SITE PLAN AND TRAFFIC ADVISORY REVIEW COMMITTEE
Internal Staff Meeting
Minnesota Valley Room, First Floor, Intergovernmental Center
****

1. **SITE PLAN ITEMS**

1. CY56-25

Request of APX Construction Group, with permission of the owner, for a final plat review of Evenson Subdivision; for a conditional use permit to allow multiple family housing in the B-3, Highway Commercial zoning district; and for a certificate of design compliance for the construction of two new multiple family dwelling structures in the Highway Gateway Overlay District. The subject property is generally described as being in the east ½ of the northwest ¼, Section 21, Township 108 N, Range 26 W lying south of Highway 83 and east of Highway 22 excluding Stanley Subdivision, Blue Earth County (Blue Earth County PID R430921177001).

2. CY57-25

Request of Mankato Area Public Schools for an amended preliminary plat and final plat review of Mankato West High School Subdivision. The subject property is described as being located in the Southeast Quarter of Section 13, Township 108, Range 27, Blue Earth County, City of Mankato (West High School, 1351 S. Riverfront Drive).

3. CY58-25

Request of APX Construction Group, with permission of the owner, for the vacation of a portion of a 10' utility easement located on the westerly side of Lot 2, Block 2 as per the recorded plat of Lime Valley Fourth Addition. The subject property is described as part of Lot 2, Block 2, Lime Valley-Fourth Addition, Blue Earth County (Blue Earth County PID R010431455007, 100 Summit Avenue).

4.

*****Site Plan and Traffic Advisory Committee Review Only. Request of Complete Construction for the review in the change in use of lots from 4-plexes, to 5-plexes.**

5

*****Site Plan and Traffic Advisory Committee Review Only. Request of R Henry Construction on behalf of the property owner for the construction of an approximately 30' X 70' accessory structure.**

2. **TRAFFIC ITEMS**

Meeting Date: 11/04/2025

Title

CY56-25

Request of APX Construction Group, with permission of the owner, for a final plat review of Evenson Subdivision; for a conditional use permit to allow multiple family housing in the B-3, Highway Commercial zoning district; and for a certificate of design compliance for the construction of two new multiple family dwelling structures in the Highway Gateway Overlay District. The subject property is generally described as being in the east ½ of the northwest ¼, Section 21, Township 108 N, Range 26 W lying south of Highway 83 and east of Highway 22 excluding Stanley Subdivision, Blue Earth County (Blue Earth County PID R430921177001).

Applicant

The applicant is Ryan Evenson, on behalf of APX Construction Group.

Request

Request of APX Construction Group, with permission of the owner, for a final plat review of Evenson Subdivision; for a conditional use permit to allow multiple family housing in the B-3, Highway Commercial zoning district; and for a certificate of design compliance for the construction of two new multiple-family dwelling structures in the Highway Gateway Overlay District.

Location

The subject property is located at 901 S. Victory Dr. and is described as being in the east ½ of the northwest ¼, Section 21, Township 108 N, Range 26 W lying south of Highway 83 and east of Highway 22 excluding Stanley Subdivision, Blue Earth County (Blue Earth County PID R430921177001).

Existing Land Use

The property is currently vacant.

Zoning

The property has been recently zoned B-3, Highway Business District.

Other Board or Commission

The Mankato Township Board reviewed the petition for annexation at their October 14, 2025, meeting. The Board adopted a resolution outlining that they have no objection to the annexation.

Environmentally Sensitive Areas

There are areas on the site that have delineated wetlands.

Public Utilities

Upon annexation, the subject site will connect to public utilities.

City Code

The Mankato City Code related to Subdivision and Development Regulations (Platting) can be found in Chapter 10, Article XII, as linked here: https://library.municode.com/mn/mankato/codes/code_of_ordinances?nodeId=PTIICOOR_CH10LAUSDE_ARTXIISUDEREPL

Mankato City Code related to B-3, Highway Business, zoning criteria can be found in Chapter 10, Article V, Division 8, as linked here: https://library.municode.com/mn/mankato/codes/code_of_ordinances?nodeId=PTIICOOR_CH10LAUSDE_ARTVCODI_DIV8HIBUDI

The Mankato City Code related to the Highway Gateway Overlay District, criteria can be found in Chapter 10, Division 9, as linked here: https://library.municode.com/mn/mankato/codes/code_of_ordinances?nodeId=PTIICOOR_CH10LAUSDE_ARTVCODI_DIV9GTGAOVDI_SDIVHGHIGAOVDI

Review

APX Construction Group is requesting a final plat review of Evenson Subdivision, a conditional use permit to allow multiple family housing in the B-3, Highway Commercial zoning district; and a certificate of design compliance for the construction of two new multiple-family dwelling structures in the Highway Gateway Overlay District.

The subject property is located at 901 S. Victory Dr. at the intersection of Victory Dr. and Stadium Rd.

The project was reviewed last month for a preliminary plat and a rezone to B-3. The applicant is working with Mankato township on annexing the property into the City of Mankato.

Final Plat:

The final plat proposes the creation of a one-lot, one-block subdivision encompassing approximately 4.27 acres.

The plat contains two wetland areas, one on the western side of the parcel and one on the eastern side of the parcel, and an easement is shown to represent the required16.5' wetland setback around each of the wetland areas. The applicant is required to submit a No Loss request with the submission of the final plat to ensure that the existing wetlands will not be impacted by the proposed project, or if there are impacts proposed, the appropriate application will be required.

Conditional Use Permit:

Site plans for the Evenson Subdivision illustrate a grouped housing development consisting of two apartment buildings with a total of 96 residential units. Supporting site improvements include on-site parking and associated residential amenities. The property is currently zoned B-3 Highway Business District, where grouped housing projects are classified as conditional uses.

The applicant proposes to construct two 36-unit buildings arranged in an "L" shape around a central parking lot. The 36-unit buildings, 60 two-bedroom units and 36 three-bedroom units. Both buildings will have a dedicated lobby, public restroom, and mail room. Both buildings include a variety of unit layouts for each bedroom classification.

Several outdoor amenities are proposed, including two patio areas, a fenced dog park, and outdoor athletic courts.

A parking analysis will need to be conducted in order to ensure the proper parking stalls have been provided. A final sidewalk location need to be determined and coordinated with Blue Earth County and City Staff.

Public utilities will be brought in to the site once the property is annexed into the City of Mankato.

Site access is proposed from Victory Dr. and will be required to conform to the City's engineering and access management standards.

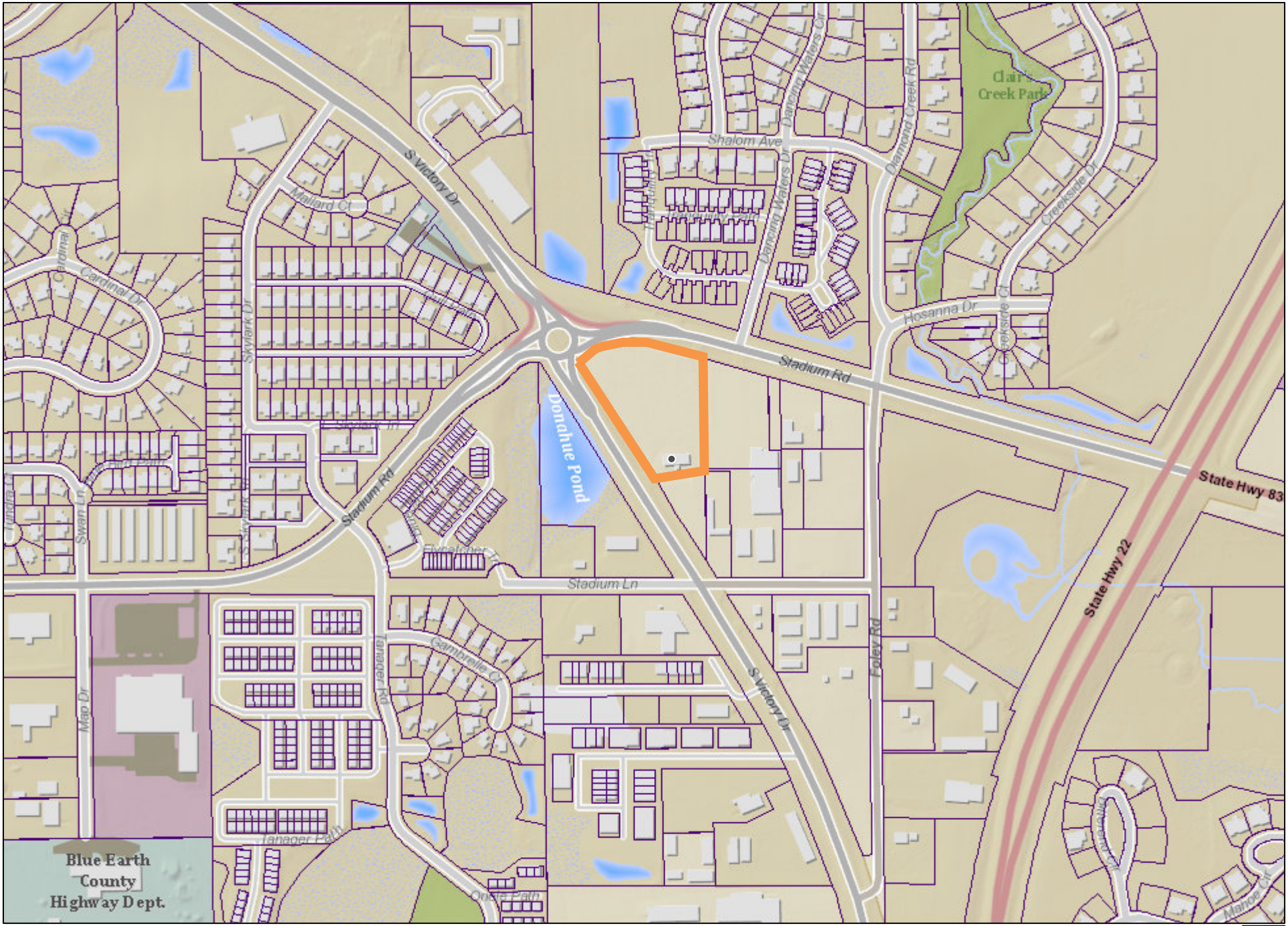
A traffic study has been submitted with the request. The findings of the study indicate that the number of new vehicle trips estimated to be generated by the Proposed Project is 30 trips during the morning peak hour (7 entering and 23 exiting), 37 trips during the evening peak hour (23 entering and 14 exiting), and 447 trips daily. This volume is low, resulting in roughly one new trip every two minutes during peak hours. The operational analyses show acceptable conditions in the study area for both existing and 2027 No-Build scenarios. The crash history review revealed no safety issues. Further, the study finds that the operation analyses for 2027 Build Conditions with the Proposed Project indicate acceptable study area operations. The Victory Drive and access intersection function acceptably with single-lane approaches.

Certificate of Design Compliance:
The proposed exterior elevations show the buildings to have flat architectural panels with square reveals, V-Grove siding, and a stone veneer wainscoting. The proposed materials are currently selected to be earth tones of white and grey, with a wood-tone accent. The storefronts and windows will be black.

Attachments

General Location Map
Aerial Plan
Preliminary Plat
Final Plat
Civil Plans
CUP and CDC Submittal
Traffic Study
Drainage Report

General Location Map



Date: September 2025

Author:

This information is to be used for reference purposes only. The City of Mankato does not guarantee accuracy of the material contained herein and is not responsible for misuse or misinterpretation.

N

Aerial Map

Date: September 2025

Author:

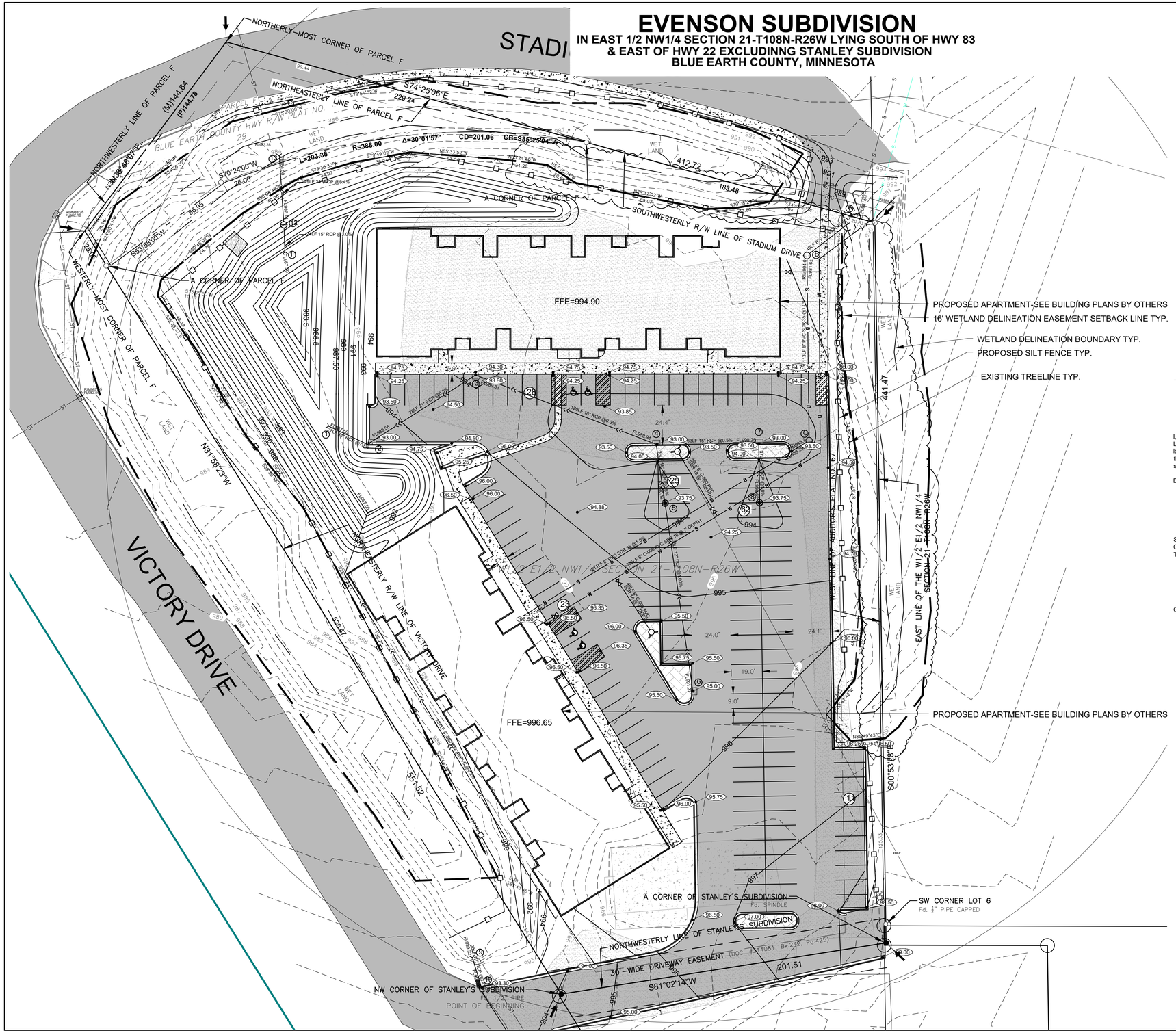
This information is to be used for reference purposes only. The City of Mankato does not guarantee accuracy of the material contained herein and is not responsible for misuse or misinterpretation.

N

PRELIMINARY_PLAT

EVENSON SUBDIVISION

IN EAST 1/2 NW1/4 SECTION 21-T108N-R26W LYING SOUTH OF HWY 83 & EAST OF HWY 22 EXCLUDINNG STANLEY SUBDIVISION BLUE EARTH COUNTY, MINNESOTA



LEGEND

- = 5/8"Ø X 16" iron stake monument
- =Iron stake monument-Found
- W = Water Main
- S = Sanitary Sewer
- = Storm Sewer
- G = Gas Main
- UT = Underground Telephone
- OT = Overhead Telephone
- FO = Fiber-Optics
- UE = Underground Electric
- OE = Overhead Electric
- X = Chain Link Fence
- = Control Access
- = Gate Post
- = Bollards
- E = Electric Meter
- G = Gas Meter
- F = Fiber-Optics Box
- T = Telephone Pedestal
- = Light Tower
- = Silt Fence
- F&I = Furnish & Install
- 1272 = Existing Elevation Contour Line
- 1272 = Proposed Elevation Contour Line
- = Sign
- = Sign-Handicap
- = Light Pole
- = Power Pole
- = Guy Anchor
- = Fire hydrant
- = Water Main Valve
- = Fire Sprinkler
- = Cleanout
- = Culvert
- = Gas Main Valve
- = Catch Basin
- = Manholes
- 1271.23 = Spot Elevation
- RM1270.89 = Rim Elevation
- FL1262.34 = Line Elevation
- =Concrete Surface
- =Bituminous Surface
- =Gravel Surface
- 27.00 =Pavement Elevation

SURVEYOR'S CERTIFICATE

I, Steven J. Thompson, do hereby certify that this plat was prepared by me or under my direct supervision; that I am a duly Licensed Land Surveyor in the State of Minnesota; that this plat is a correct representation of the boundary survey; that all mathematical data and labels are correctly designed on this plat; that all monuments depicted on this plat have been, or will be correctly set within one year; that all water boundaries and wetlands, as defined in Minnesota Statutes, Section 505.01, Subd. 3, as of the date of this certificate are shown and labeled on this plat; and all public ways are shown and labeled on this plat.

Dated _____ day of _____, ____.

_____
Licensed Land Surveyor
Minnesota Licensed No. 22705

STATE OF MINNESOTA
COUNTY OF BLUE EARTH
This Instrument was acknowledged before me on this _____ day of _____, ____ by Steven J. Thompson.

_____, Notary Public
My Commission Expires _____

Owner: Victory Mankato, LLC, Kyle Smith, Chief Manager, 1531 Madison Avenue Suite 200, Mankato, MN 56001

SCALE 1"=30'

0' 30'
15' 60'
SCALE IN FEET

AREA
3.89 ACRES±

JONES, HAUGH & SMITH INC.
CONSULTING ENGINEERS & LAND SURVEYORS
515 SOUTH WASHINGTON AVENUE ALBERT LEA, MINNESOTA 56007

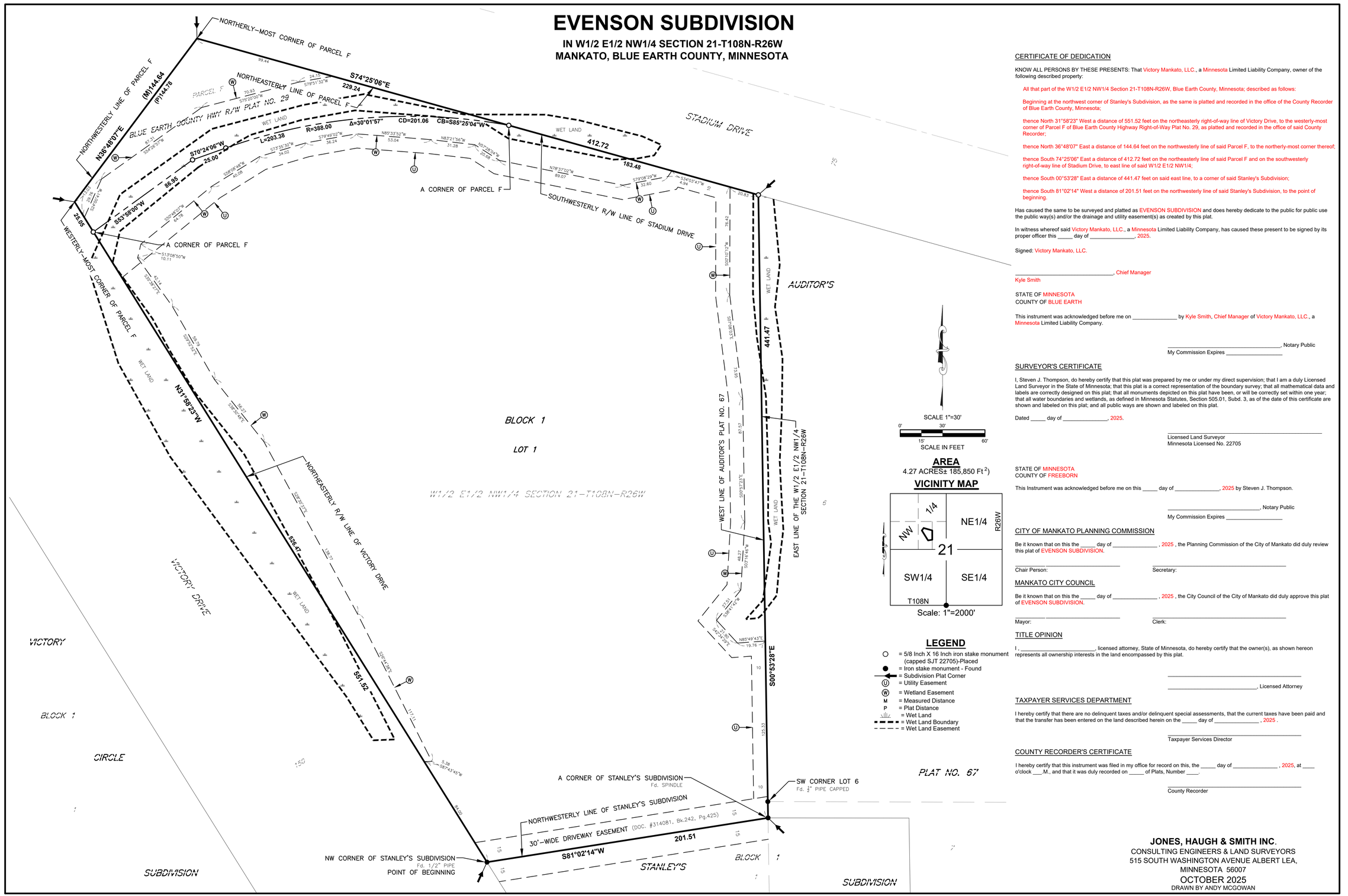
SEPTEMBER_2025

25-188DesignRev2.dwg

OFFICIAL PLAT

EVENSON SUBDIVISION

IN W1/2 E1/2 NW1/4 SECTION 21-T108N-R26W
MANKATO, BLUE EARTH COUNTY, MINNESOTA



SCALE 1"=30'

0' 30' 60'

SCALE IN FEET

AREA

4.27 ACRES± 185,850 Ft^2)

VICINITY MAP

Scale: 1"=2000'

LEGEND

- ○ = 5/8 Inch X 16 Inch iron stake monument (capped SJT 22705)-Placed
- ● = Iron stake monument - Found
- = Subdivision Plat Corner
- (U) = Utility Easement
- (W) = Wetland Easement
- M = Measured Distance
- P = Plat Distance
- = Wet Land
- = Wet Land Boundary
- = Wet Land Easement

CERTIFICATE OF DEDICATION

KNOW ALL PERSONS BY THESE PRESENTS: That Victory Mankato, LLC., a Minnesota Limited Liability Company, owner of the following described property:

All that part of the W1/2 E1/2 NW1/4 Section 21-T108N-R26W, Blue Earth County, Minnesota; described as follows:

Beginning at the northwest corner of Stanley's Subdivision, as the same is platted and recorded in the office of the County Recorder of Blue Earth County, Minnesota;

thence North 31°58'23" West a distance of 551.52 feet on the northeasterly right-of-way line of Victory Drive, to the westerly-most corner of Parcel F of Blue Earth County Highway Right-of-Way Plat No. 29, as platted and recorded in the office of said County Recorder;

thence North 36°48'07" East a distance of 144.64 feet on the northwesterly line of said Parcel F, to the northerly-most corner thereof;

thence South 74°25'06" East a distance of 412.72 feet on the northeasterly line of said Parcel F and on the southwesterly right-of-way line of Stadium Drive, to east line of said W1/2 E1/2 NW1/4;

thence South 00°53'28" East a distance of 441.47 feet on said east line, to a corner of said Stanley's Subdivision;

thence South 81°02'14" West a distance of 201.51 feet on the northwesterly line of said Stanley's Subdivision, to the point of beginning.

Has caused the same to be surveyed and platted as EVENSON SUBDIVISION and does hereby dedicate to the public for public use the public way(s) and/or the drainage and utility easement(s) as created by this plat.

In witness whereof said Victory Mankato, LLC., a Minnesota Limited Liability Company, has caused these present to be signed by its proper officer this _____ day of _____, 2025.

Signed: Victory Mankato, LLC.

_____, Chief Manager
Kyle Smith

STATE OF MINNESOTA
COUNTY OF BLUE EARTH

This instrument was acknowledged before me on _____ by Kyle Smith, Chief Manager of Victory Mankato, LLC., a Minnesota Limited Liability Company.

_____, Notary Public
My Commission Expires _____

SURVEYOR'S CERTIFICATE

I, Steven J. Thompson, do hereby certify that this plat was prepared by me or under my direct supervision; that I am a duly Licensed Land Surveyor in the State of Minnesota; that this plat is a correct representation of the boundary survey; that all mathematical data and labels are correctly designed on this plat; that all monuments depicted on this plat have been, or will be correctly set within one year; that all water boundaries and wetlands, as defined in Minnesota Statutes, Section 505.01, Subd. 3, as of the date of this certificate are shown and labeled on this plat; and all public ways are shown and labeled on this plat.

Dated _____ day of _____, 2025.

_____
Licensed Land Surveyor
Minnesota Licensed No. 22705

STATE OF MINNESOTA
COUNTY OF FREEBORN

This Instrument was acknowledged before me on this _____ day of _____, 2025 by Steven J. Thompson.

_____, Notary Public
My Commission Expires _____

CITY OF MANKATO PLANNING COMMISSION

Be it known that on this the _____ day of _____ , 2025 , the Planning Commission of the City of Mankato did duly review this plat of EVENSON SUBDIVISION.

_____ _____
Chair Person: Secretary:

MANKATO CITY COUNCIL

Be it known that on this the _____ day of _____ , 2025 , the City Council of the City of Mankato did duly approve this plat of EVENSON SUBDIVISION.

_____ _____
Mayor: Clerk:

TITLE OPINION

I , _____, licensed attorney, State of Minnesota, do hereby certify that the owner(s), as shown hereon represents all ownership interests in the land encompassed by this plat.

_____, Licensed Attorney

TAXPAYER SERVICES DEPARTMENT

I hereby certify that there are no delinquent taxes and/or delinquent special assessments, that the current taxes have been paid and that the transfer has been entered on the land described herein on the _____ day of _____ , 2025 .

_____
Taxpayer Services Director

COUNTY RECORDER'S CERTIFICATE

I hereby certify that this instrument was filed in my office for record on this, the _____ day of _____ , 2025, at ____ o'clock ___M., and that it was duly recorded on _____ of Plats, Number ____.

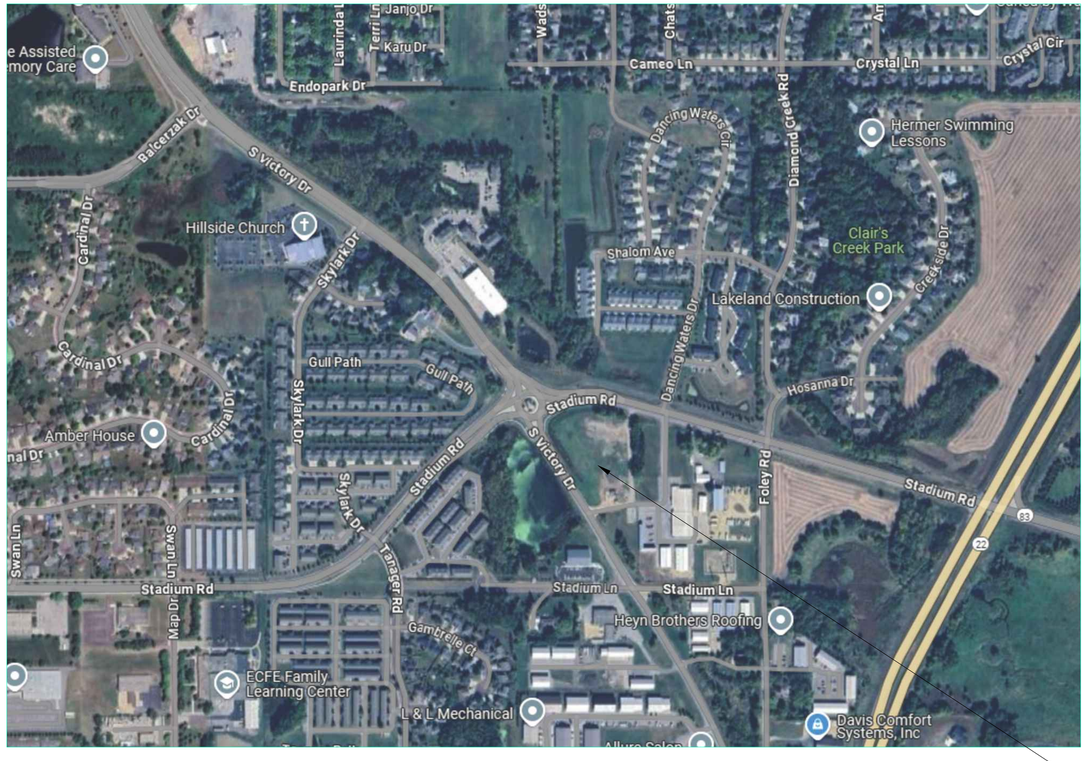
_____
County Recorder

JONES, HAUGH & SMITH INC.
CONSULTING ENGINEERS & LAND SURVEYORS
515 SOUTH WASHINGTON AVENUE ALBERT LEA,
MINNESOTA 56007

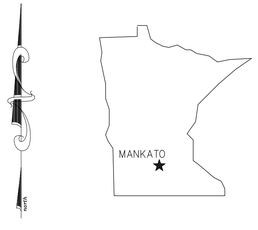
OCTOBER 2025
DRAWN BY ANDY MCGOWAN

25-188FP.dwg

MANKATO APARTMENTS
MANKATO, MN



PROJECT LOCATION



INDEX TO SHEETS

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C2: EXISTING CONDITIONS
C3: HARDSCAPE PLAN
C4: UTILITY PLAN
C5: GRADING PLAN
C6: LANDSCAPE PLAN
C7: DETAILS
C8: SWPPP NARRATIVE
C9–C10: SPECIFICATIONS

THIS PLAN CONTAINS 10 SHEETS

LEGEND

- = 5/8"Ø X 16" iron stake monument
- =Iron stake monument-Found
- W = Water Main
- S = Sanitary Sewer
- ST = Storm Sewer
- G = Gas Main
- UT = Underground Telephone
- OT = Overhead Telephone
- FO = Fiber-Optics
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- RM1270.89 = Rim Elevation
- FL1262.34 = Line Elevation
- =Concrete Surface
- =Bituminous Surface
- =Gravel Surface
- 27.00 =Proposed Pavement Elevation
- T28.0 / B24.0 =Proposed Top/Bottom of Retaining Wall Elevation

APPLICABLE CONSTRUCTION PERMITS

ALL CONSTRUCTION WITHIN ROAD RIGHT–OF–WAY SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PERMIT AS ISSUED BY THE ROAD AUTHORITY.

GENERAL NOTES

DEVELOPER, CONTRACTOR AND ALL SUBCONTRACTORS SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES GOVERNED BY STATE AND LOCAL JURISDICTION.

SITE IRRIGATING, LIGHTING, LANDSCAPING, SIGNING ARE NOT A PART OF THIS PLAN.

PROVIDE EROSION CONTROL PER NPDES PERMIT REQUIREMENTS AND AS SHOWN.

PROVIDE HANDICAP CURB RAMPS & SIGNAGE. COMPLY WITH ALL AMERICAN DISABILITY ACT REQUIREMENTS.

ALL CONCRETE OR ASHPALTIC PAVEMENT CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF MN/DOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.

A ROCK CONSTRUCTION ENTRANCE IS REQUIRED AT ALL ENTRANCES FROM BITUMINOUS PAVEMENT.

ACCESS FOR LOCAL RESIDENTS/BUSINESSES SHALL ALWAYS BE MAINTAINED.

PROVIDE PAVEMENT STRIPING AS SHOWN

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR CONSTRUCTION.

SEE BOUNDARY SURVEY BY OTHERS FOR SITE BOUNDARIES.

ANY ALTERATIONS OR REVISIONS TO THE SITE DEVELOPMENT PLAN AS SHOWN SHALL NOT BE THE RESPONSIBILITY OF JONES, HAUGH & SMITH INC. AND SHALL RELEASE JONES, HAUGH & SMITH INC. OF ANY LIABILITY FOR ANY DAMAGES CAUSED THEREFROM UNLESS WRITTEN AUTHORIZATION OR PLAN REVISION HAS BE APPROVED BY JONES, HAUGH & SMITH INC. PRIOR.

BENCHMARK 1
Top head of spike in power pole at southeast corner of property.
Elevation = 1001.49

BASIS OF BEARING SYSTEM
All bearings are based upon the MnDot Blue Earth County Coordinate System Nad 83 (96) Harn Adjustment Grid

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Brian J. Johnson
Reg. No. 42144
Date: 9/20/25

Consultant:
JONES HAUGH SMITH
Engineers • Surveyors
515 South Washington Ave. Albert Lea, MN 507-373-4876

Project:
MANKATO APARTMENTS

Revision:

No.: 25-188 | Date: 9/20/2025
Drawn: bjj | Checked:
Project Manager:
Project Status: CD

Sheet Title:
TITLE SHEET

Sheet No.:
C1

STADIUM DRIVE

VICTORY DRIVE

NORTHERLY–MOST CORNER OF PARCEL F

NORTHWESTERLY LINE OF PARCEL F

(M)144.64

(P)144.78

N39°48'07"E

NORTHEASTERLY LINE OF PARCEL F

S74°25'06"E

229.24

BLUE EARTH COUNTY HWY R/W PLAT NO. 29

S10°24'06"W

40.00

R=388.00

Δ=30°01'57"

CD=201.06

CB=S89°25'04"W

L=203.38

N74°25'06"W

39.24

N59°49'07"W

53.04

N85°33'52"W

184.28

A CORNER OF PARCEL F

SOUTHWESTERLY R/W LINE OF STADIUM DRIVE

WET LAND

412.72

183.48

S37°58'00"W

96.85

WESTERLY–MOST CORNER OF PARCEL F

A CORNER OF PARCEL F

S7°08'50"W

10.17

WEST WETLAND

EAST WETLAND

N31°59'23"W

W1/2 E1/2 NW1/4 SECTION 21–T108N–R26W

NORTHWESTERLY R/W LINE OF VICTORY DRIVE

551.52

WEST LINE OF AUDITOR'S PLAT NO. 67

EAST LINE OF THE W1/2 E1/2 NW1/4 SECTION 21–T108N–R26W

S00°53'28"E

N89°49'43"E

0.76

A CORNER OF STANLEY'S SUBDIVISION

Fd. SPINDLE

SW CORNER LOT 6

Fd. ½" PIPE CAPPED

NORTHWESTERLY LINE OF STANLEY'S SUBDIVISION

30'–WIDE DRIVEWAY EASEMENT (DOC. #314081, Bk. 326, Pg.425)

S81°02'14"W

201.51

NW CORNER OF STANLEY'S SUBDIVISION

Fd. 1/2" PIPE

POINT OF BEGINNING

EXISTING SEWER/WATER SERVICES-FIELD VERIFY LOCATION

REMOVE EXISTING DRIVEWAY APPROACH-GRADE TO MATCH EXISTING DITCH SLOPES
SEE GRADING PLAN-REMOVE EXISTING DRIVEWAY CULVERT

PROPERTY LINE TYP.

WETLAND DELINEATION LINE TYP.

EXISTING ELEVATION CONTOUR TYP.

EDGE OF TREES TYP.

EXISTING GROUND SPOT ELEVATION TYP.

16.5' WETLAND BUFFER LINE TYP.

REMOVE OR SALVAGE EXISTING GRAVEL SURFACING

EXISTING WATERSHED DIVIDE LINE TYP.

REMOVE EXISTING CONCRETE SLABS & WALKS AS REQUIRED FOR CONSTRUCTION TYP.

north

1"=30'

30 0 30

HORIZ. SCALE FEET

Consultant:

JONES HAUGH SMITH

Engineers • Surveyors

515 South Washington Ave. Albert Lea, MN 507-373-4876

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Brian J. Johnson

Reg. No. 42744

Date: 9/20/25

Project:

MANKATO APARTMENTS

Revision:

No.: 25-188 Date: 9/20/2025

Drawn: bjj Checked:

Project Manager:

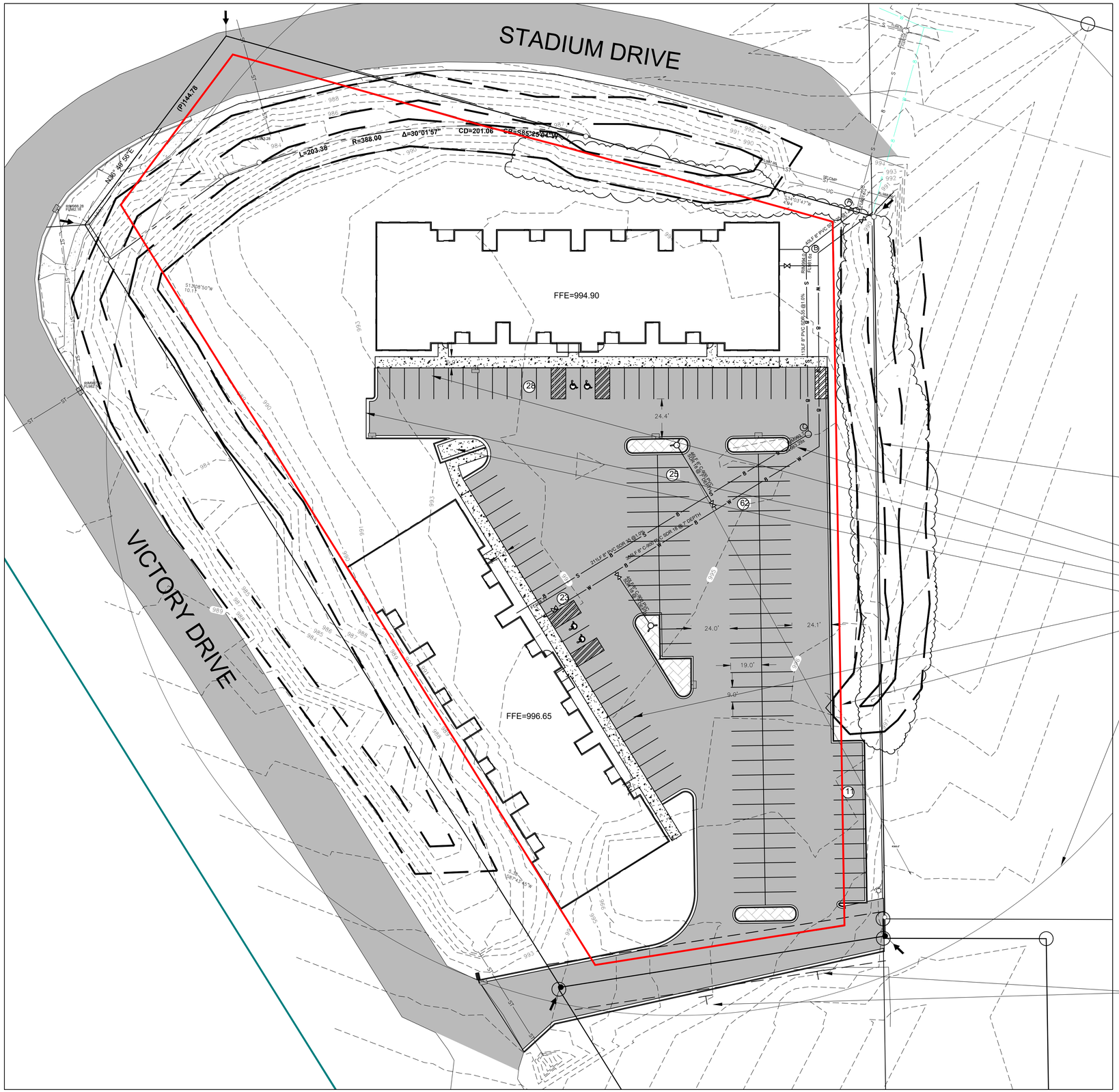
Project Status: CD

Sheet Title:

EXISTING CONDITIONS

Sheet No.:

C2



Consultant

JONES HAUGH SMITH
Engineers + Surveyors
515 South Washington Ave. Albert Lea, MN 507-373-4876

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota

Brian J. Johnson
Reg. No. 42744
Date: 9/20/25

Project:

MANKATO APARTMENTS

Revision:

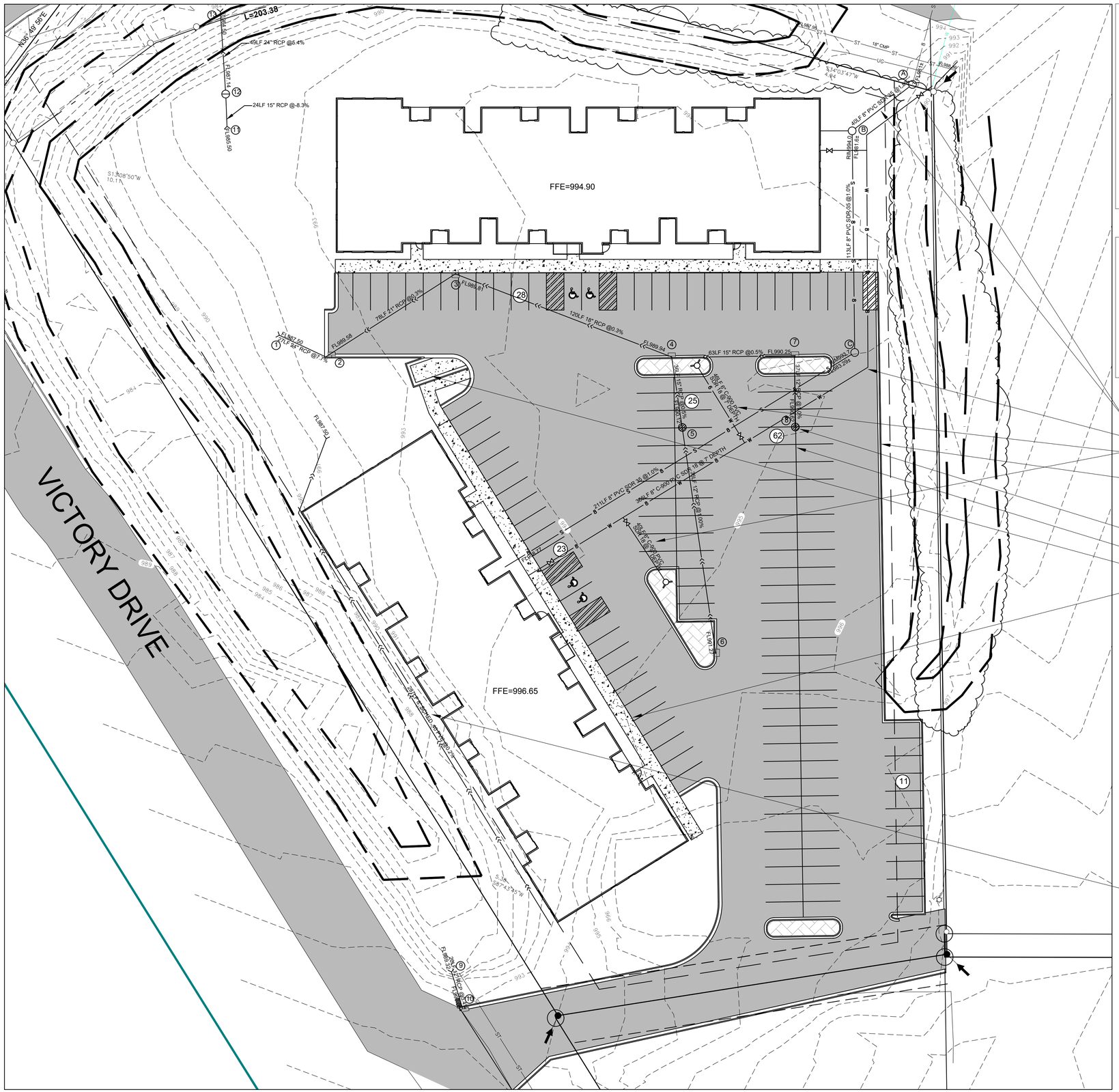
No.:	Date: 9/20/2025
Drawn: bjj	Checked:
Project Manager:	
Project Status: CD	

Sheet Title:

HARDSCAPE PLAN

Sheet No.:

C3



STORM SEWER STRUCTURE SCHEDULE

NO.	RIM EL.	INVERT EL.	HEIGHT	CASTING	DESIGN	REMARKS
1	–	987.50	–	–	–	F&I 24" RC APRON & TRASH GUARD, 10 CY CL. III RIPRAP
2	993.00	988.58	5.58	R3067	48-4022	
3	993.80	989.81	3.99	R3067	48-4022	
4	993.00	989.94	3.06	R3067	48-4022	
5	993.75	990.12	3.63	R2532	G	
6	995.00	991.27	3.73	R3067	2X3	
7	993.00	990.25	2.75	R3067	2X3	
8	993.75	990.62	3.13	R2532	G	
9	–	989.32	–	–	–	F&I 12" RC APRON & TRASH GUARD, 5 CY CL. III RIPRAP
10	993.30	989.32	3.98	R3067	2X3	
11	–	987.50	–	–	–	F&I 18" RC APRON & TRASH GUARD
12	991.00	987.50	3.50	–	–	SEE OUTLET STRUCTURE DETAIL
13	–	984.50	–	–	–	F&I 12" RC APRON & TRASH GUARD, 10 CY CL. III RIPRAP

F&I CL. III RIPRAP AS NOTED WITHIN 24 HOURS OF OUTLET INSTALLATION

SANITARY SEWER STRUCTURE SCHEDULE

NO.	RIM EL.	INVERT EL.	HEIGHT	CASTING	DESIGN	REMARKS
A	992.50	981±	11.50	1772	4007C	FIELD VERIFY EXISTING PIPE INVERT
B	994.00	981.6	12.4	1772	4007C	
C	993.75	983.29	10.46	1772	4007C	

CONNECT TO EXISTING WATERMAIN-F&I 8X8 TEE, 45° BEND, (2) 8" GATE VALVES
CONNECT TO EXISTING SANITARY-F&I MANHOLES AS SHOWN-SEE STRUCTURE SCHEDULE

F&I 8" 45° BEND

F&I (2) 8X6 TEES, 6" GATE VALVES, HYDRANT LEGS AND 6" HYDRANTS
CONNECT TO EXISTING SANITARY-F&I MANHOLES AS SHOWN-SEE STRUCTURE SCHEDULE

NEW CONCRETE B618 CURB & GUTTER TYP.

F&I STORM SEWER PIPING AND STRUCTURE TYP.-SEE STRUCTURE SCHEDULE FOR MORE INFO.

F&I LATEX PAVEMENT STRIPING/MESSAGES TYP.

F&I CONCRETE PAVEMENT SECTION WITHIN TRASH ENCLOSURE TYP.

F&I THICKENED EDGE WALK ALONG BUILDING EXCEPT AT ADA STALLS TYP.
SEE THICKENED EDGE WALK DETAIL AND RAISED PAVEMENT DETAIL

F&I 287LF 8" SCHED. 40 PVC @0.2%. CONNECT ROOF DRAIN DOWNSPOUTS TO TO PVC AND OUTLET INTO PROPOSED POND.

WET BASIN SUMMARY

TOTAL IMPERVIOUSE SURFACE=2.5 ACRES
1.1" WQV VOLUME REQUIRED: 0.2 AC.-FT.
WQV VOLUME PROVIDED: 0.2 AC.-FT.
WQV ELEVATION=988.65
DISCHARGE RATE AT WQV: 2.53 CFS
BASIN 100 YR. HWL=990.73
TOP OF BERM=993.00
EOF=992.00

DISCHARGE RATES (CFS):

	PRE-DEVELOPMENT	POST-DEVELOPMENT
2 YEAR	14.89	5.11
10 YEAR	26.36	11.51
100 YEAR	50.16	16.96

1"=25'
25 0 25
HORIZ. SCALE FEET

Consultant:
JONES HAUGH SMITH
Engineers+Surveyors
515 South Washington Ave. Albert Lea, MN 507-373-4876

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Brian J. Johnson
Reg. No. 42744
Date: 9/20/25

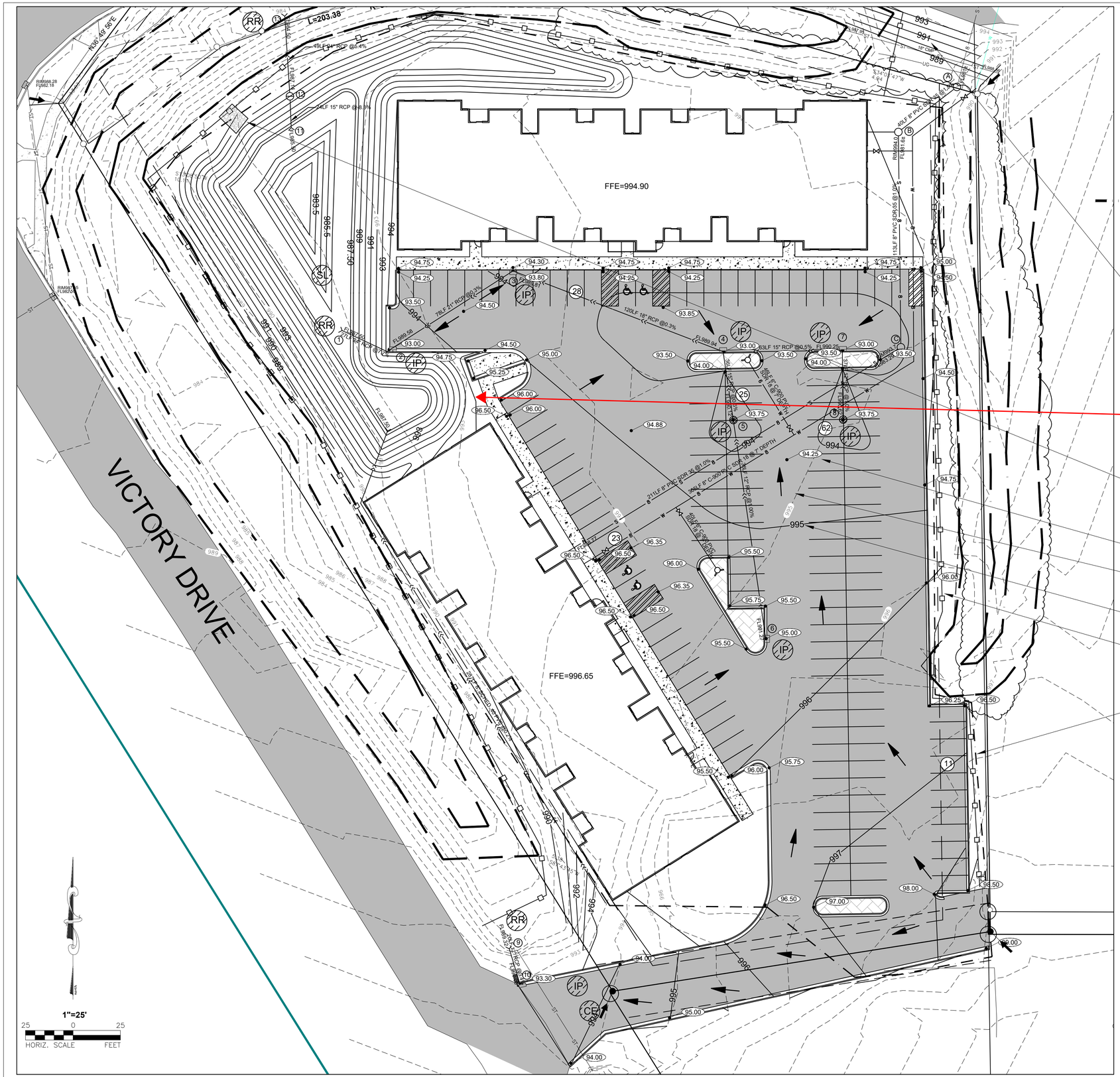
Project:
MANKATO APARTMENTS

Revision:

No.:	Date: 9/20/2025
Drawn: bjj	Checked:

Project Manager:
Project Status: CD
Sheet Title:
UTILITY PLAN

Sheet No.:
C4



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Project Status: CD	

Sheet Title:

GRADING PLAN

Sheet No.:

C5

LANDSCAPING NOTES

Sec. 10-1740 PERIMETER OFF STREET PARKING LOT
(1) SHADE TREE/ 50 LF OF FRONTAGE
(1) EVERGREEN TREE/ 25 LF OF FRONTAGE
80% OPAQUE ALONG ALL PARKING FRONTING STREET

PLANTING BEDS SHALL BE MULCHED WITH BARK CHIPS, ROCK MULCH, FEATHER ROCKS OR SIMILAR MATERIAL.

PERIMETER LANDSCAPING & TRANSITIONAL YARDS SHALL CONSIST OF A COMBINATION OF GROUND COVER, SHADE TREES OR EVERGREEN TREES, SHRUBS AND APPROPRIATE SCREENING DEVICES SUCH AS DECORATIVE WALLS, FENCES OR BERMS.

LANDSCAPING LEGEND

=DENOTES EVERGREEN TREE

=DENOTES SHRUB

=DENOTES ARBOVITAE HEDGE (4' MIN. - 8' MAX)
(80% OPAQUE ALONG ALL PARKING FRONTING PREMIER DR.)

=DENOTES SHADE TREE

=DENOTES PLANTING BED W/ MULCH

=DENOTES EXISTING TREELINE

1"=25'
25 0 25
HORIZ. SCALE FEET

Consultant
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MANKATO APARTMENTS

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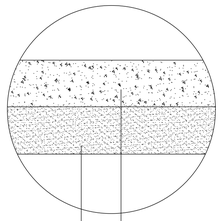
Project Manager:

Project Status: CD

Sheet Title:
LANDSCAPE PLAN

Sheet No.:
C6



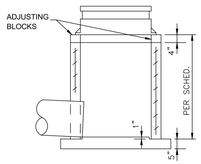
ALL JOINTS SHALL BE SEALED USING AN APPROVED MN/DOT HOT POUR ELASTIC SEALANT (3723) (INCIDENTAL)

7" CONCRETE PAVEMENT (MN/DOT 2301)

3" AGGREGATE BASE CLASS V (MN/DOT 2211)

ALL CONCRETE SHALL BE PORTLAND CEMENT CONCRETE PAVEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, A 4" MAXIMUM SLUMP AND 5% – 7% ENTRAINED AIR.

CONCRETE PAVEMENT SECTION



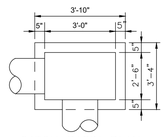
SECTIONAL VIEW
CATCH BASIN & BASE SLAB

NOTES:

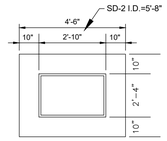
1. TO BE USED WITH NEENAH R3067 FRAMED COVER WITH 3" RAD. CURB BOX OR APPROVED EQUAL.
2. PIPE CUT-OUTS TO BE LOCATED WHERE REQUIRED.
3. ALTERNATE CAST-IN-PLACE BASE CAN BE USED.
4. MINIMUM REINFORCING SHALL BE WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.12 SQ. IN. PER FOOT IN BOTH DIRECTIONS.

FOR USE WITH R3067 CASTING

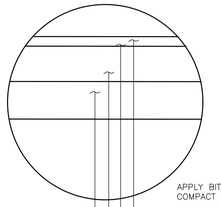
CATCH BASIN 2X3



CATCH BASIN PLAN



BASE SLAB PLAN



APPLY BITUMINOUS TACK COAT BETWEEN LIFTS
COMPACT ALL GRANULAR MATERIAL TO 100% OF PROCTOR DENSITY.

2.0" TYPE SPWEA240B WEAR COURSE

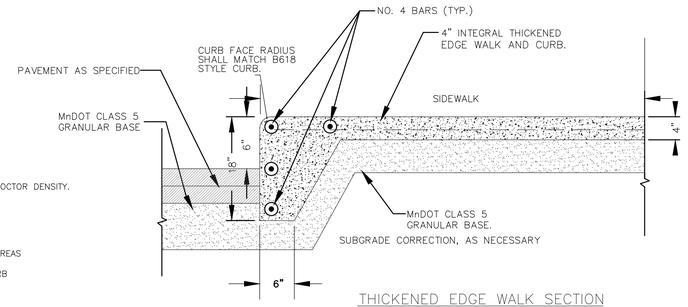
2.0" TYPE SPNWB230B BASE COURSE

12" CLASS V AGGREGATE BASE (2211)

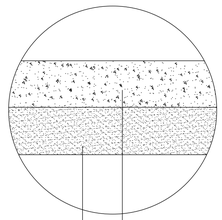
SCARIFY THE UPPER 12" OF SUBGRADE IN "CUT" AREAS

ALL GRAVEL BASE SHALL EXTEND A MINIMUMN OF 1' BEHIND ALL CURB

PARKING LOT PAVEMENT SECTION



THICKENED EDGE WALK SECTION



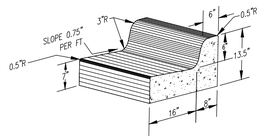
ALL JOINTS SHALL BE SEALED USING AN APPROVED MN/DOT HOT POUR ELASTIC SEALANT (3723) (INCIDENTAL)

4" CONCRETE PAVEMENT (MN/DOT 2301)

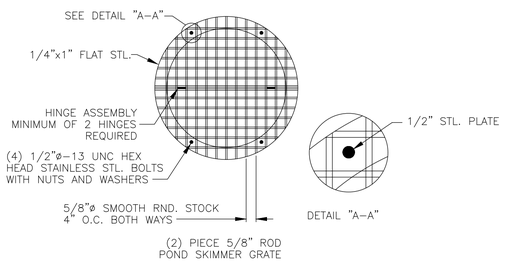
3" AGGREGATE BASE CLASS V (MN/DOT 2211)

ALL CONCRETE SHALL BE PORTLAND CEMENT CONCRETE PAVEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, A 4" MAXIMUM SLUMP AND 5% – 7% ENTRAINED AIR.

CONCRETE SIDEWALK SECTION



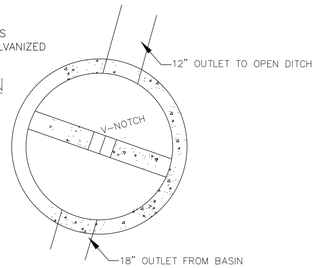
CONCRETE CURB & GUTTER DESIGN B618



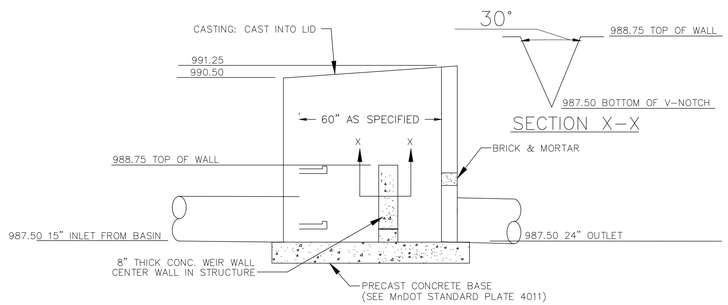
GRATE NOTES:

1) GRATE TO BE MADE IN TWO (2) PIECES
2) ALL METAL SHALL BE HOT–DIPPED GALVANIZED

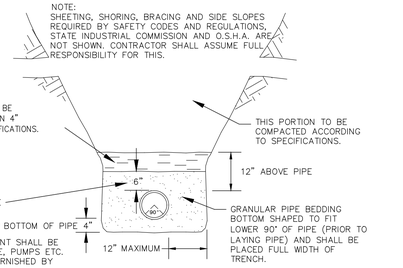
STRUCTURE 12 GRATE PLAN



V–NOTCH WEIR OUTLET STRUCTURE PLAN



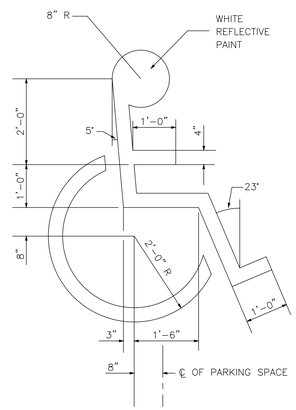
V–NOTCH WEIR OUTLET STRUCTURE 12 SECTION



THE FINISHED SUB GRADE FOR PIPE PLACEMENT SHALL BE MAINTAINED FREE OF WATER. ANY AGGREGATE, PUMPS ETC. NECESSARY TO ACCOMPLISH THIS WILL BE FURNISHED BY CONTRACTOR AS INCIDENTAL WORK.

TYPICAL TRENCH

(PVC SEWER, WATER MAIN & PE PIPE)

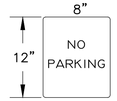


INTERNATIONAL HANDICAP SYMBOL

STEEL POST MOUNTED
(PERMANENT)

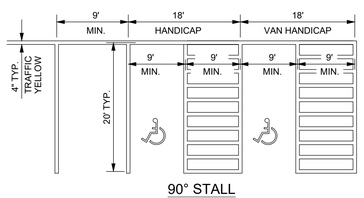
INSTALL AT ALL HANDICAP STALLS
60"–66" ABOVE FINISH GRADE
CENTERED AT THE HEAD OF THE STALL

SIGN PANEL DETAIL

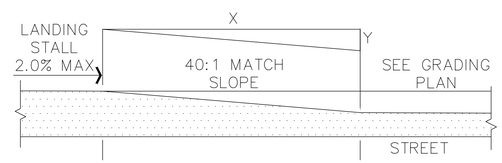


STEEL POST MOUNTED
(PERMANENT)
INSTALL AT ALL HANDICAP ACCESS AILSES–60"–66" ABOVE FINISH GRADE
CENTERED AT THE HEAD OF THE STALL

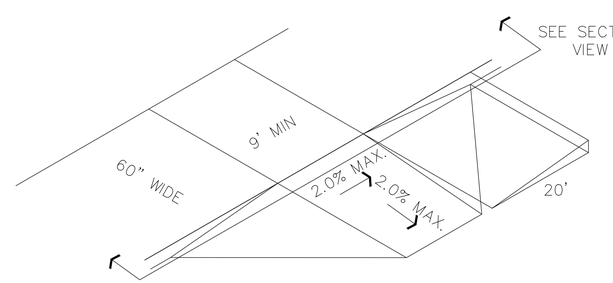
SIGN PANEL DETAIL



90° STALL



CROSS SECTION



CURB RAMP – BUILT UP PAVEMENT

Consultant

JONES HAUGH SMITH

Engineers + Surveyors

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Brian J. Johnson
Reg. No. 42744
Date: 9/20/25

Project: **MANKATO APARTMENTS**

Revision:

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Drawn: bjj	Checked:

Project Manager:

Project Status: CD

Sheet Title: **DETAILS**

Sheet No.: **C7**

SWPPP NARRATIVE

CONSTRUCTION ACTIVITY INFORMATION

PROJECT NAME: MANKATO APARTMENTS
FACILITY IMPROVEMENT PROJECT

PROJECT LOCATION: MANKATO, MN

PROJECT SIZE: PARCEL SIZE: 2.0 DISTURBED ACRES

PROJECT TYPE: RESIDENTIAL BUILDING CONSTRUCTION

MAJOR SOIL TYPE: SILTY LOAM, KLOSSNER MUCK

CUMULATIVE IMPERVIOUS SUFACE:
EXISTING - 1.26 ACRES
POST CONSTRUCTION - 2.5 ACRES

DIRECT DISCHARGE FROM IMPERVIOUS SURFACE: 0.2 ACRES

RECEIVING WATERS:
CITY STORM SEWER

DATES OF CONSTRUCTION: 2025

OWNER: GROWTH HOLDINGS LLC

UNDERGROUND UTILITY/GRADING CONTRACTOR:

TO BE DETERMINED

PARTY RESPONSIBLE FOR LONG TERM O&M:
OWNER: GROWTH HOLDINGS LLC

GENERAL SITE INFORMATION

IMMEDIATELY FOLLOWING GRADING OF SLOPES OF 3:1 OR GREATER, SLOPES MUST BE STABILIZED WITH WOOD FIBER BLANKET (OR OTHER METHOD APPROVED BY THE ENGINEER) OVER APPROVED SEED MIXTURE AND A MINIMUM OF 4" OF TOPSOIL.

ALL EROSON CONTROL MEASURES SHALL REMAIN IN PLACE AND BE MAINTAINED IN GOOD CONDITION UNTIL THE SITE HAS BEEN RE-VEGETATED, AT WHICH TIME THE CONTRACTOR MAY REMOVE NECESSARY SILT FENCING TO CONSTRUCT ROADWAYS WHILE MAINTAINING ADEQUATE EROSION CONTROL IN ADJACENT AREAS. SUFFICIENT TOPSOIL SHALL BE STOCKPILED OR IMPORTED TO ALLOW FOR THE REPLACEMENT OF A MINIMUM OF 4" OF TOPSOIL FOR DISTURBED AREAS TO BE RE-VEGETATED.

CONTRACTOR SHALL SCHEDULE SITE GRADING, UTILITY INSTALLATION, AND ROADWAY CONSTRUCTION SO THAT THE GENERAL SITE CAN BE MULCHED AND RE-SEEDED SOON AFTER DISTURBANCE. DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SODDED WITHIN: 7 DAYS

INSPECT SILT FENCES AND BALE CHECKS AFTER EACH RAIN EVENT AND DAILY DURING A PROLONGED RAINFALL. IMMEDIATELY REPAIR FAILED OR FAILING MEASURES.

REMOVE SEDIMENT DEPOSITS FROM SILT FENCE AND BALE CHECKS WHEN SEDIMENT REACHES APPROXIMATELY 1/3 THE HEIGHT OF THE BARRIER.

BARRIERS WILL BE REPLACED WHEN THEY DECOMPOSE OR BECOME INEFFECTIVE BEFORE THE BARRIERS ARE NO LONGER NECESSARY. ANY SEDIMENT REMAINING IN-PLACE AFTER THE BARRIERS ARE NO LONGER NECESSARY WILL BE DRESSED TO CONFORM TO EXISTING GRADE, AND PREPARED AND SEEDED WITH THE APPROPRIATE SEED MIX, AS DIRECTED BY THE ENGINEER.

IN THOSE AREAS WHERE WOOD FIBER BLANKET OR OTHER SLOPE STABILIZATION METHODS HAVE FAILED, THE SLOPE SHALL BE RE-ESTABLISHED, SEED AND TOPSOIL REPLACED, AND ADDITIONAL SLOPE TREATMENT INSTALLED.

BARRIERS WILL BE REMOVED WHEN FINAL STABILIZATION OF THE SLOPES HAS BEEN COMPLETED AS DETERMINED BY THE ENGINEER.

NO STORMWATER MITIGATION MEASURES WERE REQUIRED AS A PART OF ENVIRONMENTAL, ARCHAELOGICAL OR OTHER REQUIRED LOCAL, STATE, OR FEDERAL REVIEW OF THIS PROJECT.

THIS PROJECT IS NOT LOCATED IN A KARST AREA
NECESSITATING MEASURES TO PROTECT DRINKING WATER SUPPLY.

THIS PROJECT DOES DISCHARGE WATER TO AN IMPAIRED WATER.

PROVIDE SILT FENCE AROUND ALL SOIL STOCKPILES

SWPPP IMPLEMENTATION CHAIN OF RESPONSIBILITY

EACH CONTRACTOR ON-SITE WILL DESIGNATE AN EMPLOYEE AS ITS PROJECT SWPPP OFFICER. A LIST OF THESE OFFICERS WITH CONTACT INFORMATION WILL BE AVAILABLE ON-SITE. IT WILL BE SOLEY THE SWPPP OFFICERS' RESPONSIBILTY TO ENSURE THAT ALL ON-SITE ACTIVITIES PERFORMED BY ITS COMPANY COMPLY WITH THE SWPPP. THE GENERAL CONTRACTOR'S SWPPP OFFICER WILL HAVE AUTHORITY OVER ALL SUB-CONTRACTOR'S SWPPP OFFICERS FOR WORK PERTAINING TO COMPLIANCE.

SHOULD A SWPPP OFFICER FAIL TO ENSURE COMPLIANCE, THAT OFFICER'S FOREMAN OR DIRECT SUPERVISOR WILL ASSUME ALL RESPONSIBILITY.

SHOULD A SUB-CONTRACTOR FAIL TO COMPLY WITH THE SWPPP, THE GENERAL CONTRACTOR WILL ASSUME ALL RESPONSIBILITY FOR COMPLIANCE.

SHOULD THE GENERAL CONTRACTOR FAIL TO COMPLY WITH THE SWPPP, THE OWNER WILL ASSUME ALL RESPONSIBILTY FOR COMPLIANCE.

EROSION PREVENTION PRACTICES

CONTRACTOR SHALL PHASE CONSTRUCTION, MAINTAIN VEGETATIVE BUFFER STRIPS, AND PROVIDE HORIZONTAL SLOPE STAKING IN ORDER TO MINIMIZE EROSION.

SILT FENCE SHALL BE INSTALLED BEFORE WORK BEGINS. SILT FENCE LIMITS SHALL COINCIDE WITH DOWNGRADE GRADING LIMITS UNLESS OTHERWISE NOTED.

THIS PROJECT DOES NOT HAVE EXPOSED POSITIVE SLOPES WITHIN 200' OF SURFACE WATER.

THE WETTED PERIMETER OF DRAINAGE SWALES WILL BE STABILIZED WITH WOOD FIBER BLANKETS AND/OR DITCH CHECKS WITHIN 200' OF THE SITE BOUNDARY LINE OR WETTED PERIMETER OF DITCHES WITHIN 24 HOURS..

TEMPORARY OR PERMANENT DITCHES THAT ARE BEING USED AS A SEDIMENT CONTAINMENT SYSTEM DURING CONSTRUCTION MUST BE STABILIZED WITHIN 24 HOURS AFTER NON-USE

PIPE OUTLETS MUST HAVE ENERGY DISSIPATION IN PLACE WITHIN 24 HOURS OF INSTALLATION MULCH, HYDROMULCH, TACKIFIER, POLYACRYLAMIDE EROSION PREVENT PRACTICES CANNOT BE BE USED WITHIN THE NORMAL WETTED PERIMETER OF OF DRAINAGE DITCHES OR SWALE SECTIONS WITH A CONTINUOUS SLOPE GREATER THAN 2%

SEDIMENT CONTROL PRACTICES

CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN:
SEDIMENT CONTROLS FOR TEMPORARY AND PERMANENT DRAINAGE BASINS AND DRAINAGE DITCHES THAT ARE A PART OF THIS DESIGN

CHECK DAMS AND/OR WOOD FIBER BLANKETS TO ENSURE SHEET FLOW AND PREVENT RILLS FOR SLOPE LENGTHS GREATER THAN 75' WITH A SLOPE OF 3:1 OR GREATER

SILT FENCE AT ALL DOWN GRADIENT PERIMETERS INSTALLED PRIOR TO ALL LAND DISTURBING ACTIVITIES

INLET PROTECTION AT ALL DRAIN INLETS

SILT FENCING AROUND TEMPORARY SOIL STOCKPILES

ROCK CONSTRUCTION SITE ENTRANCES

STREET SWEEPING OF TRACKED SEDIMENT ONTO PAVED SURFACES

SEDIMENT CONTROL PRACTICES MUST BE IN PLACE AT ALL DOWN GRADIENT PERIMETERS AND UPGRADIENT OF ANY BUFFER ZONES

SEDIMENT CONTROL PRACTICES ARE ESTABLISHED AT THE BASE OF STOCKPILES ON DOWN GRADIENT PERIMETER

STOCKPILES ARE LOCATED OUTSIDE OF NATURAL BUFFERS OR SURFACE WATER, INCLUDEING STORM WATER CONVEYANCES UNLESS THERE IS A BYPASS

THIS PROJECT DOES NOT INCLUDE DEWATERING OR BASIN DRAINING
PERMANENT SEDIMENT BASINS WILL BE USED AS TEMPORARY BASINS DURING CONSTRUCTION

ADDITIONAL BMP'S FOR SPECIAL WATERS

THIS PROJECT DOES NOT DISCHARGE TO SPECIAL WATERS OR HAVE SIGNIFICANT IMPACTS TO WETLANDS

INSPECTIONS AND MAINTAINANCE

CONTRACTOR SHALL INSPECT AND MAINTAIN MEASURES AT MINIMUM ONCE EVERY (7) DAYS DURING ACTIVE CONSTRUCTION, AND WITHIN 24 HOURS AFTER A RAINFALL EVENT OF 0.5" IN 24 HOURS.

INSPECTIONS WILL INCLUDE STABILIZED AREAS, EROSION PREVENTION AND SEDIMENT CONTROLS, AND INFILTRATION AREAS.

REFER TO MPCA'S COMPLIANCE GUIDE FOR EROSION AND SEDIMENT CONTROL FOR INSPECTION LOG REQUIREMENTS.

MAINTENANCE RECORDS SHOULD INCLUDE: DATES & TIMES IF INSPECTION, NAME OF PERSON CONDUCTING THE INSPECTION, FINDINGS & LOCATIONS OF CORRECTIVE ACTIONS, PARTY COMPLETING MAINTENANCE ACTIVITIES, DATES & AMOUNTS OF RAINFALL EVENTS GREATER THAN 0.5" RAINFALL AMOUNTS ARE TO BE RECORDED WITH RAIN GAUGE ON SITE OR WEATHER STATION WITHIN 1 MILE OF SITE. ANY DISCHARGES OBSERVED SHOULD BE DESCRIBED & PHOTOGRAPHED.

RECORDS RETENTION

CONTRACTOR SHALL MAINTAIN RECORDS OF THE SEDIMENT RETENTION PROCEDURES ON-SITE. RECORDS WILL INCLUDE:
COPY OF THE SWPPP AND ALL REVISIONS
INSPECTION AND MAINTAINANCE RECORDS
PERMANENT OPERATION AND MAINTAINANCE AGREEMENTS
CALCULATIONS FOR THE DESIGN OF TEMPORARY AND PERMANENT STORMWATER MANAGEMENT SYSTEMS
COPIES OF THE SWPPP MUST BE RETAINED ON SITE BY THE PERMITTEE

POLLUTION PREVENTION MEASURES

SOLID WASTE:
COLLECTED SEDIMENT, ASPHALT AND CONCRETE MILLINGS, FLOATING DEBRIS, PAPER, PLASTIC, FABRIC, CONSTRUCTION AND DEMOLITION DEBRIS AND OTHER WASTES MUST BE DISPOSED OF PROPERLY AND MUST COMPLY WITH MPCA DISPOSAL REQUIREMENTS.

CONCRETE AND OTHER WASHOUTS:
PERFORM ALL CONCRETE TRUCK WASHOUTS IN PROPER CONTAINMENT FACILITIES. SOILID AND LIQUID WASHOUT WASTE FROM OTHER MATERIALS (STUCCO, PAINT, FORM RELEASE OILS CURING COMPOUNDS ETC.) WILL BE DISPOSED OF IN A PROPERLY DESIGNATED LANDFILL.

PERFORM ALL WASHOUTS INCLUDING HANDTOOLS IN A LEAKPROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER THAT PREVENTS RUNOFF ONTO ADJACENT SOILS. DEBRIS/SEDIMENT WILL NOT CONTACT THE GROUND SURFACE.

A SIGNE REQUIRING USE OF PROPER WASHOUT FACILITIES WILL BE INSTALLED ADJACENT TO SAID FACILITIES.

HAZARDOUS MATERIALS:
OIL, GASOLINE, PAINT AND ANY HAZARDOUS SUBSTANCES MUST BE PROPERLY STORED, INCLUDING SECONDARY CONTAINMENT TO PREVENT SPILLS, LEAKS, OR OTHER DISCHARGE. RESTRICTED ACCESS TO STORAGE AREAS MUST BE PROVIDED TO PREVENT VANDALISM. STORAGE AND DISPOSAL OF HAZARDOUS WASTE MUST BE IN COMPLIANCE THE MPCA REGULATIONS.

EXTERNAL WASHING OF TRUCKS AND OTHER CONSTRUCTION VEHICLES MUST BE LIMITED TO A DEFINED AREA OF THE SITE. RUNOFF MUST BE CONTAINED OF AND WASTE PROPERLY DISPOSED OF. NO ENGINE DEGREASING IS ALLOWED ON SITE.

SWPPP AMENDMENTS

AMENDMENTS MADE IN THE FIELD TO THE SWPPP SHOULD BE UPDATED ON THE SWPPP. REFER TO PROCEDURES OUTLINED IN SECTION 6.1 OF THE PERMIT.

SWPPP IMPLEMENTATION CHAIN OF RESPOSIBILITY

THE GENERAL CONTRACTOR SHALL PROVIDE A TRAINED, CERTIFIED, KNOWLEDGEABLE PERSON WHO SHALL SERVE AS THE SITE'S EROSION CONTROL INSPECTOR. THIS PERSON SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL BMP'S, AND SHALL MAINTAIN THE INSPECTION LOG AT THE PROJECT SITE.

EACH SUBCONTRACTOR ON-SITE WILL DESIGNATE AN EMPLOYEE AS ITS PROJECT SWPPP OFFICER. A LIST OF THESE OFFICERS WITH CONTACT INFORMATION WILL BE AVAILABLE ON-SITE. IT WILL BE SOLELY THE SWPPP OFFICERS' RESPONSIBILITY TO ENSURE THAT ALL ON-SITE ACTIVITIES PERFORMED BY ITS COMPANY COMPLY WITH THE SWPPP. THE GENERAL CONTRACTOR'S SWPPP INSPECTOR WILL HAVE AUTHORITY OVER ALL SUBCONTRACTOR'S SWPPP OFFICERS FOR WORK PERTAINING TO COMPLIANCE.

SHOULD A SWPPP OFFICER FAIL TO ENSURE COMPLIANCE, THAT OFFICER'S FOREMAN OR DIRECT SUPERVISOR WILL ASSUME ALL RESPONSIBILITY.

SHOULD A SUBCONTRACTOR FAIL TO COMPLY WITH THE SWPPP, THE GENERAL CONTRACTOR WILL ASSUME ALL RESPONSIBILITY FOR COMPLIANCE.

SHOULD THE GENERAL CONTRACTOR FAIL TO COMPLY WITH THE SWPPP, THE OWNER WILL ASSUME ALL RESPONSIBILITY FOR COMPLIANCE.

CHANGES IN PERMIT AND NOTICE OF TERMINATION

THE CONTRACTOR WILL BE A CO-PERMITEE DURING THE CONSTRUCTION OF THE PROJECT. AFTER GRAVEL SURFACING OF THE PROJECT HAS BEEN COMPLETED, AND 70% PERMANENT VEGETATIVE COVER HAS BEEN ESTABLISHED OVER THE PERVIOUS AREAS OF THE SITE, AND THE WARRANTY PERIOD HAS ELAPSED, THE CONTRACTOR MAY SUBMIT A MPCA (NOT)F ORM TO THE OWNER FOR SIGNATURE AND SUBMITTAL TO THE MPCA.

THE OWNER WILL SUBMIT THE NOTICE OF TERMINATION (NOT) AFTER ONE FINAL ESTABLISHMENT OF ALL PERVIOUS SURFACES ACCORDING TO THE MPCA GENERAL PERMIT REQUIREMENTS

NOTIFICATION OF THE MPCA IN CASE OF POLLUTION

IT IS THE DUTY OF THE CONTRACTOR TO NOTIFY THE MPCA IMMEDIATELY OF ANY DISCHARGE, ACCIDENTAL OR OTHERWISE, OF ANY SUBSTANCE OR MATERIAL UNDER HIS CONTROL WHICH, IF NOT RECOVERED, MAY CAUSE POLLUTION OF WATERS OF THE STATE, AND THE CONTRACTOR SHALL RECOVER AS RAPIDLY AND THOROUGHLY AS POSSIBLE SUCH SUBSTANCE OR MATERIAL AND TAKE IMMEDIATELY SUCH OTHER ACTION AS MAY BE REASONABLY POSSIBLE TO MINIMIZE OR ABATE POLLUTION OF WATERS OF THE STATE CAUSED THEREBY.

SEDIMENT LEAVING THE CONSTRUCTION SITE AND ENTERING A PUBLIC WATER IS CAUSE FOR NOTIFICATION.

MPCA DUTY OFFICER: 800-422-0798

QUALIFIED SWPPP PERSONNEL INFORMATION

SWPPP DESIGNER: BRIAN J. JOHNSON, PE
JONES HAUGH & SMITH, INC.
515 SOUTH WASHINGTON AVE
ALBERT LEA, MN 56007
(507) 373-4876

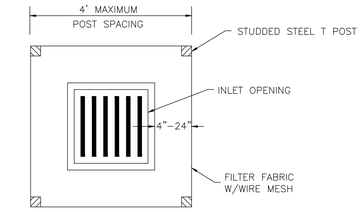
SWPPP INSTALLER:
NAME: _____
FIRM: _____
ADDRESS: _____
_____
PHONE: _____

SWPPP INSPECTOR:
NAME: _____
FIRM: _____
ADDRESS: _____
_____
PHONE: _____

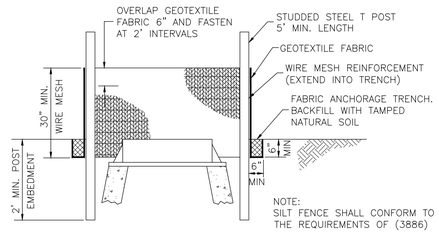
GRADING CONTRACTOR:
NAME: _____
FIRM: BCM CONTRACTING_____
ADDRESS: _____
_____
PHONE: _____

OTHER LAND DISTURBING CONTRACTOR:
NAME: _____
FIRM: _____
ADDRESS: _____
_____
PHONE: _____

OTHER LAND DISTURBING CONTRACTOR:
NAME: _____
FIRM: _____
ADDRESS: _____
_____
PHONE: _____

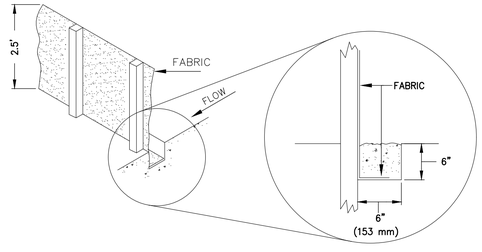


PLAN VIEW



SECTIONAL VIEW

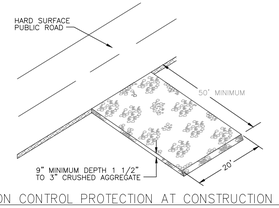
INLET PROTECTION - HEAVY DUTY



NOTES:
- PLACE BOTTOM EDGE OF FENCE INTO 6" (153 mm) DEEP
- POSTS SHALL BE:
  - 4' (1.22 m) ON CENTER
  - 2" (50.8 mm) X 2" (50.8 mm) HARDWOOD, PINE OR STANDARD STEEL FENCE POSTS
  - DRIVEN 2' (0.61 m) INTO THE GROUND.

EROSION CONTROL FENCE

(MACHINE SLICED)



EROSION CONTROL PROTECTION AT CONSTRUCTION ACCESS

Consultant:
JONES HAUGH SMITH
Engineers + Surveyors
515 South Washington Ave. Albert Lea, MN 507-373-4876

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Brian J. Johnson
Reg. No. 42744
Date 9/20/25

Project:
MANKATO APARTMENTS

Revision:

No.:	Date: 9/20/2025
Drawn: bjj	Checked:

Project Manager:

Project Status: CD

Sheet Title:
SWPPP NARRATIVE & DETAILS

Sheet No.:
C8

GOVERNING SPECIFICATIONS
The Minnesota Department of Transportation's "Standard Specifications for Construction" 2018 Edition, including the Mn/DOT Special Provisions modified for this project, Minnesota Plumbing Code and the City Engineers Association of Minnesota Standard Specification, 2018 Edition, will govern except as modified or altered in the Special Provisions. All references to "State of Minnesota" or "Commissioner of Transportation" or "Department" are hereby revised to mean "Owner."

WORK WITHIN PROPERTY
The Contractor will work only in areas secured by the Owner, and will comply with all requirements of access agreements.

MATERIALS TESTING

Materials Testing will be by the Contractor. The Contractor will hire an independent testing consultant, approved by the Engineer, prior to the start of work to be tested.

1. The following materials tests will be provided by the Testing Company:

Work to be Tested	Method	Reference Spec.	Testing Rate
Sewer & Water Service Trenches	Specified Density	MnDOT 2105, 2451, 2501	1 test per 500 lf
Storm Sewer Trench Compaction	Specified Density	MnDOT 2105, 2451, 2501	1 test per 500 lf
Subgrade/Embankment Compaction	Specified Density	MnDOT 2105	1 test per 2500 cy placed (Clay, Sand, etc.)
Test Rolling	Fully Loaded Dump Truck		1 test per road
Select Granular Borrow	Specified Density	MnDOT 3149	1 per 5000 ton
	Gradation	MnDOT 3149	1 per Source
Aggregate Base (CL 3, CL 5)	Modified DCP	MnDOT 2211	2 tests per 1000 ton
	Gradation	MnDOT 2211	1 per 5000 ton
Bituminous Paving	Ordinary Comp.-Control Strip	MnDOT 2360	1 control strip per mobilization and/or per workday
Concrete Curb & Gutter	Air, Slump, Temp, Strength	MnDOT 2461	If non-integrant
Air, Temp. - 1 per day			
Slump, Strength - 1 per day; and each time water is added at the site			
Concrete Driveway or Sidewalk	Air, Slump, Temp, Strength	MnDOT 2461	
Air, Temp. - 1 per day			
Slump, Strength - 1 per day; and each time water is added at the site			
Concrete Paving		MnDOT 2301	
All Concrete Field testing or Concrete Pavement per 2012 MnDOT Schedule of Materials Control (page 32), except Pavement Texture and Smoothness.			

Table Notes:

- Specified Density also requires Moisture-Density and Relative Density
- The Engineer may omit duplicative trench compaction tests at his discretion

MAINTENANCE OF TRAFFIC (1404)
The Contractor will be responsible for traffic control on the Project, and will furnish, erect, and maintain all necessary traffic control devices required to provide safe movement of vehicular traffic through the Project. Any traffic control device installed will meet the requirements of the Minnesota Manual on Uniform Traffic Control Devices, Field Manual, latest edition, and the latest MnDOT specifications approved at the time of bid.

The Contractor will prepare and submit to the City Engineer and County Engineer for Approval a Traffic Control Plan for any work in or utilization of traveled Right-of-Way. The plan will be submitted a minimum of 48 hours prior to the commencement of work. No work in the Right-of-Way will commence without an Approved Traffic Control Plan.

Traffic control will be in accordance with the Traffic Control Layout Plan and the following:
Traffic control devices include, but are not limited to, barricades, warning signs, lane markings, trailers, flashers, cones, and drums, as required, and sufficient barricade weights to maintain barricade stability.
No material will be deposited on a traveled roadway.
Materials will not be placed on road right of way more than one week in advance of their use.
Contractor will notify the affected parties at least one week prior to commencement of disturbance of the private or business drives.
Coordination will be maintained with the Fire and Police Departments to ensure that passage is maintained for emergency vehicles at all times.
The Contractor will make one person responsible for the maintenance of all signs. The Contractor will check each intersection at the end of each day whether it is a working day or not. The name and telephone number of this person will be left with the Police, the City Engineer, and the Fire Departments.

UTILITY PROPERTY AND SERVICE (1507)
Construction operations in the proximity of utility properties will be performed in accordance with the Provisions of 1507, except as modified below:

The first paragraph of 1507 is deleted and the following substituted therefore:

It will be the Contractor's responsibility to contact all local utility companies and ascertain the location of all existing underground utilities, if any, prior to performing any excavation operations. The Contractor will conduct his/her operations in the vicinity of any such facilities, which may exist, in a manner that will prevent damage thereto.

It will be the Contractor's responsibility to utilize the One-Call Excavation Notice System at 'Gopher State One Call' (1-800-252-1166) required under Minnesota Statute Chapter 216D, 48 hours prior to performing any excavation adjacent to any underground facility, which may exist, in a manner that will prevent damage thereto.

CONSTRUCTION STAKES, LINES AND GRADES (1508)

All construction staking will be provided by the Contractor and performed by or under the direct supervision of a Land Surveyor licensed in the State of Minnesota.

Field Fit Adjustments to Grade Stakes
The Engineer may make minor adjustments (< 0.5') to the grade stakes after they have been placed, in order to adjust to actual conditions in the field or to ensure proper or better drainage. Any adjustments to proposed or in-place materials required due to minor adjustments made by the Engineer are incidental to the work.

CONTROL OF HAUL ROADS (1515), LAWS TO BE OBSERVED (1701)

In addition to the requirements of 1515 and 1701, the Contractor will abide by all weight restrictions implemented by the governing road authorities in the performance of the work and in delivering materials and equipment to the project site.

AIR LAND AND WATER POLLUTION (1717)

The provisions of Mn/DOT 1717 are hereby modified and supplemented as follows:

DEWATERING
Any dewatering necessary to construct the work will be done by the Contractor. The Contractor is responsible to determine the type and method of dewatering and to provide and implement all equipment and materials necessary to accomplish the work on this project. Discharged water from dewatering will be routed through a temporary sediment basin. Sediment trapped in the temporary basins will be removed and disposed of on-site.

PROTECTION OF SURFACE STRUCTURES
The Contractor will not trespass on any private property without the express written consent of the Owner thereof. Trees, shrubs, fences, poles and all other private property will be protected unless their removal is authorized. Any property damaged will be satisfactorily restored at the expense of the Contractor. Any land survey or property monuments destroyed, covered, moved, bent or disturbed will be replaced by a Licensed Land Surveyor at the expense of the Contractor.

Wherever construction is planned to cross private property, an easement for the construction has been acquired from the property owner. The Contractor will familiarize himself with the terms of such easements, which the Owner will have on file.

Ground surface, trees, shrubbery, fences and other private property will be restored to the same condition as existed prior to the beginning of construction. This will include consolidating backfill, graveling driveways and any other leveling and landscaping required to restore the premises to original condition. The topsoil will be piled separately from subsoil material and will be replaced in the trench above the subsoil material.

Except where sodding is required, all grassed areas disturbed during the construction will be seeded following landscaping.

The Contractor will restore at his own expense streets, roads, alleys, private or public structures such as water mains, water connections and appurtenances, culverts, drain tiles, sewers, manholes, catch basins, sewer connections, curb, gutter, sidewalk, street signs, or other structures designated to remain in place which are damaged or injured in any way by his acts, and will be responsible for all damages to other utilities he may encounter.

The Contractor will not claim, or be entitled to receive, compensation for any damages sustained by reason of the inaccuracy or omission of any of the information given on the drawings relative to surface, overhead, or underground structures, or by reason of his failure to properly protect such structures.

PROTECTION OF SIDE STREETS AND HAUL ROUTES

The Contractor will be responsible for any damage of the side streets in the area and any other streets that are used as haul routes. The Contractor will discuss all haul route possibilities with the City Engineer and County Engineer prior to their use. The City Engineer, County Engineer, and the Contractor together will inspect the condition of the proposed routes before, during and after their use. The Contractor will correct any damage that is caused by the hauling activities at no cost to the Owner.

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Ground surface, trees, shrubbery, fences and other private property will be restored to the same condition as existed prior to the beginning of construction. This will include consolidating backfill, graveling driveways and any other leveling and landscaping required to restore the premises to original condition. The topsoil will be piled separately from subsoil material and will be replaced in the trench above the subsoil material.

Except where sodding is required, all grassed areas disturbed during the construction will be seeded following landscaping.

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The Contractor will not claim, or be entitled to receive, compensation for any damages sustained by reason of the inaccuracy or omission of any of the information given on the drawings relative to surface, overhead, or underground structures, or by reason of his failure to properly protect such structures.

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INTERFERENCE OF UNDERGROUND STRUCTURES

Existing utilities crossed by the new construction will be protected against damage, and/or replaced to original grade. Protection, temporary support and maintenance of existing utilities will be furnished by the Contractor at his own expense. The final installation will provide permanent support to prevent any settlement or movement, which may result in damage to these utilities.

Whenever existing pipe is replaced, the material of replacement will be DIP or PVC pipe of the same diameter as the original, long enough to extend at least one foot into the solid bank on either side of the excavation. The backfill under and around such pipe will be thoroughly compacted by mechanical means to preclude settlement. All connections between different types or sizes of pipe or improperly matched joint types will be encased in concrete with a minimum thickness of 6 inches.

Should it become necessary during the progress of the work to remove or relocate existing utilities or structures, the Owner will cause the same to be done at no expense to the Contractor, except as otherwise provided herein. The Contractor will notify those who maintain utilities sufficiently in advance of construction so they may make the necessary location, disclosure, relocation or other preparation. Where necessary to locate existing underground utilities, the Contractor, upon order of the Engineer, will make any required subsurface explorations and excavation, and will be allowed compensation therefore. Where relocation or reconstruction of existing utilities is impracticable, a change in line and/or grade of the new construction will be ordered, and the change will be made as directed. No deviation from the line or grade set by the Engineer will be made without his approval.

CONNECT TO EXISTING SANITARY SEWER

The Contractor will connect to the existing sanitary sewer at the locations shown on the plan. Exploratory excavation for determining the location of existing utilities and the connection to the existing sanitary sewer are incidental to the work. The Contractor will verify the connection elevation at the main is reasonably close to the elevation shown on the plan prior to beginning work. If the elevation is substantially different, the Contractor will notify the Owner and Engineer.

Where new connections are made to existing sanitary sewer manholes, the contractor will core drill the manhole wall and invert to the existing flow line, construct and shape a new invert for the new pipe, and provide a waterproof boot through the wall of the manhole for the new pipe.

SANITARY SEWER CONSTRUCTION REQUIREMENTS

1. Noise -- The Contractor will insure all equipment is properly fitted with mufflers to reduce noise to the minimum attainable to avoid creating a nuisance in the residential and business area.
2. Trench Compaction -- All trenches will be tamped using the existing material that has been excavated. Tamping will not be paid as a bid item, therefore the cost of this work will be included in the price bid for furnishing and installing the pipe.
3. Piling Excavated Materials -- Excavated material will not be piled on private property without the express permission of the owner thereof, except where easements for the sewer construction or for related work have been obtained; nor will it be piled in any location that will require backfilling machinery to operate on private property. Where excavated material is piled on private property it will be placed to cause the least possible inconvenience to the property owner. Any damage caused thereby, including damage to buildings, walls, sidewalks, driveways, trees, shrubs, lawns, or any other property, will be repaired at the expense of the Contractor. Backcasting in order to minimize disturbance is incidental to the work.
4. It will be the Contractor's responsibility to protect adjacent pipes in and around manholes to be reconstructed, and will replace any pipes damaged, cracked, or broken by the Contractor at their expense.
5. All excavations, trenching and/or jacking and boring pits will be sheeted and/or shored as per OSHA requirements. No unsheeted trench will be left open overnight.
6. Backfilling of all trenches within the limits of street excavation will comply with the provisions of MN/DOT Specification 2112 including achieving 100% compacted density in the upper three feet of subgrade (below aggregate base) and 95% below the upper three feet. Density testing will be performed as directed by the Owner to verify compaction. Trench areas that are determined by the Owner to have yielded due to improper compaction will be deemed as Unacceptable Work and will be corrected by the contractor at no additional cost.
7. Removal of former service lines. -- Service lines no longer being utilized will be removed to the main, as directed by the City. Removal and restoration of street surfacing required for the service removal is incidental.
8. RECORDS OF LATERALS: The Contractor will maintain a complete and accurate record of the location and depth of each lateral. The Contractor will make measurements from the end of each service to prominent permanent features to facilitate its location in the future. The end of each lateral will be located in plan and elevation, and a sketch made to show the plan location. These records will be turned over to the Owner.
9. Contractor shall televise all sewer main to be owned by the City.

MATERIALS FOR SANITARY SEWER CONSTRUCTION:

The project calls for the use of Poly-Vinyl Chlorids (PVC). Pipe and fittings should be properly bedded and encased in accordance with the Standard Detail Sheets and Standard Specifications for Sanitary Sewer Installation. All 8" and larger sanitary sewer shall be SDR 35, pipe smaller than 8" shall be SDR 26 Bedding and encasement beneath, along the sides, and above the pipe will be Select Granular material, tamped in place. The only deviation will be in poor soil conditions, as approved by the Engineer, where foundation rock will be substituted. Pipe bedding is incidental to pipe installation. Foundation rock is incidental to pipe installation.
Joints for PVC-SDR 35, and PVC-SDR 26 gravity sewer pipe will be made using Elastomeric gaskets conforming to the requirements of ASTM D3212.
Joints in precast concrete manholes will be made using a joint compound equal to Ram-Nek or rubber gasketed conforming to ASTM C443.
All manhole castings will be equipped with solid lid covers, self-sealing, with concealed pick holes. Manhole casting will be Neenah R1772, or equal and will be labeled 'SANITARY' on casting.

CONNECT TO EXISTING WATERMAIN

The Contractor will connect to existing watermain at the locations shown on the plan. All connections to existing water main are incidental to the work. All exploratory excavation in determining the location of existing water main is incidental to the work. The Contractor will coordinate with the utility owner and be responsible for any fees due for connections.

WATERMAIN CONSTRUCTION REQUIREMENTS

1. Noise -- The Contractor will insure all equipment is properly fitted with mufflers to reduce noise to the minimum attainable to avoid creating a nuisance in the residential and business area.
2. Bedding and encasement beneath, along the sides, and above the pipe will be Select Granular material, tamped in place. The only deviation will be in poor soil conditions, as approved by the Engineer, where foundation rock will be substituted. Pipe bedding is incidental to pipe installation. Foundation rock will be paid at the unit price per ton. No payment will be made for bedding materials which, in the opinion of the Engineer, was unnecessary for proper pipe installation.
3. Trench Compaction -- All trenches will be tamped using the existing material that has been excavated. Tamping will not be paid as a bid item, therefore the cost of this work will be included in the price bid for furnishing and installing the pipe.
4. Piling Excavated Materials -- Excavated material will not be piled on private property without the express permission of the owner thereof, except where easements for the sewer construction or for related work have been obtained; nor will it be piled in any location that will require backfilling machinery to operate on private property. Where excavated material is piled on private property it will be placed to cause the least possible inconvenience to the property owner. Any damage caused thereby, including damage to buildings, walls, sidewalks, driveways, trees, shrubs, lawns, or any other property, will be repaired at the expense of the Contractor.
5. It will be the Contractor's responsibility to protect adjacent pipes in and around manholes to be reconstructed, and will replace any pipes damaged, cracked, or broken by the Contractor at their expense.
6. All excavations, trenching and/or jacking and boring pits will be sheeted and/or shored as per OSHA requirements. No unsheeted trench will be left open overnight.
7. Backfilling of all trenches within the limits of street excavation will comply with the provisions of MN/DOT Specification 2112 including achieving 100% compacted density in the upper three feet of subgrade (below aggregate base) and 95% below the upper three feet. Density testing will be performed as directed by the Engineer to verify compaction. Trench areas that are determined by the Engineer to have yielded due to improper compaction will be deemed as Unacceptable Work and will be corrected by the contractor at no additional cost.
8. The Contractor will coordinate the construction of all private and municipal utilities.
9. The Contractor will be responsible for all tapping or other fees paid to public or private utilities as work incidental to the contract.
10. RECORDS OF LATERALS: The Contractor will maintain a complete and accurate record of the location and depth of each water lateral. The Contractor will make measurements from the end of each service to prominent features to facilitate its location in the future. The end of each lateral will be located in plan and elevation, and a sketch made to show the plan location. These records will be turned over to the Owner.

MATERIALS FOR WATERMAIN CONSTRUCTION- City standards shall govern over all material specs listed below if discrepancies exist.

1. Watermain shall be DIP meeting the requirements of AWWA C-900. Pipe and fittings should be properly bedded and encased in accordance with manufacturer's requirements. Foundation rock will be used in poor soil conditions.
2. Bedding and encasement for pipe, beneath, along the sides, and above the pipe will be Select Granular material, tamped in place. The only deviation will be in poor soil conditions, as approved by the Engineer, where foundation rock will be substituted. Pipe bedding is incidental to pipe installation. All joints between pipe, fittings, valves, and hydrants will be equipped to provide electrical conductivity.
3. Gaskets will be mechanical joint rubber gaskets, unless otherwise specified.
4. Hyrdants shall be Waterous Pacer WB-67-250 with 6" mechanical joint inlet and valve boxes as manufactured by American Flow Control Series 2500 or US Metro Pipe Seal with the Top marked WATER.
5. The furnishing and installing of disinfection materials to disinfect the watermains will be the responsibility of the Contractor. The City Utilities Department will assist the Contractor in flushing and testing the watermains.
6. The Contractor will use restrained joint mechanical joint flanges with mega lug retainer glands or equal on all hydrants, watermain offsets, bends, or other mechanical fittings. STAINLESS STEEL BOLTS will be required on all mechanical joints and sleeves.
7. All exposed parts of the bolts and nuts will be completely coated with an approved asphaltic type rust preventive material. Any parts of the fittings that have been scraped will also be coated with an approved asphaltic type rust preventive material. Watermain fittings will conform to ANSI Standard A21.10. All watermain fittings, hydrants and retaining rods will be protected by using sacrificial zinc anode caps such as 175P190 Protecto Caps as manufactured by Ebba Iron or an approved equal. Two caps per mechanical joint will be used.

