any and all reporting requirements that may apply to it that the **CITY** may establish by regulation.

D. The **CONTRACTOR** shall comply with all applicable federal, state, and city laws concerning the prohibition of discrimination.

E. The **CONTRACTOR** shall include the provisions of Subsections A through D of this Section in every subcontract or purchase order under this **AGREEMENT**, so as to be binding upon every such subcontractor or vendor of the **CONTRACTOR** under this **AGREEMENT**.

F. The **CONTRACTOR** agrees to post, in conspicuous places available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.

18. **CONTRACTOR PERSONNEL:** A list of personnel who will be onsite for project shall be provided by **CONTRACTOR** to **CITY** within 10 business days of contract execution, including:

A. First and last name;

B. Duration onsite; and,

C. Personnel responsibilities.

19. **SAFETY PROGRAM:** **CONTRACTOR** to provide **CITY** with safety program within 10 business days of contract execution.

20. **MEETINGS:** **CONTRACTOR** shall attend a pre-construction meeting with **CITY** representatives, as well as progress meetings as requested by the **CITY**.

21. **PROJECT SCHEDULE TIMELINE:** A project schedule timeline shall be provided by **CONTRACTOR** to **CITY** within 10 business days of contract execution.

Accepted schedule formats are Gantt chart, network diagram, critical path diagram, or sequential flow chart.

A Phase-Based Work-Breakdown Structure (WBS) by resource shall be provided by **CONTRACTOR** to **CITY** within 10 business days of contract execution and shall include a decomposed project scope consisting of phases and deliverables, tasks, and component deadlines.

22. **DEFAULT AND TERMINATION:** If either party fails to comply with any condition of this **AGREEMENT** at the time or in the manner provided for, the other party may, at its option, terminate this **AGREEMENT** and be released from all obligations if the default is not cured within ten (10) calendar days after written notice is provided to the defaulting party. Said notice shall set forth the items to be cured. Additionally, the non-defaulting party may bring suit for damages, specific performance, and any other remedy provided by law. These remedies are cumulative and not exclusive. Use of one remedy does not preclude use of the others. Notices shall be provided in writing and hand-delivered or mailed to the parties at the addresses set forth in the first paragraph of this **AGREEMENT**.

23. **LIAISON:** The **CITY's** designated liaison for this **AGREEMENT** is John Caterino and the **CONTRACTOR**'s designated liaison for this **AGREEMENT** is Craig Johnson.

24. **GOVERNING LAW AND VENUE:** This **AGREEMENT** shall be construed and enforced in accordance with the laws of the State of Montana. Venue for any suit between the parties arising out of this **AGREEMENT** shall be the State of Montana Thirteenth Judicial District Court, Yellowstone County.

25. **SEVERABILITY:** Any provision or part of the **AGREEMENT** held to be void or unenforceable under any law or regulation shall be deemed stricken and all remaining provisions shall continue to be valid and binding upon the **CITY** and the **CONTRACTOR**, who agree that the **AGREEMENT** shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

26. **SUCCESSORS AND ASSIGNS:** Neither the **CITY** nor the **CONTRACTOR** shall assign, transfer or encumber any rights, duties or interests accruing from this **AGREEMENT** without the written consent of the other.

27. **OWNERSHIP OF DOCUMENTS:** All documents, data, drawings, specifications, software applications and other products or materials produced by the **CONTRACTOR** in connection with the services rendered under this **AGREEMENT** shall be the property of the **CITY** whether the project for which they are made is executed or not. All such documents, products and materials shall be forwarded to the **CITY** at its request and may be used by the **CITY** as it sees fit. The **CITY** agrees that if the documents, products, and materials prepared by the **CONTRACTOR** are used for purposes other than those intended by the **AGREEMENT**, the **CITY** does so at its sole risk and agrees to hold the **CONTRACTOR** harmless for such use. All or any portions of materials,

products and documents produced under this **AGREEMENT** may be used by the **CONTRACTOR** upon confirmation from the **CITY** that they are subject to disclosure under the Public Disclosure Act. All services performed under this **AGREEMENT** will be conducted solely for the benefit of the **CITY** and will not be used for any other purpose without written consent of the **CITY**. Any information relating to the services will not be released without the written permission of the **CITY**. The **CONTRACTOR** shall preserve the confidentiality of all **CITY** documents and data accessed for use in **CONTRACTOR**'s work product.

IN WITNESS WHEREOF, the parties hereto have executed this instrument the day and year first above written.

CITY OF BILLINGS, MONTANA

_____

WILLIAM A. COLE,
MAYOR

APPROVED AS TO FORM:

_____

CITY ATTORNEY'S OFFICE

ATTEST:

_____

DENISE BOHLMAN, CITY CLERK

TELEDATA TECHNOLOGIES

_____

SIGNATURE

_____

PRINT NAME

_____

PRINT TITLE

EXHIBIT A

SCOPE OF WORK

All services to be rendered at
Site Name: Billings New City Hall
Site Address: 316 N 26th St., Billings, MT 59101
Tax ID: A00251
Item: Audio Visual Systems Procurement and Installation

Contract Documents:

- Attachment G Specifications, titled Section 00 01 10 Table of Contents, dated 09/18/2023, and consisting of 3 pages

- Attachment H Specifications, titled Section 27 40 00 – AV/Multimedia General Requirements, dated 09/18/2023, and consisting of 48 pages

- Attachment I Specifications, titled Section 27 41 00 – Audio Video Systems, dated 09/18/2023, and consisting of 36 pages

- Attachment J Drawings, titled BILLINGS NEW CITY HALL REMODEL, dated 12/27/2023, and consisting of 16 pages

Work Shall Include Procurement, Installation, and Commissioning of the following:

- **Council Chambers – 5th Floor:**
  Per Plans and specs
  Includes Samsung video wall

- **Courtrooms – 2nd Floor:**
  Per Plans and specs
  BrightSign players are included for the signage TV's

- **Police Hard Interview Rooms – 4th Floor:**
  Per Plans and specs

- **EOC and EOC Meeting – 4th Floor:**
  Per Plans and specs with the following exceptions. One (1) touch screen controller, no (0) PTZ cameras, one (1) microphone, all VSI encoders and decoders removed.

- **Jury Deliberation Room 279:**
  Per Plans and specs

- **Meeting Rooms - Full: 103, 224, 470, 555, and 584:**
  Per Plans and specs with the following exceptions. The Shure MXA920-R will be replaced with a Shure 902 speaker/microphone per typical. The MXN5W-C speakers removed per typical. One (1) VSI Encoder and One (1) VSI Decoder removed per typical.

- **Meeting Rooms - Casting Only: Jury Deliberation Room 276**
  Configured with HDMI extender due to table separation

City Council Regular

Date:	04/08/2024
Title:	City of Billings/Yellowstone County Agreement to Provide Law Enforcement Data Processing
Presented by:	David Watterson, IT Director
Department:	Information Technology
Presentation:	No
Legal Review:	Yes
Project Number:	N/A

RECOMMENDATION

Staff recommends that the City Council approve the agreement to provide FY2025 data processing services for the Yellowstone County Sheriff's Department in the amount of $ 161,470

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

The City of Billings has contracted with Yellowstone County Sheriff's Department for over 25 years to provide application hosting services including servers, storage, security, software maintenance, and support for the Public Safety Software that they use in their offices, patrol cars, and in the County Jail. Under an annual agreement, Information Technology bills the Sheriff's Office for the actual resources that were used in the prior calendar year.
Council is being asked to approve the FY2025 agreement in the amount of $161,470.

ALTERNATIVES

City Council may:

- Approve; the annual agreement with Yellowstone County Sheriff's Department, OR,
- Not Approve the annual agreement

FISCAL EFFECTS

The annual charge for July 1, 2024 through June 30, 2025 is $161,470. Information Technology is an internal service fund, whose budget is dependent on charging customers for the services it provides.

Attachments

FY25 YC Sheriff's Agreement

AGREEMENT - Fiscal Year 2025

This Agreement between the Yellowstone County Sheriff, hereinafter called the "SHERIFF", and the City of Billings, Montana, hereinafter called the "CITY".

WITNESSETH:

Whereas, the SHERIFF is desirous of using the CITY's Computer Facility to support their existing law enforcement data processing requirements; and

Whereas, the CITY maintains and operates a Computer Facility with appropriate capabilities, capacity and security; and

Whereas, the CITY is willing to allow the SHERIFF to have access to the Computer Facility at all normal operating times which are seven (7) days a week, twenty-four (24) hours a day except for necessary back-ups and maintenance.

NOW, THEREFORE, IN CONSIDERATION OF THE MUTUAL COVENANTS AND AGREEMENTS between the parties hereto, it is mutually agreed that:

1. The CITY will provide to the Yellowstone County Sheriff's department the following described computer access, disk storage, computer processing, system/data backups, and maintenance support to support their existing Law Enforcement data processing system:

   A. Communication capabilities allowing 24 hr computer access;
   B. On-site & Off-site disk storage shared with Billings Police Dept.;
   C. Computer processing, program maintenance, operations to support data processing system, system replication & backups, disaster/recovery services;

2. The SHERIFF agrees to pay CITY the sum of One Hundred and Sixty-One Thousand, Four Hundred and Seventy ($161,470) specified in Paragraph Three below. This charge is based on actual computer usage for the period of January 1, 2023 thru December 31, 2023.

3. This Agreement shall be in effect for twelve (12) months beginning July 1, 2024, and continuing until June 30, 2025.

4. Payment shall be made in two (2) equal installments of $80,735. The first installment is due and payable on or before October 20, 2024, and the second is due and payable on or before April 15, 2025.

AGREEMENT DATED _____

YELLOWSTONE COUNTY

BY: _____ 3-12-24
Sheriff Mike Linder

_____
Chair, County Commissioners

ATTEST: _____
Clerk and Recorder

CITY OF BILLINGS

_____
Mayor William A. Cole

_____
City Clerk

_____
City Attorney

Approved as to Form:

_____
County Attorney

City Council Regular

Date:	04/08/2024
Title:	Memorandum of Understanding with Hoodies 4 Heroes
Presented by:	Pigg Michael, Superintendent
Department:	Parks/Rec/Public Lands
Presentation:	No
Legal Review:	Yes
Project Number:	N/A

RECOMMENDATION

Staff recommends approval of the MOU between the City and Hoodies 4 Heroes which will allow H4H to install a memorial at Dehler Park.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

The Parks Department has been working with H4H to find an acceptable location for a monument and Dehler Park works best for accessibility and space. The Parks Board has recommended approval of the MOU with Hoodies 4 Heroes.

ALTERNATIVES

City Council may:

- Approve; or,
- Not Approve

FISCAL EFFECTS

There are no fiscal effects.

Attachments

Exhibit A
MOU

ArcGIS Web Map



2/28/2024, 4:31:24 PM

1:1,249

Tax Parcels

Address Point

Billings City Limits

Road Centerline

STREET

COLLECTOR

YCO 2023 NAIP Imagery

Red: Band_1

Green: Band_2

Blue: Band_3

0 0.01 0.02 0.04 mi

0 0.01 0.03 0.06 km

Web AppBuilder for ArcGIS

MEMORANDUM OF UNDERSTANDING
Between
City of Billings
and
Hoodies for Heroes Veterans Committee

1. Parties. This Memorandum of Understanding ("MOU") is made and entered into by and between the City of Billings, a Municipal Corporation, through its Parks, Recreation & Public Lands Department, ("City"), whose address is 390 N 23rd St, Billings, MT 59101, and the Hoodies for Heroes Veterans Committee, a Montana non-profit Corporation, ("Veterans Committee"), whose address is P.O. Box 50686 Billings, MT 59105.

2. Definitions. "Athletic Park Block" shall mean the city block within the North Park Neighborhood, one of the original residential, commercial, and cultural centers of the City, that is bounded by Tenth Avenue North, North 27th Street, Ninth Avenue North and North 25th Street, as was used for baseball activities as Athletic Field, Cobb Field and later, Dehler Park.

3. Purpose. The purpose of this MOU is to establish the terms and conditions under which the Veterans Committee can access and utilize portions of Athletic Park Block for the express purpose of construction and maintenance of a memorial marker to remember those who sacrificed their lives since the Vietnam War including the Gulf Campaigns and any future peace keeping missions or other military campaigns. The portion of Athletic Park Block to be used by the Veterans Committee is identified in attachment "A".

4. Term of MOU. This MOU is effective upon the day of execution through the duration of the life of the monument.

5. Responsibilities of City of Billings Parks, Recreation & Public Lands.

City agrees to:

- Retain ownership of and maintenance responsibilities for the parkland where the memorial will be located and surrounding area.
- Relocate the memorial if the parkland is ever sold or repurposed.
- Review for approval the design of the monument and all changes or expansions to the monument.
- Notify the Veterans Committee if the City determines the memorial must be relocated for any reason other than damage and will be responsible for the cost of such relocation.

6. Responsibilities of Veterans Committee.

Veterans Committee agrees to:

- Furnish and pay for design and construction of the memorial.
- Maintain the memorial once constructed including but not limited to graffiti removal, repair any damage and paint as necessary. If damage to the memorial is significant and it is determined by either party that the memorial should be replaced or removed

the Veterans Committee will be responsible for the cost.

- Maintain all electrical components, and replace as needed, including lights and kiosk.
- Obtain City approval prior to commencement of construction or for any changes or expansions to the monument.
- Transfer ownership of the monument to the City once it is completed.

6. <u>General Provisions</u>

a. Relationship of Parties. Nothing contained in this MOU shall be deemed or construed (either by the Parties hereto or by any third party) to create the relationship of principal and agent or create any partnership, joint venture, or other association between the Parties.

b. **Compliance with laws.** The Parties shall at all times observe and comply with all laws, ordinances, or regulations of the Federal, State, County, and local government which may in any manner affect the performance of the MOU.

c. Hold Harmless and Indemnification. The City will protect, defend, indemnify, and hold Veterans Committee, its officials, agents, and employees, while acting within their duties as such, harmless from and against all claims, liabilities, demands, causes of action, and judgments (including the cost of defense and reasonable attorney fees) arising in favor of or asserted by the City's employees or third parties on account of damage to property, bodily or personal injury, or death arising out of any services, performance, act, or omission that in any way results from the acts or omissions of the City, or their agents, or subcontractors, performed pursuant to this MOU, except the negligence of Veterans Committee.

Veterans Committee will protect, defend, indemnify, and hold the City, its elected and appointed officials, agents, and employees, while acting within their duties as such, harmless from and against all claims, liabilities, demands, causes of action, and judgements (including the cost of defense and reasonable attorney fees) arising in favor of or asserted by Veterans Committee's employees or third parties on account of damage to property, bodily or personal injury, or death arising out of any services, performance, act, or omission that in any way results from the acts or omissions of Veterans Committee, or their agents, or subcontractors, performed pursuant to this MOU, except the negligence of the City.

d. Amendments. Either party may request changes to this MOU. Any changes, modifications, revisions, or amendments to this MOU which are mutually agreed upon by and between the parties to this MOU shall be incorporated by written instrument, and effective when executed and signed by all parties to this MOU.

e. Assignment. Unless otherwise provided in this MOU, neither party may assign, delegate, transfer, or otherwise dispose of any of its rights, duties, or obligations hereunder without the prior written consent of all parties hereto.

7. Signatures. In witness whereof, the parties to this MOU through their duly authorized representatives have executed this MOU on the days and dates set out below, and certify that they have read, understood, and agreed to the terms and conditions of this MOU as set forth herein.

The effective date of this MOU is the date of the signature last affixed to this page.

HOODIES FOR HEROES VETERANS COMMITTEE:

By:_____ _____

DATE

_____

PRINT NAME and TITLE

CITY OF BILLINGS, MONTANA:

By:_____ _____

WILLIAM A. COLE, MAYOR **DATE**

ATTEST:

_____

DENISE BOHLMAN, CITY CLERK

City Council Regular

Date:	04/08/2024
Title:	Amend Park Community Garden grant accceptance
Presented by:	Cole McQuillan, Project Manager
Department:	Parks/Rec/Public Lands
Presentation:	No
Legal Review:	Not Applicable
Project Number:	N/A

RECOMMENDATION

The Parks staff is recommending approval to accept the grant award funds from First Interstate Bank in the amount of $900.00.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

Amend Community Garden is a program within Parks & Recreation, and has a continued partnership with AmeriCorps VISTAs, which started the garden initiative 10 years ago. The funds will be used at Amend Garden to purchase materials for building 6 raised planter beds to improve garden access for folks with limited mobility. The beds will also allow for planting produce that is frequently decimated by the ground squirrels in the garden, such as carrots and lettuce.

ALTERNATIVES

City Council may:

- Approve; or,
- Not Approve

FISCAL EFFECTS

No fiscal effects.

Attachments

Grant submittal letter
First Interstate Bank award

February 27, 2024

Inanna Hencke, AmeriCorps VISTA
Amend Park Community Garden / Billings Parks & Recreation
390 N 23rd St
Billings, MT 59101

Dear Linda Brun,

On behalf of the Amend Park Community Garden, thank you for considering our project. Our garden was established in 2014 through a collaboration between Billings Parks & Recreation and the Billings Metro VISTA Project. Our mission is to help alleviate poverty and build healthy futures by providing the space, tools, and resources for individuals and families to grow their own produce.

We are located in Amend Park, in Billings' Southwest Corridor. All three tracts on Billings' South Side were identified by the U.S. Census as food deserts, meaning that people who live in the area have limited access to fresh food and suffer from worse health outcomes as a result. This makes the work of our garden especially important. Just last year, we are proud to have produced over 5,700 pounds of fresh fruit and vegetables for the community.

This year, we hope to increase our impact by adding six (6) elevated beds before the growing season begins. These beds will make our garden more accessible to people with mobility issues who can't bend over or crouch to maintain a plot. The beds will also protect more delicate crops, such as lettuces, which are a favorite for our local rabbit and ground squirrel neighbors. Unwanted grazing can be very discouraging to gardeners, preventing them from growing the foods they are most excited to eat.

The estimated price of materials and soil for all six (6) garden beds is just under $900 (see attached addendum for materials and pricing). We have selected materials, such as cedar, to withstand the weather and serve our garden for years to come. The beds will be assembled on-site by community volunteers.

Would the First Interstate Bank Foundation consider a gift of $900 for materials to construct and install six (6) elevated beds in the Amend Park Community Garden?

To express our gratitude, Billings Parks & Recreation and Amend Community Garden will recognize First Interstate Bank as the sponsoring entity of the project across our social media platforms, reaching over 12,000 followers.

We look forward to hearing from you soon. Thank you for your generous investments in the health of the Billings community.

Sincerely,

Inanna Hencke

Inanna Hencke
Parks Revitalization Assessment & Planning VISTA

To: Milliron, Jake <MillironJ@billingsmt.gov>; VistaPR <vistapr@billingsmt.gov>
Subject: [EXTERNAL] RE: Grant Materials: Amend Community Garden / Parks & Rec

Hi Jake,

Thank you so much for the additional information. First Interstate Bank will be donating 900.00 to build the raised beds for your community garden. I will have the check made out to the City of Billings and mailed to the address you provided. We will have plaques made for the beds and I will reach out when they are ready to arrange delivery to you.

This is a great project and we are happy to help with it.

Thanks and have a great day!

Linda

Linda Brun
CSR
Safe Deposit
O: 406-255-5010
linda.brun@fib.com

First Interstate Bank

401 North 31st
Billings, MT 59101
firstinterstate.com

FW: Grant Materials: Amend Community Garden / Parks & Rec

Milliron, Jake <MillironJ@billingsmt.gov>
Wed 3/13/2024 4:21 PM
To:McQuillan, Cole <mcquillanc@billingsmt.gov>

From: VistaPR <vistapr@billingsmt.gov>
Sent: Monday, March 11, 2024 3:30 PM
To: Linda Brun <Linda.Brun@fib.com>; Milliron, Jake <MillironJ@billingsmt.gov>
Subject: RE: Grant Materials: Amend Community Garden / Parks & Rec

Hello Linda,

This is fantastic news! Thank you so much for your help with the grant process. We are thrilled that First Interstate Bank will be funding elevated beds for the garden, expanding our ability to serve the community and support healthier lifestyles on the South Side.

We will keep an eye out for more information about the plaques.

Thanks again!

Billings PARKS AND RECREATION

Inanna Hencke
Parks Revitalization
Assessment & Planning VISTA
Parks, Recreation & Public Lands
vistapr@billingsmt.gov
amendgarden@gmail.com

BMAP BILLINGS METRO VISTA PROJECT
AmeriCorps

2825 3rd Avenue North, Suite 610
Billings, MT 59101
PHONE 406.247.8615

From: Linda Brun <Linda.Brun@fib.com>
Sent: Monday, March 11, 2024 2:56 PM

City Council Regular

Date:	04/08/2024
Title:	Safe Routes to School Plan Update, Phase 2 Recommendation to the Policy Coordinating Committee
Presented by:	Elyse Monat
Department:	Planning & Community Services
Presentation:	No
Legal Review:	Not Applicable
Project Number:	N/A

RECOMMENDATION

Staff recommends the City Council forward a recommendation of approval of the Safe Routes to School Plan Update, Phase 2 (the Plan), to the Policy Coordinating Committee.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

The Billings Metropolitan Planning Organization conducted a Safe Routes to School Plan, Phase 2 with Sanderson Stewart as the consultant. The Plan was developed as a result of Council's request to study middle schools and County and private schools in the Billings Urbanized area for Safe Routes to School improvements. The funding for the Plan was part of the approved 2023 Unified Planning Work Program, for which the Council forwarded a recommendation of approval to the Policy Coordinating Committee.

This plan looked at a mix of Billings Public Schools, County schools within the MPO area, and private schools. Schools in the plan include:

- Ben Steele Middle School
- Billings Central Catholic High School
- Billings Christian Elementary School
- Billings Christian High School
- Castle Rock Middle School
- Elysian School
- Grace Montessori Academy
- Independent Elementary School
- Lewis & Clark Middle School
- Lockwood Schools Campus (K-8)
- Medicine Crow Middle School
- Mount Olive Lutheran School
- Pioneer Elementary School
- Riverside Middle School
- St. Francis Catholic School
- Sunrise Montessori School
- Will James Middle School

The Plan evaluates current walking and biking conditions at the schools above, identifies barriers or issues that might discourage students from walking or biking, develops a list of recommended projects ranked by impact, and develops walking route maps for schools where walking and bicycle infrastructure is currently available (excludes Billings Christian School Elementary, Grace Montessori Academy, and Pioneer Elementary). The 105 infrastructure recommendations were developed by considering several sources, including public input from open houses or tabling sessions at school events, public comment from an interactive website that included a survey and interactive map, on-the-ground walking audits of all of the schools, surveys from principals, discussions with crossing guards, GIS data, and staff expertise. Recommended projects are generally within one mile of the school. Project impact was evaluated using four categories, including traffic safety, (project) feasibility, demand, and equity. The Plan also identified programmatic recommendations to advance Safe Routes to School.

The Technical Advisory Committee forwarded a recommendation of Plan approval to the Policy Coordinating Committee and the governing bodies at its meeting on February 29, 2024 and the Planning Board forwarded a recommendation of Plan approval to the Policy Coordinating Committee at its meeting on March 26, 2024.

STAKEHOLDERS

The public was engaged throughout the plan through the steering committee, in-person events (open houses or tabling events), yard signs advertising the plan on school property, an interactive mapping website and survey, and the ability to participate in walk audits.

There was a public hearing during the March 12, 2024 Planning Board meeting. There was no public comment received during the public hearing. There is also further opportunity for public comment at the City Council Work Session when this item is reviewed on April 1, at this City Council Meeting before Council takes action, and at the Policy Coordinating Committee Meeting.

ALTERNATIVES

City Council may:

- Forward a recommendation of Plan approval to the Policy Coordinating Committee
- Not forward a recommendation of Plan approval to the Policy Coordinating Committee. Not approving the Plan at this stage would not be in alignment with both the Council's desire to complete this SRTS, Phase 2 effort and approving funding of the effort through the UPWP for the MPO in 2023.

FISCAL EFFECTS

There are no direct fiscal effects from adopting the plan. However, the City, County, schools, or other parties, may choose to program funds to implement project recommendations in the future. Given the City Council's significant support for SRTS and its coordination with Public Works and Planning to budget for SRTS improvements over time, it is expected that this plan will inform future projects it evaluated and that may be considered.

Attachments

Draft Safe Routes to School Plan, Phase 2



Billings Safe Routes to School

PLAN UPDATE: PHASE 2

REVIEW DRAFT, FEBRUARY 2024

Acknowledgments

Project Advisory Committee

Scott Walker, Billings MPO

Elyse Monat, Billings MPO

Pam Purington, Billings City Council

Ellie Lanz, Riverstone Health

Melissa Henderson, Riverstone Health

Rusty Logan, MET Transit

Brenda Koch, SD2

Lindsey Gran, SD2 Transportation

Tobin Novasio, Lockwood SD

Sarah Graham, MET Transit

Sarah Plath, Billings Public Works

Mike Black, Yellowstone County Public Works

Jed Barton, LIFTT

Amy Lierow, County School Parent

Greg McCall, McCall Development

Kolten Knatterud, IMEG/ Billings Trailnet

Consultant Team

John Halverson, Sanderson Stewart

Lauren Waterton, Sanderson Stewart

Erin Claunch, Sanderson Stewart

Lenna Johnson, Sanderson Stewart

Special Thanks

Lora Mattox, Billings MPO

Mac Fogelsong, Billings Public Works

Dakota Martonen, Billings Public Works

Monica Plecker, City/ County Planning

BILLINGS - YELLOWSTONE COUNTY MPO METROPOLITAN PLANNING ORGANIZATION

SANDERSON STEWART a sanderson bellecci company

This is a planning level document only. It is not intended to obligate or mandate development of the projects in the plan or obligate any jurisdiction to implement any or the entire document. In addition, this document does not assume prioritization or commitment of any local funds unless authorized by local government agency.

Table of Contents

Executive Summary i

1.0 Introduction 1

2.0 Programmatic Recommendations 7

- 2.1 Continue Programmatic Recommendations From Phase 1 8
- 2.2 Adopt an Updated School Zone Traffic Control Policy 8
- 2.3 Use Durable Marking Materials in School Zones 9
- 2.4 Pursue All Available Funding Sources 9

3.0 Project Recommendations 11

- 3.1 Using This Chapter 11
- 3.2 Project Intent 11
- 3.3 Project Implementation 12
- 3.4 Project Impact 12

4.0 Infrastructure Toolbox 217

- 4.1 Introduction and Key Concepts 218
- 4.2 Street Treatments 223
- 4.3 Crossing Treatments 237
- 4.4 Signs and Markings 245
- 4.5 Signals 251
- 4.6 Other 258

5.0 Recommended Routes 263

- 5.1 School Walking Maps 264

Appendix A: Data Collection A.1

- Appendix A.1 - Existing Plans, Policies and Program Overview A.2
- Appendix A.2 - Public Engagement A.6
- Appendix A.3 - School Walk Audits A.9

Appendix B: Project Prioritization A.10

Appendix C: Citations A.13

Executive Summary

"What are we without children? What is our community? Why aren't we focusing on keeping them safe so… parents don't have to be stressed or worry, "Is my kid going to make it to school safe today?"

-Johnna Jablonski
Mother of Ben Jablonski, SD2 Student injured by a car crash while biking to school on 10/4/2022
KTVQ 05/11/2023

Why SRTS?

The Safe Routes to School (SRTS) program is founded on the simple idea that together, we can make our streets safe for children to walk and bike to school, and when we do that, we all benefit. Communities with higher rates of walking and biking have lower per-capita crash injury rates[1], lower rates of childhood and adult obesity[2], higher student performance[3], and spend less of their local wealth on transportation[4]. Yellowstone County, meanwhile, has obesity rates 14% higher than the state overall[5], and a walking and biking commute share about one third that of Bozeman or Missoula[6]. The median Billings household spends nearly 20% of its income on transportation[7], 28% higher than the national average[8]. Consistent with national trends, fatal and serious injury non-motorized crashes in Billings rose by 25% from 2016 to 2020[9].

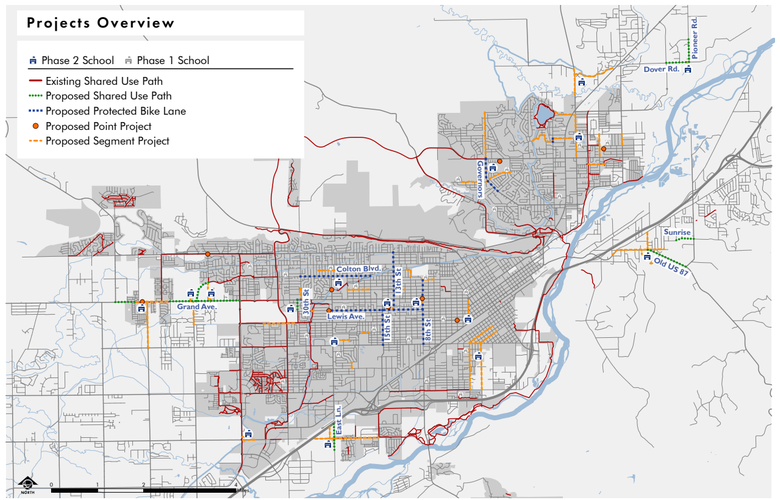
SRTS is an effective way to reduce transportation cost burden and protect the health and safety of our children. This plan, and the Billings MPO's Safe Routes to School (SRTS) program, is an affirmation of our community's commitment to prevent crashes and it is an important step toward realizing the adopted *Vision Zero* goal of a Billings with zero traffic fatalities or injuries.

This Plan

This plan, Phase 2 of the Billings Safe Routes to School Plan Update, focuses on 17 private and public schools not previously evaluated by prior Safe Routes Plans. The recommendations contained within Chapters 2 and 3 are informed by an extensive public input process. Throughout the project, over 200 community members and school administrators gave comment and completed surveys. The Project Advisory Committee, made up of representatives from City and County departments, City Council, school districts, Yellowstone County Planning Board, and advocacy groups collaborated on this plan.

Many of the schools within this project's review share two important characteristics.

Student Potential for Walking and Biking: The middle school students that this plan serves have greater potential for independent, active transportation across greater distances compared to elementary school populations.



Schools on the Edge: Many of the schools in this plan sit on the city's urban fringe, surrounded by a patchwork of City and County rights-of-way, where walking and biking infrastructure may be scarce, street connectivity low, and traffic congestion acute during pick-up and drop-off.

Projects

Public input received during this project indicates that many Billings area parents perceive the streets surrounding their schools as "dangerous," "terrifying," and "unsafe." When asked what would encourage them to let their children walk or bike more, most mentioned improved safety, improved pedestrian and bicycle facilities and crossings, and reducing the hazard of motor vehicles. The overwhelming majority of parents and guardians surveyed also identified themselves as "not willing to ride in traffic but interested in bicycling more."

The 105 project recommendations within Chapter 3 therefore focus on calming vehicular traffic, separating and protecting bike and pedestrian facilities, and improved safety at crossings. Many can be built as pilot projects, quickly and at relatively low cost. These concepts are further explained in Chapter 4, the Infrastructure Toolbox.

Several projects in this plan propose protected bike lanes on city streets, a first for Billings. Many protected bicycle facilities already exist in Billings as shared-use paths, which are mostly confined to areas of new development and relative affluence, an equity issue this plan seeks to address.

Over the next five years, the City of Billings has allocated about $3.3 million specifically for SRTS projects and $7.1 million in other funds for which the projects in this plan may qualify. Even so, that isn't enough to fund all projects identified in the Phase 1 and Phase 2 plans at once, which are estimated to cost $23 million. This plan uses the Project Impact formula developed during Phase 1 (with slight modifications) to prioritize projects. An in-depth explanation of that formula is included in Appendix B. The top ten priority projects are listed here.

TOP 10 PROJECTS

	School	Location	Project Type
1	Lewis & Clark	Area Surrounding Lewis & Clark	School Speed Zone surrounding Lewis & Clark.
2	Riverside	Jackson St.	Traffic calming. Crossing improvements. Missing sidewalk.
3	Riverside	State Ave.	Crossing improvements at State Ave. & Washington St. and State Ave. & Jackson St.
4	Riverside	Area Surrounding Riverside	School Speed Zone surrounding Riverside.
5	St. Francis Catholic School	Colton Blvd.	Traffic calming. Protected bicycle facility from 17th to Rehberg. Missing sidewalk. Crossing improvements.
6	Lewis & Clark	Main Entry, Lewis Ave.	ADA-Compliant route from Lewis Ave. to main entry
7	Castle Rock	Wicks Ln. at Castle Rock Park	Remote Drop off at Castle Rock Park parking lot.
8	Riverside	Madison Ave.	ADA-Compliant crossing at main entry. Crossing improvements at Madison Ave.
9	Medicine Crow	Jerrie Ln. / Key City Dr.	Main St. crossing improvements, route improvements from Lake Hills neighborhood to Medicine Crow.
10	Lewis & Clark	Lewis Ave.	Traffic calming. Protected bicycle facility from 8th to 24th. Sidewalk repair. Crossing improvements.

This plan is not a legal document. There is no requirement or guarantee that its proposals become real. The Billings community has shown great support for SRTS. City Council has dedicated new funds toward SRTS Phase 1 projects. Several have already been built. Continued progress will require staff, elected officials, and community members to work together, making judgments of value as well as engineering to ensure that our streets provide for the safety of children walking and biking to school.

"Once we found out Ben was going to recover, the one thing I felt in my heart was just that I don't want any parent to have to witness that, to have to go through that."

-Johnna Jablonski
Mother of Ben Jablonski, SD2 Student injured by a car crash while biking to school on 10/4/2022
KTVQ 10/12/2022

1.0 Introduction

1.1 Overview

1.2 Recent Progress

NOTE ON SIDEWALKS

While sidewalks are not considered bike-only facilities, children can and do ride their bicycles on them to get to school. According to the National Highway Traffic Safety Administration, under the age of 10, children riding alone should ride on them to get to school. Over the age of 10, the child and their parent/guardian should discuss where is the safest place to ride based on several factors such as the student's route to school, their maturity level, and demonstrated on-street riding skills.



1. 1 OVERVIEW

Safe Routes to School (SRTS)

The Safe Routes to School (SRTS) program is founded on the simple idea that together, the City of Billings, Billings MPO, Billings-area School Districts, Yellowstone County, MDT, and parents can make our streets safe for children to walk and bike to school.

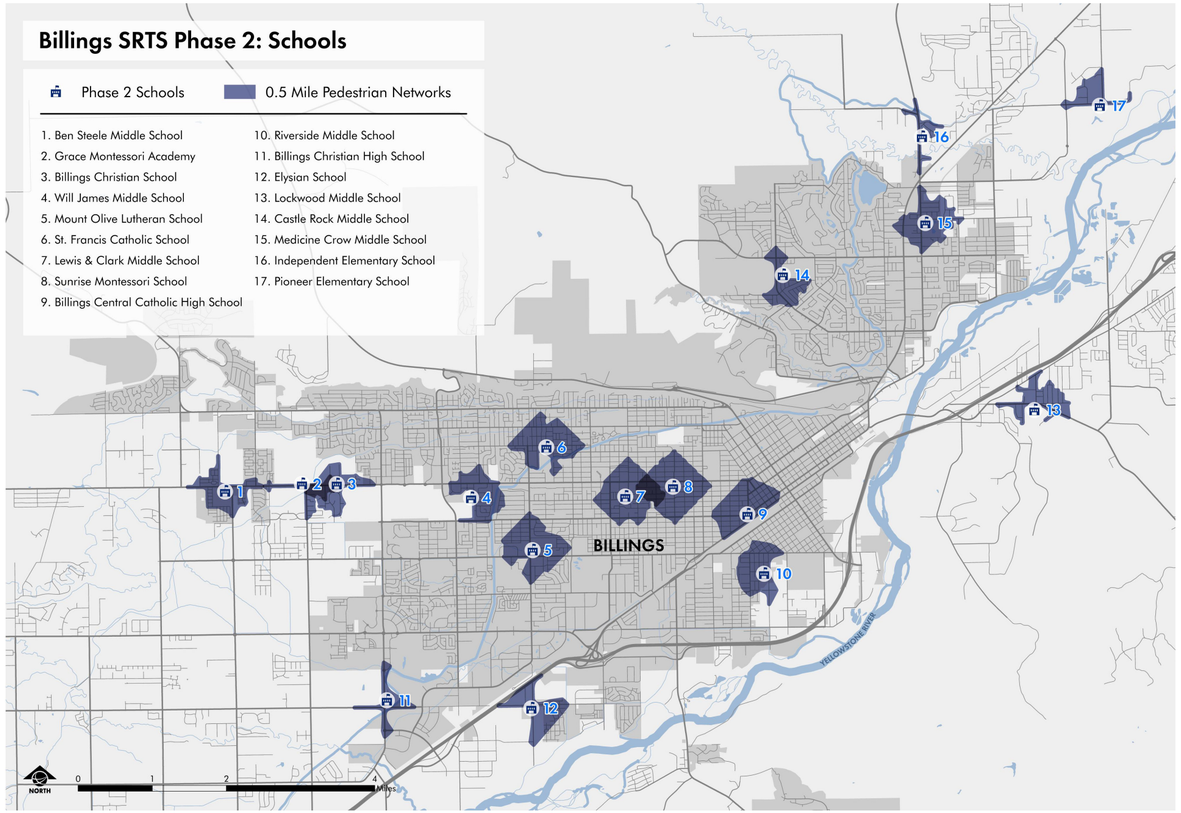
Phase 2 of The Billings Safe Routes to School Plan Update, "this plan," expands the Safe Routes program from the 2011 and 2022 plan schools to include schools that have not been studied before. The project team, made up of local government staff, representatives, practitioners, and constituents, made this plan to serve the children and families of our community and to guide local governments when identifying and prioritizing capital improvement projects.

Public Engagement

Meaningful public input is the basis of any legitimate planning effort. To inform this plan, the project team engaged with students, school staff, and community members to identify unsafe conditions that may prevent students from walking or biking to school. Team members attended school athletic and social events at each participating school to raise awareness for the plan. Community members also gave comments on the project website with online map and survey questionnaires. School administrators and staff were also interviewed and surveyed. A more in-depth summary of that input is included in Appendix A.2 of this plan.

Nearly three quarters of survey respondents identified as parents or guardians. When asked what would encourage them to let their children walk or bike more, most mentioned improved safety, improved pedestrian and bicycle facilities and crossings, and reducing the hazard of motor vehicles.





The overwhelming majority of parents and guardians surveyed also identified themselves as “not willing to ride in traffic but interested in bicycling more.”

Historical Document Review

The project team reviewed existing plans that the Billings community has adopted so this plan can incorporate and build on those efforts. Summaries of those plans are included in Appendix A.

School Walk Audits

Team members and volunteers walked and biked the neighborhoods around each school and observed arrival and dismissal to document the unique assets and barriers each school faces in improving safety for its students.

Project ID and Prioritization

All the information gathered from existing plans and policies, public input, the project website, and walk audits was analyzed by the project team to create a list of priority projects for each school. That list was then collaboratively vetted by a Project Advisory Committee (PAC), made up of representatives from City and County departments, City Council, school districts, Yellowstone County Planning Board, and advocacy groups.

The city’s recent dedication of $500,000 annually to safe routes projects, combined with additional funding earmarked for traffic calming and sidewalks, in the Capital Improvement Plan, means that SRTS projects are becoming a reality throughout Billings. Still, this is not enough funding for all identified SRTS projects to be built at once. Yellowstone County does not have a similar funding source identified for capital



projects or ongoing maintenance. The project team established a formula that prioritizes proposed projects based on how much public benefit each project creates, sorting projects into high, medium, and low impact categories. Details on that formula are available in Appendix B. Anyone implementing the recommendations of this plan should view the Phase 1 and 2 documents more as “Volumes 1 and 2,” and should consider each phase’s high, medium, and low priority projects together.

Project Characteristics

The 105 recommendations in this plan propose projects that will enhance safety along segments of popular routes to school by means of:

- Traffic calming (4.1.4)
- Separation and protection of bike and pedestrian facilities (4.1.3)
- Improved safety at crossings (4.3)

These concepts are further explained in Chapter 4 - Infrastructure Toolbox.

Several projects propose protected bike lanes on city streets—a first for Billings. Many protected bicycle facilities already exist in Billings as Shared Use Paths, which are mostly confined to areas of new development and relative affluence, an equity issue this plan seeks to address.

While SRTS projects do cost money, there are ways to make them more affordable. Many of the projects in this plan are designed to be built as pilot, or pop-up, projects. Pilot projects can be built in days or months, not years, and yield an adequate standard of safety at pop-up prices. Constructing SRTS projects with other road reconstruction projects can help create efficiencies and save money.

Purpose of the Plan

Parents are most likely to let children walk or bike to school where there is a safe route to do so. The purpose of this plan is, therefore, to

provide parents, local government staff, and decision-makers with the information they need to make our community safer for children to walk and bike to school. Like all Safe Routes plans, this plan encourages families to make more walking and biking trips by identifying safety issues that students face, recommending physical changes to streets, shared use paths, and school sites, and recommending changes to the Billings SRTS program.

Phase 2 Schools

Because Phase 1 of Billings Safe Routes studied the 22 elementary schools in School District 2 (SD2), the Billings MPO selected the remaining 21 elementary, middle, and private schools within its jurisdiction to study for Phase 2. Of those 21 schools, 17 opted into the study: 6 SD2 middle schools, 4 public county schools, and 7 private schools.

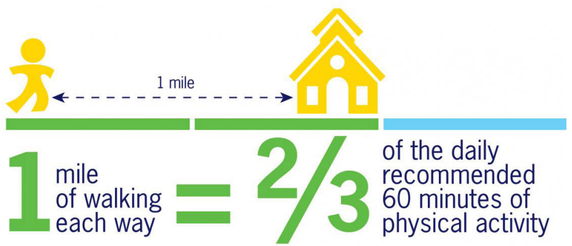
This plan represents the first time the Billings MPO has studied these schools, many sharing two characteristics that the plan should consider:

- ***Student Potential for Walking and Biking:*** The middle school students that this plan serves have greater potential for independent, active transportation across greater distances compared to elementary school populations.
- ***Schools on the Edge:*** Many of the schools in this plan sit on the city's urban fringe, surrounded by a patchwork of city and county-controlled rights-of-way, where walking and biking infrastructure may be scarce, street connectivity low, and traffic congestion acute during pick-up and drop-off.

How to Use This Plan

This plan is for everyone who wants to make Billings' streets safer for our children:

- Local government staff and decision makers can use this plan to fund and implement project and programmatic recommendations. (Chapter 2 *Programmatic Recommendations* and Chapter 3 *Project Recommendations*)
- Parents, school staff, advocates, families, and students can all use this plan to learn what improvements are recommended to improve their school (Chapter 3 *Project Recommendations* and Chapter 5 *Recommended Route Maps*)
- Anyone using this plan will notice numeric references (4.1.1) to Chapter 4, the Infrastructure Toolbox. There, readers will find street lights, flashing beacons, traffic circles and all the tools of the Safe Routes trade. Users can learn how each tool, or facility, can calm traffic (4.1.4), separate and protect kids (4.1.3) from traffic, make a crossing safer (4.3.1), and how quickly they can be installed (4.1.5).



History of Safe Routes to School

Birds need to fly. Fish need to swim. People need to walk. But since the 1960's the share of US children walking and biking to school has dropped by almost 75% with many of our nation's streets having become risky for children to walk or bike on.

The Safe Routes to School (SRTS) program is founded on the idea that together we can make our streets safe for children to walk and bike to school. When we do that, we all benefit. Communities with higher rates of walking and biking have lower per-capita crash injury rates, lower rates of childhood and adult obesity, higher student performance, and spend less of their local wealth on transportation (Litman, 2023) (Campbell, Wittgens, 2004).

Yellowstone County, meanwhile, has obesity rates 14% higher than the state overall, and a walking and biking commute share about one third that of Bozeman or Missoula. The median Billings household spends nearly 20% of its income on transportation, 28% higher than the national average. Consistent with national trends, fatal and serious injury non-motorized crashes in Billings rose by 25% from 2016 to 2020. SRTS is an effective way to reduce transportation cost burden and to fulfill the basic function of government to protect the health and safety of our children.

To that end, SRTS uses "the 6 E's" of Engagement, Equity, Engineering, Encouragement, Education, and Evaluation to make walking and biking a safe, comfortable, and feasible transportation option for Billings area families.

In Billings, SRTS was first planned for in 2011, when the 22 elementary schools of School District 2 were studied. This study also recommended programmatic and engineering improvements to improve safety of students during active transportation to and from School.

In 2018 the City of Billings updated the walking maps for each of the 22 schools from the 2011 SRTS plan. These maps included recommended routes, signals, speed zones and crossings along each route.

The 2011 SRTS plan was updated in the 2022 SRTS Plan Update. That plan includes program and infrastructure recommendations, as well as suggested walking routes for each school.

1.2 RECENT PROGRESS

At the time of the drafting of this plan, progress toward completing the project recommendations adopted in the Phase 1 Safe Routes to School Program is as follows:

Completed Projects

- Bench: School speed zone (4.4.1) installed on Lake Elmo Dr.
- Orchard: Vegetation overgrowth and mitigation reviewed on Jackson St.
- Poly: Rectangular Rapid Flashing Beacons (4.5.5) installed at 32nd St. W. and Poly Dr.
- Alkali Creek: Installed 3000 linear feet of missing sidewalk (4.2.1) on Alkali Creek Rd.
- Big Sky: Installed RRFB's (4.5.5) at Lampman Dr. and 32nd St. W.

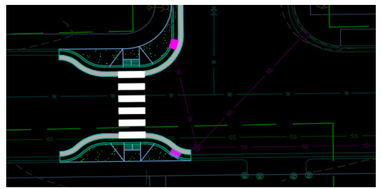
Design in Progress

- Rose Park: Curb extensions (4.3.1) at the intersection of 19th St. W. & Ave. E.
- Eagle Cliff: Curb extensions (4.3.1) at the intersection of Governors Blvd. & Constitution Ave.
- Orchard: Curb extensions (4.3.1) at the intersection of Jackson St. & Francis Ave.
- Broadwater: Curb extensions (4.3.1) at the intersection of Wyoming Ave. & 8th St. W.

Studies in Progress

- Rose Park: 19th St. W. speed and traffic calming study (4.1.4)
- Poly: Intersection of Rimrock Rd. & Arvin Rd. speed and traffic calming study (4.1.4)
- Broadwater: Broadwater Ave. from 3rd St. W. to 6th St. W. speed and traffic calming study (4.1.4)
- Orchard: Intersection of State Ave. & Jackson St. speed and traffic calming study (4.1.4)
- Orchard: Francis Ave. arrival and dismissal operations study (4.6.2)







2.0 Programmatic Recommendations

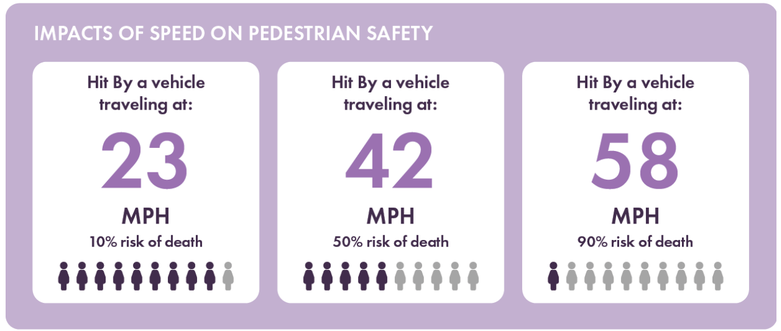
2.1 Continue Programmatic Recommendations from Phase 1

2.2 Adopt an Updated School Zone Traffic Control Policy

2.3 Develop a Snow Removal Policy

2.4 Use Durable Marking Materials in School Zones

2.5 Pursue All Available Funding Sources



While Chapter 3 of this plan contains the bulk of the work that needs to be done to make biking and walking to school safer for more students, this chapter holds the programmatic and policy recommendations that should be adopted to ensure that work gets done in a way that is comprehensive and sustained over time.

These programmatic recommendations were created by reviewing existing plans relevant to SRTS, analysis of the public input received through the project website and in-person events, school administrator interviews, best practices and guidance published by national organizations like NACTO and the FHWA, and the deliberation and consent of the Project Advisory Committee.

2.1 CONTINUE PROGRAMMATIC RECOMMENDATIONS FROM PHASE 1

Phase 1 of the Billings Safe Routes to School plan was adopted less than one year prior to the drafting of this plan. Therefore, modest progress has been made toward meeting those recommendations. Per Phase 1 programmatic strategy 3, the Billings MPO has applied for funding of an education campaign over the next three years.

This plan therefore recommends the continuation of the programmatic recommendations and summarizes them here for ease of reference:

1. Build, Define, and Leverage Partnerships

The Billings SRTS program is a collective effort between multiple organizations and individuals. While this diversity in groups, expertise, and individuals brings strength and depth to the program, it can also cause confusion about who does what, especially to school staff, parents, and students.

2. Create a Billings SRTS Toolkit

A toolkit is a document, or series of documents, that outline how to implement a safe routes to school project or program. They come in a variety of forms – some are for specific events (e.g., International Walk and Roll to School Day) while some are a "one-stop-shop" for all the programs' offerings. Either way, toolkits are clear communication tools for staff, stakeholders, families, and students to help them learn about the program and how they can get involved. A toolkit is an important documentation tool for SRTS program staff and can reduce issues due to staff turnover and/or consistency of program expectations. Toolkits can save time and money by eliminating the need for redundant work.

3. Build an Inclusive Education Campaign to Encourage Walking and Biking to School

Branding and education campaigns are essential ways to make an organization visible and recognizable to students, families, school staff, and the Billings community as a whole. This task would help to solidify knowledge of the program by stakeholders and would be used as a tool for all aspects of the SRTS program.

4. Consider Impacts on Students Walking and Biking When Creating and Updating School Policies

If a community wants more of its students to walk or bike to school, walking and biking must be easy and convenient, as well as safe. Some of the Billings School District policies may inadvertently make walking and biking difficult or, at minimum, less convenient for parents deciding whether their children should walk and/or bike. For further details, see p. 11 of the Billings Safe Routes To School Plan Update, phase 1 published July 2022.

2.2 ADOPT AN UPDATED SCHOOL ZONE TRAFFIC CONTROL POLICY

A School Zone Traffic Control Policy establishes standards for local governments when designing streets around schools. It supplements the FHWA's Manual on Uniform Traffic Control Devices (MUTCD) and guides decisions about what schools should have school speed zones, where crosswalks are located, what the speed limit is within a school zone, the role of crossing guards, etc.

Yellowstone County has no School Zone Traffic Control Policy. The City of Billings' policy was adopted in 2001, and no longer represents current standard practices. Therefore, both City and County governments should adopt updated School Zone Traffic Control Policies to reflect current standard practice and improve safety for children in School Zones.

The policies should include:

- Standards for establishing which schools qualify for a school speed zone, according to

the Manual on Uniform Traffic Control Devices (MUTCD).

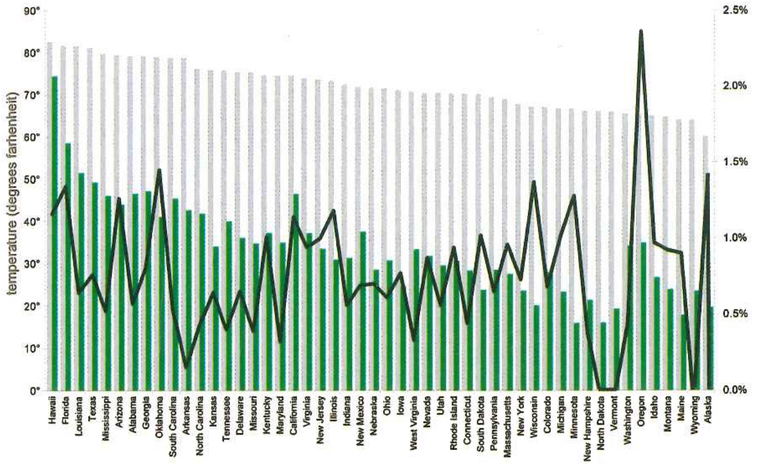
- Standards establishing the distance from a school a speed zone should begin and end according to the Manual on Uniform Traffic Control Devices (MUTCD)..
- Standards for determining the speed limit within a school zone.
- Recommended traffic calming measures within school speed zones.

2.3 USE DURABLE MARKING MATERIALS IN SCHOOL ZONES

The City of Billings currently uses water-based paint to mark crosswalks within its jurisdiction. Crosswalks are re-striped annually as weather allows. This method of maintaining crosswalk markings requires significant expenditure of staff-hours and results in crossings which are often faded during the school year.

Using more durable marking materials, such as thermoplastics, two-component resins, or preformed markings, within school zones greatly improves visibility and durability. The City of Billings should analyze total life cycle costs and savings associated these materials and determine if their use is feasible and beneficial to student safety.

2.4 PURSUE ALL AVAILABLE



Speck, Walkable City Rules

Investment has more bearing on bicycling than weather

FUNDING SOURCES

Multiple funding sources are available and should be explored to implement SRTS projects. Depending on the location of a project, different funding sources may be available. For projects within the Billings City limits, the city has created four funds for which Safe Routes to School projects may qualify:

- SRTS (non-sidewalks)
- Curb, Gutter, Sidewalk
- Traffic Calming
- ADA Replacement fund

In addition to the above sources, some projects in City limits, such as missing sidewalks, will be built partially with property owner assessments. Other projects may be built by developers as development occurs, such as during the subdivision process.

For projects in Yellowstone County, one way to fund Safe Routes to School projects is through the creation of a Rural Special Improvement District (RSID). RSID's are created through the petitioning and consent of 60% of the property owners within the proposed district and financed through the sale of bonds.

The Billings-Yellowstone County Metropolitan Planning Organization (MPO) administers the Transportation Alternatives (TA) program to distribute federal funds for non-motorized transportation improvements to local governments, school districts, or other local agencies within the urbanized area. In 2023, the MPO awarded funding to the City of Billings for the Stagecoach Trail and to Yellowstone County for the Old Hardin Road Sidewalk Connector projects. The Billings Capital Improvement Plan (CIP) currently identifies the TA program as a funding source for many upcoming shared use path projects but it could be used to fund SRTS projects if needed.

City of Billings FY 2024 - FY 2028 CIP						
	FY2024	FY2025	FY2026	FY2027	FY2028	TOTAL
SRTS (Non-sidewalk)	$500,000	$700,000	$700,000	$700,000	$700,000	$3,300,000

3.0 Project Recommendations

3.1 Using This Chapter

3.2 Project Intent

3.3 Project Impact

3.4 Project Recommendations by School

Ben Steele Middle School....21
Billings Central Catholic High....33
Billings Christian Elementary....45
Billings Christian High School....53
Castle Rock Middle School....61
Elysian School....75
Grace Montessori Academy....87
Independent School....99
Lewis & Clark Middle School....111
Lockwood Schools....129
Medicine Crow Middle School....141
Mount Olive Lutheran School....155
Pioneer Elementary School....165
Riverside Middle School....173
St. Francis Catholic School....185
Sunrise Montessori School....195
Will James Middle School....205

3.1 USING THIS CHAPTER

In this chapter, readers will find the projects recommended at each school and the information that lead to them. Each school summary contains:

- A table and a map of existing conditions
- A summary of community safety concerns
- A summary of observations gathered during arrival or dismissal
- A list of priority concerns
- A list of proposed projects

Each "Proposed Projects" table lists the topic, issue the project is intended to solve, a description of the project recommendation, the corresponding Infrastructure Toolbox ID numbers (x.x.x) of the proposed facilities, the party responsible for executing a project, and the estimated cost. More information can be found in Chapter 4.

This study makes a fundamental assumption that geography and proximity to nearby residences drives attendance and therefore adjacent infrastructure for biking and walking

3.2 PROJECT INTENT

The Importance of Parent/ Guardian Sentiment

Until parents perceive that their child's route to school is safe, they are unlikely to allow their children to walk or bike to school. The public input received during this plan indicates that many parents in the Billings area are interested in active transportation but have concerns about the safety of existing facilities.

When asked what would encourage them to let their children walk or bike more, most mentioned improved safety, improved pedestrian and bicycle facilities and crossings, and reducing the hazard of motor vehicles. The overwhelming majority of parents and guardians surveyed also identified themselves as "not willing to ride in traffic but interested in bicycling more."

School Population & Site Characteristics

Many schools share two important characteristics.

Student Potential for Walking and Biking: The middle school students that this plan serves have greater potential for independent, active transportation across greater distances compared to elementary school populations.

Schools on the Edge: Many of the schools in this plan sit on the city's urban fringe, surrounded by a patchwork of City and County rights-of-way, where walking and biking infrastructure may be scarce, street connectivity low, and traffic congestion acute during pick-up and drop-off.

Project Characteristics

The 105 project recommendations of this plan therefore propose physical changes to streets, shared use paths, and school sites which are designed to create safety along segments of popular routes to school by means of:

- Traffic calming (4.1.4)
- Separation and protection of bike and pedestrian facilities (4.1.3)
- Improved safety at crossings (4.3)

These concepts are further explained in Chapter 4, the Infrastructure Toolbox.

Several projects in this plan propose protected bike lanes on city streets. Many protected bicycle facilities already exist in Billings as Shared Use Paths, which are mostly confined to areas of new development and relative affluence, an equity issue this plan seeks to address.

Streets are expensive. Concrete, asphalt, and labor cost our local governments millions every year. Many of the projects in this plan are designed to be built as pilot, or pop-up, projects. Pilot projects can be built in days or months, and yield a high standard of safety at pop-up prices.

This Plan also proposes the creation of ADA-accessible routes on several school sites, projects which school districts would fund.

The projects listed in this chapter were vetted by the Project Advisory Committee (PAC), made up of representatives from City and County departments, City Council, school districts, Yellowstone County Planning Board, and advocacy groups, who met monthly to collaboratively created this plan.

3.3 PROJECT IMPLEMENTATION

Projects listed in this chapter have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. For example, the Manual on Uniform Traffic Control Devices (MUTCD) requires an engineering study prior to marking a crosswalk at an uncontrolled intersection with 14 different criteria to consider. As such, many crossing recommendations require a study prior to implementation.

Gathering public input from all parties affected by a proposed project, including parents, students, staff, as and nearby residents will be required for many of the projects in this chapter.

Estimated costs in this chapter are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost. Due to variations in land costs, estimates do not include costs related to right-of-way acquisition.

3.4 PROJECT IMPACT

The City of Billings has dedicated about 3.3 million dollars in its CIP to spend on SRTS over the next five years. The City has also allocated $7.1 million in other funding sources for which the projects in this plan may qualify (See Programmatic Recommendation 2.5) Even so, that funding isn't enough to complete all the projects identified in the Phase 1 and Phase 2 plans at once. Therefore, it is necessary to prioritize projects based on how much public benefit, or impact, they will create. The Project Impact formula attempts to model that impact as accurately as possible. Projects were scored based on four criteria:

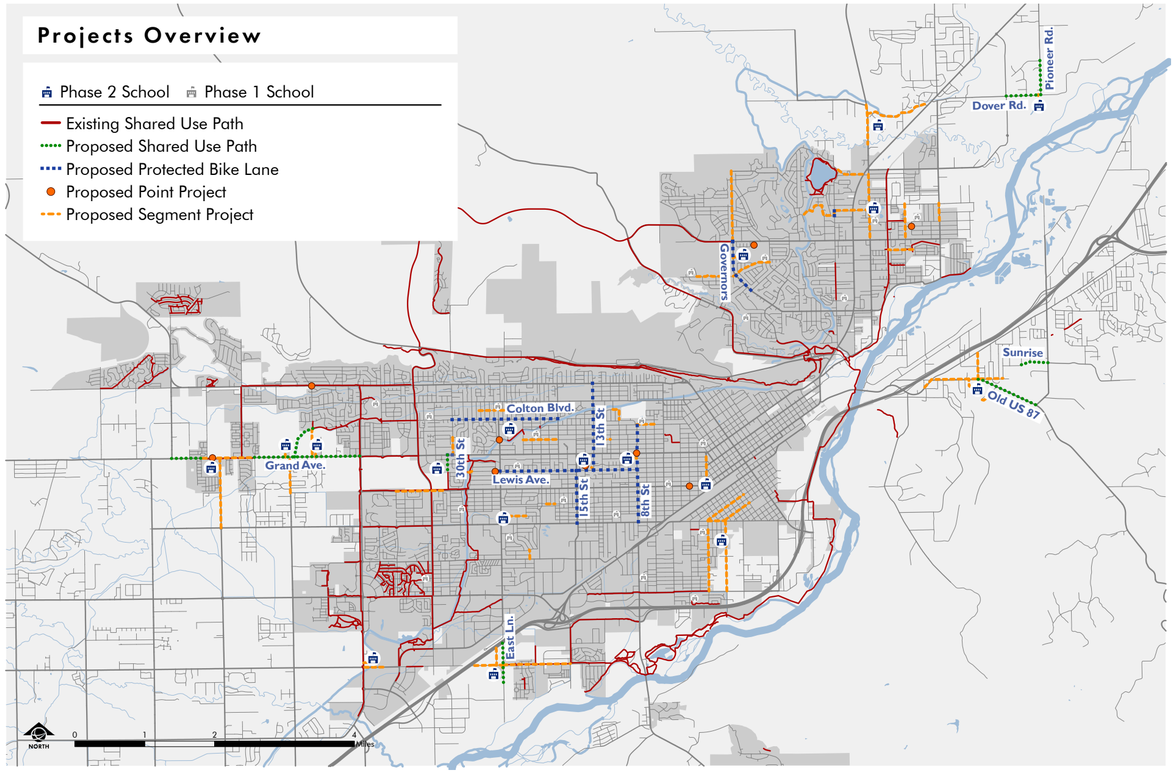
- Traffic Safety
- Feasibility
- Demand
- Equity

Once each project's scores were calculated, they were ranked and divided into the categories of high, medium, and low priority based on their overall score.

The project rankings are not intended as a strict ordering of project construction. Factors like availability of funding, feasibility, or timing of other projects at the same location could affect the actual timing of project construction. Anyone implementing the recommendations of this plan should view the Phase 1 and Phase 2 documents more as "Volumes 1 and 2," and should consider each phase's high, medium, and low priority projects together.

More on the project prioritization methods can be found in Appendix B.

Project Rankings by School					
	High	Medium	Low	# of Students in 2023	Cost of Recommended Projects
Ben Steele Middle School	1	4	1	795	$1,193,000
Billings Central Catholic High	1	3	1	325	$723,000
BCS Elementary	1	1	2	340	$2,535,000
BCS High School	0	2	1	100	$61,000
Castle Rock Middle School	4	2	1	711	$815,800
Elysian School	0	3	3	400	$1,350,700
Grace Montessori Academy	0	2	4	184	$567,000
Independent School	1	2	3	304	$1,877,500
Lewis & Clark Middle School	8	2	1	685	$3,548,000
Lockwood Schools	2	1	4	617	$1,179,000
Medicine Crow Middle School	4	3	1	521	$2,346,000
Mount Olive Lutheran	3	3	1	67	$434,7000
Pioneer Elementary	0	2	3	70	$1,096,500
Riverside Middle School	6	0	0	537	$1,451,500
St. Francis Catholic School	2	1	3	620	$2,115,000
Sunrise Montessori	0	3	2	93	$473,500
Will James Middle School	3	2	2	618	$1,357,500



High Impact Projects

					Impact Scoring Criteria Category														
					Traffic Safety				Feasibility				Demand			Equity		
Project Ranking	School	Project Number	Location	Project Type	Posted Speed Limit	Roadway Classification	High Injury Network	Total Traffic Safety Score	Ped Crossing, Sidewalk, ADA	In the location of a project specified in the 5-year CIP	In the location of a project documented in Adopted Plan	Total Feasibility Score	# of Household Routes Benefiting	Attendance	Total Demand Score	Free/Reduced Lunch % @ School	Total Equity Score	Overall Score
1	Lewis & Clark	1	Area Surrounding Lewis & Clark	School Speed Zone	35	Principal Arterial	Low	**69**	N	N	Y	**20**	18,080	685	**100**	50%	**50**	**239**
2	Riverside	3	Jackson St.	Crossing/ School Speed Zone/ Bicycling	25	Collector	Medium-High	**56**	Y	N	Y	**50**	7,553	537	**33**	100%	**100**	**239**
3	Riverside	4	State Ave.	Crossing/ CPTED	35	Minor Arterial	Medium-Low	**69**	Y	N	Y	**50**	4,129	537	**18**	100%	**100**	**237**
4	Riverside	1	Area Surrounding Riverside	School Speed Zone	25	Collector	Medium-High	**56**	N	N	Y	**20**	12,583	537	**55**	100%	**100**	**231**
5	St. Francis Catholic School	1	Colton Blvd.	Bicycling/ Crossing/ Sidewalk/ Speeding	35	Collector	No Data	**47**	Y	Y	Y	**100**	12,119	620	**61**	15%	**15**	**223**
6	Lewis & Clark	7	Main Entry, Lewis Ave.	ADA Compliance	25	Collector	Low	**42**	Y	N	N	**30**	18,080	685	**100**	50%	**50**	**222**
7	Castle Rock	4	Wicks Ln. at Castle Rock Park	Vehicle Congestion	35	Principal Arterial	Low	**69**	N	Y	Y	**70**	9,630	700	**54**	28%	**28**	**221**
8	Riverside	2	Madison Ave.	Crossing	25	Street	Low	**34**	Y	N	N	**30**	12,583	537	**55**	100%	**100**	**219**
9	Medicine Crow	2	Jerrie Ln. / Key City Dr.	Crossing/ Bicycling	45	Principal Arterial	Medium-Low	**88**	Y	N	Y	**50**	4,867	521	**20**	55%	**55**	**213**
10	Lewis & Clark	2	Lewis Ave.	Speeding/ Bicycling/ Crossing	25	Collector	Medium-Low	**50**	Y	N	Y	**50**	10,259	685	**57**	50%	**50**	**207**
11	Castle Rock	2	Governors Blvd. at Castle Rock School	Crossing/ Congestion	35	Principal Arterial	Low	**69**	Y	N	Y	**50**	9,630	700	**54**	28%	**28**	**201**
12	St. Francis Catholic School	2	Colton Blvd. & 24th St. W.	Crossing	35	Principal Arterial	Low	**69**	Y	Y	Y	**100**	3,433	620	**17**	15%	**15**	**201**
13	Riverside	6	South Park Neighborhood	ADA Compliance	25	Street	Low	**34**	Y	N	Y	**50**	3,719	537	**16**	100%	**100**	**200**
14	Lewis & Clark	11	Broadwater Ave. & 12th St. W.	Crossing	35	Principal Arterial	High	**88**	Y	N	Y	**50**	1,618	685	**9**	50%	**50**	**197**
15	Mount Olive Lutheran	4	Central Ave. & 24th St. W.	Crossing	35	Principal Arterial	Medium-High	**83**	Y	N	Y	**50**	5,393	67	**3**	59%	**59**	**195**
16	Medicine Crow	1	Area Surrounding Medicine Crow	School Speed Zone	35	Principal Arterial	Medium-Low	**77**	N	N	Y	**20**	10,167	521	**43**	55%	**55**	**195**
17	Castle Rock	3	Governors Blvd. from Wicks Ln. to Babcock Blvd.	Congestion/ Crossing/ Bicycling	35	Principal Arterial	Low	**69**	Y	N	Y	**50**	7,965	700	**45**	28%	**28**	**192**
18	Lockwood	1	Area surrounding Lockwood Schools	School Speed Zone	45	Principal Arterial	Low	**80**	N	N	Y	**50**	3,075	617	**15**	46%	**46**	**191**

High Impact Projects

					Impact Scoring Criteria Category														
					Traffic Safety				Feasibility				Demand			Equity		
Project Ranking	School	Project Number	Location	Project Type	Posted Speed Limit	Roadway Classification	High Injury Network	Total Traffic Safety Score	Ped Crossing, Sidewalk, ADA	In the location of a project specified in the 5-year CIP	In the location of a project documented in Adopted Plan	Total Feasibility Score	# of Household Routes Benefiting	Attendance	Total Demand Score	Free/Reduced Lunch % @ School	Total Equity Score	Overall Score
19	Lewis & Clark	4	15th St. W.	Speeding/ Bicycling/ Crossing/ ADA Compliance	35	Principal Arterial	Low	**69**	Y	N	Y	**50**	3,910	685	**22**	50%	**50**	**191**
20	Lockwood	3	Old US 87 E	Speeding/ Traffic/ Sidewalks/ Crossing	45	Principal Arterial	Low	**80**	Y	N	Y	**50**	2,548	617	**13**	46%	**46**	**189**
21	Riverside	5	Washington St.	Crossing/ Sidewalk	25	Street	Low	**34**	Y	N	N	**30**	4,643	537	**20**	100%	**100**	**184**
22	Medicine Crow	3	Bench Blvd.	Crossing	35	Principal Arterial	Low	**69**	Y	N	Y	**50**	2,348	521	**10**	55%	**55**	**184**
23	Independent	2	Hwy 87	Crossing/ Sidewalk	45	Principal Arterial	High	**99**	Y	N	Y	**50**	5,248	304	**13**	17%	**17**	**179**
24	Mount Olive Lutheran	3	St. Johns Ave. & 24th St. W.	Crossing	35	Principal Arterial	Medium-Low	**83**	Y	N	N	**30**	11,748	67	**6**	59%	**59**	**178**
25	Will James	1	Area Surrounding Will James	School Speed Zone	25	Street	Low	**34**	N	N	Y	**20**	17,104	618	**85**	38%	**38**	**177**
26	Lewis & Clark	3	13th St. W.	Speeding/ Bicycling/ Crossing/ Congestion/	35	Collector	Low	**53**	Y	N	Y	**50**	4,397	685	**24**	50%	**50**	**177**
27	Will James	5	Broadwater Ave.	Crossing/ Sidewalk	35	Principal Arterial	Low	**69**	Y	N	Y	**50**	3,804	618	**19**	38%	**38**	**176**
28	Billings Central Catholic High	3	Division St. & Broadwater Ave.	Crossing	35	Principal Arterial	High	**88**	Y	N	Y	**50**	11,600	325	**30**	7%	**7**	**175**
29	Medicine Crow	7	Bitterroot Dr.	Sidewalks/ Lighting	35	Principal Arterial	Low	**69**	Y	N	Y	**50**	46	521	**0**	55%	**55**	**174**
30	Lewis & Clark	6	Broadwater & 14th St. W.	Crossing	35	Principal Arterial	High	**88**	Y	N	N	**30**	558	685	**3**	50%	**50**	**171**
31	Mount Olive Lutheran	7	Berthound Ave.	ADA Compliance	35	Minor Arterial	Low	**61**	Y	N	Y	**50**	186	67	**0**	59%	**59**	**170**
32	BCS Elementary	2	Grand Ave.	Sidewalk/ Crossing	45	Principal Arterial	No Data	**74**	Y	N	Y	**50**	10,032	340	**28**	17%	**17**	**169**
33	Ben Steele	2	Grand Ave.	Crossing/ Sidewalks	45	Principal Arterial	No Data	**74**	Y	N	Y	**50**	3,762	795	**24**	19%	**19**	**167**
34	Will James	3	30th St. W.	Crossing	25	Street	No Data	**39**	Y	N	Y	**50**	7,752	618	**39**	38%	**38**	**166**
35	Castle Rock	1	Area Surrounding Castle Rock	School Speed Zone	35	Principal Arterial	Low	**63**	N	N	Y	**20**	9,630	700	**54**	28%	**28**	**165**
36	Lewis & Clark	5	8th St. W.	Speeding/ Bicycling/ Crossing	25	Collector	Medium-High	**56**	Y	N	Y	**50**	1,552	685	**9**	50%	**50**	**165**

Total cost of high impact projects: $12,976,90

*Cost estimates are planning level estimates. Not all projects have cost estimates as some are not defined enough to develop an estimate. Others have costs that may be includeded in other major reconstruction projects and may not require additional funding above what is planned for the larger construction project.

Medium Impact Projects

					Impact Scoring Criteria Category															
					Traffic Safety				Feasibility					Demand			Equity			
Project Ranking	School	Project Number	Location	Project Type	Posted Speed Limit	Roadway Classification	High Injury Network	Total Traffic Safety Score	Ped Crossing Sidewalk, ADA	In the location of a project specified in the 5-year CIP	In the location of a project documented in Adopted Plan	In the location of a project documented in Adopted Plan	Total Feasibility Score	# of Household Routes Benefiting	Attendance	Total Demand Score	Free/Reduced Lunch %@ School	Total Equity Score	Overall Score
37	Lewis & Clark	10	Area Surrounding Lewis & Clark	Sidewalk	25	Street	Low	**34**	Y	N	Y	**50**	5,236	685	**29**	50%	**50**	**163**
38	Ben Steele	3	Main Entry, Grand Ave.	Crossing	45	Principal Arterial	No Data	**74**	Y	N	Y	**50**	3,004	795	**19**	19%	**19**	**162**
39	Sunrise Montessori	3	8th St. W. & Grand Ave.	Crossing	35	Principal Arterial	Medium-High	**83**	Y	N	Y	**50**	4,705	93	**4**	25%	**25**	**162**
40	St. Francis Catholic School	4	24th St. W. & Solomon Ave.	Crossing	35	Principal Arterial	Medium-Low	**77**	Y	N	Y	**50**	3,578	620	**18**	15%	**15**	**160**
41	Will James	2	Grand Ave.	Speeding/ Crossing/ ADA Compliance	35	Principal Arterial	No Data	**63**	Y	N	Y	**50**	1,545	618	**8**	38%	**38**	**159**
42	Billings Central Catholic High	2	Division St.	Crossing/ Speeding/ Sidewalks	25	Principal Arterial	Low	**58**	Y	N	Y	**50**	15,960	325	**42**	7%	**7**	**157**
43	Billings Central Catholic High	1	Area surrounding Central Catholic High	School Speed Zone	35	Principal Arterial	High	**88**	N	N	Y	**20**	15,960	325	**42**	7%	**7**	**157**
44	Ben Steele	4	56th St. W.	Crossing/ Sidewalk	45	Principal Arterial	Low	**80**	Y	N	Y	**50**	970	795	**6**	19%	**19**	**155**
45	BCS High School	1	Hesper Rd.	Sidewalks	45	Principal Arterial	Low	**80**	Y	N	Y	**50**	137	340	**0**	24%	**24**	**154**
46	Medicine Crow	4	Hawthorne Ln.	Crossing/ Sidewalks/ Lighting	25	Collector	Low	**42**	Y	N	Y	**50**	1,429	521	**6**	55%	**55**	**153**
47	Independent	1	Hwy 87/ Area Surrounding Independent	School Speed Zone	45	Principal Arterial	High	**99**	N	N	Y	**20**	5,248	304	**13**	17%	**17**	**149**
48	Independent	3	Hwy 87 & Independent Ln.	Traffic/ Congestion	45	Principal Arterial	High	**99**	N	N	Y	**20**	5,248	304	**13**	17%	**17**	**149**
49	Will James	4	Rehberg Ln.	Crossing/ Bicycling	35	Collector	Low	**53**	Y	N	Y	**50**	1,545	618	**8**	38%	**38**	**149**
50	Medicine Crow	8	Pemberton Ln.	Sidewalks/ Light	25	Collector	Low	**42**	Y	N	Y	**50**	301	521	**1**	55%	**55**	**148**
51	Castle Rock	7	Constitution Ave.	Crossing	25	Collector	Low	**42**	Y	N	Y	**50**	4,897	700	**28**	28%	**28**	**148**
52	Pioneer	2	Dover Rd.	Sidewalks	55	Minor Arterial	No Data	**66**	Y	N	Y	**50**	1,026	70	**1**	31%	**31**	**148**
53	Pioneer	4	Dover Rd.	Crossing	55	Minor Arterial	No Data	**66**	Y	N	Y	**50**	1,026	70	**1**	31%	**31**	**148**
54	Castle Rock	6	Gleneagles Blvd.	Sidewalk	35	Principal Arterial	No Data	**63**	Y	N	Y	**50**	1,133	700	**6**	28%	**28**	**147**

Medium Impact Projects

					Impact Scoring Criteria Category															
					Traffic Safety				Feasibility					Demand			Equity			
Project Ranking	School	Project Number	Location	Project Type	Posted Speed Limit	Roadway Classification	High Injury Network	Total Traffic Safety Score	Ped Crossing Sidewalk, ADA	In the location of a project specified in the 5-year CIP	In the location of a project documented in Adopted Plan	In the location of a project documented in Adopted Plan	Total Feasibility Score	# of Household Routes Benefiting	Attendance	Total Demand Score	Free/Reduced Lunch %@ School	Total Equity Score	Overall Score
55	Ben Steele	1	Area Surrounding Ben Steele	School Speed Zone	45	Principal Arterial	Low	**80**	N	N	Y	**20**	4,257	795	**27**	19%	**19**	**146**
56	Mount Olive Lutheran	1	Area surrounding Mount Olive Lutheran	School Speed Zone	35	Principal Arterial	Medium-Low	**77**	N	N	Y	**0**	17,176	67	**9**	59%	**59**	**145**
57	Lewis & Clark	9	14th St. W.	Congestion	35	Street	Low	**45**	Y	N	N	**30**	3,414	685	**19**	50%	**50**	**144**
58	Medicine Crow	6	Maurine St. & Primrose Dr.	Crossing	25	Street	Low	**34**	Y	N	Y	**50**	968	521	**4**	55%	**55**	**143**
59	Mount Olive Lutheran	6	Miles Ave.	ADA Compliance	25	Street	Low	**34**	Y	N	Y	**50**	86	67	**0**	59%	**59**	**143**
60	Elysian	3	Elysian Rd. at Elysian School	Crossing/ Congestion	40	Collector	No Data	**47**	Y	N	Y	**50**	6,315	400	**20**	25%	**25**	**142**
61	Sunrise Montessori	1	Area Surrounding school	School Speed Zone	35	Principal Arterial	Medium-High	**83**	N	N	Y	**20**	18,827	93	**14**	25%	**25**	**142**
62	Billings Central Catholic High	4	Broadwater Ave. from Division St. to 5th Ave. W.	Crossing/ Speeding	35	Principal Arterial	Medium-High	**83**	Y	N	Y	**50**	534	325	**1**	7%	**7**	**141**
63	Elysian	5	East Ln.	Sidewalks/ Lighting/ Speeding	40	Collector	No Data	**47**	Y	N	Y	**50**	5,775	400	**19**	25%	**25**	**141**
64	Lockwood	2	Piccolo Ln.	Speeding/ Traffic/ Sidewalks	25	Collector	Low	**42**	Y	N	Y	**50**	448	617	**2**	46%	**46**	**140**
65	BCS Elementary	1	Grand Ave.	School Speed Zone	45	Principal Arterial	No Data	**74**	N	N	Y	**20**	10,032	340	**28**	17%	**17**	**139**
66	Sunrise Montessori	2	8th St. W.	Crossing/ Speeding/ ADA Compliance	25	Collector	Medium-High	**56**	Y	N	Y	**50**	8,148	93	**6**	25%	**25**	**137**
67	BCS High School	3	Shiloh Rd. at BCS HS Campus	Crossing	45	Principal Arterial	Low	**80**	Y	N	N	**30**	1,047	340	**3**	24%	**24**	**137**
68	Grace Montessori Academy	2	Grand Ave.	Sidewalks/ Crossings/ Speeding/ Congestion	45	Principal Arterial	No Data	**74**	Y	N	Y	**50**	7,582	184	**11**	N/A	**0**	**135**
69	Elysian	4	Elysian Rd. west of West Ln.	Sidewalks/ Lighting	45	Collector	No Data	**58**	Y	N	Y	**50**	529	400	**2**	25%	**25**	**135**
70	Grace Montessori Academy	3	48th St. W.	Sidewalks/ Crossings/ Speeding	45	Principal Arterial	Low	**80**	Y	N	Y	**50**	2,484	184	**4**	N/A	**0**	**134**
71	Mount Olive Lutheran	2	St. Johns Ave.	Speeding/ Crossing/ ADA Compliance	25	Street	Medium-Low	**34**	Y	N	N	**30**	17,176	67	**9**	59%	**59**	**132**
72	Ben Steele	5	Rimrock Rd. & 46th St. W.	Crossing/ Speeding	45	Principal Arterial	Low	**80**	Y	N	N	**30**	146	795	**1**	19%	**19**	**130**

Total cost of medium impact projects: $6,021,800

*Cost estimates are planning level estimates. Not all projects have cost estimates as some are not defined enough to develop an estimate. Others have costs that may be included in other major reconstruction projects and may not require additional funding above what is planned for the larger construction project. Sunrise Montessori Project 2 has been excluded from cost as the cost is also included in Lewis & Clark #5.

Low Impact Projects

Project Ranking	School	Project Number	Location	Project Type	Impact Scoring Criteria Category: Traffic Safety: Posted Speed Limit	Traffic Safety: Roadway Classification	Traffic Safety: High Injury Network	Traffic Safety: Total Traffic Safety Score	Feasibility: Ped Crossing, Sidewalk, ADA	Feasibility: In the location of a project specified in the 5-year CIP	Feasibility: In the location of a project documented in Adopted Plan	Feasibility: Total Feasibility Score	Demand: # of Household Routes Benefiting	Demand: Attendance	Demand: Total Demand Score	Equity: Free/Reduced Lunch %@ School	Equity: Total Equity Score	Overall Score
73	Elysian	2	Elysian Rd. & East Ln.	Crossing	40	Collector	No Data	**47**	Y	N	Y	**50**	2,235	400	**7**	25%	**25**	**129**
74	Pioneer	3	Pioneer Rd.	Sidewalks	55	Minor Arterial	No Data	**66**	Y	N	N	**30**	110	70	**0**	31%	**31**	**127**
75	Will James	7	Lewis Ave. & 25th St. W.	ADA Compliance	25	Street	Low	**34**	Y	N	Y	**50**	951	618	**5**	38%	**38**	**127**
76	Castle Rock	5	Castle Rock Parking Lot and Bus Loop	ADA Compliance	N/A	N/A	Low	**14**	Y	N	N	**30**	9,630	700	**54**	28%	**28**	**126**
77	St. Francis Catholic School	6	Rose Park Neighborhood	ADA Compliance	25	Street	Low	**34**	Y	N	Y	**50**	4,478	620	**22**	15%	**15**	**121**
78	Lewis & Clark	8	Ave. D	ADA Compliance	N/A	N/A	Low	**14**	Y	N	Y	**50**	1,081	685	**6**	50%	**50**	**120**
79	ioneer	1	Area Surrounding Pioneer School	School Speed Zone	55	Minor Arterial	No Data	**66**	N	N	Y	**20**	1,026	70	**1**	31%	**31**	**118**
80	ockwood	4	Hillner Ln.	Lighting/ CPTED	35	Street	Low	**45**	N	N	Y	**20**	614	617	**3**	46%	**46**	**114**
81	Sunrise Montessori	5	Parkhill Dr. from 6th to 8th St. W.	Speeding/ Crossing/ ADA Compliance	25	Collector	No Data	**36**	Y	N	Y	**50**	1,491	93	**1**	25%	**25**	**112**
82	Grace Montessori Academy	1	Area Surrounding Grace Montessori	School Speed Zone	45	Principal Arterial	Low	**80**	N	N	Y	**20**	7,582	184	**11**	N/A	**0**	**111**
83	Will James	6	Lewis Ave. BBWA bridge and trail connection	Shared Use Path/ ADA Compliance	N/A	N/A	Low	**14**	Y	N	Y	**50**	1,268	618	**6**	38%	**38**	**108**
84	Billings Central Catholic High	5	North and west of school	Sidewalks/ ADA Compliance	25	Street	Medium-High	**48**	Y	N	Y	**50**	572	325	**2**	7%	**7**	**107**
85	Medicine Crow	5	Victory Ave.	Shared Use Path	25	Street	No Data	**28**	N	N	Y	**20**	650	521	**3**	55%	**55**	**106**
86	Independent	4	Independent Ln.	Sidewalk/ Shared Use Path	45	Street	Low	**56**	Y	N	N	**30**	640	304	**2**	17%	**17**	**105**
87	Lockwood	5	Primary School parking lot	Crossing/ Bicycling/ ADA Compliance	N/A	N/A	N/A	**0**	Y	N	Y	**50**	1,667	617	**8**	46%	**46**	**104**
88	St. Francis Catholic School	3	Lyman Ave.	Speeding/ Sidewalks/ ADA Compliance	25	Street	No Data	**28**	Y	N	Y	**50**	1,956	620	**10**	15%	**15**	**103**
89	Elysian	1	Area Surrounding Elysian	School Speed Zone	40	Collector	Low	**53**	N	N	Y	**0**	6,336	400	**20**	25%	**25**	**98**
90	St. Francis Catholic School	5	Colton Blvd. at St Francis School	Congestion	N/A	N/A	N/A	**0**	N	N	N	**0**	15,937	620	**80**	15%	**15**	**95**

Low Impact Projects

Project Ranking	School	Project Number	Location	Project Type	Impact Scoring Criteria Category: Traffic Safety: Posted Speed Limit	Traffic Safety: Roadway Classification	Traffic Safety: High Injury Network	Traffic Safety: Total Traffic Safety Score	Feasibility: Ped Crossing, Sidewalk, ADA	Feasibility: In the location of a project specified in the 5-year CIP	Feasibility: In the location of a project documented in Adopted Plan	Feasibility: Total Feasibility Score	Demand: # of Household Routes Benefiting	Demand: Attendance	Demand: Total Demand Score	Equity: Free/Reduced Lunch %@ School	Equity: Total Equity Score	Overall Score
91	Elysian	6	West Ln.	Sidewalks/ Lighting/ Speeding	35	Street	No Data	**39**	Y	N	N	**30**	20	400	**0**	25%	**25**	**94**
92	BCS Elementary	3	Campus parking lot	Crossing/ ADA Compliance	N/A	N/A	N/A	**0**	Y	N	N	**30**	10,032	340	**28**	17%	**17**	**75**
93	BCS High School	2	Shiloh Rd. at BCS HS Campus	ADA Compliance/ Sidewalks	N/A	N/A	N/A	**0**	Y	N	N	**30**	6,513	340	**18**	24%	**24**	**72**
94	Sunrise Montessori	4	Alderson Ave.	Speeding	25	Street	Low	**34**	N	N	N	**0**	14,111	93	**11**	25%	**25**	**70**
95	Lockwood	6	Sunrise Ave. / Johnson Ln.	Trail	N/A	N/A	N/A	**0**	N	N	Y	**20**	319	617	**2**	46%	**46**	**68**
96	Mount Olive Lutheran	5	Mt. Olive Lutheran campus	CPTED	N/A	N/A	N/A	**0**	N	N	N	**0**	5,427	67	**3**	59%	**59**	**62**
97	Lockwood	7	Stonehaven Tr.	Trail	N/A	N/A	N/A	**0**	N	N	N	**0**	49	617	**0**	46%	**46**	**46**
98	Grace Montessori Academy	6	Grace Montessori Parking Lot	ADA Compliance	N/A	N/A	N/A	**0**	Y	N	N	**30**	7,582	184	**11**	N/A	**0**	**41**
99	BCS Elementary	4	Rimrock West Park & The Big Ditch	Trail/ Street Connections	N/A	N/A	N/A	**0**	N	N	Y	**20**	1,263	340	**3**	17%	**17**	**40**
100	Pioneer	5	Dover Rd. at Campus	Arrival/ Dismissal Behavior	N/A	N/A	No Data	**8**	N	N	N	**0**	1,026	70	**1**	31%	**31**	**40**
101	Ben Steele	6	Surrounding Undeveloped Land	Trail/ Street Connections	N/A	N/A	N/A	**0**	N	N	Y	**20**	N/A	795	**0**	19%	**19**	**39**
102	Independent	6	Neighborhoods Surrounding Independent School	Trail/ Street Connections	N/A	N/A	N/A	**0**	N	N	Y	**20**	N/A	304	**0**	17%	**17**	**37**
103	Grace Montessori Academy	4	Big Ditch Right-of-way/ Surrounding Undeveloped Lands	Trail/ Street Connections	N/A	N/A	N/A	**0**	N	N	Y	**20**	2,373	184	**4**	N/A	**0**	**24**
104	Grace Montessori Academy	5	Grace Montessori Parking Lot	Vehicle Congestion	N/A	N/A	No Data	**8**	N	N	N	**0**	7,582	184	**11**	N/A	**0**	**19**
105	Independent	5	East Ditch Crossing	Trail/ Street Connections	N/A	N/A	N/A	**0**	N	N	N	**0**	30	304	**0**	17%	**17**	**17**

Total cost of low impact projects: $3,929,700

*Cost estimates are planning level estimates. Not all projects have cost estimates as some are not defined enough to develop an estimate. Others have costs that may be includeded in other major reconstruction projects and may not require additional funding above what is planned for the larger construction project. Sunrise Montessori projects # 2 and #3 have been excluded from cost as the cost is also included in Lewis & Clark #5.

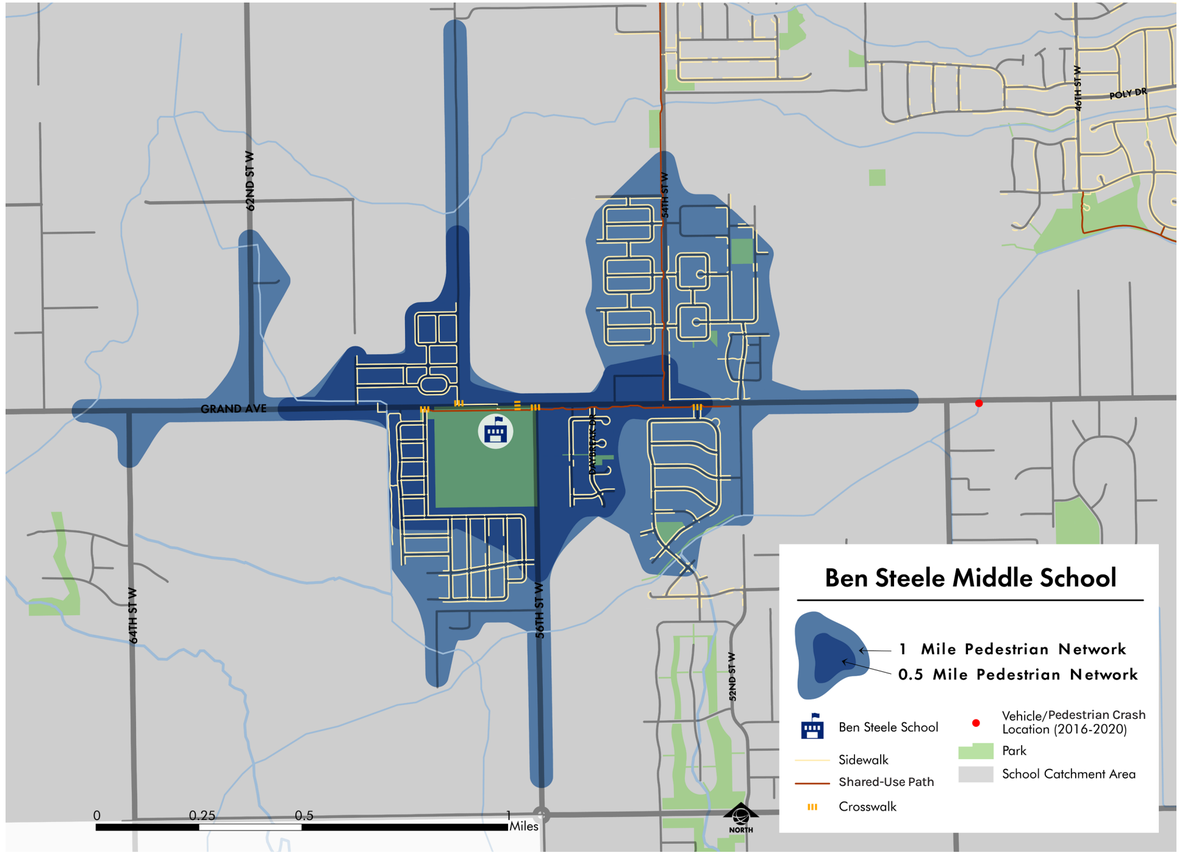

Billings MPO, Ben Steele

Ben Steele Middle School

Existing Conditions at Ben Steele Middle School

ABOUT THE SCHOOL	
Address	5640 Grand Ave, Billings, MT 59106
Number of Students (Grade Levels)	795 (6-8)
% of Students Eligible for Free & Reduced Lunch	19%
Arrival/Dismissal Times	8:10 AM / 3:10 PM

MAJOR STREETS & HIGHWAYS	AADT
Grand Ave.	6,650 (west of 56th St. W.)
56th St. W.	4,070 (north of Central Ave.)



Community Safety Concerns at Ben Steele Middle School

SOURCE OF CONCERN	SAFETY CONCERN OF COMMENT
Principal	› Students crossing 56th from church parking lot to school outside of crosswalk.
School Staff	› Some families park on the north side of Grand Ave. during pick up, creating visibility problems at crosswalks.
Webmap Survey (24 comments)	› Parts of Grand Ave. have no walking or biking facilities or are poorly maintained during winter months. Speeding vehicles, lack of lighting, and lack of visibility for crossings make Grand Ave. hazardous for walking and biking. › Missing walking and biking connections on surrounding streets. › Higher speed limits and speeding vehicles and trucks on surrounding streets. › Long distances between crossings, lack of crossing guards, insufficient visibility and signals at crossings at many intersections surrounding the school. › Intersection of Rimrock Rd. and 46th St. W. unsafe to cross. Lack of safe means to cross Rimrock Rd. and lack of connections to schools on Grand Ave.
Crossing Guard	› School staff was plowing sidewalk and has since stopped doing snow removal.
Safety Busing*	› Ben Steele operates 12 bus routes, 6 of which include safety busing stops. The neighborhoods of Rimrock West, Granite Park, Circle 50, Copper Ridge, Twin Pines and Shiloh Estates are served by safety busing.

** Safety Busing options are noted at schools where safety busing is provided. Safety Busing is provided to students living within 3 miles of a school if a barrier, such as an arterial, may prevent students from walking to school.*

Arrival Observations at Ben Steele Middle School: April 12th, 2023

OBSERVATION TYPE	OBSERVATIONS
Busing	› School Buses use a separated drop off on the east side of the school site.
Vehicles	› Most drop off occurs on the north side of the school site in the dedicated, one-way drop off lanes located off of Grand Ave. › Many parents wait in the drop off queue until their child can disembark directly in front of the front door, their vehicles blocking the crosswalk in the drop off loop. › Some families used the parking lot north of the dedicated drop off lanes for drop off. › Some families drop off their children in the event parking lot south of the auditorium. › Parents parking in the shoulders of Grand Ave. during drop off.
School Staff Roles	› Principal and several staff monitored drop off at the main entrance.
Adult crossing Guards	› A crossing guard is posted at 56th St. W. and Grand Ave.
Students Walking and Biking	› Many students observed walking and bicycling to school; most from the east, on the separated, protected shared use path on the south side of Grand Ave. › Some students observed walking and biking from the west and 58th St. W. › A small number of students observed walking to school on the shared use paths that connect the school to the neighborhood to the south and southwest. › Students observed crossing 56th St. W. outside of any crosswalk toward the Connections Church parking lot.