TESTING OF WATER MAIN

Hydrostatic pressure testing of water main and services will be conducted as follows:
After the pipe has been laid, including fittings and valves and blocking, all newly laid pipe or any valved section thereof, unless directed otherwise by the Engineer, will be subject to hydrostatic pressure of 150 pounds per square inch. The duration of each such test will be at least two hours.

Each section of pipe to be tested will be filled with water and all air expelled at the highest point. The required taps to expel air or to fill the water main will be supplied and installed by the Contractor and will be 3/4 inch and will include an approved service saddle when required.

The test apparatus will be applied at the lowest elevation on the section to be tested. The apparatus will be connected to the main at a service tap or special tap location.
The pressure gauge will be a standard pressure gauge. The dial will register from 0 - 200 psi and have a dial size of 4 1/2 inches with 1-psi increments.

The hydrostatic test, pressure requirement for an acceptable test will be a maximum pressure drop of 2 psi during the last hour of the two-hour pressure test.
If this test requirement cannot be met, the Contractor will investigate the cause, make corrections, and retest until the pressure drop requirement can be met.

Only if several consecutive tests indicate a consistent pressure drop and only after the Contractor has made numerous attempts to resolve the problem, acceptable to the Engineer, may the Contractor request in writing and the Engineer consider the use of the leakage test. The leakage test may be performed by the Contractor to determine the magnitude of the leak, however, meeting the leakage allowance will not automatically be considered acceptance, in lieu of the pressure test, for the section being tested. Final acceptance will be at the discretion of the Engineer.

When allowed, the leakage test will be performed in accordance with AWWA C-600, Section 4.1.5, 4.1.6 and the line will be accepted as per Section 4.1.7.

Operational Testing will be conducted as follows:
At the completion of the project and in the presence of the Engineer and the Contractor, representatives of the Owner will operate all valves, hydrants, and water services to ascertain that the entire facility is in good working order; that all valve boxes are centered and valves are opened; that all hydrants operate and drain properly; that all curb boxes are plumb and centered; and that water is available at all curb stops.

Disinfection Testing:
Before being placed in service, the completed water main will be disinfected. Disinfection materials and procedures, and the collection and testing of water samples, will be in accordance with the provisions of AWWA C-651. After the final flushing the water will be tested for bacteriologic quality and found to meet the standards prescribed by the Minnesota Department of Health.
Samples will be taken and tested after 24 and 48 hours of disinfection. Both tests must be returned with passing results prior to approval for service.

Where an existing water main is cut for the installation of any fitting, the pipe and fittings proposed to be installed will be disinfected prior to installation as follows:

The interior of the pipe and fittings will be cleaned of all dirt and foreign material.

The interior of the pipe and fittings will be thoroughly swabbed or sprayed with a 1 percent minimum hypochlorite solution.

Unless otherwise indicated in the Plans, Specifications, and Special Provisions, the Contractor will furnish all materials and perform the disinfecting, flushing, and testing as necessary for meeting the water quality requirements.

The flushing operations and the form of chlorine and method of application to be used will be subject to approval by the Engineer.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Brian J. Johnson
Reg. No. 42744
Date: 9/20/25

Consultant:
JONES HAUGH SMITH
Engineers + Surveyors
515 South Washington Ave. Albert Lea, MN 507-373-4876

Project:
MANKATO APARTMENTS

Revision:

No.: | Date: 9/20/2025
Drawn: bjj | Checked:
Project Manager:
Project Status: CD
Sheet Title:
SPECIFICATIONS

Sheet No.:
C9

MATERIALS FOR STORM SEWER CONSTRUCTION

1. All drainage structures with a depth of greater than 5' from top of casting elevation to bottom of structure elevation will be provided with steps.
2. Reinforced Concrete Pipe will be bedded and encased in accordance with plans and with material meeting the requirements of 2503. All RCP storm sewer pipe 15" in diameter or less will be Class 5, all other RCP storm sewer pipe will be Class 3 unless otherwise noted.
3. All PVC storm sewer will be Schedule 40 PVC, unless otherwise noted.

STORM SEWER CONSTRUCTION REQUIREMENTS

1. Unless otherwise noted, all existing drain tile encountered during the course of the work will be repaired if damaged by the work, or if the existing outlet is known to be removed or made dysfunctional, hooked up to the new storm sewer improvements. This work is incidental to the contract.
2. Where existing tile lines, sump pump lines, or other existing drainage lines are tied into RCP storm sewer lines, a hole will be created in the upper 1/3 of the side of the new storm sewer, the existing line will be inserted into the side of the new RCP to a depth of not greater than 2", geotextile fabric will be blanketed around or stuffed into the opening around the new pipe, and cement grout will be formed around the connection, so as to ensure water tightness. A maximum of 3 rings shall be used per standard plate 5043.
3. Where existing tile lines, sump pump lines, or other existing drainage lines are tied into HPDE storm sewer, fittings specifically manufactured for the connection of these lines will be used.
4. All existing drainage structures receiving new pipe will be cemented water tight around all pipes entering or exiting the structure. In addition, the inverts of all structures will be cemented so that all water entering the structure has a direct line out of the structure.
5. All new drainage structures will have integrally cast rubber boots to accept pipes and to ensure water-tightness. Worm screw stainless steel bands will be affixed to the boots to secure the pipe to the structure.
6. HDPE pipe will be installed accordance with ASTM F230

CASTING ASSEMBLIES (2506)

Casting assemblies will be of size and design noted on the plans. The work will include the cost of installing to final street surface grade on the manhole or inlet, including pavement removal and replacement if installed after paving.

Contractor will use at least two and not more than six standard adjusting rings immediately below the casting assemble which will be set in a mortar bed. Each adjusting ring will also be set in mortar. All adjusting rings will be plastered with a minimum of ½" of mortar on the interior and exterior, such that the casting is water tight from both the interior and exterior.

When bituminous paving lifts are scheduled for sequential construction seasons, castings will be set to the elevation of the non-wear course for the winter season, and then adjusted to final grade the following year. This work is incidental to construction.

Chimney Seal

Chimney seal will be furnished and installed on all sanitary manhole and ring casting assemblies. Seals will consist of rubberized sleeves or collars specially designed for covering manhole frames, rings and castings. Seals will be exterior seals with mechanical restraint as manufactured by Cretex Products or equal.

Furnish and installation of Chimney Seal is incidental to manhole castings and no additional payment will be made therefore.

Chimney Seal will not be required until final adjustment of castings at the time the final lift of bituminous paving is constructed.

ADJUST WATER VALVE BOX

This work will consist of the adjustment of all water valve boxes to conform to each grade of the bituminous pavement. This work includes multiple adjustments and is incidental to construction. If any structures are damaged by the Contractor's operations, the cost of repairs and replacement will be at the Contractor's expense. Final valve box adjustment at the final lift of paving will be by the paving contractor.

REMOVALS (2104)

Saw-cut Bituminous and/or Saw-cut Concrete

The edges of paving at the locations shown on the plan or directed as directed by the Engineer in the field will be full-depth saw-cut, typically at right angles to the faces to remain, in order to produce a clean edge of which to match the replacement paving or other surface to. Saw-cutting is incidental to the removals.

Remove Bituminous and/or Concrete Surface

After removal of bituminous or concrete surfacing in the traveled way, an aggregate surface will be provided in the removal area to the elevation of the removed materials. A minimum thickness of 6" of aggregate at the surface will be provided. This work is incidental to removals.

Disposal of Removed Materials

The removed materials will become property of the Contractor and be removed from the project site at the Contractor's expense.

Remove Storm Sewer

When existing storm sewer is designated to be removed, the existing pipe will be removed in its entirety, or crushed in its entirety and backfilled over, if directed by the Engineer.

EXCAVATION AND EMBANKMENT (2105)

1. The area designated for excavation will be excavated to sufficient depth to allow construction of the typical section shown on the plans except as otherwise directed by the Owner. The Contractor will verify to the Owner that the subgrade has been constructed to the proper elevation before base construction proceeds. The subgrade must be within 0.10' plus or minus of plan elevation before the construction is allowed to proceed. A subgrade elevation consistently above or below plan elevation will not be considered acceptable work. On average, the subgrade will be at about plan elevation.
2. Excess excavated material will be disposed of by the Contractor. Excess topsoil material will be stockpiled separately or leveled, as directed by the Owner. Stockpiling and leveling will be considered incidental to the excavation, and will not be paid for directly.
3. The contractor will salvage and stockpile suitable topsoil and surface material to the satisfaction of the Owner as necessary to provide for final seed and turf establishment and restoration. Topsoil salvage will be considered incidental to excavation and no direct compensation will be made therefore.
4. Removal of rocks, boulders, masonry or concrete within the excavated area will be considered common excavation. All roots, stumps, rubbish, rocks and other waste materials will be hauled to the nearest landfill. This work will be considered incidental to the construction and will not be paid for directly.
5. Paving sections will be required to allow construction of the typical cross-section. Embankment will be constructed in accordance with the provisions of 2105. Suitable excess excavated materials will be utilized for embankment to the fullest extent practicable. The remaining embankment material will be granular borrow conforming to the provisions of 3149.2A.
6. Site grading will be performed as required to establish plan grade. All excess becomes property of the Contractor to be disposed of off-site.
7. The Contractor will be responsible for ensuring that all areas within the limits of lot grading have a minimum of 6" of salvaged topsoil material on the final grade. It will be the Contractor's responsibility to coordinate and designate topsoil salvaging operations and stockpiling to ensure adequate topsoil is available for a 12" cover. All existing topsoil will be removed in all areas which will be filled with any material other than topsoil except that topsoil depths will not exceed two feet.
8. All borrow or salvaged excavated material to be used as embankment within the limits of paving construction will be approved by the Owner prior to placement. Embankment will comply with the provisions of Minnesota Department of Transportation Spec. 2112 including achieving 100% compacted density in the upper 3 feet of subgrade and 95% below the upper 3 feet of subgrade.
9. All natural topsoils will be removed from below all paving construction areas.
10. Suitable excavated material will be used as backfill. Embankments and boulevards not being seeded or sodded will be dragged or raked smooth prior to completion of each project.
11. Excess excavated material, excluding rocks, boulders, debris and organic material, will be the property of the Owner and will be stockpiled on site as directed by the Owner. All other excess material will be disposed of by the Contractor offsite.
12. When embankment materials are placed on existing ground with an existing slope of greater than 4:1, the embankment will be placed in accordance with 2105.3.B.
13. Where excavation is performed to the subgrade without the placing of embankment materials, the contractor will work the upper 1' of the subgrade to within 2% of optimum moisture prior to the test-rolling stated below. When the existing moisture content is greater or less than 2% of optimum, the contractor will "farm" the material to dry it, or add water and mix the materials until the subgrade reaches the desired moisture content. This work will be incidental to construction.
14. Backfill construction of concrete curb and gutter in accordance with 2531.J is incidental. The contractor will note that when this work is complete, continuous positive drainage is provided to the curb & gutter, which is defined by the MPCA as a stormwater conveyance.

TOPSOIL SALVAGE

All areas to be seeded will be finished with no less than 6 inches of topsoil salvage. This topsoil will be raked to a smooth surface free of roots, rocks and soil clumps. Topsoil salvage will be incidental to the project. All areas to receive fill material are subject to topsoil salvage. Topsoil may be placed over existing topsoil.

SUBGRADE PREPARATION (2112)

1. The provisions of 2112 will be follows and as outlined in 2112.
2. The final shaping and compacting of the subgrade will be done just prior to placing any base or surface course.
3. At the time the subgrade preparation operations have been completed, the prepared surface will be in reasonably close conformity with the cross sections shown in the Plans and the lines and grades shown on the plan.
4. Where excavation is performed to the subgrade with or without the placing of embankment materials, the contractor will work the subgrade to within 2% of optimum moisture. When the existing moisture content is greater or less than 2% of optimum, the contractor will "farm" the material to a minimum depth of 12" to dry it, or add water and mix the materials until the subgrade reaches the desired moisture content. This work will be incidental to construction.
5. The required stability will be such that when any material for base or surface courses is deposited on the subgrade, no rutting or displacement will occur.
6. The subgrade preparation prior to construction of underground utilities will not be subject to elevation tolerances.
7. Subgrade preparation is incidental to the contract

S-7 SUBGRADE COMPACTION

The subgrade when exposed will be compacted with a tamping roller, compactor or other means to not less than 100% Maximum Density and 2% Optimum Moisture. The Contractor will work the upper 1' of the subgrade to within 2% of optimum moisture during compaction. When the existing moisture content is greater or less than 2% of optimum, the contractor will "farm" the material to dry it, or add water and mix the materials until the subgrade reaches the desired moisture content. This work will be incidental to construction. Prior to placement of any stabilized base, a fully loaded dual axel dump truck will be driven over the completed sub-grade in the presence of the Contractor and Engineer present. The subgrade will be found suitable for placement when no rutting or displacment occurs. The test-rolling will be incidental to stabilized base and no specific payment will be made therefore.

S-8 SUBGRADE CORRECTION

If after substantial efforts by the contractor to correct the moisture content of the subgrade and re-compact the materials, the subgrade displays evidence of rutting or yielding prior to, during, or after this compactive effort, additional material will be excavated as directed by the Owner to the depth required to provide a stable foundation for the base material. Suitable material removed during excavation will be utilized for subgrade correction. This work will not be paid as Extra Work if it was or would have been, or could have been performed as part of any other grading activity.

STABILIZED BASE CONSTRUCTION (2211)

This work will consist of the excavation and embankment of existing subgrade and surface materials, and the construction of aggregate base.

1. Aggregate base will be either MnDOT Class 2 or Class 5, at the Contractor's option. Class 7 recycled base is acceptable where alllowed in the MnDOT standard specifications.
2. Any damage by the Contractor's operations to any existing improvements which have not been designated for removal or disturbance will be repaired at the expense of the Contractor.
3. AGGREGATE: Aggregate for the purposes required by this contract will be furnished by the Contractor from sources selected by him.
4. AGGREGATE BASE: Aggregate base, will be constructed in accordance with the provisions of 2211. Aggregate will conform to the requirements of 3138.
5. Compaction will be obtained by the Modified Penetration Index Method modified as follows: The Owner will hire an independent testing laboratory to perform density and moisture testing. Moisture tests will be performed with each density test. Tests will be performed in accordance with the Materials Testing Section above. Penetration and moisture content testing will be performed along with to the density tests. No payment will be made for work tested that fail to meet the specified density. The Contractor will be responsible for any additional tests due to the failure of work. Water will be applied to the base material during mixing, spreading and compaction operations for proper compaction and will be considered incidental work.
6. Test rolling will be performed on the aggregate base in the presence of the Owner's testing subconsultant. Test rolling will be as specified in Mn/DOT specification 2111 except that the test will be performed with a fully loaded tandem axel dump truck in lieu of the test roller. The Owner may delete the requirement for test-rolling on all or portions of the stabilized base, at his discretion, after consultation with the Contractor.
7. Furnish and install Aggregate Base, Class 5 meeting MN/DOT Specification No. 3138 under all concrete or bituminous pavements and a minimum of 2 inches of Aggregate Base, Class 5 under all curb and curb and gutter.

MAINTENANCE OF COMPLETED BASE

After completion of any part of the base, such base will be maintained in a dust free condition. It will be the Contractor's responsibility to repair at his expense all prepared and shaped surfaces until project is complete. Any water applied to keep the base dampened or reshaped will be at the Contractor's expense. The Contractor will maintain the completed aggregate base after rain events, and replace and recompact any eroded aggregate as work incidental to the contract. Maintenance of completed base is incidental to construction.

APPLICATION OF WATER (2130)

Application of water will be in accordance with the provisions of 2130 except as herein modified. No direct compensation will be made for water used in conjunction with the mixing, placing and compacting operations for base construction. The contractor is responsible for application of water for dust control in accordance with Mn/DOT 1717 and with the NPDES permit. Application of water for dust control is incidental to the work and no additional payment will be made therefore.

CONCRETE PAVEMENT (2301)

Jointed Type 3 Grade A Plain Concrete Pavement will be placed in accordance with the Mn/DOT standard specifications except as modified herein. Loading dock pavement will be reinforced.

The mix designs for concrete paving for this project are:
- Standard Paving - 3A41
- High Early Strength (if directed by Owner) - 3A41HE
- Flexural strength at 28 days will be 750 psi.
- Compressive strength at 28 days will be per the mix designations above.

High Early concrete areas will remain closed to traffic for 3 days or until they have achieved a flexural strength of 450 psi, whichever is shorter.
Concrete will be supplied from a Mn/DOT certified producer. The Contractor will be responsible for supplying the mix designs. The Contractor will provide the Engineer with the mix designs a minimum of 24 hours prior to the first pour.
Concrete will be cured by the use of membrane curing compound meeting the requirements of MnDOT 3754 AMS.
All joint sealant will conform to 3723, Concrete Joint and Crack Sealer (Hot-Poured Elastic Type) sealant.
Transverse metal-tine finishing will not be required.
The location of transverse joints may be adjusted in the field by the Engineer. An increase in the number of transverse joints of up to five percent (5%) compared to the number shown on the plans will be incidental.
All coarse aggregate for concrete pavement will meet the gradation requirements of MnDOT 3137 CA-50.

BITUMINOUS TACK COAT (2357)

Treating existing bituminous or concrete surfaces preparatory to placing a bituminous course thereon will be performed in accordance with the provisions of MN/DOT 2357 and the following:

A bituminous tack coat consisting of emulsified asphalt will be applied between all bituminous surfaces. A tack coat will be placed on the existing pavement prior to placing the next layer of bituminous and the edges of concrete pavement and curb and gutter that will come into contact with the new bituminous will be tacked. All surfaces will be cleaned of all dirt, debris and loose material prior to the application of the bituminous tack coat.

PLANT MIXED ASPHALT PAVEMENT (2350/2360)

Plant mixed asphalt pavement density will be constructed in accordance with Mn/DOT specification 2360, as published by Mn/DOT at the time of bid.After placement of the base course of bituminous paving at the bus parking area and car parking area, the Contractor will flood the work area with water to identify possible "bird bath" locations where the pavement has not been placed at enough grade to ensure proper drainage. Prior to or during placment of the wear course, the Contractor will ensure that these areas are graded to properly drain.

CONCRETE MIX FOR CURB & GUTTER, WALKS, & DRIVEWAYS (2461)

Concrete for this Contract will be as follows and as outlined in 2461:
The concrete mix number to be used for slip form curb and gutter will be 3A22. The concrete mix number for hand formed curb and gutter, sidewalks, and driveways will be 3A32.

	Minnesota Highway Designation	Minnesota Highway Designation
Mix Number	3A32B	3A22B
Type of Concrete	Type 3 (Air Entrained)	Type 3 (Air Entrained)
Grade	Grade A	Grade A
28 Day Strength	27 Mpa (3900 psi)	27 Mpa (3900 psi)
Slump	50 mm to 75 mm (2" to 3")	25 mm to 50 mm (1" to 2")
Coarse Aggregate Composition	100% Class "B"	100% Class "B"
Gradation of Coarse Aggregate	CA25 or CA50 For Structural Concrete	CA25 or CA50 For Structural Concrete

Concrete will be supplied from a Mn/DOT certified producer. The Contractor will supply the mix designs. The Contractor will provide the Engineer with the mix design a minimum of 24 hours prior to the first pour.

WALKS (2521)

Concrete sidewalks will be constructed in accordance with 2521 and Standard Plate 7035M. Preformed joint filler material will be placed in accordance with Standard Plate 7035M. Concrete sidewalks will be mix design 3A32 with a maximum slump of 3". No water will be added to the mix to reduce the slump beyond 3" for temporary workability, as stated in 2461.B3. Colored concrete shall be as manufactured by Scofield with coloring as determined by the Landscape Plan.

CONCRETE CURING AND PROTECTION (2521, 2531)

All sidewalk, driveway, curb and gutter will be cured using a membrane curing compound conforming to the requirement of Minnesota Highway Department #3754. For concrete curb and gutter poured after October 1st, blanket or extreme service membrane methods of curing will be substituted for membrane curing, in accordance with 2531.

EXTREME TEMPERATURE CONCRETE

The following additional measures will be required for extreme temperature concrete construction, as work incidental to the contract:

Hot Weather Concrete Construction
1. Do not place concrete with a placing temperature that will cause difficulty from loss of slump, flash set, or cold joints.
2. Maintain a concrete temperature during placement of less than 90 degrees F.
3. Use all means necessary to avoid drying the concrete prior to the completion of finishing operations.
4. Provide and use windbreaks, sunshades, fog sprays, and other devices to protect the concrete.

Cold Weather Concrete Construction
1. Provide adequate protection when temperatures are 40 degrees F or lower occur durin ghte placing and early curing periods.
2. Comply with all pertinent recommendations of ACI 306 (Recommended Practice for Cold Weather Concreting).
3. Type IIIA cement may be used.
4. The use of Calcium Chloride or other accelerators will not be permitted.
5. Maintain a concrete temperature during placement of more than 60 degrees F.
6. Use all means necessary to avoid exposure of concrete to freezing temperatures during placement, finishing, and curing.
7. Concrete will not be placed on a frozen subgrade.
8. Provide and maintain heated enclosures, insulating blankets, tarpaulins, heaters, fuel, and all other protective equipment required.
9. Maintain favorable curing temperature at all times until the concrete gains sufficient strength to withstand exposure to low temperature and applied loads.

CONCRETE CURBING & GUTTER (2531)

Concrete curb and gutter will be constructed in accordance with the provisions of 2531 and the following: Curing will be by the Membrane Curing Method as specified in 2531.3G (2). The sealing of joints in concrete curb and gutter will not be required.

Construction joints in curb and gutter will be installed at 10-foot intervals. Preformed joint filler material (1/2-inch) will be place at the ends of all street returns, at the ends of concrete driveway approaches, and in accordance with MN/Dot Standard Plate 7035N.

Concrete curb and gutter will be the style shown on the plans.

PEDESTRIAN CURB RAMPS (2531)

Unless otherwise dome sections will be red.

STORM WATER MANAGEMENT (2573)

The Stormwater Pollution Prevention Plan (SWPPP) required by the NPDES permit has been provided by the Owner and is incorporated into the plans and specifications.

The Minnesota Department of Transportation's Specification 2573 - Stormwater Management is hereby modified as follows:

1. The Contractor will apply for and comply with the provisions of the NPDES permit and the SWPPP (Stormwater Pollution Prevention Plan).
2. The Stormwater Pollution Prevention Plan provided by the Owner is meant and provided as a guide in the provision of Erosion and Sediment Control (ESC) Best Management Practices (BMP's) as required by the NPDES permit. The SWPPP is based on finish grade contours. Additional ESC measures, although not shown by the plan, may be required to comply with the provisions of the NPDES permit. Provision and maintenance of the ESC BMP's in accordance with the NPDES permit is the responsibility of the contractor, regardless of what is shown on the SWPPP. Interim ESC BMP's and updating of the SWPPP are the responsibility of the contractor. Maintenance of the ESC BMP's is incidental to the work and will be performed in accordance with 2573.M.
3. When updates to the SWPPP are required, the Contractor will provide the Engineer with sketches of the updated areas, so that the Engineer can update the SWPPP.
4. No additional payment will be made for additional ESC BMP's required by the NPDES permit but not shown on the SWPPP.
5. The contractor will obtain the NPDES permit from the MPCA and pay any applicable fees as work incidental to the contract. The contractor will remain named on the NPDES permit until the warranty period expires, at which time he/she may submit an NPDES Permit Modification/Transfer Form to the Owner for completion and submission to the MPCA.
6. The contractor will maintain the NPDES site inspection log.
7. The contractor will be responsible for all fines imposed by regulating agencies for failure to comply with the provisions of the NPDES permit.
8. If the Engineer determines that ESC BMP's have failed or require maintenance, the Contractor will correct the cause of failure, maintain the BMP's, and alleviate all sediment deposition outside the construction limits, to the fullest extent possible. If the Contractor fails to install or maintain erosion or sediment control measures required by the NPDES permit, fails to conduct required inspections, or fails to take action ordered by the Engineer to correct ESC problems, the Engineer will issue a written order to the Contractor. The Contractor will respond within 24 hours with sufficient personnel, equipment, and/or materials and conduct the required work or be subject to a $500 per calendar day penalty for noncompliance. In addition, the Engineer may recommend that the Owner withhold payment from all work until the ESC BMP's are constructed or maintained.
9. The Engineer may require the Contractor to submit a site plan for certain portions of the work detailing proposed ESC BMP's, and a schedule indicating start and completion dates. The Contractor will not start work within these areas until the Engineer has accepted the site plan and schedule. No additional payment will be made for preparation of site plans required by the Engineer, or reasonable delays or production losses caused by this requirement.
10. Sediment removal required due to the failures to implement or maintain ESC BMP's will not be considered Extra Work. The Contractor will remove all sediment from areas accrued due to actions or inactions by the Contractor, at no cost to the Owner
11. The Contractor will designate a concrete washout area on-site and inform the Engineer of the chosen location at the pre-construction meeting. This area must be constructed so that it drains towards itself. Concrete debris will be removed from the concrete washout and removed from the site prior to final acceptance.

Consultant:

JONES HAUGH SMITH
Engineers + Surveyors
515 South Washington Ave. Albert Lea, MN 507-373-4876

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Brian J. Johnson
Reg. No. 42744
Date: 9/20/25

Project:

MANKATO APARTMENTS

Revision:

No.:	Date: 9/20/2025
Drawn: bjj	Checked:

Project Manager:

Project Status: CD

Sheet Title:

SPECIFICATIONS

Sheet No.:

C10

[NAME TBD]

MULTI-FAMILY HOUSING
901 S. VICTORY DRIVE, MANKATO, MN 56001

SUBMITTAL FOR

CERTIFICATE OF DESIGN COMPLIANCE AND CONDITIONAL USE

GENERAL CONTRACTOR	**APX CONSTRUCTION GROUP** SHAWN MESCHKE | (612) 360-3710 | SHAWNM@APXCONSTRUCTIONGROUP.COM
ARCHITECT	[TBD]
CIVIL ENGINEER	JONES, HAUGH & SMITH BRIAN JOHNSON, PE. | (507) 552-1704 | BRIANJ@JHSENG.COM
STRUCTURAL ENGINEER	[TBD]
MECHANICAL ENGINEER	[TBD]
ELECTRICAL ENGINEER	[TBD]

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LOOKING NORTH

LOOKING EAST

LOOKING SOUTH

LOOKING WEST

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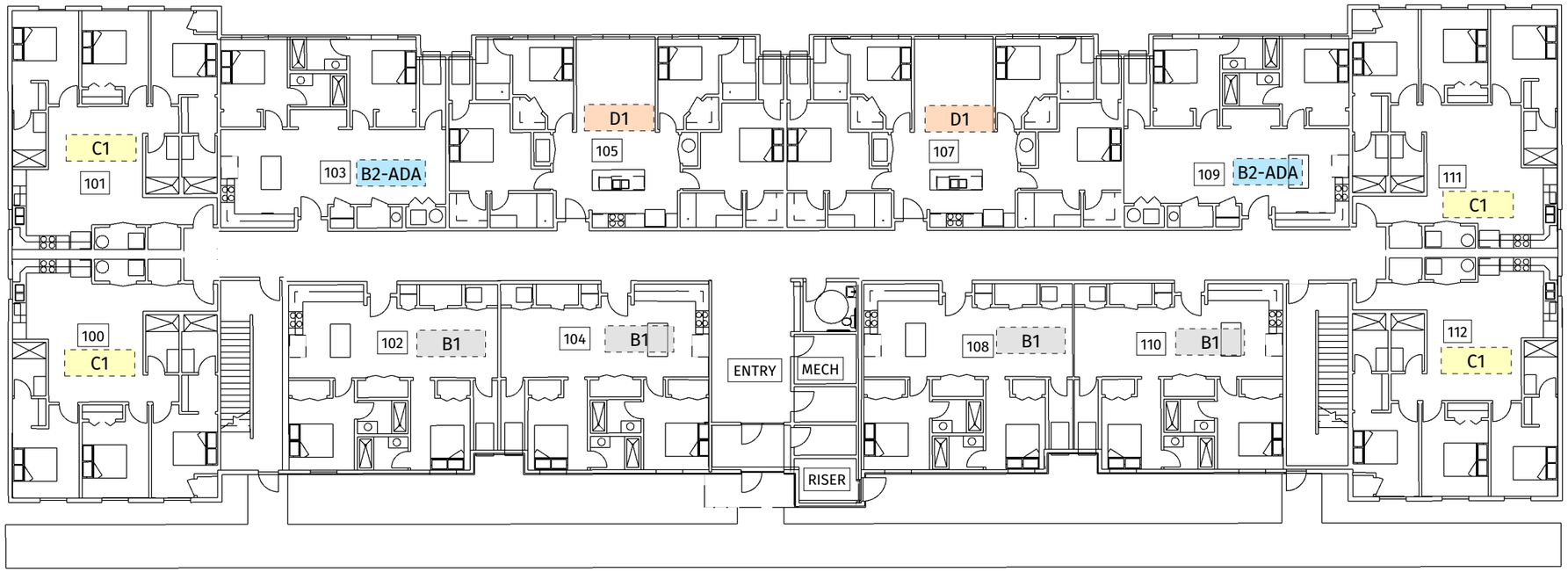

1' = 20'

PRELIMINARY CONCEPT

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GROUND FLOOR PLAN | 2025.10.14 v3

901 S.VICTORY DRIVE | 3

1' = 20'

PRELIMINARY CONCEPT

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SECOND FLOOR PLAN | 2025.10.14 v3

901 S.VICTORY DRIVE | 4

1' = 20'

PRELIMINARY CONCEPT

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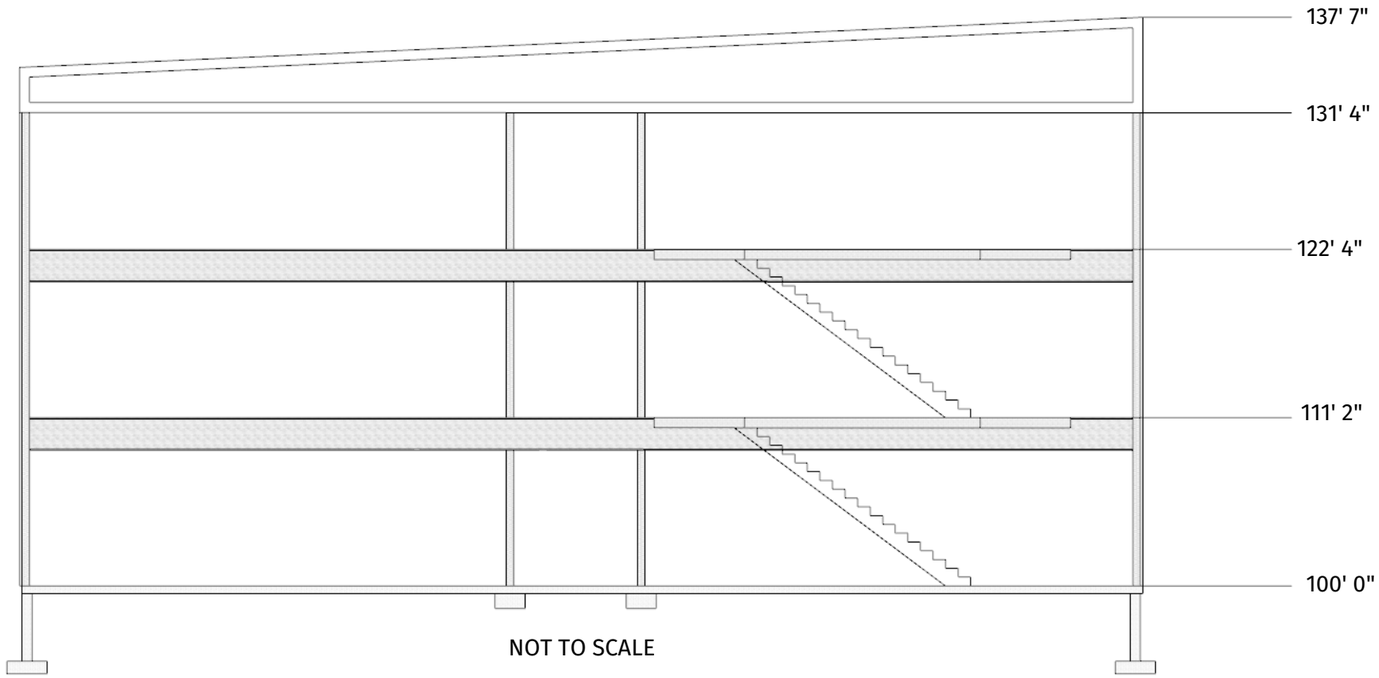
THIRD FLOOR PLAN | 2025.10.14 v3

901 S.VICTORY DRIVE | 5



B1	2 BEDROOM | 2.5 BATH	1023 SF	12 (4 PER FLOOR)	24
B2	2 BEDROOM | 2.5 BATH	1017 SF	4 (2 EA, L2 & L3)	8
B2-ADA	2 BEDROOM | 2 BATH	1017 SF	2 (2 MAIN FLR ONLY)	4
B3	2 BEDROOM | 2.5 BATH	812 SF	2 (1 EA, L2 & L3)	4
C1	3 BEDROOM | 3 BATH	1168 SF	12 (4 PER FLR)	36
D1	2 BEDROOM | 2.5 BATH	1499 SF	6 (2 PER FLR)	24

36 UNITS PER BLDG. **96 TOTAL BDRMS FOR BOTH BLDGS**

ADDITIONAL UNIT INFORMATION ON PAGE 13

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FRONT ELEVATION | 1' = 20'

REAR ELEVATION | 1' = 20'

REFERENCE PAGE 10 FOR FINISH LEGEND

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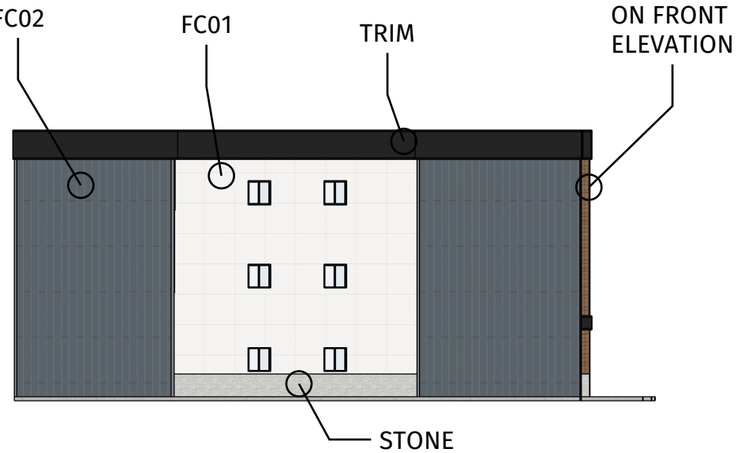
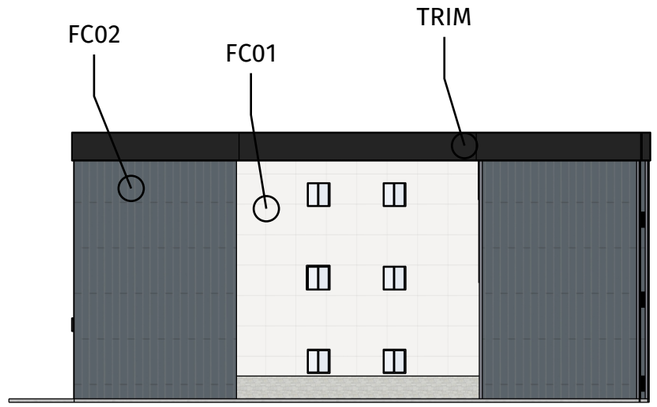


RIGHT ELEVATION | 1' = 20'



LEFT ELEVATION | 1' = 20'

REFERENCE PAGE 10 FOR FINISH LEGEND
REFERENCE PAGE 10 FOR FINISH LEGEND

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1 ELEVATION – FRONT

FINISH KEY | SEE MATERIALS LIST FOR MORE DETAIL			
FC01	FIBER CEM. PANEL	2349 sf	28.33 %
FC02	FIBER CEM. PLANK	2124 sf	25.61 %
MP01	METAL PLANK (WOOD)	1589 sf	19.16 %
STONE	STONE	375 sf	4.52 %
TRIM	TRIM	1071 sf	12.91 %
F	GLAZING	676 sf	8.15 %
G	DOORS	109 sf	1.31 %

2 ELEVATION – LEFT

FINISH KEY | SEE MATERIALS LIST FOR MORE DETAIL			
FC01	FIBER CEM. PANEL	852 sf	31.70 %
FC02	FIBER CEM. PLANK	1368 sf	50.89 %
MP01	METAL PLANK (WOOD)	0 sf	0 %
STONE	STONE	96 sf	3.57 %
TRIM	TRIM	288 sf	10.71 %
F	GLAZING	84 sf	3.13 %
G	DOORS	0 sf	0 %

3 ELEVATION - REAR

FINISH KEY | SEE MATERIALS LIST FOR MORE DETAIL			
FC01	FIBER CEM. PANEL	1722 sf	20.88 %
FC02	FIBER CEM. PLANK	2432 sf	29.48 %
MP01	METAL PLANK (WOOD)	2222 sf	26.94 %
STONE	STONE	425 sf	5.15 %
TRIM	TRIM	776 sf	9.41 %
F	GLAZING	672 sf	8.15 %
G	DOORS	0 sf	0 %

4 ELEVATION - RIGHT

FINISH KEY | SEE MATERIALS LIST FOR MORE DETAIL			
FC01	FIBER CEM. PANEL	852 sf	31.70 %
FC02	FIBER CEM. PLANK	1368 sf	50.89 %
MP01	METAL PLANK (WOOD)	0 sf	0 %
STONE	STONE	96 sf	3.57 %
TRIM	TRIM	288 sf	10.71 %
F	GLAZING	84 sf	3.13 %
G	DOORS	0 sf	0 %

REFERENCE PAGE 10 FOR FINISH LEGEND

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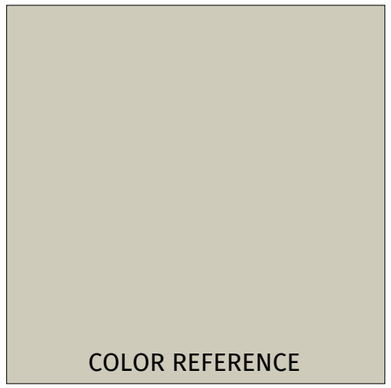
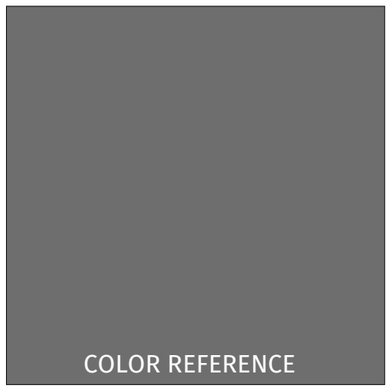


FC01 SQUARE
FIBER CEMENT ARCH PANEL
JAMES HARDIE OR SIM
SMOOTH TEXTURE
ALUMINUM CHANNEL
COLOR: NAVAJO BEIGE



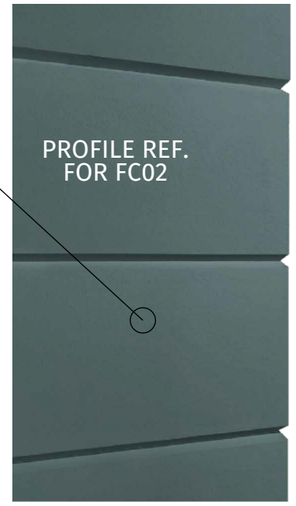
FC02 ARCH PLANK V
FIBER CEMENT
ARCHITECTURAL CLADDING
JAMES HARDIE ARTISAN
SMOOTH TEXTURE -
VGROOVE OR APP'D SIM.
PROFILE
COLOR: SLATE GRAY OR
REC. COLOR

MP01 ARCH PLANK H
FIBER CEMENT ARCH PANEL
JAMES HARDIE OR SIM
SMOOTH TEXTURE
ALUMINUM CHANNEL
COLOR: NAVAJO BEIGE

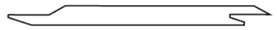
STN01
FIBER CEMENT ARCH PANEL
JAMES HARDIE OR SIM
SMOOTH TEXTURE
ALUMINUM CHANNEL
COLOR: NAVAJO BEIGE

STOREFRONT
KAWNEER ALUMINUM IN
MATTE BLACK OR SIMILAR

WINDOWS
MATERIAL TBD IN BLACK



ARTISAN®
V-GROOVE SIDING



- Deep v-shaped channels
- Great for vertical, horizontal and soffit applications

WIDTH	THICKNESS	TEXTURE	FINISH	PROFILE WIDTH x DEPTH
8.25 in (7.0 in Exposure)	5/8 in	Smooth	Primed	0.5 in x 0.263 in

BUILDING CAP & TRIM
MATTE BLACK METALS

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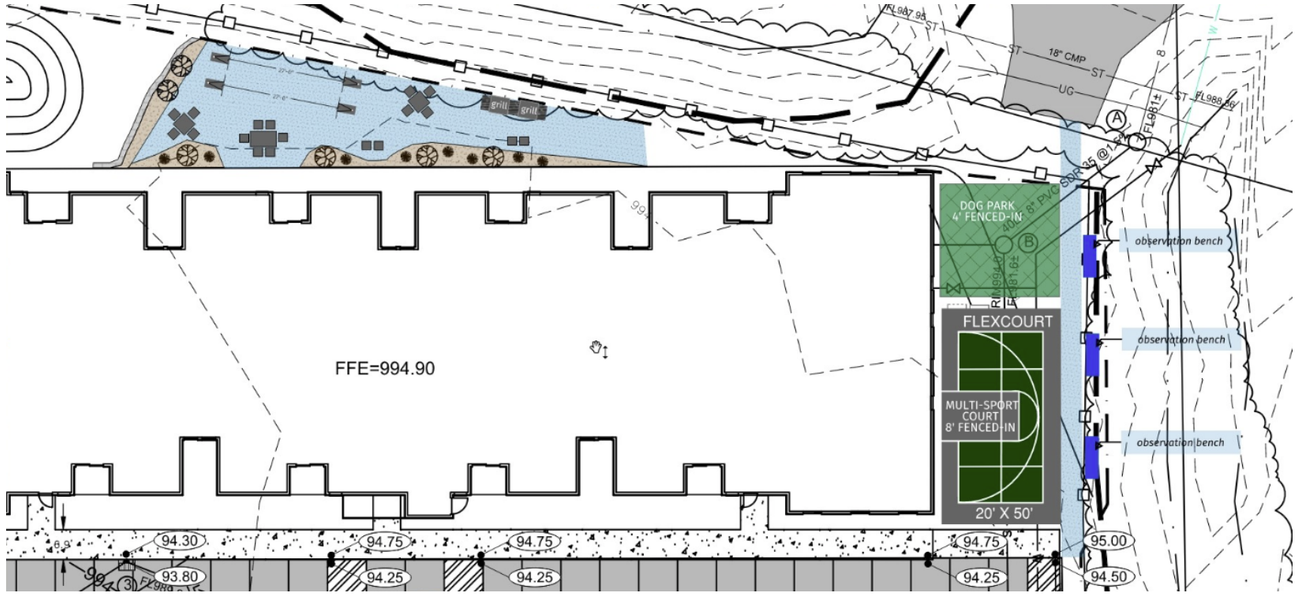
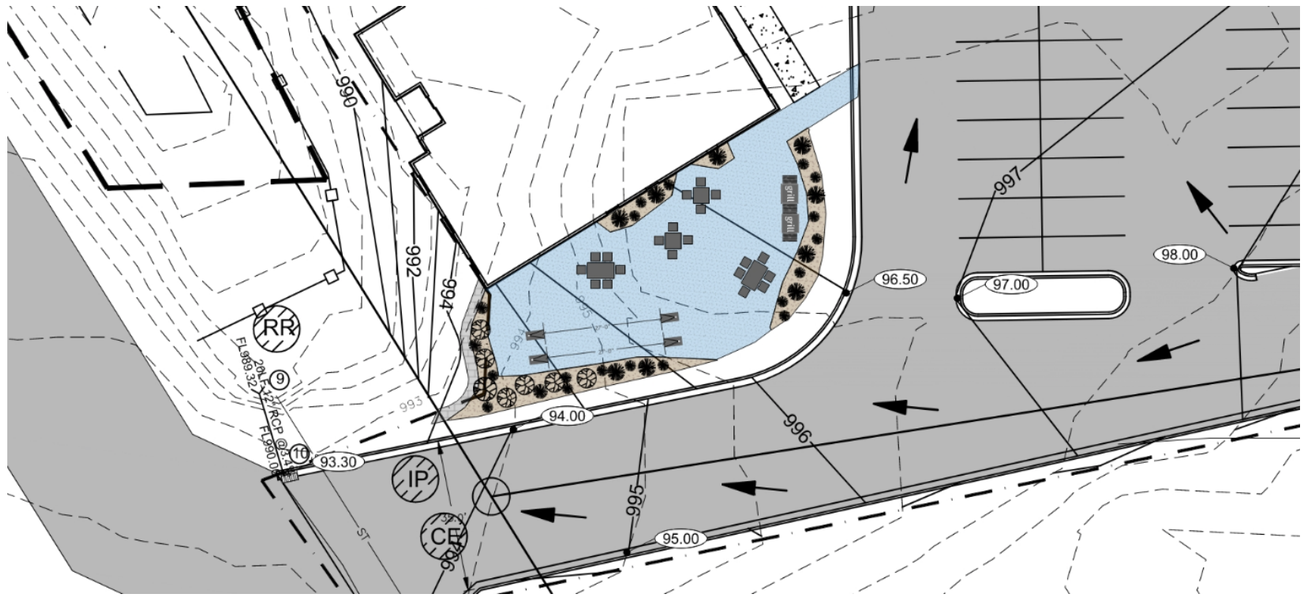
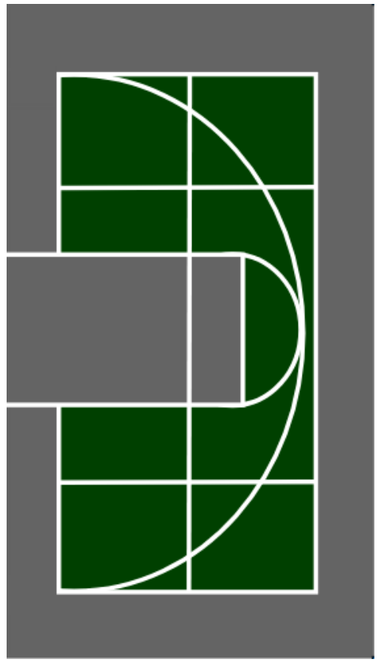
CONCEPTUAL RENDERING | 10.14.2025 v3

901 S. VICTORY DRIVE | 11





PENDING FINAL DETERMINATION OF OPEN AREAS AMANITIES THAT WOULD BE DESIRABLE WILL BE LANDSCAPED AREAS FOR OUTDOOR LOUNGING, GRILLING, PLAYING YARD GAMES. ADDITIONALLY, A FENCED IN DOG PARK AND FLEXIBLE SPORT COURT-STYLE OFFERINGS WOULD BE DESIRED IF THE DETERMINATION OF SPACE ALLOWS FOR IT. TO BE SUBMITTED IN PERMIT REQUEST EXHIBITS



EXAMPLE OF BASKETBALL, VOLLEYBALL & PICKLE BALL FLEX COURT

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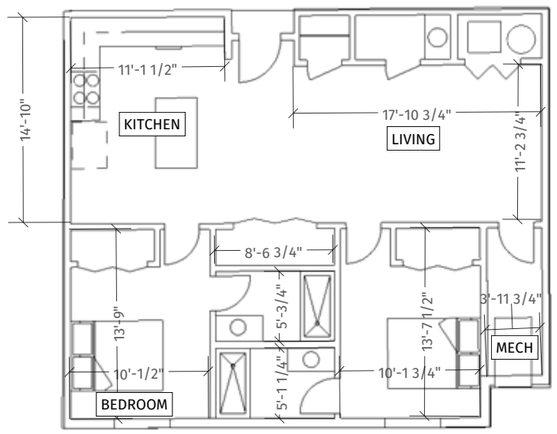
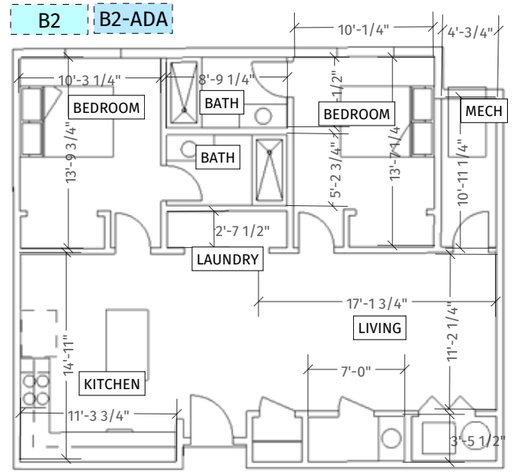
ADA VERSION NOT SHOWN, BUT RECONFIGURED SAME FOOTPRINT TO BE ACCESSIBLE

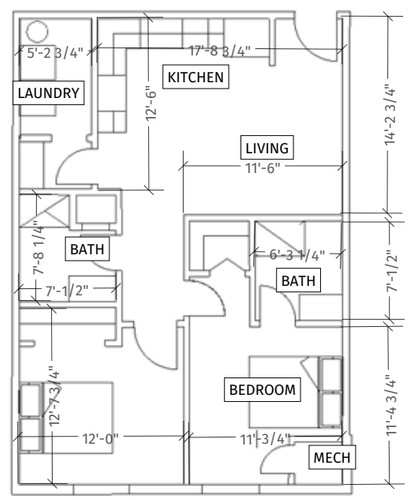
B1



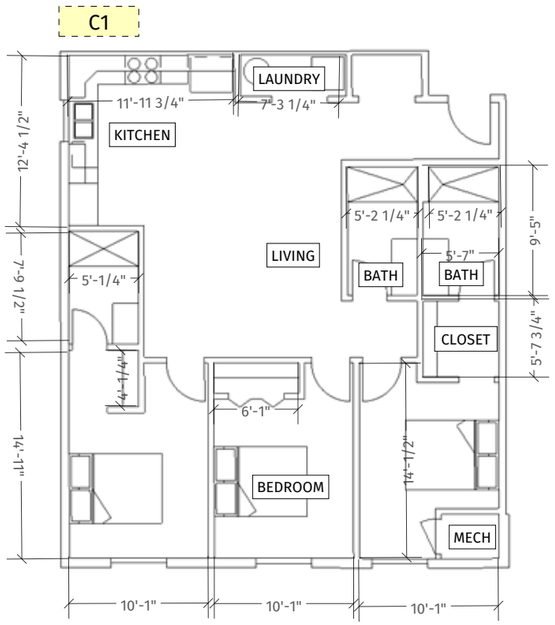
B2 B2-ADA



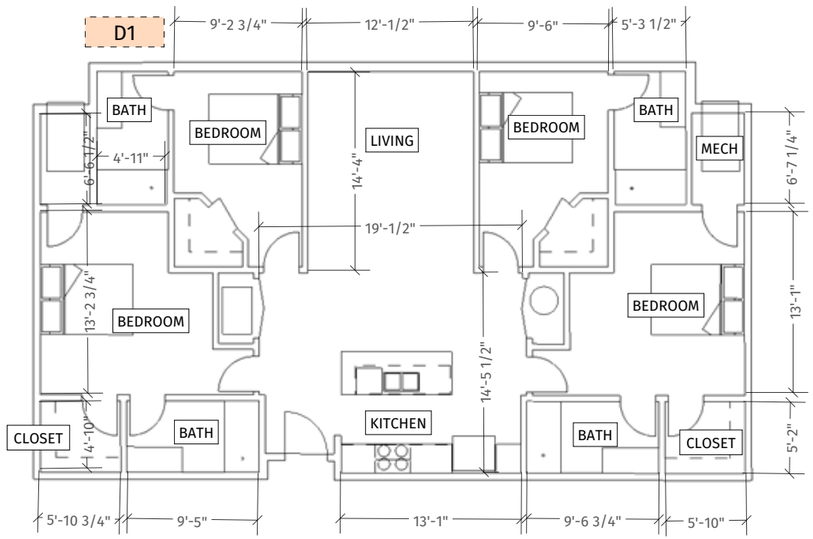
B3



C1



D1



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SSTS LLC
8112 W 16th St, St Louis Park, MN
www.s2traffic.com

September 19th, 2025

To: **Shawn Meschke, PE – APX Construction Group**

From: **Katie Schmidt, PE - SSTS LLC (MN PE #47147)**

Re: **Traffic Study – Mankato Apartments (901 S Victory Dr) Traffic Study, Mankato, MN**

SSTS, LLC has performed a traffic analysis for the Mankato Apartment Development located at 901 S Victory Dr, referred to as the Proposed Project. This development encompasses approximately 4.5 acres situated on the south side of Stadium Rd (CSAH 60) and east of S Victory Dr. The current land uses consist of a small engine repair shop and vacant land that will be redeveloped.

The Proposed Project consists of 72 apartment units distributed between two three-story buildings, along with a 150-stall surface parking lot. Access to the project is proposed via the existing driveway on S Victory Dr. Traffic will not be permitted to cut through to the eastern property. **Figure 1** illustrates the location and layout of the Proposed Project.

This study aims to assess the traffic impacts generated by the Proposed Project on the operations and safety of the adjacent roadway network and the proposed access driveway. Two existing intersections were analyzed: the Stadium Rd/S Victory Dr roundabout and the side-street stop-controlled intersection at S Victory Dr/Stadium Ln. Additionally, the proposed intersection of S Victory Dr and the Access Driveway was evaluated under Build conditions. Study years include Year 2025 (existing conditions) and Year 2027 without and with the Proposed Project. The following items will be reviewed to provide informed recommendations for safely accommodating traffic:

- Existing Conditions – Geometry and traffic volumes.
- Safety – Review of crash history.
- Future Conditions – Details on background growth and site-generated traffic. Descriptions of 2027 No-Build and 2027 Build Scenarios.
- Traffic Operations Analysis – Summary of Year 2025 Existing Conditions, and Year 2027 No-Build and Build Conditions.

EXISTING CONDITIONS

The existing conditions of the study area roadways and intersections are noted in **Table 1** and on **Figure 2**. Average Daily Traffic (ADT) volumes noted on Figure 2 are from MnDOT's traffic mapping application (MnDOT ADT Map).

Table 1. Study Roadway Characteristics

Roadway	Ownership	Functional Class*	Typical Section	Posted Speed
Stadium Rd (CSAH 60)	Blue Earth County	Minor Arterial	2-Lanes w/Turn Lanes (W of Victory Rd) 3-Lanes W/CLTL (E of Victory Rd)	40 mph
S Victory Dr	City of Mankato (S of Stadium Rd) Blue Earth County (N of Stadium Rd)	Major Collector	2-Lanes	45 mph
Stadium Ln	City of Mankato	Local	2-Lanes	30 mph

* Based on Enterprise MnDOT Mapping Application (EMMA) - EMMA Link

AM and PM peak hour turning movement counts were conducted at the two existing study area intersections (Stadium Rd/S Victory Dr roundabout and S Victory Dr/Stadium Ln side-street stop-controlled intersection) on Wednesday, September 10th, 2025. The AM peak traffic hour was found to occur from 7:15 to 8:15 AM, and the PM peak traffic hour was found to occur from 4:30 to 5:30 PM.

Figure 3 shows the existing traffic volumes at the study area intersections. Traffic volumes were balanced through the intersections as needed. Detailed traffic counts are included in Appendix A.

CRASH HISTORY REVIEW

Historical crash data from MnDOT's Crash Mapping Analysis Tool (MnCMAT) for the existing study area intersections was reviewed for 5 years (2020-2024) to note any existing safety concerns and to determine if the addition of site-generated traffic could exacerbate existing safety issues. Intersection Crash Rate (CR), MnDOT's Average Crash Rate for similar intersections, and Intersection Critical Crash Rate were reviewed. The Intersection Crash Rate is defined by the number of crashes occurring per million entering vehicles (MEV). MnDOT's Average Crash Rate is from published system-wide average crash rates for similar intersections. The Intersection Critical Crash Rate is used to determine if an intersection has a crash rate higher than similar facilities by a statistically significant amount. The critical rate is calculated by adjusting the system-wide average crash rate based on the amount of exposure and a statistical constant indicating the level of confidence. If the actual crash rate at a specific location exceeds the critical crash rate, it suggests that deficiencies in the intersection design or other factors may be contributing to the crashes. In such cases, further engineering investigation is recommended.

Table 2 summarizes the intersection crash data for the studied intersections and compares the overall crash rates to the critical crash rates. Based on the crash history at these intersections, there are no existing safety concerns, as the crash rates are lower than the critical crash rates.

Table 2. Intersection Crash Summary

Study Intersection and Control	Years of Data	Total Crashes	Crash Types	F&A Crashes*	Entering ADT	Intersection CR (per MEV)		
						CR	MnDOT Ave. CR	Critical CR
Stadium Rd & S Victory Dr Roundabout	5	5	Single Vehicle - 4 Rear End - 1	0	15,737	0.17	0.97	1.46
S Victory Dr & Stadium Ln Side-Street Stop	5	1	Rear End - 1	0	1,557	0.35	0.15	0.90

* F & A crashes are fatalities and serious injury crashes.

2027 NO-BUILD SCENARIO

Year 2027 was studied to correspond to the year after build-out of the Proposed Project, and No-Build and Build Scenarios were determined. The No-Build Scenario considers the traffic and geometric conditions that would be present at the time of completion of the Proposed Project, without the inclusion of the Proposed Project. The Build Scenario includes the volumes and geometric conditions with the Proposed Project.

To account for general background traffic growth in the area, an annual traffic growth rate was calculated based on historical AADT trends in the area from MnDOT's Traffic Mapping Application. An annual traffic growth rate of 2.35% was calculated and applied to the existing 2025 traffic volumes to estimate the 2027 No-Build traffic volumes shown on **Figure 4.**

2027 BUILD SCENARIO

The 2027 Build Scenario includes traffic from the Proposed Project. The volume of vehicle trips generated by the Proposed Project has been estimated for the weekday AM and PM peak traffic hours and on a daily basis using the data and methodology described in the Institute of Transportation Engineers' (ITE) **Trip Generation Manual**[1], which is a standard industry reference used by public a

[1] **Trip Generation Manual**, Institute of Transportation Engineers (ITE), 12th Edition

gencies to estimate trips generated by specific land uses. **Table 3** summarizes the trip generation estimates. ITE's Low Rise Multifamily land use corresponds to the proposed three-level apartment buildings.

Table 3. Trip Generation

Land Use	ITE Land Use Code	Size	Trips Generated:				
			AM Peak		PM Peak		Weekday ADT
			Enter	Exit	Enter	Exit	
Multifamily Housing (Low-Rise)	220	72 units	7	23	23	14	447
Totals			**7**	**23**	**23**	**14**	**447**
			30		**37**		

The Proposed Project is estimated to generate the following:

- 30 new trips (7 entering and 23 exiting) during the morning traffic peak hour,
- 37 new trips (23 entering and 14 exiting) during the evening traffic peak hour, and
- 447 daily trips.

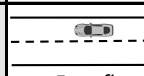
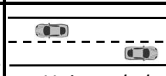
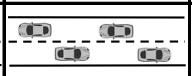
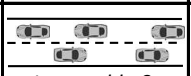
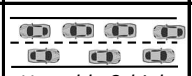
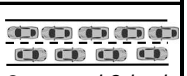
The primary travel pattern for residents of the Proposed Project is assumed to/from Minnesota State University via Stadium Rd, accounting for 70% of site-generated traffic. Additionally, it is estimated that 15% of the site-generated traffic is to/from the north on Victory Dr, 5% to/from the south on Victory Dr, and 10% to/from the east on Stadium Rd. **Figure 5** illustrates the distribution percentages of site-generated traffic and the resulting trip assignment at each intersection. The Build traffic volumes, shown on **Figure 6**, are formed when the No-Build traffic volumes are combined with the trip assignment traffic volumes.

Turning volumes at the S Victory Dr and the Access Driveway do not warrant turn lanes per industry references (NCHRP Reports) and the intersection was modeled with shared single lane approaches.

TRAFFIC OPERATIONS ANALYSIS

The operating conditions of intersections are assessed by comparing their capacity to the actual traffic volume. The industry standards for evaluating capacity are outlined in the **Highway Capacity Manual**[2]. These conditions are described in terms of driver delay, which is represented by a Level of Service (LOS) grade, where "A" indicates the best conditions and "F" signifies the worst. Generally, LOS "D" marks the threshold for acceptable operations. **Table 4** provides a summary of the LOS and delay criteria for unsignalized intersections and roundabouts.

Table 4. Level of Service Criteria – Unsignalized Intersections & Roundabouts

LOS	A	B	C	D	E	F
Delay	0-10 seconds	>10-15 seconds	>15-25 seconds	>25-35 seconds	>35-50 seconds	>50 seconds
Description	 *Free-flow operation*	 *Unimpeded operation*	 *Stable operation*	 *Less stable & more delay*	 *Unstable & high delay*	 *Congested & back-ups*

Another component of operational analyses is a study of queuing. An intersection can operate with an acceptable LOS, but if queues from the intersection extend back to block adjacent intersections, entrances to turn lanes, or access driveways, unsafe conditions could result. This study reports the industry design standard 95th Percentile Queue Length.

This study utilized the Synchro/SimTraffic software package (12th Edition) for the side-street stop control operational analyses and RODEL Roundabout Analysis Software for the roundabout operational

[2] **Highway Capacity Manual (HCM)**, Transportation Research Board, 7th Edition

analyses. LOS D was considered the threshold for acceptable operations. LOS, delay, and queues are reported for each intersection.

Intersection operational analysis results for Existing Conditions, 2027 No-Build Conditions, and 2027 Build Conditions are reported in **Table 5** and **Table 6** for the AM and PM peak hours, respectively.

Table 5. Operational Analysis Results – AM Peak Hour

Intersection	Lane	2025 Existing AM Peak Hour		2027 No-Build AM Peak Hour		2027 Build AM Peak Hour	
		Delay	*Queue (')*	*Delay*	*Queue (')*	*Delay*	*Queue (')*
Stadium Rd & Victory Dr (Roundabout)	*EB*	A 3.8	49	A 3.9	53	A 3.9	54
	WB	A 6.0	48	A 6.2	53	A 6.4	55
	NB	A 5.1	24	A 5.2	27	A 5.4	30
	SB	A 4.2	9	A 4.3	10	A 4.3	10
	Overall	A 4.5		A 4.6		A 4.7	
Victory Dr & Stadium Ln (Side-Street Stop)	*EB LTR*	B 10.5	3	B 10.7	3	B 10.7	3
	WB LTR	A 9.4	0	A 9.5	0	A 9.5	0
	NB LT	A 7.4	0	A 7.4	0	A 7.4	0
	NB R	A 0.0	0	A 0.0	0	A 0.0	0
	SB LT	A 7.7	0	A 7.7	0	A 7.7	0
	SB R	A 0.0	0	A 0.0	0	A 0.0	0
	Overall	A 0.7		A 0.7		A 0.7	
Victory Dr & Access (Side-Street Stop)	*WB LR*	NA		NA		A 9.8	3
	NB TR					A 0.0	0
	SB LT					A 7.8	0
	Overall					A 0.8	

Table 6. Operational Analysis Results – PM Peak Hour

Intersection	Lane	2025 Existing PM Peak Hour		2027 No-Build PM Peak Hour		2027 Build PM Peak Hour	
		Delay	*Queue (')*	*Delay*	*Queue (')*	*Delay*	*Queue (')*
Stadium Rd & Victory Dr (Roundabout)	*EB*	A 4.0	59	A 4.2	65	A 4.2	67
	WB	A 7.9	103	A 8.6	119	A 8.8	122
	NB	A 5.0	19	A 5.2	21	A 5.3	23
	SB	A 5.7	30	A 6.0	33	A 6.1	35
	Overall	A 5.5		A 5.8		A 5.9	
Victory Dr & Stadium Ln (Side-Street Stop)	*EB LTR*	B 11.1	3	B 11.3	3	B 11.3	3
	WB LTR	A 9.7	0	A 9.7	0	A 9.7	0
	NB LT	A 7.6	0	A 7.6	0	A 7.6	0
	NB R	A 0.0	0	A 0.0	0	A 0.0	0
	SB LT	A 7.5	0	A 7.6	0	A 7.6	0
	SB R	A 0.0	0	A 0.0	0	A 0.0	0
	Overall	A 0.7		A 1.0		A 1.0	
Victory Dr & Access (Side-Street Stop)	*WB LR*	NA		NA		A 9.5	3
	NB TR					A 0.0	0
	SB LT					A 7.7	3
	Overall					A 0.7	

The following summarizes the operational results for each study year:

- 2025 Existing Conditions - The two study area intersections function acceptably under existing conditions. LOS is B or better for all approach lanes. Queuing is safely managed by the current roadway geometry.
- 2027 No-Build Conditions - The two study area intersections also operate acceptably under 2027 No-Build conditions. The growth in background traffic slightly increases delays and queuing. LOS remains B or better for all approach lanes. Queuing continues to be safely managed by the current roadway geometry.
- 2027 Build Conditions - The intersections and proposed access within the study area function acceptably under 2027 Build conditions with the Proposed Project. The addition of site-generated traffic causes slight increases in delay and queuing. LOS remains B or better for all approach lanes. Queuing is safely accommodated by the existing roadway geometry. Mainline turn lanes at the access are not necessary on Victory Dr based on operations.

SUMMARY

- ★ The number of new vehicle trips estimated to be generated by the Proposed Project is 30 trips during the morning peak hour (7 entering and 23 exiting), 37 trips during the evening peak hour (23 entering and 14 exiting), and 447 trips daily. This volume is low, resulting in roughly one new trip every two minutes during peak hours.
- ★ The operational analyses show acceptable conditions in the study area for both existing and 2027 No-Build scenarios. The crash history review revealed no safety issues.
- ★ The operation analyses for 2027 Build conditions with the Proposed Project indicate acceptable study area operations. The Victory Dr and Access intersection functions acceptably with single-lane approaches.

Figure 1. Project Location and Site Layout

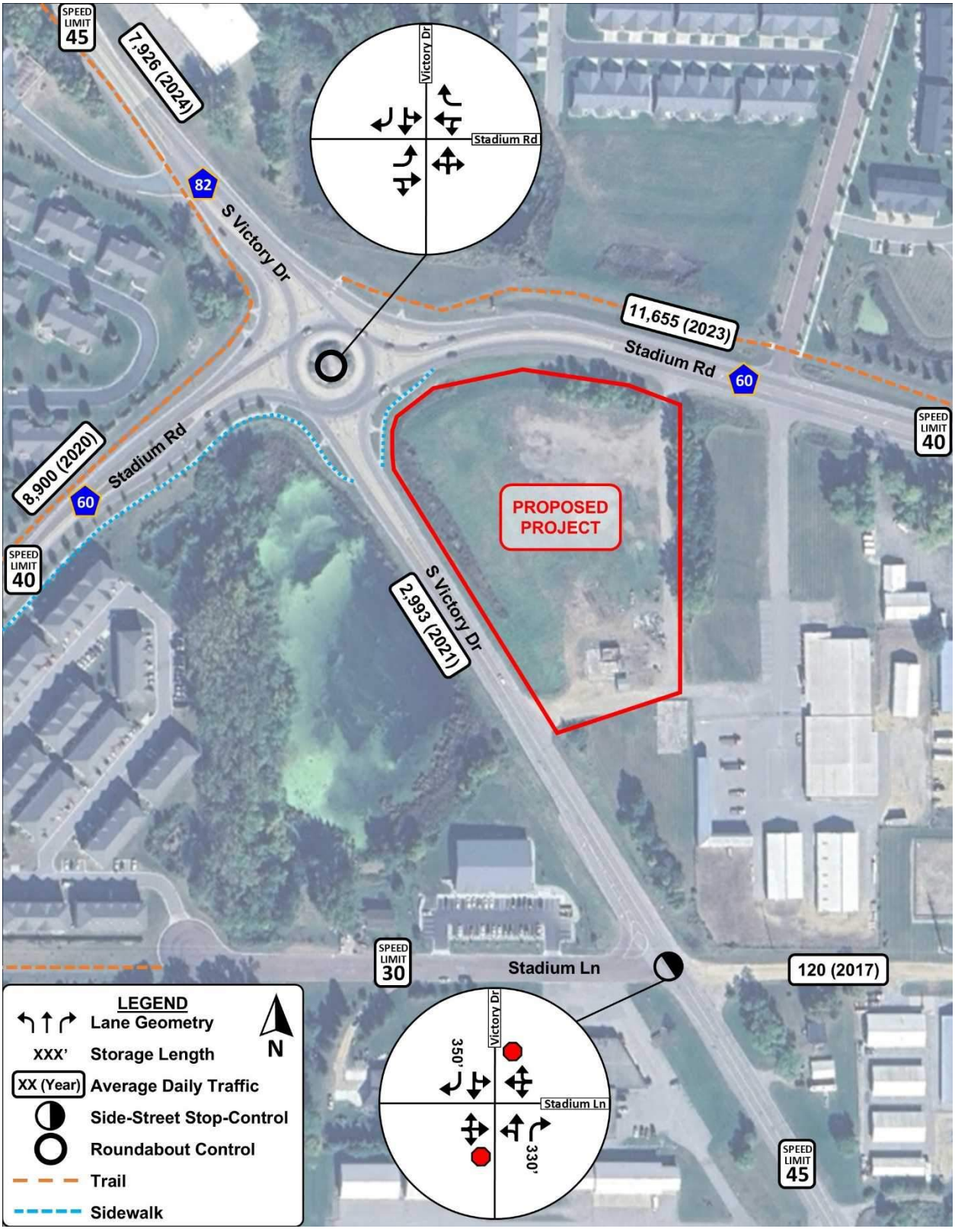


Figure 2. Existing Conditions

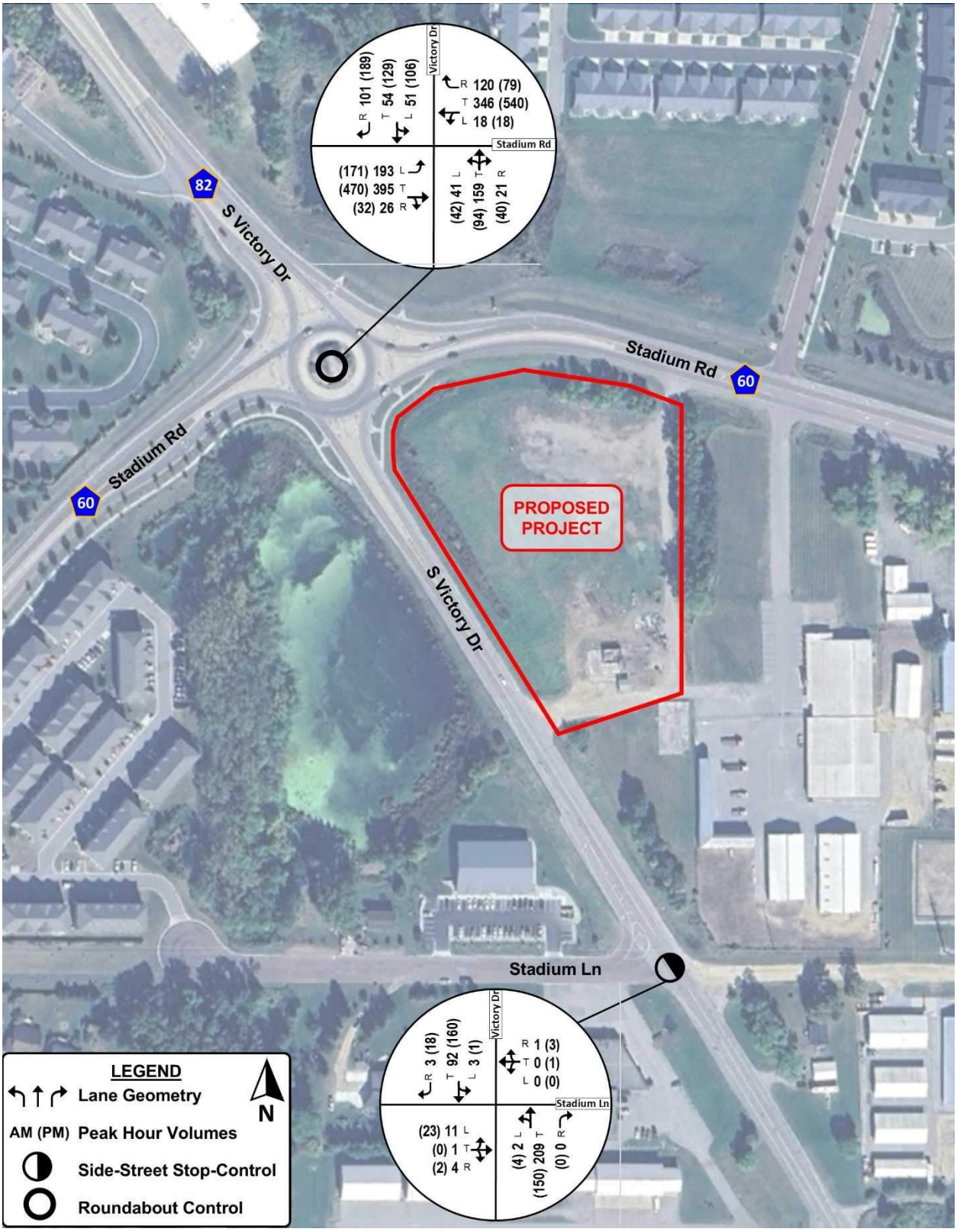


Figure 3. Existing 2025 Traffic Volumes

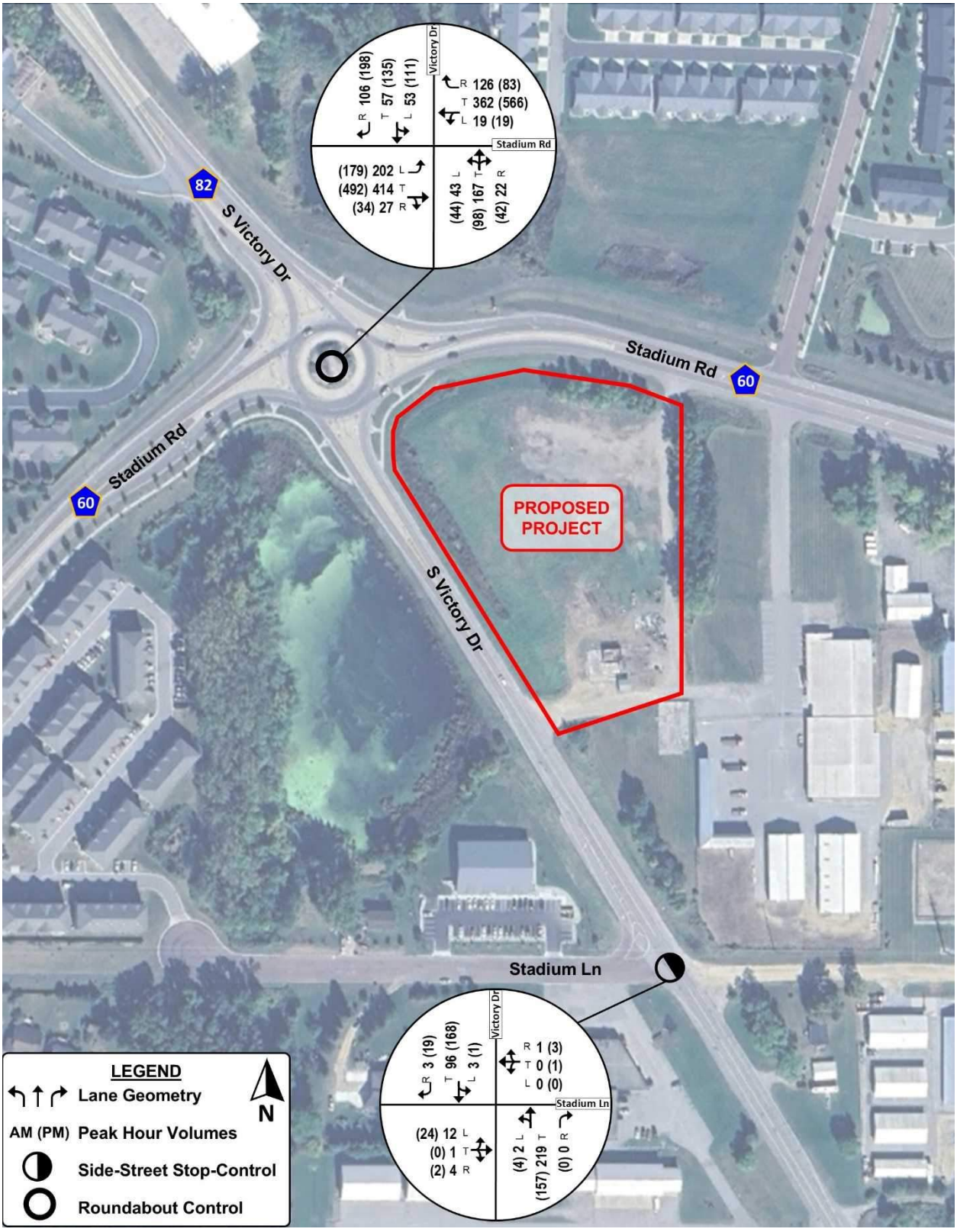


Figure 4. 2027 No-Build Traffic Volumes

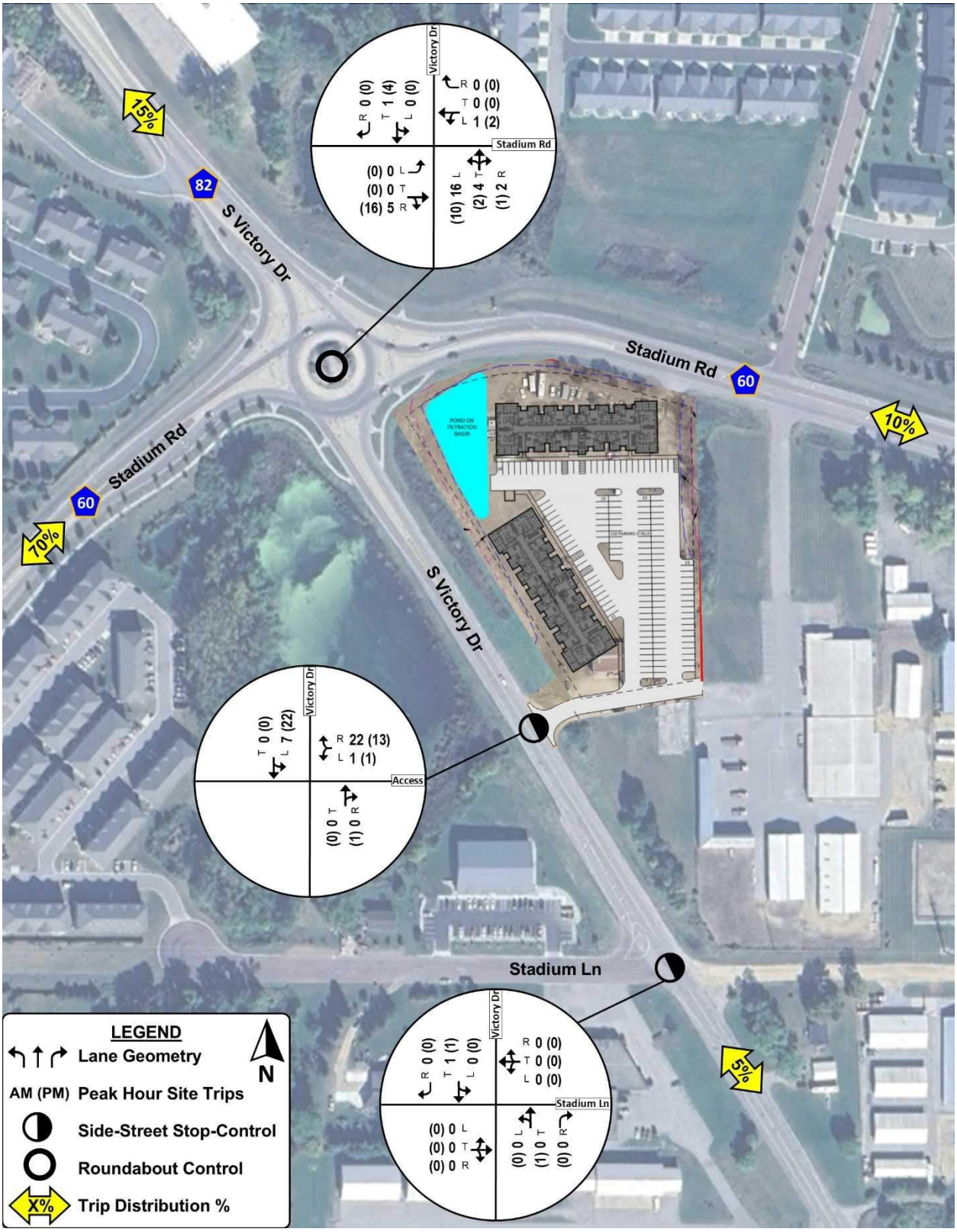


Figure 5. Trip Distribution and Assignment

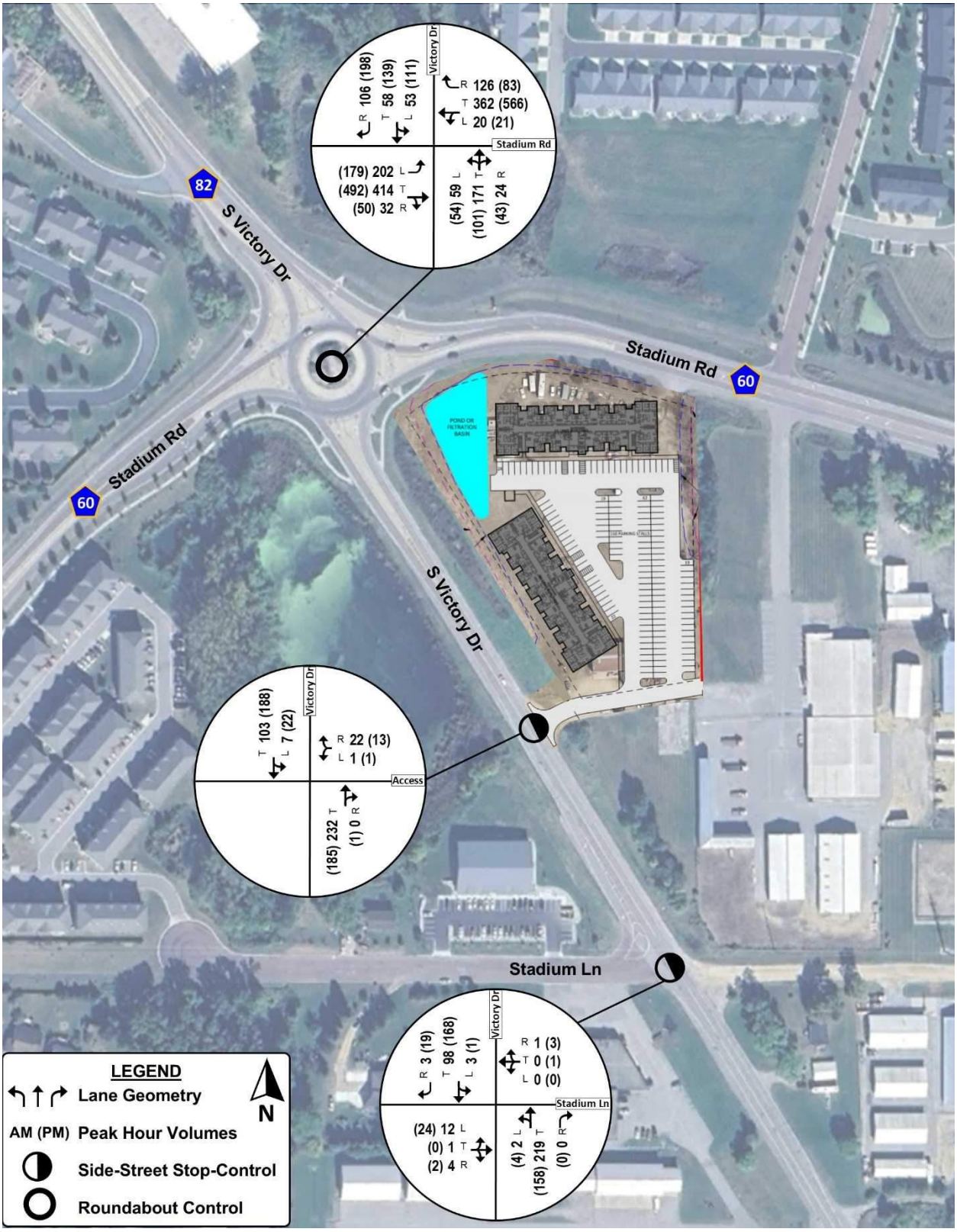


Figure 6. 2027 Build Traffic Volumes

Appendix A – Turning Movement Counts

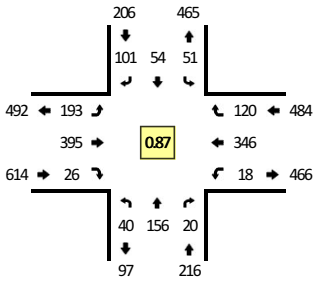
Type of peak hour being reported: Intersection Peak

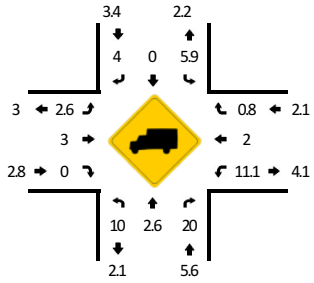
Method for determining peak hour: Total Entering Volume

LOCATION: S Victory Dr -- Stadium Rd
CITY/STATE: Mankato, MN

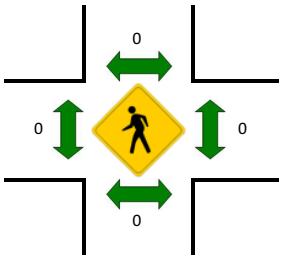
QC JOB #: 17227201
DATE: Wed, Sep 10 2025

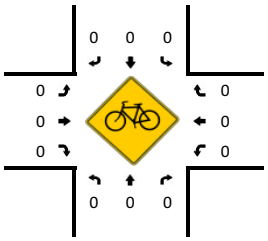
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

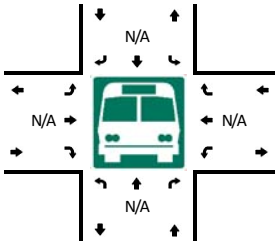


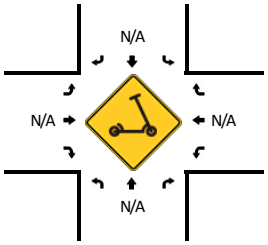


TRUE DATA TO IMPROVE MOBILITY









15-Min Count Period Beginning At	S Victory Dr (Northbound)				S Victory Dr (Southbound)				Stadium Rd (Eastbound)				Stadium Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	4	25	4	0	9	8	11	1	32	76	2	1	3	42	21	0	239	
7:15 AM	11	31	4	0	13	8	24	0	47	84	8	0	5	79	28	1	343	
7:30 AM	15	50	6	0	9	13	28	0	47	89	4	1	1	107	31	0	401	
7:45 AM	10	46	5	0	14	17	30	0	53	117	7	1	6	93	39	0	438	1421
8:00 AM	4	29	5	0	14	16	19	1	41	105	7	3	5	67	22	0	338	1520
8:15 AM	9	24	3	0	9	7	14	0	31	93	7	0	3	88	31	0	319	1496
8:30 AM	4	22	4	0	11	17	24	0	36	57	2	3	2	115	26	0	323	1418
8:45 AM	3	23	2	0	8	9	18	0	34	58	6	0	3	65	18	0	247	1227

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	40	184	20	0	56	68	120	0	212	468	28	4	24	372	156	0	1752
Heavy Trucks	0	0	4		0	0	4		0	8	0		4	16	4		40
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

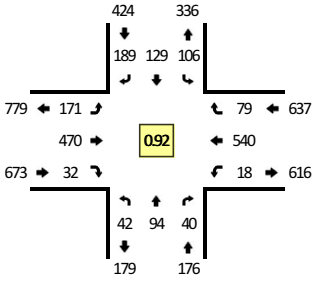
Report generated on 9/17/2025 8:29 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

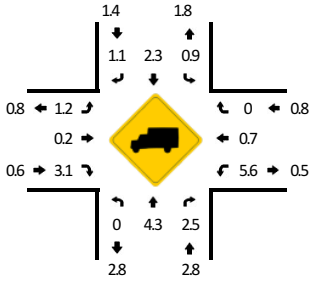
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

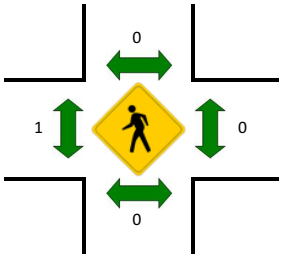
LOCATION: S Victory Dr -- Stadium Rd | **QC JOB #:** 17227202
CITY/STATE: Mankato, MN | **DATE:** Wed, Sep 10 2025

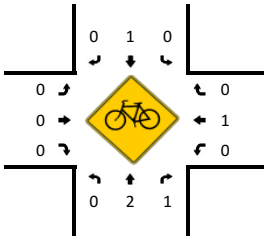
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

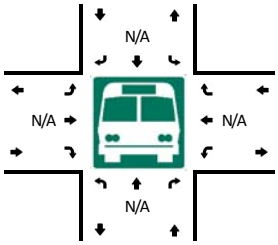


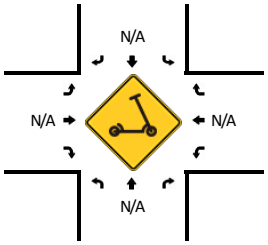
TRUE DATA TO IMPROVE MOBILITY











15-Min Count Period Beginning At	S Victory Dr (Northbound)				S Victory Dr (Southbound)				Stadium Rd (Eastbound)				Stadium Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	8	18	8	0	28	37	49	0	40	134	7	2	6	116	21	0	474	
4:15 PM	7	25	2	0	26	26	40	0	48	129	3	0	4	142	17	0	469	
4:30 PM	16	22	14	0	26	39	35	0	45	114	8	3	4	137	19	0	482	
4:45 PM	7	30	8	0	26	28	42	0	45	109	12	2	7	122	20	0	458	1883
5:00 PM	12	22	7	0	18	28	51	0	32	118	7	2	5	129	21	0	452	1861
5:15 PM	7	20	11	0	36	34	61	0	41	129	5	1	2	152	19	0	518	1910
5:30 PM	6	20	4	0	16	20	34	0	43	96	5	1	2	102	23	0	372	1800
5:45 PM	7	26	7	0	14	17	40	0	46	101	12	1	2	115	23	0	411	1753

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	28	80	44	0	144	136	244	0	164	516	20	4	8	608	76	0	2072
Heavy Trucks	0	0	0		0	8	4		4	0	0		4	4	0		24
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 9/17/2025 8:29 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: S Victory Dr -- Stadium Ln | **QC JOB #:** 17227203
CITY/STATE: Mankato, MN | **DATE:** Wed, Sep 10 2025

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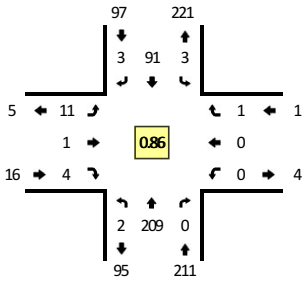
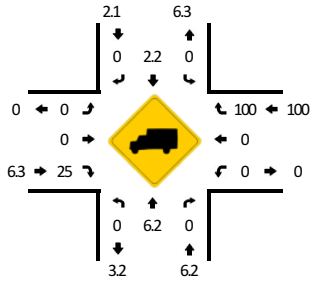
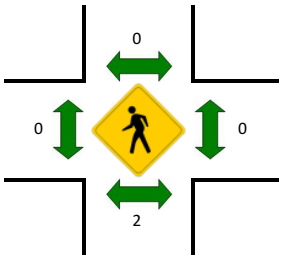
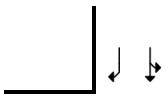
Peak 15-Min: 7:30 AM -- 7:45 AM

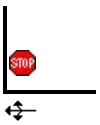


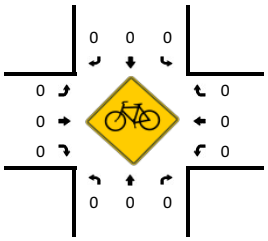


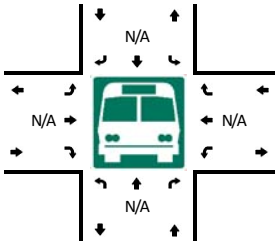
TRUE DATA TO IMPROVE MOBILITY

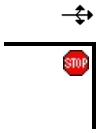


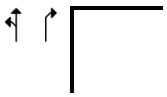


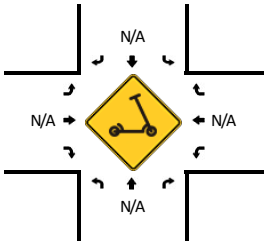












15-Min Count Period Beginning At	S Victory Dr (Northbound)				S Victory Dr (Southbound)				Stadium Ln (Eastbound)				Stadium Ln (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	28	0	0	0	13	0	0	4	0	1	0	0	0	0	0	46	
7:15 AM	1	46	0	0	2	19	0	0	3	0	3	0	0	0	0	0	74	
7:30 AM	0	71	0	0	0	16	2	0	5	0	1	0	0	0	0	0	95	
7:45 AM	1	57	0	0	0	30	0	0	2	1	0	0	0	0	0	0	91	306
8:00 AM	0	35	0	0	1	26	1	0	1	0	0	0	0	0	1	0	65	325
8:15 AM	0	29	0	0	0	14	0	1	2	0	0	0	0	0	2	0	48	299
8:30 AM	0	30	0	0	0	22	0	0	1	1	0	0	0	0	1	0	55	259
8:45 AM	0	27	0	0	2	13	2	0	2	0	0	0	1	0	0	0	47	215

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	284	0	0	0	64	8	0	20	0	4	0	0	0	0	0	380
Heavy Trucks	0	16	0		0	0	0		0	0	0		0	0	0		16
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

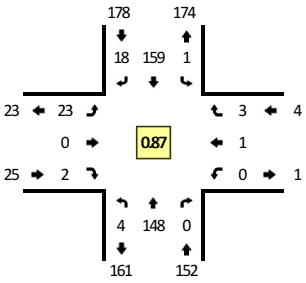
Comments:

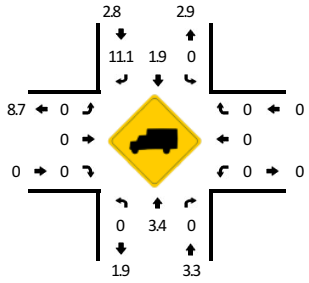
Report generated on 9/17/2025 8:29 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

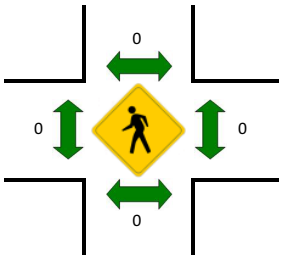
LOCATION: S Victory Dr -- Stadium Ln | **QC JOB #:** 17227204
CITY/STATE: Mankato, MN | **DATE:** Wed, Sep 10 2025

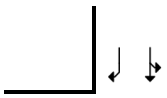
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 4:30 PM -- 4:45 PM

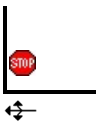


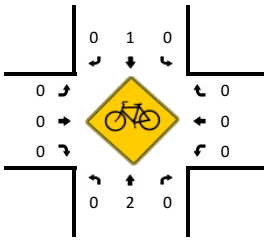


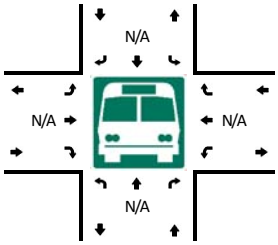
TRUE DATA TO IMPROVE MOBILITY

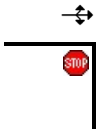


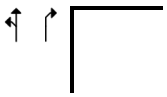


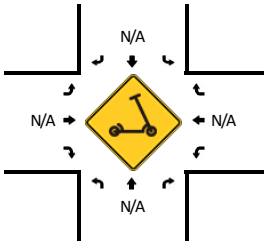












15-Min Count Period Beginning At	S Victory Dr (Northbound)				S Victory Dr (Southbound)				Stadium Ln (Eastbound)				Stadium Ln (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	31	0	0	1	48	3	0	3	0	1	0	0	0	0	0	87	
4:15 PM	0	29	0	0	1	29	3	0	5	0	2	0	0	0	1	0	70	
4:30 PM	1	44	0	0	0	46	6	0	4	0	0	0	0	0	2	0	103	
4:45 PM	0	40	0	0	1	38	6	0	5	0	2	0	0	0	0	0	92	352
5:00 PM	2	33	0	0	0	37	4	0	7	0	0	0	0	1	0	0	84	349
5:15 PM	1	31	0	0	0	38	2	0	7	0	0	0	0	0	1	0	80	359
5:30 PM	0	29	0	0	0	27	3	0	3	0	0	0	1	0	1	0	64	320
5:45 PM	1	35	0	0	0	31	0	0	2	0	1	0	0	0	1	0	71	299

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	176	0	0	0	184	24	0	16	0	0	0	0	0	8	0	412
Heavy Trucks	0	12	0		0	4	4		0	0	0		0	0	0		20
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 9/17/2025 8:29 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

MANKATO APARTMENTS
MANKATO, MN

GRADING, DRAINAGE, WETLAND DELINEATION & TRIP GENERATION REPORT

Blue Earth County, Mankato, MN

JHS
ENGINEERS
SURVEYORS
Established 1945
Albert Lea • Austin • Owatonna

Jones, Haugh
& Smith Inc.
515 SOUTH WASHINGTON AVE.
ALBERT LEA, MN. 56007
507-373-4876

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Brian J. Johnson

Date: 10/24/2025 License No. 42744

TABLE OF CONTENTS

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Grading & Drainage Report	4
Civil Plans	8
MIDS Calcs (Existing & Proposed)	6
Site Treatment Calculations	23
NRCS Site Soil Survey	23
Wetland Delineation	26
Trip Generation Report	1

Applicant:
APX Construction
3 Civic Center Plaza Suite 400
Mankato, MN 56001

Project Description
APX Construction is proposing to construct (2) 36 unit apartment buildings in the West 1. Of the East ½ of Section S21-T108-26W near the roundabout at Victory Drive and Stadium Road in Mankato, MN. An existing street access off Victory Drive will be utilized for egress to the parcel.

Existing Conditions
The current condition of the site is a previously developed site which now appears vacant. Wetlands are present on the site and were recently delineated. An undisturbed buffer of 16.5' will be maintained from the wetland delineation lines as part of development. The site is relatively flat with a high point in the southern portion of the site with slope northerly and primarily westerly from the high point. The soils on site consist of silty clays and muck near the north as outlined by the attached NRCS soils report. Approximately 1.25 acres of existing gravel surfacing exists on the site.

Adjacent Areas
Victory Drive and Stadium Road front the property on the two sides while developed commercial parcels abut the south and east sides of the site.

The site is not located within a 100 year flood plain as defined by FEMA Flood Insurance Rate Maps.

Areas and Volumes
The parcel consists of approximately 3.9 acres and approximately 2 acres of new impervious surfaces consisting of parking lots and the buildings will be constructed.

Stormwater Management Considerations
Storm water treatment for the proposed construction is proposed via a wet retention basin located in the northwest side of the development. Stormwater off the new roof and parking areas will be collected with curb inlets and be transported via underground storm sewer to the basin. The attached plans illustrate the locations and grades of proposed storm sewer utilities. The proposed bottom of the basin is proposed at elevation 984. The basin would have a control structure at the outlet with a 30 degree V-notch weir wall at elevation 987.50 and an overflow weir wall at elevation 988.50 with a basin emergency overflow elevation of 991.00 as outlined in the attached hydro cad calculations.

The basin will provide rate control for the 2,10 and 100 year rain events thereby keeping post development rates of runoff the same or less than pre-development rates. This basin will also

serve to provide removal of total suspended solids, particulate phosphorus and to a lesser degree, dissolved phosphorus. Consideration was given to implementing infiltration practices, however the onsite silty clay loams are not suitable for infiltration due to being HSG D soils with a shallow water table.