Priority Concerns at Ben Steele Middle School

#	LOCATION	OBSERVATIONS	COMMUNITY COMMENTS?
1	Area Surrounding Ben Steele	› Inconsistently located School Zone signage on streets surrounding Ben Steele. › Many public comments reporting apparent speeding vehicles in school zone.	Yes
2	Grand Ave.	› Many public comments report speeding in school zone. › Missing sidewalk and sidewalks which are not shoveled during winter months along north side of Grand Ave. › Unmarked and faded crosswalk markings at intersections and parking lots from Shiloh to 62nd St. W. › Difficulty accessing Grand Ave. from 56th St. W. causes people in cars to block the crosswalk on the south leg of the intersection.	Yes
3	Grand Ave. at Ben Steele main entry	› Parked vehicles on the shoulders of Grand Ave. during drop off obstructs view of students in the crosswalk. › Vehicles block crosswalk in drop off loop.	Yes
4	56th St. W.	› Students crossing 56th St. W. at Connections Church parking lot access. Lot also used as overflow event parking for school. › Missing sidewalks south of Stockman Ave. › Missing sidewalks on the east side of 56th St. W.	Yes
5	Rimrock Rd. & 46th St. W.	› No marked crossing exists on Rimrock Rd. from Shiloh Rd. to 54th St. W, a distance of 8,700 feet. › A posted speed limit of 45 mph on Rimrock Rd. increases the likelihood of serious injury in crashes. › Public comments reporting apparent speeding.	Yes
6	Surrounding Undeveloped Land	› Lack of shared use path or street connections from surrounding neighborhoods increases travel distances and requires students to travel along higher speed, higher traffic roadways.	Yes

This Page Intentionally Left Blank

Proposed Projects at Ben Steele Middle School *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUES	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
1	Area Surrounding Ben Steele	School Speed Zone	› Public comments report apparent speeding vehicles school zone. › School Speed Zone is 35 mph.	1	› Design the street to a speed limit that provides for the safety and access of people walking and biking within the school zone.	4.1.4	City	$-
2	Grand Ave.	Crossing/ Sidewalks	› Many public comments report speeding in school zone. › Missing sidewalk and sidewalks which are not shoveled during winter months along north side of Grand Ave. › Unmarked and faded crosswalk markings at intersections and parking lots from Shiloh to 62nd St. W. › Difficulty accessing Grand Ave. from 56th St. W. causes people in cars to block the crosswalk on the south leg of the intersection.	2	› Install protection for existing shared use path. Possible solutions include; curb, bollards, street trees, boulders, or guard rails. › Install lighting along the shared use path on Grand Ave. › When Grand Ave. is rebuilt, complete all missing sidewalks. › When the intersection of Grand Ave. and 54th St. W. is rebuilt, design it to prioritize the safety of students walking and biking to school. › When this segment of Grand Ave. is re-built, if a signal is warranted, design the signalized intersection at 56th and Grand to prioritize the safety of students walking and biking to school.	4.1.3, 4.2.6 4.2.7 4.2.1 4.2.7, 4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.5.1, 4.5.2, 4.5.3 4.2.7, 4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.5.1, 4.5.2, 4.5.3	City	$440,000
3	Main Entry, Grand Ave.	Crossing	› Parked vehicles on the shoulders of Grand Ave. during drop off obstructs view of students in the crosswalk. › Vehicles block crosswalk in drop off loop.	3	› Install advanced yield marking and Yield Here to Pedestrians signage ahead of the crossing in the drop off loop. › Install curb extensions in the shoulders and a pedestrian refuge in the median of Grand Ave. to improve visibility and safety of crossing students.	4.4.3 4.2.7, 4.3.1, 4.3.4	City/ School	$38,000

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects at Ben Steele Middle School *(Continued across to next page)*

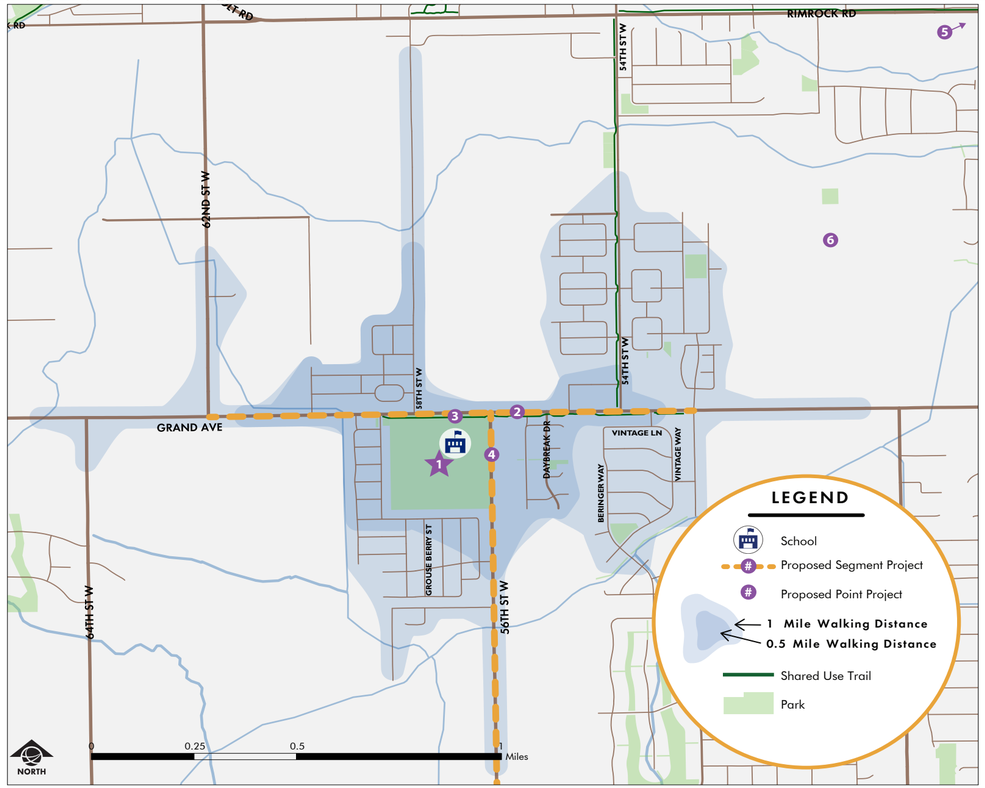
#	LOCATION	TOPIC	ISSUES	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
4	56th St. W.	Crossing/ Sidewalk	› Students crossing 56th St. W. at Connections Church parking lot access. Lot also used as overflow event parking for school. › Missing sidewalks south of Stockman Ave. › Missing sidewalks on the east side of 56th St. W.	4	› Study and install a high visibility crosswalk no less than 300 feet south of the intersection of Grand Ave. and 56th St. W. to serve students crossing 56th St. W. from the Connections Church parking lot. Study whether to include curb extensions, advanced traffic control signals, or a pedestrian refuge island. If studies find that a crosswalk is not warranted at this location, evaluate alternatives including potential church property changes. › When the segment of 56th St. W. from Grand Ave. to Central Ave. is re-built, design the right of way to include separated, protected sidewalks and shared-use paths.	4.2.7, 4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.4.4, 4.5.5 4.2.1, 4.2.6, 4.2.7	City/ County	$180,000
5	Rimrock Rd. & 46th St. W.	Crossing/ Speeding	› No marked crossing exists on Rimrock Rd. from Shiloh Rd. to 54th St. W, a distance of 8,700 feet. › A posted speed limit of 45 mph on Rimrock Rd. increases the likelihood of serious injury in crashes › Public comments reporting apparent speeding.	5	› Study and install a high visibility crosswalk, bulb out, and advanced traffic control signal across Rimrock Rd.	4.2.7, 4.3.1, 4.3.2, 4.3.3, 4.4.3, 4.5.5	City	$535,000
6	Surrounding Undeveloped Land	Shared Use Path/ Street Connections	› Lack of shared use path or street connections from surrounding neighborhoods increases travel distances and requires students to travel along higher speed, higher traffic roadways.	6	› Secure right of way connections and well-connected streets in any future development on lands within the 1.5-mile area surrounding Ben Steele. › Secure right-of-way to continue connections along the Big Ditch. Aquiring right-of-way may have a cost associated with it.	4.2.1, 4.2.6 4.2.6, 4.2.7	County/ City/ Developer	$-

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects Map at Ben Steele Middle School



This Page Intentionally Left Blank

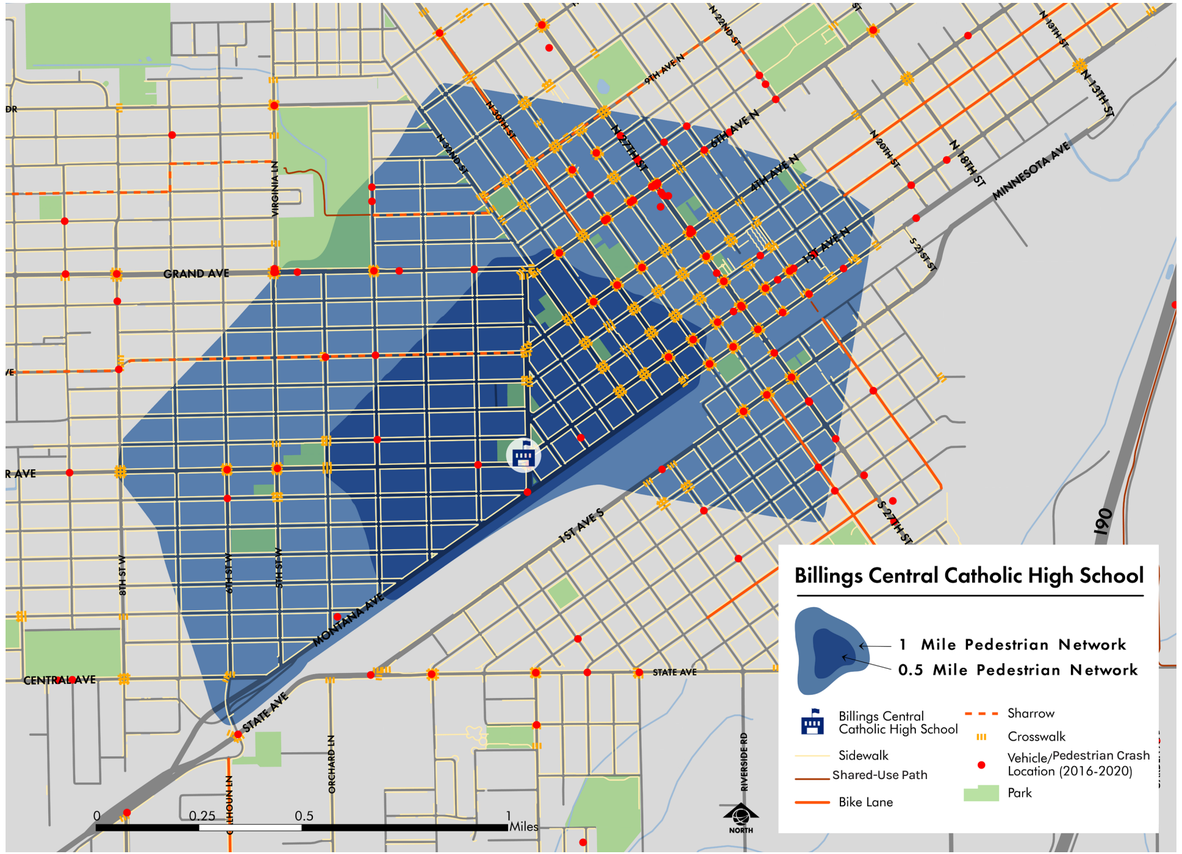
Billings Central Catholic High School



Existing Conditions at Billings Central Catholic High School

ABOUT THE SCHOOL	
Address	3 Broadwater Ave, Billings, MT 59101
Number of Students (Grade Levels)	325 (9-12)
% of Students Eligible for Free & Reduced Lunch	7%
Arrival/Dismissal Times	8:10 AM / 3:05 PM

MAJOR STREETS & HIGHWAYS	AADT
Broadwater Ave.	15,060
Division St.	18,340



Community Safety Concerns at Billings Central Catholic High School

SOURCE OF CONCERN	SAFETY CONCERN OF COMMENT
Principal	› Vehicle congestion at the intersection of Division St. & Wyoming Ave.
Webmap Survey (5 comments)	› Signal timing at the intersection of Broadwater Ave. & Division St. is too short for people walking to safely cross. › Students parking on Yellowstone Ave. cross mid-block, outside of a crosswalk. › Unsafe intersection for students crossing 6th at Wyoming.
Safety Busing	› Two bus routes that serve the Heights and West End are shared by Central High and St. Francis.

Arrival Observations at Billings Central Catholic High School: March 17th, 2023

OBSERVATION TYPE	OBSERVATIONS
Busing	› Buses drop students off on Wyoming Ave. at no parking strip.
Vehicles	› Most private vehicle drop off occurred in the lot to the rear of the building, accessed from Broadwater Ave. and Wyoming Ave. › Many students park private vehicles on the streets in the neighborhood north of Broadwater Ave. and west of Division St. › Some students were observed parking in the Dahl Funeral Chapel parking lot. › Private vehicles dropping students off and looking for parking were stacking on Wyoming Ave. from Division St. to 1st St. W. › Vehicles were observed mounting the curb and encroaching on the sidewalk to enter the south-bound turn lane at Broadwater Ave. & Division St.
School Staff Roles	› No staff were observed to have any role in the arrival period.
Adult crossing Guards	› No crossing guards were observed to be posted in the area around the school.
Students Walking and Biking	› Students were observed approaching the school from the north via 1st St. W. › Students were observed approaching the school from the west via Wyoming Ave. possibly from vehicles parked further west on Wyoming Ave. › A student was observed approaching the school from the east, via the crosswalk at Division St. and 1st Ave. N.

Priority Concerns at Billings Central Catholic High School

#	LOCATION	OBSERVATIONS	COMMUNITY COMMENTS?
1	Area Surrounding Central Catholic High	› No school zone signage exists in the area around the school.	No
2	Division St.	› There are only three marked crossings on Division St., all of which are faded and are about 1,000 feet apart from each other. › Relatively wide travel lanes encourage speeding. › Missing crosswalks at Division and N. 34th St. and N. 33rd St.	No
3	Division St. & Broadwater Ave.	› Crosswalk markings are faded on all legs of this intersection. › Crossing distances are relatively long on all legs of this intersection. Large curb radii increase crossing distances. › Crosswalk signal timing appeared to be inadequate to accommodate all ages and abilities.	Yes
4	Broadwater Ave.	› There are no marked crossings of Broadwater Ave. from Division St. to 5th St. W, a distance of about 3,100 feet. › Curbwalk sidewalk along Broadwater Ave. puts students very close to 35 MPH traffic, reducing comfort and creating hazard for people walking. › Side streets along Broadwater Ave. do not have marked crossings.	Yes
5	North and west of school	› Many sidewalks in this neighborhood are uneven or have deteriorating surfaces. › Many curb cuts in this neighborhood are missing or are non-ADA compliant.	No

This Page Intentionally Left Blank

Proposed Projects at Billings Central Catholic High School *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
1	Area surrounding Central Catholic High	School Speed Zone	› No school zone signage exists in the area around the school.	1	› Study and establish a School Zone and School Speed Zone surrounding Central High School in accordance with MUTCD standards and an updated School Zone Traffic Control Policy per programmatic recommendation 2.1. › Design the streets within the school zone to a speed limit that provide for the safety and access of children walking and biking.	4.4.1 4.1.4	City	$24,000
2	Division St.	Crossing/ Speeding/	› There are only three marked crossings on Division St., all of which are faded and are about 1,000 feet apart from each other. › Travel lanes between 11 and 14 feet wide encourage speeding. › Missing crosswalks at Division and N. 34th St. and N. 33rd St.	2	› Study speeds on Division St. and reconfigure Division St. to calm traffic and prioritize safety and access for people walking and biking. This may include reducing curb radii, reconfiguring travel lanes, eliminating slip lanes, and eliminating lanes on side streets. › Replace all crossings of Division St. and its side streets with high visibility crossings. › Install high visibility crossings, missing sidewalk, and curb extensions and ADA ramps at N. 34th St. and N. 33rd St. › Install a contra-flow bicycle crossing and lane along Clark Ave. from 3rd Ave. N & Division St. to Clark Ave. & 1st St. W. Educate public on contraflow lane.	4.1.4, 4.2.3, 4.3.1 4.3.1, 4.3.2, 4.4.4 4.3.1, 4.3.2, 4.3.3, 4.4.4 4.2.5	City	$122,000
3	Division St. & Broadwater Ave.	Crossing	› Crosswalk markings are faded on all legs of this intersection. › Crossing distances are relatively long on all legs of this intersection. Large curb radii increase crossing distances. › Crosswalk signal timing appeared to be inadequate to accommodate all ages and abilities.	3	› Study and install high visibility crossings on all legs of the intersection of 1st Ave. N, Broadwater Ave. & Division St. › Study and install leading pedestrian interval and verify adequate crossing signal timing. › Reduce curb radii at this intersection.	4.3.2 4.5.2 4.3.1	City	$45,000

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects at Billings Central Catholic High School *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
4	Broadwater Ave. from Division St. to 5th Ave. W.	Crossing/ Speeding	› There are no marked crossings of Broadwater Ave. from Division St. to 5th St. W, a distance of about 3,100 feet. › Curbwalk sidewalk along Broadwater Ave. puts students very close to 35 MPH traffic, reducing comfort and creating hazard for people walking. › Side streets along Broadwater Ave. do not have marked crossings.	4	› Study and install a high visibility crossing and advanced traffic control signal Broadwater Ave. between 5th St. W and Division. › If studies find that a crosswalk is not warranted at this location, evaluate alternatives.	4.3.2, 4.3.3, 4.5.5	City	$67,000
5	North and west of school	Sidewalks/ ADA Compliance	› Many sidewalks in this neighborhood are uneven or have deteriorating surfaces. › Many curb cuts in this neighborhood are missing or are non-ADA compliant.	5	› Install ADA-compliant curb cuts and repair sidewalks where needed at intersections in the area from Wyoming Ave. & Division St. to Lewis Ave. and 5th St. W. › Install high visibility crossing, ADA compliant ramps, and curb extensions on all legs of the intersection of 1st St. W. and Wyoming Ave.	4.2.1, 4.3.1, 4.3.2 4.2.1, 4.3.1, 4.3.2	City	$465,000

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

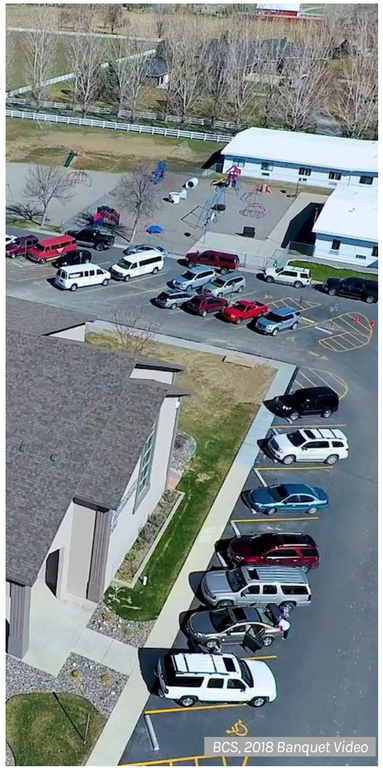
Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects Map at Billings Central Catholic High School



This Page Intentionally Left Blank

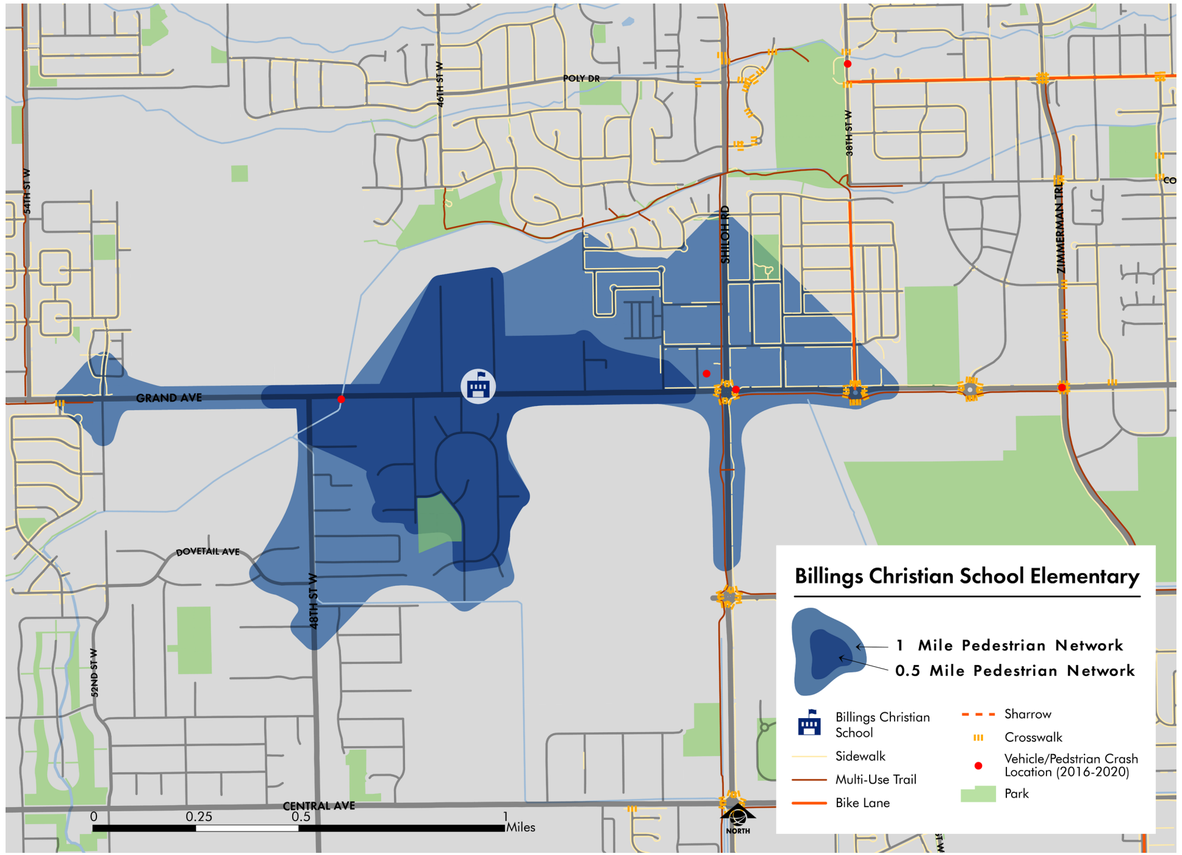

BCS, 2018 Banquet Video

Billings Christian Elementary School

Existing Conditions at Billings Christian Elementary School

ABOUT THE SCHOOL	
Address	4519 Grand Ave, Billings, MT 59106
Number of Students (Grade Levels)	340 (PK-8)
% of Students Eligible for Free & Reduced Lunch	17%
Arrival/Dismissal Times	8:15 -8:30 AM / 12:00-3:15 PM

MAJOR STREETS & HIGHWAYS	AADT
Grand Ave.	11,060



Community Safety Concerns at Billings Christian Elementary School

SOURCE OF CONCERN	SAFETY CONCERN OF COMMENT
Principal	› Traffic congestion during pick up and drop off presents a safety hazard.
Webmap Survey (16 comments)	› Speeding vehicles, congestion, missing sidewalks, inconsistent School Zones, and a desire for a shared-use path on Grand Ave. › Lack of shared use path or street connections from neighborhoods north of the school, and a desire for continuing the shared use path along the BBWA westward.

Arrival Observations at Billings Christian Elementary School: June 12th, 2023

OBSERVATION TYPE	OBSERVATIONS
Busing	› No busing is provided.
Vehicles	› Private vehicle drop off traffic increases at 7:45 AM with moments of significant stacking on Grand Ave. for vehicles waiting to turn left into school lot. › Irregular and unpredictable vehicle movements observed while stacking exists on Grand Ave. › Westbound vehicles turning right into parking lot yield to east-bound vehicles turning left into the lot. › Drop off occurred mostly at the entry of the elementary building on the eastern portion of the site.
School Staff Roles	› Staff received students at the elementary building and monitored the playground before school began.
Adult crossing Guards	› No crossing guards were observed.
Students Walking and Biking	› No students were observed walking or biking to school.

Priority Concerns at Billings Christian Elementary School

#	LOCATION	OBSERVATIONS	COMMUNITY COMMENTS?
1	Grand Ave.	› Inconsistently-located school zone signage along Grand Ave. › The posted speed limit on Grand Ave. is 45 mph. › Several public comments about speeding vehicles.	Yes
2	Grand Ave.	› The nearest marked crossings on Grand Ave. are over 3,000 feet to the east and and 5,300 feet to the west. › The nearest sidewalks or bike infrastructure on Grand Ave. are 2,400 feet to the east and 4,300 feet to the west.	Yes
3	Campus parking lot	› No direct, marked walking or biking route exists from Grand Ave. through the parking lot, to the main entry.	No
4	Rimrock West Park & The Big Ditch	› Lack of shared use path or street connections from neighborhoods north of BCS Elementary to Grand Ave. increases travel distances and requires students to travel along higher speed, higher volume roadways.	Yes

Proposed Projects at Billings Christian Elementary School *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
1	Grand Ave.	School Speed Zone	› Inconsistently-located school zone signage along Grand Ave. › The posted speed limit on Grand Ave. is 45 mph. › Several public comments about speeding vehicles.	1	› Relocate existing school speed zone signage to comply with MUTCD standards and an updated School Zone Traffic Control Policy per programmatic recommendation 2.1. › Design the street to a speed limit that provides for the safety and access of children walking and biking within the school zone.	4.1.4 4.4.1	County/ City	$129,000
2	Grand Ave.	Sidewalk/ Crossing	› The nearest marked crossings on Grand Ave. are over 3,000 feet to the east and and 5,300 feet to the west. › The nearest sidewalks or bike infrastructure on Grand Ave. are 2,400 feet to the east and 4,300 feet to the west.	2	› When the segment of Grand Ave. west of Shiloh is re-built, design the right of way to include separated, protected sidewalks and shared use paths. › Install street lighting along the installed sidewalks and shared use paths. › When the segment of Grand Ave. west of Shiloh is re-built, further study installation of a high visibility crossing, advanced traffic control signal at the intersection of Grand Ave. & Bluegrass Dr.	4.2.1, 4.2.6 4.2.7 4.2.7, 4.3.2, 4.3.3, 4.4.3, 4.5.1, 4.5.2, 4.5.3, 4.5.5	City/ County/ Land Owner	$2,375,000
3	Campus parking lot	Crossing/ ADA Compliance	› No direct, marked walking or biking route exists from Grand Ave. through the parking lot, to the main entry.	3	› Install a direct, marked, ADA compliant path from Grand Ave. through the parking lot, to the main entry of each building.	4.3.3	School	$31,000
4	Rimrock West Park & The Big Ditch	Shared Use Path/ Street Connections	› Lack of shared use path or street connections from neighborhoods north of BCS Elementary to Grand Ave. increases travel distances and requires students to travel along higher speed, higher volume roadways.	4	› Secure right-of-way connections from the neighborhoods north of BCS Elementary to Grand Ave. Possible connections include 43rd, 48th, Lenhardt, and Nansel Ln. Accesses may be dedicated during the subdivision process, or as funds are available. › Secure right-of-way to continue connections westward along the Big Ditch	4.2.1, 4.2.6, 4.2.7 4.2.6, 4.2.7	County/ City	$-

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

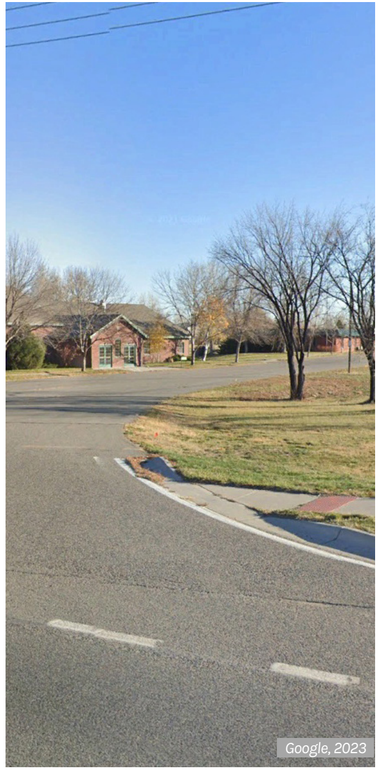
Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects Map at Billings Christian Elementary School



This Page Intentionally Left Blank

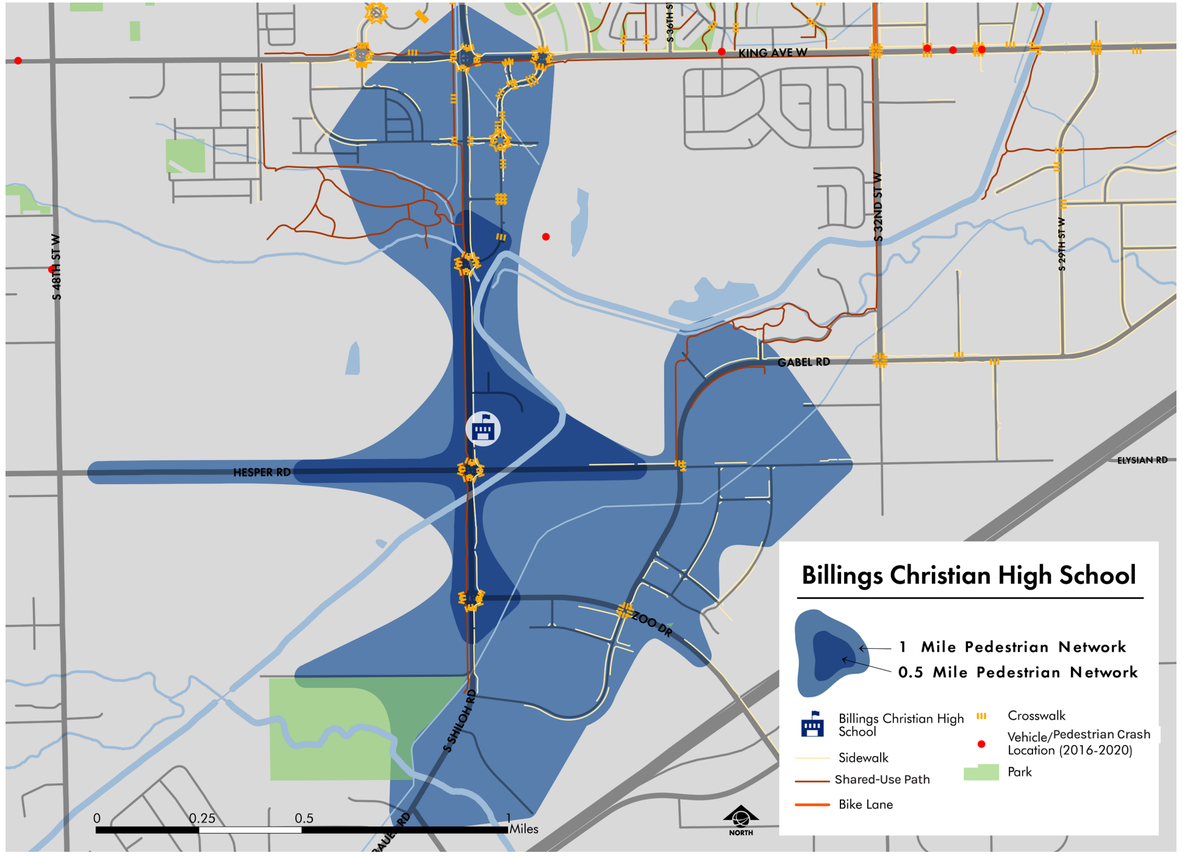
Billings Christian High School



Existing Conditions at Billings Christian High School

ABOUT THE SCHOOL	
Address	1515 S Shiloh Rd, Billings, MT 59106
Number of Students (Grade Levels)	100 (9-12)
% of Students Eligible for Free & Reduced Lunch	24%
Arrival/Dismissal Times	8:25 AM / 3:25 PM

MAJOR STREETS & HIGHWAYS	AADT
Shiloh Rd	14,560
Hesper Rd	5,390



Community Safety Concerns at Billings Christian High School

SOURCE OF CONCERN	SAFETY CONCERN OF COMMENT
Principal	› Dangerous pedestrian crossings at the roundabout intersection of Shiloh Rd. & Hesper Rd.
Webmap Survey (0 comments)	› N/A

Arrival Observations at Billings Christian High School: May 5th, 2023

OBSERVATION TYPE	OBSERVATIONS
Busing	› No buses were observed during the arrival period.
Vehicles	› Some students arrived by private vehicle at or before 8 AM, most from the informal dirt road from Hesper Rd. No congestion was observed.
School Staff Roles	› No staff were observed to have any role in the arrival period.
Adult crossing Guards	› No crossing guards were observed during the arrival period.
Students Walking and Biking	› No students were observed walking or biking to school.

Priority Concerns at Billings Christian High School

#	LOCATION	OBSERVATIONS	COMMUNITY COMMENTS?
1	Area surrounding BCS High School	› No School Zone exists in the area surrounding BCS High School.	No
2	Shiloh Rd. & Hesper Rd.	› Faded crosswalk markings on all legs of this intersection. › The posted speed limit on Shiloh Rd. is 45 MPH.	Yes
3	Hesper Rd.	› Hesper Rd. has no walking or bicycling facilities.	No
4	Shiloh Rd. at BCS HS Campus	› No direct, marked, ADA compliant route exists from Shiloh Rd. to the campus' internal sidewalk network.	No
5	Shiloh Rd. at BCS HS Campus	› Faded or unmarked crossings at campus primary Shiloh Rd. vehicle access.	No

Proposed Projects at Billings Christian High School *(Continued across to next page)*

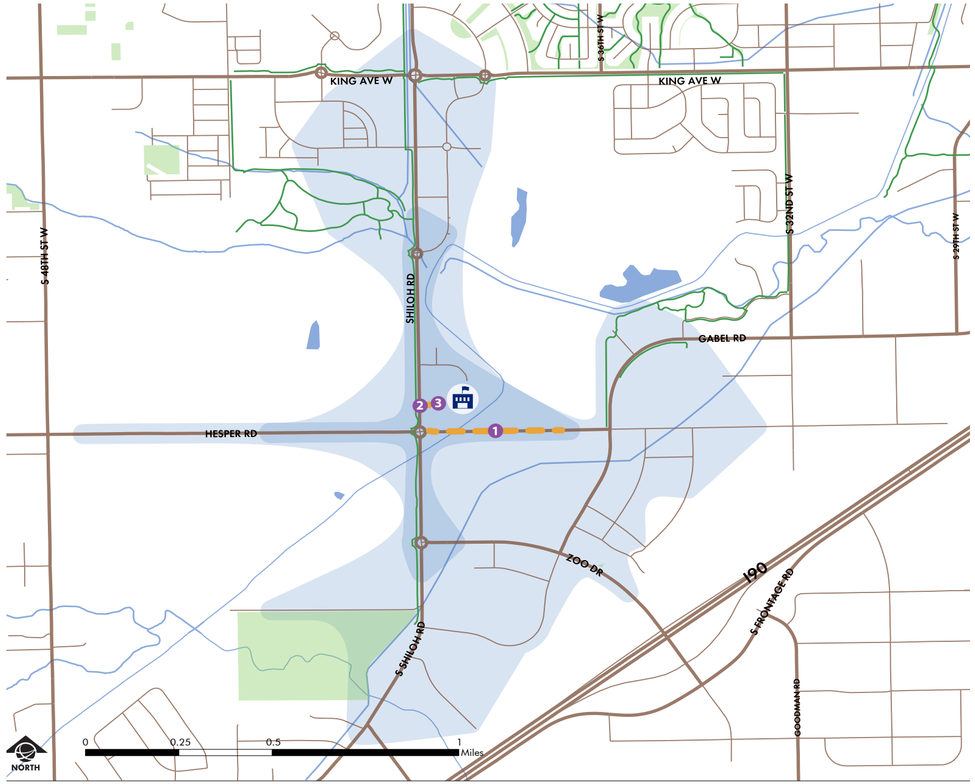
#	LOCATION	TOPIC	ISSUES	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
1	Hesper Rd.	Sidewalks	› Hesper Rd. has no walking or biking facilities.	1	› When the segment of Hesper Rd. in front of the school is rebuilt, install separated, protected walking and bicycling facilities.	4.2.1, 4.2.6, 4.2.7	Developer	$22,000
2	Shiloh Rd. at BCS HS Campus	ADA Compliance/ Sidewalks	› No direct, marked, ADA compliant route exists from Shiloh Rd. to the campus' internal sidewalk network.	2	› Install a direct, well-marked, ADA compliant route from Shiloh Rd. to the campus' internal sidewalk network.	4.2.1, 4.3.3	School	$15,500
3	Shiloh Rd. at BCS HS Campus	Crossing	› Faded or unmarked crossings at campus primary Shiloh Rd. vehicle access.	3	› Install high visibility crossings across the vehicular accesses to the campus from Shiloh Rd. to improve safety of people walking along Shiloh. Rd.	4.3.2, 4.2.2, 4.2.7	County/ City	$23,500

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects Map at Billings Christian High School



This Page Intentionally Left Blank

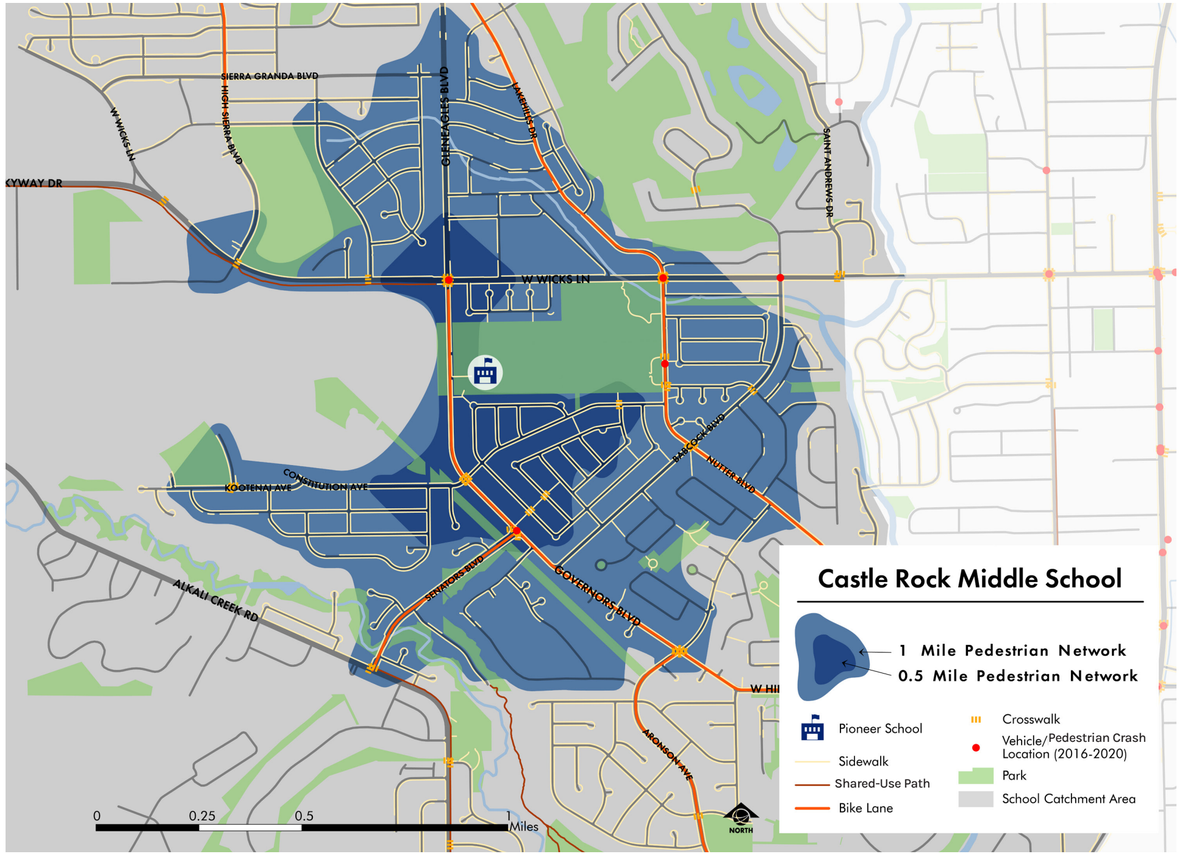
Castle Rock Middle School



Existing Conditions at Castle Rock Middle School

ABOUT THE SCHOOL	
Address	1441 Governors Blvd, Billings, MT 59105
Number of Students (Grade Levels)	711 (6-8)
% of Students Eligible for Free & Reduced Lunch	28%
Arrival/Dismissal Times	8:10 AM / 3:10 PM

MAJOR STREETS & HIGHWAYS	AADT
Governors Blvd	6,350
Wicks Ln	5,700



Community Safety Concerns at Castle Rock Middle School

SOURCE OF CONCERN	SAFETY CONCERN OF COMMENT
Principal	› Private vehicle drop off on west side of Governors Blvd, students then cross outside of crosswalk. General concern regarding congestion during morning drop off.
School Staff	› Lack of safe street crossings. › Concerns about high school students driving unsafely. › Lack of consistent snow clearing on sidewalks. › Lack of protected facilities.
Webmap Survey (44 comments)	› Numerous public comments report that Governors Blvd. at Castle Rock is “terrifying,” and “very dangerous,” for student crossing during pick up and drop off. › Several public comments of witnessing children and parents nearly being struck by vehicles while crossing Governors Blvd. at Castle Rock. › Lack of safe, on site, walking or biking routes to building’s main entry. › Vehicles using bicycle lanes to pass left-turning vehicles on the right along Governors Blvd. › Lack of safe crossings at intersections along Governors Blvd. from Senators Blvd. to Wicks Ln. › Vehicles speed, fail to yield to walking students, run red lights at Governors Blvd. and Wicks Ln. › Faded or unmarked crossings and need for traffic calming in the Centennial neighborhood. › Need for better street and shared use path connections in future development surrounding Castle Rock.
Safety Busing	› No safety busing provided.

Arrival Observations at Castle Rock Middle School: April 14th, 2023

OBSERVATION TYPE	OBSERVATIONS
Busing	› School Buses drop students off in a dedicated loop via a single access onto Governors Blvd. Contrary to school policy, some parents use the bus loop for drop off. › MET Transit drops off a significant number of students at Wicks Ln. & Governors Blvd. who then walk to Castle Rock.
Vehicles	› Red light running and apparent speeding observed at Wicks Ln. & Governors Blvd. › Drop off traffic causes significant stacking along Governors Blvd. in front of Castle Rock. › Vehicles stacking onto Wicks Ln. from Governors Blvd. › Left-turning traffic from school parking lot causes stacking in lot. Vehicles then making unpredictable maneuvers to get onto Governors Blvd. › North-bound vehicles on Governors Blvd. move into the bike land to pass left-turning vehicles at Constitution Ave. and Babcock Blvd. › Apparent speeding along Governors Blvd.
School Staff Roles	› Principal reports that staff had enforced ban on private vehicles in bus drop off, but stopped due to rude remarks and harassment from drivers.
Adult crossing Guards	› No crossing guards were observed to be on duty. Principal reports difficulty hiring crossing guards.
Students Walking and Biking	› Students were observed walking from north, south, and east. › Students use several paths to access the school through the neighborhood to the south.

Priority Concerns at Castle Rock Middle School

#	LOCATION	OBSERVATIONS	COMMUNITY COMMENTS?
1	Area Surrounding Castle Rock	› Inconsistently located School Zone signage.	Yes
2	Governors Blvd. at Castle Rock	› Student drop off in the south-bound parking lane causes students to cross Governors Blvd. in front of the school, stepping out from between vehicles, where their visibility is obstructed and no marked crossings exist. › Governors Blvd. is an arterial, is the only street from which to access Castle Rock by vehicle and, as one of the only streets in the area with through connection, also carries significant through traffic. › Significant vehicular stacking during drop off in both directions on Governors Blvd. › Vehicles observed making unpredictable, quick maneuvers in school zone. › Left turns to and from the school access points worsen congestion, and cause vehicles to make quick, sudden movements.	Yes
3	Governors Blvd. from Wicks Ln. to Senators Blvd.	› Governors Blvd. has a posted speed limit of 35 MPH. › Public input indicates that, despite the existence of sidewalks and bike lanes, Governors Blvd. is perceived by many guardians as unsafe for children to walk or bike. › The average distance between marked crosswalks on Governors Blvd. between Wicks Ln. and Aronson Ave. is 3,000 feet. › The bike lane along Governors Blvd. is narrow, unprotected, and positioned in the door zone of parked vehicles. Community members report that the bike lane is often used by vehicles to pass left-turning vehicles on the right. › Sidewalks along Governors Blvd. have no buffer from the curb, and accessible paths are often obstructed by mailboxes or trash cans. › Several intersections have curb radii in excess of 50 feet. › Several crosswalks have faded markings. › Apparent speeding and red light running observed at the intersection of Wicks Ln. and Governors Blvd. › Faded crosswalk markings at the intersection of Wicks and Governors Blvd.	Yes
4	Castle Rock Parking Lot and Bus Loop	› Because Governors Blvd. is the only street from which to access Castle Rock by vehicle, and because Governors Blvd also carries significant morning commute traffic, stacking and congestion occur during morning drop off. › This stacking and congestion causes drivers to make unpredictable, quick maneuvers on Governors Blvd. in front of the school, where many students are disembarking vehicles and crossing to access the school. › The existing remote parking lot off of Constitution Ave. was not observed to be well-used for drop off.	Yes
5	Castle Rock Parking Lot and Bus Loop	› No accessible routes exist from the several sidewalk and shared use path access points, through the parking lot, to the main entry.	Yes
6	Gleneagles Blvd.	› Many segments of Gleneagles Blvd. have no sidewalk.	No
7	Constitution Ave.	› Several pedestrian access points from this neighborhood to the Castle Rock School site and park have no crosswalks or ADA-compliant facilities along their route. › Faded crosswalk markings or unmarked crossings at many intersections. › Speeding vehicles reported throughout. › Sidewalks along streets have no buffer from the curb, and accessible paths are often obstructed or lack curb ramps.	Yes

Proposed Projects at Castle Rock Middle School *(Continued across to next page)*

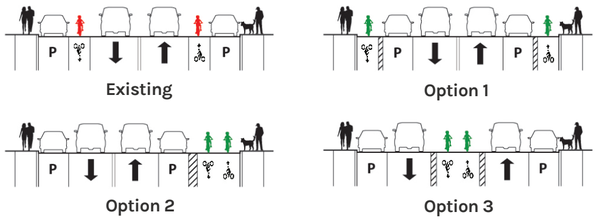
#	LOCATION	TOPIC	ISSUES	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
1	Area Surrounding Castle Rock	School Speed Zone	› Inconsistently located School Zone signage.	1	› Relocate existing school speed zone signage to comply with MUTCD standards and an updated School Zone Traffic Control Policy per programmatic recommendation 2.1. › Design the street to a speed limit that provides for the safety and access of children walking and biking within the school zone.	4.4.1 4.1.4	City	$72,800
2	Governors Blvd. at Castle Rock School	Crossing/ Congestion	› Student drop off in the south-bound parking lane causes students to cross Governors Blvd. in front of the school, stepping out from between vehicles, where their visibility is obstructed and no marked crossings exist. › Because Governors Blvd is the only street from which to access Castle Rock by vehicle, and because Governors Blvd also carries significant morning commute traffic, stacking and congestion occur during morning drop off. › This stacking and congestion causes drivers to make unpredictable, quick motions on Governors in front of the school, where many students are disembarking vehicles and crossing to access the school.	2	› Study and Install high-visibility crosswalks, curb extensions and advanced traffic control signals at each vehicular site access point. › Evaluate and re-configure vehicular and bus drop off operations and facilities to relieve congestion. Possible interventions include restricting access to the parking lot to right-in, right-out, re-striping the existing parking lot, and reconfiguration of the existing accesses to one-way travel.	4.2.7, 4.3.1, 4.3.2, 4.3.3, 4.5.5 4.6.2	City/ School	$166,000

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects at Castle Rock Middle School *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
3	Governors Blvd. from Wicks Ln. to Babcock Blvd.	Congestion/ Crossing/ Bicycling	› Public input indicates that, despite the existence of sidewalks and bike lanes, Governors Blvd. is perceived by many guardians as unsafe for children to walk or bike. › The bike lane along Governors Blvd. is unprotected and positioned next to the vehicular travel lane, which reduces the visual friction and traffic calming benefits that the on-street parking would otherwise provide. This encourages speeding and allows people driving to use the bike lane to pass on the right. See Section 4.1.4 for more information. › Sidewalks along Governors Blvd. have no buffer from the curb, and accessible paths are often obstructed by mailboxes or trash cans. › Several intersections have curb radii in excess of 50 feet. Large turning radii encourage faster turning motions by people driving. › Several crosswalks have faded markings. › Apparent speeding and red light running observed at the intersection of Wicks Ln. and Governors Blvd. › Faded crosswalk markings at the intersection of Wicks and Governors Blvd.	3	› Reconfigure Governors Blvd. to install a protected bicycle facility and place the existing on-street parking lanes next to the travel lanes. Public input required.  › Ensure that existing street lighting is on during pre-dawn and after dark student commute times. › Reduce curb radii and calm turning traffic at the intersections of Governors Blvd and; Wicks Ln, Senators Blvd, and Babcock Blvd. › At the intersection of Wicks Ln. and Governors Blvd, Install high visibility crossings and a Leading Pedestrian Interval (LPI).	4.2.3, 4.2.5 4.2.7 4.3.1, 4.2.10 4.3.1, 4.3.2, 4.5.2	City	$131,000

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects at Castle Rock Middle School *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
4	Wicks Ln. at Castle Rock Park	Vehicle Congestion	› Because Governors Blvd is the only street from which to access Castle Rock by vehicle, and because Governors Blvd also carries significant morning commute traffic, stacking and congestion occur during morning drop off. › This stacking and congestion causes drivers to make unpredictable, quick maneuvers on Governors Blvd. in front of the school, where many students are disembarking vehicles and crossing to access the school. › The existing remote parking lot off of Constitution Ave. was not observed to be well-used for drop off.	4	› Coordinate with the Parks Department to create remote drop off in the Castle Rock Park Splash Park parking lot with accessible path to Castle Rock School. Consider an incentive program to encourage use of new remote lot and existing remote lot.	4.2.6, 4.2.7, 4.6.3	School	$60,000
5	Castle Rock Parking Lot and Bus Loop	ADA Compliance	› No accessible routes exist from the several sidewalk and shared use path access points, through the parking lot, to the main entry.	5	› Install well-marked, direct, ADA compliant routes from Governors Blvd. and other paths through or around the school parking lot and to the main entry.	4.2.1, 4.2.7, 4.3.3	School	$94,000
6	Gleneagles Blvd.	Sidewalk	› Many segments of Gleneagles Blvd. have no sidewalk.	6	› Install missing sidewalks to achieve a continuous sidewalk along at least one side of Gleneagles Blvd. from its northern extent to Wicks Ln.	4.2.1, 4.2.7	City/ Land Owner	$78,000
7	Constitution Ave.	Crossing	› Several pedestrian access points from this neighborhood to the Castle Rock School site and park have no crosswalks or ADA-compliant facilities along their route. › Faded crosswalk markings or unmarked crossings at many intersections. › Speeding vehicles reported throughout.	7	› Install a high visibility crosswalk, curb extensions, and ADA ramps at of Constitution Avenue's intersections with Patriot St., N Church St., the access to the parking lot east of the track and field, Breeds Hill St. and Nutter Blvd. Install advanced traffic control signals as appropriate. › Install curb ramps where missing along Constitution Ave.	4.2.7, 4.3.1, 4.3.2, 4.5.4, 4.3.3, 4.5.4, 4.5.5 4.3.3	City	$214,000

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

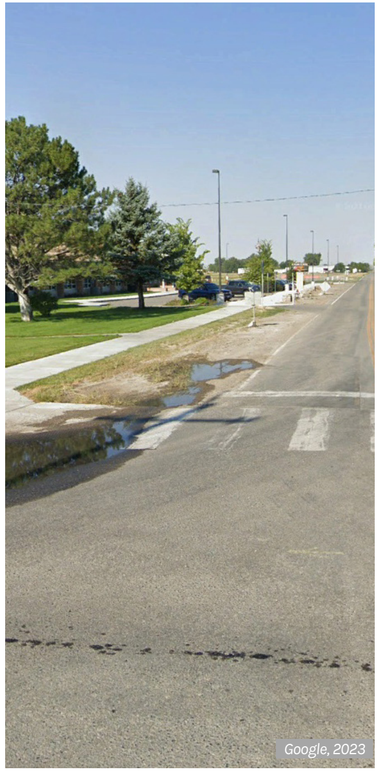
Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects Map at Castle Rock Middle School



This Page Intentionally Left Blank

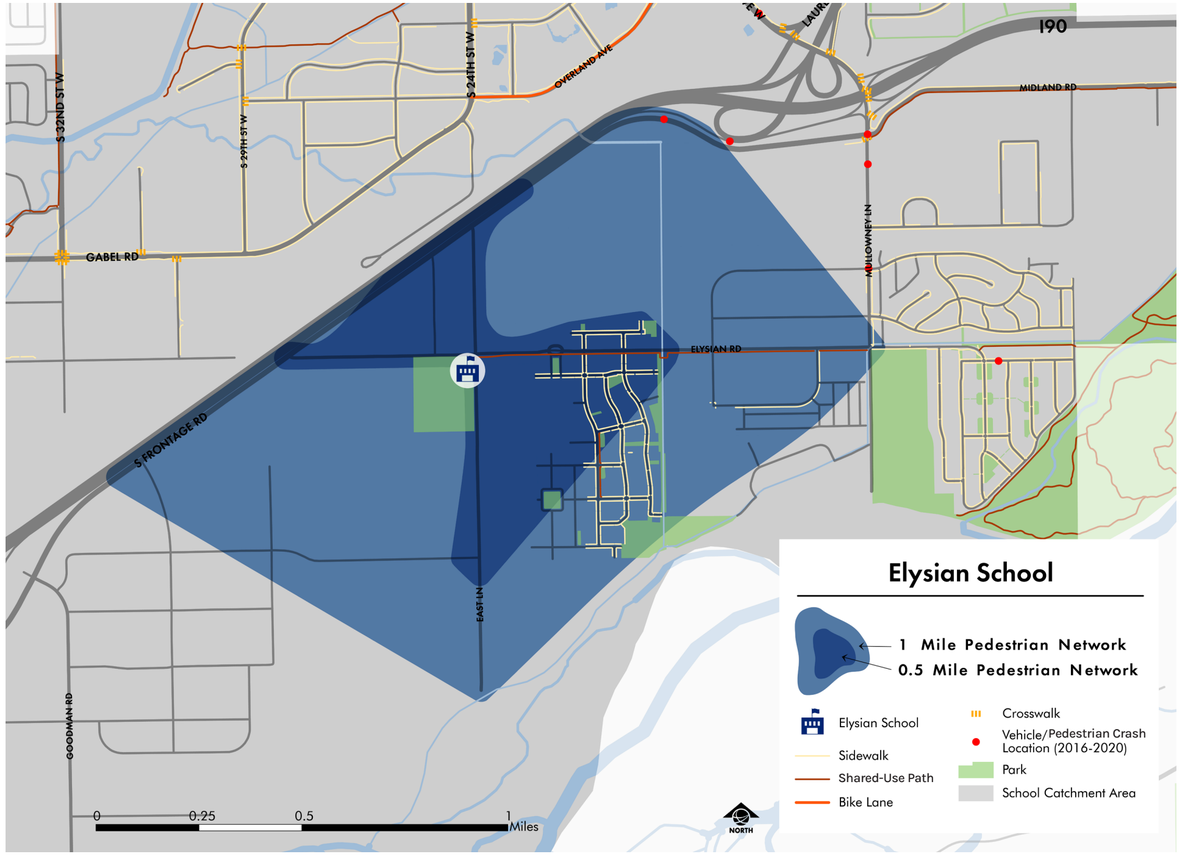
Elysian School



Existing Conditions at Elysian School

ABOUT THE SCHOOL	
Address	6416 Elysian Rd, Billings, MT 59101
Number of Students (Grade Levels)	400 (PK-8)
% of Students Eligible for Free & Reduced Lunch	25%
Arrival/Dismissal Times	8:10 AM / 3:20 PM

MAJOR STREETS & HIGHWAYS	AADT
Elysian Rd.	3,409
East Ln. north of Elysian Rd.	1,215
S. Frontage Rd.	3,705



Community Safety Concerns at Elysian School

SOURCE OF CONCERN	SAFETY CONCERN OF COMMENT
Principal	› Commercial traffic speeds through the school zone. › Drop off loop looks directly into morning sun, which can obscure visibility of students being dropped off.
Webmap Survey (102 comments)	› Speeding vehicles, high vehicle and student traffic volumes, a poorly maintained roadway surface which fails to drain during significant weather events, and congestion during pick up and drop off at the intersection of Elysian Rd. & East Ln. › East Ln. lacks walking or bicycling facilities and has no street lighting. › Lack of ADA path or marked walking route in eastern parking lot. › Roof drainage and ice build up obstructs walking route to east entry. › The existing drop off loop on Elysian Rd. has many issues including: parked vehicles on Elysian Rd. obstruct the vision triangle for vehicles exiting the drop off; lack of safe, direct, ADA compliant walking and biking route from Elysian Rd. to school entrance; poor student visibility in drop off loop. › High vehicle and student traffic volumes, poorly marked crossings and insufficient lighting at the intersection of Elysian Rd. & West Ln. › Speeding vehicles, missing safe walking or biking route and lack of lighting along West Ln. › Poorly marked crossings, and vehicles blocking the way of people using the shared-use path at Elysian Rd. & Walter Creek Blvd. › Long distances between crossings on Elysian Rd. between Walter Creek Blvd. and Mullowney Ln. › Insufficient lighting and ice build up on the shared-use path along Elysian Rd. › Lack of safe walking and bicycle routes, lack of lighting, and poor visibility at intersections along S Frontage Rd.
Crossing Guard	› Crossing guard posted at Elysian Rd. and East lane. Vehicles obstruct crosswalks at intersection while attempting to get onto Elysian Rd. from East Ln.
Safety Busing	› Safety busing is provided for all students living east of the Annafeld subdivision.

Arrival Observations at Elysian School: May 15th, 2023

OBSERVATION TYPE	OBSERVATIONS
Busing	› Buses drop students off in the loop northwest of the building.
Vehicles	› Vehicles drop students off in the loop directly north of the main entrance and in the eastern gravel lot. › Some vehicles dropped students off in the south shoulder of Elysian Rd. in front of the school.
School Staff Roles	› Staff receive students at the main north entry.
Adult crossing Guards	› Staff are posted as crossing guards on Elysian Rd. at East Ln. & West Ln.
Students Walking and Biking	› Most students walking and biking to school were observed approaching from the east along the shared-use path on Elysian Rd. › Some students walking and biking to school were observed approaching from the north along West Ln.

Priority Concerns at Elysian School

#	LOCATION	OBSERVATIONS	COMMUNITY COMMENTS?
1	Area Surrounding Elysian	› Inconsistently located School Zone signage. › Vehicles appear to exceed the posted speed limit. › Public Comments reporting speeding.	Yes
2	Elysian Rd. & East Ln.	› Apparent speeding vehicles, high vehicle and student traffic volumes, a poorly maintained roadway surface which fails to drain during significant weather events, and congestion during pick up and drop off at the intersection of Elysian Rd. & East Ln.	Yes
3	Elysian Rd. at Elysian School	› The existing drop off loop on Elysian Rd. has many issues including: parked vehicles on Elysian Rd. obstruct the clear vision triangle for vehicles exiting the drop off; lack of safe, direct, ADA compliant walking and biking route from Elysian Rd. to school entrance; poor student visibility in drop off loop. › Lack of walking and biking infrastructure on either side of Elysian Rd.	Yes
4	Elysian Rd. west of West Ln.	› Lack of lighting. › Lack of walking and biking infrastructure. › Vehicles appear to exceed the posted speed limit.	Yes
5	East Ln.	› Lack of lighting. › Lack of walking and biking infrastructure. › Vehicles appear to exceed the posted speed limit.	Yes
6	West Ln.	› Lack of lighting. › Lack of walking and biking infrastructure. › Vehicles appear to exceed the posted speed limit.	Yes

This Page Intentionally Left Blank

Proposed Projects at Elysian School *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
1	Area Surrounding Elysian	School Speed Zone	› Inconsistently located School Zone signage. › Vehicles appear to exceed the posted speed limit. › Public Comments reporting speeding.	1	› Relocate existing school speed zone signage to comply with MUTCD standards and an updated School Zone Traffic Control Policy per programmatic recommendation 2.2. › Design the streets within the school zone to a speed limit that provides for the safety and access of children walking and biking within the school zone.	4.4.1 4.1.4	City	$58,000
2	Elysian Rd. & East Ln.	Crossing	› Apparent speeding vehicles, high vehicle and student traffic volumes, a poorly maintained roadway surface which fails to drain during significant weather events, and congestion during pick up and drop off at the intersection of Elysian Rd. & East Ln.	2	› When Elysian Rd. is rebuilt, design the intersection of Elysian Rd. & East Ln. to prioritize the safety of students walking and biking to school. › Install protection for existing shared use path. Possible solutions include; curb, bollards, street trees, boulders, or guard rails. › Install lighting along the existing shared-use path.	4.2.7, 4.3.1, 4.3.2, 4.3.3, 4.5.1, 4.5.2, 4.5.3 4.1.3, 4.2.6 4.2.7	City/ Land Owner	$121,000
3	Elysian Rd. at Elysian School	Crossing/ Congestion	› The existing drop off loop on Elysian Rd. has many issues including: parked vehicles on Elysian Rd. obstruct the clear vision triangle for vehicles exiting the drop off; lack of safe, direct, ADA compliant walking and biking route from Elysian Rd. to school entrance; poor student visibility in drop off loop. › Lack of walking and biking infrastructure on either side of Elysian Rd.	3	› Install curb extensions and a pedestrian table crossing in drop off loop to improve visibility and safety of crossing students. › Install curb extensions at drop off loop exit to improve visibility for exiting vehicles. › Construct shared use path from East Ln. across Elysian School site, along existing parking medians on the south side of Elysian Rd. with high visibility crossings at drop off loop entry and exit, to western extent of school site.	4.2.2, 4.3.1, 4.3.1 4.2.6, 4.2.7, 4.3.2	City/ School	$78,500
4	Elysian Rd. west of West Ln.	Sidewalks/ Lighting	› Lack of lighting. › Lack of walking and biking infrastructure.	4	› When the segment of Elysian Rd. from West Ln. to S. Frontage Rd. is rebuilt, design the right-of-way to include a separated, protected shared use path and lighting.	4.2.6, 4.2.7	City/ County/ Land Owner	$176,200

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects at Elysian School *(Continued across to next page)*

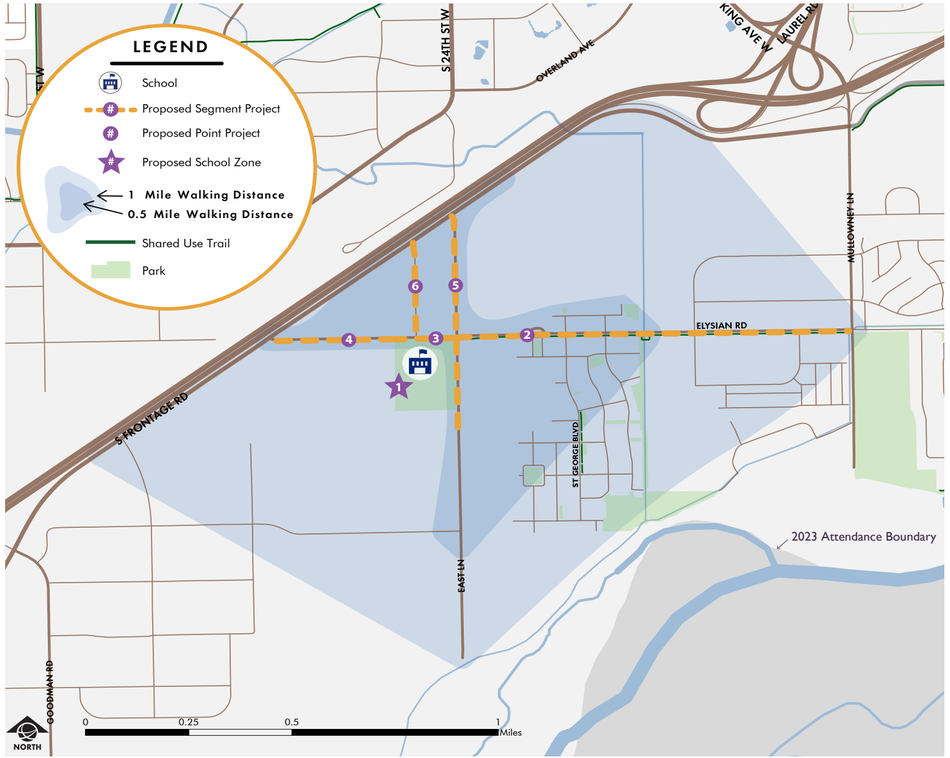
#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
5	East Ln.	Sidewalks/ Lighting/ Speeding	› Lack of lighting. › Lack of walking and biking infrastructure. › Vehicles appear to exceed the posted speed limit.	5	› When the segment of East Ln. from S Frontage Rd. to Eva Marie Ln. is re-built, design it to include lighting, safe walking and biking infrastructure. › Install high visibility crossings at the intersection of East Ln. and Eva Marie Ln.	4.2.1, 4.2.6, 4.2.7, 4.3.1, 4.2.7, 4.3.1, 4.3.2, 4.3.3, 4.4.4, 4.5.4	City/ County	$265,000
6	West Ln.	Sidewalks/ Lighting/ Speeding	› Lack of lighting. › Lack of walking and biking infrastructure. › Vehicles appear to exceed the posted speed limit.	6	› Install curb, gutter, lighting and separated, protected walking and biking facilities along West Ln. › Design the street to a speed limit that prioritizes the safety and access of children walking and biking within the school zone.	4.2.1, 4.2.7 4.1.4	County	$652,000

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

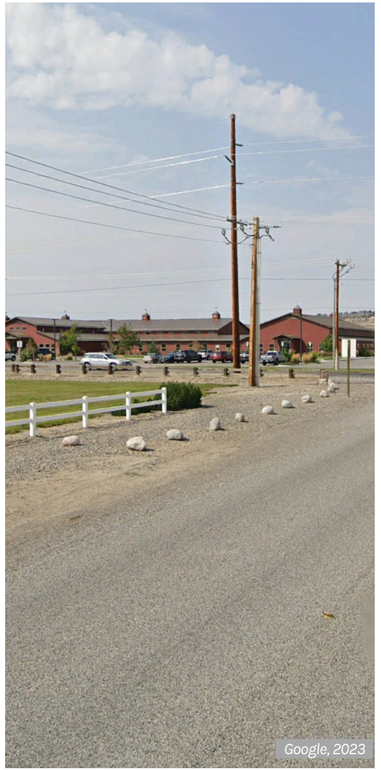
Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects Map at Elysian School



This Page Intentionally Left Blank

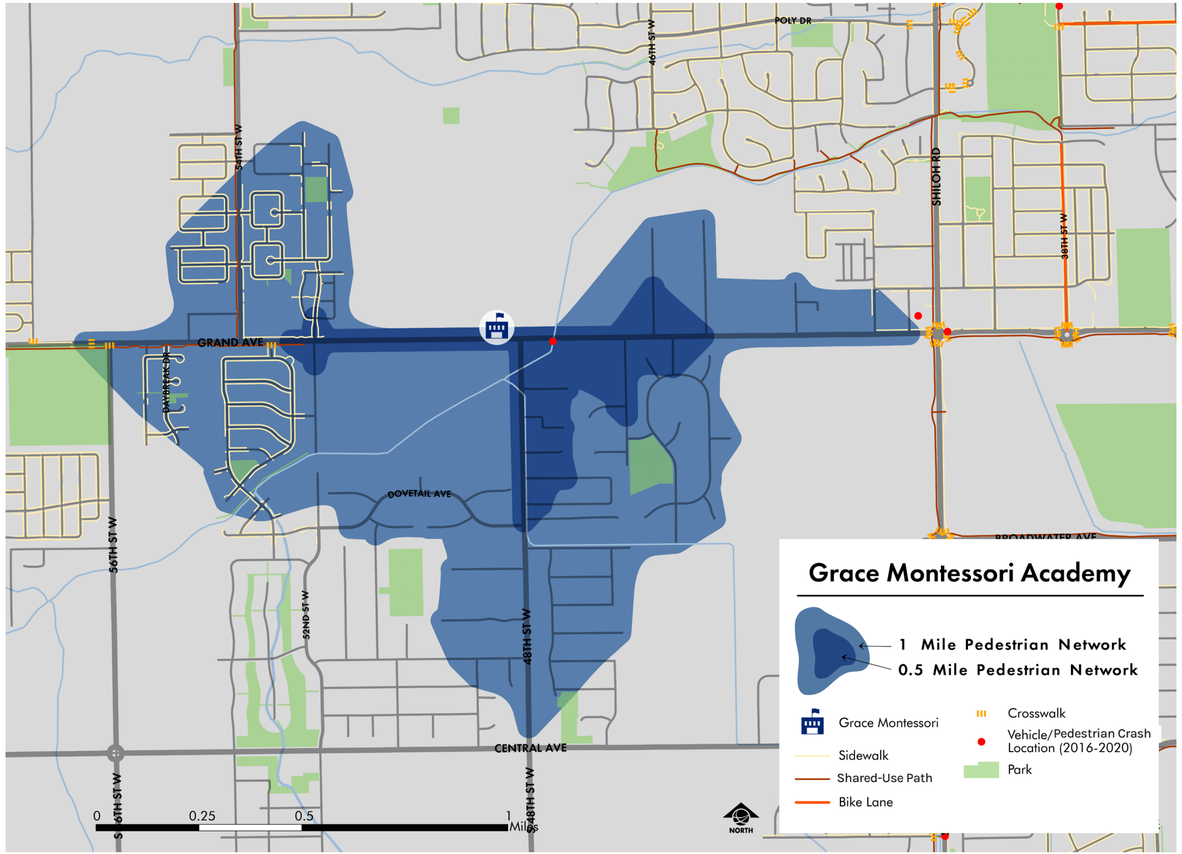
Grace Montessori Academy



Existing Conditions at Grace Montessori Academy

ABOUT THE SCHOOL	
Address	4809 Grand Ave, Billings, MT 59106
Number of Students (Grade Levels)	184 (PK-8)
% of Students Eligible for Free & Reduced Lunch	N/A
Arrival/Dismissal Times	8:00 AM / 2:50 PM

MAJOR STREETS & HIGHWAYS	AADT
Grand Ave.	9,200
N. 48th St. W.	4,090



Community Safety Concerns at Grace Montessori Academy

SOURCE OF CONCERN	SAFETY CONCERN OF COMMENT
Principal	› Traffic congestion on Grand Ave. during arrival and dismissal. › Design of arterials is unsupportive of walking and bicycling and do not connect to safer streets like Colton Blvd.
Webmap Survey (6 comments)	› Lack of safe bicycling route along Grande Ave. from Shiloh to 54th St. W. › Vehicle traffic congestion at the intersection of Grand Ave. & 48th St. W. › Vehicles do not comply with school zone speed limits. › Safety concerns for vehicles exiting school parking lot in winter conditions.

Arrival Observations at Grace Montessori Academy: May 25th, 2023

OBSERVATION TYPE	OBSERVATIONS
Busing	› A 15-passenger van parked in front of the school with about 5 students disembarking.
Vehicles	› Vehicle traffic on Grand Ave. flowed freely until about 7:50 AM when left turning vehicles created intermittent congestion. › Elementary level student drop off began at about 7:50 AM. Vehicles enter the school site via 48th St. W. and line up facing south in the northeastern parking lot. Students disembark once vehicle reaches front of the queue. › Early Childhood drop off occurs at the front entry to the school. Vehicles arrive and wait in queue for about 10-15 minutes. Stacking momentarily blocked the elementary drop off queue. › All vehicles exit the school site via the western parking lot access. Exiting vehicles stacked to the point of blocking the Early Childhood drop off queue. Exiting vehicles were prevented from accessing Grand Ave. by stacking that resulted from vehicles waiting to make eastbound lefts into the school site from Grand Ave.
School Staff Roles	› Staff received students when they disembark their vehicles.
Adult Crossing Guards	› No crossing guards were observed.
Sudents Walking and Biking	› No students were observed walking or bicycling to school.

Priority Concerns at Grace Montessori Academy

#	LOCATION	OBSERVATIONS	COMMUNITY COMMENTS?
1	Area Surrounding Grace Montessori	› Inconsistently located School Zone signage.	Yes
2	Grand Ave.	› Grand Ave. from 41st St. W. to 52nd St. W. has no walking or biking facilities. › Grand Ave. is currently the only street from which to access Grace Montessori by vehicle and, as one of the only streets in the area with through connection, also carries significant through traffic. › Significant vehicular stacking during drop off in both directions on Grand Ave. › Vehicles observed making unpredictable, quick maneuvers in the school zone. › Significant congestion at the intersection of Grand Ave. & 48th St. W. during morning drop off.	Yes
3	48th St. W	› 48th St. W. has no walking or biking infrastructure.	No
4	Big Ditch right-of-way/ Surrounding Undeveloped Lands	› Lack of shared use path or street connections from neighborhoods surrounding Grace Montessori to Grand Ave. increases travel distances and requires students to walk and bike along higher speed, higher volume roadways.	Yes
5	School Parking Lot	› All vehicles exit the school site via the western parking lot access. Exiting vehicles stacked to the point of blocking the Early Childhood drop off queue. Exiting vehicles were prevented from accessing Grand Ave. by stacking that resulted from vehicles waiting to make eastbound lefts into the school site from Grand Ave.	Yes
6	School Parking Lot	› No direct, marked walking or biking route exists from Grand Ave. through the parking lot, to the main entry.	No

This Page Intentionally Left Blank

Proposed Projects at Grace Montessori Academy *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
1	Area Surrounding Grace Montessori	School Speed Zone	› Inconsistently located School Zone signage	1	› Relocate existing school speed zone signage to comply with MUTCD standards and an updated School Zone Traffic Control Policy per programmatic recommendation 2.1. › Design streets within the school zone to a speed limit that provides for the safety and access of children walking and biking.	4.4.1 4.1.4	County/ City	$134,000
2	Grand Ave.	Sidewalks/ Crossings/ Speeding/ Congestion	› Grand Ave. from 41st St. W. to 52nd St. W. has no walking or biking facility. › Grand Ave. is currently the only street from which to access Grace Montessori by vehicle and, as one of the only streets in the area with through connectivity, also carries significant through traffic. › Significant vehicular stacking during drop off in both directions on Grand Ave. › Vehicles observed making unpredictable, quick motions in the school zone. › Significant vehicular stacking during drop off at the intersection of Grand Ave.& 48th St. W.	2	› When the segment of Grand Ave. in front of this school is rebuilt, design it to include a separated, protected shared-use path. › Install lighting along the proposed shared-use path. › When this intersection is rebuilt, design it to prioritize the safety of students walking and biking to school.	4.1.3, 4.2.6 4.2.7 4.2.7, 4.3.1, 4.3.2, 4.3.3, 4.5.2, 4.5.3	County/ City	$203,000
3	48th St. W.	Sidewalks/ Crossings/ Speeding	› 48th St. W. has no walking or biking infrastructure.	3	› When 48th St. W. is rebuilt and connected northward, design it to include separated, protected walking and biking routes.	4.2.1, 4.2.5, 4.2.6	County/ City/ Developer	$99,000

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects at Grace Montessori Academy *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
4	Big Ditch right-of-way/ Surrounding Undeveloped Lands	Shared use path/ Street Connections	› Lack of shared use path or street connections from neighborhoods surrounding Grace Montessori to Grand Ave. increases travel distances and requires students to walk and bike along higher speed, higher volume roadways.	4	› Secure right-of-way way to continue connections westward along the Big Ditch. › As land around the school continues to develop, ensure streets are connected between neighborhoods and that shared use path connections are also made.	4.2.6, 4.2.7	County/ City/ Developer	$-
5	Grace Montessori Parking Lot	ADA Compliance	› Significant vehicular stacking during drop off in both directions on Grand Ave.	5	› Further study and re-configure vehicular drop off operations and facilities to relieve congestion. Possible interventions include restricting access to the parking lot to right-in, right-out, re-striping the existing parking lot, and reconfiguration of the existing accesses to one-way travel. › When Grand Ave. is reconstructed, evaluate removal of the approaches to Grace Montessori nearest to the intersection of Grand Ave. and 48th St. W.	4.3.3	School/ City	$107,000
6	Grace Montessori Parking Lot	ADA Compliance	› No direct, well-marked, ADA compliant walking or biking route exists from Grand Ave. through the parking lot, to the main entry, reducing visibility of children walking through the lot.	6	› Grace Montessori should install a direct, marked, ADA compliant path from Grand Ave. through the parking lot, to the main entry of the building.	4.3.3	School	$24,200

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects Map at Grace Montessori Academy



This Page Intentionally Left Blank

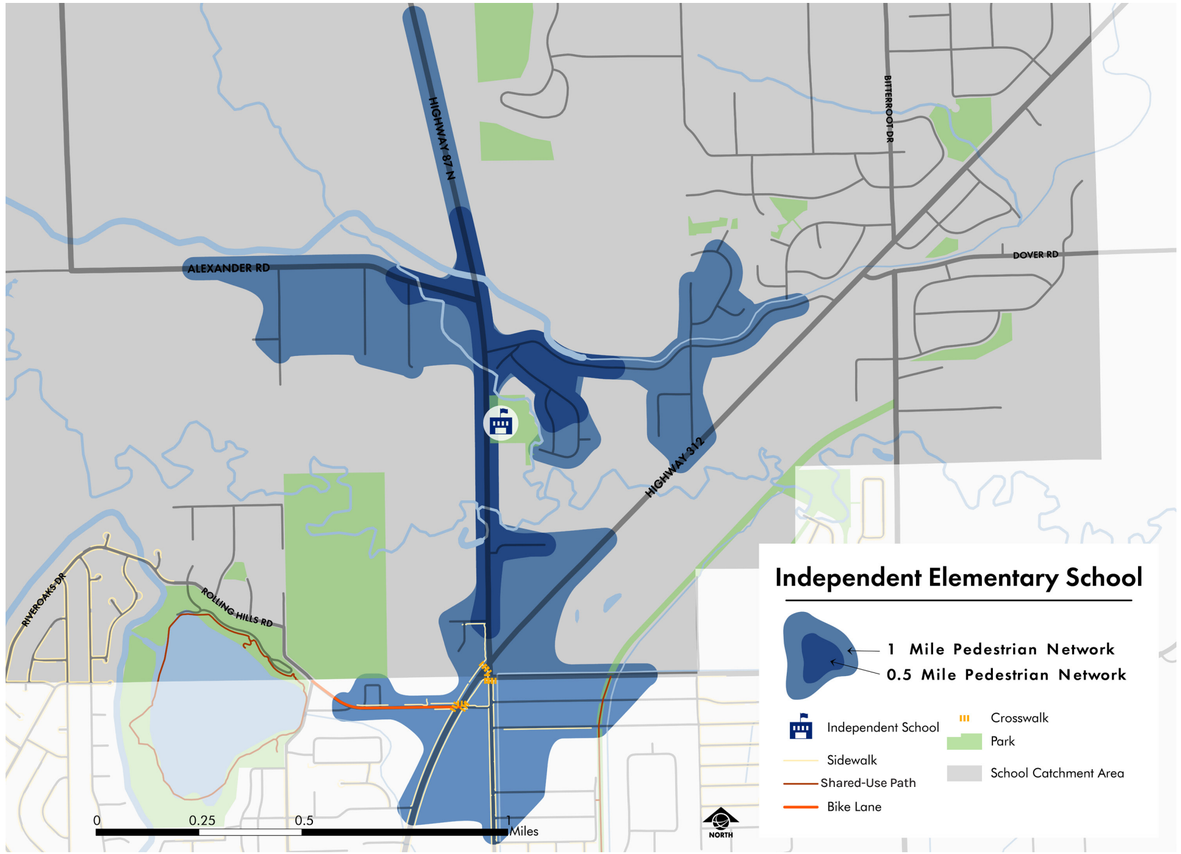
Independent Elementary School



Existing Conditions at Independent Elementary School

ABOUT THE SCHOOL	
Address	2907 Roundup Rd. Billings, MT 59105
Number of Students (Grade Levels)	304 (PK-6)
% of Students Eligible for Free & Reduced Lunch	17%
Arrival/Dismissal Times	8:15 AM / 3:00 PM M-TH, 2:00 PM Fri

MAJOR STREETS & HIGHWAYS	AADT
Highway 87	5,780
Old Hwy 312	11,240 (north of Mary St.)



Community Safety Concerns at Independent Elementary School

SOURCE OF CONCERN	SAFETY CONCERN OF COMMENT
Principal	› Lack of pedestrian facilities on Hwy 87, Hwy 312, Independent Ln. and Alexander Rd. › Lack of safe route to school from Lake Elmo neighborhood. › Lack of safety busing due to financial constraints.
Webmap Survey (2 comments)	› Vehicular traffic congestion during pick up and drop off causes vehicles to stack onto Hwy 87. › Private vehicles park on the west side of Hwy 87 for pick up and drop off, causing students to cross the road outside of any cross walk. › Missing sidewalks on Hwy 87. › Posted speed limit of 40 mph on Hwy 87 “hazardous” and unobserved by many vehicles. › Missing sidewalks on Independent Ln. Students walk along top of drainage ditch. › Missing sidewalks on Hwy 312.
Crossing Guard	› No crossing guards.
Safety Busing	› No safety busing is provided.
Neighbors	› Neighbors report observing students bullying in vacated area of the Independent Ln. right of way where some informal drop off/ pick up occurs.

Dismissal Observations at Independent Elementary School: May 4th, 2023

OBSERVATION TYPE	OBSERVATIONS
Busing	› School buses load and unload in teacher lot north of primary access and parking lot.
Vehicles	› Vehicles queued onto hwy 87 to narrow bridge over Five Mile Creek, approximately 900 feet south of parking lot access point. › Stacking vehicles block crossings at school parking lot entry and exit. › Several vehicles observed picking up children on both sides of Hwy 87, requiring students to cross the road without a marked crosswalk, often emerging from between parked vehicles where their visibility is obstructed. › Private vehicles observed using vacated right of way near Independent Ln. as informal remote pick up. › Many vehicles appeared to be speeding in the school zone and did not yield to students using the crosswalk at Independent Ln. & Hwy 87.
School Staff Roles	› Two staff in school parking lot direct traffic and attempt to direct students to designated crossings in the parking lot.
Adult Crossing Guards	› No crossing guards were observed.
Students Walking and Biking	› Students were observed leaving school going north toward Independent Ln. Others were observed using a small foot bridge over a creek at the southeast corner of the school site. › Students were observed walking along the ditch right of way along Independent Ln. accompanied by an adult.

Priority Concerns at Independent Elementary School

#	LOCATION	OBSERVATIONS	COMMUNITY COMMENTS?
1	Hwy 87 Main entry pick up/ drop off	› Hwy 87 is currently the only street from which to access Independent by vehicle and also carries significant through traffic. › Significant vehicular stacking occurs during dismissal in both directions on Hwy 87. › Vehicles observed making unpredictable, quick motions in school zone. › Faded crosswalk markings in parking lot and lack of well-marked, direct, ADA compliant route through parking lot to main entry.	Yes
2	Hwy 87	› High speed vehicular through traffic which does not yield to pedestrians in crosswalk or adhere to flashing school zone signage. › Missing sidewalks along Hwy 87. › Faded crosswalk markings at Independent Ln. › Flashing 40 mph School Zone sign unaccompanied by traffic calming measures to encourage compliance. School zone signage misaligned along roadway.	Yes
3	Independent Ln	› Missing sidewalks cause students to use path within ditch ROW.	Yes

This Page Intentionally Left Blank

Proposed Projects at Independent Elementary School *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
1	Hwy 87/ Area Surrounding Independent	School Speed Zone	› Apparent speeding. Public comment reporting speeding. › Through traffic reported and observed not yielding to students in crosswalk. › The existing School Zone speed limit is 40 mph.	1	› Coordinate with Yellowstone County and MDT to bring the School Zone and School Speed Zone surrounding Independent School into accordance with MUTCD standards and an updated School Zone Traffic Control Policy per programmatic recommendation 2.1. › Design the segment of Hwy 87 within the school zone to a speed limit that prioritizes the safety and access of children walking and biking within the school zone.	4.4.1 4.1.4	County	$94,500
2	Hwy 87	Crossing/ Sidewalk	› Student drop off in the west shoulder of Hwy 87 causes students to cross outside of any crosswalk to access parked vehicles or walk home. › Vehicles fail to yield to students in crosswalk at Independent Ln. and Hwy 87. › Lack of Sidewalks from Independent Ln to planned 5-Mile Creek shared use path.	2	› Install a high visibility crosswalk and advanced traffic control signal at Independent School with an accessible, well-marked, direct and protected route to the school's main entry. › Install advanced traffic control signal and curb extensions at the existing high visibility crosswalk at Independent Ln. and Hwy 87. › Install separated, protected shared use paths or sidewalks within the Hwy 87 right-of-way to provide access from Alexander Rd. to the planned shared use path along 5-Mile Creek to the south.	4.2.7, 4.3.1, 4.3.2, 4.3.3, 4.4.3, 4.5.5 4.3.1, 4.5.5 4.2.1, 4.2.6, 4.2.7	County	$931,500
3	Hwy 87 & Independent Ln.	Traffic/ Congestion	› Because Hwy 87 is the only street from which to access Independent by vehicle, and because Hwy 87 also carries significant morning commute traffic, stacking and congestion occur during afternoon dismissal. › Congestion and vehicle stacking at dismissal cause people driving to make unpredictable and sudden maneuvers and are sometimes rude to staff in the school parking lot.	3	› Construct remote drop off facilities within the vacated right-of-way of Independent Ln. where an informal remote drop off exists now. Design this drop off to comply with CPTED principals and connect it to the school with separated, protected pedestrian facilities.	4.2.7, 4.2.1, 4.6.3	School	$183,500

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects at Independent Elementary School *(Continued across to next page)*

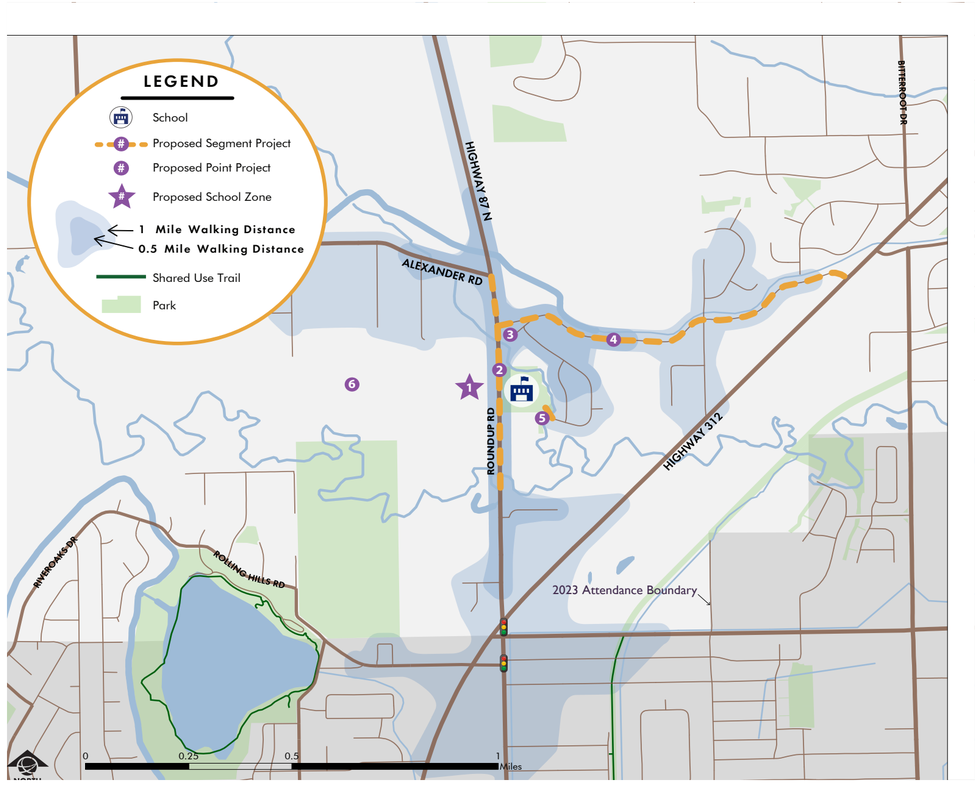
#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
4	Independent Ln.	Sidewalk/ Shared Use Path	› Lack of walking facilities causes students to use path within ditch ROW.	4	› Dedicate access and install a shared-use path along the BBWA canal.	4.2.6, 4.2.7	County	$538,000
5	East Ditch Crossing	Shared Use Path/ Street Connections	› Student use informal shared use path and bridge to access Saratoga Tr. and residences to the east. Bridge and access are maintained at the discretion of the abutting homeowner.	5	› Formalize access and maintenance of a shared use path and bridge across ditch at eastern edge of school site.	4.2.6, 4.2.7	County	$130,000
7	**Neighborhoods Surrounding Independent School**	Shared Use Path/ Street Connections	› Students living in the Lake Elmo area walk to school via a privately-owned parcel where access is maintained at the discretion of the property owner. › Lack of shared use path or street connections from neighborhoods west of school increases travel distances and requires students to travel along higher speed, higher volume roadways.	6	› Secure other rights of way for walking and biking from surrounding neighborhoods including those near Lake Elmo. › As land around the school continues to develop, ensure streets are connected between neighborhoods and that shared use path connections are also made.	4.2.6, 4.2.7	County	$-

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects Map at Independent Elementary School



This Page Intentionally Left Blank

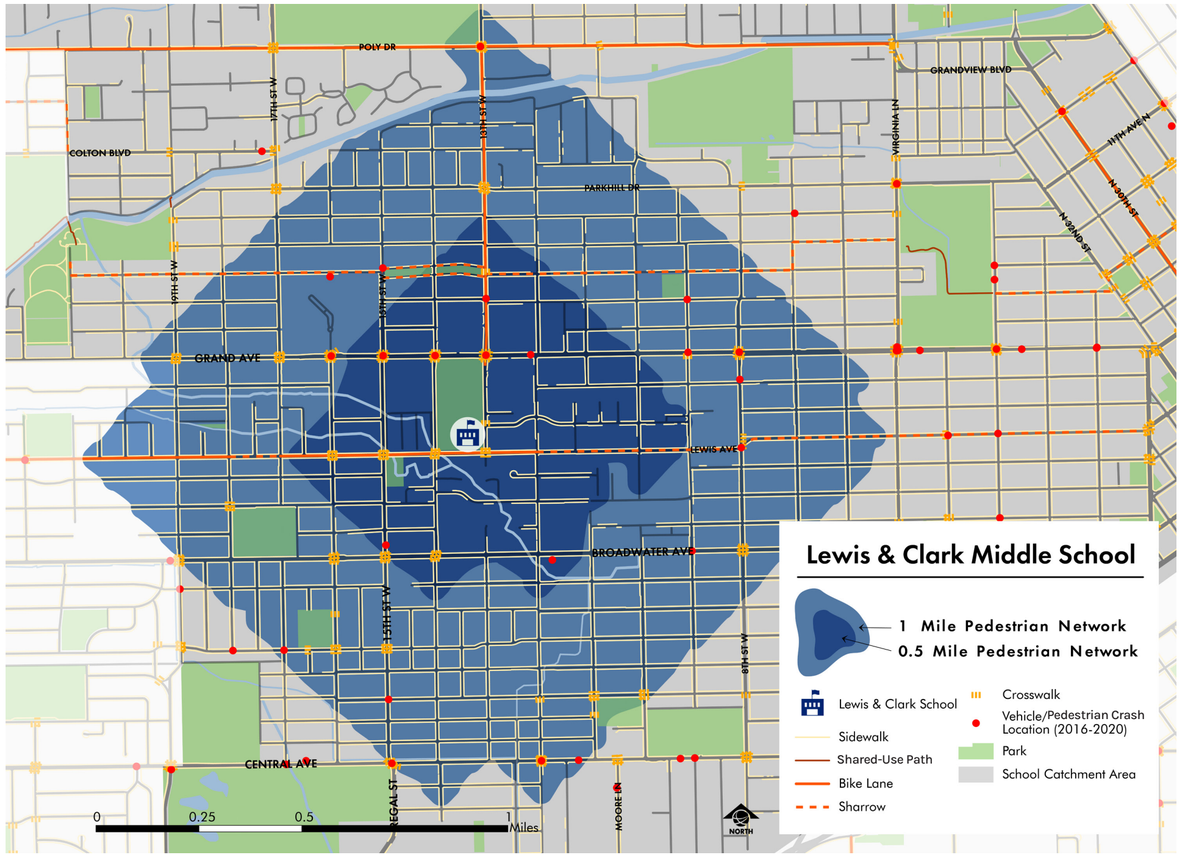
Lewis & Clark Middle School



Existing Conditions at Lewis & Clark Middle School

ABOUT THE SCHOOL	
Address	1315 Lewis Ave, Billings, MT 59102
Number of Students (Grade Levels)	685 (6-8)
% of Students Eligible for Free & Reduced Lunch	50%
Arrival/Dismissal Times	8:10 AM / 3:10 PM

MAJOR STREETS & HIGHWAYS	AADT
Lewis Ave.	6,100
Grand Ave.	22,630
14th St. W.	5,800
13th St. W.	4,460



Community Safety Concerns at Lewis & Clark Middle School

SOURCE OF CONCERN	SAFETY CONCERN OF COMMENT
Principal	› Traffic congestion on 13th St. W. and 14th St. W. St during pick up and drop off. › Vehicles do not yield to students using the crossing at Burlington Ave. and 13th St. W.
Staff	› Lack of clear wayfinding for students. › Lack of crossing guards at intersections. › Unsafe crossings at Lewis and 8th.
Webmap Survey (25 comments)	› Speeding vehicles, quick left-turning vehicle movements, and low-visibility crosswalks at the intersection of 13th St. W. and Lewis Ave. create hazards for student crossings. › Long distances between crossings on Lewis Ave. › Several comments reporting that the intersection of Lewis Ave. and 8th St. W. is “one of the most dangerous intersections in the whole neighborhood,” with high student and vehicle volumes. › Lane widths on 8th St. W. are overly wide, encourage speeding, and make crossings dangerous. › Parked vehicles obstruct the visibility of crossing students on Lewis Ave. near the school. › Some sidewalks are in poor condition and are not ADA compliant along 13th St. W. › The intersection of Grand Ave. & 13th St. W. handles higher volumes of both vehicular and student walking and biking traffic, reports of vehicles speeding. Faded crosswalk markings. › Speeding vehicles, obstructed sidewalks and poor bicycle lane markings on 13th St. W. creates hazard for students walking and biking. › The intersection of Grand Ave. & 14th St. W. handles high volumes of both vehicular and student walking and biking traffic where vehicles speed and cross walks are poorly marked.
Safety Busing	› No safety busing is provided.

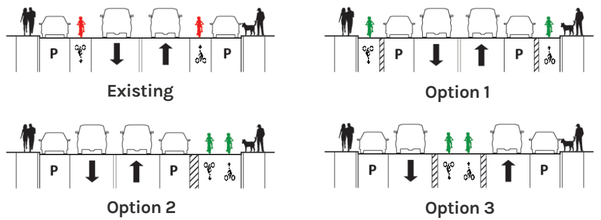
Arrival Observations at Lewis & Clark Middle School: April 27th, 2023

OBSERVATION TYPE	OBSERVATIONS
Busing	› A large number of students got off the MET bus at 15th St. W. and Lewis Ave.
Vehicles	› Private vehicles dropped students off in the northbound parking lane of 14th St. W. › Numerous vehicles appeared to exceed the posted speed limit, red light running was observed, and drop off occurred in bicycle lanes at the intersection of Lewis Ave. & 14th St. W. › Students dropped off in Lewis Ave. westbound parking lane navigate through parking lot and main entry loop to main entry without dedicated walking path. › Vehicles stack on 14th St. W. while waiting to make east-bound left onto Lewis Ave. › Vehicles appeared to exceed the posted speed limit at Lewis and 13th St. W › Vehicles blocking the crosswalk at 13th St. W. attempting to turn left onto Lewis Ave. › Vehicles observed making unpredictable, sudden motions in school zone.
School Staff Roles	› Staff received students at the school entries.
Adult Crossing Guards	› A crossing guard is posted at the intersection of Burlington Ave. & 13th St. W.
Students Walking and Biking	› Students were observed walking and biking from all directions.