The basin should provide total suspended solids (TSS) on the order of 80% removal as well as particulate phosphorus as shown on the attached Minimal Impact Design Standards (MIDS) pre and post development calculations.

The proposed impervious surface tributary to the new basin will be approximately 4 acres. Storm water runoff will enter the basin via underground storm sewer piping and surface runoff. A dry storage volume of approximately 35,000 cubic feet will be provided via the basin. A WQV of 2.5 acres of new impervious surface * 3600 cu. ft = 0.2 acre ft will be retained. The 1.1” water quality volume (approximately water elevation 988.65) discharge rate will be approximately 2.53 cfs.

Predevelopment and post development rates discharging from the new basin are summarized below. Discharge for the new basin will occur via a 12” outlet pipe into an existing roadway ditch that is currently tributary to existing City storm sewer.

	Pre Development	Post Development
2 Year	14.89 cfs	5.11 cfs
10 Year	26.36 cfs	11.51 cfs
100 Year	50.16 cfs	16.96 cfs

A summary of the treatment calculations and rate calculations is appended to this report.

Maintenance
Seasonal maintenance of the storm water basin will be required to remove accumulated sediment, removal of undesired vegetation and to ensure all upstream and downstream areas are stabilized.

Signatures and Acceptance
We hereby acknowledge we have prepared the grading plan associated with this report.

Brian J. Johnson, Jones Haugh & Smith, Inc. Date: 10/24/2025

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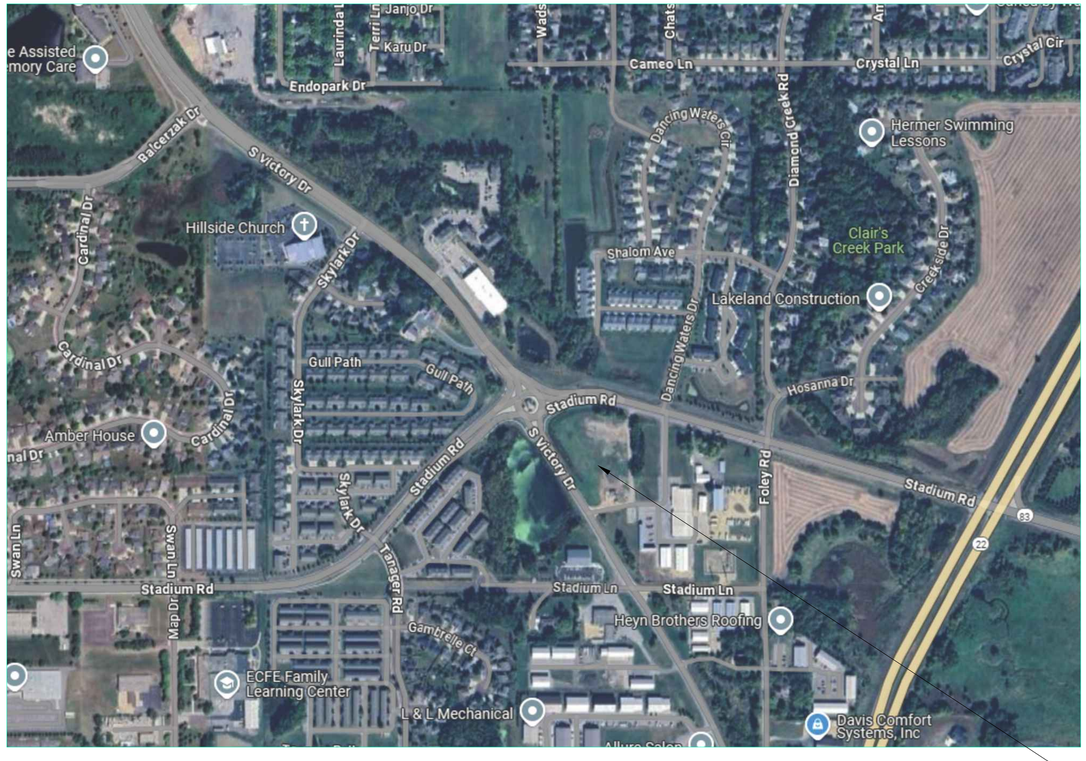
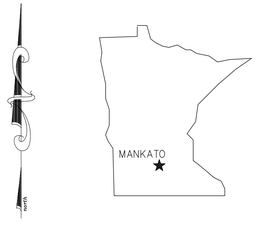
MANKATO APARTMENTS
MANKATO, MN



PROJECT LOCATION



INDEX TO SHEETS

C1: TITLE SHEET
C2: EXISTING CONDITIONS
C3: HARDSCAPE PLAN
C4: UTILITY PLAN
C5: GRADING PLAN
C6: LANDSCAPE PLAN
C7: DETAILS
C8: SWPPP NARRATIVE
C9–C10: SPECIFICATIONS

THIS PLAN CONTAINS 10 SHEETS

LEGEND

- = 5/8"Ø X 16" iron stake monument
- =Iron stake monument-Found
- W = Water Main
- S = Sanitary Sewer
- ST = Storm Sewer
- G = Gas Main
- UT = Underground Telephone
- OT = Overhead Telephone
- FO = Fiber-Optics
- UE = Underground Electric
- OE = Overhead Electric
- X = Chain Link Fence
- = Control Access
- = Gate Post
- = Bollards
- E = Electric Meter
- G = Gas Meter
- F = Fiber-Optics Box
- T = Telephone Pedestal
- = Light Tower
- = Silt Fence
- F&I = Furnish & Install
- 1272 = Existing Elevation Contour Line
- 1272 = Proposed Elevation Contour Line

- = Sign
- = Sign-Handicap
- = Light Pole
- = Power Pole
- = Guy Anchor
- = Fire hydrant
- = Water Main Valve
- = Fire Sprinkler
- = Cleanout
- = Culvert
- = Gas Main Valve
- = Catch Basin
- W ST S = Manholes
- 1271.23 = Spot Elevation
- RM1270.89 = Rim Elevation
- FL1262.34 = Line Elevation
- =Concrete Surface
- =Bituminous Surface
- =Gravel Surface
- 27.00 =Proposed Pavement Elevation
- T28.0 / B24.0 =Proposed Top/Bottom of Retaining Wall Elevation

APPLICABLE CONSTRUCTION PERMITS

ALL CONSTRUCTION WITHIN ROAD RIGHT–OF–WAY SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PERMIT AS ISSUED BY THE ROAD AUTHORITY.

GENERAL NOTES

DEVELOPER, CONTRACTOR AND ALL SUBCONTRACTORS SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES GOVERNED BY STATE AND LOCAL JURISDICTION.

SITE IRRIGATING, LIGHTING, LANDSCAPING, SIGNING ARE NOT A PART OF THIS PLAN.

PROVIDE EROSION CONTROL PER NPDES PERMIT REQUIREMENTS AND AS SHOWN.

PROVIDE HANDICAP CURB RAMPS & SIGNAGE. COMPLY WITH ALL AMERICAN DISABILITY ACT REQUIREMENTS.

ALL CONCRETE OR ASHPALTIC PAVEMENT CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF MN/DOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.

A ROCK CONSTRUCTION ENTRANCE IS REQUIRED AT ALL ENTRANCES FROM BITUMINOUS PAVEMENT.

ACCESS FOR LOCAL RESIDENTS/BUSINESSES SHALL ALWAYS BE MAINTAINED.

PROVIDE PAVEMENT STRIPING AS SHOWN

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR CONSTRUCTION.

SEE BOUNDARY SURVEY BY OTHERS FOR SITE BOUNDARIES.

ANY ALTERATIONS OR REVISIONS TO THE SITE DEVELOPMENT PLAN AS SHOWN SHALL NOT BE THE RESPONSIBILITY OF JONES, HAUGH & SMITH INC. AND SHALL RELEASE JONES, HAUGH & SMITH INC. OF ANY LIABILITY FOR ANY DAMAGES CAUSED THEREFROM UNLESS WRITTEN AUTHORIZATION OR PLAN REVISION HAS BE APPROVED BY JONES, HAUGH & SMITH INC. PRIOR.

BENCHMARK 1
Top head of spike in power pole at southeast corner of property.
Elevation = 1001.49

BASIS OF BEARING SYSTEM
All bearings are based upon the MnDot Blue Earth County Coordinate System Nad 83 (96) Harn Adjustment Grid

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Brian J. Johnson
Reg. No. 42144
Date: 9/20/25

Consultant:
JONES HAUGH SMITH
Engineers • Surveyors
515 South Washington Ave. Albert Lea, MN 507-373-4876

Project:
MANKATO APARTMENTS

Revision:

No.: 25-188 | Date: 9/20/2025
Drawn: bjj | Checked:
Project Manager:
Project Status: CD

Sheet Title:
TITLE SHEET

Sheet No.:
C1

STADIUM DRIVE

VICTORY DRIVE

NORTHERLY–MOST CORNER OF PARCEL F

NORTHWESTERLY LINE OF PARCEL F

(M)144.64

(P)144.78

N39°48'07"E

NORTHEASTERLY LINE OF PARCEL F

S74°25'06"E

229.24

BLUE EARTH COUNTY HWY R/W PLAT NO. 29

S10°24'06"W

40.00

R=388.00

Δ=30°01'57"

CD=201.06

CB=S89°25'04"W

L=203.38

N74°25'06"W

39.24

N59°49'07"W

53.04

N85°33'52"W

184.28

A CORNER OF PARCEL F

SOUTHWESTERLY R/W LINE OF STADIUM DRIVE

WET LAND

412.72

183.48

S37°58'00"W

96.85

WESTERLY–MOST CORNER OF PARCEL F

A CORNER OF PARCEL F

S7°08'50"W

10.17

WEST WETLAND

EAST WETLAND

N31°59'23"W

W1/2 E1/2 NW1/4 SECTION 21–T108N–R26W

NORTHWESTERLY R/W LINE OF VICTORY DRIVE

551.52

WEST LINE OF AUDITOR'S PLAT NO. 67

EAST LINE OF THE W1/2 E1/2 NW1/4 SECTION 21–T108N–R26W

S00°53'28"E

N89°49'43"E

0.76

A CORNER OF STANLEY'S SUBDIVISION

Fd. SPINDLE

SW CORNER LOT 6

Fd. ½" PIPE CAPPED

NORTHWESTERLY LINE OF STANLEY'S SUBDIVISION

30'–WIDE DRIVEWAY EASEMENT (DOC. #314081, Bk. 326, Pg.425)

S81°02'14"W

201.51

NW CORNER OF STANLEY'S SUBDIVISION

Fd. 1/2" PIPE

POINT OF BEGINNING

EXISTING SEWER/WATER SERVICES-FIELD VERIFY LOCATION

REMOVE EXISTING DRIVEWAY APPROACH-GRADE TO MATCH EXISTING DITCH SLOPES
SEE GRADING PLAN-REMOVE EXISTING DRIVEWAY CULVERT

PROPERTY LINE TYP.

WETLAND DELINEATION LINE TYP.

EXISTING ELEVATION CONTOUR TYP.

EDGE OF TREES TYP.

EXISTING GROUND SPOT ELEVATION TYP.

16.5' WETLAND BUFFER LINE TYP.

REMOVE OR SALVAGE EXISTING GRAVEL SURFACING

EXISTING WATERSHED DIVIDE LINE TYP.

REMOVE EXISTING CONCRETE SLABS & WALKS AS REQUIRED FOR CONSTRUCTION TYP.

north

1"=30'

30 0 30

HORIZ. SCALE FEET

Consultant:

JONES HAUGH SMITH

Engineers • Surveyors

515 South Washington Ave. Albert Lea, MN 507-373-4876

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Brian J. Johnson

Reg. No. 42744

Date: 9/20/25

Project:

MANKATO APARTMENTS

Revision:

No.: 25-188 Date: 9/20/2025

Drawn: bjj Checked:

Project Manager:

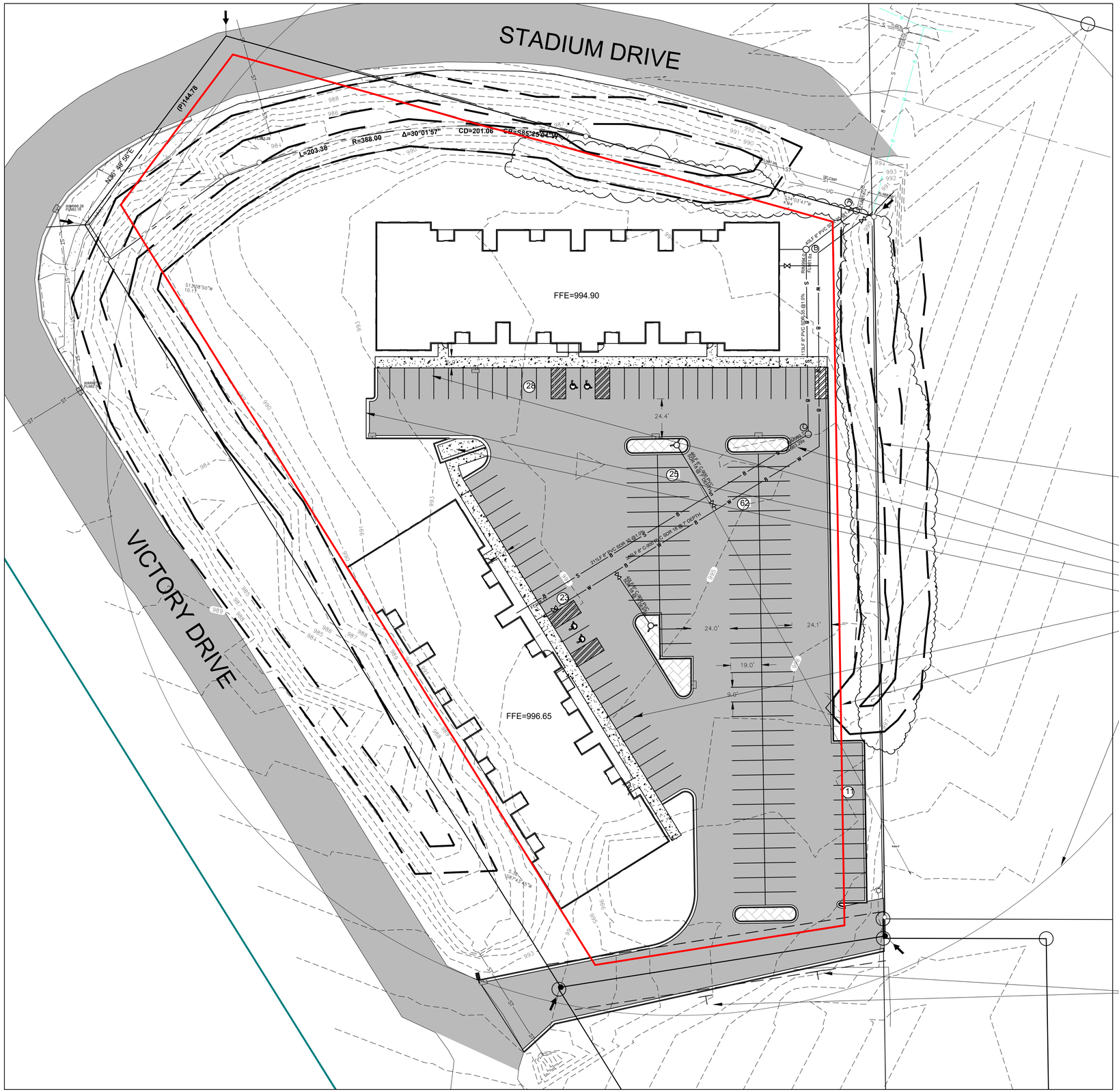
Project Status: CD

Sheet Title:

EXISTING CONDITIONS

Sheet No.:

C2



Consultant

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Date: 9/20/25

Project:

MANKATO APARTMENTS

Revision:

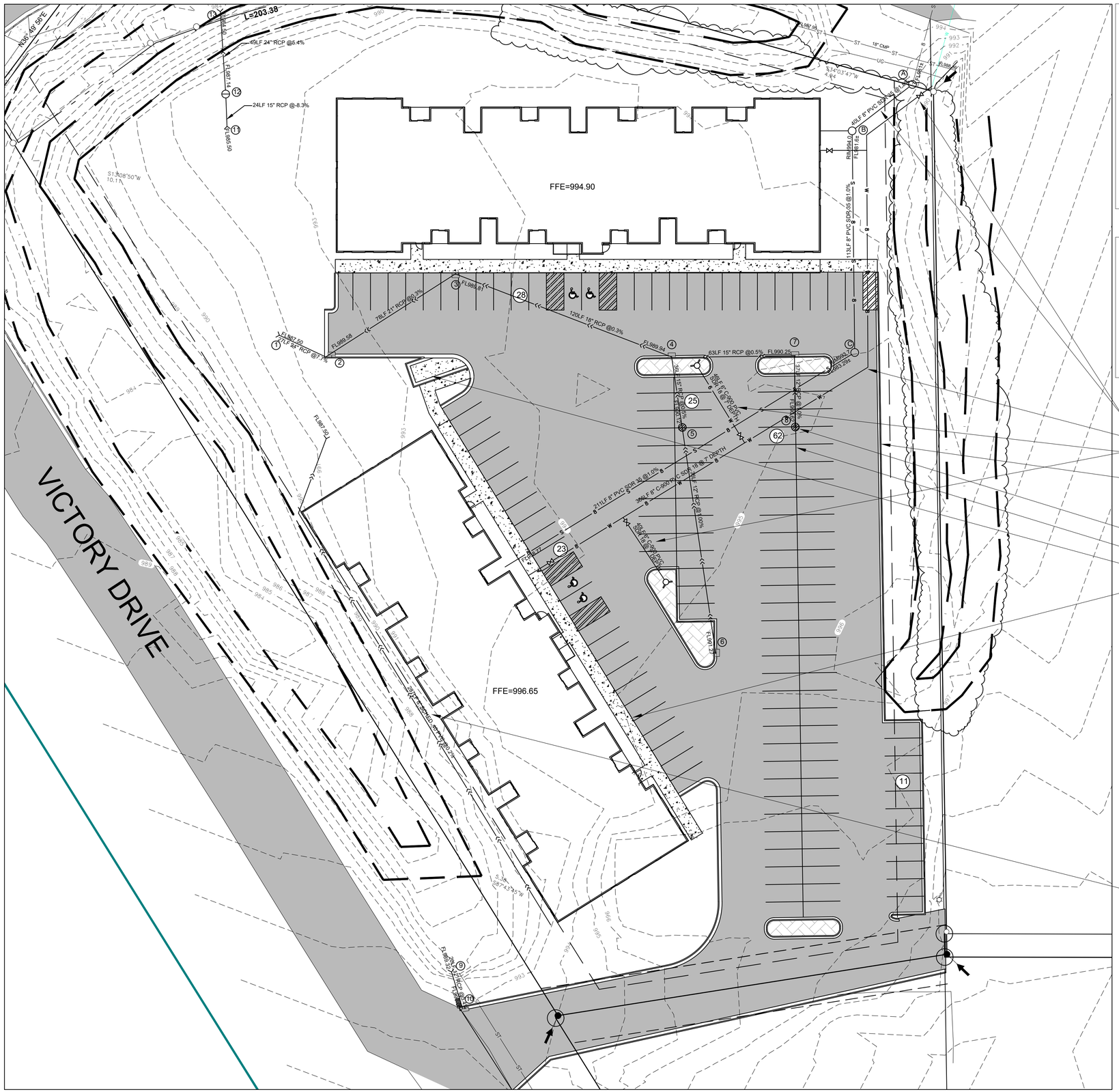
No.:	Date: 9/20/2025
Drawn: bjj	Checked:
Project Manager:	
Project Status: CD	

Sheet Title:

HARDSCAPE PLAN

Sheet No.:

C3



STORM SEWER STRUCTURE SCHEDULE

NO.	RIM EL.	INVERT EL.	HEIGHT	CASTING	DESIGN	REMARKS
1	–	987.50	–	–	–	F&I 24" RC APRON & TRASH GUARD, 10 CY CL. III RIPRAP
2	993.00	988.58	5.58	R3067	48-4022	
3	993.80	989.81	3.99	R3067	48-4022	
4	993.00	989.94	3.06	R3067	48-4022	
5	993.75	990.12	3.63	R2532	G	
6	995.00	991.27	3.73	R3067	2X3	
7	993.00	990.25	2.75	R3067	2X3	
8	993.75	990.62	3.13	R2532	G	
9	–	989.32	–	–	–	F&I 12" RC APRON & TRASH GUARD, 5 CY CL. III RIPRAP
10	993.30	989.32	3.98	R3067	2X3	
11	–	987.50	–	–	–	F&I 18" RC APRON & TRASH GUARD
12	991.00	987.50	3.50	–	–	SEE OUTLET STRUCTURE DETAIL
13	–	984.50	–	–	–	F&I 12" RC APRON & TRASH GUARD, 10 CY CL. III RIPRAP

F&I CL. III RIPRAP AS NOTED WITHIN 24 HOURS OF OUTLET INSTALLATION

SANITARY SEWER STRUCTURE SCHEDULE

NO.	RIM EL.	INVERT EL.	HEIGHT	CASTING	DESIGN	REMARKS
A	992.50	981±	11.50	1772	4007C	FIELD VERIFY EXISTING PIPE INVERT
B	994.00	981.6	12.4	1772	4007C	
C	993.75	983.29	10.46	1772	4007C	

CONNECT TO EXISTING WATERMAIN-F&I 8X8 TEE, 45° BEND, (2) 8" GATE VALVES
CONNECT TO EXISTING SANITARY-F&I MANHOLES AS SHOWN-SEE STRUCTURE SCHEDULE

F&I 8" 45° BEND

F&I (2) 8X6 TEES, 6" GATE VALVES, HYDRANT LEGS AND 6" HYDRANTS
CONNECT TO EXISTING SANITARY-F&I MANHOLES AS SHOWN-SEE STRUCTURE SCHEDULE

NEW CONCRETE B618 CURB & GUTTER TYP.

F&I STORM SEWER PIPING AND STRUCTURE TYP.-SEE STRUCTURE SCHEDULE FOR MORE INFO.

F&I LATEX PAVEMENT STRIPING/MESSAGES TYP.

F&I CONCRETE PAVEMENT SECTION WITHIN TRASH ENCLOSURE TYP.

F&I THICKENED EDGE WALK ALONG BUILDING EXCEPT AT ADA STALLS TYP.
SEE THICKENED EDGE WALK DETAIL AND RAISED PAVEMENT DETAIL

F&I 287LF 8" SCHED. 40 PVC @0.2%. CONNECT ROOF DRAIN DOWNSPOUTS TO TO PVC AND OUTLET INTO PROPOSED POND.

WET BASIN SUMMARY

TOTAL IMPERVIOUSE SURFACE=2.5 ACRES
1.1" WQV VOLUME REQUIRED: 0.2 AC.-FT.
WQV VOLUME PROVIDED: 0.2 AC.-FT.
WQV ELEVATION=988.65
DISCHARGE RATE AT WQV: 2.53 CFS
BASIN 100 YR. HWL=990.73
TOP OF BERM=993.00
EOF=992.00

DISCHARGE RATES (CFS):

	PRE-DEVELOPMENT	POST-DEVELOPMENT
2 YEAR	14.89	5.11
10 YEAR	26.36	11.51
100 YEAR	50.16	16.96

1"=25'
25 0 25
HORIZ. SCALE FEET

Consultant:
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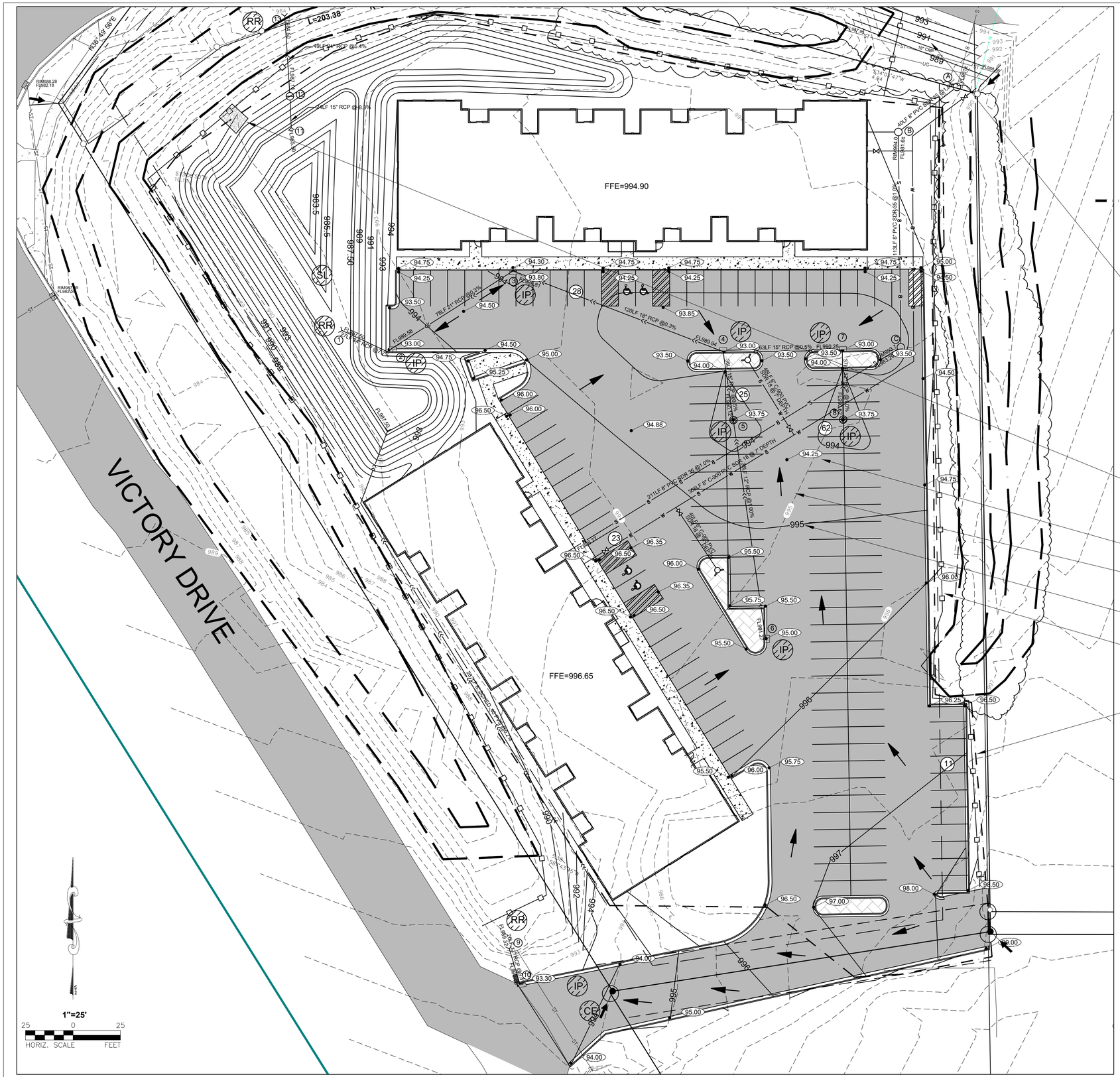
Project Manager:
Project Status: CD
Sheet Title:
UTILITY PLAN

Sheet No.:
C4


VICTORY DRIVE
FFE=994.90
FFE=996.65
L=203.38
N00°49'50"E
49LF 24" RCP @0.4%
14LF 15" RCP @8.9%
78LF 21" RCP @0.2%
120LF 18" RCP @0.3%
83LF 15" RCP @0.5%
211LF 8" PVC SDR 35 @1.0%
39LF 8" PVC SDR 35 @1.0%
30LF 8" PVC SDR 35 @1.0%
11LF 8" PVC SDR 35 @1.0%
30LF 8" PVC SDR 35 @1.0%
39LF 8" C-900 PVC SDR 18 @1.0%
45LF 6" C-900 PVC SDR 18 @1.25%
45LF 6" C-900 PVC SDR 18 @1.25%
30LF 6" C-900 PVC SDR 18 @1.25%
30LF 6" C-900 PVC SDR 18 @1.25%
39LF 8" C-900 PVC SDR 18 @1.0%
39LF 8" C-900 PVC SDR 18 @1.0%
30LF 8" PVC SDR 35 @1.0%
30LF 8" PVC SDR 35 @1.0%
30LF 8" PVC SDR 35

LANDSCAPING NOTES

Sec. 10-1740 PERIMETER OFF STREET PARKING LOT
(1) SHADE TREE/ 50 LF OF FRONTAGE
(1) EVERGREEN TREE/ 25 LF OF FRONTAGE
80% OPAQUE ALONG ALL PARKING FRONTING STREET

PLANTING BEDS SHALL BE MULCHED WITH BARK CHIPS, ROCK MULCH, FEATHER ROCKS OR SIMILAR MATERIAL.

PERIMETER LANDSCAPING & TRANSITIONAL YARDS SHALL CONSIST OF A COMBINATION OF GROUND COVER, SHADE TREES OR EVERGREEN TREES, SHRUBS AND APPROPRIATE SCREENING DEVICES SUCH AS DECORATIVE WALLS, FENCES OR BERMS.

LANDSCAPING LEGEND

=DENOTES EVERGREEN TREE

=DENOTES SHRUB

=DENOTES ARBOVITAE HEDGE (4' MIN. - 8' MAX)
(80% OPAQUE ALONG ALL PARKING FRONTING PREMIER DR.)

=DENOTES SHADE TREE

=DENOTES PLANTING BED W/ MULCH

=DENOTES EXISTING TREELINE

1"=25'
25 0 25
HORIZ. SCALE FEET

Consultant
JONES HAUGH SMITH
Engineers + Surveyors
515 South Washington Ave. Albert Lea, MN 507-373-4876

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Brian J. Johnson Date: 9/20/25
Reg. No. 42744

Project:
MANKATO APARTMENTS

Revision:

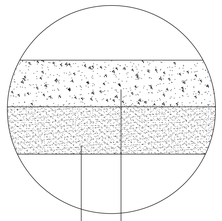
No.:	Date: 9/20/2025
Drawn: bji	Checked:

Project Manager:

Project Status: CD

Sheet Title:
LANDSCAPE PLAN

Sheet No.:
C6



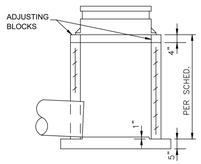
ALL JOINTS SHALL BE SEALED USING AN APPROVED MN/DOT HOT POUR ELASTIC SEALANT (3723) (INCIDENTAL)

7" CONCRETE PAVEMENT (MN/DOT 2301)

3" AGGREGATE BASE CLASS V (MN/DOT 2211)

ALL CONCRETE SHALL BE PORTLAND CEMENT CONCRETE PAVEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, A 4" MAXIMUM SLUMP AND 5% – 7% ENTRAINED AIR.

CONCRETE PAVEMENT SECTION



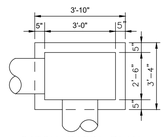
SECTIONAL VIEW
CATCH BASIN & BASE SLAB

NOTES:

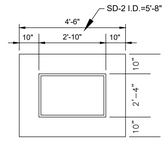
1. TO BE USED WITH NEENAH R3067 FRAMED COVER WITH 3" RAD. CURB BOX OR APPROVED EQUAL.
2. PIPE CUT-OUTS TO BE LOCATED WHERE REQUIRED.
3. ALTERNATE CAST-IN-PLACE BASE CAN BE USED.
4. MINIMUM REINFORCING SHALL BE WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.12 SQ. IN. PER FOOT IN BOTH DIRECTIONS.

FOR USE WITH R3067 CASTING

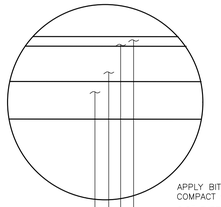
CATCH BASIN 2X3



CATCH BASIN PLAN



BASE SLAB PLAN



APPLY BITUMINOUS TACK COAT BETWEEN LIFTS
COMPACT ALL GRANULAR MATERIAL TO 100% OF PROCTOR DENSITY.

2.0" TYPE SPWEA240B WEAR COURSE

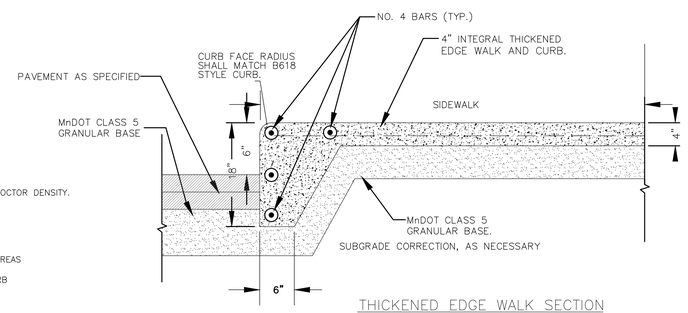
2.0" TYPE SPNWB230B BASE COURSE

12" CLASS V AGGREGATE BASE (2211)

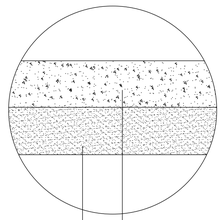
SCARIFY THE UPPER 12" OF SUBGRADE IN "CUT" AREAS

ALL GRAVEL BASE SHALL EXTEND A MINIMUMN OF 1' BEHIND ALL CURB

PARKING LOT PAVEMENT SECTION



THICKENED EDGE WALK SECTION



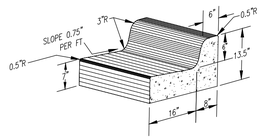
ALL JOINTS SHALL BE SEALED USING AN APPROVED MN/DOT HOT POUR ELASTIC SEALANT (3723) (INCIDENTAL)

4" CONCRETE PAVEMENT (MN/DOT 2301)

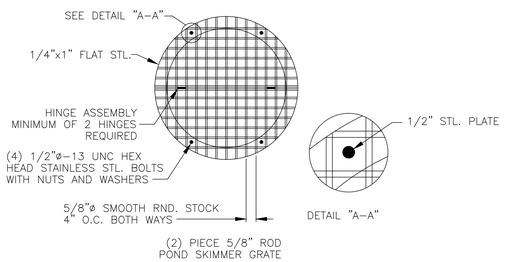
3" AGGREGATE BASE CLASS V (MN/DOT 2211)

ALL CONCRETE SHALL BE PORTLAND CEMENT CONCRETE PAVEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, A 4" MAXIMUM SLUMP AND 5% – 7% ENTRAINED AIR.

CONCRETE SIDEWALK SECTION



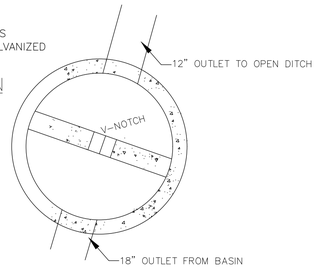
CONCRETE CURB & GUTTER DESIGN B618



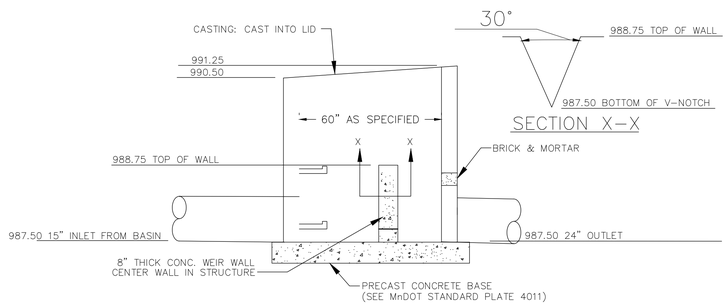
GRATE NOTES:

1) GRATE TO BE MADE IN TWO (2) PIECES
2) ALL METAL SHALL BE HOT–DIPPED GALVANIZED

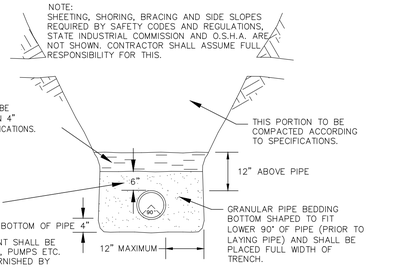
STRUCTURE 12 GRATE PLAN



V–NOTCH WEIR OUTLET STRUCTURE PLAN

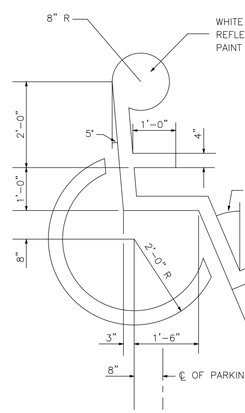


V–NOTCH WEIR OUTLET STRUCTURE 12 SECTION



THE FINISHED SUB GRADE FOR PIPE PLACEMENT SHALL BE MAINTAINED FREE OF WATER. ANY AGGREGATE, PUMPS ETC. NECESSARY TO ACCOMPLISH THIS WILL BE FURNISHED BY CONTRACTOR AS INCIDENTAL WORK.

TYPICAL TRENCH
(PVC SEWER, WATER MAIN & PE PIPE)

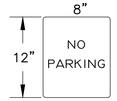


INTERNATIONAL HANDICAP SYMBOL

STEEL POST MOUNTED
(PERMANENT)

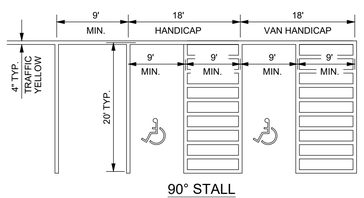
INSTALL AT ALL HANDICAP STALLS
60"–66" ABOVE FINISH GRADE
CENTERED AT THE HEAD OF THE STALL

SIGN PANEL DETAIL

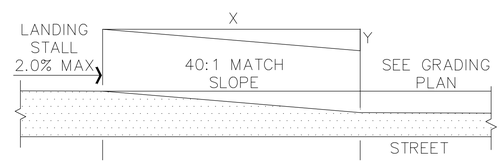


STEEL POST MOUNTED
(PERMANENT)
INSTALL AT ALL HANDICAP ACCESS AILSES–60"–66" ABOVE FINISH GRADE
CENTERED AT THE HEAD OF THE STALL

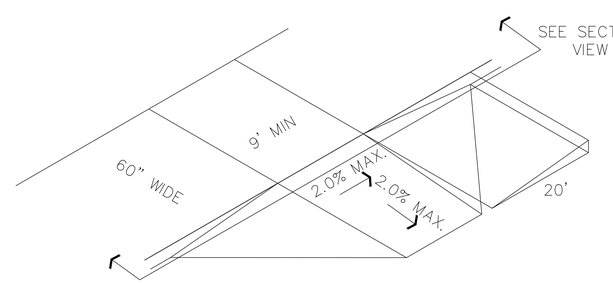
SIGN PANEL DETAIL



90° STALL



CROSS SECTION



CURB RAMP – BUILT UP PAVEMENT

Consultant
JONES HAUGH SMITH
Engineers + Surveyors
515 South Washington Ave. Albert Lea, MN 507-373-4876

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Brian J. Johnson
Reg. No. 42744
Date: 9/20/25

Project: **MANKATO APARTMENTS**

Revision:

No.:	Date: 9/20/2025
Drawn: bjj	Checked:

Project Manager:

Project Status: CD

Sheet Title: **DETAILS**

Sheet No.: **C7**

SWPPP NARRATIVE

CONSTRUCTION ACTIVITY INFORMATION

PROJECT NAME: MANKATO APARTMENTS
FACILITY IMPROVEMENT PROJECT

PROJECT LOCATION: MANKATO, MN

PROJECT SIZE: PARCEL SIZE: 2.0 DISTURBED ACRES

PROJECT TYPE: RESIDENTIAL BUILDING CONSTRUCTION

MAJOR SOIL TYPE: SILTY LOAM, KLOSSNER MUCK

CUMULATIVE IMPERVIOUS SUFACE:
EXISTING - 1.26 ACRES
POST CONSTRUCTION - 2.5 ACRES

DIRECT DISCHARGE FROM IMPERVIOUS SURFACE: 0.2 ACRES

RECEIVING WATERS:
CITY STORM SEWER

DATES OF CONSTRUCTION: 2025

OWNER: GROWTH HOLDINGS LLC

UNDERGROUND UTILITY/GRADING CONTRACTOR:

TO BE DETERMINED

PARTY RESPONSIBLE FOR LONG TERM O&M:
OWNER: GROWTH HOLDINGS LLC

GENERAL SITE INFORMATION

IMMEDIATELY FOLLOWING GRADING OF SLOPES OF 3:1 OR GREATER, SLOPES MUST BE STABILIZED WITH WOOD FIBER BLANKET (OR OTHER METHOD APPROVED BY THE ENGINEER) OVER APPROVED SEED MIXTURE AND A MINIMUM OF 4" OF TOPSOIL.

ALL EROSON CONTROL MEASURES SHALL REMAIN IN PLACE AND BE MAINTAINED IN GOOD CONDITION UNTIL THE SITE HAS BEEN RE-VEGETATED, AT WHICH TIME THE CONTRACTOR MAY REMOVE NECESSARY SILT FENCING TO CONSTRUCT ROADWAYS WHILE MAINTAINING ADEQUATE EROSION CONTROL IN ADJACENT AREAS. SUFFICIENT TOPSOIL SHALL BE STOCKPILED OR IMPORTED TO ALLOW FOR THE REPLACEMENT OF A MINIMUM OF 4" OF TOPSOIL FOR DISTURBED AREAS TO BE RE-VEGETATED.

CONTRACTOR SHALL SCHEDULE SITE GRADING, UTILITY INSTALLATION, AND ROADWAY CONSTRUCTION SO THAT THE GENERAL SITE CAN BE MULCHED AND RE-SEEDED SOON AFTER DISTURBANCE. DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SODDED WITHIN: 7 DAYS

INSPECT SILT FENCES AND BALE CHECKS AFTER EACH RAIN EVENT AND DAILY DURING A PROLONGED RAINFALL. IMMEDIATELY REPAIR FAILED OR FAILING MEASURES.

REMOVE SEDIMENT DEPOSITS FROM SILT FENCE AND BALE CHECKS WHEN SEDIMENT REACHES APPROXIMATELY 1/3 THE HEIGHT OF THE BARRIER.

BARRIERS WILL BE REPLACED WHEN THEY DECOMPOSE OR BECOME INEFFECTIVE BEFORE THE BARRIERS ARE NO LONGER NECESSARY. ANY SEDIMENT REMAINING IN-PLACE AFTER THE BARRIERS ARE NO LONGER NECESSARY WILL BE DRESSED TO CONFORM TO EXISTING GRADE, AND PREPARED AND SEEDED WITH THE APPROPRIATE SEED MIX, AS DIRECTED BY THE ENGINEER.

IN THOSE AREAS WHERE WOOD FIBER BLANKET OR OTHER SLOPE STABILIZATION METHODS HAVE FAILED, THE SLOPE SHALL BE RE-ESTABLISHED, SEED AND TOPSOIL REPLACED, AND ADDITIONAL SLOPE TREATMENT INSTALLED.

BARRIERS WILL BE REMOVED WHEN FINAL STABILIZATION OF THE SLOPES HAS BEEN COMPLETED AS DETERMINED BY THE ENGINEER.

NO STORMWATER MITIGATION MEASURES WERE REQUIRED AS A PART OF ENVIRONMENTAL, ARCHAELOGICAL OR OTHER REQUIRED LOCAL, STATE, OR FEDERAL REVIEW OF THIS PROJECT.

THIS PROJECT IS NOT LOCATED IN A KARST AREA
NECESSITATING MEASURES TO PROTECT DRINKING WATER SUPPLY.

THIS PROJECT DOES DISCHARGE WATER TO AN IMPAIRED WATER.

PROVIDE SILT FENCE AROUND ALL SOIL STOCKPILES

SWPPP IMPLEMENTATION CHAIN OF RESPONSIBILITY

EACH CONTRACTOR ON-SITE WILL DESIGNATE AN EMPLOYEE AS ITS PROJECT SWPPP OFFICER. A LIST OF THESE OFFICERS WITH CONTACT INFORMATION WILL BE AVAILABLE ON-SITE. IT WILL BE SOLEY THE SWPPP OFFICERS' RESPONSIBILTY TO ENSURE THAT ALL ON-SITE ACTIVITIES PERFORMED BY ITS COMPANY COMPLY WITH THE SWPPP. THE GENERAL CONTRACTOR'S SWPPP OFFICER WILL HAVE AUTHORITY OVER ALL SUB-CONTRACTOR'S SWPPP OFFICERS FOR WORK PERTAINING TO COMPLIANCE.

SHOULD A SWPPP OFFICER FAIL TO ENSURE COMPLIANCE, THAT OFFICER'S FOREMAN OR DIRECT SUPERVISOR WILL ASSUME ALL RESPONSIBILITY.

SHOULD A SUB-CONTRACTOR FAIL TO COMPLY WITH THE SWPPP, THE GENERAL CONTRACTOR WILL ASSUME ALL RESPONSIBILITY FOR COMPLIANCE.

SHOULD THE GENERAL CONTRACTOR FAIL TO COMPLY WITH THE SWPPP, THE OWNER WILL ASSUME ALL RESPONSIBILTY FOR COMPLIANCE.

EROSION PREVENTION PRACTICES

CONTRACTOR SHALL PHASE CONSTRUCTION, MAINTAIN VEGETATIVE BUFFER STRIPS, AND PROVIDE HORIZONTAL SLOPE STAKING IN ORDER TO MINIMIZE EROSION.

SILT FENCE SHALL BE INSTALLED BEFORE WORK BEGINS. SILT FENCE LIMITS SHALL COINCIDE WITH DOWNGRADE GRADING LIMITS UNLESS OTHERWISE NOTED.

THIS PROJECT DOES NOT HAVE EXPOSED POSITIVE SLOPES WITHIN 200' OF SURFACE WATER.

THE WETTED PERIMETER OF DRAINAGE SWALES WILL BE STABILIZED WITH WOOD FIBER BLANKETS AND/OR DITCH CHECKS WITHIN 200' OF THE SITE BOUNDARY LINE OR WETTED PERIMETER OF DITCHES WITHIN 24 HOURS..

TEMPORARY OR PERMANENT DITCHES THAT ARE BEING USED AS A SEDIMENT CONTAINMENT SYSTEM DURING CONSTRUCTION MUST BE STABILIZED WITHIN 24 HOURS AFTER NON-USE

PIPE OUTLETS MUST HAVE ENERGY DISSIPATION IN PLACE WITHIN 24 HOURS OF INSTALLATION MULCH, HYDROMULCH, TACKIFIER, POLYACRYLAMIDE EROSION PREVENT PRACTICES CANNOT BE BE USED WITHIN THE NORMAL WETTED PERIMETER OF OF DRAINAGE DITCHES OR SWALE SECTIONS WITH A CONTINUOUS SLOPE GREATER THAN 2%

SEDIMENT CONTROL PRACTICES

CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN:
SEDIMENT CONTROLS FOR TEMPORARY AND PERMANENT DRAINAGE BASINS AND DRAINAGE DITCHES THAT ARE A PART OF THIS DESIGN

CHECK DAMS AND/OR WOOD FIBER BLANKETS TO ENSURE SHEET FLOW AND PREVENT RILLS FOR SLOPE LENGTHS GREATER THAN 75' WITH A SLOPE OF 3:1 OR GREATER

SILT FENCE AT ALL DOWN GRADIENT PERIMETERS INSTALLED PRIOR TO ALL LAND DISTURBING ACTIVITIES

INLET PROTECTION AT ALL DRAIN INLETS

SILT FENCING AROUND TEMPORARY SOIL STOCKPILES

ROCK CONSTRUCTION SITE ENTRANCES

STREET SWEEPING OF TRACKED SEDIMENT ONTO PAVED SURFACES

SEDIMENT CONTROL PRACTICES MUST BE IN PLACE AT ALL DOWN GRADIENT PERIMETERS AND UPGRADIENT OF ANY BUFFER ZONES

SEDIMENT CONTROL PRACTICES ARE ESTABLISHED AT THE BASE OF STOCKPILES ON DOWN GRADIENT PERIMETER

STOCKPILES ARE LOCATED OUTSIDE OF NATURAL BUFFERS OR SURFACE WATER, INCLUDEING STORM WATER CONVEYANCES UNLESS THERE IS A BYPASS

THIS PROJECT DOES NOT INCLUDE DEWATERING OR BASIN DRAINING
PERMANENT SEDIMENT BASINS WILL BE USED AS TEMPORARY BASINS DURING CONSTRUCTION

ADDITIONAL BMP'S FOR SPECIAL WATERS

THIS PROJECT DOES NOT DISCHARGE TO SPECIAL WATERS OR HAVE SIGNIFICANT IMPACTS TO WETLANDS

INSPECTIONS AND MAINTAINANCE

CONTRACTOR SHALL INSPECT AND MAINTAIN MEASURES AT MINIMUM ONCE EVERY (7) DAYS DURING ACTIVE CONSTRUCTION, AND WITHIN 24 HOURS AFTER A RAINFALL EVENT OF 0.5" IN 24 HOURS.

INSPECTIONS WILL INCLUDE STABILIZED AREAS, EROSION PREVENTION AND SEDIMENT CONTROLS, AND INFILTRATION AREAS.

REFER TO MPCA'S COMPLIANCE GUIDE FOR EROSION AND SEDIMENT CONTROL FOR INSPECTION LOG REQUIREMENTS.

MAINTENANCE RECORDS SHOULD INCLUDE: DATES & TIMES IF INSPECTION, NAME OF PERSON CONDUCTING THE INSPECTION, FINDINGS & LOCATIONS OF CORRECTIVE ACTIONS, PARTY COMPLETING MAINTENANCE ACTIVITIES, DATES & AMOUNTS OF RAINFALL EVENTS GREATER THAN 0.5" RAINFALL AMOUNTS ARE TO BE RECORDED WITH RAIN GAUGE ON SITE OR WEATHER STATION WITHIN 1 MILE OF SITE. ANY DISCHARGES OBSERVED SHOULD BE DESCRIBED & PHOTOGRAPHED.

RECORDS RETENTION

CONTRACTOR SHALL MAINTAIN RECORDS OF THE SEDIMENT RETENTION PROCEDURES ON-SITE. RECORDS WILL INCLUDE:
COPY OF THE SWPPP AND ALL REVISIONS
INSPECTION AND MAINTAINANCE RECORDS
PERMANENT OPERATION AND MAINTAINANCE AGREEMENTS
CALCULATIONS FOR THE DESIGN OF TEMPORARY AND PERMANENT STORMWATER MANAGEMENT SYSTEMS
COPIES OF THE SWPPP MUST BE RETAINED ON SITE BY THE PERMITTEE

POLLUTION PREVENTION MEASURES

SOLID WASTE:
COLLECTED SEDIMENT, ASPHALT AND CONCRETE MILLINGS, FLOATING DEBRIS, PAPER, PLASTIC, FABRIC, CONSTRUCTION AND DEMOLITION DEBRIS AND OTHER WASTES MUST BE DISPOSED OF PROPERLY AND MUST COMPLY WITH MPCA DISPOSAL REQUIREMENTS.

CONCRETE AND OTHER WASHOUTS:
PERFORM ALL CONCRETE TRUCK WASHOUTS IN PROPER CONTAINMENT FACILITIES. SOILID AND LIQUID WASHOUT WASTE FROM OTHER MATERIALS (STUCCO, PAINT, FORM RELEASE OILS CURING COMPOUNDS ETC.) WILL BE DISPOSED OF IN A PROPERLY DESIGNATED LANDFILL.

PERFORM ALL WASHOUTS INCLUDING HANDTOOLS IN A LEAKPROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER THAT PREVENTS RUNOFF ONTO ADJACENT SOILS. DEBRIS/SEDIMENT WILL NOT CONTACT THE GROUND SURFACE.

A SIGNE REQUIRING USE OF PROPER WASHOUT FACILITIES WILL BE INSTALLED ADJACENT TO SAID FACILITIES.

HAZARDOUS MATERIALS:
OIL, GASOLINE, PAINT AND ANY HAZARDOUS SUBSTANCES MUST BE PROPERLY STORED, INCLUDING SECONDARY CONTAINMENT TO PREVENT SPILLS, LEAKS, OR OTHER DISCHARGE. RESTRICTED ACCESS TO STORAGE AREAS MUST BE PROVIDED TO PREVENT VANDALISM. STORAGE AND DISPOSAL OF HAZARDOUS WASTE MUST BE IN COMPLIANCE THE MPCA REGULATIONS.

EXTERNAL WASHING OF TRUCKS AND OTHER CONSTRUCTION VEHICLES MUST BE LIMITED TO A DEFINED AREA OF THE SITE. RUNOFF MUST BE CONTAINED OF AND WASTE PROPERLY DISPOSED OF. NO ENGINE DEGREASING IS ALLOWED ON SITE.

SWPPP AMENDMENTS

AMENDMENTS MADE IN THE FIELD TO THE SWPPP SHOULD BE UPDATED ON THE SWPPP. REFER TO PROCEDURES OUTLINED IN SECTION 6.1 OF THE PERMIT.

SWPPP IMPLEMENTATION CHAIN OF RESPOSIBILITY

THE GENERAL CONTRACTOR SHALL PROVIDE A TRAINED, CERTIFIED, KNOWLEDGEABLE PERSON WHO SHALL SERVE AS THE SITE'S EROSION CONTROL INSPECTOR. THIS PERSON SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL BMP'S, AND SHALL MAINTAIN THE INSPECTION LOG AT THE PROJECT SITE.

EACH SUBCONTRACTOR ON-SITE WILL DESIGNATE AN EMPLOYEE AS ITS PROJECT SWPPP OFFICER. A LIST OF THESE OFFICERS WITH CONTACT INFORMATION WILL BE AVAILABLE ON-SITE. IT WILL BE SOLELY THE SWPPP OFFICERS' RESPONSIBILITY TO ENSURE THAT ALL ON-SITE ACTIVITIES PERFORMED BY ITS COMPANY COMPLY WITH THE SWPPP. THE GENERAL CONTRACTOR'S SWPPP INSPECTOR WILL HAVE AUTHORITY OVER ALL SUBCONTRACTOR'S SWPPP OFFICERS FOR WORK PERTAINING TO COMPLIANCE.

SHOULD A SWPPP OFFICER FAIL TO ENSURE COMPLIANCE, THAT OFFICER'S FOREMAN OR DIRECT SUPERVISOR WILL ASSUME ALL RESPONSIBILITY.

SHOULD A SUBCONTRACTOR FAIL TO COMPLY WITH THE SWPPP, THE GENERAL CONTRACTOR WILL ASSUME ALL RESPONSIBILITY FOR COMPLIANCE.

SHOULD THE GENERAL CONTRACTOR FAIL TO COMPLY WITH THE SWPPP, THE OWNER WILL ASSUME ALL RESPONSIBILITY FOR COMPLIANCE.

CHANGES IN PERMIT AND NOTICE OF TERMINATION

THE CONTRACTOR WILL BE A CO-PERMITEE DURING THE CONSTRUCTION OF THE PROJECT. AFTER GRAVEL SURFACING OF THE PROJECT HAS BEEN COMPLETED, AND 70% PERMANENT VEGETATIVE COVER HAS BEEN ESTABLISHED OVER THE PERVIOUS AREAS OF THE SITE, AND THE WARRANTY PERIOD HAS ELAPSED, THE CONTRACTOR MAY SUBMIT A MPCA (NOT)F ORM TO THE OWNER FOR SIGNATURE AND SUBMITTAL TO THE MPCA.

THE OWNER WILL SUBMIT THE NOTICE OF TERMINATION (NOT) AFTER ONE FINAL ESTABLISHMENT OF ALL PERVIOUS SURFACES ACCORDING TO THE MPCA GENERAL PERMIT REQUIREMENTS

NOTIFICATION OF THE MPCA IN CASE OF POLLUTION

IT IS THE DUTY OF THE CONTRACTOR TO NOTIFY THE MPCA IMMEDIATELY OF ANY DISCHARGE, ACCIDENTAL OR OTHERWISE, OF ANY SUBSTANCE OR MATERIAL UNDER HIS CONTROL WHICH, IF NOT RECOVERED, MAY CAUSE POLLUTION OF WATERS OF THE STATE, AND THE CONTRACTOR SHALL RECOVER AS RAPIDLY AND THOROUGHLY AS POSSIBLE SUCH SUBSTANCE OR MATERIAL AND TAKE IMMEDIATELY SUCH OTHER ACTION AS MAY BE REASONABLY POSSIBLE TO MINIMIZE OR ABATE POLLUTION OF WATERS OF THE STATE CAUSED THEREBY.

SEDIMENT LEAVING THE CONSTRUCTION SITE AND ENTERING A PUBLIC WATER IS CAUSE FOR NOTIFICATION.

MPCA DUTY OFFICER: 800-422-0798

QUALIFIED SWPPP PERSONNEL INFORMATION

SWPPP DESIGNER: BRIAN J. JOHNSON, PE
JONES HAUGH & SMITH, INC.
515 SOUTH WASHINGTON AVE
ALBERT LEA, MN 56007
(507) 373-4876

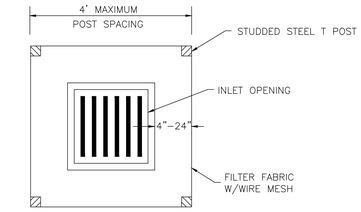
SWPPP INSTALLER:
NAME: _____
FIRM: _____
ADDRESS: _____
_____
PHONE: _____

SWPPP INSPECTOR:
NAME: _____
FIRM: _____
ADDRESS: _____
_____
PHONE: _____

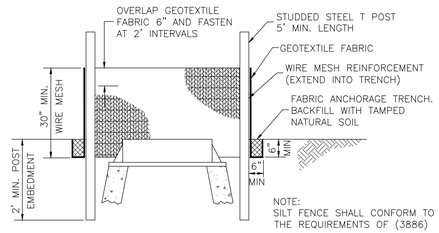
GRADING CONTRACTOR:
NAME: _____
FIRM: BCM CONTRACTING_____
ADDRESS: _____
_____
PHONE: _____

OTHER LAND DISTURBING CONTRACTOR:
NAME: _____
FIRM: _____
ADDRESS: _____
_____
PHONE: _____

OTHER LAND DISTURBING CONTRACTOR:
NAME: _____
FIRM: _____
ADDRESS: _____
_____
PHONE: _____

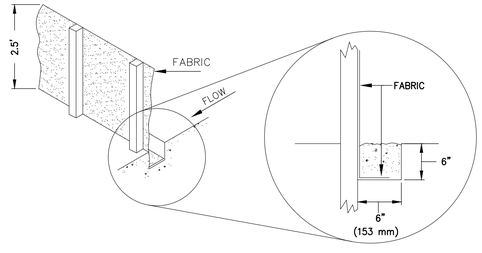


PLAN VIEW



SECTIONAL VIEW

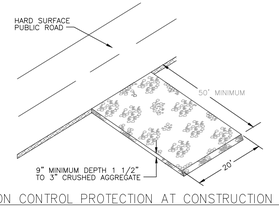
INLET PROTECTION - HEAVY DUTY



NOTES:
- PLACE BOTTOM EDGE OF FENCE INTO 6" (153 mm) DEEP
- POSTS SHALL BE:
  - 4' (1.22 m) ON CENTER
  - 2" (50.8 mm) X 2" (50.8 mm) HARDWOOD, PINE OR STANDARD STEEL FENCE POSTS
  - DRIVEN 2' (0.61 m) INTO THE GROUND.

EROSION CONTROL FENCE

(MACHINE SLICED)



EROSION CONTROL PROTECTION AT CONSTRUCTION ACCESS

Consultant:
JONES HAUGH SMITH
Engineers + Surveyors
515 South Washington Ave. Albert Lea, MN 507-373-4876

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Brian J. Johnson
Reg. No. 42744
Date 9/20/25

Project:
MANKATO APARTMENTS

Revision:

No.:	Date: 9/20/2025
Drawn: bjj	Checked:

Project Manager:

Project Status: CD

Sheet Title:
SWPPP NARRATIVE & DETAILS

Sheet No.:
C8

GOVERNING SPECIFICATIONS
The Minnesota Department of Transportation's "Standard Specifications for Construction" 2018 Edition, including the Mn/DOT Special Provisions modified for this project, Minnesota Plumbing Code and the City Engineers Association of Minnesota Standard Specification, 2018 Edition, will govern except as modified or altered in the Special Provisions. All references to "State of Minnesota" or "Commissioner of Transportation" or "Department" are hereby revised to mean "Owner."

WORK WITHIN PROPERTY
The Contractor will work only in areas secured by the Owner, and will comply with all requirements of access agreements.

MATERIALS TESTING

Materials Testing will be by the Contractor. The Contractor will hire an independent testing consultant, approved by the Engineer, prior to the start of work to be tested.

1. The following materials tests will be provided by the Testing Company:

Work to be Tested	Method	Reference Spec.	Testing Rate
Sewer & Water Service Trenches	Specified Density	MnDOT 2105, 2451, 2501	1 test per 500 lf
Storm Sewer Trench Compaction	Specified Density	MnDOT 2105, 2451, 2501	1 test per 500 lf
Subgrade/Embankment Compaction	Specified Density	MnDOT 2105	1 test per 2500 cy placed (Clay, Sand, etc.)
Test Rolling	Fully Loaded Dump Truck		1 test per road
Select Granular Borrow	Specified Density	MnDOT 3149	1 per 5000 ton
	Gradation	MnDOT 3149	1 per Source
Aggregate Base (CL 3, CL 5)	Modified DCP	MnDOT 2211	2 tests per 1000 ton
	Gradation	MnDOT 2211	1 per 5000 ton
Bituminous Paving	Ordinary Comp.-Control Strip	MnDOT 2360	1 control strip per mobilization and/or per workday
Concrete Curb & Gutter	Air, Slump, Temp, Strength	MnDOT 2461	If non-integrant
Air, Temp. - 1 per day			
Slump, Strength - 1 per day; and each time water is added at the site			
Concrete Driveway or Sidewalk	Air, Slump, Temp, Strength	MnDOT 2461	
Air, Temp. - 1 per day			
Slump, Strength - 1 per day; and each time water is added at the site			
Concrete Paving		MnDOT 2301	
All Concrete Field testing or Concrete Pavement per 2012 MnDOT Schedule of Materials Control (page 32), except Pavement Texture and Smoothness.			

Table Notes:

- Specified Density also requires Moisture-Density and Relative Density
- The Engineer may omit duplicative trench compaction tests at his discretion

MAINTENANCE OF TRAFFIC (1404)
The Contractor will be responsible for traffic control on the Project, and will furnish, erect, and maintain all necessary traffic control devices required to provide safe movement of vehicular traffic through the Project. Any traffic control device installed will meet the requirements of the Minnesota Manual on Uniform Traffic Control Devices, Field Manual, latest edition, and the latest MnDOT specifications approved at the time of bid.

The Contractor will prepare and submit to the City Engineer and County Engineer for Approval a Traffic Control Plan for any work in or utilization of traveled Right-of-Way. The plan will be submitted a minimum of 48 hours prior to the commencement of work. No work in the Right-of-Way will commence without an Approved Traffic Control Plan.

Traffic control will be in accordance with the Traffic Control Layout Plan and the following:
Traffic control devices include, but are not limited to, barricades, warning signs, lane markings, trailers, flashers, cones, and drums, as required, and sufficient barricade weights to maintain barricade stability.
No material will be deposited on a traveled roadway.
Materials will not be placed on road right of way more than one week in advance of their use.
Contractor will notify the affected parties at least one week prior to commencement of disturbance of the private or business drives.
Coordination will be maintained with the Fire and Police Departments to ensure that passage is maintained for emergency vehicles at all times.
The Contractor will make one person responsible for the maintenance of all signs. The Contractor will check each intersection at the end of each day whether it is a working day or not. The name and telephone number of this person will be left with the Police, the City Engineer, and the Fire Departments.

UTILITY PROPERTY AND SERVICE (1507)
Construction operations in the proximity of utility properties will be performed in accordance with the Provisions of 1507, except as modified below:

The first paragraph of 1507 is deleted and the following substituted therefore:

It will be the Contractor's responsibility to contact all local utility companies and ascertain the location of all existing underground utilities, if any, prior to performing any excavation operations. The Contractor will conduct his/her operations in the vicinity of any such facilities, which may exist, in a manner that will prevent damage thereto.

It will be the Contractor's responsibility to utilize the One-Call Excavation Notice System at 'Gopher State One Call' (1-800-252-1166) required under Minnesota Statute Chapter 216D, 48 hours prior to performing any excavation adjacent to any underground facility, which may exist, in a manner that will prevent damage thereto.

CONSTRUCTION STAKES, LINES AND GRADES (1508)

All construction staking will be provided by the Contractor and performed by or under the direct supervision of a Land Surveyor licensed in the State of Minnesota.

Field Fit Adjustments to Grade Stakes
The Engineer may make minor adjustments (< 0.5') to the grade stakes after they have been placed, in order to adjust to actual conditions in the field or to ensure proper or better drainage. Any adjustments to proposed or in-place materials required due to minor adjustments made by the Engineer are incidental to the work.

CONTROL OF HAUL ROADS (1515), LAWS TO BE OBSERVED (1701)

In addition to the requirements of 1515 and 1701, the Contractor will abide by all weight restrictions implemented by the governing road authorities in the performance of the work and in delivering materials and equipment to the project site.

AIR LAND AND WATER POLLUTION (1717)

The provisions of Mn/DOT 1717 are hereby modified and supplemented as follows:

DEWATERING
Any dewatering necessary to construct the work will be done by the Contractor. The Contractor is responsible to determine the type and method of dewatering and to provide and implement all equipment and materials necessary to accomplish the work on this project. Discharged water from dewatering will be routed through a temporary sediment basin. Sediment trapped in the temporary basins will be removed and disposed of on-site.

PROTECTION OF SURFACE STRUCTURES
The Contractor will not trespass on any private property without the express written consent of the Owner thereof. Trees, shrubs, fences, poles and all other private property will be protected unless their removal is authorized. Any property damaged will be satisfactorily restored at the expense of the Contractor. Any land survey or property monuments destroyed, covered, moved, bent or disturbed will be replaced by a Licensed Land Surveyor at the expense of the Contractor.

Wherever construction is planned to cross private property, an easement for the construction has been acquired from the property owner. The Contractor will familiarize himself with the terms of such easements, which the Owner will have on file.

Ground surface, trees, shrubbery, fences and other private property will be restored to the same condition as existed prior to the beginning of construction. This will include consolidating backfill, graveling driveways and any other leveling and landscaping required to restore the premises to original condition. The topsoil will be piled separately from subsoil material and will be replaced in the trench above the subsoil material.

Except where sodding is required, all grassed areas disturbed during the construction will be seeded following landscaping.

The Contractor will restore at his own expense streets, roads, alleys, private or public structures such as water mains, water connections and appurtenances, culverts, drain tiles, sewers, manholes, catch basins, sewer connections, curb, gutter, sidewalk, street signs, or other structures designated to remain in place which are damaged or injured in any way by his acts, and will be responsible for all damages to other utilities he may encounter.

The Contractor will not claim, or be entitled to receive, compensation for any damages sustained by reason of the inaccuracy or omission of any of the information given on the drawings relative to surface, overhead, or underground structures, or by reason of his failure to properly protect such structures.

PROTECTION OF SIDE STREETS AND HAUL ROUTES

The Contractor will be responsible for any damage of the side streets in the area and any other streets that are used as haul routes. The Contractor will discuss all haul route possibilities with the City Engineer and County Engineer prior to their use. The City Engineer, County Engineer, and the Contractor together will inspect the condition of the proposed routes before, during and after their use. The Contractor will correct any damage that is caused by the hauling activities at no cost to the Owner.

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Ground surface, trees, shrubbery, fences and other private property will be restored to the same condition as existed prior to the beginning of construction. This will include consolidating backfill, graveling driveways and any other leveling and landscaping required to restore the premises to original condition. The topsoil will be piled separately from subsoil material and will be replaced in the trench above the subsoil material.

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PROTECTION OF SIDE STREETS AND HAUL ROUTES

The Contractor will be responsible for any damage of the side streets in the area and any other streets that are used as haul routes. The Contractor will discuss all haul route possibilities with the City Engineer and County Engineer prior to their use. The City Engineer, County Engineer, and the Contractor together will inspect the condition of the proposed routes before, during and after their use. The Contractor will correct any damage that is caused by the hauling activities at no cost to the Owner.

INTERFERENCE OF UNDERGROUND STRUCTURES

Existing utilities crossed by the new construction will be protected against damage, and/or replaced to original grade. Protection, temporary support and maintenance of existing utilities will be furnished by the Contractor at his own expense. The final installation will provide permanent support to prevent any settlement or movement, which may result in damage to these utilities.

Whenever existing pipe is replaced, the material of replacement will be DIP or PVC pipe of the same diameter as the original, long enough to extend at least one foot into the solid bank on either side of the excavation. The backfill under and around such pipe will be thoroughly compacted by mechanical means to preclude settlement. All connections between different types or sizes of pipe or improperly matched joint types will be encased in concrete with a minimum thickness of 6 inches.

Should it become necessary during the progress of the work to remove or relocate existing utilities or structures, the Owner will cause the same to be done at no expense to the Contractor, except as otherwise provided herein. The Contractor will notify those who maintain utilities sufficiently in advance of construction so they may make the necessary location, disclosure, relocation or other preparation. Where necessary to locate existing underground utilities, the Contractor, upon order of the Engineer, will make any required subsurface explorations and excavation, and will be allowed compensation therefore. Where relocation or reconstruction of existing utilities is impracticable, a change in line and/or grade of the new construction will be ordered, and the change will be made as directed. No deviation from the line or grade set by the Engineer will be made without his approval.

CONNECT TO EXISTING SANITARY SEWER

The Contractor will connect to the existing sanitary sewer at the locations shown on the plan. Exploratory excavation for determining the location of existing utilities and the connection to the existing sanitary sewer are incidental to the work. The Contractor will verify the connection elevation at the main is reasonably close to the elevation shown on the plan prior to beginning work. If the elevation is substantially different, the Contractor will notify the Owner and Engineer.

Where new connections are made to existing sanitary sewer manholes, the contractor will core drill the manhole wall and invert to the existing flow line, construct and shape a new invert for the new pipe, and provide a waterproof boot through the wall of the manhole for the new pipe.

SANITARY SEWER CONSTRUCTION REQUIREMENTS

1. Noise -- The Contractor will insure all equipment is properly fitted with mufflers to reduce noise to the minimum attainable to avoid creating a nuisance in the residential and business area.
2. Trench Compaction -- All trenches will be tamped using the existing material that has been excavated. Tamping will not be paid as a bid item, therefore the cost of this work will be included in the price bid for furnishing and installing the pipe.
3. Piling Excavated Materials -- Excavated material will not be piled on private property without the express permission of the owner thereof, except where easements for the sewer construction or for related work have been obtained; nor will it be piled in any location that will require backfilling machinery to operate on private property. Where excavated material is piled on private property it will be placed to cause the least possible inconvenience to the property owner. Any damage caused thereby, including damage to buildings, walls, sidewalks, driveways, trees, shrubs, lawns, or any other property, will be repaired at the expense of the Contractor. Backcasting in order to minimize disturbance is incidental to the work.
4. It will be the Contractor's responsibility to protect adjacent pipes in and around manholes to be reconstructed, and will replace any pipes damaged, cracked, or broken by the Contractor at their expense.
5. All excavations, trenching and/or jacking and boring pits will be sheeted and/or shored as per OSHA requirements. No unsheeted trench will be left open overnight.
6. Backfilling of all trenches within the limits of street excavation will comply with the provisions of MN/DOT Specification 2112 including achieving 100% compacted density in the upper three feet of subgrade (below aggregate base) and 95% below the upper three feet. Density testing will be performed as directed by the Owner to verify compaction. Trench areas that are determined by the Owner to have yielded due to improper compaction will be deemed as Unacceptable Work and will be corrected by the contractor at no additional cost.
7. Removal of former service lines. -- Service lines no longer being utilized will be removed to the main, as directed by the City. Removal and restoration of street surfacing required for the service removal is incidental.
8. RECORDS OF LATERALS: The Contractor will maintain a complete and accurate record of the location and depth of each lateral. The Contractor will make measurements from the end of each service to prominent permanent features to facilitate its location in the future. The end of each lateral will be located in plan and elevation, and a sketch made to show the plan location. These records will be turned over to the Owner.
9. Contractor shall televise all sewer main to be owned by the City.

MATERIALS FOR SANITARY SEWER CONSTRUCTION:

The project calls for the use of Poly-Vinyl Chlorids (PVC). Pipe and fittings should be properly bedded and encased in accordance with the Standard Detail Sheets and Standard Specifications for Sanitary Sewer Installation. All 8" and larger sanitary sewer shall be SDR 35, pipe smaller than 8" shall be SDR 26 Bedding and encasement beneath, along the sides, and above the pipe will be Select Granular material, tamped in place. The only deviation will be in poor soil conditions, as approved by the Engineer, where foundation rock will be substituted. Pipe bedding is incidental to pipe installation. Foundation rock is incidental to pipe installation.
Joints for PVC-SDR 35, and PVC-SDR 26 gravity sewer pipe will be made using Elastomeric gaskets conforming to the requirements of ASTM D3212.
Joints in precast concrete manholes will be made using a joint compound equal to Ram-Nek or rubber gasketed conforming to ASTM C443.
All manhole castings will be equipped with solid lid covers, self-sealing, with concealed pick holes. Manhole casting will be Neenah R1772, or equal and will be labeled 'SANITARY' on casting.

CONNECT TO EXISTING WATERMAIN

The Contractor will connect to existing watermain at the locations shown on the plan. All connections to existing water main are incidental to the work. All exploratory excavation in determining the location of existing water main is incidental to the work. The Contractor will coordinate with the utility owner and be responsible for any fees due for connections.

WATERMAIN CONSTRUCTION REQUIREMENTS

1. Noise -- The Contractor will insure all equipment is properly fitted with mufflers to reduce noise to the minimum attainable to avoid creating a nuisance in the residential and business area.
2. Bedding and encasement beneath, along the sides, and above the pipe will be Select Granular material, tamped in place. The only deviation will be in poor soil conditions, as approved by the Engineer, where foundation rock will be substituted. Pipe bedding is incidental to pipe installation. Foundation rock will be paid at the unit price per ton. No payment will be made for bedding materials which, in the opinion of the Engineer, was unnecessary for proper pipe installation.
3. Trench Compaction -- All trenches will be tamped using the existing material that has been excavated. Tamping will not be paid as a bid item, therefore the cost of this work will be included in the price bid for furnishing and installing the pipe.
4. Piling Excavated Materials -- Excavated material will not be piled on private property without the express permission of the owner thereof, except where easements for the sewer construction or for related work have been obtained; nor will it be piled in any location that will require backfilling machinery to operate on private property. Where excavated material is piled on private property it will be placed to cause the least possible inconvenience to the property owner. Any damage caused thereby, including damage to buildings, walls, sidewalks, driveways, trees, shrubs, lawns, or any other property, will be repaired at the expense of the Contractor.
5. It will be the Contractor's responsibility to protect adjacent pipes in and around manholes to be reconstructed, and will replace any pipes damaged, cracked, or broken by the Contractor at their expense.
6. All excavations, trenching and/or jacking and boring pits will be sheeted and/or shored as per OSHA requirements. No unsheeted trench will be left open overnight.
7. Backfilling of all trenches within the limits of street excavation will comply with the provisions of MN/DOT Specification 2112 including achieving 100% compacted density in the upper three feet of subgrade (below aggregate base) and 95% below the upper three feet. Density testing will be performed as directed by the Engineer to verify compaction. Trench areas that are determined by the Engineer to have yielded due to improper compaction will be deemed as Unacceptable Work and will be corrected by the contractor at no additional cost.
8. The Contractor will coordinate the construction of all private and municipal utilities.
9. The Contractor will be responsible for all tapping or other fees paid to public or private utilities as work incidental to the contract.
10. RECORDS OF LATERALS: The Contractor will maintain a complete and accurate record of the location and depth of each water lateral. The Contractor will make measurements from the end of each service to prominent features to facilitate its location in the future. The end of each lateral will be located in plan and elevation, and a sketch made to show the plan location. These records will be turned over to the Owner.

MATERIALS FOR WATERMAIN CONSTRUCTION- City standards shall govern over all material specs listed below if discrepancies exist.

1. Watermain shall be DIP meeting the requirements of AWWA C-900. Pipe and fittings should be properly bedded and encased in accordance with manufacturer's requirements. Foundation rock will be used in poor soil conditions.
2. Bedding and encasement for pipe, beneath, along the sides, and above the pipe will be Select Granular material, tamped in place. The only deviation will be in poor soil conditions, as approved by the Engineer, where foundation rock will be substituted. Pipe bedding is incidental to pipe installation. All joints between pipe, fittings, valves, and hydrants will be equipped to provide electrical conductivity.
3. Gaskets will be mechanical joint rubber gaskets, unless otherwise specified.
4. Hyrdants shall be Waterous Pacer WB-67-250 with 6" mechanical joint inlet and valve boxes as manufactured by American Flow Control Series 2500 or US Metro Pipe Seal with the Top marked WATER.
5. The furnishing and installing of disinfection materials to disinfect the watermains will be the responsibility of the Contractor. The City Utilities Department will assist the Contractor in flushing and testing the watermains.
6. The Contractor will use restrained joint mechanical joint flanges with mega lug retainer glands or equal on all hydrants, watermain offsets, bends, or other mechanical fittings. STAINLESS STEEL BOLTS will be required on all mechanical joints and sleeves.
7. All exposed parts of the bolts and nuts will be completely coated with an approved asphaltic type rust preventive material. Any parts of the fittings that have been scraped will also be coated with an approved asphaltic type rust preventive material. Watermain fittings will conform to ANSI Standard A21.10. All watermain fittings, hydrants and retaining rods will be protected by using sacrificial zinc anode caps such as 175P190 Protecto Caps as manufactured by Ebba Iron or an approved equal. Two caps per mechanical joint will be used.

TESTING OF WATER MAIN

Hydrostatic pressure testing of water main and services will be conducted as follows:
After the pipe has been laid, including fittings and valves and blocking, all newly laid pipe or any valved section thereof, unless directed otherwise by the Engineer, will be subject to hydrostatic pressure of 150 pounds per square inch. The duration of each such test will be at least two hours.

Each section of pipe to be tested will be filled with water and all air expelled at the highest point. The required taps to expel air or to fill the water main will be supplied and installed by the Contractor and will be 3/4 inch and will include an approved service saddle when required.

The test apparatus will be applied at the lowest elevation on the section to be tested. The apparatus will be connected to the main at a service tap or special tap location.
The pressure gauge will be a standard pressure gauge. The dial will register from 0 - 200 psi and have a dial size of 4 1/2 inches with 1-psi increments.

The hydrostatic test, pressure requirement for an acceptable test will be a maximum pressure drop of 2 psi during the last hour of the two-hour pressure test.
If this test requirement cannot be met, the Contractor will investigate the cause, make corrections, and retest until the pressure drop requirement can be met.

Only if several consecutive tests indicate a consistent pressure drop and only after the Contractor has made numerous attempts to resolve the problem, acceptable to the Engineer, may the Contractor request in writing and the Engineer consider the use of the leakage test. The leakage test may be performed by the Contractor to determine the magnitude of the leak, however, meeting the leakage allowance will not automatically be considered acceptance, in lieu of the pressure test, for the section being tested. Final acceptance will be at the discretion of the Engineer.

When allowed, the leakage test will be performed in accordance with AWWA C-600, Section 4.1.5, 4.1.6 and the line will be accepted as per Section 4.1.7.

Operational Testing will be conducted as follows:
At the completion of the project and in the presence of the Engineer and the Contractor, representatives of the Owner will operate all valves, hydrants, and water services to ascertain that the entire facility is in good working order; that all valve boxes are centered and valves are opened; that all hydrants operate and drain properly; that all curb boxes are plumb and centered; and that water is available at all curb stops.

Disinfection Testing:
Before being placed in service, the completed water main will be disinfected. Disinfection materials and procedures, and the collection and testing of water samples, will be in accordance with the provisions of AWWA C-651. After the final flushing the water will be tested for bacteriologic quality and found to meet the standards prescribed by the Minnesota Department of Health.
Samples will be taken and tested after 24 and 48 hours of disinfection. Both tests must be returned with passing results prior to approval for service.

Where an existing water main is cut for the installation of any fitting, the pipe and fittings proposed to be installed will be disinfected prior to installation as follows:

The interior of the pipe and fittings will be cleaned of all dirt and foreign material.

The interior of the pipe and fittings will be thoroughly swabbed or sprayed with a 1 percent minimum hypochlorite solution.

Unless otherwise indicated in the Plans, Specifications, and Special Provisions, the Contractor will furnish all materials and perform the disinfecting, flushing, and testing as necessary for meeting the water quality requirements.

The flushing operations and the form of chlorine and method of application to be used will be subject to approval by the Engineer.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Brian J. Johnson
Reg. No. 42744
Date: 9/20/25

Consultant:
JONES HAUGH SMITH
Engineers + Surveyors
515 South Washington Ave. Albert Lea, MN 507-373-4876

Project:
MANKATO APARTMENTS

Revision:

No.: | Date: 9/20/2025
Drawn: bjj | Checked:
Project Manager:
Project Status: CD
Sheet Title:
SPECIFICATIONS

Sheet No.:
C9

MATERIALS FOR STORM SEWER CONSTRUCTION

1. All drainage structures with a depth of greater than 5' from top of casting elevation to bottom of structure elevation will be provided with steps.
2. Reinforced Concrete Pipe will be bedded and encased in accordance with plans and with material meeting the requirements of 2503. All RCP storm sewer pipe 15" in diameter or less will be Class 5, all other RCP storm sewer pipe will be Class 3 unless otherwise noted.
3. All PVC storm sewer will be Schedule 40 PVC, unless otherwise noted.

STORM SEWER CONSTRUCTION REQUIREMENTS

1. Unless otherwise noted, all existing drain tile encountered during the course of the work will be repaired if damaged by the work, or if the existing outlet is known to be removed or made dysfunctional, hooked up to the new storm sewer improvements. This work is incidental to the contract.
2. Where existing tile lines, sump pump lines, or other existing drainage lines are tied into RCP storm sewer lines, a hole will be created in the upper 1/3 of the side of the new storm sewer, the existing line will be inserted into the side of the new RCP to a depth of not greater than 2", geotextile fabric will be blanketed around or stuffed into the opening around the new pipe, and cement grout will be formed around the connection, so as to ensure water tightness. A maximum of 3 rings shall be used per standard plate 5043.
3. Where existing tile lines, sump pump lines, or other existing drainage lines are tied into HPDE storm sewer, fittings specifically manufactured for the connection of these lines will be used.
4. All existing drainage structures receiving new pipe will be cemented water tight around all pipes entering or exiting the structure. In addition, the inverts of all structures will be cemented so that all water entering the structure has a direct line out of the structure.
5. All new drainage structures will have integrally cast rubber boots to accept pipes and to ensure water-tightness. Worm screw stainless steel bands will be affixed to the boots to secure the pipe to the structure.
6. HDPE pipe will be installed accordance with ASTM F230

CASTING ASSEMBLIES (2506)

Casting assemblies will be of size and design noted on the plans. The work will include the cost of installing to final street surface grade on the manhole or inlet, including pavement removal and replacement if installed after paving.

Contractor will use at least two and not more than six standard adjusting rings immediately below the casting assemble which will be set in a mortar bed. Each adjusting ring will also be set in mortar. All adjusting rings will be plastered with a minimum of ½" of mortar on the interior and exterior, such that the casting is water tight from both the interior and exterior.

When bituminous paving lifts are scheduled for sequential construction seasons, castings will be set to the elevation of the non-wear course for the winter season, and then adjusted to final grade the following year. This work is incidental to construction.

Chimney Seal

Chimney seal will be furnished and installed on all sanitary manhole and ring casting assemblies. Seals will consist of rubberized sleeves or collars specially designed for covering manhole frames, rings and castings. Seals will be exterior seals with mechanical restraint as manufactured by Cretex Products or equal.

Furnish and installation of Chimney Seal is incidental to manhole castings and no additional payment will be made therefore.

Chimney Seal will not be required until final adjustment of castings at the time the final lift of bituminous paving is constructed.

ADJUST WATER VALVE BOX

This work will consist of the adjustment of all water valve boxes to conform to each grade of the bituminous pavement. This work includes multiple adjustments and is incidental to construction. If any structures are damaged by the Contractor's operations, the cost of repairs and replacement will be at the Contractor's expense. Final valve box adjustment at the final lift of paving will be by the paving contractor.

REMOVALS (2104)

Saw-cut Bituminous and/or Saw-cut Concrete

The edges of paving at the locations shown on the plan or directed as directed by the Engineer in the field will be full-depth saw-cut, typically at right angles to the faces to remain, in order to produce a clean edge of which to match the replacement paving or other surface to. Saw-cutting is incidental to the removals.

Remove Bituminous and/or Concrete Surface

After removal of bituminous or concrete surfacing in the traveled way, an aggregate surface will be provided in the removal area to the elevation of the removed materials. A minimum thickness of 6" of aggregate at the surface will be provided. This work is incidental to removals.

Disposal of Removed Materials

The removed materials will become property of the Contractor and be removed from the project site at the Contractor's expense.

Remove Storm Sewer

When existing storm sewer is designated to be removed, the existing pipe will be removed in its entirety, or crushed in its entirety and backfilled over, if directed by the Engineer.

EXCAVATION AND EMBANKMENT (2105)

1. The area designated for excavation will be excavated to sufficient depth to allow construction of the typical section shown on the plans except as otherwise directed by the Owner. The Contractor will verify to the Owner that the subgrade has been constructed to the proper elevation before base construction proceeds. The subgrade must be within 0.10' plus or minus of plan elevation before the construction is allowed to proceed. A subgrade elevation consistently above or below plan elevation will not be considered acceptable work. On average, the subgrade will be at about plan elevation.
2. Excess excavated material will be disposed of by the Contractor. Excess topsoil material will be stockpiled separately or leveled, as directed by the Owner. Stockpiling and leveling will be considered incidental to the excavation, and will not be paid for directly.
3. The contractor will salvage and stockpile suitable topsoil and surface material to the satisfaction of the Owner as necessary to provide for final seed and turf establishment and restoration. Topsoil salvage will be considered incidental to excavation and no direct compensation will be made therefore.
4. Removal of rocks, boulders, masonry or concrete within the excavated area will be considered common excavation. All roots, stumps, rubbish, rocks and other waste materials will be hauled to the nearest landfill. This work will be considered incidental to the construction and will not be paid for directly.
5. Paving sections will be required to allow construction of the typical cross-section. Embankment will be constructed in accordance with the provisions of 2105. Suitable excess excavated materials will be utilized for embankment to the fullest extent practicable. The remaining embankment material will be granular borrow conforming to the provisions of 3149.2A.
6. Site grading will be performed as required to establish plan grade. All excess becomes property of the Contractor to be disposed of off-site.
7. The Contractor will be responsible for ensuring that all areas within the limits of lot grading have a minimum of 6" of salvaged topsoil material on the final grade. It will be the Contractor's responsibility to coordinate and designate topsoil salvaging operations and stockpiling to ensure adequate topsoil is available for a 12" cover. All existing topsoil will be removed in all areas which will be filled with any material other than topsoil except that topsoil depths will not exceed two feet.
8. All borrow or salvaged excavated material to be used as embankment within the limits of paving construction will be approved by the Owner prior to placement. Embankment will comply with the provisions of Minnesota Department of Transportation Spec. 2112 including achieving 100% compacted density in the upper 3 feet of subgrade and 95% below the upper 3 feet of subgrade.
9. All natural topsoils will be removed from below all paving construction areas.
10. Suitable excavated material will be used as backfill. Embankments and boulevards not being seeded or sodded will be dragged or raked smooth prior to completion of each project.
11. Excess excavated material, excluding rocks, boulders, debris and organic material, will be the property of the Owner and will be stockpiled on site as directed by the Owner. All other excess material will be disposed of by the Contractor offsite.
12. When embankment materials are placed on existing ground with an existing slope of greater than 4:1, the embankment will be placed in accordance with 2105.3.B.
13. Where excavation is performed to the subgrade without the placing of embankment materials, the contractor will work the upper 1' of the subgrade to within 2% of optimum moisture prior to the test-rolling stated below. When the existing moisture content is greater or less than 2% of optimum, the contractor will "farm" the material to dry it, or add water and mix the materials until the subgrade reaches the desired moisture content. This work will be incidental to construction.
14. Backfill construction of concrete curb and gutter in accordance with 2531.J is incidental. The contractor will note that when this work is complete, continuous positive drainage is provided to the curb & gutter, which is defined by the MPCA as a stormwater conveyance.

TOPSOIL SALVAGE

All areas to be seeded will be finished with no less than 6 inches of topsoil salvage. This topsoil will be raked to a smooth surface free of roots, rocks and soil clumps. Topsoil salvage will be incidental to the project. All areas to receive fill material are subject to topsoil salvage. Topsoil may be placed over existing topsoil.

SUBGRADE PREPARATION (2112)

1. The provisions of 2112 will be follows and as outlined in 2112.
2. The final shaping and compacting of the subgrade will be done just prior to placing any base or surface course.
3. At the time the subgrade preparation operations have been completed, the prepared surface will be in reasonably close conformity with the cross sections shown in the Plans and the lines and grades shown on the plan.
4. Where excavation is performed to the subgrade with or without the placing of embankment materials, the contractor will work the subgrade to within 2% of optimum moisture. When the existing moisture content is greater or less than 2% of optimum, the contractor will "farm" the material to a minimum depth of 12" to dry it, or add water and mix the materials until the subgrade reaches the desired moisture content. This work will be incidental to construction.
5. The required stability will be such that when any material for base or surface courses is deposited on the subgrade, no rutting or displacement will occur.
6. The subgrade preparation prior to construction of underground utilities will not be subject to elevation tolerances.
7. Subgrade preparation is incidental to the contract

S-7 SUBGRADE COMPACTION

The subgrade when exposed will be compacted with a tamping roller, compactor or other means to not less than 100% Maximum Density and 2% Optimum Moisture. The Contractor will work the upper 1' of the subgrade to within 2% of optimum moisture during compaction. When the existing moisture content is greater or less than 2% of optimum, the contractor will "farm" the material to dry it, or add water and mix the materials until the subgrade reaches the desired moisture content. This work will be incidental to construction. Prior to placement of any stabilized base, a fully loaded dual axel dump truck will be driven over the completed sub-grade in the presence of the Contractor and Engineer present. The subgrade will be found suitable for placement when no rutting or displacment occurs. The test-rolling will be incidental to stabilized base and no specific payment will be made therefore.

S-8 SUBGRADE CORRECTION

If after substantial efforts by the contractor to correct the moisture content of the subgrade and re-compact the materials, the subgrade displays evidence of rutting or yielding prior to, during, or after this compactive effort, additional material will be excavated as directed by the Owner to the depth required to provide a stable foundation for the base material. Suitable material removed during excavation will be utilized for subgrade correction. This work will not be paid as Extra Work if it was or would have been, or could have been performed as part of any other grading activity.

STABILIZED BASE CONSTRUCTION (2211)

This work will consist of the excavation and embankment of existing subgrade and surface materials, and the construction of aggregate base.

1. Aggregate base will be either MnDOT Class 2 or Class 5, at the Contractor's option. Class 7 recycled base is acceptable where alllowed in the MnDOT standard specifications.
2. Any damage by the Contractor's operations to any existing improvements which have not been designated for removal or disturbance will be repaired at the expense of the Contractor.
3. AGGREGATE: Aggregate for the purposes required by this contract will be furnished by the Contractor from sources selected by him.
4. AGGREGATE BASE: Aggregate base, will be constructed in accordance with the provisions of 2211. Aggregate will conform to the requirements of 3138.
5. Compaction will be obtained by the Modified Penetration Index Method modified as follows: The Owner will hire an independent testing laboratory to perform density and moisture testing. Moisture tests will be performed with each density test. Tests will be performed in accordance with the Materials Testing Section above. Penetration and moisture content testing will be performed along with to the density tests. No payment will be made for work tested that fail to meet the specified density. The Contractor will be responsible for any additional tests due to the failure of work. Water will be applied to the base material during mixing, spreading and compaction operations for proper compaction and will be considered incidental work.
6. Test rolling will be performed on the aggregate base in the presence of the Owner's testing subconsultant. Test rolling will be as specified in Mn/DOT specification 2111 except that the test will be performed with a fully loaded tandem axel dump truck in lieu of the test roller. The Owner may delete the requirement for test-rolling on all or portions of the stabilized base, at his discretion, after consultation with the Contractor.
7. Furnish and install Aggregate Base, Class 5 meeting MN/DOT Specification No. 3138 under all concrete or bituminous pavements and a minimum of 2 inches of Aggregate Base, Class 5 under all curb and curb and gutter.

MAINTENANCE OF COMPLETED BASE

After completion of any part of the base, such base will be maintained in a dust free condition. It will be the Contractor's responsibility to repair at his expense all prepared and shaped surfaces until project is complete. Any water applied to keep the base dampened or reshaped will be at the Contractor's expense. The Contractor will maintain the completed aggregate base after rain events, and replace and recompact any eroded aggregate as work incidental to the contract. Maintenance of completed base is incidental to construction.

APPLICATION OF WATER (2130)

Application of water will be in accordance with the provisions of 2130 except as herein modified. No direct compensation will be made for water used in conjunction with the mixing, placing and compacting operations for base construction. The contractor is responsible for application of water for dust control in accordance with Mn/DOT 1717 and with the NPDES permit. Application of water for dust control is incidental to the work and no additional payment will be made therefore.

CONCRETE PAVEMENT (2301)

Jointed Type 3 Grade A Plain Concrete Pavement will be placed in accordance with the Mn/DOT standard specifications except as modified herein. Loading dock pavement will be reinforced.

The mix designs for concrete paving for this project are:
- Standard Paving - 3A41
- High Early Strength (if directed by Owner) - 3A41HE
- Flexural strength at 28 days will be 750 psi.
- Compressive strength at 28 days will be per the mix designations above.

High Early concrete areas will remain closed to traffic for 3 days or until they have achieved a flexural strength of 450 psi, whichever is shorter.
Concrete will be supplied from a Mn/DOT certified producer. The Contractor will be responsible for supplying the mix designs. The Contractor will provide the Engineer with the mix designs a minimum of 24 hours prior to the first pour.
Concrete will be cured by the use of membrane curing compound meeting the requirements of MnDOT 3754 AMS.
All joint sealant will conform to 3723, Concrete Joint and Crack Sealer (Hot-Poured Elastic Type) sealant.
Transverse metal-tine finishing will not be required.
The location of transverse joints may be adjusted in the field by the Engineer. An increase in the number of transverse joints of up to five percent (5%) compared to the number shown on the plans will be incidental.
All coarse aggregate for concrete pavement will meet the gradation requirements of MnDOT 3137 CA-50.

BITUMINOUS TACK COAT (2357)

Treating existing bituminous or concrete surfaces preparatory to placing a bituminous course thereon will be performed in accordance with the provisions of MN/DOT 2357 and the following:

A bituminous tack coat consisting of emulsified asphalt will be applied between all bituminous surfaces. A tack coat will be placed on the existing pavement prior to placing the next layer of bituminous and the edges of concrete pavement and curb and gutter that will come into contact with the new bituminous will be tacked. All surfaces will be cleaned of all dirt, debris and loose material prior to the application of the bituminous tack coat.

PLANT MIXED ASPHALT PAVEMENT (2350/2360)

Plant mixed asphalt pavement density will be constructed in accordance with Mn/DOT specification 2360, as published by Mn/DOT at the time of bid.After placement of the base course of bituminous paving at the bus parking area and car parking area, the Contractor will flood the work area with water to identify possible "bird bath" locations where the pavement has not been placed at enough grade to ensure proper drainage. Prior to or during placment of the wear course, the Contractor will ensure that these areas are graded to properly drain.

CONCRETE MIX FOR CURB & GUTTER, WALKS, & DRIVEWAYS (2461)

Concrete for this Contract will be as follows and as outlined in 2461:
The concrete mix number to be used for slip form curb and gutter will be 3A22. The concrete mix number for hand formed curb and gutter, sidewalks, and driveways will be 3A32.

	Minnesota Highway Designation	Minnesota Highway Designation
Mix Number	3A32B	3A22B
Type of Concrete	Type 3 (Air Entrained)	Type 3 (Air Entrained)
Grade	Grade A	Grade A
28 Day Strength	27 Mpa (3900 psi)	27 Mpa (3900 psi)
Slump	50 mm to 75 mm (2" to 3")	25 mm to 50 mm (1" to 2")
Coarse Aggregate Composition	100% Class "B"	100% Class "B"
Gradation of Coarse Aggregate	CA25 or CA50 For Structural Concrete	CA25 or CA50 For Structural Concrete

Concrete will be supplied from a Mn/DOT certified producer. The Contractor will supply the mix designs. The Contractor will provide the Engineer with the mix design a minimum of 24 hours prior to the first pour.

WALKS (2521)

Concrete sidewalks will be constructed in accordance with 2521 and Standard Plate 7035M. Preformed joint filler material will be placed in accordance with Standard Plate 7035M. Concrete sidewalks will be mix design 3A32 with a maximum slump of 3". No water will be added to the mix to reduce the slump beyond 3" for temporary workability, as stated in 2461.B3. Colored concrete shall be as manufactured by Scofield with coloring as determined by the Landscape Plan.

CONCRETE CURING AND PROTECTION (2521, 2531)

All sidewalk, driveway, curb and gutter will be cured using a membrane curing compound conforming to the requirement of Minnesota Highway Department #3754. For concrete curb and gutter poured after October 1st, blanket or extreme service membrane methods of curing will be substituted for membrane curing, in accordance with 2531.

EXTREME TEMPERATURE CONCRETE

The following additional measures will be required for extreme temperature concrete construction, as work incidental to the contract:

Hot Weather Concrete Construction
1. Do not place concrete with a placing temperature that will cause difficulty from loss of slump, flash set, or cold joints.
2. Maintain a concrete temperature during placement of less than 90 degrees F.
3. Use all means necessary to avoid drying the concrete prior to the completion of finishing operations.
4. Provide and use windbreaks, sunshades, fog sprays, and other devices to protect the concrete.

Cold Weather Concrete Construction
1. Provide adequate protection when temperatures are 40 degrees F or lower occur durin ghte placing and early curing periods.
2. Comply with all pertinent recommendations of ACI 306 (Recommended Practice for Cold Weather Concreting).
3. Type IIIA cement may be used.
4. The use of Calcium Chloride or other accelerators will not be permitted.
5. Maintain a concrete temperature during placement of more than 60 degrees F.
6. Use all means necessary to avoid exposure of concrete to freezing temperatures during placement, finishing, and curing.
7. Concrete will not be placed on a frozen subgrade.
8. Provide and maintain heated enclosures, insulating blankets, tarpaulins, heaters, fuel, and all other protective equipment required.
9. Maintain favorable curing temperature at all times until the concrete gains sufficient strength to withstand exposure to low temperature and applied loads.

CONCRETE CURBING & GUTTER (2531)

Concrete curb and gutter will be constructed in accordance with the provisions of 2531 and the following: Curing will be by the Membrane Curing Method as specified in 2531.3G (2). The sealing of joints in concrete curb and gutter will not be required.

Construction joints in curb and gutter will be installed at 10-foot intervals. Preformed joint filler material (1/2-inch) will be place at the ends of all street returns, at the ends of concrete driveway approaches, and in accordance with MN/Dot Standard Plate 7035N.

Concrete curb and gutter will be the style shown on the plans.

PEDESTRIAN CURB RAMPS (2531)

Unless otherwise dome sections will be red.

STORM WATER MANAGEMENT (2573)

The Stormwater Pollution Prevention Plan (SWPPP) required by the NPDES permit has been provided by the Owner and is incorporated into the plans and specifications.