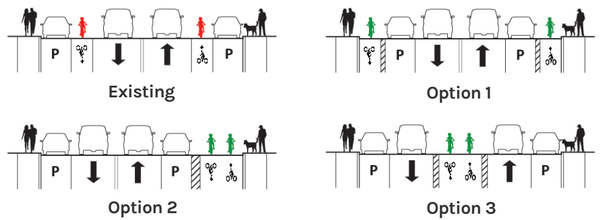
Priority Concerns at Lewis & Clark Middle School

#	LOCATION	OBSERVATIONS	COMMUNITY COMMENTS?
1	Area Surrounding Lewis & Clark	› No school zone exists in the area surrounding Lewis & Clark.	Yes
2	Lewis Ave.	› Although there have been no documented crashes between 9th St. W. and 19th St. W. (2016-2020) on Lewis Ave., the bike lanes along Lewis Ave. are unprotected and positioned next to the vehicular travel lane, which reduces the visual friction and traffic calming benefits that the on-street parking would otherwise provide. See Section 4.1.4 for more information. › Vehicles appear to exceed the posted speed limit of 25 mph on Lewis Ave. and several comments were received reporting apparent speeding. › Sidewalks in many locations along Lewis Ave. are spalled and obstructed by trash cans. › Observed red light running at the intersection of Lewis Ave. & 14th St. W. › Faded crosswalk markings on all legs of the intersection of Lewis Ave. & 14th St. W.	Yes
4	15th St. W.	› Higher vehicle speeds and volumes, higher student walking and bicycling volumes. › Relatively wide travel lanes. › Faded crosswalk markings.	No
5	8th St. W.	› Relatively wide street and travel lanes encourage speeding. › Vehicles appear to exceed the posted speed limit of 25 mph on 8th St. W. and several comments were received reporting apparent speeding. › Unmarked crosswalks on all legs of the intersection of Lewis Ave. and 8th St. W. › Misaligned roadways at the intersection of Lewis Ave. and 8th St. W.	Yes
6	Broadway & 14th St. W.	› Faded crosswalk markings on all legs of this intersection.	No
7	Main Entry, Lewis Ave.	› No direct, well-marked, ADA compliant route exists from Lewis Ave. through the parking lot to the main building entry.	Yes
8	Ave. D	› No ADA compliant curb ramps exist at the intersections of Ave. D and 12th and 11th St. W.	No

Proposed Projects at Lewis & Clark Middle School *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
1	Area Surrounding Lewis & Clark	School Speed Zone	› No school zone exists in the area surrounding Lewis & Clark.	1	› Study and establish a school zone surrounding the school in compliance with MUTCD standards and an updated School Zone Traffic Control Policy per programmatic recommendation 2.1. › Design the streets within the school zone to a speed limit that provides for the safety and access of children walking and biking to school.	4.4.1 4.1.4	City	$522,500
2	Lewis Ave.	Speeding/ Bicycling/ Crossing	› The bike lanes along Lewis Ave. are unprotected and positioned next to the vehicular travel lane, which reduces the visual friction and traffic calming benefits that the on-street parking would otherwise provide. See Section 4.1.4 for more information. › Vehicles appear to exceed the posted speed limit of 25 mph on Lewis Ave. and several comments were received reporting apparent speeding. › Sidewalks in many locations along Lewis Ave. are spalled and obstructed by trash cans. › Observed red light running at the intersection of Lewis Ave. & 14th St. W. › Faded crosswalk markings on all legs of the intersection of Lewis Ave. & 14th St. W.	2	› Reconfigure Lewis Ave. to install a protected bicycle facility from 8th St. W to 24th St. W. Public input required.  › Repair spalled sidewalk surfaces and install curb ramps where missing. Install missing sidewalk from 8th St. W. to 9th St. W. › Coordinate with Billings Solid Waste to collect all bins from alleys where possible and encourage residents to place bins in appropriate locations. › Design the street to a speed limit that provides for the safety and access of children walking and biking to school. › Study and install advanced traffic control signals, high-visibility crosswalks and curb extensions at Lewis Ave. & 13th St. W. › Study and install high-visibility crosswalks and curb extensions at Lewis Ave. & 14th St. W. › Coordinate with SD2 and BPD to enforce parking restrictions along Lewis Ave. at the school or install curb extensions at critical locations.	4.2.5, 4.2.6, 4.2.7 4.2.1, 4.3.3 4.2.2, 4.2.4, 4.2.7, 4.2.8, 4.3.1, 4.3.2, 4.2.7, 4.3.1, 4.3.2 4.2.7, 4.3.1, 4.3.2, 4.3.3 4.3.1	City	$963,500

Proposed Projects at Lewis & Clark Middle School *(Continued across to next page)*

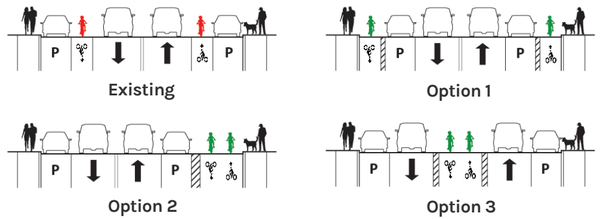
#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
3	13th St. W.	Speeding/ Bicycling/ Crossing/ Congestion	› The bike lanes along 13th St. W. are unprotected and positioned next to the vehicular travel lane, which reduces the visual friction and traffic calming benefits that the on-street parking would otherwise provide. See Section 4.1.4 for more information. › Higher vehicle speeds and volumes, higher student walking and biking volumes, › Relatively wide travel lanes encourage speeding. › Faded crosswalk marking and bike lane markings. › Unmarked or faded crosswalks at the intersection of Grand Ave. & 13th St. W. › Vehicles fail to yield to students in the crosswalk at 13th St. W. & Burlington Ave. › Stacking and quick, unpredictable vehicle movements at the intersection of Lewis Ave. and 13th St. W. › Parked vehicles obstruct the visibility of students in the crosswalk of Lewis Ave. and 13th St. W. › Faded crosswalk markings at the intersection of Lewis Ave. and 13th St. W.	3	› Reconfigure 13th St. W. to install a protected bicycle facility from Rimrock Rd. to Lewis Ave. Public input required.  › Study and install high-visibility crosswalks on all legs of the intersection of Grand Ave. & 13th St. W. › Study and install curb extensions, high visibility crosswalk, and advanced traffic control signal at the intersection of 13th St. W. and Burlington Ave.	4.2.5, 4.2.7 4.2.7, 4.3.1, 4.3.2, 4.3.3 4.2.7, 4.3.1, 4.3.2, 4.3.3, 4.5.4	City	$255,000

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects at Lewis & Clark Middle School *(Continued across to next page)*

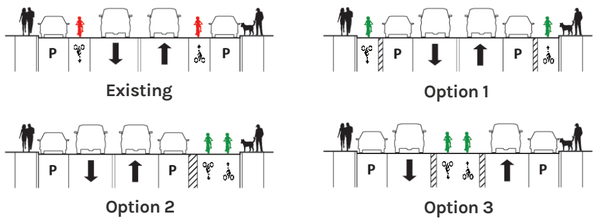
#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
4	15th St. W.	Speeding/ Bicycling/ Crossing/ ADA Compliance	› Higher vehicle speeds and volumes, higher student walking and bicycling volumes. › Relatively wide travel lanes. › Faded crosswalk markings.	4	› Reconfigure 15th St. W to install a protected bicycle facility froms from Lewis Ave. to Central Ave. Public input required.  › Study and install high-visibility crosswalks on all legs of the intersection of Broadwater Ave. & 15th St. W. › Install ADA compliant curb ramps where missing from Lewis Ave. to Central Ave.	4.2.5, 4.2.7 4.3.2 4.3.3	City	$209,500

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects at Lewis & Clark Middle School *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
5	8th St. W.	Speeding/ Bicycling/ Crossing	› Relatively wide street and travel lanes encourage speeding. › Vehicles appear to exceed the posted speed limit of 25 mph on 8th St. W and several comments were received reporting apparent speeding. › Unmarked crosswalks on all legs of the intersection of Lewis Ave. and 8th St. W. › Misaligned roadways at the intersection of Lewis Ave. and 8th St. W.	5	› Reconfigure 8th St. W. to install a protected bicycle facility from Parkhill Dr. to Central Ave. Public input required.  › Design of the intersection of 8th St. W. and Lewis Ave. to calm traffic and provide for the safety of students walking and bicycling to school. › Study and install curb extensions, high visibility crosswalks, and advanced traffic control signals on all legs of the intersection of Parkhill Dr. & 8th St. W.	4.2.3, 4.2.5, 4.2.7 4.2.7, 4.3.1, 4.3.2, 4.3.3 4.2.7, 4.3.1, 4.3.2, 4.3.3	City	$584,500

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects at Lewis & Clark Middle School *(Continued across to next page)*

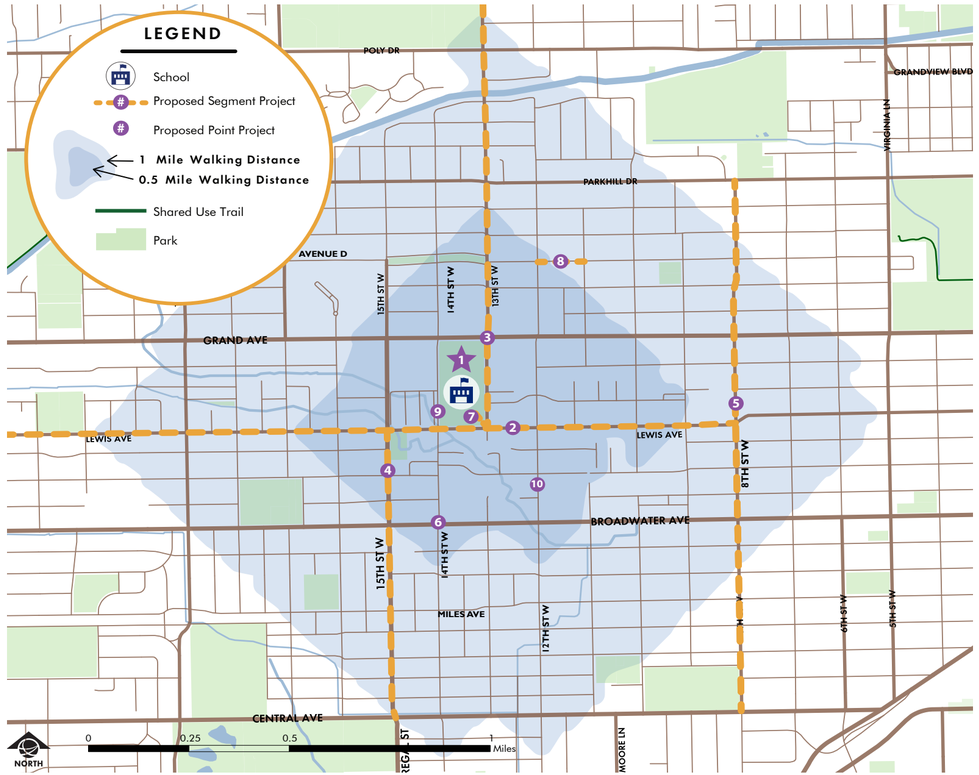
#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
6	Broadwater & 14th St. W.	Crossing	› Faded crosswalk markings on all legs of this intersection.	6	› Install high visibility crosswalks on all legs of this intersection.	4.3.1, 4.3.2	City	$13,000
7	Main Entry, Lewis Ave.	ADA Compliance	› No direct, well-marked, ADA compliant route exists from Lewis Ave. through the parking lot to the main building entry.	7	› Install a direct, well-marked, ADA compliant route from Lewis Ave. though the parking lot, to the main entry.	4.3.3	School	$14,500
8	Ave. D	ADA Compliance	› No ADA compliant curb ramps exist at the intersections of Ave. D and 12th and 11th St. W.	8	› Install ADA compliant curb ramps on all corners of the intersections of Ave. D & 11th and 12th St. W.	4.3.3	City	$26,000
9	14th St. W.	Congestion	› Illegally parked vehicles on 14th St. W. during arrival and dismissal.	9	› Coordinate with SD2 and BPD to enforce parking restrictions along 14th St. W at the school or install curb extensions at critical locations.	4.3.1	City	$17,000
10	Area Surrounding Lewis & Clark	Missing sidewalks	› Missing sidewalks.	10	› Install missing sidewalk segments at: › 12th St. W. from Yellowstone Ave. to Parkhill Dr. › Public through streets between Broadwater Ave, Lewis Ave, 9th St. W. and 15th St. W. › Clark from 8th St. W. to 9th St. W. › 10th St. W. from Yellowstone Ave. to Parkhill Dr. › 9th St. W. from Wyoming Ave. to Lewis Ave.	4.2.1	City	$520,000
11	Broadwater & 12th St. W.	Crossing	› The nearest marked crossings on Broadwater Ave. are 1,200 to the west and 2,500 feet to the east.	11	› Study and install a high visibility crosswalk at the intersection of Broadwater Ave. and 12th St. W. to serve students living south of Broadwater Ave. Study whether to include curb extensions, advanced traffic control signals, or a pedestrian refuge island.	4.3.1, 4.3.2, 4.3.4, 4.5.1, 4.5.5	City	$422,500

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects Map at Lewis & Clark Middle School



This Page Intentionally Left Blank

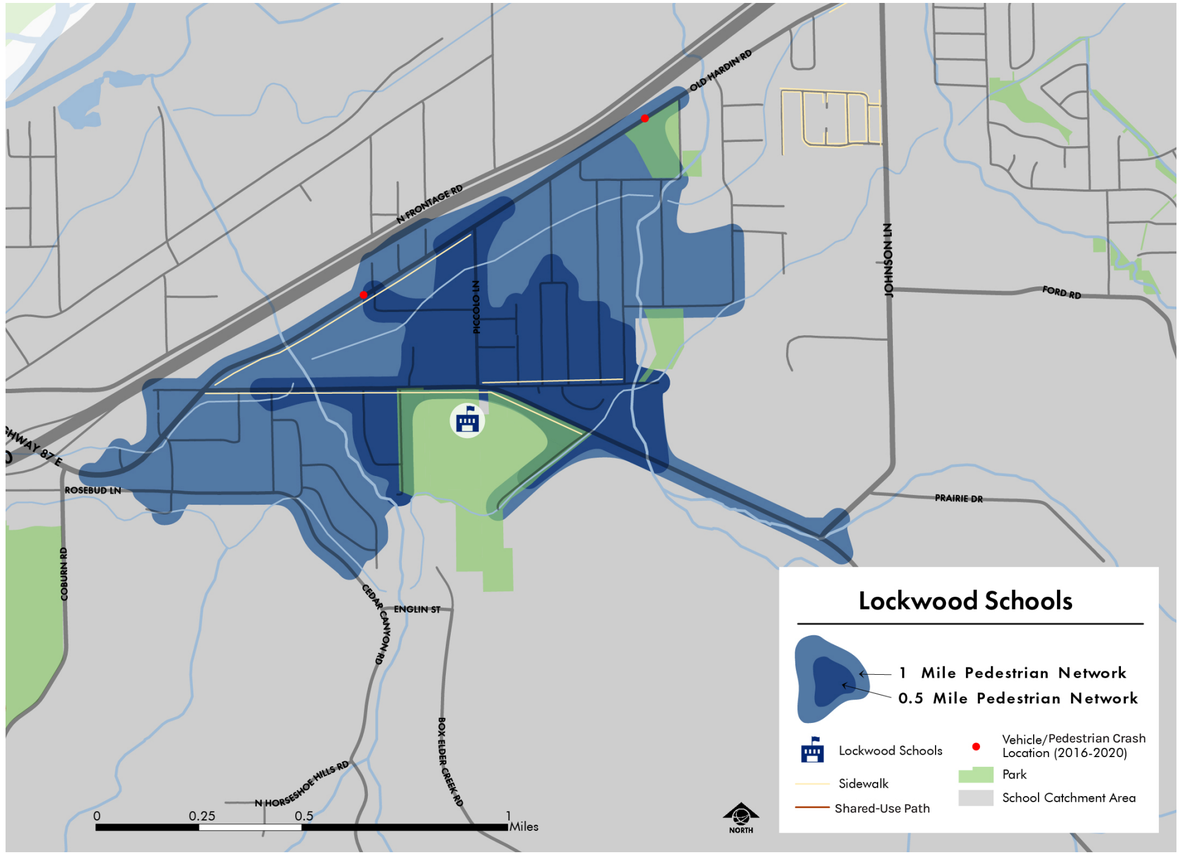
Lockwood Schools



Existing Conditions at Lockwood Schools

ABOUT THE SCHOOL	
Address	1932 U.S. Hwy 87 E, Billings, MT 59101
Number of Students (Grade Levels)	617 (K-8)
% of Students Eligible for Free & Reduced Lunch	46%
Arrival/Dismissal Times	8:00 AM / 2:00 PM (k-2) 8:00 AM / 3:00 PM (3-5) 9:00 AM / 3:55 PM (6-12)

MAJOR STREETS & HIGHWAYS	AADT
Hwy 87 E	5,570
Piccolo	880



Community Safety Concerns at Lockwood Schools

SOURCE OF CONCERN	SAFETY CONCERN OF COMMENT
Principal	› Missing sidewalks in the area surrounding Lockwood Schools campus.
Webmap Survey (10 comments)	› Missing sidewalks on Johnson Ln. › Piccolo Ln. is major student route. › Missing sidewalks and speeding vehicles on neighborhood streets north of Lockwood Schools campus. › Safety/ CPTED concerns on Hillner Ln. › Vehicle congestion during pick up and drop off on Hwy 87. › Vehicles do not comply with stop signs at the intersection of Hwy 87 E & Old Hardin Rd. › Missing sidewalks along Old US 87 to serve students walking from Eastgate neighborhood.
Crossing Guard	› Crossing guard at Piccolo Ln. and Old US 87 reports that a dog in the neighborhood north of Lockwood School may have bitten several students.

Arrival Observations at Lockwood Schools: April 24th, 2023

OBSERVATION TYPE	OBSERVATIONS
Vehicles	› Private vehicle drop off occurred in the loops off Old US 87 E and Peters St. › Some vehicle drop off in the Primary School lot occurred in the parking lot stalls, requiring students to walk through the lot and drop off lane, where no marked walking route exists. › Apparent high vehicle volume and speeds on Piccolo Ln. › Congested vehicle traffic on Old US 87 E at front drop off loop during peak drop off times. › Vehicles waiting to access Old US 87 E stack on Peters St. to primary school parking lot access. › Many vehicles on Old US 87 E appeared not to reduce speed at flashing school zone sign. › Vehicle failed to yield to student in crosswalk at Old US 87 E and Rock Hill Dr. › Vehicles moved through the slip lane crosswalk at Old Hardin Rd. & Hwy 87 E at high speed.
School Staff Roles	› Staff received students at the elementary and middle school entrances off Old US 87 E and Peters St.
Adult Crossing Guards	› A crossing guard was posted at the crosswalk on Old US 87 E & Piccolo Ln.
Students Walking and Biking	› Many students were observed walking and bicycling from the north and using the crosswalk at Old US 87 E. and Piccolo Ln. › Many children were observed walking in the street on Piccolo Ln. where no safe walking or bicycling route exists. › Children were observed running through the slip lane at Old Hardin Rd. & Hwy 87 E without activating the beacon.

Priority Concerns at Lockwood Schools

#	LOCATION	OBSERVATIONS	COMMUNITY COMMENTS?
1	Area surrounding Lockwood Schools	› Inconsistently located School Zone signage.	Yes
2	Piccolo Ln.	› Piccolo Ln. is a well-used route for both vehicles and students walking and biking. › Piccolo Ln. has no sidewalks or lighting.	Yes
3	Old US 87 E	› Missing sidewalk on segment of Old US 87 E near front of school. › Missing sidewalk on segment of Old US 87 E west of Old Hardin Rd. › Old US 87 has few marked crossing locations. The distance between the crosswalk at Old Hardin Rd. and the crosswalk at Piccolo Ln. is over 3,400 feet. › No marked crossings exist east of Piccolo Ln. on Old US 87 E. › Congested vehicle traffic on Old US 87 E at front drop off loop during drop off period.	Yes
4	Hillner Ln.	› Hillner Ln. has no marked crossings. › Hillner Ln. has no lighting. CPTED concerns. › Overgrown vegetation obstructs the sidewalk.	Yes
5	Primary School entry	› No direct, ADA compliant route exists from Old US 87 E to the primary school entry. › No marked route exists through the primary school parking lot to the main entry.	No
6	Sunrise Ave. / Johnson Ln.	› Students living in the Johnson Ln. neighborhood have no safe walking or biking route to school.	No
7	Stonehaven Tr.	› Staff and parents report students using Stonehaven Tr. to walk to school from the Hillside Village neighborhood despite lack of legal access between them.	Yes

This Page Intentionally Left Blank

Proposed Projects at Lockwood Schools *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
1	Area surrounding Lockwood Schools	School Speed Zone	› Inconsistently located School Zone signage.	1	› Relocate School Zone signage surrounding Lockwood schools to comply with MUTCD standards and an updated School Zone Traffic Control Policy per programmatic recommendation 2.1. › Design streets within the school zone to a speed limit that prioritizes the safety and access of children walking and biking to school.	4.4.1 4.1.4	County	$236,500
2	Piccolo Ln.	Speeding/ Traffic/ Sidewalks	› Piccolo Ln. is a well-used route for both vehicles and students walking and biking. › Piccolo Ln. has no sidewalks or lighting.	2	› Study means of calming traffic and creating safe walking and biking routes on Piccolo Ln. From Old Hardin Rd. to Old US 87. Possible solutions may include: acquiring right of way, installing sidewalk, Bicycle Boulevard classification, or woonerf configuration. › Install a high visibility crossing and advanced traffic control signal across Piccolo Ln. at Old US 87 E. › Install a pedestrian waiting area and ADA ramps at the northwest corner or the intersection of Piccolo Ln. & Old US 87 E.	4.1.4, 4.2.1, 4.2.7, 4.2.8, 4.2.9 4.2.7, 4.3.1, 4.3.2, 4.4.3, 4.5.5 4.3.3	County	$464,500
3	Old US 87 E	Speeding/ Traffic/ Sidewalks/ Crossing	› Missing sidewalk segment near front of school. › Missing sidewalk segment west of Old Hardin Rd. › Missing sidewalk segment from school property to Johnson Ln. › Old US 87 has few marked crossing locations. The distance between the crosswalk at Old Hardin Rd. and the crosswalk at Piccolo Ln. is over 3,400 feet. › Congested vehicle traffic on Old US 87 E at front drop off loop during drop off period.	3	› Install high visibility crossings of all side streets along the south side of Old US 87 E from Old Hardin Rd. to Stonehaven Tr. including school parking lot accesses. › Install a high visibility crossing, curb extensions, and advanced traffic control signal across Old US 87 E. at Peters St. › Install ADA ramps at the high school access point from Old US 87 E. › Install sidewalk along the northwest side of Old US 87 from Melody Ln. to Conoco property. › Install sidewalk at missing segment at Piccolo Ln. and Old US 87 E. › Continue shared use path on south side of Old US 87 E. to Johnson Ln.	4.2.2, 4.2.7, 4.3.1, 4.3.2, 4.3.3 4.2.7, 4.3.1, 4.3.2, 4.4.3, 4.5.5 4.3.3 4.2.1, 4.2.7 4.2.1, 4.2.7 4.2.6, 4.2.7	County	$403,500

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility. Projects in Lockwood may need to be coordinated with the Lockwood Pedestrain Safety Committee.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects at Lockwood Schools *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
4	Hillner Ln.	Lighting/ CPTED	› Hillner Ln. has no marked crossings. › Hillner Ln. has no lighting. CPTED concerns reported in public comment. › Overgrown vegetation obstructs the sidewalk.	4	› Install lighting and control vegetation along the sidewalk of Hillner Ln.	4.2.7	County	$58,500
5	Primary School parking lot	Crossing/ Bicycling/ ADA Compliance	› No direct, ADA compliant facility exists from Old US 87 E to the primary school entry. › No marked route exists through the primary school parking lot to the main entry.	5	› Install a direct, well-marked, ADA compliant route from Old US 87 E. through the parking lot, to the main entry of the Primary School.	4.2.7, 4.3.3	School	$16,000
6	Sunrise Ave. / Johnson Ln.	Shared Use Path	› Students living in the Johnson Ln. neighborhood have no safe walking or biking route to school.	6	› Dedicate access from the Johnson Ln. area to Sunrise Ave. per the recommendation of the Lockwood Non-motorized Transportation plan.	4.2.6, 4.2.7	County	$-
7	Stonehaven Tr.	Shared Use Path	› Staff and parents report students using Stonehaven Tr. to walk to school from the Hillside Village neighborhood despite lack of legal access between them.	7	› Acquire a formal access easement or dedication of a shared use path connection from the Hillside Village neighborhood's southern boundary to Lockwood School campus' southern boundary.	4.2.6, 4.2.7	County	$-

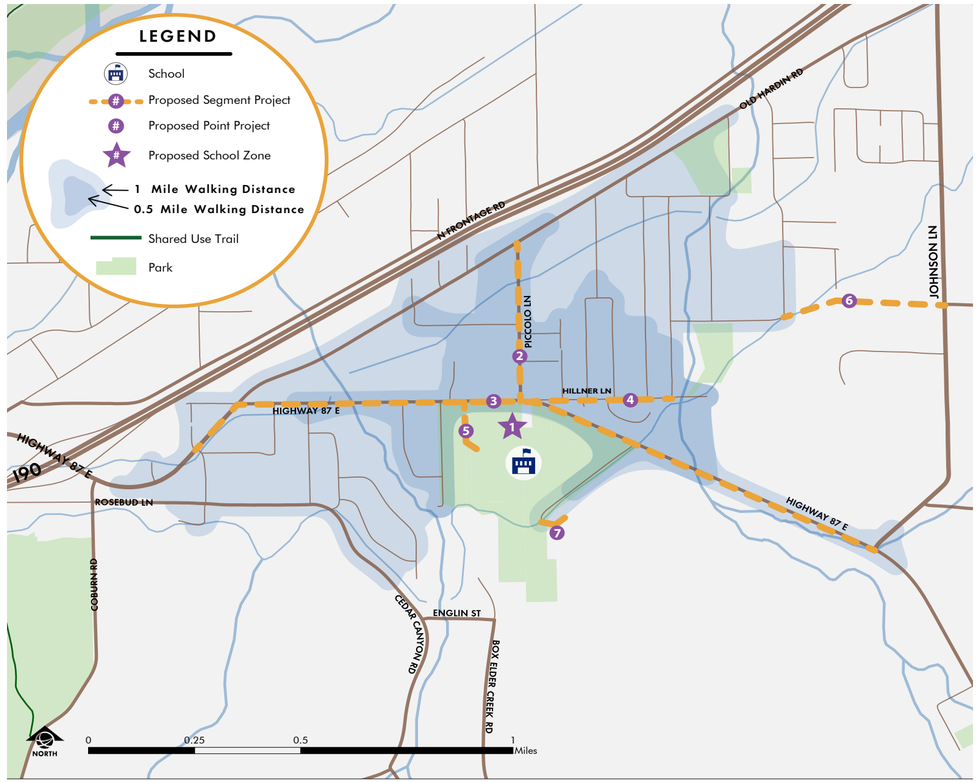
Projects listed here will require coordination with the Lockwood Pedestrian Safety District.

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects Map at Lockwood Schools



This Page Intentionally Left Blank

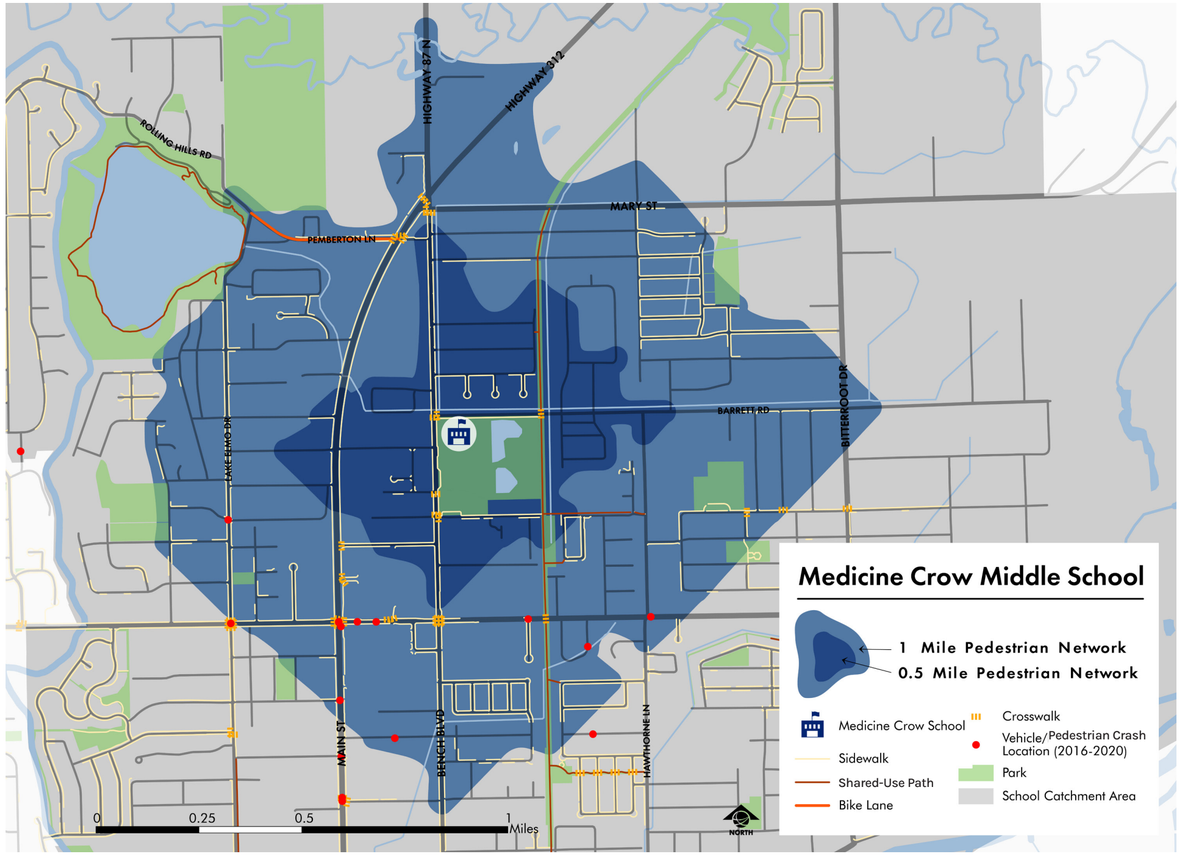
Medicine Crow Middle School



Existing Conditions at Medicine Crow Middle School

ABOUT THE SCHOOL	
Address	900 Barrett Rd, Billings, MT 59105
Number of Students (Grade Levels)	521 (6-8)
% of Students Eligible for Free & Reduced Lunch	55%
Arrival/Dismissal Times	8:10 AM / 3:10 PM

MAJOR STREETS & HIGHWAYS	AADT
Barrett Rd.	1,210
Bench Blvd.	7,090
Hwy 87/ Main St.	17,940



Community Safety Concerns at Medicine Crow Middle School

SOURCE OF CONCERN	SAFETY CONCERN OF COMMENT
Webmap Survey (23 comments)	› Lack of sidewalks and insufficient lighting on Barret Rd. › Insufficient lighting on Bitterroot Rd. › Lack of sidewalks on Wicks Ln. between Bitterroot Dr. & Hawthorne Ln. › Lack of marked crossings at the intersection of Bitterroot Dr. & Wicks Ln. › Lack of Sidewalks on Hawthorne Ln. › Insufficient lighting on Hawthorne Ln. › Intersection of Maurine St. & Primrose Dr. is a common student route, has bus stop for Skyview, is uncontrolled and vehicles do not yield to students. › High vehicle volumes, high student walking and biking volumes at Hawthorne Ln. & Kyhl Ln.
Crossing Guard	› Bitterroot Elementary Crossing guard posted at Wicks Ln. & Kiwanis Shared Use Path crossing reports: › Speeding vehicles › Vehicles fail to yield to students in crosswalk › Vehicles do not stop at bus stops › Insufficient lighting at crossing › Fences on adjacent properties obstruct view of students approaching crossing.
Safety Busing	› Safety busing is provided to students living west of Main St.

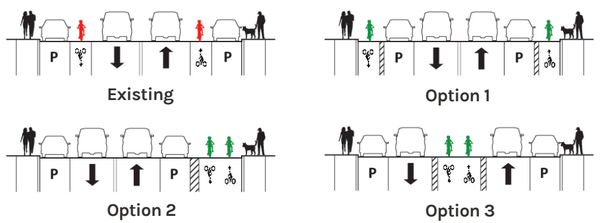
Arrival Observations at Medicine Crow Middle School: May 2nd, 2023

OBSERVATION TYPE	OBSERVATIONS
Busing	› Buses dropped students off in the loop at the northeast corner of the school site.
Vehicles	› Private vehicle drop off was observed in the two drop off loops on Barret Rd. as well as in the parking lanes of both Barret Rd. and Bench Blvd. › Barret Rd. was under construction at time of observation. Re-constructed segment is planned to include sidewalks.
School Staff Roles	› No staff were observed during the arrival period.
Adult Crossing Guards	› A crossing guard from Bitterroot Elementary is posted at the Wicks Ln. crossing of the Kiwanis shared use path, which is also a common route for Medicine Crow students.
Students Walking and Biking	› Many students were observed walking and biking to school along the Kiwanis shared use path.

Priority Concerns at Medicine Crow Middle School

#	LOCATION	OBSERVATIONS	COMMUNITY COMMENTS?
1	Area Surrounding Medicine Crow	› Inconsistently located School Zone signage.	No
2	Main St. from Pemberton Ln. to Wicks Ln.	› There are no marked crossings on Main St. from Pemberton Ln. to Wicks Ln. a distance of over 5,000 feet. › Faded crosswalk markings at Pemberton Ln. and Wicks Ln. › The posted speed limit on Main St. is 45 mph.	No
3	Bench Blvd. From Wicks Ln. to Pemberton Ln.	› Faded crosswalk markings throughout.	No
4	Hawthorne Ln.	› Many segments have no walking or biking infrastructure. › Insufficient lighting. › Faded crosswalk markings at Hawthorne Ln. & Barrett Rd. › Faded or unmarked crossings at Wicks Ln. Hawthorne Ln.	Yes
5	Cherry Creek Neighborhood	› Students living in the Cherry Creek neighborhood have no continuous walking or biking facilities on any route to school.	Yes
6	Maurine St. & Primrose Dr.	› Intersection of Maurine St. & Primrose Dr. is a common student route. › A bus stop for Skyview High exists at this intersection. › The intersection is uncontrolled, with reports of vehicles which do not yield to students.	Yes
7	Bitterroot Dr.	› No walking or biking facilities exists from Elaine St. to Barrett Rd. › Insufficient lighting. › Faded or unmarked crossings at the intersection of Wicks Ln. & Bitterroot Dr.	Yes
8	Pemberton Ln.	› There are no marked crossings on Main St. from Pemberton Ln. to Wicks Ln. a distance of over 5,000 feet. › Pemberton Ln. west of Main St. has no continuous sidewalk on either side.	No

Proposed Projects at Medicine Crow Middle School *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
1	Area Surrounding Medicine Crow	School Speed Zone	› Inconsistently located School Zone signage.	1	› Relocate School Zone and School Speed Zone signage surrounding Medicine Crow in accordance with MUTCD standards and an updated School Zone Traffic Control Policy per programmatic recommendation 2.1. › Design streets within the school zone to a speed limit that provides for the safety and access of children walking and biking to school.	4.4.1 4.1.4	City	$178,000
2	Jerrie Ln. / Key City Dr.	Crossing/ Bicycling	› Conditions on Main St. prevent students living west of Main St. from walking or biking to school. › There are no marked crossings on Main St. from Pemberton Ln. to Wicks Ln. a distance of over 5,000 feet. › Faded crosswalk markings at Pemberton Ln. to Wicks Ln. › The posted speed limit on Main St. is 45 mph.	2	› Coordinate with MDT to study and install high visibility crossing and advanced traffic control signal at Main St. & Jerrie Ln. › Design Jerrie Ln. and Key City Dr. to a speed limit that prioritizes the safety and access of children walking and biking within the school zone. Public input required. › Install sidewalks along the Jerrie Ln. and Key City Dr. › Install a protected bike facility on Lake Elmo Dr. from Meadowlark Ln. to Jerrie Ln. Public input required.  › When the subdivision to the east of the BBWA develops, study and install a shared-use bridge of minimum 14 feet width to give students living west of the BBWA access to the crossing at Main St. and Jerrie Ln.	4.2.7, 4.3.2, 4.3.3, 4.3.4, 4.4.3, 4.5.5 4.2.1, 4.2.2, 4.2.4, 4.2.7, 4.2.8, 4.3.1 4.2.1, 4.2.7 4.2.5, 4.2.7 4.2.7, 4.3.5	City/ Land Owner	$967,000

Proposed Projects at Medicine Crow Middle School *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
3	Bench Blvd.	Crossing	› Faded crosswalk markings on Bench Blvd. from Wicks Ln. to Pemberton Ln.	3	› Study and install high visibility crossings on Bench Blvd. at: › Pemberton Ln. / Christ Dr. › Barrett Rd. › Kyhl Ln. › Lynch Dr. › Wicks Ln.	4.2.7, 4.3.1, 4.3.2, 4.3.4, 4.4.3, 4.5.4	City	$16,500
4	Hawthorne Ln.	Crossing/ Sidewalks/ Lighting	› No walking or biking infrastructure exists on segments of Hawthorne Ln. › Insufficient lighting. › Faded crosswalk markings at Hawthorne Ln. & Barrett Rd.	4	› Coordinate with county to install boulevard sidewalk and street lights along Hawthorne Ln. as right-of-way and funding allows. › Study the feasibility of dedicating right-of-way along this corridor to accommodate boulevard sidewalk. › Construct the intersection of Hawthorne Ln. & Barrett Rd. to prioritize the safety of students walking and biking to school. › Study and Install an advance traffic control signal at Hawthorne Ln. & Kyhl Ln.	4.2.1, 4.2.7 4.2.7, 4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.5.1, 4.5.2, 4.5.3 4.2.7, 4.5.5	City/ County	$689,500
5	Victory Ave.	Shared Use Path	› Students living in the Cherry Creek neighborhood have no continuous walking or biking facilities on any route to school.	5	› Design Victory Ln. from the Kiwanis Trail to Hawthorne Ln. to a speed limit that provides for the safety and access of children walking and biking to school. › Acquire right of way from the intersection of Victory Ave. & Hawthorne Ln. to the shared-use path behind Tania Cir. › Study and install a high visibility crosswalk across Hawthorne Ln. at Victory Ave. › Study and install a high visibility crosswalk across Bitterroot Dr. at the shared use path between Wicks Ln. and Anchor Ave.	4.2.2, 4.2.7, 4.2.8, 4.3.1, 4.2.6, 4.2.7 4.2.7, 4.3.2, 4.4.3, 4.5.5 4.2.7, 4.3.2, 4.4.3, 4.5.5	City/ Developer	$58,500

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects at Medicine Crow Middle School *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUE
6	Maurine St. & Primrose Dr.	Crossing	› Intersection of Maurine St. & Primrose Dr. is a common student route. › A bus stop for Skyview High exists at this intersection. › The intersection is uncontrolled, with reports of vehicles which do not yield to students.
7	Bitterroot Dr.	Sidewalks/ Lighting	› No walking or biking facilities exists from Elaine St. to Barrett Rd. › Insufficient lighting. › Faded or unmarked crossings at the intersection of Wicks Ln. & Bitterroot Dr.
8	Pemberton Ln.	Sidewalks/ Lighting	› There are no marked crossings on Main St. from Pemberton Ln. to Wicks Ln. a distance of over 5,000 feet. › Pemberton Ln. West of Main St. has no continuous sidewalk on either side.

Proposed Projects at Medicine Crow Middle School

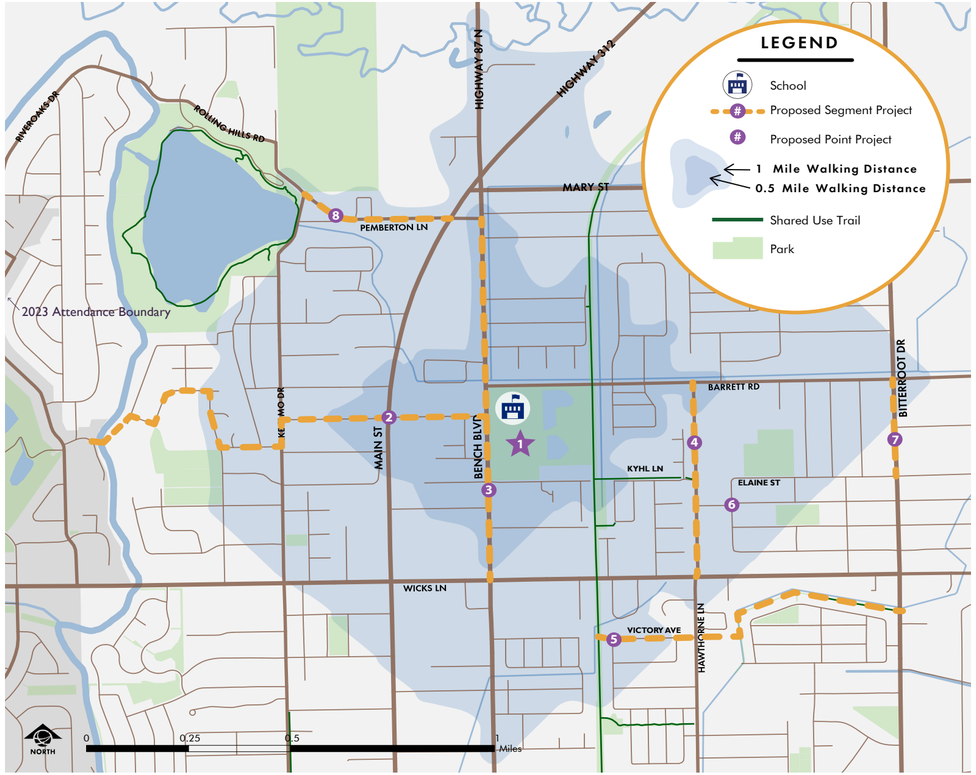
#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
6	› Reconfigure intersection to prioritize the safety of students walking and biking to school.	4.2.2, 4.2.4, 4.2.7, 4.3.1, 4.3.2	City	$23,500
7	› Coordinate with County to install boulevard sidewalk and street lights along Bitterroot Dr. from Elaine St. to Barrett Rd. › Study the feasibility of dedicating right-of-way along this corridor to accommodate boulevard sidewalk.	4.2.1, 4.2.6, 4.2.7 4.3.2	City	$274,000
8	› Install missing sidewalk to achieve a continuous facility on at least one side of the street from Main St. to Lake Elmo Dr. › Study and install high visibility crossings at the intersection of Hwy 87/ Main St. & Pemberton Ln. Coordination with MDT required. The US 87/Main Street intersection will be relocated/reconstructed with the Billings Bypass project.	4.2.1, 4.2.6, 4.2.7 4.3.2	City	$139,000

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

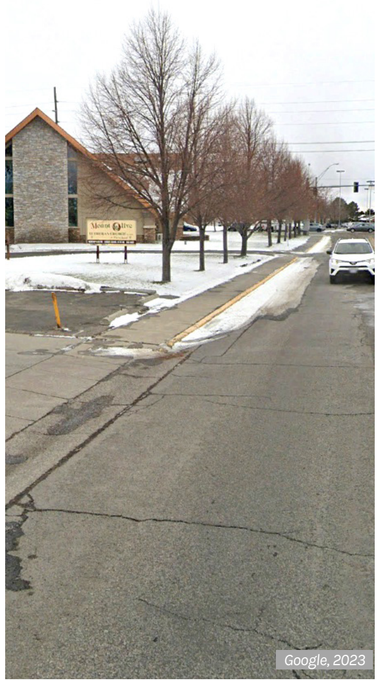
Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects Map at Medicine Crow Middle School



This Page Intentionally Left Blank

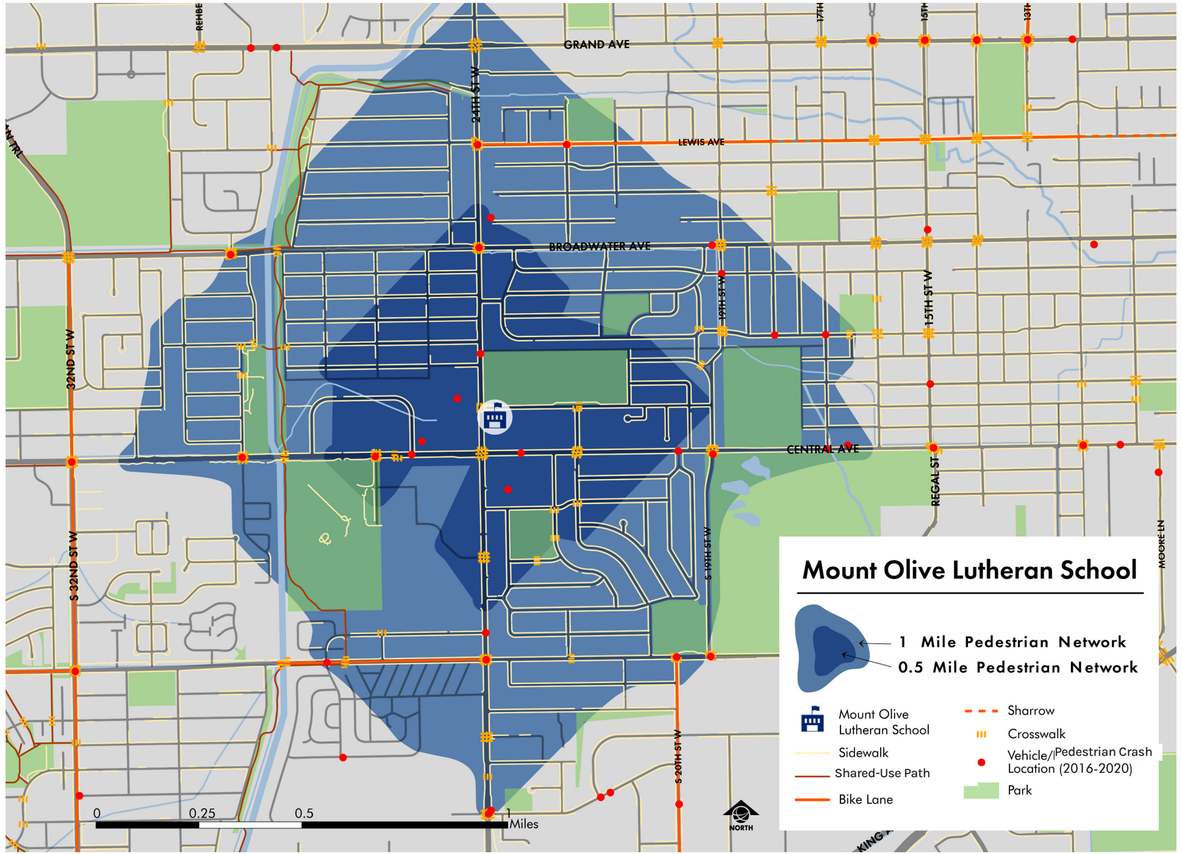
Mount Olive Lutheran School



Existing Conditions at Mount Olive Lutheran School

ABOUT THE SCHOOL	
Address	2336 St Johns Ave, Billings, MT 59102
Number of Students (Grade Levels)	67 (PK-5)
% of Students Eligible for Free & Reduced Lunch	59%
Arrival/Dismissal Times	8:10 AM / 11:30 AM (pre-k) 8:10 AM / 3:45 PM (1-5)

MAJOR STREETS & HIGHWAYS	AADT
24th St. W.	21,280
Central Ave.	16,400



Community Safety Concerns at Mount Olive Lutheran School

SOURCE OF CONCERN	SAFETY CONCERN OF COMMENT
Principal	› The intersection of Central Ave. & 24th St. W. has high vehicle and student walking traffic volumes and is one of the most dangerous intersections in Billings. › Curb walk along Central Ave. puts walking students very close to high speed vehicle traffic. › Short crossing times and poorly marked crosswalks at the intersection of Central Ave. & Santa Fe Dr. make that intersection hazardous. › Students from West High use Mount Olive campus to access restaurants on Central Ave. This leads to CPTED concerns, with several fights known to have occurred on church property.
Webmap Survey (9 comments)	› Curb walk along 24th St. W. puts walking students very close to high speed vehicle traffic. › Lack of safe bicycle routes on surrounding streets. › Missing safe walking or biking routes through parking lot in commercial development west of the intersection at 24th St. W. and St. Johns Ave.

Arrival Observations at Mount Olive Lutheran School: May 17th, 2023

OBSERVATION TYPE	OBSERVATIONS
Busing	› No bus drop off was observed.
Vehicles	› Vehicle drop off occurred in the parking lot and drop off loop on site. No visible spike in Mount Olive drop off occurred during the arrival period.
School Staff Roles	› Staff were not observed to have any role during the arrival period.
Adult Crossing Guards	› No crossing guards were observed.
Students Walking and Biking	› No students were observed walking or biking to school.

Priority Concerns at Mount Olive Lutheran School

#	LOCATION	OBSERVATIONS	COMMUNITY COMMENTS?
1	Area surrounding Mount Olive Lutheran	› No School Zone exists in the area surrounding Mount Olive Lutheran.	Yes
2	St. Johns Ave.	› Higher vehicle traffic volumes and speeds during arrival and dismissal at neighboring West High School. › The distance between marked crossings on St. Johns Ave. is about 1,200 feet. This causes high volumes of student traffic from West High to cross St. Johns Ave. outside of crosswalks. › No parking strip along church side of St. John's effectively widens travel lane and encourages speeding. › Unmarked crossings, faded crosswalk markings and wide travel lanes which encourage speeding create hazard for students walking or biking to school.	Yes
3	Mt. Olive Lutheran campus	› Higher vehicle and student walking traffic volumes, red light running, and conflicting vehicle and walking motions, observed. › Faded crosswalk markings, on all legs of this intersection. › Relatively wide travel lanes encourage speeding.	Yes
4	St. Johns Ave. & 24th St. W.	› High vehicle and student walking traffic volumes, faded crosswalk markings, red light running, conflicting vehicle and walking motions, and wide travel lanes make the intersection of 24th and St. Johns Ave. hazardous for students walking to school.	Yes
5	Central Ave. & 24th St. W.	› Long crossing distances and faded crosswalk markings on all legs of this intersection make it hazardous for students walking or biking to school.	Yes
6	Miles Ave.	› Missing curb ramps at Miles Avenue's intersections with Glen Dr. and Nelson Dr.	No
7	Berthound Ave.	› Missing curb ramps at Berthound Drive's intersections with Beloit Dr. and Monad Rd.	No

Proposed Projects at Mount Olive Lutheran School *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
1	Area surrounding Mount Olive Lutheran	School Speed Zone	› No School Zone exists in the area surrounding Mount Oliver Lutheran.	1	› Study and establish a School Zone and School Speed Zone surrounding Mount Olive in accordance with MUTCD standards and an updated School Zone Traffic Control Policy per programmatic recommendation 2.1. › Design streets within the school zone to a speed limit that provides for the safety and access of children walking and biking to school.	4.4.1 4.1.4	City	$84,500
2	St. Johns Ave.	Speeding/ Crossing/ ADA Compliance	› Higher vehicle traffic volumes and speeds during arrival and dismissal at neighboring West High School. › The distance between marked crossings on St. Johns Ave. is about 1,200 feet. This causes high volumes of pedestrian traffic to cross St. Johns Ave. outside of crosswalks. › No parking strip along church side of St. John's effectively widens travel lane and encourages speeding. › Unmarked crossings, faded crosswalk markings and wide travel lanes which encourage speeding at the intersection of St. Johns Ave. & Santa Fe Dr. › Missing curb ramps at the intersection of St. Johns Ave. and 21st St. W.	2	› Study and install curb extensions, a high visibility crossing, and advanced traffic control signal at the eastern access to the West High student parking lot to calm traffic and encourage students to cross St Johns Ave. in a designated crosswalk. › Install a curb extension along the no parking strip in front of Mount Olive Lutheran to narrow travel lane and calm traffic. Public input required. › Study and install high visibility crossings and curb extensions on all legs of the intersection of St. Johns Ave. & Santa Fe Dr. › Install missing curb ramps at the intersection of St. Johns Ave. and 21st St. W.	4.3.1, 4.3.2, 4.3.3, 4.5.4 4.3.1 4.3.1, 4.3.2, 4.3.3 4.3.3	City	$151,000
3	St. Johns Ave. & 24th St. W.	Crossing	› Higher vehicle and student walking traffic volumes, red light running, and conflicting vehicle and walking motions, observed. › Faded crosswalk markings, on all legs of this intersection. › Relatively wide travel lanes encourage speeding.	3	› Reconfigure intersection to provide for the safety of students walking and bicycling to school. › Study and install high visibility crosswalks and leading pedestrian intervals on all legs of this intersection.	4.3.1, 4.3.2, 4.3.3, 4.5.2, 4.5.3	City	$46,500
4	Central Ave. & 24th St. W.	Crossing	› Long crossing distances and faded crosswalk markings on all legs of this intersection.	4	› Study and install high visibility crossings on all legs of the intersection of Central Ave. & 24th St. W. › Study and modify signalization to ensure adequate crossing times and leading pedestrian interval.	4.3.2 4.5.1, 4.5.2	City	$13,000

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects at Mount Olive Lutheran School *(Continued across to next page)*

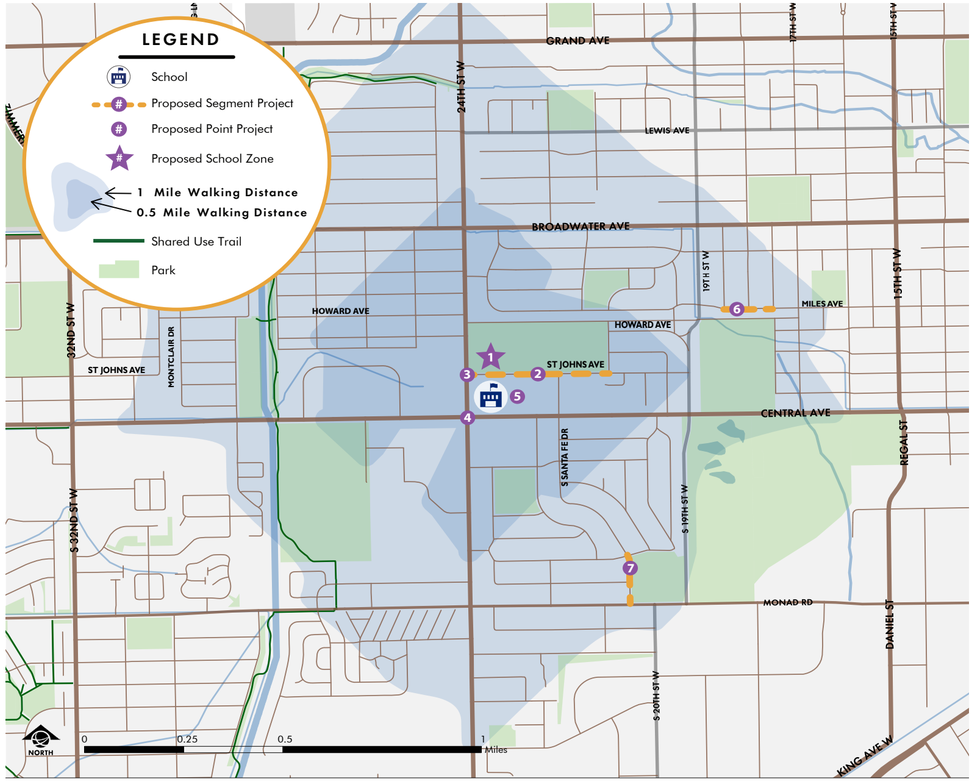
#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
5	Mt. Olive Lutheran campus	CPTED	› Students from West High use Mount Olive campus to access restaurants on Central Ave. This leads to CPTED concerns, with several fights occurring on church property.	5	› Further investigate CPTED modifications to the church property to discourage illicit activities. This may include alternate connection locations, lighting, introducing active use of the eastern portion of the site, or fencing off access to the property as a route to Central Ave.	4.2.7	School	$110,500
6	Miles Ave.	ADA Compliance	› Missing curb ramps at Miles Avenue's intersections with Glen Dr. and Nelson Dr.	6	› Install curb ramps where Miles Ave. intersects Glen Dr. and Nelson Dr.	4.3.3	City	$14,600
7	Berthound Ave.	ADA Compliance	› Missing curb ramps at Berthound Drive's intersections with Beloit Dr. and Monad Rd.	7	› Install curb ramps where Berthound Drive intersects Beloit Dr. and Monad Rd.	4.3.3	City	$14,600

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects Map at Mount Olive Lutheran School



This Page Intentionally Left Blank

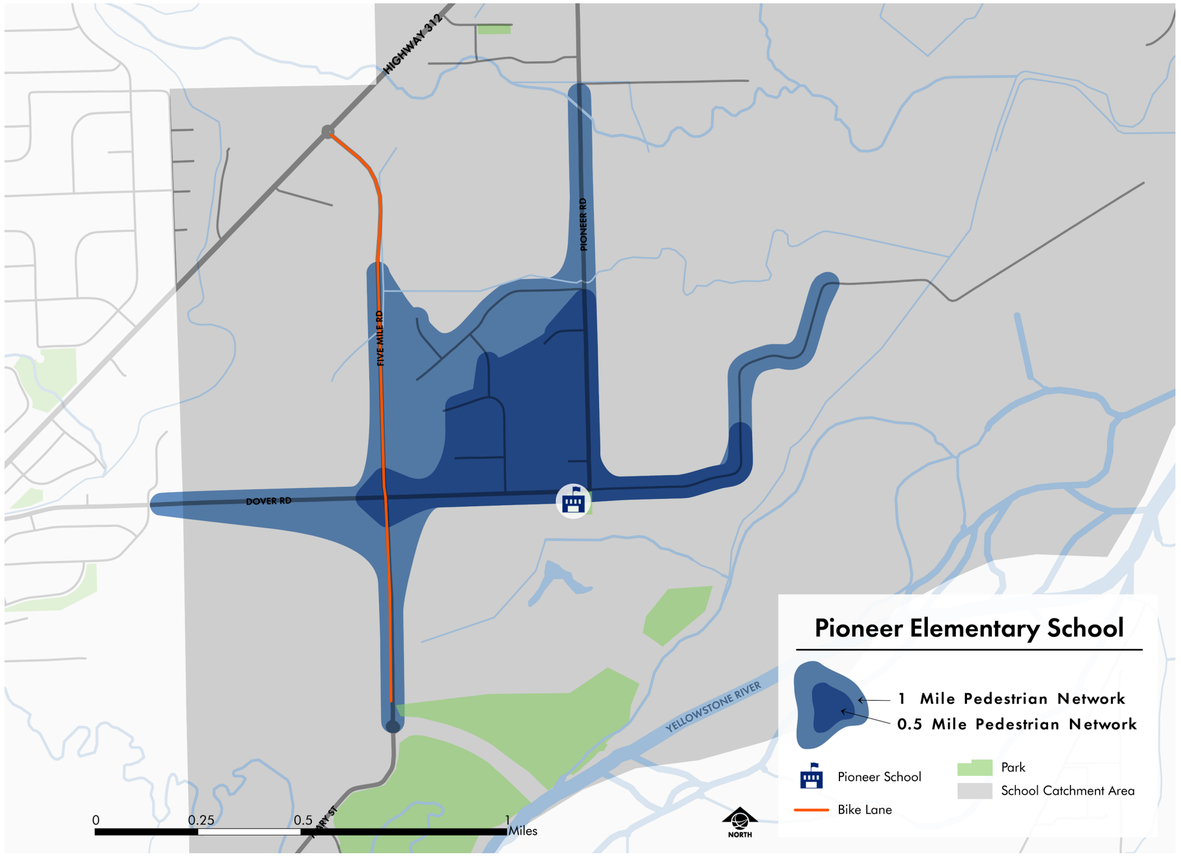
Pioneer Elementary School



Existing Conditions at Pioneer Elementary School

ABOUT THE SCHOOL	
Address	1937 Dover Rd, Billings, MT 59105
Number of Students (Grade Levels)	70 (PK-8)
% of Students Eligible for Free & Reduced Lunch	31%
Arrival/Dismissal Times	8:00AM / 4:00PM

MAJOR STREETS & HIGHWAYS	AADT
Dover Rd	1,402
Pioneer Rd	836



Community Safety Concerns at Pioneer Elementary School

SOURCE OF CONCERN	SAFETY CONCERN OF COMMENT
Principal	› Speeding vehicles on Dover Rd. and Pioneer Rd. that do not observe the posted School Zone signage.
Webmap Survey (0 comments)	› N/A
Safety Busing	› No safety busing is provided.

Arrival Observations at Pioneer Elementary School: March 18th, 2023

OBSERVATION TYPE	OBSERVATIONS
Busing	› Bus drop off occurs in front of the school in the same gravel turn-around that private vehicles use.
Vehicles	› Vehicular access to the school is provided in the form of a mostly gravel lot. As there is no curb, the Dover Rd. access is 130' long, and vehicles pull off of Dover Rd. at high speed and use the loop to decelerate. › Vehicles access the school both from Dover Rd. and Pioneer Rd. which can cause conflict. › Private vehicles and buses use the same access loop, creating conflict. › Frequent truck traffic from adjacent gravel pit.
School Staff Roles	› Staff welcomed students within the schoolyard fence and organized them for entering the building.
Adult Crossing Guards	› No adult crossing guards were observed.
Students Walking and Biking	› No students were observed walking or biking.

Priority Concerns at Pioneer Elementary School

#	LOCATION	OBSERVATIONS	COMMUNITY COMMENTS?
1	Area Surrounding Pioneer School	› Inconsistently located School Zone signage on Dover Rd. and Pioneer Rd. › Apparent vehicle speeding in school zone.	Yes
2	Dover Rd.	› Dover Rd. has no walking or biking facilities.	No
3	Pioneer Rd.	› Pioneer Rd. has no walking or biking facilities.	No
4	Dover Rd.	› Dover Rd. has no marked crossings.	No
5	Dover Rd. at Campus	› Vehicles using parking lot access as deceleration lane and two-way drop off loop with buses creates conflict.	No

Proposed Projects at Pioneer Elementary School *(Continued across to next page)*

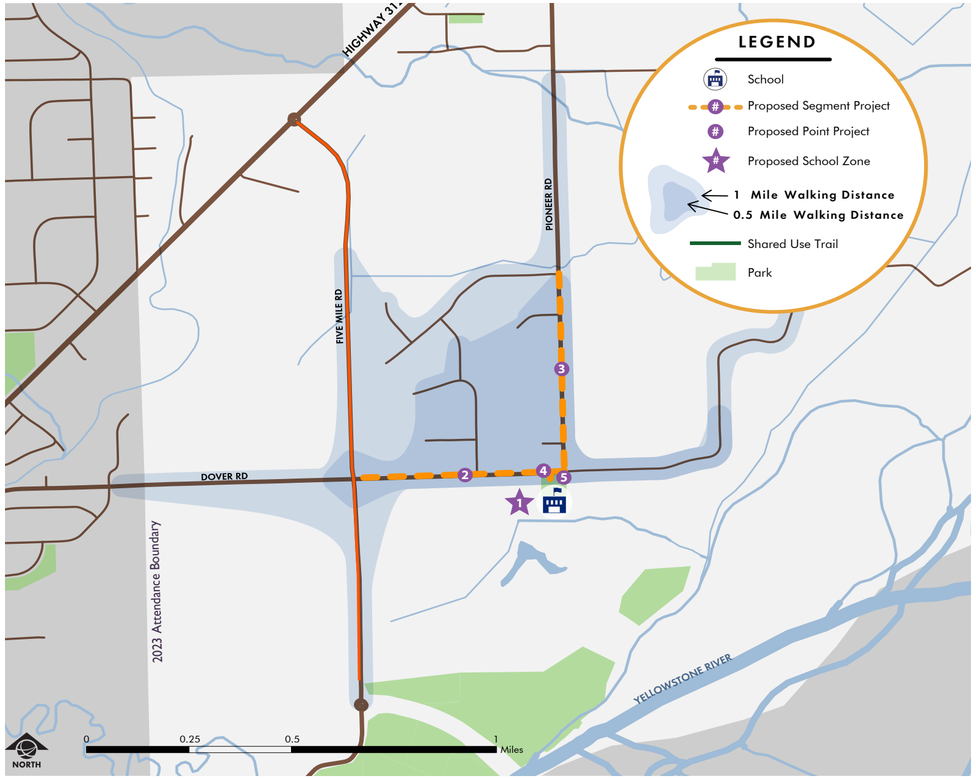
#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
1	Area Surrounding Pioneer School	School Speed Zone	› School Zone signage is inconsistently located on Dover Rd. and Pioneer Rd. › Apparent vehicle speeding in school zone.	1	› Install School Zone and School Speed Zone signage surrounding Pioneer in accordance with MUTCD standards and an updated School Zone Traffic Control Policy per programmatic recommendation 2.1. › Design streets within the school zone to a speed limit that prioritizes the safety and access of people walking and biking within the school zone.	4.4.1 4.1.4	County	$179,000
2	Dover Rd.	Sidewalks	› Dover Rd. has no walking or biking facilities.	2	› Install a separated, protected shared use path along Dover Rd. from 5 Mile Rd. to Pioneer Rd.	4.2.6, 4.2.7	County	$338,000
3	Pioneer Rd.	Sidewalks	› Pioneer Rd. has no walking or biking infrastructure.	3	› Construct separated, protected shared use path along Pioneer Rd. from Clearwater Way to Dover Rd.	4.2.6, 4.2.7	County	$325,000
4	Dover Rd.	Crossing	› Dover Rd. has no marked crossings.	4	› Install a high visibility crosswalk with curb extensions and advanced traffic control signals in front of the school. › Continue route from crosswalk to main building via direct, well-marked, ADA compliant path.	4.2.7, 4.3.1, 4.3.2, 4.5.4 4.3.3	County	$39,500
5	Dover Rd. at Campus	Arrival/ Dismissal Behavior	› Vehicles using parking lot access as deceleration lane and two-way drop off loop with buses creates conflict.	5	› Study and reconfigure vehicular and bus drop off operations to reduce speeds and conflicts in parking lot. › Study the feasibility of constructing a parking lot and drop off loop on adjacent YRPA-owned lands.	4.6.2 4.2.1, 4.2.7, 4.6.3	County	$215,000

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects Map at Pioneer Elementary School



This Page Intentionally Left Blank

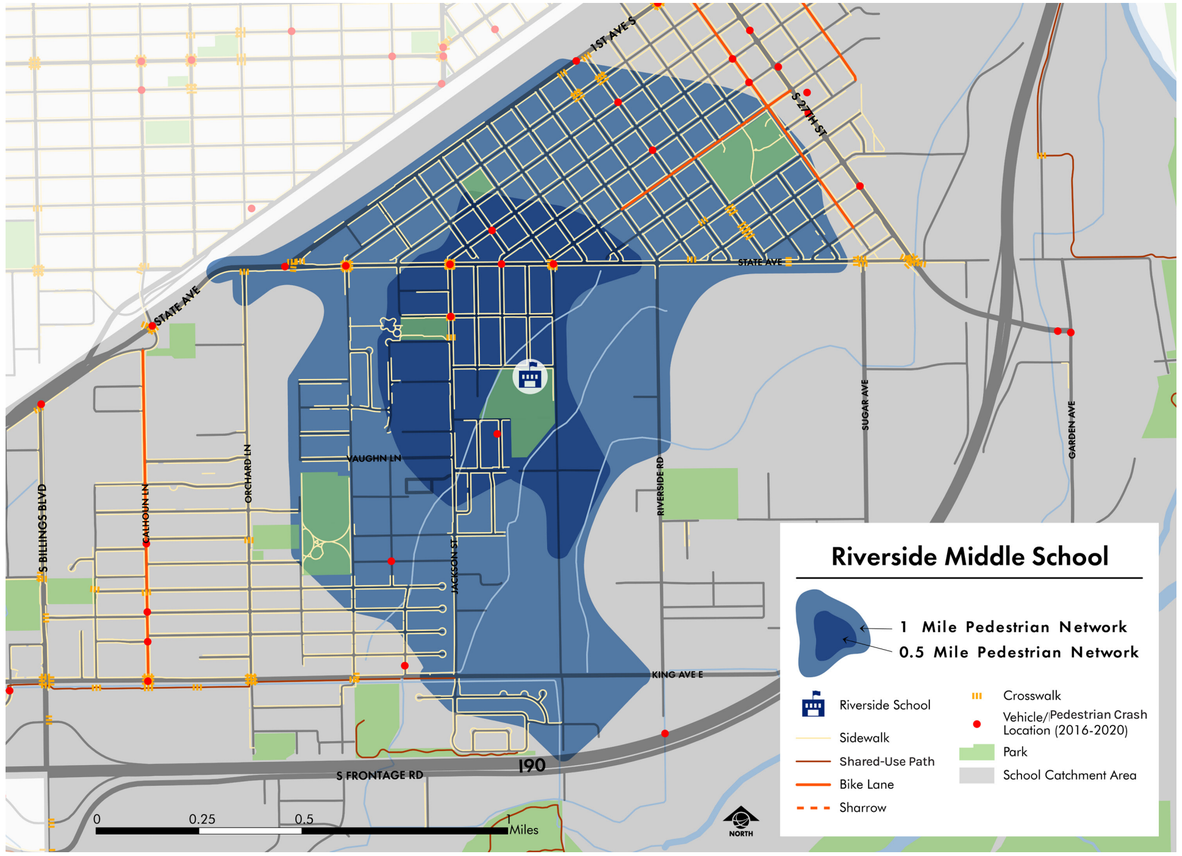
Riverside Middle School



Existing Conditions at Riverside Middle School

ABOUT THE SCHOOL	
Address	3700 Madison Ave, Billings, MT 59101
Number of Students (Grade Levels)	537 (6-8)
% of Students Eligible for Free & Reduced Lunch	100%
Arrival/Dismissal Times	8:10 AM / 3:10 PM

MAJOR STREETS & HIGHWAYS	AADT
Jackson	4,200
State	8,560



Community Safety Concerns at Riverside Middle School

SOURCE OF CONCERN	SAFETY CONCERN OF COMMENT
Principal	› Lack of School Zone signage. › Need for a crosswalk across Madison Ave. at the school's front entry.
Webmap Survey (4 comments)	› South Billings Blvd. has higher vehicle volumes and speeds than are safe for the volume of students walking and bicycling traffic that it also carries. › Need for traffic calming, sidewalks, and safe crossings at E King Ave. & Jackson/ Washington St. › Missing sidewalks on Washington St. south of Riverside School. › Lack of safe walking and bicycling route to bus stop at Blue Creek Rd. & Old Blue Creek Rd. bus stop.
Safety Busing	› 4 bus routes serve Riverside. All have safety busing stops that serve the East Billings/Downtown, Buena Vista, North Park, Sugar Avenue, Agri-Center Subdivision, and Murphy Avenue neighborhoods.

Arrival Observations at Riverside Middle School: May 4th, 2023

OBSERVATION TYPE	OBSERVATIONS
Busing	› Buses drop off students in the loop on Madison Ave. and pick up students in the lots east of the school on Washington St.
Vehicles	› Most private vehicles drop students off in the loop on Madison Ave. Some drop off occurs in the lot on Washington St.
School Staff Roles	› 2 Staff are usually posted at the main entry during arrival. No staff were present on the day of observation.
Adult Crossing Guards	› Orchard Elementary posts crossing guards at Jackson St. & State Ave. and at Jackson St. and Frances Ave.
Students Walking and Biking	› High volumes of students walking and biking were observed on Jackson St. › Some students were observed walking and biking to school from the north at State Ave. and Washington St.

Priority Concerns at Riverside Middle School

#	LOCATION	OBSERVATIONS	COMMUNITY COMMENTS?
1	Area Surrounding Riverside	› No School Zone exists in the area surrounding Riverside.	Yes
2	Madison Ave.	› The crosswalk in the drop off loop in front of the school is non ADA compliant, it's marking is faded, and it and does not continue across Madison Ave. › Observed vehicles exiting left from the drop off loop that may not have seen and did not yield to children crossing Madison Ave. at Adams St. › Madison Ave. has no marked crossings.	Yes
3	Jackson St.	› Jackson St. appears to be a primary student walking and biking route. › Missing, uneven, or curbwalk sidewalks in several places. › Accessible routes obstructed by mailboxes, parked cars, vegetation or non-compliant curb cuts. › There are no marked crossings on Jackson St. › Faded or unmarked crossings on all legs of the intersection of Jackson St. and King Ave E. › Vehicles blocking crosswalks to merge onto King Ave. E traffic. › CPTED concerns at vacant lots, trash, homes in disrepair, and abandoned vehicles.	No
4	State Ave.	› Faded crosswalk markings on all legs of the intersection of State Ave. & Washington St. › Faded crosswalk markings on all legs of the intersection of State Ave. & Jackson St. › CPTED concerns at abandoned homes and aggressive dogs.	No
5	Washington St.	› No School Zone signage on Washington St. › Missing sidewalk within the County-owned portions of the Washington St. South of Riverside. › The crossing at Grey Eagle Ditch is uneven and is not ADA compliant.	Yes

#	LOCATION	OBSERVATIONS	COMMUNITY COMMENTS?
6	South Park Neighborhood	› Many intersections in this neighborhood do not have ADA compliant curb ramps.	No

Proposed Projects at Riverside Middle School *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
1	Area Surrounding Riverside	School Speed Zone	› No School Zone exists in the area surrounding Riverside.	1	› Study and establish a School Zone and School Speed Zone surrounding Riverside in accordance with MUTCD standards and an updated School Zone Traffic Control Policy per programmatic recommendation 2.1. › Design streets within the school zone to a speed limit that provides for the safety and access of people walking and biking within the school zone.	4.4.1 4.1.4	City	$522,500
2	Madison Ave.	Crossing	› Vehicles block the crosswalk in drop off loop. The crosswalk does not continue north across Madison Ave. making frequent student crossings and vehicle conflicts unsafe. › Madison Ave. has no marked crossings.	2	› Study and install a direct, well-marked, ADA compliant route with raised pedestrian table and curb extensions from main entry across drop off loop to north sidewalk of Madison Ave. › Study and install high visibility crosswalks and curb extensions at Madison Ave. intersections with; Jackson, Jefferson, and Washington Streets. Install School Zone Crossing signage at all intersections.	4.2.2, 4.2.7, 4.3.1, 4.3.2, 4.3.3, 4.2.2, 4.2.7, 4.3.1, 4.3.2, 4.3.3, 4.4.1	City	$46,000
3	Jackson St.	Crossing/ School Speed Zone	› Jackson St. appears to carry much of the student bicycling and walking traffic for both Riverside and Orchard Schools, but has missing, uneven, or curbwalk sidewalks, and no bicycle facilities. › Accessible routes obstructed by mailboxes, parked cars, vegetation or non-compliant curb cuts. › There are no marked crossings on Jackson St. › Faded or unmarked crossings on all legs of the intersection of Jackson St. and King Ave E. › Vehicles blocking crosswalks to merge onto King Ave. E traffic. › CPTED concerns at vacant lots, trash, homes in disrepair, and abandoned vehicles.	3	› Design the street to a speed limit that provides for the safety and access of people walking and biking. › Evaluate and install curb extensions and high visibility crosswalks at Jackson Street's intersections with; *Roosevelt Ave., Frances Ave., Orrel Dr., Vaughn Ln., Morgan Ave. , King Ave. East* › Install missing segments of sidewalk from King Ave. E. to Madison Ave.	4.1.4, 4.2.2, 4.2.4, 4.2.7, 4.2.8, 4.3.1 4.2.2, 4.2.7, 4.3.2, 4.3.3, 4.4.4, 4.5.4 4.2.1	City	$546,000

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects at Riverside Middle School *(Continued across to next page)*

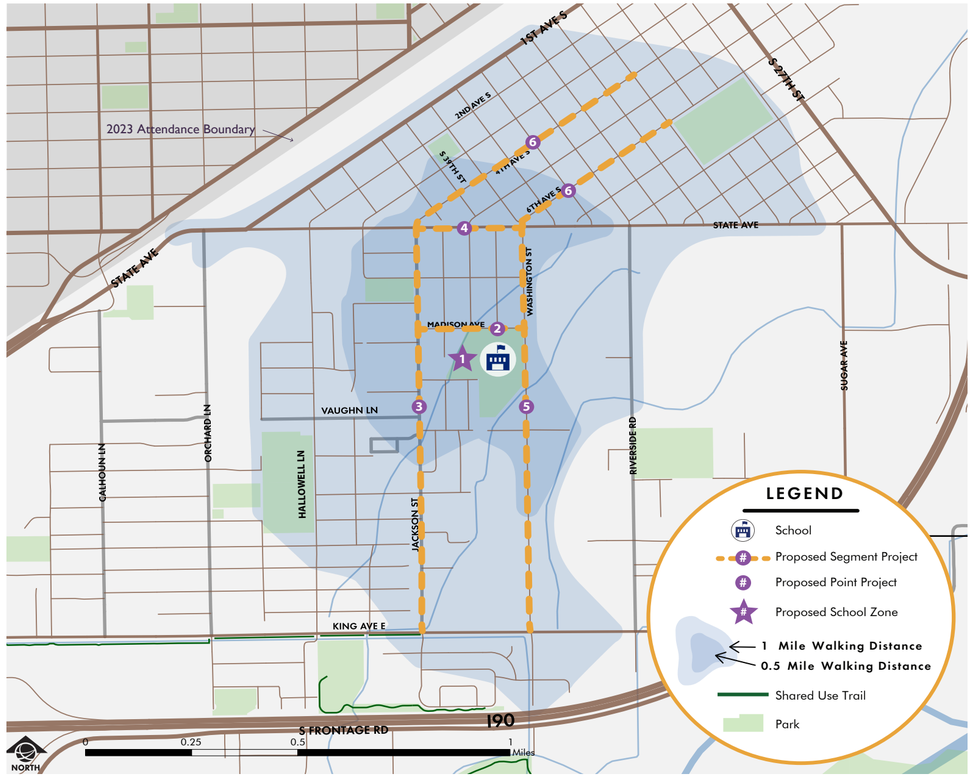
#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
4	State Ave.	Crossing/ CPTED	› Faded crosswalk markings on all legs of the intersection of State Ave. & Washington St. › Faded crosswalk markings on all legs of the intersection of State Ave. & Jackson St. › CPTED concerns at abandoned homes and aggressive dogs.	4	› Install high visibility crossings on the west leg of the intersection of State Ave. & Washington St. › Install high visibility crossings on the east and west legs of the intersection of State Ave. & Jackson St.	4.3.1, 4.3.2, 4.3.3, 4.5.2, 4.5.3 4.3.1, 4.3.2, 4.3.3, 4.5.2, 4.5.3	City	$19,500
5	Washington St.	Crossing/ Sidewalk	› Many students cross King Ave. at Washington St. where faded crosswalk markings create hazard. › Much of Washington has no walking or biking facilities, which creates hazard when walking or biking for students living east of the school.	5	› Install curb extensions, pedestrian refuge island and high visibility crosswalks at the intersection of Washington Street & King Ave. E › Install missing sidewalks along Washington St.	4.2.7, 4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.5.2 4.2.1, 4.2.7	City/ County	$315,000
6	South Park Neighborhood	ADA Compliance	› Many intersections in this neighborhood do not have ADA compliant curb ramps.	6	› Install ADA compliant curb ramps where missing at intersections along 4th Ave. S and 6th Ave. S. Evaluate installation of curb extensions when installing ramps.	4.3.1, 4.3.3	City	$26,000

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects Map at Riverside Middle School



This Page Intentionally Left Blank

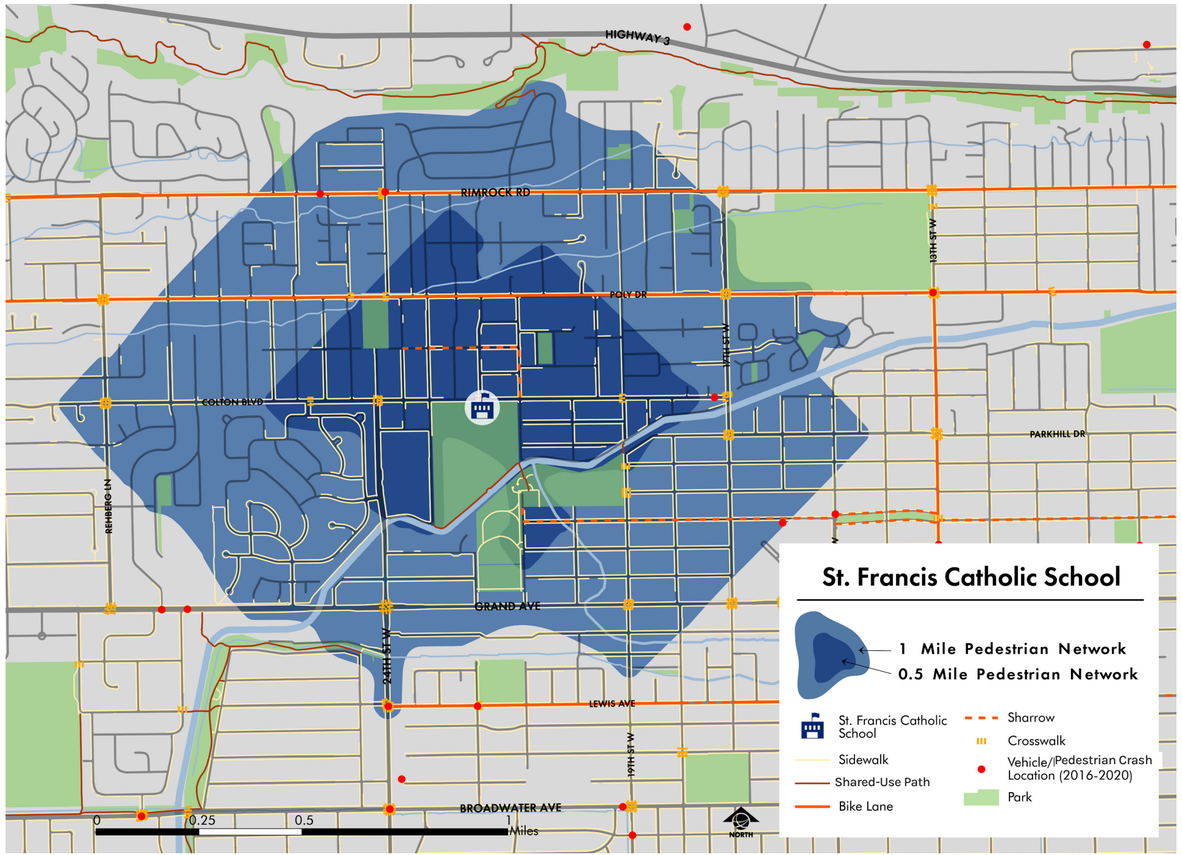
St. Francis Catholic School



Existing Conditions at St. Francis Catholic School

ABOUT THE SCHOOL	
Address	2202 Colton Blvd, Billings, MT 59102
Number of Students (Grade Levels)	620 (K-8)
% of Students Eligible for Free & Reduced Lunch	15%
Arrival/Dismissal Times	8:00 AM / 2:50 PM (K-4) 8:00 AM / 3:10 PM (5-8)

MAJOR STREETS & HIGHWAYS	AADT
Colton Blvd	5,070
24th St	6,780



Community Safety Concerns at St. Francis Catholic School

SOURCE OF CONCERN	SAFETY CONCERN OF COMMENT
Principal	› Crosswalk on Colton Blvd. and 22nd St. W. Thomas parking lot at dismissal and arrival; speed of traffic on Colton during dismissal and arrival; people parking on north side of Colton and walking across middle of street in between cars to get to SFC sidewalk.
Webmap Survey (4 comments)	› Unsafe Crossing at Poly Dr. & Downer Ln. › High vehicle and student traffic volumes at Colton Blvd. & 24th St. W., which is an unsafe intersection. › Unsafe intersections along Lyman Ave.
Crossing Guard	› Frequent speeding vehicles on Colton Blvd. Vehicles fail to yield to crossing guard and students in crosswalk.

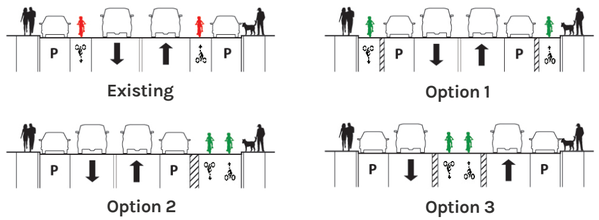
Arrival Observations at St. Francis Catholic School: March 19th, 2023

OBSERVATION TYPE	OBSERVATIONS
Busing	› St. Francis operates two bus routes for students living downtown and on Billings' West End. Drop off occurs in the east-bound parking lane of Colton Blvd. in front of the school.
Vehicles	› Private vehicles dropped off students in the loop between the school and parking lot. Vehicles were also seen dropping students off on Colton Blvd. on both sides of the street. › Vehicle observed running a stop sign at Lyman Ave. and Woody Dr.
School Staff Roles	› Staff are posted at the drop off to act as crossing guards for students crossing the drop off westward toward the parking lot.
Adult Crossing Guards	› A crossing guard is posted at the crosswalk in front of the school at 22nd St. W. and Colton Blvd.
Students Walking and Biking	› Students were observed walking to school from the east and west along Colton Blvd. and from the north via the crosswalk at 22nd St. W.

Priority Concerns at St. Francis Catholic School

#	LOCATION	OBSERVATIONS	COMMUNITY COMMENTS?
1	Colton Blvd.	› Relatively wide streets and travel lanes encourage speeding. › Distances between crossings on Colton Blvd. are 1,400 feet on average. › Unmarked or faded crosswalk markings on Colton Blvd.	Yes
2	Colton Blvd. & 24th St. W.	› Higher vehicle and student traffic volumes. › Faded crosswalk markings.	Yes
3	Lyman Ave.	› A vehicle struck a child biking on this route in October of 2022. › Segments of Lyman Ave. have no walking or biking facilities. › The intersection of Lyman Ave. & Woody Dr. has no curb ramps.	Yes
4	24th St. W. & Solomon Ave.	› There are no marked crossings on 24th St. W. between Colton Blvd. and Grand Ave. a distance of about 2,500 feet. › No marked crossing exists on 24th St. W. to connect the shared use path along the BBWA canal.	No
5	Colton Blvd. at St Francis School	› Congestion and stacking during pick up and drop off observed. › Irregular and unpredictable vehicle movements observed while stacking exists.	Yes
6	Rose Park Neighborhood	› Many intersections in this neighborhood are missing curb ramps.	No

Proposed Projects at St. Francis Catholic School *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
1	Colton Blvd.	Bicycling/ Crossing/ Sidewalk/ Speeding	› Relatively wide streets and travel lanes encourage speeding. › Distances between crossings on Colton Blvd. are 1,400 on average. › Unmarked or faded crosswalk markings on Colton Blvd. › Missing curb ramps at many intersections along Colton Blvd. › Administrator reports safety concerns at the crosswalk of Colton Blvd. at 22nd St. W.	1	› Reconfigure Colton Blvd. from 17th St. W to Rehberg Ln. to install a protected bicycle facility and place the existing on-street parking lanes next to the travel lanes. Public input required. 	4.2.3, 4.2.5	City/ Land Owner	$875,500
					› Design Colton Blvd. to a speed limit that provides for the safety and access of children walking and biking within the school zone.	4.1.4		
					› Install a high visibility crossing, curb extensions, and an advanced traffic control signal at Colton Blvd. & 21st St. W.	4.3.1, 4.3.2, 4.3.3		
					› Install lighting along Colton Blvd. from 17th St. W. to Rehberg Ln. Public input required.	4.2.7		
					› Install curb ramps where missing along Colton Blvd.	4.3.3		
					› Install missing segment of sidewalk along the north side of Colton Blvd. between 21st St. W. and Woody Dr.	4.2.1		

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects at St. Francis Catholic School *(Continued across to next page)*

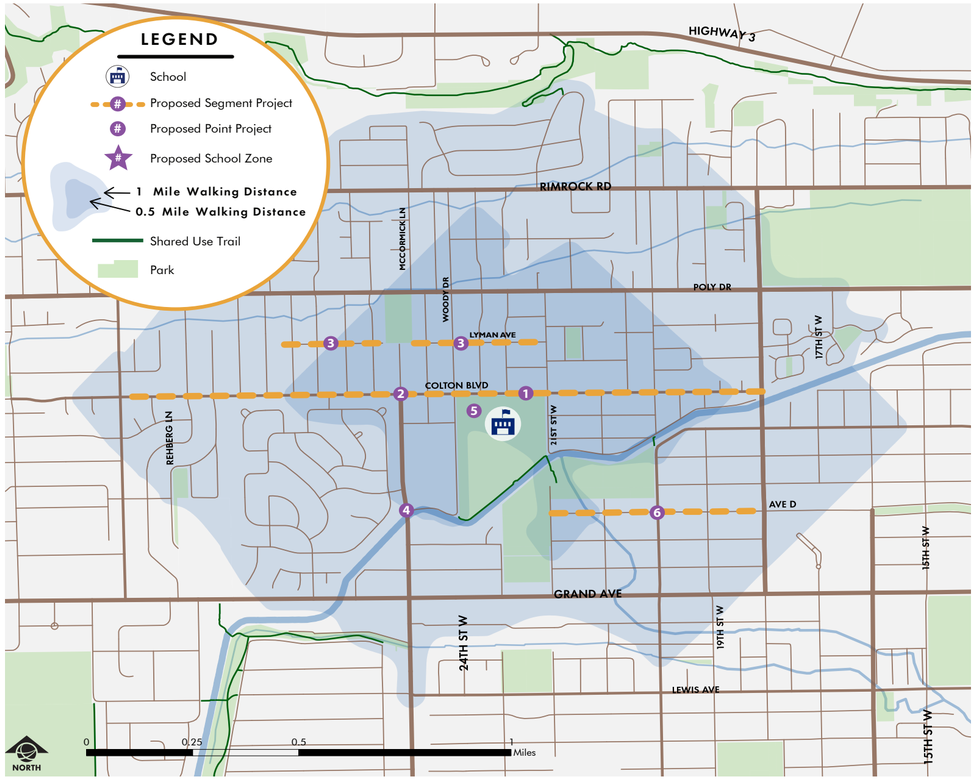
#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
2	Colton Blvd. & 24th St. W.	Crossing/ School Speed Zone/ Bicycling	› Higher vehicle and student traffic volumes. › Faded crosswalk markings.	2	› Reconfigure this intersection to provide for the safety of students walking and biking to school, including recommendations from the phase 1 SRTS plan regarding this intersection. › Install bulb outs on the south leg of the intersection with lane width reduction. › Design intersection and future signal timing to accommodate protected bicycle facility per project #1 above.	4.2.7, 4.3.1, 4.3.2, 4.3.3, 4.5.2, 4.5.3 4.3.1 4.2.5	City	$708,500
3	Lyman Ave. from Elizabeth St. to 21st St. W.	Speeding/ Sidewalks/ ADA Compliance	› A vehicle struck a child biking on this route in October of 2022. › Segments of Lyman Ave. have no walking or biking facilities. › The intersection of Lyman Ave. & Woody Dr. has no curb ramps.	3	› Install missing segments of sidewalk along Lyman Ave. › Install curb ramps at the intersection of Lyman Ave. & Woody Dr.	4.2.1, 4.2.7 4.3.3	City	$81,500
4	24th St. W. & Solomon Ave.	Crossing	› There are no marked crossings on 24th St. W between Colton Blvd. and Grand Ave. a distance of about 2,500 feet. › No marked crossing exists on 24th St. W to connect the shared use path along the BBWA canal.	4	› Study and install a high visibility crosswalk, curb extensions, and advanced traffic control signals at the intersection of 24th St. W & Solomon Ave.	4.2.7, 4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.5.5	City	$377,000
5	Colton Blvd. at St Francis School	Congestion	› Congestion and stacking during pick up and drop off observed. › Irregular and unpredictable vehicle movements observed while stacking exists.	5	› Further evaluate dispersed drop off locations in the parking lot of St Thomas or the school-owned property south of St. Thomas.	4.6.2, 4.6.3, 4.3.3	School	$-
6	Rose Park Neighborhood	ADA Compliance	› Many intersections in this neighborhood are missing curb ramps.	6	› Install Curb ramps along Ave. D and 19th St. W. where missing.	4.3.3	City	$73,000

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

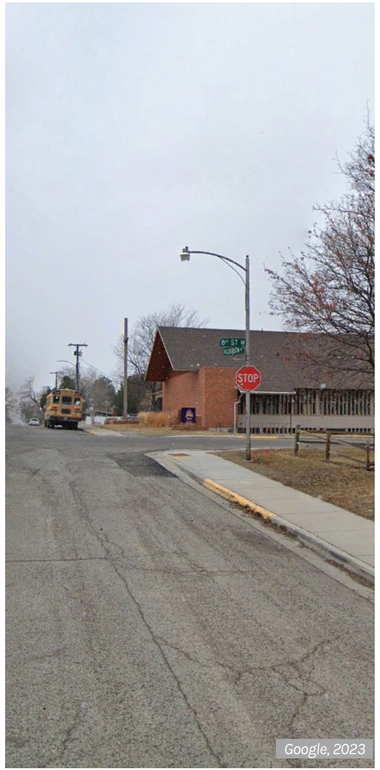
Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects Map at St. Francis Catholic School



This Page Intentionally Left Blank

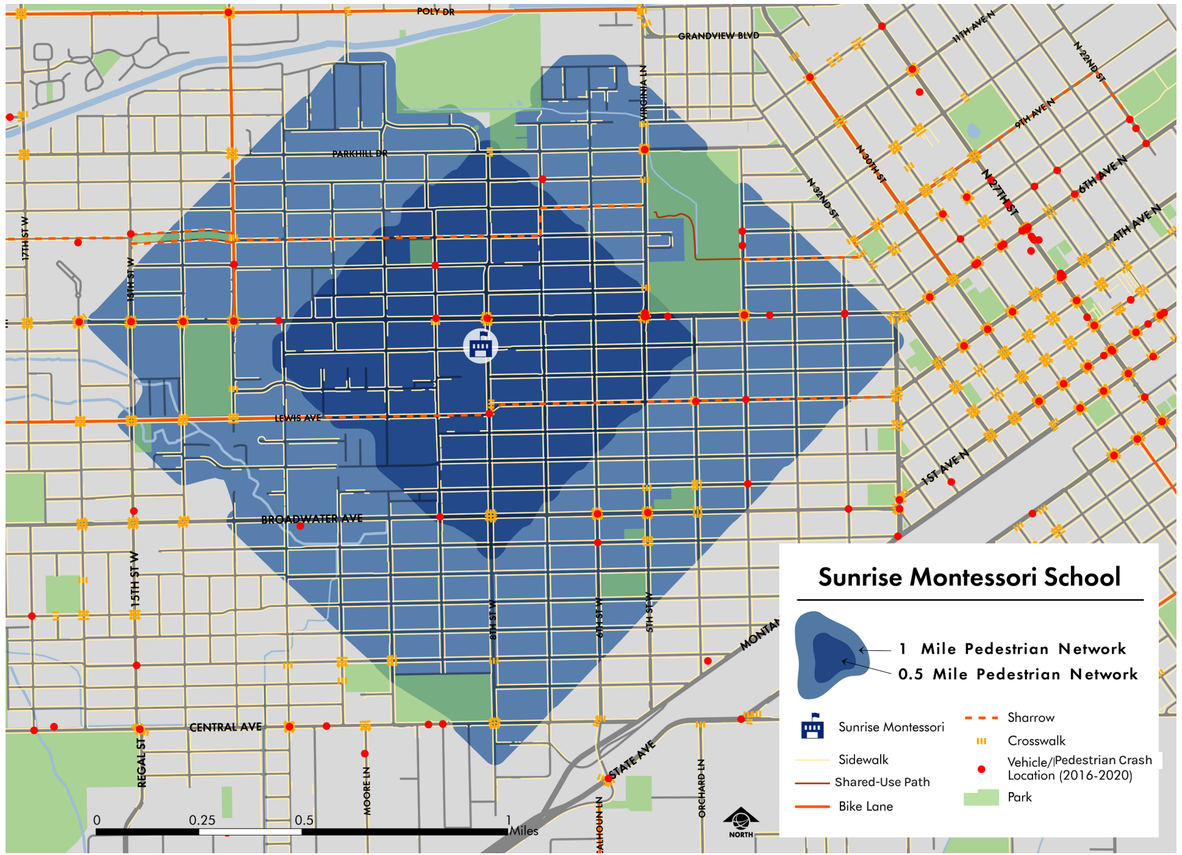
Sunrise Montessori School



Existing Conditions at Sunrise Montessori School

ABOUT THE SCHOOL	
Address	805 Alderson Ave, Billings, MT 59101
Number of Students (Grade Levels)	93 (PK-6)
% of Students Eligible for Free & Reduced Lunch	25%
Arrival/Dismissal Times	8:00 AM / 3:00 PM

MAJOR STREETS & HIGHWAYS	AADT
Grand Ave.	21,950
8th St. W.	6,010



Community Safety Concerns at Sunrise Montessori School

SOURCE OF CONCERN	SAFETY CONCERN OF COMMENT
Principal	› Students walking home cross 8th St. W. which has high speed vehicles that do not stop for students.
Webmap Survey (50 comments)	› Speeding vehicles, long distances between crossings, and poor visibility on the hill at 8th St. W. & Burlington Ave. make 8th St. W. dangerous for students walking and biking to school. › Speeding vehicles on Alderson Ave. between 8th St. W. and 9th St. W. › Lack of School Zone signage on streets surrounding the school. › Lack of curb cuts throughout neighborhood surrounding the school. › The majority of comments received were on Parkhill Dr. including; speeding and reckless vehicles, unsafe crossings, ADA violations, and congestion.
Crossing Guard	› A crossing guard is posted at 8th St. W. and Alderson at dismissal.
Safety Busing	› No safety busing is provided.