The Minnesota Department of Transportation's Specification 2573 - Stormwater Management is hereby modified as follows:

1. The Contractor will apply for and comply with the provisions of the NPDES permit and the SWPPP (Stormwater Pollution Prevention Plan).
2. The Stormwater Pollution Prevention Plan provided by the Owner is meant and provided as a guide in the provision of Erosion and Sediment Control (ESC) Best Management Practices (BMP's) as required by the NPDES permit. The SWPPP is based on finish grade contours. Additional ESC measures, although not shown by the plan, may be required to comply with the provisions of the NPDES permit. Provision and maintenance of the ESC BMP's in accordance with the NPDES permit is the responsibility of the contractor, regardless of what is shown on the SWPPP. Interim ESC BMP's and updating of the SWPPP are the responsibility of the contractor. Maintenance of the ESC BMP's is incidental to the work and will be performed in accordance with 2573.M.
3. When updates to the SWPPP are required, the Contractor will provide the Engineer with sketches of the updated areas, so that the Engineer can update the SWPPP.
4. No additional payment will be made for additional ESC BMP's required by the NPDES permit but not shown on the SWPPP.
5. The contractor will obtain the NPDES permit from the MPCA and pay any applicable fees as work incidental to the contract. The contractor will remain named on the NPDES permit until the warranty period expires, at which time he/she may submit an NPDES Permit Modification/Transfer Form to the Owner for completion and submission to the MPCA.
6. The contractor will maintain the NPDES site inspection log.
7. The contractor will be responsible for all fines imposed by regulating agencies for failure to comply with the provisions of the NPDES permit.
8. If the Engineer determines that ESC BMP's have failed or require maintenance, the Contractor will correct the cause of failure, maintain the BMP's, and alleviate all sediment deposition outside the construction limits, to the fullest extent possible. If the Contractor fails to install or maintain erosion or sediment control measures required by the NPDES permit, fails to conduct required inspections, or fails to take action ordered by the Engineer to correct ESC problems, the Engineer will issue a written order to the Contractor. The Contractor will respond within 24 hours with sufficient personnel, equipment, and/or materials and conduct the required work or be subject to a $500 per calendar day penalty for noncompliance. In addition, the Engineer may recommend that the Owner withhold payment from all work until the ESC BMP's are constructed or maintained.
9. The Engineer may require the Contractor to submit a site plan for certain portions of the work detailing proposed ESC BMP's, and a schedule indicating start and completion dates. The Contractor will not start work within these areas until the Engineer has accepted the site plan and schedule. No additional payment will be made for preparation of site plans required by the Engineer, or reasonable delays or production losses caused by this requirement.
10. Sediment removal required due to the failures to implement or maintain ESC BMP's will not be considered Extra Work. The Contractor will remove all sediment from areas accrued due to actions or inactions by the Contractor, at no cost to the Owner
11. The Contractor will designate a concrete washout area on-site and inform the Engineer of the chosen location at the pre-construction meeting. This area must be constructed so that it drains towards itself. Concrete debris will be removed from the concrete washout and removed from the site prior to final acceptance.

Consultant:

JONES HAUGH SMITH
Engineers + Surveyors
515 South Washington Ave. Albert Lea, MN 507-373-4876

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Brian J. Johnson
Reg. No. 42744
Date: 9/20/25

Project:

MANKATO APARTMENTS

Revision:

No.:	Date: 9/20/2025
Drawn: bjj	Checked:

Project Manager:

Project Status: CD

Sheet Title:

SPECIFICATIONS

Sheet No.:

C10

Project Information

Calculator Version:	Version 4: July 2020
Project Name:	Mankato Apartments Existing
User Name / Company Name:	Jones, Haugh & Smith Inc
Date:	6/25/2025
Project Description:	Mankato Apartments
Construction Permit?:	Yes

Site Information

Retention Requirement (inches):	1.1
Site's Zip Code:	56001
Annual Rainfall (inches):	30.7
Phosphorus EMC (mg/l):	0.3
TSS EMC (mg/l):	54.5

Total Site Area

Land Cover	A Soils (acres)	B Soils (acres)	C Soils (acres)	D Soils (acres)	Total (acres)
Forest/Open Space - Undisturbed, protected forest/open space or reforested land				0	0
Managed Turf - disturbed, graded for yards or other turf to be mowed/managed				2.74	2.74
			Impervious Area (acres)		1.26
				Total Area (acres)	4

Site Areas Routed to BMPs

Land Cover	A Soils (acres)	B Soils (acres)	C Soils (acres)	D Soils (acres)	Total (acres)
Forest/Open Space - Undisturbed, protected forest/open space or reforested land					0
Managed Turf - disturbed, graded for yards or other turf to be mowed/managed					0
			Impervious Area (acres)		
				Total Area (acres)	0

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Summary Information

Performance Goal Requirement

Performance goal volume retention requirement:	5031	ft3
Volume removed by BMPs towards performance goal:		ft³
Percent volume removed towards performance goal		**%**

Annual Volume and Pollutant Load Reductions

Post development annual runoff volume	4.3333	acre-ft
Annual runoff volume removed by BMPs:		acre-ft
Percent annual runoff volume removed:		**%**
Post development annual particulate P load:	1.9448	lbs
Annual particulate P removed by BMPs:		lbs
Post development annual dissolved P load:	1.591	lbs
Annual dissolved P removed by BMPs:	0	lbs
Total P removed by BMPs	0	lbs
Percent annual total phosphorus removed:		**%**
Post development annual TSS load:	642.4	lbs
Annual TSS removed by BMPs:		lbs
Percent annual TSS removed:		**%**

BMP Summary

Performance Goal Summary

BMP Name	BMP Volume Capacity (ft3)	Volume Recieved (ft3)	Volume Retained (ft3)	Volume Outflow (ft3)	Percent Retained

Annual Volume Summary

BMP Name	Volume From Direct Watershed (acre-ft)	Volume From Upstream BMPs (acre-ft)	Volume Retained (acre-ft)	Volume outflow (acre-ft)	Percent Retained (%)

Particulate Phosphorus Summary

BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained

Dissolved Phosphorus Summary

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BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained

Total Phosphorus Summary

BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained

TSS Summary

BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained

BMP Schematic

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Project Information

Calculator Version:	Version 4: July 2020
Project Name:	Mankato Apartments Proposed Conditions
User Name / Company Name:	Jones, Haugh & Smith Inc
Date:	6/25/2025
Project Description:	Mankato Apartments
Construction Permit?:	Yes

Site Information

Retention Requirement (inches):	1.1
Site's Zip Code:	56001
Annual Rainfall (inches):	30.7
Phosphorus EMC (mg/l):	0.3
TSS EMC (mg/l):	54.5

Total Site Area

Land Cover	A Soils (acres)	B Soils (acres)	C Soils (acres)	D Soils (acres)	Total (acres)
Forest/Open Space - Undisturbed, protected forest/open space or reforested land				0	0
Managed Turf - disturbed, graded for yards or other turf to be mowed/managed				1.5	1.5
				Impervious Area (acres)	2.5
				Total Area (acres)	4

Site Areas Routed to BMPs

Land Cover	A Soils (acres)	B Soils (acres)	C Soils (acres)	D Soils (acres)	Total (acres)
Forest/Open Space - Undisturbed, protected forest/open space or reforested land					0
Managed Turf - disturbed, graded for yards or other turf to be mowed/managed				1.5	1.5
				Impervious Area (acres)	2.5
				Total Area (acres)	4

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Summary Information

Performance Goal Requirement

Performance goal volume retention requirement:	9982	ft3
Volume removed by BMPs towards performance goal:		ft³
Percent volume removed towards performance goal		**%**

Annual Volume and Pollutant Load Reductions

Post development annual runoff volume	6.3319	acre-ft
Annual runoff volume removed by BMPs:	0	acre-ft
Percent annual runoff volume removed:	**0**	**%**
Post development annual particulate P load:	2.8417	lbs
Annual particulate P removed by BMPs:	1.705	lbs
Post development annual dissolved P load:	2.325	lbs
Annual dissolved P removed by BMPs:	0	lbs
Total P removed by BMPs	1.705	lbs
Percent annual total phosphorus removed:	**33**	**%**
Post development annual TSS load:	938.6	lbs
Annual TSS removed by BMPs:	563.2	lbs
Percent annual TSS removed:	**60**	**%**

BMP Summary

Performance Goal Summary

BMP Name	BMP Volume Capacity (ft3)	Volume Recieved (ft3)	Volume Retained (ft3)	Volume Outflow (ft3)	Percent Retained
1 - Constructed stormwater pond	0	9982	0	9982	0

Annual Volume Summary

BMP Name	Volume From Direct Watershed (acre-ft)	Volume From Upstream BMPs (acre-ft)	Volume Retained (acre-ft)	Volume outflow (acre-ft)	Percent Retained (%)
1 - Constructed stormwater pond	6.3319	0	0	6.3319	0

Particulate Phosphorus Summary

BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained
1 - Constructed stormwater pond	2.8417	0	1.705	1.1367	60

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Dissolved Phosphorus Summary

BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained
1 - Constructed stormwater pond	2.3251	0	0	2.3251	0

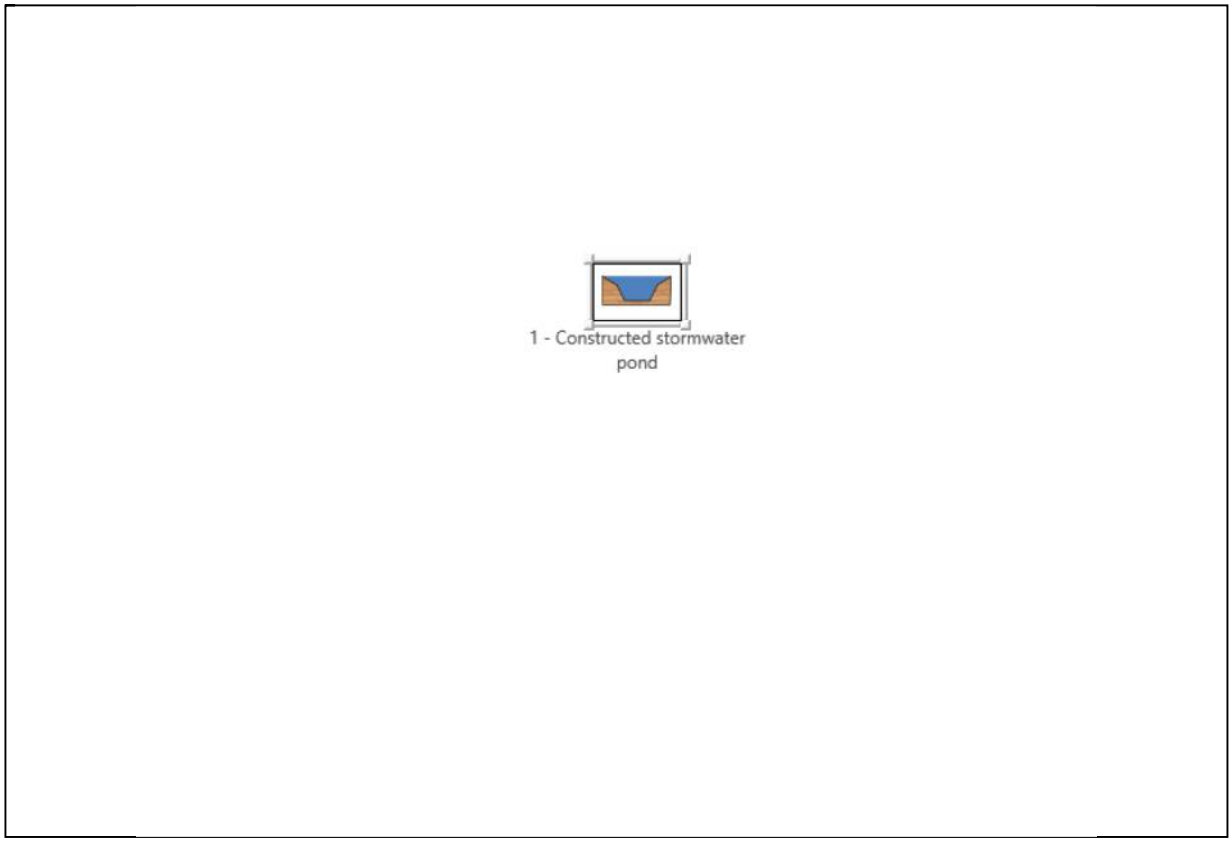
Total Phosphorus Summary

BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained
1 - Constructed stormwater pond	5.1668	0	1.705	3.4618	30

TSS Summary

BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained
1 - Constructed stormwater pond	938.64	0	563.18	375.46	60

BMP Schematic



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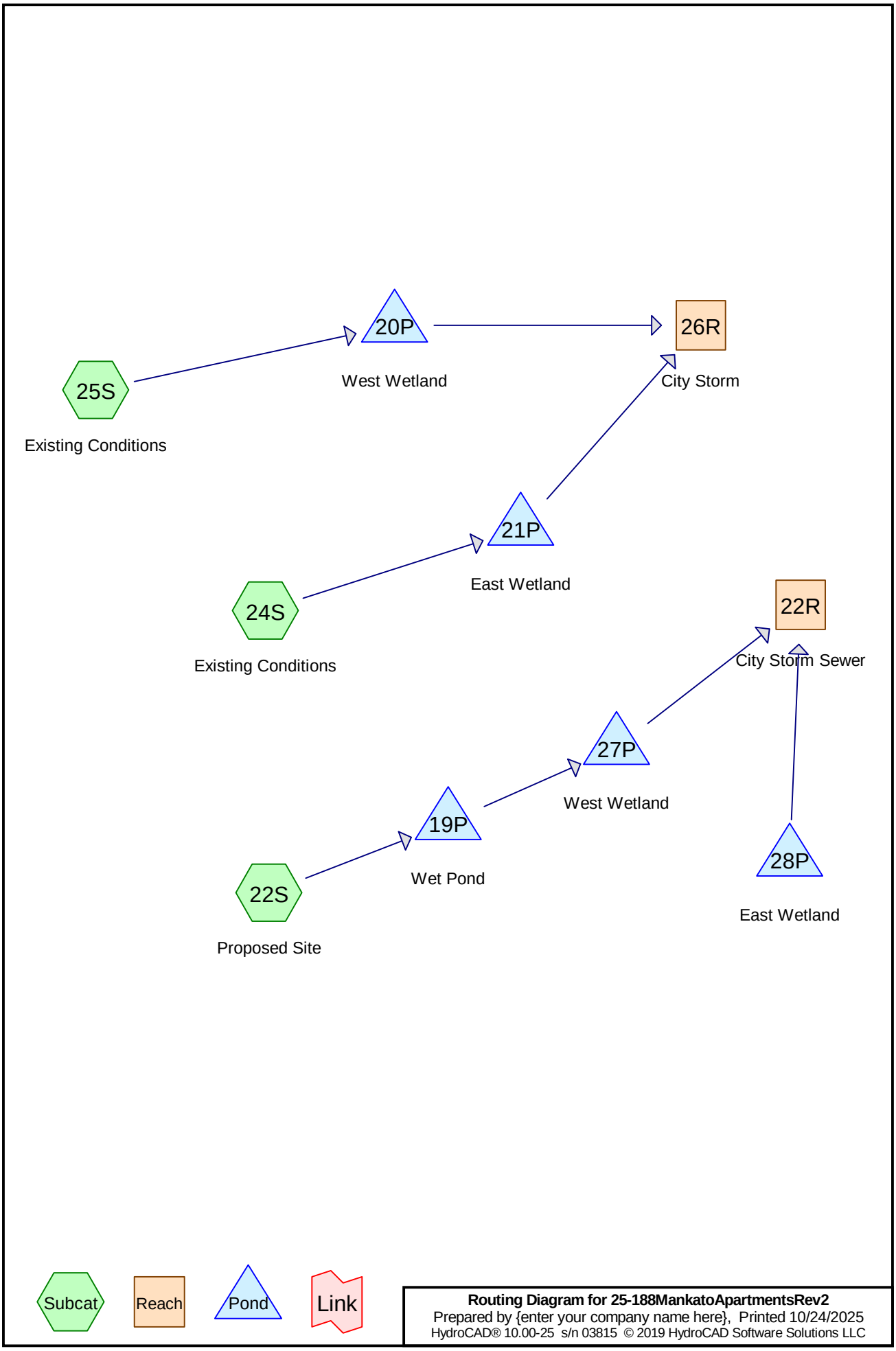

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
4.250	80	>75% Grass cover, Good, HSG D (22S, 24S, 25S)
2.750	98	Paved parking, HSG D (22S, 24S, 25S)
1.000	98	Roofs, HSG D (22S)
8.000	**88**	**TOTAL AREA**

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
8.000	HSG D	22S, 24S, 25S
0.000	Other	
8.000		**TOTAL AREA**

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	4.250	0.000	4.250	>75% Grass cover, Good	22S, 24S, 25S
0.000	0.000	0.000	2.750	0.000	2.750	Paved parking	22S, 24S, 25S
0.000	0.000	0.000	1.000	0.000	1.000	Roofs	22S
0.000	**0.000**	**0.000**	**8.000**	**0.000**	**8.000**	**TOTAL AREA**	

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	19P	987.50	984.00	50.0	0.0700	0.012	24.0	0.0	0.0
2	19P	987.50	987.50	20.0	0.0000	0.013	15.0	0.0	0.0

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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 22S: Proposed Site Runoff Area=4.000 ac 62.50% Impervious Runoff Depth=1.95"
Flow Length=600' Tc=5.0 min CN=91 Runoff=17.70 cfs 0.650 af

Subcatchment 24S: Existing Conditions Runoff Area=1.500 ac 50.00% Impervious Runoff Depth=1.78"
Flow Length=600' Slope=0.0200 '/' Tc=4.4 min CN=89 Runoff=6.35 cfs 0.223 af

Subcatchment 25S: Existing Conditions Runoff Area=2.500 ac 20.00% Impervious Runoff Depth=1.41"
Flow Length=600' Slope=0.0200 '/' Tc=4.4 min CN=84 Runoff=8.54 cfs 0.294 af

Reach 22R: City Storm Sewer Inflow=5.11 cfs 0.641 af
Outflow=5.11 cfs 0.641 af

Reach 26R: City Storm Inflow=14.89 cfs 0.517 af
Outflow=14.89 cfs 0.517 af

Pond 19P: Wet Pond Peak Elev=988.97' Storage=0.321 af Inflow=17.70 cfs 0.650 af
Outflow=5.11 cfs 0.641 af

Pond 20P: West Wetland Inflow=8.54 cfs 0.294 af
Primary=8.54 cfs 0.294 af

Pond 21P: East Wetland Inflow=6.35 cfs 0.223 af
Primary=6.35 cfs 0.223 af

Pond 27P: West Wetland Inflow=5.11 cfs 0.641 af
Primary=5.11 cfs 0.641 af

Pond 28P: East Wetland

Total Runoff Area = 8.000 ac Runoff Volume = 1.167 af Average Runoff Depth = 1.75"
53.13% Pervious = 4.250 ac 46.88% Impervious = 3.750 ac

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Summary for Subcatchment 22S: Proposed Site

[49] Hint: Tc<2dt may require smaller dt

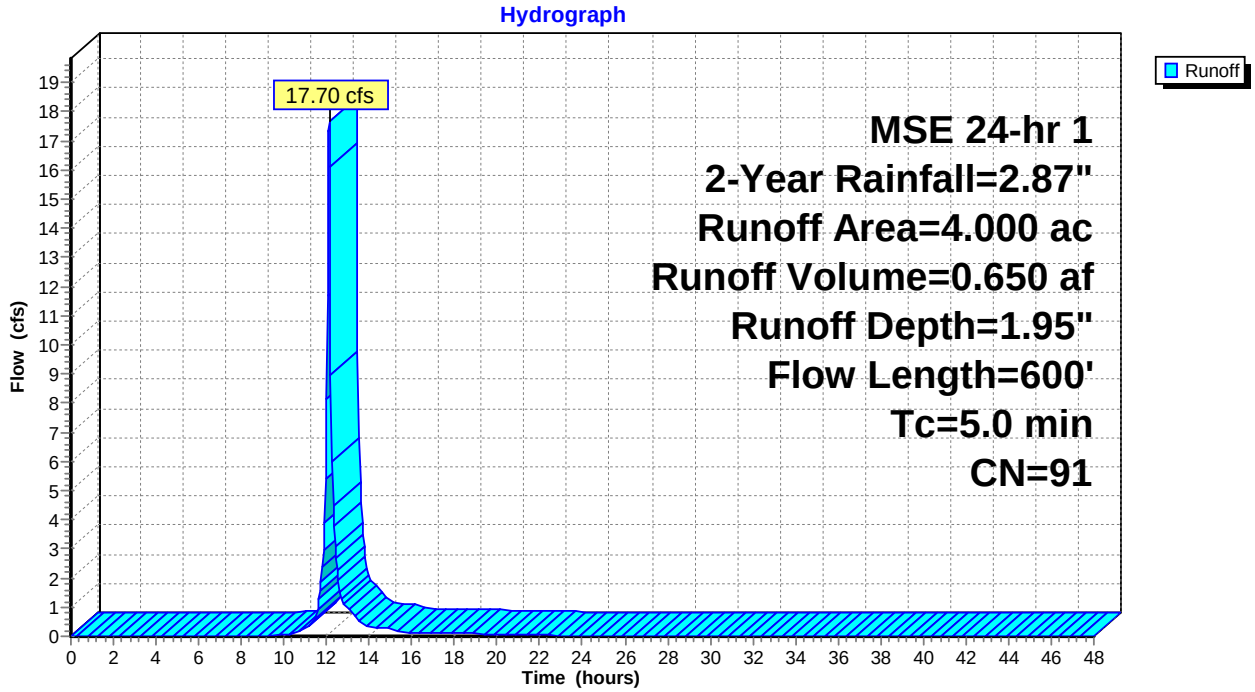
Runoff = 17.70 cfs @ 12.12 hrs, Volume= 0.650 af, Depth= 1.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 1 2-Year Rainfall=2.87"

Area (ac)	CN	Description
1.000	98	Roofs, HSG D
1.500	98	Paved parking, HSG D
1.500	80	>75% Grass cover, Good, HSG D
4.000	91	Weighted Average
1.500		37.50% Pervious Area
2.500		62.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	600		2.00		**Direct Entry,**

Subcatchment 22S: Proposed Site



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Summary for Subcatchment 24S: Existing Conditions

[49] Hint: Tc<2dt may require smaller dt

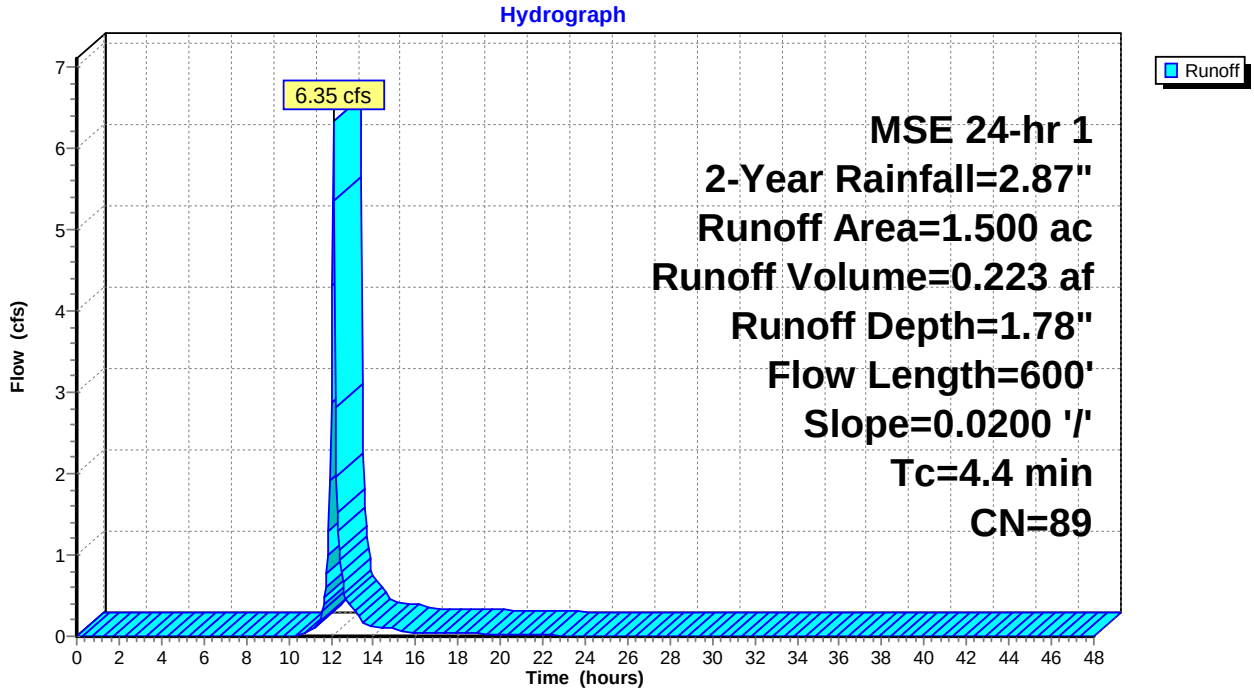
Runoff = 6.35 cfs @ 12.11 hrs, Volume= 0.223 af, Depth= 1.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 1 2-Year Rainfall=2.87"

Area (ac)	CN	Description
0.750	80	>75% Grass cover, Good, HSG D
0.750	98	Paved parking, HSG D
1.500	89	Weighted Average
0.750		50.00% Pervious Area
0.750		50.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	600	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps

Subcatchment 24S: Existing Conditions



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Summary for Subcatchment 25S: Existing Conditions

[49] Hint: Tc<2dt may require smaller dt

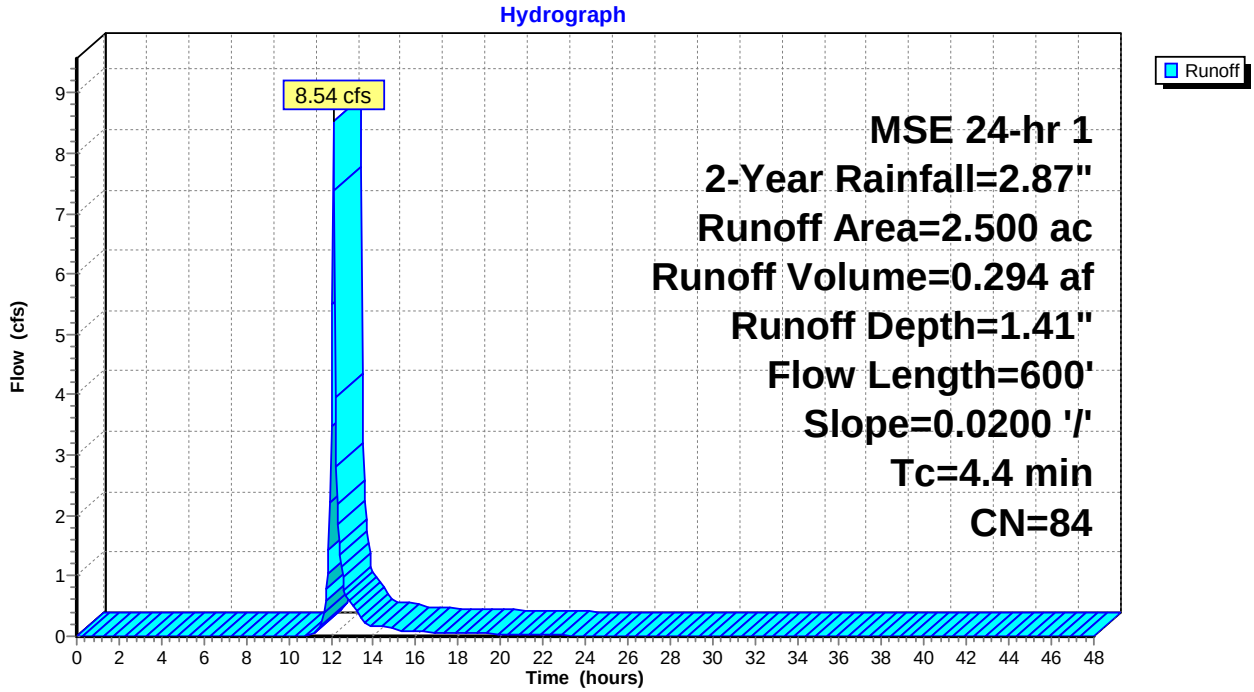
Runoff = 8.54 cfs @ 12.11 hrs, Volume= 0.294 af, Depth= 1.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 1 2-Year Rainfall=2.87"

Area (ac)	CN	Description
2.000	80	>75% Grass cover, Good, HSG D
0.500	98	Paved parking, HSG D
2.500	84	Weighted Average
2.000		80.00% Pervious Area
0.500		20.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	600	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps

Subcatchment 25S: Existing Conditions



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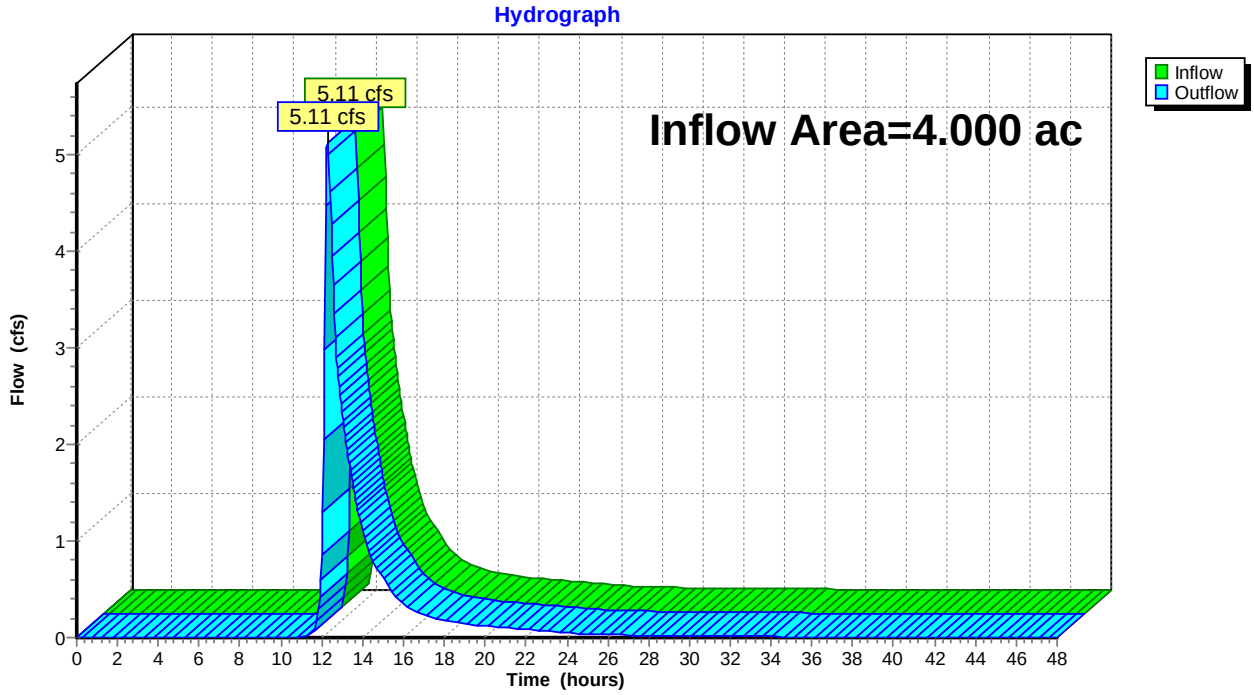
Summary for Reach 22R: City Storm Sewer

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.000 ac, 62.50% Impervious, Inflow Depth > 1.92" for 2-Year event
Inflow = 5.11 cfs @ 12.28 hrs, Volume= 0.641 af
Outflow = 5.11 cfs @ 12.28 hrs, Volume= 0.641 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Reach 22R: City Storm Sewer



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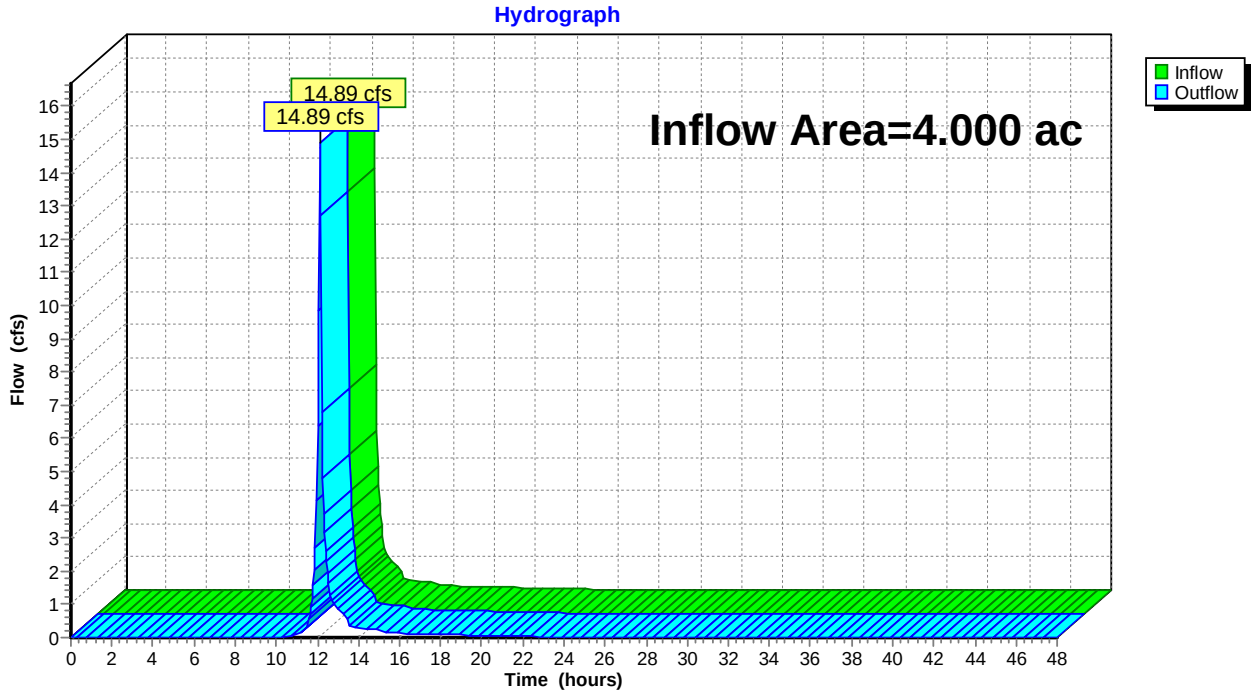
Summary for Reach 26R: City Storm

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.000 ac, 31.25% Impervious, Inflow Depth = 1.55" for 2-Year event
Inflow = 14.89 cfs @ 12.11 hrs, Volume= 0.517 af
Outflow = 14.89 cfs @ 12.11 hrs, Volume= 0.517 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Reach 26R: City Storm



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Summary for Pond 19P: Wet Pond

[95] Warning: Outlet Device #1 rise exceeded

Inflow Area = 4.000 ac, 62.50% Impervious, Inflow Depth = 1.95" for 2-Year event
Inflow = 17.70 cfs @ 12.12 hrs, Volume= 0.650 af
Outflow = 5.11 cfs @ 12.28 hrs, Volume= 0.641 af, Atten= 71%, Lag= 10.0 min
Primary = 5.11 cfs @ 12.28 hrs, Volume= 0.641 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 988.97' @ 12.28 hrs Surf.Area= 0.259 ac Storage= 0.321 af

Plug-Flow detention time= 114.2 min calculated for 0.641 af (99% of inflow)
Center-of-Mass det. time= 106.3 min (877.4 - 771.1)

Volume	Invert	Avail.Storage	Storage Description
#1	987.50'	1.708 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
987.50	0.160	0.000	0.000
988.00	0.210	0.093	0.093
989.00	0.260	0.235	0.328
990.00	0.310	0.285	0.612
991.00	0.350	0.330	0.943
992.00	0.370	0.360	1.302
993.00	0.440	0.405	1.708

Device	Routing	Invert	Outlet Devices
#1	Device 2	987.50'	**30.0 deg x 0.7' long x 1.00' rise Sharp-Crested Vee/Trap Weir** Cv= 2.61 (C= 3.26)
#2	Primary	987.50'	**24.0" Round Culvert** L= 50.0' Ke= 1.000 Inlet / Outlet Invert= 987.50' / 984.00' S= 0.0700 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf
#3	Device 2	988.75'	**5.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#4	Device 1	987.50'	**15.0" Round Culvert** L= 20.0' Ke= 1.000 Inlet / Outlet Invert= 987.50' / 987.50' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=5.08 cfs @ 12.28 hrs HW=988.97' (Free Discharge)
└**2=Culvert** (Passes 5.08 cfs of 7.66 cfs potential flow)
  ├**1=Sharp-Crested Vee/Trap Weir** (Passes 3.63 cfs of 4.50 cfs potential flow)
  │ └**4=Culvert** (Barrel Controls 3.63 cfs @ 3.16 fps)
  └**3=Broad-Crested Rectangular Weir** (Weir Controls 1.45 cfs @ 1.32 fps)

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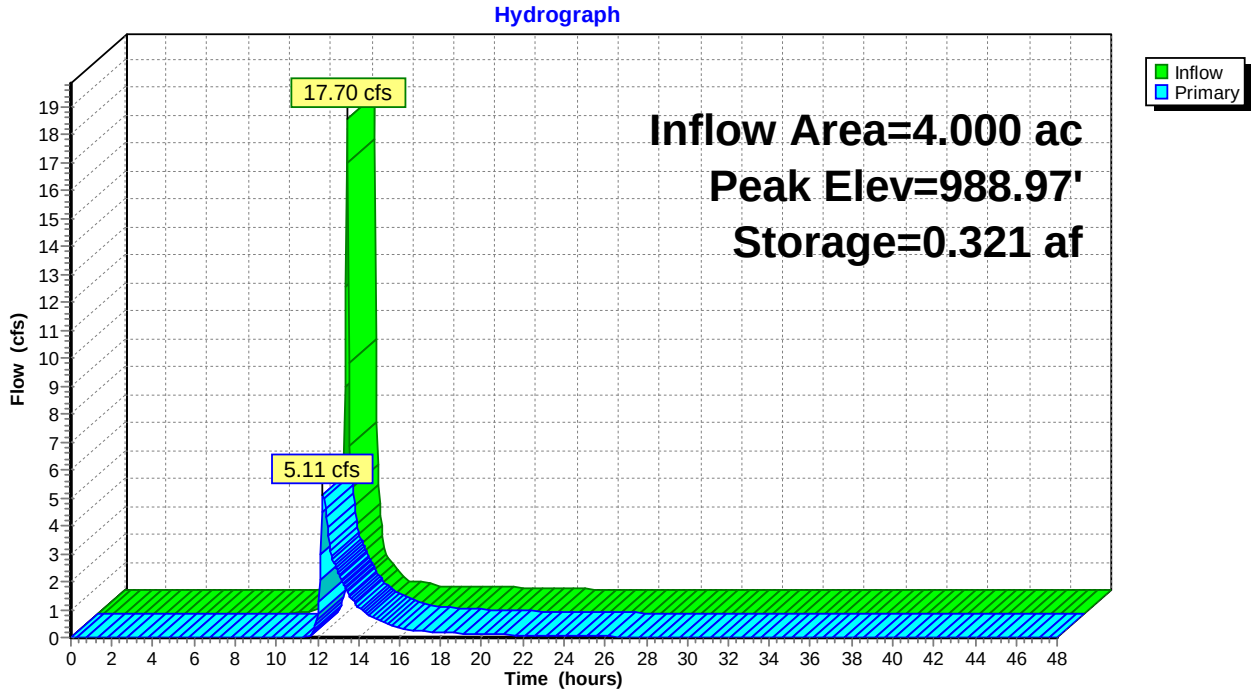
Pond 19P: Wet Pond



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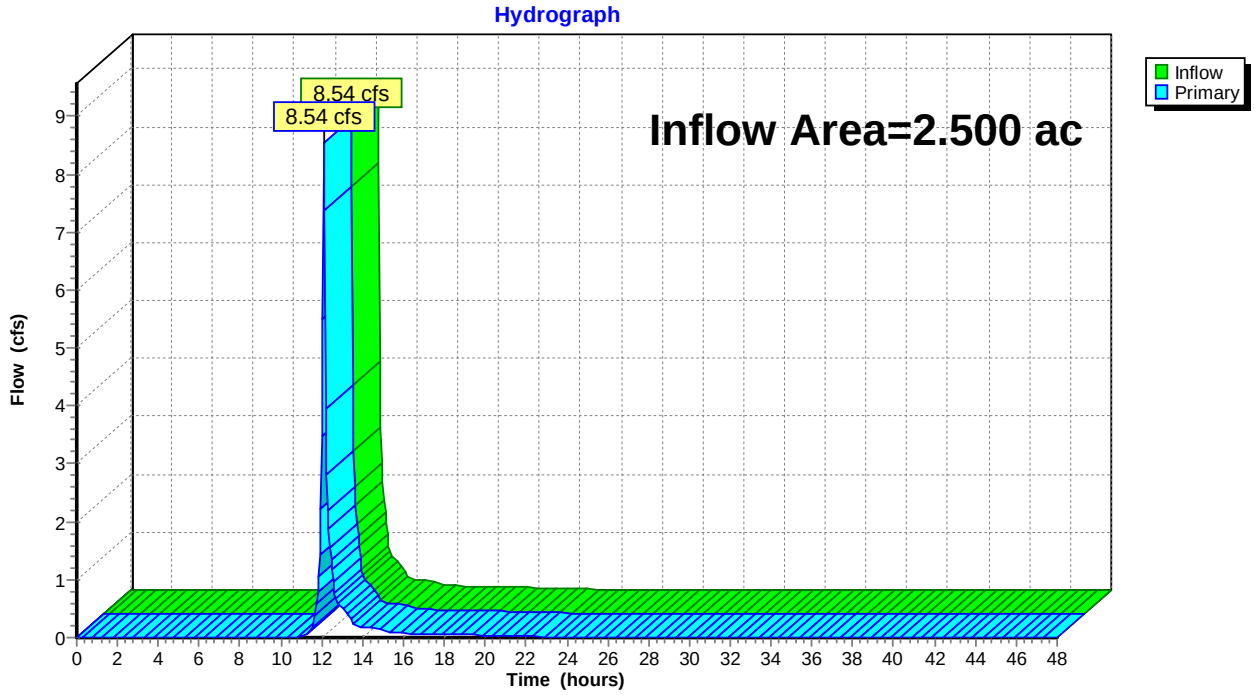
Summary for Pond 20P: West Wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.500 ac, 20.00% Impervious, Inflow Depth = 1.41" for 2-Year event
Inflow = 8.54 cfs @ 12.11 hrs, Volume= 0.294 af
Primary = 8.54 cfs @ 12.11 hrs, Volume= 0.294 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 20P: West Wetland



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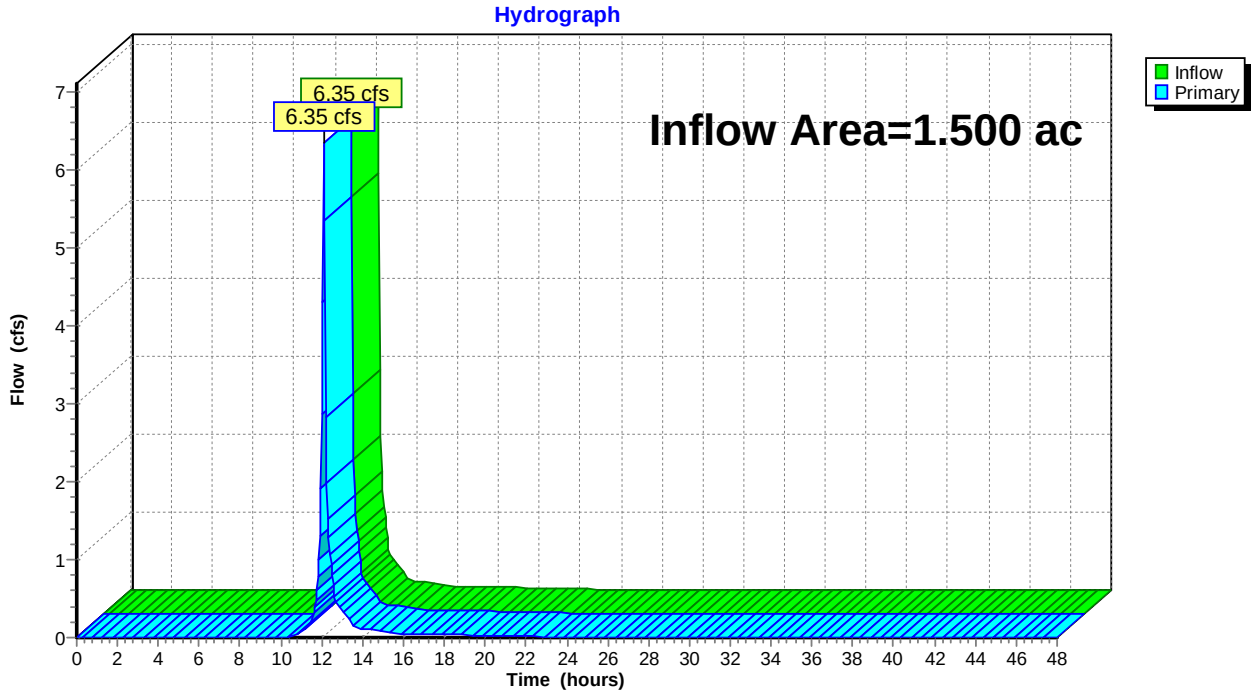
Summary for Pond 21P: East Wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.500 ac, 50.00% Impervious, Inflow Depth = 1.78" for 2-Year event
Inflow = 6.35 cfs @ 12.11 hrs, Volume= 0.223 af
Primary = 6.35 cfs @ 12.11 hrs, Volume= 0.223 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 21P: East Wetland



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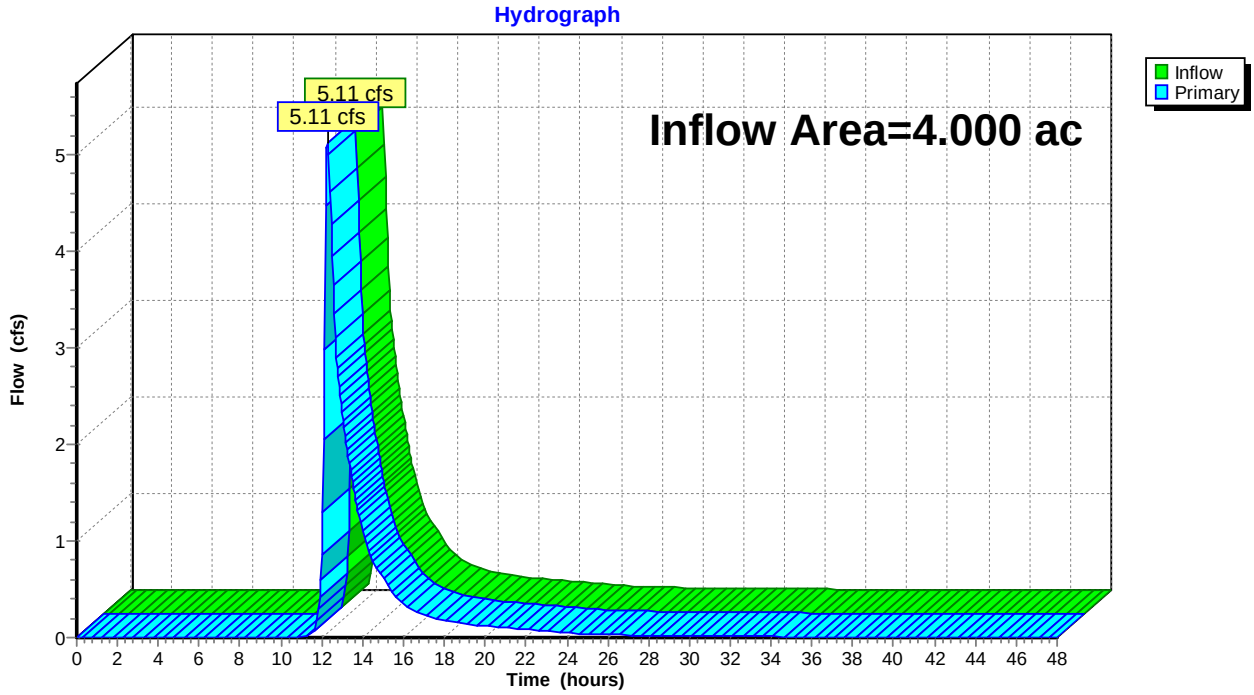
Summary for Pond 27P: West Wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.000 ac, 62.50% Impervious, Inflow Depth > 1.92" for 2-Year event
Inflow = 5.11 cfs @ 12.28 hrs, Volume= 0.641 af
Primary = 5.11 cfs @ 12.28 hrs, Volume= 0.641 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 27P: West Wetland



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Summary for Pond 28P: East Wetland

[40] Hint: Not Described (Outflow=Inflow)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' TW=0.00' (Free Discharge)

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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 22S: Proposed Site Runoff Area=4.000 ac 62.50% Impervious Runoff Depth=3.30"
Flow Length=600' Tc=5.0 min CN=91 Runoff=29.02 cfs 1.099 af

Subcatchment 24S: Existing Conditions Runoff Area=1.500 ac 50.00% Impervious Runoff Depth=3.10"
Flow Length=600' Slope=0.0200 '/' Tc=4.4 min CN=89 Runoff=10.72 cfs 0.387 af

Subcatchment 25S: Existing Conditions Runoff Area=2.500 ac 20.00% Impervious Runoff Depth=2.63"
Flow Length=600' Slope=0.0200 '/' Tc=4.4 min CN=84 Runoff=15.64 cfs 0.548 af

Reach 22R: City Storm Sewer Inflow=11.51 cfs 1.089 af
Outflow=11.51 cfs 1.089 af

Reach 26R: City Storm Inflow=26.36 cfs 0.935 af
Outflow=26.36 cfs 0.935 af

Pond 19P: Wet Pond Peak Elev=989.53' Storage=0.478 af Inflow=29.02 cfs 1.099 af
Outflow=11.51 cfs 1.089 af

Pond 20P: West Wetland Inflow=15.64 cfs 0.548 af
Primary=15.64 cfs 0.548 af

Pond 21P: East Wetland Inflow=10.72 cfs 0.387 af
Primary=10.72 cfs 0.387 af

Pond 27P: West Wetland Inflow=11.51 cfs 1.089 af
Primary=11.51 cfs 1.089 af

Pond 28P: East Wetland

Total Runoff Area = 8.000 ac Runoff Volume = 2.033 af Average Runoff Depth = 3.05"
53.13% Pervious = 4.250 ac 46.88% Impervious = 3.750 ac

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Summary for Subcatchment 22S: Proposed Site

[49] Hint: Tc<2dt may require smaller dt

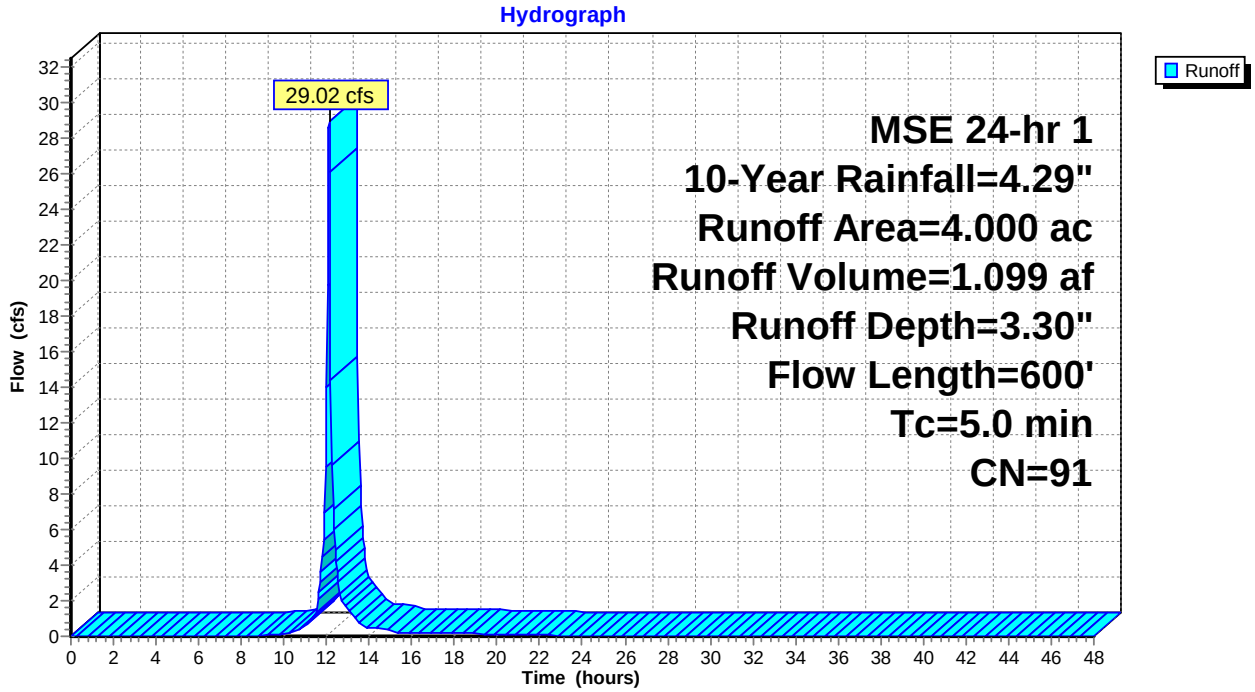
Runoff = 29.02 cfs @ 12.11 hrs, Volume= 1.099 af, Depth= 3.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 1 10-Year Rainfall=4.29"

Area (ac)	CN	Description
1.000	98	Roofs, HSG D
1.500	98	Paved parking, HSG D
1.500	80	>75% Grass cover, Good, HSG D
4.000	91	Weighted Average
1.500		37.50% Pervious Area
2.500		62.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	600		2.00		**Direct Entry,**

Subcatchment 22S: Proposed Site



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Summary for Subcatchment 24S: Existing Conditions

[49] Hint: Tc<2dt may require smaller dt

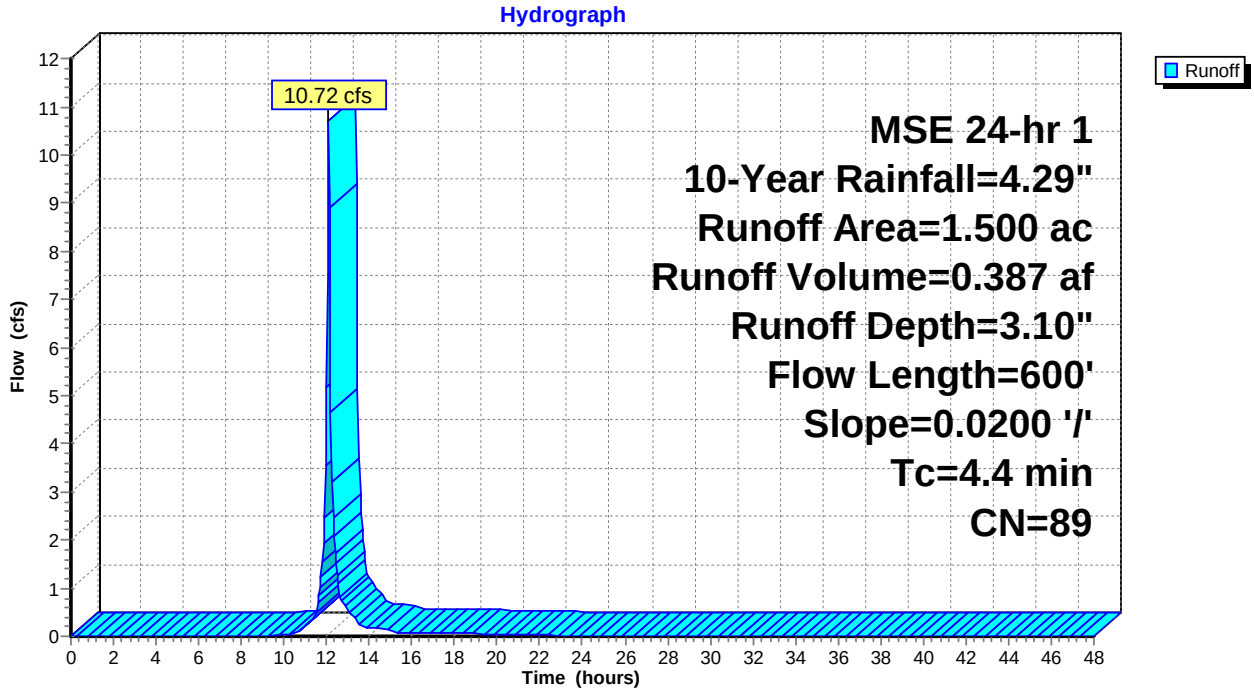
Runoff = 10.72 cfs @ 12.11 hrs, Volume= 0.387 af, Depth= 3.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 1 10-Year Rainfall=4.29"

Area (ac)	CN	Description
0.750	80	>75% Grass cover, Good, HSG D
0.750	98	Paved parking, HSG D
1.500	89	Weighted Average
0.750		50.00% Pervious Area
0.750		50.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	600	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps

Subcatchment 24S: Existing Conditions



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Summary for Subcatchment 25S: Existing Conditions

[49] Hint: Tc<2dt may require smaller dt

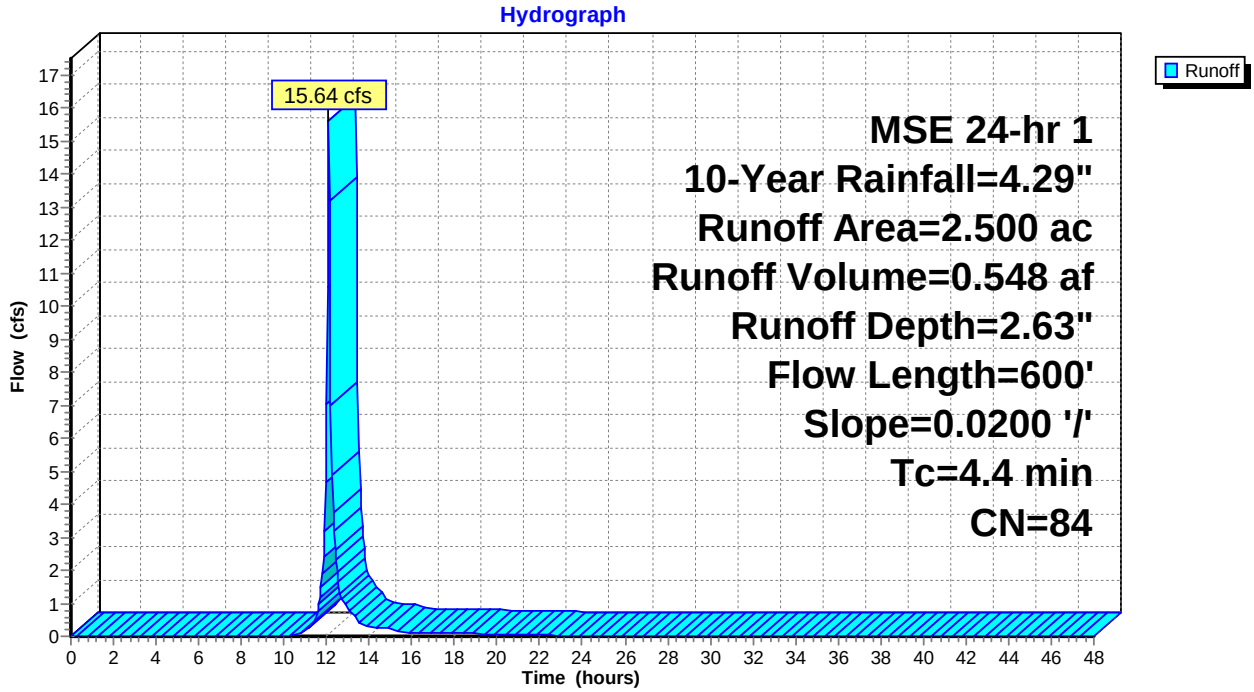
Runoff = 15.64 cfs @ 12.11 hrs, Volume= 0.548 af, Depth= 2.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 1 10-Year Rainfall=4.29"

Area (ac)	CN	Description
2.000	80	>75% Grass cover, Good, HSG D
0.500	98	Paved parking, HSG D
2.500	84	Weighted Average
2.000		80.00% Pervious Area
0.500		20.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	600	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps

Subcatchment 25S: Existing Conditions



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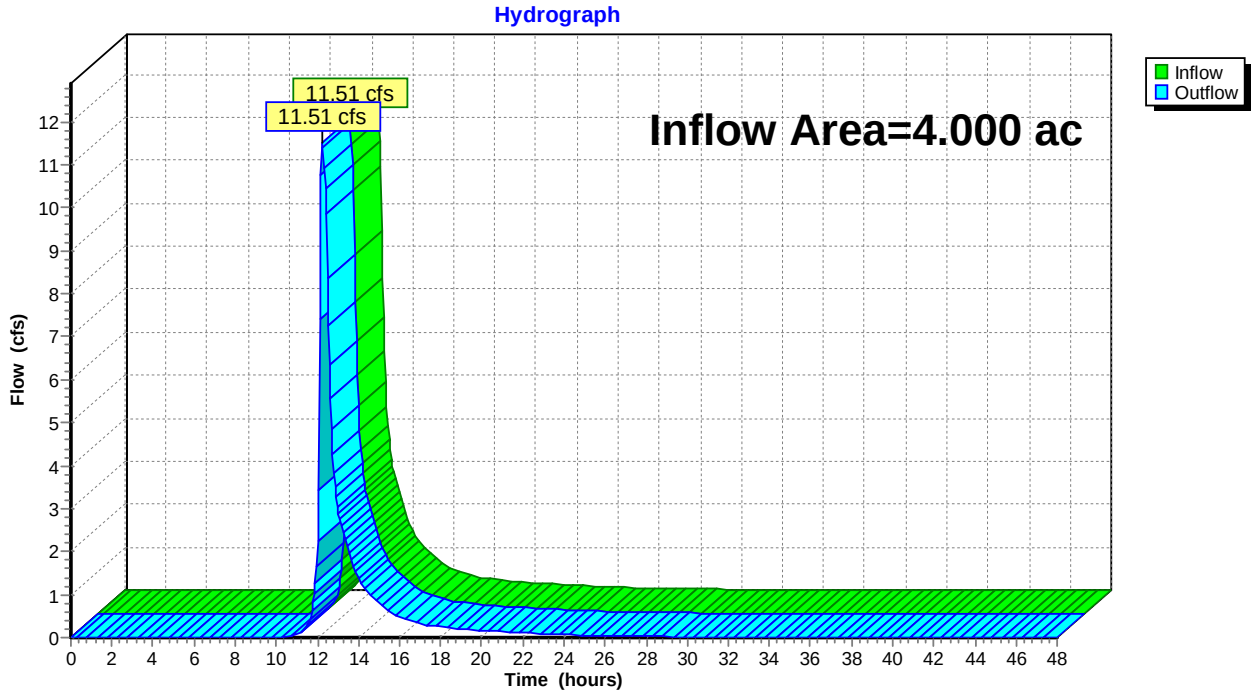
Summary for Reach 22R: City Storm Sewer

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.000 ac, 62.50% Impervious, Inflow Depth > 3.27" for 10-Year event
Inflow = 11.51 cfs @ 12.23 hrs, Volume= 1.089 af
Outflow = 11.51 cfs @ 12.23 hrs, Volume= 1.089 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Reach 22R: City Storm Sewer



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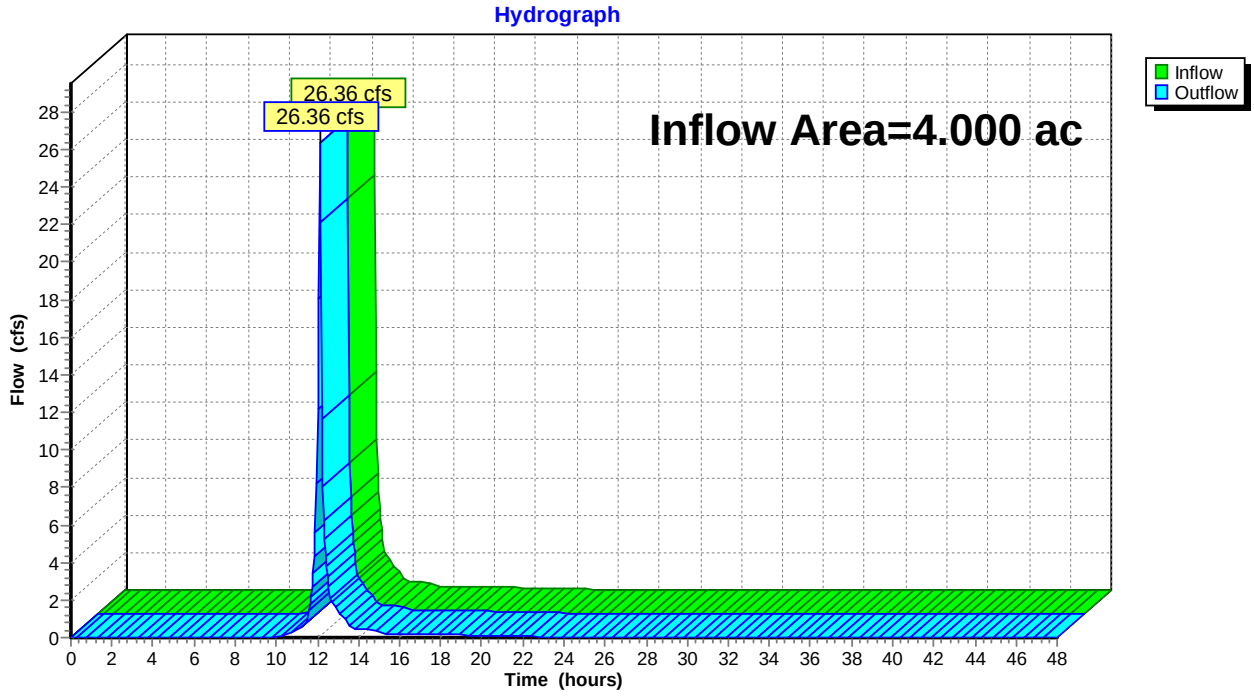
Summary for Reach 26R: City Storm

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.000 ac, 31.25% Impervious, Inflow Depth = 2.80" for 10-Year event
Inflow = 26.36 cfs @ 12.11 hrs, Volume= 0.935 af
Outflow = 26.36 cfs @ 12.11 hrs, Volume= 0.935 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Reach 26R: City Storm



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Summary for Pond 19P: Wet Pond

[95] Warning: Outlet Device #1 rise exceeded

Inflow Area = 4.000 ac, 62.50% Impervious, Inflow Depth = 3.30" for 10-Year event
Inflow = 29.02 cfs @ 12.11 hrs, Volume= 1.099 af
Outflow = 11.51 cfs @ 12.23 hrs, Volume= 1.089 af, Atten= 60%, Lag= 7.1 min
Primary = 11.51 cfs @ 12.23 hrs, Volume= 1.089 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 989.53' @ 12.23 hrs Surf.Area= 0.286 ac Storage= 0.478 af

Plug-Flow detention time= 83.2 min calculated for 1.087 af (99% of inflow)
Center-of-Mass det. time= 79.3 min (843.6 - 764.2)

Volume	Invert	Avail.Storage	Storage Description
#1	987.50'	1.708 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
987.50	0.160	0.000	0.000
988.00	0.210	0.093	0.093
989.00	0.260	0.235	0.328
990.00	0.310	0.285	0.612
991.00	0.350	0.330	0.943
992.00	0.370	0.360	1.302
993.00	0.440	0.405	1.708

Device	Routing	Invert	Outlet Devices
#1	Device 2	987.50'	**30.0 deg x 0.7' long x 1.00' rise Sharp-Crested Vee/Trap Weir** Cv= 2.61 (C= 3.26)
#2	Primary	987.50'	**24.0" Round Culvert** L= 50.0' Ke= 1.000 Inlet / Outlet Invert= 987.50' / 984.00' S= 0.0700 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf
#3	Device 2	988.75'	**5.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#4	Device 1	987.50'	**15.0" Round Culvert** L= 20.0' Ke= 1.000 Inlet / Outlet Invert= 987.50' / 987.50' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=11.48 cfs @ 12.23 hrs HW=989.52' (Free Discharge)
└**2=Culvert** (Inlet Controls 11.48 cfs @ 3.65 fps)
  ├**1=Sharp-Crested Vee/Trap Weir** (Passes < 5.73 cfs potential flow)
  │ └**4=Culvert** (Passes < 5.24 cfs potential flow)
  └**3=Broad-Crested Rectangular Weir** (Passes < 11.12 cfs potential flow)

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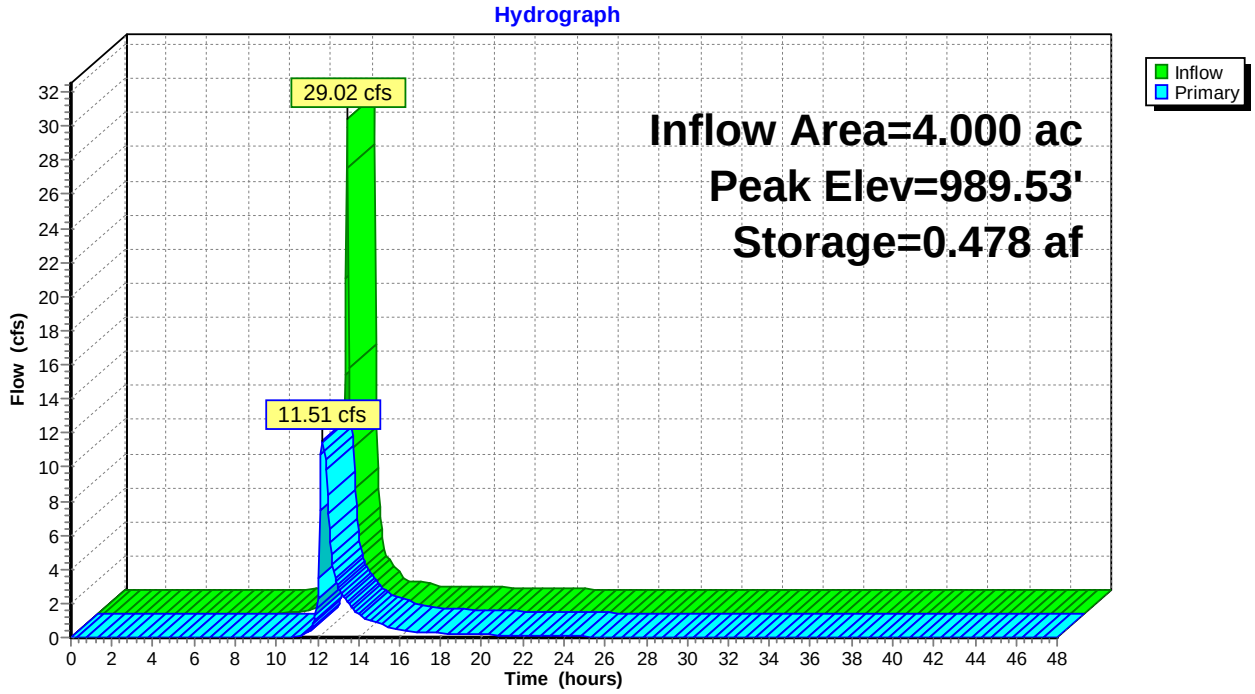
Pond 19P: Wet Pond



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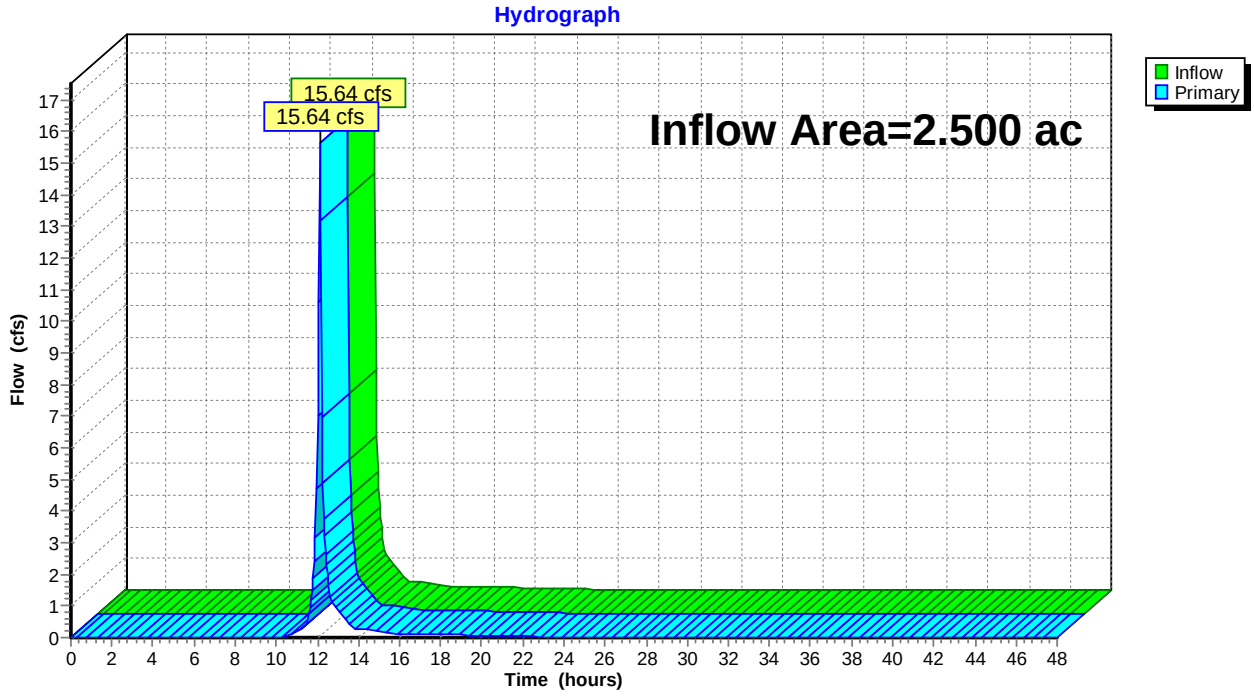
Summary for Pond 20P: West Wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.500 ac, 20.00% Impervious, Inflow Depth = 2.63" for 10-Year event
Inflow = 15.64 cfs @ 12.11 hrs, Volume= 0.548 af
Primary = 15.64 cfs @ 12.11 hrs, Volume= 0.548 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 20P: West Wetland



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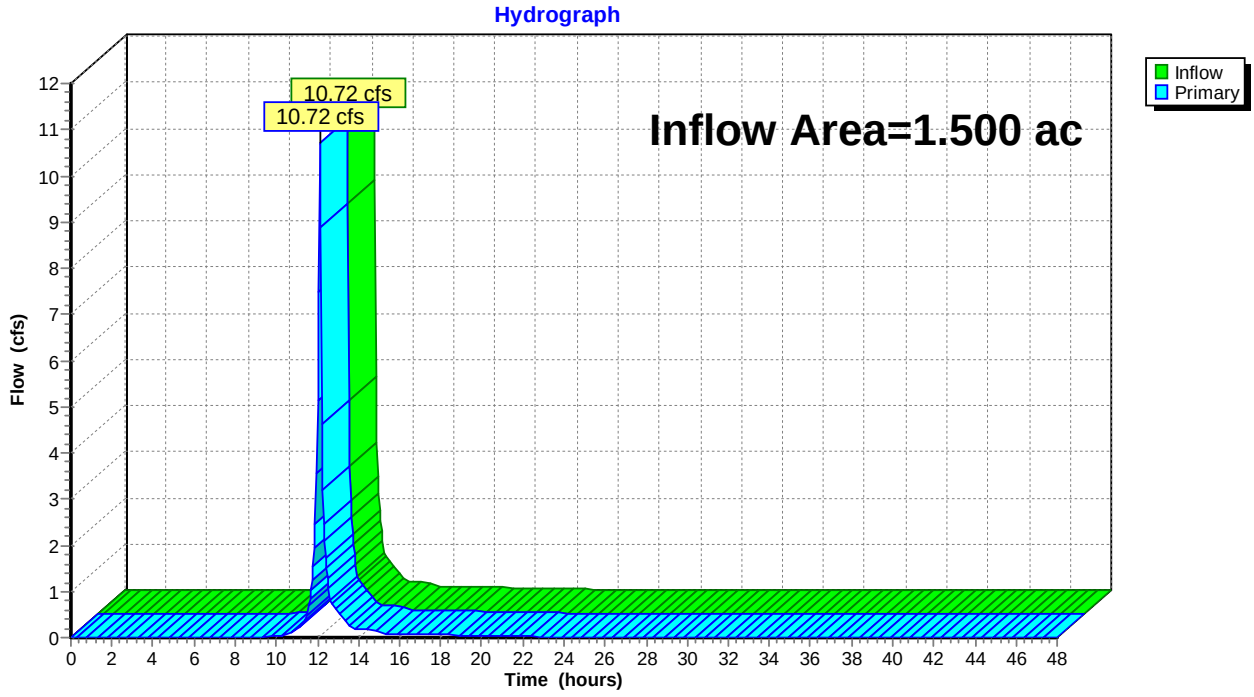
Summary for Pond 21P: East Wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.500 ac, 50.00% Impervious, Inflow Depth = 3.10" for 10-Year event
Inflow = 10.72 cfs @ 12.11 hrs, Volume= 0.387 af
Primary = 10.72 cfs @ 12.11 hrs, Volume= 0.387 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 21P: East Wetland



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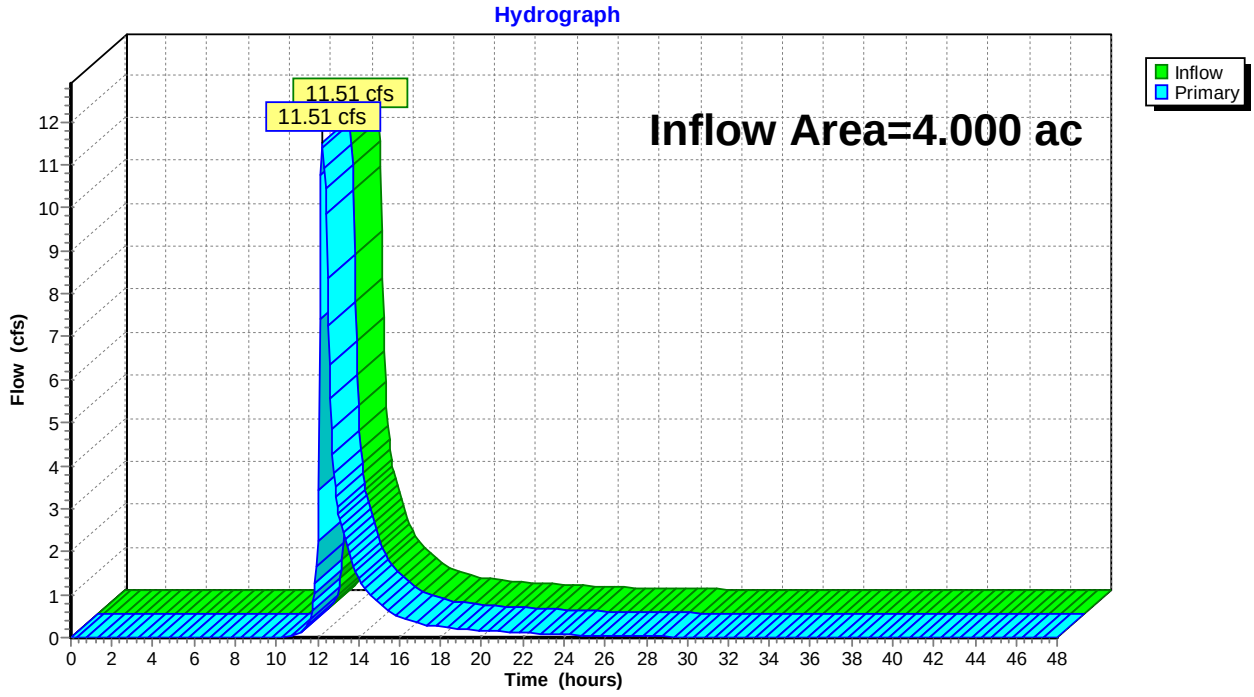
Summary for Pond 27P: West Wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.000 ac, 62.50% Impervious, Inflow Depth > 3.27" for 10-Year event
Inflow = 11.51 cfs @ 12.23 hrs, Volume= 1.089 af
Primary = 11.51 cfs @ 12.23 hrs, Volume= 1.089 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 27P: West Wetland



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Summary for Pond 28P: East Wetland

[40] Hint: Not Described (Outflow=Inflow)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' TW=0.00' (Free Discharge)

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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 22S: Proposed Site Runoff Area=4.000 ac 62.50% Impervious Runoff Depth=6.14"
Flow Length=600' Tc=5.0 min CN=91 Runoff=51.89 cfs 2.045 af

Subcatchment 24S: Existing Conditions Runoff Area=1.500 ac 50.00% Impervious Runoff Depth=5.90"
Flow Length=600' Slope=0.0200 '/' Tc=4.4 min CN=89 Runoff=19.61 cfs 0.738 af

Subcatchment 25S: Existing Conditions Runoff Area=2.500 ac 20.00% Impervious Runoff Depth=5.33"
Flow Length=600' Slope=0.0200 '/' Tc=4.4 min CN=84 Runoff=30.55 cfs 1.110 af

Reach 22R: City Storm Sewer Inflow=16.96 cfs 2.036 af
Outflow=16.96 cfs 2.036 af

Reach 26R: City Storm Inflow=50.16 cfs 1.848 af
Outflow=50.16 cfs 1.848 af

Pond 19P: Wet Pond Peak Elev=990.73' Storage=0.855 af Inflow=51.89 cfs 2.045 af
Outflow=16.96 cfs 2.036 af

Pond 20P: West Wetland Inflow=30.55 cfs 1.110 af
Primary=30.55 cfs 1.110 af

Pond 21P: East Wetland Inflow=19.61 cfs 0.738 af
Primary=19.61 cfs 0.738 af

Pond 27P: West Wetland Inflow=16.96 cfs 2.036 af
Primary=16.96 cfs 2.036 af

Pond 28P: East Wetland

Total Runoff Area = 8.000 ac Runoff Volume = 3.894 af Average Runoff Depth = 5.84"
53.13% Pervious = 4.250 ac 46.88% Impervious = 3.750 ac

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Summary for Subcatchment 22S: Proposed Site

[49] Hint: Tc<2dt may require smaller dt

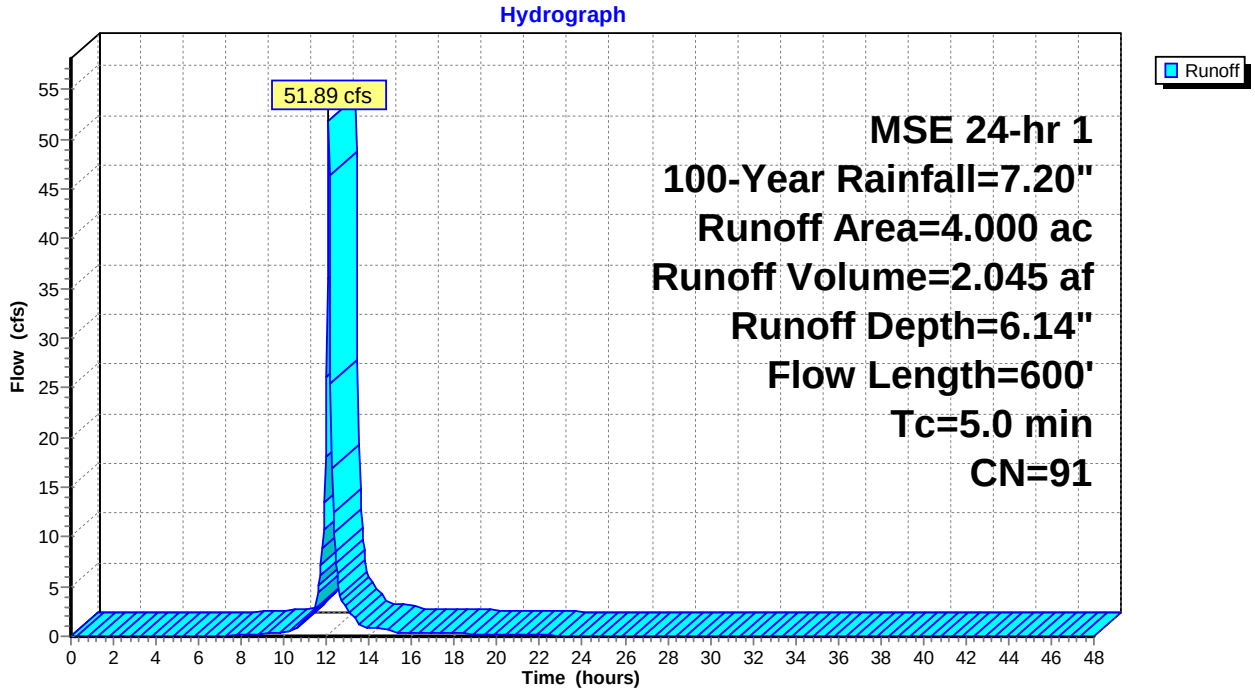
Runoff = 51.89 cfs @ 12.11 hrs, Volume= 2.045 af, Depth= 6.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 1 100-Year Rainfall=7.20"

Area (ac)	CN	Description
1.000	98	Roofs, HSG D
1.500	98	Paved parking, HSG D
1.500	80	>75% Grass cover, Good, HSG D
4.000	91	Weighted Average
1.500		37.50% Pervious Area
2.500		62.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	600		2.00		**Direct Entry,**

Subcatchment 22S: Proposed Site



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Summary for Subcatchment 24S: Existing Conditions

[49] Hint: Tc<2dt may require smaller dt

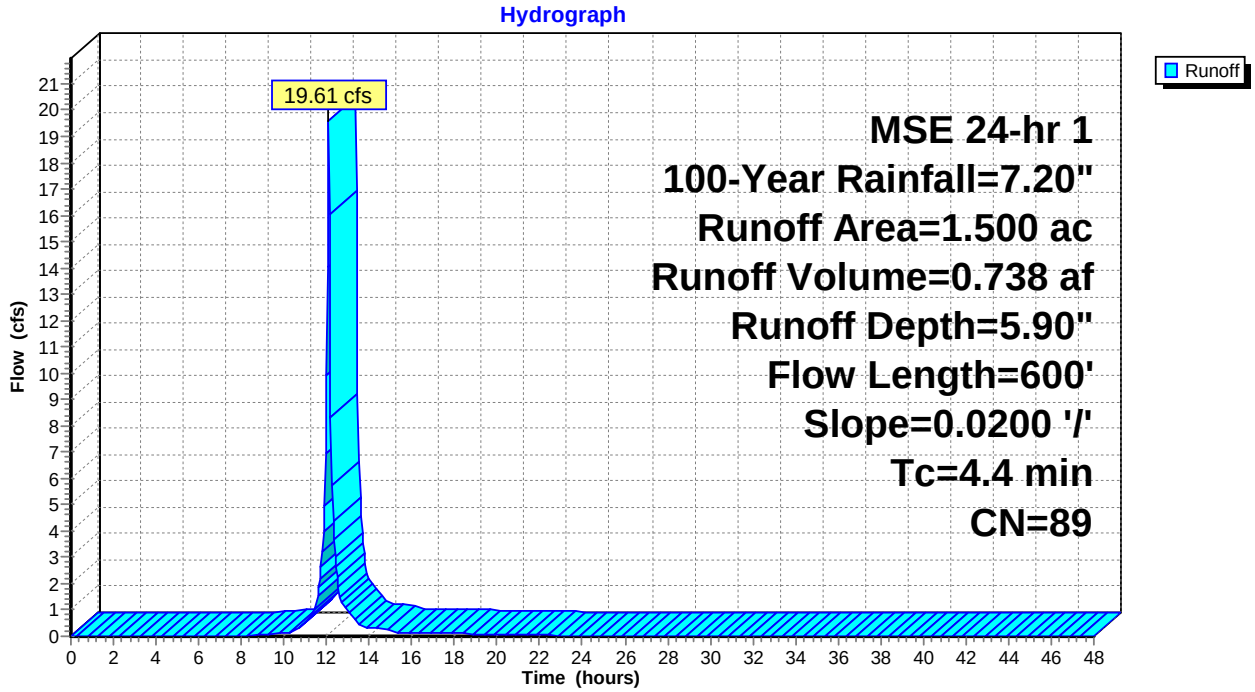
Runoff = 19.61 cfs @ 12.11 hrs, Volume= 0.738 af, Depth= 5.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 1 100-Year Rainfall=7.20"

Area (ac)	CN	Description
0.750	80	>75% Grass cover, Good, HSG D
0.750	98	Paved parking, HSG D
1.500	89	Weighted Average
0.750		50.00% Pervious Area
0.750		50.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	600	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps

Subcatchment 24S: Existing Conditions



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Summary for Subcatchment 25S: Existing Conditions

[49] Hint: Tc<2dt may require smaller dt

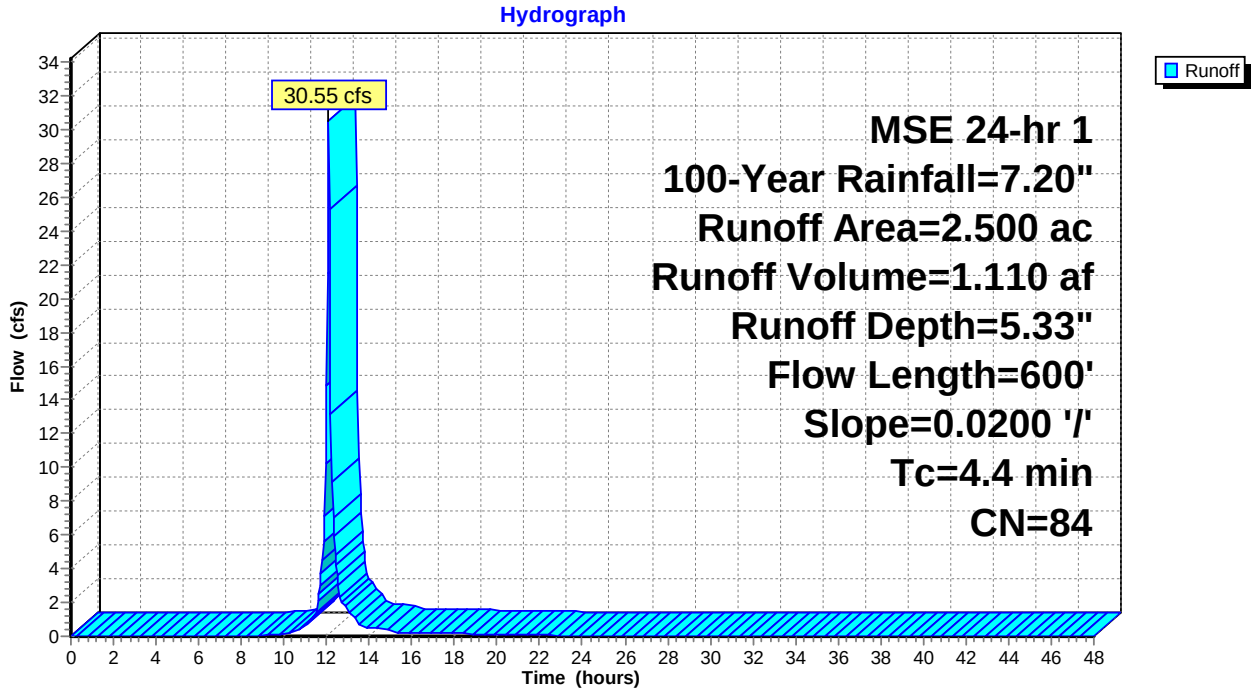
Runoff = 30.55 cfs @ 12.11 hrs, Volume= 1.110 af, Depth= 5.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 1 100-Year Rainfall=7.20"

Area (ac)	CN	Description
2.000	80	>75% Grass cover, Good, HSG D
0.500	98	Paved parking, HSG D
2.500	84	Weighted Average
2.000		80.00% Pervious Area
0.500		20.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	600	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps

Subcatchment 25S: Existing Conditions



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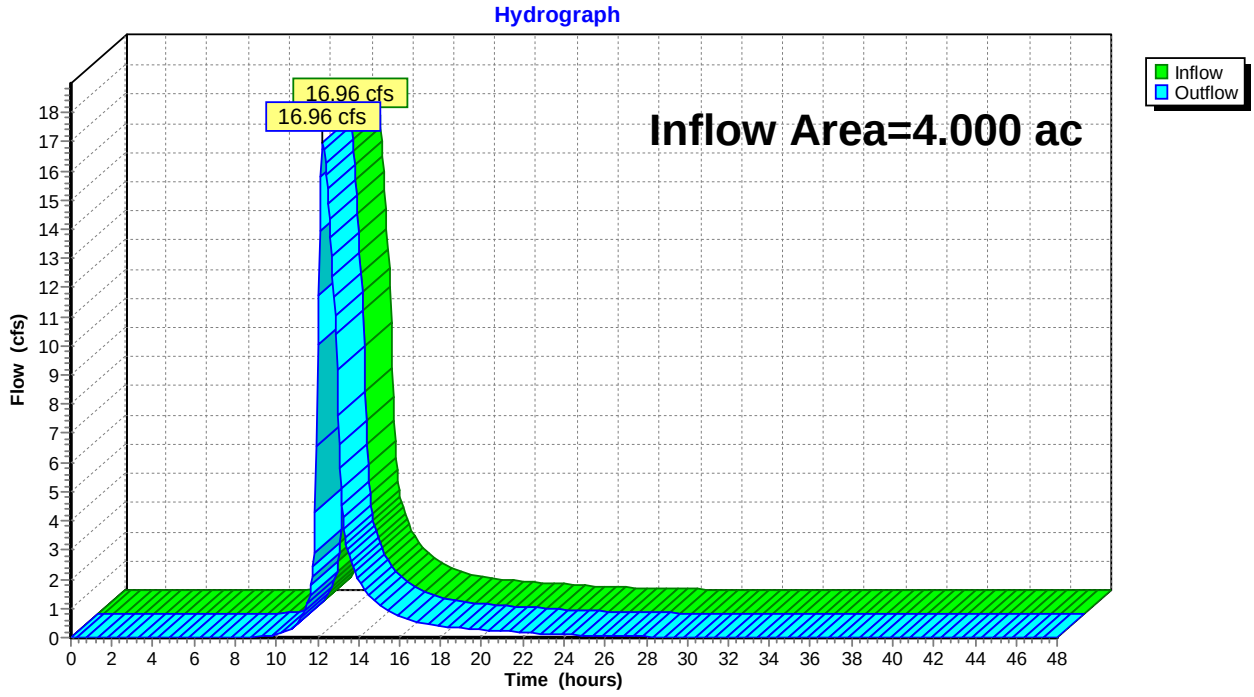
Summary for Reach 22R: City Storm Sewer

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.000 ac, 62.50% Impervious, Inflow Depth > 6.11" for 100-Year event
Inflow = 16.96 cfs @ 12.26 hrs, Volume= 2.036 af
Outflow = 16.96 cfs @ 12.26 hrs, Volume= 2.036 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Reach 22R: City Storm Sewer



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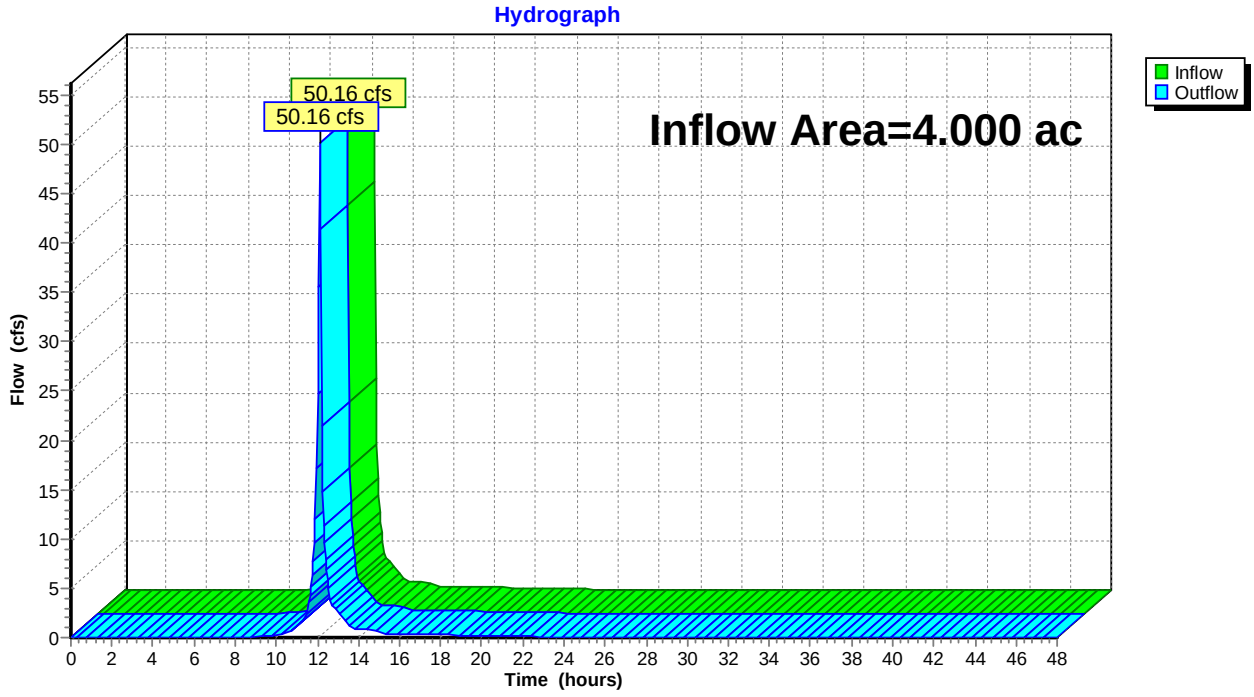
Summary for Reach 26R: City Storm

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.000 ac, 31.25% Impervious, Inflow Depth = 5.55" for 100-Year event
Inflow = 50.16 cfs @ 12.11 hrs, Volume= 1.848 af
Outflow = 50.16 cfs @ 12.11 hrs, Volume= 1.848 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Reach 26R: City Storm



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Summary for Pond 19P: Wet Pond

[95] Warning: Outlet Device #1 rise exceeded

Inflow Area = 4.000 ac, 62.50% Impervious, Inflow Depth = 6.14" for 100-Year event
Inflow = 51.89 cfs @ 12.11 hrs, Volume= 2.045 af
Outflow = 16.96 cfs @ 12.26 hrs, Volume= 2.036 af, Atten= 67%, Lag= 8.7 min
Primary = 16.96 cfs @ 12.26 hrs, Volume= 2.036 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 990.73' @ 12.26 hrs Surf.Area= 0.339 ac Storage= 0.855 af

Plug-Flow detention time= 64.2 min calculated for 2.034 af (99% of inflow)
Center-of-Mass det. time= 62.8 min (819.0 - 756.2)

Volume	Invert	Avail.Storage	Storage Description
#1	987.50'	1.708 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
987.50	0.160	0.000	0.000
988.00	0.210	0.093	0.093
989.00	0.260	0.235	0.328
990.00	0.310	0.285	0.612
991.00	0.350	0.330	0.943
992.00	0.370	0.360	1.302
993.00	0.440	0.405	1.708

Device	Routing	Invert	Outlet Devices
#1	Device 2	987.50'	**30.0 deg x 0.7' long x 1.00' rise Sharp-Crested Vee/Trap Weir** Cv= 2.61 (C= 3.26)
#2	Primary	987.50'	**24.0" Round Culvert** L= 50.0' Ke= 1.000 Inlet / Outlet Invert= 987.50' / 984.00' S= 0.0700 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf
#3	Device 2	988.75'	**5.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#4	Device 1	987.50'	**15.0" Round Culvert** L= 20.0' Ke= 1.000 Inlet / Outlet Invert= 987.50' / 987.50' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=16.94 cfs @ 12.26 hrs HW=990.73' (Free Discharge)
└**2=Culvert** (Inlet Controls 16.94 cfs @ 5.39 fps)
  ├**1=Sharp-Crested Vee/Trap Weir** (Passes < 7.75 cfs potential flow)
  │ └**4=Culvert** (Passes < 7.15 cfs potential flow)
  └**3=Broad-Crested Rectangular Weir** (Passes < 46.21 cfs potential flow)

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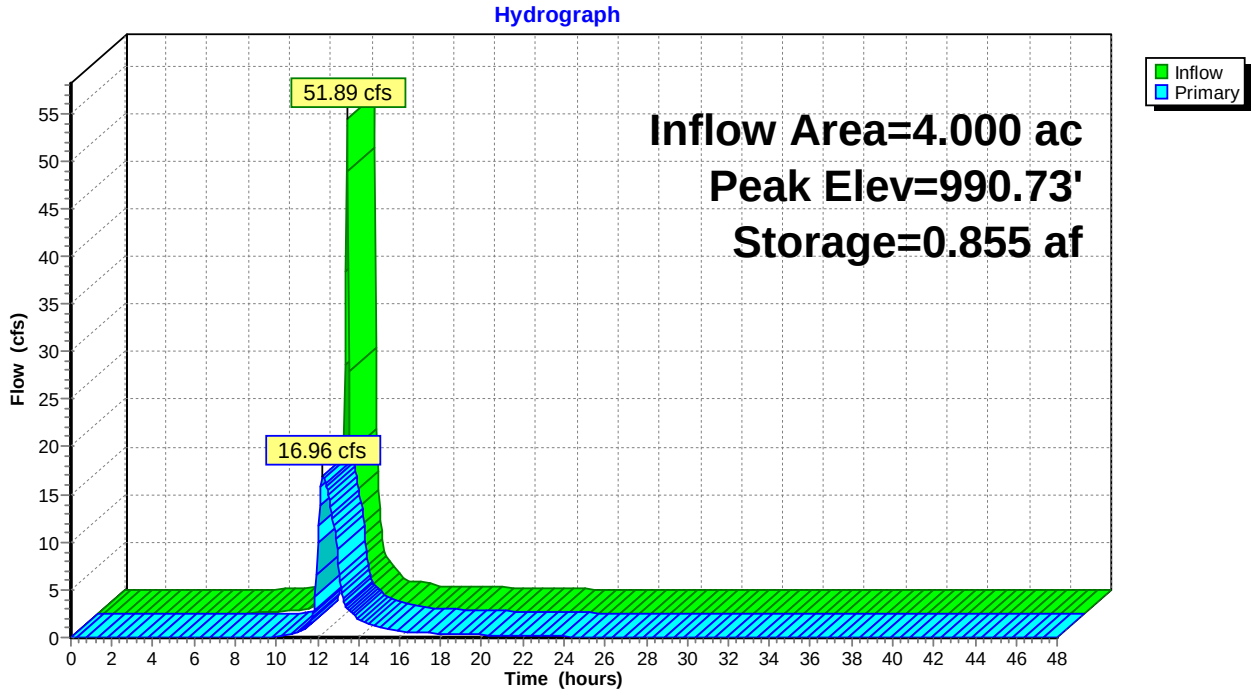
Pond 19P: Wet Pond