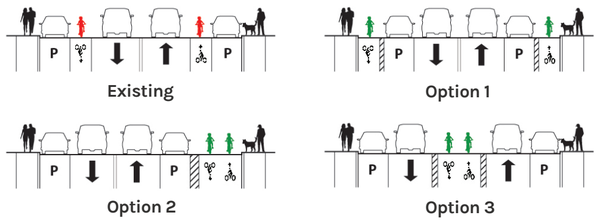
Arrival Observations at Sunrise Montessori School: March 11th, 2023

OBSERVATION TYPE	OBSERVATIONS
Busing	› No buses were observed during the arrival period.
Vehicles	› Private vehicle drop off occurs on both curbs of Alderson Ave. between 8th and 9th St. W. Others are dropped off in the parking lot west of the school, where vehicles stack through the lot and into Alderson Ave. Students wait in stacked vehicles until reaching the front of the line. › Apparent speeding on 8th St. W. and people driving who do not look for pedestrians when merging from side streets.
School Staff Roles	› Staff receive students as they disembark from their vehicles in the school parking lot. Staff then direct or accompany students to the playground or entry.
Students Walking and Biking	› Students were observed walking to school from the east along Alderson Ave.

Priority Concerns at Sunrise Montessori School

#	LOCATION	OBSERVATIONS	COMMUNITY COMMENTS?
1	Area surrounding the school	› Lack of school zone signage on streets surrounding the school.	Yes
2	8th St. W.	› There are no marked crossings on 8th St. W. from Parkhill Dr. to Grand Ave. a distance of 2,000 feet. › There are no marked crossings on 8th St. from Grand Ave. to Broadwater Ave., a distance of 2,400 feet. › Relatively wide travel lanes and street encourage speeding. › Many public comments of safety concerns at the intersection of 8th St. W. and Lewis Ave. › Missing curb ramps at many intersections along 8th St. W.	Yes
3	8th St. W. & Grand Ave.	› Faded crosswalk markings and relatively long crossing distances.	Yes
4	Alderson Ave.	› Reports of speeding vehicles use Alderson Ave. from 8th St. W. to 9th St. W. as a cut through to access commercial uses on Grand Ave. › Missing segment of sidewalk along the south side of the 700 block of Alderson Ave.	Yes
5	Parkhill Dr. from 6th to 8th St. W.	› Numerous public comments received reporting speeding and reckless vehicles, unsafe crossings, ADA violations, and congestion.	Yes
6	O Malley Dr. and Azelia Ln.	› Missing sidewalk along one side of O Malley Dr. and Azelia Ln.	No

Proposed Projects at Sunrise Montessori School *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
1	Area Surrounding School	School Speed Zone	› Lack of school zone and signage on streets surrounding the school.	1	› Study and establish a School Zone and School Speed Zone surrounding Sunrise Montessori in accordance with MUTCD standards and an updated School Zone Traffic Control Policy per programmatic recommendation 2.1. › Design the streets within the school zone to a speed limit that provides for the safety and access of children walking and biking to school.	4.4.1 4.1.4	City	$55,000
2	8th St. W.	Crossing/ Speeding/ ADA Compliance	› There are no marked crossings on 8th St. W. from Parkhill Dr. to Grand Ave. a distance of 2,000 feet. › There are no marked crossings on 8th St. from Grand Ave. to Broadwater Ave., a distance of 2,400 feet › Relatively wide travel lanes and street encourage speeding. › Many public comments of safety concerns at the intersection of 8th St. W. and Lewis Ave. › Missing curb ramps at many intersections along 8th St. W.	2	› Reconfigure 8th St. W. to install protected bicycle facilities. Public input required.  › Design the street to a speed limit that provides for the safety and access of children walking and biking to school. › Ensure that existing street lighting is on during predawn and after dark student commute times. › Design of the intersection of 8th St. W. and Lewis Ave. to calm traffic and create safe crossing conditions.	4.2.3, 4.2.5 4.1.4 4.2.7 4.2.7, 4.3.1, 4.3.2	City/ Land Owner	$314,000

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects at Sunrise Montessori School *(Continued across to next page)*

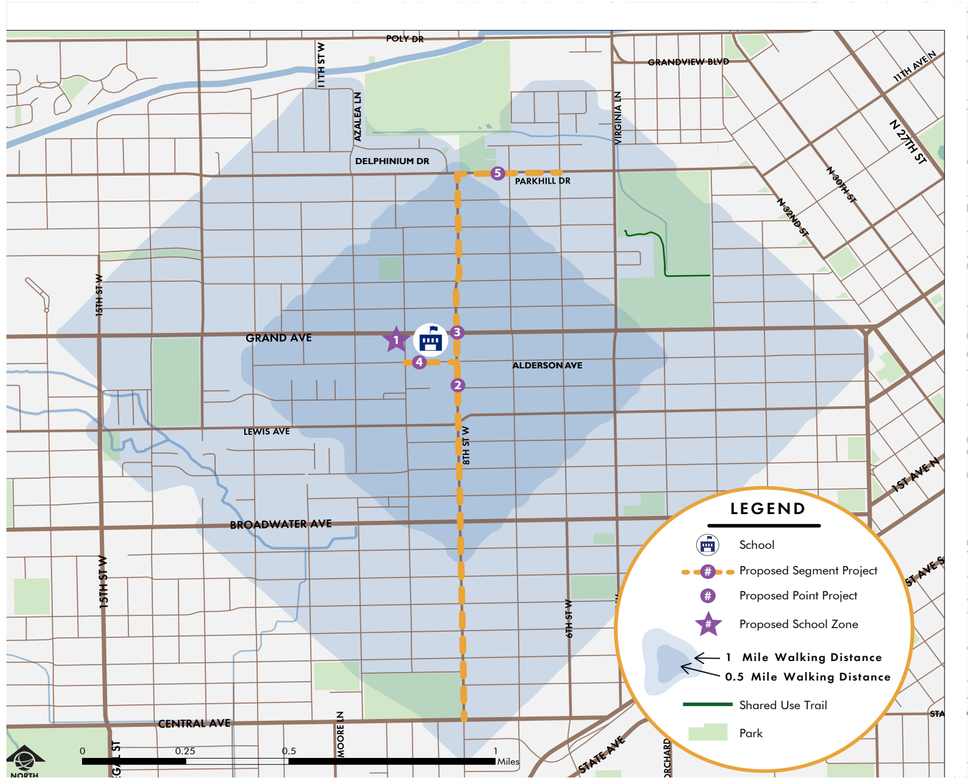
#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
3	8th St. W. & Grand Ave.	Crossing	› Faded crosswalk markings and relatively long crossing distances.	3	› Study and install high visibility crosswalks on all legs of this intersection. › Further investigate lane width reductions, mid-crossing pedestrian refuge islands on the Grand Ave. legs, reducing curb radii and elimination of turning lanes on 8th St. W. to calm traffic and reduce crossing distances. Public input required.	4.3.2 4.2.3, 4.3.1, 4.3.3, 4.3.4, 4.5.2, 4.5.3	City	$224,000
4	Alderson Ave.	Speeding	› Reports of speeding vehicles use Alderson Ave. from 8th St. W. to 9th St. W. as a cut through to access commercial uses on Grand Ave. › Missing segment of sidewalk along the south side of the 700 block of Alderson Ave.	4	› Install curb extensions and high visibility crossings at the intersections at Alderson Ave. and 8th and 9th St. W. › Design the street to a speed limit that provides for the safety and access of children walking and biking on this street. › Install missing segment of sidewalk along the south side of the 700 block of Alderson Ave.	4.2.2, 4.2.7, 4.3.1, 4.3.2, 4.3.3, 4.5.4 4.1.4 4.2.1	City	$104,500
5	Parkhill Dr. from 6th to 8th St. W.	Speeding/ Crossing/ ADA Compliance	› Numerous public comments received reporting speeding and reckless vehicles, unsafe crossings, ADA violations, and congestion.	5	› Install high visibility crosswalks and curb extensions at these intersections.	4.3.1, 4.3.2, 4.5.4	City	$117,000

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects Map at Sunrise Montessori School



This Page Intentionally Left Blank

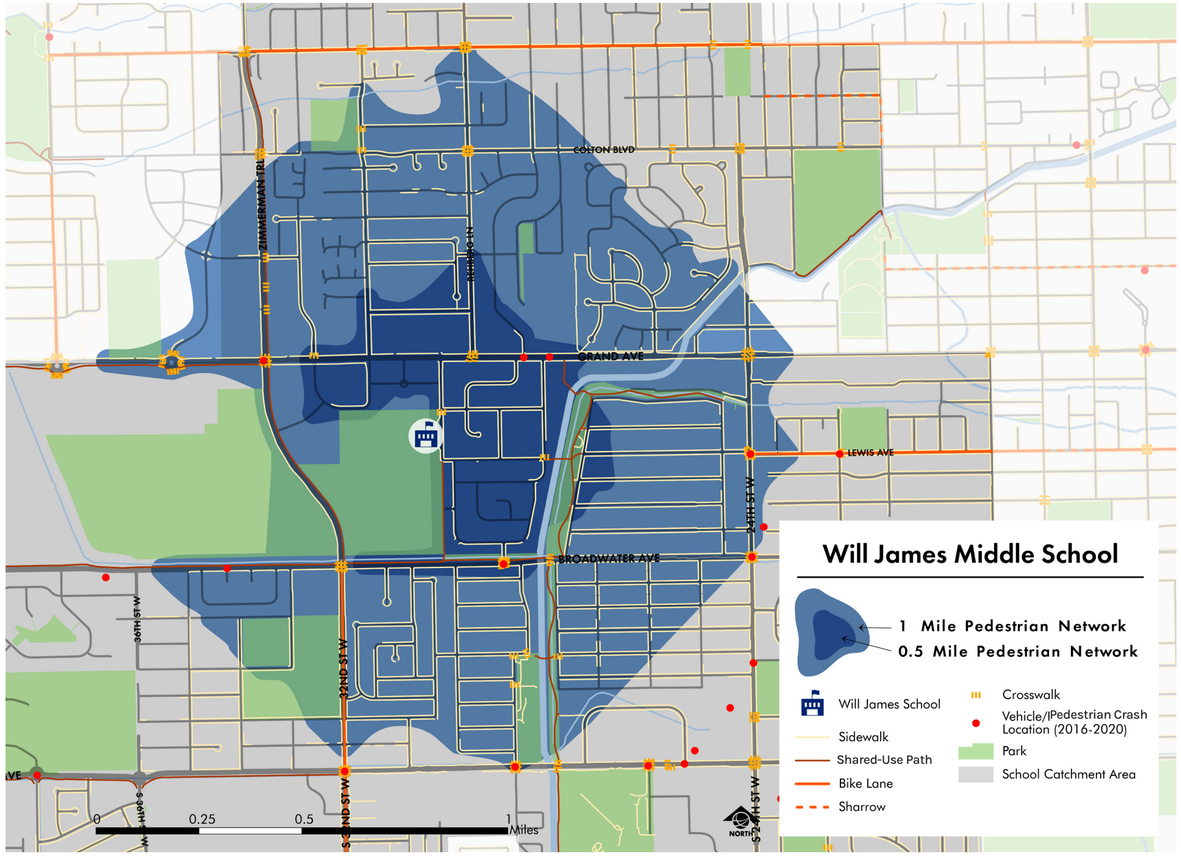
Will James Middle School



Existing Conditions at Will James Middle School

ABOUT THE SCHOOL	
Address	1200 30th St W, Billings, MT 59102
Number of Students (Grade Levels)	618 (6-8)
% of Students Eligible for Free & Reduced Lunch	38%
Arrival/Dismissal Times	8:10 AM / 3:10 PM

MAJOR STREETS & HIGHWAYS	AADT
Grand Ave.	18,760
Broadwater Ave.	11,070
Rehberg Ln.	7,160



Community Safety Concerns at Will James Middle School

SOURCE OF CONCERN	SAFETY CONCERN OF COMMENT
Principal	› Students crossing Grand Ave. at 30th St. W. rather than at signalized intersection at Rehberg Ln.
Webmap Survey (12 comments)	› Crossings on Rimrock Rd. are "few and far between." With poor pedestrian visibility at Rehberg Ln. › Vehicles fail to yield to pedestrians in the crosswalk at Zimmerman Trl. and Colton Blvd. › Insufficient lighting on Zimmerman Trl. between Broadwater Ave. and Grand Ave. › Vehicles fail to yield to pedestrians in the crosswalk at 24th St. W. and Lewis Ave. › High student walking and biking traffic volumes at Belvedere Dr. & 28th St. W. where parked vehicles obstruct view of crossing students, and vehicles speed. Missing School Zone signage. › Long distances between crossings and low visibility crossings along Broadwater Ave. Vehicles fail to yield to crossing students at Broadwater & 31st St. W. › Poor bicycle route connection at Broadwater Ave. and Lillis Park.
Safety Busing	› No safety busing provided.

Arrival Observations at Will James Middle School: May 8th, 2023

OBSERVATION TYPE	OBSERVATIONS
Busing	› A MET bus dropped off a large group of students on the west sidewalk of 30th St. W. north of Belvedere Dr. Many of these students walked in the roadway because of the narrow sidewalk.
Vehicles	› Fast-moving vehicles turning onto or off of Grand Ave. often make unpredictable, quick movements and do not yield to pedestrians in crosswalks of 30th St. W. Golden Valley Cir. and N. Meadowview Rd. › Significant stacking of vehicles turning left from Grand Ave. to 30th St. W. › Vehicular stacking and congestion on 30th St. W. during drop off. › Vehicles drop off at MET stop on 30th St. W. block bus stop. › Informal remote drop off observed in parking lot of Church of Jesus Christ of Latter-day Saints. › Vehicles dropping off students in crosswalk at 30th St. W. & Belvedere Dr. › Vehicles dropping off students in 30th St. W. south-bound parking lane and then turning left onto Belvedere Dr. › Vehicles stacked in north-bound travel lane of 30th St. W. to turn left into school drop off loop.
School Staff Roles	› No staff were observed to have any role in student arrival.
Adult crossing Guards	› No crossing guards were observed.
Students Walking and Biking	› Students were observed walking southward on the west sidewalk of Rehberg Ln. › Students were observed walking and biking to school via the crossing at Broadwater and 31st St. W. › Students were observed biking to school on the bridge crossing of the BBWA at Lillis Park and Lewis Ave.

Priority Concerns at Will James Middle School

#	LOCATION	OBSERVATIONS	COMMUNITY COMMENTS?
1	Area Surrounding Will James	› No School Zone exists in the area surrounding Will James.	Yes
2	Grand Ave.	› Students cross Grand Ave. at 30th St. W. rather than detour to crosswalk at Rehberg Ln. & Grand Ave. › Vehicles turning onto 30th St. W from Grand Ave. fail to yield to pedestrians in crosswalk. › Public comments report apparent speeding. › Ramp locations prolong pedestrian crossing time and exposure. › No bicycle facilities exist on Grand Ave. connecting 30th St. W. to recently-installed bike lanes on Rehberg Ln. › Curb walk along Grand Ave. puts students very close to 35 mph traffic, reducing their comfort and safety. › No bicycle facility exists connecting 30th St. W to the recently installed bike lanes on Rehberg Ln. › Multiple ADA violations on Grand Ave. southern sidewalk; spalling, obstructions.	Yes
3	30th St. W	› Faded crosswalk markings on all legs of the intersection of 30th St. W. & Belvedere Dr. › Visibility of students in crossing is reduced by parked vehicles near the intersection and vehicles dropping off in the intersection of 30th St. W. & Belvedere Dr. › Private vehicle drop off blocks crosswalks in the intersection of 30th St. W. & Belvedere Dr. › 30th St. W. has no bicycle facilities.	Yes
4	Rehberg Ln.	› Faded crosswalk markings on all legs of the intersection of Rehberg Ln. & Grand Ave. Vehicles block crossings. › Missing curb ramps at the intersection of Rehberg Ln. and Ave. E.	Yes
5	Broadwater Ave.	› The crossing at Broadwater Ave. & 31st St. W. has no markings. The nearest marked crossings are 840 feet to the west and 1,200 feet to the east. › Missing sidewalk along the south side of Broadwater Ave. 3500 block.	Yes
6	Lewis Ave. BBWA bridge and shared use path connection	› The shared use path connection from Lillis Park to 28th St. W. is non ADA compliant. › High vegetation, a narrow passage, and tall fencing exist on either side of this segment of shared use path. › The bridge is narrow, measuring about 6 feet wide, which is too narrow for two people to walk past each other comfortably and is not wide enough to serve as a bicycle facility. › Fencing on bridge appears to be in disrepair.	No
7	Lewis Ave. & 25th St. W.	› The intersection of Lewis Ave. & 25th St. W. has no curb ramps.	No

Proposed Projects at Will James Middle School *(Continued across to next page)*

#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
1	Area Surrounding Will James	School Speed Zone	› No School Zone exists in the area surrounding Will James.	1	› Study and establish a School Zone and School Speed Zone surrounding Will James in accordance with MUTCD standards and an updated School Zone Traffic Control Policy per programmatic recommendation 2.1. › Design streets within the school zone to a speed limit that provides for the safety and access of people walking and biking within the school zone.	4.4.1 4.1.4	City	$106,000
2	Grand Ave.	Speeding/ Crossing/ ADA Compliance	› Students cross Grand Ave. at 30th St. W, where no marked crossing exists, rather than detour to crosswalk at Rehberg Ln. & Grand Ave. › Vehicles turning onto 30th St. W. from Grand Ave. fail to yield to pedestrians in crosswalk. › Public comments report apparent speeding. › Ramp locations prolong pedestrian crossing time and exposure. › Curb walk along Grand Ave. puts students very close to 35 MPH traffic, reducing comfort and safety of people using sidewalk. › No bicycle facility exists connecting 30th St. W to the recently-installed bike lanes on Rehberg Ln. › Multiple ADA violations on Grand Ave. southern sidewalk; spalling, obstructions.	2	› Study and install high-visibility crosswalks and advanced traffic control signal for students crossing Grand Ave. at the intersection of Grand Ave. and 30th St. W. If studies find that a crosswalk is not warranted at this location, evaluate alternatives. › Install a high-visibility crosswalk and curb extensions across 30th St. W. at the intersection of Grand Ave. and 30th St. W. › Study the feasibility of eliminating full access across Grand Ave. at 30th St. W. & Grand Ave. and installing pedestrian refuge at mid-crossing. › Reconfigure Grand Ave. from Rehberg Ln. to 30th St. W. to install a protected bicycle facility and crossing to connect from 30th St. W. to Rehberg Ln. › Repair sidewalks surrounding the intersection of Grand Ave. & Rehberg Ln.	4.2.7, 4.3.1, 4.3.2, 4.3.3, 4.4.3, 4.5.5 4.2.7, 4.3.1, 4.3.2, 4.3.3 4.3.4 4.2.3, 4.2.5, 4.2.7 4.2.1	City	$527,500
3	30th St. W.	Crossing	› Faded crosswalk markings on all legs of the intersection of 30th St. W. & Belvedere Dr. › Visibility of students in crossing at 30th St. W. & Belvedere Dr. is reduced by parked vehicles near the intersection and vehicles dropping off in intersection. › Private vehicle drop off blocks crosswalks at the intersection of 30th St. W. & Belvedere Dr. › 30th St. W has no bicycle facilities.	3	› Study and install curb extensions, high visibility crosswalks, and curb ramps at the intersection of 30th St. W. & Belvedere Dr. including the parking lot access and the existing crosswalk south of the school parking lot access. › Acquire right of way to install shared use path along 30th St. W. between the school and Grand Ave. if feasible.	4.2.7, 4.3.1, 4.3.2, 4.3.3, 4.5.4 4.2.6, 4.2.7	City	$65,000

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects at Will James Middle School *(Continued across to next page)*

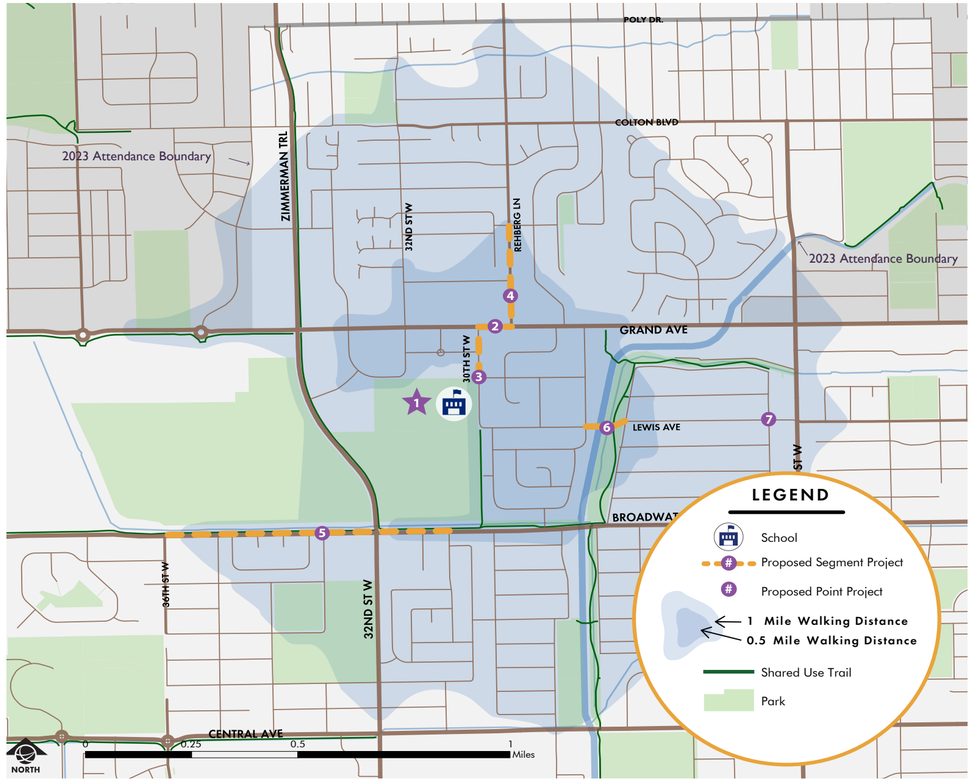
#	LOCATION	TOPIC	ISSUE	#	RECOMMENDATION	TOOLBOX ID	RESP PARTY	EST COST
4	Rehberg Ln.	Crossing/ Speeding/ ADA Compliance	› Faded crosswalk markings on all legs of the intersection of Rehberg Ln. & Grand Ave. Vehicles block crossings. › Missing curb ramps at the intersections of Rehberg Ln. and Ave. E, and Rehberg Ln. and Parkhill Dr.	4	› Study and install high-visibility crosswalks on all legs of the intersection of Rehberg Ln. & Grand Ave. › Install curb ramps at the at the intersections of Rehberg Ln. and Ave. E, and Rehberg Ln. and Parkhill Dr.	4.2.7, 4.3.1, 4.3.2, 4.4.3 4.3.3	City	$49,000
5	Broadwater Ave.	Crossing/ Sidewalk	› The crossing at Broadwater Ave. and 31st St. W. has no markings. › The nearest marked crossings to the unmarked crossing at Broadwater Ave. and 31st St. W. are 840 feet to the west and 1,200 feet to the east. › The 3500 block of Broadwater Ave. has no sidewalk on its south side.	5	› Study and install high-visibility crossing, curb extensions and advanced traffic control signal for students crossing Broadwater Ave. at this location in conjunction with improvements planned in CIP. › Install sidewalk along the south side of the 3500 block of Broadwater Ave.	4.2.7, 4.3.1, 4.3.2, 4.4.3, 4.5.5 4.2.1. 4.2.7	City	$415,000
6	Lewis Ave. BBWA bridge and shared use path connection	Shared Use Path/ ADA Compliance	› The shared use path connection from Lillis Park to 28th St. W. is non ADA compliant › High vegetation, a narrow passage, and tall fencing on either side of this shared use path. › The bridge is narrow, measuring about 6 feet wide, which is too narrow for two people to walk past each other comfortably and is not wide enough to serve as a bicycle facility. › Fencing on bridge appears to be in disrepair.	6	› Widen the Lewis Ave. pedestrian bridge and shared use path connection from Lillis Park to 28th St. W. › Improve the shared use path connection from Lillis Park to 28th St. W. to make it compliant with ADA and CPTED guidelines.	4.3.5 4.2.7, 4.3.3	City	$143,000
7	Lewis Ave. & 25th St. W.	ADA Compliance	› The intersection of Lewis Ave. & 25th St. W. has no curb ramps.	7	› Install ADA compliant curb ramps and curb extensions at this intersection.	4.3.1, 4.3.3	City	$52,000

Projects listed here have not been designed. Final design and implementation may be subject to further data collection including, but not limited to, a speed study, a traffic or pedestrian count, a warrant study, ROW acquisition, or a public input process. This process may make a project infeasible. The availability of funding for both initial construction and ongoing maintenance also contributes to project feasibility.

Here, advanced traffic control signals refer to a range of options from pedestrian activated Rectangular Rapid Flashing Beacons, to Pedestrian Hybrid Beacons, to full signals. Each location will need to be evaluated based on traffic volumes, speeds, and pedestrian crossing volumes to determine the correct treatment.

Estimated costs shown are intended to represent a planning-level cost estimate and do not represent a detailed Engineer's Opinion of Probable Cost.

Proposed Projects Map at Will James Middle School



This Page Intentionally Left Blank

4.0 Infrastructure Toolbox

4.1 Introduction and Key Concepts

4.1.1 Purpose of This Chapter
4.1.2 Weighing Value, Balancing Interests
4.1.3 Separation and Protection
4.1.4 Traffic Calming
4.1.5 Pilot Projects

4.2 Street Treatments

4.2.1 Sidewalks
4.2.2 Speed Humps
4.2.3 Lane Reconfiguration
4.2.4 Traffic Circles
4.2.5 Protected Bike Lane
4.2.6 Shared Use Path
4.2.7 Lighting
4.2.8 Bicycle Boulevard
4.2.9 Woonerf
4.2.10 Right-Turn Design

4.3 Crossing Treatments

4.3.1 Curb Bulb-outs/Extensions
4.3.2 High Visibility Crosswalk
4.3.3 ADA Ramp/ADA Compliant Route
4.3.4 Pedestrian Refuge/Refuge Island
4.3.5 Bridges and Tunnels

4.4 Signs and Markings

4.4.1 School Zones
4.4.2 Stop Signs
4.4.3 Yield Signs and Advanced Yield Markings
4.4.4 Parking Restriction Signs

4.5 Signals

4.5.1 Traffic Signals
4.5.2 Leading Pedestrian Interval (LPI)
4.5.3 No RTOR
4.5.4 Pedestrian Hybrid Beacons
4.5.5 Rectangular Rapid Flashing Beacons

4.6 Other

4.6.1 Bicycle Parking
4.6.2 Arrival-Dismissal Traffic Safety Plan
4.6.3 Remote Drop Off Facility



Volunteers, consultant and staff at Lewis and Clark Middle School

4.1 INTRODUCTION AND KEY CONCEPTS

4.1.1 Purpose of This Chapter

The purpose of this chapter is to help execute the projects outlined in Chapter 3 and inform future decisions of what gets built where.

While speeding and safety issues can be addressed through education, encouragement, and enforcement, the design of a roadway is the most effective tool to communicate 24 hours-a-day, 7 days-a-week how a street should be safely used.

Each project proposed in Chapter 3 has a "Toolbox ID" number that corresponds to the "tools," or engineering treatments, described in this chapter. These treatments can improve safety for all street users and for students walking and biking to school. When completed, the intent of these tools is to meet the standard of safety that a parent must perceive to allow their child to walk or bike to school.

The project recommendations and infrastructure toolbox contained in this plan do not include every possible engineering solution. Further analysis by City staff may be needed to adapt this plan's proposals to their specific locations. All projects should use applicable City, State, and Federal design guidelines and manuals such as the NACTO Urban Bikeway Design Guide, the Manual on Uniform Traffic Control Devices (MUTCD), or Federal Highway Administration (FHWA) publications.

4.1.2 Weighing Value, Balancing Interests

Whether we call it a street, an avenue, a road, or a right-of-way (ROW), one thing is almost always true: street space is limited.

The decision of whether to use that space for people to drive, park, ride bikes, walk, or plant trees is more than a straight forward engineering problem; it is a decision that must be made by weighing value and balancing interests. The projects proposed in Chapter 3 will require those who execute them gather public input and make value judgments about how to use the limited space on the streets where they are proposed. For example, seven feet of street width can either be a buffered bike lane or street parking, but it cannot be both. People who live on that street might have an interest in that space being used for parking. On the other hand, students using that street to bike to school might have an interest in the added safety that a bike lane provides. In this case, the value of street parking must be weighed against the value of students' increased safety on the street in question. If the public process finds a project recommendation infeasible and if another route is available with less impact to home owners or businesses with the same level of protection and safety, then a project could be adjusted to accommodate a solution that fits the needs of the area. Accessibility for emergency services is also a consideration.

Completing the projects in Chapter 3 will require similar value judgments, often weighing speed, capacity, parking, and safety against each other to maximize public benefit. The engineers, staff, elected officials, and community members who execute this plan will have to decide what use of our public street space has greatest value.

- Many of the tools described in this chapter were developed during Phase 1 of the Safe Routes to School Plan Update by Toole Design and are recreated here for ease of reference with permission of the Billings MPO.
- Costs listed in this chapter account for initial construction/ installation costs. Operations, maintenance, and secondary costs must also be considered when engineering and design occurs.

4.1.3 Separation and Protection

This plan uses the terms ***"separated"*** and ***"protected"*** to describe street treatments like sidewalks, paths, and bike lanes, also known as facilities. Different facilities may need more separation or protection than others to feel safe depending on the road. Ideally, all facilities would have both separation and protection, but in many cases, increased protection can make up for lack of separation.

A ***Separated*** walking or biking route is set apart from the roadway and is buffered from vehicular traffic by some horizontal distance, usually five feet or more. The most common form of separation is a boulevard, or strip of landscape between the street and sidewalk.

A ***Protected*** walking or biking route has some kind of verticle obstacle between it and vehicular traffic that physically prevents a vehicle from entering the facility. Examples include curbs, bollards, street trees, large rocks, guard rails or parked cars.

Infrastructure tools that provide separation or protection are marked with this badge:

SP



Crossing guard at pedestrian refuge island



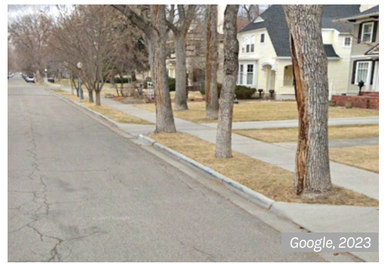
This bike lane on Lewis Ave. is neither separated nor protected.



This sidewalk on Broadwater Ave. has some protection because of the curb, but is not separated. This is called "curbwalk" and should be avoided as an SRTS solution whenever possible.



This multiuse path on Wicks Lane is separated, but not protected.



This sidewalk on Clark Ave. is separated and, because of the curb and frequent street trees, has a higher level of protection.

4.1.4 Traffic Calming

Many of the tools and projects in this plan are intended to reduce traffic speeds, or calm traffic. Some traffic calming tools change the configuration of a roadway, and others change a person's perception of a street, causing them to reduce their speed.

According to the Federal Highway Administration (FHWA) controlling traffic speed is one of the most important tools for reducing fatal and serious injury crashes. A person hit by a car traveling at 35 MPH is five times more likely to die than a person hit by a car traveling at 20 MPH.

The National Association of City Transportation Officials or NACTO, recommends speeds of 25 miles per hour or less on streets with significant student traffic.

Roadside features that produce visual friction, like on-street parking, sidewalks, or buildings, are associated with lower speeds, while roadways with wide shoulders, large building setbacks, and residential-type land development were associated with higher speeds (Ivan, Garrick, and Hanson 2009). Creating visual friction through roadside design can be an effective way to slow traffic, particularly on low-speed roadways with pedestrian and bicyclist activity.

Infrastructure tools that provide traffic calming are marked with this badge:

TC



Figure 2.01 - Median:
Medians create a pinch-point for traffic in the center of the roadway and, when they include pedestrian refuge islands, can reduce crossing distances



Figure 2.02 - Pinch-point:
Pinch-points restrict vehicles from moving at high speeds and can expand the sidewalk for pedestrians at intersections as curb extensions or at mid-block locations.

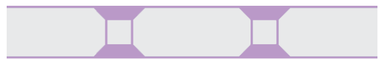


Figure 2.03 - Speed Hump:
Speed humps vertically deflect vehicles and improve safety and visibility of people walking when they are combined with a crosswalk.



Figure 2.03 - On Street Parking
Parking on the street effectively narrows the street, slows traffic by creating "visual friction", and is one of the easiest, cheapest things community members can do to calm traffic in their neighborhoods.

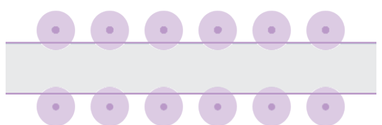


Figure 2.02 - Street Trees
Trees narrow a driver's visual field and, when included in boulevard sidewalk configurations, protect people on the sidewalk.



Figure 2.01 - Traffic Circles
Traffic Circles reduce traffic speeds at intersections by requiring motorists to move with caution through conflict points.

The traffic calming measures to the left are adapted from the NACTO Urban Street Design Guide, can be used to calm traffic in many rural settings.

4.1.5 Pilot Projects

A ***Pilot Project***, also known as a ***Pop-Up Project***, is a low-cost, temporary way to test projects' affects on behavior and safety of all street users.

Pop-up projects are low-cost, low-risk ways for citizens and agencies to work together to collect data on, and demonstrate safer street designs for all people using the street.

Infrastructure tools that can be built as a pilot project are marked with this badge:

P

References and Resources:

- NACTO Speed Reduction Mechanisms
- FHWA Safe System Approach for Speed Management

- More Pilot Projects can be found here.



Western Transportation Institute

4.2.1 - Sidewalks SP

Sidewalks are the foundation of our pedestrian network. While many neighborhoods in Billings have built-out sidewalk networks, many areas in the city do not have sidewalks at all. Sidewalks provide the greatest benefit to people when they are wide enough for two people to walk side-by-side, maintained in good condition with few bumps or cracks, kept clear of debris and overgrowing plants, and built with curbs.



New sidewalk remains level across driveway



Severe cracking creates uneven and hazardous walking surfaces


Misplaced bins can block sidewalks

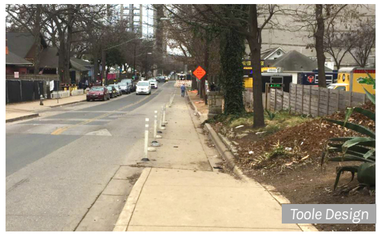
What is the purpose of Sidewalks?

- Improves safety and comfort of people walking by separating them from faster-moving bikes and cars.
- Provides a dedicated space away from vehicular traffic for children to walk, play, or learn to ride a bike.

Where can they be installed?

- The Billings Urban Area Long-Range Transportation Plan, the Safe Routes to School Plan, and the Capital Improvement Plan identify locations for new sidewalk construction and existing sidewalk repair and rehabilitation projects.
- Developers often have to build new sidewalks or repair existing sidewalks with new development.
- Ideally, existing neighborhoods should have sidewalks on at least one side of residential streets. New developments in the City, (with the exception of parcels developed via master site plans i.e. apartments or condos all on the same lot) are required to have sidewalks on both sides of the street. School routes may be locations where sidewalks should be installed on both sides of residential streets to provide for direct access from homes to school, as well as to areas used for off-site drop-off and pick-up.
- Along existing sidewalks, opportunities are identified to remove barriers such as light poles or other obstructions, aiming to maintain a 4-ft clear path. Opportunities to limit or narrow driveways (aka curb cuts) may also be identified, which can create conflicts between people walking and people driving.

How much does it cost?



Alternative sidewalk design


Accessible routes should have 4 feet minimum clear width


Vegetation should be trimmed to maintain minimum clear width

$$-$$$$: Building new sidewalks can be an expensive and challenging engineering project. It can require coordinating with nearby property owners, redesign and reconstruction of driveways, removal of encroaching private improvements, and building new stormwater infrastructure.

How long does it take to install?

1–2 Years: Design and outreach must be completed before construction can begin.

Additional Information:

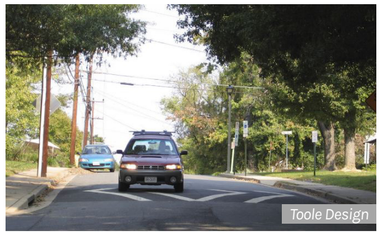
» When building conventional sidewalks is not feasible, other strategies may be considered for creating safer walking routes to school, such as Shared Streets, reallocating road space to create dedicated walking space, and alternative surfacing materials.

References and Resources:

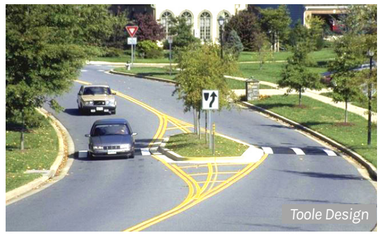
» United States Access Board Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG)

4.2.2 - Speed Humps P TC

Speed humps are a raised area that extends across the street to slow traffic by vertically deflecting vehicles. Speed humps can be combined with crosswalks at intersections or mid-block locations



Speed Hump



Speed humps installed on hills help slow traffic coming downhill



Speed humps help with traffic calming on streets that have high numbers of bicyclists

What is the purpose of Speed Humps?

- Slow people driving to make streets safer and more comfortable for people walking and biking.
- When combined with a crosswalk, speed humps improve pedestrian visibility.

Where can they be installed?

- Speed humps are usually installed on neighborhood streets.
- There is a City-approved design template for speed humps that should be used to ensure consistency across the City.

How much does it cost?

$: Speed humps are low-cost ways to slow vehicular traffic to safer speeds.

How long does it take to install?

1–2 years: Priority streets with high speeds are usually identified one year and construction happens the next year.

References and Resources:

- NACTO Urban Street Design Guide
- Billings Public Works Traffic Calming
- City Standard Modifications Drawing: Speed Hump

4.2.3 - Lane Reconfiguration SP P TC

A lane reconfiguration changes how a street's width is divided into lanes or uses. It can change the number or width of travel lanes for cars, add or change parking. In some cases lane reconfigurations can repurpose the width of a turn lane for wider sidewalks, street trees, bike lanes, or more efficient transit. When considering a lane reconfiguration, a strong public process and careful analysis should be used to determine the desired function of a street.



Street before lane reconfiguration



Street after lane reconfiguration



Street after lane reconfiguration

What is the purpose of Lane Reconfiguration?

On multi-lane streets, a lane reconfiguration can improve safety for all roadway users.

- Narrowing the width of travel lanes can also slow people driving and create space on the street to make it safer and more comfortable for people walking and biking. A person hit by a car traveling at 35 MPH is five times more likely to die than a person hit by a car traveling at 20 MPH.
- Makes it easier and safer for people to cross busy streets by reducing the number of traffic lanes a person has to cross. When people cross streets with more than one lane in each direction they encounter a 'multiple threat.'
- Slows people driving, which makes the street safer for everyone. When there's one lane in each direction, a person driving can only go as fast as the person in front of them.
- Makes it safer for people driving to make a left turn when a center turn lane is added, and a single lane of traffic helps manage drivers cutting in and out of lanes, which helps reduce collisions.
- Reallocates space on the street to widen sidewalks, plant street trees, add curb extensions, or install protected bike lanes.

Where can a lane reconfiguration be installed?

- For all lane reconfiguration projects, technical traffic analysis and meaningful public input are conducted to determine the desired function of a street.
- When a street is being resurfaced or reconstructed, there is an opportunity to change the configuration of lanes on the street. Traffic conditions and crash records are evaluated to identify whether a road or lane diet is needed and if parking can be modified.
- Streets that are good candidates for lane reconfigurations typically have lower volumes than would be expected for a street with the existing configuration.
- For parking lane reconfigurations, parking use and supply is carefully studied and inform the proposed designs that are vetted through a public process before moving forward.
- Any modifications made for lane reconfigurations are designed by an engineer

4.2.3 - Lane Reconfiguration Continued



A three-lane to two-lane reconfiguration



Lane reconfiguration



Center turn lane narrowed to provide space for bike lanes

How much does a lane reconfiguration cost?

$-$$$$: The cost of a lane reconfiguration is highly variable; it may involve removing the lane lines from the street and repainting new lane lines, which is often done at night or on weekends to minimize traffic disruptions.

When a lane reduction is done as part of a larger project to resurface or reconstruct a street, it can be accomplished for relatively low costs.

How long does a lane reconfiguration take to install?

>1 year: Community input is gathered through presentations and public comment at the local governing bodies which influences design decisions in the first year, and construction typically follows the year after.

References and Resources:

» FHWA Proven Safety Countermeasures

» FHWA Road Diet

4.2.4 - Traffic Circles P TC

Traffic Circles, or mini roundabouts, are circular markings or raised islands that reduce traffic speeds at uncontrolled intersections in residential neighborhoods by horizontally deflecting vehicles and causing people driving to move with caution through conflict points. Neighborhood traffic circles are different than roundabouts in that they do not have channelized lanes or medians to direct incoming lanes.



Traffic Circles can be quickly and cheaply installed as Pilot Projects



Traffic Circles provide opportunities for landscaping and beautification



Traffic Circles in Missoula calm and discourage cut through traffic

What is the purpose of Traffic Circles?

- Slow traffic at uncontrolled intersections to make them safer for all street users.
- Opportunities for landscaping.

Where can they be installed?

- At 4-way, uncontrolled intersections on residential streets; streets with < 30 mph speed limit; intersections that are not offset (all 4 “legs” of the intersection meet at right angles, and the path of travel through the intersection does not require a change in course).
- Streets with little heavy truck or large vehicle traffic.
- Where 15’ minimum of clearance is possible between the edge of the traffic circle to the edge of the curb radius; if curb radii are small, this distance may need to be larger.
- Winter maintenance needs include reflective vertical elements, such as reflective delineators. Traffic circles require more articulation of snow removal equipment.

How much does it cost?

$-$$: Because traffic circles can be installed as either simple markings with reflectors or as raised islands, their cost is relatively low and can be installed as pilot projects.

References and Resources:

» Bike Walk Montana: Pop-up Traffic Calming

» NACTO Urban Street Design Guide

4.2.5 - Protected Bike Lane SP P TC

A protected bike lane, also known as a cycle track, separated bikeway, or on-street bike path is a dedicated one, or two-way bike facility that provides the protection of a separated path within a roadway. Protected bike lanes can be at street level or raised to provide vertical separation from the adjacent vehicle lane.



A protected bike lane created with a lane reconfiguration and re-striping



A protected bike lane at sidewalk level in Missoula, MT



A two-way protected bike lane with temporary pin-down curb

What is the purpose of a Protected Bike Lane?

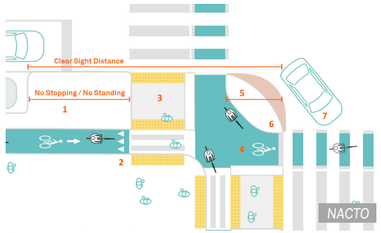
- Dedicates and protects space for bicyclists by improving perceived comfort and safety. Eliminates risk and fear of collisions with overtaking vehicles.
- Reduces risk of 'dooring' compared to an unprotected bike lane if buffer between bike lane and cars is wide enough, and eliminates the risk of a doored bicyclist being run over by a motor vehicle. Risk of dooring from passenger doors may still be present. There is also a continued risk, similar to an unprotected bike lane, of pedestrian/bicycle conflict when pedestrians cross the lane.
- Low implementation cost when making use of existing pavement and drainage and using parking lane or other barrier for protection from traffic.
- More attractive to a wide range of bicyclists at all levels and ages.
- Two-way protected bike lanes are wide enough for snow removal without requiring special equipment.

Where can they be installed?

- On streets where existing bike lanes are not perceived as safe enough to encourage students to use them.
- On streets with relatively few conflicts such as driveways or cross streets on one side of the street.
- On streets with frequent conflicts like driveways or cross streets, a center, two-way protected bike lane can be used.
- On streets where there is not enough room for a one-way protected bike lane on both sides of the street, a two-way lane reduces the street width needed for protection.
- On streets where lane reconfigurations and lane width reductions are desirable for calming traffic.
- On streets for which conflicts at intersections can be effectively mitigated using parking lane setbacks, bicycle markings through the intersection, and other signalized intersection treatments.
- Along streets with high bicycle volumes.



A protected bike lane at a driveway



A protected intersection accommodates curb extensions and protected bike lanes



Planters provide economical beauty and protection

How much does it cost?

$$-$$$$: The cost of a protected bike lane varies widely depending on the kind of protection provided, whether the installation is permanent or temporary, and the length of the protected lane.

The kind of protection; striping and parked cars, temporary pin-down curb, or permanent concrete curb will significantly affect cost.

How long does it take to install?

Varies. Planning, public input, design, engineering, and construction are all components of the installation process.

References and Resources

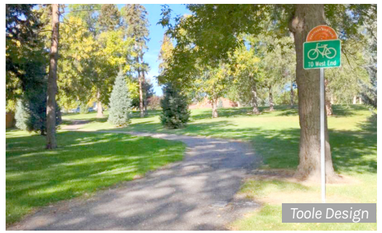
- Billings Area Bikeway and Trail Master Plan
- NACTO Urban Bikeway Design Guide
- AASHTO Guide for the Development of Bicycle Facilities
- City of Billings Subdivision Regulations

4.2.6 - Shared Use Path SP

Also known as multi-use trails, shared use paths are paved paths that are horizontally separated from the roadway and shared by people walking or biking. Ideally, when a shared use path is beside a high speed, high volume roadway, they include vertical protection in the form of curbs, trees, or physical barriers like guard rails.



Shared use paths in Alexandria, VA



Shared use path in Billings



Shared use path in Austin, TX

What is the purpose of a Shared Use Path?

- Provides a high level of safety and user comfort by separating and protecting them from vehicle traffic.
- Serves both transportation and recreation users.
- Can accommodate two-way pedestrian and bicycle use.
- May include connections to the on-street bicycle and sidewalk network.
- Should be aesthetically appealing and feel safe to use.
- May provide opportunities for economic development along the path corridor.

Where can they be installed?

- Shared use paths can be built independent from the road network or alongside a roadway where traffic volumes and speeds are too high, or where there is not enough space for bike lanes in the existing roadway.
- Prioritization criteria based on proximity to destinations, residential populations, connectivity, and community support all contribute to the shared use path-siting process.
- Opportunities to integrate shared use paths in proposed development projects are consistently looked for, as well as outreach and education opportunities for local bicycle, pedestrian, and environmental advocacy groups.
- A 10 ft-wide hard surface path is ideal, but may need to narrow the shared use path under constrained circumstances.

Shared use paths are constructed as part of the construction or reconstruction of arterial roads within the City of Billings. On arterials, shared use path are being built on one side with a standard sidewalk on the other.

How much does it cost?

$$$: Costs for shared use paths vary, but are typically among the most expensive types of bicycle and pedestrian facilities. Components of shared-use path design and construction include:


Recent investments induce demand near Ben Steele Middle School



Shared Use Path along Shiloh Rd.



Shared Use Paths provide great connection to recreational amenities for the whole family

- Right-of-way
- Surface material
- Lighting
- Landscaping
- Terrain grading
- Retaining walls
- Pavement markings
- Fencing/rails
- Shared-use bridges
- Maps and signage
- Trail furniture
- Wayfinding signage

How long does it take to install?

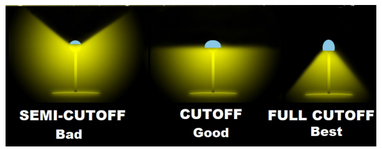
Varies: Planning, public input, design, engineering, and construction are all part of the installation process. Many urban shared use paths will take 5 to 10 years to be fully implemented. However, shorter segments that close gaps in the network or eliminate barriers can often be installed in a shorter timeframe. Public Works constructs about 1 mile of shared use path per year and developers who develop on arterial streets are required to build shared use paths.

References and Resources

- Billings Area Bikeway and Trail Master Plan
- NACTO Urban Bikeway Design Guide
- AASHTO Guide for the Development of Bicycle Facilities
- City of Billings Subdivision Regulations

4.2.7 - Lighting

Street Lighting illuminates areas where students walk or bike. Pedestrian-scaled lighting places light sources lower to the ground and more frequently placed than very tall, auto-oriented street lights to create uniform light levels.



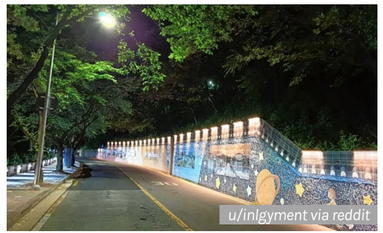
BCFOTS

Cutoffs on street lights prevent light pollution



Adobe Stock

LED lights save energy and money



u/inlgyment via reddit

Lighting contributes to Crime Prevention Through Environmental Design (CPTED)

What is the purpose of Lighting?

- Street lights improve visibility of people walking and biking, as well as providing greater personal security.
- Because it is often dark during winter months when students are walking and biking to school, or returning home from after-school activities, street lighting can significantly affect perceived and actual safety along a route to school.
- Allows people walking and people driving to better see each other.
- Lighting is a key part of Crime Prevention Through Environmental Design (CPTED).

Where can they be installed?

- Along streets and especially at crossings, illumination of areas of pedestrian activity can greatly improve pre-sunrise and after-dark pedestrian safety and security.
- Lighting can be used on streets fronted by schools to reduce vandalism and improve security.
- Lights should use “full cut off” fixtures to reduce light pollution.

How much does it cost?

$$-$$$: Cost vary depending on materials, lighting design, utility service agreements and other factors. There is also a cost to operate lights.

How long does it take to install?

1-2 years: Construction of street lights is usually funded through a Special Improvement District (SID), maintenance and energy are funded through a Special Improvement Lighting Maintenance District (SILMD). Public input and approvals, design, and equipment sourcing all contribute to installation schedules.

Things to Consider

- Install lights on both sides of wide streets to eliminate “dark spots”.
- Use consistent lighting levels
- Consider existing objects in the area to be illuminated that might block light like trees.
- Factors to consider include the number of nighttime pedestrian crashes in an area, the percent of crashed that happen during nighttime hours, the affect that the presence of lighting and pedestrians have on reducing undesirable or criminal behavior.

References and Resources

- Project for Public Spaces Lighting Use and Design
- Billings CPTED Program

4.2.8 - Neighborhood Bikeway

P TC

A Neighborhood Bikeway, also referred to as a Bicycle Boulevard, uses streets with low vehicle traffic volumes and speeds which are designated and designed to give bicycle and pedestrian traffic travel priority. Neighborhood Bikeway use wayfinding signs, pavement markings, and traffic calming tools to discourage excess through trips by vehicles and create safe crossings



Bicycle Boulevards are designed to calm traffic



Google, 2023

A Bicycle Boulevard on Ave. D in Billings



NACTO

Diverters can be used to manage volume on Bicycle Boulevards

What is the purpose of a Neighborhood Bikeway?

- Neighborhood bikeways create safe, comfortable, and slow speed connections with relatively minor changes to existing streets and minimal cost to the public.

Where can they be installed?

- Streets which parallel or already serve as popular bicycle and pedestrian routes are good candidates for Neighborhood Bikeways designation.
- Neighborhood Bikeways should be designated on streets that can feasibly be reduced to 3000 vehicle trips per day and speed limits of no more than 25 mph.
- Route selection for neighborhood bikeways is critical. If routed in illogical ways, require unnecessary stops, or are located on streets that are too busy, they are unlikely to be used as intended.
- A neighborhood bikeway should be considered where streets offer a continuous and direct route along low-traffic streets, or a route with bicycle and pedestrian-only connections.

How much does it cost?

$-$$: Because neighborhood bikeways can be installed using a range of both temporary and permanent elements like signage, paint, bollards, and raised medians, they are a cost effective way to enhance safety for people walking and biking.

How long does it take to install?

6 months-1 year: Planning, public input, design, engineering, and construction are all part of the installation process.

References and Resources

- Billings Area Bikeway and Trail Master Plan
- NACTO Urban Bikeway Design Guide
- AASHTO Guide for the Development of Bicycle Facilities

4.2.9 - Woonerf P TC

Once, all streets were woonerfs, or “living streets.” They are designed for traffic speeds (10 mph) and volumes low enough for people walking, biking, and driving to all share the same space. These kinds of streets usually do not have curbs or sidewalks and vehicles are slowed by placing trees, planters, parking areas and other traffic calming measures in the street.



Space is shared and vehicles move slowly on a woonerf



Alleys are great candidates for woonerf reconfiguration



A recently-built Woonerf in Bozeman, MT

What is the purpose of a Woonerf?

Transforms a street into a space for social interaction, rather than a channel for vehicular mobility.

Where can they be installed?

- Local access streets that have low volume.
- Streets where there is a neighborhood desire to create a public space for social activities and play for local residents.
- A woonerf is generally not appropriate where there is a need to provide for non-local access to services or through streets.
- The design of a woonerf must reduce vehicle speeds to 10 mph or less to make the space safe for children.

How much does it cost?

$$-$$$$: The cost to retrofit a woonerf may be high but there would be no extra cost if designed into original construction.

How long does it take to install?

>1 year: A meaningful public input process and detailed technical analysis should be undertaken to determine the public desire and appropriateness of converting a street into a woonerf before construction can begin.

References and Resources:

» Department of Transportation

4.2.10 - Right-Turn Design P TC

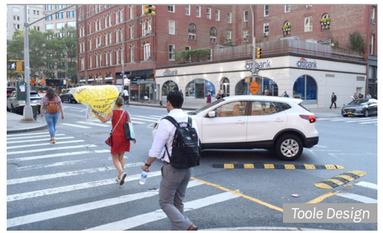
Intersections should be designed to accommodate safe pedestrian crossings using tight curb radii, pedestrian corner islands, and other tools. This is especially the case where right-turn slip lanes are present, many of which were designed to promote fast, and unimpeded vehicles travel, which can be unsafe for crossing pedestrians.



Slip lanes with added signs and raised crosswalks bring attention to pedestrians



Curb radii can be adjusted to lower vehicle turning speeds



Temporary turn wedges can be installed to test turning radii

What is the purpose of a Right Turn Redesign?

- Separate right-turning traffic.
- Slow turning vehicle speeds and improve safety by reducing the likelihood of a “right hook” crash.
- Allow drivers to see approaching cross street traffic more clearly.

Where can they be installed?

- Right lane redesign can be used at intersections with high volumes of pedestrians and conflicting turning vehicles.
- Vehicle turning speeds are evaluated to determine whether a decrease in turning radius would reduce speeds

How much does it cost?

$$-$$$: Depending on the location, right turn redesigns include reconfiguring the roadway, adding striping and/or constructing an island.

How long does it take to install?

1–2 years: Traffic studies must be completed before installation can begin. Additional time may be needed if traffic islands are constructed.

References and Resources:

» AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities

» AASHTO Guide for the Development of Bicycle Facilities

» ITE Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities

4.3.1 - Curb Bulb-outs/Extensions SP P TC

Curb extensions move the curb line out into the parking lane, reducing the distance for people walking across the street and improve visibility between people walking and driving. By visually and physically narrowing the roadway, curb extensions also help reduce speeding. Curb extensions can be temporarily installed with striping, bollards, and pin-down curb or permanently installed in concrete.



Mid-block curb extension



Easy-to-install materials such as paint, turtle bumps, and flex posts may be used to create curb extensions



Curb extensions may provide space for landscaping

What is the purpose of a Curb Extension?

- Improves safety by reducing the distance and time required to cross the street.
- Improves visibility between people driving and people walking across the street.
- Provides additional space in constrained locations for installing curb ramps.
- Improves safety at corners by slowing turning motorists through a tighter turning radius.
- Prevents people from parking too close to a crosswalk, which could limit visibility, or from blocking a curb ramp or crosswalk.
- Provides space for seating, public art, bike racks, rain gardens or other public amenities.

Where can they be installed?

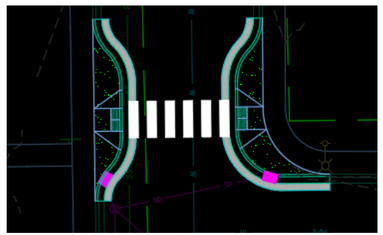
- Curb extensions are considered at locations that would benefit from improved visibility between people walking and driving, such as at school crosswalks.
- Curb extensions can be installed at most locations with a legal crosswalk, whether marked or unmarked, provided there is adequate width, and on streets with all day on-street parking.
- Curb extensions can be installed as part of larger capital improvement projects.



A pilot project curb extension at 6th St. and Lewis Ave.



Curb extensions calm traffic in Josephine Crossing



A curb extension being designed on Jackson St.

How much does it cost?

$-$$$: Permanently installed curb extensions typically involve roadway and sidewalk removal and may require replacement/relocation of stormwater drainage inlets.

Pilot or temporary installations of curb extensions using paint, pin-down curb, and bollards can significantly reduce costs.

How long does it take to install?

3 months - 2 years. Typically, design of a permanent curb extension is completed in 6-12 months and construction is completed by a contractor the following year.

The pilot or temporary installation process includes project team assembly, walking audit, public input, design and implementation usually takes around 3 months.

References and Resources:

- Pedestrian Safety Guide and Countermeasure Selection System: Curb Extensions
- NACTO Urban Street Design Guide: Curb Extensions
- AASHTO Guide for the Planning, Design and Operation of Pedestrian Facilities, 2015

4.3.2 - High Visibility Crosswalk P TC

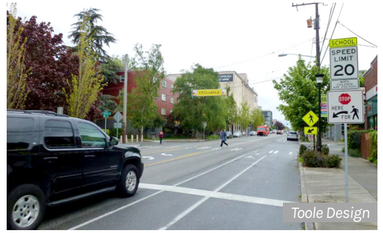
Legal crossings exist at every intersection, (except where prohibited by signage) whether marked or unmarked. Marked crosswalks are used to raise driver awareness of people crossing the street and to direct people who are walking to the best place to cross the street. High visibility crosswalk markings go beyond traditional parallel line crosswalks to include parallel lines, diagonal lines, advances stop markings, and signage.



Marked ladder style crosswalk at an intersection



Raised crosswalks slow drivers



Advanced stop bars increase visibility of people crossing the street

What is the purpose of a High Visibility Crosswalk?

- Make people driving more aware of where to expect students to cross the street.
- Direct people walking to the best place to cross the street.
- Indicate the walking route to school.
- NACTO guidelines state that pedestrian non-compliance increases with detour and delay. Detours of three minutes or more may cause pedestrians to take more direct, but unsafe routes. This suggests a maximum detour distance of 540 feet round trip for a person walking at 3 feet per second, not including wait time at a crossing.

Where can they be installed?

- Crosswalks will generally be marked at signals and at intersections downtown.
- Crosswalks will typically be marked at stop-controlled locations if there is high vehicular volume, and will be marked if feasible at uncontrolled locations if they satisfy the criteria outlined on this page.
- The following factors are considered when deciding whether to mark a crosswalk at uncontrolled locations.
- It should be noted that different jurisdictions (City, County, and MDT) have different policies:
  - Average hourly traffic over 300 vehicles per hour in any hour
  - Adequate stopping or sight distance
  - More than 20 pedestrian crossings in any one hour of the day, or more than 10 children or elderly persons in any one hour
  - There is no existing marked crosswalk within 300-ft of the location in question
  - The crosswalk is located on a trail, shared-use path, designated safe route to school, or provides direct access to a transit stop, or other pedestrian destinations
  - Presence of curb ramps
  - Presence of lighting



Art and crosswalks combine to encourage walking

How much does it cost?

$: If a potential new marked crosswalk location does not require any additional safety treatments, then marking the crosswalk is relatively inexpensive and straightforward.

$$: If other safety improvements, are needed at the crosswalk the cost can be higher.

How long does it take to install?

Varies. In some cases, it can take 1–2 months or less to install a new marked crosswalk. If new curb ramps or other safety improvements need to be installed in addition to the marked crosswalk, then it can take 1–2 years or longer to complete the work.

Raised Crosswalks

- Raised crosswalks keep the crosswalk at the same height as the sidewalk.
- They act as a speed hump and slow vehicles as they approach the crosswalk.
- Make pedestrians more visible to drivers
- Raised crosswalks may require modifications to stormwater drainage structures in the street, increasing construction costs.

Raised Intersections

- Raised intersections slow people driving and encourage them to yield to people walking across the street
- Raised intersections can be installed in neighborhood intersections to make the public space more comfortable and inviting for people to walk and bike.

Other Things to Consider:

- The total distance a person walking would have to cross. If there is more than one lane of traffic in each direction, additional features may be added to supplement the crosswalk and minimize the potential multiple threat. These treatments could include elements like crossing beacons, pedestrian signals, refuge islands, curb extensions, or advanced stop lines.
- Volume and speed of people driving. If the street is very busy and speeds are high, additional features may be added to supplement the marked crosswalk.
- New crosswalks are often accompanied by new crosswalk signs. If it's a crosswalk mostly used by kids, the marked crosswalk will be a school crosswalk with school crosswalk signs. Otherwise, regular crosswalk signs are used. Flexible in-street bollards may also be used to draw additional attention to the crossing.
- Durable and reflective materials are used to mark crosswalks. Over time, the crosswalk markings may need to be refreshed. Crosswalk maintenance is prioritized based on the condition of all the crosswalks in the city. One of the programmatic recommendations of this plan is to mark all school zone crosswalks with durable marking materials (Section 2.5).

Multiple Threat

- A multiple threat is a situation where a driver in one lane (car A) stops for a person crossing the street, but the driver in the next lane (car B) doesn't see the person and doesn't stop. If a crosswalk is marked across more than two lanes of traffic, additional safety improvements like crossing beacons, pedestrian signals, refuge islands, curb extensions, or advanced stop lines may be installed to minimize the multiple threat.

References and Resources:

- Marking and Signing Crosswalks (Safe Routes to School Guide)
- Manual on Uniform Traffic Control Devices (MUTCD) Chapter 7C.03 Crosswalk Markings

4.3.3 - ADA Ramp/ADA Compliant Route

Curb ramps are sloped areas located at intersection corners and crossings that connect the street to the sidewalk. They create a barrier-free environment for everyone when crossing streets that have curbs and sidewalks.



Curbs limit universal accessibility and are barriers for transitioning from the sidewalk to the street



A sidewalk retrofitted with a curb ramp and a tactile warning strip



Each corner should have two curb ramps, one for each crossing

What is the purpose of a Curb Ramp/ADA Compliant Route?

- Provides a comfortable transition from the street to the sidewalk for all people, including people with disabilities, kids on bikes, and caretakers pushing strollers.
- Where recommended in this plan, ADA compliant routes provide safe, accessible paths from the street to a school entry point.
- The Americans with Disabilities Act (ADA) created design standards to ensure equal access to private and public facilities. The Federal Highway Administration (FHWA) issues guidance through its Public Right-of-Way Accessibility Guidelines (PROWAG).

Where can they be installed?

- To the extent that resources are available, new curb ramp installations are coordinated with sidewalk rehabilitation and applicable street alterations. Curb ramps are the standard on all new construction.
- The Billings Urban Area Long-Range Transportation Plan, Safe Routes to School Plan on the ground observations, GIS data, comments from the public, and the Capital Improvement Plan list are all used to select and prioritize curb ramp retrofits.

How much does it cost?

$-$$: The Federal Americans with Disabilities Act (ADA) and Public Right-of-Way Accessibility Guidelines (PROWAG) have very specific requirements for how curb ramps must be constructed, including level landings and gentle grades. The cost of a curb ramp may vary depending on what existing conditions need to be changed to meet these requirements and/or whether cost can be saved by doing multiple curb ramps on the same intersection at a time.

How long does it take to install?

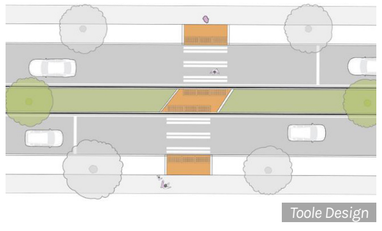
Varies: If a curb ramp is a small scale, stand-alone project, it can be completed within several months. If it is part of a larger resurfacing or reconstruction project, it can take a year or more.

References and Resources:

- US Access Board Public Right-of-Way Accessibility Guidelines (PROWAG)
- ADA Accessibility Survey Instructions: Curb Ramps

4.3.4 - Pedestrian Refuge/Refuge Island SP P TC

Pedestrian refuge islands (also called pedestrian refuges or center islands) are delineated or raised areas in the middle of the street at intersections or mid-block crossings that provide a designated place for people walking and biking to wait for an opportunity to cross the other half of the street.



Typical crossing island



A pedestrian refuge island assists people crossing Broadwater Ave.



Pedestrian refuge islands also help people on bicycles cross the street

What is the purpose of a Pedestrian Refuge/ Refuge Island?

- Makes the crossing more visible to people driving.
- Allows people to cross the street in two stages, making it easier to find gaps in traffic by only having to cross one direction of travel at a time.
- Reduces the amount of time a person crossing the street is exposed to traffic by providing a designated place to wait in the middle of the crossing.
- Makes the street easier to cross for kids, older adults, people with disabilities, and others who may need more time to cross or have more difficulty judging gaps in traffic.
- Reduces speeding due to perceived road width narrowing at the crossing.

Where can they be installed?

- Pedestrian refuge islands may be an effective crossing treatment in situations where it is difficult to cross the street due to long crossing distances or few gaps in traffic.
- There must be adequate width (6-ft minimum) in the middle of the road to install the refuge island.
- Generally, streets with a two-way center turn lane or few or no left turns by people driving provide opportunities to install a pedestrian refuge island.
- Additional safety improvements like crossing beacons are often installed along with the refuge island to make the crossing even more visible to people driving.
- Any added vegetation should be low-lying as to not affect sight distance.
- At crossings frequently used by people on bikes, such as neighborhood bikeway crossings, crossings that separate people biking and people walking may be created.
- Analysis is needed at each intersection before a pedestrian refuge island is installed.

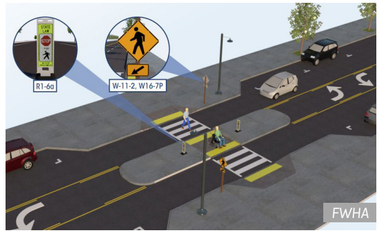
Example in Billings

- BBWA shared use path crossings at Broadwater, Central, Monad, and King Ave.

References and Resources:

- Pedestrian Safety Guide and Countermeasure Selection System (PEDSAFE): Refuge islands
- NACTO Urban Bikeway Design Guide: Median Refuge Island
- FHWA Proven Safety Countermeasures: Medians and Pedestrian Refuge islands

4.3.4 - Pedestrian Refuge/Refuge Island Continued



Pedestrian Islands give people the option to wait in the median before crossing



Pedestrian refuge islands can reduce pedestrian crashes by 32%



A pedestrian refuge island on King Ave. in Billings, MT

How much does it cost?

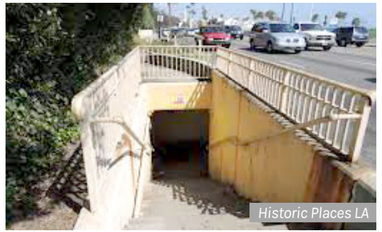
$$–$$$: A small asphalt or concrete pedestrian refuge island can be fairly inexpensive, typically in the range of $10K to $20K to install. Lower cost materials such as flexible posts can also be used to delineate the pedestrian refuge island in certain situations. Larger projects that include landscaping and drainage structures can increase construction and maintenance costs.

How long does it take to install?

1–2 years or less: A simple project can be designed in six months and constructed easily by City crews. More time is required to design larger pedestrian refuge islands or pedestrian refuge islands at busy intersections.

4.3.5 - Bridges and Tunnels SP

A bike or pedestrian bridge or tunnel is a grade separated crossing (separated from ground level) that provides connections across major barriers like rivers, freeways or railroads by routing people walking or bicycling over the barrier on a bridge, or under the barrier in a tunnel.



A pedestrian tunnel in Los Angeles, CA



Pedestrian bridges require significant detour



A pedestrian bridge in Austin, TX

What is the purpose of a Bike/Pedestrian Bridge and Tunnel

- Pedestrian overpasses and underpasses allow for the uninterrupted flow of pedestrian movement separate from vehicle traffic. However, they should be a measure of last resort, and it is usually more appropriate to use traffic-calming measures or install a pedestrian-activated signal that is accessible to all pedestrians because overpasses and underpasses are costly, visually intrusive, and poorly utilized when a more direct at-grade crossing is possible.
- Bridges and tunnels require people walking or biking to make significant detours to use them. Given the choice, people will often risk crossing a roadway at street level rather than climbing ramps or stairs or going under ground into a tunnel where lighting, drainage, graffiti and security are major concerns.

Where can they be installed?

- Bike and pedestrian bridges are often installed at crossings of controlled-access highways. Bridges can be installed to cross water bodies or railways.
- Pedestrian bridges work best when topography allows for a structure without ramps like an overpass over a sunken highway.
- Tunnels or underpasses work best when designed to feel open and accessible.

How much does it cost?

$$$$: Bridges and tunnels are the most expensive solution to create crossings for people walking or biking. They require structural and civil engineering and, often, re-routing of utilities, They are often suggested where a high-visibility crosswalk would be more appropriate.

Underpasses are significantly less expensive when built as part of a construction or reconstruction project and generally offer gentler grade changes than overpasses.

How long does it take to install?

>2 Years: Public input, design, engineering and construction of a bridge or tunnel can be costly both in terms of time and money.

References and Resources:

» Pedestrian Safety Guide and Countermeasure Selection System

4.4.1 - School Zones TC

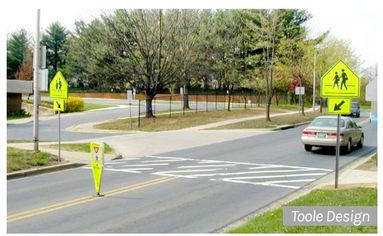
School Zones are designated on the blocks around a school with reduced speed limits and pedestrian crossing signage to facilitate safer crossings for children walking and biking to school.



Trained crossing guards improve school zone safety



School crossing sign



In road signage reinforces pedestrian priority at school crossings

What is the purpose of School Zones?

A School Zone is an area around a school that usually have a reduced speed limit. This lower speed limit and associated signage serves to improve safety and alert drivers that there will be students walking and/or biking in the area.

What treatments define a school zone?

- School zone signs with flashing lights are used to reduce speed limits during school arrival and dismissal hours.
- School crossing signs should be used on key crossings located within the school zone. Other enhanced crossing treatments may be appropriate, depending on the volumes of pedestrian and motor vehicle traffic
- Signs may include School Crossing, Speed Limit, and/or School Bus Stop signs.
- Beacons may be used to supplement signage.

What other treatments should also be considered to improve safety in a school zone?

- Adequate sidewalks and crosswalk markings.
- Crossing guards with proper equipment and training.
- Traffic control devices including pedestrian activated signals.

Where can these be installed?

- The beginning point of a reduced school speed limit zone should be at least 200-ft in advance of the school grounds, a school crossing, or other school related activities; however, this 200-ft distance should be increased if the school zone speed limit is 30 mph or higher.
- School zone locations are governed by MUTCD and engineering evaluation.
- Signage and pavement markings are not frequently used on neighborhood streets, though it does depend on speed of traffic and anticipated number of students walking along the route. This also applies if the approach is a state highway or major arterial.
- Several organizations publish guidance for setting speed limits within school zones. These include the FHWA's "Safe System Approach" and NACTO's "Safe Speed Study."



A variable speed limit sign near Ben Steele Middle School



Current City policy does not require school zones at middle schools



Many cities are adopting lower speed limits to improve safety

- Additional information on school zone signage and markings can be found in the MUTCD.
- Traffic calming measures may need to be installed when a speed limit is reduced to ensure driver compliance.

How much does it cost?

$: Pavement markings and signage are relatively inexpensive. Costs increase if sidewalk construction, road alterations, and traffic signals are also needed.

How long does it take to install?

1-6 months: An engineering study must be completed before signs and signals can be installed.

References and Resources:

- MUTCD Traffic Control for School Areas
- New Jersey School Zone Design Guide
- Arizona Traffic Safety for School Zones Manual
- NACTO City Limits Design Guidelines
- FHWA Safe System Approach

4.4.2 - Stop Signs

Stop signs are a traffic control device used at intersections with three or more approaches, and where application of the normal right-of-way rule would not be expected to provide reasonable compliance with the law.



Stop sign with stop line at an all-way stop



Stop sign oriented to traffic crossing a neighborhood bikeway



Stop sign at intersection between a neighborhood street and a busier street

What is the purpose of Stop Signs?

- Controls traffic movements between people driving, walking, and biking by assigning right of way at an intersection.
- May be used to control one direction of traffic while allowing the other direction to flow freely or can be used to control all directions of traffic.

Where can they be installed?

- The MUTCD determines if the safety of an intersection would be improved by controlling one or more directions of traffic with a stop sign. The MUTCD outlines certain minimum thresholds of motorist, pedestrian, and bicyclist traffic and collisions that should be considered before installing a stop sign.
- If the volumes of people driving, walking, and biking at each direction of the intersection are approximately equal and meet the minimum thresholds established in the MUTCD, stop signs may be installed for all directions of travel.
- If the volumes of people driving, walking, and biking from each direction are unequal, the street with the lower volume of people traveling should be stop-controlled unless there are reasons to provide an advantage to one direction of travel (e.g. neighborhood bikeways).
- Other considerations include:
  - » Direction of school walking routes,
  - » Visibility and sight distance on different sides of the intersection, and
  - » Providing advantage to one direction of travel over another, e.g. neighborhood bikeway or major shared use path connection.
  - » Stop signs may increase speeds between stops.
- Stop signs may be accompanied by stop lines, which indicate to people driving where to stop their car before the intersection.



A new stop sign supplements curb extensions in Josephine Crossing



A stop sign where buildings limit visibility in Billings



A four-way stop in Billings

How much does it cost?

$: Stop signs are a relatively low-cost and effective way of controlling traffic at intersections.

How long does it take to install?

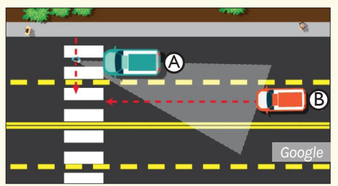
<1 year: If it is determined that an intersection should have one or more new stop signs, they can be installed relatively quickly.

References and Resources:

- » FHWA Manual for Uniform Traffic Control Devices
- » AASHTO Guide for the Development of Bicycle Facilities

Multiple Threat

- » A multiple threat is a situation where a driver in one lane (car A) stops for a person crossing the street, but the driver in the next lane (car B) doesn't see the person and doesn't stop. If a crosswalk is marked across more than two lanes of traffic, additional safety improvements like crossing beacons, pedestrian signals, refuge islands, curb extensions, or advanced stop lines may be installed to minimize the multiple threat.



4.4.3 - Yield Signs and Advanced Yield Markings P

Advance yield lines are pavement markings placed in advance of a crosswalk and are used in conjunction with YIELD HERE TO PEDESTRIANS signs. This treatment increases the distance between where motorists yield and the crosswalk, which improves the visibility of people in the crosswalk and helps reduce multiple-threat crashes. Multiple-threat crashes occur when a driver in one lane yields for a person in the crosswalk and a driver in an adjacent lane does not, striking the person in the crosswalk.



Yield signage in combination with crossing infrastructure increases visibility



Yield signage can vary with application



Bike-specific yield markings and signs may be necessary depending on the situation

What is the purpose of Field Signs and Advanced Yield Markings?

- Increases visibility between people driving, walking, and bicycling.
- Reduces multiple-threat crashes.

Where can they be installed?

- Advance yield markings should be considered on four-lane (or wider) streets at uncontrolled intersections.
- Yield signs and markings are used at mid-block crossings, crosswalks at free-flow ramps, and roundabouts.
- Parking should be prohibited in the area between the yield line and the crosswalk to allow for increased visibility for pedestrians and motorists.

How much does it cost?

$: Yield signs and advanced yield markings are typically added where there is already a marked crosswalk, so the cost is minimal.

How long does it take to install?

<1 year: If it is determined that a crossing needs a yield sign and markings, they can be installed relatively quickly.

Where can they be installed?

Advance yield markings can be installed on two-lane streets, and are required at crossings on multi-lane streets with uncontrolled intersections.

- Yield signs and markings are used at mid-block crossings, crosswalks at free-flow ramps, and roundabouts.
- Parking should be prohibited in the area between the yield line and the crosswalk to allow for increased visibility for pedestrians

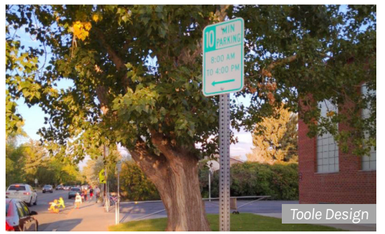
References and Resources:

» AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities

» Zerger, C., C. Lyon, R. Srinivasan, B. Persaud, B. Lan, and S. Smith. 2017. "Development of Crash Modification Factors for Uncontrolled Pedestrian Crossing Treatments." Transportation Research Record: Journal of the Transportation Research Board 2636. Transportation Research Board of the National Academies, Washington, D.C.

4.4.4 - Parking Restriction Signs P

Parking provides access to businesses, residences, and other community resources, and it can also have a traffic calming effect by acting as a buffer between moving motor vehicles and people walking or biking. However, on-street parking can reduce visibility between drivers and people walking, especially at intersections and crosswalks.



Signage communicating time restrictions



Parking signage can indicate drop off only instructions



Signage can also be temporary and removable

What is the purpose of Parking Restriction Signs?

- Parking restriction signs can be used to provide space for and communicate the right locations for school drop-off and pick-up activities.
- Removing parking space(s) at an intersection can improve the visibility of the crosswalk.

Where can they be installed?

- Signs are installed on approaches to intersections and crossings where parked vehicles could block visibility of pedestrians, or where stopped motorists block curb ramps or crosswalks.
- In some cases, physical street barriers to prevent motorists from parking near crosswalks, such as curb extensions, or interim measures such as planters or vertical flexible delineators are used to supplement parking restriction signs.
- Parking restrictions can either be implemented on a permanent basis or during certain times of day.
- Parking restrictions intended to improve crossing visibility are tailored to the speed of the street. The Federal Highway Administration (FHWA) recommends extending parking restrictions 20 feet from the crosswalk on 20 to 30 mph streets, 50 feet from the crosswalk on 35 to 45 mph streets, and 100 feet from the crosswalk on streets with posted speeds above 45 mph."

How much does it cost?

$: Parking restriction signs can be quickly fabricated and installed, so the cost is minimal.

How long does it take to install?

<1 year: Once the area and type of parking restriction is decided upon, they can be installed relatively quickly. The amount of time may increase as additional stakeholders (e.g., businesses) are impacted by parking restrictions.

References and Resources:

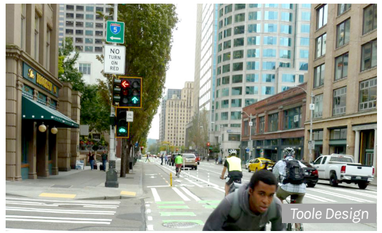
» FHWA MUTCD Chapter 2

4.5.1 - Traffic Signals

Traffic signals coordinate the flow of traffic at intersections, including people driving, walking, and biking.



Bicycle signal detection



Reflective back plate makes the signal more visible



"No Turn on Red" sign

What is the purpose of the Traffic Signal?

- Controls the flow of traffic and provides coordinated movement of people driving, walking, and biking.
- Provides safer conditions for people walking and biking to cross streets with higher traffic volumes or speeds. People driving have to completely stop at red signals when it's the pedestrian's or bicyclist's turn to cross the street.
- When there is a steady stream of traffic, it can be difficult for people walking or biking to find a gap in traffic to cross the street. Traffic signals create gaps in traffic that allow people biking or walking to cross the street.
- Signals should allow adequate crossing time for pedestrians and an adequate clearance interval based upon a maximum walking speed of 3.5 ft/s. In areas where there is a heavy concentration of the elderly or children, a lower speed (typically 3.0 ft/s) should be used in determining pedestrian clearance time.

Where can they be installed?

- The MUTCD is used to determine whether the safety and traffic flow at an intersection would be improved by installing a new traffic signal. The MUTCD outlines minimum thresholds for vehicle and pedestrian traffic and collisions that should be considered before installing a traffic signal.
- A traffic engineering study must be conducted to analyze traffic patterns, determine if a location meets the MUTCD thresholds, and conclude whether a new signal would improve safety or the flow of traffic.
- At some intersections near schools, signal timing and flashing pattern during school arrival and dismissal hours can be adjusted to create fewer conflicts between people walking and people driving.
- Providing a dedicated phase for people to cross the street followed by a separate phase for left turning vehicles reduces potential conflicts between pedestrians and motorists. By prohibiting left turns during the WALK phase, people in the crosswalk do not have to worry about turning vehicles yielding to them.
- At some intersections, including some locations in downtown, people driving aren't allowed to make a right turn when the traffic signal is red. This design makes it safer for people walking across the street by reducing the number of potential conflicts with people turning right on red.
- Traffic signals are more convenient for people walking when the WALK sign is displayed automatically when it's their turn to cross the street, a strategy referred to as automatic recall. Signals in areas of Billings with high pedestrian volumes are programed to show the walk signal automatically. In situations with very low pedestrian volumes, this design may not be appropriate, so many traffic signals have push buttons for people to activate the WALK phase.



Bike traffic signal



Mid-block crossing with traffic signal



Traffic signal at intersection

- At intersections that are frequently used by people on bikes, equipment can be installed to detect when a bicyclist is present. Many new traffic signals in Billings are being controlled by GRIDSMART video controllers that automatically detect bikes in the road. In addition, old induction loops are being replaced with` these new controllers.

How much does it cost?

$$$$: Installing a new traffic signal is a very costly safety improvement. When possible, more cost-effective safety improvements that achieve the same safety objectives are considered so that more can be achieved with limited city resources.

How long does it take to install?

2–4 years: A limited number of new signals are installed every year because they are so costly. They take a long time to design and construct because they are complex systems.

4+ years: If the new signal is on a state route, then the City coordinates with the Montana Department of Transportation, which adds time to the process.

References and Resources:

- FHWA Manual on Uniform Traffic Control Devices
- Federal Highway Administration Proven Safety Countermeasures

4.5.2 - Leading Pedestrian Interval (LPI)

A Leading Pedestrian Interval (LPI) gives people walking the WALK indication 3–5 seconds before people driving in the same direction get a green signal. Because people walking are already in the crosswalk when people driving begin to turn left or right, people driving are more likely to yield to people walking.



With a Leading Pedestrian Interval, motorists have a red signal for the first 3–5 seconds of the WALK phase



Pedestrian WALK push button



An LPI increases visibility of crossing pedestrians

What is the purpose of a Leading Pedestrian Interval (LPI)?

- The LPI signal timing technique allows pedestrians to establish themselves in the intersection in front of turning vehicles, increasing visibility between all modes.

Where can they be installed?

- The LPI can be used at intersections with high volumes of pedestrians and conflicting turning vehicles and at locations with a large population of elderly or school children who tend to walk more slowly.
- The LPI should be at least three seconds to allow pedestrians to cross at least one lane of traffic to establish their position ahead of turning traffic.

How much does it cost?

$: An LPI is typically added where there is already a signal, so the cost is minimal. There may be additional costs to drivers due to cost of intersection efficiency and increased wait times.

How long does it take to install?

A few months. An LPI is typically added where there is already a signal, so this reflects the time to redesign the signal cycle and time for a technician to adjust it at the control center or in the field.

References and Resources:

» FHWA Proven Safety Countermeasures

» NACTO Urban Street Design Guide

4.5.3 - No RTOR

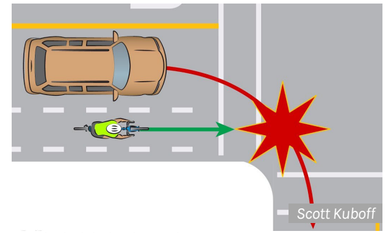
A Right Turn on Red Restriction (RTOR Restriction) prohibits motorists from taking right turns at signals if the light is red. The standard MUTCD sign states “NO TURN ON RED.” For areas were RTOR restrictions may only be needed during certain times of the day (e.g., school arrival and dismissal times), time-of day restrictions may be appropriate.



A combination of Yield and No Right on Red signs



Right turn restriction in Billings



A typical “right hook” crash

What is the purpose of Right Turn on Red Restrictions

- RTOR restrictions allow pedestrians to have a specific phase where they can walk aligned with a green light without conflict from right turning vehicles, also known as a “right hook” crash.
- NO TURN ON RED restrictions remind drivers of their obligation to yield to people walking and biking in the crosswalk.

Where can they be installed?

- RTOR restrictions can be used at intersections with high volumes of pedestrians and conflicting turning vehicles or in areas with visibility concerns.
- Signs should be clearly visible to right-turning motorists stopped in the curb lane at the crosswalk.
- There is no available research to support whether installing NO TURN ON RED signs is an effective tool at decreasing crashes with pedestrians. Therefore, it is recommended that such signs be used in conjunction with LPIs.

How much does it cost?

$: An RTOR restriction is typically added where there is already a signal, so the cost is minimal. If an electronic sign is desired, that can significantly increase the cost.

How long does it take to install?

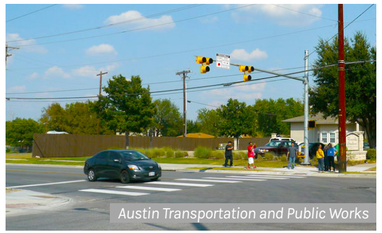
A few months. An RTOR restriction is usually added to an already-existing signal pole, so the timing is dependent on how long the intersection analysis and evaluation would take. More time would be needed for electronic signs to allow a technician to adjust the signal timing at the control center or in the field.

References and Resources:

» FHWA Proven Safety Countermeasures

4.5.4 - Pedestrian Hybrid Beacons

Pedestrian Hybrid Beacons (PHB) are pedestrian-activated traffic control devices which help pedestrians safely cross major roadways where there is no traffic signal. PHBs are also known as High Intensity Activated Crosswalks, or HAWK, signals.



Pedestrian hybrid beacon in Austin, TX



Pedestrian hybrid beacon



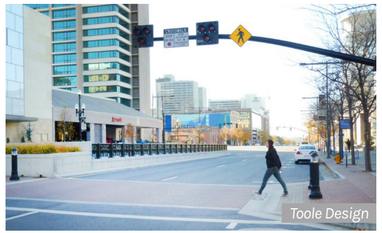
Pedestrian hybrid beacon on a divided roadway

What is the purpose of a Pedestrian Hybrid Beacon?

- Makes the presence of a person trying to cross the street known to people driving, since the beacon is only activated when someone pushes the button.
- The beacon consists of two red lights above a single yellow light. The beacon head is "dark," or un-illuminated, until a pedestrian activates the device. The pedestrian pushes a button that activates the beacon. After displaying brief flashing and then steady yellow intervals, the device displays a steady red indication to drivers and a "WALK" indication to pedestrians, allowing them to cross while traffic is stopped.
- The solid red signal face on a PHB has the same meaning as and should be treated like a traffic signal showing a red light. Once the red light starts flashing it should be treated like a stop sign, where the driver is to stop and make sure it is clear before proceeding.

Where can they be installed?

- The City follows the Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD) guidelines and warrants when studying a location for a PHB.
- Data is used to understand the volume and speed of people driving on the street as well as the number of traffic lanes a person has to cross.
- The safety history of the crossing is considered in addition to environmental and community issues at a given location.
- PHB must be located more than 300-ft from existing signals.
- PHB can be installed at crosswalks that have other safety improvements, like a crossing island.



Pedestrian hybrid beacon on a downtown street



A PHB in Phoenix, AZ provides added visibility for pedestrians near a high school



A pedestrian hybrid beacon in Belgrade, MT

How much does it cost?

$$$$: Relatively expensive due to electrical components that often require temporarily removing sidewalk to access underground electrical lines and the reconstruction of any sidewalk removed during construction. The cost can range from $75,000 to $150,000.

How long does it take to install?

1–2 years: Traffic studies and signal design must be completed before installation can begin. Difficulty in equipment sourcing can delay installation timelines.

References and Resources:

- Pedestrian Safety Guide and Countermeasure Selection System: Pedestrian Hybrid Beacon
- FHWA Intersection Safety Technologies
- Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD)

4.5.5 - Rectangular Rapid Flashing Beacons

Rectangular Rapid Flashing Beacons (RRFB) are pedestrian-activated flashing lights on the side of the street that make a crosswalk more visible to people driving and alert them to the presence of a person trying to cross the street.



RRFB with passive detection



RRFB with push button at a school crosswalk



RRFB at a neighborhood bikeway crossing

What is the purpose of a Rectangular Rapid Flashing Beacon?

- Makes the presence of a person trying to cross the street known to people driving, since they only flash when someone pushes the button or activates an automatic sensor.
- Studies have shown that people driving are more likely to stop for people trying to cross the street when they activate a rectangular rapid flashing beacon. The highly visible flash of RRFBs is very eye-catching to motorists.

Where can they be installed?

- The Federal Highway Administration (FHWA) provides guidance for the installation of RRFBs. For more information, see here.
- The City of Billings considers the volume and speed of traffic on the street as well as the total distance a person walking or biking has to cross.
- RRFBs can be installed at crosswalks that have other safety improvements, like a crossing island.

How much does it cost?

$$: RRFBs are a relatively inexpensive ($5k-$8k per crossing) way to improve safety for people crossing the street. The cost to install RRFBs can increase if the crossing doesn't already have a marked crosswalk with curb ramps that meet Federal Americans with Disabilities Act requirements.

How long does it take to install?

Varies. If the existing crossing already has marked crosswalks and curb ramps that meet ADA requirements, RRFB can be installed in a few months. If other improvements are needed at the location, it may take 1–2 years.

References and Resources:

- Interim Approval for Optional Use of RRFBs (FHWA)
- Pedestrian Safety Guide and Countermeasure Selection System: RRFB
- FHWA Intersection Safety Technologies

4.6 OTHER

4.6.1 - Bicycle Parking

Bicycle parking is a device, usually a rack or a group of racks, that allow people to secure their bicycles. Bicycle parking can be installed on school grounds, on the sidewalk, or in the street.



Bike racks on the sidewalk



Bike corral



Covered bike parking

What is the purpose of Bicycle Parking?

- Gives students and school staff a place to secure their bike during the day while they're at school.
- Encourages students and school staff to ride their bikes to school.
- When located near the main entrance, bike parking makes it inviting for people who get to school by bike.
- Sends the message that the school encourages bicycling.

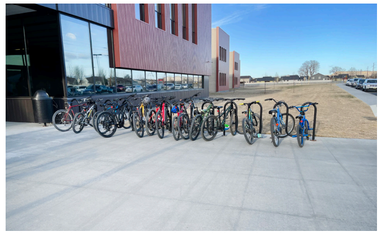
Bike Corrals

- Sometimes the best place to install bike parking is on the street. A bike corral can be installed in place of on-street parking and can provide parking for 6 to 12 bikes in place of one car.
- A corral can also be placed in locations where parking isn't allowed, like 30 feet from an intersection or marked crosswalk. This helps make the crosswalk safer by ensuring no one parks their car illegally and blocks visibility of the crosswalk or intersection, while also adding parking spaces for people on bikes.

4.6.1 - Bicycle Parking Continued



School bicycle parking on grass tiles


Bike parking at Ben Steele Middle School complements shared use paths in the area



Vertical bike racks save space

Where can they be installed?

- Every school should have enough bike parking to meet the day-to-day needs of students and staff. Bike parking at schools is currently the responsibility of the school district.
- When deciding where to install bike racks, the school district facilities group considers locations where the racks will be:
  - » Noticeable upon arriving at school
  - » Visible from nearby windows and the street to ensure bikes are secure
  - » Publicly accessible
- The Billings Area Bikeway and Trail Master Plan specifies three preferred bicycle rack types - the “Inverted U,” coat hanger rack, and post and loop rack.

How much do they cost?

$: Bike parking is relatively inexpensive.

How long does it take to install?

< 1 year: New bike parking can generally be installed at a school in less than one year.

References and Resources:

- » Billings Area Bikeway and Trail Master Plan
- » Safe Routes to School National Partnership
- » City of Billings Bike Parking Guidelines
- » Association of Pedestrian and Bicycle Professionals: Bicycle Parking Guidelines

4.6.2 - Arrival-Dismissal Traffic Safety Plan

Many parents cite traffic and confusion at pick-up and drop-off as one of the reasons they choose to drive their children to and from school. Arrival and dismissal plans formalize procedures for all modes of transportation at pick-up and drop off to limit confusion and conflict. These plans rely on the compliance of students and families and enforcement by staff to work.



Arrival and dismissal plans communicate the preferred locations for buses and personal vehicles



Crossing guards should be involved in creating arrival and dismissal plans



Arrival and dismissal plans can encourage walking and biking to school by managing behavior expectations

What is the purpose of Arrival-Dismissal Traffic Safety Plan?

- Gives guardians consistent expectations of how to behave at drop-off and pick-up to maintain safety for people walking, biking, driving, and busing.
- Allows the school to address campus-specific issues and challenging local street networks.

How are Arrival-Dismissal Traffic Safety Plans developed?

- Currently, each school develops their own Arrival-Dismissal Traffic Safety Plan. These plans, for most schools, were updated for the 2021–2022 school year to address COVID-19 precautions.
- Traffic safety plans should be revised regularly to address changes in travel behaviors, identified safety concerns, availability of staff to supervise, or safety busing changes.
- Arrival-Dismissal Traffic Safety Plans should be revisited prior to the school year and sent to parents and staff with welcome materials. The plans should be revisited throughout the school year to address any issues that arise.

How much does it cost?

$: Plans are a relatively low-cost way to manage drop-off and pick-up times. Additional costs may be incurred implementing the plan, dependent on whether additional staff are needed to assist.

How long does it take to install?

<1 month: The plan is sent to parents and staff via email or as student take-home materials.

Arrival-Dismissal Traffic Safety Plans require staff and administrators to monitor arrival and dismissal and enforce its procedures when necessary.

References and Resources:

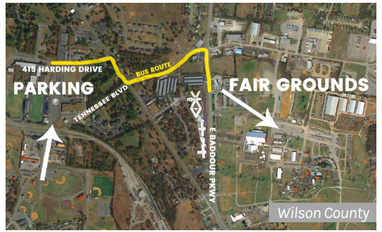
- » Safe Routes to School National Partnership. Keep Calm and Carry on to School: Improving Arrival and Dismissal for Walking and Biking
- » Feet First. Improve your School Arrival and Departure Procedures: A Toolkit for School Safety Committees

4.6.3 - Remote Drop Off Facility

A remote drop off facility, also known as a “park and walk” is a designated site, typically within 1/4 or 1/2 mile of the school it serves, where private vehicles or buses drop off or pick up students, who then walk the remaining distance to school.



Congestion results if all students arrive by vehicle on one street



Airports, stadiums, and county fairs often use remote drop off or parking



Remote facilities work best when they are within 1/4 to 1/2 mile of a school

What is the purpose of a Remote Drop Off Facility?

- Relieve congestion and improve safety at existing school drop off facilities and streets that lead to the school.
- Reduce traffic conflict between students walking or biking and vehicles.
- Reduce inter-personal conflicts between people driving and staff tasked with enforcing Arrival-Dismissal Traffic Safety Plans.
- Reduce the amount of time spent on morning commutes.
- Encourage physical activity for students.

Where can they be installed?

- Remote Drop Off Facilities are most useful at schools where vehicle access to existing drop off is limited by few street connections, where only one street leads to a school, and where congestion raises safety concerns.
- These facilities best located where they do not require a significant detour to use.
- Remote Drop Off Facilities are usually located within 1/4 to 1/2 mile of the school they serve.
- When considering a site for remote drop off, the safety of the site and the route between it and the school should be evaluated for crime prevention and traffic safety. Nearby parks or parking lots are usually good candidates.

How much do they cost?

$-$$$$: In some cases, guardians may already use nearby areas for informal remote drop off. If the site and route from it to the school are found to be safe, establishing a remote drop off there will have little or no cost.

Finding volunteers or by paid staff to monitor the remote drop off or walk with students may be necessary.

If a remote drop off site must be built from scratch or if safety improvements are needed, installation of sidewalk, crosswalks, lighting, paving and curb can become more costly.

How long does it take to install?

<1 month- 2 years: If a suitable site exists near the school, coordinating with the site’s owner and promoting its use can be relatively quick.

If a new facility or improvements are needed, design usually takes a few months and construction happens the following season.

References and Resources:

- Safe Routes to School Guide: Park and Walk
- Opportunities to Walk to School through Remote Drop-off Programs

5.0 Recommended Routes

5.1 School Walking Maps

Ben Steele Middle School....265
Billings Central Catholic High....266
Billings Christian High School....267
Castle Rock Middle School....268
Elysian School....269
Independent School....270
Lewis & Clark Middle School....271
Lockwood Schools....272
Medicine Crow Middle School....273
Mount Olive Lutheran School....274
Riverside Middle School....275
St. Francis Catholic School....276
Sunrise Montessori School....277
Will James Middle School....278



5.1 SCHOOL WALKING MAPS

As part of the Encouragement aspect of SRTS, this plan provides Suggested Walking Route maps for each of the 17 schools included in The Plan. These maps are intended to reduce the mental labor families must do to choose a safe route to school for walking or biking. These routes were selected by evaluating the streets within a mile walking distance of the school and based on factors such as the presence of sidewalks, crossing guards, signals and traffic volumes. The route deemed safest was identified.

These maps can be distributed to students and families to help them choose their route to school, and are intended to function independently of the larger plan document. These maps can also be made available online on City, County, and School websites as appropriate.

These maps are intended for informational purposes only. The City of Billings or Billings Public Schools cannot and does not guarantee the safety of these routes, and assumes no responsibility or liability. We encourage families and students to use this map to explore options for traveling to and from school, but each family is responsible for choosing the most appropriate option based upon their knowledge of route conditions and the specific needs and/or experience level of their student.

Suggested Walking Route maps were not created for some schools because of a lack of walking or biking facilities near those schools. They are:

- BCS Elementary
- Grace Montessori Academy
- Pioneer Elementary

Sidewalk Versus Street Riding

Source: Based on National Highway Traffic Safety Administration information

Children less than 10 years old riding without an adult are not mature enough to make the decisions necessary to safely ride in the street. Children less than 10 years old are better off riding on the sidewalk.

Over the age of 10, the child and their parent/guardian should discuss where is the safest place to ride based on several factors, including the student's route to school, their maturity level, demonstrated on-street riding skills, and understanding that drivers may not expect people traveling as fast as bikes do on the sidewalk.

For anyone riding on a sidewalk:

Check local and state law to make sure sidewalk riding is allowed.

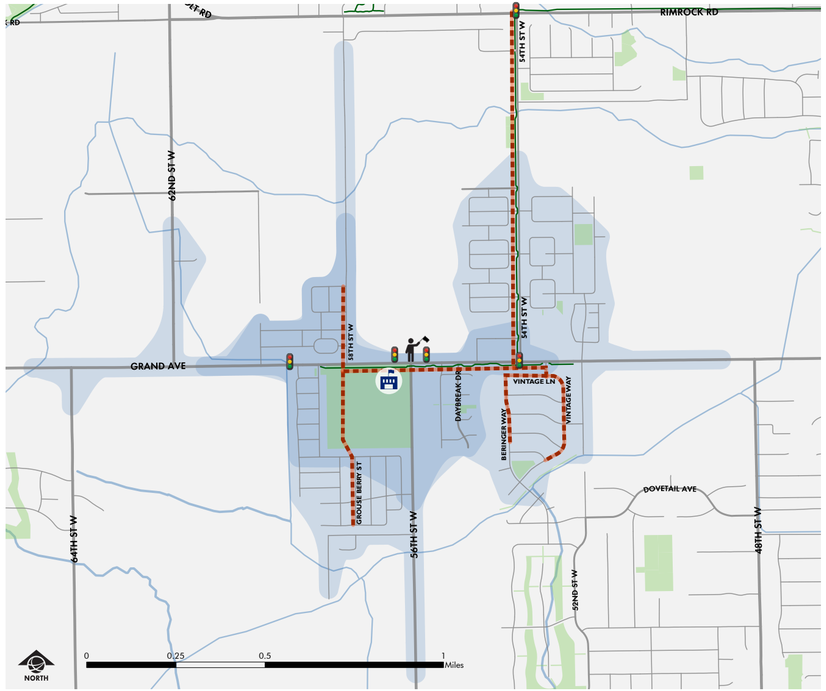
Watch for vehicles coming out of or turning into driveways.

Stop at corners of sidewalks and streets to look for cars and make sure the drivers see you before crossing.

Enter a street at a corner and not between parked cars. Alert Pedestrians that you are near by by saying "Excuse me," or "Passing on your left," or use a bell or horn.

Ben Steele Middle School

Suggested Walking Routes to School

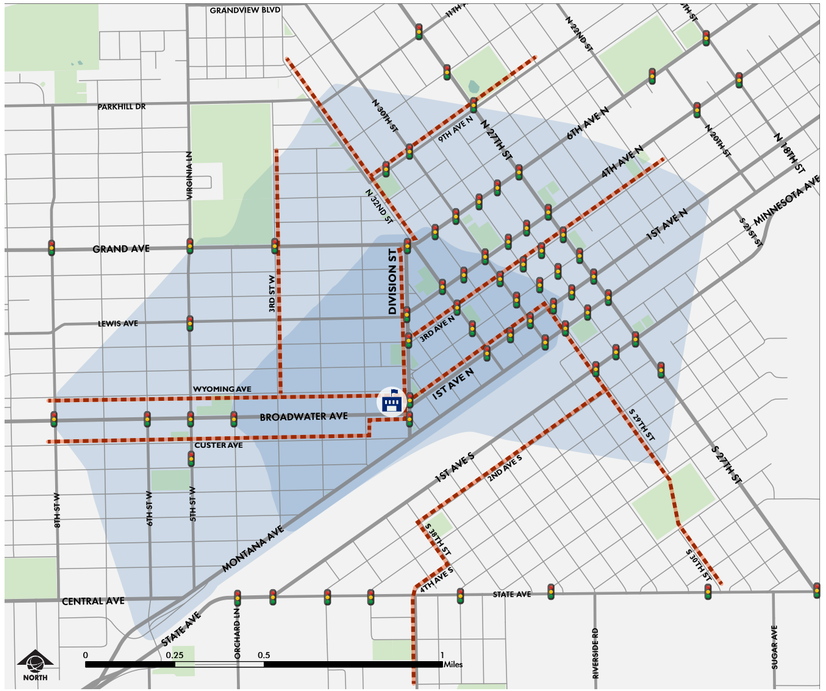




This map is intended for informational purposes only. Neither the City of Billings nor any of the schools included in this plan can guarantee the safety of these routes, and assumes no responsibility or liability. We encourage families and students to use this map to explore options for going to and from school, but each family is responsible for choosing the most appropriate option based upon their knowledge of route conditions and the specific needs and/or experience level of their student.

Billings Central Catholic High School

Suggested Walking Routes to School

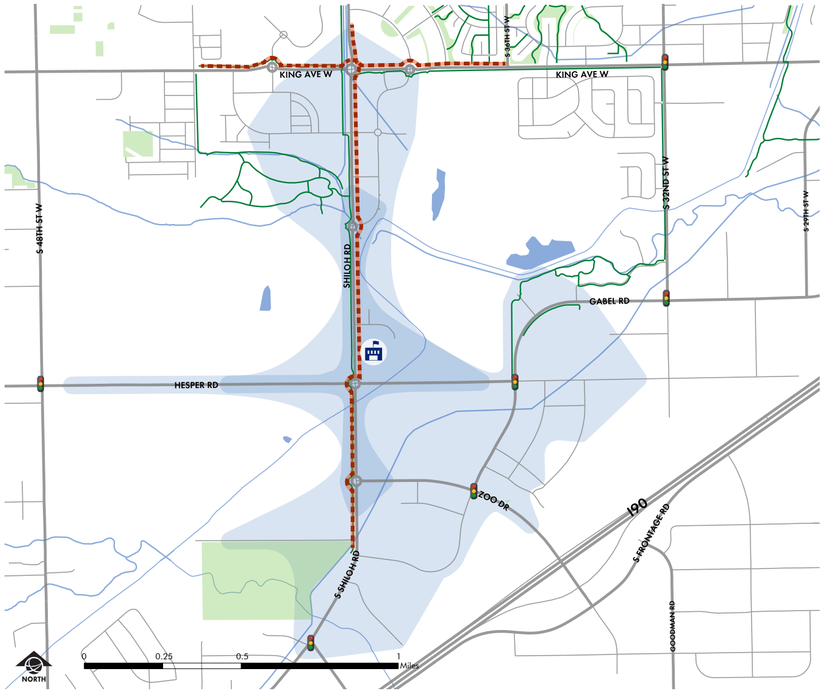




This map is intended for informational purposes only. Neither the City of Billings nor any of the schools included in this plan can guarantee the safety of these routes, and assumes no responsibility or liability. We encourage families and students to use this map to explore options for going to and from school, but each family is responsible for choosing the most appropriate option based upon their knowledge of route conditions and the specific needs and/or experience level of their student.

Billings Christian High School

Suggested Walking Routes to School

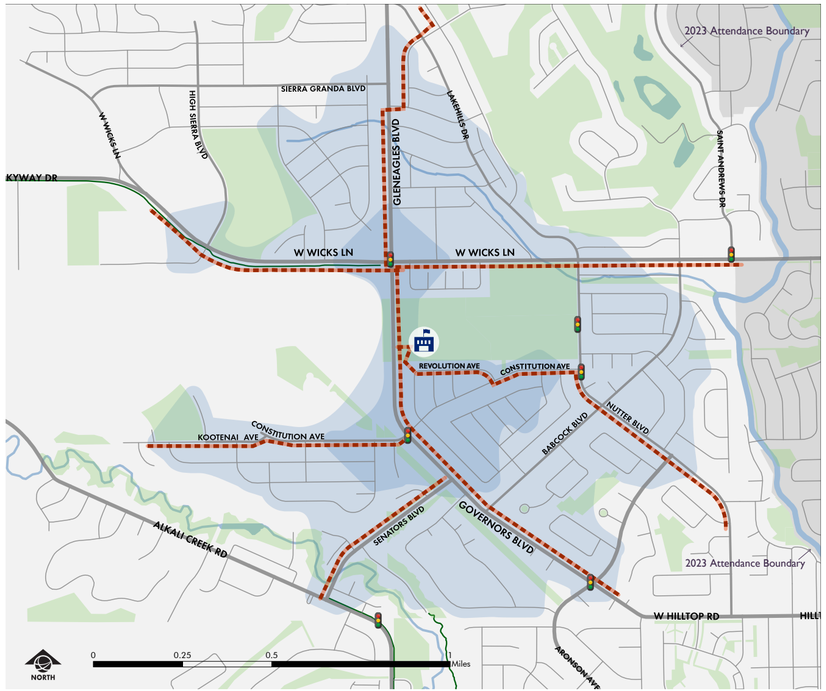




This map is intended for informational purposes only. Neither the City of Billings nor any of the schools included in this plan can guarantee the safety of these routes, and assumes no responsibility or liability. We encourage families and students to use this map to explore options for going to and from school, but each family is responsible for choosing the most appropriate option based upon their knowledge of route conditions and the specific needs and/or experience level of their student.

Castle Rock Middle school

Suggested Walking Routes to School

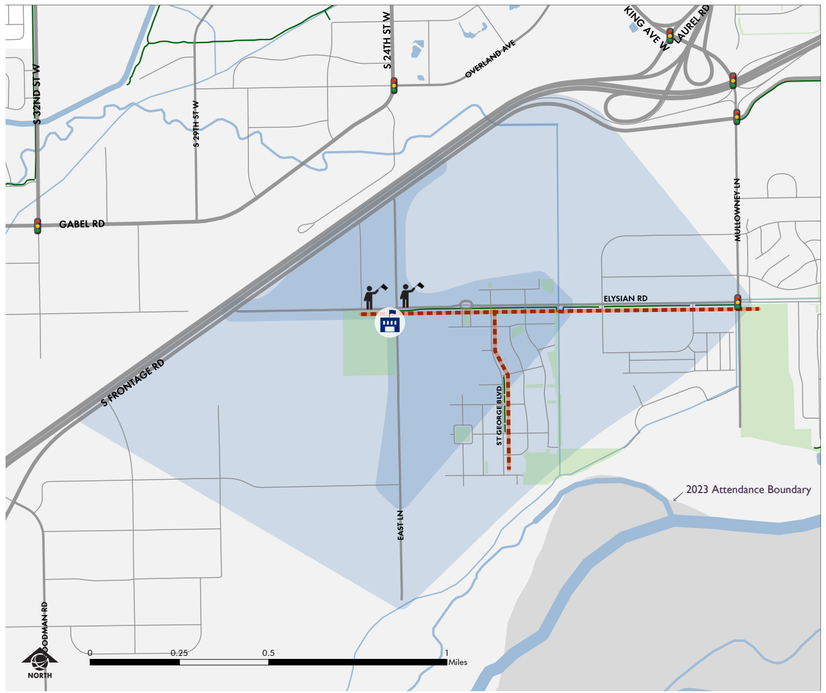




This map is intended for informational purposes only. Neither the City of Billings nor any of the schools included in this plan can guarantee the safety of these routes, and assumes no responsibility or liability. We encourage families and students to use this map to explore options for going to and from school, but each family is responsible for choosing the most appropriate option based upon their knowledge of route conditions and the specific needs and/or experience level of their student.

Elysian School

Suggested Walking Routes to School

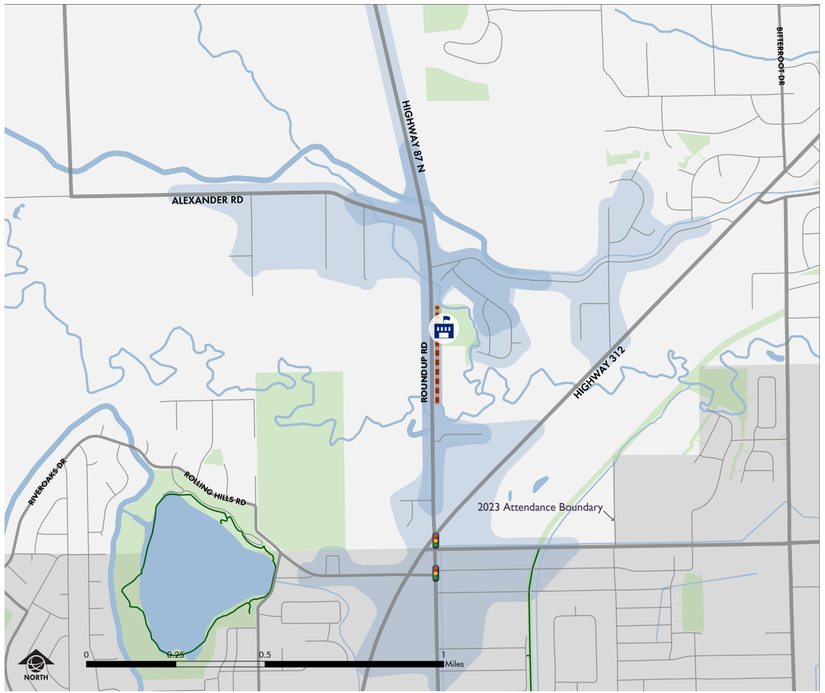




This map is intended for informational purposes only. Neither the City of Billings nor any of the schools included in this plan can guarantee the safety of these routes, and assumes no responsibility or liability. We encourage families and students to use this map to explore options for going to and from school, but each family is responsible for choosing the most appropriate option based upon their knowledge of route conditions and the specific needs and/or experience level of their student.

Independent School

Suggested Walking Routes to School

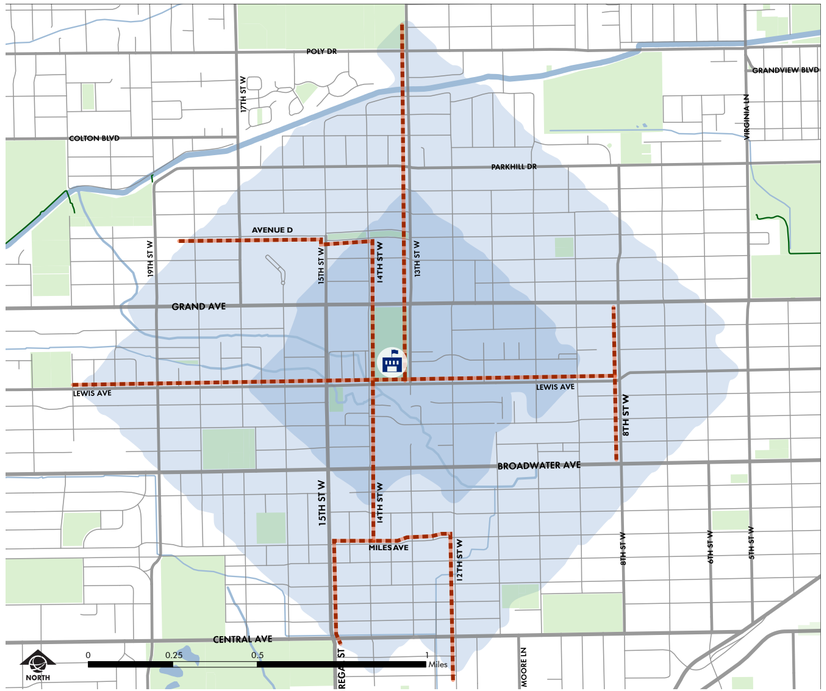




This map is intended for informational purposes only. Neither the City of Billings nor any of the schools included in this plan can guarantee the safety of these routes, and assumes no responsibility or liability. We encourage families and students to use this map to explore options for going to and from school, but each family is responsible for choosing the most appropriate option based upon their knowledge of route conditions and the specific needs and/or experience level of their student.

Lewis and Clark Middle School

Suggested Walking Routes to School

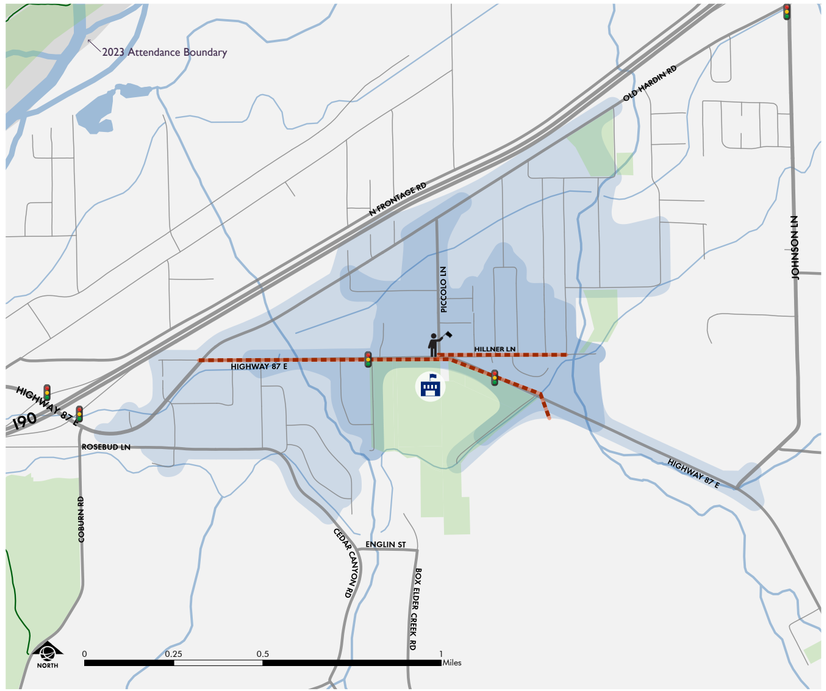




This map is intended for informational purposes only. Neither the City of Billings nor any of the schools included in this plan can guarantee the safety of these routes, and assumes no responsibility or liability. We encourage families and students to use this map to explore options for going to and from school, but each family is responsible for choosing the most appropriate option based upon their knowledge of route conditions and the specific needs and/or experience level of their student.

Lockwood Schools

Suggested Walking Routes to School

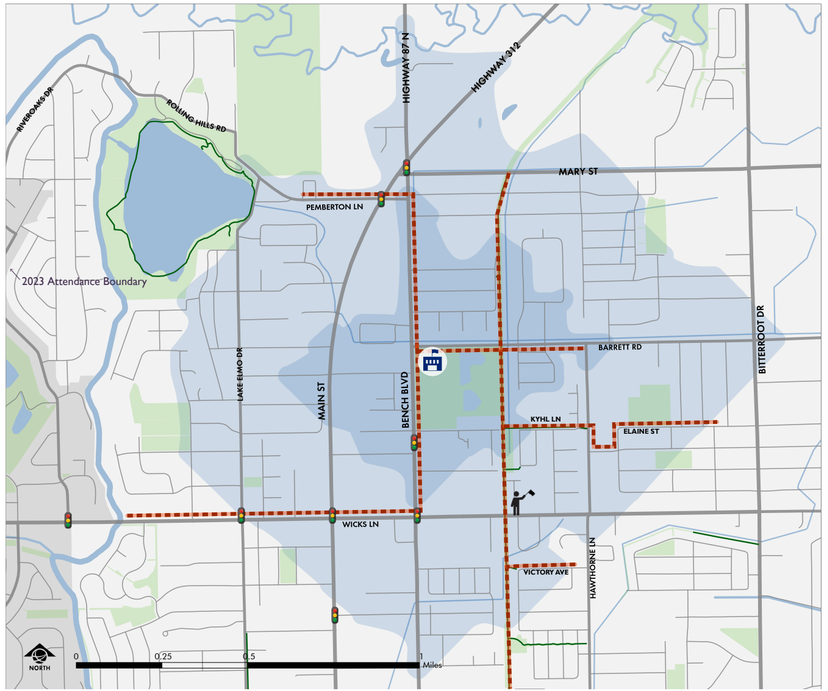




This map is intended for informational purposes only. Neither the City of Billings nor any of the schools included in this plan can guarantee the safety of these routes, and assumes no responsibility or liability. We encourage families and students to use this map to explore options for going to and from school, but each family is responsible for choosing the most appropriate option based upon their knowledge of route conditions and the specific needs and/or experience level of their student.

Medicine Crow Middle School

Suggested Walking Routes to School

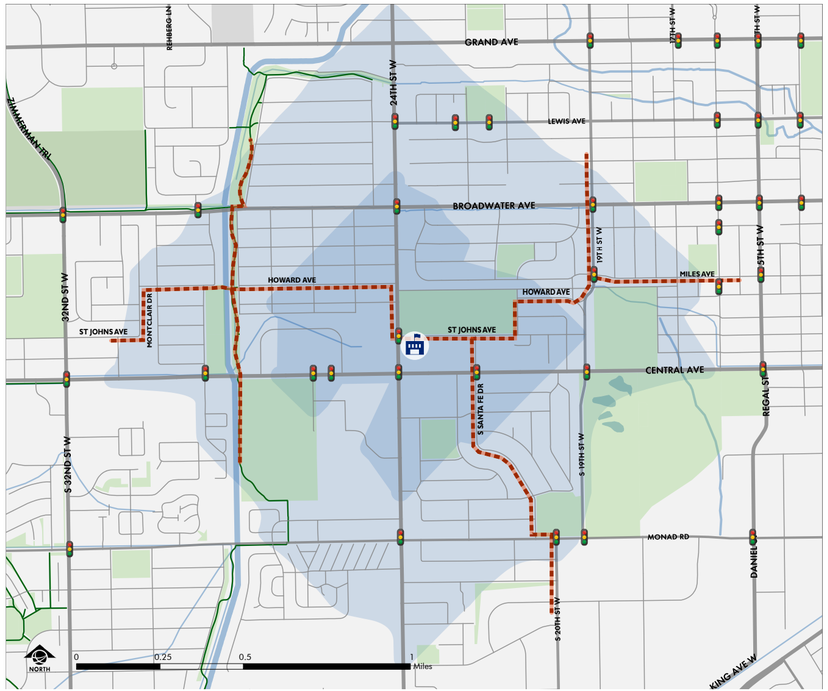




This map is intended for informational purposes only. Neither the City of Billings nor any of the schools included in this plan can guarantee the safety of these routes, and assumes no responsibility or liability. We encourage families and students to use this map to explore options for going to and from school, but each family is responsible for choosing the most appropriate option based upon their knowledge of route conditions and the specific needs and/or experience level of their student.

Mount Olive Lutheran School

Suggested Walking Routes to School

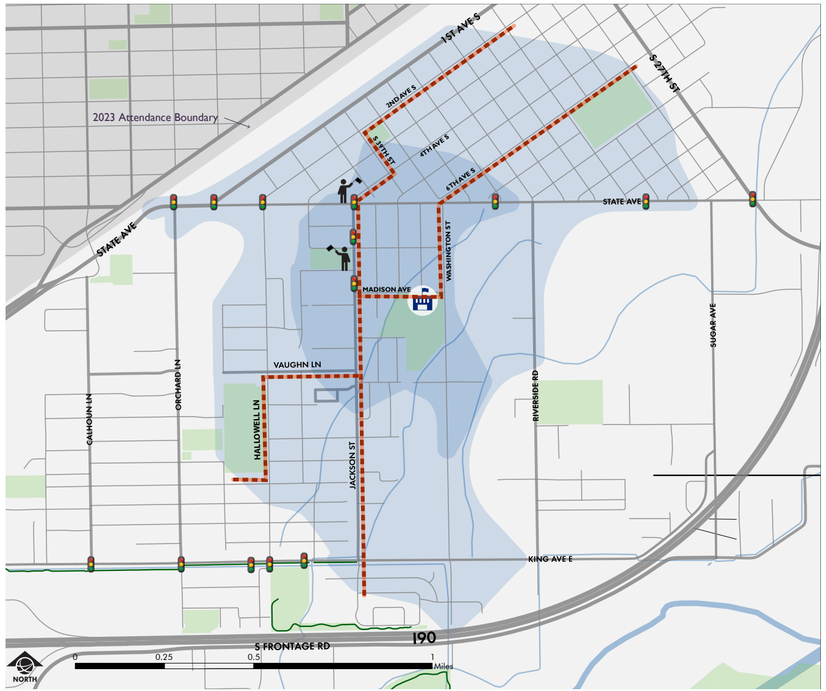




This map is intended for informational purposes only. Neither the City of Billings nor any of the schools included in this plan can guarantee the safety of these routes, and assumes no responsibility or liability. We encourage families and students to use this map to explore options for going to and from school, but each family is responsible for choosing the most appropriate option based upon their knowledge of route conditions and the specific needs and/or experience level of their student.

Riverside Middle School

Suggested Walking Routes to School

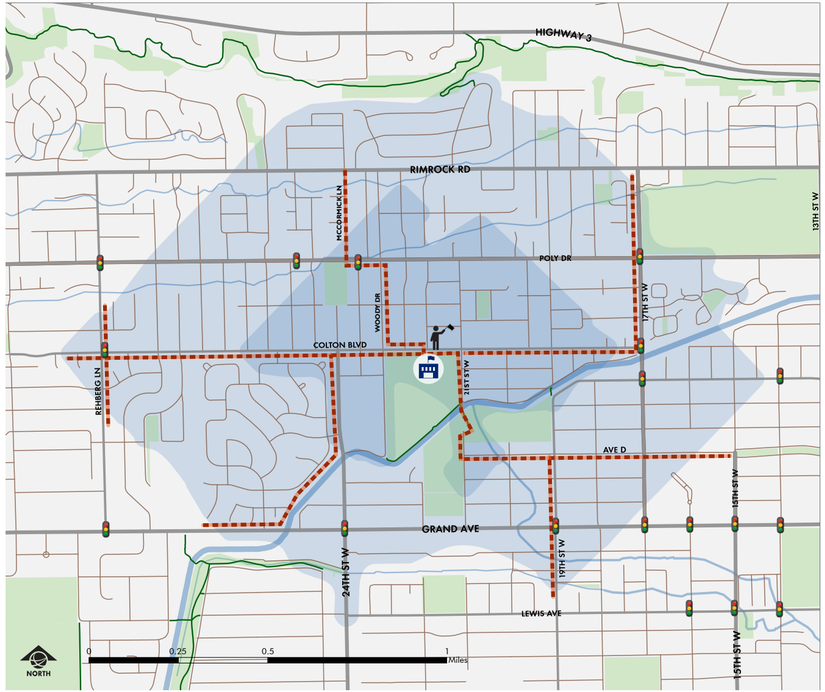




This map is intended for informational purposes only. Neither the City of Billings nor any of the schools included in this plan can guarantee the safety of these routes, and assumes no responsibility or liability. We encourage families and students to use this map to explore options for going to and from school, but each family is responsible for choosing the most appropriate option based upon their knowledge of route conditions and the specific needs and/or experience level of their student.

St. Francis Catholic School

Suggested Walking Routes to School

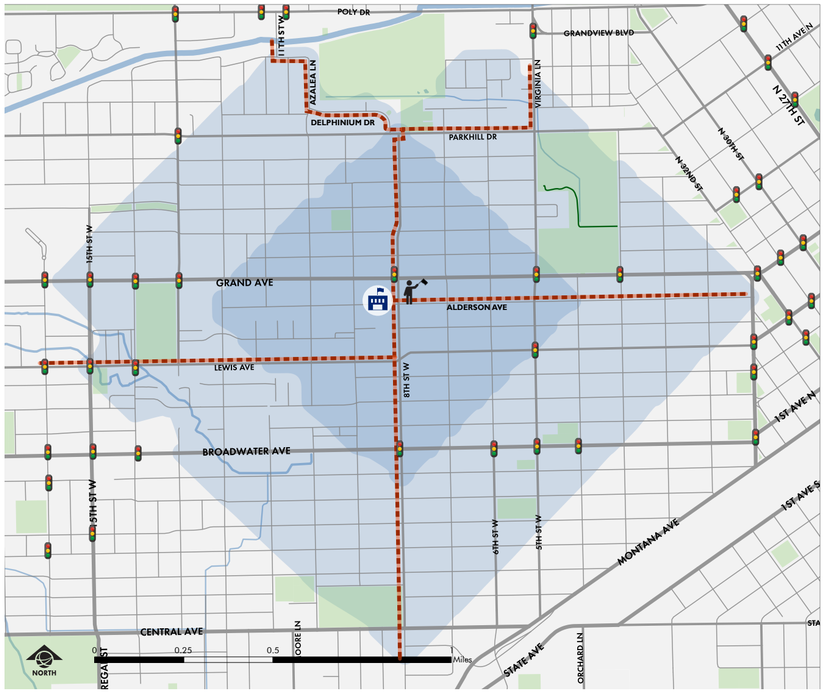




This map is intended for informational purposes only. Neither the City of Billings nor any of the schools included in this plan can guarantee the safety of these routes, and assumes no responsibility or liability. We encourage families and students to use this map to explore options for going to and from school, but each family is responsible for choosing the most appropriate option based upon their knowledge of route conditions and the specific needs and/or experience level of their student.

Sunrise Montessori School

Suggested Walking Routes to School

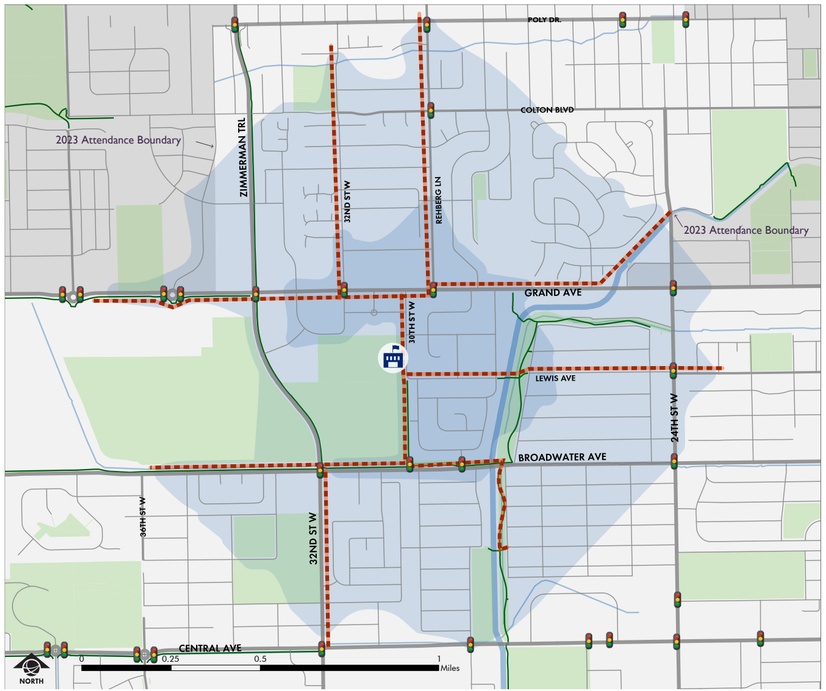


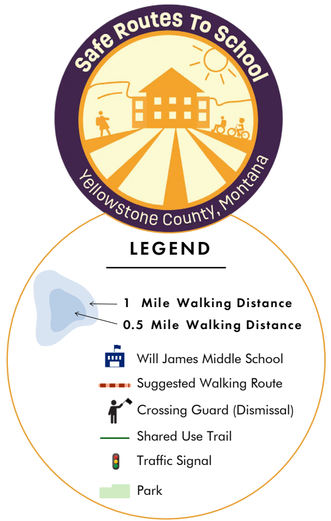


This map is intended for informational purposes only. Neither the City of Billings nor any of the schools included in this plan can guarantee the safety of these routes, and assumes no responsibility or liability. We encourage families and students to use this map to explore options for going to and from school, but each family is responsible for choosing the most appropriate option based upon their knowledge of route conditions and the specific needs and/or experience level of their student.

Will James Middle School

Suggested Walking Routes to School





This map is intended for informational purposes only. Neither the City of Billings nor any of the schools included in this plan can guarantee the safety of these routes, and assumes no responsibility or liability. We encourage families and students to use this map to explore options for going to and from school, but each family is responsible for choosing the most appropriate option based upon their knowledge of route conditions and the specific needs and/or experience level of their student.

Appendix A: Data Collection

To inform the recommendations of this plan, the project team gathered data from many sources including collection of quantitative data on crashes and Average Annual Daily Trips (AADT), as well as qualitative data from the community. This data was collected and analyzed in the spring of 2023.

A.1 Existing Safe Routes to School Plans, Policies and Program Review

A.2 Public Engagement

A.3 Walk Audits

APPENDIX A.1 - EXISTING PLANS, POLICIES AND PROGRAM OVERVIEW

City of Billings School Zone Traffic Control Policy — 2001

The 2001 City of Billings School Zone Traffic Control Policy represents the most recent such policy document adopted. It provides guidance on school crossing location and design, and functions as a supplement to the several other guiding documents published by the Institute of Transportation Engineers (ITE) and the Montana Office of Public Instruction. It cites the City Council's 1989 decision to end the use of reduced speed zones at Middle Schools, using the justification that middle school-aged students are personally responsible for their own safety while traveling to and from school. This document does not represent current standard practices and is recommended to be repealed and replaced as part of this plan's programmatic recommendations chapter.

Link: Microsoft Word - Document2 (billingsmtpublicworks.gov)

City of Billings Safe Routes to School Study — 2011

The 2011 Safe Routes to School study was the first of its kind in Billings. It evaluated conditions at and around the 22 elementary schools of School District Two. Its objectives were to enhance student safety during travel to and from school and to encourage more students to walk and bike. The study takes a holistic approach to Safe Routes with emphasis on engineering improvements. It highlights the collaborative efforts of local jurisdictions. The 2011 plan identified priority projects, planning-level cost estimates, and potential funding sources for those projects.

Link: WASHINGTON (billingsmtpublicworks.gov)

Billings Community Transportation Safety Plan — 2021

The Billings Metropolitan Planning Organization (MPO) partnered with the Montana Department of Transportation (MDT) to create the Community Transportation Safety Plan (CTSP) for Billings. The plan seeks to reduce fatal and serious injury crashes using a data-driven approach like Montana's Comprehensive Highway Safety Plan (CHSP). Led by a Transportation Safety Advisory Committee, the CTSP adopted Vision Zero. Emphasis areas identified were unrestrained occupants, impaired driving, and inattentive driving/ speeding. Strategies and action steps were developed through public input and online surveys to achieve the goal. The CTSP aligns with the CHSP and Vision Zero's objective of eliminating fatalities and serious injuries on Montana's roadways.

Link: Documents – Billings CTSP

Billings Area Bikeway and Trails Master Plan Update — 2017

The Billings Area Bikeway and Trail Master Plan outlines both long-term vision and short-term actions to improve active transportation mobility and recreation in the Billings Area. The plan covers long-range goals, existing conditions, needs assessment, recommendations, and implementation. It emphasizes the importance of evaluating roadways for compatibility with on-street facilities and proposes the creation of bicycle boulevards and on-street bike lanes. The plan promotes consideration of bicycle and trail facilities at all levels of government, inclusion of active transportation facilities in other transportation projects, and securing funding for implementation and maintenance. Short-term projects are identified for inclusion in the 5-year CIP with a focus on key connections and safe routes to schools. The plan also highlights the need to improve programmatic frameworks and resources for maintenance and expansion.

Link: Billings-Bikeway-and-Trails-Master-Plan (billingsmt.gov)

Billings Urban Area Long Range Transportation Plan — 2018

The Billings Urban Area Long Range Transportation Plan is a framework that guides the development and implementation of transportation projects in the Billings urban area. The plan considers land use and transportation conditions, forecasts future needs, and identifies improvements for the Billings region. It touches on topics including streets, highways, rail, freight, transit, sidewalks, and bicycle facilities. It also addresses safety, funding sources and project recommendations. The plan sets goals and performance measures to improve the overall transportation system in the Billings urban area.

The LRTP also enumerates the significant investments that Billings has made to enhance pedestrian and bicycle facilities in the past 25 years. It encourages continued pursuit of Safe Routes to School projects and programs, as well as setting the goal of Billings achieving the "Gold Bicycle Friendly Community" rating by 2030. It integrates several previously recommended SRTS projects into its own project recommendations.

Link: mdt.mt.gov/publications/docs/brochures/billings-tranplan.pdf

Billings Urban Area Long Range Transportation Plan — 2023

The 2023 update was published while this plan was being developed. As elements of the 2023 LRTP were completed, they were used to inform this plan where possible.

The 2023 LRTP included a "Performance Measure Report Card" that tracked the Metropolitan Area's progress on objectives set in the 2018 LRTP. It revealed that, while the 5-year rolling average of fatal and serious injury crashes decreased by 17%, non-motorized fatal and serious injury crashed increased by 25% in the same time.

Link: 2023-Billings-LTRP-Report (billingsmt.gov)

Billings & Yellowstone County MPO Public Participation Plan (PPP) — 2018

The purpose of the Billings and Yellowstone County Public Participation Plan is to establish guidelines and procedures for public engagement in the plan-making process of the Metropolitan Planning Organization (MPO). It serves as a framework for involving the public in transportation planning projects, emphasizing transparency and accessibility. The PPP defines the MPO and its functions, lists the various committees and boards that help create and review plans created by the MPO, outlines the plan production process that the MPO undertakes for each plan, and identifies significant plan documents that the MPO produces. The PPP was used to inform the SRTS phase 2 plan's public participation and review processes.

Link: 21353_Billings-Public-Participation-Plan_FinalDraft-PDF (billingsmt.gov)

Billings Safe Routes to School (SRTS) Plan Update — July 2022

Phase 1 of the Billings Safe Routes to School Plan was created by the MPO to improve safety and accessibility for students walking and biking to school in Billings. It studied 22 School District 2 public elementary schools, evaluating current conditions, identifying barriers, suggesting walking routes, and proposed policy changes and infrastructure projects to promote walking and biking to school. The 2023 SRTS plan followed many of the processes and conventions established in the 2022 plan. It was also used as a reference to inform the project and programmatic recommendations included in the 2023 plan.

Link: billingsmt.gov/DocumentCenter/View/47663/Billings-SRTS-Study-07262022_final

Walking Route Maps for Billings Elementary Schools — 2022

As part of the 2022 Safe Routes to School Plan Update, the original, 2018 "Suggested Walking Routes" maps were updated for the 22 School District 2 elementary schools included in the study. These maps show school locations, traffic signals, crossing guard locations, bike racks, shared use paths, and recommended walking routes. These maps were intended to help families to explore options for walking to and from school under existing conditions. They were referenced by the phase 2 consultant team while creating project recommendations for phase 2 schools near the phase 1 schools.

Link: Walking Route Maps For Billings Elementary Schools | City of Billings, MT - Official Website (billingsmt.gov)

Montana Department of Transportation Crash Data 2011-2020

The Montana Department of Transportation (MDT) offers detailed crash data for different geographies including cities, counties, and reservations. This data is categorized within the "Problem Identification: 2020 Data" crash report, covering aspects like crashes involving no motorists, or street users not in a vehicle. This report serves as a compilation of crash trends, encompassing crash statistics, demographic information, and areas of emphasis related to traffic safety, all part of Montana's Vision Zero initiative. When examining crash data for non-motorists in Yellowstone County, the number of crashes resulting in serious injury or death are somewhat erratic with a slight downward trend. This crash data was used to inform project recommendations.

Link: Crash Data | Montana Department of Transportation (MDT) (mt.gov)

City of Billings Transportation Planning Resources

The City of Billings and MPO regularly update resources for transportation planning that were used to inform this Safe Routes to School Plan Update. These resources include:

- Billings Urbanized Area Traffic Count Map — 2022
- Trail Counts — 2019
- Bikeway Counts — 2019
- Transportation Improvement Plan (TIP) — 2020-2024
- Billings Urban Area Unified Planning Work Program — 2023

Link: Transportation Planning Resources | City of Billings, MT - Official Website (billingsmt.gov)

Billings Area Wayfinding Signage Plan — 2020

The Billings Area Wayfinding Signage Plan provides guidance underscoring the importance and design considerations of wayfinding tailored to Billings, and addressing challenges in pedestrian and bicycle navigation. The plan addresses the unique needs of these modes of transportation by providing a holistic wayfinding system. It elaborates on the advantages of wayfinding, best practices, diverse signage functions and designs, and offers guidance on destination selection, programming, placement, and eventual implementation. Furthermore, the plan adopts a destination hierarchy, designating middle schools as secondary destinations and elementary schools as tertiary ones, contributing to a well-structured wayfinding system for the city.

Link: Final-Billings-Wayfinding-Signage-Plan (billingsmt.gov)

City of Billings Complete Streets Progress Report — 2020

The 2020 City of Billings Complete Streets Policy Progress Report assesses advancements since the adoption of the original 2011 policy and urges further expansion. Complete Streets are intended accommodate diverse transportation needs, from sidewalks to bike lanes, promoting inclusivity for all residents. The progress report discusses the importance of streets as recreational amenities during the COVID-19 pandemic. The Complete Streets Policy seeks to ensure streets are open to everyone, citing research to support that this leads to improved public safety and health outcomes via fiscally responsible means.

Link: https://ci.billings.mt.us/DocumentCenter/View/43311/Final-Complete-Streets-Progress-Report-2020

Kids In Motion — Ongoing

Kids In Motion is a collaborative effort between Intermountain Health (formerly St. Vincent's Healthcare), the Education Foundation for Billings Public Schools, the City of Billings, School District #2, and others. The program includes events held at schools during which volunteers teach students bicycle maintenance and traffic safety fundamentals. The Kids In Motion program is emblematic of the "Encouragement E" of the Six E's of SRTS. It includes lessons and printable materials that educators can download to use in classroom settings.

Link: HOME | kimbillings (kidsinmotionvolunt.wixsite.com)

Lockwood Non-Motorized Transportation Plan

In 2014, the Lockwood community initiated the creation of the Lockwood Pedestrian Safety District, thereby creating a Special Improvement District (SID) to fund sidewalk improvements. The 2023 Lockwood Non-Motorized Transportation Plan serves as the strategic pedestrian and non-motorized plan until 2028. The new plan addresses Lockwood's current conditions and demographic trends, assesses the success of recent pedestrian safety improvements, and ultimately outlines Lockwood's pedestrian improvement work for the next five years. The work plan establishes infrastructure improvements, implementation strategies, and an ongoing approach that will allow Lockwood to continue towards their goal of increasing pedestrian and bike safety and accessibility throughout their community.

APPENDIX A.2 - PUBLIC ENGAGEMENT

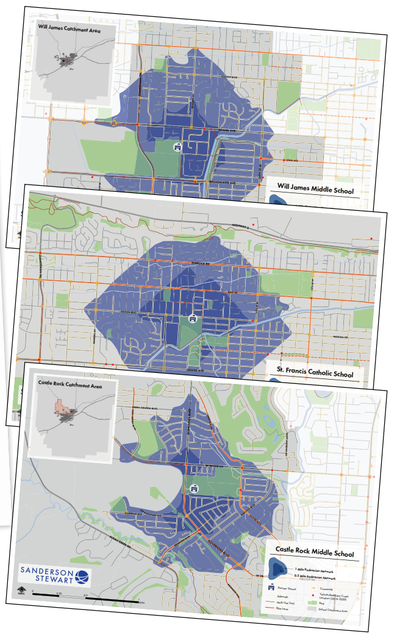
Technical expertise alone is not enough to make a good Safe Routes to School plan. For this plan to be useful to Yellowstone County families and schools, it is recommended to have it be based on the everyday knowledge of the people who live here. To gather the collective knowledge of the community, the project team undertook a public engagement process that included attending school events in the spring of 2023, distributing surveys to school administrators, and publishing a website with an online survey and webmap where community members posted comments.

The SRTS plan and webmap were publicized via:

- Email and correspondence with school administrators
- E-flyers sent out to school email lists
- An article in the Billings Gazette
- A story on local KTVQ news station
- In-person visits and tabling during school events
- Yard signs posted at participating schools

The results of input received are summarized here. Comments about specific schools and their surroundings are summarized in Chapter 3 in each school summary under "Community Safety Concerns."

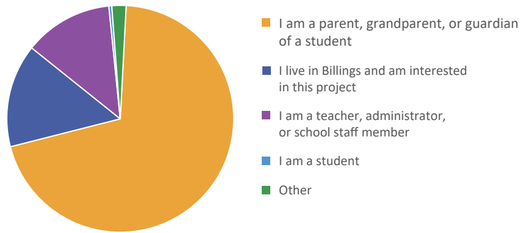




Survey Results

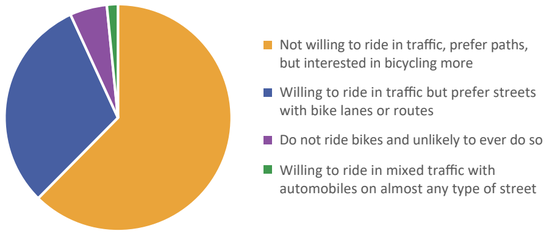
Q1:

Choose the statement that best describes you (Select all that apply)

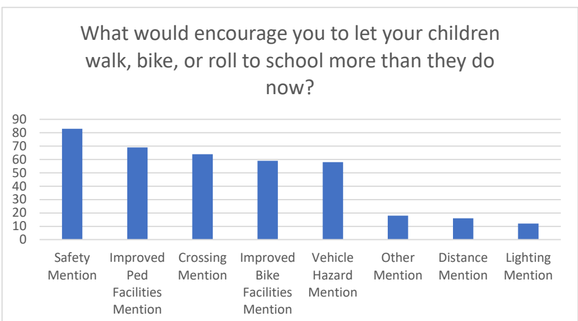


Q2:

How would you describe your and your household's biking habits and comfort level?

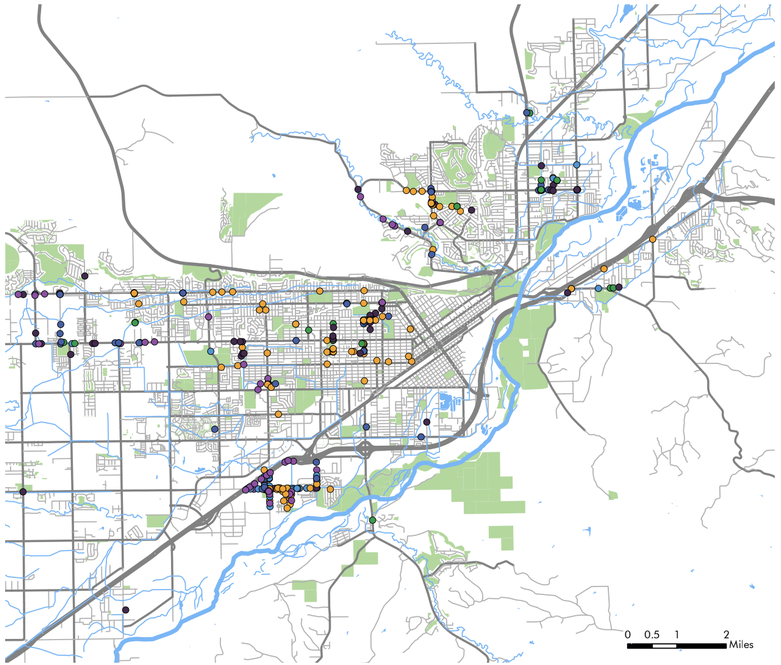


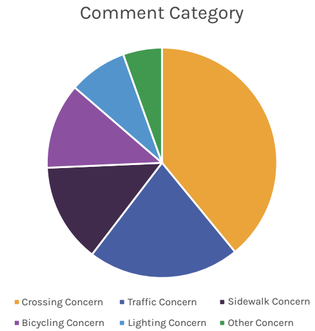
Q3:



Public Input Totals	
Total website visitors	710
Total contributors	216
Surveys completed	193
Webmap comments	365

Webmap Results





APPENDIX A.3 - SCHOOL WALK AUDITS

During the spring of 2023, Sanderson Stewart staff, Billings MPO staff, City staff and volunteers conducted walk audits of the 17 participating schools. These included interviews with staff, administrators and crossing guards. Staff and volunteers walked and biked the streets surrounding each school, using public comments to identify areas of concern. Observations of conditions and behaviors were collected via online tools, photos and paper forms. Summaries of data collected during walk audits about specific schools and their surroundings are summarized in Chapter 3 in each school summary under "Arrival/ Dismissal Observations."

School Neighborhood Walk Audit: INDEPENDENT

What to Look For:

Sidewalks and bike lanes

- Is a sidewalk present? Is it wide enough? yes
- Is the sidewalk cracked, broken, or incomplete? no
- Are there trip hazards or accessibility issues?
- Are there bike lanes? no
- Would children be safe biking? no!!
- Is it easy and safe to cross the street? no

Safety

- Does walking feel safe from cars?
- Does it feel safe from crime and violence? yes
- Is traffic too fast? yes, highway speed too fast!
- Is it well lit?

School Zone

- Are students walking or biking yes separated from car/bus drop offs?
- Are there safe street/driveway crossings when approaching the school entrance? no
- Are there continuous sidewalks/ bike paths from approaches to school entrance?

Neighborhood

- Are buildings well maintained? yes
- Are there vacant buildings?
- Are other people out and about? some in neighborhood behind school
- Are there playgrounds or parks? no
- Are parks unsafe or unmaintained?



For each noteworthy feature that you observe along the route on the map above, write a number at the location on the map. Write a brief description of your observation under Notes at the related number.

Notes:

1. 2 crossing guards in school parking lot
2. directing cars + pedestrians @ crosswalk
3. at school entrance and 2nd parking lot
4. ~~Bike~~ lane closest to road.
5. Kids crossing on their own @ non-
6. designated spots. Crossing guard asking
7. them to use crosswalk!!
8. Limit 4-5 cars to pick up kids. Hold
9. other cars @ front steps.
10. Crossing guard states a few kids cross w/out parent. parents should come across crosswalk to pick up kid @ steps.
11. upset parents who yell/gesture @
12. Crossing guard in far parking lane.
13. because she makes them wait in line. they are
14. no signage about crosswalk use
15.
16. The staff does a good job with their
17. system - parents who park in lot
18. pretty good about complying w/
19. crosswalk use.
20.





Appendix B: Project Prioritization

The City of Billings has dedicated over $3.2 million in its CIP to spend on Traffic Calming, SRTS, sidewalk, and ADA projects over the next five years. Even so, that funding isn't enough to complete all the projects identified in the Phase 1 and Phase 2 plans at once. Therefore, it is necessary to prioritize projects based on how much public benefit, or impact, they will create. The Project Impact formula attempts to estimate, or model that impact.

The project rankings are not intended as a strict ordering of project construction. Factors like availability of funding or timing of other projects at the same location could affect the actual timing of project construction. Anyone implementing the recommendations of this plan should view the Phase 1 and Phase 2 documents more as "Volumes 1 and 2," and should consider each phase's high, medium, and low priority projects together.

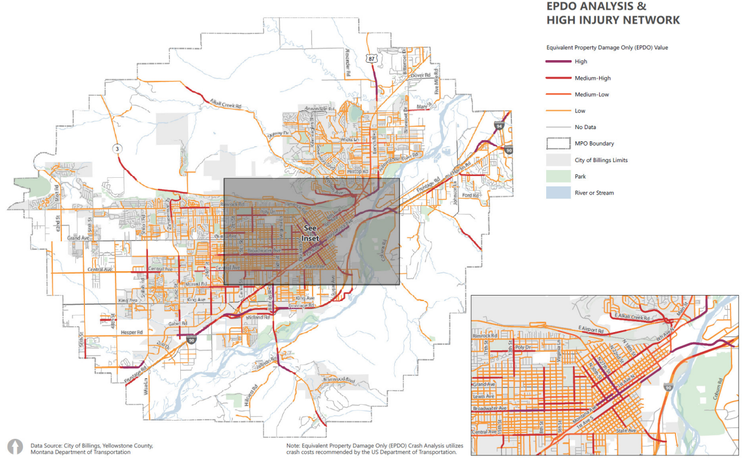
Project Impact Formula Modification Process

Early in the production of this plan, before any projects were created, the Project Advisory Committee (PAC) deliberated over changes to the Project Impact formula developed for the 2022 Phase 1 plan. Because the schools in this plan include private schools which have no attendance boundaries and middle schools whose boundaries are larger than the elementary schools studied in the Phase 1 Plan, the PAC decided to evaluate the Project Impact Formula created in the Phase 1 Plan. Each PAC member completed a form stating how they would modify the formula calculations and weights. After thorough deliberation, the PAC reached consensus on the following Project Impact formula, which is briefly discussed in Chapter 3, Project Recommendations, and is explained in greater detail here.

Traffic Safety (100 pts)

This criterion accounts for the relative safety of the roadway where the proposed project is located. It combines three factors that affect actual and perceived safety:

- The posted speed limit at the project location
- The roadway classification at the project location
- The roadway's category in the 2023 Long Range Transportation Plan's High Injury Network (AKA High EDPO). This factor was not available during the Phase 1 Plan, and was added for the Phase 2 Plan.



Billings MPO, EDPO & High Injury Network

Feasibility (100 pts)

This criterion accounts for the likelihood or ease of completing a project based on dedicated funding and documented support. These factors include:

- Whether a project includes pedestrian crossings, sidewalks, or ADA improvements,
- Whether a project is in the same place as a project listed in the FY2024-2028 Capital Improvement Plan
- Whether a project is in the same place as a project listed in an adopted plan like the 2023 LRTP or the 2017 Bikeway and Trails Master Plan

Demand (100 pts)

This criterion measures how many people might use a project once built. The Phase 1 Project Impact formula counted the number of students living within a quarter mile of a project for this criterion. The PAC changed the calculation of this criterion for several reasons:

- Students may age out of a school before a project is constructed
- Private schools have no attendance boundaries
- Schools often serve as neighborhood recreational amenities

To improve the durability and accuracy of this criterion, the project team used GIS network analysis to count the number of households within two miles of a school whose shortest route to school would take them through the project location. That number was then multiplied by the number of students attending the subject school, and points awarded equal to the that project's score relative to the highest-scoring project.



Example of demand modeling methodology at BCS Elementary

Equity (100 pts)

This criterion accounts for justice and fairness by allotting points based on the percentage of students at the project's school who qualify for free and reduced lunch. This way, the Project Impact formula recognizes both that lower-income schools have been historically under-funded, and that lower-income populations tend to use active transportation at higher rates. Race was not included as in Phase 1 because some schools did not have data.

Once each project's scores were calculated, they were ranked and divided into the categories of high, medium, and low priority based on their overall score.

Criteria	Metric	Maximum Points Per Metric	Point Assignment	Overall Criteria Score
Traffic Safety	Posted Speed Limit[1]	33	25 mph = 11 30-44 mph = 22 45+ mph = 33	100
	Roadway Classification	33	Street = 9 Collector = 17 Minor Arterial = 25 Principal Arterial = 33	
	High Injury Network	33	No Data = 8 Low = 14 Medium-Low = 22 Medium-High = 28 High = 33	
Feasibility	Pedestrian Crossing, Sidewalk, or ADA Improvement	30	Yes = 30 No = 0	100
	In 5-Year Capital Improvement Plan	50	Yes = 50 No = 0	
	Documented in Adopted Plan	20	Yes = 20 No = 0	
Demand	Number of Households Within 2 Miles of School Whose Route to School Benefits From Project * Attendance	100	% of highest-scoring project	100
Equity	Free and Reduced Lunch Percentage at School	100	% = Points	100
			TOTAL POINTS AVAILABLE:	400

[1] Posted speed limits used are not reflective of any "School Zone" temporal speed limit (e.g., 20mph when school speed limit sign is flashing) and only represent the regularly signed speed on the roadway.

Appendix C: Citations

1 Litman, T (2023, November 19) Evaluating Active Transport Benefits and Costs: Guide to Valuing Walking and Cycling Improvements and Encouragement Programs. Victoria Transport Policy Institute

2 Pedestrian and Bicycle Information Center et all (2007) Safe Routes to School Guide

3 Phansikar M, Ashrafi SA, Khan NA, Massey WV, Mullen SP. Active Commute in Relation to Cognition and Academic Achievement in Children and Adolescents: A Systematic Review and Future Recommendations. Int J Environ Res Public Health. 2019 Dec 13;16(24):5103. doi: 10.3390/ijerph16245103. PMID: 31847267; PMCID: PMC6950697.

4 Litman, T (2023, November 19) Evaluating Active Transport Benefits and Costs: Guide to Valuing Walking and Cycling Improvements and Encouragement Programs. Victoria Transport Policy Institute

5 PRC Inc. (2020). 2020 Community Health Needs Assessment Report. Omaha, NE.

6 Social Explorer Tables: ACS 2018 (5-Year Estimates) (SE), ACS 2018 (1-Year Estimates), Social Explorer; U.S. Census Bureau

7 Center for Neighborhood Technology, (2023) H+T Fact Sheet: True Affordability and Location Efficiency
Title : Transportation Statistics Annual Report 2023
Corporate Creator(s) : United States. Department of Transportation. Bureau of Transportation Statistics
Contributor(s) : Robinson, Ramond;Nguyen, Long;Moore, William H.;Culotta, Kalle;Hocevar, Hannah;Kimmel, Sari;Stacey, Mikki;Bricka, Stacey;Bronzini, Michael;Edmonds, Julie;Fang, Bingsong;Firestine, Theresa;Fletcher, Wendell;Greene, David;Kent, Paul;Pisarski, Alan;Rick, Christopher;
Published Date : 2023-12-01
Series : Transportation Statistics Annual Report (TSAR)
DOI : https://doi.org/10.21949/1529944

8 Same as #7

9 Billings – Yellowstone County MPO, 2023, Long Range Transportation Plan

City Council Regular

Date:	04/08/2024
Title:	Boundary Line Relocation between City Parking Lot and Grand Building
Presented by:	Jessica Fust, Building Official
Department:	City Hall Administration
Presentation:	No
Legal Review:	Yes
Project Number:	N/A

RECOMMENDATION

Staff recommends approval of a boundary line adjustment between a City Parking Lot and the Grand Building located at 100 N 27th St, Billings, MT 59101.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

While completing due diligence for the sale of the City-owned parking lot located to the north of the Grand Building, it was discovered that the building may encroach onto the parking lot. The City hired Sanderson-Stewart to survey the boundary line to confirm the encroachment. An encroachment of approximately 0.51' - 0.65' was confirmed. The proposed remedy is to relocate the lot line 0.7' (or 8.4") to the north to ensure that the building no longer encroaches onto the parking lot property. The Grand Building owner agrees to this approach and will cover part of the cost for the lot line adjustment.

Further, the resolution of the Grand Building encroachment is a contingency in the Purchase and Sale Agreement between the City of Billings and Honaker Realty, LLC and JWT Capital, LLC, that council approved on March 11, 2024.

ALTERNATIVES

City Council may:

- Approve; or,
- Not Approve and provide further direction

FISCAL EFFECTS

The cost to relocate the lot line is approximately $4,500 in engineering and filing fees. Approximately $1,500 will be paid with Facilities funds and $3,000 will be paid by the Grand Building owner.

Attachments

Boundary Line Relocation Exhibit

PLAT OF AMENDED LOTS 4 AND 5, BLOCK 92,

ORIGINAL TOWN OF BILLINGS

SITUATED IN GOVERNMENT LOT 3 OF
SECTION 3, T. 1 S., R. 26 E., P.M.M.
CITY OF BILLINGS IN YELLOWSTONE COUNTY

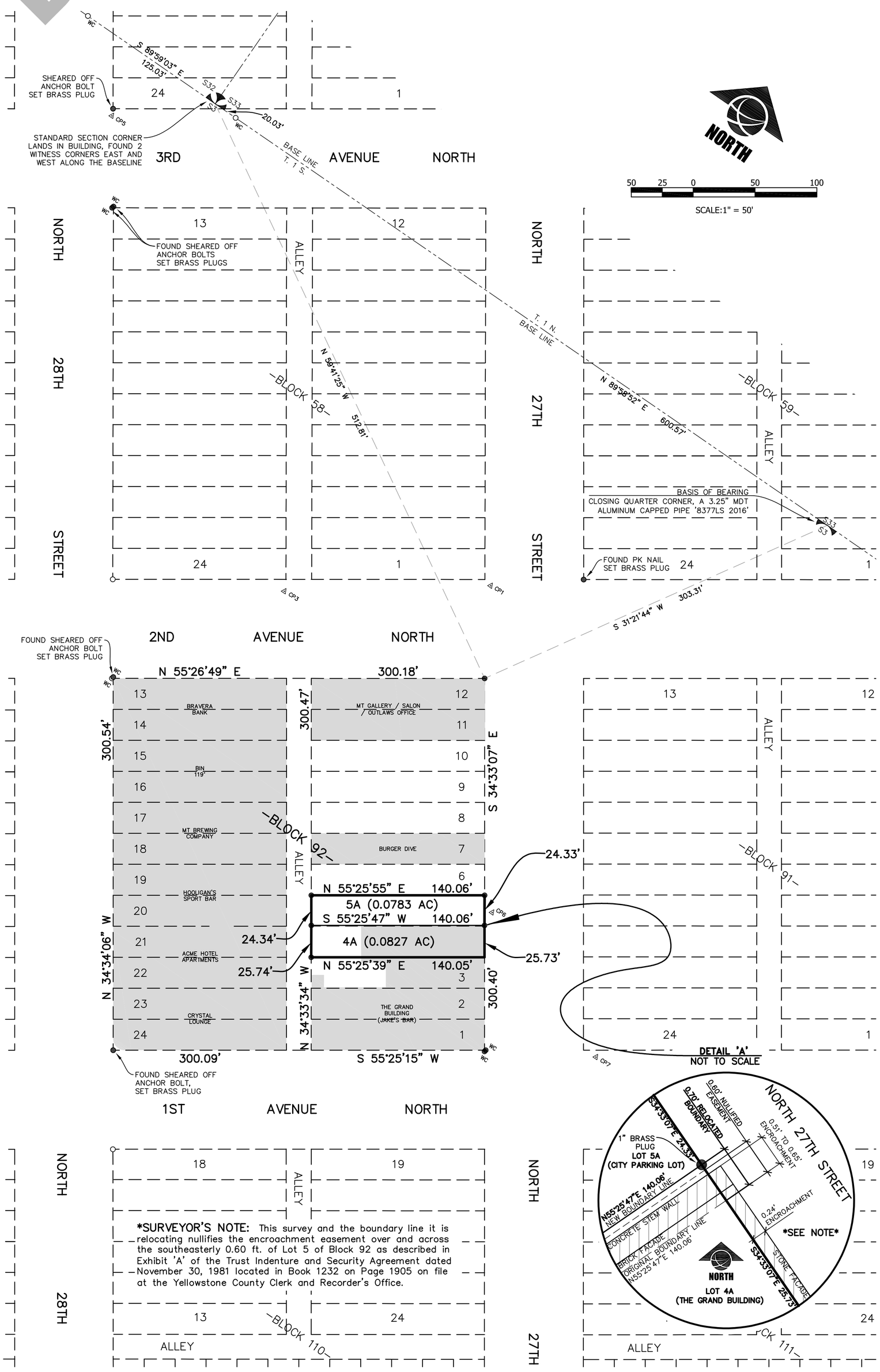
PREPARED FOR : CITY OF BILLINGS

JANUARY, 2024

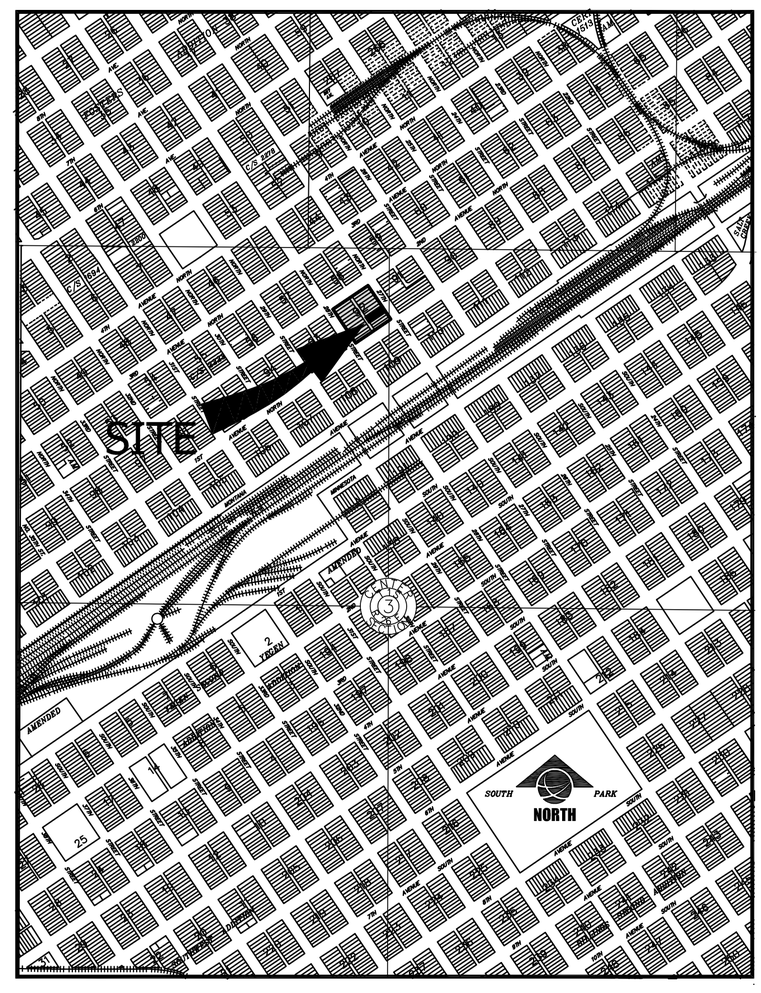
PREPARED BY : SANDERSON STEWART

BILLINGS, MONTANA

DRAFT



SCALE:1" = 50'



VICINITY MAP

NOT TO SCALE

BASIS OF BEARING: THE BASIS OF BEARINGS FOR THIS SURVEY HAS BEEN DERIVED FROM GPS OBSERVATIONS AND IS BASED ON A NAD 83, LAMBERT CONFORMAL CONIC, SINGLE PARALLEL, LOW DISTORTION PROJECTION FOR THE CITY OF BILLINGS; HAVING A POINT OF ORIGIN AT 45°47'00"N LATITUDE AND 108°25'00"W LONGITUDE WITH A SCALE FACTOR OF 1.0001515. THE GRID TO GROUND COMBINED SCALE FACTOR AT THE CLOSING 1/4 CORNER OF S.3–T.1S.–R.26E., A 3.25" ALUMINUM CAPPED PIPE, IS 1.0000040708; THE CONVERGENCE ANGLE IS –0°03'47". DISTANCES ARE INTERNATIONAL FEET. FOR THIS SURVEY, GRID DISTANCE IS ESSENTIALLY EQUAL TO GROUND DISTANCE.

- ○ FOUND SURVEY MONUMENT, ANCHOR BOLT WITH 1.5" WASHER MARKED 'MDT 8377LS 2016', OR AS NOTED
- ○WC FOUND WITNESS CORNER, ANCHOR BOLT WITH 1.5" WASHER MARKED 'MDT WC 8377LS 2016', OR AS NOTED
- ● SET SURVEY MONUMENT, 1.0" BRASS PLUG MARKED 'PC 87940LS 2024'
- ●WC SET WITNESS CORNER, 1.0" BRASS PLUG MARKED 'WC 1FT 87940LS 2024'
- STANDARD SECTION CORNER, AS NOTED
- CLOSING QUARTER CORNER, AS NOTED
- △ SET CONTROL POINT, MAGNAIL IN SIDEWALK

PURPOSE OF SURVEY: RELOCATION OF COMMON BOUNDARY LINE

The undersigned owners hereby certify that the purpose of this survey is to relocate the common boundary line between adjoining properties outside of a platted subdivision and no additional tracts are being hereby created.

Therefore this division of land is exempt from review as a subdivision pursuant to Section 76–3–207(1)(e), M.C.A.

Pursuant to ARM 24.183.1104(1)(f)(iii)(C), the area that is being removed from one tract of record and joined with another tract of record is not itself a tract of record. Said area shall not be available as a reference legal description in any subsequent real property transfer after the initial transfer associated with the certificate of survey on which said area is described, unless said area is included with or excluded from adjoining tracts of record.

Lot 4 of this survey is not subject to review by the Department of Environmental Quality pursuant to ARM 17.36.605(2)(c) for "a parcel that will be affected by a proposed boundary line adjustment, if the parcel has existing facilities for water supply, wastewater disposal, storm drainage, or solid waste disposal that were not subject to review, and have not been reviewed, under Title 76, chapter 4, part 1, MCA, and if:

(i) no facilities, other than those in existence prior to the boundary line adjustment, or those that were previously approved as replacements for the existing facilities, will be constructed on the parcel;
(ii) existing facilities on the parcel complied with state and local laws and regulations, including permit requirements, which were applicable at the time of installation; and
(iii) the local health officer determines that existing facilities are adequate for the existing use. As a condition of the exemption, the local health officer may require evidence that:
  (A) existing septic tanks have been pumped within the previous three years;
  (B) the parcel includes acreage or features sufficient to accommodate a replacement drainfield;
  (C) existing wells are adequate for the proposed uses; and
  (D) adequate storm drainage and solid waste disposal are provided.

Lot 5 is not subject to review by the Department of Environmental Quality pursuant to ARM 17.36.605(2)(a) for "a parcel that has no facilities for water supply, wastewater disposal, storm drainage, or solid waste disposal, if no facilities will be constructed on the parcel".

OWNER: Lot 4, Block 92, of the Town of Billings

Noraca, LLC,
a Montana limited liability company

By: _____

Title: MANAGING PARTNER

STATE OF MONTANA)
: ss
County of Yellowstone)

On this _____ day of _____ , 20____ , before me, the undersigned Notary Public for the State of Montana, personally appeared _____, known to me to be the person who signed the foregoing instrument as Managing Partner of Noraca, LLC and who acknowledged to me that they executed the same. Witness my hand and seal the day and year herein above written.

_____
Notary Public in and for the State of Montana

OWNER: Lot 5, Block 92, of the Town of Billings

CITY OF BILLINGS

By: _____
WILLIAM A. COLE

Title: MAYOR

STATE OF MONTANA)
: ss
County of Yellowstone)

On this _____ day of _____ , 20____ , before me, the undersigned Notary Public for the State of Montana, personally appeared William A. Cole, known to me to be the persons who signed the foregoing instrument and who acknowledged to me that they executed the same. Witness my hand and seal the day and year herein above written.

_____
Notary Public in and for the State of Montana

CERTIFICATE OF COUNTY ATTORNEY

This document has been reviewed by the County Attorney's office and is acceptable as to form.

Date: _____

Reviewed by: _____

CERTIFICATE OF RIVERSTONE HEALTH

This Certificate of Survey has been reviewed and approved by Riverstone Health.

_____
Health Officer or Authorized Representative
Yellowstone City/County Health Department
dba Riverstone Health

CERTIFICATE OF COUNTY TREASURER

I hereby certify that all real property taxes and special assessments have been paid per 76–3–611(1)(b)/ 76–3–207(3), M.C.A.

Date: _____
Yellowstone County Treasurer

By: _____
Deputy

CERTIFICATE OF SURVEYOR

STATE OF MONTANA)
: ss
County of Yellowstone)

The undersigned, a Land Surveyor licensed in the State of Montana, states that during the month of January, 2024, a survey was performed under his supervision of a tract of land situated in Government Lot 3 of Section 3, T. 1 S., R. 26 E., in the City of Billings, Yellowstone County, being more particularly described as follows, to wit:

Lots 4 and 5 of Block 92 of the Original Plat of The Town of Billings , Document No. 16312, records of Yellowstone County, Montana.

That the monuments found and set are of the character and occupy the positions shown hereon, that said survey and the plat hereof shows true and correct dimensions and that the plat conforms with the work on the ground.

SANDERSON STEWART

By: JESSE R. BURNS

Montana License No. 87940LS

Date: _____

ERRORS AND OMISSIONS REVIEW

I hereby certify that I have examined the annexed and foregoing plat for errors and omissions in computations and drafting.

_____ _____
Examining Land Surveyor Date

DEED

Document No. _____

DEED

Document No. _____

RESERVED FOR CLERK AND RECORDER

DRAFT

City Council Regular

Date:	04/08/2024
Title:	Resolution Authorizing the Issuance and Private Negotiated Sale for the Refunding of the Series 2013A Bonds
Presented by:	Andy Zoeller, Finance Director
Department:	Finance
Presentation:	No
Legal Review:	Not Applicable
Project Number:	N/A

RECOMMENDATION

Staff recommends that City Council approve the resolution authorizing the issuance and private negotiated sale for refunding the Series 2013A Tax Increment bonds.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

Tax Increment Series 2013A bonds were issued in 2013 to finance the acquisition, design and construction of the Empire Garage. Based upon current market conditions, the City may have an opportunity to refinance the bonds at a lower true interest rate. The estimated net present value savings will be approximately $200,000 to $300,000 over the life of the bonds, based on current market conditions. If market conditions change, such that refunding would not be beneficial, the City Finance Department will not pursue the refunding. The parameters resolution will authorize the refunding of the Series 2013 bonds so long as the true interest cost is less than 4.5%.

On January 22, 2024, the Council approved a resolution authorizing the sale of tax increment bonds to fund the construction of one-way to two-way street conversion and a pedestrian walking bridge in the downtown district. The refunding bonds and the new TIF bonds are expected to be issued simultaneously and may be combined in a single series of bonds.

ALTERNATIVES

City Council may:

- Approve; or,
- Not Approve the resolution and not refund the 2013A bonds

FISCAL EFFECTS

The actual interest rate and net savings will be determined at the time of negotiations.

Attachments

resolution

CERTIFICATE AS TO RESOLUTION AND ADOPTING VOTE

I, the undersigned, being the duly qualified and acting recording officer of the City of Billings, Montana (the "City"), hereby certify that the attached resolution is a true copy of Resolution No. _____, entitled: "RESOLUTION RELATING TO TAX INCREMENT URBAN RENEWAL REVENUE AND REFUNDING BONDS (EXPANDED NORTH 27TH STREET URBAN RENEWAL AREA), SERIES 2024; AUTHORIZING THE ISSUANCE AND PRIVATE NEGOTIATED SALE THEREOF" (the "Resolution"), on file in the original records of the City in my legal custody; that the Resolution was duly adopted by the City Council of the City at a regular meeting on April 8, 2024, and that the meeting was duly held by the City Council and was attended throughout by a quorum, pursuant to call and notice of such meeting given as required by law; and that the Resolution has not as of the date hereof been amended or repealed.

I further certify that, upon vote being taken on the Resolution at said meeting, the following Council Members voted in favor thereof: _____ _____; voted against the same: _____; abstained from voting thereon: _____; or were absent: _____.

WITNESS my hand officially this ____ day of April, 2024.

(SEAL)

_____
City Clerk

RESOLUTION NO. _____

RESOLUTION RELATING TO TAX INCREMENT URBAN RENEWAL REVENUE AND REFUNDING BONDS (EXPANDED NORTH 27TH STREET URBAN RENEWAL AREA), SERIES 2024; AUTHORIZING THE ISSUANCE AND PRIVATE NEGOTIATED SALE THEREOF

BE IT RESOLVED by the City Council (the "Council") of the City of Billings, Montana (the "City"), as follows:

Section 1. Recitals; Prior City Actions.

1.01. Under the provisions of Montana Code Annotated, Title 7, Chapter 15, Parts 42 and 43, as amended (the "Act"), the City is authorized to create urban renewal areas, prepare and adopt an urban renewal plan therefor and amendments thereto, undertake urban renewal projects therein, provide for the segregation and collection of tax increment with respect to property taxes collected in such areas, issue its bonds to pay the costs of such projects and to refund bonds previously issued under the Act and pledge to the repayment of the bonds the tax increment and other revenues derived from projects undertaken within the urban renewal area.

1.02. Pursuant to the Act and Ordinance No. 05-5333, adopted by the Council on July 11, 2005, as amended and supplemented by Ordinance Nos. 06-5394, 08-5483 and 11-5539 adopted on November 13, 2006, December 8, 2008 and July 11, 2011, respectively (as so amended and supplemented, the "Ordinance"), the Council created the Expanded North 27th Street Urban Renewal Area (the "District") and approved the Expanded North 27th Street Urban Renewal Plan (the "Plan"). The Plan provides for the segregation and collection of tax increment with respect to the District. The District and the Plan have been duly and validly created and adopted in accordance with the Act and are in full force and effect.

1.03. Pursuant to the Act and Resolution No. 13-19253 adopted by the Council on March 25, 2013 (the "Original Resolution"), the City issued its $7,885,000 Tax Increment Urban Renewal Revenue Bonds (Expanded North 27th Street Urban Renewal Area), Series 2013A (the "Series 2013A Bonds"), payable from tax increment, of which $7,885,000 aggregate principal amount remains outstanding. Proceeds of the Series 2013A Bonds were used to finance a portion of the costs of the acquisition, design and construction of the Empire Parking Garage, to fund a deposit to the debt service reserve account and to pay costs of issuance of the Series 2013A Bonds.

The outstanding Series 2013A Bonds (the "Refunded Bonds") are subject to redemption on and after January 1, 2023 at the option of the City. For the purposes of reducing the interest cost on the Refunded Bonds, it is proposed that the City issue its Tax Increment Urban Renewal Revenue and Refunding Bonds (Expanded North 27th Street Urban Renewal Area), Series 2024 (the "Refunding Bonds"), to refund the Refunded Bonds, fund a deposit to the debt service reserve account or pay a surety for a debt service reserve surety bond and pay costs of issuance and of the refunding.

1.04. Pursuant to Resolution No. 24-11178, adopted by the Council on January 22, 2024, the Council previously determined to undertake the design, engineering and construction of one-way to two-way street conversions and a pedestrian walking bridge in the District (the "2024 Project"). In addition, subject to certain parameters set forth in Resolution No. 24-11178, the Council declared its intention to issue tax increment revenue bonds (the "New Money Bonds") to pay costs of the 2024 Project, fund a deposit to the debt service reserve account and pay costs of issuance. The New Money Bonds and Refunding Bonds are expected to be issued substantially simultaneously and may be combined into a single series of bonds, in which case "New Money Bonds" refers to the new money portion and "Refunding Bonds" refers to the refunding portion. For the avoidance of doubt, the parameters set forth in Resolution No. 24-11178 apply to the New Money Bonds and the parameters set forth in Section 4 hereof apply to the Refunding Bonds.

Section 2. Authorizations. Pursuant to the authorizations and findings recited in the Plan and in Section 1 hereof, it is hereby determined that it is in the best interests of the City to offer for sale the Refunding Bonds for the purpose of refunding the Refunded Bonds, funding a deposit to a debt service reserve account or paying a surety for a debt service reserve surety bond, and paying costs of issuance and of the refunding, as determined by the officers of the City identified pursuant to, and subject to the limitations set forth in, Section 4 hereof.

Section 3. Adequacy of Tax Increment. In addition to the Series 2013A Bonds, the City has previously issued its Tax Increment Urban Renewal Revenue Bonds (Expanded North 27th Street Urban Renewal Area) (Taxable), Series 2013B (the "Series 2013B Bonds"), which are currently outstanding in the aggregate principal amount of $2,075,000, and its Tax Increment Urban Renewal Revenue Bonds (Expanded North 27th Street Urban Renewal Area), Series 2020 (the "Series 2020 Bonds"), which are currently outstanding in the aggregate principal amount of $1,975,000. Upon the issuance of the New Money Bonds and the Refunding Bonds, there are no other obligations of the City in respect of the Tax Increment, other than the Series 2013B Bonds, the Series 2020 Bonds and the Subordinate Obligations described below.

The maximum aggregate annual debt service on the Series 2013B Bonds, the Series 2020 Bonds, the New Money Bonds and the Refunding Bonds, assuming with respect to the New Money Bonds an average interest rate of 6.50% per annum and a final maturity of July 1, 2044 and assuming with respect to the Refunding Bonds an average interest rate of 4.50% and a final maturity of July 1, 2038, is $1,665,469. Based on Tax Increment of $2,963,563 received by the City in fiscal year 2023, the City estimates that the Tax Increment to be received by the City each fiscal year will be at least $2,963,563 per year. Accordingly, the estimated Tax Increment to be received by the City in each fiscal year is expected to be sufficient to pay the maximum aggregate annual debt service on the Series 2013B Bonds, the Series 2020 Bonds, the New Money Bonds and the Refunding Bonds and amounts due pursuant to the Subordinate Obligations, and the Tax Increment received by the City in fiscal year 2023 ($2,963,563) was equal to at least 130% of the estimated maximum aggregate annual debt service for any future calendar year ($2,165,110) with respect to the Series 2013B Bonds, the Series 2020 Bonds, the New Money Bonds and the Refunding Bonds.

In addition, the Tax Increment received by the City in fiscal year 2023 ($2,963,563) and the Tax Increment estimated to be received by the City in the next succeeding three fiscal years ($2,963,563) (adjusted as provided in the Original Resolution) is estimated to be equal to at least 140% of the maximum aggregate annual debt service for any future calendar year ($2,331,657) with respect to the Series 2013B Bonds, the Series 2020 Bonds, the New Money Bonds and the Refunding Bonds.

Pursuant to certain development agreements entered into (or to be entered into) between the City and various developers, the City has agreed to make grant payments to such developers with respect to certain eligible infrastructure expenses, subject to the satisfaction of certain conditions precedent, in the amounts reflected in such agreements. Such grant payments are to be made from Tax Increment and are payable on a subordinate basis to the Series 2013B Bonds, the Series 2020 Bonds, the New Money Bonds and the Refunding Bonds (the "Subordinate Obligations"). Schedule 1 attached hereto reflects such Subordinate Obligations and the estimated timing for payment thereof.

Section 4. Negotiated Sale and Terms.

4.01. This Council hereby determines that it would be in the best interests of the City to sell the Refunding Bonds through a private negotiated sale. The City Finance Director has selected Stifel Public Finance as purchaser for the Refunding Bonds and the New Money Bonds (the "Purchaser"), subject to Section 4.02 hereof, and selection of the Purchaser is hereby ratified and confirmed. Pursuant to Resolution No. 24-11178, the City provided parameters for the sale of the New Money Bonds, which parameters are hereby ratified and confirmed. This resolution provides parameters for the sale of the Refunding Bonds.

4.02. The Refunding Bonds shall be sold to the Purchaser on terms and at a purchase price within the following limitations and conditions: (1) the maximum aggregate principal amount of the Refunding Bonds, exclusive of original issue discount or premium, shall not exceed $8,500,000; (2) the maximum true interest cost on the Refunding Bonds shall not exceed 4.50%; (3) the underwriter's discount shall not exceed 1.30% of the principal amount of the Refunding Bonds, exclusive of original issue premium or discount; and (4) the final stated maturity of the Refunding Bonds shall not be later than July 1, 2038.

The Refunding Bonds will be payable from Tax Increment on a parity basis with the Series 2013B Bonds, the Series 2020 Bonds and the New Money Bonds and prior to the Subordinate Obligations described Section 3 hereof. All costs of issuing the Refunding Bonds (including, without limitation, the fees and expenses of bond counsel, the fees of the paying agent and registrar, the preliminary and final Official Statement costs, municipal bond insurance premiums, if any, and the costs of printing the Refunding Bonds) shall be paid by the City.

The form of the Refunding Bonds and the final terms and conditions thereof shall be prescribed by a subsequent resolution to be adopted by this Council.

4.03. The City Administrator and the City Finance Director, in consultation with Baker Tilly Municipal Advisors, LLC, the City's municipal advisor ("Baker Tilly"), are hereby

authorized and directed to approve the principal amount, maturity dates, interest rates and redemption provisions of the Refunding Bonds, the use of municipal bond insurance and/or a debt service reserve surety bond, if advisable, and compensation to the Purchaser, subject to the limitations contained in this Section 4.

Upon approving such terms, the City Administrator and the City Finance Director are hereby authorized to approve, execute and deliver to the Purchaser a bond purchase agreement (the "Bond Purchase Agreement"), containing the agreement of the City to sell, and the agreement of the Purchaser to purchase, the Refunding Bonds on the terms so approved, and containing such other provisions as such officers shall deem necessary and appropriate. The City Administrator and City Finance Director are further authorized and directed to execute such other agreements as may be necessary or desirable to consummate the sale of the New Money Bonds and the Refunding Bonds. In the event of the absence or disability of the City Finance Director and/or City Administrator, the Mayor and/or the Assistant City Administrator shall make such approvals and execute and deliver the Bond Purchase Agreement and any additional agreements that may be necessary or desirable to consummate the sale of the New Money Bonds and the Refunding Bonds. The execution and delivery by appropriate officers of the City of the Bond Purchase Agreement and any related agreements shall be conclusive as to the approval of such officers of the terms of the New Money Bonds and the Refunding Bonds and the agreement of the City to sell the New Money Bonds and the Refunding Bonds on such terms in accordance with the provisions thereof.

Section 5. Official Statement. The City Finance Director, in consultation with Baker Tilly, the Purchaser and Dorsey & Whitney LLP, the City's bond counsel, is authorized to prepare on behalf of the City a Preliminary Official Statement and an Official Statement, to be distributed by the Purchaser to prospective purchasers of the Refunding Bonds. The Preliminary Official Statement and the Official Statement shall contain such information as shall be advisable and necessary to describe accurately the City and the security for, and the terms and conditions of, the Refunding Bonds. The City Administrator and the City Finance Director are authorized on behalf of the Council to deem the Preliminary Official Statement near "final" as of its date, in accordance with Rule 15c2-12(b)(1) under the Securities Exchange Act of 1934.

Section 6. Continuing Disclosure. To permit the Purchaser and other participating underwriters in the primary offering of the Refunding Bonds to comply with paragraph (b)(5) of Rule 15c2-12 promulgated by the Securities and Exchange Commission under the Securities Exchange Act of 1934, the City will covenant and agree, for the benefit of the registered holders and beneficial owners from time to time of the outstanding Refunding Bonds, to provide annual reports of specified information and notice of the occurrence of certain events.

PASSED AND APPROVED by the City Council of the City of Billings, Montana, this 8th day of April, 2024.

_____
Mayor

Attest: _____
City Clerk

SCHEDULE 1

Subordinate Obligations
Estimated Payment Dates

Name	FY24	FY25	FY26	FY27	FY28
Arthouse Cinema Phase II	$ 350,000				
Alberta Bair Theater	250,000				
Burger Dive		$ 233,186	$ 233,186		
Stone Building	221,922	221,922	221,922		
Kibler & Kirch PO 23-000881	79,940				
MJShanks LLC PO 24-000425	110,200				
Skypoint Project PO 22-000032	260,000				
Montana Rescue Mission		210,000	210,000		
Old Town Flats		384,553	384,553	$384,553	$384,553
Lincoln Apartments PO 24-000224	50,000	50,000	50,000	50,000	50,000
Old Billings Hardware		149,000	149,000	149,000	149,000
Rockman Project			1,000,000	1,000,000	1,000,000

City Council Regular

Date:	04/08/2024
Title:	Ward Boundary Expansion Ordinance Second Reading - Annexation 24-01
Presented by:	Hunter Kelly, Planner 1
Department:	Planning & Community Services
Presentation:	No
Legal Review:	No
Project Number:	PZX-24-00051

RECOMMENDATION

Staff recommends the City approve this ordinance on second reading, adding recently annexed property to Ward IV. Council held a public hearing on March 25th and recommended approval on first reading. This second reading action would be consistent with first reading.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

Taj Mukadam on behalf of George Jorvich submitted a petition to annex land using the provisions of Section 7-2-4600, MCA. The property is located South of Grand Avenue and is surrounded by the Buffalo Crossing Subdivision. The land being annexed is described as being Parcel 4B of Certificate of Survey No. 2735, Recorded February 2nd, 2010, under document No. 3539423 on file and of record in the office of the Yellowstone County Clerk and Recorder. Said annexation contains 1.000 acres gross and net, more or less.

Upon Council approval, this annexation requires a change in the boundaries of Ward IV. Two readings are required for this action. The first reading and public hearing occurred March 25th. The second reading will occur at this meeting.

STAKEHOLDERS

City Council conducted a public hearing and 1st reading of the Ward Boundary Ordinance and acted on the Annexation at its meeting on March 25th. The City Council received no testimony from the public, and closed the public hearing. The City Council did not have any further discussion. Council Member Joy made a motion to approve the Ward Boundary Ordinance on first reading and adopt the findings of the annexation criteria. The motion was seconded by Council Member Tidswell and approved on a 9-0 vote.

ALTERNATIVES

City Council may:

- Approve adding the subject property to Ward IV, or;
- Disapprove adding the subject property to Ward IV. Disapproval will not modify the boundary of Ward IV and will create a problem where property inside the City Limits is not within a City Ward.

FISCAL EFFECTS

This application has no impact on the Planning Division Budget.

Attachments

Ward Boundary Ordinance

ORDINANCE 24-_____

AN ORDINANCE OF THE CITY OF BILLINGS, AMENDING BILLINGS MUNICIPAL CODE, CHAPTER 11, ELECTIONS, IN PARTICULAR, SECTION 11-102(c), WARD BOUNDARIES; AND CHANGING THE WARD BOUNDARIES ESTABLISHED THEREIN BY ADDING CERTAIN NEWLY ANNEXED REAL PROPERTY TO WARD IV PROVIDING FOR CERTIFICATION AND REPEALING OF ALL ORDINANCES AND RESOLUTIONS INCONSISTENT THEREWITH.

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BILLINGS, MONTANA:

1. AMENDMENT. Pursuant to Billings Municipal Code, Section 11-102(c) and the State Law, Billings Municipal Code, Section 11-102(c) Ward Boundaries is hereby amended by adding to Ward IV the following described real property:

> A parcel of Land situated in the NE 1/4 of Section 5, T.1S., R.25E. Yellowstone County, Montana, more particularly described as follows: Parcel 4B of Certificate of Survey No. 2735, Recorded February 2nd, 2010, under document No. 3539423 on file and of record in the office of the Yellowstone County Clerk and Recorder.
>
> Said annexation contains 1.000 acres gross and net, more or less.
>
> (# 24-01) See Exhibit "A" attached.

2. EFFECTIVE DATE. This ordinance shall be effective either thirty (30) days after second reading and final adoption as provided by law, or upon the effective date of **Resolution 24-**_____ approving the annexation of the above territory, whichever date is later.

3. REPEALER. All other ordinances, sections of the Billings Municipal Code and ordinances inconsistent herewith are hereby repealed.

4. CERTIFICATION. Pursuant to M.C.A. Section 13-3-103, the above change and alteration is hereby certified to the election administrator by the City Council, and the City Administrator or his designee is hereby directed to certify the changes and alterations and to deliver a map showing the boundaries of the ward, the streets, avenues and alleys by name and the ward by number, to the election administrator not more than ten (10) days after the effective date of this ordinance.

PASSED by the City Council on the first reading this 25th day of March, 2024.

PASSED by the City Council on the second reading this 8th day of April, 2024.

CITY OF BILLINGS:

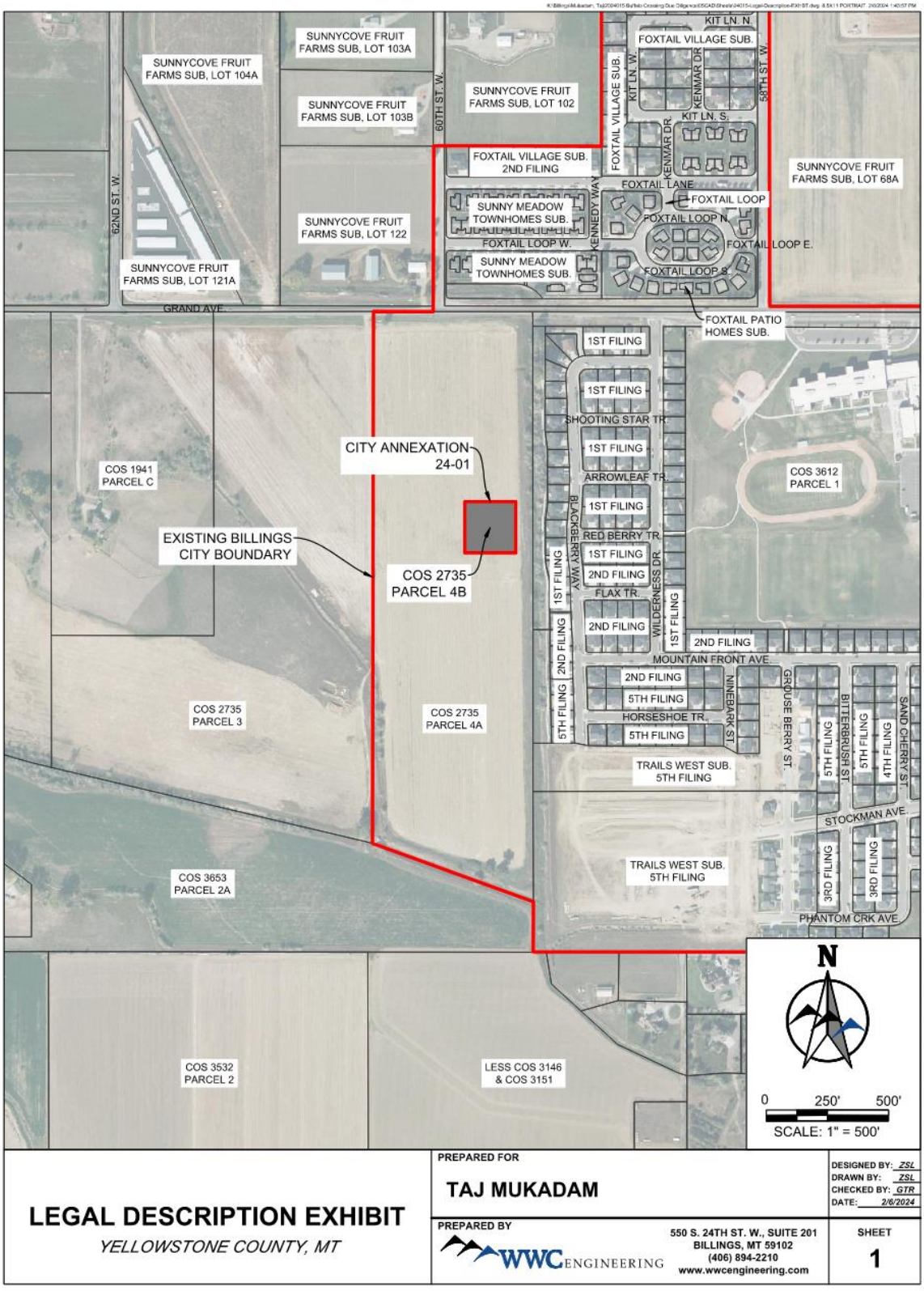
_____
William A. Cole, Mayor

ATTEST:

BY: _____
Denise R. Bohlman, City Clerk

(Annexation 24-01)

EXHIBIT ‘A’



LEGAL DESCRIPTION EXHIBIT

YELLOWSTONE COUNTY, MT

PREPARED FOR

TAJ MUKADAM

DESIGNED BY: ZSL
DRAWN BY: ZSL
CHECKED BY: GTR
DATE: 2/6/2024

PREPARED BY

WWC ENGINEERING

550 S. 24TH ST. W., SUITE 201
BILLINGS, MT 59102
(406) 894-2210
www.wwcengineering.com

SHEET 1

City Council Regular

Date:	04/08/2024
Title:	Ward Boundary Expansion Ordinance Second Reading - Annexation 24-02
Presented by:	Hunter Kelly, Planner 1
Department:	Planning & Community Services
Presentation:	No
Legal Review:	No
Project Number:	PZX-24-00054

RECOMMENDATION

Staff recommends the City approve this ordinance on second reading, adding recently annexed property to Ward V. Council held a public hearing on March 25th and recommended approval on first reading. This second reading action would be consistent with first reading.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

Craig Dalton of Performance Engineering, on behalf of Todd Brown, submitted a petition to annex land using the provisions of Section 7-2-4600, MCA. The property is located South of Central Avenue and east of South 48th Street West. The land being annexed is described as being Parcels of Land situated in the NW 1/4 of Section 10, T.1S., R.25E., Yellowstone County, Montana, more particularly described as follows: Tract 2 of Certificate of Survey No. 3844, filed July 14th, 2023, under Document No. 1051600 on file and of record in the office of the Yellowstone County Clerk and Recorder. Including all adjacent Right-Of-Way of Central Avenue. Said annexation containing 50.333 gross acres more or less.