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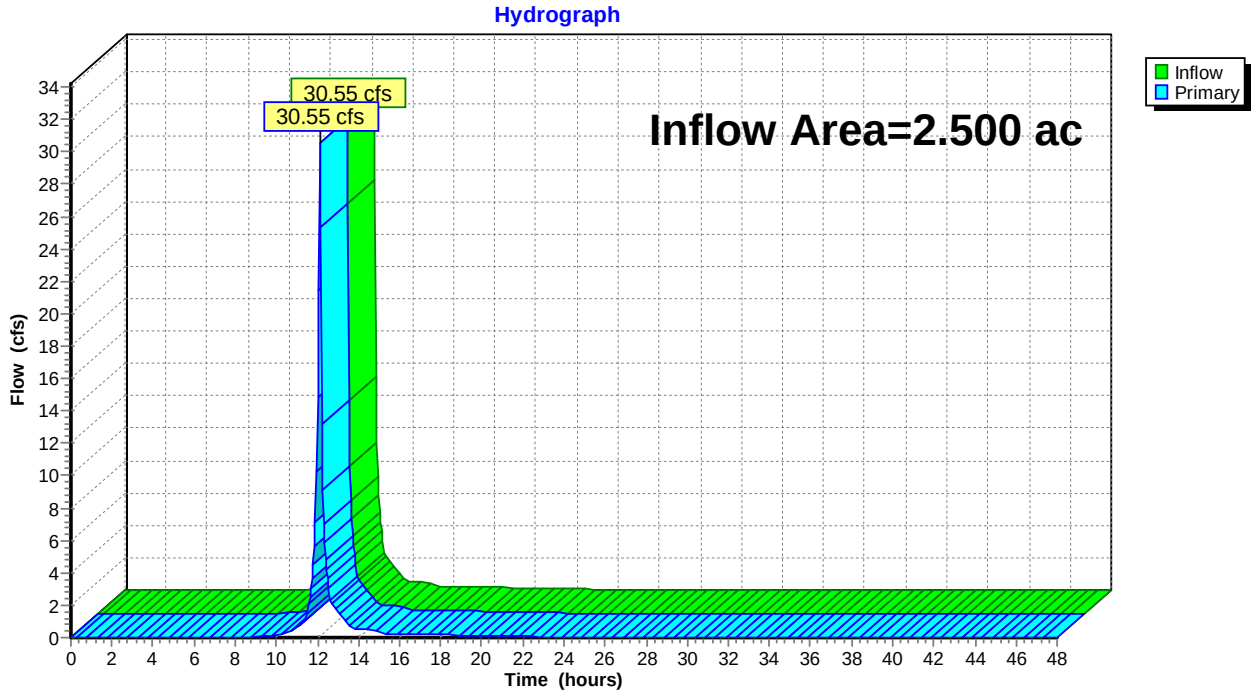
Summary for Pond 20P: West Wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.500 ac, 20.00% Impervious, Inflow Depth = 5.33" for 100-Year event
Inflow = 30.55 cfs @ 12.11 hrs, Volume= 1.110 af
Primary = 30.55 cfs @ 12.11 hrs, Volume= 1.110 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 20P: West Wetland



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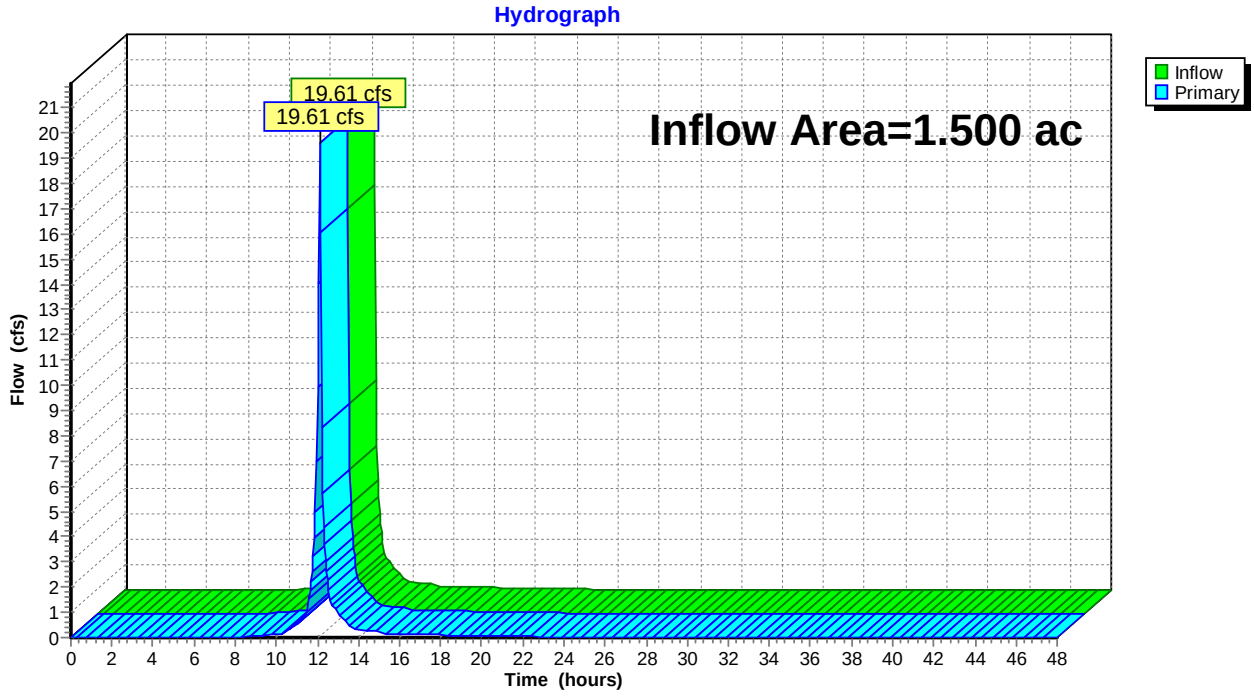
Summary for Pond 21P: East Wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.500 ac, 50.00% Impervious, Inflow Depth = 5.90" for 100-Year event
Inflow = 19.61 cfs @ 12.11 hrs, Volume= 0.738 af
Primary = 19.61 cfs @ 12.11 hrs, Volume= 0.738 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 21P: East Wetland



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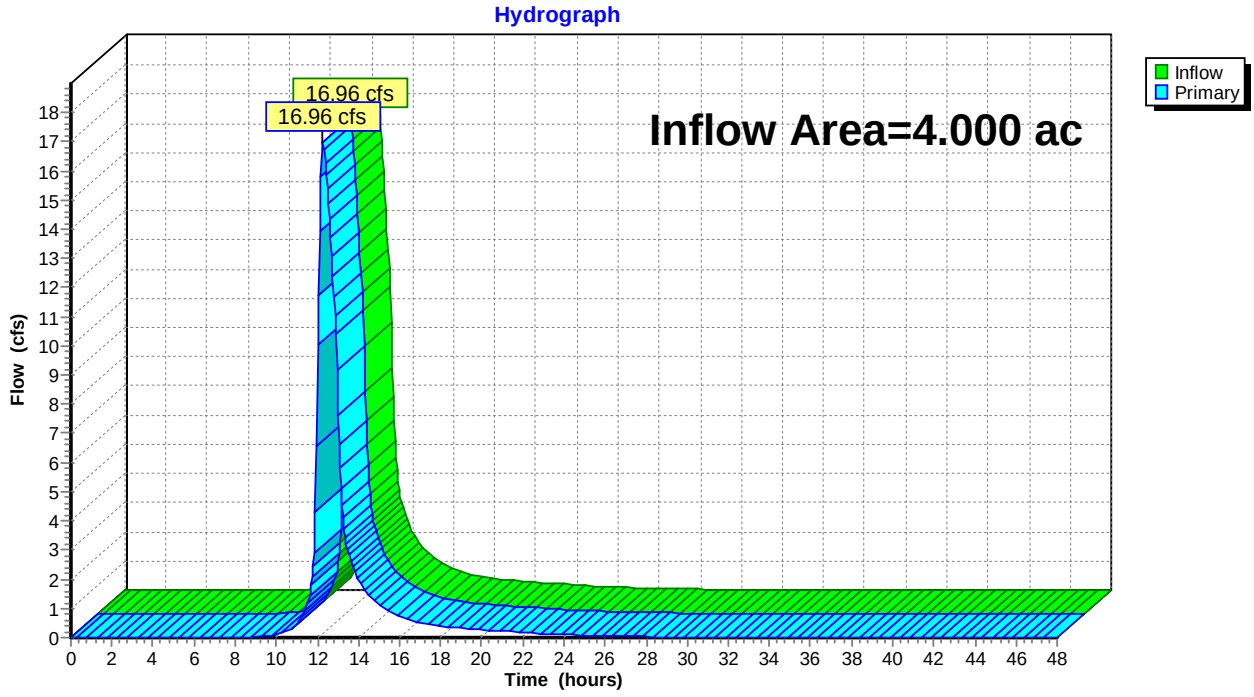
Summary for Pond 27P: West Wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.000 ac, 62.50% Impervious, Inflow Depth > 6.11" for 100-Year event
Inflow = 16.96 cfs @ 12.26 hrs, Volume= 2.036 af
Primary = 16.96 cfs @ 12.26 hrs, Volume= 2.036 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 27P: West Wetland



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Summary for Pond 28P: East Wetland

[40] Hint: Not Described (Outflow=Inflow)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' TW=0.00' (Free Discharge)

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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 22S: Proposed Site Runoff Area=4.000 ac 62.50% Impervious Runoff Depth=3.30"
Flow Length=600' Tc=5.0 min CN=91 Runoff=22.23 cfs 1.099 af

Subcatchment 24S: Existing Conditions Runoff Area=1.500 ac 50.00% Impervious Runoff Depth=3.10"
Flow Length=600' Slope=0.0200 '/' Tc=4.4 min CN=89 Runoff=8.16 cfs 0.387 af

Subcatchment 25S: Existing Conditions Runoff Area=2.500 ac 20.00% Impervious Runoff Depth=2.63"
Flow Length=600' Slope=0.0200 '/' Tc=4.4 min CN=84 Runoff=11.91 cfs 0.548 af

Reach 22R: City Storm Sewer Inflow=10.29 cfs 1.089 af
Outflow=10.29 cfs 1.089 af

Reach 26R: City Storm Inflow=20.07 cfs 0.935 af
Outflow=20.07 cfs 0.935 af

Pond 19P: Wet Pond Peak Elev=989.31' Storage=0.416 af Inflow=22.23 cfs 1.099 af
Outflow=10.29 cfs 1.089 af

Pond 20P: West Wetland Inflow=11.91 cfs 0.548 af
Primary=11.91 cfs 0.548 af

Pond 21P: East Wetland Inflow=8.16 cfs 0.387 af
Primary=8.16 cfs 0.387 af

Pond 27P: West Wetland Inflow=10.29 cfs 1.089 af
Primary=10.29 cfs 1.089 af

Pond 28P: East Wetland

Total Runoff Area = 8.000 ac Runoff Volume = 2.033 af Average Runoff Depth = 3.05"
53.13% Pervious = 4.250 ac 46.88% Impervious = 3.750 ac

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Summary for Subcatchment 22S: Proposed Site

[49] Hint: Tc<2dt may require smaller dt

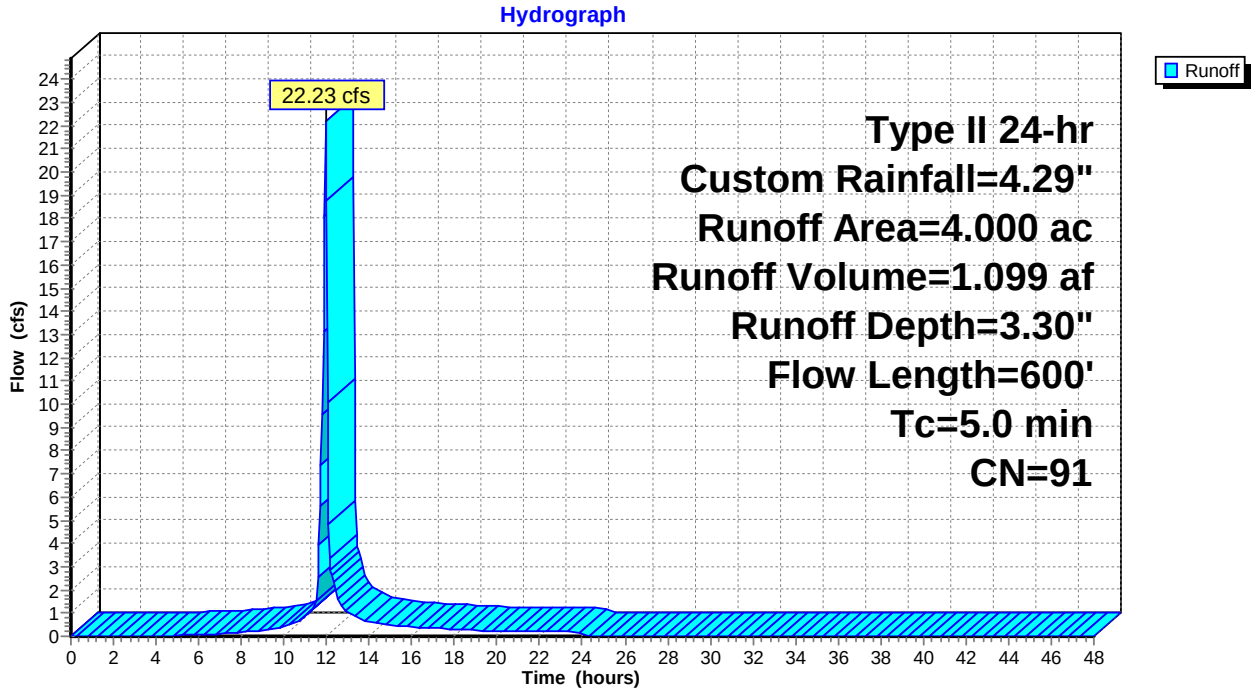
Runoff = 22.23 cfs @ 11.95 hrs, Volume= 1.099 af, Depth= 3.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr Custom Rainfall=4.29"

Area (ac)	CN	Description
1.000	98	Roofs, HSG D
1.500	98	Paved parking, HSG D
1.500	80	>75% Grass cover, Good, HSG D
4.000	91	Weighted Average
1.500		37.50% Pervious Area
2.500		62.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	600		2.00		**Direct Entry,**

Subcatchment 22S: Proposed Site



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Summary for Subcatchment 24S: Existing Conditions

[49] Hint: Tc<2dt may require smaller dt

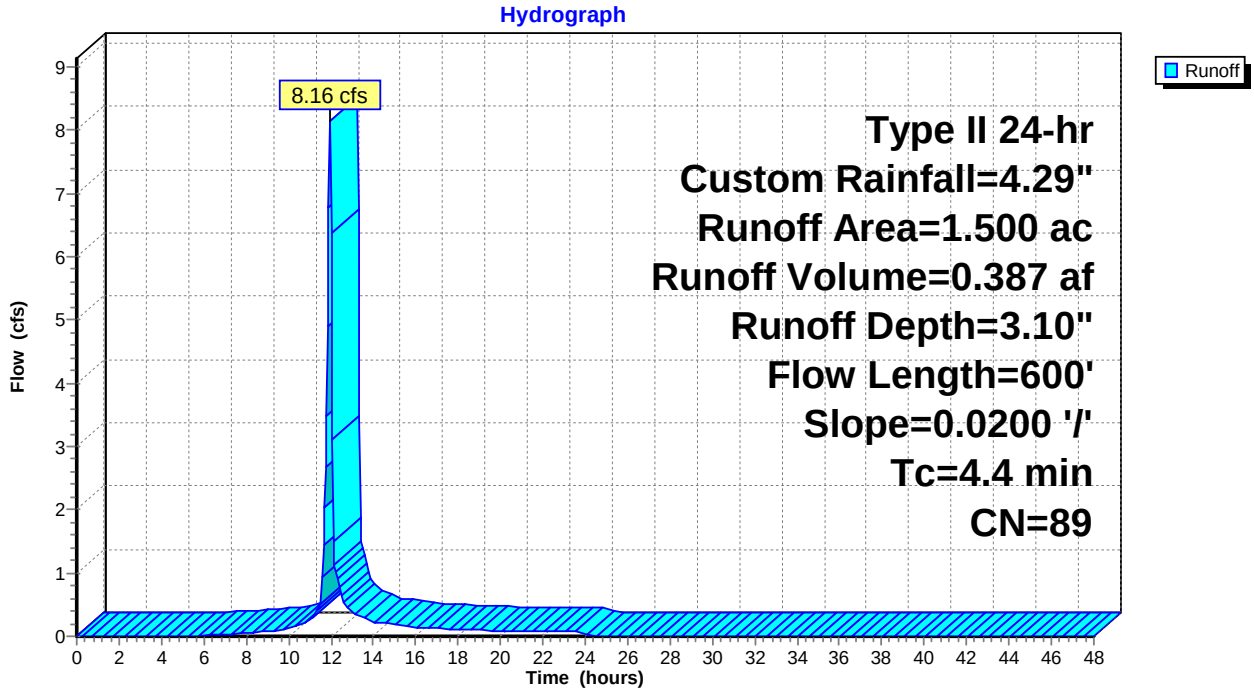
Runoff = 8.16 cfs @ 11.95 hrs, Volume= 0.387 af, Depth= 3.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr Custom Rainfall=4.29"

Area (ac)	CN	Description
0.750	80	>75% Grass cover, Good, HSG D
0.750	98	Paved parking, HSG D
1.500	89	Weighted Average
0.750		50.00% Pervious Area
0.750		50.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	600	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps

Subcatchment 24S: Existing Conditions



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Summary for Subcatchment 25S: Existing Conditions

[49] Hint: Tc<2dt may require smaller dt

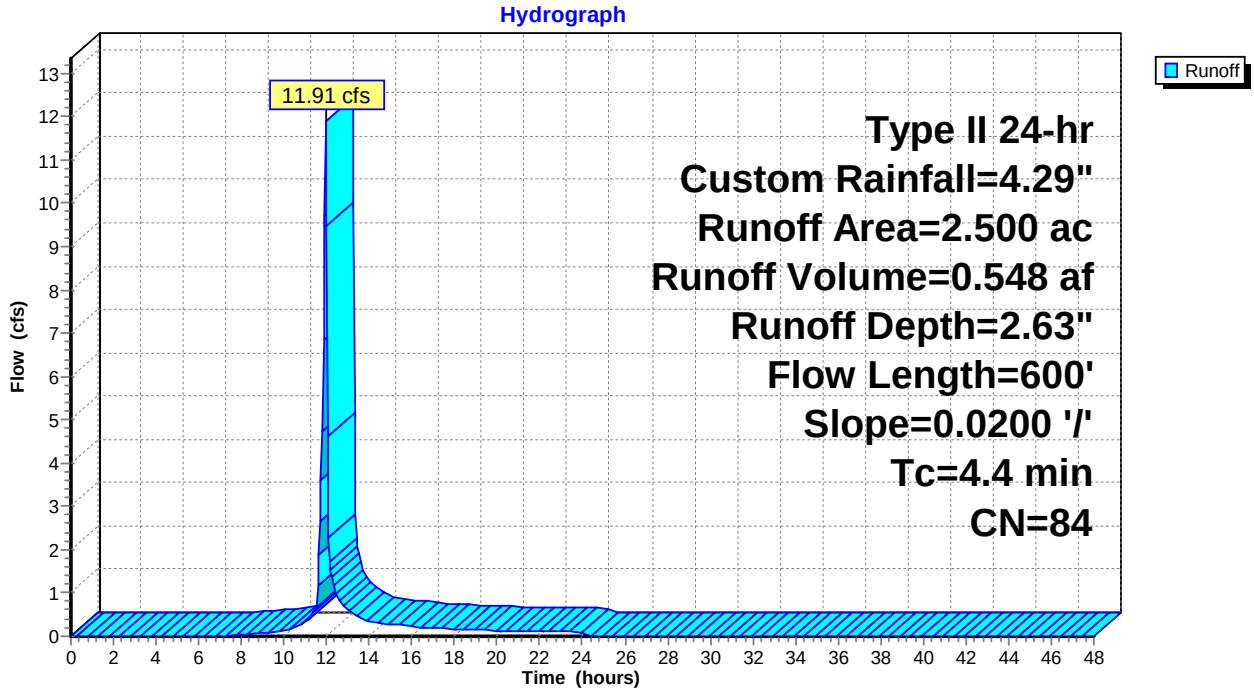
Runoff = 11.91 cfs @ 11.95 hrs, Volume= 0.548 af, Depth= 2.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr Custom Rainfall=4.29"

Area (ac)	CN	Description
2.000	80	>75% Grass cover, Good, HSG D
0.500	98	Paved parking, HSG D
2.500	84	Weighted Average
2.000		80.00% Pervious Area
0.500		20.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	600	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps

Subcatchment 25S: Existing Conditions



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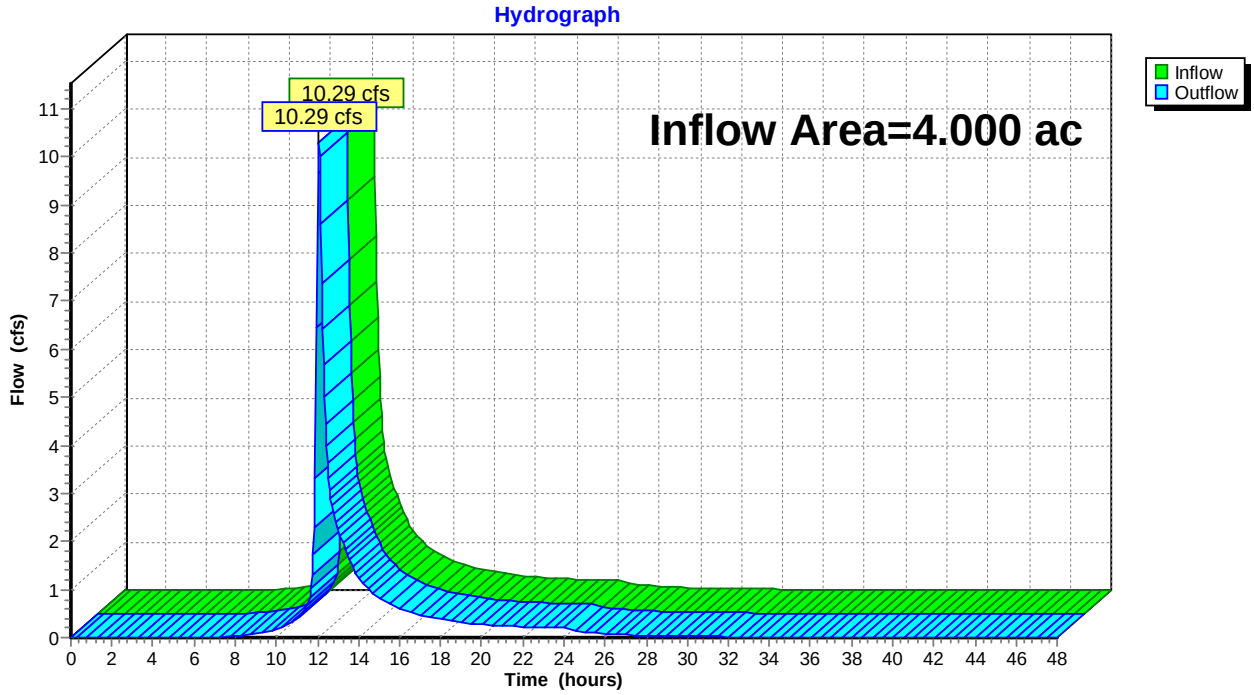
Summary for Reach 22R: City Storm Sewer

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.000 ac, 62.50% Impervious, Inflow Depth > 3.27" for Custom event
Inflow = 10.29 cfs @ 12.06 hrs, Volume= 1.089 af
Outflow = 10.29 cfs @ 12.06 hrs, Volume= 1.089 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Reach 22R: City Storm Sewer



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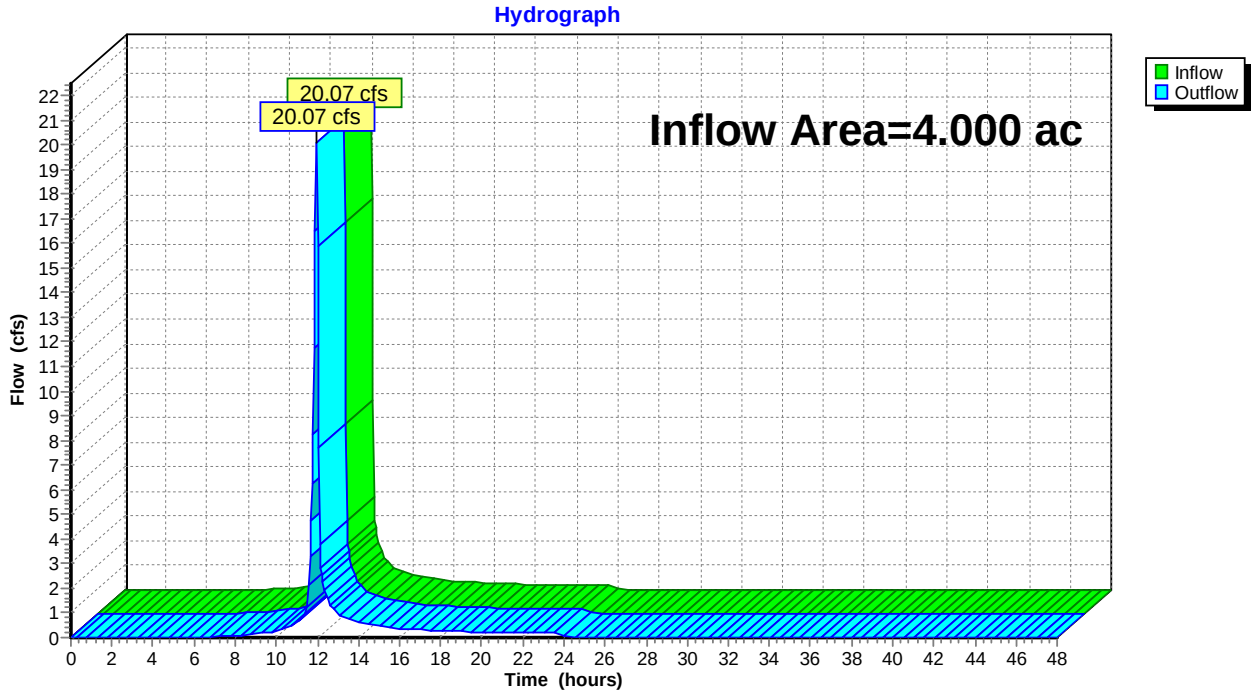
Summary for Reach 26R: City Storm

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.000 ac, 31.25% Impervious, Inflow Depth = 2.80" for Custom event
Inflow = 20.07 cfs @ 11.95 hrs, Volume= 0.935 af
Outflow = 20.07 cfs @ 11.95 hrs, Volume= 0.935 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Reach 26R: City Storm



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Summary for Pond 19P: Wet Pond

[95] Warning: Outlet Device #1 rise exceeded

Inflow Area = 4.000 ac, 62.50% Impervious, Inflow Depth = 3.30" for Custom event
Inflow = 22.23 cfs @ 11.95 hrs, Volume= 1.099 af
Outflow = 10.29 cfs @ 12.06 hrs, Volume= 1.089 af, Atten= 54%, Lag= 6.4 min
Primary = 10.29 cfs @ 12.06 hrs, Volume= 1.089 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 989.31' @ 12.06 hrs Surf.Area= 0.276 ac Storage= 0.416 af

Plug-Flow detention time= 101.9 min calculated for 1.089 af (99% of inflow)
Center-of-Mass det. time= 96.4 min (884.3 - 787.8)

Volume	Invert	Avail.Storage	Storage Description
#1	987.50'	1.708 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
987.50	0.160	0.000	0.000
988.00	0.210	0.093	0.093
989.00	0.260	0.235	0.328
990.00	0.310	0.285	0.612
991.00	0.350	0.330	0.943
992.00	0.370	0.360	1.302
993.00	0.440	0.405	1.708

Device	Routing	Invert	Outlet Devices
#1	Device 2	987.50'	**30.0 deg x 0.7' long x 1.00' rise Sharp-Crested Vee/Trap Weir** Cv= 2.61 (C= 3.26)
#2	Primary	987.50'	**24.0" Round Culvert** L= 50.0' Ke= 1.000 Inlet / Outlet Invert= 987.50' / 984.00' S= 0.0700 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf
#3	Device 2	988.75'	**5.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#4	Device 1	987.50'	**15.0" Round Culvert** L= 20.0' Ke= 1.000 Inlet / Outlet Invert= 987.50' / 987.50' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=10.22 cfs @ 12.06 hrs HW=989.30' (Free Discharge)
└**2=Culvert** (Inlet Controls 10.22 cfs @ 3.43 fps)
  ├**1=Sharp-Crested Vee/Trap Weir** (Passes < 5.28 cfs potential flow)
  │ └**4=Culvert** (Passes < 4.66 cfs potential flow)
  └**3=Broad-Crested Rectangular Weir** (Passes < 6.25 cfs potential flow)

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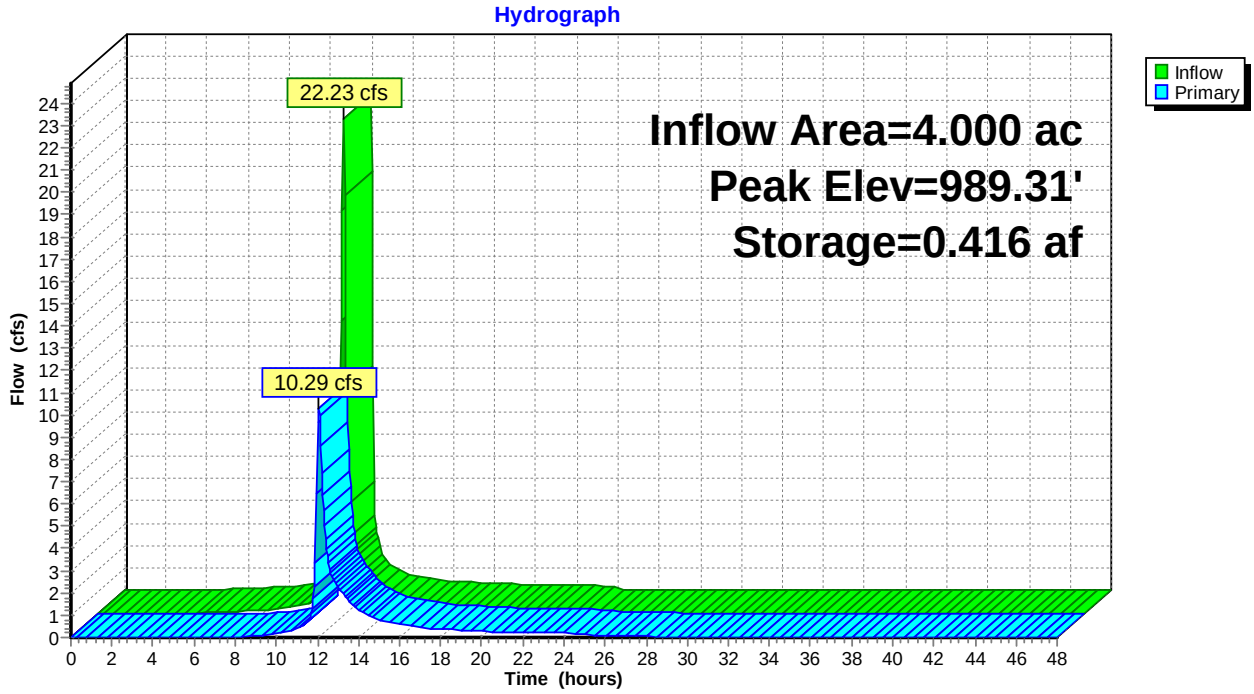
Pond 19P: Wet Pond



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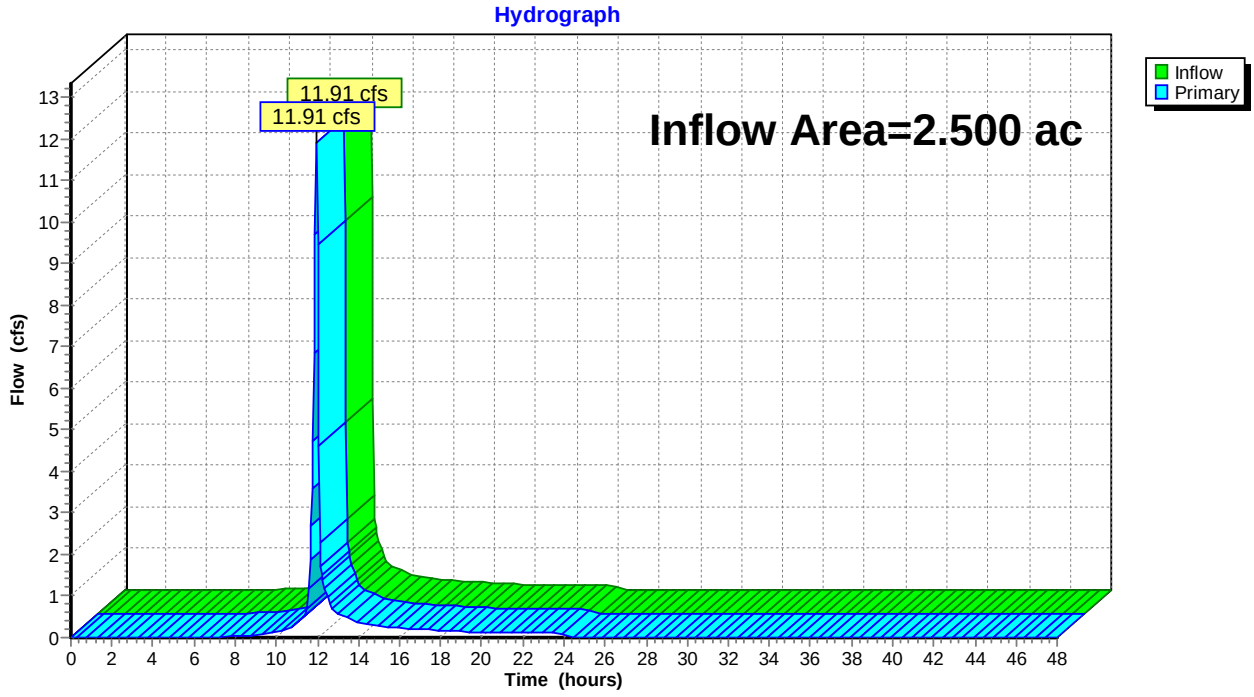
Summary for Pond 20P: West Wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.500 ac, 20.00% Impervious, Inflow Depth = 2.63" for Custom event
Inflow = 11.91 cfs @ 11.95 hrs, Volume= 0.548 af
Primary = 11.91 cfs @ 11.95 hrs, Volume= 0.548 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 20P: West Wetland



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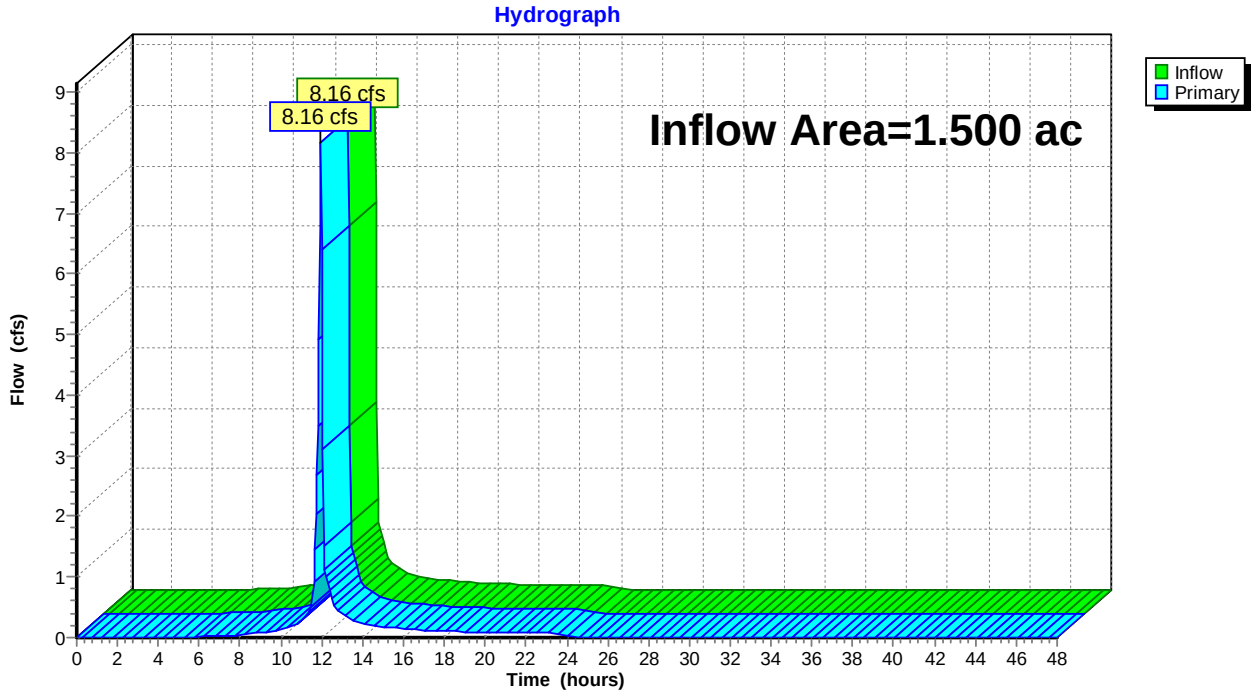
Summary for Pond 21P: East Wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.500 ac, 50.00% Impervious, Inflow Depth = 3.10" for Custom event
Inflow = 8.16 cfs @ 11.95 hrs, Volume= 0.387 af
Primary = 8.16 cfs @ 11.95 hrs, Volume= 0.387 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 21P: East Wetland



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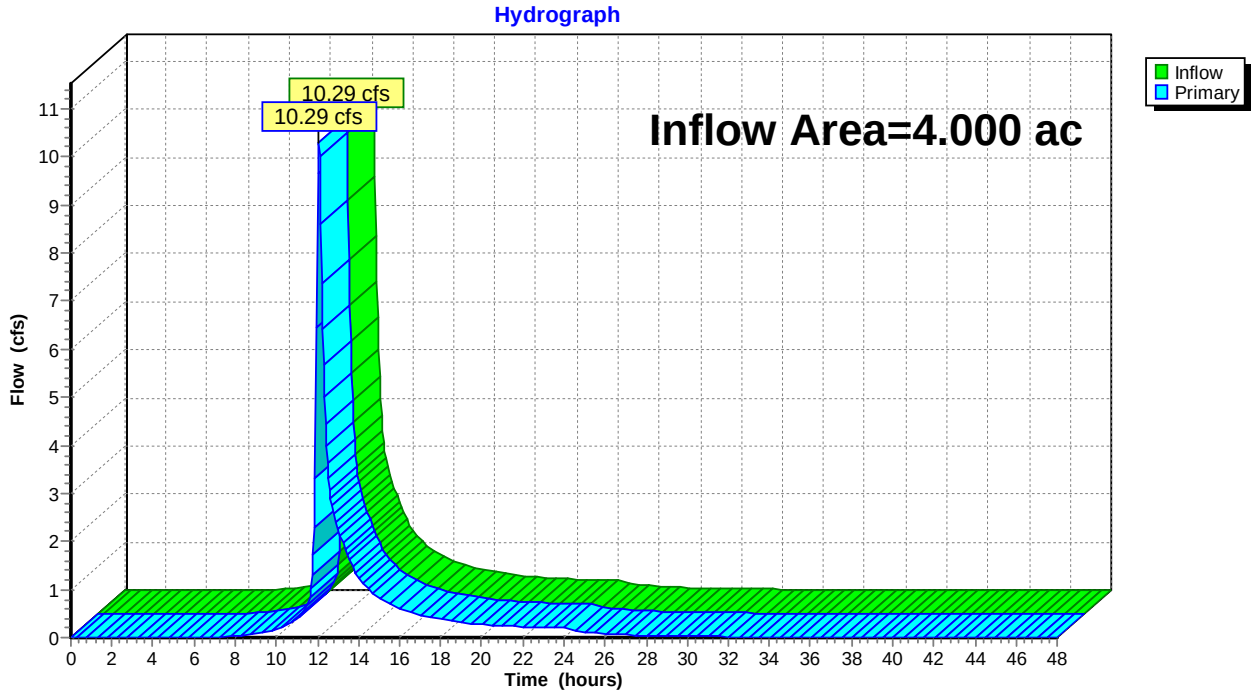
Summary for Pond 27P: West Wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.000 ac, 62.50% Impervious, Inflow Depth > 3.27" for Custom event
Inflow = 10.29 cfs @ 12.06 hrs, Volume= 1.089 af
Primary = 10.29 cfs @ 12.06 hrs, Volume= 1.089 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 27P: West Wetland



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Summary for Pond 28P: East Wetland

[40] Hint: Not Described (Outflow=Inflow)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' TW=0.00' (Free Discharge)

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United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Blue Earth County, Minnesota

June 20, 2025

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

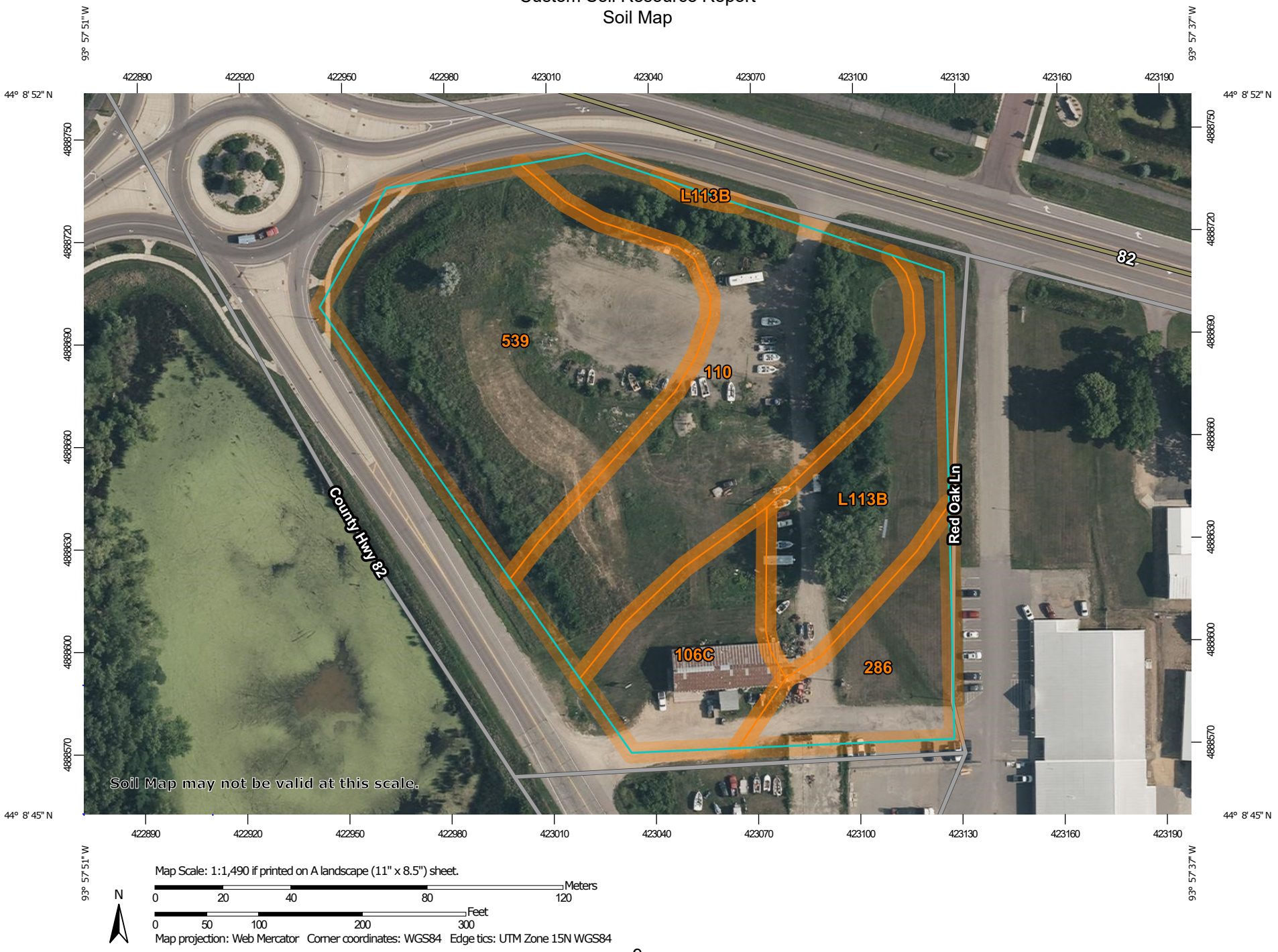
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:1,490 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Blue Earth County, Minnesota
Survey Area Data: Version 22, Sep 7, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 2, 2023—Aug 8, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
106C	Lester loam, 6 to 10 percent slopes	0.6	10.7%
110	Marna silty clay loam, 0 to 2 percent slopes	1.9	32.1%
286	Shorewood silty clay loam, 1 to 6 percent slopes	0.5	9.2%
539	Klossner muck, lake plain, depressional, 0 to 1 percent slopes	2.0	34.4%
L113B	Reedslake-Le Sueur complex, 1 to 6 percent slopes	0.8	13.6%
Totals for Area of Interest		**5.8**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it

was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Blue Earth County, Minnesota

106C—Lester loam, 6 to 10 percent slopes

Map Unit Setting

National map unit symbol: 2ttc7
Elevation: 690 to 1,840 feet
Mean annual precipitation: 24 to 37 inches
Mean annual air temperature: 43 to 52 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Lester and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lester

Setting

Landform: Hillslopes, ground moraines
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Parent material: Fine-loamy till

Typical profile

Ap - 0 to 9 inches: loam
Bt - 9 to 30 inches: clay loam
C - 30 to 79 inches: loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: About 47 to 63 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R103XY020MN - Loamy Upland Savannas
Forage suitability group: Sloping Upland, Acid (G103XS006MN)
Other vegetative classification: Sloping Upland, Acid (G103XS006MN)
Hydric soil rating: No

Minor Components

Le sueur

Percent of map unit: 10 percent
Landform: Ground moraines, hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Ecological site: R103XY020MN - Loamy Upland Savannas
Other vegetative classification: Sloping Upland, Acid (G103XS006MN)
Hydric soil rating: No

Webster

Percent of map unit: 5 percent
Landform: Ground moraines
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R103XY001MN - Loamy Wet Prairies
Other vegetative classification: Level Swale, Neutral (G103XS001MN)
Hydric soil rating: Yes

Storden, moderately eroded

Percent of map unit: 3 percent
Landform: Ground moraines
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Rise
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Ecological site: R103XY020MN - Loamy Upland Savannas
Other vegetative classification: Sloping Upland, Calcareous (G103XS010MN)
Hydric soil rating: No

Lester

Percent of map unit: 2 percent
Landform: Ground moraines, hillslopes
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Linear, convex
Ecological site: R103XY020MN - Loamy Upland Savannas
Other vegetative classification: Sloping Upland, Acid (G103XS006MN)
Hydric soil rating: No

110—Marna silty clay loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2vwk0
Elevation: 690 to 1,840 feet
Mean annual precipitation: 24 to 37 inches

Mean annual air temperature: 43 to 52 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Marna and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Marna

Setting

Landform: Lake plains, ground moraines, flats
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Glaciolacustrine deposits over till

Typical profile

Ap - 0 to 7 inches: silty clay loam
A - 7 to 18 inches: silty clay loam
Bg - 18 to 36 inches: silty clay
2Bkg - 36 to 45 inches: clay loam
2Cg - 45 to 79 inches: clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 2.00 in/hr)
Depth to water table: About 0 to 8 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: R103XY008MN - Clayey Wet Prairies
Forage suitability group: Level Swale, Neutral (G103XS001MN)
Other vegetative classification: Level Swale, Neutral (G103XS001MN)
Hydric soil rating: Yes

Minor Components

Okoboji

Percent of map unit: 7 percent
Landform: Depressions, depressions
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R103XY015MN - Depressional Marsh
Other vegetative classification: Ponded If Not Drained (G103XS013MN)
Hydric soil rating: Yes

Guckeen

Percent of map unit: 5 percent
Landform: Ground moraines, flats, lake plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R103XY005MN - Clayey Upland Prairies
Other vegetative classification: Level Swale, Neutral (G103XS001MN)
Hydric soil rating: No

Brownton

Percent of map unit: 3 percent
Landform: Lake plains, flats, ground moraines
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R103XY008MN - Clayey Wet Prairies
Other vegetative classification: Level Swale, Calcareous (G103XS009MN)
Hydric soil rating: Yes

286—Shorewood silty clay loam, 1 to 6 percent slopes

Map Unit Setting

National map unit symbol: f97m
Elevation: 700 to 1,570 feet
Mean annual precipitation: 23 to 35 inches
Mean annual air temperature: 43 to 50 degrees F
Frost-free period: 155 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Shorewood and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Shorewood

Setting

Landform: Rises on lake plains
Landform position (two-dimensional): Summit
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Clayey lacustrine deposits over fine-loamy till

Typical profile

Ap,A - 0 to 17 inches: silty clay loam
Bt - 17 to 39 inches: silty clay
C - 39 to 60 inches: loam

Properties and qualities

Slope: 1 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.57 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Ecological site: R103XY021MN - Clayey Upland Savannas
Forage suitability group: Sloping Upland, Neutral (G103XS002MN)
Other vegetative classification: Sloping Upland, Neutral (G103XS002MN)
Hydric soil rating: No

Minor Components

Minnetonka

Percent of map unit: 5 percent
Landform: Flats
Hydric soil rating: Yes

Guckeen

Percent of map unit: 5 percent
Landform: Lake plains
Hydric soil rating: No

539—Klossner muck, lake plain, depressional, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2s8x1
Elevation: 690 to 1,840 feet
Mean annual precipitation: 24 to 37 inches
Mean annual air temperature: 43 to 52 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Klossner, drained, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Klossner, Drained

Setting

Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Organic material over glaciolacustrine deposits

Typical profile

Oap - 0 to 9 inches: muck
Oa - 9 to 24 inches: muck
2A - 24 to 46 inches: silty clay loam
2Cg - 46 to 79 inches: silty clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 2.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Occasional
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 17.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: R103XY016MN - Organic Marsh
Forage suitability group: Organic (G103XS014MN)
Other vegetative classification: Organic (G103XS014MN)
Hydric soil rating: Yes

Minor Components

Lura

Percent of map unit: 10 percent
Landform: Depressions, ground moraines, lake plains
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R103XY015MN - Depressional Marsh
Other vegetative classification: Ponded If Not Drained (G103XS013MN)
Hydric soil rating: Yes

Brownton

Percent of map unit: 5 percent
Landform: Lake plains, flats, ground moraines
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R103XY008MN - Clayey Wet Prairies
Other vegetative classification: Level Swale, Calcareous (G103XS009MN)

Hydric soil rating: Yes

L113B—Reedslake-Le Sueur complex, 1 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2y037
Elevation: 690 to 1,450 feet
Mean annual precipitation: 24 to 37 inches
Mean annual air temperature: 37 to 52 degrees F
Frost-free period: 140 to 168 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Reedslake and similar soils: 59 percent
Le sueur and similar soils: 30 percent
Minor components: 11 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Reedslake

Setting

Landform: Hillslopes
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Rise
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Fine-loamy till

Typical profile

Ap - 0 to 6 inches: loam
A - 6 to 15 inches: loam
Bt - 15 to 33 inches: loam
Bk - 33 to 54 inches: loam
C - 54 to 79 inches: loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: About 20 to 41 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: C
Ecological site: R103XY020MN - Loamy Upland Savannas
Forage suitability group: Sloping Upland, Neutral (G103XS002MN)
Other vegetative classification: Sloping Upland, Neutral (G103XS002MN)
Hydric soil rating: No

Description of Le Sueur

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Talf
Down-slope shape: Concave, linear
Across-slope shape: Linear
Parent material: Fine-loamy till

Typical profile

Ap - 0 to 6 inches: clay loam
A - 6 to 11 inches: clay loam
Bt - 11 to 24 inches: clay loam
Bkg - 24 to 36 inches: loam
BC - 36 to 55 inches: loam
C - 55 to 79 inches: loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 2.00 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: C/D
Ecological site: R103XY020MN - Loamy Upland Savannas
Forage suitability group: Sloping Upland, Acid (G103XS006MN)
Other vegetative classification: Sloping Upland, Acid (G103XS006MN)
Hydric soil rating: No

Minor Components

Cordova

Percent of map unit: 7 percent
Landform: Depressions
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R103XY022MN - Loamy Wet Savannas
Other vegetative classification: Level Swale, Neutral (G103XS001MN)
Hydric soil rating: Yes

Swanlake

Percent of map unit: 4 percent
Landform: Hillslopes
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Rise
Down-slope shape: Convex, linear
Across-slope shape: Convex
Ecological site: R103XY020MN - Loamy Upland Savannas
Other vegetative classification: Sloping Upland, Calcareous (G103XS010MN)
Hydric soil rating: No

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BOARD OF WATER AND SOIL RESOURCES

Minnesota Wetland Conservation Act
Notice of Decision

Local Government Unit: Blue Earth County	**County:** Blue Earth
Applicant Name: Kyle Smith – Growth Holdings, LLC and Menk	**Applicant Representative:** : Addie Theis – Bolton
Project Name: Victory Drive and TH 83 Redevelopment	**LGU Project No. (if any):** PL2023123
Date Application Received by LGU: 11/8/2023	
Date of LGU Decision: 12/19/2023	
Date this Notice was Sent: 12/19/2023	

WCA Decision Type - check all that apply

☒ Wetland Boundary/Type ☐ Sequencing ☐ Replacement Plan ☐ Bank Plan (not credit purchase)
☐ No-Loss (8420.0415) ☐ Exemption (8420.0420)
Part: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐ H Subpart: ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9

Replacement Plan Impacts (replacement plan decisions only)

Total WCA Wetland Impact Area:
Wetland Replacement Type: ☐ Project Specific Credits: ☐ Bank Credits:
Bank Account Number(s):

Technical Evaluation Panel Findings and Recommendations (attach if any)

☒ Approve ☐ Approve w/Conditions ☐ Deny ☐ No TEP Recommendation

LGU Decision

☐ Approved with Conditions (specify below)[1] ☒ Approved[1] ☐ Denied
List Conditions:

Decision-Maker for this Application: ☒ Staff ☐ Governing Board/Council ☐ Other:

Decision is valid for: ☒ 5 years (default) ☐ Other (specify):

[1] *Wetland Replacement Plan approval is not valid until BWSR confirms the withdrawal of any required wetland bank credits. For project-specific replacement a financial assurance per MN Rule 8420.0522, Subp. 9 and evidence that all required forms have been recorded on the title of the property on which the replacement wetland is located must be provided to the LGU for the approval to be valid.*

LGU Findings – Attach document(s) and/or insert narrative providing the basis for the LGU decision[1].

☐ Attachment(s) (specify):
☒ Summary: On November 14th the Victory Drive site was visited by Blue Earth County. The boundary of the identified wetland basins were walked and found to be accurate based off of the topography of the site. On November 15th the Blue Earth County Technical Evaluation Pannel met to discuss the submitted report. Blue Earth County staff communicated what was observed during the site visit on the day prior and the TEP reviewed the boundaries against aerial photos. The TEP concurred that the boundaries and type identified were accurate.

For more information regarding this application go to:
https://cityview.blueearthcountymn.gov/cityviewportal/Planning/Status?planningId=15003

[1] *Findings must consider any TEP recommendations.*

Attached Project Documents

☐ Site Location Map ☒ Project Plan(s)/Descriptions/Reports (specify): Victory Drive and TH 83 Redevelopment Wetland Delineation

Appeals of LGU Decisions

If you wish to appeal this decision, you must provide a written request within 30 calendar days of the date you received the notice. All appeals must be submitted to the Board of Water and Soil Resources Executive Director along with a check payable to BWSR for $500 *unless* the LGU has adopted a local appeal process as identified below. The check must be sent by mail and the written request to appeal can be submitted by mail or e-mail. The appeal should include a copy of this notice, name and contact information of appellant(s) and their representatives (if applicable), a statement clarifying the intent to appeal and supporting information as to why the decision is in error. Send to:

Appeals & Regulatory Compliance Coordinator
Minnesota Board of Water & Soils Resources
520 Lafayette Road North
St. Paul, MN 55155
travis.germundson@state.mn.us

Does the LGU have a local appeal process applicable to this decision?

☒ Yes[1] ☐ No

[1]*If yes, all appeals must first be considered via the local appeals process.*

Local Appeals Submittal Requirements (LGU must describe how to appeal, submittal requirements, fees, etc. as applicable)

Appeal of an LGU staff decision. Send petition and $700.00 fee to: Blue Earth County Property and Environmental Resources PO BOX 3566 Mankato, MN 56002

Notice Distribution (include name)

Required on all notices:

☒ SWCD TEP Member: Jake Fritz	☒ BWSR TEP Member: Alyssa Core
☐ LGU TEP Member (if different than LGU contact):	
☒ DNR Representative: Erynn Jenzen	
☐ Watershed District or Watershed Mgmt. Org.:	
☒ Applicant (notice only): Kyle Smith – Growth Holdings, LLC	☒ Agent/Consultant (notice only): Addie Theis – Bolton and Menk

Optional or As Applicable:

☒ Corps of Engineers: Corps of Engineers General Notification	
☐ BWSR Wetland Mitigation Coordinator (required for bank plan applications only):	
☐ Members of the Public (notice only):	☐ Other:

Signature:	**Date:**
Dan Lynch	12/19/23

This notice and accompanying application materials may be sent electronically or by mail. The LGU may opt to send a summary of the application to members of the public upon request per 8420.0255, Subp. 3.

Victory & TH 83 Redevelopment

Joint Type & Boundary Application

Growth Holdings, LLC.
October 27, 2023

Submitted by:
Bolton & Menk, Inc.
1960 Premier Drive
Mankato, MN 56001
P: (507) 625-4171
F: (507) 625-4177

BOLTON & MENK
Real People. Real Solutions.

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Appendix

WETLAND DELINEATION REPORT

PART ONE: Applicant Information

If applicant is an entity (company, government entity, partnership, etc.), an authorized contact person must be identified. If the applicant is using an agent (consultant, lawyer, or other third party) and has authorized them to act on their behalf, the agent's contact information must also be provided.

Applicant/Landowner Name:	Kyle Smith | Growth Holdings, LLC.
Mailing Address:	530 Front Street | Suite 100 | Mankato, MN 56001
Phone:	507-469-0887
E-mail Address:	ksmith@thetailwindgroup.com

Authorized Contact (do not complete if same as above):
Mailing Address:
Phone:
E-mail Address:

Agent Name:	Bolton & Menk, Inc. | Addeline Theis | Natural Resource Specialist
Mailing Address:	1960 Premier Drive | Mankato, MN | 56001
Phone:	507-625-4171 ext 3745
E-mail Address:	Addeline.theis@bolton-menk.com

PART TWO: Site Location Information

County: Blue Earth **City/Township: Mankato TWP**
Parcel ID and/or Address: 901 S Victory Dr Mankato, MN 56001 (Parcel ID: R430921177001)
Legal Description (Section, Township, Range): 21, 108N, 26W
Lat/Long (decimal degrees):
Attach a map showing the location of the site in relation to local streets, roads, highways.
Approximate size of site (acres) or if a linear project, length (feet): 4.5 acres

If you know that your proposal will require an individual Permit from the U.S. Army Corps of Engineers, you must provide the names and addresses of all property owners adjacent to the project site. This information may be provided by attaching a list to your application or by using block 25 of the Application for Department of the Army permit which can be obtained at:

http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/engform_4345_2012oct.pdf

PART THREE: General Project/Site Information

If this application is related to a delineation approval, exemption determination, jurisdictional determination, or other correspondence submitted ***prior to*** this application then describe that here and provide the Corps of Engineers project number.

Describe the project that is being proposed, the project purpose and need, and schedule for implementation and completion. The project description must fully describe the nature and scope of the proposed activity including a description of all project elements that effect aquatic resources (wetland, lake, tributary, etc.) and must also include plans and cross section or profile drawings showing the location, character, and dimensions of all proposed activities and aquatic resource impacts.

PART FOUR: Aquatic Resource Impact[1] Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

Aquatic Resource ID (as noted on overhead view)	**Aquatic Resource Type** (wetland, lake, tributary etc.)	**Type of Impact** (fill, excavate, drain, or remove vegetation)	**Duration of Impact** Permanent (P) or Temporary (T)[1]	**Size of Impact**[2]	**Overall Size of Aquatic Resource** [3]	**Existing Plant Community Type(s)** in Impact Area[4]	**County, Major Watershed #, and Bank Service Area #** of Impact Area[5]

[1]If impacts are temporary; enter the duration of the impacts in days next to the "T". For example, a project with a temporary access fill that would be removed after 220 days would be entered "T (220)".
[2]Impacts less than 0.01 acre should be reported in square feet. Impacts 0.01 acre or greater should be reported as acres and rounded to the nearest 0.01 acre. Tributary impacts must be reported in linear feet of impact and an area of impact by indicating first the linear feet of impact along the flowline of the stream followed by the area impact in parentheses). For example, a project that impacts 50 feet of a stream that is 6 feet wide would be reported as 50 ft (300 square feet).
[3]This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A".
[4]Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.
[5]Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

If any of the above identified impacts have already occurred, identify which impacts they are and the circumstances associated with each:

N/A

PART FIVE: Applicant Signature

☐ Check here if you are requesting a pre-application consultation with the Corps and LGU based on the information you have provided. Regulatory entities will not initiate a formal application review if this box is checked.

By signature below, I attest that the information in this application is complete and accurate. I further attest that I possess the authority to undertake the work described herein.

Signature: _____ Date: 11/10/23

I hereby authorize **Bolton & Menk, Inc** to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

[1] The term "impact" as used in this joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.

Attachment A

Request for Delineation Review, Wetland Type Determination, or Jurisdictional Determination

By submission of the enclosed wetland delineation report, I am requesting that the U.S. Army Corps of Engineers, St. Paul District (Corps) and/or the Wetland Conservation Act Local Government Unit (LGU) provide me with the following (check all that apply):

☒ **Wetland Type Confirmation**

☒ **Delineation Concurrence**. Concurrence with a delineation is a written notification from the Corps and a decision from the LGU concurring, not concurring, or commenting on the boundaries of the aquatic resources delineated on the property. Delineation concurrences are generally valid for five years unless site conditions change. Under this request alone, the Corps will not address the jurisdictional status of the aquatic resources on the property, only the boundaries of the resources within the review area (including wetlands, tributaries, lakes, etc.).

☐ **Preliminary Jurisdictional Determination**. A preliminary jurisdictional determination (PJD) is a non-binding written indication from the Corps that waters, including wetlands, identified on a parcel may be waters of the United States. For purposes of computation of impacts and compensatory mitigation requirements, a permit decision made on the basis of a PJD will treat all waters and wetlands in the review area as if they are jurisdictional waters of the U.S. PJDs are advisory in nature and may not be appealed.

☐ **Approved Jurisdictional Determination**. An approved jurisdictional determination (AJD) is an official Corps determination that jurisdictional waters of the United States are either present or absent on the property. AJDs can generally be relied upon by the affected party for five years. An AJD may be appealed through the Corps administrative appeal process.

In order for the Corps and LGU to process your request, the wetland delineation must be prepared in accordance with the 1987 Corps of Engineers Wetland Delineation Manual, any approved Regional Supplements to the 1987 Manual, and the *Guidelines for Submitting Wetland Delineations in Minnesota* (2013).
http://www.mvp.usace.army.mil/Missions/Regulatory/DelineationJDGuidance.aspx

Appendix

Victory & TH 83 Redevelopment

Wetland Delineation Report

Growth Holdings, LLC.
October 27, 2023

Submitted by:
Bolton & Menk, Inc.
1960 Premier Drive
Mankato, MN 56001
P: (507) 625-4171
F: (507) 625-4177

BOLTON & MENK
Real People. Real Solutions.

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ANTECEDENT PRECIPITATION CONDITIONS 2

Appendix

Exhibit A: Site Location Map
Exhibit B: 2-Foot LiDAR Contours Map
Exhibit C: National Wetlands Inventory Map
Exhibit D: Public Waters Inventory Map
Exhibit E: Blue Earth County Soil Survey Map
Exhibit F: Delineated Wetlands Map
Exhibit G: Delineation Data Sheets

I. INTRODUCTION

Growth Holdings, LLC. Is proposing site improvements to their property at 901 s Victory Dr in Mankato, MN. This report details the findings of the field delineation completed on October 27, 2023.

The project is found in Section 21, in Township 108 North of Range 26 West.

II. WETLAND DELINEATION METHODOLOGY

The wetland boundaries were delineated and staked in the field in October 2023, using methods described in the "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)". Wetlands identified were classified using "Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, et al., 1979)", "Wetlands of the United States (United States Fish and Wildlife Service Circular No. 39, 1971 edition)" and "Wetland Plants and Plant Communities of Minnesota and Wisconsin" (Eggers and Reed Third Edition). Subsequently, the three mandatory technical criteria for wetland determinations are as follows:

Hydrophytic Vegetation. A hydrophytic plant community is present when the dominant plant species present can endure prolonged inundation and/or soil saturation during the growing season. A plant's Wetland Indicator Status is determined using the 2016 National Wetland Plant List for Minnesota, published by the Army Corp of Engineers.

Hydric Soils. A hydric soil is defined as a soil that is formed under conditions of saturation, flooding or ponding long enough during the growing season (the portion of the year when there is above ground growth and development of vascular plants and/or soil temperature at 12 inches below the soil surface is above 41 degrees Fahrenheit or higher) to develop anaerobic conditions in the upper part.

Wetland Hydrology. An area has wetland hydrology if it experiences 14 or more consecutive days of flooding, ponding or a water table within 12 inches of the surface during the growing season at a minimum frequency of five out of ten years. This is determined by using both primary and secondary Wetland Hydrology indicators.

III. BACKGROUND INFORMATION

Prior to conducting a field investigation of this site, Exhibits A through E were used to complete a preliminary evaluation. The data gathered during the preliminary investigation was used as described below:

Exhibit A is a location map of the study area.

Exhibits B is an aerial photo with topographic information overlaid on it. This provides information regarding topography of the site, helping to identify areas that may have wetland characteristics.

Exhibit C is the National Wetlands Inventory of the site and surrounding properties. This information is used to complete a preliminary investigation of the wetlands that may or may not exist on the site.

Exhibit D is used to identify waters that are regulated by the DNR. This exhibit shows where there are DNR public waters relative to the site.

Exhibit E is the Blue Earth County Soil Survey and is used to identify hydric soils that may lie within the study area.

Delineation Exhibits F and G were prepared from the information gathered at the site.

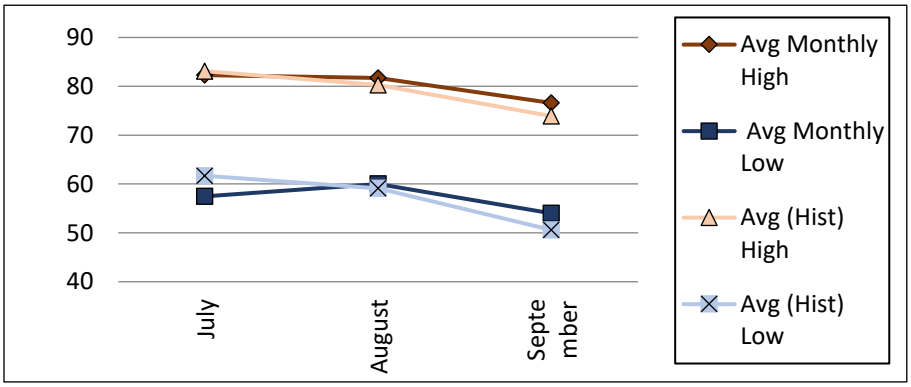
Exhibit F is the site map showing the delineated aquatic resources.

Exhibit G includes the wetland delineation data sheets.

IV. CLIMATE DATA

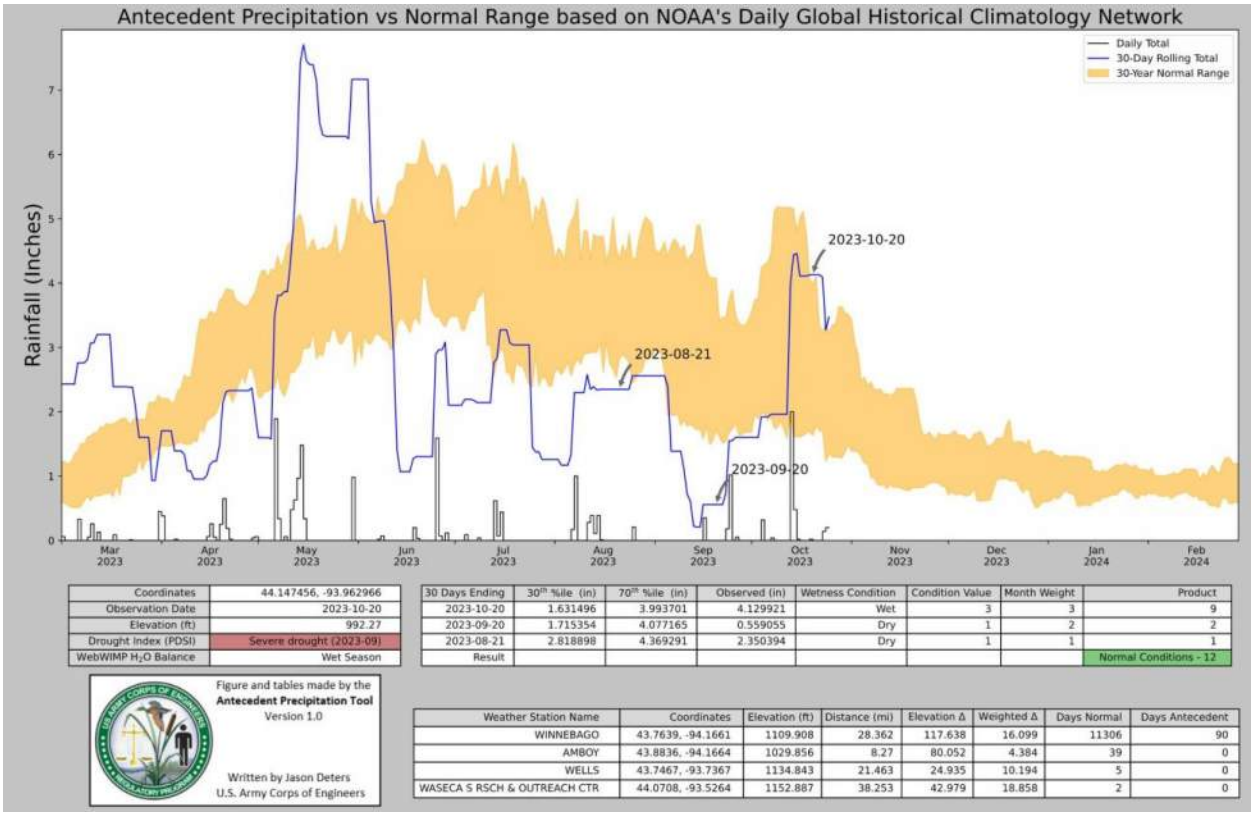
The monthly temperature table below shows the average high and low temperatures for the three months prior to the field delineation, along with the historical averages for these months. The monthly low and high temperatures have been within normal ranges for this period.

MONTHLY TEMPERATURE RANGE



Antecedent precipitation was evaluated using a combination of the NRCS Method and the Rolling Totals Method. The analysis found that precipitation was normal over the past two months.

ANTECEDENT PRECIPITATION CONDITIONS



Coordinates	44.147456, -93.962966
Observation Date	2023-10-20
Elevation (ft)	992.27
Drought Index (PDSI)	Severe drought (2023-09)
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-10-20	1.631496	3.993701	4.129921	Wet	3	3	9
2023-09-20	1.715354	4.077165	0.559055	Dry	1	2	2
2023-08-21	2.818898	4.369291	2.350394	Dry	1	1	1
Result							Normal Conditions - 12

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
WINNEBAGO	43.7639, -94.1661	1109.908	28.362	117.638	16.099	11306	90
AMBOY	43.8836, -94.1664	1029.856	8.27	80.052	4.384	39	0
WELLS	43.7467, -93.7367	1134.843	21.463	24.935	10.194	5	0
WASECA S RSCH & OUTREACH CTR	44.0708, -93.5264	1152.887	38.253	42.979	18.858	2	0

This climatic data was gathered using the Climatology Working Group Website, http://climate.umn.edu/ and the National Weather Service Forecast Office, http://w2.weather.gov/climate/. The information for the investigation was retrieved from the WETS Station in St. Peter (ID: 217405)

V. FINDINGS

On October 27, 2023 a field investigation was performed to evaluate and verify the existence and boundary of any aquatic resources located within the study area. One wetland complex found to exist within the study area. The following describes the aquatic resources identified, together with a brief description of wetland types and observations made during the field investigation.

Wetland 1 (W1-A & W1-B):
NWI Cowardin: PEM1C
PWI (Hydro) ID: None
Field Observation Circular 39: Types 2, 3, & 4
Field Observation Eggers and Reed: Fresh (wet) Meadow, Shallow Marsh, & Deep Marsh
Soil Mapping Unit(s):

Wetland 1 is a complex of fresh wet meadow, shallow and deep marsh.

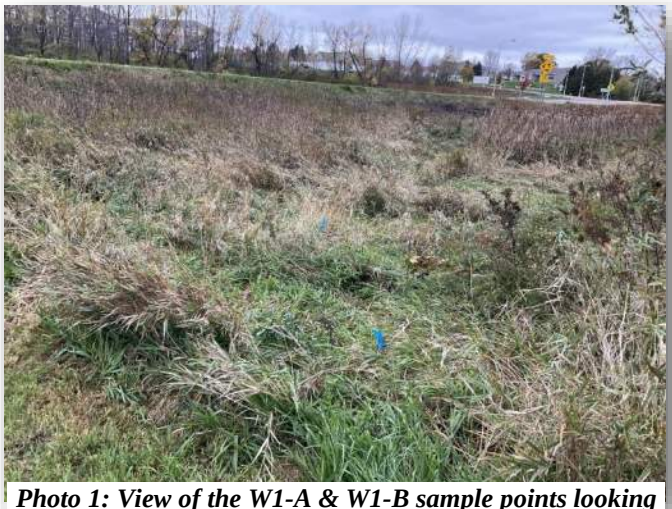


Photo 1: View of the W1-A & W1-B sample points looking into the wetland.

The field investigation found that the site has met all three wetland indicators and this wetland complex should be considered a combination of a palustrine emergent persistent temporarily flooded (PEM1A) wetland, a palustrine emergent persistent seasonally flooded (PEM1C) wetland and a palustrine emergent persistent continuously flooded (PEM1E) wetland. Two sample points were taken to determine the wetland boundary. The wetland boundary was largely drawn based on the changes in topography.

Photo 2: View of the Type 4 portion of wetland 1-A, facing south.

At the W1-A wetland pit location, the plant community was dominated by reed canary grass. The W1-B upland pit location was dominated by smooth brome and reed canary grass. Only the wetland pit location met hydrophytic vegetation. Soils in the W1-A wetland pit location met the hydric soil indicator F6-Redox Dark Surface. Soils in the W1-B upland pit location did not meet any of the hydric soil indicators. The W1-A wetland location met primary indicator A1 and two secondary hydrology indicators D2-Geomorphic Position and D5- FAC-Neutral Test. The W1-B upland pit location did not meet any of the secondary hydrology indicators.

From the observations of both upland and wetland pit locations we can determine this area meets the criteria to be considered a wetland.

Photo 3: View of the Type 3 portion of wetland 1-A, facing west.

Photo 4: View of the Type 2 portion of wetland 1-A, facing north.

Photo 5: View of the Type 2 portion of wetland 1-A, facing east.

Photo 6: View of the Type 2 portion of wetland 1-B, facing south-east.

Photo 7: View of the Type 2 portion of wetland 1BA, facing south.

Photo 8: View of upland area of site. Water sitting due to previous rainfall.

VI. CONCLUSION

The delineation was performed on October 27, 2023. The boundaries of the wetlands were staked in the field with three foot "Wetland Delineation" pin flags. The location of the pin flags were surveyed by Bolton & Menk, Inc. using a Juniper Geode Data Collector and tied to the Blue Earth County coordinate system. The delineated limits are believed to be the upper limits of where all three of the required wetland criteria were present.

Bolton & Menk, Inc., was asked to determine the boundaries of those jurisdictional wetlands that exist upon this property as defined by the Wetland Conservation Act.

Based upon all available information, the existing conditions that currently prevail, and the on-site investigation, evidence supports the presence of one wetland complex within the boundaries of the study area.

WETLAND SUMMARY

Id #	Wetland Type^	Size*
W1-A	Type 2/3/4	0.31 ac
W1-B	Type 2	0.06 ac
Total:		**0.37 ac**

**size measured within study area.*
^wetland type within study area

Sincerely,
BOLTON & MENK, INC.

Addeline Theis
Certified Wetland Delineator, No. 1434

APPENDIX

Victory & TH 83 Redevelopment

Mankato TWP, Blue Earth County, MN

Exhibit A: Location Map

October 2023

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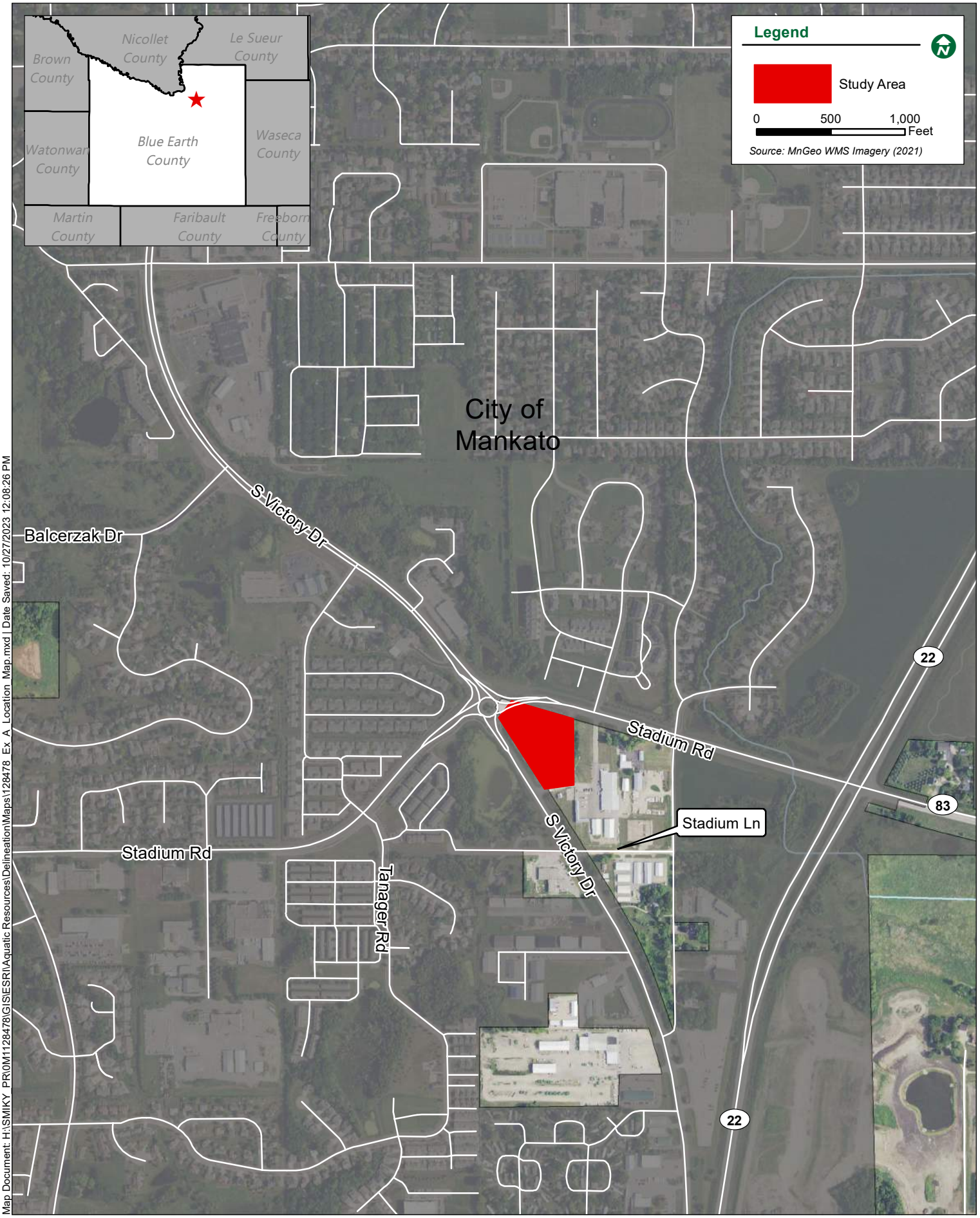

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Victory & TH 83 Redevelopment

Mankato TWP, Blue Earth County, MN

Exhibit B: 2-Foot LiDAR Contours Map

October 2023

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Victory & TH 83 Redevelopment

Mankato TWP, Blue Earth County, MN

Exhibit C: National Wetlands Inventory Map

October 2023

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Victory & TH 83 Redevelopment

Mankato TWP, Blue Earth County, MN

Exhibit D: Public Waters Inventory Map

October 2023

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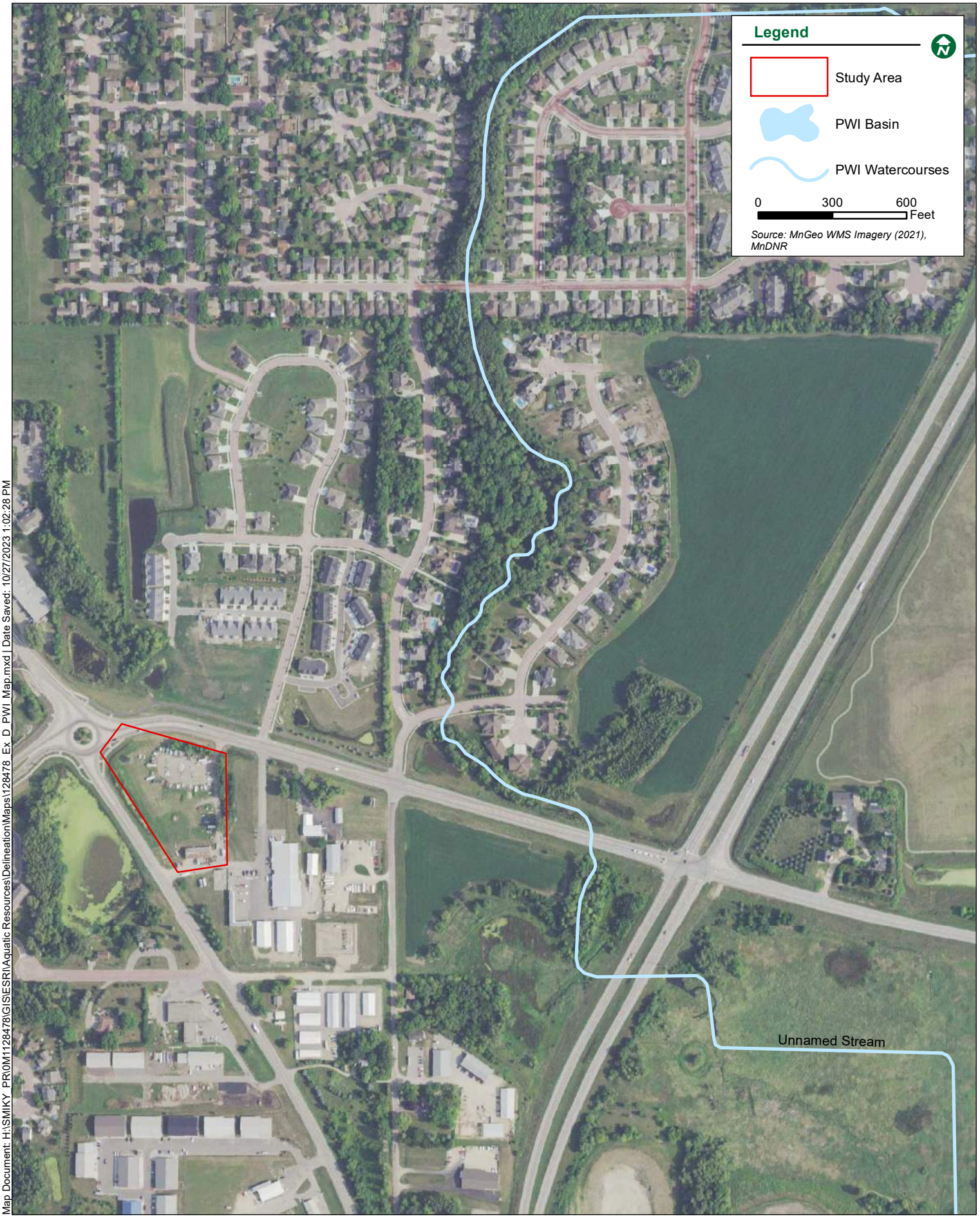

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Victory & TH 83 Redevelopment

Mankato TWP, Blue Earth County, MN

Exhibit E: Blue Earth County Soil Survey Map

October 2023

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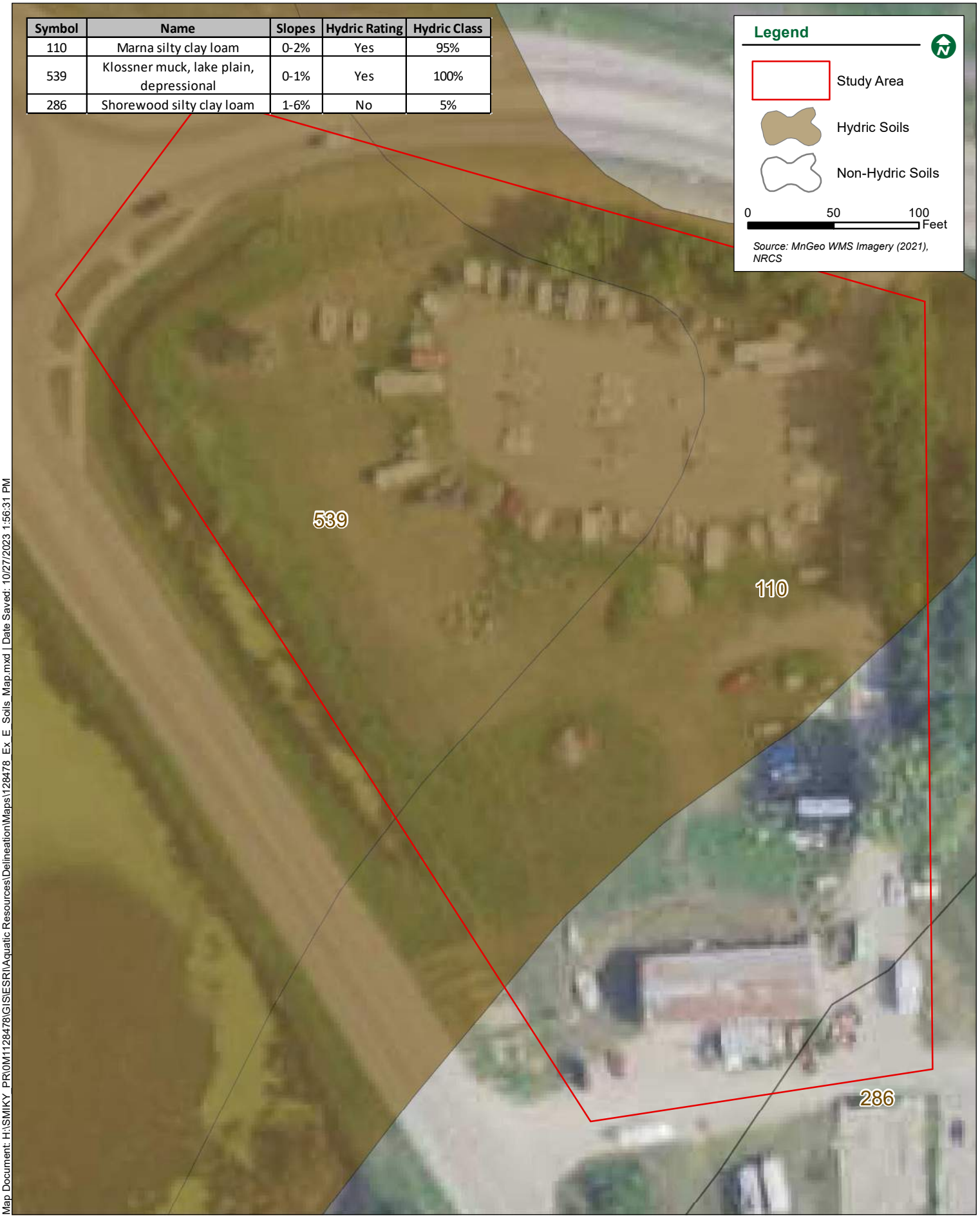
Symbol	Name	Slopes	Hydric Rating	Hydric Class
110	Marna silty clay loam	0-2%	Yes	95%
539	Klossner muck, lake plain, depressional	0-1%	Yes	100%
286	Shorewood silty clay loam	1-6%	No	5%



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Victory & TH 83 Redevelopment

Mankato TWP, Blue Earth County, MN

Exhibit F: Wetland Delineation Map

October 2023

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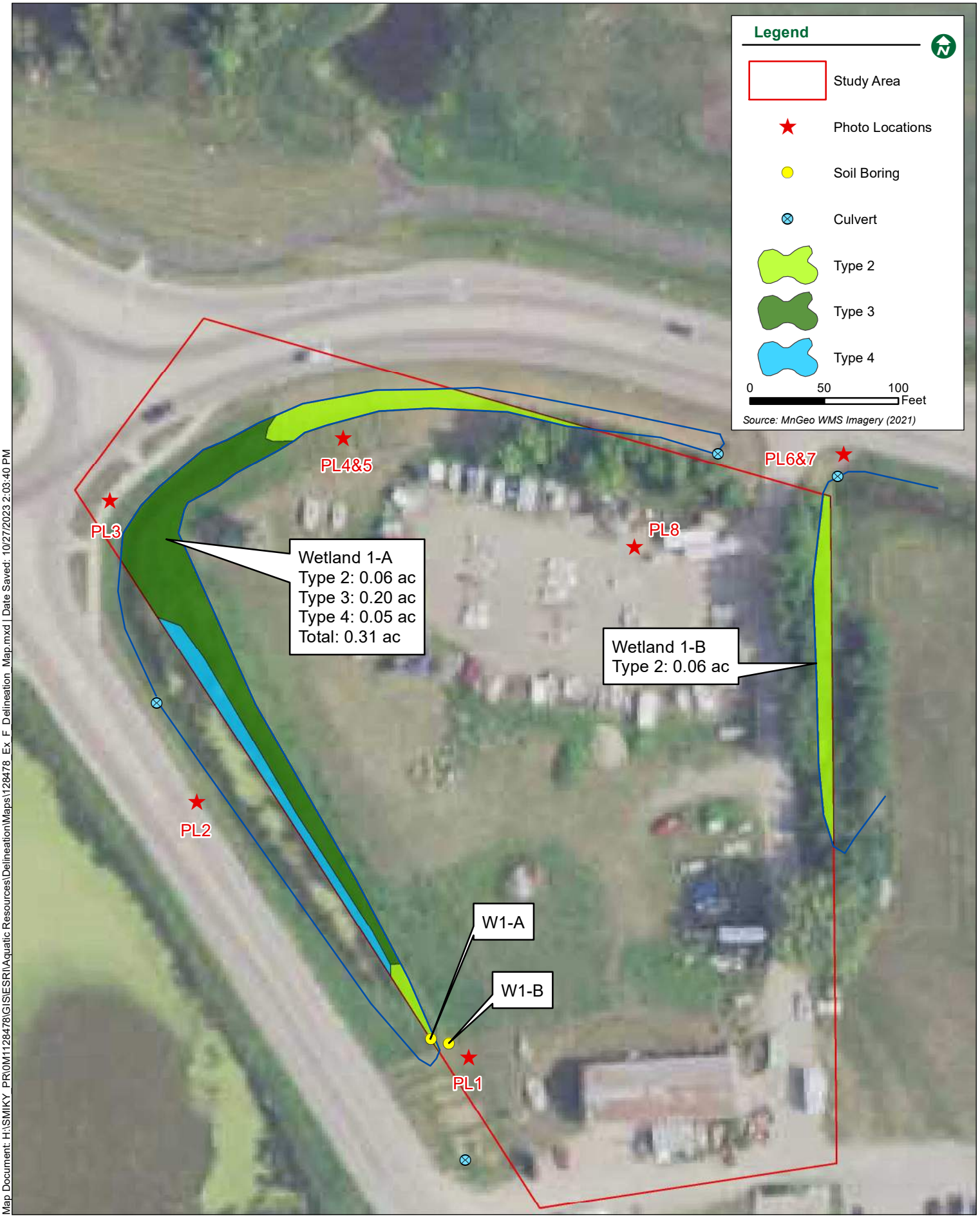

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WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Victory & TH 83 Redevelopment City/County: Blue Earth County Sampling Date: 2023-10-27

Applicant/Owner: Growth Holdings, LLC. State: Minnesota Sampling Point: W1-A

Investigator(s): Addeline Theis Section, Township, Range: sec 21 T108N R026W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 44.146584 Long: -93.962611 Datum: WGS84

Soil Map Unit Name: Marna silty clay loam, 0 to 2 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:
While drought conditions were dominate for a majority of the growing season, late fall rains just before site visit brought climate conditions back to normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Phalaris arundinacea*	65	Y	FACW
2. *Typha angustifolia*	15	N	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	80.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15.00	x 1 =	15.00
FACW species	65.00	x 2 =	130.00
FAC species	0.00	x 3 =	0.00
FACU species	0.00	x 4 =	0.00
UPL species	0.00	x 5 =	0.00
Column Totals:	80.00 (A)		145.00 (B)

Prevalence Index = B/A = 1.81

Hydrophytic Vegetation Indicators:

✓ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W1-A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 2/1	100					CL	
7-16	10YR 2/1	85	7.5YR 4/6	15	C	M	CL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No ___ Depth (inches): 8

Water Table Present? Yes ✓ No ___ Depth (inches): 15

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Victory & TH 83 Redevelopment City/County: Blue Earth County Sampling Date: 2023-10-27

Applicant/Owner: Growth Holdings, LLC. State: Minnesota Sampling Point: W1-B

Investigator(s): Addeline Theis Section, Township, Range: sec 21 T108N R026W

Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, none): Linear

Slope (%): 3-7 Lat: 44.146583 Long: -93.962567 Datum: WGS84

Soil Map Unit Name: Marna silty clay loam, 0 to 2 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
While drought conditions were dominate for a majority of the growing season, late fall rains just before site visit brought climate conditions back to normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Bromus inermis*	55	Y	FACU
2. *Phalaris arundinacea*	45	Y	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	45.00	x 2 =	90.00
FAC species	0.00	x 3 =	0.00
FACU species	55.00	x 4 =	220.00
UPL species	0.00	x 5 =	0.00
Column Totals:	100.00 (A)		310.00 (B)

Prevalence Index = B/A = 3.1

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W1-B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	100					CL	
10-19	10YR 2/2	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SSTS LLC
8112 W 16th St, St Louis Park, MN
www.s2traffic.com

June 6th, 2025

To: **Brian Johnson, Jones, Haugh & Smith Inc.**

From: **Katie Schmidt, PE (MN PE License #47147)**

Re: **Trip Generation Memorandum – Mankato Apartments Development, Mankato, MN**

Per your request, SSTS LLC has conducted a trip generation estimate for the proposed Mankato Apartment Development in the City of Mankato, Blue Earth County, MN. The Proposed Project is located on the south side of Stadium Rd (CSAH 60) and east of S Victory Dr. The Proposed Project includes 72 apartment units split between two three-level buildings and a 150-stall surface parking lot. Access is proposed on S Victory Dr. The adjacent **Figure 1** depicts the site layout and access location. It is noted that traffic will not be able to cut-through to eastern property.

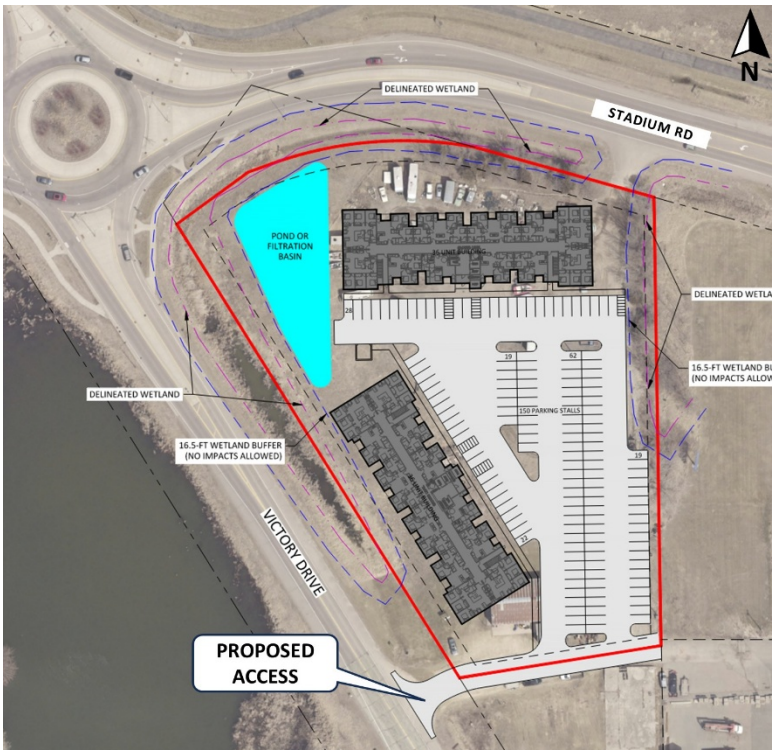


Figure 1. Proposed Project

Trip Generation

The volume of vehicle trips generated by the Proposed Project has been estimated for the weekday AM and PM peak traffic hours and on a daily basis using the data and methodology described in the Institute of Transportation Engineers' (ITE) ***Trip Generation Manual*** [1], which is a standard industry reference used by public agencies to estimate trips generated by specific land uses. **Table 1** summarizes the trip generation estimates. ITE's Low Rise Multifamily land use corresponds to the proposed three-level apartment buildings.

Table 1 - Trip Generation

Land Use	ITE Land Use Code	Size	Trips Generated:				
			AM Peak		PM Peak		Weekday ADT
			Enter	Exit	Enter	Exit	
Multifamily Housing (Low-Rise)	220	72 units	7	22	23	14	485
Totals			**7**	**22**	**23**	**14**	**485**
			29		**37**		

The Proposed Project is estimated to generate the following:

- 29 new trips (7 entering and 22 exiting) during the morning traffic peak hour,
- 37 new trips (23 entering and 14 exiting) during the evening traffic peak hour, and
- 485 daily trips.

The anticipated travel patterns for residents of the Proposed Project are approximately 85% to/from the north and 15% to/from the South on S Victory Dr. The number of vehicle trips generated by the Proposed Project is low, approximately one new vehicle trip every two minutes during the peak hours, and impacts to existing traffic operations are anticipated to be minimal. Additionally, turning volumes at the access point do not warrant turn lanes per industry references (AASHTO and NCHRP Reports).

[1] ***Trip Generation Manual***, Institute of Transportation Engineers (ITE), 11th Edition

Site Plan and Traffic Advisory Review Committee **1. 2.**

Meeting Date: 11/04/2025

Title

CY57-25

Request of Mankato Area Public Schools for an amended preliminary plat and final plat review of Mankato West High School Subdivision. The subject property is described as being located in the Southeast Quarter of Section 13, Township 108, Range 27, Blue Earth County, City of Mankato (West High School, 1351 S. Riverfront Drive).

Applicant

The applicant is Mankato Area Public Schools.

Request

The applicant is requesting review of an amended preliminary plat and final plat review of Mankato West High School Subdivision.

Location

The subject property is described as being located in the Southeast Quarter of Section 13, Township 108, Range 27, Blue Earth County, City of Mankato (West High School, 1351 S. Riverfront Drive).

Existing Land Use

The property is currently used as a school. The City's Land Use Plan designates this area as Public-Semi Public.

Zoning

The property is zoned R-1, One Family Dwelling District.

Environmentally Sensitive Areas

A wetland delineation has been conducted on the site and the extent and boundary of the wetland on the southerly parcel is reflected on the plat.

Public Utilities

The property is currently served by public utilities.

Review

The applicant is seeking an amended preliminary plat review of Mankato West Subdivision and the final plat review.

The preliminary plat was reviewed by the planning commission on August 27, 2025, and subsequently by the City Council on September 8, 2025. The recommended conditions of approval for the initial review are included as follows:

1. The applicant shall be a willing petitioner when any intersection improvements are proposed on adjacent roads.
2. The applicant shall obtain a cross-access agreement with the adjacent parcel (YMCA).
3. The applicant shall grant the City an easement for all existing storm and sanitary over the parcel between Riverfront Drive and Pleasant Street.

As a result of the applicant working through the initial conditions of approval associated with the preliminary plat, an amendment is being sought. The plat includes 2 blocks, Block 1 and Block 2, each having one lot. As part of the amendment, the plat also creates an outlot over the current wetland area on the southerly parcel.

The amended preliminary plat and final plat identifies and clarifies the location and establishment of easements for private and public utilities, creates an outlot for the drainage area near Rasmussen Woods, establishes areas for public dedication where existing public infrastructure is located, and further clarifies an access easement.

The amended preliminary and final plat for West High School are part of the current construction projects at the school.

Attachments

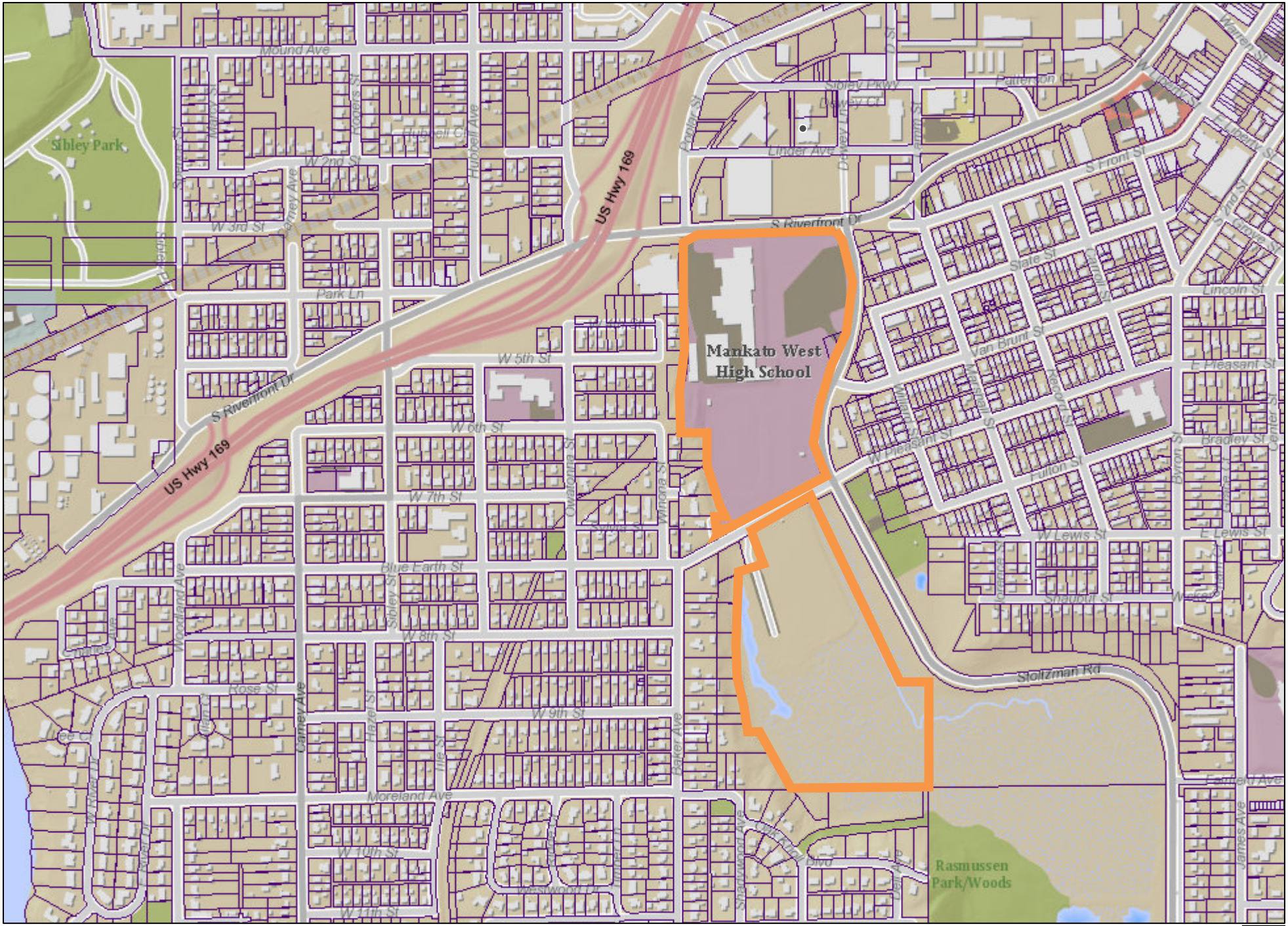
General Location Map

Aerial Plan

Amended Preliminary Plat

Final Plat

General Location Map



Date: June 2025

Author:

This information is to be used for reference purposes only. The City of Mankato does not guarantee accuracy of the material contained herein and is not responsible for misuse or misinterpretation.

N

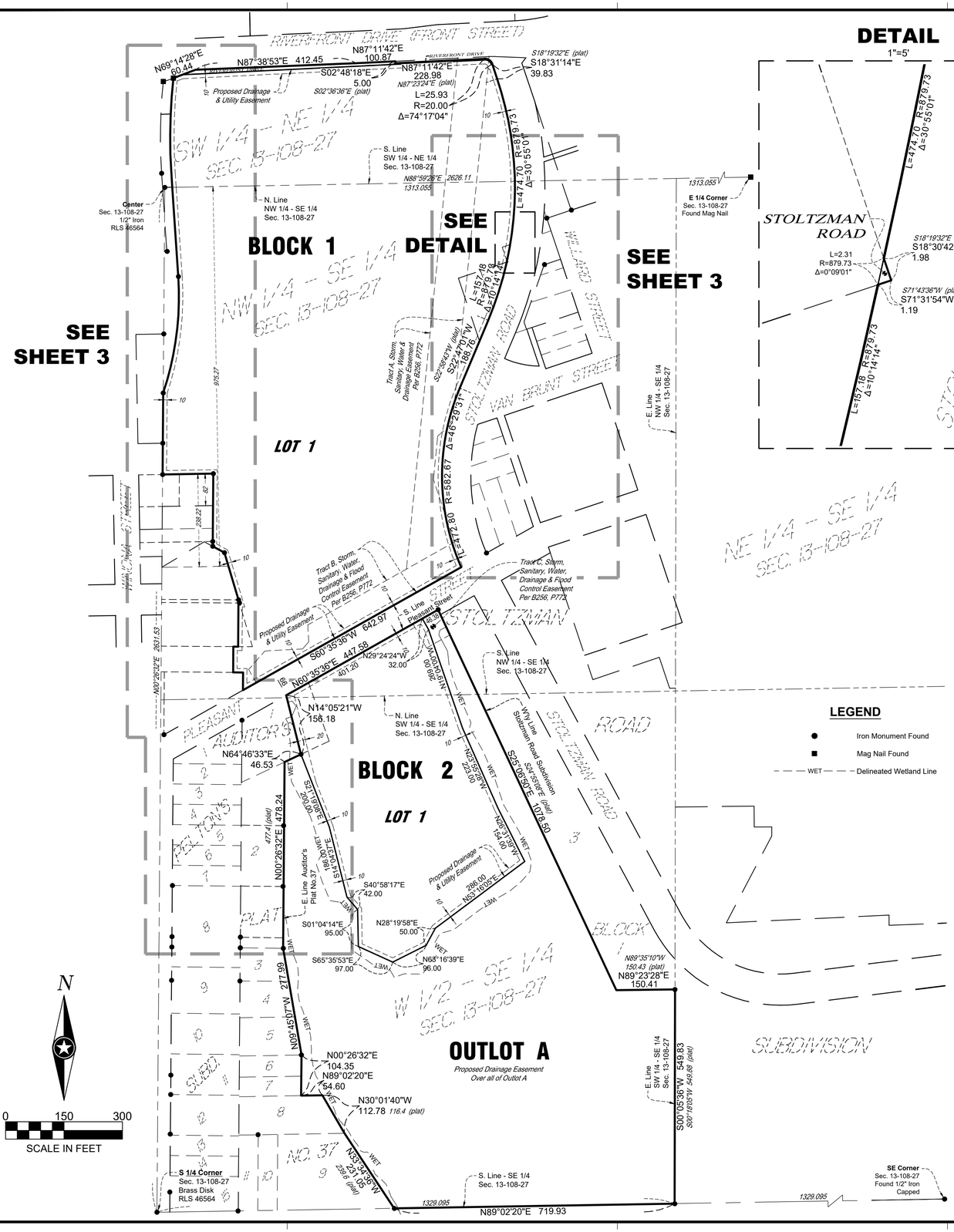
Aerial Map

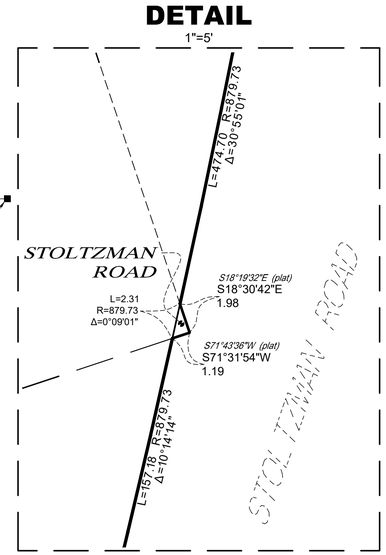
Date: June 2025

Author:

This information is to be used for reference purposes only. The City of Mankato does not guarantee accuracy of the material contained herein and is not responsible for misuse or misinterpretation.

N





MANKATO WEST HIGH SCHOOL SUBDIVISION

EXISTING LEGAL DESCRIPTION:
(Per Preliminary Title Opinion)

All that part of the West Half of the Southeast Quarter of Section 13, Township 108, Range 27, Blue Earth County, Minnesota, which lies southerly of the South right-of-way line of W. Pleasant Street in the City of Mankato, easterly of Auditor's Plat No. 37 and westerly of Stoltzman Road Subdivision, Blue Earth County, Minnesota.

AND

Commencing at a point on the Southerly line of Pleasant Street One Hundred Thirty (130) feet Northeasterly of the Northeast corner of Lot One (1) of Pelton's Subdivision of a part of the Southwest Quarter of the Southeast Quarter (SW 1/4 SE 1/4) Section Thirteen (13), Township One Hundred Eight (108) North, Range Twenty-seven (27) West; thence running Northeasterly along said Southerly line of Pleasant Street a distance of Sixty-six (66) feet; thence Southeasterly at an angle of One Hundred Degrees (100°) a distance of One Hundred Fifty Nine and Thirty Six Hundredths (159.36) feet; thence Southwesterly at an angle of Eighty-four Degrees Fifteen Minutes (84°15') a distance of Seventy Nine and Fifty Two Hundredths (79.52) feet; thence Northwesterly at an angle of One Hundred One Degrees (101°) a distance of One Hundred Fifty Six (156) feet to the place of beginning, also known as Lot One (1) of Auditor's Plat No. 37 which is on file and of record in the office of the Register of Deeds in and for Blue Earth County, Minnesota.

AND

All that portion of the Northwest Quarter of the Southeast Quarter and the Southwest Quarter of the Northeast Quarter of Section 13, Township 108 North, Range 27, lying south of Front Street, west of Stoltzman Road Subdivision and northerly of W. Pleasant Street, Blue Earth County, Minnesota, EXCEPTING THEREFROM THE FOLLOWING TRACTS:

1. West Street Subdivision

2. West Mankato Trail

3. Auditor's Plat No. 83

4. The Northerly 82 feet of the following tract or parcel of land lying Easterly of Winona Street in West Mankato described as follows: Beginning at the Northeasterly intersection of West Seventh Street and Winona Street, thence Northerly along Winona Street to West Sixth Street, thence Easterly along West Sixth Street to Government Quarter line of Section 13-108-27, thence Southerly along said quarter line to West Seventh Street, thence Westerly along West Seventh Street to the place of beginning, except the Southerly 140 feet thereof: subject to existing street and alley easements, if any, and subject to all easements and restrictions of record; said tract lying East of Block 166 and Winona Street, in the City of Mankato.

A strip of land adjoining and easterly of the land described in Book 219 of Blue Earth County Records, page 65, said strip of land is described as: The West 43.00 feet of the North 82.00 feet of the South 238.22 feet of the North 975.27 feet of the Northwest quarter of the Southeast quarter of Section 13, Township 108 North, Range 27 West, Blue Earth County, Minnesota.

And the East 87.00 feet of the West 130.00 feet of the North 82.00 feet of the South 238.22 feet of the North 975.27 feet of the Northwest Quarter of the Southeast Quarter of Section 13, Township 108 North, Range 27 West, Blue Earth County, Minnesota.

**The North-South centerline of Section 13, Township 108 North, Range 27 West is, as indicated on the plat of West Mankato Trail, City of Mankato, Blue Earth County, Minnesota.

5. Beginning at a point 258 feet North of the Southwest corner of the Northwest Quarter of the Southeast Quarter, Section 13, Township 108, Range 27, thence North 82½ feet, thence northeasterly 58 degrees 30 minutes, 127 feet, thence southeasterly 59 degrees 30 minutes, 58.75 feet, thence southeasterly 45 degrees, 126.5 feet, thence west 107 degrees, 197.32 feet to the place of beginning.

AND

The North 8 feet of the following described tract of land, to-wit: Commencing at a point 138 feet North of the Southwest corner of the Northwest Quarter of the Southeast Quarter of Section 13, Township 108, Range 27, thence North on the West line of said Northwest Quarter of the Southeast Quarter of said Section 13, 120 feet, thence East 197.32 feet, thence Southeasterly 125.50 feet to a point 234 feet directly east of the point of beginning, thence West 234 feet to the place of beginning.

6. Commencing at a point 138 feet North of the Southwest corner of the NW ¼ SE ¼ of Section 13-108-27, thence North on the West line of said NW ¼ SE ¼ of said Sec. 13, 120 feet, thence east 197.32 feet, thence southeasterly 125.50 feet to a point 234 feet directly east of the point of beginning, thence West 234 feet to the place of beginning; except the North 8 feet of said premises, together with easement for a driveway in the West 20 feet of said Northerly 8 foot strip; and except that part of the aforesaid Tract lying Easterly of the East line of the West 197.32 feet of the Northwest Quarter of the Southeast Quarter of Section 13, Township 108 North, Range 27 West.

7. All that part of the Northwest Quarter (NW¼) of the Southeast Quarter (SE¼), of Section Thirteen (13), Township One Hundred Eight (108) North of Range Twenty-seven (27) West, described as follows: Commencing at a point on the West line of said Northwest Quarter (NW¼) of the Southeast Quarter (SE¼) Seventy-two (72) feet North of the Southwest corner thereof; running thence East at right angles to said West line One Hundred Eighty-five (185) feet; thence North Sixty-six (66) feet; thence West on a line parallel with South line of said tract One Hundred Eighty- five (185) feet to said West line of said Forty-acre tract; thence South along said West line Sixty- six (66) feet to the place of beginning; also a right of way adjoining said tract hereby conveyed Fifteen (15) feet in width, and thence South to Pleasant Street in City of Mankato, said right of way following present traveled track.

8. That part of the Southwest Quarter of the Southeast Quarter of Section 13 and that part of the Northwest Quarter of the Southeast Quarter of Section 13, all in Township 108 North, Range 27 West Blue Earth County, described as: Commencing at the northwest corner of the Southwest Quarter of the Southeast Quarter of Section 13, thence North 89 degrees 00 minutes 25 seconds East (assumed bearing), along the north line of the Southwest Quarter of the Southeast Quarter of Section 13 a distance of 8.32 feet to the point of beginning; thence North 00 degrees 27 minutes 42 seconds East along a line parallel with the North-South center line of Section 13 a distance of 71.79 feet; thence South 89 degrees 32 minutes 18 seconds East at right angles to the North-South center line of Section 13, a distance of 202.06 feet; thence South 00 degrees 27 minutes 42 seconds West along a line parallel with the North-South center line of Section 13, a distance of 45.40 feet to a point on the northerly right of way line of Pleasant Street; thence South 60 degrees 35 minutes 51 seconds West, along said northerly line, 233.00 feet to the point of intersection with a line parallel with and distant 8.32 feet easterly of the North-South center line of Section 13; thence North 00 degrees 27 minutes 42 seconds East along said parallel line, 89.63 feet to the point of beginning.

OWNERS / DEVELOPERS:
Independent School District No. 77
PO Box 8741
Mankato, MN 56001

SURVEYOR:
ISG
115 E. Hickory Street Suite 300
Mankato, MN 56001
(507)-387-6651

AREA TABLE:
Lot 1 Block 1 = 24.96 acres
Lot 1 Block 2 = 6.96 acres
Outlot A = 17.25 acres
Right of Way = 0.13 acres
Total = 49.30 acres

EXISTING PROPERTY:
ZONED: R-1 (One-Family Dwelling) (per City of Mankato website)

Setbacks
Building
Front = 30 feet
Rear = 25 feet
Side = 6 feet

BENCHMARK:
Top nut fire hydrant located on south side of Riverfront Drive at northeast corner of property.
Elevation = 786.55 (NAVD88)

FLOOD ZONE:
Parts of the surveyed premises shown on this survey map are in Flood Zone X (areas of the 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from the 1% annual chance flood) and Zone X (areas determined to be outside the 0.2% annual chance floodplain), according to Flood Insurance Rate Map Community Panel No. 27013C0092F, published by the Federal Emergency Management Agency, effective date February 22, 2024.

Parts of the surveyed premises shown on this survey map are in Special Flood Hazard Area AE (base flood areas determined) and Zone X (areas determined to be outside the 0.2% annual chance floodplain), according to Flood Insurance Rate Map Community Panel No. 27013C0094F, published by the Federal Emergency Management Agency, effective date February 22, 2024.

NOTE:

A blanket easement covering storm and sanitary sewer north of Pleasant Street exists per Book 152, Page 531, Blue Earth County Records.

ISG

I HEREBY CERTIFY THAT THIS SURVEY, PLAN, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.

RYAN E. KOTTHOFF

DATE 8/18/25 LIC. NO. 61565

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PROJECT

MANKATO WEST HIGH SCHOOL

ADDITION AND RENOVATION

MANKATO MINNESOTA

REVISION SCHEDULE

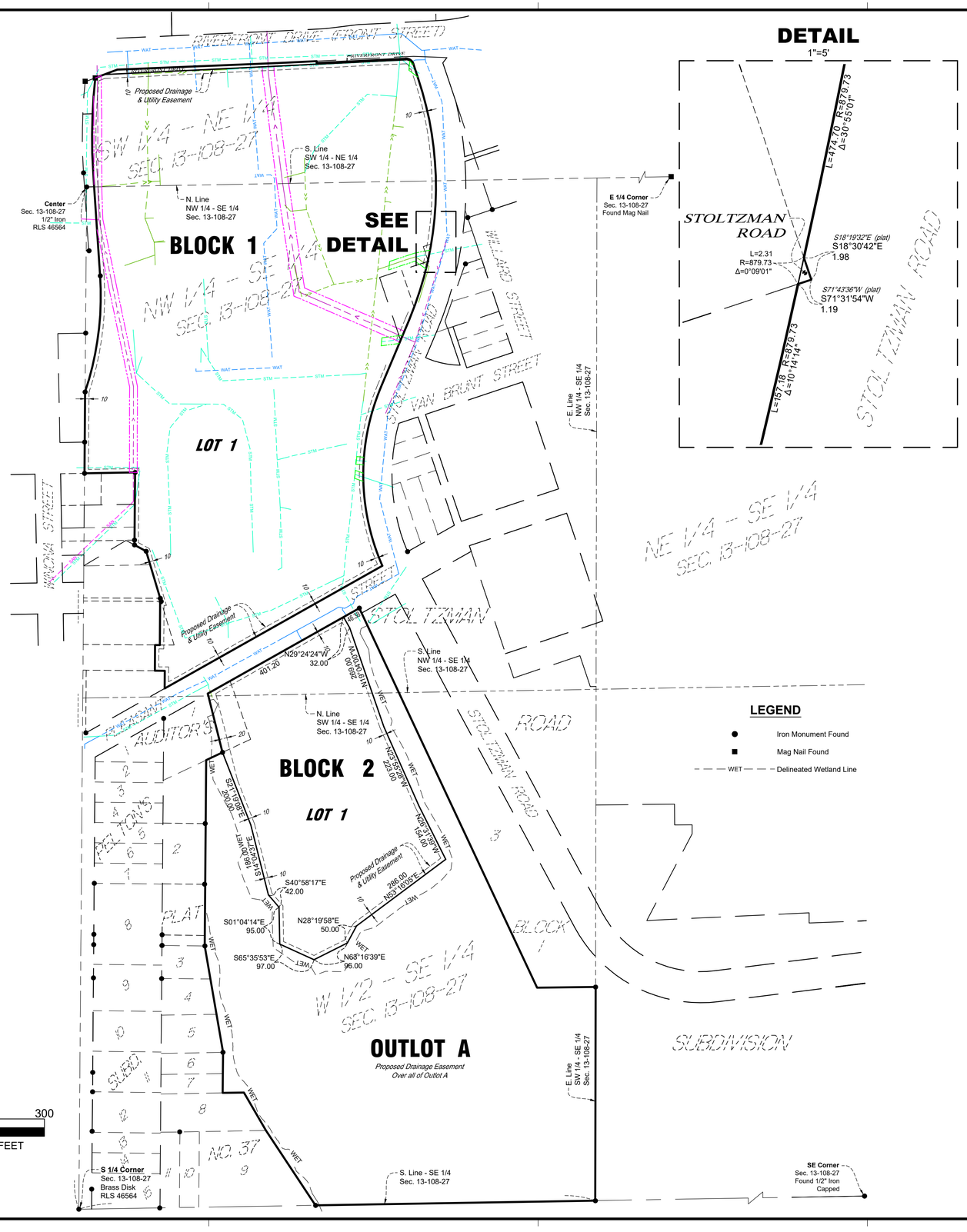
DATE	DESCRIPTION	BY
8/18/25	City Comments	KH
10/10/25	City Comments	KH

PROJECT NO.	22-27129
FILE NAME	27129 PPLAT
DRAWN BY	KH
DESIGNED BY	---
REVIEWED BY	---
ORIGINAL ISSUE DATE	7/22/25
CLIENT PROJECT NO.	-

TITLE

PRELIMINARY PLAT

SHEET 1 OF 4



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6. Commencing at a point 138 feet North of the Southwest corner of the NW ¼ SE ¼ of Section 13-108-27, thence North on the West line of said NW ¼ SE ¼ of said Sec. 13, 120 feet, thence east 197.32 feet, thence southeasterly 125.50 feet to a point 234 feet directly east of the point of beginning, thence West 234 feet to the place of beginning; except the North 8 feet of said premises, together with easement for a driveway in the West 20 feet of said Northerly 8 foot strip; and except that part of the aforesaid Tract lying Easterly of the East line of the West 197.32 feet of the Northwest Quarter of the Southeast Quarter of Section 13, Township 108 North, Range 27 West.

7. All that part of the Northwest Quarter (NW¼) of the Southeast Quarter (SE¼), of Section Thirteen (13), Township One Hundred Eight (108) North of Range Twenty-seven (27) West, described as follows: Commencing at a point on the West line of said Northwest Quarter (NW¼) of the Southeast Quarter (SE¼) Seventy-two (72) feet North of the Southwest corner thereof; running thence East at right angles to said West line One Hundred Eighty-five (185) feet; thence North Sixty-six (66) feet; thence West on a line parallel with South line of said tract One Hundred Eighty- five (185) feet to said West line of said Forty-acre tract; thence South along said West line Sixty- six (66) feet to the place of beginning; also a right of way adjoining said tract hereby conveyed Fifteen (15) feet in width, and thence South to Pleasant Street in City of Mankato, said right of way following present traveled track.

8. That part of the Southwest Quarter of the Southeast Quarter of Section 13 and that part of the Northwest Quarter of the Southeast Quarter of Section 13, all in Township 108 North, Range 27 West Blue Earth County, described as: Commencing at the northwest corner of the Southwest Quarter of the Southeast Quarter of Section 13, thence North 89 degrees 00 minutes 25 seconds East (assumed bearing), along the north line of the Southwest Quarter of the Southeast Quarter of Section 13 a distance of 8.32 feet to the point of beginning; thence North 00 degrees 27 minutes 42 seconds East along a line parallel with the North-South center line of Section 13 a distance of 71.79 feet; thence South 89 degrees 32 minutes 18 seconds East at right angles to the North-South center line of Section 13, a distance of 202.06 feet; thence South 00 degrees 27 minutes 42 seconds West along a line parallel with the North-South center line of Section 13, a distance of 45.40 feet to a point on the northerly right of way line of Pleasant Street; thence South 60 degrees 35 minutes 51 seconds West, along said northerly line, 233.00 feet to the point of intersection with a line parallel with and distant 8.32 feet easterly of the North-South center line of Section 13; thence North 00 degrees 27 minutes 42 seconds East along said parallel line, 89.63 feet to the point of beginning.

OWNERS / DEVELOPERS:
Independent School District No. 77
PO Box 8741
Mankato, MN 56001

SURVEYOR:
ISG
115 E. Hickory Street Suite 300
Mankato, MN 56001
(507)-387-6651

AREA TABLE:
Lot 1 Block 1 = 24.96 acres
Lot 1 Block 2 = 6.96 acres
Outlot A = 17.25 acres
Right of Way = 0.13 acres
Total = 49.30 acres

EXISTING PROPERTY:
ZONED: R-1 (One-Family Dwelling) (per City of Mankato website)

Setbacks
Building
Front = 30 feet
Rear = 25 feet
Side = 6 feet

LEGEND
- Sanitary Sewer Line
- Sanitary Sewer Line Per City
- Storm Sewer Line
- Storm Sewer Line Per City
- Watermain Per City
- Proposed Private Sanitary Easement Line
- Proposed Private Storm Easement Line

BENCHMARK:
Top nut fire hydrant located on south side of Riverfront Drive at northeast corner of property.
Elevation = 786.55 (NAVD88)

FLOOD ZONE:
Parts of the surveyed premises shown on this survey map are in Flood Zone X (areas of the 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from the 1% annual chance flood) and Zone X (areas determined to be outside the 0.2% annual chance floodplain), according to Flood Insurance Rate Map Community Panel No. 27013C0092F, published by the Federal Emergency Management Agency, effective date February 22, 2024.

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NOTE:

1. A blanket easement covering storm and sanitary sewer north of Pleasant Street exists per Book 152, Page 531, Blue Earth County Records.

2. Aerial photograph shown on this sheet is from 2025, provided by Blue Earth County.

ISG

I HEREBY CERTIFY THAT THIS SURVEY, PLAN, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.

RYAN E. KOTTHOFF

DATE 7/22/25 LIC. NO. 61565

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PROJECT

MANKATO WEST HIGH SCHOOL

ADDITION AND RENOVATION

MANKATO MINNESOTA

REVISION SCHEDULE

DATE	DESCRIPTION	BY
8/18/25	City Comments	KH
10/10/25	City Comments	KH

PROJECT NO.	22-27129
FILE NAME	27129 PPLAT
DRAWN BY	KH
DESIGNED BY	---
REVIEWED BY	---
ORIGINAL ISSUE DATE	7/22/25
CLIENT PROJECT NO.	-

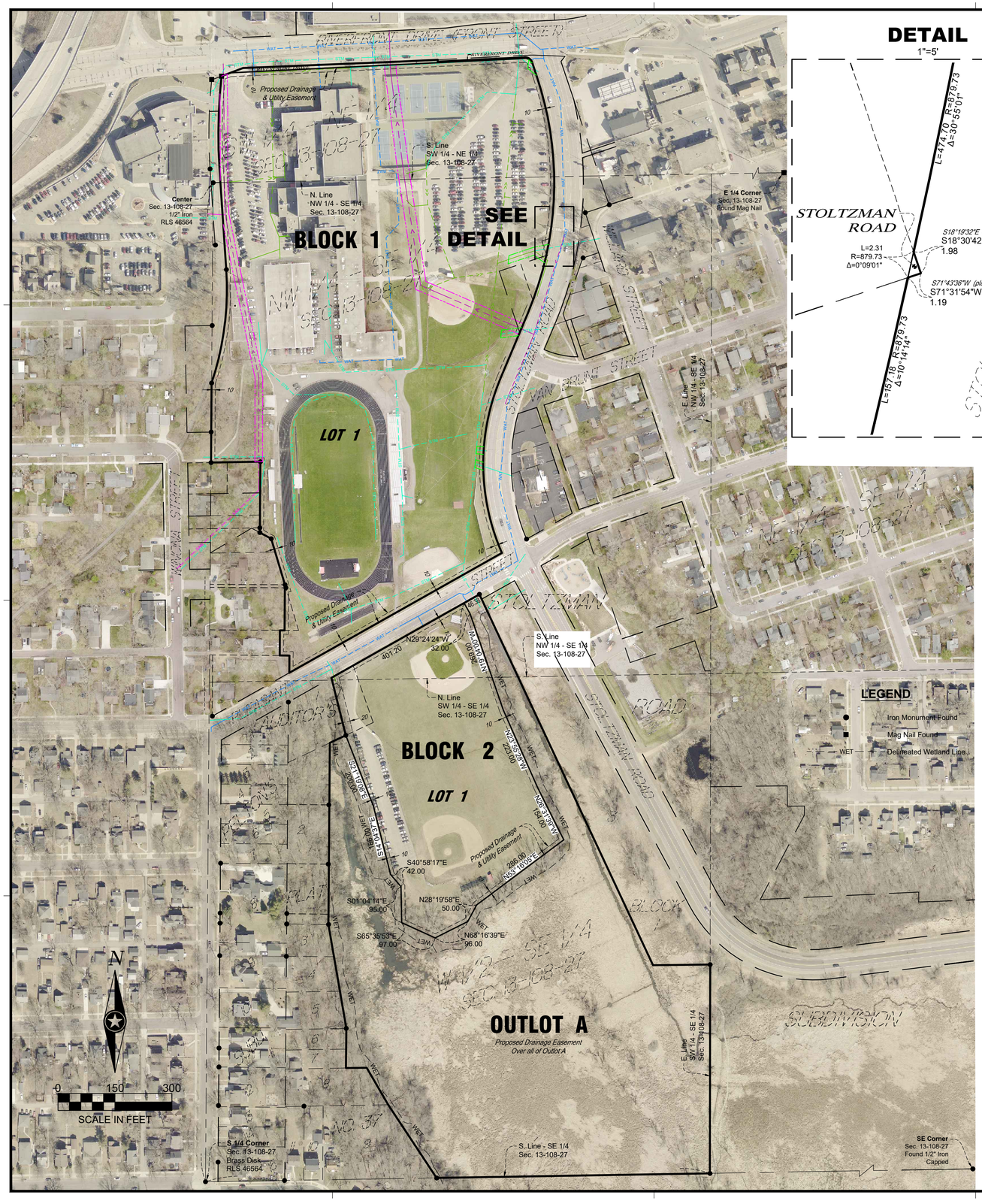
TITLE

PRELIMINARY PLAT

SHEET

2

OF 4



DETAIL
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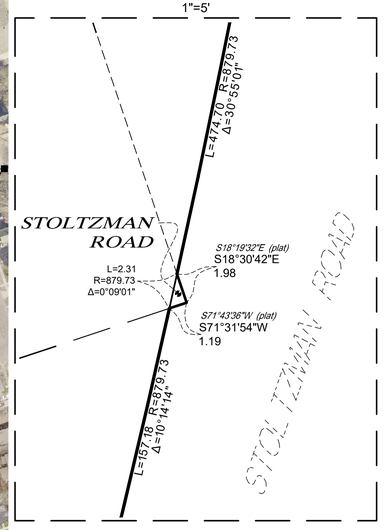

MANKATO WEST HIGH SCHOOL SUBDIVISION

EXISTING LEGAL DESCRIPTION:
(Per Preliminary Title Opinion)

All that part of the West Half of the Southeast Quarter of Section 13, Township 108, Range 27, Blue Earth County, Minnesota, which lies southerly of the South right-of-way line of W. Pleasant Street in the City of Mankato, easterly of Auditor's Plat No. 37 and westerly of Stoltzman Road Subdivision, Blue Earth County, Minnesota.

AND

Commencing at a point on the Southerly line of Pleasant Street One Hundred Thirty (130) feet Northeasterly of the Northeast corner of Lot One (1) of Pelton's Subdivision of a part of the Southwest Quarter of the Southeast Quarter (SW 1/4 SE 1/4) Section Thirteen (13), Township One Hundred Eight (108) North, Range Twenty-seven (27) West; thence running Northeasterly along said Southerly line of Pleasant Street a distance of Sixty-six (66) feet; thence Southeasterly at an angle of One Hundred Degrees (100°) a distance of One Hundred Fifty Nine and Thirty Six Hundredths (159.36) feet; thence Southwesterly at an angle of Eighty-four Degrees Fifteen Minutes (84°15') a distance of Seventy Nine and Fifty Two Hundredths (79.52) feet; thence Northwesterly at an angle of One Hundred One Degrees (101°) a distance of One Hundred Fifty Six (156) feet to the place of beginning, also known as Lot One (1) of Auditor's Plat No. 37 which is on file and of record in the office of the Register of Deeds in and for Blue Earth County, Minnesota.

AND

All that portion of the Northwest Quarter of the Southeast Quarter and the Southwest Quarter of the Northeast Quarter of Section 13, Township 108 North, Range 27, lying south of Front Street, west of Stoltzman Road Subdivision and northerly of W. Pleasant Street, Blue Earth County, Minnesota, EXCEPTING THEREFROM THE FOLLOWING TRACTS:

1. West Street Subdivision

2. West Mankato Trail

3. Auditor's Plat No. 83

4. The Northerly 82 feet of the following tract or parcel of land lying Easterly of Winona Street in West Mankato described as follows: Beginning at the Northeasterly intersection of West Seventh Street and Winona Street, thence Northerly along Winona Street to West Sixth Street, thence Easterly along West Sixth Street to Government Quarter line of Section 13-108-27, thence Southerly along said quarter line to West Seventh Street, thence Westerly along West Seventh Street to the place of beginning, except the Southerly 140 feet thereof: subject to existing street and alley easements, if any, and subject to all easements and restrictions of record; said tract lying East of Block 166 and Winona Street, in the City of Mankato.

A strip of land adjoining and easterly of the land described in Book 219 of Blue Earth County Records, page 65, said strip of land is described as: The West 43.00 feet of the North 82.00 feet of the South 238.22 feet of the North 975.27 feet of the Northwest quarter of the Southeast quarter of Section 13, Township 108 North, Range 27 West, Blue Earth County, Minnesota.

And the East 87.00 feet of the West 130.00 feet of the North 82.00 feet of the South 238.22 feet of the North 975.27 feet of the Northwest Quarter of the Southeast Quarter of Section 13, Township 108 North, Range 27 West, Blue Earth County, Minnesota.

**The North-South centerline of Section 13, Township 108 North, Range 27 West is, as indicated on the plat of West Mankato Trail, City of Mankato, Blue Earth County, Minnesota.

5. Beginning at a point 258 feet North of the Southwest corner of the Northwest Quarter of the Southeast Quarter, Section 13, Township 108, Range 27, thence North 82½ feet, thence northeasterly 58 degrees 30 minutes, 127 feet, thence southeasterly 59 degrees 30 minutes, 58.75 feet, thence southeasterly 45 degrees, 126.5 feet, thence west 107 degrees, 197.32 feet to the place of beginning.

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The North 8 feet of the following described tract of land, to-wit: Commencing at a point 138 feet North of the Southwest corner of the Northwest Quarter of the Southeast Quarter of Section 13, Township 108, Range 27, thence North on the West line of said Northwest Quarter of the Southeast Quarter of said Section 13, 120 feet, thence East 197.32 feet, thence Southeasterly 125.50 feet to a point 234 feet directly east of the point of beginning, thence West 234 feet to the place of beginning.

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OWNERS / DEVELOPERS:
Independent School District No. 77
PO Box 8741
Mankato, MN 56001

SURVEYOR:
ISG
115 E. Hickory Street Suite 300
Mankato, MN 56001
(507)-387-6651

AREA TABLE:
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Lot 1 Block 2 = 6.96 acres
Outlot A = 17.25 acres
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EXISTING PROPERTY:
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Setbacks
Building
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Rear = 25 feet
Side = 6 feet

BENCHMARK:
Top nut fire hydrant located on south side of Riverfront Drive at northeast corner of property.
Elevation = 786.55 (NAVD88)

FLOOD ZONE:
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LEGEND

- Sanitary Sewer Line
- SAN Sanitary Sewer Line Per City
- Storm Sewer Line
- STM Storm Sewer Line Per City
- WAT Watermain Per City
- Proposed Private Sanitary Easement Line
- Proposed Private Storm Easement Line

ISG

I HEREBY CERTIFY THAT THIS SURVEY, PLAN, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.

RYAN E. KOTTHOFF

DATE 7/22/25 LIC. NO. 61565

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PROJECT

MANKATO WEST HIGH SCHOOL

ADDITION AND RENOVATION

MANKATO MINNESOTA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY
8/18/25	City Comments	KH
10/10/25	City Comments	KH

PROJECT NO.	22-27129
FILE NAME	27129 PPLAT
DRAWN BY	KH
DESIGNED BY	---
REVIEWED BY	---
ORIGINAL ISSUE DATE	7/22/25
CLIENT PROJECT NO.	-

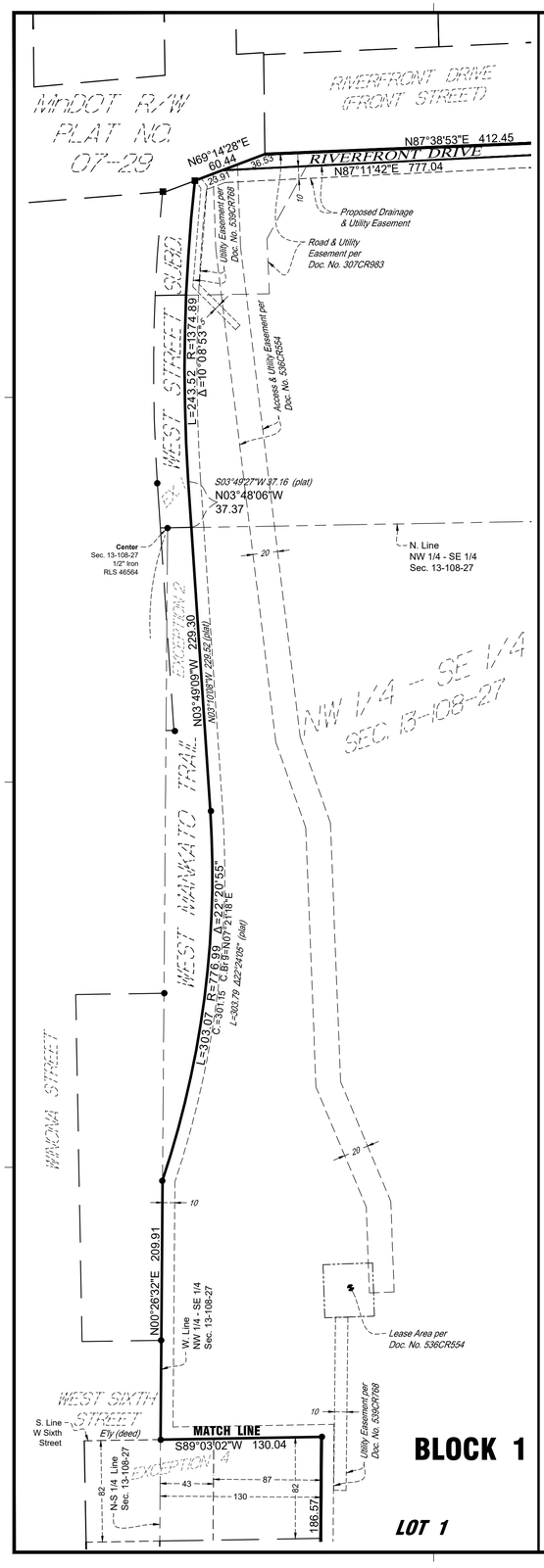
TITLE

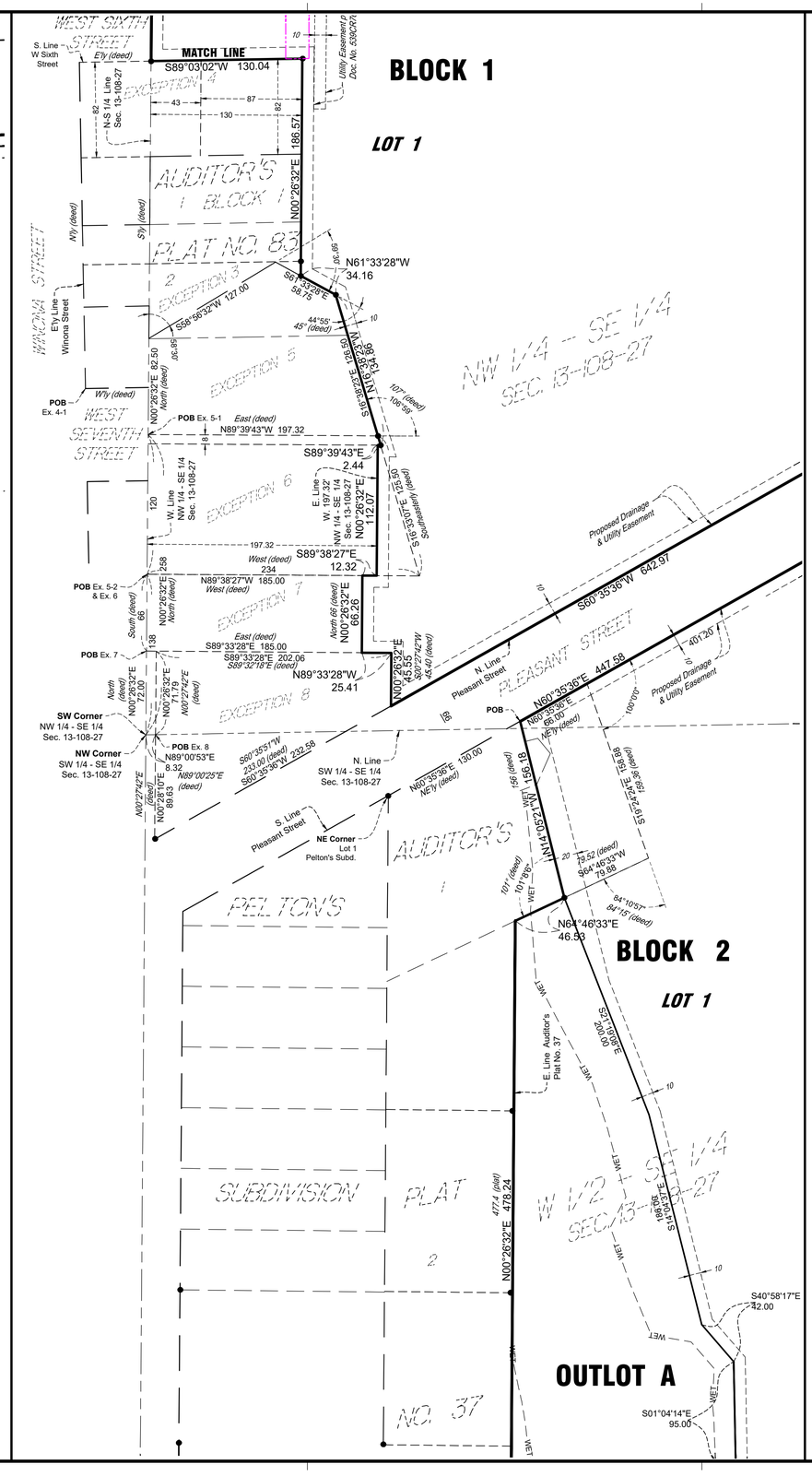
PRELIMINARY PLAT

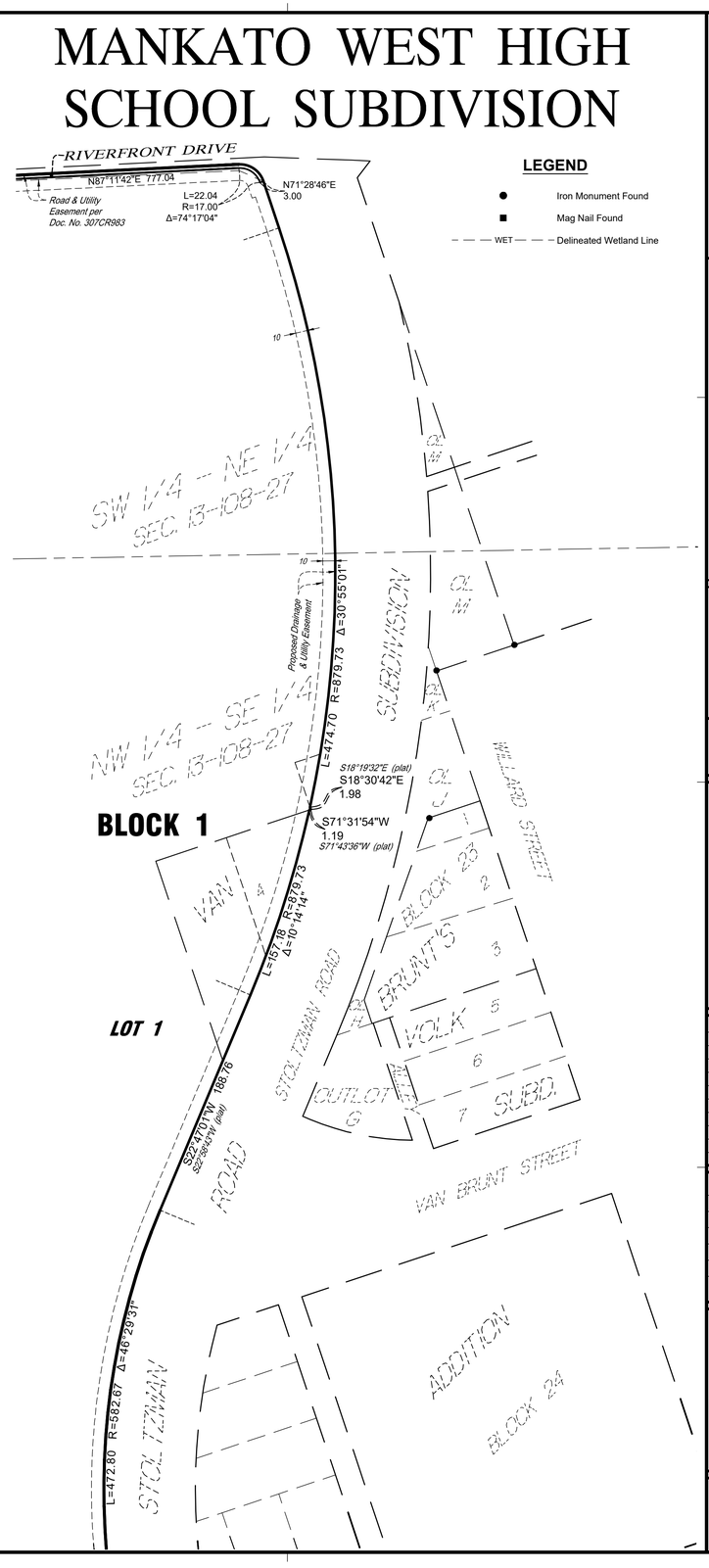
SHEET

2 OF 4

MANKATO WEST HIGH SCHOOL SUBDIVISION







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RYAN E. KOTTHOFF

DATE 7/22/25 LIC. NO. 61565

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PROJECT

MANKATO WEST HIGH SCHOOL

ADDITION AND RENOVATION

MANKATO MINNESOTA

REVISION SCHEDULE

DATE	DESCRIPTION	BY
8/18/25	City Comments	KH
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DRAWN BY	KH
DESIGNED BY	---
REVIEWED BY	---
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CLIENT PROJECT NO.	-

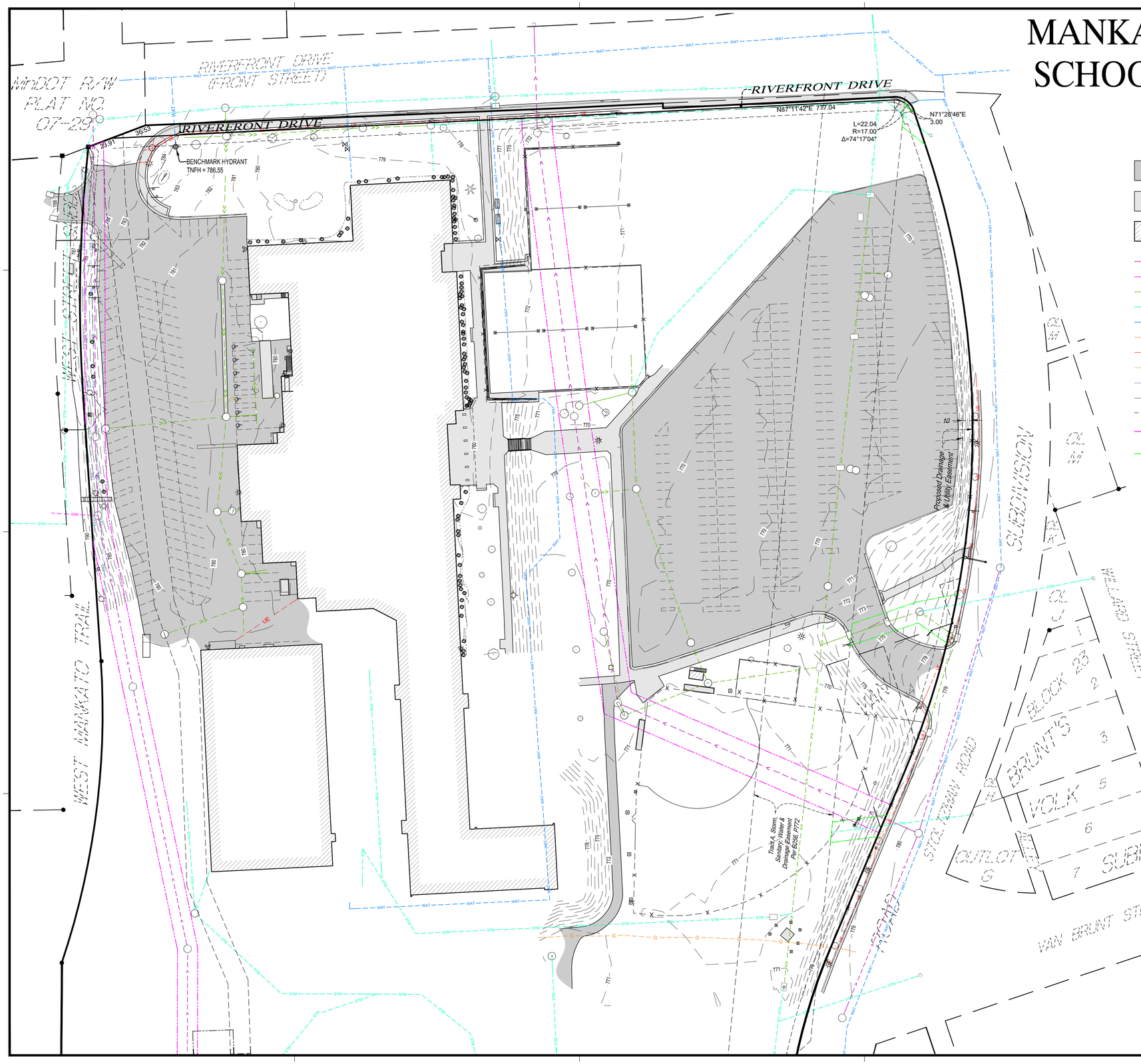
TITLE

PRELIMINARY PLAT

SHEET

3 OF 4

MANKATO WEST HIGH SCHOOL SUBDIVISION



LEGEND

- Bituminous Surface
- Concrete Surface
- Existing Building
- Sanitary Sewer Line
- Sanitary Sewer Line Per City
- Storm Sewer Line
- Storm Sewer Line Per City
- Watermain Per City
- Underground Gas Line
- Underground Electric Line
- Underground Utility Line
- Overhead Utility Line
- Landscaping Edge
- Fence
- Proposed Private Sanitary Easement Line
- Proposed Private Storm Easement Line
- Utility Vault
- Light Pole
- Utility Pole/Guy Wire
- Hydrant
- Fire Department Connection
- Water Valve
- Water Shut Off
- Manhole/Catch Basin
- Roof Drain
- Downspout
- Handicapped Parking Stall
- Flag Pole
- Post
- Guard Post
- Sign
- Traffic Signal Pole
- Bush
- Coniferous Tree
- Deciduous Tree
- Iron Monument Found
- Mag Nail Found

NOTE:
Topographic information shown on this sheet is limited to the area of proposed improvements.

N

0 50 100
SCALE IN FEET

ISG

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PROJECT

MANKATO WEST HIGH SCHOOL

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TITLE

PRELIMINARY PLAT

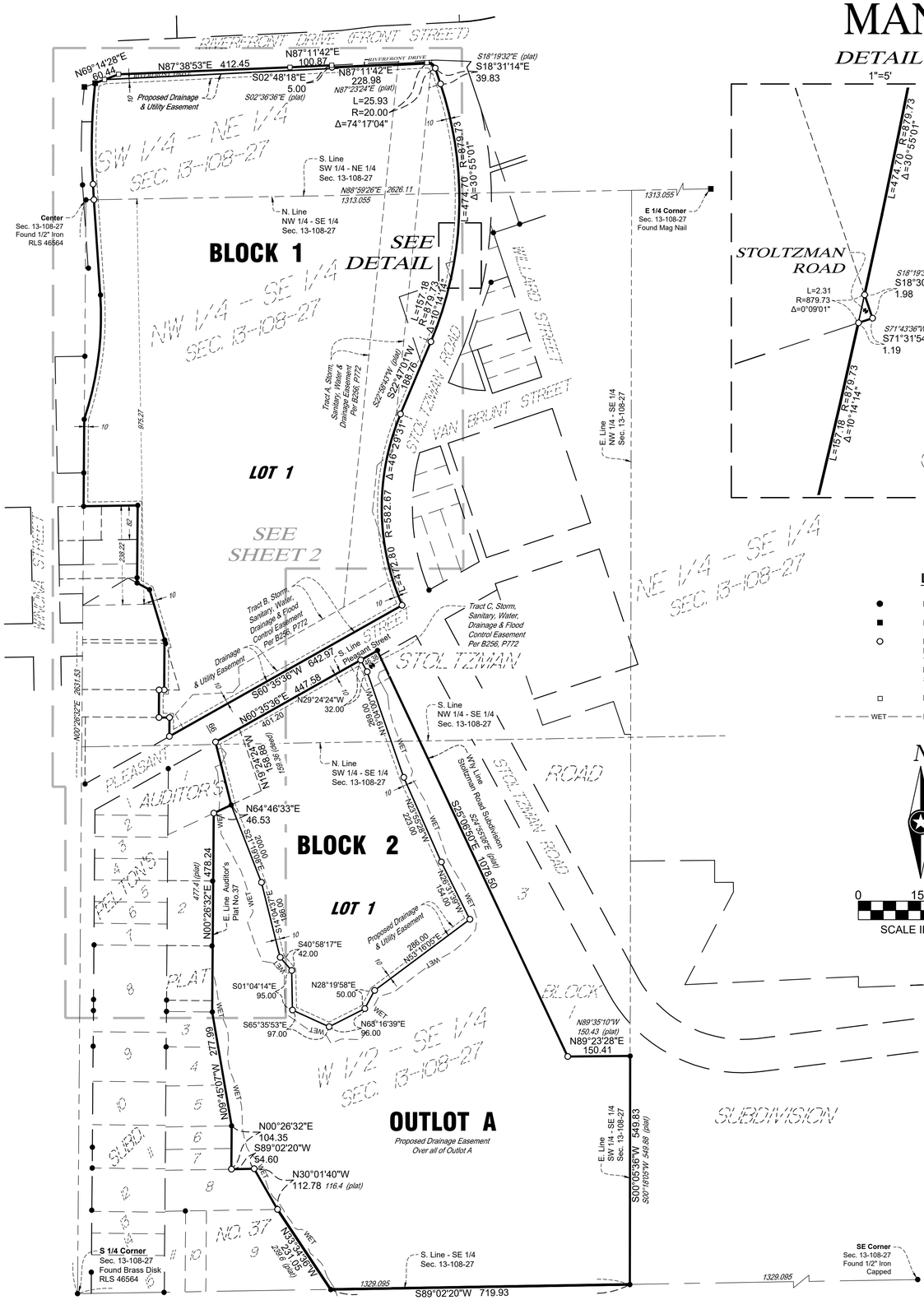
SHEET

4

OF 4

FINAL PLAT FOR REVIEW

MANKATO WEST HIGH SCHOOL SUBDIVISION



DETAIL

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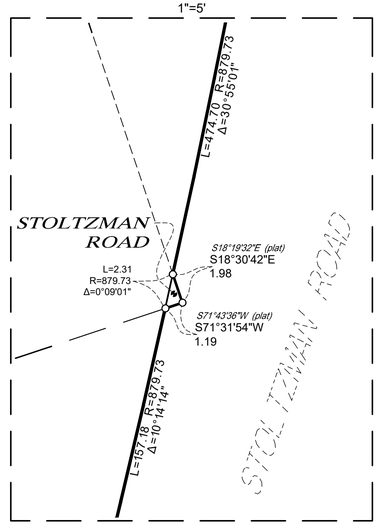

LEGEND

- ● Iron Monument Found
- ■ Mag Nail Found
- ○ Indicates 1/2" Dia. x 18" Long Solid Iron Pipe Set With Plastic Cap Marked By ISG, License No. 61565 To Be Set Before Time of Recording.
- □ Indicates Mag Nail Set
- WET Delineated Wetland Line

INSTRUMENT OF DEDICATION

KNOW ALL PERSONS BY THESE PRESENTS: That Independent School District # 77, a corporation under the laws of the State of Minnesota f/k/a Board of Education of the City of Mankato, owner of the following described property:

All that part of the West Half of the Southeast Quarter of Section 13, Township 108, Range 27, Blue Earth County, Minnesota, which lies southerly of the South right-of-way line of W. Pleasant Street in the City of Mankato, easterly of Auditor's Plat No. 37 and westerly of Stoltzman Road Subdivision, Blue Earth County, Minnesota.

AND

Commencing at a point on the Southerly line of Pleasant Street One Hundred Thirty (130) feet Northeasterly of the Northeast corner of Lot One (1) of Pelton's Subdivision of a part of the Southwest Quarter of the Southeast Quarter (SW 1/4 SE 1/4) Section Thirteen (13), Township One Hundred Eight (108) North, Range Twenty-seven (27) West; thence running Northeasterly along said Southerly line of Pleasant Street a distance of Sixty-six (66) feet; thence Southeasterly at an angle of One Hundred Degrees (100°) a distance of One Hundred Fifty Nine and Thirty Six Hundredths (159.36) feet; thence Southwesterly at an angle of Eighty-four Degrees Fifteen Minutes (84°15') a distance of Seventy Nine and Fifty Two Hundredths (79.52) feet; thence Northwesterly at an angle of One Hundred One Degrees (101°) a distance of One Hundred Fifty Six (156) feet to the place of beginning, also known as Lot One (1) of Auditor's Plat No. 37 which is on file and of record in the office of the Register of Deeds in and for Blue Earth County, Minnesota.

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1. West Street Subdivision

2. West Mankato Trail

3. Auditor's Plat No. 83

4. The Northerly 82 feet of the following tract or parcel of land lying Easterly of Winona Street in West Mankato described as follows: Beginning at the Northeasterly intersection of West Seventh Street and Winona Street, thence Northerly along Winona Street to West Sixth Street, thence Easterly along West Sixth Street to Government Quarter line of Section 13-108-27, thence Southerly along said quarter line to West Seventh Street, thence Westerly along West Seventh Street to the place of beginning, except the Southerly 140 feet thereof: subject to existing street and alley easements, if any, and subject to all easements and restrictions of record; said tract lying East of Block 166 and Winona Street, in the City of Mankato.

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**The North-South centerline of Section 13, Township 108 North, Range 27 West is, as indicated on the plat of West Mankato Trail, City of Mankato, Blue Earth County, Minnesota.

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6. Commencing at a point 138 feet North of the Southwest corner of the NW ¼ SE ¼ of Section 13-108-27, thence North on the West line of said NW ¼ SE ¼ of said Sec. 13, 120 feet, thence east 197.32 feet, thence southeasterly 125.50 feet to a point 234 feet directly east of the point of beginning, thence West 234 feet to the place of beginning; except the North 8 feet of said premises, together with easement for a driveway in the West 20 feet of said Northerly 8 foot strip; and except that part of the aforesaid Tract lying Easterly of the East line of the West 197.32 feet of the Northwest Quarter of the Southeast Quarter of Section 13, Township 108 North, Range 27 West.

7. All that part of the Northwest Quarter (NW¼) of the Southeast Quarter (SE¼), of Section Thirteen (13), Township One Hundred Eight (108) North of Range Twenty-seven (27) West, described as follows: Commencing at a point on the West line of said Northwest Quarter (NW¼) of the Southeast Quarter (SE¼) Seventy-two (72) feet North of the Southwest corner thereof; running thence East at right angles to said West line One Hundred Eighty-five (185) feet; thence North Sixty-six (66) feet; thence West on a line parallel with South line of said tract One Hundred Eighty- five (185) feet to said West line of said Forty-acre tract: thence South along said West line Sixty- six (66) feet to the place of beginning; also a right of way adjoining said tract hereby conveyed Fifteen (15) feet in width, and thence South to Pleasant Street in City of Mankato, said right of way following present traveled track.

8. That part of the Southwest Quarter of the Southeast Quarter of Section 13 and that part of the Northwest Quarter of the Southeast Quarter of Section 13, all in Township 108 North, Range 27 West Blue Earth County, described as: Commencing at the northwest corner of the Southwest Quarter of the Southeast Quarter of Section 13, thence North 89 degrees 00 minutes 25 seconds East (assumed bearing), along the north line of the Southwest Quarter of the Southeast Quarter of Section 13 a distance of 8.32 feet to the point of beginning; thence North 00 degrees 27 minutes 42 seconds East along a line parallel with the North-South center line of Section 13 a distance of 71.79 feet; thence South 89 degrees 32 minutes 18 seconds East at right angles to the North-South center line of Section 13, a distance of 202.06 feet; thence South 00 degrees 27 minutes 42 seconds West along a line parallel with the North-South center line of Section 13, a distance of 45.40 feet to a point on the northerly right of way line of Pleasant Street; thence South 60 degrees 35 minutes 51 seconds West, along said northerly line, 233.00 feet to the point of intersection with a line parallel with and distant 8.32 feet easterly of the North-South center line of Section 13; thence North 00 degrees 27 minutes 42 seconds East along said parallel line, 89.63 feet to the point of beginning.

Has caused the same to be surveyed and platted as **MANKATO WEST HIGH SCHOOL SUBDIVISION** and does hereby dedicate to the public, for public use, the public way and the drainage and utility easements as created by this plat.

In witness whereof said Independent School District # 77, a corporation under the laws of the State of Minnesota, has caused these presents to be signed by its proper officer this _____ day of _____, 20____.

Signed: Independent School District # 77

_____
Dr. Paul Peterson, Superintendent

State of _____

County of _____

This instrument was acknowledged before me on _____, 20____ by Dr. Paul Peterson, Superintendent , of Independent School District # 77, a corporation under the laws of the State of Minnesota, on behalf of the corporation.

_____
_____
Notary Public _____
My Commission Expires _____

SURVEYOR'S CERTIFICATE

I, Ryan E. Kotthoff, do hereby certify that this plat was prepared by me or under my direct supervision; that I am a duly Licensed Land Surveyor in the State of Minnesota; that this plat is a correct representation of the boundary survey; that all mathematical data and labels are correctly designated on this plat; that all monuments depicted on this plat have been or, will be correctly set within one year; that all water boundaries and wet lands, as defined in Minnesota Statutes, Section 505.01, Subd. 3, as of the date of this certificate are shown and labeled on this plat; and all public ways are shown and labeled on this plat.

Dated this _____ day of _____, 20____.

_____
Ryan E. Kotthoff, Licensed Land Surveyor
Minnesota License No. 61565

State of Minnesota
County of Blue Earth

This instrument was acknowledged before me on _____, 20____ by Ryan E. Kotthoff, Licensed Land Surveyor.

_____
Kent A. Hays
Notary Public, Minnesota
My Commission Expires Jan. 31, 2030

MANKATO PLANNING COMMISSION

Be it known that on this _____ day of _____, 20____, the Planning Commission of the City of Mankato did duly review this plat of **MANKATO WEST HIGH SCHOOL SUBDIVISION**.

_____ Chair Person

_____ Secretary

CITY COUNCIL, CITY OF MANKATO, MINNESOTA

This plat of **MANKATO WEST HIGH SCHOOL SUBDIVISION**, was approved and accepted by the City Council of the City of Mankato, Minnesota at a regular meeting thereof held this _____ day of _____, 20____, and said plat is in compliance with the provisions of Minnesota Statutes, Section 505.03, Subd. 2.

_____ Mayor

_____ Clerk

TITLE OPINION

I, _____, Licensed Attorney, State of Minnesota, do hereby certify that the owners as indicated hereon represent all ownership interest in the land encompassed by this plat.

_____
Licensed Attorney

BLUE EARTH COUNTY PROPERTY AND ENVIRONMENTAL RESOURCES

I hereby certify that there are no delinquent taxes and/or delinquent special assessments, that the current taxes have been paid and that the transfer has been entered on the land described herein on the _____ day of _____, 20____.

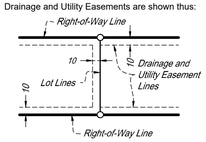
_____
Blue Earth County Property and Environmental Resources Director

COUNTY RECORDER, BLUE EARTH COUNTY, MINNESOTA

I hereby certify that this plat of **MANKATO WEST HIGH SCHOOL SUBDIVISION** was filed in the office of the County Recorder for public record on this _____ day of _____, 20____, at _____ o'clock _____M. and was duly filed in Book _____ of Plats, page _____, as Document No. _____.

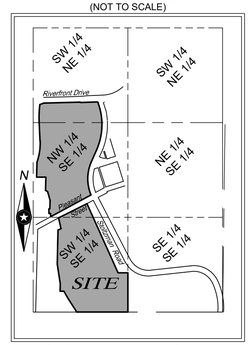
_____
Blue Earth County, County Recorder

Drainage and Utility Easements are shown thus:



Being 10 feet in width and adjoining right-of-way and Outlot lines as indicated on the plat.

VICINITY MAP
(NOT TO SCALE)

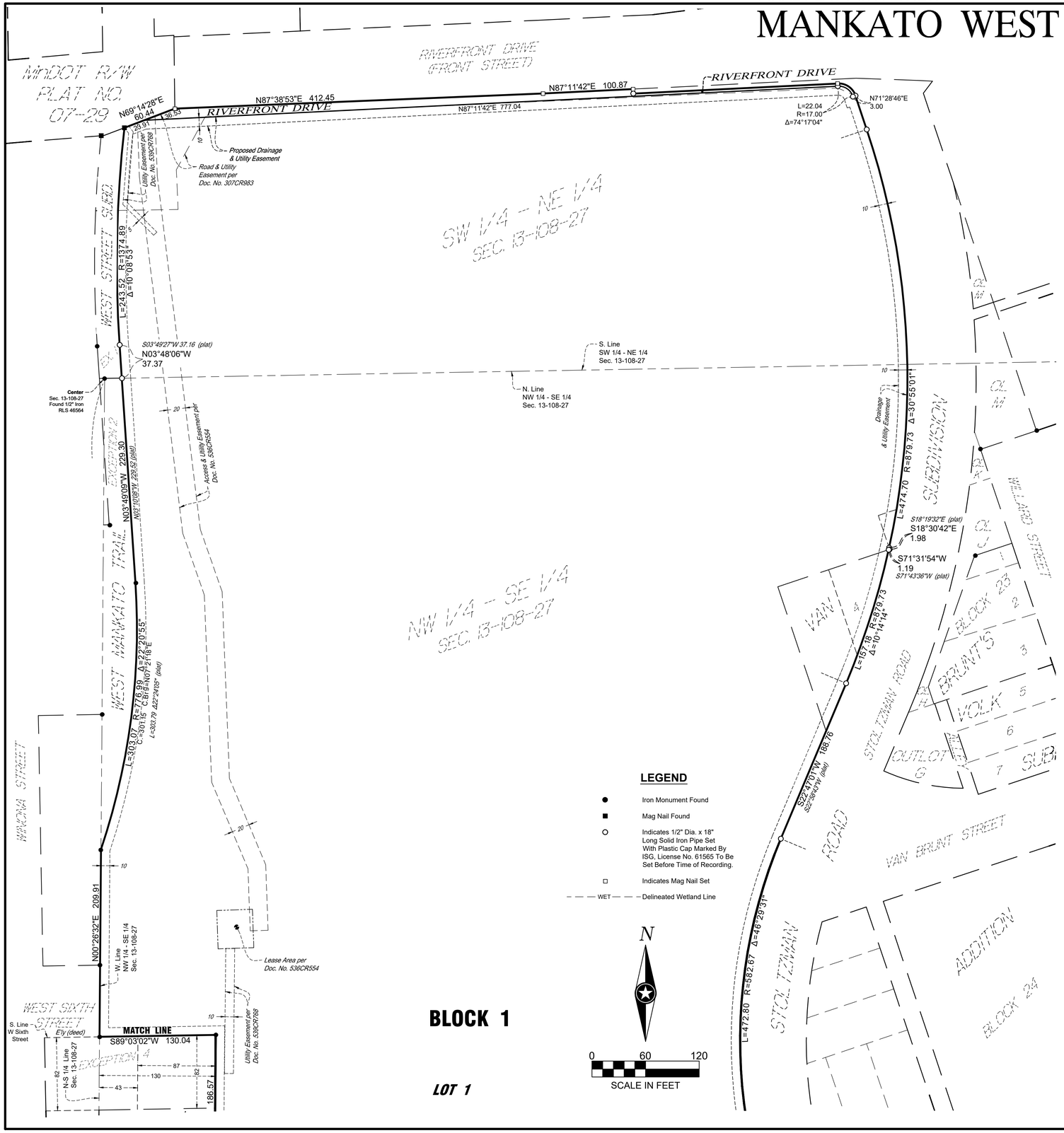


SEC. 13, TWP. 108, RGE. 27
Blue Earth County, Minnesota

ISG

JOB # 27129 DATE: 10/10/25

MANKATO WEST HIGH SCHOOL SUBDIVISION



LEGEND

- Iron Monument Found
- Mag Nail Found
- Indicates 1/2" Dia. x 18" Long Solid Iron Pipe Set With Plastic Cap Marked By ISG, License No. 61565 To Be Set Before Time of Recording.
- Indicates Mag Nail Set
- WET — Delineated Wetland Line

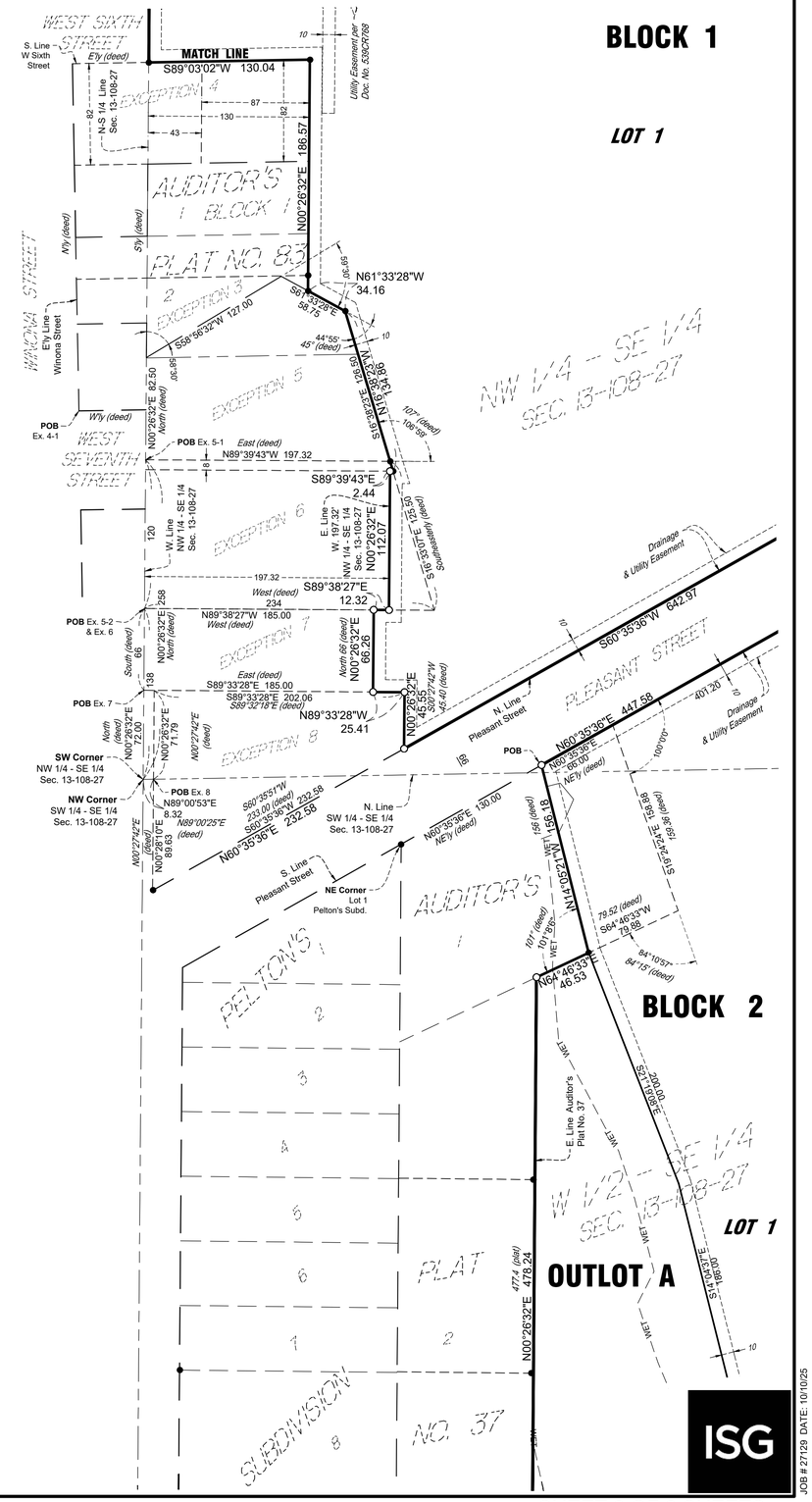
N

0 60 120

SCALE IN FEET

BLOCK 1

LOT 1



JOB # 27129 DATE: 10/10/25

Site Plan and Traffic Advisory Review Committee **1. 3.**

Meeting Date: 11/04/2025

Title

CY58-25

Request of APX Construction Group, with permission of the owner, for the vacation of a portion of a 10' utility easement located on the westerly side of Lot 2, Block 2 as per the recorded plat of Lime Valley Fourth Addition. The subject property is described as part of Lot 2, Block 2, Lime Valley-Fourth Addition, Blue Earth County (Blue Earth County PID R010431455007, 100 Summit Avenue).

Applicant

The applicant is APX Construction Group, on behalf of the property owner.

Request

The applicant is requesting the vacation of a portion of a 10' utility easement located on the westerly side of Lot 2, Block 2, per the recorded Plat of Lime Valley-Fourth Addition adjoining the west line of Lot 2, Block 2 said Lime Valley-Fourth Addition; excepting there from the 20.00 foot Drainage and Utility Easement adjoining the northerly line of said Lot 2 as dedicated per said Plat and excepting there from the variable width Utility Easement adjoining the Southerly line of said Lot 2 as dedicated per said Plat.

Location

The subject property is described as part of Lot 2, Block 2, Lime Valley-Fourth Addition, Blue Earth County (Blue Earth County PID R010431455007, 100 Summit Avenue).

Existing Land Use

The subject properties are currently used for aggregate storage.

Zoning

The subject properties are zoned M-2, Heavy Industrial District.

Environmentally Sensitive Areas

The subject parcel was delineated for wetlands and determined not to contain as much. A stream identified as a PEM1F, runs along the northern and eastern property boundaries of the subject area. A drainage easement was dedicated for the stream area.

Public Utilities

Public Utilities are available to the site via Summit Ave to the South. The applicant shall coordinate design of the new water service and required pressure actuator with the City of Mankato Department of Public Works.

Review

The applicant, APX Construction Group, with permission of the property owner, is requesting the vacation of a 3,515 Sq. Ft. portion of a 10' utility easement. This easement is located on the westerly side of Lot 2, Block 2, Lime Valley-Fourth Addition (100 Summit Ave).

The proposed easement vacation area excludes the 20.00-foot Drainage and Utility Easement adjoining the northerly line of Lot 2, and the variable-width Utility Easement adjoining the southerly line of Lot 2.

The easement vacation is being proposed to allow for the construction of a new concrete batch plant to be owned and operated by Cemstone and to be located across the existing easement location. In order to permit the construction of a structure at this location, the subject easement must be vacated.

The applicant has notified the utility companies and received signatures stating that the easement would not be necessary for their utility purposes. Based on the information received, there are no known utilities within the utility easement requested for vacation. Therefore, no utilities would need to be relocated as part of this vacation.

Cemstone currently operates a batch plant at 141 Summit Ave, which is located across Summit Ave SE from the subject properties.

Existing Site Conditions:
The site consists of 5.3 acres. The site was graded in 2016 as part of approved site construction plans. The proposed site construction plans were only partially completed in 2016. The improvements consisted of grading the site, construction of a filtration pond, removal of the 3rd Ave access, addition of a second access from Summit Ave, paving of a 100'x100' area, graveling of the site, and minor landscaping. Site grading directs on-site stormwater into the filtration pond on the east portion of the site, which then outlets into the existing ditch located along the north and east site boundaries.

Proposed Site Improvements:
Cemstone Companies intends to develop the site into a concrete plant with a standalone building, batch plant, aggregate storage, and paved parking & driving areas.

The proposed building will be addressed as 100 Summit Ave and the proposed batch plant as 104 Summit Ave.

All proposed site improvements shall conform to Mankato City Code; the proposed improvements will be subject to review through the Building Permit process. This will include, but not be limited to, the review of on-site stormwater management, screening, hard-surfacing, exterior storage, parking, operations, and landscaping.

Attachments

General Location Map
Aerial Map
Easement Vacation Exhibit
Proposed Site Plan
Proposed Civil Plans
Petition to Vacate

General Location Map

Date: October 2025

Author:

This information is to be used for reference purposes only. The City of Mankato does not guarantee accuracy of the material contained herein and is not responsible for misuse or misinterpretation.

N

Aerial Plan

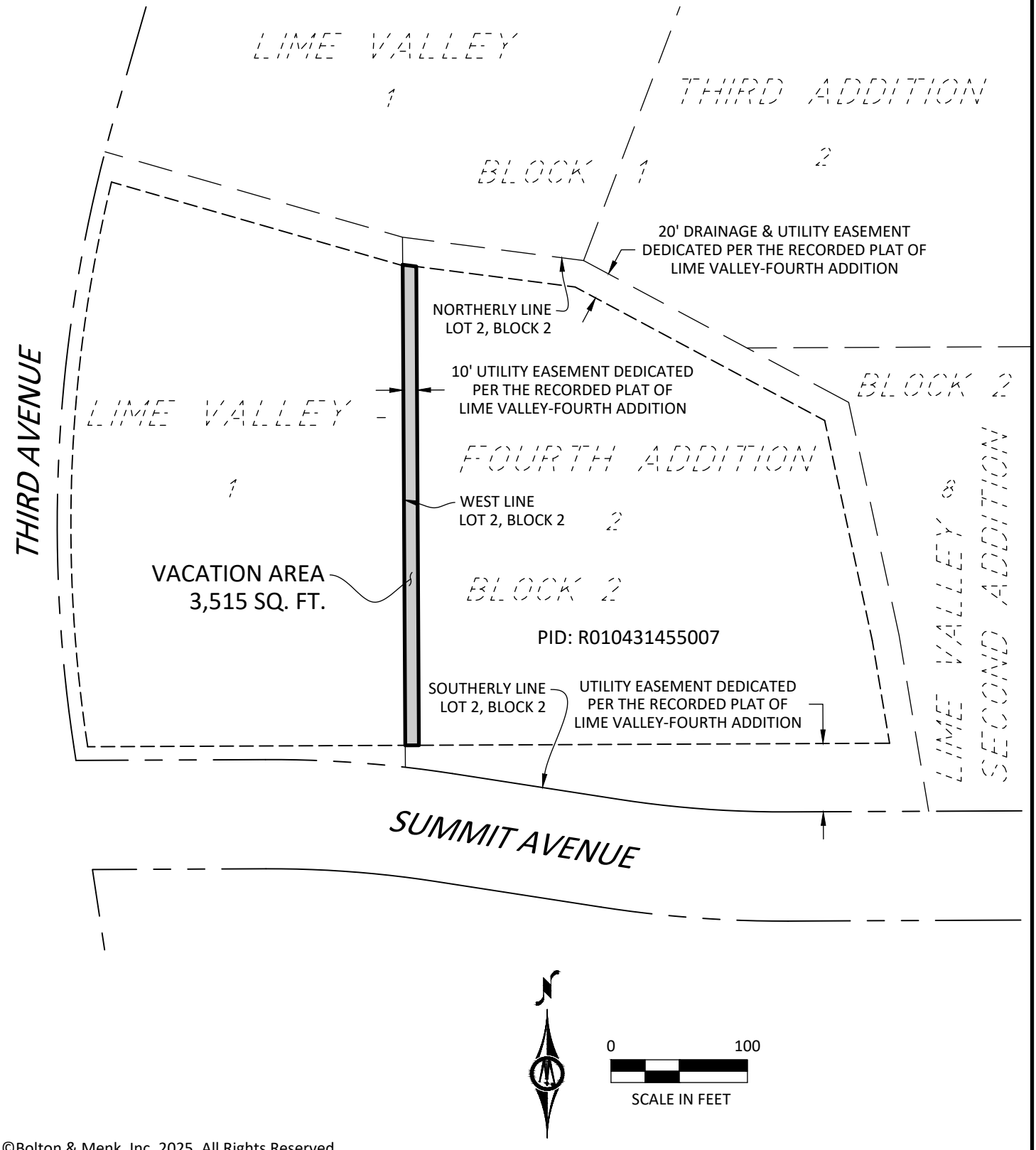
Date: October 2025

Author:

This information is to be used for reference purposes only. The City of Mankato does not guarantee accuracy of the material contained herein and is not responsible for misuse or misinterpretation.

N

EXHIBIT A



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CERTIFICATE OF EASEMENT VACATION
MANKATO, MINNESOTA

PART OF LOT 2, BLOCK 2, LIME VALLEY-FOURTH ADDITION,
BLUE EARTH COUNTY, MINNESOTA

BOLTON & MENK
1960 PREMIER DRIVE
MANKATO, MN 56001
(507) 625-4171

FOR: APX CONSTRUCTION GROUP

JOB NUMBER: 25X.141070.000 FIELD BOOK: DRAWN BY: CDT

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1.0 S31-T109N-R26W-(43)

EXHIBIT B

VACATION AREA

The 10.00 foot Utility Easement dedicated per the recorded Plat of Lime Valley-Fourth Addition adjoining the west line of Lot 2, Block 2 said Lime Valley-Fourth Addition; excepting there from the 20.00 foot Drainage and Utility Easement adjoining the northerly line of said Lot 2 as dedicated per said Plat and excepting there from the variable width Utility Easement adjoining the Southerly line of said Lot 2 as dedicated per said Plat.

SURVEYOR'S CERTIFICATION

I hereby certify that this survey, plan, or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

Janele Fowlds — 10/14/2025

Janele Fowlds
License Number 26748

Date

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CERTIFICATE OF EASEMENT VACATION
MANKATO, MINNESOTA

PART OF LOT 2, BLOCK 2, LIME VALLEY-FOURTH ADDITION, BLUE EARTH COUNTY, MINNESOTA

BOLTON & MENK
1960 PREMIER DRIVE
MANKATO, MN 56001
(507) 625-4171

FOR: APX CONSTRUCTION GROUP

JOB NUMBER: 25X.141070.000 FIELD BOOK: DRAWN BY: CDT

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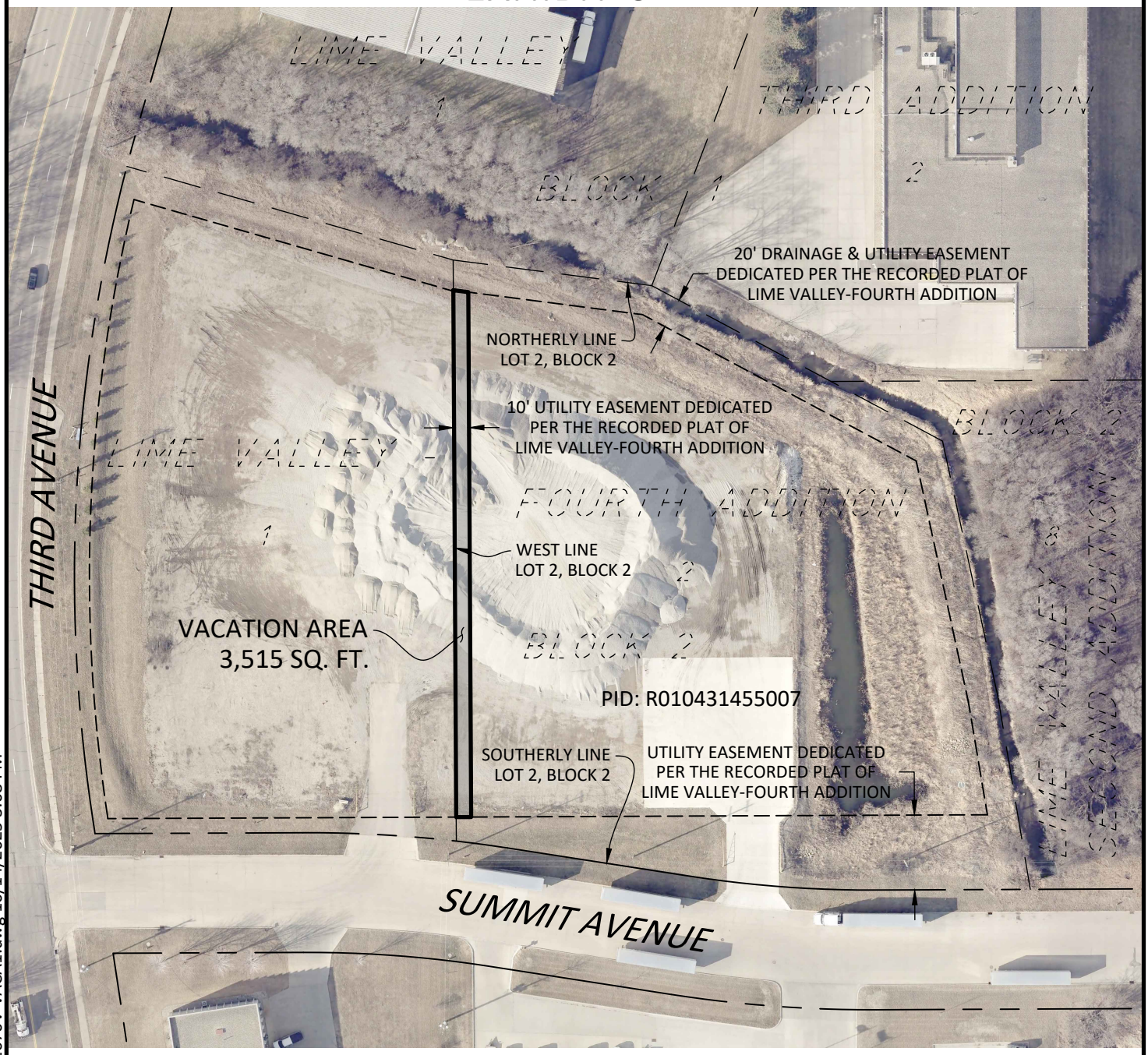
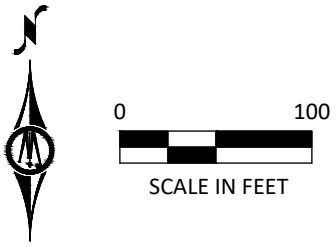
1.0 S31-T109N-R26W-(43)

EXHIBIT C





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CERTIFICATE OF EASEMENT VACATION
MANKATO, MINNESOTA

PART OF LOT 2, BLOCK 2, LIME VALLEY-FOURTH ADDITION,
BLUE EARTH COUNTY, MINNESOTA

FOR: APX CONSTRUCTION GROUP

BOLTON & MENK
1960 PREMIER DRIVE
MANKATO, MN 56001
(507) 625-4171

JOB NUMBER: 25X.141070.000 FIELD BOOK: DRAWN BY: CDT

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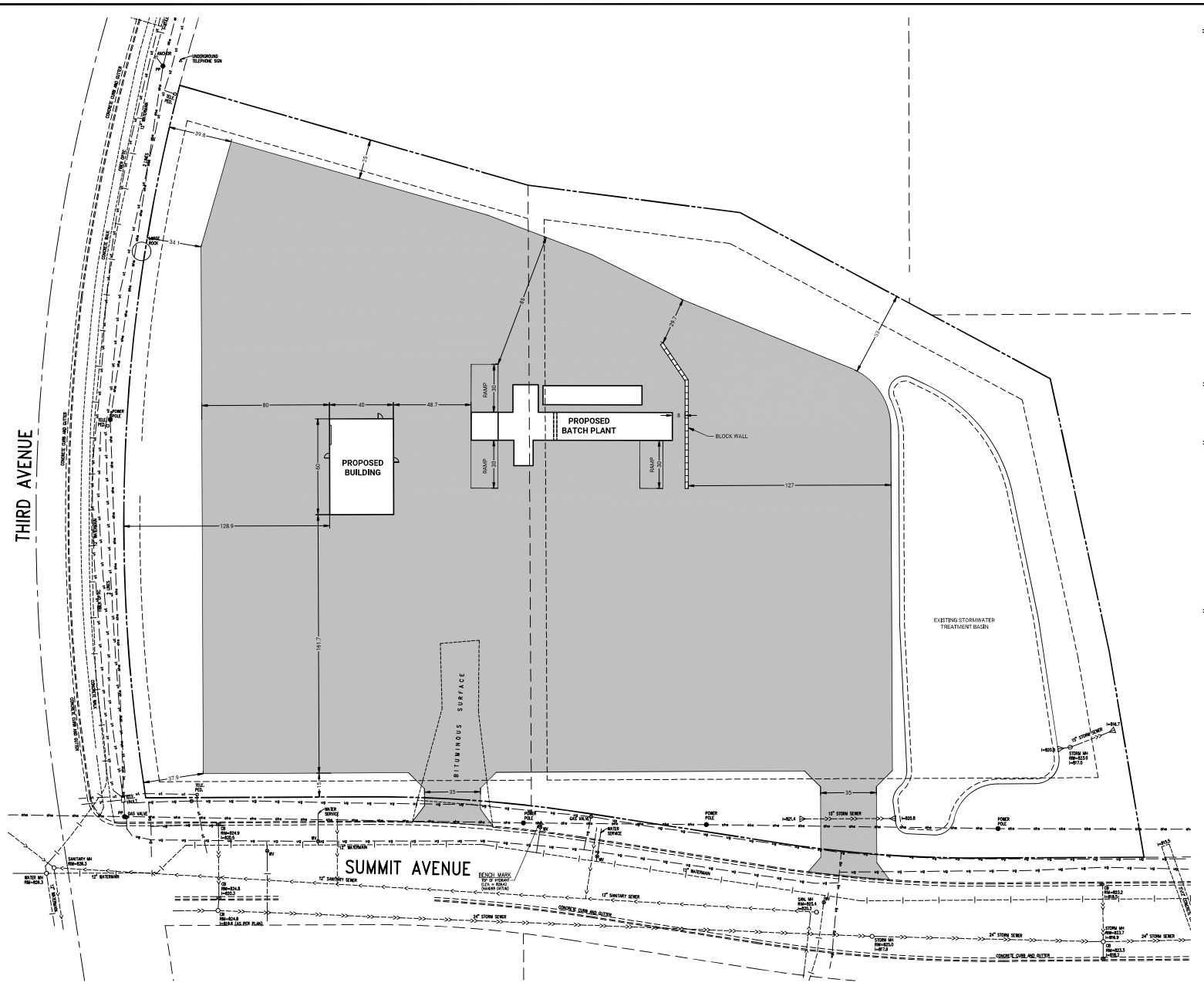
1.0 S31-T109N-R26W-(43)



LEGEND

EXISTING	PROPOSED
	PROPERTY LINE
	EASEMENT LINE
	CURB LINE
CONCRETE	CONCRETE PAVEMENT
	CL 5 AGGREGATE BASE
BITUMINOUS	BITUMINOUS PAVEMENT
CONCRETE WALK	CONCRETE WALK
	SANITARY SEWER
	STORM SEWER
	WATER MAIN
UG	UNDERGROUND GAS
UE	UNDERGROUND ELECTRIC
UT	UNDERGROUND TELEPHONE
OHE	OVERHEAD ELECTRIC
	MANHOLE
	CATCH BASIN
	HYDRANT
	WATER VALVE
	UTILITY POLE
	ELECTRIC BOX
	TELEPHONE PEDESTAL
	GAS VALVE
	GUY WIRE
	TREE LINE

BENCHMARK

TOP NUT OF HYDRANT ON NORTH SIDE OF SUMMIT AVENUE, JUST EAST OF WEST ACCESS DRIVEWAY

ELEVATION: 829.42 (NAVD 88)

SITE PLAN NOTES

1. ALL DIMENSIONS ARE TO EDGE OF PAVEMENT AND OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
2. UNLESS OTHERWISE SHOWN IN THE PLANS, CONTRACTOR SHALL PROVIDE CONTROL JOINTS AND EXPANSION JOINTS IN SLAB ON GRADE, SIDEWALKS, AND DRIVES PER THE FOLLOWING REQUIREMENTS:

CONTROL JOINTS: WALKS @ 8' SPACING
OTHERS @ 10' SPACING

SAWCUT CONTROL JOINTS MINIMUM ¼ CONCRETE THICKNESS.

EXPANSION JOINTS: WALKS @ 24' SPACING
OTHERS @ 40' SPACING

PROVIDE EXPANSION JOINT AT ALL POINTS WHERE A CHANGE IN PAVEMENT THICKNESS OCCURS AND WHERE NEW PAVEMENT WILL MATCH EXISTING PAVEMENT.

DOWEL ALL EXPANSION JOINTS AT 24' SPACING MAX.

SITE DATA

PARCEL AREA:	230,865 SF	
IMPERVIOUS AREA:		
BUILDING:	2,400 SF	1%
PLANT SLABS:	3,416 SF	1%
PAVEMENT:	137,584 SF	60%
TOTAL:	143,400 SF	62%
PERVIOUS AREA:	87,465 SF	38%

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Know what's below. Call before you dig.

CONTOUR CIVIL DESIGN
8195 VERNON STREET | ROCKFORD, MN 55373
TEL: 612.730.2265 | WWW.CONTOURCD.COM

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

NAME: JOSEPH T RADACH PE
SIGNATURE:
DATE: 10/03/25 LIC # 45889

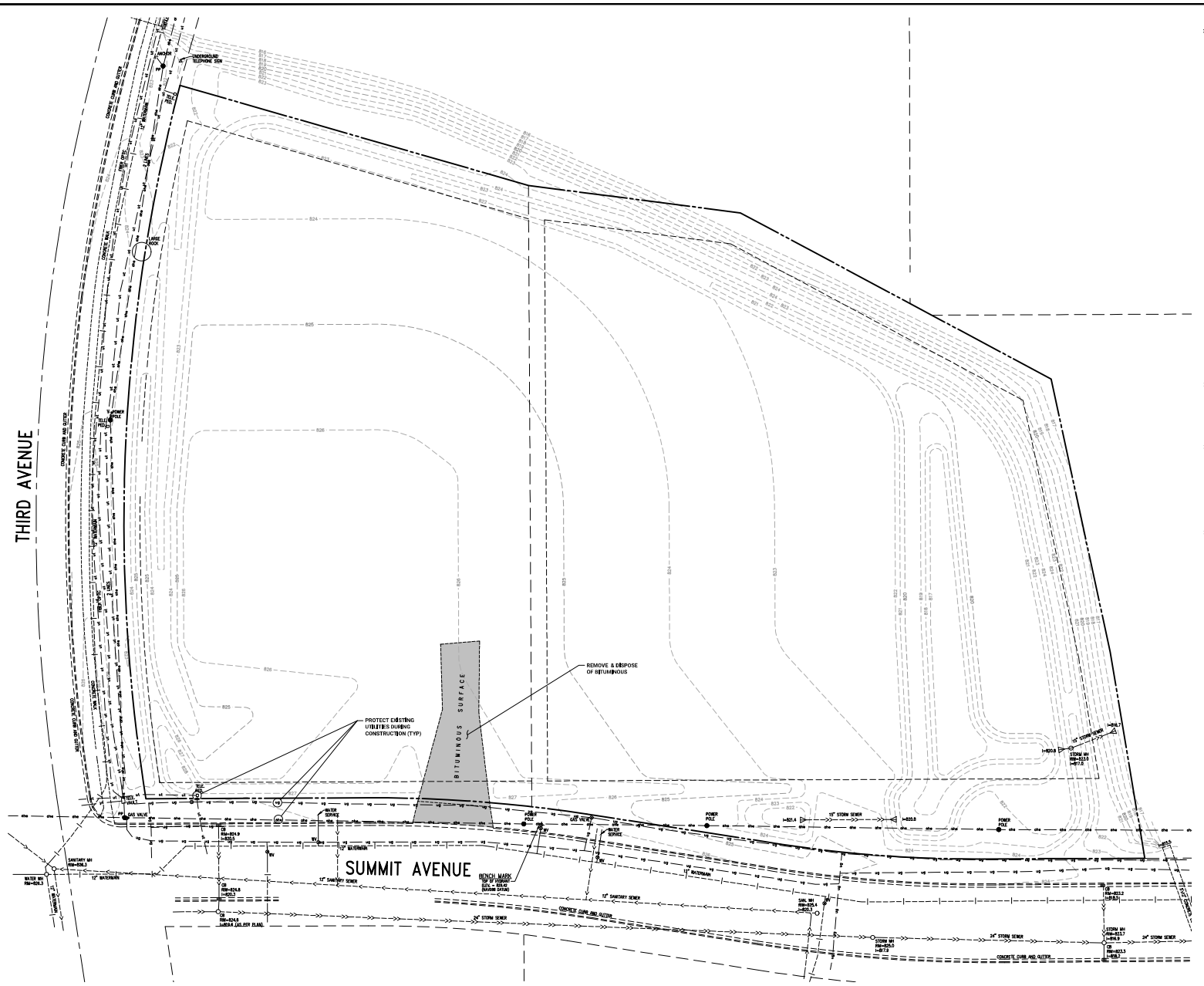
REVISIONS	ISSUE DATE: 10/03/25	BY: JTR
1.		
2.		
3.		
4.		
5.		
6.		
7.		