Upon Council approval, this annexation requires a change in the boundaries of Ward V. Two readings are required for this action. The first reading and public hearing occurred March 25th. The second reading will occur at this meeting.

STAKEHOLDERS

City Council conducted a public hearing and 1st reading on March 25. The City Council received no testimony from the public, and closed the public hearing. The City Council did not have any further discussion. Council Member Boyett made a motion to approve the Ward Boundary Ordinance on first reading. The motion was seconded by Council Member Rupsis and approved on a 9-0 vote.

ALTERNATIVES

City Council may:

- Approve adding the subject property to Ward V, or;
- Disapprove adding the subject property to Ward V. Disapproval will not modify the boundary of Ward V and will create a problem where property inside the City Limits is not within a City Ward.

FISCAL EFFECTS

This application has no impact on the Planning Division Budget.

Attachments

Ward Boundary Ordinance

ORDINANCE NO. 24-

AN ORDINANCE OF THE CITY OF BILLINGS, AMENDING BILLINGS MUNICIPAL CODE, CHAPTER 11, ELECTIONS, IN PARTICULAR, SECTION 11-102(c), WARD BOUNDARIES; AND CHANGING THE WARD BOUNDARIES ESTABLISHED THEREIN BY ADDING CERTAIN NEWLY ANNEXED REAL PROPERTY TO WARD V PROVIDING FOR CERTIFICATION AND REPEALING OF ALL ORDINANCES AND RESOLUTIONS INCONSISTENT THEREWITH.

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BILLINGS, MONTANA:

1. AMENDMENT. Pursuant to Billings Municipal Code, Section 11-102(c) and the State Law, Billings Municipal Code, Section 11-102(c) Ward Boundaries is hereby amended by adding to Ward V the following described real property:

Parcels of Land situated in the NW 1/4 of Section 10, T.1S., R.25E., Yellowstone County, Montana, more particularly described as follows:

Tract 2 of Certificate of Survey No. 3844, filed July 14th, 2023, under Document No. 4051600 on file and of record in the office of the Yellowstone County Clerk and Recorder.

Including all adjacent Right-Of-Way of Central Avenue.

Said annexation containing 50.333 gross acres more or less.

(# 24-02) See Exhibit "A" Attached

2. EFFECTIVE DATE. This ordinance shall be effective either thirty (30) days after second reading and final adoption as provided by law, or upon the effective date of Resolution No. 24-_____ approving the annexation of the above territory, whichever date is later.

3. REPEALER. All other ordinances, sections of the Billings Municipal Code and ordinances inconsistent herewith are hereby repealed.

4. CERTIFICATION. Pursuant to M.C.A. Section 13-3-103, the above change and alteration is hereby certified to the election administrator by the City Council, and the City Administrator or his designee is hereby directed to certify the changes and alterations and to deliver a map showing the boundaries of the ward, the streets, avenues and alleys by name and the ward by number, to the election administrator not more than ten (10) days after the effective date of this ordinance.

PASSED by the City Council on the first reading this 25th day of March, 2024.

PASSED by the City Council on the second reading this 8th day of April, 2024.

THE CITY OF BILLINGS:

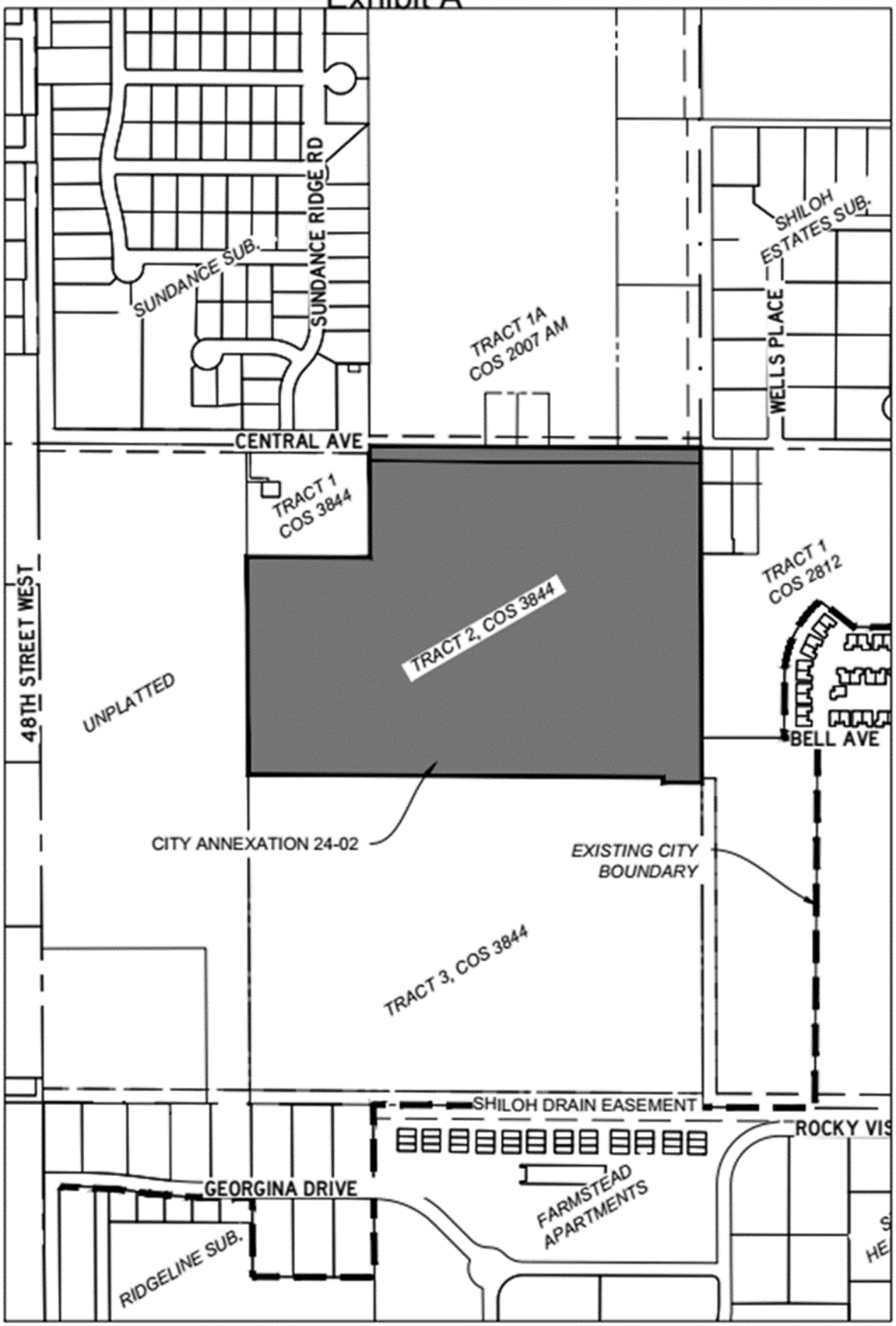
_____
William A. Cole, MAYOR

ATTEST:

BY: _____
Denise Bohlman, CITY CLERK

(#24-02)

Exhibit A


SUNDANCE SUB.
SUNDANCE RIDGE RD
SHILOH ESTATES SUB.
WELLS PLACE
TRACT 1A
COS 2007 AM
CENTRAL AVE
TRACT 1
COS 3844
TRACT 1
COS 2812
48TH STREET WEST
TRACT 2, COS 3844
UNPLATTED
BELL AVE
CITY ANNEXATION 24-02
EXISTING CITY
BOUNDARY
TRACT 3, COS 3844
SHILOH DRAIN EASEMENT
ROCKY VIS
GEORGINA DRIVE
FARMSTEAD
APARTMENTS
RIDGELINE SUB.

City Council Regular

Date:	04/08/2024
Title:	Zone Change 1043 - 4190 S Frontage Rd - RMH to CX - 2nd reading
Presented by:	Nicole Cromwell
Department:	Planning & Community Services
Presentation:	No
Legal Review:	Not Applicable
Project Number:	PZX-24-00033

RECOMMENDATION

The Zoning Commission recommended approval and adoption of the findings of the 10 review criteria for Zone Change 1043. The City Council adopted the zone change on first reading on March 25, 2024. A second reading of the zone change ordinance is required.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

This is a zone change request for a parcel located at 4190 S Frontage Road from Residential Manufactured Home (RMH) to Heavy Commercial (CX), a zoning that would allow the development of small shops or storage for businesses. The proposed zoning is compatible and identical to the zoning to the east. To the west is the Agri-center Subdivision also zoned RMH but outside the city limits. These lots have public water through "county" water lines installed decades ago when the subdivision was developing. At the west boundary line with the manufactured home subdivision there is a fence but no other bufferyard between the properties. The subject property has been within the city limits since the early 1980s. Recently the manufactured homes were removed from the property. Dwellings cannot be re-established on the property without extension of a city sewer line to the property. The cost of the sewer extension is large compared to the development potential in the RMH zone on the small property. The proposed zone change will allow the property to be developed for one or two small shops or for storage purposes. Any new development on the property will require installation of a bufferyard on the west property line.

S. Frontage Road is an arterial street that currently handles over 5,000 vehicle trips per day and has posted speeds over 50 mph. This type of street frontage does not support the development of a small, manufactured home park. The continued development of large commercial warehouses and businesses to the east and south contributes to the incompatibility of the current RMH zone. Smaller lots for local businesses would add value to the existing development pattern and allow the existing RMH neighborhood to the west to be buffered from these more intense developments.

The proposed CX zone does allow a wide variety of commercial uses. Some of these uses will not be likely on a parcel of this size and limitation. For example, a hotel or restaurant would not fit well on this site given the high-speed arterial frontage and the adjacent uses. In addition, these uses would require a costly extension of the city sewer line. The proposed uses will not require an extension of the city sewer line.

STAKEHOLDERS

The applicant held a pre-application neighborhood meeting on January 18, 2024, at the Powderhorn Cafe. Six surrounding property owners signed into the meeting. The primary concern expressed by the surrounding owners was regarding noise, lighting and traffic (entry and exit). Planning staff sent the required mailed notices, posted the property, posted a synopsis of the application on the Current Zoning Application webpage, and published the legal information for the Zoning Commission hearing. No public comments were received by the Planning staff prior to this report.

City Zoning Commission hearing March 5, 2024

The Zoning Commission held its hearing on the zone change request and received the staff report and recommendation for approval. The applicant's agent, Greg Reid of WWC Engineering, provided testimony in favor of the zone change and explained the difficulty with sewer line connection at this location. Mr. Reid stated a small shop with no facilities or just one toilet and sink would be allowed to re-connect to the on-site septic system. He stated this is the owner's intent at this time. No other testimony was received.

Chairperson Dan Brooks closed the public hearing and asked for a motion on the request. Greg McCall made a motion to recommend approval and adoption of the findings of the 10 review criteria. The motion was seconded by

Andy Megorden and was approved on a 5-0 vote.

City Council Public Hearing on first reading March 25, 2024

The City Council conducted a public hearing and first reading of the ordinance for the zone change on March 25, 2024. The Council received the Zoning Commission recommendation and testimony from the applicant's agent, WWC Engineering. No other testimony was received.

Mayor Cole closed the public hearing. Council member Shaw made a motion to approve the zone change and adopt the findings of the 10 review criteria. The motion was seconded by Council member Aspenlieder and approved on a unanimous voice vote.

ALTERNATIVES

The City Council may:

- Approve and adopt the findings of the ten review criteria for Zone Change 1043 as recommended by the Zoning Commission and approved by the Council on first reading; or,
- Deny and adopt different findings of the ten review criteria for Zone Change 1043; or,
- Delay action on the zone change request for up to 30 days at the request of the applicant or on its own motion; or
- Refer the application back to the Zoning Commission for an additional public hearing based on 1) new information submitted that the applicant and public has not had an opportunity to examine; or 2) new information has been presented that was never submitted or considered by the Zoning Commission or staff; or
- Allow the applicant to withdraw the zone change request.

The applicant has not requested a delay or withdrawal of the application.

FISCAL EFFECTS

Approval or denial of the proposed zone change will not have an effect on the Planning Division budget.

SUMMARY

The City Council shall consider the Zoning Commission's recommended findings of the 10 review criteria prior to making a decision on the zone change:

1) Is the new zoning designed in accordance with the Growth Policy and neighborhood plans?
The proposed zone change is consistent with the following guidelines of the 2016 Growth Policy:

- Infill development and development near existing city infrastructure may be the most cost-effective.
- Walkable neighborhoods that permit convenient destinations such as neighborhood services, open space, parks, schools and public gathering spaces foster health, goodwill, and social interaction.
- Implementation of the Infill Policy is important to encourage the development of underutilized properties.

The South Billings Urban Renewal Master Plan envisioned this area south of the interstate as an area that could build new economic opportunities. This was designated the "Four Corners" area and this area as the "Riverside Business Park". The master plan did show this parcel outside the city limits -- although this was incorrect at the time. This parcel was the first parcel annexed to the city south of the interstate between S. Billings Boulevard and Garden Avenue. This annexation to the city occurred about the same time as the first zone change request on this parcel from residential to commercial in 1983. The S. Billings Urban Renewal Master Plan stated the following: "Undeveloped land in this area may be particularly attractive to small manufacturers, professional offices, and small office/warehouse as there is no other business park in Billings that offers the ease of interstate access, views, and a natural setting with many recreation amenities."

The proposed zoning would allow an existing vacant property to be developed for cold storage warehousing or contractor shops. The parcel is within the city limits but has limited access to city services. City water is available to the property. The cost to bring the sanitary sewer infrastructure to the property exceeds the potential development investment by orders of magnitude. The re-establishment of one or two manufactured homes under the current zoning would require the extension of a public sewer line to the parcel. The engineer's estimate for extension of wastewater services is well above $50,000. The parcel is small in comparison to the adjacent heavy commercial development to the east. This development includes Intermountain Distributing, Old Dominion Freight, and Inland Truck Parts. Further east are some large warehousing facilities as well as heavy equipment businesses and specialized storage companies. Overall, this heavy commercial area is over 115 acres of development. The parcel does not provide any

transition between the existing commercial development and the County manufactured home park to the west.

Redevelopment as a commercial property will require the development to install a buffer yard on the west property line to provide the visual barrier required between commercial development and residential development. S. Frontage Road is an arterial street that currently handles over 5,000 vehicle trips per day and has posted speeds over 50 mph. This type of street frontage does not support the development of a small, manufactured home park.

2) Is the new zoning designed to secure from fire and other dangers?
The new zoning requires minimum setbacks, open and landscaped areas and building separations. The new zoning, as do all zoning districts, provides adequate building separations and density limits to provide security from fire and other dangers. The site will be developed in conformance with Section 27-400 (BMCC) as well as sections on Landscaping, Off-street Parking and Signs. New buildings would be required to meet city Building Codes and Engineering standards as well.

3) Whether the new zoning will promote public health, public safety and general welfare?
Similar to criteria two, public health and public safety will be promoted by both the existing zoning and the proposed zoning. The proposed CX zoning would allow the vacant property to be developed for non-residential uses. Developed land will increase property values. Vacant land tends to add unpredictability to the area. It is not likely that the current zoning would result in the placement of residential homes on the property given the cost to bring city sewer services to the property.

4) Will the new zoning facilitate the adequate provision of transportation, water, sewerage, schools, parks and other public requirements?
Transportation: The proposed zoning should not have any measurable impact on transportation. S Frontage Road is managed by the Montana Department of Transportation (MDT). There is one approach from the road that is permitted by MDT. A second approach is not necessary. Re-development of the site will require submittal of the site plan to the city and to MDT. Any required improvements will be noted at that time. Storage uses and small business warehouses do not generate significant traffic.
Water and Sewer: The City will provide water to the property. A service line was installed in 2023. There is a sanitary sewer in the vicinity but not close enough to make it economically feasible to extend the line for this 1.35-acre parcel. The Utilities Division voiced no concerns.
Schools and Parks: Schools and parks should not be negatively affected by the proposed zoning. The school district provided no comments on the proposed zone change. Parks should not be negatively impacted by the proposed zoning. The closest public park is a portion of Riverfront Park ¼ mile south of the parcel.
Fire and Police: The subject property is served by city public safety services. The Police and Fire Departments had no concerns with the zone change.

5) Will the new zoning provide adequate light and air?
Similar to criteria 2 and 3, the proposed zoning provides for sufficient setbacks to allow for adequate separation between structures and adequate light and air. Any development of the property would follow the requirements of Section 27-400 (BMCC) and other city regulations for development.

6) Will the new zoning affect motorized and non-motorized transportation?
The existing property fronts S Frontage Road. This is a high-speed arterial managed by MDT. There is no curb, gutter or sidewalk along this street frontage. The curb, gutter and sidewalk will likely not be required at the time of development, but the owner may be required to sign a waiver to allow future construction of these improvements. East of 3716 S Frontage Rd, there is a multi-use pathway under construction in front of the large warehouses at 3218 and 3226 S Frontage Road.

7) Will the new zoning promote compatible urban growth?
The proposed zoning is compatible with the adjacent zoning and existing urban growth to the east. Property to the west is outside the city limits and is a County manufactured home park subdivision. This residential subdivision is between heavy commercial zoning districts to the east and west. Redevelopment of the subject property will require a better buffer yard along the property line of the eastern lots in the subdivision. The CX zoning is compatible with the surrounding property and development. The zoning does promote compatible urban growth.

8) Does the new zoning consider the character of the district and the peculiar suitability of the property for particular uses?
The proposed zoning does consider the character of the district and the suitability of the property for the proposed use or uses. The proposed zoning will allow re-development of the property for commercial purposes. This redevelopment will require the installation of a good visual barrier for the manufactured home park to the west. The types of uses will be limited unless and until a sewer line connection is available.

9) Will the new zoning conserve the value of buildings?
The new zoning is not expected to alter the value of any buildings in the area. Any development of the property will need to meet the code requirements for Heavy Commercial zoning, and other city development and building regulations. New development tends to increase surrounding property values.

10) Will the new zoning encourage the most appropriate use of land throughout the City of Billings?
The proposed zoning will allow the redevelopment of the property along a high-speed arterial with good access to the interstate and other transportation corridors. Infill on vacant parcels also contributes to the neighborhood stability of the manufactured home park to the west. The proposed zoning and use will encourage the most appropriate use of the parcel.

Attachments

ZC 1043 Ordinance

ORDINANCE 24-_____

**AN ORDINANCE OF THE CITY OF BILLINGS,
PROVIDING THE ZONE CLASSIFICATION for C/S 741,
Parcel 2A, of Amended Tracts 1 & 2, BE AMENDED**

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BILLINGS THAT:

Section 1. **RECITALS.** *Title 76, Chapter 2, Part 3, MCA,* and *Sections 27-1628, BMCC,* provide for amendment to the City Zoning Map from time to time. The City Zoning Commission and staff have reviewed the proposed zoning for the real property hereinafter described. The Zoning Commission and staff have considered the ten (10) criteria required by Title 76, Chapter 2, Part 3, MCA. The recommendations of the Zoning Commission and staff have been submitted to the City Council, and the City Council, in due deliberation, has considered the ten (10) criteria required by state law.

Section 2. **DESCRIPTION. C/S 741, Parcel 2A, of Amended Tracts 1 & 2,** is presently zoned **Residential Manufactured Home (RMH),** and is shown on the official zoning map within this zone.

Section 3. **ZONE DISTRICT AMENDMENT.** The official zoning map is hereby amended and the zoning for **C/S 741, Parcel 2A, of Amended Tracts 1 & 2,** is hereby changed from **Residential Manufactured Home (RMH),** to **Heavy Commercial (CX),** and from the effective date of this ordinance, shall be subject to all the rules and regulations pertaining to **Heavy Commercial (CX),** as set out in the Billings, Montana City Code.

Section 4. **EFFECTIVE DATE**. This ordinance shall be effective thirty (30) days after second reading and final adoption as provided by law.

Section 5. **REPEALER**. All resolutions, ordinances, and sections of the City Code inconsistent herewith are hereby repealed.

Section 6. **SEVERABILITY**. If any provision of this ordinance or the application thereof to any person or circumstances is held invalid, such invalidity shall not affect the other provisions of this ordinance which may be given effect without the invalid provisions or application, and, to this end, the provisions of this ordinance are declared to be severable.

PASSED by the City Council on first reading this 25th day of March, 2024.

PASSED, ADOPTED and APPROVED on second reading this 8th day of April, 2024.

CITY OF BILLINGS

BY:_____

William A. Cole, Mayor

Attest:

BY:_____

Denise R. Bohlman, City Clerk

Zone Change 1043 – 4190 S Frontage Road

Zoning Commission

Date:	04/08/2024
Title:	Zone Change 1044 - 5900 Block of Grand - Zone Change 2nd reading
Presented by:	Nicole Cromwell
Department:	Planning & Community Services
Presentation:	No
Legal Review:	Not Applicable
Project Number:	PZX-24-00044

RECOMMENDATION

The City Zoning Commission recommended approval and adoption of the findings of the 10 review criteria for Zone Change 1044. The City Council approved the zone change request and first reading of the ordinance on March 25, 2024. A second reading is required to approve the zone change.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

This is a zone change request for a 1-acre parcel located within and surrounded by the Buffalo Crossing Subdivision. The parcel is legally described as Parcel 4B, amended plat of Certificate of Survey 2735. The current zoning is Rural Residential 1 (RR1) a county zone. A concurrent annexation has been submitted. The proposed zoning of Mixed Residential 2 (NX2) is intended to fit in with the Buffalo Crossing NX2 development to the north. Buffalo Crossing was annexed, zoned and subdivided in 2022 and 2023. A vacant county parcel surrounded by urban level development is not an ideal development pattern.

The proposed zone change will allow the property to be developed for multifamily structures with off-street parking for the new residents. There are very few housing choices in this area of West Billings. Most (70% +) are single family homes on large urban lots (7,000 sf +). There are several areas that also offer a two-unit dwelling. Foxtail Village to the north has 18 duplexes, Grand Peaks to the east has about 22 duplexes, and Signal Peak at 62nd St W and Rimrock Rd has about 77 duplex town homes. These comprise less than 20% of the total housing choice in the area. The rarest housing choice is the attached multifamily unit (3+ units per structure), either for rent or ownership. This is less than 5% of the total housing choice west of Shiloh Road from Central Avenue to the north. A resilient urban fabric has more housing choices than are currently available in West Billings.

Planning staff recommended approval based on the compatibility with the adjacent zoning and will provide predictable development in Buffalo Crossing. The proposed zoning is in conformance with the 2016 Growth Policy guidelines. The proposed use and zoning will benefit the orderly transition of this property from a rural residential county lot to an urban neighborhood. The proposed zoning supports the city's Infill Policy. The City Zoning Commission concurred with these findings and recommendation.

STAKEHOLDERS

The applicant held a pre-application neighborhood meeting on January 20, 2024, at Ben Steele Middle School. Two surrounding owners signed in to the meeting. The primary concern expressed by the surrounding owners was regarding density and parking and whether the new residents would own or rent. Planning staff sent the required mailed notices, posted the property, posted a synopsis of the application on the Current Zoning Application web page, and published the legal information for the Zoning Commission hearing. No public comments were received by the Planning staff prior to this report.

Zoning Commission hearing March 5, 2024

The Zoning Commission held its hearing and received the staff report and recommendation of approval for Zone Change 1044. The applicant's agent, Greg Reid of WWC Engineering, stated the only directly affected property owner is the owner of Buffalo Crossing. The owner of Buffalo Crossing has no concerns with the proposed zoning or with fitting in Mr. Mukadam's development plans into Buffalo Crossing. There was no other testimony.

Chairperson Dan Brooks closed the public hearing. Greg McCall made a motion to recommend approval and adoption of the findings of the 10 review criteria. The motion was seconded by David Goss and approved on a 5-0 vote.

City Council Public Hearing on first reading March 25, 2024

The City Council conducted a public hearing and first reading of the ordinance for the zone change on March 25, 2024. The Council received the Zoning Commission recommendation and testimony from the applicant's agent, WWC Engineering. No other testimony was received.

Mayor Cole closed the public hearing. Council member Joy made a motion to approve the zone change and adopt the findings of the 10 review criteria. The motion was seconded by Council member Neese and approved on a unanimous voice vote.

ALTERNATIVES

The City Council may:

- Approve and adopt the findings of the ten review criteria for Zone Change 1044 as recommended by the Zoning Commission and approved by the Council on March 25, 2024; or,
- Deny and adopt different findings of the ten review criteria for Zone Change 1044; or,
- Delay action on the zone change request for up to 30 days at the request of the applicant or on its own motion; or
- Refer the application back to the Zoning Commission for an additional public hearing based on 1) new information submitted that the applicant and public has not had an opportunity to examine; or 2) new information has been presented that was never submitted or considered by the Zoning Commission or staff; or
- Allow the applicant to withdraw the zone change request.

The applicant has not requested a delay or withdrawal of the application.

FISCAL EFFECTS

Approval or denial of the proposed zone change will not have an effect on the Planning Division budget.

SUMMARY

The City Council shall consider the findings of the 10 review criteria as recommended by the Zoning Commission prior to making decision on Zone Change 1044:

1) Is the new zoning designed in accordance with the Growth Policy and neighborhood plans?
The proposed zone change is consistent with the following guidelines of the 2016 Growth Policy:

- Infill development and development near existing city infrastructure may be the most cost-effective.
- Walkable neighborhoods that permit convenient destinations such as neighborhood services, open space, parks, schools and public gathering spaces foster health, goodwill, and social interaction.
- Implementation of the Infill Policy is important to encourage the development of underutilized properties.

The proposed zoning would allow an existing vacant county property to be sold and incorporated into the Buffalo Crossing subdivision plan. This in-holding was not acquired by the developer of Buffalo Crossing. The prospective owner, Taj Mukadam, is working with the owner of Buffalo Crossing to ensure the compatibility of both developments. The current concept plan adds up to 18 dwelling units on this one-acre parcel.

2) Is the new zoning designed to secure from fire and other dangers?
The new zoning requires minimum setbacks, open and landscaped areas and building separations. The new zoning, as do all zoning districts, provides adequate building separations and density limits to provide security from fire and other dangers. The site will be developed in conformance with section 27-300 (BMCC) for Mixed Residential zones as well as landscaping (27-1200). New buildings would be required to meet city Building Codes and Engineering standards as well. A multi-unit development on an undivided parcel will require a master site plan review. This is an administrative review similar to a subdivision.

3) Whether the new zoning will promote public health, public safety and general welfare?
Similar to criteria two, public health and public safety will be promoted by both the existing zoning and the proposed zoning. The proposed NX2 zoning would allow the vacant property to be developed with compatible uses to the already approved Buffalo Crossing neighborhood. Developed land will increase property values. Vacant land tends to add unpredictability to the area. It is not likely that the current zoning would result in the placement of a residential home on the property. The state and city would require annexation to provide water and sewer to any new dwelling(s).

4) Will the new zoning facilitate the adequate provision of transportation, water, sewerage, schools, parks and other public requirements?
Transportation: The proposed zoning should not have any measurable impact on transportation. The owner will need to coordinate any changes to the existing traffic analysis done for Buffalo Crossing.
Water and Sewer: The City will provide water and sewer to the property. An annexation agreement will outline the city and developer's responsibilities.

Schools and Parks: Schools and parks should not be negatively affected by the proposed zoning. The school district provided no comments on the proposed zone change. Parks should not be negatively impacted by the proposed zoning. The development is not large enough to trigger the requirement to provide on-site open space. There will be walking trails within Buffalo Crossing and there will be a multi-use path on the south side of Grand Avenue.
Fire and Police: The subject property will be served by city public safety services. The Police and Fire Departments had no concerns with the zone change.

5) Will the new zoning provide adequate light and air?
Similar to criteria 2 and 3, the proposed zoning provides for sufficient setbacks to allow for adequate separation between structures and adequate light and air. Any development of the property would follow the requirements of Section 27-300 (BMCC) and other city regulations for development.

6) Will the new zoning affect motorized and non-motorized transportation?
The existing property has no street frontage. The current certificate of survey provides an access easement from Buffalo Crossing to Grand Avenue. This is a high-speed arterial managed by the city and county. There is no curb, gutter or sidewalk currently along this street frontage. If the annexation and zone change are approved, the easement for direct access onto Grand Avenue will be extinguished, and new access will be along Buffalo Crossing streets. This will improve traffic management and non-motorized transportation by removing this potential conflicting access point on Grand Avenue.

7) Will the new zoning promote compatible urban growth?
The proposed zoning is compatible with the adjacent zoning and existing urban growth proposed for this area. The property to the west is outside the city limits and is agricultural land. The surrounding residential subdivisions are compatible with this proposed zoning and a 1-acre infill parcel. The zoning does promote compatible urban growth.

8) Does the new zoning consider the character of the district and the peculiar suitability of the property for particular uses?
The proposed zoning does consider the character of the district and the suitability of the property for the proposed use or uses. The proposed zoning will allow the 1 acre parcel to develop with the rest of Buffalo Crossing. The adjacent zoning to the north is NX2. To the south, west and east is N3 zoning. A buffer yard will be required along the shared property lines with the adjacent lots. This does not need to be a sight-obscuring buffer but will include trees and shrubs as required.

9) Will the new zoning conserve the value of buildings?
The new zoning is not expected to alter the value of any buildings in the area. Any development of the property will need to meet the code requirements for Mixed Residential zoning, and other city development and building regulations. New development tends to increase surrounding property values.

10) Will the new zoning encourage the most appropriate use of land throughout the City of Billings?
The proposed zoning will allow the incorporation of the property in the existing Buffalo Crossing, allowing infill on a vacant parcel. This also contributes to the neighborhood stability of the area. The proposed zoning and use will encourage the most appropriate use of the parcel.

Attachments

Ordinance ZC 1044

ORDINANCE 24-_____

**AN ORDINANCE OF THE CITY OF BILLINGS,
PROVIDING THE ZONE CLASSIFICATION for C/S 2735,
Parcel 4B, Amd, BE AMENDED**

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BILLINGS THAT:

Section 1. **RECITALS.** *Title 76, Chapter 2, Part 3, MCA,* and *Sections 27-1628, BMCC,* provide for amendment to the City Zoning Map from time to time. The City Zoning Commission and staff have reviewed the proposed zoning for the real property hereinafter described. The Zoning Commission and staff have considered the ten (10) criteria required by Title 76, Chapter 2, Part 3, MCA. The recommendations of the Zoning Commission and staff have been submitted to the City Council, and the City Council, in due deliberation, has considered the ten (10) criteria required by state law.

Section 2. **DESCRIPTION. C/S 2735, Parcel 4B, Amd,** is presently zoned **Rural Residential 1 (RR1), a county zone district,** and is shown on the official zoning map within this zone.

Section 3. **ZONE DISTRICT AMENDMENT.** The official zoning map is hereby amended and the zoning for **C/S 2735, Parcel 4B, Amd,** is hereby changed from **Rural Residential 1 (RR1),** to **Mixed Residential 2 (NX2),** and from the effective date of this ordinance, shall be subject to all the rules and regulations pertaining to **Mixed Residential 2 (NX2),** as set out in the Billings, Montana City Code.

Section 4. **EFFECTIVE DATE**. This ordinance shall be effective thirty (30) days after second reading and final adoption as provided by law; or upon effective date of Resolution 24-_____ approving the annexation of the above territory, whichever is later.

Section 5. **REPEALER**. All resolutions, ordinances, and sections of the City Code inconsistent herewith are hereby repealed.

Section 6. **SEVERABILITY**. If any provision of this ordinance or the application thereof to any person or circumstances is held invalid, such invalidity shall not affect the other provisions of this ordinance which may be given effect without the invalid provisions or application, and, to this end, the provisions of this ordinance are declared to be severable.

PASSED by the City Council on first reading this 25th day of March, 2024.

PASSED, ADOPTED and APPROVED on second reading this 8th day of April, 2024.

CITY OF BILLINGS

BY:_____

William A. Cole, Mayor

Attest:

BY:_____

Denise R. Bohlman, City Clerk

Zone Change 1044 – 5900 Grand Ave

Zoning Commission

Date:	04/08/2024
Title:	Zone Change 1045 - 4524 Central Ave - Proposed Clearwater Neighborhood - Zone Change 2nd reading
Presented by:	Nicole Cromwell
Department:	Planning & Community Services
Presentation:	No
Legal Review:	Not Applicable
Project Number:	PZX-24-00053

RECOMMENDATION

The City Zoning Commission recommended approval and adoption of the findings of the 10 review criteria for Zone Change 1045. The City Council held a public hearing on March 25, 2024, and approved the zone change on first reading. A second reading is required to approve the zone change.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

This is a zone change request using the Planned Neighborhood Development zone change process for a proposed annexation of a 48.49-acre parcel located south of Central Avenue and west of the Twin Pines and Legends West urban neighborhoods. The proposed Mixed Use PND will include 6.9 acres of Corridor MIxed Use 1 (CMU1) on the Central Ave frontage, less than 1-acre of Neighborhood Mixed Use (NMU) also on the Central Ave frontage, 21.9 acres of Mixed Residential 1 (NX1), 6.7 acres of Mixed Residential 2 (NX2), 10.4 acres of Mid-Century Neighborhood (N2) and 1.4 acres of Public 1 (P1). The PND process is a tool to help guide the coordination of annexation, subdivisions, and master planning for new city neighborhoods. The previous zoning code (pre-2021) allowed urban-type zoning districts in both the city and the county. In many cases, developers were "pre-zoning" parcels in the county prior to annexation. The PND process allows developers to process all the zoning with the City Council, phase the annexation of the property (if necessary), and coordinate both of these processes with subdivision or master site plan review. The new tool applies a level of certainty to all stakeholders, including the surrounding property owners.

This zone change is for a Mixed Use PND and includes two types of mixed residential zoning (NX1 and NX2), and N2 zoned area adjacent to the County zoning on the west boundary. The Corridor Mixed Use and Neighborhood Mixed Use are along the Central Avenue frontage in proximity to the 44th St W (collector) street intersection planned for this area. The applicant also has an option to purchase another 50+ acres south of the subject parcel. This may also be annexed and zone changed through the PND process. Bell Avenue will be the street that runs along the south boundary of the subject property. The Public zone area is in the southeast corner on both sides of the proposed Bell Avenue.

The zoning plan for the property shows a grid layout that is conducive to the proposed blocks and provides for a wide variety of housing choices on the subject property including single family dwellings, two-family, 3-8 unit apartment buildings (or condos) as well as mixed uses that can provide neighborhood services to the area. The layout meets the requirements of Section 27-800 for Planned Neighborhood Development zone change applications including the required mix of zone districts, blocks, percent open space and recommendations for district placements. The street layout includes connections to adjacent property to ensure connectivity between developments as they occur. The Central Avenue frontage will have a multi-use path required as part of the subdivision and annexation agreement. While this section may be discontinuous to adjacent property outside the city limits, eventually these parcels will annex to the city and the path can be completed.

This area of Billings has experienced a great deal of growth and development in the past decade. This includes three Planned Development zones, customized zoning for specific parcels, that include mixed uses, residential development and medical facilities. Housing demand has reached a high level while supply of all types of housing choices has not kept up with the demand. At least two decades ago, local planning and growth policy documents indicated a need for independent living units for aging residents who want to "downsize" from a maintenance heavy single family dwelling on a large lot to unit ownership or townhomes as well as rental apartments. The 2010 Census indicated Billings, like many other urban areas, saw a reduction in average household size to 2.3 persons. The 2020 Census saw a slight increase to 2.8 persons per household, with 17.5% of the city population over the age of 65. Smaller households, aging residents and the higher costs of all housing has driven the demand for apartments, townhomes, and smaller multi-family products. Developers have made robust investments in multi-family dwelling choices in Lenhardt Square already including the InterUrban and Interpointe Apartments, and the KWO Apartments. A new multi-family project is underway for the northern piece of Lenhardt Square. Several other multi-family

developments have come on-line in the last 15 years around King Avenue West and Shiloh Road including Long Beach Apartments, Affinity at Billings (age restricted), and Hoop Dreams Apartments and condominiums. Apartments, townhomes and unit ownership housing choices are still in high demand in Billings especially in areas close to shopping, schools and recreational opportunities. The Ridgeline Subdivision and PND zoning was approved last year and will include areas for mixed residential and two-family townhomes as well as a small commercial node at King Ave West and 48th St West. The Vista West PND zone change approved in 2023, and includes a mix of housing choices. Development of the parcel will start in 2024.

There are challenges to an area of urban development that is on the edge of the city limits. These challenges include ensuring there are transitions between adjacent county property and uses and the new urban neighborhoods and uses. This is not meant to ensure similarity or homogenous development patterns between the city and county, but the development plan includes buffering, connectivity where and when needed, and recognition of similar goals for both types of property. The 2016 Billings Growth Policy and the 2001 West Billings Neighborhood Plan goals and policies support the proposed Mixed Residential PND zoning for different housing types. The West Billings Neighborhood Plan goals and objectives stated the need to locate compatible uses and offer a range of housing choices and development densities. The proposed zone change supports these goals. The 2016 Billings Growth Policy supports a broad range of housing choices, encourages more walkable neighborhoods with connectivity to other transportation options, and building the community fabric through urban-designed public spaces. The proposed zone change supports these goals as well.

STAKEHOLDERS

The applicant conducted a pre-application neighborhood meeting on January 24, 2024, at Grace Montessori Academy, 4809 Grand Avenue. Twenty-seven people attended the meeting, not including the applicants. The required notification area for all new PND zone changes is 1/4-mile from the property boundary. In this case, over 180 individual property owners and interested parties were notified of the pending zoning application. The summary of the meeting is included in the attachments. In general, the questions from the surrounding owners included interest in the number of new dwelling units. The applicants estimated at the time of the pre-application meeting about 250 units (5+ units per acre) might be built. Attendees asked about the traffic impacts and access to surrounding existing streets. The agents stated they have a contract to do a full traffic impact study based on the proposed zoning if it is approved. Questions were asked regarding building height and whether homes outside the city limits would be forced to annex when water and sewer is installed. The CMU zone allows for up to 4 stories, while the other zone districts are 2 or 2.5 stories. The city will not force anyone to annex unless the property requests or is required to use city water or sewer. Annexation is required before these city services can be provided.

Planning staff did not receive any written comments or phone calls from the surrounding owners prior to preparing this staff report and recommendation. City staff and departments had no negative comments on the proposed annexation and zoning plan. One letter of comment was received by the Zoning Commission on March 4, 2024. This is attached to this report.

City Zoning Commission hearing March 5, 2024

The Zoning Commission held its public hearing and received the staff report and recommendation for approval of Zone Change 1045. The applicant's agent, Craig Dalton of Performance Engineering, provided testimony in favor of the application. He stated the property is currently surrounded by county land and the owner originally intended to build a residential subdivision in the County. As part of the preliminary review of that plan, planning staff encouraged the owner to look at the feasibility of developing within the city limits. He stated the city has identified Central Avenue as a critical corridor for connecting and sustaining the city's infrastructure investments in water, sewer and storm water management facilities. He stated the city had recently installed a 30-inch sewer main along the Monad/Rocky Vista Way corridor to the south and city water is only about 800 feet east on Central Avenue. Mr. Dalton stated the Ridgeline development to the south and west at 48th St W and King Ave W was done by the same owner working with Performance Engineering. He stated that although a full city re-build of Central Avenue is not yet in the Capital improvement plan, developments such as the Clearwater Neighborhood and Vista West to the southeast would help bring that project to the top of the list. The city does intend to enforce its access management on Central Avenue since the street is an important arterial connector. He stated there will be different traffic control at Central Avenue and 48th St W in the future such as a roundabout or signal. He stated the subdivision will have one entry that allows all turning movements, and one that will be restricted to a right in/right out turning movement. He stated that Bell Avenue as shown in the south-east corner would not connect to the current dead end of Bell Avenue unless and until the county land between the subject property and the current city limits is annexed. Mr. Dalton stated the parkland shown on the zoning master plan is just the beginning of their plan for parks in the new neighborhood. He stated it is difficult to know at the PND stage of a project where the best location in the development might be for a neighborhood park. He stated the city should consider allowing some flexibility for the placement or area of Public 1 zoning in a PND after annexation, without having to go through another zone change process. He stated the intent of the CMU1 and NMU zoning on the Central Ave frontage was to encourage the new residents to have walkable amenities and not

have to drive everywhere for services. He stated the neighborhood was informed of some of those potential uses, including a gas station or a bar. He stated the location could not support a casino since it does not have the separation distance to a neighborhood zone. He stated a bar may be possible since the neighborhood separation is only 150 feet compared to the 350 feet for a casino. He stated the commercial zoning was not likely large enough for a grocery store, but specialty services such as a bakery or coffee shop might be possible. He stated the mix of the other N and NX zones was to allow residents to choose a housing option that fits their lifestyle and also have the opportunity to stay in the neighborhood when their housing needs change.

Mr. Craig Jardine of 110 Saddletree Lane spoke in opposition. He stated his home is in the Shiloh Estate subdivision to the north of Central Avenue. He stated it does not make sense to strip out commercial development on this location on Central Avenue. He stated he would be in favor of single family development that is similar to the county subdivision to the north. He stated their is enoguh multifamily development already to the south of this land. Mr. Jardine stated the traffic on Central is already hard to manage during certain times of the day. He stated he does not feel left out because there isn't a coffee shop in his neighborhood because there are at least three places to get coffee within 5 minutes of his house. He stated the proposal is not a neighborhood but a subdivision. He stated he has never heard of people moving from house to house within the same subdivision. He stated Twin Pines and Legends West are the preferred development pattern with just single family homes and duplexes. He stated there is no need for more multifamily housing.

Mr. Andy Wilson of 4355 Wells Place testified against the zone change. He stated their home is right across from the new commercial zoning. He stated he does not want to live across the street from a bar or a gas station. He wanted to know why this was considered compatible with the adjacent zoning, since Shiloh Estates is all single family homes on large lots. He stated this new zoning and subdivision would devalue their property. He stated he found someone out surveying recently on Central Avenue and the work crew told him they were surveying for a new 4-lane street. He stated he would be amenable to all residential zoning and development but not commercial zoning. He stated there were already enough bars just down the street on Shiloh Road.

Laura Wilson of 4355 Wells Place testified against the zone change. She stated this is not the place for commercial zoning or uses. She stated the commercial zoning could allow 4-story buildings. She stated their primary concerns were noise, lighting and crime from commercial activity. She stated neighborhoods that have commercial development have a lot more crime. She stated there was no crime in their subdivision (Shiloh Estates). She stated if a gas station went in it would endanger all their drinking water wells, and cause more air pollution. She stated that right now there are some evenings in their backyard when all you can smell is exhaust fumes from Shiloh and Central Avenue. She stated Shiloh Rd has some very loud traffic noise at all hours of the day and night. She stated the traffic is a constant nuisance to their neighborhood. She stated single-family homes would be welcomed but not commercial uses or multifamily developments.

Mr. Dalton provided some rebuttal comments on the testimony against the zone change. He stated the city code does not allow the placement of neighborhood zone districts directly on arterial streets. He stated the owner could essentially do the same type of zoning outside the city limits, so having the development in the county and not in the city would not necessarily eliminate commercial zoning on the frontage. He stated that CMU1 would allow a 4-story building, but it is not a requirement of the zone. He stated there are challenges to building at that height. He stated that a bar is possible but not a casino at this location. He re-iterated that the owners' intent is to provide daily services close to the neighborhood, so people need not drive every place.

Chairperson Dan Brooks closed the public hearing. David Goss made a motion to recommend approval and adoption of the findings of the 10 review criteria for Zone Change 1045. The motion was seconded by Andy Megorden. Mr. Goss stated he understood the county neighbor's concerns about the city development across the street. He stated the one thing that was quite noticeable to him when he returned to Billings after living on the West Coast was that the city had grown out but not up. He stated a continuation of the same pattern is no longer feasible. Mr. Brooks stated he also shares the concern about getting development ahead of street improvements and not having Central Avenue as a CIP project yet. He stated this has been the way the city has paid for street improvements - by annexing and getting contributions for those improvements ahead of time, well before there is enough funding to build a safer road. Mr. McCall stated he was recusing himself from the vote and debate on this item as he is in discussions with the owner about buying and developing a portion of this new neighborhood. The Commission voted 4-0-1 to recommend approval of the zone change.

City Council Public Hearing on first reading March 25, 2024

The City Council conducted a public hearing and first reading of the ordinance for the zone change on March 25, 2024. The Council received the Zoning Commission recommendation and testimony from the applicant's agent, Performance Engineering. Council member Aspenlieder recused himself from the hearing and voting due to a conflict of interest. There was no other public testimony.

The Council asked staff and the agent questions regarding the connectivity of the proposed development. The Council

expressed concern that the only connection to the west might be through private streets. The Council added a condition to the annexation agreement to ensure there will be public access granted across any private streets in the development.
Mayor Cole closed the public hearing. Council member Rupsis made a motion to approve the zone change and adopt the findings of the 10 review criteria. The motion was seconded by Council member Boyett and approved on a 9-0 vote with Council member Aspenlieder recused from voting.

ALTERNATIVES

The City Council may:

- Approve and adopt the findings of the ten review criteria for Zone Change 1045 as recommended by the Zoning Commission; or,
- Deny and adopt different findings of the ten review criteria for Zone Change 1045; or,
- Delay action on the zone change request for up to 30 days at the request of the applicant or on its own motion; or
- Refer the application back to the Zoning Commission for an additional public hearing based on 1) new information submitted that the applicant and public has not had an opportunity to examine; or 2) new information has been presented that was never submitted or considered by the Zoning Commission or staff; or
- Allow the applicant to withdraw the zone change request.

The applicant has not requested a delay or withdrawal of the application.

FISCAL EFFECTS

Approval or denial of the proposed zone change will not have an effect on the Planning Division budget.

SUMMARY

The City Council shall consider the findings of the ten review criteria as recommended by the Zoning Commission before making a decision on Zone Change 1045:

1) Is the new zoning designed in accordance with the Growth Policy?
The proposed zone change is consistent with the following guidelines of the 2016 Growth Policy and the West Billings Neighborhood Plan (2001):

The West Billings Neighborhood Plan goals and objectives stated the need to locate compatible uses and offer a range of housing choices and development densities. The West Billings Plan adopted a number of Goals, Policies, and Implementation Strategies. The proposed MU-PND for the property is consistent with the following adopted Policies of Planned Growth
Goal 1: Establish Development Patterns that Use Land More Efficiently
Policy R "Encourage innovative land-use planning techniques to be used in building higher density and mixed-use developments as well as infill developments."

The proposed zoning is compatible with goals of the West Billings Neighborhood Plan. The proposed zone change and street layout will accommodate uses that are compatible in a mixed-use environment. The proposed development will also have good access to outdoor activities and is in proximity to commercial centers and transportation options.

The proposed zone change is in line with the adopted 2016 Growth Policy goals for:
Strong Neighborhoods:

- Zoning regulations that allow a mixture of housing types provide housing options for all age groups and income levels
- Walkable neighborhoods that permit convenient destinations such as neighborhood services, open space, parks, schools and public gathering spaces foster health, goodwill and social interaction
- Safe and livable neighborhoods can be achieved through subdivision design that focuses on complete streets, pedestrian-scale streetlights, street trees and walkable access to public spaces
- Neighborhoods that are safe and attractive and provide essential services are much desired Implementation of the Infill Policy is important to encourage development of underutilized properties

Home Base:

- A mix of housing types that meet the needs of a diverse population is important

- The Housing Needs Assessment is an important tool to ensure Billings recognizes and meets the demands of future development Common to all types of housing choices is the desire to live in surroundings that are affordable, healthy and safe
- Planning and construction of interconnected sidewalks and trails are important to the economy and livability of Billings Public safety and emergency service response are critical to the well-being of Billings' residents
- Homes that are safe and sound support a healthy community

The proposed layout for the property will allow higher density housing to be located internal to the property and the dwellings adjacent to the agricultural uses to the west will be a lower density. The proposed zoning plan will have urban development adjacent to county agricultural land to the east, west and south. The property to the south may be an addition to the city in the near future if this development is successful. The layout of the parkland will provide an "entry" type park for the development when the connection is made to the existing west end of Bell Avenue. The location of the parkland on either side of the Bell Avenue right of way will lend itself to a green or a plaza (Section 27-803.B).

2) Is the new zoning designed to secure from fire and other dangers?
The zoning requires minimum setbacks, open and landscaped areas and building separations. The zoning assembly is designed to secure the development from fire and other dangers.

3) Whether the new zoning will promote public health, public safety and general welfare?
Public health and public safety will be promoted by the proposed change. Approval of the overall zoning plan will provide certainty both for the property owner and the surrounding owners. Annexation and provision of public health and safety services from the city will promote the general welfare of the area.

4) Will the new zoning facilitate the adequate provision of transportation, water, sewerage, schools, parks and other public requirement?
Transportation: The applicant has started the process of developing a traffic impact study and will coordinate with the City Engineering Division. The future transportation map only includes collector streets and arterial streets. A mid-section collector street (44th St West) is intended to come south from Central Avenue. Bell Avenue will extend further west to meet this collector street in the future. Although it is not shown on the zoning plan, there is a multi-use path planned for the south side of Central Avenue. The city limits are discontinuous on Central Avenue west of Shiloh Road. The developer will likely be required through the annexation agreement to contribute to the cost of this multi-use path construction in the future.
Water and Sewer: The City will provide water and sewer for the property. There will be no additional impacts on the system from the proposed changes.
Schools and Parks: Schools and parks may be effected by the proposed zone change and development of a new city neighborhood. SD #2 did not provide any comments. At the time of subdivision, the developer will need to provide additional parkland or cash-in-lieu of parkland to meet the minimum required by subdivision regulations (11% of net area).
Fire and Police: The subject property will be served by city public safety services. The Police and Fire Departments had no concerns about the zone change.

5) Will the new zoning provide adequate light and air?
The proposed zoning provides for sufficient setbacks to allow for adequate separation between structures and adequate light and air.

6) Will the new zoning effect motorized and non-motorized transportation?
Non-motorized travel -- walking and biking -- is an essential part of the traffic plan for this development. The subject property will be isolated from the co-terminus boundaries of the city limits for an undetermined amount of time. If the developer exercises the option to purchase the 50 acres to the south, a clear vehicle and pedestrian connection can be made to the urban neighborhoods of Lenhardt Square, the Vista West development and the St. Vincent's Healthcare subdivision, as well as a connection to Shiloh Road. Central Avenue is a principal arterial street. Most of the development west of Shiloh Road with access to Central Avenue is rural residential neighborhoods that are still actively used for agricultural purposes. The average daily traffic count just west of Shiloh road is less than 6,500 trips per day. The 2016 West End Multi-Modal Traffic Study (city/County) indicated long term projects for Central Avenue from Shiloh Road to 48th St West would include completion of a three-lane section (one lane each direction with a center turn lane) and a traffic control option (signal or roundabout) at 48th St W and Central Avenue. The existing conditions according to the 2016 study indicated a low level of service for traffic entering or leaving Central Avenue during peak hours between Shiloh Road and about 44th St West. The level of service is based on wait time for making safe left or right turns onto Central Avenue or off of Central Avenue. The south side of Central Avenue is on the list of arterial streets with a multi-use path on the south side of the right of way. There is no continuous city-controlled right of way on Central Avenue west of Shiloh. The developer will be required to contribute to the future construction of the multi-use path.

7) Will the new zoning will promote compatible urban growth?
The proposed overall development density is compatible with urban growth and the provision of city-level services for new residents. The proposed zone district boundaries are consistent with the urban growth in this area and will be compatible with the surrounding neighborhoods.

8) Does the new zoning consider the character of the district and the peculiar suitability of the property for particular uses?
The proposed zoning does consider the character of the district and the suitability of the property for the proposed use. This area between Central Avenue and King Ave West is undergoing rapid urban development and growth. Demand for new housing choices, including townhomes and apartments, is increasing. Providing a wide range of housing types is suitable for this area.

9) Will the new zoning conserve the value of buildings?
The property is an undeveloped agricultural parcel. Approval of the zone change will provide certainty for surrounding landowners and may help to maintain property values of adjacent buildings.

10) Will the new zoning encourage the most appropriate use of land throughout the City of Billings?
The proposed Mixed Used PND with N2, NX1, NX2, CMU1, NMU and Public 1 zoning will encourage the most appropriate use of this land in Billings.

Attachments

Ordinance ZC 1045

ORDINANCE 24-_____

AN ORDINANCE OF THE CITY OF BILLINGS, PROVIDING THE ZONE CLASSIFICATION for C/S 3844, Tract 2, BE AMENDED

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BILLINGS THAT:

Section 1. **RECITALS.** *Title 76, Chapter 2, Part 3, MCA,* and *Sections 27-1628, BMCC,* provide for amendment to the City Zoning Map from time to time. The City Zoning Commission and staff have reviewed the proposed zoning for the real property hereinafter described. The Zoning Commission and staff have considered the ten (10) criteria required by Title 76, Chapter 2, Part 3, MCA. The recommendations of the Zoning Commission and staff have been submitted to the City Council, and the City Council, in due deliberation, has considered the ten (10) criteria required by state law.

Section 2. **DESCRIPTION. C/S 3844, Tract 2,** is presently zoned **Agriculture (A), a county zone district,** and is shown on the official zoning map within this zone.

Section 3. **ZONE DISTRICT AMENDMENT.** The official zoning map is hereby amended and the zoning for **C/S 3844, Tract 2,** is hereby changed from **Agriculture (A), to Corridor Mixed Use 1 (CMU1), Neighborhood Mixed Use (NMU), Mixed Residential 2 (NX2), Mixed Residential 1 (NX1), Mid-Century Neighborhood (N2) and Public 1 (P1)**, as shown on the attached **Exhibit A – Zoning Master Plan,** and from the effective date of this ordinance, shall be subject to all the rules and regulations pertaining to **Corridor Mixed Use 1 (CMU1), Neighborhood Mixed Use (NMU), Mixed Residential 2 (NX2), Mixed Residential 1 (NX1), Mid-Century Neighborhood (N2) and Public 1 (P1),** as set out in the Billings, Montana City Code.

Section 4. **EFFECTIVE DATE**. This ordinance shall be effective thirty (30) days after second reading and final adoption as provided by law; or upon effective date of Resolution 24-_____ approving the annexation of the above territory, whichever is later.

Section 5. **REPEALER**. All resolutions, ordinances, and sections of the City Code inconsistent herewith are hereby repealed.

Section 6. **SEVERABILITY**. If any provision of this ordinance or the application thereof to any person or circumstances is held invalid, such invalidity shall not affect the other

provisions of this ordinance which may be given effect without the invalid provisions or application, and, to this end, the provisions of this ordinance are declared to be severable.

PASSED by the City Council on first reading this 25th day of March, 2024.

PASSED, ADOPTED and APPROVED on second reading this 8th day of April, 2024.

CITY OF BILLINGS

BY:_____

William A. Cole, Mayor

Attest:

BY:_____

Denise R. Bohlman, City Clerk

Zone Change 1045 – 4524 Central Ave – Clearwater Neighborhood

Exhibit A – Zoning Master Plan Zone Change 1045

PROPOSED PLANNED NEIGHBORHOOD DEVELOPMENT FOR

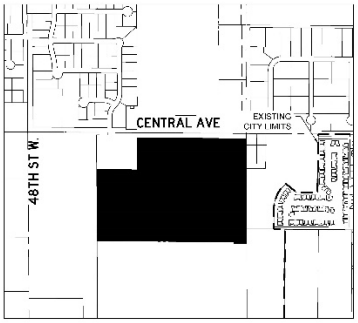
TRACT 2 OF CERTIFICATE OF SURVEY 3844

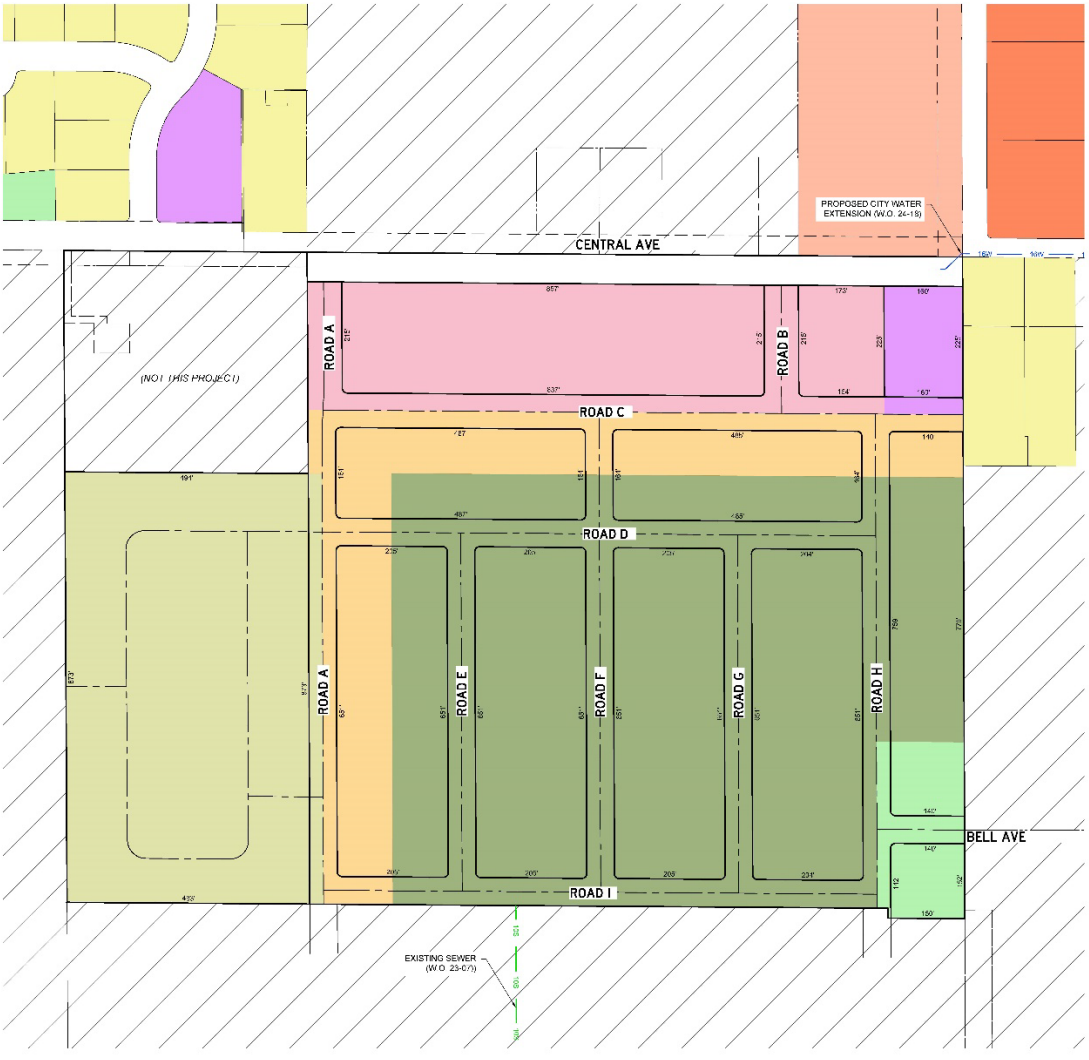
LOCATED NW 1/4 OF SECTION 10, T 01 S, R 25 E, P.M.M.
YELLOWSTONE COUNTY, MT

PREPARED FOR : BROWN DEVELOPMENT, LLC

PREPARED BY : PERFORMANCE ENGINEERING, LLC

ZONING INFORMATION		
ZONING DISTRICT	ACRES	PERCENTAGE
CMU 1	6.986	14.4
NMU	0.954	2.0
NX1	21.947	45.3
NX2	6.704	13.8
N2	10.452	21.6
P1	1.452	2.9
TOTAL	48.492	100.0





ZONING LEGEND

- CMU 1 - COMMERCIAL MIXED USE 1
- N2 - 1 TO 2 DWELLING UNITS/STRUCTURE
- NX1 - 1 TO 4 DWELLING UNITS/STRUCTURE
- NMU - NEIGHBORHOOD MIXED USE
- RR1 - RURAL RESIDENTIAL 1
- RR3 - RURAL RESIDENTIAL 3
- NX2 - 2 TO 8 DWELLING UNITS/STRUCTURE
- N4 - LARGE LOT SUBURBAN
- P1 - OPEN SPACE
- AO - AGRICULTURAL OPEN

SHEET 1 OF 1

Zoning Commission

Date:	04/08/2024
Title:	Zone Change 1046 - 1202 W. Wicks Lane - NX3 to CMU2 - 2nd reading
Presented by:	Nicole Cromwell
Department:	Planning & Community Services
Presentation:	No
Legal Review:	Not Applicable
Project Number:	PZX-24-00056

RECOMMENDATION

The Zoning Commission recommended approval of Zone Change 1046 located at1202 W. Wicks Lane from NX3 to CMU2 based on the findings of the 10 criteria. The City Council approved the zone change on first reading on March 25, 2024. A second reading is required to approve the zone change.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

This is a zone change request from Mixed Residential 3 (NX3 -- 5+ unit buildings) to Corridor Mixed Use 2 (CMU2), on proposed lots 1 and 2 of Skyview Ridge, 2nd Filing. The two lots will equal about 8.6 acres in area. The intent, if approved, is to allow for the development of several personal storage warehouses on the parcels. Skyview Ridge is a subdivision of state-owned school trust land on the south side of W Wicks Lane near Skyview High School. The property was annexed and a master zoning plan approved in 2008. Since 2008, there have been no developments on the property. The state must approve a development through a long-term lease-process. State school trust lands are generally never sold but rather leased long-term. The site is in an area with Eagle sandstone formations that are shallow and do not drain well. Excavations for utilities, footings, foundations as well as providing for storm water management will be very challenging on this site. A major electric substation, two wireless communication towers, the city's 800 Mega-hertz radio tower (public safety communications), and two water utility pumping stations are located nearby, as well as high-tension power lines traverse near the property. The lots were originally zoned Residential Multi-family-Restricted. In the 2021 update, the state requested this area to be designated NX3 as the corollary zone district.

The proposed zoning of CMU2 matches the current zoning of lots to the east and north. Lots in Skyview Ridge, 1st Filings at the intersection of W Wicks Lane and Governor's Boulevard to the east are currently zoned CMU1. These lots to the east have sandstone outcroppings (See Zoning and Site Photos attachment) and share a property boundary with lots zoned NX2 to the south. The CMU2 zone district is intended for larger parcels that are separated from residential zones by a street or other demarcation that allows sufficient separation to diminish impacts on neighborhoods. The CMU2 zone appears to fit the criteria for this location. The zone district has building and siting standards that will need to be met - even for personal storage buildings. For example, the primary structure will need to be within the build-to area, cover at least 50 percent of the front lot line and have 65% of the front facade in doors and windows as measured between 2 ft and 8 ft above grade (Section 27-406). The zoning code also has use standards for personal storage warehousing that does not allow exterior overhead doors to face street frontages, requires units that have direct exterior access to be at least 100 feet from the front or side street property lines, requires a maximum "facility" size of 3 acres and the security fencing to be behind any required landscaping area (Section 27-1006.C).

Personal storage warehousing is an expanding business in the community. This is not a high value investment in property, but does provide a necessity for people who may be moving, downsizing, or just need extra space not available at their residence. There are over 10,000 personal storage units within the greater metropolitan area of Billings, including outdoor storage (boats, RVS, campers), personal storage units and climate-controlled units. The regional market for Billings is much larger than other cities with a similar population. Billings supports a retail and service market much larger than is needed by the residents of the city due to this market's reach (~400 radius miles). Self-storage unit properties may experience some crime and vandalism that is not applicable to other businesses. Many secure storage facilities invest in screening customers, surveillance cameras, good exterior lighting, security fencing and security companies to provide response to any alarm systems. Daily traffic to and from these facilities tend to be low - about 8 trips per day per acre of storage. For a 3-acre storage facility, it is about 24 traffic trips per day. Twenty-four trips per day is what three apartments would generate on average.

Planning staff recommended approval based on the proposed findings of the zone change review criteria. The Zoning Commission concurred with this recommendation. The location is on an arterial street and will be separated by at

least a street from any existing or future residential development in Skyview Ridge. The challenging conditions of the site make the proposed zoning and use of the property compatible with the existing area. The townhomes, high school, church and assisted living facility on the north side of W Wicks Lane are separated from the proposed use. The existing traffic on W Wicks Lane at this location is not high volume (about 5,500 trips per day) for an arterial. The multi-use path on the Wicks Lane frontage is already installed.

STAKEHOLDERS

The applicant conducted a pre-application meeting on January 25, 2024, at the Lake Hills Golf Course clubhouse. No surrounding owners attended the meeting.

Planning staff prepared the mailed notice to the surrounding owners, published the legal ad, posted the property and placed a synopsis of the application on the Current Zoning Applications' web page. Planning staff received no public comments in writing or by telephone before the preparation of the report to the Zoning Commission. The Zoning Commission received several emailed letters of comment just prior to the public hearing. These are included as an attachment.

Zoning Commission hearing March 5, 2024

The Zoning Commission held its hearing and received the staff report and recommendation for approval of Zone Change 1046. The applicant's agent, Taylor Kasperick of Performance Engineering, provided testimony in favor of the zone change request. He stated the property is owned in trust by the state and so only leases of the land are made to prospective developers. He stated they are working with a potential lessee that is in the business of building and managing personal storage warehousing. He stated the lessee chose this parcel due to its proximity to the power substation, the power lines and wireless antennae, since this location was not desirable for multifamily development as it is currently zoned. He stated the zone change to CMU2 would allow this development. He stated the development would be in compliance with the general and specific standards for personal storage in the zone. Those standards include structure facade requirements for the buildings that face Wicks Lane, street frontage landscape and bufferyards around the facility. He stated in addition, each facility (there will be two) for personal storage cannot exceed three acres. He stated that as Billings is built more densely and with more multifamily units, people need places to store some of their extra belongings. He stated the owner has one development for storage already built, but it is outside any zoning district in the County. He stated this facility would look much different with the requirements of the zoning and development code in the city. He stated they have heard concerns about traffic generated from the development. He stated according to industry manuals, a multifamily development would generate 4.5 trips per unit per day. He stated a personal storage warehouse would generate about 8 trips per day for each 100 storage units. He stated any residential development would generate much more traffic than a storage facility.

Mr. Kasperick stated there will be additional land that can be used for other uses - about 2.5 acres - after both facilities are constructed. He stated this additional land would likely be at the south end of the property with access off Targhee Avenue. He stated uses that could be allowed on the CMU2 that are not desirable - such as a bar or casino - could not be located on the property due to the proximity to the school Skyview High School), a church and to residential zones. He stated the soils on the property are very challenging and would not support any type of multifamily development. He stated the lessee and the DNRC staff believe this first development may be the catalyst needed to move more development on to the trust land.

Commission member Greg McCall asked about the lot layout. Mr. Kasperick stated there is a pending minor subdivision that will create 2 lots with the property boundary running north to south from W Wicks Lane to Targhee Avenue. He stated the city will allow one shared access onto W Wicks Lane as a temporary access point until Targhee Avenue can be built. Commission member Beau Mulvaney asked whether the storage would include boats or RVs. Mr. Kasperick stated the plan does not include outdoor storage. Chairperson Dan Brooks stated there were some late emails from the school district employees, and he was wondering whether those suggestions for donation of land to the schools or the city are under consideration. Mr. Kasperick stated he was not aware of those discussions. Commission member Dave Goss stated that as a federal employee that also works with trust lands, it is difficult to donate or sell trust land. For federal trust land, it takes an act of Congress.

Mr. Ed Hostettler of 1305 Nutter Circle stated he expected Project ReCode to put a stop to these constant zoning changes. Planning staff explained that Project ReCode tried to place the appropriate zone in the map update, but it was not a perfect process and changes will continue to occur. He stated he was concerned about any interference with traffic on W Wicks Lane since most of the Inner Belt Loop traffic would be coming this way. He stated his concern is not with the generation of new traffic, but with the potential conflict with the existing traffic. He stated both the high school and the church generate a lot of traffic on Wicks Lane already. He stated there are 8 storage facilities in the Heights already and 48 in the City of Billlings. He stated there appears to be quite a lot of storage already. He stated the CMU2 zoning is not compatible with the zoning to the north with Public zoning for the high school and neighborhood zoning for the townhomes.

Linnea Forseth of 1056 Picador Way testified with concerns and questions about the proposed development. She stated her home is right across the street from the property, and she is concerned about commercial uses across the street. She stated she believes the highest and best use of property is to support families in Billings of all incomes. She stated while she waited for the hearing to start she looked up the existing storage development for this lessee - Beehive Storage. She stated what she found about the existing development is concerning. She stated the existing facility has a billboard-sized over-lit sign. She stated she has concerns about how stormwater would be handled and how that compares with a residential development. She stated she was concerned about how the development would affect the nesting osprey near the property. She stated she was concerned about the multi-use path and how pedestrians and bicyclists would be affected by the development.

Mr. Kasperick provided rebuttal comments and answered questions. He stated the lessee here would be required to build a sign in conformance with the zoning of CMU2. He stated the existing sign in the county would not be allowed on the property. Planning staff gave details of what types and the sizes of signs that would be allowed by zoning. Mr. Kasperick stated the owner would have to follow all the standards for building in the CMU2 zone district including putting the fence inside the landscape bufferyard, and ensuring that any security lighting would not trespass onto adjacent property. He stated the stormwater management would be based on a geotechical report that is currently underway. The results of the study are not yet available, but it appears from preliminary results stormwater could be handled on site. He stated this is the first he has heard about an osprey nesting site. Ms. Forseth clarified the nesting platform is on or near the Northwestern substation. Mr. Kasperick stated he would find out more. He stated the development of the first facility would start on the eastern side of the property away from any nesting site. He stated the multi-use path would not be affected other than to install a driveway across it at a location dictated by City engineering.

Chairperson Dan Brooks closed the public hearing. Mr. Goss stated he was recusing himself from the debate and vote as he has a conflict of interest as a federal employee who has negotiated leases with the DNRC for facilities on state trust land in Billings. Greg Mccall stated he understands the concerns about the zoning across from the existing neighborhoods but the zoning designation for NX3 does not make sense on this property. He stated as a developer he has looked at these state trust parcels for developments and the cost of installing water and sewer in this type of soil (Eagle Sandstone) is astronomical compared to the development potential. Andy Megorden made a motion to recommend approval and adoption of the findings of the 10 review criteria for Zone Change 1046. The motion was seconded by Greg McCall and was approved on a 4-0-1 vote.

City Council Public Hearing on first reading March 25, 2024
The City Council conducted a public hearing and first reading of the ordinance for the zone change on March 25, 2024. The Council received the Zoning Commission recommendation and testimony from the applicant's agent, Performance Engineering. Council member Aspenlieder recused himself from the hearing and voting due to a conflict of interest. No other testimony was received.
The City Council asked questions concerning the application and the potential design of a personal storage facility. Staff explained that any development, including personal storage warehousing, would have to comply with the CMU2 building and siting requirements as well as the specific use standards for personal storage. Staff stated the development would be different from many existing personal storage warehouses in Billings, with doors and windows that face the street and concealment of overhead access doors from public right of ways. In addition, the new zoning requires any landscaping to be outside of security fencing and limits the size of any single facility to 3 acres or less. Mayor Cole closed the public hearing. Council member Shaw made a motion to approve the zone change and adopt the findings of the 10 review criteria. The motion was seconded by Council member Gulick and approved on an 8-1 vote with Council member Aspenlieder recused from voting. Council member Neese voted in opposition to the zone change. He stated it was his opinion the zone change did not meet specific criteria, including the Zoning Commission's recommended findings for criteria numbers 3, 4, 7, 8 and 10.

ALTERNATIVES
The Zoning Commission may:

- Recommend Approval of the Zone Change and adopt the findings of the 10 review criteria for Zone Change 1046; or,
- Recommend Denial of the Zone Change and adopt different findings of the 10 review criteria for Zone Change 1046; or,
- Delay action on the zone change request for up to 30 days; or,
- Allow the applicant to withdraw the application.

The Zoning Commission is required to make a recommendation to the City Council on this application for zone change. The application will not proceed to the City Council without a recommendation. The applicant has not requested a delay or withdrawal of the application.

FISCAL EFFECTS

Approval or denial of the proposed zone change should not have an effect on the Planning Division budget.

SUMMARY

The City Council shall consider the findings of the 10 review criteria as recommended by the Zoning Commission prior to making a decision on Zone Change 1046:

1. Is the new zoning designed in accordance with the Growth Policy?

The proposed zone change is most consistent with the following guidelines of the 2016 Growth Policy:
Prosperity (promoting equal opportunity and economic advancement)

- Predictable, reasonable City taxes and assessments are important to Billings' taxpayers
- A diversity of available jobs can ensure a strong Billings' economy
- Successful businesses that provide local jobs benefit the community
- Community investments that attract and retain a strong, skilled and diverse workforce also attracts businesses
- Retaining and supporting existing businesses helps sustain a healthy economy

The proposed zoning would allow an existing business to expand to this location. The prospective lessor is HS Management, LLC, that currently runs and is expanding "Apple Storage" on Lincoln Lane. The owner (DNRC - State of Montana) is requesting the zone change on behalf of the lessor. The Growth Policy encourages prosperity by supporting local business needs for expansion. The Policy also states support for retaining and supporting existing businesses as this helps to sustain a healthy economy. Approval of the zone change will allow an existing business an expansion opportunity.

2. Is the new zoning designed to secure property from fire and other dangers?
The new zoning (CMU2) requires minimum setbacks, open and landscaped areas and building separations, which creates security from fire and other dangers. The new zoning, as do all zoning districts, provides adequate building separations. Any new structures would comply with the building code and other development codes in Billings intended to keep places safe.

3. Whether the new zoning will promote public health, public safety and general welfare?
Public health and public safety are promoted by the proposed zoning. This is not unique to the CMU2 zone, but instead is promoted by all adopted zoning districts within the City of Billings. The site and structure regulations found in 27-406 for the CMU2 district promote the minimum standards to ensure public health and safety and promote general welfare. The proposed zoning of CMU2 will allow the state to lease this land to an existing business and build new storage warehousing. The new construction will comply with the zone district standards. The approval of the zone change should not have negative affects on public health, safety and welfare given the existing conditions and site requirements.

4. Will the new zoning facilitate the adequate provision of transportation, water, sewerage, schools, parks and other public requirement?
Transportation: The proposed zoning itself will not increase the traffic at this location. Any traffic increases will be minor compared to the existing traffic on W Wicks Lane. City Engineering will require advance discussion on access to the parcels before any development is approved. Wicks Lane already has a multi-use path developed on this side of the right of way and public sidewalk on the north side.
Water and Sewer: Water and sewer, if needed, will be provided by the City of Billings. There are no anticipated impacts related to these services on the proposed personal storage warehousing.
Schools and Parks: Schools and parks should not be negatively affected by the proposed zoning. These uses are impacted through additional residential development. This is a commercial development, therefore there are no identified concerns for parks and schools.
Fire and Police: The subject property is served by city public safety services. The Police and Fire Departments were consulted and had no concerns about the zone change.

5. Will the new zoning provide adequate light and air?
Similar to criteria 2 and 3, the proposed CMU2 zone, like all zones, requires minimum setbacks to allow for adequate separation between structures and adequate light and air. The proposed zoning provides for sufficient setbacks to allow for adequate separation between structures and adequate light and air. Any new construction will have to comply with these rules.

6. Will the new zoning effect motorized and non-motorized transportation?
Traffic generation will depend on the size of the facility (maximum is three acres per facility). The likely number of

daily trips to the facility is small and W Wicks Lane is a principal arterial. Principal arterial streets, even with high volumes of traffic, are designed to carry the maximum traffic. Traffic counts in this area are estimated to be about 5,500 vehicle trips per day. High school traffic is not included in these numbers as counts are taken when school is not in session. High school traffic has at least two ways out onto W Wicks Lane - High Sierra Blvd and Fantan St. Traffic twice a day during school hours can become congested. Fantan and W Wicks Lane is an all-way (3 legs) stop. High Sierra and W Wicks Lane is also a three-way stop controlled intersection. The addition traffic will not likely impact either daily traffic or high school traffic.

7. Will the new zoning promote compatible urban growth?
The proposed zoning is compatible with the adjacent zoning and existing urban growth in the vicinity. Existing CMU2/CMU1 zones are located to the east. The subject property will be separate from residential uses by at least a street width. Additionally, site and landscape requirements of the CMU2 district will promote compatibility specifically by requiring a landscaped buffer for the use and adjacent to other zones with different uses.

8. Does the new zoning consider the character of the district and the peculiar suitability of the property for particular uses?
This is a suitable use for this parcel of land and the zoning is appropriate in this situation. The difficult soils make the existing zoning for higher density multifamily uses unlikely or cost-prohibitive. The proposed zoning and use for personal storage warehousing will allow some use of the property.

9. Will the new zoning conserve the value of buildings?
The new zoning is not expected to alter the value of any buildings in the area. Due to the existing uses and established zones to the east, west and north, the proposed use should not impact the value of these buildings. New construction tends to increase property value. The CMU2 building and siting requirements will help conserve the value of any surrounding property.

10. Will the new zoning encourage the most appropriate use of land throughout the City of Billings?
The proposed zoning will encourage an appropriate commercial use that will be separated from any existing or future residential uses. This is an appropriate use of the land.

Attachments

Ordinance ZC 1046

ORDINANCE 24-_____

AN ORDINANCE OF THE CITY OF BILLINGS, PROVIDING THE ZONE CLASSIFICATION for proposed Lots 1 and 2 of Skyview Ridge Subdivision, 2nd Filing, BE AMENDED

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BILLINGS THAT:

Section 1. **RECITALS.** *Title 76, Chapter 2, Part 3, MCA,* and *Sections 27-1628, BMCC,* provide for amendment to the City Zoning Map from time to time. The City Zoning Commission and staff have reviewed the proposed zoning for the real property hereinafter described. The Zoning Commission and staff have considered the ten (10) criteria required by Title 76, Chapter 2, Part 3, MCA. The recommendations of the Zoning Commission and staff have been submitted to the City Council, and the City Council, in due deliberation, has considered the ten (10) criteria required by state law.

Section 2. **DESCRIPTION. Proposed Lots 1 and 2 of Skyview Ridge Subdivision, 2nd Filing,** is presently zoned **Mixed Residential 3 (NX3),** and is shown on the official zoning map within this zone.

Section 3. **ZONE DISTRICT AMENDMENT.** The official zoning map is hereby amended and the zoning for **proposed Lots 1 and 2 of Skyview Ridge Subdivision, 2nd Filing,** is hereby changed from **Mixed Residential 3 (NX3),** to **Corridor Mixed Use 2 (CMU2),** and from the effective date of this ordinance, shall be subject to all the rules and regulations pertaining to **Corridor Mixed Use 2 (CMU2),** as set out in the Billings, Montana City Code.

Section 4. **EFFECTIVE DATE**. This ordinance shall be effective thirty (30) days after second reading and final adoption as provided by law.

Section 5. **REPEALER**. All resolutions, ordinances, and sections of the City Code inconsistent herewith are hereby repealed.

Section 6. **SEVERABILITY**. If any provision of this ordinance or the application thereof to any person or circumstances is held invalid, such invalidity shall not affect the other provisions of this ordinance which may be given effect without the invalid provisions or application, and, to this end, the provisions of this ordinance are declared to be severable.

PASSED by the City Council on first reading this 25th day of March, 2024.

PASSED, ADOPTED and APPROVED on second reading this 8th day of April, 2024.

CITY OF BILLINGS

BY:_____

William A. Cole, Mayor

Attest:

BY:_____

Denise R. Bohlman, City Clerk

Zone Change 1046 – 1202 W Wicks Lane

City Council Regular

Date:	04/08/2024
Title:	Payment of Claims for week of March 4th, 2024
Presented by:	Erin Watterud
Department:	Finance
Presentation:	No
Legal Review:	Not Applicable
Project Number:	N/A

RECOMMENDATION

Staff recommends Council approve the Payment of Claims

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

Claims in the amount of $3,563,138.62 have been reviewed and are presented for City Council payment approval. A complete listing of the claims for the week are available in the Finance Department. Payment Approval Process Every invoice for payment is entered into the City's accounting system and the backup documentation is scanned in and attached (physical invoices, additional e-mails explaining payments, bids, contracts, etc.). Each invoice goes through a multi-step approval process depending upon the amount of the payment. First, invoices are entered by the department requesting the payment and the department director or designee must perform an initial review and approval of the purchase. The number of approvals within the department can vary based upon the size of the department, but no less than one approver within each department must verify the payment. Second, all payments, regardless of size, must be approved by the Purchasing Agent or designee. The Purchasing Agent will review the payment to ensure purchasing procedures are followed and appropriate documentation is attached. If the payment is greater than $1,000, then it must be approved by the Finance Director or designee. If that payment is greater than $10,000, then it must be approved by the City Administrator or Assistant City Administrator. Once all approvals are completed, the payment is able to be made and the Accounts Payable Clerk can print the check. After all checks are printed, a list of all checks in excess of $2,500 is generated and placed on the next City Council meeting for review.

ALTERNATIVES

No other alternatives were analyzed

FISCAL EFFECTS

Claims have a varying impact on department budgets, but are submitted by the departments and reviewed by Finance staff before being sent to the Council.

Attachments

CouncilMemo wk of 03042024

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/04/2024	868946	Altitude Signal	Street/Traffic	$ 4,650.00	I003644
03/04/2024	868949	Apsco	Wastewater	$ 2,259.98	Primary Sludge Pump Impeller repair
03/04/2024	868949	Apsco	Wastewater	$ 1,655.12	Primary Sludge Pump Seal Repair
03/04/2024	868959	Blngs Chamber Of Commerce	General	$ 750.00	2024 Aspirational City Registration-mayor
03/04/2024	868959	Blngs Chamber Of Commerce	General	$ 1,500.00	2024 Aspirational City Registration-city admin
03/04/2024	868959	Blngs Chamber Of Commerce	General	$ 1,500.00	2024 Aspirational City Registration- council
03/04/2024	868959	Blngs Chamber Of Commerce	Planning	$ 750.00	2024 Aspirational City Registration- planning
03/04/2024	868960	Billings Logistics Center One	Tax Incrmnt S	$ 1,000,000.00	S TIF Development Incentive for FY24 - TPA Group
03/04/2024	868965	Bradford Roof Management	Airport	$ 24,475.00	Repair Wind Damaged Roof Section
03/04/2024	868970	Centimark	Wastewater	$ 11,464.45	Retainage Release
03/04/2024	868971	Century Link	Airport	$ 51.22	Airport Terminal Power M
03/04/2024	868971	Century Link	Airport	$ 45.66	Airport Alarm
03/04/2024	868971	Century Link	Airport	$ 53.73	Airport 1FB Line
03/04/2024	868971	Century Link	Airport	$ 83.74	Airport
03/04/2024	868971	Century Link	Airport	$ 53.73	Airport P9 Building
03/04/2024	868971	Century Link	Airport	$ 264.08	Airport -Charges for Airport phone fax alarm line
03/04/2024	868971	Century Link	Airport	$ 38.45	Bill Date: Aug 16, 2021. QTA Phone
03/04/2024	868971	Century Link	Engineering	$ 116.88	Measured Lines Depot 50/50
03/04/2024	868971	Century Link	EOC 911	$ 45.65	911
03/04/2024	868971	Century Link	EOC 911	$ 45.65	911
03/04/2024	868971	Century Link	EOC 911	$ 311.26	9-1-1 Center Landfill #2
03/04/2024	868971	Century Link	EOC 911	$ 311.26	9-1-1 Center Fox Reservoir #2
03/04/2024	868971	Century Link	EOC 911	$ 5,278.94	9-1-1 Center
03/04/2024	868971	Century Link	Fleet	$ 51.73	Motor Pool
03/04/2024	868971	Century Link	General	$ -	Cemetery Kenco Line
03/04/2024	868971	Century Link	General	$ 65.07	Stewart Park Batting Cages
03/04/2024	868971	Century Link	IT Resources	$ 51.22	Kenco Security Alarm IT Alarm
03/04/2024	868971	Century Link	Library	$ 190.62	Library 6 lines (4) Library
03/04/2024	868971	Century Link	P.W. Admin	$ 116.87	Measured Lines Depot 50/50
03/04/2024	868971	Century Link	Park Dist 1	$ 69.43	Parks
03/04/2024	868971	Century Link	Park Dist 1	$ 51.22	Parks 3890 Stillwater
03/04/2024	868971	Century Link	Parking	$ 41.87	Park 2 Elevator Phone
03/04/2024	868971	Century Link	Parking	$ 51.22	Park 1 Elevator Phone

03/04/2024	868971	Century Link	Phone System	$	127.08	Library 6 lines
03/04/2024	868971	Century Link	Phone System	$	105.34	Airport Measured Lines
03/04/2024	868971	Century Link	Phone System	$	116.02	Met Measured Lines
03/04/2024	868971	Century Link	Phone System	$	112.82	BOC Measured Lines
03/04/2024	868971	Century Link	Phone System	$	164.04	PUD Measured Lines
03/04/2024	868971	Century Link	Phone System	$	2,596.65	Main System Centrex
03/04/2024	868971	Century Link	Phone System	$	52.67	MET Fax and Kenco Fax
03/04/2024	868971	Century Link	Phone System	$	49.03	Animal Control Fax
03/04/2024	868971	Century Link	Phone System	$	51.22	Fire Alarm
03/04/2024	868971	Century Link	Phone System	$	51.22	Four Dances
03/04/2024	868971	Century Link	Phone System	$	53.20	Miller Building
03/04/2024	868971	Century Link	Phone System	$	51.22	Pioneer Park
03/04/2024	868971	Century Link	Phone System	$	52.67	Streets Fax
03/04/2024	868971	Century Link	Planning	$	51.22	Planning Traffic Central Broadwater
03/04/2024	868971	Century Link	Planning	$	51.22	Planning Traffic Central 9th
03/04/2024	868971	Century Link	Public Safety	$	52.67	Fire Elevator
03/04/2024	868971	Century Link	Public Safety	$	51.22	Crime Prevention Alarm
03/04/2024	868971	Century Link	Public Safety	$	119.32	Fire
03/04/2024	868971	Century Link	Public Safety	$	118.28	Fire RR Crossing Alarm
03/04/2024	868971	Century Link	Public Safety	$	61.60	Fire 5 911 Line
03/04/2024	868971	Century Link	Public Safety	$	41.87	Fire Maintenance Shop
03/04/2024	868971	Century Link	Radio	$	311.26	Fire Airport Radio Tower WCK
03/04/2024	868971	Century Link	Radio	$	311.26	Fire Airport Radio Tower Jellison
03/04/2024	868971	Century Link	Solid Waste	$	97.85	Solid Waste Landfill
03/04/2024	868971	Century Link	Solid Waste	$	194.66	SW Landfill
03/04/2024	868971	Century Link	Street/Traffic	$	43.05	PW Traffic 3728 McDougall
03/04/2024	868971	Century Link	Street/Traffic	$	52.67	PW Traffic Signal 24 Central
03/04/2024	868971	Century Link	Wastewater	$	51.22	PUD Sahara Sand Lift Station
03/04/2024	868971	Century Link	Water	$	39.44	PUD Alarm Water Tower
03/04/2024	868988	Dell Computer	EOC 911	$	2,429.62	Mobile Precision 7780, i7
03/04/2024	868988	Dell Computer	Public Safety	$	2,220.38	Qt. 2 OptiPlex 7010, i5
03/04/2024	868988	Dell Computer	Public Safety	$	16,554.00	Qty. 15 OptiPlex SSF 7010+, i5
03/04/2024	868988	Dell Computer	Public Safety	$	2,065.48	Rugged Latitude 5430, i7
02/28/2024	346031	EBMS Import	City Ins Fund	$	4,841.26	EBMS INSURANCE PAYMENTS

02/28/2024	346033	EBMS Import	City Ins Fund	$	3,880.25	EBMS INSURANCE PAYMENTS
02/28/2024	346034	EBMS Import	City Ins Fund	$	47,336.66	EBMS INSURANCE PAYMENTS
02/28/2024	346040	EBMS Import	City Ins Fund	$	3,095.79	EBMS INSURANCE PAYMENTS
02/28/2024	346053	EBMS Import	City Ins Fund	$	10,805.93	EBMS INSURANCE PAYMENTS
03/04/2024	868992	Empire Heating & Cooling	Public Safety	$	57,165.57	PROVIDE & INSTALL ROOF TOP UNIT
03/04/2024	ACH	Endress & Hauser	Water	$	843.93	Level sensor for LS1
03/04/2024	ACH	Endress & Hauser	Water	$	3,121.87	LS1 Level Sensor
03/04/2024	869008	Guardian Security	Library	$	10,391.19	1054 January 2024
03/04/2024	869012	High Point Networks	IT Resources	$	6,459.20	Palo Alto Security Bundle through 05/25
03/04/2024	869017	Insight Public Sector	EOC 911	$	5,086.82	Qty. 2 MS Surface Pro 9 13"
03/04/2024	869017	Insight Public Sector	Facilities	$	2,049.32	Surface Pro 9, i7
03/04/2024	869018	Integrity Pump Solutions	Water	$	31,416.81	Lc-P1 Pump Rebuild
03/04/2024	869020	Interstate Power Systems	Water	$	2,649.00	Maint Services for Walter Pump Station
03/04/2024	869022	JC Billion	Engineering	$	23,367.00	24 four door sedan to replace vehicle #1085
03/04/2024	ACH	Joe Johnson Equip	Fleet	$	1,707.00	P01476
03/04/2024	ACH	Joe Johnson Equip	Street/Traffic	$	556.59	adjust rear broom settings on unit 1243
03/04/2024	ACH	Joe Johnson Equip	Street/Traffic	$	300.00	labor to repair broom settings on unit 1243
03/04/2024	869026	Kent D. Bruce Co	Fleet	$	1,604.50	15238
03/04/2024	869026	Kent D. Bruce Co	Fleet	$	351.00	15238
03/04/2024	869026	Kent D. Bruce Co	Fleet	$	19.81	15238
03/04/2024	869026	Kent D. Bruce Co	Fleet	$	333.50	15238
03/04/2024	869026	Kent D. Bruce Co	Fleet	$	656.90	15238
03/04/2024	869026	Kent D. Bruce Co	Fleet	$	335.90	15238
03/04/2024	869026	Kent D. Bruce Co	Fleet	$	352.80	15238
03/04/2024	869031	L N Curtis & Sons	Fleet	$	1,033.00	868881
03/04/2024	869031	L N Curtis & Sons	Fleet	$	217.98	868881
03/04/2024	869031	L N Curtis & Sons	Fleet	$	153.60	869952
03/04/2024	869031	L N Curtis & Sons	Fleet	$	13.86	869952
03/04/2024	869031	L N Curtis & Sons	Public Safety	$	2,696.40	335011 CMC 11MM CLUTCH
03/04/2024	869031	L N Curtis & Sons	Public Safety	$	19.46	TRANSPORTATION ON INVOICE
03/04/2024	869032	L P Anderson Tire	Fleet	$	217.58	2067752
03/04/2024	869032	L P Anderson Tire	Fleet	$	2,592.00	2069411
03/04/2024	869032	L P Anderson Tire	Street/Traffic	$	99.50	2068965 - TIRE REPAIR
03/04/2024	869032	L P Anderson Tire	Street/Traffic	$	48.00	2068968 - TIRE REPAIR

03/04/2024	869033	Laurel Chevrolet	Capital Replace	$	95,390.00	Animal control-Three Chevrolet 3/4 ton HD2500
03/04/2024	869033	Laurel Chevrolet	Public Safety	$	3,748.00	Animal control-Three Chevrolet 3/4 ton HD2500- PD fund
03/04/2024	869033	Laurel Chevrolet	Wastewater	$	25,657.00	4x4 Ext Cab Long Box to Replace 7409
03/04/2024	869033	Laurel Chevrolet	Water	$	25,657.00	4x4 Ext Cab Long Box to Replace 7409
03/04/2024	869038	LSC Environmental Products	Solid Waste	$	35,550.00	Posi-shell cover for Landfill working face.
03/04/2024	869041	Mckinstry Co	Stillwater Const	$	11,500.00	Indep. 3rd party commissioning svcs Stillwater Building
03/04/2024	869047	Millipore Corp	Water	$	2,352.72	Services to replace existing pure water system
03/04/2024	869047	Millipore Corp	Water	$	657.28	Pure Water System Replacement
03/04/2024	869051	MT Dakota Utilities CNG	Solid Waste	$	3,882.38	2212024
03/04/2024	869051	MT Dakota Utilities CNG	Solid Waste	$	6.24	2212024
03/04/2024	869052	MT Dakota Utilities	Facilities	$	1,175.37	130 733 1000 8
03/04/2024	869052	MT Dakota Utilities	Facilities	$	3,083.32	757 633 1000 2
03/04/2024	869052	MT Dakota Utilities	Facilities	$	5,485.04	989 733 1000 0
03/04/2024	869052	MT Dakota Utilities	Facilities	$	860.79	993 733 1000 4
03/04/2024	869052	MT Dakota Utilities	General	$	62.26	061 943 1000 6
03/04/2024	869052	MT Dakota Utilities	General	$	340.09	571 295 3342 8
03/04/2024	869052	MT Dakota Utilities	General	$	111.53	927 890 1000 3
03/04/2024	869052	MT Dakota Utilities	Park Dist 1	$	96.48	371 101 1000 6
03/04/2024	869052	MT Dakota Utilities	Public Safety	$	428.60	442 190 1000 4
03/04/2024	869052	MT Dakota Utilities	Solid Waste	$	852.74	284 225 1320 1
03/04/2024	869052	MT Dakota Utilities	Solid Waste	$	102.88	602 680 9335 2
03/04/2024	869052	MT Dakota Utilities	Solid Waste	$	1,394.65	770 390 1000 2
03/04/2024	869052	MT Dakota Utilities	Wastewater	$	219.35	310 490 1000 7
03/04/2024	869052	MT Dakota Utilities	Wastewater	$	219.35	410 490 1000 6
03/04/2024	869052	MT Dakota Utilities	Wastewater	$	105.37	868 563 1000 7
03/04/2024	869052	MT Dakota Utilities	Water	$	207.33	010 490 1000 0
03/04/2024	869052	MT Dakota Utilities	Water	$	63.32	110 490 1000 9
03/04/2024	869052	MT Dakota Utilities	Water	$	251.17	209 077 5055 6
03/04/2024	869052	MT Dakota Utilities	Water	$	334.45	210 490 1000 8
03/04/2024	869052	MT Dakota Utilities	Water	$	658.05	310 490 1000 7
03/04/2024	869052	MT Dakota Utilities	Water	$	658.05	410 490 1000 6
03/04/2024	869052	MT Dakota Utilities	Water	$	3,553.69	500 490 1000 7
03/04/2024	869052	MT Dakota Utilities	Water	$	105.26	510 490 1000 5
03/04/2024	869052	MT Dakota Utilities	Water	$	122.80	527 033 1000 4