OWNER
CEMSTONE COMPANIES
2025 Centre Pointe Blvd, Suite 300
Mendota Heights, MN 55120

SITE PLAN

CEMSTONE MANKATO PLANT
100 Summit Avenue
Mankato, MN 56001

SHEET NUMBER
C2.1



LEGEND

EXISTING	REMOVAL	
		PROPERTY LINE
		EASEMENT LINE
		CURB LINE
CONCRETE		CONCRETE PAVEMENT
		CL.5 AGGREGATE BASE
BITUMINOUS	AS NOTED	BITUMINOUS PAVEMENT
CONCRETE WALK		CONCRETE WALK
		SANITARY SEWER
		STORM SEWER
		WATER MAIN
		UNDERGROUND GAS
		UNDERGROUND ELECTRIC
		UNDERGROUND TELEPHONE
		OVERHEAD ELECTRIC
		MANHOLE
		CATCH BASIN
		HYDRANT
		WATER VALVE
		UTILITY POLE
		ELECTRIC BOX
		TELEPHONE PEDESTAL
		GAS VALVE
		GUY WIRE
		TREE LINE
		10' CONTOUR
		2' CONTOUR

BENCHMARK

TOP NUT OF HYDRANT ON NORTH SIDE OF SUMMIT AVENUE, JUST EAST OF WEST ACCESS DRIVEWAY

ELEVATION: 829.42 (NAVD 88)

EXISTING CONDITIONS NOTES

1. EXISTING CONDITIONS BASED ON TOPOGRAPHIC SURVEY PREPARED BY SURVEY SERVICES INC. DATED 4/28/16 AND SITE CONSTRUCTION PLANS PREPARED BY CARLSON MCCAIN INC. DATED 10/26/16.

REMOVAL PLAN NOTES

1. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION, DEPTH AND TYPES OF EXISTING UTILITIES AND TO NOTIFY THE OWNER AND ENGINEER IMMEDIATELY OF ANY DISCREPANCIES OR VARIATIONS FROM THE PLANS. UTILITY QUALITY LEVEL D PER CI/ASCE 38-02.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING UTILITIES, APPURTENANCES AND STRUCTURES NOT INDICATED FOR REMOVAL. DAMAGE CAUSED BY DEMOLITION OPERATIONS SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
3. CONTRACTOR TO REMOVE/RELOCATE EXISTING PRIVATE UTILITIES AS NECESSARY. THE CONTRACTOR SHALL COORDINATE THESE ACTIVITIES WITH THE UTILITY COMPANIES.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL THE REMOVALS SHOWN ON THE PLANS AND SHALL CONFORM/ADHERE TO ALL GOVERNING STATE AND LOCAL REGULATIONS. ALL PERMITS, APPLICATIONS AND FEES ARE THE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL SAWCUTS SHALL BE FULL-DEPTH CUTS.
6. ALL WORK WITHIN THE ADJACENT STREET RIGHTS OF WAY MUST BE COORDINATED WITH AND APPROVED BY THE CITY PUBLIC WORKS DEPARTMENT.

N

0 15 30 60

< SCALE IN FEET >

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CONTOUR CIVIL DESIGN
8195 VERNON STREET | ROCKFORD, MN 55373
TEL: 612.730.2565 | WWW.CONTOURCD.COM

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

NAME: JOSEPH T. RADACH PE
SIGNATURE
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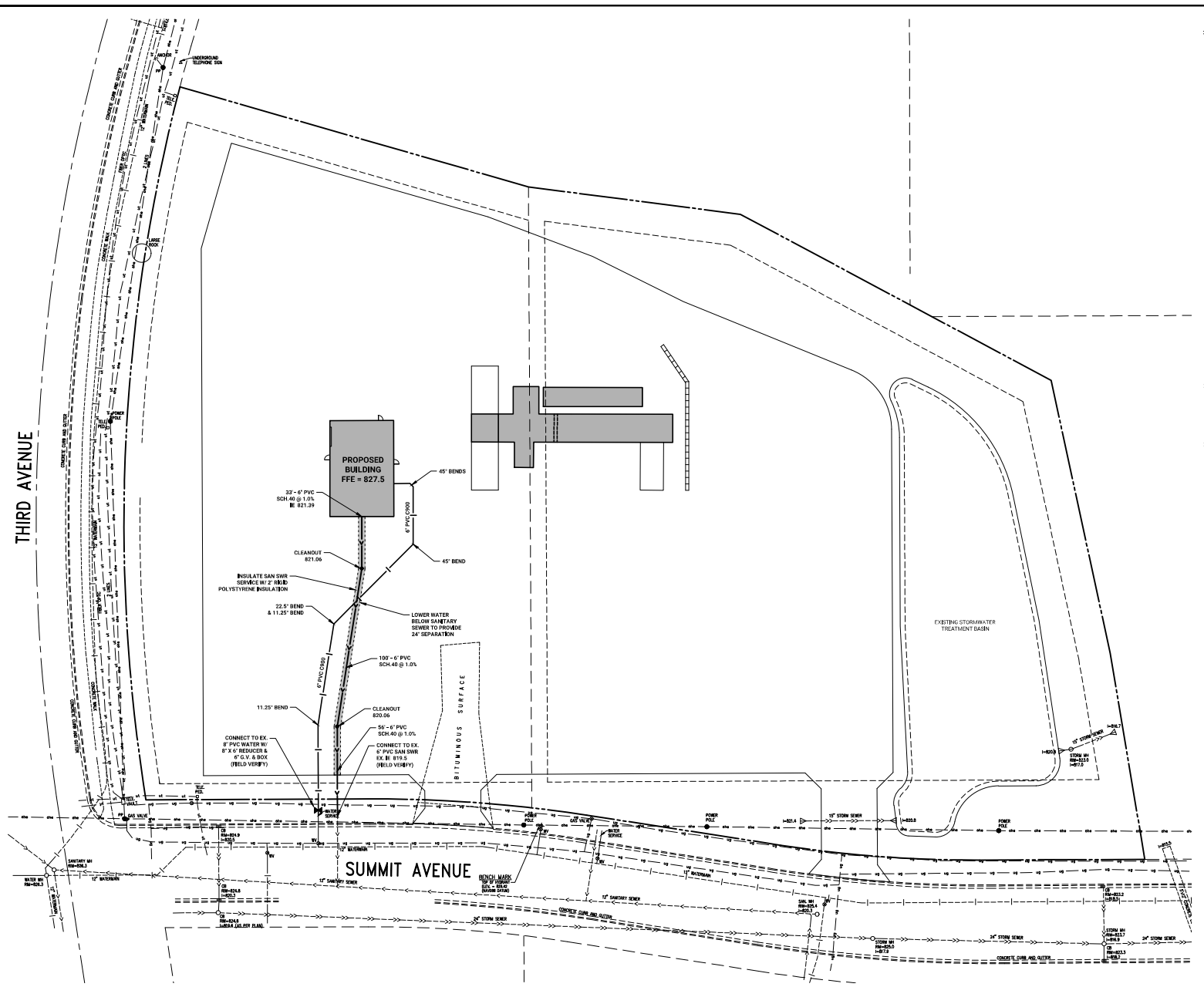
REVISIONS	ISSUE DATE: 10/03/25	BY: JTR
1.		
2.		
3.		
4.		
5.		
6.		
7.		

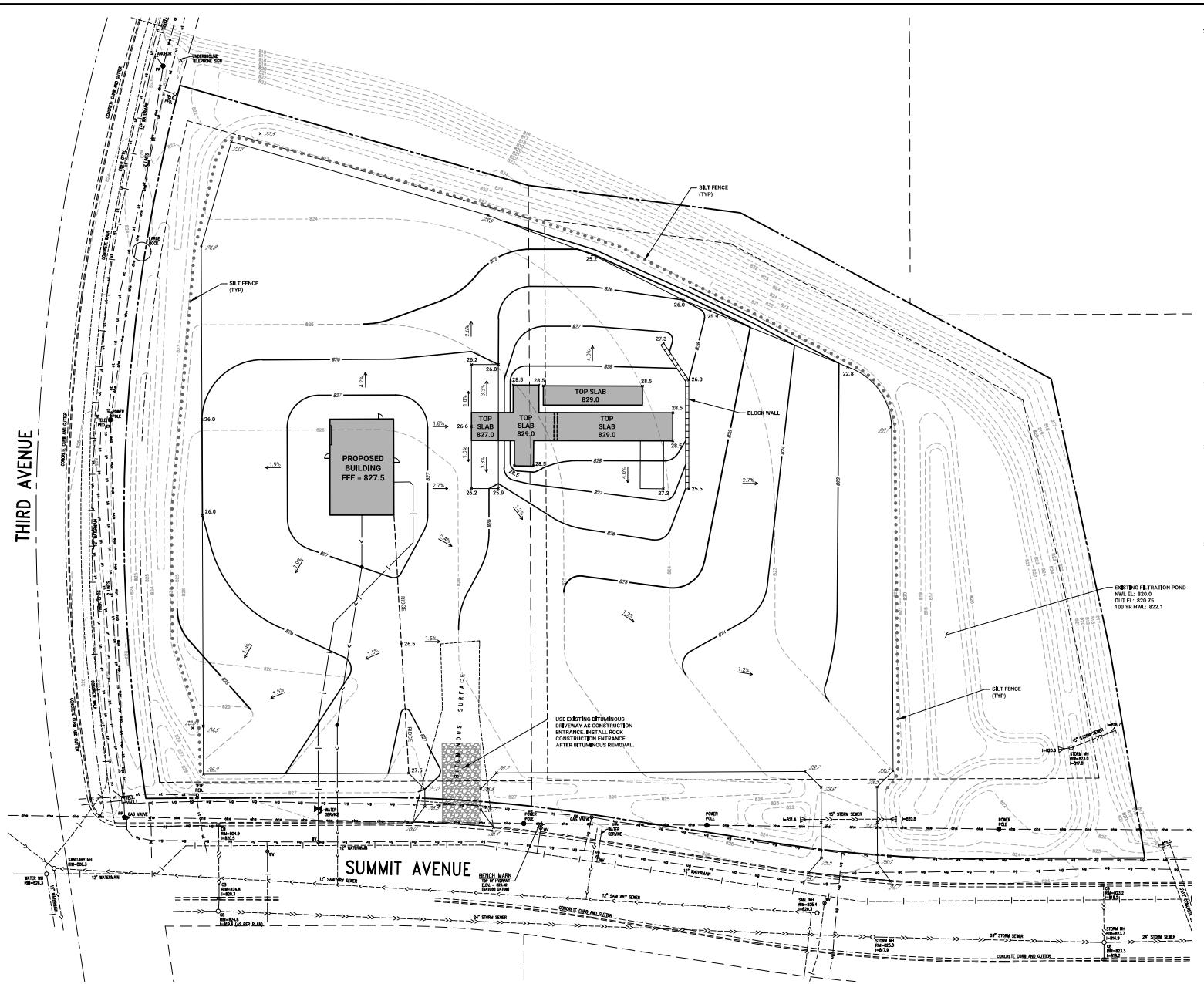
OWNER
CEMSTONE COMPANIES
2025 Centre Pointe Blvd, Suite 300
Mendota Heights, MN 55120

EXISTING CONDITIONS & REMOVALS PLAN

CEMSTONE MANKATO PLANT
100 Summit Avenue
Mankato, MN 56001

SHEET NUMBER
C1.1


THIRD AVENUE
SUMMIT AVENUE
PROPOSED BUILDING FFE = 827.5
33' - 6" PVC SCH.40 @ 1.0% IE 821.39
45° BENDS
6" PVC C900
45° BEND
CLEANOUT 821.06
INSULATE SAN SWR SERVICE W/ 2" RIGID POLYSTYRENE INSULATION
22.5° BEND & 11.25° BEND
LOWER WATER BELOW SANITARY SEWER TO PROVIDE 24" SEPARATION
100' - 6" PVC SCH.40 @ 1.0%
6" PVC C900
11.25° BEND
CLEANOUT 820.06
56' - 6" PVC SCH.40 @ 1.0%
CONNECT TO EX. 8" PVC WATER W/ 8" X 6" REDUCER & 6" G.V. & BOX (FIELD VERIFY)
CONNECT TO EX. 8" PVC SAN SWR EX. IE 819.5 (FIELD VERIFY)
BITUMINOUS SURFACE
EXISTING STORMWATER TREATMENT BASIN
BENCH MARK TOP OF HYDRANT ELEV. = 829.42 (NAVD 88)
CONCRETE CURB AND GUTTER
12" WATERMAIN
12" SANITARY SEWER
24" STORM SEWER
15" STORM SEWER
UNDERGROUND TELEPHONE SIGN
ANCHOR
LARGE ROCK
POWER POLE
TELE. PED.
GAS VALVE
WATER SERVICE
SANITARY MH
STORM MH
CB
HYDRANT
WATER VALVE
TELE. PED.
CONCRETE CURB AND GUTTER
ASPHALT PAVEMENT
CONCRETE WALK
ASPHALT PATH
CONCRETE PAVEMENT
CONCRETE CURB AND GUTTER
ASPHALT PAVEMENT
CONCRETE WALK



LEGEND

EXISTING	PROPOSED
	PROPERTY LINE
	EASEMENT LINE
	CURB LINE
CONCRETE	CONCRETE PAVEMENT
	CL.5 AGGREGATE BASE
BITUMINOUS	BITUMINOUS PAVEMENT
CONCRETE WALK	CONCRETE WALK
	SANITARY SEWER
	STORM SEWER
	WATER MAIN
UG	UNDERGROUND GAS
UE	UNDERGROUND ELECTRIC
UT	UNDERGROUND TELEPHONE
OHE	OVERHEAD ELECTRIC
	MANHOLE
	CATCH BASIN
	HYDRANT
	WATER VALVE
	UTILITY POLE
	ELECTRIC BOX
	TELEPHONE PEDESTAL
	GAS VALVE
	GUY WIRE
	TREE LINE
825	826 — 10' CONTOUR
824	825 — 2' CONTOUR
57.1 ×	57.1 × SPOT ELEVATION (CURB ELEVATIONS ARE TO GUTTER LINE)
	T 44.2 G 43.8 TOP OF CURB ELEV. GUTTER LINE ELEV.
	SILT FENCE

BENCHMARK

TOP NUT OF HYDRANT ON NORTH SIDE OF SUMMIT AVENUE, JUST EAST OF WEST ACCESS DRIVEWAY

ELEVATION: 829.42 (NAVD 88)

GOVERNING SPECIFICATIONS

1. THE LATEST EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AND THE CITY OF MANKATO SPECIFICATIONS.
2. THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD).
3. THE LATEST EDITION OF THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM) STANDARD SPECIFICATIONS.

GRADING NOTES

1. VEHICLE TRACKING REDUCTION DEVICE, SILT FENCE, AND EXISTING CATCH BASIN/INLET PROTECTION SHALL BE INSTALLED PRIOR TO GRADING CONSTRUCTION, AND SHALL BE MAINTAINED UNTIL THE SITE HAS BEEN STABILIZED.
2. CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO THE START OF GRADING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF DISCREPANCIES OR VARIATIONS FROM THE PLAN.
3. CONTRACTOR SHALL STRIP, STOCKPILE AND RESPREAD SUFFICIENT TOPSOIL TO PROVIDE A MINIMUM OF 6" OF TOPSOIL OVER ALL DISTURBED AREAS THAT WILL BE SODDED, SEEDED OR LANDSCAPED.
4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 14 CALENDARS DAYS AFTER LAND-DISTURBING WORK HAS TEMPORARILY OR PERMANENTLY CEASED.
5. ALL SLOPES STEEPER THAN 3:1 SHALL HAVE MNDOT CAT.1 EROSION CONTROL BLANKET AND SEED, OR APPROVED EQUAL.
6. STOCKPILES SHALL BE STABILIZED WITHIN 14 DAYS OF ROUGH GRADING OR INACTIVITY.
7. ALL WORK WITHIN THE ADJACENT STREET RIGHTS OF WAY MUST BE COORDINATED WITH AND APPROVED BY THE CITY PUBLIC WORKS DEPARTMENT.

N

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< SCALE IN FEET >

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CONTOUR CIVIL DESIGN
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I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

NAME: JOSEPH T. RADACH PE

SIGNATURE:

DATE: 10/03/25 LIC #: 45889

REVISIONS	ISSUE DATE: 10/03/25	BY: JTR
1.		
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3.		
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7.		

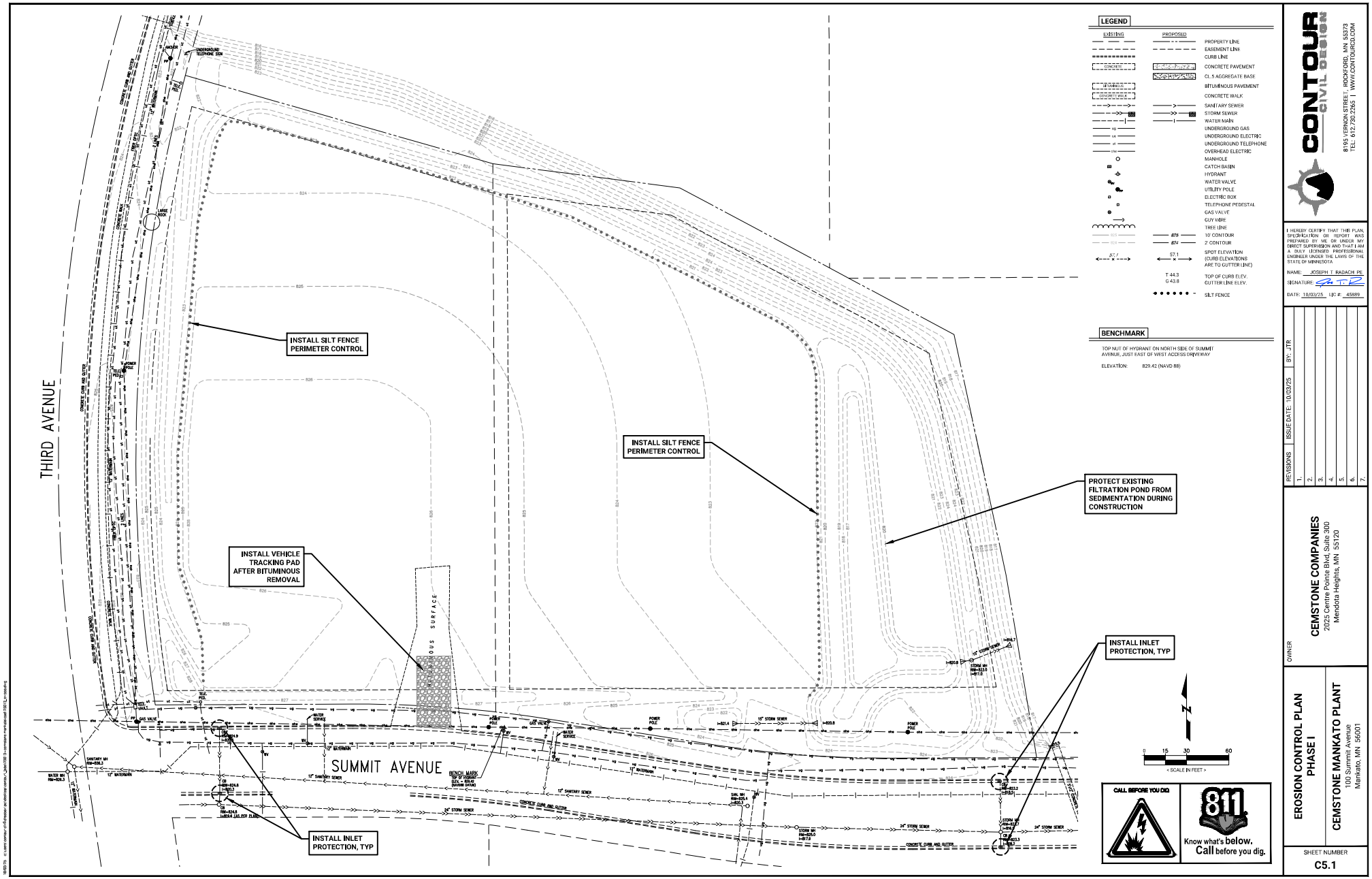
OWNER

CEMSTONE COMPANIES
2025 Centre Pointe Blvd, Suite 300
Mendota Heights, MN 55120

GRADING AND DRAINAGE PLAN

CEMSTONE MANKATO PLANT
100 Summit Avenue
Mankato, MN 56001

SHEET NUMBER
C4.1



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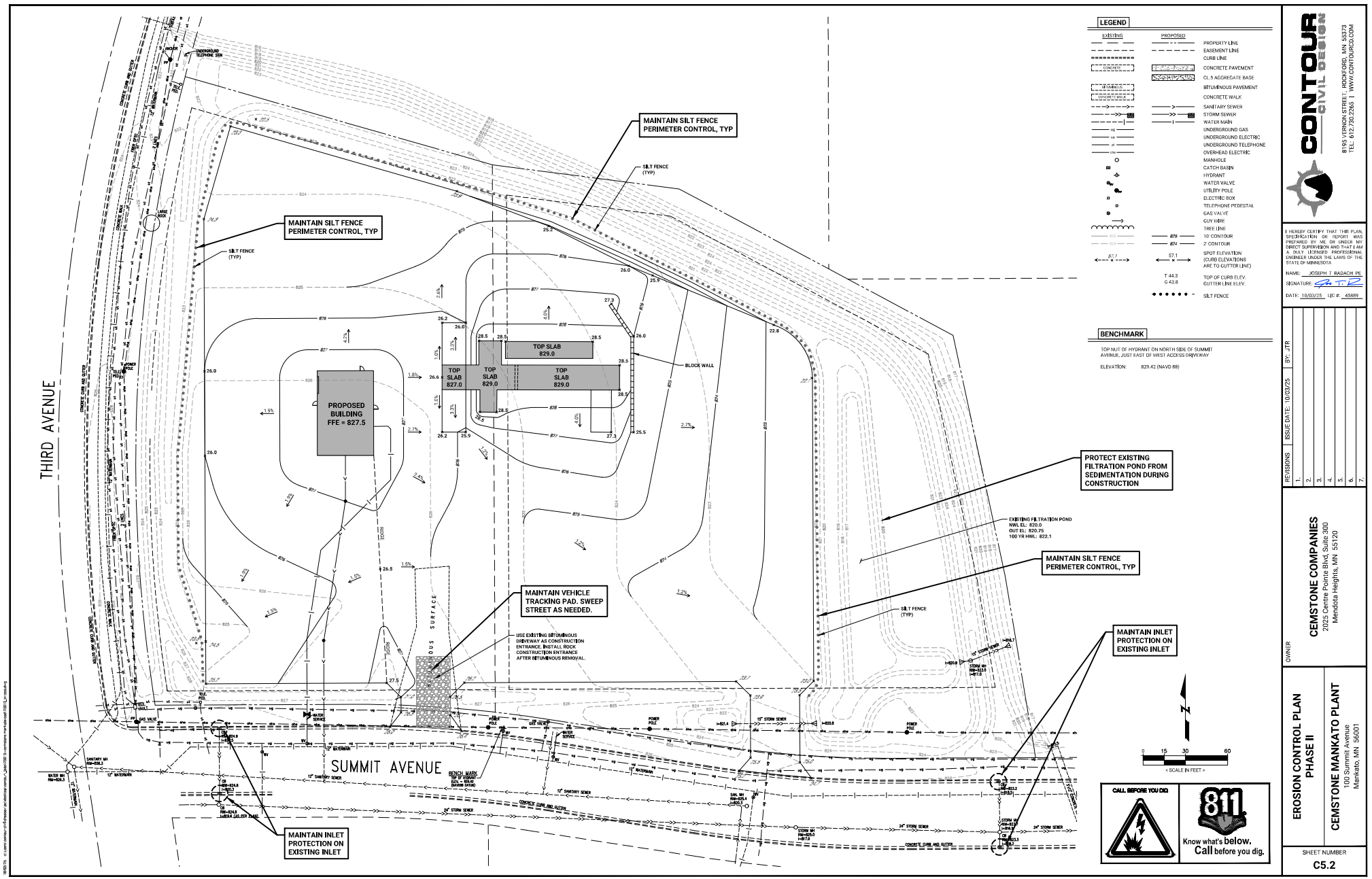
OWNER
CEMSTONE COMPANIES
2025 Centre Pointe Blvd, Suite 300
Mendota Heights, MN 55120

EROSION CONTROL PLAN
PHASE I

CEMSTONE MANKATO PLANT
100 Summit Avenue
Mankato, MN 56001

SHEET NUMBER
C5.1



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OWNER
CEMSTONE COMPANIES
2025 Centre Pointe Blvd, Suite 300
Mendota Heights, MN 55120

EROSION CONTROL PLAN
PHASE II

CEMSTONE MANKATO PLANT
100 Summit Avenue
Mankato, MN 56001

SHEET NUMBER
C5.2

PROJECT INFORMATION

PROJECT NAME:	CEMSTONE MANKATO PLANT
STREET ADDRESS:	100 SUMMIT AVENUE
CITY:	MANKATO
COUNTY:	BLUE EARTH
STATE:	MINNESOTA
ZIP CODE:	56001
LAT/LONG:	44.1969, -93.9964
BOUNDARY AREA:	5.300 ACRES
EXISTING IMPERVIOUS:	3.490 ACRES
PROPOSED IMPERVIOUS:	0.000 ACRES
NET NEW IMPERVIOUS:	0.000 ACRES
DISTURBED AREA:	3.6 ACRES
OWNER:	CEMSTONE COMPANIES

RESPONSIBLE PARTIES

SWPPP DESIGN:	JOSEPH RADACH PE
TRAINING:	DESIGN OF CONSTRUCTION SWPPP, U OF MN (5/26 EXPIRATION)
SITE MANAGER:	
TRAINING:	
LONG TERM O&M:	CEMSTONE COMPANIES

SWPPP CONTENT

THE SWPPP CONTAINS ALL SHEETS WITHIN THE CONSTRUCTION PLAN SET AND INCLUDES THE STORMWATER MANAGEMENT PLAN, INCORPORATED HEREIN BY REFERENCE. IN DEVELOPING THIS SWPPP, THE TEMPORARY AND PERMANENT BMPS WERE DESIGNED BASED ON EXPECTED RAINFALLS OF 3 INCHES IN 24 HOURS DURING CONSTRUCTION, WITH EXTREME EVENTS RANGING FROM 5 TO 7 INCHES IN 24 HOURS.

EXISTING CONDITIONS

THE SITE IS LOCATED IN THE NORTHEAST QUADRANT OF THIRD AVENUE AND SUMMIT AVENUE IN MANKATO, BLUE EARTH COUNTY, MINNESOTA. THE SITE IS BOUNDED ON THE NORTH BY INDUSTRIAL PROPERTY, ON THE EAST BY UNDEVELOPED PROPERTY, ON THE SOUTH BY SUMMIT AVENUE AND ON THE WEST BY THIRD AVENUE.

THE SITE BOUNDARY CONSISTS OF 5.30 ACRES. THE SITE WAS GRADING AND GRAVELED IN 2016 UNDER SITE CONSTRUCTION PLANS PREPARED BY CARLSON MCCAIN, INC. THE SITE IS CURRENTLY PARTIALLY PAVED WITH BITUMINOUS, CONCRETE, AND GRAVEL. THE SITE CURRENTLY CONTAINS APPROXIMATELY 3.49 ACRES OF IMPERVIOUS SURFACE.

THE SITE WAS GRADED TO DRAIN TO FILTRATION POND THAT WAS CONSTRUCTED AS PART OF THE 2016 IMPROVEMENTS. THE FILTRATION POND IS LOCATED IN EAST PORTION OF THE SITE. ELEVATIONS ONSITE RANGE FROM 926 IN THE WEST CENTRAL PORTION OF THE SITE DOWN TO ABOUT 917 IN THE NORTHEAST. THERE IS AN EXISTING DITCH THAT TRANSVERSES THE SITE ALONG THE NORTH AND EAST BOUNDARY. THE FILTRATION POND OUTLETS TO THE EXISTING DITCH WHICH DRAINS WEST UNDER THIRD AVENUE

PROPOSED CONDITIONS

CEMSTONE COMPANIES PLANS ON DEVELOPING THE SITE INTO A CONCRETE PLANT WITH BUILDING, PLANT, AGGREGATE STORAGE, AND PAVED PARKING AND DRIVE AREAS. DURING CONSTRUCTION, APPROXIMATELY 3.6 ACRES WILL BE DISTURBED. THE PROPOSED CONSTRUCTION WILL NOT CREATE ANY ADDITIONAL IMPERVIOUS SURFACES. THE SITE WILL CONTINUE TO SURFACE DRAIN TO THE EXISTING FILTRATION POND. NO ADDITIONAL STORMWATER TREATMENT IS REQUIRED FOR THE SITE.

SOIL INFORMATION

AT THE TIME OF THIS REPORT, A SITE SPECIFIC GEOTECHNICAL REPORT WAS NOT AVAILABLE. ACCORDING TO THE NRCS WEB SOIL SURVEY, ONSITE SOILS GENERALLY CONSIST OF SILTY CLAY LOAM IN HYDROLOGIC SOIL GROUP "D".

SITE CONTAMINATION

A REVIEW OF THE MPCA'S "WHAT'S IN MY NEIGHBOR' SHOWED A PETROLEUM LEAK OCCURRED IN 2006 WHICH WAS CORRECTED AND THE LEAK SITE WAS CLOSED IN 2008. IT IS NOT ANTICIPATED THAT CONTAMINATION EXISTS AT THE SITE.

STORMWATER RECEIVING WATERS

ALL STORMWATER FROM THE SITE DRAINS TO THE EXISTING DITCH WHICH ULTIMATELY DRAINS TO THE MINNESOTA RIVER.

SPECIAL OR IMPAIRED WATERS

THE MINNESOTA RIVER IS LOCATED 3,500 WEST OF THE SITE AND IS LISTED AS AN IMPAIRED WATER WITH A CONSTRUCTION RELATED PARAMETER. ADDITIONAL BMPS ARE REQUIRED TO BE IMPLEMENTED AT THE SITE AND ARE AS FOLLOWS:

- PERMITTEES MUST IMMEDIATELY INITIATE STABILIZATION OF EXPOSED SOIL AREAS, INCLUDING SOIL STOCKPILES, AND COMPLETE THE STABILIZATION WITHIN SEVEN (7) CALENDAR DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE TEMPORARILY OR PERMANENTLY CEASES.
- PERMITTEES MUST PROVIDE A TEMPORARY SEDIMENT BASIN FOR COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH FIVE (5) OR MORE ACRES DISTURBED AT ONE TIME.
- PERMITTEES MUST INCLUDE AN UNDISTURBED BUFFER ZONE OF NOT LESS THAN 100 LINEAR FEET FROM A SPECIAL WATER (NOT INCLUDING TRIBUTARIES) AND MUST MAINTAIN THIS BUFFER ZONE AT ALL TIMES, BOTH DURING CONSTRUCTION AND AS A PERMANENT FEATURE POST CONSTRUCTION, EXCEPT WHERE A WATER CROSSING OR OTHER ENCROACHMENT IS NECESSARY TO COMPLETE THE PROJECT.

WETLAND CONSIDERATIONS

THERE ARE NO KNOWN WETLANDS ONSITE.

PERMANENT STORMWATER MANAGEMENT SYSTEM

ALL STORMWATER FROM THE SITE DRAINS TO THE RECENTLY CONSTRUCTED FILTRATION POND IN THE EAST PORTION OF THE SITE. THE FILTRATION POND WAS DESIGNED TO TREAT STORMWATER FROM THE FULLY DEVELOPED SITE.

THE MPCA CONSTRUCTION STORMWATER GENERAL PERMIT REQUIRES PERMITTEES TO DESIGN AND CONSTRUCT A PERMANENT STORMWATER TREATMENT SYSTEM TO TREAT THE WATER QUALITY VOLUME IF THE PROJECTS ULTIMATE DEVELOPMENT REPLACES VEGETATION AND/OR OTHER PERVIOUS SURFACES CREATING A NET INCREASE OF ONE (1) OR MORE ACRES OF CUMULATIVE IMPERVIOUS SURFACE. PERMITTEES MUST CALCULATE THE WATER QUALITY VOLUME AS ONE (1) INCH TIMES THE NET INCREASE OF IMPERVIOUS SURFACES CREATED BY THE PROJECT. PERMITTEES MUST FIRST CONSIDER VOLUME REDUCTION PRACTICES ONSITE (E.G. INFILTRATION OR OTHER) WHEN DESIGNING THE PERMANENT STORMWATER TREATMENT SYSTEM.

THE PROPOSED PLAN OF REDEVELOPMENT WILL NOT CREATE ADDITIONAL IMPERVIOUS SURFACE BEYOND WHAT WAS PLANNED UNDER THE 2016 SITE IMPROVEMENTS. NO ADDITIONAL STORMWATER TREATMENT PRACTICES ARE REQUIRED FOR THE PROPOSED PROJECT.

BMP IMPLEMENTATION SCHEDULE

PRIOR TO CONSTRUCTION, IMPLEMENT THE FOLLOWING BMPS:

- VEHICLE TRACKING PAD
- PERIMETER CONTROL
- STORM DRAIN INLET PROTECTION

DURING CONSTRUCTION, IMPLEMENT THE FOLLOWING BMPS:

- PHASED GRADING
- STREET SWEEPING
- STABILIZATION OF EXPOSED SOILS
- STABILIZATION OF DITCHES OR SWALES
- STOCKPILE PERIMETER CONTROL & STABILIZATION
- MINIMIZATION OF SOIL COMPACTION AND PRESERVATION OF TOPSOIL
- CONCRETE WASHOUT AREA
- STORM DRAIN INLET PROTECTION

EROSION AND SEDIMENT CONTROL ESTIMATED QUANTITIES

VEHICLE TRACKING PAD	1 EA
SILT FENCE	1,110 LF
BIOROLL	AS NEEDED
INLET PROTECTION	4 EA
TURF ESTABLISHMENT	0.5 AC

PERMIT REQUIREMENTS & SWPPP IMPLEMENTATION

THE FOLLOWING SECTIONS WERE TAKEN FROM THE MPCA CONSTRUCTION STORMWATER GENERAL PERMIT. IT IS THE RESPONSIBILITY OF THE PERMITTEE TO FOLLOW ALL REQUIREMENTS OF THE MPCA CONSTRUCTION STORMWATER GENERAL PERMIT.

3.1 APPLICATION AND COVERAGE EFFECTIVE DATE. [MINN. R. 7090]

3.2 THE OWNER AND OPERATOR MUST SUBMIT A COMPLETE AND ACCURATE ONLINE APPLICATION WITH THE APPROPRIATE FEE TO THE MPCA FOR EACH PROJECT THAT DISTURBS ONE (1) OR MORE ACRES OF LAND OR FOR A COMMON PLAN OF DEVELOPMENT OR SALE THAT WILL ULTIMATELY DISTURB ONE (1) OR MORE ACRES. [MINN. R. 7090]

3.3 FOR PROJECTS OR COMMON PLANS OF DEVELOPMENT OR SALE THAT DISTURB LESS THAN 50 ACRES OR DO NOT DISCHARGE STORMWATER WITHIN 1 MILE (AERIAL RADIUS MEASUREMENT) OF A SPECIAL OR IMPAIRED WATER, PERMITTEES DO NOT NEED TO SUBMIT THE SWPPP WITH THE APPLICATION. PERMIT COVERAGE FOR THESE PROJECTS IS EFFECTIVE UPON APPLICATION AND COMPLETING THE PAYMENT PROCESS. [MINN. R. 7090]

3.4 FOR CERTAIN PROJECTS OR COMMON PLANS OF DEVELOPMENT OR SALE DISTURBING 50 ACRES OR MORE, THE COMPLETE SWPPP MUST BE INCLUDED WITH THE APPLICATION AND SUBMITTED AT LEAST 30 DAYS BEFORE THE START OF CONSTRUCTION ACTIVITY. THIS APPLIES IF THERE IS A DISCHARGE POINT ON THE PROJECT WITHIN ONE MILE (AERIAL RADIUS MEASUREMENT) OF, AND FLOWS TO, A SPECIAL WATER LISTED IN ITEM 23.3 THROUGH 23.6 OR AN IMPAIRED WATER AS DESCRIBED IN ITEM 23.7. PERMIT COVERAGE FOR THESE PROJECTS IS EFFECTIVE UPON SUBMITTING THE APPLICATION AND COMPLETE SWPPP, COMPLETING THE PAYMENT PROCESS AND RECEIVING A DETERMINATION FROM THE MPCA THAT THE REVIEW OF THE SWPPP IS COMPLETE. THE DETERMINATION MAY TAKE LONGER THAN 30 DAYS IF THE SWPPP IS INCOMPLETE. IF THE MPCA FAILS TO CONTACT THE PERMITTEES WITHIN 30 DAYS OF APPLICATION RECEIPT, COVERAGE IS EFFECTIVE 30 DAYS AFTER COMPLETING THE PAYMENT PROCESS. [MINN. R. 7090]

3.5 THE APPLICATION REQUIRES LISTING ALL PERSONS MEETING THE DEFINITION OF OWNER AND OPERATOR AS PERMITTEES. THE OWNER IS RESPONSIBLE FOR COMPLIANCE WITH ALL TERMS AND CONDITIONS OF THIS PERMIT. THE OPERATOR IS RESPONSIBLE FOR COMPLIANCE WITH SECTIONS 3, 4, 6-22, 24 AND APPLICABLE REQUIREMENTS FOR CONSTRUCTION ACTIVITY IN SECTION 23. [MINN. R. 7090]

3.6 PERMITTEES WILL RECEIVE COVERAGE NOTIFICATION IN A MANNER DETERMINED BY THE MPCA. [MINN. R. 7090]

3.7 FOR CONSTRUCTION PROJECTS WHERE THE OWNER OR OPERATOR CHANGES (E.G., AN ORIGINAL DEVELOPER SELLS PORTIONS OF THE PROPERTY TO VARIOUS HOMEBUILDERS OR SELLS THE ENTIRE SITE TO A NEW OWNER), THE CURRENT OWNER AND THE NEW OWNER OR OPERATOR MUST SUBMIT A COMPLETE PERMIT MODIFICATION FORM PROVIDED BY THE MPCA. THE CURRENT OWNER AND THE NEW OWNER OR OPERATOR MUST SUBMIT THE FORM PRIOR TO THE NEW OWNER OR OPERATOR COMMENCING CONSTRUCTION ACTIVITY OR NO LATER THAN 30 DAYS AFTER TAKING OWNERSHIP OF THE PROPERTY. [MINN. R. 7090]

3.8 FOR CONSTRUCTION PROJECTS WHERE THE OWNER OR OPERATOR CHANGES, THE CURRENT OWNER MUST PROVIDE A SWPPP TO THE NEW OWNER OR OPERATOR THAT SPECIFICALLY ADDRESSES THE REMAINING CONSTRUCTION ACTIVITY. THE NEW OWNER OR OPERATOR CAN IMPLEMENT THE ORIGINAL SWPPP, MODIFY THE SWPPP, OR DEVELOP A NEW SWPPP. PERMITTEES MUST INCLUDE ANY ACTIVITIES DO NOT RENDER ANOTHER PARTY'S EROSION PREVENTION AND SEDIMENT CONTROL BMPS INEFFECTIVE. [MINN. R. 7090]

4.1 TERMINATION OF COVERAGE. [MINN. R. 7090]

4.2 PERMITTEES MUST SUBMIT A NOT WITHIN 30 DAYS AFTER ALL TERMINATION CONDITIONS LISTED IN SECTION 13 ARE COMPLETE. [MINN. R. 7090]

4.3 PERMITTEES MUST SUBMIT A NOT WITHIN 30 DAYS AFTER SELLING OR OTHERWISE LEGALLY TRANSFERRING THE ENTIRE SITE, INCLUDING PERMIT RESPONSIBILITY FOR ROADS (E.G., STREET SWEEPING) AND STORMWATER INFRASTRUCTURE FINAL CLEAN OUT, OR TRANSFERRING PORTIONS OF A SITE TO ANOTHER PARTY. THE PERMITTEES' COVERAGE UNDER THIS PERMIT TERMINATES AT MIDNIGHT ON THE SUBMISSION DATE OF THE NOT. [MINN. R. 7090]

4.4 PERMITTEES MAY TERMINATE PERMIT COVERAGE PRIOR TO COMPLETION OF ALL CONSTRUCTION ACTIMTY IF THEY MEET ALL OF THE FOLLOWING CONDITIONS:

a. CONSTRUCTION ACTIVITY HAS CEASED FOR AT LEAST 90 DAYS; AND

b. AT LEAST 90 PERCENT (BY AREA) OF ALL ORIGINALLY PROPOSED CONSTRUCTION ACTIVITY HAS BEEN COMPLETED AND PERMANENT COVER HAS BEEN ESTABLISHED ON THOSE AREAS; AND

c. ON AREAS WHERE CONSTRUCTION ACTIVITY IS NOT COMPLETE, PERMANENT COVER HAS BEEN ESTABLISHED; AND

d. THE SITE COMPLIES WITH ITEM 13.3 THROUGH 13.7.

AFTER PERMIT COVERAGE IS TERMINATED UNDER THIS ITEM, ANY SUBSEQUENT DEVELOPMENT ON THE REMAINING PORTIONS OF THE SITE WILL REQUIRE PERMIT COVERAGE IF THE SUBSEQUENT DEVELOPMENT ITSELF OR AS PART OF THE REMAINING COMMON PLAN OF DEVELOPMENT OR SALE WILL RESULT IN LAND DISTURBING ACTIVITIES OF ONE (1) OR MORE ACRES IN SIZE. [MINN. R. 7090]

4.5 PERMITTEES MAY TERMINATE COVERAGE UPON MPCA APPROVAL AFTER SUBMITTING INFORMATION DOCUMENTING THE OWNER CANCELLED THE PROJECT. [MINN. R. 7090]

6.1 SWPPP AMENDMENTS. [MINN. R. 7090]

6.2 ONE OF THE INDIVIUALS DESCRIBED IN ITEM 21.2.A OR ITEM 21.2.B OR ANOTHER QUALIFIED INDIVIDUAL MUST COMPLETE ALL SWPPP CHANGES. CHANGES INCLUDING THE USE OF A LESS STRINGENT BMP MUST INCLUDE A JUSTIFICATION DESCRIBING HOW THE REPLACEMENT BMPTS EFFECTIVE FOR THE SITE CHARACTERISTICS. [MINN. R. 7090]

6.3 PERMITTEES MUST AMEND THE SWPPP TO INCLUDE ADDITIONAL OR MODIFIED BMPS AS NECESSARY TO CORRECT PROBLEMS IDENTIFIED OR ADDRESS SITUATIONS WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE, WEATHER OR SEASONAL CONDITIONS HAVING A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER. [MINN. R. 7090]

6.4 PERMITTEES MUST AMEND THE SWPPP TO INCLUDE ADDITIONAL OR MODIFIED BMPS AS NECESSARY TO CORRECT PROBLEMS IDENTIFIED OR ADDRESS SITUATIONS WHENEVER INSPECTIONS OR INVESTIGATIONS BY THE SITE OWNER OR OPERATOR, USEPA OR MPCA OFFICIALS INDICATE THE SWPPP IS NOT EFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER OR THE DISCHARGES ARE CAUSING WATER QUALITY STANDARD EXCEEDANCES (E.G., NUISANCE CONDITIONS AS DEFINED IN MINN. R. 7050.0210, SUBP. 2) OR THE SWPPP IS NOT CONSISTENT WITH THE OBJECTIVES OF A USEPA APPROVED TMDL. [MINN. R. 7050.0210]

7.1 BMP SELECTION AND INSTALLATION. [MINN. R. 7090]

7.2 PERMITTEES MUST SELECT, INSTALL, AND MAINTAIN THE BMPS IDENTIFIED IN THE SWPPP AND IN THIS PERMIT IN AN APPROPRIATE AND FUNCTIONAL MANNER AND IN ACCORDANCE WITH RELEVANT MANUFACTURER SPECIFICATIONS AND ACCEPTED ENGINEERING PRACTICES. [MINN. R. 7090]

8.1 EROSION PREVENTION PRACTICES. [MINN. R. 7090]

8.2 BEFORE WORK BEGINS, PERMITTEES MUST DELINEATE THE LOCATION OF AREAS NOT TO BE DISTURBED. [MINN. R. 7090]

8.3 PERMITTEES MUST MINIMIZE THE NEED FOR DISTURBANCE OF PORTIONS OF THE PROJECT WITH STEEP SLOPES. WHEN STEEP SLOPES MUST BE DISTURBED, PERMITTEES MUST USE TECHNIQUES SUCH AS PHASING AND STABILIZATION PRACTICES DESIGNED FOR STEEP SLOPES (E.G., SLOPE DRAINING AND TERRACING). [MINN. R. 7090]

8.4 PERMITTEES MUST STABILIZE ALL EXPOSED SOIL AREAS, INCLUDING STOCKPILES. STABILIZATION MUST BE INITIATED IMMEDIATELY TO LIMIT SOIL EROSION WHEN CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. STABILIZATION MUST BE COMPLETED NO LATER THAN 14 CALENDAR DAYS AFTER THE CONSTRUCTION ACTIVITY HAS CEASED. STABILIZATION IS NOT REQUIRED ON CONSTRUCTED BASE COMPONENTS OF ROADS, PARKING LOTS AND SIMILAR SURFACES. STABILIZATION IS NOT REQUIRED ON TEMPORARY STOCKPILES WITHOUT SIGNIFICANT SILT, CLAY OR ORGANIC COMPONENTS (E.G., CLEAN AGGREGATE STOCKPILES, DEMOLITION CONCRETE STOCKPILES, SAND STOCKPILES) BUT PERMITTEES MUST PROVIDE SEDIMENT CONTROLS AT THE BASE OF THE STOCKPILE. [MINN. R. 7090]

8.5 FOR PUBLIC WATERS THAT THE MINNESOTA DNR HAS PROMULGATED "WORK IN WATER RESTRICTIONS" DURING SPECIFIED FISH SPAWNING TIME FRAMES, PERMITTEES MUST COMPLETE STABILIZATION OF ALL EXPOSED SOIL AREAS WITHIN 200 FEET OF THE WATER'S EDGE AND THAT DRAIN TO THESE WATERS, WITHIN 24-HOURS DURING THE RESTRICTION PERIOD. [MINN. R. 7090]

8.6 PERMITTEES MUST STABILIZE THE NORMAL WETTED PERIMETER OF THE LAST 200 LINEAR FEET OF TEMPORARY OR PERMANENT DRAINAGE DITCHES OR SWALES THAT DRAIN WATER FROM THE SITE WITHIN 24 HOURS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE. PERMITTEES MUST COMPLETE STABILIZATION OF REMAINING PORTIONS OF TEMPORARY OR PERMANENT DITCHES OR SWALES WITHIN 14 CALENDAR DAYS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE AND CONSTRUCTION IN THAT PORTION OF THE DITCH TEMPORARILY OR PERMANENTLY CEASES. [MINN. R. 7090]

8.7 TEMPORARY OR PERMANENT DITCHES OR SWALES BEING USED AS A SEDIMENT CONTAINMENT SYSTEM DURING CONSTRUCTION (WITH PROPERLY DESIGNED ROCK-DITCH CHECKS, BIO ROLLS, SILT DIKES, ETC.) DO NOT NEED TO BE STABILIZED. PERMITTEES MUST STABILIZE THESE AREAS WITHIN 24 HOURS AFTER THEIR USE AS A SEDIMENT CONTAINMENT SYSTEM CEASES. [MINN. R. 7090]

8.8 PERMITTEES MUST NOT USE MULCH, HYDROMULCH, TACKIFIER, POLYACRYLAMIDE OR SIMILAR EROSION PREVENTION PRACTICES WITHIN ANY PORTION OF THE NORMAL WETTED PERIMETER OF A TEMPORARY OR PERMANENT DRAINAGE DITCH OR SWALE WITH A CONTINUOUS SLOPE OF GREATER THAN 2 PERCENT. [MINN. R. 7090]

8.9 PERMITTEES MUST PROVIDE TEMPORARY OR PERMANENT ENERGY DISSIPATION AT ALL PIPE OUTLETS WITHIN 24 HOURS AFTER CONNECTION TO A SURFACE WATER OR PERMANENT STORMWATER TREATMENT SYSTEM. [MINN. R. 7090]

8.10 PERMITTEES MUST NOT DISTURB MORE LAND (I.E., PHASING) THAN CAN BE EFFECTIVELY INSPECTED AND MAINTAINED IN ACCORDANCE WITH SECTION 11. [MINN. R. 7090]

9.1 SEDIMENT CONTROL PRACTICES. [MINN. R. 7090]

9.2 PERMITTEES MUST ESTABLISH SEDIMENT CONTROL BMPS ON ALL DOWNGRADIENT PERIMETERS OF THE SITE AND DOWNGRADIENT AREAS OF THE SITE THAT DRAIN TO ANY SURFACE WATER, INCLUDING CURBS AND GUTTER SYSTEMS. PERMITTEES MUST LOCATE SEDIMENT CONTROL PRACTICES UPGRADIENT OF ANY BUFFER ZONES. PERMITTEES MUST INSTALL SEDIMENT CONTROL PRACTICES BEFORE ANY UPGRADIENT LAND-DISTURBING ACTIVITIES BEGIN AND MUST KEEP THE SEDIMENT CONTROL PRACTICES IN PLACE UNTIL THEY ESTABLISH PERMANENT COVER. [MINN. R. 7090]

9.3 IF DOWNGRADIENT SEDIMENT CONTROLS ARE OVERLOADED, BASED ON FREQUENT FAILURE OR EXCESSIVE MAINTENANCE REQUIREMENTS, PERMITTEES MUST INSTALL ADDITIONAL UPGRADIENT SEDIMENT CONTROL PRACTICES OR REDUNDANT BMPS TO ELIMINATE THE OVERLOADING AND AMEND THE SWPPP TO IDENTIFY THESE ADDITIONAL PRACTICES AS REQUIRED IN ITEM 6.3. [MINN. R. 7090]

9.4 TEMPORARY OR PERMANENT DRAINAGE DITCHES AND SEDIMENT BASINS DESIGNED AS PART OF A SEDIMENT CONTAINMENT SYSTEM (E.G., DITCHES WITH ROCK-CHECK DAMS) REQUIRE SEDIMENT CONTROL PRACTICES ONLY AS APPROPRIATE FOR SITE CONDITIONS. [MINN. R. 7090]

9.5 A FLOATING SILT CURTAIN PLACED IN THE WATER IS NOT A SEDIMENT CONTROL BMP TO SATISFY ITEM 9.2 EXCEPT WHEN WORKING ON A SHORELINE OR BELOW THE WATERLINE. IMMEDIATELY AFTER THE SHORT TERM CONSTRUCTION ACTIVITY (E.G., INSTALLATION OF RIP RAP ALONG THE SHORELINE) IN THAT AREA IS COMPLETE, PERMITTEES MUST INSTALL AN UPLAND PERIMETER CONTROL PRACTICE IF EXPOSED SOILS STILL DRAIN TO A SURFACE WATER. [MINN. R. 7090]

9.6 PERMITTEES MUST REINSTALL ALL SEDIMENT CONTROL PRACTICES ADJUSTED OR REMOVED TO ACCOMMODATE SHORT-TERM ACTIVITIES SUCH AS CLEARING OR GRUBBING, OR PASSAGE OF VEHICLES, IMMEDIATELY AFTER THE SHORT-TERM ACTIVITY IS COMPLETED. PERMITTEES MUST REINSTALL SEDIMENT CONTROL PRACTICES BEFORE THE NEXT PRECIPITATION EVENT EVEN IF THE SHORT-TERM ACTIMTY IS NOT COMPLETE. [MINN. R. 7090]

9.7 PERMITTEES MUST PROTECT ALL STORM DRAIN INLETS USING APPROPRIATE BMPS DURING CONSTRUCTION UNTIL THEY ESTABLISH PERMANENT COVER ON ALL AREAS WITH POTENTIAL FOR DISCHARGING TO THE INLET. [MINN. R. 7090]

9.8 PERMITTEES MAY REMOVE INLET PROTECTION FOR A PARTICULAR INLET IF A SPECIFIC SAFETY CONCERN (E.G. STREET FLOODING/FREEZING) IS IDENTIFIED BY THE PERMITTEES OR THE JURISDICTIONAL AUTHORITY (E.G., CITY/COUNTY/TOWNSHIP/MINNESOTA DEPARTMENT OF TRANSPORTATION ENGINEER). PERMITTEES MUST DOCUMENT THE NEED FOR REMOVAL IN THE SWPPP. [MINN. R. 7090]

9.9 PERMITTEES MUST PROVIDE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS AT THE BASE OF STOCKPILES ON THE DOWNGRADIENT PERIMETER. [MINN. R. 7090]

9.10 PERMITTEES MUST LOCATE STOCKPILES OUTSIDE OF NATURAL BUFFERS OR SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS UNLESS THERE IS A BYPASS IN PLACE FOR THE STORMWATER. [MINN. R. 7090]

9.11 PERMITTEES MUST INSTALL A VEHICLE TRACKING BMP TO MINIMIZE THE TRACK OUT OF SEDIMENT FROM THE CONSTRUCTION SITE OR ONTO PAVED ROADS WITHIN THE SITE. [MINN. R. 7090]

9.12 PERMITTEES MUST USE STREET SWEEPING IF VEHICLE TRACKING BMPS ARE NOT ADEQUATE TO PREVENT SEDIMENT TRACKING ONTO THE STREET. [MINN. R. 7090]

9.13 PERMITTEES MUST INSTALL TEMPORARY SEDIMENT BASINS AS REQUIRED IN SECTION 14. [MINN. R. 7090]

9.14 IN ANY AREAS OF THE SITE WHERE FINAL VEGETATIVE STABILIZATION WILL OCCUR, PERMITTEES MUST RESTRICT VEHICLE AND EQUIPMENT USE TO MINIMIZE SOIL COMPACTION. [MINN. R. 7090]

9.15 PERMITTEES MUST PRESERVE TOPSOIL ON THE SITE, UNLESS INFEASIBLE. [MINN. R. 7090]

9.16 PERMITTEES MUST DIRECT DISCHARGES FROM BMPS TO VEGETATED AREAS UNLESS INFEASIBLE. [MINN. R. 7090]

9.17 PERMITTEES MUST PRESERVE A 50 FOOT NATURAL BUFFER OR, IF A BUFFER IS INFEASIBLE ON THE SITE, PROVIDE REDUNDANT (DOUBLE) PERIMETER SEDIMENT CONTROLS WHEN A SURFACE WATER IS LOCATED WITHIN 50 FEET OF THE PROJECT'S EARTH DISTURBANCES AND STORMWATER FLOWS TO THE SURFACE WATER. PERMITTEES MUST INSTALL PERIMETER SEDIMENT CONTROLS AT LEAST 5 FEET APART UNLESS LIMITED BY LACK OF AVAILABLE SPACE. NATURAL BUFFERS ARE NOT REQUIRED ADJACENT TO ROAD DITCHES, JUDICIAL DITCHES, COUNTY DITCHES, STORMWATER CONVEYANCE CHANNELS, STORM DRAIN INLETS, AND SEDIMENT BASINS. IF PRESERVING THE BUFFER IS INFEASIBLE, PERMITTEES MUST DOCUMENT THE REASONS IN THE SWPPP. SHEET FILING IS A REDUNDANT PERIMETER CONTROL IF INSTALLED IN A MANNER THAT RETAINS ALL STORMWATER. [MINN. R. 7090]

9.18 PERMITTEES MUST USE POLYMERS, FLOCCULANTS, OR OTHER SEDIMENTATION TREATMENT CHEMICALS IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICES, DOSING SPECIFICATIONS AND SEDIMENT REMOVAL DESIGN SPECIFICATIONS PROVIDED BY THE MANUFACTURER OR SUPPLIER. THE PERMITTEES MUST USE CONVENTIONAL EROSION AND SEDIMENT CONTROLS PRIOR TO CHEMICAL ADDITION AND MUST DIRECT TREATED STORMWATER TO A SEDIMENT CONTROL SYSTEM FOR FILTRATION OR SETTLEMENT OF THE FLOC PRIOR TO DISCHARGE. [MINN. R. 7090]

10.1 DEWATERING AND BASIN DRAINING. [MINN. R. 7090]

10.2 PERMITTEES MUST DISCHARGE TURBID OR SEDIMENT-LADEN WATERS RELATED TO DEWATERING OR BASIN DRAINING (E.G., PUMPED DISCHARGES, TRENCH/DITCH CUTS FOR DRAINAGE) TO A TEMPORARY OR PERMANENT SEDIMENT BASIN DESIGNED FOR THE PROJECT SITE UNLESS INFEASIBLE. PERMITTEES MAY DEWATER TO SURFACE WATERS IF THEY VISUALLY CHECK TO ENSURE ADEQUATE TREATMENT HAS BEEN OBTAINED AND NUISANCE CONDITIONS (SEE MINN. R. 7050.0210, SUBP. 2) WILL NOT RESULT FROM THE DISCHARGE. IF PERMITTEES CANNOT DISCHARGE THE WATER TO A SEDIMENTATION BASIN PRIOR TO ENTERING A SURFACE WATER, PERMITTEES MUST TREAT IT WITH APPROPRIATE BMPS SUCH THAT THE DISCHARGE DOES NOT ADVERSELY AFFECT THE SURFACE WATER OR DOWNSTREAM PROPERTIES. [MINN. R. 7050.0210]

10.3 IF PERMITTEES MUST DISCHARGE WATER CONTAINING OIL OR GREASE, THEY MUST USE AN OIL-WATER SEPARATOR OR SUITABLE FILTRATION DEVICE (E.G., CARTRIDGE FILTERS, ABSORBENTS PADS) PRIOR TO DISCHARGE. [MINN. R. 7090]

10.4 PERMITTEES MUST DISCHARGE ALL WATER FROM DEWATERING OR BASIN-DRAINING ACTIVITIES IN A MANNER THAT DOES NOT CAUSE EROSION OR SCOUR IN THE IMMEDIATE VICINITY OF DISCHARGE POINTS OR IN THE INUNDATION OF WETLANDS IN THE IMMEDIATE VICINITY OF DISCHARGE POINTS THAT CAUSES SIGNIFICANT ADVERSE IMPACT TO THE WETLAND. [MINN. R. 7090]

10.5 IF PERMITTEES USE FILTERS WITH BACKWASH WATER, THEY MUST HAUL THE BACKWASH WATER AWAY FOR DISPOSAL, RETURN THE BACKWASH WATER TO THE BEGINNING OF THE TREATMENT PROCESS, OR INCORPORATE THE BACKWASH WATER INTO THE SITE IN A MANNER THAT DOES NOT CAUSE EROSION. [MINN. R. 7090]

11.1 INSPECTIONS AND MAINTENANCE. [MINN. R. 7090]

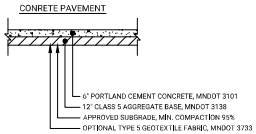
11.2 PERMITTEES MUST ENSURE A TRAINED PERSON, AS IDENTIFIED IN ITEM 21.2.B, WILL INSPECT THE ENTIRE CONSTRUCTION SITE AT LEAST ONCE EVERY SEVEN (7) DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 1/2 INCH IN 24 HOURS. [MINN. R. 7090]

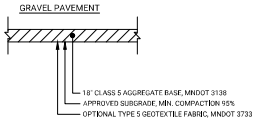
11.3 PERMITTEES MUST INSPECT AND MAINTAIN ALL PERMANENT STORMWATER TREATMENT BMPS. [MINN. R. 7090]

11.4 PERMITTEES MUST INSPECT ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPS AND POLLUTION PREVENTION MANAGEMENT MEASURES TO ENSURE INTEGRITY AND EFFECTIVENESS. PERMITTEES MUST REPAIR, REPLACE OR SUPPLEMENT ALL NONFUNCTIONAL BMPS WITH FUNCTIONAL BMPS BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY UNLESS ANOTHER TIME FRAME IS SPECIFIED IN ITEM 11.5 OR 11.6. PERMITTEES MAY TAKE ADDITIONAL TIME IF FIELD CONDITIONS PREVENT ACCESS TO THE AREA. [MINN. R. 7090]

11.5 DURING EACH INSPECTION, PERMITTEES MUST INSPECT SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS BUT NOT CURB AND GUTTER SYSTEMS, FOR EVIDENCE OF EROSION AND SEDIMENT DEPOSITION. PERMITTEES MUST REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS, INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS AND RESTABILIZE THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOIL. PERMITTEES MUST COMPLETE REMOVAL AND STABILIZATION WITHIN SEVEN (7) CALENDAR DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. PERMITTEES MUST USE ALL REASONABLE EFORTS TO OBTAIN ACCESS. IF PRECLUDED, REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) DAYS OF OBTAINING ACCESS. PERMITTEES ARE RESPONSIBLE FOR CONTACTING ALL LOCAL, REGIONAL STATE AND FEDERAL AUTHORITIES AND RECEIVING ANY APPLICABLE PERMITS, PRIOR TO CONDUCTING ANY WORK IN SURFACE WATERS. [MINN. R. 7090]

11.6 PERMIT



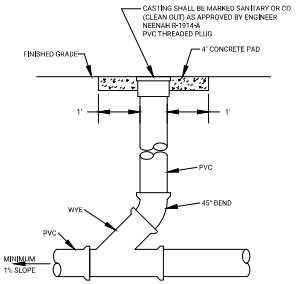


NOTES

1. FINAL PAVEMENT SECTIONS AND SUBGRADE COMPACTION REQUIREMENTS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER OF RECORD

1 PAVEMENT SECTIONS

NO SCALE



NOTES:
- ALL JOINTS SHALL BE SOLVENT WELD EXCEPT AS NOTED.
- CLEAN OUTS ARE REQUIRED AT 100' SPACING AND AT CHANGE OF DIRECTION.
- ALL CLEAN OUTS SHALL BE EQUIPPED WITH A FROST SLEEVE.

2 CLEANOUT

NO SCALE

STABILIZE ALL EXPOSED SOIL AREAS, INCLUDING STOCKPILES. STABILIZATION MUST BE INITIATED IMMEDIATELY TO LIMIT SOIL EROSION WHEN CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. STABILIZATION MUST BE COMPLETED NO LATER THAN 7 CALENDAR DAYS AFTER THE CONSTRUCTION ACTIVITY HAS CEASED. STABILIZATION IS NOT REQUIRED ON CONSTRUCTED BASE COMPONENTS OF ROADS, PARKING LOTS AND SIMILAR SURFACES. STABILIZATION IS NOT REQUIRED ON TEMPORARY STOCKPILES WITHOUT SIGNIFICANT SILT, CLAY OR ORGANIC COMPONENTS (E.G., CLEAN AGGREGATE STOCKPILES, DEMOLITION CONCRETE STOCKPILES, SAND STOCKPILES) BUT PERMITTEES MUST PROVIDE SEDIMENT CONTROLS AT THE BASE OF THE STOCKPILE.

TEMPORARY SEEDING SHALL BE IN ACCORDANCE WITH MNDOT 2575 AND SHALL BE AS FOLLOWS:

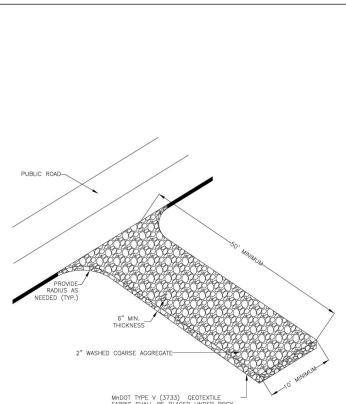
SEED: 21-111 AT 100 LBS PER ACRE OR 21-112 AT 100 LBS PER ACRE
MULCH: TYPE 1 AT 2 TONS PER ACRE
FERTILIZER: 10-20-20 AT 300 LBS PER ACRE

PERMANENT SEEDING SHALL BE IN ACCORDANCE WITH MNDOT 2575 AND SHALL BE AS FOLLOWS, UNLESS SHOWN OTHERWISE ON THE PLANS:

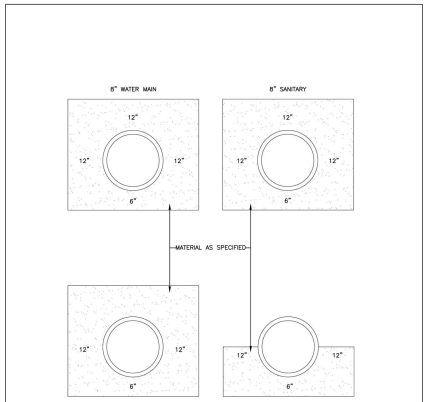
SEED: 25-131 AT 220 LBS PER ACRE OR 25-141 AT 59 LBS PER ACRE
MULCH: TYPE 1 AT 2 TONS PER ACRE
FERTILIZER: 10-10-10 AT 200 LBS PER ACRE

3 TURF ESTABLISHMENT

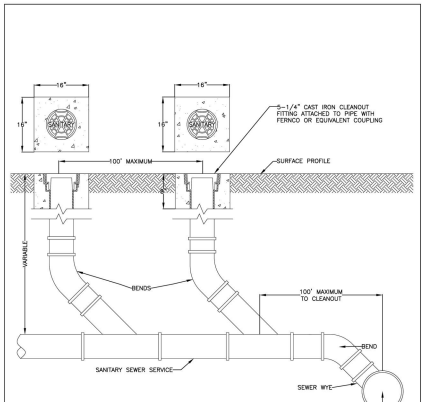
NO SCALE



APPROVED: Digitally signed by Michael J McCarty Date: 2022.10.28 12:14:06-05'00' — CITY ENGINEER
CITY OF MANKATO ENGINEERING — STABILIZED CONSTRUCTION EXIT
SPECIFICATION REFERENCE:
STANDARD PLATE NO. 2003A — 1 OF 1

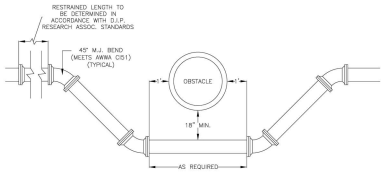


APPROVED: Digitally signed by Michael J McCarty Date: 2022.10.28 12:14:06-05'00' — CITY ENGINEER
CITY OF MANKATO ENGINEERING — GRANULAR BEDDING & ENCASEMENT
SPECIFICATION REFERENCE:
STANDARD PLATE NO. 2100A — 1 OF 1



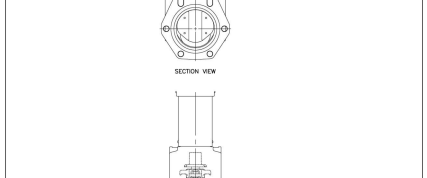
NOTE:
CLEANOUT IS TO BE WITHIN EASEMENT AREA BUT OUT OF DRIVING SURFACE, GRANULAR MATERIAL TO BE PLACED AROUND ALL PIPE.

APPROVED: Digitally signed by Michael J McCarty Date: 2022.10.28 12:14:06-05'00' — CITY ENGINEER
CITY OF MANKATO ENGINEERING — SANITARY SERVICE CLEANOUT
SPECIFICATION REFERENCE:
STANDARD PLATE NO. 2242A — 1 OF 1

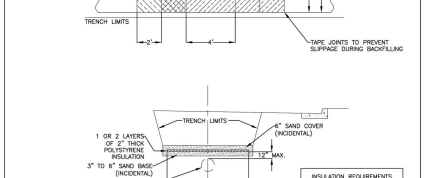


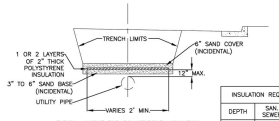
NOTES:
1. FITTINGS SHALL BE RESTRAINED WITH THE USE OF APPROVED MECHANICAL JOINT RESTRAINING GLANDS.
2. FITTINGS AND GLANDS SHALL BE EPOXY COATED, FLUOROCARBON COATED BOLTS SHALL BE BLUE WITH TWO ZINC ANODES ATTACHED PER GLAND.

APPROVED: Digitally signed by Michael J McCarty Date: 2022.10.28 12:14:51-05'00' — CITY ENGINEER
CITY OF MANKATO ENGINEERING — WATERMAIN CONSTRUCTION AROUND OBSTACLES
SPECIFICATION REFERENCE:
STANDARD PLATE NO. 2320A — 1 OF 1



APPROVED: Digitally signed by Michael J McCarty Date: 2022.10.28 12:14:51-05'00' — CITY ENGINEER
CITY OF MANKATO ENGINEERING — GATE VALVE ADAPTOR
SPECIFICATION REFERENCE:
STANDARD PLATE NO. 2321A — 1 OF 1





TYPICAL LAYOUT FOR POLYSTYRENE INSULATION

INSULATION REQUIREMENTS		
DEPTH	SAN. SEWER	WATER-MAIN
5'	4"	4"
5'-7'	2"	2"
>7'	0	0

NOTES:
1. INSULATION BOARD SHALL BE AS PER MN/DOT SPEC. 3760.
2. FOR WATERMAIN WITH NO SERVICE CONNECTIONS OR FOR WATERMAIN OUTSIDE OF PAVED AREAS WHERE SNOW IS NOT REMOVED, NO INSULATION IS REQUIRED IF COVER IS AT LEAST 5'.
3. INSULATION BOARD SHALL BE PAID FOR AS 2503.604 2" OR 4" INSULATION WHERE APPLICABLE AT THE PRICE BID PER SQ. YD.
4. DEPTH FOR SANITARY AND STORM SHALL BE TO INVERT. DEPTH FOR WATERMAIN SHALL BE TO THE TOP OF THE PIPE.

APPROVED: Digitally signed by Michael J McCarty Date: 2022.10.28 12:14:51-05'00' — CITY ENGINEER
CITY OF MANKATO ENGINEERING — POLYSTYRENE INSULATION
SPECIFICATION REFERENCE:
STANDARD PLATE NO. 2323A — 1 OF 1

CONTOUR CIVIL DESIGN
8195 VERNON STREET | ROCKFORD, MN 55373
TEL: 612.730.2565 | WWW.CONTOURCD.COM

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

NAME: JOSEPH T RADACH PE
SIGNATURE
DATE: 10/03/25 LIC #: 45889

REVISIONS	ISSUE DATE: 10/03/25	BY: JTR
1.		
2.		
3.		
4.		
5.		
6.		
7.		

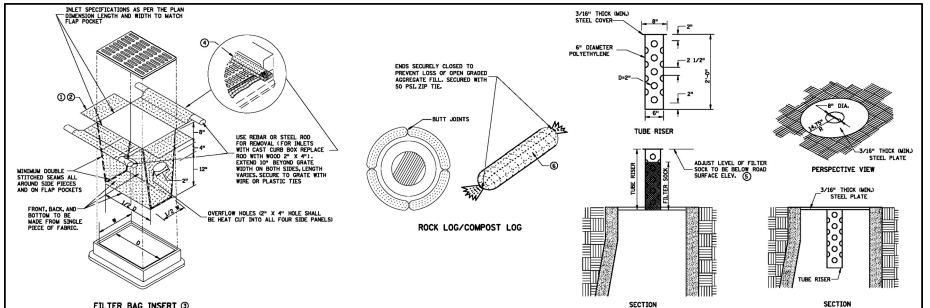
OWNER
CEMSTONE COMPANIES
2025 Centre Pointe Blvd, Suite 300
Mendota Heights, MN 55120

DETAILS

CEMSTONE MANKATO PLANT
100 Summit Avenue
Mankato, MN 56001

SHEET NUMBER
C6.1

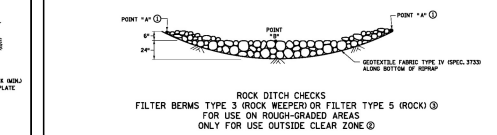
VERIFY: c:\users\contour-civil\desktop_archive_cad\2021\3-complete marketplace\2021_stand.dwg

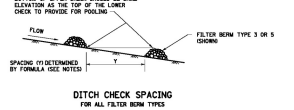


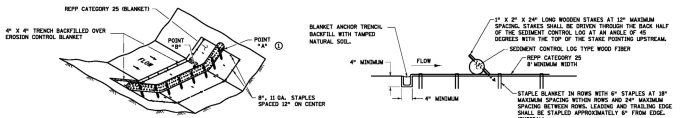
NOTES:
SEE SPECS. 2573, 3137, & 3886.
DEVICES MUST BE ADJUSTED ACCORDINGLY AS TO NOT CAUSE FLOODING ON ROADWAY THAT WOULD IMPEDE TRAFFIC FLOW.
① ALL GEOTEXTILE USED FOR INLET PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS, MEETING SPEC. 3886.
② FINISHED SIZE, INCLUDING POCKETS WHERE REQUIRED SHALL EXTEND A MINIMUM OF 10 INCHES AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
③ INSTALLATION NOTES:
DO NOT PLACE FILTER BAG INSERT IN INLETS SHALLOWER THAN 30 INCHES, MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. THE PLACED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE OF 3 INCHES BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES. WHERE NECESSARY THE CONTRACTOR SHALL CLINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3 INCH SIDE CLEARANCE.
④ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2 INCH X 4 INCH OR USE A ROCK SOCK OR SAND BAGS IN PLACE OF THE FLAP POCKETS.
⑤ SOCK HEIGHT MUST NOT BE SO HIGH AS TO SLOW DOWN WATER FILTRATION TO CAUSE FLOODING OF THE ROADWAY.
⑥ GEOTEXTILE SOCK BETWEEN 4-10 FEET LONG AND 4-6 INCH DIAMETER, SEAM TO BE JOINED BY TWO ROWS OF STITCHING WITH A PLASTIC MESH BACKING OR PROVIDE A HEAT BONDED SEAM (OR APPROVED EQUIVALENT). FILL ROCK LOG WITH OPEN GRADED AGGREGATE CONSISTING OF SOUND DURABLE PARTICLES OF COARSE AGGREGATE CONFORMING TO SPEC. 3137 TABLE 3137-1, CA-3 GRADATION.

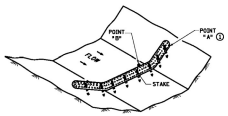
REVISIONS
APPROVED: 2-28-2017

MINNESOTA DEPARTMENT OF TRANSPORTATION — STATE DESIGN ENGINEER
STANDARD PLAN 5-297.405 | 4 OF 8
APPROVED: 2-28-2017
REVISED:
TEMPORARY SEDIMENT CONTROL
STORM DRAIN INLET PROTECTION
STATE PROJ. NO. (T.H.) SHEET NO. OF SHEETS





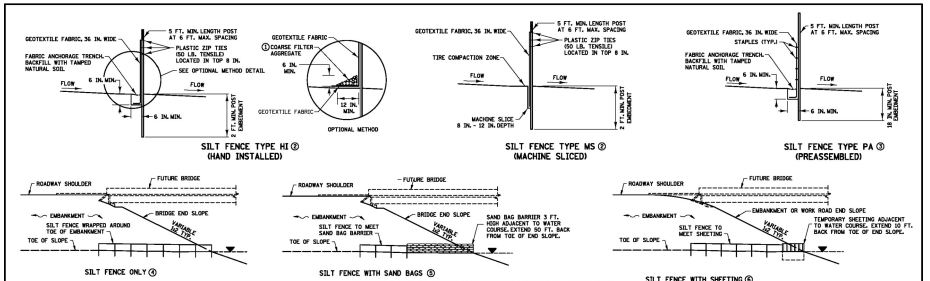


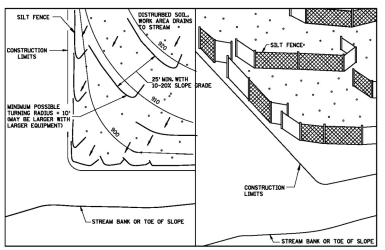


NOTES:
REPP = ROLLED EROSION PREVENTION PRODUCT.
SEE SPECS. 2573, 3601, 3733, 3885, 3886 & 3895.
FOR DITCH CHECKS, PLACE SEDIMENT CONTROL LOG PERPENDICULAR TO FLOW AND IN A CRESCENT SHAPE WITH THE ENDS FACING UPSTREAM.
APPROXIMATE SPACING BETWEEN EACH DITCH CHECK SHOULD BE DETERMINED FROM THE FOLLOWING SPACING FORMULA:
APPROXIMATE SPACING OF DITCH CHECKS (FT.) = Y = $\frac{\text{DITCH CHECK HEIGHT (FT.)}}{\text{X CHANNEL SLOPE}}$ X 100
① POINT "A" MUST BE A MINIMUM OF 6" HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.
② ROCK DITCH CHECKS PLACED WITHIN THE CLEAR ZONE ARE TO BE 18" OR LESS IN HEIGHT, A 1:6 APPROACH AND DEPARTURE SLOPE SHALL BE PROVIDED.
③ DITCH GRADE 3% - 5%, MAX. FLOW VELOCITY 12 FT./SEC.
④ DITCH GRADE 1.5% - 3%, MAX. FLOW VELOCITY 4.5 FT./SEC.
⑤ DITCH GRADE 1.0% - 3%, MAX. FLOW VELOCITY 1.5 FT./SEC.

REVISIONS
APPROVED: JANUARY 8, 2020

MINNESOTA DEPARTMENT OF TRANSPORTATION — STATE DESIGN ENGINEER
STANDARD PLAN 5-297.405 | 3 OF 8
APPROVED: 1-8-2020
REVISED:
TEMPORARY SEDIMENT CONTROL
DITCH CHECK
STATE PROJ. NO. (T.H.) SHEET NO. OF SHEETS

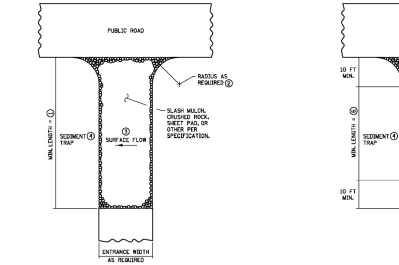


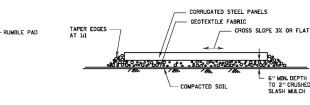


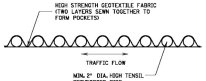
NOTES:
SEE SPECS. 2573, 3149 & 3886.
① COARSE FILTER AGGREGATE (SPEC. 3149) SHALL BE INCIDENTAL.
② TO PROTECT AREAS FROM SHEET FLOW. MAXIMUM CONTRIBUTING AREA= 1 ACRE.
③ TO PROTECT AREAS FROM SHEET FLOW. MAXIMUM CONTRIBUTING AREA= 0.25 ACRE.
④ WATER COURSE FLOW VELOCITY: STANDING. CONTRIBUTING SLOPE AREA= L/2 ACRE.
⑤ WATER COURSE FLOW VELOCITY: 1 TO 7 FT./SEC. CONTRIBUTING SLOPE AREA= 1 ACRE.
⑥ WATER COURSE FLOW VELOCITY: 8 TO 15 FT./SEC. CONTRIBUTING SLOPE AREA= 3 ACRES.

REVISIONS
APPROVED: 2-28-2017

MINNESOTA DEPARTMENT OF TRANSPORTATION — STATE DESIGN ENGINEER
STANDARD PLAN 5-297.405 | 6 OF 8
APPROVED: 2-28-2017
REVISED:
TEMPORARY SEDIMENT CONTROL
SILT FENCE
STATE PROJ. NO. (T.H.) SHEET NO. OF SHEETS







NOTES:
SEE SPECS. 2573 & 3882.
① MINIMUM LENGTH SHALL BE THE GREATER OF 50 FEET OR A LENGTH SUFFICIENT TO ALLOW A MINIMUM OF 5 TIRE ROTATIONS ON THE PROVIDED PAD. MINIMUM LENGTH SHALL BE CALCULATED USING THE LARGEST TIRE WHICH WILL BE USED IN TYPICAL OPERATIONS.
② PROVIDE RADIUS OR WIDEN PAD SUFFICIENTLY TO PREVENT VEHICLE TIRES FROM TRACKING OFF OF PAD WHEN LEAVING SITE.
③ IF RUNOFF FROM DISTURBED AREAS FLOWS TOWARD CONSTRUCTION EXITS, PREVENT RUNOFF FROM DRAINING DIRECTLY TO PUBLIC ROAD OVER CONSTRUCTION EXIT BY CROWNING THE EXIT OR SLOPING TO ONE SIDE. IF SURFACE GRADING IS INSUFFICIENT, PROVIDE OTHER MEANS OF INTERCEPTING RUNOFF.
④ IF RUNOFF FROM CONSTRUCTION EXITS WILL DRAIN OFF OF PROJECT SITE, PROVIDE SEDIMENT TRAP WITH STABILIZED OVERFLOW.
⑤ IF A TIRE WASH OFF IS REQUIRED THE CONSTRUCTION EXITS SHALL BE GRADED TO DRAIN THE WASH WATER TO A SEDIMENT TRAP.
⑥ MINIMUM LENGTH OF RUMBLE PAD SHALL BE 20 FEET, OR AS REQUIRED TO REMOVE SEDIMENT FROM TIRES. IF SIGNIFICANT SEDIMENT IS TRACKED FROM THE SITE, THE RUMBLE PAD SHALL BE LENGTHENED OR THE DESIGN MODIFIED TO PROVIDE ADDITIONAL VIBRATION. WASH-OFF LENGTH SHALL BE AS REQUIRED TO EFFECTIVELY REMOVE CONSTRUCTION SEDIMENT FROM VEHICLE TIRES.
⑦ MAINTENANCE OF CONSTRUCTION EXITS SHALL OCCUR WHEN THE EFFECTIVENESS OF SEDIMENT REMOVAL HAS BEEN REDUCED. MAINTENANCE SHALL CONSIST OF REMOVING SEDIMENT AND CLEANING THE MATERIALS OR PLACING ADDITIONAL MATERIAL (SLASH MULCH OR CRUSHED ROCK) OVER SEDIMENT FILLED MATERIAL TO RESTORE EFFECTIVENESS.

REVISIONS
APPROVED: 2-28-2017

MINNESOTA DEPARTMENT OF TRANSPORTATION — STATE DESIGN ENGINEER
STANDARD PLAN 5-297.405 | 5 OF 8
APPROVED: 2-28-2017
REVISED:
TEMPORARY SEDIMENT CONTROL
STABILIZED CONSTRUCTION EXIT
STATE PROJ. NO. (T.H.) SHEET NO. OF SHEETS

CONTOUR CIVIL DESIGN
8195 VERNON STREET | ROCKFORD, MN 55373
TEL: 612.730.2565 | WWW.CONTOURCD.COM

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
NAME: JOSEPH T RADACH PE
SIGNATURE
DATE: 10/03/25 LIC #: 45889

REVISIONS	ISSUE DATE: 10/03/25	BY: JTR
1.		
2.		
3.		
4.		
5.		
6.		
7.		

OWNER
CEMSTONE COMPANIES
2025 Centre Pointe Blvd, Suite 300
Mendota Heights, MN 55120

DETAILS

CEMSTONE MANKATO PLANT
100 Summit Avenue
Mankato, MN 56001

SHEET NUMBER
C6.2

M:\MD\73\ c:\users\contour-civil\appdata\local\temp\acpublish_2436\73\3-comissions mankato\sheet 73C3_sheet1.dwg

Logan Stenberg

From: Mayers, Charles J <charles.mayers@CenterpointEnergy.com>
Sent: Tuesday, October 14, 2025 6:02 AM
To: Logan Stenberg
Cc: Mayers, Charles J
Subject: RE: [External Email] Vacation Request - 114 Summit Ave Mankato, Mn 56001

Hi Logan,

CenterPoint Energy has no issues or concerns at this time with your Vacation Request - 114 Summit Ave Mankato, Mn 56001. We have no facilities within the vacated area. You are good to go.

Chuck Mayers

Chuck Mayers **SR/WA**
Senior Agent, Right of Way
System Integrity & Operation Support
612-321-5381 w. | 952-334-9180 c.
Charles.mayers@centerpointenergy.com

From: Logan Stenberg <LoganS@apxconstructiongroup.com>
Sent: Monday, October 13, 2025 3:33 PM
Cc: Lars Anderson <landerson@cemstone.com>; Alex Olin <aolin@cemstone.com>
Subject: [External Email] Vacation Request - 114 Summit Ave Mankato, Mn 56001
Importance: High

> You don't often get email from logans@apxconstructiongroup.com. Learn why this is important

All,

Please see the attached easement vacation request. Please review and sign for your respective companies as soon as possible. We are looking for this request returned end of day tomorrow 10/14.

Thank you,

LOGAN STENBERG
PROJECT MANAGER

CEL: 507-316-1444
TEL: 507-387-6836
EXT: 221
FAX: 507-387-1169

STREET/ALLEY VACATION REQUEST

City of Mankato
Intergovernmental Center
10 Civic Center Plaza
Mankato, MN 56001

Community Development
Phone: 507.387.8600
Fax: 507.388.7530
www.mankatomn.gov

Address/Location of Property:

114 Summit Ave Mankato, MN 56001

The City Council, with the assistance of the City Planning Commission, has the exclusive power to vacate or discontinue public streets, alleys, highways, or any portion thereof in the city, and public utility or access easements, but no such vacation or discontinuance shall be granted or ordered by the Council except upon the verified petition, in writing, of one or more of the owners of real property on that portion of such street, alley, or highway proposed to be vacated, or upon the verified petition of the city's Community Development Director. The petition shall state the reason for the vacation and briefly describe the street, alley, highway, or portion thereof, to be vacated.

The petition shall be delivered to the Community Development Director, who will forward it to the City Planning Commission, which will hold a hearing on the request and make a recommendation to the City Council.

It is the responsibility of the applicants to have all utility companies review the request for vacation to determine whether utilities are located in the right-of-way or easement to be vacated. The petition for right-of-way or easement vacation shall be accompanied by this form, along with a map of the proposed vacation, and brought to each utility listed below, to be signed and an indication made as to the presence of utilities. If easements must be retained for utilities or access, the applicant shall submit a drawing and a written description of the easements with this form.

Utility	By	Utilities present within vacation	Check box if easement needed
Alliance Pipeline		Yes____ No____	
Benco Electric		Yes____ No____	
CenterPoint Energy		Yes____ No____	
Charter Communication		Yes____ No____	
Consolidated Communications	Jason Friedland	Yes____ No X	
Enterprise Products (propane)		Yes____ No____	
Greater MN Gas		Yes____ No____	
Metronet		Yes____ No____	
Kinder Morgan Cochin Pipeline		Yes____ No____	
Magellan Pipeline		Yes____ No____	
Mankato Public Works		Yes____ No____	
Northern Natural Gas		Yes____ No____	
Sprint		Yes____ No____	
Verizon Wireless		Yes____ No____	
Xcel Energy		Yes____ No____	
Zayo Group		Yes____ No____	

Utility Company Comments:_____

STREET/ALLEY VACATION REQUEST

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CenterPoint Energy		Yes____ No____	
Charter Communication		Yes____ No____	
Consolidated Communications		Yes____ No____	
Enterprise Products (propane)		Yes____ No____	
Greater MN Gas		Yes____ No____	
Metronet		Yes____ No____	
Kinder Morgan Cochin Pipeline		Yes____ No____	
Magellan Pipeline	HEath Biegler	Yes____ No__x__	
Mankato Public Works		Yes____ No____	
Northern Natural Gas		Yes____ No____	
Sprint		Yes____ No____	
Verizon Wireless		Yes____ No____	
Xcel Energy		Yes____ No____	
Zayo Group		Yes____ No____	

Utility Company Comments:_____
_____
_____
_____
_____
_____

STREET/ALLEY VACATION REQUEST

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Alliance Pipeline		Yes____ No____	
Benco Electric		Yes____ No____	
CenterPoint Energy		Yes____ No____	
Charter Communication		Yes____ No____	
Consolidated Communications		Yes____ No____	
Enterprise Products (propane)	D. Nicholson	Yes____ No X	
Greater MN Gas		Yes____ No____	
Metronet		Yes____ No____	
Kinder Morgan Cochin Pipeline		Yes____ No____	
Magellan Pipeline		Yes____ No____	
Mankato Public Works		Yes____ No____	
Northern Natural Gas		Yes____ No____	
Sprint		Yes____ No____	
Verizon Wireless		Yes____ No____	
Xcel Energy		Yes____ No____	
Zayo Group		Yes____ No____	

Utility Company Comments: Enterprise is clear. Any questions, please let me know. Thanks, Nick 651-295-0960

D. Nick Nicholson - 651-295-0960

STREET/ALLEY VACATION REQUEST

City of Mankato
Intergovernmental Center
10 Civic Center Plaza
Mankato, MN 56001

Community Development
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Alliance Pipeline		Yes___ No___	
Benco Electric		Yes___ No___	
CenterPoint Energy		Yes___ No___	
Charter Communication	SDL BRIAN OVIATT	Yes___ No X	
Consolidated Communications		Yes___ No___	
Enterprise Products (propane)		Yes___ No___	
Greater MN Gas		Yes___ No___	
Metronet		Yes___ No___	
Kinder Morgan Cochin Pipeline		Yes___ No___	
Magellan Pipeline		Yes___ No___	
Mankato Public Works		Yes___ No___	
Northern Natural Gas		Yes___ No___	
Sprint		Yes___ No___	
Verizon Wireless		Yes___ No___	
Xcel Energy		Yes___ No___	
Zayo Group		Yes___ No___	

Utility Company Comments: NO UTILITIES IN EASEMENT REQUESTED.

UTILITY COMPANY CONTACTS

Steven Senger - **Zayo Group**
5005 Cheshire Parking North, STE 1
Minneapolis, MN 55446-3719
Phone: 612.210.8036
steven.senger@zayo.com

Randy Phillips - **Alliance Pipeline**
7701 France Ave S, Suite 600
Edina, MN 55435
Phone: 612-597-9616
Randall.phillips@enbridge.com

Tim Braulick - **Benco Electric Cooperative**
20946 549th Avenue, PO Box 8
Mankato, MN 56001
Phone: 507.387.7963 Fax: 507.387.6254
timb@benco.coop

Charles Mayer - **Center Point Energy**
2400 N. Riverfront Drive
Mankato, MN 56001
Phone: 612.321.5381
charles.mayers@centerpointenergy.com

Brian Oviatt - **Charter Communications**
101 Pauley Way,
Mankato, MN 56001
Phone: 507.469.0256
Brian.oviatt@charter.com

Nick Nicholson - **Enterprise Products (propane)**
10825 Courthouse Blvd. E.
Inver Grove Heights, MN 55077
Phone: 651-453-5302 Fax: 651-453-5310
ddnicholson@eprod.com

Nikki Kupser - **Greater Minnesota Gas**
1900 Cardinal Drive
Fairbault, MN 55021
Phone: 888.931.3411 Fax: 507.934.6675
nkupser@greatermngas.com

Lori Kemper - **Metronet**
3701 Communications Way
Evansville, IN 47715
Phone: 812.213.1050
Lori.kemper@metronet.com

Jason Fladland - **Consolidated Communications**
2730 3rd Ave, PO Box 3288
Mankato, MN 56002-3248
Phone: 507.386.3597
Jason.Fladland@consolidated.com

Stephen Urban - **Kinder Morgan Cochin Pipeline**
PO Box 39
Eagle Lake, MN 56024
Phone: 507.625.1411 Fax: 507.625.4494
Stephen_urban@kindermorgan.com

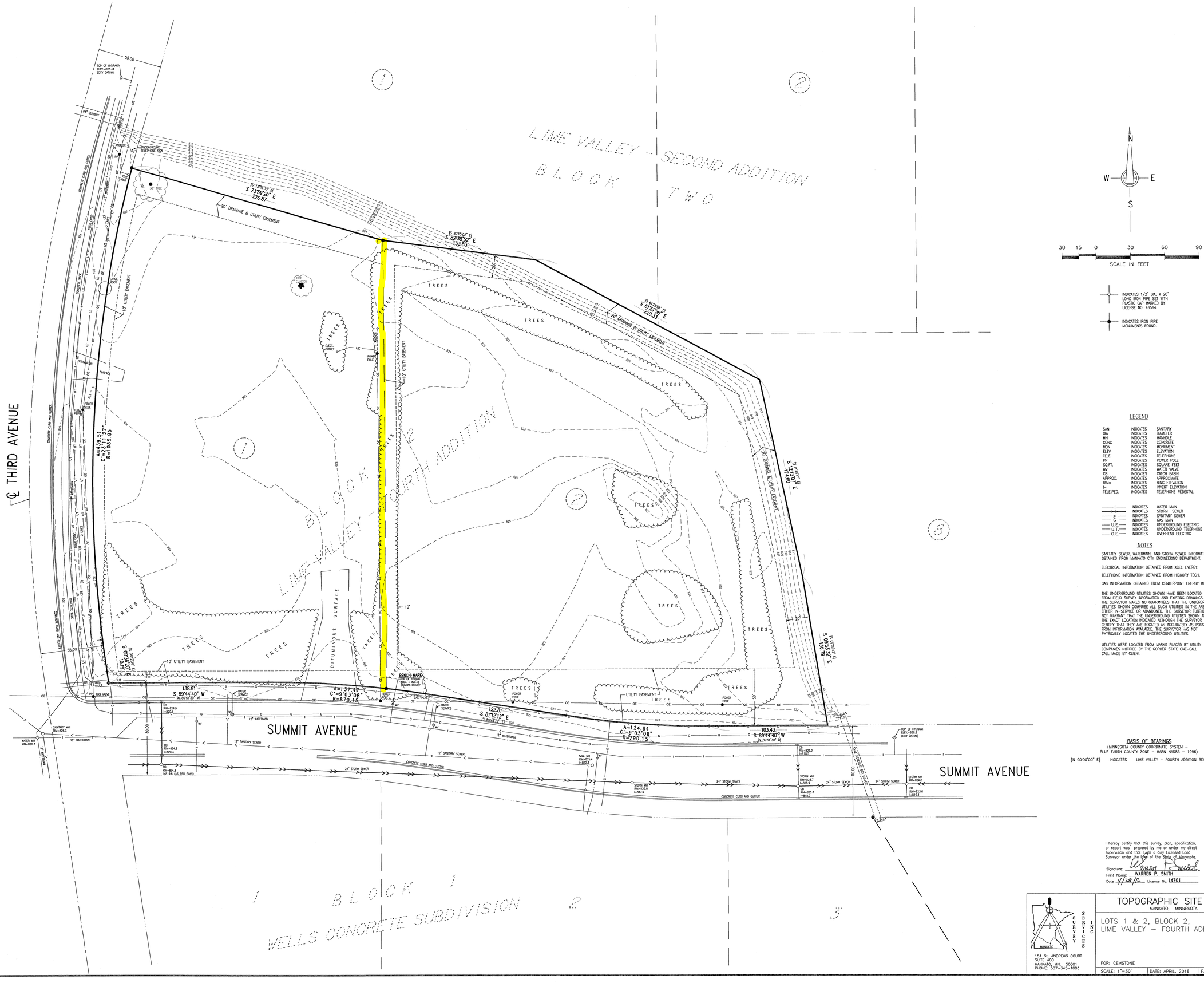
Heath Biegler - **Magellan Pipeline**
2728 Paton Rd.
St. Paul, MN 55113
Phone: 612-723-0107
Heath.biegler@magellanlp.com

Rod Nelson - **Northern Natural Gas Company**
1186 State Highway 263
Welcome, MN 56181
Phone: 402.530.2451 Cell: 507.226.6848
Fax: 402.530.2484
Rod.nelson@nngco.com

Karl Nelson - **Sprint**
465 Kim Lane
Owatonna, MN 55060
Phone: 507.451.8097 Cell: 507.363.9513
Fax: 507.451.4475
Karl.nelson@sprint.com

Robert Clements - **Verizon Wireless**
100 Warren Street Suite 300
Mankato, MN 56001
Phone: 507.385.3133
Robert.clements@verizonwireless.com

Lawrence Novak - **Xcel Energy**
210 Lime Street
PO Box 1090
Mankato, MN 56002
Phone: 507.387.9612
Fax: 507.387.9604
Lawrence.j.novak@xcelenergy.com



INDICATES 1/2" DIA. X 20" LONG IRON PIPE SET WITH PLASTIC CAP MARKED BY LICENSE NO. 46564.

INDICATES IRON PIPE MONUMENTS FOUND.

LEGEND

SAN	INDICATES	SANITARY
DIA	INDICATES	DIAMETER
MH	INDICATES	MANHOLE
CONC	INDICATES	CONCRETE
MON	INDICATES	MONUMENT
ELEV	INDICATES	ELEVATION
TELE.	INDICATES	TELEPHONE
PP	INDICATES	POWER POLE
SQ.FT.	INDICATES	SQUARE FEET
WV	INDICATES	WATER VALVE
CB	INDICATES	CATCH BASIN
APPROX.	INDICATES	APPROXIMATE
RIM=	INDICATES	RING ELEVATION
I=	INDICATES	INVERT ELEVATION
TELE.PED.	INDICATES	TELEPHONE PEDESTAL

——W——	INDICATES	WATER MAIN
——ST——	INDICATES	STORM SEWER
——SN——	INDICATES	SANITARY SEWER
——G——	INDICATES	GAS MAIN
—U.E.—	INDICATES	UNDERGROUND ELECTRC
—U.T.—	INDICATES	UNDERGROUND TELEPHONE
—O.E.—	INDICATES	OVERHEAD ELECTRC

NOTES

SANITARY SEWER, WATERMAIN, AND STORM SEWER INFORMATION OBTAINED FROM MANKATO CITY ENGINEERING DEPARTMENT.

ELECTRICAL INFORMATION OBTAINED FROM XCEL ENERGY.

TELEPHONE INFORMATION OBTAINED FROM HICKORY TECH.

GAS INFORMATION OBTAINED FROM CENTERPOINT ENERGY MINNEGASCO.

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

UTILITIES WERE LOCATED FROM MARKS PLACED BY UTILITY COMPANIES NOTIFIED BY THE GOPHER STATE ONE-CALL CALL MADE BY CLIENT.

BASIS OF BEARINGS

(MINNESOTA COUNTY COORDINATE SYSTEM – BLUE EARTH COUNTY ZONE – HARN NAD83 – 1996)

(N 90°00'00" E) INDICATES LIME VALLEY – FOURTH ADDITION BEARING DATUM

I hereby certify that this survey, plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

Signature: Warren P. Smith

Print Name: WARREN P. SMITH

Date 4/28/16 License No. 14701

SURVEY SERVICES INC.
MANKATO
151 St. ANDREWS COURT
SUITE 400
MANKATO, MN. 56001
PHONE: 507-345-1003

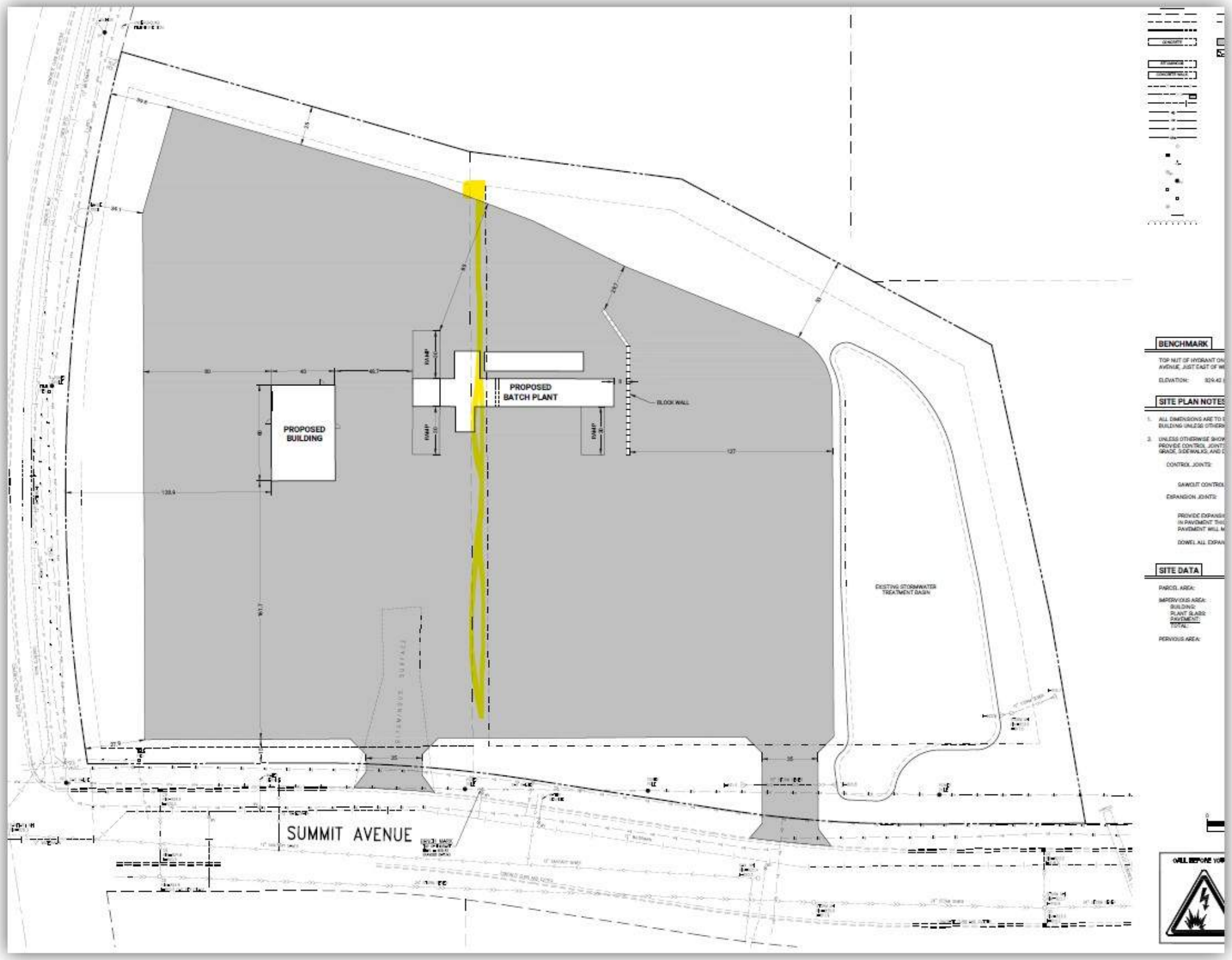
TOPOGRAPHIC SITE PLAN

MANKATO, MINNESOTA

LOTS 1 & 2, BLOCK 2,
LIME VALLEY – FOURTH ADDITION

FOR: CEMSTONE

SCALE: 1"=30'	DATE: APRIL, 2016	F.B.: FILE 16106


PROPOSED BUILDING
PROPOSED BATCH PLANT
BLOCK WALL
EXISTING STORMWATER TREATMENT BASIN
SUMMIT AVENUE
BENCHMARK
SITE PLAN NOTES
SITE DATA

Site Plan and Traffic Advisory Review Committee **1. 4.**

Meeting Date: 11/04/2025

Title

*****Site Plan and Traffic Advisory Committee Review Only. Request of Complete Construction for the review in the change in use of lots from 4-plexes, to 5-plexes.**

Applicant

The applicant is Complete Construction, LLC.