03/04/2024	869052	MT Dakota Utilities	Water	$	149.72	566 923 1000 8
03/04/2024	869052	MT Dakota Utilities	Water	$	35.72	600 490 1000 6
03/04/2024	869052	MT Dakota Utilities	Water	$	35.73	600 490 1000 6
03/04/2024	869052	MT Dakota Utilities	Water	$	291.87	610 490 1000 4
03/04/2024	869052	MT Dakota Utilities	Water	$	99.62	666 923 1000 7
03/04/2024	869052	MT Dakota Utilities	Water	$	419.60	700 490 1000 5
03/04/2024	869052	MT Dakota Utilities	Water	$	597.88	800 490 1000 4
03/04/2024	869052	MT Dakota Utilities	Water	$	91.48	832 001 1000 1
03/04/2024	869052	MT Dakota Utilities	Water	$	583.12	900 490 1000 3
03/04/2024	869057	Morrison Maierle	Airport	$	9,355.08	AIP-73 Terminal Expan - Eligible for Reimbursement
03/04/2024	869057	Morrison Maierle	Airport	$	1,039.45	AIP-73 Terminal Expan- Ineligible for Reimbursement
03/04/2024	869057	Morrison Maierle	Airport	$	879.37	AIP-76 Terminal Expan - eligible for local
03/04/2024	869057	Morrison Maierle	Airport	$	29,322.33	Amendment #13 Terminal Expan Project - Federal
03/04/2024	869057	Morrison Maierle	Airport	$	2,756.25	Amendment #13 Terminal Expan Project - Ineligible
03/04/2024	869057	Morrison Maierle	Airport	$	3,258.04	Amendment #13 Terminal Expan Project - Local
03/04/2024	869057	Morrison Maierle	Airport	$	216.80	Amendment #8 PFC Application
03/04/2024	869057	Morrison Maierle	Airport	$	4,157.92	Amendment 11-On Call Services
03/04/2024	869057	Morrison Maierle	Airport	$	649.83	Passenger Boarding Jet Bridges - Eligible Local Share
03/04/2024	869057	Morrison Maierle	Airport	$	54.97	Passenger Boarding Jet Bridges - Ineligible Share
03/04/2024	869057	Morrison Maierle	Transit	$	76,324.95	Amendment 10 MET Transit Remodel Project
03/04/2024	869057	Morrison Maierle	Water	$	8,160.72	WO 23-39 Grand Ave Waterline Replacement
03/04/2024	869057	Morrison Maierle	Water	$	4,872.00	WO 24-24 Voelker Pump Station PRV
03/04/2024	869059	MRPA	General	$	1,750.00	MTRPA registration for PRPL staff-0010
03/04/2024	869059	MRPA	General	$	2,100.00	MTRPA registration for PRPL staff-0010
03/04/2024	869059	MRPA	General	$	350.00	MTRPA registration for PRPL staff-0010
03/04/2024	869059	MRPA	Park Dist 1	$	350.00	MTRPA registration for PRPL staff-0010
03/04/2024	869059	MRPA	Park Dist 1	$	425.00	MTRPA registration for PRPL staff-0010
03/04/2024	869059	MRPA	Park Dist 1	$	700.00	MTRPA registration for PRPL staff-0010
03/04/2024	869060	MT Dept of Rev-CGR2	Airport	$	8,392.48	AIP-77 Terminal Expansion- Federal Share
03/04/2024	869060	MT Dept of Rev-CGR2	Airport	$	788.88	AIP-77 Terminal Expansion- Ineligible Local Share
03/04/2024	869060	MT Dept of Rev-CGR2	Airport	$	932.50	AIP-77 Terminal Expansion- Local Share
03/04/2024	869060	MT Dept of Rev-CGR2	Airport	$	656.56	Retainage Release
03/04/2024	869060	MT Dept of Rev-CGR2	Airport	$	634.72	Retainage Release
03/04/2024	869060	MT Dept of Rev-CGR2	Airport	$	326.93	Retainage Release

03/04/2024	869060	MT Dept of Rev-CGR2	Airport	$	675.17	Retainage Release
03/04/2024	869060	MT Dept of Rev-CGR2	Airport	$	749.05	Retainage Release
03/04/2024	869060	MT Dept of Rev-CGR2	Airport	$	610.16	Retainage Release
03/04/2024	869060	MT Dept of Rev-CGR2	Gas Tax	$	475.09	WO 23-02 Missing Sidewalk Project
03/04/2024	869060	MT Dept of Rev-CGR2	Gas Tax	$	-	WO 23-02 Missing Sidewalk Project
03/04/2024	869060	MT Dept of Rev-CGR2	Gas Tax	$	-	WO 23-02 Missing Sidewalk Project
03/04/2024	869060	MT Dept of Rev-CGR2	Gas Tax	$	-	WO 23-02 Missing Sidewalk Project
03/04/2024	869060	MT Dept of Rev-CGR2	Public Safety	$	577.43	PROVIDE & INSTALL ROOF TOP HVAC UNIT
03/04/2024	869060	MT Dept of Rev-CGR2	Sidewalk Const	$	3.69	WO 23-02 Missing Sidewalk Project
03/04/2024	869060	MT Dept of Rev-CGR2	Sidewalk Const	$	-	WO 23-02 Missing Sidewalk Project
03/04/2024	869060	MT Dept of Rev-CGR2	Sidewalk Const	$	-	WO 23-02 Missing Sidewalk Project
03/04/2024	869060	MT Dept of Rev-CGR2	Sidewalk Const	$	-	WO 23-02 Missing Sidewalk Project
03/04/2024	869060	MT Dept of Rev-CGR2	Solid Waste	$	98.57	WO 20-46 COP Construction Council Action
03/04/2024	869060	MT Dept of Rev-CGR2	Wastewater	$	115.80	Retainage Release Final
03/04/2024	869060	MT Dept of Rev-CGR2	Wastewater	$	-	WO 22-14 WRF Admin AHU Modifications
03/04/2024	869060	MT Dept of Rev-CGR2	Wastewater	$	320.61	WO 22-14 WRF Admin AHU Modifications
03/04/2024	869063	Napa	Fleet	$	160.00	3977-545105
03/04/2024	869063	Napa	Fleet	$	11.52	3977-545185
03/04/2024	869063	Napa	Fleet	$	80.54	3977-545275
03/04/2024	869063	Napa	Fleet	$	372.44	3977-545559
03/04/2024	869063	Napa	Fleet	$	7.41	3977-545679
03/04/2024	869063	Napa	Fleet	$	10.65	3977-545810
03/04/2024	869063	Napa	Fleet	$	10.65	3977-545814
03/04/2024	869063	Napa	Fleet	$	12.58	3977-545815
03/04/2024	869063	Napa	Fleet	$	9.77	3977-545866
03/04/2024	869063	Napa	Fleet	$	358.64	3977-546162
03/04/2024	869063	Napa	Fleet	$	20.34	3977-546248
03/04/2024	869063	Napa	Fleet	$	248.24	3977-546259
03/04/2024	869063	Napa	Fleet	$	32.72	3977-546866
03/04/2024	869063	Napa	Fleet	$	12.21	3977-546903
03/04/2024	869063	Napa	Fleet	$	9.52	3977-546984
03/04/2024	869063	Napa	Fleet	$	6.31	3977-546984
03/04/2024	869063	Napa	Fleet	$	251.09	3977-547222
03/04/2024	869063	Napa	Fleet	$	193.00	3977-547297

03/04/2024	869063	Napa	Fleet	$	65.82	3977-547370
03/04/2024	869063	Napa	Fleet	$	16.07	3977-547461
03/04/2024	869063	Napa	Fleet	$	40.76	3977-547580
03/04/2024	869063	Napa	Fleet	$	86.74	3977-547638
03/04/2024	869063	Napa	Fleet	$	55.08	3977-552316
03/04/2024	869063	Napa	Fleet	$	276.00	3977-552579
03/04/2024	869063	Napa	Fleet	$	20.11	3977-552581
03/04/2024	869063	Napa	Fleet	$	103.10	3977-552676
03/04/2024	869063	Napa	Fleet	$	130.17	3977-552676
03/04/2024	869063	Napa	Fleet	$	100.26	3977-552676
03/04/2024	869063	Napa	Fleet	$	42.75	4124-368061
03/04/2024	869066	Newman Traffic Signs	Street/Traffic	$	2,114.17	sign blanks
03/04/2024	869066	Newman Traffic Signs	Street/Traffic	$	1,022.32	sign blanks
03/04/2024	869070	North Ridge Fire Equip	Public Safety	$	4,143.35	29117 FIRE SHELTERS & PANTS
03/04/2024	869070	North Ridge Fire Equip	Public Safety	$	782.99	29362 PANTS, NOMEX
03/04/2024	869071	NorthWestern Energy	Airport	$	414.80	0712792-1. IP-7. Feb 2024
03/04/2024	869071	NorthWestern Energy	Airport	$	1,092.31	0712800-2. IP-9. Feb 2024
03/04/2024	869071	NorthWestern Energy	Airport	$	801.15	0712809-3. IP11/12 Alpine. Feb 2024
03/04/2024	869071	NorthWestern Energy	Engineering	$	688.62	1741314-7
03/04/2024	869071	NorthWestern Energy	Engineering	$	54.83	Depot parking lot
03/04/2024	869071	NorthWestern Energy	Facilities	$	7,408.40	0100507-3
03/04/2024	869071	NorthWestern Energy	Facilities	$	6,135.29	3927205-9
03/04/2024	869071	NorthWestern Energy	General	$	1,296.80	0100506-5
03/04/2024	869071	NorthWestern Energy	General	$	193.72	0712683-2
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	6.00	0722237-5
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	6.00	0722247-4
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	90.69	0722255-7
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	36.74	0722257-3
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	141.58	0722260-7
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	-	0722261-5
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	-	0722262-3
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	-	0722265-6
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	187.84	0722266-4
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	13.62	0722269-8

03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	10.88	0722292-0
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	24.79	0722293-8
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	6.00	0722905-7
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	52.85	0722933-9
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	-	0723027-9
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	84.71	0723035-2
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	6.72	0723036-0
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	133.83	0723037-8
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	-	0723038-6
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	50.18	0723042-8
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	19.76	0723044-4
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	-	0723051-9
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	-	0723052-7
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	9.85	0723055-0
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	53.47	0723056-8
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	8.42	0723057-6
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	17.40	0723058-4
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	8.70	0723090-7
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	6.00	0723162-4
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	-	0723170-7
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	38.11	0789437-1
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	6.00	0831702-6
03/04/2024	869071	NorthWestern Energy	Park Dist 1	$	8.70	electricity for north park Feb. 2024
03/04/2024	869071	NorthWestern Energy	Parking	$	946.11	0720829-1
03/04/2024	869071	NorthWestern Energy	Parking	$	2,604.10	0720834-1
03/04/2024	869071	NorthWestern Energy	Parking	$	1,817.34	1569636-2
03/04/2024	869071	NorthWestern Energy	Parking	$	1,326.27	1594282-4
03/04/2024	869071	NorthWestern Energy	Parking	$	202.90	3463478-2
03/04/2024	869071	NorthWestern Energy	Parks Maint	$	165.63	1059093-3
03/04/2024	869071	NorthWestern Energy	Public Safety	$	430.18	0100476-1FIRE 1 & 6 ELECTRIC SVC, FY24
03/04/2024	869071	NorthWestern Energy	Public Safety	$	824.68	0712537-0
03/04/2024	869071	NorthWestern Energy	Public Safety	$	2,507.06	3448739-7
03/04/2024	869071	NorthWestern Energy	Radio	$	267.28	0721580-9
03/04/2024	869071	NorthWestern Energy	Street/Traffic	$	6.00	0723645-8

03/04/2024	869071	NorthWestern Energy	Transit	$	6.00	0712764-0
03/04/2024	869071	NorthWestern Energy	Transit	$	433.17	1784756-7
03/04/2024	869071	NorthWestern Energy	Wastewater	$	1,041.79	0100606-3
03/04/2024	869071	NorthWestern Energy	Water	$	3,125.35	0100606-3
03/04/2024	869071	NorthWestern Energy	Water	$	79,175.52	0100606-3
03/04/2024	869071	NorthWestern Energy	Water	$	235.99	0722252-4
03/04/2024	869073	Northwestern Energy-Billing Dv	Airport	$	66,798.00	Relocation Power Line For Runway Lights- Federal
03/04/2024	869073	Northwestern Energy-Billing Dv	Airport	$	7,422.00	Relocation Power Line For Runway Lights- Local
03/04/2024	869077	Pioneer Technical Services	Solid Waste	$	5,048.34	WO 22-47 Landfill Slope Stability Improvements
03/04/2024	869085	Rick's Auto Body	Airport	$	2,866.58	Repairs for Vehicle damage - 50% of Estimate
03/04/2024	869088	Rocky Mtn Compost	Park Dist 1	$	3,770.00	playground chips for fall protection at playgrounds
03/04/2024	869089	Rocky Mtn Truck Accessories	Public Safety	$	450.00	287876 - INSTALL LABOR
03/04/2024	869089	Rocky Mtn Truck Accessories	Public Safety	$	499.00	287876 - LUV415088
03/04/2024	869089	Rocky Mtn Truck Accessories	Public Safety	$	1,779.00	287876 - RDA6232
03/04/2024	869089	Rocky Mtn Truck Accessories	Public Safety	$	550.00	287877 - INSTALL LABOR
03/04/2024	869089	Rocky Mtn Truck Accessories	Public Safety	$	499.00	287877 - LUV415088
03/04/2024	869089	Rocky Mtn Truck Accessories	Public Safety	$	1,779.00	287877 - RDA6232
03/04/2024	869090	Routeware	Solid Waste	$	24,788.10	Q2 2024 Support (April, May, June)
03/04/2024	869091	Safetech	Wastewater	$	2,713.50	Retainage Release
03/04/2024	869092	Sanderson Stewart	Facilities	$	4,090.00	Grand Building Boundary line adjustment (BLA) survey
03/04/2024	869092	Sanderson Stewart	Gas Tax	$	3,285.00	Gravel Street Reconstructions
03/04/2024	869097	Sletten	Airport	$	830,855.63	AIP-77 Terminal Expansion- Federal Share
03/04/2024	869097	Sletten Construction	Airport	$	78,099.23	AIP-77 Terminal Expansion- Ineligible Local Share
03/04/2024	869097	Sletten Construction	Airport	$	92,317.29	AIP-77 Terminal Expansion- Local Share
03/04/2024	869097	Sletten Construction	Airport	$	32,364.24	Retainage Release
03/04/2024	869097	Sletten Construction	Airport	$	62,836.97	Retainage Release
03/04/2024	869097	Sletten Construction	Airport	$	60,405.79	Retainage Release
03/04/2024	869097	Sletten Construction	Airport	$	74,155.41	Retainage Release
03/04/2024	869097	Sletten Construction	Airport	$	65,001.53	Retainage Release
03/04/2024	869097	Sletten Construction	Airport	$	66,842.22	Retainage Release
03/04/2024	869098	Solid Waste Systems	Fleet	$	109.78	165007
03/04/2024	869098	Solid Waste Systems	Solid Waste	$	2,521.48	165007
03/04/2024	869102	Star Service	Water	$	52,000.00	WO 23-20 HSPS Zone 1 Piping Modifications
03/04/2024	869102	Star Service	Water	$	10,000.00	WO 23-21 HSPS Zone 2 Piping Modifications

03/04/2024	869106	Summit Fire & Security	Fleet	$	1,575.00	1411679
03/04/2024	869106	Summit Fire & Security	Fleet	$	120.00	1411679
03/04/2024	869106	Summit Fire & Security	Fleet	$	98.00	1411679
03/04/2024	869106	Summit Fire & Security	Fleet	$	140.00	1411679
03/04/2024	869106	Summit Fire & Security	Fleet	$	791.00	1411679
03/04/2024	869110	TC Glass Distributor	Stillwater Const	$	9,416.00	Water Test at Stillwater Building
03/04/2024	ACH	Town & Co Supply	Fleet	$	4,348.07	441991
03/04/2024	ACH	Town & Co Supply	Fleet	$	2.93	441991
03/04/2024	ACH	Town & Co Supply	Fleet	$	3,622.28	441991
03/04/2024	ACH	Town & Co Supply	Fleet	$	8,878.60	441991
03/04/2024	ACH	Town & Co Supply	Fleet	$	5,956.81	441991
03/04/2024	ACH	Town & Co Supply	Fleet	$	3,276.59	443298
03/04/2024	ACH	Town & Co Supply	Fleet	$	3.02	443298
03/04/2024	ACH	Town & Co Supply	Fleet	$	5,720.94	443298
03/04/2024	ACH	Town & Co Supply	Fleet	$	4,853.17	443298
03/04/2024	ACH	Town & Co Supply	Fleet	$	9,342.42	443298
03/04/2024	ACH	Town & Co Supply	Fleet	$	2.99	443305
03/04/2024	ACH	Town & Co Supply	Fleet	$	5,466.72	443305
03/04/2024	ACH	Town & Co Supply	Fleet	$	5,781.68	443305
03/04/2024	ACH	Town & Co Supply	Fleet	$	15,670.15	443305
03/04/2024	ACH	Town & Co Supply	Fleet	$	6,337.82	443305
03/04/2024	ACH	Town & Co Supply	Public Safety	$	1,453.46	442081 FIRE 1 - UNLEADED & BLENDED DIESEL
03/04/2024	ACH	Town & Co Supply	Public Safety	$	981.29	442082 FIRE 2 - BLENDED DIESEL
03/04/2024	ACH	Town & Co Supply	Solid Waste	$	7,458.57	440867
03/04/2024	ACH	Town & Co Supply	Solid Waste	$	14,726.46	440867
03/04/2024	ACH	Town & Co Supply	Wastewater	$	800.90	Diesel Fuel
03/04/2024	869118	TW Ridley	Wastewater	$	16,018.69	WO 23-24 Belknap Remodel
03/04/2024	869118	TW Ridley	Water	$	4,258.13	WO 23-24 Belknap Remodel
03/04/2024	ACH	Wastequip Manufacturing	Solid Waste	$	13,040.00	Encumb per Sourcewell Contract 2 Rear load containers
03/04/2024	ACH	Wastequip Manufacturing	Solid Waste	$	5,875.60	Shipping
03/04/2024	869132	YVAS	Public Safety	$	28,243.64	city contract 2-2024

City Council Regular

Date:	04/08/2024
Title:	Payment of Claims for week of March 12th, 2024
Presented by:	Erin Watterud
Department:	Finance
Presentation:	No
Legal Review:	Not Applicable
Project Number:	N/A

RECOMMENDATION

Staff recommends Council approve the Payment of Claims

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

Claims in the amount of $2,821,941.33 have been reviewed and are presented for City Council payment approval. A complete listing of the claims for the week are available in the Finance Department. Payment Approval Process Every invoice for payment is entered into the City's accounting system and the backup documentation is scanned in and attached (physical invoices, additional e-mails explaining payments, bids, contracts, etc.). Each invoice goes through a multi-step approval process depending upon the amount of the payment. First, invoices are entered by the department requesting the payment and the department director or designee must perform an initial review and approval of the purchase. The number of approvals within the department can vary based upon the size of the department, but no less than one approver within each department must verify the payment. Second, all payments, regardless of size, must be approved by the Purchasing Agent or designee. The Purchasing Agent will review the payment to ensure purchasing procedures are followed and appropriate documentation is attached. If the payment is greater than $1,000, then it must be approved by the Finance Director or designee. If that payment is greater than $10,000, then it must be approved by the City Administrator or Assistant City Administrator. Once all approvals are completed, the payment is able to be made and the Accounts Payable Clerk can print the check. After all checks are printed, a list of all checks in excess of $2,500 is generated and placed on the next City Council meeting for review.

ALTERNATIVES

No other alternatives were analyzed

FISCAL EFFECTS

Claims have a varying impact on department budgets, but are submitted by the departments and reviewed by Finance staff before being sent to the Council.

Attachments

CouncilMemo wk of 03122024

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	869138	A & H Turf & Specialities	Park Dist 1	$ 10,063.96	IQ upgrades for city parks
03/12/2024	869138	A & H Turf & Specialities	Parks Maint	$ 4,588.00	IQ upgrades for city parks
03/12/2024	869138	A & H Turf & Specialities	Parks Maint	$ 4,360.37	IQ upgrades for city parks
03/12/2024	869138	A & H Turf & Specialities	Parks Maint	$ 9,000.00	IQ upgrades for city parks
03/12/2024	869138	A & H Turf & Specialities	Parks Maint	$ 9,280.54	IQ upgrades for city parks
03/12/2024	869138	A & H Turf & Specialities	Parks Maint	$ 4,500.32	IQ upgrades for city parks
03/12/2024	869138	A & H Turf & Specialities	Parks Maint	$ 5,147.80	IQ upgrades for city parks
03/12/2024	869138	A & H Turf & Specialities	Parks Maint	$ 2,294.00	IQ upgrades for city parks
03/12/2024	869138	A & H Turf & Specialities	Street/Traffic	$ 3,850.00	mulch for shiloh roundabouts
03/12/2024	869139	A+ Electric Intermediate	Water	$ 2,590.00	Low Service 2 BLDG
03/12/2024	869140	Ace Electric	SID Const	$ 148,681.17	SID 1423...Annafeld Subdivision 4th Filing Streetlights
03/12/2024	869147	Apsco	Wastewater	$ 1,811.15	Primary Sludge Pump Parts
03/12/2024	869147	Apsco	Wastewater	$ 1,996.28	spare impeller for primary sludge pumps
03/12/2024	869154	Bcs Scrip	City Ins Fund	$ 23,000.00	April 2024 HI Bio Event Gift Cards
03/12/2024	869157	Billings Bench Water Assn	Park Dist 1	$ 9,928.00	water rental for 272 acres - invoice 51015
03/12/2024	869158	Billings Clinic	Public Safety	$ 7,560.00	MEDICAL DIRECTOR: NOV, DEC 2023 & JAN 2024
03/12/2024	ACH	Border States	Street/Traffic	$ 229.20	inv#927832278muletape tool
03/12/2024	ACH	Border States	Wastewater	$ 2,953.18	Control System Software license update
03/12/2024	ACH	Border States	Wastewater	$ 378.00	Jobsite charger/radio, Battery
03/12/2024	ACH	Border States	Wastewater	$ 96.43	materials for electrical installations/s
03/12/2024	ACH	Border States	Wastewater	$ 1,157.10	replacement vfd power interface board fo
03/12/2024	ACH	Border States	Water	$ 42.69	consumable tools/materials
03/12/2024	ACH	Border States	Water	$ 36.14	consumable tools/materials
03/12/2024	ACH	Border States	Water	$ 68.25	consumable tools/materials
03/12/2024	ACH	Border States	Water	$ 805.41	electrical materials to rewire low servi
03/12/2024	ACH	Border States	Water	$ 28.64	Parts for Staples CL17 Disconnect Switch
03/12/2024	ACH	Border States	Water	$ 1,169.55	Terminal replacing WTP-Seclientsr
03/12/2024	869171	Community Seven	General	$ 9,344.25	PEG Fees September 01 to December 31, 2023
03/12/2024	869172	Community Solutions	Court Grants	$ 2,834.00	24 Feb. CSI Etg
03/12/2024	869172	Community Solutions	Court Grants	$ 2,585.00	24 Feb. CSI Etg DUI
03/12/2024	869179	Cubic Corp and Subsidiaries	Transit	$ 4,000.00	#24-MET-03. 2000 Umo Fixed Route Bus Pass Smart Cards
03/12/2024	869179	Cubic Corp and Subsidiaries	Transit	$ 1,513.10	Invoice #24-MET-02. Monthly Transaction Fees. February 2024
03/12/2024	869180	Cummins- Rocky Mountain	Stillwater Const	$ 32,793.75	Material/labor to install muffler and exhaust piping for generator
03/12/2024	869180	Cummins- Rocky Mountain	Transit	$ 1,971.87	38-92343_Diagnostic Repair Unit #1833
03/12/2024	869181	Cushing Terrell	Park Dist 1	$ 3,735.00	consultant on the reconstruction of the north parking lot
03/12/2024	869184	Denny Menholt Chevrolet	Property Ins	$ 129.95	Inv. #462724 Repairs to Parks Vehicle #3629
03/12/2024	869184	Denny Menholt Chevrolet	Property Ins	$ 6,498.29	Inv. 460420 Repairs to Park Vehicle #3629

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	869185	Dept Of Enviro Quality	Wastewater	$ 5,070.00	WO 24-01 Contract 2: 2024 Sewer Main Rep
03/12/2024	869185	Dept Of Enviro Quality	Water	$ 2,729.00	WO 24-01 Contract 3: Cedar Park Water Ma
03/12/2024	869186	Desert Mountain	Street/Traffic	$ 4,924.09	ice slicer
03/12/2024	869186	Desert Mountain	Street/Traffic	$ 5,041.01	ice slicer
03/12/2024	869186	Desert Mountain	Street/Traffic	$ 4,985.62	ice slicer
03/12/2024	869186	Desert Mountain	Street/Traffic	$ 4,942.56	ice slicer
03/12/2024	869187	Dick Anderson Const	Water	$ 5,128.64	Retainage Release FINAL
03/12/2024	869187	Dick Anderson Const	Water	$ 661,304.27	WO 19-42 West End WTP Project - Construction
03/12/2024	869190	DOWL	Tax Incrmnt N27	$ 46,147.89	WO 23-11 Downtown 2-Way Street Conversion
03/12/2024	869190	DOWL	Wastewater	$ 9,359.49	WO 22-01 Schedules 1 & 2: Water & Sanitary Sewer Main Replacements
03/12/2024	869190	DOWL	Water	$ 8,105.51	WO 22-01 Schedules 1 & 2: Water & Sanitary Sewer Main Replacements
03/12/2024	869190	DOWL	Water	$ 29,056.25	WO 22-44 Zone 1 Water Storage Improvements
03/12/2024	869190	DOWL	Water	$ 3,885.00	WO 23-01 2023 Water and Sewer Main Replacement - Water
03/12/2024	869190	DOWL	Water	$ 16,001.25	WO24-01 Contract 1: 2024 Water Main Replacement
03/12/2024	869194	EBMS	City Ins Fund	$ 770.00	April 2024
03/12/2024	869194	EBMS	City Ins Fund	$ 1,281.00	April 2024
03/12/2024	869194	EBMS	City Ins Fund	$ 4,725.00	April 2024
03/12/2024	869194	EBMS	City Ins Fund	$ 71,552.86	April 2024
03/12/2024	869194	EBMS	City Ins Fund	$ 36,393.99	April 2024
03/12/2024	869194	EBMS	City Ins Fund	$ 6,250.44	April 2024
03/12/2024	869194	EBMS	Payroll Clearing	$ 12,766.25	April 2024
03/12/2024	869201	Ferguson Enterprises	Water	$ 2,775.00	5-1/4" MAIN VALVE RUBBER - 190354 REVERSIBLE 79 NEWER
03/12/2024	869201	Ferguson Enterprises	Water	$ 201.60	DRAIN VALVE LEATHER FACING (A-34 142811)
03/12/2024	ACH	HDR	Engineering	$ 98.39	WO 20-33 Public Works GIS Services,; Pmt 49
03/12/2024	ACH	HDR	Light Maint	$ 25.47	WO 20-33 Public Works GIS Services,; Pmt 49
03/12/2024	ACH	HDR	P.W. Admin	$ 281.00	WO 20-33 Public Works GIS Services,; Pmt 49
03/12/2024	ACH	HDR	Solid Waste	$ 114.60	WO 20-33 Public Works GIS Services,; Pmt 49
03/12/2024	ACH	HDR	Storm Sewer	$ 313.13	WO 20-33 Public Works GIS Services, Pmt 49
03/12/2024	ACH	HDR	Street/Traffic	$ 385.76	WO 20-33 Public Works GIS Services,; Pmt 49
03/12/2024	ACH	HDR	Wastewater	$ 421.36	WO 20-33 Public Works GIS Services,; Pmt 49
03/12/2024	ACH	HDR	Wastewater	$ 11,176.99	WO 20-44 WRF Nutrient Recovery Improvements Project
03/12/2024	ACH	HDR	Water	$ 1,254.23	WO 20-33 Public Works GIS Services
03/12/2024	869214	Iaff	Payroll Clearing	$ 5,687.84	Payroll Summary
03/12/2024	869216	Ingram Library	Library	$ 5.97	80411865
03/12/2024	869216	Ingram Library	Library	$ 0.05	80411865
03/12/2024	869216	Ingram Library	Library	$ 0.16	80411866
03/12/2024	869216	Ingram Library	Library	$ 17.70	80411866

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	869216	Ingram Library	Library	$ 219.65	80411867
03/12/2024	869216	Ingram Library	Library	$ 2.05	80411867
03/12/2024	869216	Ingram Library	Library	$ 78.12	80411868
03/12/2024	869216	Ingram Library	Library	$ 33.91	80411868
03/12/2024	869216	Ingram Library	Library	$ 17.11	80411868
03/12/2024	869216	Ingram Library	Library	$ 0.62	80411868
03/12/2024	869216	Ingram Library	Library	$ 0.12	80411869
03/12/2024	869216	Ingram Library	Library	$ 18.00	80411869
03/12/2024	869216	Ingram Library	Library	$ 24.75	80437491
03/12/2024	869216	Ingram Library	Library	$ 0.45	80437491
03/12/2024	869216	Ingram Library	Library	$ 31.50	80437491
03/12/2024	869216	Ingram Library	Library	$ 44.06	80437492
03/12/2024	869216	Ingram Library	Library	$ 0.38	80437492
03/12/2024	869216	Ingram Library	Library	$ 4.19	80437492
03/12/2024	869216	Ingram Library	Library	$ 26.97	80437493
03/12/2024	869216	Ingram Library	Library	$ 0.34	80437493
03/12/2024	869216	Ingram Library	Library	$ 0.67	80437494
03/12/2024	869216	Ingram Library	Library	$ 59.60	80437494
03/12/2024	869216	Ingram Library	Library	$ 22.36	80437495
03/12/2024	869216	Ingram Library	Library	$ 16.51	80437495
03/12/2024	869216	Ingram Library	Library	$ 0.71	80437495
03/12/2024	869216	Ingram Library	Library	$ 14.72	80437496
03/12/2024	869216	Ingram Library	Library	$ 0.45	80437496
03/12/2024	869216	Ingram Library	Library	$ 1,121.05	80470594
03/12/2024	869216	Ingram Library	Library	$ 280.33	80470594
03/12/2024	869216	Ingram Library	Library	$ 107.21	80470594
03/12/2024	869216	Ingram Library	Library	$ 188.98	80470594
03/12/2024	869216	Ingram Library	Library	$ 25.18	80470594
03/12/2024	869216	Ingram Library	Library	$ 3.00	80470594
03/12/2024	869216	Ingram Library	Library	$ 18.99	80470594
03/12/2024	869216	Ingram Library	Library	$ 76.80	80470594
03/12/2024	869216	Ingram Library	Library	$ 73.61	80470594
03/12/2024	869216	Ingram Library	Library	$ 5.89	80470595
03/12/2024	869216	Ingram Library	Library	$ 10.79	80490671
03/12/2024	869216	Ingram Library	Library	$ 0.70	80490671
03/12/2024	869216	Ingram Library	Library	$ 0.32	80490672
03/12/2024	869216	Ingram Library	Library	$ 5.99	80490672

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	869216	Ingram Library	Library	$ 18.87	80490673
03/12/2024	869216	Ingram Library	Library	$ 1.98	80490673
03/12/2024	869216	Ingram Library	Library	$ 17.84	80490673
03/12/2024	869218	Invoice Cloud	Building	$ 73.25	service for 02/04/2024 - 02/29/2024
03/12/2024	869218	Invoice Cloud	City Ins Fund	$ 67.89	service for 02/04/2024 - 02/29/2024
03/12/2024	869218	Invoice Cloud	Parking	$ 842.62	service for 02/04/2024 - 02/29/2024
03/12/2024	869218	Invoice Cloud	Solid Waste	$ 11,085.52	service for 02/04/2024 - 02/29/2024
03/12/2024	869218	Invoice Cloud	Wastewater	$ 10,253.62	service for 02/04/2024 - 02/29/2024
03/12/2024	869218	Invoice Cloud	Water	$ 13,982.21	service for 02/04/2024 - 02/29/2024
03/12/2024	869220	Johnson Laffen Galloway	Stillwater Const	$ 36,032.21	Phase 1 Stillwater Bldg - develop comprehensive master plan
03/12/2024	869223	KB Commercial	Airport	$ 22,455.55	Invoice #490422. Carpet Sweeper
03/12/2024	869227	Knife River	Street/Traffic	$ 7,014.50	inv#899011sand/salt material
03/12/2024	ACH	Kois Brothers Equip	Fleet	$ 5,623.32	131551
03/12/2024	ACH	Kois Brothers Equip	Fleet	$ 172.56	131890
03/12/2024	ACH	Kois Brothers Equip	Fleet	$ 74.78	132030
03/12/2024	ACH	Kois Brothers Equip	Fleet	$ 34.80	132030
03/12/2024	ACH	Kois Brothers Equip	Fleet	$ 847.62	132044
03/12/2024	ACH	Kois Brothers Equip	Public Safety	$ 54.72	131811 - LATCH
03/12/2024	ACH	Kois Brothers Equip	Public Safety	$ (50.48)	9297 - LATCH; HANDLE LATCH
03/12/2024	869234	Lee Newspaper	Library	$ 858.00	102-60003259 February 2024
03/12/2024	869234	Lee Newspaper	P.W. Admin	$ 7,309.12	PW Dept Media Marketing 2023; 12/25/2023 - 01/28/2024
03/12/2024	869234	Lee Newspaper	P.W. Admin	$ 3,000.00	PW Dept Media Marketing 2023; service for 01/29/2024 - 02/25/2024
03/12/2024	869235	Library Solutions	Library	$ 3,500.00	3296 Library Calendar annual subscription
03/12/2024	869237	Mailing Technical Services	Central Services	$ 5,568.55	Postage for February, 2024
03/12/2024	869237	Mailing Technical Services	General	$ 853.33	Postage for February, 2024
03/12/2024	869237	Mailing Technical Services	Library	$ 1,304.52	LIBR Library mailing February 2024
03/12/2024	869237	Mailing Technical Services	Parking	$ 195.89	Postage for February, 2024
03/12/2024	869242	Montana CSED	Payroll Clearing	$ 5,501.85	Montana Child Support
03/12/2024	869245	MFPE	Payroll Clearing	$ 2,876.76	Payroll Summary
03/12/2024	869246	MMIA	Property Ins	$ 28,222.83	Inv. DR1005540 Liability Self Insurance
03/12/2024	869247	MSFA	Payroll Clearing	$ 5,413.03	Payroll Summary
03/12/2024	869248	Morrison Maierle	Airport	$ 2,372.38	Amendment 13 Gate Fiber Optic Replacement Project - Federal Share
03/12/2024	869248	Morrison Maierle	Airport	$ 263.60	Amendment 13 Gate Fiber Optic Replacement Project - Local Share
03/12/2024	869250	MPPA	Payroll Clearing	$ 3,982.09	Payroll Summary
03/12/2024	869251	MT Dept of Rev-CGR2	Facilities	$ 50.50	Inv. 1421 February 2024
03/12/2024	869251	MT Dept of Rev-CGR2	SID Const	$ 1,501.83	SID 1423..Annafeld Subdivision 4th Filing Streetlights; Payment 3
03/12/2024	869251	MT Dept of Rev-CGR2	Stillwater Const	$ 2,927.07	Procurement/installation of access control and camera-Stillwater

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	869251	MT Dept of Rev-CGR2	Stillwater Const	$ 3,842.87	Inv. 1000587023 Modernization of elevators at the Stillwater Building
03/12/2024	869251	MT Dept of Rev-CGR2	Storm Sewer	$ 125.70	change order #1
03/12/2024	869251	MT Dept of Rev-CGR2	Storm Sewer	$ -	WO 22-25 CCTV City Storm Drain
03/12/2024	869251	MT Dept of Rev-CGR2	Water	$ 6,679.85	WO 19-42 West End WTP Construction
03/12/2024	869253	NAI Business	Facilities	$ 2,630.20	Inv. 425 Dakava House
03/12/2024	869255	Napa-MET	Transit	$ 948.08	3977-553427_Batteries Unit #1832 & 1833
03/12/2024	869255	Napa-MET	Transit	$ 288.00	3977-553427_Core
03/12/2024	869255	Napa-MET	Transit	$ 30.45	3977-553444_Filters
03/12/2024	869255	Napa-MET	Transit	$ 11.00	3977-553444_Filters
03/12/2024	869255	Napa-MET	Transit	$ 25.53	3977-553444_Sanding Discs
03/12/2024	869255	Napa-MET	Transit	$ 50.50	3977-553444_Sanding Discs
03/12/2024	869255	Napa-MET	Transit	$ 51.50	3977-553444_Sanding Discs
03/12/2024	869255	Napa-MET	Transit	$ 89.00	3977-553444_Sanding Discs
03/12/2024	869255	Napa-MET	Transit	$ (288.00)	3977-553812_Battery Cores
03/12/2024	869255	Napa-MET	Transit	$ (98.77)	3977-553815_Oil Unit#1819
03/12/2024	869255	Napa-MET	Transit	$ (50.50)	3977-553815_Sanding Disc
03/12/2024	869255	Napa-MET	Transit	$ (19.50)	3977-553815_Tire Gauge
03/12/2024	869255	Napa-MET	Transit	$ 3,400.00	3977-553838_Transmission
03/12/2024	869255	Napa-MET	Transit	$ 46.32	3977-554969_Carb Cleaner
03/12/2024	869255	Napa-MET	Transit	$ 11.00	3977-555000_Filters
03/12/2024	869255	Napa-MET	Transit	$ 90.84	3977-555000_Filters
03/12/2024	869255	Napa-MET	Transit	$ 11.22	3977-555000_Fuse Holder
03/12/2024	869255	Napa-MET	Transit	$ 39.43	3977-555050_Welding Wire
03/12/2024	869255	Napa-MET	Transit	$ (51.11)	39778-553815_Oil Unit#1819
03/12/2024	869255	Napa-MET	Transit	$ 15.53	4124-374874_Sanding Disc's and Paint
03/12/2024	869255	Napa-MET	Transit	$ 56.98	4124-374874_Sanding Disc's and Paint
03/12/2024	869255	Napa-MET	Transit	$ 45.00	4124-374874_Sanding Disc's and Paint
03/12/2024	869260	NorthWestern Energy	Airport	$ 35,356.92	0100482-9. Vault Main. February 2024
03/12/2024	869260	NorthWestern Energy	General	$ 169.90	0712539-6
03/12/2024	869260	NorthWestern Energy	General	$ 110.25	0720841-6
03/12/2024	869260	NorthWestern Energy	General	$ 11.08	1635289-0
03/12/2024	869260	NorthWestern Energy	Library	$ 8,101.97	3039007-4 Library electricity February 2024
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 187.54	0722256-5
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 12.93	0722259-9
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 321.40	0722273-0
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 29.68	0722277-1
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 7.55	0722852-1

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 300.07	0722901-6
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 6.42	0722976-8
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 1,099.38	0722995-8
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ -	0723039-4
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 6.00	0723046-9
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 6.00	0723049-3
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 4.03	0723391-9
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 86.45	0723884-3
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 19.76	0723887-6
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 28.66	0793134-8
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 7.41	0920801-8
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 32.10	0978917-3
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 69.08	0999807-1
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 32.78	1141284-8
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 6.13	1156527-2
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 95.11	1160780-1
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 6.28	1230066-1
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ -	1409394-2
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 1.03	1692666-9
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 6.72	1902257-3
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 10.23	3020837-5
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 6.00	3178260-0
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 26.47	3771457-3
03/12/2024	869260	NorthWestern Energy	Park Dist 1	$ 29.72	3999603-8
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 6.00	0723385-1
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 6.00	0723386-9
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 6.00	0723388-5
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 2.69	0723391-9
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 0.77	0723392-7
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 7.14	0723393-5
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 6.13	0723394-3
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 6.13	0723395-0
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 6.13	0723396-8
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 6.13	0723397-6
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 6.13	0723398-4
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 6.13	0723835-5
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 8.58	0723836-3

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 6.28	0723840-5
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 15.09	0723879-3
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 6.56	0723883-5
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 0.77	0723885-0
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 1.16	0971824-8
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 0.65	1045813-1
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 0.78	1312707-1
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ -	1396192-5
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 6.85	1564209-3
03/12/2024	869260	NorthWestern Energy	Parks Maint	$ 0.65	2041362-1
03/12/2024	869260	NorthWestern Energy	Public Safety	$ 560.48	0100477-9 FIRE 6 ELECTRIC SERVICE, FY2024
03/12/2024	869260	NorthWestern Energy	Public Safety	$ 498.85	0100477-9 FIRE 6 ELECTRIC SERVICE, FY2024
03/12/2024	869260	NorthWestern Energy	Public Safety	$ 27.17	0712532-1
03/12/2024	869260	NorthWestern Energy	Public Safety	$ 412.24	0720840-8
03/12/2024	869260	NorthWestern Energy	Public Safety	$ 1,580.33	1183483-5
03/12/2024	869260	NorthWestern Energy	Public Safety	$ 316.27	1984150-1
03/12/2024	869260	NorthWestern Energy	Public Safety	$ 300.85	1984155-0
03/12/2024	869260	NorthWestern Energy	Public Safety	$ 107.74	4045328-4
03/12/2024	869260	NorthWestern Energy	Radio	$ 182.11	1006915-1
03/12/2024	869260	NorthWestern Energy	Street/Traffic	$ 7.82	0855404-0
03/12/2024	869260	NorthWestern Energy	Street/Traffic	$ 109.14	1738989-1
03/12/2024	869260	NorthWestern Energy	Street/Traffic	$ 1.77	1797828-9
03/12/2024	869260	NorthWestern Energy	Street/Traffic	$ 7.14	2047000-1
03/12/2024	869260	NorthWestern Energy	Street/Traffic	$ 7.28	2047011-8
03/12/2024	869260	NorthWestern Energy	Street/Traffic	$ 7.82	2047018-3
03/12/2024	869260	NorthWestern Energy	Street/Traffic	$ 69.35	3648861-7
03/12/2024	869260	NorthWestern Energy	Wastewater	$ 140.08	0723383-6
03/12/2024	869260	NorthWestern Energy	Wastewater	$ 247.90	0723878-5
03/12/2024	869260	NorthWestern Energy	Wastewater	$ 21.24	1704025-4
03/12/2024	869260	NorthWestern Energy	Wastewater	$ 102.24	1704030-4
03/12/2024	869260	NorthWestern Energy	Wastewater	$ 1,466.34	2132749-9
03/12/2024	869260	NorthWestern Energy	Water	$ 704.16	0100478-7
03/12/2024	869260	NorthWestern Energy	Water	$ 6.00	0722249-0
03/12/2024	869260	NorthWestern Energy	Water	$ 3,308.15	0722270-6
03/12/2024	869260	NorthWestern Energy	Water	$ 106.60	0723043-6
03/12/2024	869260	NorthWestern Energy	Water	$ 439.69	805 Constitution Ave...Feb 2024
03/12/2024	869266	Pine Cove Consulting	Stillwater Const	$ 289,780.02	Procurement/installation of access control and camera- Stillwater

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	869268	Pride of Montana	Facilities	$ 2,527.05	Inv. 71936 February 2024 general cleaning of the Stillwater Building
03/12/2024	869270	Public Utilities	Airport	$ 83.65	250828-Alpine Air-Maintenance
03/12/2024	869270	Public Utilities	Airport	$ 116.81	250831-Zone Dispatch-IP6 & IP7
03/12/2024	869270	Public Utilities	Airport	$ 58.00	250832-Corp Air/Alpine
03/12/2024	869270	Public Utilities	Airport	$ 208.32	250834-QTA
03/12/2024	869270	Public Utilities	Airport	$ 104.16	250836-West End T-Hangars
03/12/2024	869270	Public Utilities	Airport	$ 141.65	250840-Edwards Jet Center West
03/12/2024	869270	Public Utilities	Airport	$ 109.02	250842-Executive Hangars
03/12/2024	869270	Public Utilities	Airport	$ 7.79	250842-Executive Hangars USDA APHIS
03/12/2024	869270	Public Utilities	Airport	$ 176.15	250843-Airfield Maintenance Compactor
03/12/2024	869270	Public Utilities	Airport	$ 140.92	250845-Airfield Maintenance
03/12/2024	869270	Public Utilities	Airport	$ 366.14	250847-UPS Gate 21
03/12/2024	869270	Public Utilities	Airport	$ 116.00	250848-Edwards Jet Center 1871 Aviation Place
03/12/2024	869270	Public Utilities	Airport	$ 116.81	250849-Rocky Mountain College-EJC
03/12/2024	869270	Public Utilities	Airport	$ 141.65	250850-US Postal Service Gate 15
03/12/2024	869270	Public Utilities	Airport	$ 166.22	250851-Edwards Jet Center 1691 Aviation Place
03/12/2024	869270	Public Utilities	Airport	$ 83.11	250853-Aerotronics
03/12/2024	869270	Public Utilities	Airport	$ 141.65	250854-Marchi Hangar
03/12/2024	869270	Public Utilities	Airport	$ 70.88	250855-Marchi Office
03/12/2024	869270	Public Utilities	Airport	$ 116.81	250857-MT State Lands DEQ/DNRC
03/12/2024	869270	Public Utilities	Airport	$ 116.81	250858-Billings Fire Center-BLM
03/12/2024	869270	Public Utilities	Airport	$ 58.00	250859-TSA
03/12/2024	869274	Reliable Mech & Cntrls	Facilities	$ 4,999.50	Inv. 1421
03/12/2024	869276	Rocky Mtn Compost	Park Dist 1	$ 2,610.00	playground chips (parks and kiwanis) - 26058
03/12/2024	869276	Rocky Mtn Compost	Park Dist 1	$ 2,900.00	playground chips for pmd's 26,24,18 and general fund parks - 25902
03/12/2024	869276	Rocky Mtn Compost	Parks Maint	$ 1,160.00	playground chips (parks and kiwanis) - 26058
03/12/2024	869276	Rocky Mtn Compost	Parks Maint	$ 290.00	playground chips for pmd's 26,24,18 and general fund parks - 25902
03/12/2024	869276	Rocky Mtn Compost	Parks Maint	$ 290.00	playground chips for pmd's 26,24,18 and general fund parks - 25902
03/12/2024	869276	Rocky Mtn Compost	Parks Maint	$ 290.00	playground chips for pmd's 26,24,18 and general fund parks - 25902
03/12/2024	869278	Rocky Mtn Compost	City Ins Fund	$ 8,000.00	InHealthy Is-Corporate Wellness March 2024
03/12/2024	869280	Routeware	Solid Waste	$ 320.62	Routeware Services for SOW attached..12 month Contract
03/12/2024	869280	Routeware	Solid Waste	$ 2,025.00	Routeware Services for SOW attached..12 month Contract
03/12/2024	869280	Routeware	Solid Waste	$ 67.50	Routeware Services for SOW attached..12 month Contract
03/12/2024	869280	Routeware	Wastewater	$ 320.63	Routeware Services for SOW attached..12 month Contract
03/12/2024	869280	Routeware	Wastewater	$ 2,025.00	Routeware Services for SOW attached..12 month Contract
03/12/2024	869280	Routeware	Wastewater	$ 67.50	Routeware Services for SOW attached..12 month Contract
03/12/2024	869280	Routeware	Water	$ 427.50	Routeware Services for SOW attached..12 month Contract

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	869280	Routeware	Water	$ 2,700.00	Routeware Services for SOW attached..12 month Contract
03/12/2024	869280	Routeware	Water	$ 90.00	Routeware Services for SOW attached..12 month Contract
03/12/2024	869281	S & S Machine	Water	$ 125.00	37940 - FABRICATE PIN- unit #7327
03/12/2024	869281	S & S Machine	Water	$ 12,433.00	Motor Reconditioning L2-P3
03/12/2024	869285	Sk Geotechnical	St Maint Dist	$ 2,891.00	Street & Traffic Remote Salt Storage/Breakroom Building Agreement
03/12/2024	869288	Solid Waste Systems	Fleet	$ 2,032.14	165271
03/12/2024	869288	Solid Waste Systems	Fleet	$ 554.55	165271
03/12/2024	869288	Solid Waste Systems	Fleet	$ 181.60	165276
03/12/2024	869288	Solid Waste Systems	Fleet	$ 16.73	165276
03/12/2024	869288	Solid Waste Systems	Fleet	$ 866.14	165427
03/12/2024	869288	Solid Waste Systems	Fleet	$ 22.87	165427
03/12/2024	869288	Solid Waste Systems	Fleet	$ 48.24	165443
03/12/2024	869288	Solid Waste Systems	Fleet	$ 189.42	165443
03/12/2024	869288	Solid Waste Systems	Fleet	$ 3,510.76	165444
03/12/2024	869288	Solid Waste Systems	Fleet	$ 239.07	165444
03/12/2024	869292	St V's Occupational Health	City Ins Fund	$ 675.00	Drug Testing/On-site Nursing/DOT Physicals/Tetanus and Hep B Shots
03/12/2024	869292	St V's Occupational Health	Facilities	$ 50.00	Drug Testing/On-site Nursing/DOT Physicals/Tetanus and Hep B Shots
03/12/2024	869292	St V's Occupational Health	Fleet	$ 190.00	Drug Testing/On-site Nursing/DOT Physicals/Tetanus and Hep B Shots
03/12/2024	869292	St V's Occupational Health	General	$ 1,730.00	Drug Testing/On-site Nursing/DOT Physicals/Tetanus and Hep B Shots
03/12/2024	869292	St V's Occupational Health	P.W. Admin	$ 95.00	Drug Testing/On-site Nursing/DOT Physicals/Tetanus and Hep B Shots
03/12/2024	869292	St V's Occupational Health	Public Safety	$ 40.00	INFLUENZE VACCINE
03/12/2024	869292	St V's Occupational Health	Public Safety	$ 352.00	FIRE PHYSICAL
03/12/2024	869292	St V's Occupational Health	Public Safety	$ 317.00	FIRE PHYSICAL
03/12/2024	869292	St V's Occupational Health	Solid Waste	$ 190.00	Drug Testing/On-site Nursing/DOT Physicals/Tetanus and Hep B Shots
03/12/2024	869292	St V's Occupational Health	Solid Waste	$ 190.00	Drug Testing/On-site Nursing/DOT Physicals/Tetanus and Hep B Shots
03/12/2024	869292	St V's Occupational Health	Street/Traffic	$ 570.00	Drug Testing/On-site Nursing/DOT Physicals/Tetanus and Hep B Shots
03/12/2024	869292	St V's Occupational Health	Transit	$ 95.00	Drug Testing/On-site Nursing/DOT Physicals/Tetanus and Hep B Shots
03/12/2024	869292	St V's Occupational Health	Wastewater	$ 242.00	Drug Testing/On-site Nursing/DOT Physicals/Tetanus and Hep B Shots
03/12/2024	869292	St V's Occupational Health	Water	$ 242.00	Drug Testing/On-site Nursing/DOT Physicals/Tetanus and Hep B Shots
03/12/2024	869294	Star Service	Water	$ 13,200.00	Material for Replacement-1 Air Line w/ 304 Stainless Steel Pipe/Fittings
03/12/2024	869295	Steiner Thuesen	Park Dist 1	$ 7,386.70	REPLACE THE TENNIS COURTS AT PIONEER PARK
03/12/2024	869299	TC Glass Distributor	Stillwater Const	$ 9,416.00	Inv. 50973 Water Test at Stillwater Building
03/12/2024	869300	Terracon Consultants	Water	$ 8,740.00	WO 23-39 Grand Ave Waterline Replacement
03/12/2024	869301	Thorn Run Partners	General	$ 3,750.00	Federal Lobbying Svcs 2 Year Contract
03/12/2024	869301	Thorn Run Partners	P.W. Admin	$ 3,750.00	Federal Lobbying Svcs 2 Year Contract
03/12/2024	869303	TK Elevator	Stillwater Const	$ 380,444.13	Modernized the elevator equipment at the Stillwater Building
03/12/2024	869304	TNT Springs	Fleet	$ 420.96	225762

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	869304	TNT Springs	Fleet	$ 315.80	225771
03/12/2024	869304	TNT Springs	Fleet	$ 3,313.25	226352
03/12/2024	ACH	Town & Co Supply	Airport	$ 25,531.99	Invoice #442460. QTA Car Rental Fuel.
03/12/2024	ACH	Town & Co Supply	Fleet	$ 4,022.88	442458
03/12/2024	ACH	Town & Co Supply	Fleet	$ 3.25	442458
03/12/2024	ACH	Town & Co Supply	Fleet	$ 6,034.32	442458
03/12/2024	ACH	Town & Co Supply	Fleet	$ 9,139.35	442458
03/12/2024	ACH	Town & Co Supply	Fleet	$ 5,039.25	442458
03/12/2024	ACH	Town & Co Supply	Public Safety	$ 508.65	443753 FIRE 6 - DIESEL FUEL - BLENDED
03/12/2024	ACH	Town & Co Supply	Public Safety	$ 1,626.11	443756 FIRE 1 - UNLEADED (300 GALLONS) AND BLENDED DIESEL FUEL
03/12/2024	ACH	Town & Co Supply	Public Safety	$ 619.84	443757 FIRE 7 - DIESEL - BLENDED
03/12/2024	ACH	Town & Co Supply	Transit	$ 18,253.76	440869_Diesel Fuel
03/12/2024	ACH	Town & Co Supply	Transit	$ 13,089.54	443309_Diesel Fuel
03/12/2024	ACH	Town & Co Supply	Transit	$ 6,600.12	443309_Diesel Fuel
03/12/2024	ACH	Town & Co Supply	Transit	$ 5,804.10	443380_Fuel Unleaded
03/12/2024	869307	Tru Pipe	Storm Sewer	$ 12,444.35	change order #1
03/12/2024	869307	Tru Pipe	Storm Sewer	$ -	WO2225 CCTV City Storm Drain Contract
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 40.70	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 286.31	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 511.16	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 140.00	A1 Jds Lock - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 1,300.00	Airports Council Intl - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 10.99	Albertsons #1227 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 348.09	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 95.21	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 48.12	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 238.54	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 527.87	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 36.52	Amazon.Com*Ri1988C90 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ (17.82)	Amzn Mktp Us - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ (17.82)	Amzn Mktp Us - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 29.15	Amzn Mktp Us*R004I4No1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 29.98	Amzn Mktp Us*R02Uk9Nf1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 76.27	Amzn Mktp Us*R03E38Yv0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 46.97	Amzn Mktp Us*R05R40Gg2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 34.18	Amzn Mktp Us*R06T79Wt0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 35.64	Amzn Mktp Us*R07Ff9Ax2 - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 48.94	Amzn Mktp Us*R07Ot12U2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 28.84	Amzn Mktp Us*R08U08Z01 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 34.75	Amzn Mktp Us*R09771Fp1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 22.20	Amzn Mktp Us*R097O2H21 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 7.89	Amzn Mktp Us*R09Kt7H92 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 66.93	Amzn Mktp Us*R211I0Fd1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 16.75	Amzn Mktp Us*R24Rl1D91 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 31.49	Amzn Mktp Us*R27Sk3Rb1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 49.95	Amzn Mktp Us*R832A3St2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 40.64	Amzn Mktp Us*R84Ct0Qn1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 122.27	Amzn Mktp Us*Rb00W2Pc2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 75.15	Amzn Mktp Us*Rb37V53I1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 77.85	Amzn Mktp Us*Ri09R4P31 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 228.48	Amzn Mktp Us*Ri0Nx8Gx2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 64.32	Applied Ind Tech 2422 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 175.00	Arma International - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 204.36	Batteries+Bulbs #0253 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 1,460.20	Big Sky Journal - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 60.00	Billing Times Publishi - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 175.00	Billings Overhead Door In - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 2,493.50	Billings Overhead Door In - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 254.81	Billings Overhead Door In - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 1,832.50	Billings Overhead Door In - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 194.77	Bobcat Of Big Sky Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 65.15	Bobcat Of Big Sky Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 1.25	Co Billings Park3 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 109.59	Cummins Inc - 38 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 110.19	Dtv*Directv Service - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 145.63	Ecolab Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 126.94	Ecolab Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 140.08	Ecolab Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 218.58	Ecolab Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 73.52	Econo Print - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 528.50	Energi Systems Mobile - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 23.12	Evergreen Ace Hardware - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 180.65	Evergreen Ace Hardware - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 14.99	Evergreen Ace Hardware - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 425.00	Fsp*Generator Starter Sho - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 72.42	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 943.55	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 160.00	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 90.52	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 62.26	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 42.94	Heights Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 17.97	Heights Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 29.97	Heights Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 140.44	Hose And Rubber Supply Bi - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 21.60	Hose And Rubber Supply Bi - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 780.34	Hose And Rubber Supply Bi - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 17.40	Hose And Rubber Supply Bi - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 11.28	Hose And Rubber Supply Bi - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 126.58	Hose And Rubber Supply Bi - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 104.02	Hughey Phillips Llc - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 64.00	In *Cotter'S Sewer, Septi - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 200.26	Interstate Power Syste - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 855.40	Ir Industrial - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 60.48	Kb Commercial Products - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 262.00	Kb Commercial Products - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 1,469.81	Kb Commercial Products - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 2,307.40	Kb Commercial Products - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 169.68	Kb Commercial Products - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 283.14	Kb Commercial Products - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 42.09	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 43.92	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 7.99	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 45.00	Kotek - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 250.00	Lp Anderson - Point S, Dt - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 1,268.96	Lp Anderson - Point S, Dt - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 378.00	Mfcp Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 73.33	Mixer & Plant Parts Manuf - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 418.95	Modern Group Ltd - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 52.22	Napa Store 3547001 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 83.61	Napa Store 3547004 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 8.27	Napa Store 3547007 - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 156.24	Norco Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 490.23	Npc*New Pig Corp - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 199.99	Office Depot #2135 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 64.99	Office Depot #2135 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 317.74	Parts4Heatingcom - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 80.00	Pzg**Mt Dept Revenue-E - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 35.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 35.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 35.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 20.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 20.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 35.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 35.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 150.00	Scheels Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 416.00	Schnitzer Steel Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 7.25	Shipton'S Big R Heights - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 150.00	Shipton'S Big R West - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 132.89	Sp Buyparts.Online - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 473.29	Sp Buyparts.Online - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 69.00	Sp Peak Cocktails - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ (69.00)	Sp Peak Cocktails - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 253.16	Sp Trueclassictees.C - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 100.00	Spic And Span - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 33.45	Sq *Hotsy Wy-Mont - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 234.30	Sq *Hotsy Wy-Mont - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 2,009.10	State Chemic*State Che - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 758.67	State Chemic*State Che - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 2,625.00	Summit Fire And Security - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 113.10	Supplyhouse.Com - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 134.91	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 55.51	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 80.94	The Home Depot 3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 170.43	The Ups Store 4741 - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 1,500.00	Transportation Security C - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 111.99	Warson Group Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Airport	$ 16.59	Zoom.Us 888-799-9666 - PCard
03/12/2024	ACH	U.S. Bank PCards	Building	$ 192.71	Amzn Mktp Us*R00O36P52 - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Building	$ 72.55	Amzn Mktp Us*R01Hj3Tv1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Building	$ 85.49	Amzn Mktp Us*R260B3Uz1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Building	$ 5.99	Amzn Mktp Us*R800Q5Ha1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Building	$ 54.52	Dakota Supply Group - Bil - PCard
03/12/2024	ACH	U.S. Bank PCards	Building	$ 44.92	Dk Hardware Supply Llc - PCard
03/12/2024	ACH	U.S. Bank PCards	Building	$ 25.98	Heights Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Building	$ 275.00	Iapmo - PCard
03/12/2024	ACH	U.S. Bank PCards	Building	$ 300.00	Int'L Code Council - PCard
03/12/2024	ACH	U.S. Bank PCards	Building	$ 69.00	Int'L Code Council Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Building	$ 305.00	Int'L Code Council Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Building	$ 79.00	Int'L Code Council Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Building	$ 305.00	Int'L Code Council Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Building	$ 384.00	Int'L Code Council Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Building	$ 85.00	Juniorleagu - PCard
03/12/2024	ACH	U.S. Bank PCards	Building	$ 85.00	Juniorleagu - PCard
03/12/2024	ACH	U.S. Bank PCards	Building	$ 17.98	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Building	$ 71.19	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Building	$ 95.40	Lucid Software Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Building	$ 49.96	Wal-Mart #2923 - PCard
03/12/2024	ACH	U.S. Bank PCards	CDBG	$ 20.82	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	CDBG	$ 52.50	Amazon.Com*R063B9Fm1 - PCard
03/12/2024	ACH	U.S. Bank PCards	CDBG	$ 86.01	Amzn Mktp Us*R26Jt8Qy0 - PCard
03/12/2024	ACH	U.S. Bank PCards	CDBG	$ 12.95	Canva* I04044-40139394 - PCard
03/12/2024	ACH	U.S. Bank PCards	CDBG	$ 1,755.32	Cncs - PCard
03/12/2024	ACH	U.S. Bank PCards	CDBG	$ 1,818.01	Cncs - PCard
03/12/2024	ACH	U.S. Bank PCards	CDBG	$ 279.99	Costco Whse #1644 - PCard
03/12/2024	ACH	U.S. Bank PCards	CDBG	$ 469.00	Dude Rancher Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	CDBG	$ 3.24	Dude Rancher Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	CDBG	$ (93.80)	Dude Rancher Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	CDBG	$ 93.80	Dude Rancher Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	CDBG	$ 119.99	Office Depot #2135 - PCard
03/12/2024	ACH	U.S. Bank PCards	CDBG	$ 173.05	Panera Bread #202752 O - PCard
03/12/2024	ACH	U.S. Bank PCards	CDBG	$ 500.00	Paypal *Shannonstob - PCard
03/12/2024	ACH	U.S. Bank PCards	CDBG	$ 41.97	Sq *Shanghai Village Down - PCard
03/12/2024	ACH	U.S. Bank PCards	CDBG	$ 79.00	Sunset Bowl - PCard
03/12/2024	ACH	U.S. Bank PCards	CDBG	$ 112.69	Tst* Mediterranean Soul - PCard
03/12/2024	ACH	U.S. Bank PCards	CDBG	$ 34.56	Www.Rockcreekcoffee.Co - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Cemetery Improvements	$ 151.95	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Central Services	$ 729.08	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Court Grants	$ 63.10	Albertsons #4041 - PCard
03/12/2024	ACH	U.S. Bank PCards	Court Grants	$ 44.76	Costco Whse #1644 - PCard
03/12/2024	ACH	U.S. Bank PCards	Court Grants	$ 27.25	Dollar Tree - PCard
03/12/2024	ACH	U.S. Bank PCards	Court Grants	$ 16.25	Dollar Tree - PCard
03/12/2024	ACH	U.S. Bank PCards	Court Grants	$ 21.99	Great American Bagel - PCard
03/12/2024	ACH	U.S. Bank PCards	Court Grants	$ 60.00	Holiday Stations 0280 - PCard
03/12/2024	ACH	U.S. Bank PCards	Court Grants	$ 16.98	Little Caesar'S 3727-0001 - PCard
03/12/2024	ACH	U.S. Bank PCards	Court Grants	$ 85.71	Pyl*Rainbow Property Mana - PCard
03/12/2024	ACH	U.S. Bank PCards	Court Grants	$ 20.70	Sp Aa Medallion Stor - PCard
03/12/2024	ACH	U.S. Bank PCards	Court Grants	$ 115.00	Sq *Ox Indoor Axe Throwin - PCard
03/12/2024	ACH	U.S. Bank PCards	Court Grants	$ 5.90	Wal-Mart #2923 - PCard
03/12/2024	ACH	U.S. Bank PCards	Court Grants	$ 50.88	Wm Supercenter #2923 - PCard
03/12/2024	ACH	U.S. Bank PCards	Court Grants	$ 16.59	Zoom.Us 888-799-9666 - PCard
03/12/2024	ACH	U.S. Bank PCards	Engineering	$ 54.50	4Te*Alarm Services - PCard
03/12/2024	ACH	U.S. Bank PCards	Engineering	$ 68.80	4Te*Alarm Services - PCard
03/12/2024	ACH	U.S. Bank PCards	Engineering	$ 751.80	Davis Instruments - PCard
03/12/2024	ACH	U.S. Bank PCards	Engineering	$ 305.33	In *Timemark Incorporated - PCard
03/12/2024	ACH	U.S. Bank PCards	Engineering	$ 800.00	Montana Contractors As - PCard
03/12/2024	ACH	U.S. Bank PCards	Engineering	$ 529.00	Pollardwater.Com #3325 - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 96.18	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 75.00	4Te*Alarm Services - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 12.50	4Te*Alarm Services - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 100.00	Ace Electric - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 288.90	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 389.10	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 34.00	Batteries Plus #0598 - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 192.77	Ecolab Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 575.00	Educate Llp - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 65.04	Ferguson Ent - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 26.66	Ferguson Ent #1342 - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 137.19	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 42.49	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 16.10	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 55.50	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 79.31	Grainger - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 70.45	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 453.44	Hose And Rubber Supply Ra - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 1,324.94	Kb Commercial Products - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 354.10	Kb Commercial Products - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 124.09	Kb Commercial Products - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 31.70	Kb Commercial Products - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 19.42	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 25.17	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 32.16	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 139.00	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 15.38	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 67.34	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 99.98	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 35.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 9.95	Sp Goldspot Pens - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 19.25	Spinfresh Laundry - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 48.00	Spinfresh Laundry - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 29.75	Spinfresh Laundry - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 17.50	Spinfresh Laundry - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 40.00	Spinfresh Laundry - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 68.25	Spinfresh Laundry - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 54.00	Spinfresh Laundry - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 49.00	Spinfresh Laundry - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 1,215.00	Sq *Skyline Services, Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 140.00	Sq *Skyline Services, Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 700.00	Sq *Skyline Services, Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 2,407.59	State Chemic*State Che - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 23.88	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 10.51	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 167.21	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 12.93	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 5.47	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 50.96	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 44.90	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 162.20	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 9.75	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 8.97	The Home Depot #3101 - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 141.94	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 74.85	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 95.34	The Home Depot 3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 38.95	West End Lock And Securit - PCard
03/12/2024	ACH	U.S. Bank PCards	Facilities	$ 399.00	Www.Theseminargroup.Ne - PCard
03/12/2024	ACH	U.S. Bank PCards	FireStation Const	$ 101.94	Amzn Mktp Us*R09D76Fq1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Fleet	$ 41.99	Office Depot #450 - PCard
03/12/2024	ACH	U.S. Bank PCards	Fleet	$ 150.25	Thermprint - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 914.67	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 39.50	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 38.95	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 27.28	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 114.85	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 2.49	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 85.14	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 400.00	3Cma Onlin* Inv-3159 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 86.00	Aaim - Services - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 23.88	Adobe Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 60.63	Adobe Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 54.99	Adobe Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 14.99	Adobe Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 54.99	Adobe Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 12.99	Adobe Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 54.99	Adobe Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 54.99	Adobe Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 2,384.21	Air Controls-Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 110.00	Air Controls-Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 55.89	Albertsons #0038 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 37.41	Albertsons #0038 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 39.59	Albertsons #1227 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 9.99	Albertsons #1227 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 9.63	Albertsons #4025 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 27.99	Amazon Retail* 1-Code - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 568.20	Amazon.Com*R24Ep8Qf0 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 44.09	Amazon.Com*Rb1A41Zz1 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 20.13	Amazon.Com*Rb23R4Bs2 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 14.99	Ampd Strong - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	General	$ 4.99	Ampd Strong - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 26.98	Amzn Mktp Us*R00Lc9660 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 125.73	Amzn Mktp Us*R00M37Nd2 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 6.49	Amzn Mktp Us*R018C63J2 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 31.98	Amzn Mktp Us*R04Wa2Un2 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 12.98	Amzn Mktp Us*R05H359U1 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 84.91	Amzn Mktp Us*R09Pd62E1 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 19.80	Amzn Mktp Us*R200Y7Ti2 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 158.00	Amzn Mktp Us*R212W0U70 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 139.12	Amzn Mktp Us*R22Ac3Ma0 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 20.98	Amzn Mktp Us*R22Qh8F12 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 162.88	Amzn Mktp Us*R22W71Lp1 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 124.69	Amzn Mktp Us*R23Td7De2 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 33.82	Amzn Mktp Us*R24Jn4T20 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 49.90	Amzn Mktp Us*R24N22Hq1 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 41.99	Amzn Mktp Us*R250B7Ia0 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 109.90	Amzn Mktp Us*R262303G2 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 9.99	Amzn Mktp Us*Rb41R75D2 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 96.57	Amzn Mktp Us*Rb74M0Oj1 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 38.50	Amzn Mktp Us*Rb9On8Un1 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 349.00	Amzn Mktp Us*Ri0Dl3O02 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 140.99	Amzn Mktp Us*Ri50V1T00 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 349.00	Amzn Mktp Us*Ri99R0B02 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 26.99	Amzn Mktp Us*Ri9Qp3Si0 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 21.51	Amzn Mktp Us*Rw1Ob7Cc0 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 615.00	Billings Ink And Toner, I - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 32.45	Bin 119 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 210.08	Buddy Punch - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 125.00	Bur Of Bus Econ Res Um - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 125.00	Bur Of Bus Econ Res Um - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 93.24	Costco Whse #1644 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 113.00	Creative Monograms Smb - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 5.00	Dollar Tree - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 25.00	Dollar Tree - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 143.07	Domino'S 7003 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 350.00	Eb 2024 Goscma Annual - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 57.87	Econoprint - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	General	$ 77.12	Econoprint - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 44.90	Efilemyforms.Com - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 237.60	Esoft Planner - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 530.45	Fsp*State Bar Of Montana - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 530.45	Fsp*State Bar Of Montana - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 223.24	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 224.48	Graybar Electric - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 8.99	Harbor Freight Tools 207 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 24.99	Hobby-Lobby #251 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 41.04	Hose And Rubber Supply Bi - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 60.00	Inreach Online Cle - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 467.29	Insight Public Sector - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 32.16	Insight Public Sector - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 90.92	Kb Commercial Products - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 42.35	Kelley Connect - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 44.07	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 34.16	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 90.17	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 22.00	Klamath Cnty Trl 08033 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 174.86	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 14.36	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 66.96	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 117.00	Macon Supply Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 31.52	Maxi Aids Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 1,250.00	Medallion Vault & Casket - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 10.60	Midland Implement Co - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 248.40	Midland Implement Co - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 62.00	Montana Brewing Company - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 305.00	Montana Society Of Certif - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 70.00	Nchec - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 545.00	Ndrpa - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 26.25	Northern Hotel - Berni - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 241.83	Northland Automotive - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 36.52	Northwest Pipe Fittings - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 30.59	Office Depot #1080 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 20.99	Office Depot #1080 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 29.69	Office Depot #1080 - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	General	$ 63.57	Office Depot #2135 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 73.25	Office Depot #2135 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 50.98	Office Depot #2135 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 171.60	Office Depot #450 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 44.97	Pedagogy Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 39.99	Pedagogy Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 36.00	Pepsicola Bottling Compan - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 97.48	Pizza Hut #1714 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 88.00	Pp*Zee Creative - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 602.00	Quickscores - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 1,007.00	Rei*Matthew Bender &Co - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 2.99	Remarkable - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 40.00	Rmgpa.Org - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 39.00	Southerncarlson - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 79.99	Spectrum - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 16.99	Spotify Usa - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 76.22	Target 00013334 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 50.00	Textmagic.Com - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 42.43	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 107.77	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 52.36	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 267.28	The Rubber Stamp Shop, - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 1,916.25	Thomson West*Tcd - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 83.45	Tire Rama 105 It - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 377.10	Track1099.Com - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 21.25	Track1099.Com - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 12.50	Track1099.Com - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 1,010.48	Ultra Graphics, Llc - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 768.68	United 0162360742215 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 79.88	Wal-Mart #1956 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 23.96	Wal-Mart #1956 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 4.00	Wal-Mart #1956 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 209.88	Walmart.Com - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 100.00	Wheniwork.Com - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 58.09	Zoom.Us 888-799-9666 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 16.59	Zoom.Us 888-799-9666 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 49.00	Zoom.Us 888-799-9666 - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	General	$ 17.99	Zoom.Us 888-799-9666 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 16.59	Zoom.Us 888-799-9666 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 16.59	Zoom.Us 888-799-9666 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 47.97	Zoom.Us 888-799-9666 - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 72.39	Zumba Fitness - PCard
03/12/2024	ACH	U.S. Bank PCards	General	$ 35.00	Zumbini - PCard
03/12/2024	ACH	U.S. Bank PCards	IT Resources	$ 34.50	4Te*Alarm Services - PCard
03/12/2024	ACH	U.S. Bank PCards	IT Resources	$ 55.98	Amazon Retail* 1-Code - PCard
03/12/2024	ACH	U.S. Bank PCards	IT Resources	$ (39.99)	Amazon.Com - PCard
03/12/2024	ACH	U.S. Bank PCards	IT Resources	$ 39.99	Amazon.Com*R00Rn3F31 - PCard
03/12/2024	ACH	U.S. Bank PCards	IT Resources	$ 72.29	Amazon.Com*R01Lu2Xk2 - PCard
03/12/2024	ACH	U.S. Bank PCards	IT Resources	$ 12.96	Amazon.Com*R07Xh3G12 - PCard
03/12/2024	ACH	U.S. Bank PCards	IT Resources	$ 21.00	Amazon.Com*Ri4Hq3S60 - PCard
03/12/2024	ACH	U.S. Bank PCards	IT Resources	$ 79.99	Amazon.Com*Ri4Rm8A72 - PCard
03/12/2024	ACH	U.S. Bank PCards	IT Resources	$ (59.38)	Amzn Mktp Us - PCard
03/12/2024	ACH	U.S. Bank PCards	IT Resources	$ (52.99)	Amzn Mktp Us - PCard
03/12/2024	ACH	U.S. Bank PCards	IT Resources	$ 39.94	Amzn Mktp Us*R05K69Za2 - PCard
03/12/2024	ACH	U.S. Bank PCards	IT Resources	$ 216.31	Amzn Mktp Us*R07Ot6Wa0 - PCard
03/12/2024	ACH	U.S. Bank PCards	IT Resources	$ 52.99	Amzn Mktp Us*R09Ps9Gy0 - PCard
03/12/2024	ACH	U.S. Bank PCards	IT Resources	$ 220.00	Amzn Mktp Us*Rb4S17Zd2 - PCard
03/12/2024	ACH	U.S. Bank PCards	IT Resources	$ 278.00	Batteries+Bulbs #0253 - PCard
03/12/2024	ACH	U.S. Bank PCards	IT Resources	$ 484.00	Digicert - PCard
03/12/2024	ACH	U.S. Bank PCards	IT Resources	$ 147.96	Dmi* Dell Bus Online - PCard
03/12/2024	ACH	U.S. Bank PCards	IT Resources	$ 50.00	Gisjobscom - PCard
03/12/2024	ACH	U.S. Bank PCards	IT Resources	$ 291.25	Insight Public Sector - PCard
03/12/2024	ACH	U.S. Bank PCards	IT Resources	$ 25.00	Paypal *Gisjobsclea - PCard
03/12/2024	ACH	U.S. Bank PCards	Legal Grants	$ 743.20	American Air0012110030021 - PCard
03/12/2024	ACH	U.S. Bank PCards	Legal Grants	$ 743.20	American Air0012110030022 - PCard
03/12/2024	ACH	U.S. Bank PCards	Legal Grants	$ 743.20	American Air0012110030023 - PCard
03/12/2024	ACH	U.S. Bank PCards	Legal Grants	$ 743.20	American Air0012110030024 - PCard
03/12/2024	ACH	U.S. Bank PCards	Legal Grants	$ 743.20	American Air0012110030025 - PCard
03/12/2024	ACH	U.S. Bank PCards	Legal Grants	$ 3,000.00	Conference On Crimes Agai - PCard
03/12/2024	ACH	U.S. Bank PCards	Legal Grants	$ 194.11	Sheraton Dallas - PCard
03/12/2024	ACH	U.S. Bank PCards	Legal Grants	$ 194.11	Sheraton Dallas - PCard
03/12/2024	ACH	U.S. Bank PCards	Legal Grants	$ 194.11	Sheraton Dallas - PCard
03/12/2024	ACH	U.S. Bank PCards	Legal Grants	$ 194.11	Sheraton Dallas - PCard
03/12/2024	ACH	U.S. Bank PCards	Legal Grants	$ 194.11	Sheraton Dallas - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Library	$ 544.88	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 87.50	4Te*Alarm Services - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 505.00	4Te*Alarm Services - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 211.90	Albertsons #1227 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 16.97	Albertsons #4025 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 3.81	Amazon.Com*R265V4Mz2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 2.99	Amazon.Com*Rb0Rm9V11 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 19.95	Amazon.Com*Rb0Rm9V11 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 16.24	Amazon.Com*Rb3L23Vs2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 14.95	Amazon.Com*Rb6Pm9702 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 20.32	Amazon.Com*Rb8Bv0561 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 6.00	Amazon.Com*Ri3Rg1Yl0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 7.66	Amazon.Com*Ri6Ck95K2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 56.27	Amazon.Com*Ri8Xk5Nz0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 44.13	Amzn Mktp Us*R098Z24E2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 48.89	Amzn Mktp Us*R20Qn3V20 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 19.79	Amzn Mktp Us*R21Nc8Ge0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 22.98	Amzn Mktp Us*R21Nc8Ge0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 28.88	Amzn Mktp Us*R260R1Y81 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 14.90	Amzn Mktp Us*R29Cs5If0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 7.99	Amzn Mktp Us*R29Cs5If0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 58.94	Amzn Mktp Us*R83846Re2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 40.00	Amzn Mktp Us*Rb0A07Nj1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 49.98	Amzn Mktp Us*Rb1Cd7Yb0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 12.15	Amzn Mktp Us*Rb37N9Ze1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 72.14	Amzn Mktp Us*Rb3R36Ux0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 14.99	Amzn Mktp Us*Rb4Ro4Z01 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 99.53	Amzn Mktp Us*Rb6Vr2Gy2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 29.95	Amzn Mktp Us*Rb7Sj0Ys0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 31.96	Amzn Mktp Us*Rb8Jh66D1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 12.41	Amzn Mktp Us*Ri2Fw0Ar0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 7.04	Amzn Mktp Us*Ri5Zg4Ab0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 17.50	Amzn Mktp Us*Ri6Dj7Ou1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 20.99	Amzn Mktp Us*Ri9Ik2V60 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 61.57	Amzn Mktp Us*Rw3Dc2Ek0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 21.99	Amzn Mktp Us*Rw3Dc2Ek0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 75.00	Art House Cinema And Pub - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Library	$ 86.13	Barnes & Noble #2765 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 26.50	Batteries+Bulbs #0253 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 635.84	Billings Carpet Water - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 119.99	Canva* I04066-55612788 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 3.99	Costco Whse #1644 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 510.00	Data Axle-Citydirectories - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 194.25	Demco Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 21.25	Dollar Tree - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 2.50	Dollar Tree - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 3.96	Evergreen Ace Hardware - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 34.85	Facebk K3Dcsztqq2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 10.45	Fastenal Company 01Mtbll - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 16.22	Fastenal Company 01Mtbll - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 99.98	Gamestop - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 30.01	Gan*1094Grfalltribcirc - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 34.00	Gan*Usatodaycirc - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 244.50	Gaylord Bros Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 15.21	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 4.76	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 11.88	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 641.17	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 2.97	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 114.80	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 25.97	Harbor Freight Tools 207 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 15.97	Harbor Freight Tools 207 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 1,438.00	Homedepot.Com - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 75.00	Humanities Montana - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 198.00	In *Sensource, Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 129.35	Jerry'S Artarama - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 74.98	Joann Stores #2315 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 1,322.71	Kb Commercial Products - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 1,015.02	Kb Commercial Products - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 168.24	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 7.99	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 43.19	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 61.54	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 17.53	Kings Ace Hdwe - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Library	$ 103.92	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 25.00	Kohl'S #1265 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 45.66	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 217.58	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 79.94	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 128.94	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 23.98	Michaels Stores 9916 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 799.00	Office Depot #1080 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 249.99	Office Depot #1080 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 13.00	Pacific Steel Branch #02 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 22.50	Party America Billings He - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 343.00	Simply Family Magazine, I - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 835.90	Skillpath / National - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 664.05	Sp Loopus - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 221.00	Sq *Stomping Grounds Book - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 15.00	Sq *This House Of Books - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 52.00	Sq *Yellowstone County Ne - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 52.00	Sq *Yellowstone County Ne - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 4.98	Target 00013334 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 60.43	Target 00013334 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 48.49	Target 00013334 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 106.97	Target.Com * - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 99.00	Techsoup - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 14.98	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 272.13	The Home Depot 3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 275.00	Tst* City Brew Coffee - C - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 41.25	Tst* Nothing Bundt Cakes - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 80.24	Uline *Ship Supplies - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 97.11	Uline *Ship Supplies - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 69.11	Uline *Ship Supplies - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 47.98	Walgreens #12155 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 12.88	Wal-Mart #2923 - PCard
03/12/2024	ACH	U.S. Bank PCards	Library	$ 100.00	Zsk*Ce Zoomontana Pos - PCard
03/12/2024	ACH	U.S. Bank PCards	P.W. Admin	$ 59.70	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	P.W. Admin	$ 645.19	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	P.W. Admin	$ 32.17	Amzn Mktp Us*R00T01As1 - PCard
03/12/2024	ACH	U.S. Bank PCards	P.W. Admin	$ 24.99	Amzn Mktp Us*R02Up0Dn0 - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	P.W. Admin	$ 108.16	Amzn Mktp Us*R07Ot6Wa0 - PCard
03/12/2024	ACH	U.S. Bank PCards	P.W. Admin	$ 26.99	Billingsgazettethriftynck - PCard
03/12/2024	ACH	U.S. Bank PCards	P.W. Admin	$ 14.68	Fedex270449003768 - PCard
03/12/2024	ACH	U.S. Bank PCards	P.W. Admin	$ 110.50	Mackenzie River Blgs Hts - PCard
03/12/2024	ACH	U.S. Bank PCards	P.W. Admin	$ 16.59	Zoom.Us 888-799-9666 - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 275.68	A & I Distributors - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 66.81	Amazon.Com*Rb8Vk9Iw1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 224.75	Archie Cochrane Ford - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 129.99	Autozone #3772 - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 22.17	Autozone #3772 - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 70.47	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 41.03	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 42.49	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 500.10	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 53.98	Cab Store Billings, Mt - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 2,100.00	Dri*Rainbird Dgtal Svc - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 2.38	Evergreen Ace Hardware - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 15.99	Evergreen Ace Hardware - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 62.99	Evergreen Ace Hardware - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 99.00	Evergreen Ace Hardware - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 36.79	Ferguson Ent - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 411.55	Hanson Chemical - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 135.18	Hanson Chemical - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 112.64	Hanson Chemical - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 25.98	Harbor Freight Tools 207 - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 26.99	Heights Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 19.99	Heights Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 22.98	Heights Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 10.22	Hose And Rubber Supply Bi - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 21.15	Hose And Rubber Supply Bi - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 157.66	Hose And Rubber Supply Bi - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 576.89	In *Icd High Performance - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 547.58	Insight Public Sector - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 154.95	Interstate Battery Of The - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 135.00	Isa - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 199.36	Kb Commercial Products - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 26.98	Kings Ace Hdwe - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 8.89	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 17.98	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 211.92	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 25.99	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 9.95	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 65.68	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 9.96	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 20.98	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 44.90	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 49.98	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 20.68	Midland Implement Co - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 165.50	Midland Implement Co - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 704.68	Midland Implement Co - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 311.91	Midland Implement Co - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 157.82	Midland Implement Co - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 19.53	Midland Implement Co - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 58.01	Midland Implement Co - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 41.20	Mountain Supply - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 59.03	Napa Store 3547001 - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 146.31	Napa Store 3547001 - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 1,090.00	Ndrpa - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 545.00	Ndrpa - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 69.88	Norco Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 302.93	Northland Automotive - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 91.96	Office Depot #1080 - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 29.70	Office Depot #1080 - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 52.68	Office Depot #2135 - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 62.96	Office Depot #450 - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 8.79	Office Depot #450 - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 5.69	Pacific Steel Branch #02 - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 282.00	Pp*Zee Creative - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 93.70	Pzg**Mt Dept Of Ag Onl - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 155.35	Pzg**Mt Dept Of Ag Onl - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 96.00	Ratco Llc - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 2,381.28	Ratco Llc - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 41.96	Selbys - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ (99.99)	Shipton'S Big R Heights - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 15.99	Shipton'S Big R Heights - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 99.99	Shipton'S Big R Heights - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 179.99	Shipton'S Big R West - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 15.99	Shipton'S Big R West - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 7.66	Snappyduds - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 1,333.75	Snappyduds - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 1,025.00	Sp Sweepscrub.Com - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 23.94	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 349.02	Tire Rama 105 It - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 247.50	Tire Rama 105 It - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 75.50	Total Package - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 80.45	Tractor & Equipment - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 87.72	Tractor & Equipment - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 59.94	Wal-Mart #4412 - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 19.00	Yellowstone Valley Elect - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Dist 1	$ 16.99	Zoom.Us 888-799-9666 - PCard
03/12/2024	ACH	U.S. Bank PCards	Park Prgrms	$ 209.00	International Bronze Plaq - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 69.31	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 105.00	Air Controls-Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 300.00	Air Controls-Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 533.96	Air Controls-Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 32.36	Amzn Mktp Us*R08Ni6Uc1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 7.95	Amzn Mktp Us*R83Q81Kn2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 76.47	Amzn Mktp Us*Ri2S21Bb0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 1.25	Co Billings Park3 - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 148.26	Econo Print - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 43.62	Fedex74754753 - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 695.00	In *International Parking - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 11.97	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 20.97	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 89.97	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 10.00	Spic And Span - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 20.83	Spic And Span - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 10.00	Spic And Span - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 20.84	Spic And Span - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 20.83	Spic And Span - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 10.00	Spic And Span - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 35.00	Sq *Skyline Services, Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 35.00	Sq *Skyline Services, Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 145.00	Sq *Skyline Services, Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 145.00	Sq *Skyline Services, Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 115.00	Sq *Skyline Services, Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Parking	$ 45.90	Yellowstone County Treas - PCard
03/12/2024	ACH	U.S. Bank PCards	Parks Maint	$ 158.80	Border States Industries - PCard
03/12/2024	ACH	U.S. Bank PCards	Parks Maint	$ 170.64	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Parks Maint	$ 29.95	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Parks Maint	$ 204.10	Yellowstone Valley Elect - PCard
03/12/2024	ACH	U.S. Bank PCards	Parks Maint	$ 19.47	Yellowstone Valley Elect - PCard
03/12/2024	ACH	U.S. Bank PCards	Parks Maint	$ 20.28	Yellowstone Valley Elect - PCard
03/12/2024	ACH	U.S. Bank PCards	Parks Maint	$ 47.50	Yellowstone Valley Elect - PCard
03/12/2024	ACH	U.S. Bank PCards	Parks Maint	$ 297.53	Yellowstone Valley Elect - PCard
03/12/2024	ACH	U.S. Bank PCards	PD Program	$ 55.96	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	PD Program	$ 1,277.26	Alamo Rent-A-Car - PCard
03/12/2024	ACH	U.S. Bank PCards	PD Program	$ 1,274.73	Alamo Rent-A-Car - PCard
03/12/2024	ACH	U.S. Bank PCards	PD Program	$ 1,575.00	Alliance For Hope Intern - PCard
03/12/2024	ACH	U.S. Bank PCards	PD Program	$ 525.00	Alliance For Hope Intern - PCard
03/12/2024	ACH	U.S. Bank PCards	PD Program	$ 16.17	Dan Tibbs Liberty 2000 - PCard
03/12/2024	ACH	U.S. Bank PCards	PD Program	$ 1,036.35	Drury Inns - PCard
03/12/2024	ACH	U.S. Bank PCards	PD Program	$ 1,036.35	Drury Inns - PCard
03/12/2024	ACH	U.S. Bank PCards	PD Program	$ 1,036.35	Drury Inns - PCard
03/12/2024	ACH	U.S. Bank PCards	PD Program	$ 888.30	Drury Inns - PCard
03/12/2024	ACH	U.S. Bank PCards	PD Program	$ 1,625.94	Insight Public Sector - PCard
03/12/2024	ACH	U.S. Bank PCards	PD Program	$ 37.72	Texaco 0383749 - PCard
03/12/2024	ACH	U.S. Bank PCards	PD Program	$ 13.38	Texaco 0383749 - PCard
03/12/2024	ACH	U.S. Bank PCards	PD Program	$ 298.20	United 0162360472480 - PCard
03/12/2024	ACH	U.S. Bank PCards	PD Program	$ 35.00	United 0164276956682 - PCard
03/12/2024	ACH	U.S. Bank PCards	PD Program	$ 45.00	United 0164276956683 - PCard
03/12/2024	ACH	U.S. Bank PCards	Phone System	$ 5.98	Amzn Mktp Us*R05Nx3Pz2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Phone System	$ 12.74	Amzn Mktp Us*R05Wh6Ct1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Planning	$ 3.98	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Planning	$ 49.50	American Water Technol - PCard
03/12/2024	ACH	U.S. Bank PCards	Planning	$ 36.00	Cbr*Kioware - PCard
03/12/2024	ACH	U.S. Bank PCards	Planning	$ 156.40	Costco Whse #1644 - PCard
03/12/2024	ACH	U.S. Bank PCards	Planning	$ 134.89	Jimmy Johns - 1646 - E - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Planning	$ 203.73	La Quinta Inn & Suites - PCard
03/12/2024	ACH	U.S. Bank PCards	Planning	$ 28.20	Rockets Gourmet Wraps And - PCard
03/12/2024	ACH	U.S. Bank PCards	Planning	$ 347.26	Sq *Terri Porta Fine Art - PCard
03/12/2024	ACH	U.S. Bank PCards	Planning	$ 44.80	The Rubber Stamp Shop, - PCard
03/12/2024	ACH	U.S. Bank PCards	Planning	$ 32.00	The Rubber Stamp Shop, - PCard
03/12/2024	ACH	U.S. Bank PCards	Planning	$ 135.70	Tst* Spitz Restaurant Gro - PCard
03/12/2024	ACH	U.S. Bank PCards	Planning	$ 158.94	Uline *Ship Supplies - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 6.79	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 13.19	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 538.65	4Te*Alarm Services - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 232.00	5.11, Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 263.88	Adobe Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 880.00	Air Controls-Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 842.93	Air Controls-Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 165.00	Air Controls-Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 1,266.25	Airbnb Hmfj5Zq28Z - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 301.23	Albertsons #1227 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 242.55	Albertsons #1227 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 995.00	Allegiant Aifgg - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 1,575.00	Alliance For Hope Intern - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 76.48	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 58.74	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 65.40	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 65.20	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 19.12	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 107.78	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 54.57	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 52.70	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 239.98	Amazon Ret* Prindle Ha - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 82.92	Amazon Retail* Crash - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 106.95	Amazon Retail* Fire 1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 181.25	Amazon.Com*R01Hq4X52 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 167.80	Amazon.Com*R85Oo8Bx1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 79.00	Amazon.Com*Rb2Rm6Un0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 252.77	Amazon.Com*Rb6Wf2610 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 359.60	American Air0012115105759 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 801.21	American Air0017007661795 - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 920.21	American Air0017008174406 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ (17.74)	American Air0018310158458 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 17.74	American Air0018310158458 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ (242.27)	Amzn Mktp Us - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 28.13	Amzn Mktp Us*R03Es4Yw1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 27.11	Amzn Mktp Us*R06Ez3Dq1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 170.00	Amzn Mktp Us*R06Rp7Yt2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 170.22	Amzn Mktp Us*R08Ur3Hp0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 202.99	Amzn Mktp Us*R23Z250F0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 173.80	Amzn Mktp Us*R24Tp85C2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 51.07	Amzn Mktp Us*R25Q022R0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 27.98	Amzn Mktp Us*R29Ni1Yk2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 13.98	Amzn Mktp Us*R80Ow1851 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 26.97	Amzn Mktp Us*R81Fr1Il2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 26.39	Amzn Mktp Us*R82Lw3Rj2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 95.98	Amzn Mktp Us*R86Cp5Dx1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 53.94	Amzn Mktp Us*R86Pc39O1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.19	Amzn Mktp Us*R88Rh29V2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 15.99	Amzn Mktp Us*Rb2972Fe1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 15.99	Amzn Mktp Us*Rb3Kb0Uc0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 110.00	Amzn Mktp Us*Rb4S17Zd2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 495.56	Amzn Mktp Us*Rw3Qz6Fe0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 56.39	Amzn Mktp Us*Rw4Wo3550 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 905.00	Arkon Resources Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 187.20	B&H Photo 800-606-6969 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 586.85	B&H Photo 800-606-6969 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 94.99	Bestbuycom806915154641 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 105.59	Bfah.Net - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 2,275.00	Big Sky Communications 1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 850.00	Billings Army Navy Surplu - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 403.41	Billings Hardware & Servi - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 35.52	Billings Hardware & Servi - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 13.07	Billings Hardware & Servi - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 584.00	Billings Ink And Toner, I - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 29.99	Billingsgazettethriftynck - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 134.07	Boss Safety Products - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 51.27	Cab Store Billings, Mt - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 12.00	Cbr*Kioware - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 90.00	City Of Billiings Buildin - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 1,147.50	Clarion Events Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 1,314.00	Clarion Events Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 1,289.00	Clarion Events Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 105.64	Cmi Inc Moto - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 545.25	Conditioned Air Sys... - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 30.00	Conoco - Big Timber 2 103 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 30.06	Conoco - Billings 1 1038 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 23.96	Conoco - Livingston 3 130 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 162.95	Costco Whse #1644 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 999.99	Costco Whse #1644 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 59.67	Costco Whse #1644 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ (75.00)	Costco Whse #1644 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 129.83	Costco Whse #1644 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 131.87	Costco Whse #1644 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 266.52	Costco Whse #1644 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 192.00	Creative Monograms Smb - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 124.00	Creative Monograms Smb - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 145.87	Dd *Topzsandwichcompa - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 277.20	Delta Air 0062206542482 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 277.20	Delta Air 0062206542483 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 487.20	Delta Air 0062207402748 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 590.20	Delta Air 0062207491150 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 357.20	Delta Air 0062207917291 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 590.20	Delta Air 0062207956828 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 657.20	Delta Air 0062210706142 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 557.20	Delta Air 0067022636298 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 557.20	Delta Air 0067022636299 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 52.75	Domino'S 7003 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 167.08	Dri*Printing Services - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 120.00	Ecolab Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 172.51	Econoprint - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 120.00	Empire Heating And Coolin - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 125.17	Epic Sports - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 8.97	Epic Sports - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 603.75	Evergreen Ace Hardware - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 70.94	Expedia 72750481134024 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 1,096.48	Expedia 72753418793049 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 3,910.19	Farrwest - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 2,917.08	Farrwest - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 146.79	First Aid Supplies Onl - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 67.27	First Aid Supplies Onl - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 944.68	Hampton Inn Boca - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 225.00	Hansers Wrecker & Salv - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 111.42	Hanson Chemical - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 292.22	Hanson Chemical - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 36.00	Hanson Chemical - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 149.80	Hanson Chemical - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 198.56	Hanson Chemical - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 192.13	Hanson Chemical - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 81.99	Hulu 877-8244858 Ca - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 371.00	I/O Solutions, Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 853.00	Iaai - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 853.00	Iaai - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 123.00	Iaai - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 300.00	In *Action Pest Control - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 1,200.00	In *Edutainment Consultin - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 1,409.00	In *Fileonq - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 83.00	In *Frosty Solutions, Llc - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 495.00	In *Gps Commercial Cleani - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 153.00	In *Sam Brown Shields, In - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 153.00	In *Sam Brown Shields, In - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 2,438.66	Insight Public Sector - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 23.04	Insight Public Sector - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 70.34	Insight Public Sector - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 1,035.92	Insight Public Sector - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 94.76	Insight Public Sector - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 1,095.00	Inst. Of Police Tech & - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 1,095.00	Inst. Of Police Tech & - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 247.20	Int'L Code Council Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 415.44	Iron Mountain - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 95.82	Iron Mountain - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 50.00	Isfsi.Org - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 50.00	Isfsi.Org - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 1,595.00	Isfsi.Org - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 24.73	Joann Stores #2315 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 719.00	Justice Clearinghouse - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 197.39	Kb Commercial Products - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 1,011.27	Kenetrek Boots Dealer - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 364.03	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 94.90	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 253.64	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 39.98	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 6,500.00	Lexisnexis Epic - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 45.20	Life Assist Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 2,452.60	Life Assist Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 113.59	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 132.50	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 2,653.73	Ls North Ridge Fire Eq - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 4,050.00	Mcwholesale - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 135.30	Midland Mechanical Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 55.00	National Academies Of Eme - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 50.00	National Association Of S - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 50.00	National Association Of S - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 612.24	National Emergency Train - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 32.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 32.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 32.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 32.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.00	National Registry Emt - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 32.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 26.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 32.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 26.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 25.00	National Registry Emt - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 737.00	Northland Automotive - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 37.48	Office Depot #2135 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 31.66	Office Depot #450 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 66.69	Office Depot #450 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 28.67	Office Depot #450 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 140.32	Office Depot #450 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 163.27	Planet Hollywd Adv Depo - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 130.39	Planet Hollywd Adv Depo - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 381.67	Priceln*Thrifty Car Re - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 68.84	Primary Arms - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 129.00	Priority Dispatch Corp - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 425.00	Priority Dispatch Corp - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 425.00	Priority Dispatch Corp - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 299.00	Priority Dispatch Corp - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 299.00	Priority Dispatch Corp - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 1,310.00	Priority Dispatch Corp - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 129.00	Priority Dispatch Corp - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 150.85	Professional Pride, Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 75.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 55.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 75.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 35.00	Pzg**Mt Dli Ebiz - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 35.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 35.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 35.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 75.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 75.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 75.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 35.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 35.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 35.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 35.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 35.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 75.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 35.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 75.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 55.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 35.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 35.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 75.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 52.00	Rev.Com - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 4.00	Rev.Com - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 32.00	Rev.Com - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 42.00	Rev.Com - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 86.00	Rev.Com - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 7.75	Rev.Com - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 47.84	Scheels Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 60.36	Selbys - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 296.53	Sgt Fire Bags, Llc - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 40.00	Sk Martial Arts Gracie - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 4,044.15	Sons Of Liberty Gun Works - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 450.00	Sp Www.Rfmax.Us - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 132.95	Specialized Armament - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 285.92	Spectrum - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 293.44	Springhill Suites - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 1,312.00	Sq *Buckley Powder Co - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 97.90	Taco Bell 038935 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 119.89	The Bosworth Company - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 43.20	The Home Depot #3101 - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 143.85	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 9.98	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 134.12	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 13.24	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 567.66	The Home Depot 3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 217.00	The Home Depot 3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 45.74	The Ups Store 2594 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 33.00	The Ups Store 4741 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 75.98	The Ups Store 4741 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 86.04	The Ups Store 4741 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 114.61	The Ups Store 4741 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 136.00	Tlo Transunion - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 709.00	Tritech Forensics - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 154.44	Tst* Spitz Restaurant Gro - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 1,199.00	Tyler User Conference - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 298.20	United 0162360472481 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 11.67	Ups*Billing Center - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 13.26	Ups*Billing Center - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 145.81	Ups*Billing Center - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 28.11	Ups*Billing Center - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 11.64	Ups*Billing Center - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 390.74	Verizon Wrls W3091-01 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 259.73	Wasabi Technologies - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 14.75	West End Lock And Securit - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 53.00	West End Lock And Securit - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 19.50	West End Lock And Securit - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 19.50	West End Lock And Securit - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 46.33	Wm Supercenter #1956 - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 97.00	Www.Volgistics.Com - PCard
03/12/2024	ACH	U.S. Bank PCards	Public Safety	$ 162.05	Yellowstone Valley Elect - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 193.36	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 393.75	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 254.75	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 392.38	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 87.36	Amzn Mktp Us*R25766In0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 179.90	Amzn Mktp Us*R25It4Vr2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 101.34	Amzn Mktp Us*R25It4Vr2 - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 79.01	Amzn Mktp Us*R25lt4Vr2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 28.65	Billings Construction Sup - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 9.90	City Of Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 65.08	Facebk 2Eq32Wkw42 - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 4,347.20	Fastenal Company 01Mtbll - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 45.51	Fastenal Company 01Mtbll - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 1,182.74	Fastenal Company 01Mtbll - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 878.87	Ferguson Ent 2006 - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 12.61	Hose And Rubber Supply Bi - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 22.53	Hose And Rubber Supply Bi - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 15.54	Hose And Rubber Supply Bi - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 25.98	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 3.99	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 9.99	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 53.94	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 34.99	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 119.57	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 1,870.87	Lawson Products - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 1,254.74	Lawson Products - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 119.96	Lockwood Ace Hardware - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 54.98	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 11.88	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 106.41	Norco Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 67.85	Norco Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 50.00	Norco Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 201.29	Norco Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 188.12	Npc*New Pig Corp - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 159.43	Pacific Steel Branch #02 - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 13.05	Pacific Steel Branch #02 - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 120.64	Schnitzer Steel Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 41.98	Shipton'S Big R West - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 21.98	Shipton'S Big R West - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 132.96	Shipton'S Big R West - PCard
03/12/2024	ACH	U.S. Bank PCards	Solid Waste	$ 4.75	West End Lock And Securit - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 230.25	A And H Turf And Specialt - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 270.00	A-1 Rentals - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 35.24	Amzn Mktp Us*Rb1018Xc2 - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 26.22	Awg 3575 - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 46.96	Billings Hardware & Servi - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 51.93	Billings Hardware & Servi - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 258.98	Billings Hardware & Servi - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 26.46	Billings Hardware & Servi - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 82.88	Billings Hardware & Servi - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 170.69	City Of Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 69.60	Dxp Enterprises - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 385.00	Fp *Altitude Signal, Llc - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 4,085.00	Fp *Altitude Signal, Llc - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 41.59	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 122.43	Jares Fence Company Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 26.02	Jares Fence Company Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 13.96	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 10.74	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 25.99	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 22.49	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 110.44	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 14.62	Lithia Cjd Of Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 334.90	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 464.88	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 69.98	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 65.92	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 84.98	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 145.34	Napa Store 3547001 - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 63.73	Office Depot #2135 - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 41.88	O'Reilly 1751 - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 234.52	O'Reilly 1751 - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ (44.00)	O'Reilly 1751 - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 11.99	O'Reilly 1751 - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 23.21	Pacific Steel Branch #02 - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 119.98	Sams Club #4805 - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 71.88	Sams Club #4805 - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 23.98	Shipton'S Big R West - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 67.96	Shipton'S Big R West - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 199.99	Vermeer Mountain West, In - PCard
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 43.85	Yellowstone County Treas - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Street/Traffic	$ 149.90	Yellowstone Valley Elect - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 834.00	(Pc) 0725 Ced - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 24.86	(Pc) 0725 Ced - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 315.02	Aaim - Services - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 39.99	Adobe Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 12.99	Adobe Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 17.98	Albertsons #1227 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 78.93	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 217.05	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 434.10	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 157.86	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 108.60	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 54.30	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 165.69	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 264.30	American Solutions4 Bus - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 19.99	Amzn Mktp Us*R05Mq9Hd0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 116.98	Amzn Mktp Us*R20633Mr2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 28.99	Amzn Mktp Us*Rb4S06Qv0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 39.83	Amzn Mktp Us*Rb9Jn9F50 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 31.96	Amzn Mktp Us*Rb9Jn9F50 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 11.39	Amzn Mktp Us*Ri2Oj4B42 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 23.99	Amzn Mktp Us*Ri6Tz7Mr2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 52.81	Awg 3575 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 52.81	Awg 3575 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 14.00	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 8.21	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 6.13	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 2,326.88	City Of Billiings Buildin - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 1,553.00	Creative Monograms Smb - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 828.29	Dri*Printing Services - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 17.00	Dxp Enterprises - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 61.76	Econoprint - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 46.71	Ferguson Ent #1342 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 29.60	Ferguson Ent #1342 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ (6.61)	Ferguson Ent #1342 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 11.25	Ferguson Ent #1342 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 30.04	Gateway Fees - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 147.65	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 410.00	In *Cotter'S Sewer, Septi - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 1,060.00	In *Global Bolting Techno - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 8.77	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 41.10	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 59.99	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 16.50	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 22.39	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 33.98	Krispy Kreme #0582 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 2.78	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 4.98	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 33.22	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 52.44	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 105.53	Midland Implement Co - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 154.56	Napa Store 3547001 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 15.20	Napa Store 3547001 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 5.83	Napa Store 3547001 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 94.07	Napa Store 3547001 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 98.49	Office Depot #450 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 66.13	Pacific Steel Branch #02 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 257.10	Polaris Laboratories - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 34.68	Purvis Industries 68 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 262.50	Safety Kleen Systems - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 458.45	Safety Kleen Systems - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 150.00	Sq *Taylor Electric Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 48.00	Target 00001719 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 11.99	Target 00001719 - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 842.45	Usps.Com Every Door Dtml - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 194.88	Usps.Com Every Door Dtml - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 259.84	Usps.Com Every Door Dtml - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 3,990.00	West Networ - PCard
03/12/2024	ACH	U.S. Bank PCards	Transit	$ 16.59	Zoom.Us 888-799-9666 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 18.12	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 5.32	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 2.50	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 10.19	4Te*Alarm Services - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 10.19	4Te*Alarm Services - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 89.00	A And H Turf And Specialt - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 174.99	A And H Turf And Specialt - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 38.00	Aaim - Services - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 359.82	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 15.92	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 57.24	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 134.51	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 127.02	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 431.83	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 167.29	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 898.42	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 128.73	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 106.00	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 12.07	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 114.15	Amazon.Com*R206F36Y1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 65.91	Amazon.Com*Rb3K39Bi0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 46.05	Amazon.Com*Ri2Qj48E0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ (4.99)	Amzn Mktp Us - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 42.94	Amzn Mktp Us*R00Mu2Uq2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 9.50	Amzn Mktp Us*R037F4Hm0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 22.46	Amzn Mktp Us*R07Ad33Y1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 149.90	Amzn Mktp Us*R09Gn7G90 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 4.99	Amzn Mktp Us*R84Ta78V1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 38.79	Amzn Mktp Us*R87W54B21 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 8.92	Amzn Mktp Us*Rb06A4Gf0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 50.97	Amzn Mktp Us*Rb5Je2M61 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 162.54	Amzn Mktp Us*Rb5Vw8W61 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 108.82	Amzn Mktp Us*Rb62J3R60 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 155.45	Amzn Mktp Us*Ri5Q70Wn2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 3.50	Amzn Mktp Us*Ri61P4C72 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 69.00	Automationdirect.Com - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 3.39	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 8.58	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 30.91	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 60.33	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 152.57	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 4.04	Billings - Tacoma Screw P - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 24.87	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 116.58	Bloedorn Lumber Co- Bi - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 186.20	Ceuplan - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 187.69	City Of Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 18.15	City Of Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 298.61	City Of Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 74.66	City Of Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 38.46	City Of Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 1,000.00	City Of Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 94.99	Costco Whse #1644 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 51.80	Ebay O*10-11114-67500 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 101.08	Edge Construction Supp - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 28.16	Edge Construction Supp - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 312.22	F And H Mine Supply - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 10.75	Family Dollar - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 2.24	Fastenal Company 01Mtbll - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 120.73	Fedex270397811860 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 3,871.23	Feniex Industries Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 3,479.00	Gih*Globalindustrialeq - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 72.14	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 22.78	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 15.21	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 3.29	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 10.78	Harbor Freight Tools 207 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 125.88	Heights Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 440.00	In *Fife Water Services, - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 1,096.92	Joe Johnson Equip Montana - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 14.12	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 9.10	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 6.25	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 28.22	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 3.18	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 49.90	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 112.40	Midland Scientific - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 2,041.69	Midland Scientific - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 349.70	Midland Scientific - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 277.73	Midland Scientific - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 52.67	Midland Scientific - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 219.81	Midland Scientific - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 1,500.00	Msu-Bz-Extuniv-Cm - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 74.98	Murdoch'S Ranch&Home #99 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 88.43	Napa Store 3547001 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 26.90	Napa Store 3547007 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 249.99	Office Depot #2135 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 52.38	Office Depot #2135 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 472.27	Office Depot #2135 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 155.00	Paypal *Msawwa - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 1,423.08	Provantage - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 161.84	Provantage - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 83.49	Provantage - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 440.18	Purvis Industries 68 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 700.70	Pzg**Mt Dept Environ Q - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ (150.00)	Pzg**Mt Dept Of Ag Onl - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 155.35	Pzg**Mt Dept Of Ag Onl - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 75.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 238.88	Rock Auto - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 36.12	Rsd - Billings#57 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 453.36	Rsd - Billings#57 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 1,041.65	Rsd - Billings#57 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 78.85	Sherwin Williams 703203 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 2,534.41	Tfs*Fishersci Ecom Hus - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 6.48	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 2.28	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 340.00	Wef Main - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 40.80	Wm Supercenter #2923 - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 64.18	Www.Isa.Org - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 19.00	Yellowstone Valley Elect - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 287.69	Yellowstone Valley Elect - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 1,269.39	Yellowstone Valley Elect - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 306.57	Yellowstone Valley Elect - PCard
03/12/2024	ACH	U.S. Bank PCards	Wastewater	$ 228.36	Yellowstone Valley Elect - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 585.38	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 45.62	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 2.50	360 Office Solutions Inc - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Water	$ 5.32	360 Office Solutions Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 10.18	4Te*Alarm Services - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 80.90	4Te*Alarm Services - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 10.19	4Te*Alarm Services - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 89.00	A And H Turf And Specialt - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 175.00	A And H Turf And Specialt - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 76.00	Aaim - Services - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 38.00	Aaim - Services - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 428.80	Agilent Technologies, - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 127.02	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 12.07	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 898.41	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 339.75	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 530.25	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 386.17	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 106.00	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 359.82	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 57.23	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 47.78	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 167.28	Alsco Inc. - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 191.10	Amazon Reta* Storeroom - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ (5.00)	Amzn Mktp Us - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 128.81	Amzn Mktp Us*R00Mu2Uq2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 30.48	Amzn Mktp Us*R024J6372 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 9.49	Amzn Mktp Us*R037F4Hm0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 22.46	Amzn Mktp Us*R07Ad33Y1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 47.38	Amzn Mktp Us*R07Rv6R12 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 479.80	Amzn Mktp Us*R21R99452 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 86.69	Amzn Mktp Us*R813X4U61 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 5.00	Amzn Mktp Us*R84Ta78V1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 38.79	Amzn Mktp Us*R87W54B21 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 26.77	Amzn Mktp Us*Rb06A4Gf0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 118.70	Amzn Mktp Us*Rb1Oq3000 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 108.83	Amzn Mktp Us*Rb62J3R60 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 219.00	Amzn Mktp Us*Rb6918Ez0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 79.98	Amzn Mktp Us*Rb6O25Ex2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 39.36	Amzn Mktp Us*Ri5Sp0Vr0 - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Water	$ 85.35	Amzn Mktp Us*Ri60N4Ge1 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 10.49	Amzn Mktp Us*Ri61P4C72 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 99.95	Amzn Mktp Us*Ri65W7Wu2 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 74.95	Amzn Mktp Us*Rw5C21Vd0 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 367.00	Awwa.Org - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 75.00	Awwa.Org - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 246.00	Awwa.Org - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 5.14	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 159.46	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 3.38	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 12.09	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 30.91	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 8.58	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 50.70	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 24.88	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 4.04	Billings - Tacoma Screw P - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 820.16	Billings Kubota Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 164.26	Billings Kubota Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 116.58	Bloedorn Lumber Co- Bi - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 15.50	Carquest 3103 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 74.66	City Of Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 149.32	City Of Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 45.23	City Of Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 115.39	City Of Billings - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 195.99	Continental Battery - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 95.00	Costco Whse #1644 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 687.66	Cpi*Coleparmerinstrumt - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 74.63	Cpi*Coleparmerinstrumt - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 218.92	Cross Petroleum Service - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 82.50	Dxp Enterprises - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 12.95	Ebay O*10-11114-67500 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 33.89	Ebay O*19-11096-20173 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 51.80	Ebay O*19-11096-20174 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 80.50	Edge Construction Supp - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 28.16	Edge Construction Supp - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 344.77	Era - A Waters Company - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 312.23	F And H Mine Supply - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Water	$ 10.75	Family Dollar - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 2.24	Fastenal Company 01Mtbll - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 1,710.80	Ge Analytical Instrument - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 50.20	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 13.80	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 72.15	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 321.01	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 175.03	Grainger - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 77.21	Hach Company - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 391.00	Hach Company - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 14.98	Harbor Freight Tools 207 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 73.94	Harbor Freight Tools 207 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 10.79	Harbor Freight Tools 207 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 196.00	Heights Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 11.40	Kb Commercial Products - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 2.69	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 12.00	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 5.92	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 61.70	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 84.65	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 18.74	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 124.99	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 3.98	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 3.18	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 59.48	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 5.39	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 27.32	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 17.99	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 26.85	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 17.62	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 14.13	Kings Ace Hdwe - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 194.00	Knox Company Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 17.46	Lowes #00319* - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 618.00	Mt Rural Water System Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 17.02	Napa Store 3547001 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 161.78	Northwest Scientific Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 472.27	Office Depot #2135 - PCard

Check Date	Check #	Name	Fund Name	Amount	Item Desc
03/12/2024	ACH	U.S. Bank PCards	Water	$ 26.00	Pacific Steel Branch #02 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 31.89	Pacific Steel Branch #02 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 845.00	Perkin Elmer - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 812.00	Perkin Elmer - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 973.55	Power Service Inc - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 600.00	Pzg**Mt Dept Environ Q - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 270.00	Pzg**Mt Dept Environ Q - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 140.00	Pzg**Mt Dept Environ Q - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 75.00	Pzg**Mt Dli Ebiz - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 154.00	Roto-Rooter Billings - Ro - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 99.98	Samsclub #4805 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 265.44	Sherwin Williams 703203 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 44.99	Shipton'S Big R West - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 37.12	Stellar Industrial Supply - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 19.44	The Home Depot #3101 - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 113.56	Tst* Bw Blacksmith - Deli - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 778.70	Ulvsinc - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 868.55	Ulvsinc - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 6.00	West End Lock And Securit - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 64.19	Www.Isa.Org - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 27.88	Yellowstone Valley Elect - PCard
03/12/2024	ACH	U.S. Bank PCards	Water	$ 1,327.49	Yellowstone Valley Elect - PCard
03/12/2024	869317	Western Water Consultants	SID Const	$ 22,273.00	SID 1421 Cypress Point Professional Services Contract
03/12/2024	869320	Yellowstone Electric Co	Airport	$ 25,755.19	Terminal Fire Alarm Upgrade
03/12/2024	869321	Yellowstone Valley Elec	Radio	$ 157.16	RADIO TOWER SITES: WATER TANK (FOX) (4179004)
03/12/2024	869321	Yellowstone Valley Elec	Solid Waste	$ 5,340.25	Electricity service at Landfill 01/01/2024 - 02/01/2024.
03/12/2024	869321	Yellowstone Valley Elec	Solid Waste	$ 770.30	Electricity service at Landfill Flare 01/01/2024 - 02/01/2024.

City Council Regular

Date:	04/08/2024
Title:	Land Use Contrary to Zoning No. 3 - HomeFront new duplex in an NX3 zone at 302 Sioux Lane - Public Hearing
Presented by:	Nicole Cromwell
Department:	Planning & Community Services
Presentation:	Yes
Legal Review:	Not Applicable
Project Number:	PZX-24-00106

RECOMMENDATION

Planning staff recommends the City Council hold the public hearing as required by MCA 76-2-401 for land uses contrary to zoning proposed by public agencies on publicly owned property.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

HomeFront (officially known as the HomeFront Housing Authority of Billings) is proposing to build a duplex on property it owns at 302 Sioux Lane that is zoned Mixed Residential 3 (NX3) in the Billings Heights. The zone district has a minimum number of dwelling units required in a single structure. Five units is the minimum number of units. The proposed duplex is contrary to the zoning requirements. All other aspects of the proposed project appear to meet the other zoning and site development requirements.

The proposed project is unique as it proposes to use a 3D printing method of construction. This is a demonstration project for the organization. The site plan and applicant information is attached to this report.

The state law at MCA 76-2-402 allows a public agency to use public land contrary to local zoning regulations provided a hearing is held before the governing body of the jurisdiction. The law was changed in 2021 to change the venue of the public hearing (previously the Board of Adjustment) and eliminate the language that limited the scope and intent of the public hearing. The prior law stated that the Board of Adjustment "shall have no power to deny the proposed use but shall act only to allow a public forum for comment on the proposed use". The current law simply eliminated this language. Here is the current state law:

> *"76-2-401. Definitions. As used in 76-2-402, the following definitions apply:*
> *(1) "Agency" means a board, bureau, commission, department, an authority, or other entity of state or local government.*
> *(2) "Local zoning regulations" means zoning regulations adopted pursuant to Title 76, chapter 2.*
> *76-2-402. Local zoning regulations -- application to agencies.*
> *(1) Whenever an agency proposes to use public land contrary to local zoning regulations, a public hearing must be held and the agency shall attend the public hearing.*
> *(2) The local governing body shall hold a hearing within 30 days of the date the agency gives notice to the local governing body of its intent to develop land contrary to local zoning regulations."*

The new statute does not state that there is decision-making authority for the process with the City Council, it only requires the Council to hold a public hearing to accept public comment. There is no other action required of the City Council.

ALTERNATIVES

The City Council will hold a public hearing and take public comment. No other action is required of the City Council on this item.

FISCAL EFFECTS

There will be no effect on the Planning Division budget by holding the public hearing for this land use contrary to zoning.

Attachments

LUCZ No. 3 application
302 Sioux Lane Site Plan
Letter to City Council

APPLICATION FORM

CITY Land Use Contrary to Zoning ID: City LUCZ #__3___ - Project #PZX-24-00106

FEE: $563 + 40 cents per mailing label

The undersigned as owner(s) of the following described property hereby request a Public Hearing before the **City Council** on a **Land Use Contrary to Zoning** from the terms of the City of Billings Zoning Regulations.

TAX ID # _____ _____CITY WARD #_____

Legal Description of Property: WHITETAIL SQUARE SUB (10), S22, T01 N, R26 E, BLOCK 2, LOT 2A, AMD (13)

Address or General Location (If unknown, contact County Public Works): _____

302 SIOUX LANE, BILLINGS, MT 59105

Zoning Classification: NX3 - Mixed Residential 3

Size of Parcel (Area & Dimensions): 1.025 ac

Covenants or Deed Restrictions on Property: Yes_____ No1.025 ac

If yes, please attach to application

Brief explanation of the Project:

The project consists of a new, 3D printed, affordable rent, duplex (1330 sf plus patio spaces), on an existing site with (2) existing buildings (another duplex and property manager building). The new building is approx 14' tall, with "butterfly" style roof, 3D-printed concrete exterior walls, and sustainable features including solar panels.

*** Additional information may be required as determined by the Zoning Coordinator in order to fully evaluate the application.

Owner(s): HomeFront (The Housing Authority of Billings) - Patti Webster, CEO
(Recorded Owner)

2415 1st Ave N, Billings, MT 59101
(Address)

406-237-1916 pattiw@homefrontmt.org
(Phone Number) (email)

Agent(s): Eric Schmidt, High Plains Architects
(Name)

2720 Minnesota Avenue, Billings, MT 59101
(Address)

406-896-0250 eschmidt@highplainsarchitects.com
(Phone Number) (email)

I attest that all the information presented herein is factual and correct.

Patricia Webster Date: 09/15/2023

Date Stamp

Signature: _____

(Recorded Owner)

Date Stamp



SITE PHOTO - LOOKING SOUTH FROM SIOUX LN



SITE PHOTO - LOOKING SOUTHEAST



SITE PHOTO - LOOKING SOUTH



SITE PHOTO - LOOKING SOUTHWEST

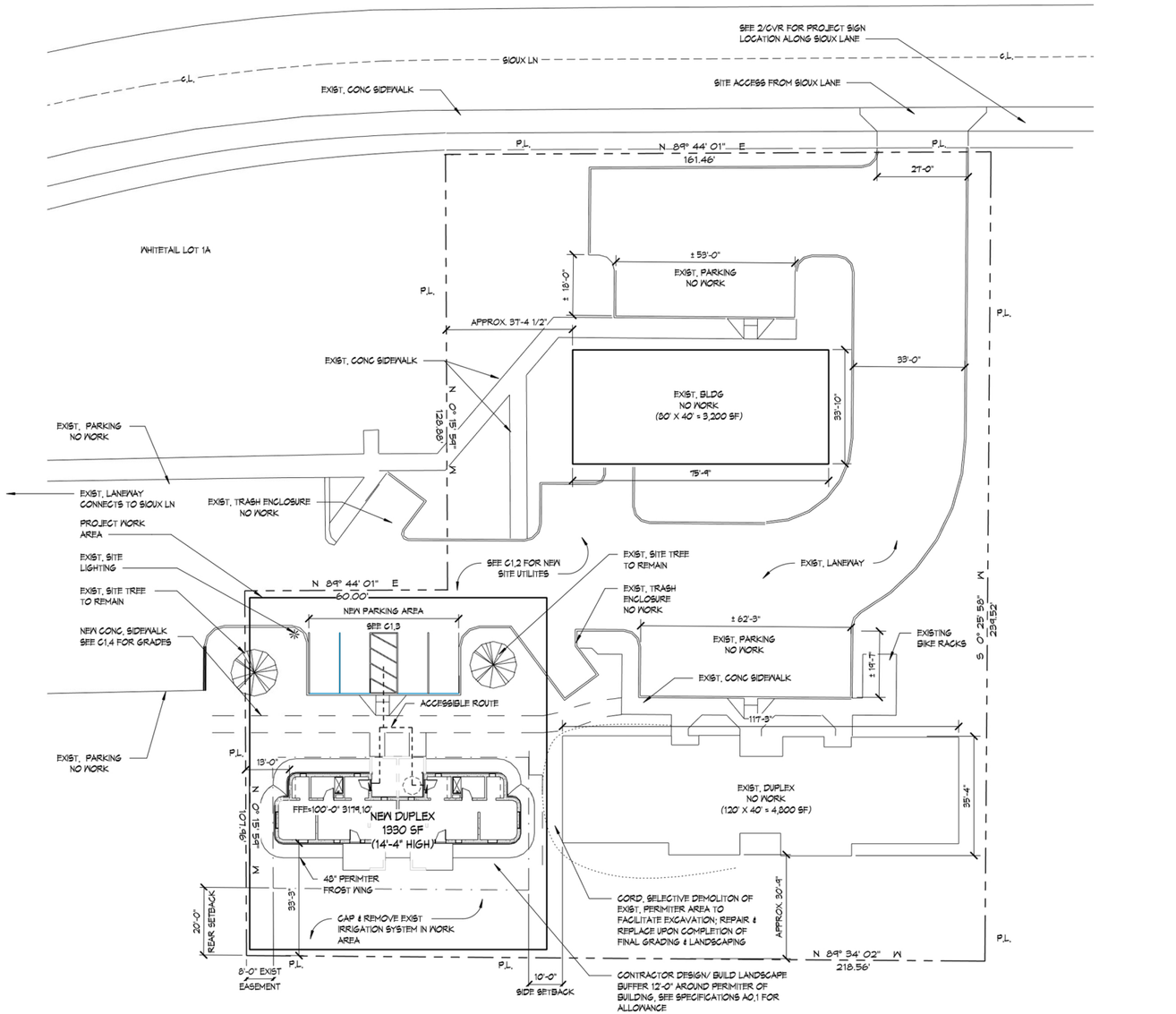
6 SITE PHOTOGRAPHS

A1.2 NTS



16 VICINITY MAP

A1.2 NTS



16 ZONING APPLICATION - SITE PLAN

A1.2 1" = 40'-0"

ZONING APPLICATION SITE PLAN
3D PRINTED HOMES
CONSTRUCTION DOCUMENTS

HIGH PLAINS
ARCHITECTS
PHONE (406) 969-0230 | FAX (406) 969-0235
GREG NELSON (406) 855-1345 | BILLINGS, MT 59103
P.O. BOX 2233 | BILLINGS, MT 59103
WWW.HIGHPLAINSARCHITECTS.COM

DRAWN BY: EJRS
PROJECT#: 22211.03
DATE: 10/31/2023

A1.2

©

PLOT STAMP: 10/31/2023 11:27:14 AM

HIGH PLAINS
ARCHITECTS

November 1, 2023

Mayor and City Council
210 N 27th St, Billings, MT 59101
Billings, MT 59101

RE: LAND USE CONTARY TO ZONING FOR 302 SIOUX LANE, BILLINGS, MT (WHITETAIL SQUARE SUB (10), S22, T01 N, R26 E, BLOCK 2, LO 2A, AMD (13)) – "FALCON RUN"

Dear Mayor and City Council,

On behalf of our client, Homefront, High Plains Architects hereby gives notice that Homefront intends to develop their property at 302 Sioux Lane in a manner where land use is contrary to zoning. Homefront is intending to develop a single-story, 1330 SF, residential duplex. The duplex will be constructed with an additive manufacturing process which commonly referred to as 3D printing This duplex will provide fully accessible, low-income housing to the community.

Existing on the property is a single-story, 4,800 SF residential duplex and a single-story 3,200 SF support building. The property intended for development is zoned NX3. Neither the existing buildings nor the new duplex meet the requirements of NX3.

As required by Montana State Law, a public hearing will be held before the local governing body within 30 days of this notice.

Sincerely,
High Plains Architects

Eric Schmidt AIA | LEED BD+C | CPHC®
Associate Vice President

City Council Regular

Date:	04/08/2024
Title:	Proposed Code Enforcement Ordinance Amendments - First Reading and Public Hearing
Presented by:	Tina Hoeger
Department:	Planning & Community Services
Presentation:	Yes
Legal Review:	Yes
Project Number:	N/A

RECOMMENDATION

Code Enforcement and City Legal staff recommend City Council conduct a public hearing and approve the proposed amendments to the City Nuisance, Graffiti, and Boarded Up Structures Ordinances on First Reading.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

The Code Enforcement Division previously brought proposed amendments to the Nuisance, Graffiti, and Boarded Up Structures ordinances to Council in a Work Session on February 20. Council made some minor suggestions to the proposed amendments and then decided to move them to a First Reading and Public Hearing. The suggested changes by Council were made to the ordinances and reviewed by City Legal. The attached Nuisance Ordinance shows strikeout and new language.

STAKEHOLDERS

The residents of Billings will ultimately benefit from the City making these ordinance amendments as the changes will increase efficiency of enforcement, better clarify the codes so people understand their rights and obligations under the City Code, and make it easier to apply the codes by the City Code Enforcement Division.

ALTERNATIVES

City Council may:

- Approve the proposed amendments to the Nuisance, Graffiti, and Boarded Up Structures ordinances; or,
- Approve with modifications the proposed amendments to the Nuisance, Graffiti, and Boarded Up Structures ordinances; or,
- Not Approve the proposed amendments to the Nuisance, Graffiti, and Boarded Up Structures ordinances

FISCAL EFFECTS

Should the Council decide to approve the ordinance changes, there could be some advantages of efficiency and process that might be fiscally beneficial. However, it would be difficult to measure them given the overall complexity of some of these enforcement processes. The establishment of the anti-graffiti fund reward opportunity would require an initial budget amount; however, Municipal Court fines would be deposited in this fund to help supplement the budget to support rewards for information leading to convictions.

Attachments

Presentation Notes
Nuisance Ordinance
Graffiti Ordinance
Boarded Up Structures Ordinance

Billings CODE ENFORCEMENT

Ordinance Amendments

Tina Hoeger
Code Enforcement Division Manager
hoegert@billingsmt.gov
406-869-3936

Billings CODE ENFORCEMENT

Requested Changes

1. Removed "and/or". Kept the language "and" in all 3 ordinances where applicable.
2. Nuisance Ordinance:
   a. Removed inoperable vehicle definition from the enforcement officer definition. This was a typo. (18-302 definitions)
   b. Kept responsible person definition intact and in place. Has a different connotation under this ordinance than the definition of responsible party in the graffiti ordinance. (18-302 definitions)
   c. Kept the original language of "three or more vehicles" as a public nuisance. (18-303 prohibitions, subsection 2)
   d. Changed the language of "trespassing" to "criminal activity" on the property within a 24-month period. (18-303 prohibitions, what would now be subsection 5 ix)
3. Graffiti Ordinance:
   a. Added definition for perpetrator (18-1102 definitions)
   b. Kept responsible party definition (18-1102 definitions)
   c. Resolution submitted for Council approval to establish reward level and anti-graffiti fund. (18-1116)
4. Boarded Up Structures Ordinance:
   a. Boarded buildings prior to enactment of revised ordinance are grandfathered.

ORDINANCE 24-_____

AN ORDINANCE OF THE CITY OF BILLINGS, PROVIDING THAT THE BILLINGS, MONTANA CITY CODE (BMCC) BE AMENDED BY REVISING ARTICLE 18-300, OF SAID CODE

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BILLINGS THAT:

Section 1. That Article 18-300, of the Billings, Montana City Code (BMCC) is amended so that such section shall read as follows:

Article 18-300. – NUISANCES

Sec. 18-301. Purpose.

The purpose of this article is to regulate conditions in the city that may constitute public nuisances, are injurious to public health, safety and welfare, obstruct the free use of property or interfere with the comfortable enjoyment of life or property and to provide for the remediation of such nuisances, to protect the public health, safety and welfare and to promote the economic stability of neighborhoods and areas within the city. It is also the purpose of this article to prevent and prohibit those conditions which reduce the value of private property, interfere with the enjoyment of public and private property, create and constitute public nuisances and contribute to the degradation of the character of neighborhoods and the depreciation of property values.

(Ord. No. 04-5280, § 1, 5-10-04; Ord. No. 19-5721, § 1, 1-14-19)

Sec. 18-302. Definitions.

For the purposes of this article the following definitions shall apply:

~~*Abandoned or decaying structure* means a structure that exhibits objectively determinable signs of deterioration specified in section 18-303(5)(B) sufficient to constitute a public nuisance.~~

Abate means to repair, replace, remove, destroy or otherwise remedy the condition in question by such means, in such a manner and to such an extent that is determined necessary in the interest of the health, safety and general welfare of the effected community.

Creating a hazard means a dangerous condition existing on property that would be attractive to children, including such things as an unfenced swimming pool, a refrigerator or other container that could trap a child inside, and an un-barricaded construction site.

~~*Dangerous structure* means any dangerous, falling or damaged residential dwelling or other structure excluding any structure related to an agricultural or farming operation. Openings in the walls or roof that allow unrestricted access by humans, animals or weather to the interior of the structure shall constitute a presumption that the structure is dangerous.~~

Enforcement officer means a code enforcement officer, police officer, or other city employee designated by the city council or the city administrator.

Inoperable vehicle means any discarded, ruined, wrecked, or dismantled motor vehicle or motor vehicle parts or components. Any vehicle not capable of immediate and legal operation on public roads shall be considered an inoperable vehicle for purposes of this section.

Junk means any worn out, cast off or unusable article or material which is ready for destruction or has been collected or stored as salvage, for conversion to some other use or for reduction into components. Junk includes but is not limited to old or scrap metal, rope, rags, household goods, appliances, furniture, vehicle parts or components, batteries, paper, tires, rubber debris or waste, iron, steel and other old or scrap ferrous or non-ferrous material.

Nuisance structure means a structure that exhibits objectively determinable signs of deterioration such as those set forth in section 18-303(5) which are sufficient to constitute a public nuisance and includes any dangerous, falling, or damaged residential dwelling, commercial structure, or other structure excluding any structure related to an agricultural or farming operation. Openings in the walls, roof or floor that allow unrestricted access by humans, animals, or weather to the interior of the structure shall constitute a presumption that the structure is ~~dangerous~~ a nuisance structure.

Public nuisance means a situation created or allowed to continue by the owner or occupant of real property which may endanger or be injurious to public safety or health, is offensive to the senses, renders any public right-of-way dangerous for passage, adversely affects the property values of adjacent properties, or obstructs the free use of property so as to interfere with the comfortable enjoyment of life or property. Nothing which is done or maintained under the express authority of a statute can be deemed a nuisance. A public nuisance is one which affects, at the same time, an entire community or neighborhood or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.

Open storage means exposed to the elements or not stored inside an enclosed structure which includes walls on all sides and a roof.

Person means any individual, firm, association, partnership, corporation or any entity, public or private.

Premises means any lot, parcel of land, building, parcel, real estate, land or portion of land whether improved or unimproved including any portion of any street, right-of-way

or alley lying between such lot or parcel of land and the center of such street, right-of-way or alley.

Responsible person means any agent, lessee, owner or other person occupying or having charge or control of any premises.

(Ord. No. 04-5280, § 2, 5-10-04; Ord. No. 13-5604, § 1, 5-28-13; Ord. No. 19-5721, § 2, 1-14-19)

Sec. 18-303. Prohibitions.

It is unlawful for any person to create or maintain on any premises or adjacent to a public right-of-way within the incorporated area of the city any condition that contributes to the creation of a public nuisance. Public nuisances include but are not limited to the following:

(1) Creating a hazard on any premises for more than twenty-four (24) hours.

(2) The open storage of more than three (3) inoperable vehicles on any premises for more than five (5) consecutive days.

(3) The open storage of a collection of junk (see definition) on any premises for more than five (5) consecutive days.

(4) Creating or maintaining on any premises an amount of decaying matter, animal or vegetable, that is not part of an agricultural or farming operation, so as to contaminate the atmosphere and be offensive to the senses and obstruct the free enjoyment of life and property.

(5) Maintaining a ~~dangerous~~ nuisance structure (see definition) ~~or an abandoned or decaying structure~~ for more than ten (10) days without abating the ~~dangerous or~~ nuisance condition. ~~of such structure.~~

~~a.~~ A ~~dangerous~~ nuisance structure is ~~being maintained~~ present if three (3) or more of the following listed conditions exist:

i. Broken, boarded, or missing windows and/or doors;

~~ii. Broken or missing doors;~~

~~iii~~.ii. Broken or missing attic vent(s);

~~iv~~.iii. Broken or missing under-floor vent(s);

iv. Building exteriors with substantially deteriorating or peeling paint ~~which allows the exterior building coverings to significantly deteriorate;~~

v~~i~~. Building exteriors with visible signs of decay such as siding with dry rot, warping or cracking;

vi~~i~~. Building with missing or severely damaged finish siding materials;

viii. Buildings with missing or substantially damaged exterior walls;

~~ix. Buildings with missing or severely damaged roofs; or~~

~~x~~.viii. Buildings with missing or severely damaged foundations.

~~b. An abandoned or decaying structure is being maintained if three (3) or more of the following listed conditions exist:~~

~~i. Buildings with substantially deteriorating or peeling paint which allows the exterior building coverings to significantly deteriorate;~~

~~ii. Building exteriors with visible signs of decay such as siding with dry rot, warping or cracking;~~

~~iii~~x. Two (2) or more reports to the police department or code enforcement division of building exteriors, walls, fences, driveways, or walkways which has been defaced by "graffiti" within a ~~12~~-24 month period;

~~iv~~x. Two (2) or more reports to the police department or code enforcement division of ~~unauthorized persons (trespassing)~~ criminal activity on the property within a ~~12~~-24 month period;

~~v~~xi. Has one or more essential utilities turned off for a period of 30 days or more;

~~v~~xii. Dead, dying or diseased trees, shrubs and other desired vegetation;

~~vii. Dead, dying or diseased shrubs and other desired vegetation;~~

~~vi~~xiii. Dead, dying or diseased lawn area(s) due to lack of water or other necessary maintenance;

~~ix~~iv. Neglected trees and shrubs growing uncontrolled without proper pruning;

xv. Building walls which are broken, defective, or significantly deteriorated; or

xvi. Building appurtenances such as railings, gutters, fences, gates or exterior light(s) are broken, fallen, or significantly damaged.

xvii. Damaged roofing to include missing shingles or roofing materials; warped shingles; or deteriorating roofing materials;

(6) Creating or maintaining on any premises:

(a) a condition constituting a public nuisance not otherwise described, or

(b) any location where persons gather for the purpose of engaging in unlawful conduct.

(Ord. No. 04-5280, § 3, 5-10-04; Ord. No. 13-5604, § 1, 5-28-13; Ord. No. 19-5721, § 3, 1-14-19)

Sec. 18-304. Enforcement and penalties.

A. Upon written or oral complaint of any citizen so affected by an alleged public nuisance, or if an enforcement officer becomes aware of a condition or situation that may constitute a public nuisance, the enforcement officer shall investigate the condition or situation within a reasonable period of time. The enforcement officer shall determine whether such condition or situation constitutes a public nuisance. If the officer finds there exists a public nuisance as defined herein, such officer shall give written notice to the owner of the premises and the responsible person who is maintaining or creating such public nuisance of the specific nature of the violation. The notice shall contain the following information:

1) The street address and legal description of the property sufficient for identification of the property;

2) A statement that the property is a potential public nuisance with a concise description of the conditions leading to the finding;

3) A statement that the public nuisance must be abated no less than ten (10) days after receipt of the notice. If the public nuisance is not abated within that time, the city may send a second/final ten (10) day notice.

4) If the public nuisance is still not abated after the second/final notice, the city may declare the property to be a public nuisance subject to the abatement procedures in section 18-305. In cases of emergency or exigent circumstances, the officer shall have the discretion to abate the public nuisance within less than the ten (10) days from receipt of the first notice.

B. Service of a notice of violation shall be made on the owner of the premises and the person responsible for the code violation by one or more of the following methods:

1) Personal service of the notice of violation.
2) By leaving a copy of the notice of violation at the person's residence with a person of suitable age and discretion who resides there and concurrently mailing notice as provided for herein.
3) By posting the notice of violation in a conspicuous place on the property where the violation occurred and concurrently mailing notice as provided for herein.
4) For the owner of the premises, service by mail may be made by mailing a copy, postage prepaid, by ordinary first-class mail, to the person's residential address. The taxpayer's address as shown on the tax records of Yellowstone County for the property where the violation occurred shall also be deemed to be a proper address for the purpose of mailing such notice.
5) For the responsible person, service by mail may be made for a notice of violation by mailing a copy, postage prepaid, by ordinary first-class mail, to the person's residential address or at the address of the violation. The person's address as shown on the records of the Montana Motor Vehicle Division shall also be deemed to be a proper address for the purpose of mailing such notice.

6) In all cases, service by mail shall be presumed effective upon the third business day following the day upon which the notice of violation was placed in the mail.
7) If either the owner of the premises or the responsible person cannot be personally served within the City of Billings, and if an address for mailed service cannot reasonably be determined, then service may be made upon that person by posting the notice of violation in a conspicuous place on the property where the violation occurred. Service by posting in this instance shall be presumed effective upon the seventh day following the day upon which the notice was posted.

C. Proof of service shall be made by a written declaration under penalty of perjury executed by the person effecting the service declaring the time and date of service, the manner by which the service was made, and, if by posting, the facts showing the attempts to serve the person personally or by mail.

D. Failure to make or attempt service on any person named in the notice of violation shall not invalidate any proceedings as to any other person duly served.

~~(b)~~ E. If the public nuisance is not abated within the time period specified in the notice of violation then the owner of the premises and the responsible person ~~Violations of this article~~ may be cited for the violation into municipal court as a municipal infraction ~~citations~~ and shall be ~~are~~ subject to civil penalties as specified in section 18-1304. Each day that a violation occurs is a separate offense.

~~(c)~~ F. The city may also pursue civil remedies provided by law including seeking injunctive relief or a court order to allow the city to enter the property for the purposes of abating such public nuisance.

(Ord. No. 04-5280, § 4, 5-10-04; Ord. No. 19-5721, § 4, 1-14-19)

Editor's note(s)—Ord. No. 19-5721, § 4, adopted Jan. 14, 2019, amended the title of § 18-304 to read as herein set out. The former § 18-304 title pertained to enforcement.

Sec. 18-305. Abatement and collection of costs.

~~The remedies specified in this section shall be in addition to all other remedies provided by law. When a public nuisance has not been abated by the responsible party within the time specified in the notice of violation and after a first municipal infraction citation has been issued, the following procedure applies:~~

~~(1) The city may bring a civil action in the municipal court to have the nuisance declared as such by the court and for an order enjoining the public nuisance or authorizing its restraint, removal, termination or abatement.~~

~~(2) The action to declare and abate a public nuisance shall be brought by the city in the name of the people of the city, by the filing of a complaint, which shall be verified or supported by an affidavit. Summons shall be issued and served as provided by state law for civil cases. If the owner or responsible person cannot~~

be personally served after good faith efforts, service may be made by publication as provided in state law for matters concerning real property.

(3) The respondent shall file a response as provided by state law for civil cases and as set forth in sections 18-1302 and 18-1303. Within thirty (30) days of the response being filed, the court shall set the matter for scheduling conference and/or trial. Failure to appear on any other date set for trial shall be grounds for entering a default and judgment thereon against a non-appearing party.

(4) If the respondent has filed no response as required in section 18-305(3) and the city proves that proper service was made on the respondent, the court may enter judgment against the respondent as provided by state law for civil cases and as set forth in section 18-1303. For good cause shown, and prior to enforcement, the court may set aside an entry of default and the judgment entered thereon.

(5) The judgment of the municipal court may be appealed to the district court.

(6) The procedure for determining the cost of abatement of a public nuisance will be as follows:

a. The enforcement officer will secure a good faith estimate of the costs to abate the public nuisance prior to or coincidentally with the civil action filed in municipal court. The enforcement officer may utilize city resources, including staff and equipment, to complete some or all components of a court ordered abatement, and the value of utilization of staff and equipment shall be assessed in accordance with this section.

b. The enforcement officer will forward the good faith estimate of the costs to abate the public nuisance to the municipal court and the city's legal staff.

c. The municipal court may assess as a judgment the good faith estimate of the costs of abatement.

d. The municipal court may allow the property owner a period of time, not to exceed forty-five (45) days, to abate the public nuisance prior to assessing the good faith estimate in a judgement.

e. At the expiration of the period of time allowed by the municipal court, the city may proceed to enter the property and abate the nuisance as ordered and in accordance with the good faith estimate.

f. The enforcement officer will coordinate the abatement project and oversee the work as it is being performed.

g. After the planning director and the enforcement officer have approved the final bill it will be forwarded to the city finance department for payment by the property owner.

h. A copy of approved bill(s) and proof of disbursement is placed in the enforcement agency file maintained by enforcement officer. These

documents, along with the itemized abatement expense report are used to determine the total cost of abatement for the property. The abatement expense report is then certified and transmitted to the finance department for approval of assessment on the real property being abated.

i. The property owner will then be sent an abatement expense report for the subject property and be given notice that any assessment that is not paid shall become a lien upon the property and is enforceable in the same manner as the nonpayment of property taxes. The interest fee will be waived for any payments made within thirty (30) days of notice.

j. A summary listing of the assessments, tax codes, and property owners will be kept by the clerk and recorder through August 31 of each year, and the list shall be presented to the department of revenue for billing on the next real property tax statement.

k. A special abatement fund will be established to account for costs, collections, and transactions necessary to the efficient operation of the program. Assessment funds collected are returned to the designated abatement account for future use on other involuntary property abatements or for transfer back to the city general fund.

l. Any judgment assessed by the municipal court may not exceed the statutory amount as set in MCA 3-11-103, as amended. The portion of a good faith estimate that exceeds this statutory amount may not be assessed as a judgment by the municipal court.

(Ord. No. 04-5280, § 8, 5-10-04, Ord. No. 13-5604, § 1, 5-28-13; Ord. No. 19-5721, § 6, 1-14-19)

Editor's note(s)—Ord. No. 19-5721, §§ 5, 6, adopted Jan. 14, 2019, repealed § 18-305 and renumbered § 18-308 as § 18-305 as set out herein. The historical notations have been retained with the amended provisions for historical purposes. The former § 18-305 pertained to right of entry, and derived from Ord. No. 04-5280, § 5, adopted May 10, 2004.

The procedure for abatement and collection of costs of a public nuisance shall be as set forth in Sec. 18-1304 and the following:

1. Upon finding a violation of Sec. 18-303 has been proven, the municipal court may either order the defendant to abate or cease the violation, or authorize the city to abate or correct the violation. The municipal court may allow the property owner of the premises and the responsible party up to thirty (30) days to abate the public nuisance upon the expiration of which the city shall be authorized by the court to enter the property and abate the nuisance.

2. The enforcement officer will coordinate any abatement project conducted by the city and oversee the work as it is being performed. The enforcement officer may utilize city resources, including staff and equipment, to complete some or all of the components of a court ordered abatement, and the value of utilization of staff and equipment shall be assessed in accordance with this section.
3. Upon completion of an abatement project, the enforcement officer shall prepare an itemized abatement expense report and final bill for approval by the Code Enforcement Division Manager. Upon the Code Enforcement Division Manager's approval, the final bill will be forwarded to the city finance department for payment by the property owner.
4. A copy of approved bill(s) and proof of disbursement shall be placed in the enforcement agency file maintained by the enforcement officer. These documents, along with the itemized abatement expense report, shall be used to determine the total cost of abatement for the property. The abatement expense report shall be transmitted to the finance department for approval of assessment on the real property being abated.
5. The property owner of the premises will then be sent an abatement expense report for the subject property and be given notice that any assessment that is not paid shall become a lien upon the property that is enforceable in the same manner as the nonpayment of property taxes. The interest fee will be waived for any payments made within thirty (30) days of notice.
6. A summary listing of the assessments, tax codes, and property owners will be kept by the clerk and recorder through August 31 of each year, and the list shall be presented to the department of revenue for billing on the next real property tax statement.
7. A special abatement fund will be established to account for costs, collections, and transactions necessary to the efficient operation of the program. Assessment funds collected are returned to the designated abatement account for future use on other involuntary property abatements or for transfer back to the city general fund.
8. The municipal court may also order the city's costs for abatement or correction of the violation be entered as a judgment against the defendant. A request for judgment shall be accompanied by an itemized abatement expense report and final bill which have been approved by the Code Enforcement Division Manager.
9. Any judgment assessed by the municipal court may not exceed the statutory amount as set in MCA 3-6-103.

Sec. 18-306. Authority of the city to seek other remedies.

This section is not the exclusive remedy for any nuisance action brought by the City of Billings. Nothing in this section prohibits or precludes the City of Billings from filing an action in Ddistrict Ceourt under state law.

(Ord. No. 19-5721, § 6, 1-14-19)

Editor's note(s)—Ord. No. 19-5721, § 6, adopted Jan. 14, 2019, repealed the former § 18-306 and enacted a new § 18-306 as set out herein. The former § 18-306 pertained to emergency abatement and derived from Ord. No. 04-5280, § 6, adopted May 10, 2004 and Ord. No. 13-5604, § 1, adopted May 28, 2013.

Sec. 18-307. Reserved.

Editor's note(s)—Ord. No. 19-5721, § 6, adopted Jan. 14, 2019, repealed § 18-307, which pertained to voluntary abatement and derived from Ord. No. 04-5280, § 7, adopted May 10, 2004 and Ord. No. 13-5604, § 1, adopted May 28, 2018. Rnbd 18-308 as 18-305

Sec. 18-308. Reserved.

Editor's note(s)—See the editor's note to § 18-305.

Sec. 18-309. Reserved.

Editor's note(s)—See the editor's note to § 18-103.

Section 2. **EFFECTIVE DATE.** This ordinance shall be effective thirty (30) days after second reading and final adoption as provided by law.

Section 3. **REPEALER.** All resolutions, ordinances, and sections of the City Code inconsistent herewith are hereby repealed.

Section 4. **SEVERABILITY.** If any provision of this ordinance or the application thereof to any person or circumstances is held invalid, such invalidity shall not affect the other provisions of this ordinance which may be given effect without the invalid provisions or application, and, to this end, the provisions of this ordinance are declared to be severable.

PASSED by the City Council on first reading the 8th day of April 2024.

PASSED, ADOPTED and APPROVED on second reading this 22nd day of April, 2024.

CITY OF BILLINGS

BY:_____
William A. Cole, Mayor

Attest
:

_____
Denise R. Bohlman, City Clerk

ORDINANCE 24-_____

AN ORDINANCE OF THE CITY OF BILLINGS, PROVIDING THAT THE BILLINGS, MONTANA CITY CODE (BMCC) BE AMENDED BY REVISING ARTICLE 18-1100, OF SAID CODE

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BILLINGS THAT:

Section 1. That Article 18-1100, of the Billings, Montana City Code (BMCC) is amended so that such section shall read as follows:

Article 18-1100. – GRAFFITI

Sec. 18-1101. Purpose ~~and intent~~.

Graffiti presents a threat to the health, safety and welfare of the community and reduces the value of adjoining properties. Graffiti is deemed a public nuisance in accordance with Sec. 18-301. Standards for graffiti abatement established in this section will help improve the appearance of these structures and preserve neighborhood property values.

~~The city council is enacting this article to help prevent the spread of graffiti vandalism and to establish a program for the removal of graffiti from public and private property. The council is authorized to enact this article pursuant to its police powers, as specified in Section 1.01 of the City Charter and MCA §§ 7-1-101, 7-5-4101, and 7-5-4104 that authorize the city to have all power possible for a self-government city as fully and as completely as though they were fully enumerated in the Charter, to exercise any power not prohibited by the Constitution or laws of the state, to make and pass all laws not repugnant to the Constitution or laws of the state necessary for the government or management of the affairs of a city or town, and to define and abate nuisances and impose fines on persons guilty of creating, continuing or suffering nuisances to exist on premises they occupy or control.~~

~~The council finds that graffiti is a public nuisance and destructive of the rights and values of property owners as well as the entire community. Unless the city acts to remove graffiti from public and private property, the graffiti tends to remain. Other properties then become the target of graffiti, and entire neighborhoods are affected and become less desirable places in which to be, all to the detriment of the city.~~

~~The city council intends, through the adoption of this article, to provide additional enforcement tools to protect public and private property from acts of graffiti vandalism and defacement. The council does not intend for this article to conflict with any existing anti-graffiti state laws.~~

(Ord. No. 05-5332, § 1, 7-11-05)

Sec. 18-1102. Definitions.

~~For the purposes of this article, the following words shall have the meanings respectively ascribed to them in this section, except where the context clearly indicates a different meaning:~~

For the purposes of this article the following definitions shall apply:

Graffiti means any unauthorized inscription, word, figure, painting or other defacement that is written, marked, etched, scratched, sprayed, drawn, painted, or engraved on or otherwise affixed to any surface of public or private property by any graffiti implement, to the extent that the graffiti was not authorized in advance by the owner or occupant of the property, or, despite advance authorization~~, is otherwise deemed a public nuisance by the city council.~~ constitutes a public nuisance as defined in Section 18-302

Graffiti implement means an aerosol paint container, a broad-tipped marker, gum label, paint stick or graffiti stick, etching equipment, brush or any other device capable of scarring or leaving a visible mark on any natural or man-made surface.

Owner means any entity or entities have a legal or equitable interest in real or personal property including but not limited to the interest of a tenant or lessee.

Paint stick or *graffiti stick* means any device containing a solid form of paint, chalk, wax, epoxy, or other similar substance capable of being applied to a surface by pressure and leaving a mark of at least one-eighth (⅛) of an inch in width.

Perpetrator means a person who applies graffiti to or on any property located within the City of Billings.

Person means any individual, partnership, cooperative association, private corporation, personal representative, receiver, trustee, assignee, or any other legal entity.

Property means any real or personal property and that which is affixed, incidental or appurtenant to real property including but not limited to any structure, fence, wall, sign or any separate part thereof whether permanent or not.

Responsible party means an owner or entity or person acting as an agent for an owner by agreement who has authority over the property or is responsible for the property's maintenance or management. Irrespective of any arrangement to the contrary with any other party, each owner shall always be a responsible party for the purposes of this chapter. There may be more than one responsible party for a particular piece of property.

Unauthorized means without the consent of the responsible party.

(Ord. No. 05-5332, § 2, 7-11-05)

Sec. 18-1103. ~~Prohibited acts.~~ Prohibitions.

~~Defacement. It shall be unlawful for any person to apply graffiti to any natural or man-made surface on any city-owned property or, without the permission of the owner or responsible party, on any non-city-owned property.~~

It shall be unlawful for any person to apply graffiti to or on any property located within the City of Billings.

(Ord. No. 05-5332, § 3, 7-11-05)

Sec. 18-1104. Enforcement and Penalties - Perpetrator.

(a) *Fines and imprisonment.* Any person violating this article by applying graffiti to any property shall be punished as provided in section 1-110.

(b) *Restitution.* In addition to any punishment specified in this section, the court shall order any violator to make restitution to the victim for damages or loss caused directly or indirectly by the violator's offense in the amount or manner determined by the court.

(c) *Community service.* In-lieu of, or as part of, the penalties specified in this section, an offender may be required to perform community service as described by the court based on the following minimum requirements:

(1) The offender shall perform at least thirty (30) hours of community service.

(2) The entire period of community service shall be performed under the supervision of a community service provider approved by the municipal court.

(3) Reasonable effort shall be made to assign the minor or adult to a type of community service that is reasonably expected to have the most rehabilitative effect on the offender, including community service that involves graffiti removal.

(Ord. No. 05-5332, § 4, 7-11-05)

Sec. 18-1105. Rewards and reimbursements for information.

(a) The city may offer a reward in an amount to be established by resolution of the city council for information leading to the identification and apprehension of any person who willfully damages or destroys any public or private property by the use of graffiti. In the event of damage to public property, the offender or the parents or legal guardian of any unemancipated minor must reimburse the city for any reward paid. In the event of multiple contributors of information, the reward amount shall be divided by the city in the manner it shall deem appropriate.

(b) Claims for rewards under this section shall be filed, in writing, with the city ~~in the manner specified by the city council.~~ clerk. Each claim should:

(1) Specifically identify the date, location, and kind of property damaged or destroyed;

(2) Identify by name the person who was convicted; and

(3) Identify the court and the date upon which the conviction occurred.

(c) The City Administrator shall review each claim for reward submitted pursuant to this chapter and either accept, accept in part, or deny the claim. No claim for a reward shall be accepted by the City Council unless the City investigates and verifies the accuracy of the claim and determines that the requirements of this section have been satisfied. The investigation must determine that the claimant's information was relevant and directly responsible for the arrest and conviction of the suspect.

(d) The offer of a reward is made to members of the public generally. However, no law enforcement officer, municipal officer, employee of the City, or person(s) apprehended shall be eligible for such a reward.

(e) Any person committing graffiti vandalism shall be civilly liable for any reward paid pursuant to this section. If said person is an unemancipated minor, then the parent or lawful guardian of said minor shall be civilly liable for any reward paid pursuant to this section.

~~(c) No claim for a reward shall be allowed unless the city investigates and verifies the accuracy of the claim and determines that the requirements of this section have been satisfied.~~

(Ord. No. 05-5332, § 5, 7-11-05)

Sec. 18-1106. Graffiti as a public nuisance.

(a) The existence of graffiti on ~~public or~~ private property in violation of this article is expressly declared to be a public nuisance and, therefore, is subject to the ~~removal and~~ abatement provisions specified in Section 18-305. ~~in this article~~.

(b) It is the duty of both the owner of the private property to which the graffiti has been applied and any responsible party to at all times keep the private property clear of graffiti.

(c) Failure to remove graffiti by the private property owner or any responsible party shall be punished as a municipal infraction and shall be subject to civil penalties as specified in section 18-1304.

(Ord. No. 05-5332, § 6, 7-11-05)

Sec. 18-1107. Removal of graffiti by perpetrator.

Any person applying graffiti on public or private property shall have the duty to remove the graffiti within twenty-four (24) hours after notice by the city or private owner of the property involved. Such removal shall be done in a manner prescribed by the chief of police, the director of the department of public works, or any additional city department head, as authorized by the city council. Any person applying graffiti shall be responsible for the removal or for the payment of the removal. Failure of any person to remove graffiti or pay for the removal shall constitute an additional violation of this article.

(Ord. No. 05-5332, § 7, 7-11-05)

Sec. 18-1108. Removal of graffiti by property owner or city.

If graffiti is not removed by the perpetrator according to section 18-1107, graffiti shall be removed pursuant to the following provisions:

Property owner responsibility. It is unlawful for any person who is the owner or responsible party of property to permit property that is defaced with graffiti to remain defaced for a period of ten (10) days after service by first class mail of notice of the defacement. The notice shall contain the following information:

(1) The street address and legal description of the property sufficient for identification of the property;

(2) A statement that the property is a potential graffiti nuisance property with a concise description of the conditions leading to the finding;

(3) A statement that the graffiti must be removed within ten (10) days after receipt of the notice and that if the graffiti is not abated within that time the city will declare the property to be a public nuisance, subject to the abatement procedures in section 18-1114.

(4) An information sheet identifying any graffiti removal assistance programs available through the city and private graffiti removal contractors.

(Ord. No. 05-5332, § 8, 7-11-05)

Sec. 18-1109. Failure to comply.

Upon first failure, neglect or refusal to remove the graffiti during the prescribed period, the city shall give notice to the noncomplying owner, agent or occupant thereof. Such notice shall provide as a minimum:

(1) That the noncomplying owner, or agent thereof, is allowed ten (10) days from the date of notice of noncompliance to remove;

(2) That upon failure to comply the city may by its own work forces or by contract cause the graffiti to be removed and the cost thereof shall be assessed against the noncomplying real property together with an additional administrative cost equal to twenty-five (25) percent of the cost of removal and a twenty-five dollar ($25.00) penalty;

(3) If the owner or agent of the property continues to neglect to maintain the property free from graffiti, the city may at its sole discretion remove the graffiti again as needed without additional notice of any kind. Charges as in subsection (2), including penalty, will be assessed for each time the city removes the graffiti;

(4) That the assessed amount together with costs and penalties shall constitute a lien on the noncomplying real property and will be taxed as a special assessment against the real property.

(5) Appeal. The owner or agent may appeal any determination that they have failed to comply with the requirements of any order to the director of the city-county planning department.

(6) Notice. Notice under this article is sufficient if served upon the owner or responsible person personally or mailed regular mail to the last known address owner or responsible person or the last address of the owner shown on the tax rolls of the county. Upon mailing, the city clerk shall execute an affidavit of mailing. Notice shall be deemed given when deposited in a United States Postal Service receptacle.

(Ord. No. 05-5332, § 9, 7-11-05)

Sec. 18-1110. Failure to comply misdemeanor.

Any person who willfully fails to comply with the provisions of this article is guilty of a misdemeanor and upon a signed complaint shall be punished as provided in section 1-110.

(Ord. No. 05-5332, § 10, 7-11-05)

Sec. 18-1111. Exceptions to property owner responsibility.

The removal requirements of section 18-1108 shall not apply if the property owner or responsible party can demonstrate that:

(1) The property owner or responsible party lacks the financial ability to remove the defacing graffiti; or

(2) The property owner or responsible party has an active program for the removal of graffiti and has scheduled the removal of the graffiti as part of that program, in which case it shall be unlawful to permit such property to remain defaced

with graffiti for a period of ten (10) days after service by first class mail of notice of the defacement.

(Ord. No. 05-5332, § 11, 7-11-05)

Sec. 18-1112. right of city to remove.

(a) *Use of public funds.* Whenever the city becomes aware or is notified and determines that graffiti is located on publicly or privately owned property viewable from a public or quasi-public place, the city shall be authorized to use public funds for the removal of the graffiti, or for the painting or repairing of the graffiti, but shall not authorize or undertake to provide for the painting or repair of any more extensive an area than that where the graffiti is located, unless the city administrator, or the designee of the city administrator, determines in writing that a more extensive area is required to be repainted or repaired in order to avoid an aesthetic disfigurement to the neighborhood or community, or unless the property owner or responsible party agrees to pay for the costs of repainting or repairing the more extensive area.

(b) *Right of entry on private property.* Prior to entering upon private property or property owned by a public entity other than the city for the purpose of graffiti removal the city shall attempt to secure the consent of the property owner or responsible party and a release of the city from liability for property damage or personal injury. If the property owner or responsible party fails to remove the offending graffiti within the time specified by this article, or if the city has requested consent to remove or paint over the offending graffiti and the property owner or responsible party has refused consent for entry on terms acceptable to the city and consistent with the terms of this section, the city shall commence abatement and cost recovery proceedings for the graffiti removal according to the provisions specified below.

(Ord. No. 05-5332, § 12, 7-11-05)

Sec. 18-1113. Abatement and cost recovery proceedings.

(a) Annually the city shall prepare a list of all lots, tracts and parcels of real property within the city from which and adjacent to which graffiti was removed by the city and for which such charges and penalties have not yet been paid, the list shall include as a minimum the following:

(1) Name as shown by the tax rolls, common address if known;

(2) Tax code of the property;

(3) Legal description of the lot, tract or parcel;

(4) Cost of the graffiti removal for that property;

(5) Administrative costs;

~~(6) Penalty assessed.~~

~~(b) The assessment list shall be incorporated into a special assessment resolution in proper form which resolution shall be presented to the city council for consideration. From and after passage of the resolution, the assessments stated therein, together with administrative costs and penalty shall constitute a special assessment, as provided in MCA §§ 7-1-101 and 7-5-4123 and a lien on the real property shown on the assessment list. A copy of the resolution after passage shall be certified to the official collecting the city taxes and assessments.~~

~~(Ord. No. 05-5332, § 13, 7-11-05)~~

Sec. 18-1114. Ease of removal provisions.

(a) *Common utility colors and paint-type.* Any gas, electric, telephone, water, sewer, cable, telephone and other utility operating in the city shall paint its above-surface metal fixtures with a uniform paint type and color, or wrap, that meets with the approval of the city administrator or the city administrator's designee.

(b) *Conditional encroachment permits.* All encroachment permits issued by the city shall, among such other things, be conditioned on:

(1) The permittee's application of an anti-graffiti material to the encroaching object of a type and nature that is acceptable to the city administrator, or the city administrator's designee;

(2) The permittee's immediate removal of any graffiti;

(3) The city's right to remove graffiti or to paint the encroaching object; or

(4) The permittee's providing the city with sufficient matching paint and/or anti-graffiti material on demand for use in the painting of the encroaching object containing graffiti.

(Ord. No. 05-5332, § 14, 7-11-05)

~~Sec. 18-1115. Prevention provisions.~~

~~*Retro-fit existing graffiti-attracting surfaces; non-residential structures.* The following provisions may be incorporated in a graffiti eradication order:~~

~~(1) *At owner's expense.* Any surface of a structure on a parcel of land used for non-residential purposes that has been defaced with graffiti more than five (5) times in twelve (12) months shall be declared a public nuisance and required to be retrofitted, at the cost of the property owner, with features or qualities as may be established by the city as necessary to reduce the attractiveness of the surface for graffiti, or as necessary to permit more convenient or efficient removal of graffiti. In exercising the authority hereunder, the city may not impose a cost on the property owner of greater than three thousand dollars ($3,000.00).~~

(2) *At city's cost.* If the property owner or responsible party of property used for non-residential purposes on which is located a surface of a structure that has been defaced with graffiti more than five (5) times in twelve (12) months lacks the financial ability to make modifications, the owner or responsible party shall permit the city to enter the property and, at the city's cost, make modifications as necessary to reduce the attractiveness of the surface for graffiti, or as necessary to permit more convenient or efficient removal of graffiti.

(3) *Appeal.* The owner or agent may appeal any determination that they are required to retrofit the property with features or qualities necessary to reduce the attractiveness of the surface for graffiti or to permit more convenient or efficient removal of graffiti to the director of the city-county planning department.

(Ord. No. 05-5332, § 15, 7-11-05)

Sec. 18-1116. Anti-graffiti fund.

The city council may at its discretion ~~hereby~~ create~~s~~ the city anti-graffiti fund. Costs recovered for graffiti removal and penalties assessed in municipal court against violators of this article shall be placed in the fund, along with any monetary donations received from persons wishing to contribute to the fund. The council, or its designee, shall direct the expenditures of monies in the fund. Such expenditures shall be limited to the payment of the cost of labor and materials for graffiti removal, the payment, at the discretion of the city council, or its designee, of rewards for information leading to the conviction of violation of the article, the costs of administering the article, and such other public purposes pertaining to graffiti as may be approved by the council by resolution.

(Ord. No. 05-5332, § 16, 7-11-05)

Section 2. **EFFECTIVE DATE.** This ordinance shall be effective thirty (30) days after second reading and final adoption as provided by law.

Section 3. **REPEALER.** All resolutions, ordinances, and sections of the City Code inconsistent herewith are hereby repealed.

Section 4. **SEVERABILITY.** If any provision of this ordinance or the application thereof to any person or circumstances is held invalid, such invalidity shall not affect the other provisions of this ordinance which may be given effect without the invalid provisions or application, and, to this end, the provisions of this ordinance are declared to be severable.

PASSED by the City Council on first reading the 8th day of April, 2024..

PASSED, ADOPTED and APPROVED on second reading this 22nd day of April, 2024.

CITY OF BILLINGS

BY:_____
William A. Cole, Mayor

Attest
:

_____
Denise R. Bohlman, City Clerk

ORDINANCE 24-_____

AN ORDINANCE OF THE CITY OF BILLINGS, PROVIDING THAT THE BILLINGS, MONTANA CITY CODE (BMCC) BE AMENDED BY REVISING ARTICLE 18-1400, OF SAID CODE

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BILLINGS THAT:

Section 1. That Article 18-1400, of the Billings, Montana City Code (BMCC) is amended so that such section shall read as follows:

Article 18-1400. – BOARDED UP STRUCTURES

Sec. 18-1401. Purpose ~~and intent~~.

~~Abandoned s~~ Structures left boarded up over a significant period present a threat to the health, safety and welfare of the community and reduce the value of adjoining properties. Standards for long term security of ~~abandoned.~~ boarded up structures established in this section will help improve the appearance of these structures and preserve neighborhood property values.

(Ord. No. 12-5584, § 1, 9-24-12)

Sec. 18-1402. Definitions.

For the purposes of this article the following definitions shall apply:

~~*Abandoned structure:* A structure that has remained unoccupied and one or more utilities, including but not limited to gas, electricity, and water, have been disconnected for a period of at least one hundred eighty (180) days.~~

Abate: To repair, replace, remove, destroy or otherwise remedy the condition in question by such means, in such a manner and to such an extent that is determined necessary in the interest of the health, safety and general welfare of the affected community.

Boarded up structure: The use of materials unrelated to the structure's exterior finish, such as plywood, oriented-strand board, plastic, metal, or canvas, to secure or cover openings in a~~n abandoned~~ structure.

Owner: The title owner(s), contract purchaser, or any other person or representative of any entity which holds a legal or equitable interest in any parcel.

Owner's agent: A statutory agent such as, but not limited to a legal guardian, conservator, person with durable power of attorney, or property manager.

(Ord. No. 12-5584, § 1, 9-24-12)

Sec. 18-1403. ~~Abandoned structure—~~Temporary boarding as a public nuisance.

(a) *Temporary boarding of window, doors openings.* Window or door openings on a~~n abandoned~~ structure may be boarded up for no more than one hundred eighty (180) total days from initial installation. Boards shall consist of a single sheet of oriented strand board (OSB) or plywood large enough to completely cover the window or door opening. The boards shall be attached with ~~wood screws that are not common Phillips-head or slotted-head screws, such as hex or beveled-head~~ non-tampering screws.

(b) *Boarded window and door openings—Board replacement.* The boards on window and door openings shall be replaced within a single one hundred eighty (180) day~~s~~ period from ~~of~~ the initial installation with properly installed, tight-fitting, and secure windows and doors. For any window or door installation, or replacement, or if a door or window is to be covered or closed in, a building permit must be secured and all permit review and inspection processes completed per City requirements.

(c) A structure in violation of subsection a and/or b is deemed a public nuisance per Section 18-301.

(Ord. No. 12-5584, § 1, 9-24-12)

Sec. 18-1404. Enforcement and penalties.

~~Upon written or oral complaint of any citizen so affected by an alleged~~ A violation of the provisions in this article~~, or if a code enforcement officer becomes aware of a condition or situation that may constitute a violation of the provisions in this article, the officer shall investigate the condition or situation within a reasonable period of time. The officer shall determine whether such condition or situation violates the provisions of this article. If the officer finds that there exists a violation, such officer~~ shall be enforced and shall be subject to the penalties as provided in Section 18-304. ~~give written notice to the owner of the premises and the owner's agent of the specific nature of the violation. Unless a violation is determined to exist such that the abatement procedure is described elsewhere in the City Code, the code enforcement officer shall afford the owner of the premises or the owner's agent thirty (30) days to voluntarily abate the violation. The officer must give written notice in person or by certified mail of the specific condition to be abated and the specific abatement required to the owner of the premises and the owner's agent.~~

(Ord. No. 12-5584, § 1, 9-24-12)

~~Sec. 18-1405. Violations.~~

~~When an abandoned, boarded up structure has not been voluntarily abated within the time specified in the notice to abate it is a violation of this article, a municipal infraction, and is punishable by civil penalties as specified in section 18-1304. Each day that the violation continues is a separate offense and shall be punished accordingly.~~

(Ord. No. 12-5584, § 1, 9-24-12)

Section 2. **EFFECTIVE DATE.** This ordinance shall be effective thirty (30) days after second reading and final adoption as provided by law.

Section 3. **REPEALER.** All resolutions, ordinances, and sections of the City Code inconsistent herewith are hereby repealed.

Section 4. **SEVERABILITY.** If any provision of this ordinance or the application thereof to any person or circumstances is held invalid, such invalidity shall not affect the other provisions of this ordinance which may be given effect without the invalid provisions or application, and, to this end, the provisions of this ordinance are declared to be severable.

PASSED by the City Council on first reading the 8th day of April 2024.

PASSED, ADOPTED and APPROVED on second reading this 22nd day of April, 2024.

CITY OF BILLINGS

BY:_____
William A. Cole, Mayor

Attest
:

_____
Denise R. Bohlman, City Clerk

City Council Regular

Date:	04/08/2024
Title:	Resolution Establishing Grafitti Reward Fund Per BMCC Section 18-1116
Presented by:	Tina Hoeger
Department:	Planning & Community Services
Presentation:	Yes
Legal Review:	Yes
Project Number:	N/A

RECOMMENDATION

Code Enforcement staff and City Legal staff recommend the City Council approve a Resolution establishing a Grafitti Reward Fund Per BMCC Section 18-1116 and direct staff to make an initial budget allocation to the fund.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

In addition to the proposed amendments to the Nuisance, Graffiti, and Boarded Up Structures ordinances considered by City Council, a resolution has been drafted to establish an anti-graffiti fund per BMCC Section 18-1116, and setting a reward amount for information leading to the conviction of a graffiti vandal. The resolution is attached to this memo and City Council is scheduled to take action on the resolution at this meeting.

STAKEHOLDERS

The residents of Billings will ultimately benefit from the City incentivizing the reporting of graffiti vandalism and getting convictions of graffiti vandals. Tools like this to discourage graffiti across the City will lead to safe neighborhoods, improved quality of life, and less damage to private and public property.

ALTERNATIVES

City Council may:

- Approve the Resolution establishing a Grafitti Reward Fund Per BMCC Section 18-1116 and direct staff to make an initial budget allocation to the fund; or,
- Not Approve the Resolution establishing a Grafitti Reward Fund Per BMCC Section 18-1116 and not direct staff to make an initial budget allocation to the fund. Not approving the Resolution will mean one less tool in the City's tool box to discourage and prevent graffiti vandalism in the community and would be out of the alignment with the Coucil's strategic goals to improve public safety.

FISCAL EFFECTS

The establishment of the anti-graffiti reward fund would require an initial budget allocation amount to start the fund. However, Municipal Court fines would be deposited in this fund going forward to help supplement the budget to support rewards for information leading to convictions.

Attachments

Graffiti Fund Resolution

RESOLUTION 24-_____

A RESOLUTION ESTABLISHING PER SECTION 18-1116, BILLINGS MONTANA CITY CODE (BMCC) A GRAFFITI REWARD FUND TO ENCOURAGE THE REPORTING OF GRAFFITI VANADALISM AND LEAD TO THE IDENTIFICATION, APPREHENSION AND CONVICTION OF GRAFFITI VANDALS

WHEREAS, Section 18-1116 Billings, Montana City Code (BMCC) provides that the City shall create an anti-graffiti fund to include payment of rewards for information leading to the identification, apprehension, and conviction of a person found guilty of graffiti vandalism, and

WHEREAS the prevention of graffiti vandalism is important to the City and establishing a reward will encourage reporting; and

WHEREAS increased reporting of graffiti vandalism is a mechanism to deter such behavior; and

WHEREAS, the City Council has duly considered the matter and is establishing an anti-graffiti fund in BMCC Section 18-1116.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BILLINGS, MONTANA:

1. REWARD AMOUNT: The amount of $500.00 for information leading to the conviction of a person found guilty of graffiti vandalism.

2. CLAIMS FOR REWARDS: Each claim shall be filed in writing to the City Clerk and shall specifically identify the date, location, and kind of property damaged or destroyed; identify by name the person who was convicted; and identify the court and the date upon which the conviction occurred.

3. REVIEW OF CLAIMS: The City Administrator shall review each claim for reward submitted and either accept, accept in part, or deny the claim. No claim for reward shall be accepted by the City Council unless the City investigates and verifies the accuracy of the claim and determines the requirements have been satisfied.

4. INELIGIBLE CLAIMANTS: No law enforcement officer, municipal officer, employee of the City, or person(s) apprehended shall be eligible for a reward.

5. NOTICE OF HEARING. On Monday, April 8, 2024, at 5:30 p.m., or as soon thereafter as the matter could be considered on the agenda in the Council Chambers of the City Hall, Billings, Montana, the City Council heard objections to

the adoption of this resolution. The City Clerk published notice twice, at least five (5) days prior to the hearing, in the Yellowstone County News, as provided in Section 7-1-4127, MCA.

6. EFFECTIVE DATE. This resolution shall be effective upon adoption.

ADOPTED AND APPROVED by the City Council of the City of Billings, Montana, on the _____ day of _____, 2024.

CITY OF BILLINGS

By: _____
William A. Cole, Mayor

ATTEST:

By: _____
Denise R. Bohlman, City Clerk

City Council Regular

Date:	04/08/2024
Title:	Approval of Cottonwood Park Master Plan
Presented by:	Pigg Michael, Superintendent
Department:	Parks/Rec/Public Lands
Presentation:	Yes
Legal Review:	Not Applicable
Project Number:	N/A

RECOMMENDATION

Approve or reject and provide staff with direction

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

In FY 23 CIP, Council approved development of a master plan for Cottonwood Park. Staff issued a Request For Proposals (RFP) and on August 26, 2022, five firms responded. Land Design, Inc. of Billings was selected as the top ranked firm. Staff met with the firm and negotiated a scope of work. At the November 2023 Parks Board meeting, the Parks Board unanimously recommended approval of the Cottonwood master plan.

ALTERNATIVES

City Council may:

- Approve; or,
- Not Approve

FISCAL EFFECTS

There are no immediate fiscal effects

Attachments

Cottonwood Park Master Plan



COTTONWOOD PARK

MASTER PLAN **2024**

LAND DESIGN

Billings PARKS AND RECREATION

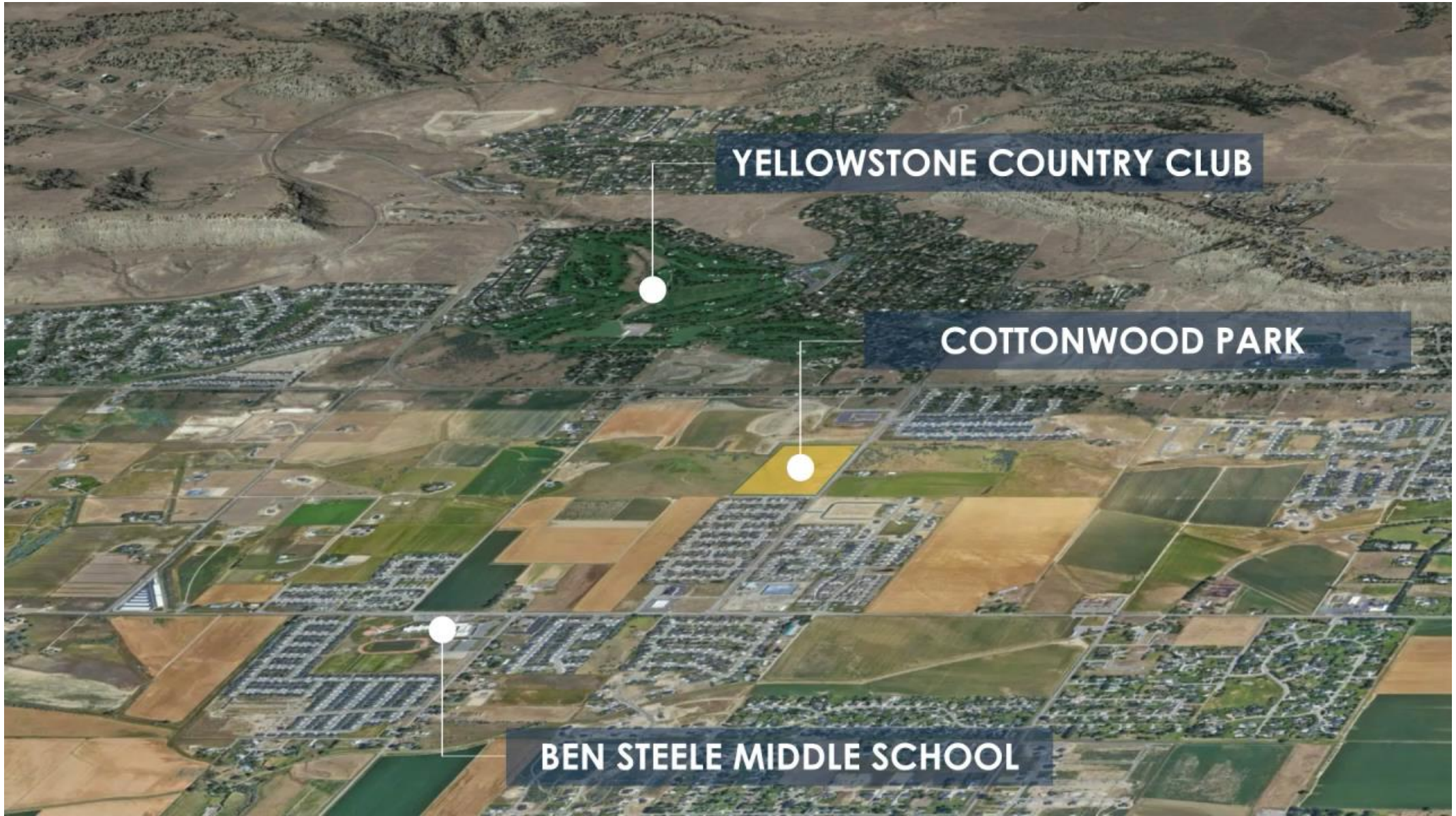
COTTONWOOD PARK COMMUNITY CONTEXT



COTTONWOOD PARK SITE CONTEXT



COTTONWOOD PARK SITE CONTEXT



COTTONWOOD PARK SITE CONTEXT



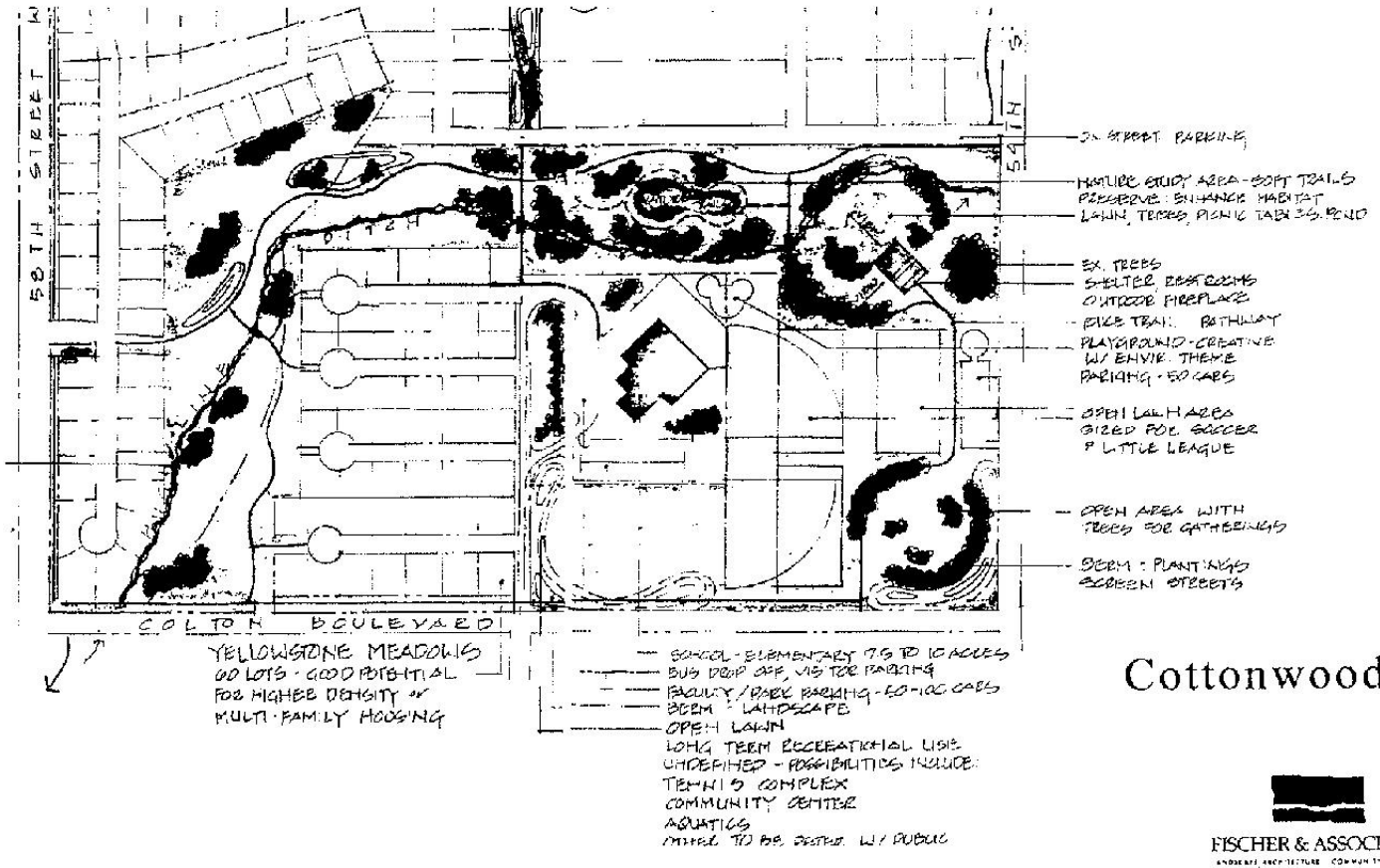
HISTORY

- PROPERTY DONATED BY FORBES FAMILY
- PROPERTY BECAME CITY PARK IN 2002
- 38 ACRE PARCEL

PARK VISION:

"A MULTI-FUNCTIONAL COMMUNITY PARK SUITABLE FOR CASUAL PLAY, PICNICKING, CONCERTS, STROLLING, COMMUNITY EVENTS AND THE LIKE."

PROPERTY DONATION



Cottonwood Park

FISCHER & ASSOCIATES

PROPERTY DEDICATION

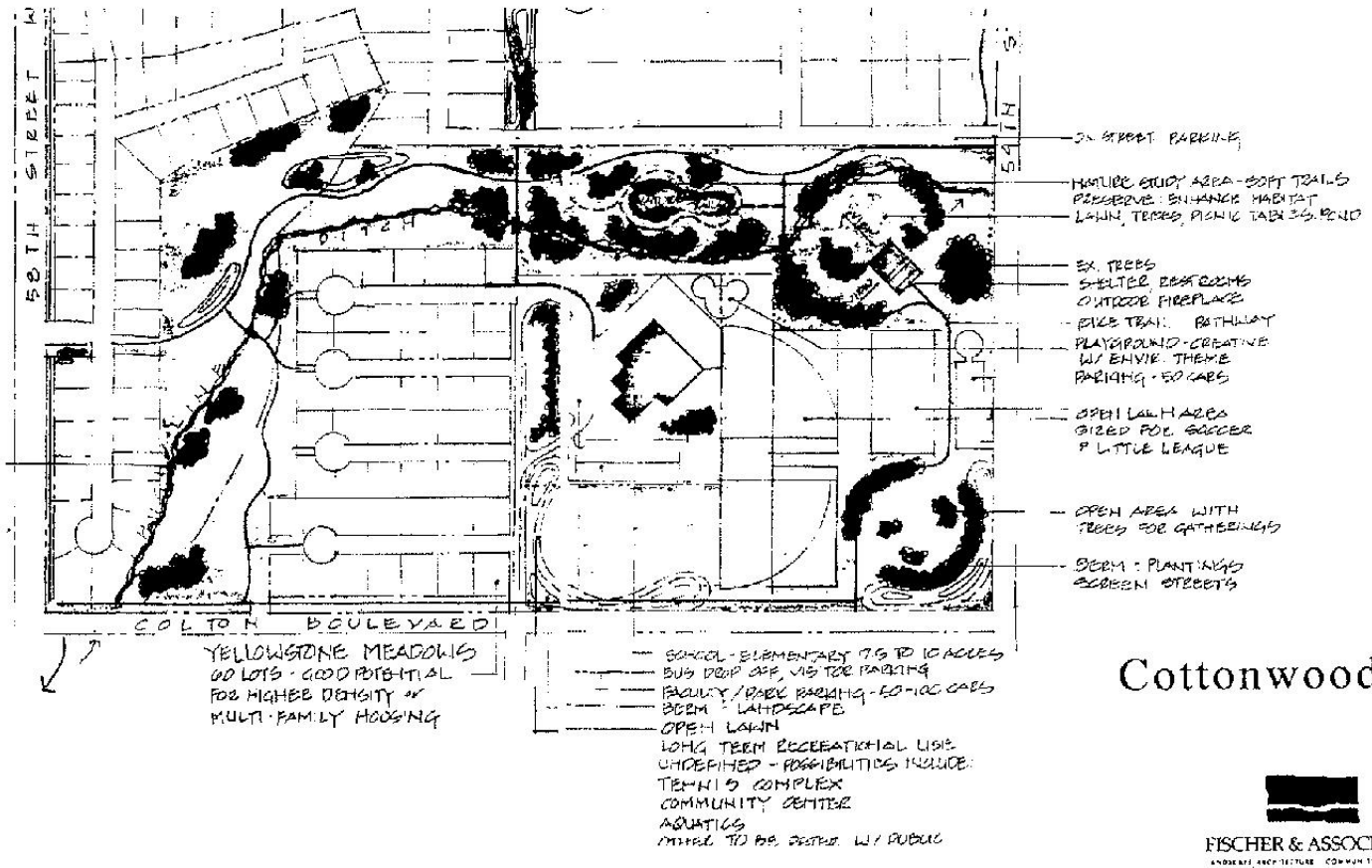
PROGRAM REQUIREMENTS & DESIRED IMPROVEMENTS

REQUIREMENTS

- TURF GRASS
- ABUNDANCE OF TREES
- CHILDREN'S PLAYGROUND EQUIPMENT
- RESTROOM FACILITIES
- PICNIC TABLES
- OPEN SPACE FOR DIVERSE ACTIVITIES
- ONE LARGE PICNIC SHELTER

RESTRICTIONS

- SPORTS COMPLEX
- POLICE STATION
- FIRE STATION
- MAINTENANCE (EXCEPT FOR PARK OPERATION)

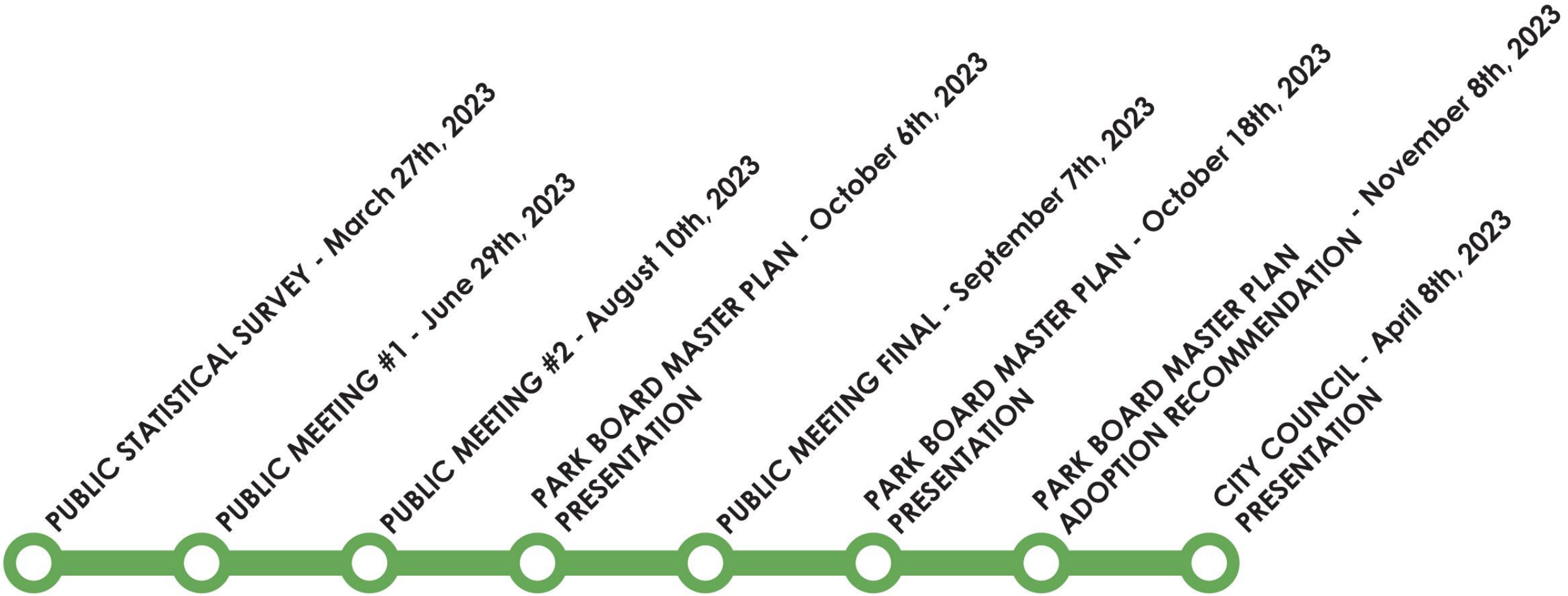


Cottonwood Park

FISCHER & ASSOCIATES

COTTONWOOD PARK

PUBLIC PROCESS TIMELINE



COTTONWOOD PARK FINAL MASTER PLAN

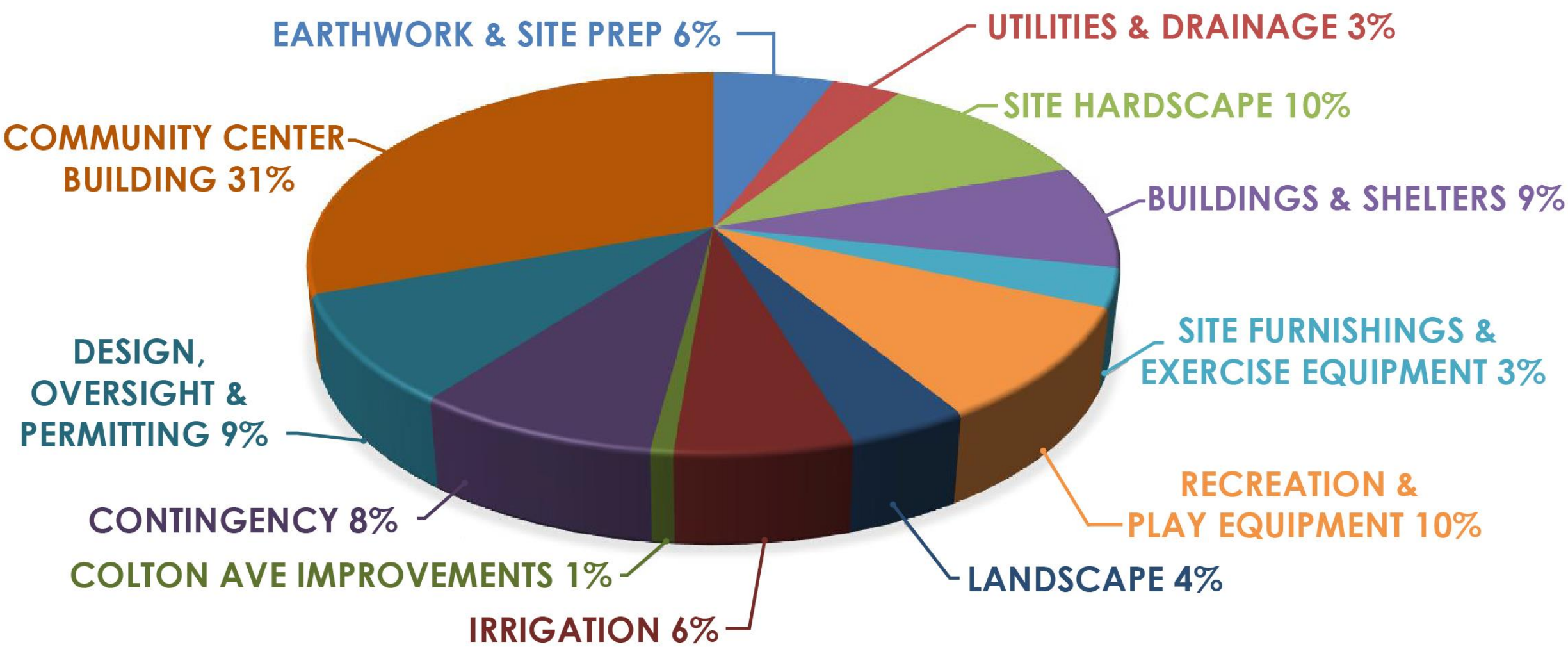
PLAN FEATURES

TURF AREA:	20 ACRES
MEMORIAL POND:	0.75 ACRES
PARKING LOT:	227 SPACES
SMALL SHELTERS:	11
PAVED TRAILS:	13,900 LINEAR FEET
GRAVEL TRAILS:	900 LINEAR FEET
COMMUNITY CENTER:	24,000 SF
PICKLEBALL COURTS:	8
BASKETBALL COURTS:	2
TENNIS COURTS:	5
LARGE PLAYGROUND:	30,000 S.F.
DOG PARK:	3.3 ACRES

ESTIMATED COST RANGE:
$25,000,000 - $30,000,000



COTTONWOOD PARK COST ESTIMATE



TOTAL ESTIMATED COST $25,000,000 - $30,000,000

COTTONWOOD PARK

3D RENDERING



COTTONWOOD PARK

MASTER PLAN **2024**

LAND DESIGN

Billings PARKS AND RECREATION