Request

The applicant is seeking a Site Plan and Traffic Advisory Committee review for the change in configuration and density on the subject parcels. The applicant is seeking to change the unit configuration from a 4-plex to a 5-plex.

Location

The properties are located in Groh Farm Subdivision and are currently addressed between 3126 and 3224 Bassett Drive as well as 1124 Fraser Lane.

Existing Land Use

The properties are vacant, platted parcels within an existing subdivision.

Zoning

The parcels are zoned R-3, Medium Density Residential.

Environmentally Sensitive Areas

There are no known environmentally sensitive areas on the site.

Review

The applicant is seeking a Site Plan and Traffic Advisory Committee review for the development of 5-plexs on 6 lots.

The site plans provided show the development of 6, 5-plex structures. The previous plans, and the CIC plat, were planned to accommodate 4-plexes. Plans show shared driveways from Bassett Drive.

Attachments

General Location Map

Aerial Plan

Site Plan

Floor Plans

General Location Map

Date: October 2025

Author:

This information is to be used for reference purposes only. The City of Mankato does not guarantee accuracy of the material contained herein and is not responsible for misuse or misinterpretation.

N

Aerial Map

Date: October 2025

Author:

This information is to be used for reference purposes only. The City of Mankato does not guarantee accuracy of the material contained herein and is not responsible for misuse or misinterpretation.

N

Groh Farm Row Homes
Mankato, Minnesota

Concept Plan
August, 2025

BOLTON & MENK

H:\DRUMLAND_PR\25X139001000\CAD\C3D\139001V_CON_2.dwg 8/1/2025 1:33:33 PM

1 A-1 FRONT ELEVATION

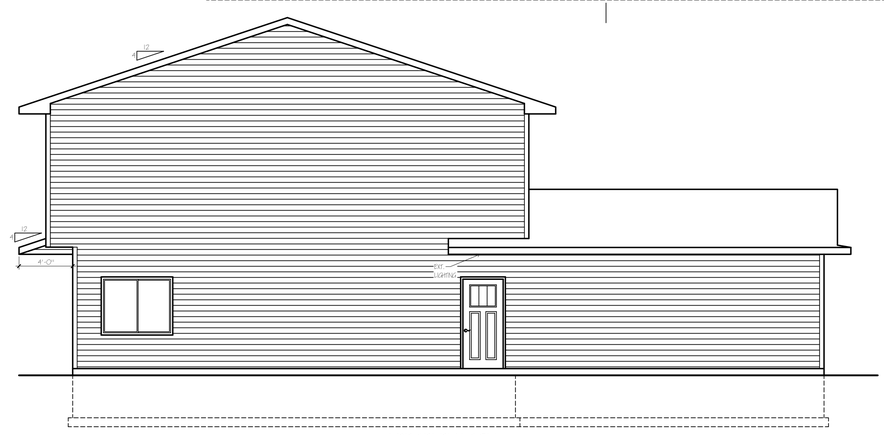
SCALE: 1/ 4" = 1'-0" 24X36"

ELEVATION NOTES:

1. 6" WOOD / EARTH SEPARATION STRIP WHILE PROVIDING POSITIVE DRAINAGE AWAY FROM STRUCTURE. BUILDER/ HOMEOWNER SHALL COMPLY WITH GRADING PLAN TO ASSURE PROPER DRAINAGE.
2. GRADED SITE FOR MIN. 12IN + 2% ABOVE STREET CRWN.
3. GRADE SHALL FALL FROM FDN. A MIN. OF 6" IN THE FIRST 10'-0"
4. DECK LEDGER TO BE ATTACHED TO HOUSE USING 5/ 8" LAG BOLTS, MAX. 16" O.C., MUST BE FLASHED & SEALED!
5. A MEMBER RESISTIVE BARRIER EQUIV. TO 2 LAYERS OF GRADE "D" PAPER IS REQ'D UNDER ADHERED VENEER SUCH AS CULTURED STONE OR STUCCO.
6. 50' MAX. CONC. DRIVE WIDTH AT PROPERTY LINE
7. FLASH ALL EXT. OPENINGS AND INTERSECTIONS OF WALL AND ROOF PER IRC SECT. R703.8.
8. PAN FLASH ALL EXT. DOOR & WDW OPENINGS PRIOR TO INSTALLATION.
9. VEHICLE ACCESS DOORS SHOULD MEET ASTM E-330 ON ANSI/ SPRIMA 108 - 90+ MPH WIND RATED.
10. 7 5/ 4" MAX. RISE, 10" MIN. TREADS, 36" MIN. LANDING
11. TEMPORARY HOUSE # LEGIBLE FROM STREET.
12. POST SITE ADDRESS TO BE READABLE FROM STREET. 4" HEIGHT, 1/2" STROKE
13. INSTALL & MAINTAIN IRTZ'S EROSION CONTROL. VEHICLE ACCESS AND PARKING IS RESTRICTED TO CRUSHED ROCK CONSTRUCTION DRIVEWAY.

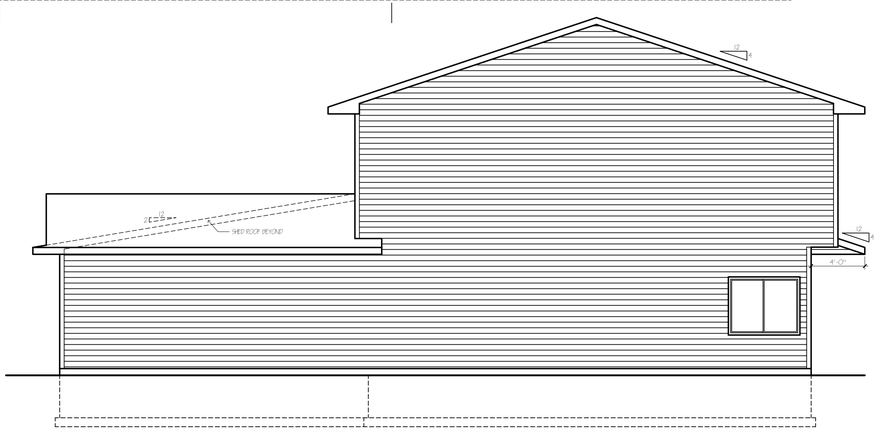
CODE COMPLIANCE NOTES:

1. 2020 MN RESIDENTIAL CODE ADOPTING THE 2018 IRC.
2. 2020 MN BUILDING CODE ADMINISTRATIVE COMPONENTS CHAPTER 1300.
3. THE 2020 MN MECHANICAL & FUEL GAS CODES ADOPTING THE 2018 SERIES OF THE INTERNATIONAL FUEL GAS CODE & 2018 INTERNATIONAL MECHANICAL CODE.
4. THE 2020 MN ENERGY CODE ADOPTION THE 2018 INTERNATIONAL ENERGY CODE.
5. THE 2017 NATIONAL ELECTRICAL CODE
6. THE 2018 MN STATE PLUMBING CODE ADOPTING THE 2018 UNIFORM PLUMBING CODE.



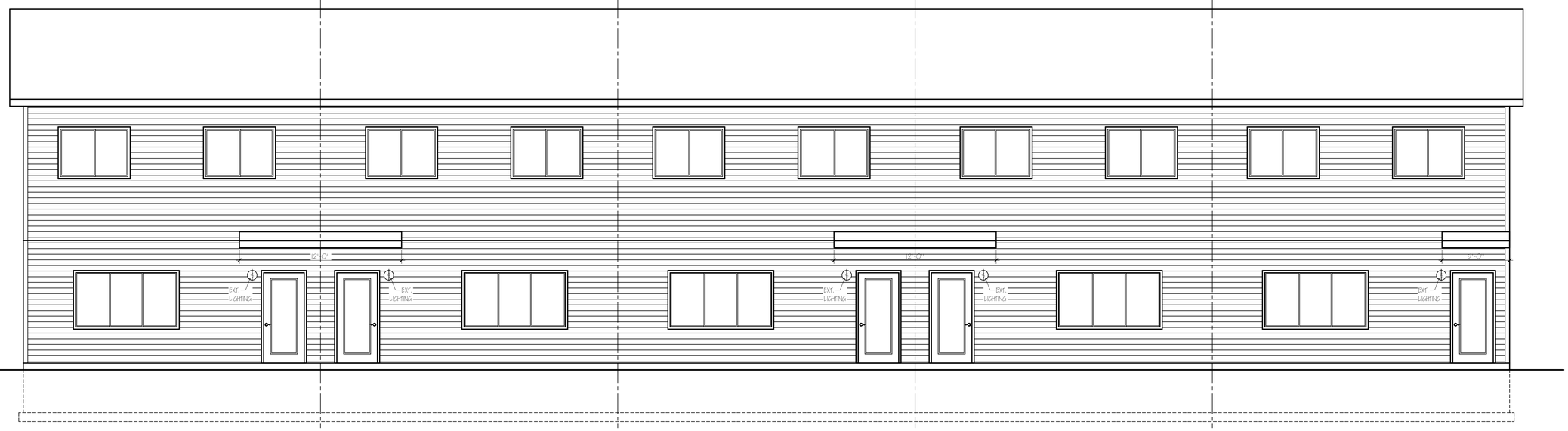
3 A-1 LEFT ELEVATION

SCALE: 1/ 8" = 1'-0" 24X36"



2 A-1 RIGHT ELEVATION

SCALE: 1/ 8" = 1'-0" 24X36"



4 A-1 REAR ELEVATION

SCALE: 1/ 4" = 1'-0" 24X36"

Rev:	Date:

GROUP FARM PROJECT
2 STORY 5 PLEX
MANKATO, MN

COMPLETE CONSTRUCTION
1052 S. VICTORY DR.
MANKATO, MN 56001

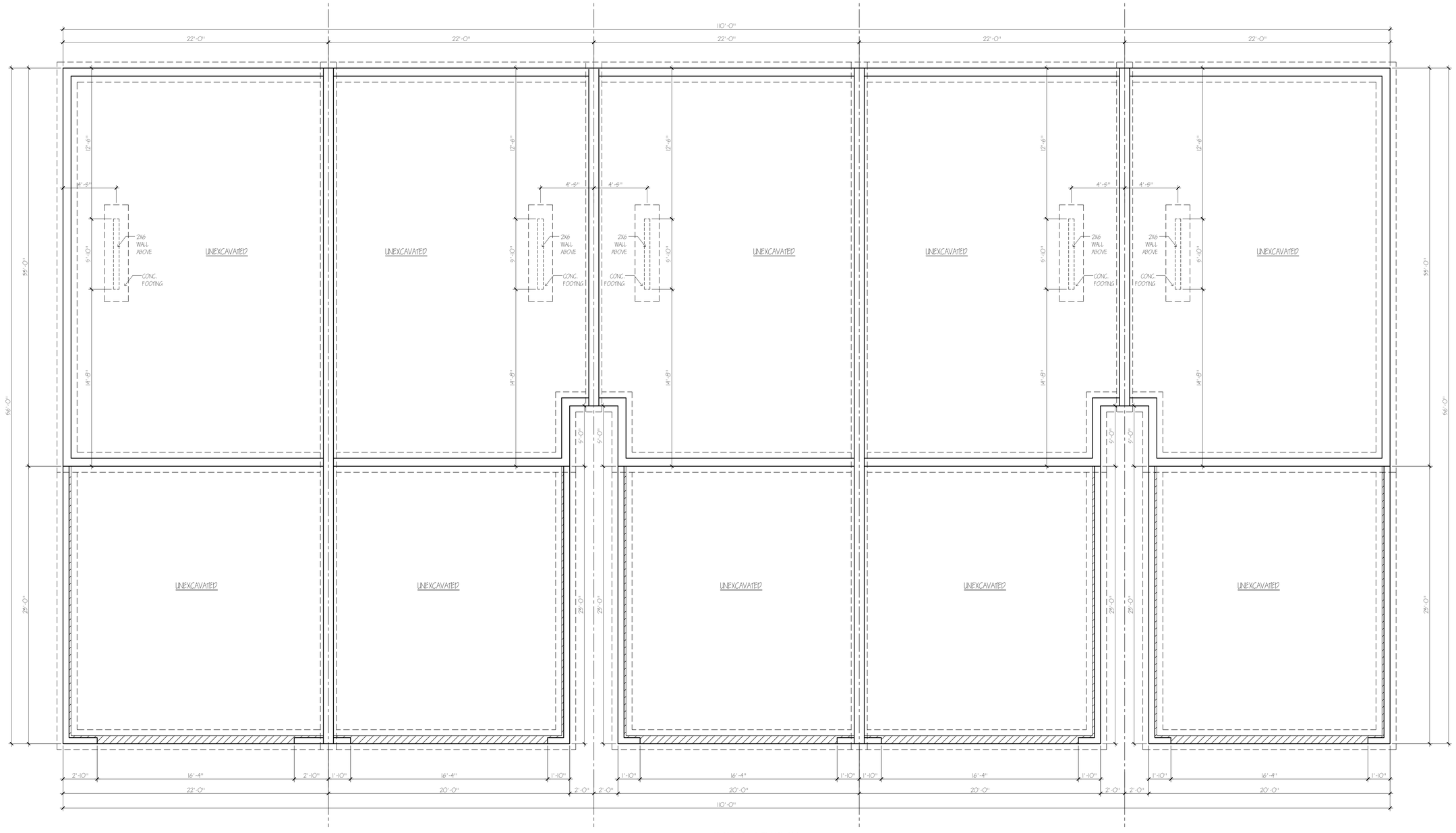
Project #: 2754

Date: 7-18-25

Drawn By: ALK

Sheet: ELEVATIONS

A-1



FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

NORTH

FOUNDATION NOTES:

1. ALL PIERS TO BE BELOW FROST LINE - 42" MIN.
2. X" DIA. X _____" ANCHOR BOLTS @ 4'-0" MAX. FROM CORNERS EA SIDE & 7" EMBEDMENT INTO CONC. REQ'D WITHIN ALL FDN. WALLS INCLUDING GARAGE. MIN. OF 2 ANCHORS PER EA. PIECE OF SILL PLATE.
3. SHADED AREAS OF FOUNDATION WALLS TO BE AT FINISH GRADE LEVEL.
4. ALL WATER FROM FOUNDATION DRAINS OF SUMPS MUST BE PUMPED OR DRAINED DIRECTLY TO THE EXTERIOR THROUGH RIGID PLASTIC OR STEEL PIPING.
5. WATERPROOF EXT. WALLS AS REQ'D
6. VAPOR BARRIER REQ'D UNDER CONC. FLOOR
7. ELECTRIC PANEL TO BE GROUNDED TO REBAR AS REQ'D - CONTACT ELECTRICIAN
8. POINT LOADS FROM GIRDER TRUSS, HEADS AND BEAMS SHALL BE TRANSFERRED TO FDN. BY SOLID BLOCKING IN BETWEEN.
9. ALL INTERIOR BEARING WALLS SHALL BE BOLTED TO THE FLOOR W/ NUTS & WASHERS TIGHT. ALSO SOLID BLOCK IF LEFT UNFINISHED.
10. ALL MECHANICAL DUCT CONNECTIONS SHALL BE LIMITED TO 14" OFF MAIN PLENUM.
11. CUTS, NOTCHES AND HOLES BORED IN TRUSSES, STRUCTURAL COMPOSITE MEMBERS AND / OR STRUCTURAL GLUE-LAMINATED MEMBERS SHALL BE PROHIBITED.
12. VENT DRYER TO OUTSIDE & INSULATE 5'-0" INTO BUILDING.
13. CONCRETE MASON: SUPERIOR CONCRETE

Rev:	Date:

ORCHARD PARK PROJECT
2 STORY 5 PLEX
MANKATO, MN

COMPLETE CONSTRUCTION
1052 S. VICTORY DR.
MANKATO, MN 56001

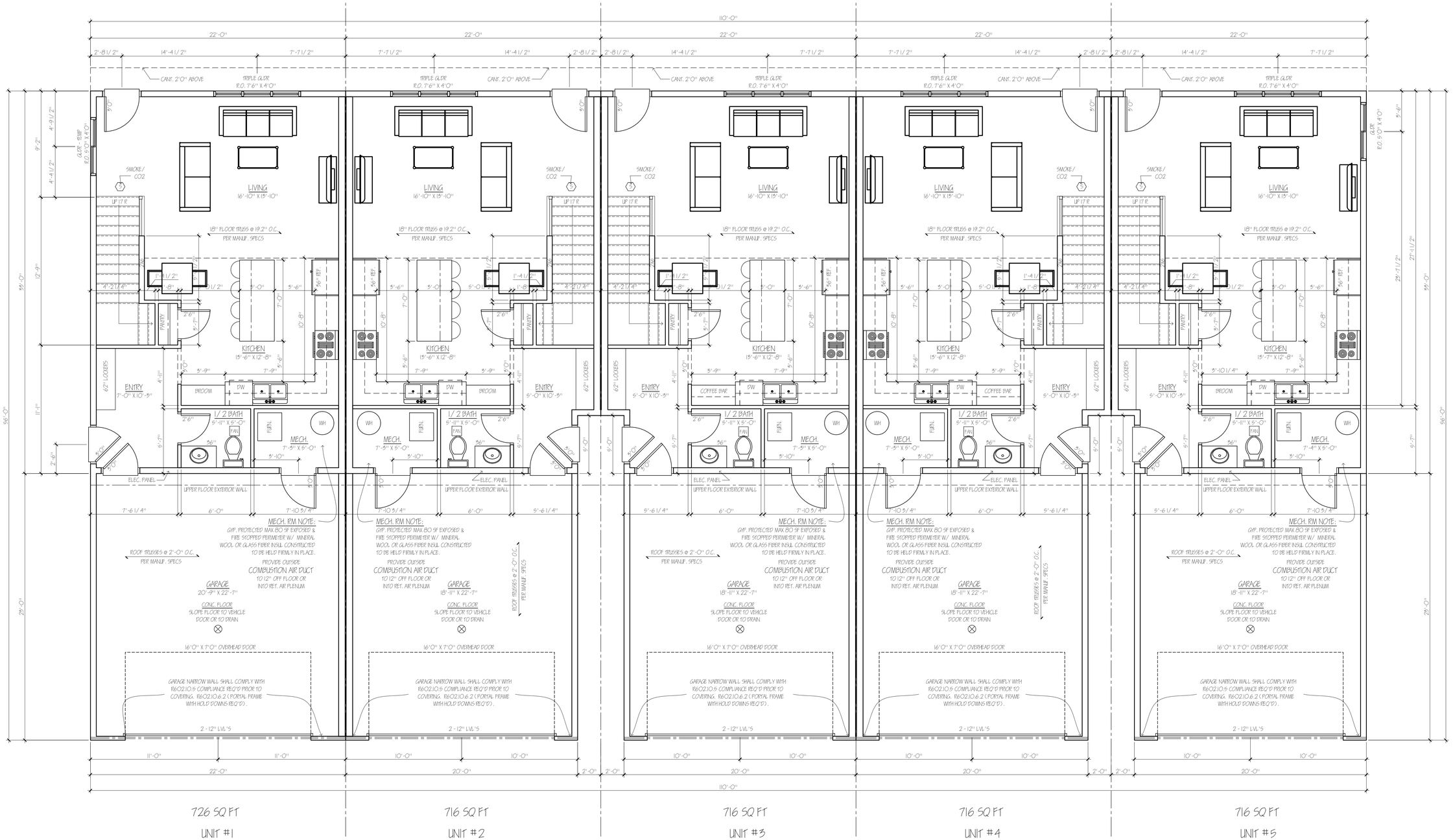
Project #: 2754

Date: 7-18-25

Drawn By: ALK

Sheet: FOUNDATION PLAN

A-2



FLOOR PLAN

SCALE: 1/4" = 1'-0" 24x36#

NORTH

GENERAL NOTES:

1. 2" X 6" @ 16" O.C. EXTERIOR HOUSE WALLS ONLY UNLESS NOTED ON PLAN
2. 7" ENERGY HEELS REQ'D AT ALL RAFTER ENDS
3. SHINGLES TO BE _____
4. ALUM. SOFFIT & FASCIA REQ'D
5. SIDING TO BE MIN. .040 VINYL
6. WINDOWS TO BE LINDSAY
7. CEILING HEIGHT TO BE 9'-0"
8. INTERIOR TRIM IS _____
9. SMOKE DETECTORS MUST BE AUDIBLE IN ALL SLEEPING AREAS, HARD WIRED AND BATTERY BACK-UP REQ'D.
10. ⅝" T&G PLYWOOD SUBFLOOR, GLUED & SCREWED
11. MIN. ½" TYPE X GYP. REQ'D ON GARAGE FIRE SEPARATION WALL TO RIDGE, WITH ALL JOINTS TAPED.
12. MIN. ½" TYPE X GYP. REQ'D ON CEILING WHEN IT IS USED AS PART OF THE FIRE WALL
13. GARAGE NARROW WALLS SHALL COMPLY WITH R602.10.5 - COMPLIANCE REQUIRED PRIOR TO COVERING
14. DRAFT STOP KITCHEN SOFFIT AREAS
15. PROVIDE A MECHANICAL VENTILATION SYSTEM CAPABLE OF A MIN. 50 CFM IN BATHROOMS, TOILET ROOMS & SIMILAR ROOMS
16. BATH EXHAUST VENTS TO BE VENTED DIRECTLY OUTSIDE & REQ'D R-8 INSUL. FOR DUCTS IN ATTIC
17. PROTECT VAPOR BARRIER WITH SOLID SHEATHING BEHIND TUB AND SHOWER ENCLOSURES.
18. MIN. 2-2X10 HEADERS OR 11 ¼" LVL HEADER REQ'D @ ALL EXTERIOR WDW. & DOOR OPENINGS
19. CUTS, NOTCHES & HOLES BORED IN TRUSSES, STRUCTURAL COMPOSITE MEMBERS AND / OR STRUCTURAL GLUE-LAMINATE MEMBERS SHALL BE PROHIBITED.
20. POINT LOADS FROM GIRDERS TRUSS, HEADERS & BEAMS SHALL BE TRANSFERRED TO FOUNDATION BY SOLID BLOCKING IN BETWEEN
21. 20 MIN. RATED GARAGE FIRE DOOR
22. THESE PLANS SHALL COMPLY TO IRC CODE 2018 & MN STATE BUILDING CODE 2020

Rev:	Date:

GROTH FARM PROJECT
2 STORY 5 PLEX
MANKATO, MN

COMPLETE CONSTRUCTION
1052 S. VICTORY DR.
MANKATO, MN 56001

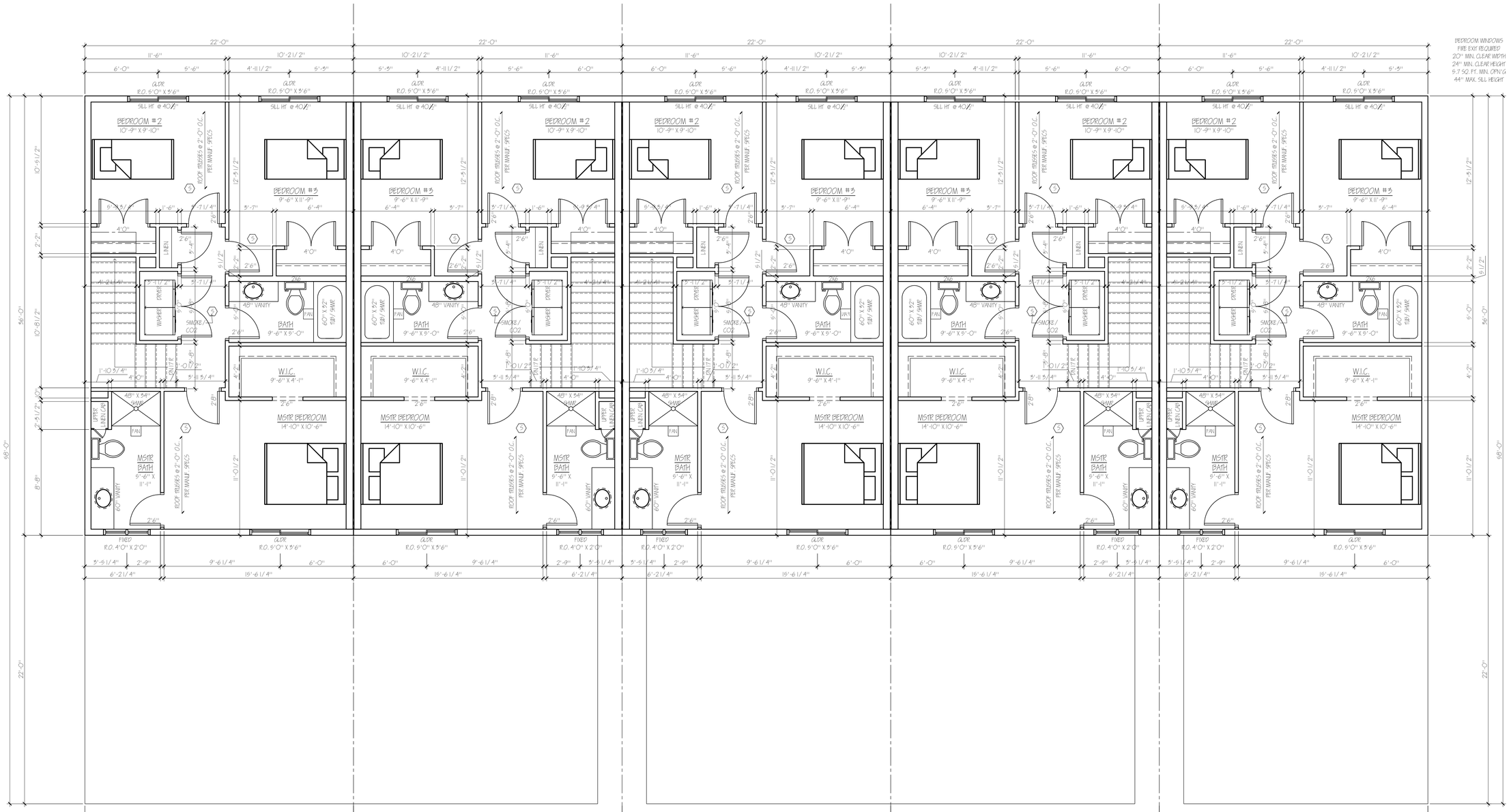
Project #: 2754

Date: 7-18-25

Drawn By: ALK

Sheet: FLOOR PLAN

A-3



UPPER FLOOR PLAN

SCALE: 1/4" = 1'-0"

NORTH

GENERAL NOTES:

1. 2" X 6" @ 16" O.C. EXTERIOR HOUSE WALLS ONLY UNLESS NOTED ON PLAN
2. 7" ENERGY HEELS REQ'D AT ALL RAFTER ENDS
3. SHINGLES TO BE _____
4. ALUM. SOFFIT & FASCIA REQ'D
5. SIDING TO BE MIN. .040 VINYL
6. WINDOWS TO BE __LINDSAY_____
7. CEILING HEIGHT TO BE _9'0"_____
8. INTERIOR TRIM IS _____
9. SMOKE DETECTORS MUST BE AUDIBLE IN ALL SLEEPING AREAS, HARD WIRED AND BATTERY BACK-UP REQ'D.
10. 3/4" T&G PLYWOOD SUBFLOOR, GLUED & SCREWED
11. MIN. 1/2" TYPE X GYP. REQ'D ON GARAGE FIRE SEPARATION WALL TO RIDGE, WITH ALL JOINTS TAPED.
12. MIN. 5/8" TYPE X GYP. REQ'D ON CEILING WHEN IT IS USED AS PART OF THE FIRE WALL
13. GARAGE NARROW WALLS SHALL COMPLY WITH R602.10.9 - COMPLIANCE REQUIRED PRIOR TO COVERING
14. DRAFT STOP KITCHEN SOFFIT AREAS
15. PROVIDE A MECHANICAL VENTILATION SYSTEM, CAPABLE OF A MIN. 50 CFM IN BATHROOMS, TOILET ROOMS & SIMILAR ROOMS
16. BATH EXHAUST VENTS TO BE VENTED DIRECTLY OUTSIDE & REQ'D R-8 INSUL. FOR DUCTS IN ATTIC
17. PROTECT VAPOR BARRIER WITH SOLID SHEATHING BEHIND TUB AND SHOWER ENCLOSURES.
18. MIN. 2-2X10 HEADERS OR 11 7/8" LVL HEADER REQ'D @ ALL EXTERIOR MDW & DOOR OPENINGS
19. CUTS, NOTCHES & HOLES BORED IN TRUSSES, STRUCTURAL COMPOSITE MEMBERS AND / OR STRUCTURAL GLUE-LAMINATE MEMBERS SHALL BE PROHIBITED.
20. POINT LOADS FROM GIRDERS TRUSS, HEADERS & BEAMS SHALL BE TRANSFERRED TO FOUNDATION BY SOLID BLOCKING IN BETWEEN.
21. 20 MIN. RATED GARAGE FIRE DOOR
22. THESE PLANS SHALL COMPLY TO IRC CODE 2018 & MN STATE BUILDING CODE 2020

Rev:	Date:

CROSS FARM PROJECT
2 STORY 5 PLEX
MANKATO, MN

COMPLETE CONSTRUCTION
1052 S. VICTORY DR.
MANKATO, MN 56001

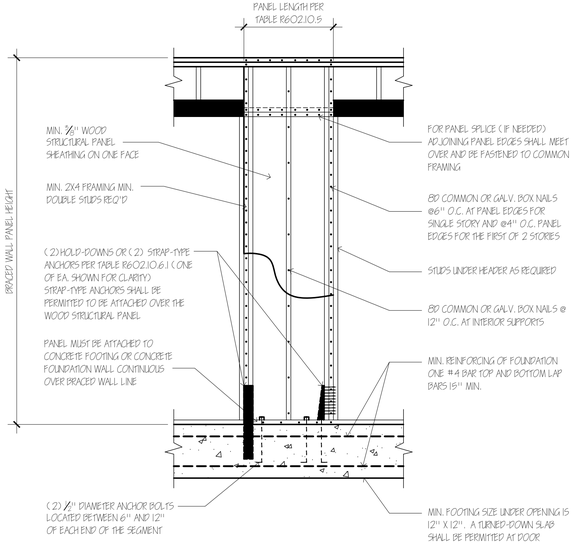
Project #: 2754

Date: 7-18-25

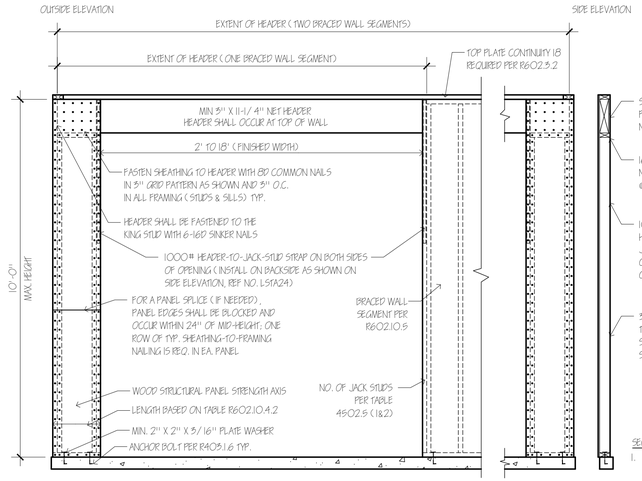
Drawn By: ALK

Sheet: UPPER FLOOR PLAN

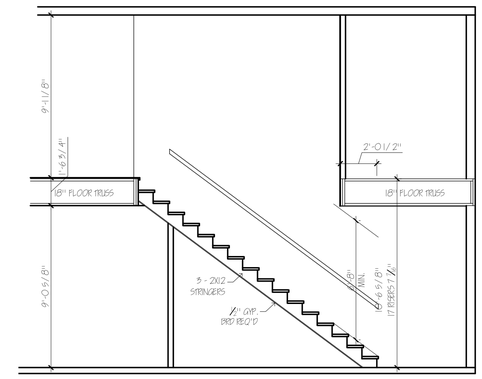
A-4



4 A-5 NARROW WALL DETAIL
SCALE: 1/ 2" = 1'-0" 2405ltr



3 A-5 NARROW WALL DETAIL
SCALE: 1/ 2" = 1'-0" 2405ltr



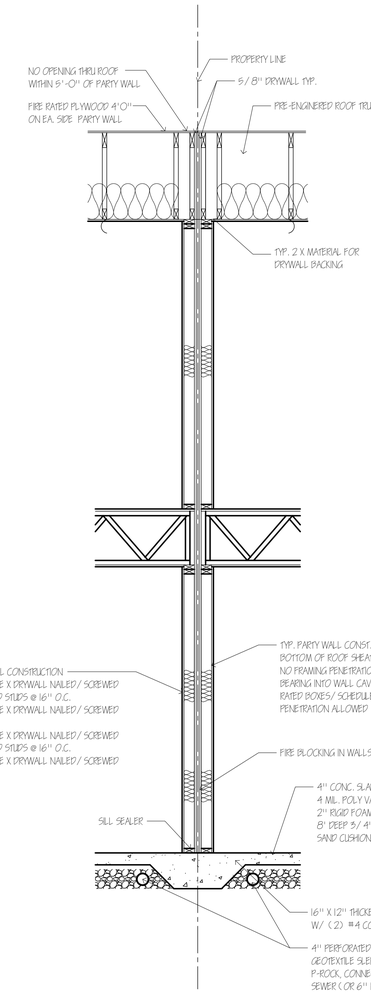
2 A-5 STAIR SECTION
SCALE: 1/ 4" = 1'-0" 2405ltr

PRIVATE STAIRWAY NOTES:

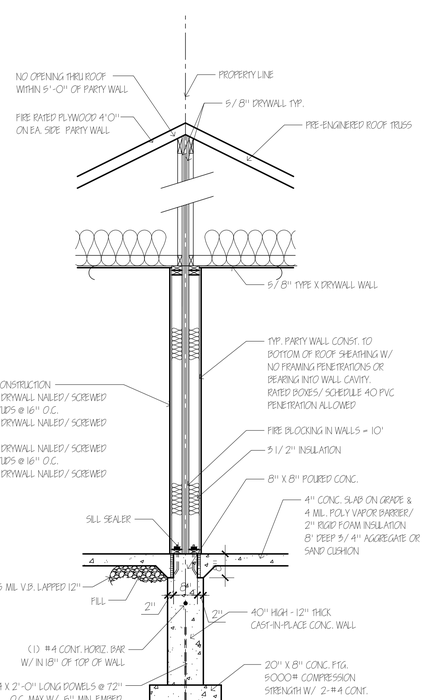
1. MIN. CLEAR WIDTH OF 36". MAX. RISE OF 7 3/4". MIN. RUN OF 10". MAX. VARIATION OF 3/8". OPEN RISERS SHALL NOT ALLOW PASSAGE OF A 4" SPHERE.
2. INSTALL CONT. AND GRIPABLE HANDRAIL ON ALL STAIRS WITH FOOR OR MORE RISERS. LOCATE HANDRAIL 34" - 38" ABOVE TREAD NOSE. RETURN ENDS TO WALL OR TERMINATE TO A NEWEL POST.
3. 36" GUARDS ARE REQ'D ON ALL WALKING SURFACES WHICH ARE MORE THAN 30" ABOVE ADJACENT GRADE. INTERMEDIATE RAILS SHALL NOT ALLOW PASSAGE OF A 4" SPHERE.
4. FIREBLOCKING REQ'D @ CONCEALED SPACE UNDER STAIRS @ TOP & BOTT. OF STRINGERS.

SECTION NOTES:

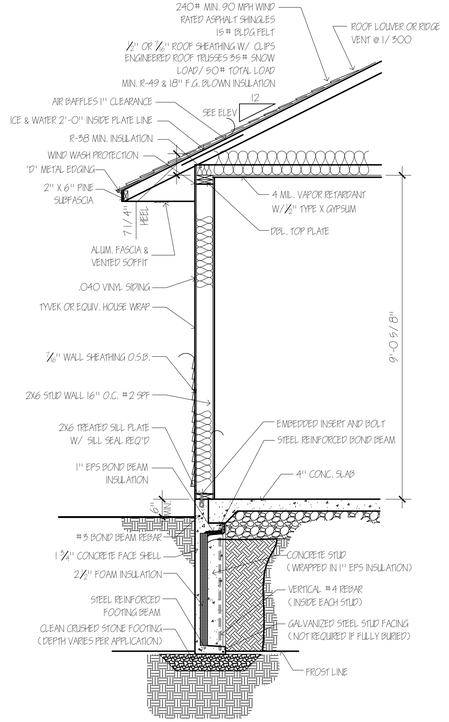
1. ALL WATER FROM FOUNDATION DRAINS OR SUMPS MUST BE PUMPED OR DRAINED DIRECTLY TO THE EXTERIOR THROUGH RIGID PLASTIC OR STEEL PIPING.
2. PENETRATIONS FOR ELECTRICAL, T.V., PLUMBING & HEATING REQ'D TO BE AIR SEALED
3. CALL'L ALL BM. JOISTS & FAN HOUSINGS
4. ALL FOOTINGS SHALL BE PLACED A MIN. OF 12" BELOW VIRGIN SOIL
5. ALL FOOTINGS SHALL BE _____FULL DEPTH, REBAR CLEAN, 4" SUSPENDED & SUPPORTED, 90° BENDS AT ALL CORNERS & TIED AS REQ'D
6. RADON RESISTANT CONSTRUCTION SHALL COMPLY WITH THE 2018 IECC I.R.C. 2402 - RADON VENT LABEL SHALL READ "RADON GAS VENT SYSTEM" AND SHALL BE LABELED AT ALL LEVELS & ATTIC. INSULATE RADON VENT THROUGH ATTIC TO R-4. OUTLET FOR FUTURE RADON FAN TO BE INSTALLED IN ATTIC
7. TRUSS SPECS SHALL BE ON THE JOB SITE AT FRAMING INSPECTION
8. ATTIC SHALL COMPLY WITH R.S.O.S.1 - R.S.O.S.(K.2) APPROVAL REQ'D PRIOR TO SEALING ACCESS
9. NARROW GARAGE WALL LESS THAN 24" WILL HAVE METAL STRAP HOLD DOWN.
10. ANY NARROW WALL 24" ≥ 36" 1/2" BOLT.
11. ANY NARROW WALL GREATER THAN 36" AT LEAST 2 -1/ 2 BOLTS.



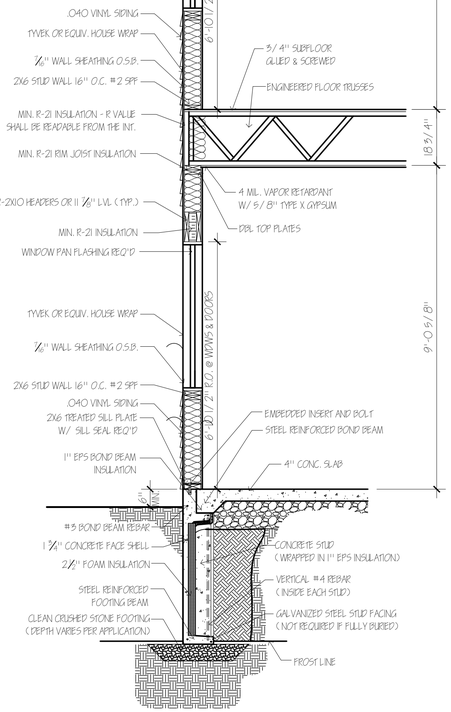
5 A-5 PARTY WALL
SCALE: 1/ 2" = 1'-0" 2405ltr



2 A-5 GARAGE PARTY WALL
SCALE: 1/ 2" = 1'-0" 2405ltr



2 A-5 GARAGE WALL SECTION TYP.
SCALE: 1/ 2" = 1'-0" 2405ltr



2 A-5 WALL SECTION TYP.
SCALE: 1/ 2" = 1'-0" 2405ltr

Rev:	Date:

CROW FARM PROJECT
2 STORY 5 PLEX
MANKATO, MN

COMPLETE CONSTRUCTION
1052 S. VICTORY DR.
MANKATO, MN 56001

Project #: 2754
Date: 7-18-25
Drawn By: ALK
Sheet: WALL SECTIONS & DETAILS
A-5

Site Plan and Traffic Advisory Review Committee **1. 5.**

Meeting Date: 11/04/2025

Title

*****Site Plan and Traffic Advisory Committee Review Only. Request of R Henry Construction on behalf of the property owner for the construction of an approximately 30' X 70' accessory structure.**

Applicant

The applicant is requesting a Site Plan and Traffic Advisory Committee only review.

Request

The applicant is seeking a Site Plan and Traffic Advisory Committee review for the installation of a new 70' X 30' storage structure.

Location

The subject property is located at 101 Power Drive.

Existing Land Use

The site is the location of an existing industrial use.

Zoning

The property is zoned M-1, Light Industrial.

Environmentally Sensitive Areas

The subject site is located in the Shoreland district.

Review

The applicant is seeking a Site Plan and Traffic Advisory Committee review for the installation of a 70' X 30' accessory structure.

Site plans show the structure being located on the easterly side of the existing building. The floor plans show a new, approximately 2,100 square foot structure. The applicant's narrative states that the construction is for a cold storage building for material overflow.

Attachments

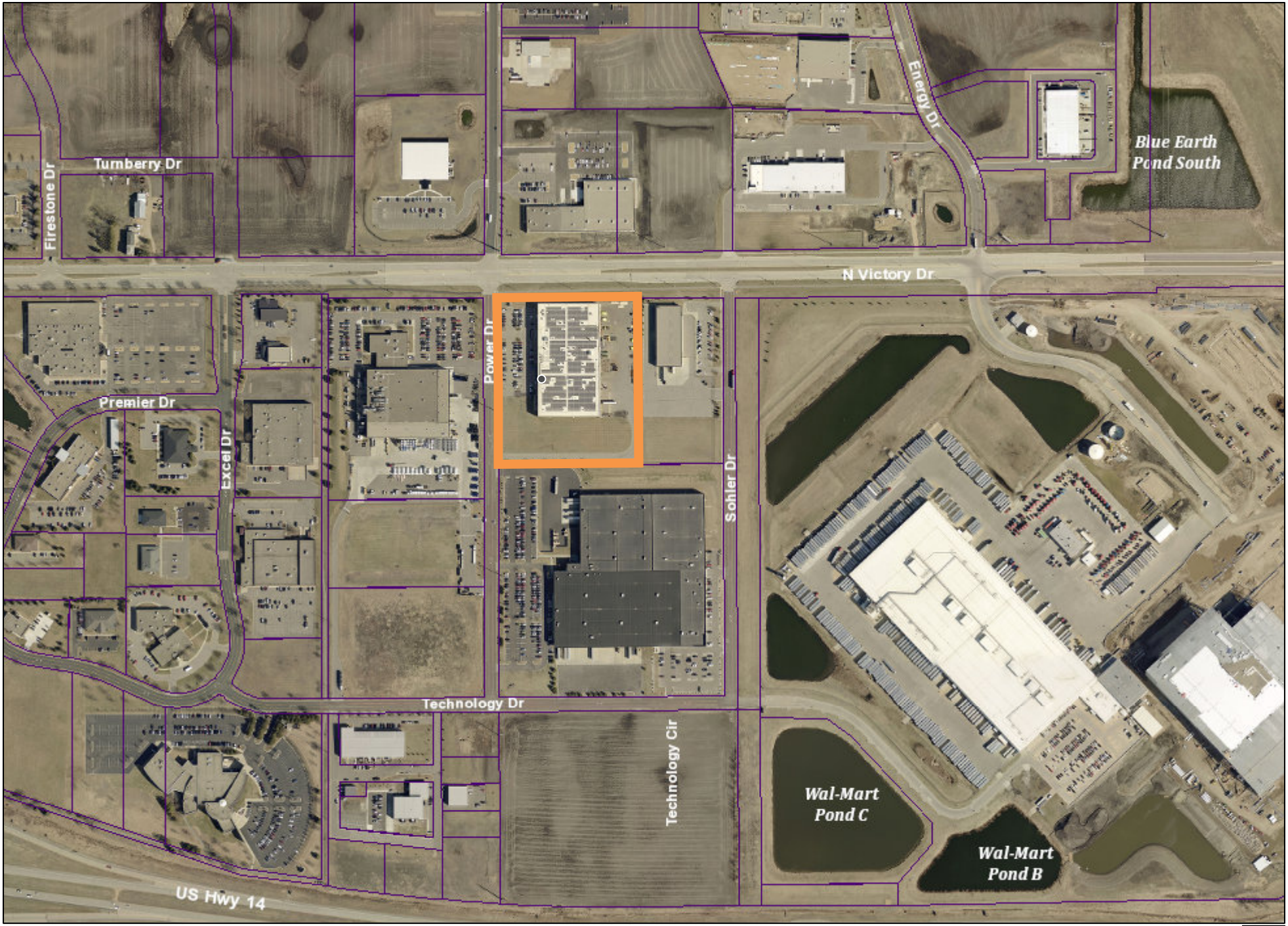
Aerial Plan

General Location Map

Site Plan

Plans

Aerial Map



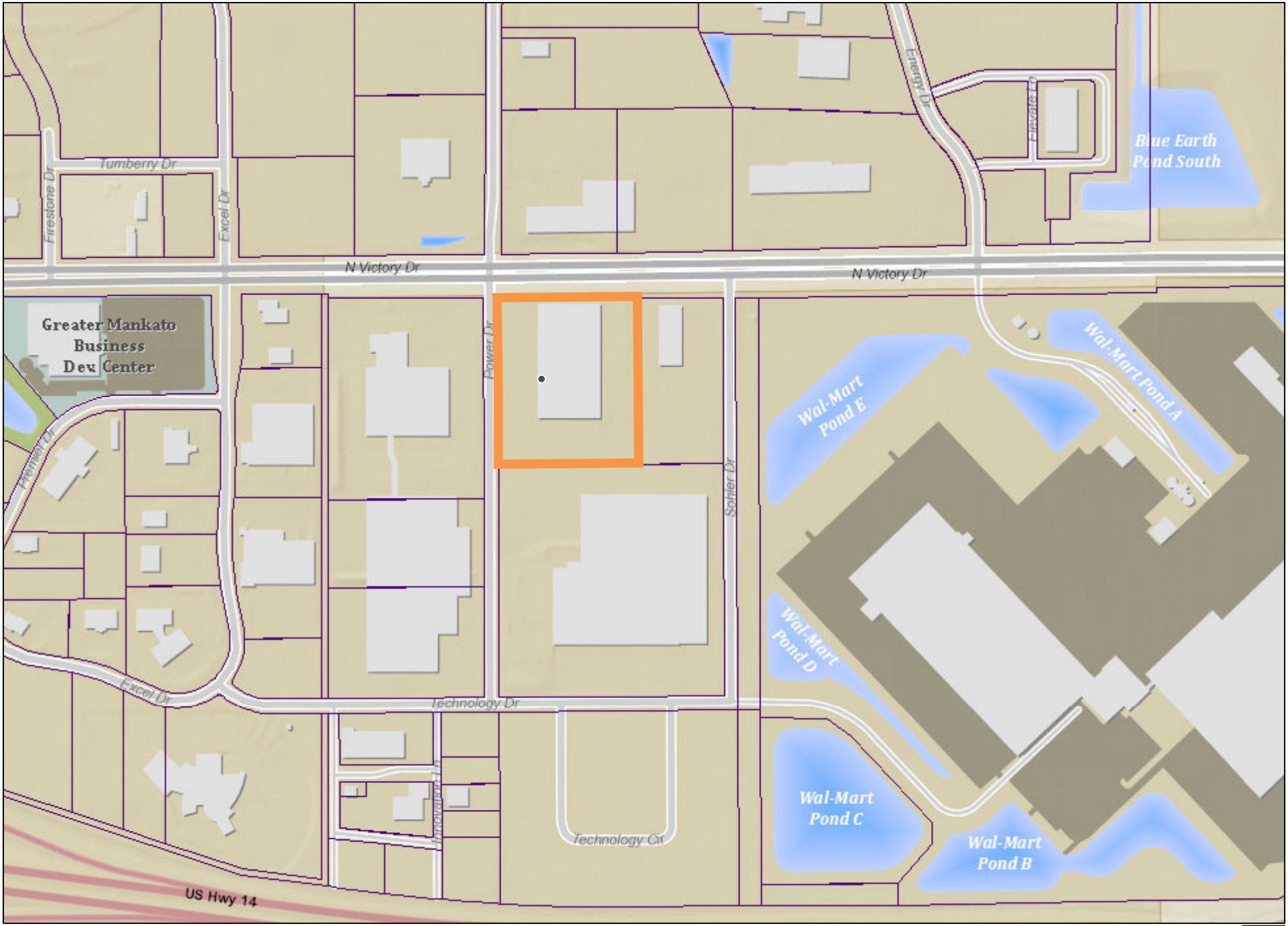
Date: October 2025

Author:

This information is to be used for reference purposes only. The City of Mankato does not guarantee accuracy of the material contained herein and is not responsible for misuse or misinterpretation.

N

General Location Map



Date: October 2025

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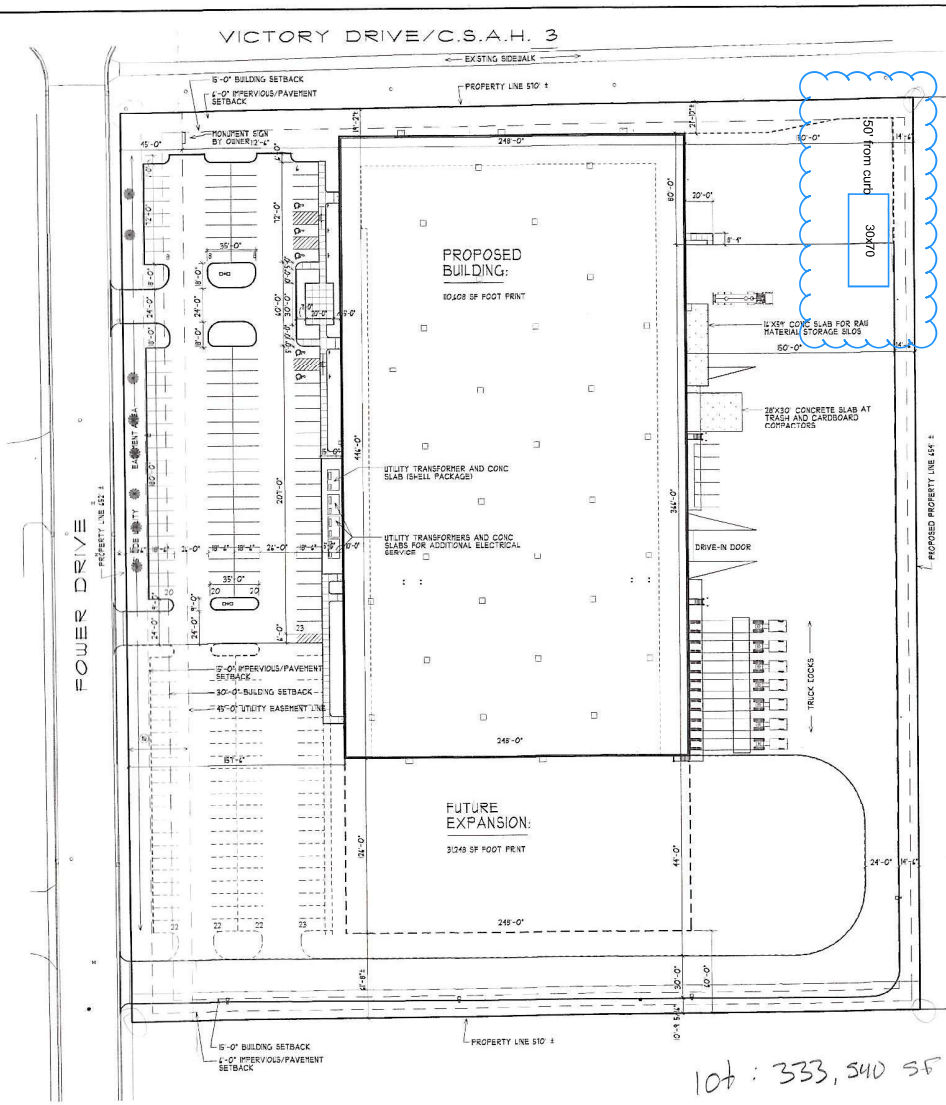


lot : 333,540 SF

Building : 90,768
storage : 2100
total : 92,868 SF

SITE PLAN
SCALE: 1" = 40'-0"
A1-3
NORTH
20 0 80
40 0 40

BY	DATE	REVISIONS
CLR/JAC	02/12/13	ISSUED FOR BUILDING PERMIT
CLR/JAC	04/14/13	REVISED PER CITY COMMENTS AND ACCEPTED ALTERNATES/OWNER REVISIONS
CLR/JAC	07/1/13	REVISED SPRINKLER & FIRE LINE LOCATION PER CO (E 11-2)
CLR/JAC	08/20/13	REVISED TO INCLUDE ACCEPTED ALTERNATES/OWNER REVISIONS
CLR/JAC	09/24/13	REVISED PER CHANGE ORDER #2 (T11 AND E1 SHELL)
CLR/JAC	10/8/13	REVISED PER CHANGE ORDER #3 (T11 AND E1 SHELL)
CLR/JAC	04/01/14	REVISED PER CHANGE ORDER #4 PER OWNER REQUEST
CLR/JAC	04/01/14	ISSUED FOR AS BUILT DOCUMENTS

DRAWN BY: JAC
CHECKED: CLR
APPROVED BY: CLR
ISSUE DATE: 03/12/13

PROJECT: PROPOSED NEW FACILITY FOR: IQI POWER DRIVE MANKATO, MN 56001
CLIENT #12-01-0062
SITE PLAN
TENANT IMPROVEMENTS

APPRO DEVELOPMENT
2476 CRESCENT AVE
LAKE VILLA, IL 60046
PH 952-461-3171
FAX 952-461-3173
EMAIL JEFF@approdevelopment.com

PROJECT #: 12-01-0062
SHEET: A1-3
TENANT IMPROVEMENTS

GENERAL SPECIFICATIONS

SITE WORK
THE SITE SHALL BE GRADED TO PROVIDE DRAINAGE AWAY FROM THE BUILDING. MAINTAIN THE GRADE LEVELS AROUND THE BUILDING FLOOR PLAN.

CONCRETE WORK
THE CONCRETE WORK SHALL CONSIST OF ALL NECESSARY PRECAST OR POUR-IN-PLACE CONCRETE AS PER BUILDING PLANS AND SECTIONS. THE CONCRETE SHALL MEET A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. ALL CONCRETE MIXES SHALL BE IN ACCORDANCE WITH ACI STANDARDS.

PRIMARY FRAMING COMPONENTS
TRUSSES: WOOD TRUSSES ARE SHOP/PLANT FABRICATED WITH CONNECTOR PLATES PER SPECIFICATIONS AND CONFORM WITH DESIGN CRITERIA ESTABLISHED BY THE TRUSS PLATE INSTITUTE (TPI) AND THE AMERICAN FOREST AND PAPER ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD (NDS). DC_ DETAILS.
RAFTERS: RAFTER SIZES AND TYPE ARE SHOWN PER BUILDING DRAWINGS.
COLUMNS: WOOD COLUMNS FOR ROOF, WALL AND FLOOR SUPPORT SHALL BE MULTI-PLY NAIL-LAMINATED. EACH PLY OF UPPER AND LOWER PORTIONS (IF REQUIRED) SHALL BE FACTORY JOINED BY GLUED FINGER JOINTS BEFORE COLUMN PLIES ARE NAILED TOGETHER. IF PLACED IN GROUND, LOWER PORTION OF COLUMN FOR 12 INCHES MINIMUM ABOVE GROUND SHALL BE PRESERVATIVE TREATED TO .6PCF RETENTION OF CHROMATED COPPER ARSENATE (CCA) TYPE C (OXIDE BASIS). SEE FLOOR PLAN AND CROSS SECTIONS FOR CORRECT SIZES.
WOOD STUDS: ALL STUD FRAMING SHALL BE #2 GRADE MINIMUM, PRIMARY FRAMING IS FACTORY CUT TO LENGTHS REQUIRED. STUDS MAY BE A SINGLE PLY/DOUBLE PLY 2X4, 2X6, OR 2X8 MATERIAL. LOCATE STUDS AT 16", 24" OR 48" O.C. AS SHOWN ON BUILDING DRAWINGS.

SECONDARY FRAMING
WOOD FRAMING: ALL WOOD FRAMING SHALL BE #2 GRADE MINIMUM. THE SPECIES WILL VARY PER AVAILABILITY AND PLANT LOCATION. THE SPECIES MAY BE #2 MC-19 DOUG FIR LARCH UNLESS SPECIFICALLY NOTED OTHERWISE ON BUILDING DRAWINGS.
HEADERS: HEADER SIZES AND TYPE ARE SHOWN PER BUILDING DRAWINGS.

OTHER
METAL CONNECTORS: ALL LIGHT GAUGE METAL CONNECTORS ARE GALVANIZED STEEL TO MEET OR EXCEED REQUIRED DESIGN STANDARDS.
WOOD: ALL NON PRESERVATIVE TREATED WOOD SHALL BE PLACED A MINIMUM OF 6 INCHES ABOVE FINISHED GRADE UNLESS SPECIFICALLY SHOWN LOWER ON CROSS SECTION(S).
FASTENERS: ALL FASTENERS SHALL BE PER BUILDING DRAWINGS AND DETAILS.

IMPORTANT DIAPHRAGM INFORMATION
THE BUILDING IS DESIGNED USING THE ROOF AS A DIAPHRAGM (DEEP THIN BEAM) TO TRANSFER SIDEWALL ENDWALL, AND ROOF LOADS TO THE SHEAR WALLS WHICH THEN CARRY THE LOADS TO THE FOUNDATION. STEEL PANELS ARE AN INTEGRAL PART OF THE BUILDING STRUCTURE AND ANY FUTURE FIELD MODIFICATIONS OF LESTER STEEL PANELS MAY BE DETRIMENTAL TO THE BUILDING'S STRUCTURAL PERFORMANCE. BUILDING DESIGN IS BASED ON THE NUMBER, SIZE AND LOCATION OF OPENINGS ON THE DRAWINGS.
LESTERS (LESTER, LESTERS, OR LESTER'S, IS LESTER BUILDING SYSTEMS L.L.C.) ASSUMES NO RESPONSIBILITY FOR THE STRUCTURAL INTEGRITY OF THE BUILDING IF ADDITIONAL OPENINGS, NOT SHOWN ON THE DRAWINGS OR CHANGES IN LOCATION OR SIZE OF OPENINGS ARE UNDERTAKEN WITHOUT WRITTEN PERMISSION FROM A LESTER ENGINEERING REPRESENTATIVE.

NOTES
SEE BUILDING DRAWINGS FOR OTHER SPECIFIC MATERIALS REQUIRED FOR SPECIFIC JOB THAT MAY NOT BE INDICATED WITHIN THIS SECTION.

NOTICE TO BUILDERS

MEMBERS WITH IDENTICAL LENGTHS MAY HAVE DIFFERENT END USES AND MAY BE OF DIFFERENT SPECIES.

TO HELP INSURE THE CORRECT LENGTH AND SPECIES OF LUMBER IS USED IN ITS INTENDED APPLICATION, A COLOR CODE SYSTEM HAS BEEN ESTABLISHED.

THIS APPLIES TO FACTORY CUT PURLINS, GIRTS, BOTTOM CHORD BRACES AND EAVE NAILERS ONLY!

RED — WALL GIRTS WILL HAVE ENDS PAINTED RED
BLACK — PURLINS WILL HAVE ENDS PAINTED BLACK
PINK — BOTTOM CHORD BRACES WILL HAVE ENDS PAINTED PINK
BLUE — EAVE NAILERS WILL HAVE ENDS PAINTED BLUE
ORANGE — HIGHER GRADE LUMBER IS SUBSTITUTED, ENDS PAINTED ORANGE

REVISIONS

SYM.	PAGE	DATE	DESCRIPTION	BY

LESTER BUILDINGS

LESTER BUILDINGS, LLC
TERRITORY MANAGER: JENNIFER WIGHT
PHONE: 320-395-5308 MOBILE:
E-MAIL: jwight@lesterbuildings.com
PROJ. MANAGER: Bryan Mickolichek PM PHONE: 800-826-4439 EXT 5242
DRAWN BY: Amanda Weibel EST PHONE: 800-826-4439 EXT 5235

⚠ IMPORTANT SAFETY INFORMATION

ACCOMPANYING THIS BUILDING AND THESE ERECTION DRAWINGS IS THE LESTER ERECTION SAFETY INFORMATION PACKET. DIRECTIONS ON THE PACKET ENVELOPE OUTLINE SPECIFIC STEPS THAT MUST BE TAKEN BEFORE BUILDING ERECTION BEGINS.

THE ERECTION SAFETY INSTRUCTIONS (INCLUDED IN THE PACKET) PROVIDE DETAILED INFORMATION AND INSTRUCTIONS TO ASSIST IN SAFE BUILDING ERECTION.

COPIES OF THE FOLLOWING WARNING LABELS ARE ALSO INCLUDED IN THE ERECTION SAFETY INFORMATION PACKET AND ON ROOF PANELS AND WOOD BUNDLES.

Wood Member Warning

Roof Panel Warning

NOTE:
THESE WARNINGS AND SAFETY INSTRUCTIONS ARE NOT INTENDED TO BE COMPLETE AND COMPREHENSIVE SAFETY INSTRUCTIONS AND MAY VARY FROM APPLICABLE LAWS AND REGULATIONS. ALL LOCAL, STATE, AND OSHA SAFETY REGULATIONS MUST BE FOLLOWED AT ALL TIMES. THE ERECTION CONTRACTOR HAS ULTIMATE RESPONSIBILITY FOR WORKER SAFETY AND MUST COMPLY WITH ALL APPLICABLE SAFETY REGULATIONS.

COMBINED LUMBER GRADES

LESTER GROUPS NDS LUMBER TYPES WITH SIMILAR DESIGN VALUES INTO COMBINED LUMBER GRADES. BLD DESIGN IS BASED ON THE LOWEST DESIGN VALUE FOR ANY LUMBER IN THE GROUP. THE FOLLOWING CHART SHOWS THE SPECIFIC NDS SIZE/SPECIES/GRADE LUMBER TYPES THAT CAN BE USED FOR EACH COMBINED LUMBER GRADE.

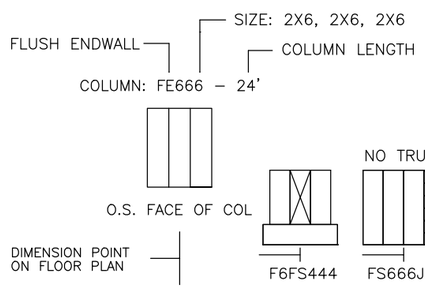
Combo 2x4 #2 Lester 2x4 #2 DFL or SYP 2x4 1250 1.4E MSR DFL or SYP 2x4 M9 & M29 DFL or SYP	Combo 2x6 #2 Lester 2x6 #2 DFL or SYP 2x6 1250 1.4E MSR DFL or SYP 2x6 M9 & M29 DFL or SYP	Combo 2x8 #2 Lester 2x8 #2 DFL or SYP 2x8 975 1.4E MSR DFL or SYP 2x6 M9 & M34 DFL or SYP
Combo 2x4 #1 Lester 2x4 #1 DFL or SYP 2x4 1500 1.6E MSR DFL or SYP 2x4 M14 & M39 DFL or SYP	Combo 2x6 #1 Lester 2x6 #1 DFL or SYP 2x6 1500 1.6E MSR DFL or SYP 2x6 M14 & M39 DFL or SYP	Combo 2x8 #1 Lester 2x8 #1 DFL or SYP 2x8 1200 1.6E MSR DFL or SYP 2x8 M14 & M29 DFL or SYP 2x8 M39 DFL or SYP
Combo 2x4 Premium Lester 2x4 SS DFL or SYP 2x4 1800 1.6E MSR DFL or SYP 2x4 M17 - M20 DFL or SYP 2x4 M40 DFL or SYP	Combo 2x6 Premium Lester 2x6 SS DFL or SYP 2x6 1800 1.6E MSR DFL or SYP 2x6 M17 - M20 DFL or SYP 2x6 M40 DFL or SYP	Combo 2x8 Premium Lester 2x8 SS DFL or SYP 2x8 1800 1.6E MSR DFL or SYP 2x8 M17 - M20 DFL or SYP 2x8 M40 DFL or SYP
Combo 2x4 M23/2400MSR 2x4 DSS SYP 2x4 2400 1.8E MSR DFL or SYP 2x4 M23 DFL or SYP	Combo 2x10 #1 Lester 2x10 #1 DFL or SYP 2x10 1050 1.6E MSR DF or SYP 2x10 M12 & M29 DFL or SYP 2x10 M35 DFL or SYP	Combo 2x10 Premium Lester 2x10 SS DFL or SYP 2x10 1650 1.6E MSR DF or SP 2x10 M17 - M20 DFL or SYP 2x10 M14, M39, M40 DF or SP

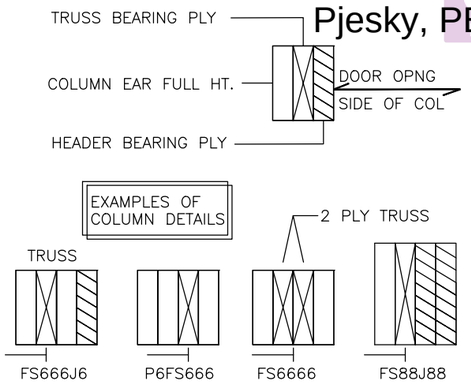
ABBREVIATIONS AND SYMBOLS

DIA OR ∅ -- DIAMETER
SF OR ⍁ -- SQUARE FEET
BLDG -- BUILDING
BRG -- BEARING
BTM -- BOTTOM
CC -- CEMENT COATED
COL -- COLUMN
CONC -- CONCRETE
DF -- DOUGLAS FIR
DGB -- DIAG. GABLE BRACE
E -- EXIT LIGHT
F -- FIRE EXTINGUISHER
FBO -- FURNISHED BY OTHERS (NOT BY LESTER BLDG SYS)
FDN -- FOUNDATION
FIN -- FINISH
FL -- FLOOR(ING)
FT -- FOOT OR FEET
FTG -- FOOTING
FO -- FINISH OPENING
GA -- GAUGE
GALV -- GALVANIZED
HDR -- HEADER
INT -- INTERMEDIATE
INS -- INSULATION
LB(S) -- POUNDS
℄ -- CENTERLINE
LF -- LINEAR FOOT
MO -- MASON OPENING
MSR -- MACHINE STRESS RATED LUMBER
MPH -- MILES PER HOUR
O.C. -- ON CENTER
OVHD -- OVERHEAD
OVHG -- OVERHANG
OPG -- OPENING
PB -- POLE BARN NAIL (RING SHANK)
RO -- ROUGH OPENING
PSI -- POUNDS PER SQUARE INCH
PSF -- POUNDS PER SQUARE FOOT
RS -- RING SHANK (NAIL)
SQ -- SQUARE
SYP -- SOUTHERN YELLOW PINE
T&G -- TONGUE AND GROOVE
TYP -- TYPICAL
TRTD -- TREATED
UNO -- UNLESS NOTED OTHERWISE
VB -- VAPOR BARRIER
WDO -- WINDOW
W/ -- WITH
W/O -- WITH OUT

COLUMN IDENTIFICATION KEY

FS = FLUSH SIDEWALL
FE = FLUSH ENDWALL
FG = FLUSH GLUED
HI = INTERIOR POCKET
F = FACE PLY
J = HEADER BEARING PLY
P = PLUS PLY





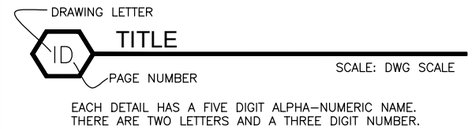
DESIGN LOADS

GROUND SNOW LOAD	50	PSF
ROOF SNOW LOAD	39.4	PSF
ROOF DEAD LOAD	4	PSF
IMP. FACTOR SNOW	1	
CEILING DEAD LOAD	5	PSF
FLOOR LIVE LOAD	N/A	PSF
ALLOWABLE WIND SPEED	90.9	MPH
ULTIMATE WIND SPEED	115; RISK CAT II	MPH
WARRANTY WIND SPEED	90.9	MPH
EXPOSURE	B	
SOIL BEARING	2000	PSF
CODE	IBC-2018	

GENERAL

OWNER: Door Engineering and Mfg, LLC
BLD ADDRESS: Mankato, MN
BUILDING USE: Storage
CONSTRUCTION: V-B
AREA: 2104 SF

DETAIL IDENTIFICATION



EACH DETAIL HAS A FIVE DIGIT ALPHA-NUMERIC NAME. THERE ARE TWO LETTERS AND A THREE DIGIT NUMBER.

F A 246
GROUP DIVISION DETAIL NUMBER

THE FIRST LETTER DESIGNATES A BROAD SUBJECT GROUP.
THE SECOND LETTER SHOWS A SUBDIVISION WITHIN THE GROUP.
THE THREE DIGIT NUMBER INDICATES A SPECIFIC DETAIL WITHIN THE DIVISION.

GROUP	SUBJECT
A	= ELEVATIONS & FLOOR PLANS
B	= WALL SECTIONS
C	= PANEL LAYOUTS IF REQUIRED
D	= ENGINEERING INFORMATION
E	= FOUNDATIONS
F	= WALL STRUCTURAL FRAMING
G	= STRUCTURAL HEADERS
H	= WALL OPENING FRAMING
I	= TRUSS (ROOF SUPPORT)
J	= BRACING
K	= EAVE TREATMENT (SIDES & ENDS)
L	= ROOF FINISH
M	= WALK DOORS AND WINDOWS
N	= SLIDING AND OVERHEAD DOORS
O	= EXTERIOR WALL FINISH
	= INTERIOR FINISH
	= ACCESSORIES

ALL DETAILS ARE ARRANGED IN ALPHABETICAL AND NUMERIC ORDER WITHIN THE STRUCTURAL & NON STRUCTURAL DETAIL SETS.

NO PAGE NUMBER IS GIVEN!!!

SYMBOL DESIGNATION

THE FOLLOWING SYMBOL DESIGNATIONS INDICATES THE DETAIL TO REFER TO FOR ADDITIONAL INFORMATION.

□ = STRUCTURAL ○ = NON-STRUCTURAL

CUSTOM DETAIL → GA-A
STANDARD DETAIL → GA310

PAGE	INDEX REFERENCE
1	BUILDING SPECIFICATIONS
2	ELEVATIONS
3	FLOOR PLAN
4	BUILDING SECTIONS
5	DETAILS TO END
6	.
7	.
8	.
9	.
10	.
11	.
12	.
13	.
14	.
15	.

MATERIAL SHORTAGES AND DAMAGE

CONTACT INFORMATION:

DIRECT DIAL:
(320) 395-5263

LESTER SWITCHBOARD/RECEPTIONIST:
(800) 826-4439 EXT. 5263

EMAIL:
orders@lesterbuildings.com

Digitally signed by Matthew Pjesky, PE
DN: O="Lester Building Systems, LLC", CN="Matthew Pjesky, PE", E=mjesky@lesterbuildings.com
Reason: I am approving this document
Location:
Date: 2025.09.29 10:29:48 -05'00'
Foxit PDF Reader Version: 12.1.3

Matthew Pjesky, PE

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature: Matthew Pjesky
Name: Matthew Pjesky
Date: 09-29-25 License Number: 61670

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DA003 | ENG STAMP BOX - STRUCTURAL DESIGN FULL | 384 R2

DATE: 9/29/2025
SHEET 01 OF 15
JOB-NUMBER 633954
DRWN BY: Amanda x5235
CHKD BY:
REV NO: 0
JOB DESCRIPTION: 30'x70'x20'

CUSTOMER:
R. Henry Construction, Inc.
101 Power Dr
Mankato, MN 56001

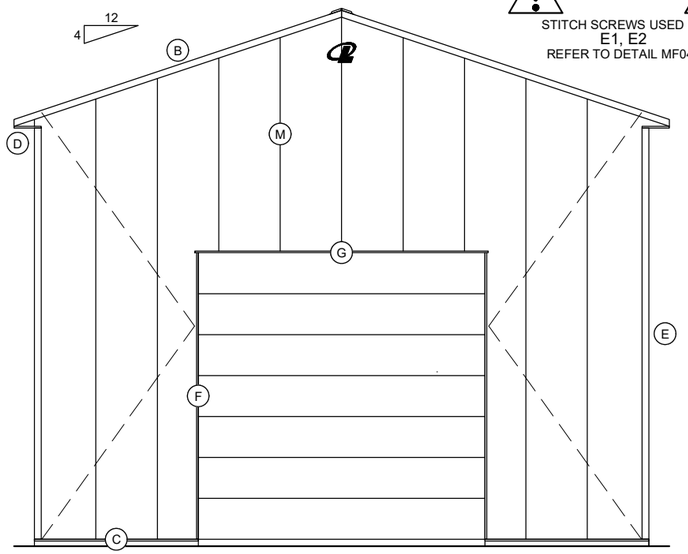
DEALER:
Jennifer Wight
25434 Cedar Lane
New Prague, MN 56071

LESTER BUILDING SYSTEMS, LLC.
TOLL-FREE: 800-826-4439
See Titleblock DRWN BY for Extension

ATTENTION

STITCH SCREWS USED ON E1, E2

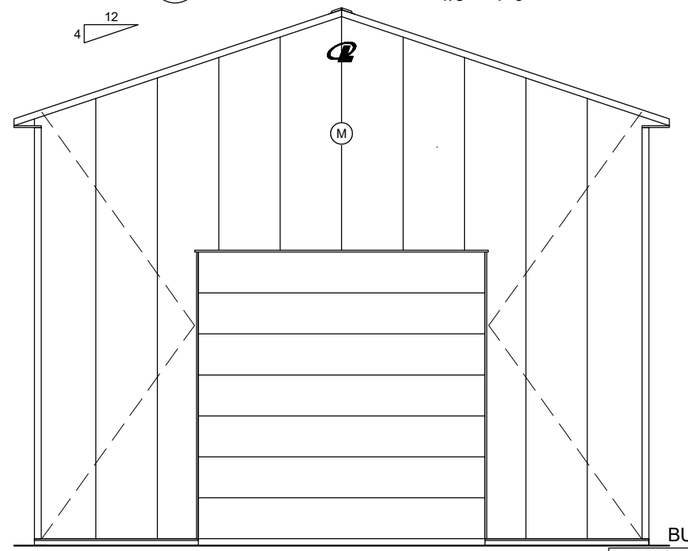
REFER TO DETAIL MF043

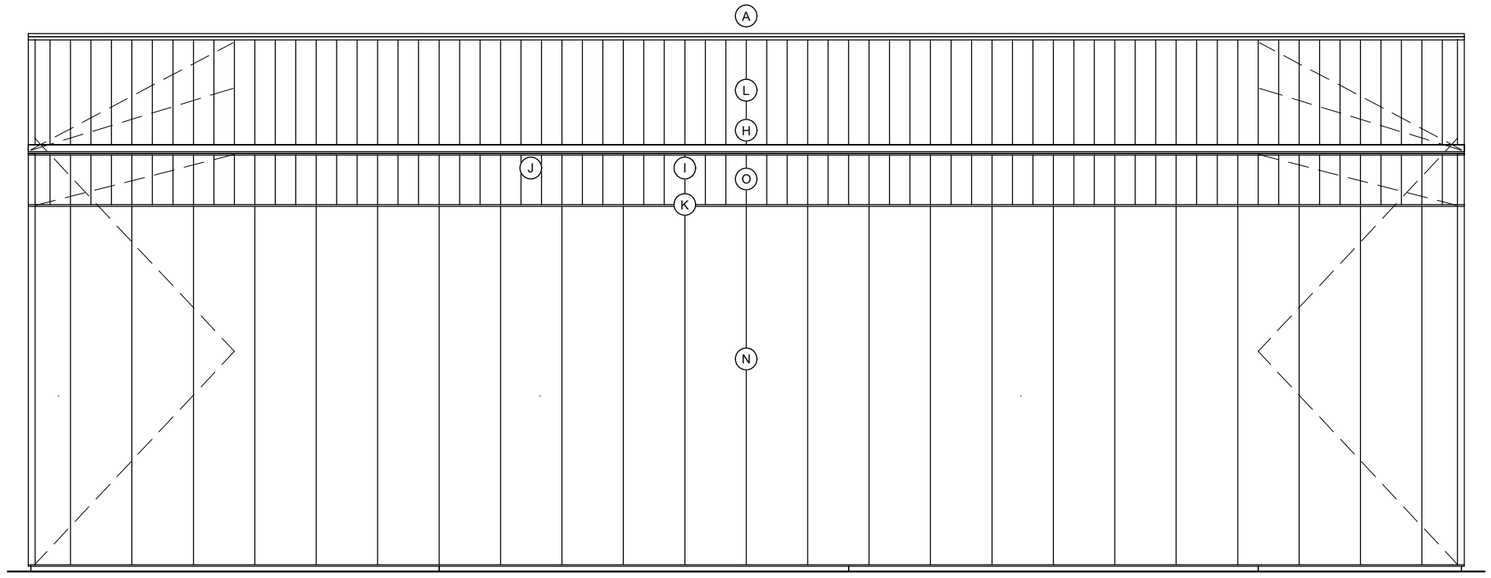


A1

A2 ENDWALL 1 ELEVATION

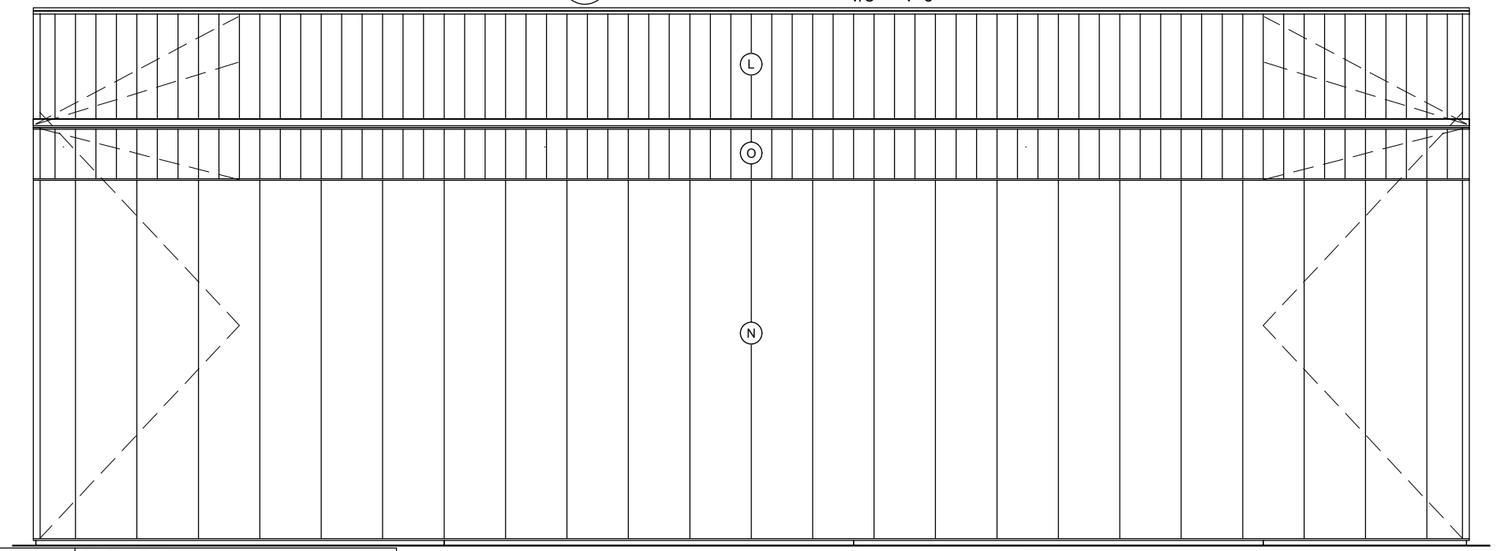
1/8" = 1'-0"





B2 SIDEWALL 1 ELEVATION

1/8" = 1'-0"



A1

C2 ENDWALL 2 ELEVATION

1/8" = 1'-0"

OPENING SCHEDULE

ID	MODEL	NOMINAL
A1	OVERHEADDOOR - FBO	168x168

BUILDING COLORS

ROOF METAL	CLAY
SIDEWALL	CLAY
ENDWALL	CLAY
GABLES	--
BASE	CLAY
CORNER	CLAY
EAVE/FASCIA	CLAY
GABLE/RAKE	CLAY
SOFFIT	CLAY
WAINSCOT	--
ACCENT PANEL	--
GABLE LOUVER	--
INSUL WL BATTEN	--
RIDGE CAP	CLAY
RIDGE VENT	--
CUPOLA ROOF	--
CUPOLA BODY	--
CUPOLA BASE	--
GUTTER	--
DOWNSPOUT	--
LEAN-TO ROOF	--
LEAN-TO CRWN/VBLK	--
LEAN-TO SOFT/CLG	--
CLEAR OPNG COL CVR	--
CLEAR OPNG TR	--
CURTAIN OPNG TR	--
BOX STALL GRILLS	--
SLDG DR PANEL	--
SLDG DR JAMB TR	--
SLDG DR TRACK	--
SLDG DR VERTS	--
SLDG DR BTM GIRT	--
OVHD DR PANEL	--
OVHD DR TRIM	CLAY
WALK DR	--
WALK DR TRIM	--
WINDOW	--
WINDOW TRIM	--
SHUTTERS	--
SIG DR FIELD	--
SIG DR TRIM	--
SIG DR JAMB TR	--
SIG DR WINDOW	--
SIG DR TRACK	--
LARGE DOOR	--
LARGE DOOR TRIM	--
DUTCH DR FRAME	--
DUTCH DR INSERT	--
DUTCH DR TRIM	--
SHINGLES	--
MANSARD ROOF	--
MANSARD EAVE	--
MANSARD SOFFIT	--
MODERRA	--

D2 SIDEWALL 2 ELEVATION

1/8" = 1'-0"

FINISH SCHEDULE

ID	LOCATION	DESCRIPTION	DETAILS
	FINISH	ELEVATIONS ARE NOT FOR PANEL LAYOUT	
	FINISH	SEE PANELGEN REPORTING FOR ACTUAL LAYOUT	
A	RIDGE TRIM	#152 VENTED RIDGECAP	OA050, JF707
B	RAKE TRIM	#820 RAKE AND CORNER	JF330, MF530
C	BASE TRIM	#190 BOTTOM CLOSURE	MF113, MF142
D	SOFFIT END TRIM	#190 BOTTOM CLOSURE	MF562
E	CORNER TRIM	#820 RAKE AND CORNER	MF511
F	OVHD DR TRIM	#890 SIDE JAMB C TRIM	LK424
G	OVHD DR TRIM	#260 J TRIM	LK424
H	EAVE TRIM	#170 STANDARD EAVE	JF154
I	EAVE TRIM	#672 FASCIA WITH STIFFENER	JF153, MF548
J	SOFFIT	#107 FJJ SOFFIT 1"/.375"THR	MF724, IF642
K	WALL SPLICE	#230 Z-TRIM	MF359
L	R1, R2	FINISH: UNI-RIB 28GA - AZ50 SMP	JF044
M	E1, E2	FINISH: UNI-RIB 28GA - AZ50 SMP (STITCHED)	MF043
N	S1, S2	FINISH: UNI-RIB 28GA - AZ50 SMP	MF044
O	S1, S2	EAVELITE: UNI-RIB EAVE LITE PANEL	MF045

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature: Matthew Pjesky

Name: Matthew Pjesky

Date: 09-29-25 License Number: 61670

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DA003 | ENG STAMP BOX – STRUCTURAL DESIGN FULL | 384 R2

AE633954 | TITLE1 TITLE2 | 4 PRE

DATE: 9/29/2025

JOB–NUMBER 633954

SHEET 02 OF 15

DRWN BY: Amanda x5235

CHKD BY:

REV NO: 0

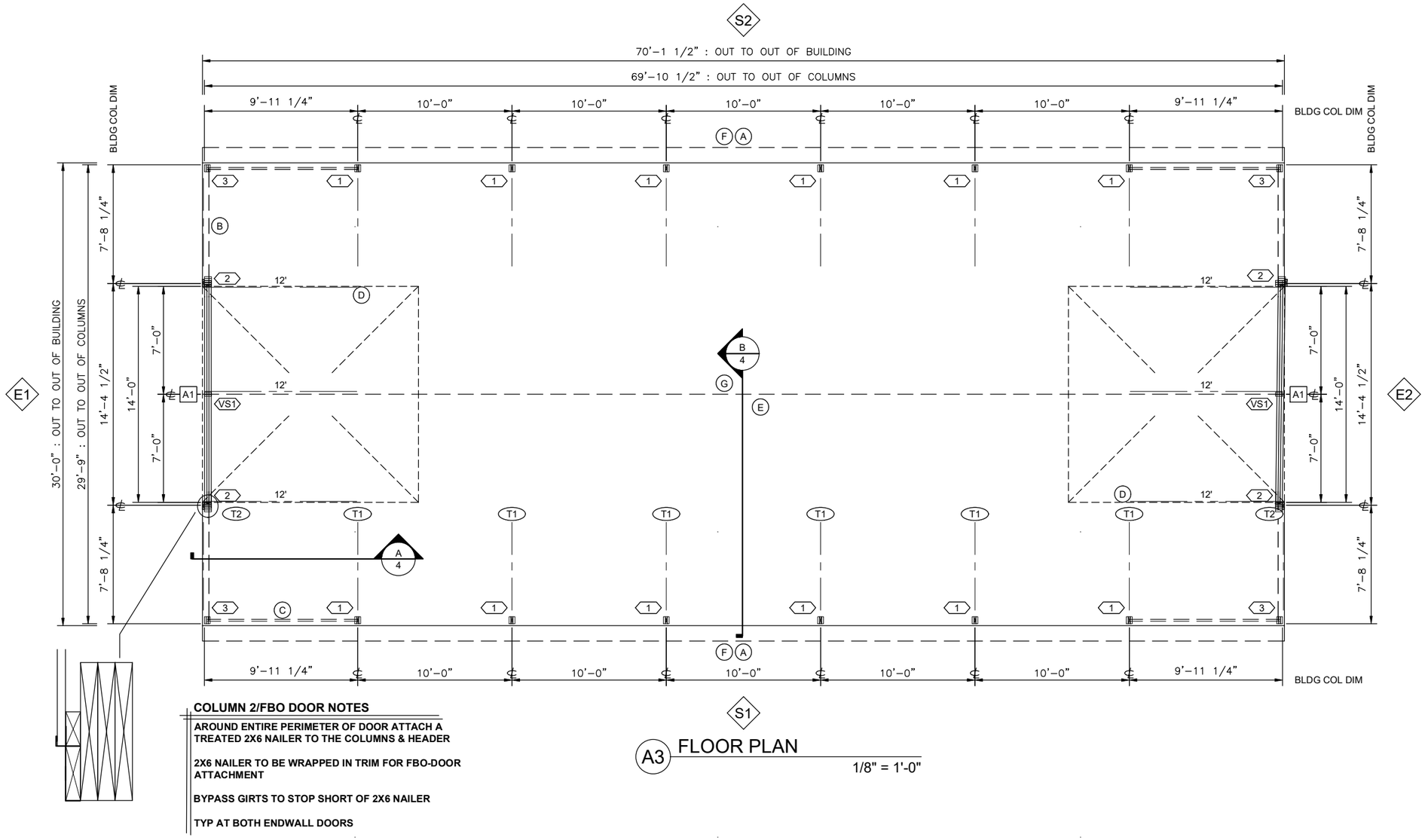
JOB DESCRIPTION: 30'x70'x20'

CUSTOMER: R. Henry Construction, Inc.
101 Power Dr
Mankato, MN 56001

DEALER: Jennifer Wight
25434 Cedar Lane
New Prague, MN 56071

LESTER BUILDING SYSTEMS, LLC.
TOLL-FREE: 800-826-4439

See Titleblock DRWN BY for Extension



COLUMN 2/FBO DOOR NOTES

AROUND ENTIRE PERIMETER OF DOOR ATTACH A TREATED 2X6 NAILER TO THE COLUMNS & HEADER

2X6 NAILER TO BE WRAPPED IN TRIM FOR FBO-DOOR ATTACHMENT

BYPASS GIRTS TO STOP SHORT OF 2X6 NAILER

TYP AT BOTH ENDWALL DOORS

NOTES

FASTEN T2 GABLE TRUSS TO EW COLUMN W/6" FLATLOK SCREWS
(4) AT TC
(4) AT BC
(1) VERTICAL WEB AT EVERY 12" O.C.

FASTEN T2 GABLE TRUSS HEELS TO CORNER COLUMNS W/(6) 4.5" FLATLOKS

REF DETAIL FF300 USE SCREWS INSTEAD OF NAILS

TYP BOTH EW

FLOOR PLAN SCHEDULE

ID	DESCRIPTION	DETAILS
	76'-3 1/4" DIAGONAL OUT-OUT OF FRAMING	
	TRUSS SPACING FROM ENDWALL 1: 1@120.75; 5@120; 1@120.75	
A	12" OVERHANG S1, S2	IF222
B	2x4 WALL DIAG BRACE	HA526
C	2x4 EAVE SHEAR BRACE	HA550
D	2x6 DIAGONAL GABLE BRACE	HB100
E	#152 VENTED RIDGECAP	OA050
F	EAVE DIAPHRAGM HARDWARE	IF202
G	RIDGE DIAPHRAGM HARDWARE	GA442

ROOF FRAMING SCHEDULE

ID	PART	DESCRIPTION	DETAILS
T1	C001	1-PLY 30'-0" TRUSS 2x10 TC / 2x8 BC	HD631
T2	C002	1-PLY 30'-0" GABLE TRUSS 2x8 TC / 2x6 BC	FF300
H1	C012	3-PLY 1-1/4x14 LVL 171-00 HEADER	FO380
		BEARING: 168-08 - BEAM POCKET: 5.38 x 11.75	

COLUMN SCHEDULE

COLUMN					FOOTING				ANCHOR		
ID	PART	SHAPE	LENGTH	BASE	SIZE	TYPE	YDS/BGS	DET	TYPE	BRS/BLTS	DET
1	C003	FS666	28-00-00	-64	8x30	POURED	0.1212	EF203	BLOCK	-	EF211
2	C011	J6FE6666	30-00-00	-58	8x24	POURED	0.0436	EF203	BLOCK	-	EF211
3	C004	FE666	28-00-00	-61	8x18	POURED	0.0436	EF203	BLOCK	-	EF211
VS1	695162	FE66	12-00-00	169.5	-	TRUSS	-	-	-	-	HB660

OPENING SCHEDULE

ID	MODEL	COLOR	NOMINAL	ROUGH	FRAME DET	FINISH DET
A1	OVERHEADDOOR - FBO		168"x168"		LK253	LK424

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Signature: Matthew Pjesky

Name: Matthew Pjesky

Date: 09-29-25 License Number: 61670

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AP633954 | TITLE1 TITLE2 | 4 PRE

DATE: 9/29/2025 | SHEET 03 OF 15

JOB–NUMBER 633954

DRWN BY: Amanda x5235 | CHKD BY: . | REV NO: 0

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DEALER: Jennifer Wight 25434 Cedar Lane New Prague, MN 56071

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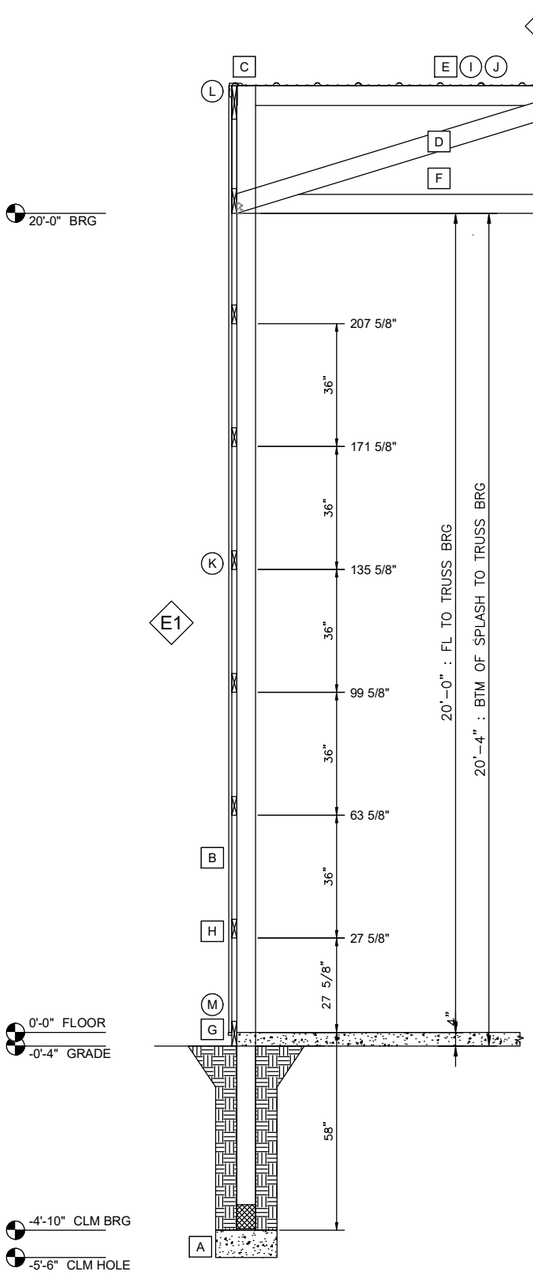
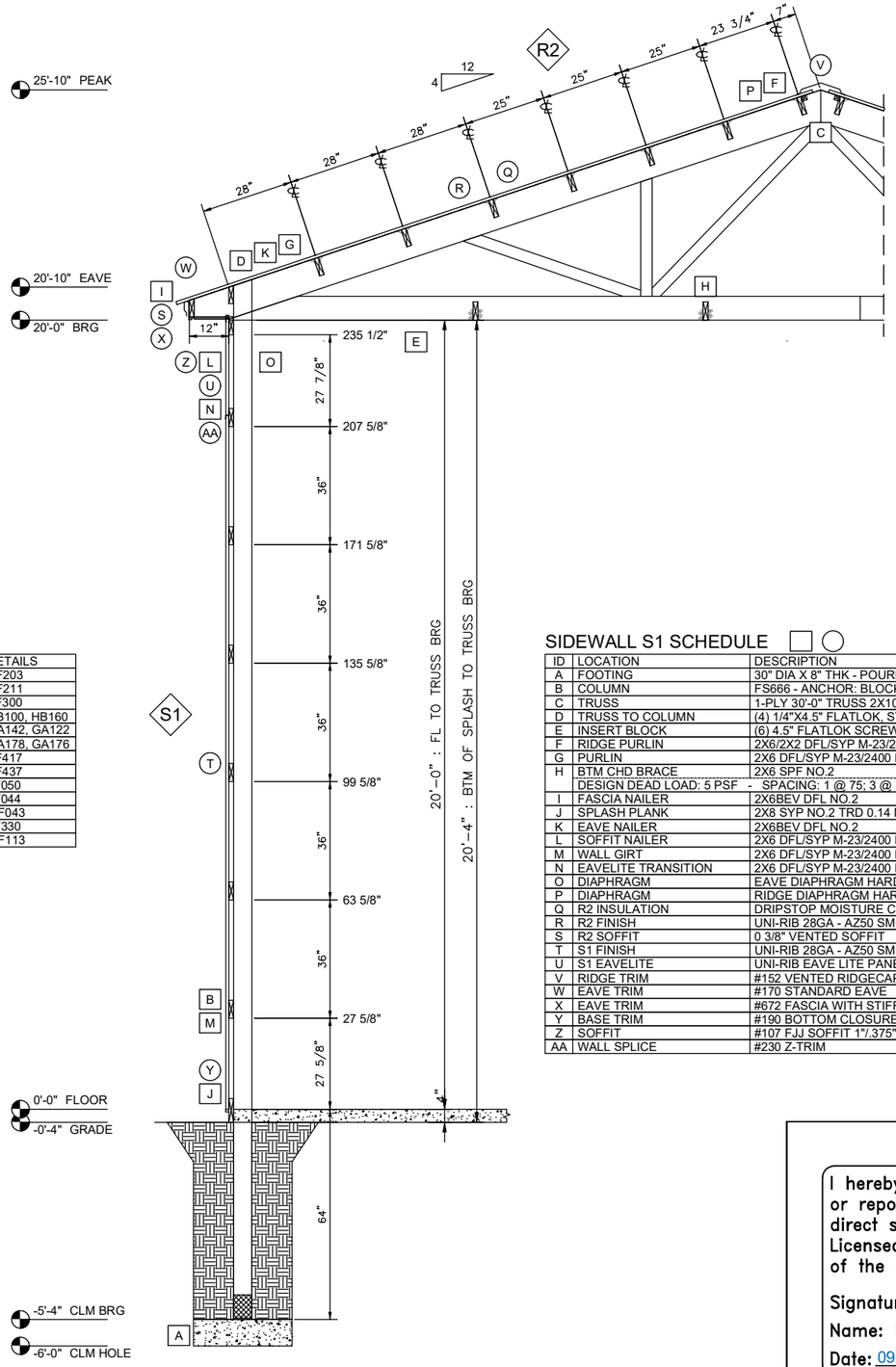


ENDWALL E1 SCHEDULE

ID	LOCATION	DESCRIPTION	DETAILS
A	FOOTING	18" DIA X 8" THK - POURED	EF203
B	COLUMN	FE666 - ANCHOR: BLOCK	EF211
C	TRUSS	1-PLY 30'-0" GABLE TRUSS 2X8 TC / 2X6 BC	FF300
D	DIAG GBL BRACE	2X6 LESTER NO.2	HB100, HB160
E	PURLIN	2X6 DFL/SYP M-23/2400 MSR 1.8E	GA142, GA122
F	BTM CHD BRACE	2X6 SPF NO.2	GA178, GA176
G	SPLASH PLANK	2X8 SYP NO.2 TRD 0.14 MCA-C	FF417
H	WALL GIRT	2X6 LESTER NO.2	FF437
I	R2 INSULATION	DRIPSTOP MOISTURE CONTROL	JF050
J	R2 FINISH	UNI-RIB 28GA - AZ50 SMP	JF044
K	E1 FINISH	UNI-RIB 28GA - AZ50 SMP (STITCHED)	MF043
L	RAKE TRIM	#820 RAKE AND CORNER	JF330
M	BASE TRIM	#190 BOTTOM CLOSURE	MF113

A4 ENDWALL E1 SECTION
23'-2" FROM S2 1/4" = 1'-0"



SIDEWALL S1 SCHEDULE

ID	LOCATION	DESCRIPTION	DETAILS
A	FOOTING	30" DIA X 8" THK - POURED	EF203
B	COLUMN	FS666 - ANCHOR: BLOCK	EF211
C	TRUSS	1-PLY 30'-0" TRUSS 2X10 TC / 2X8 BC	-
D	TRUSS TO COLUMN	(4) 1/4"X4.5" FLATLOK, STD, UNI	HD631
E	INSERT BLOCK	(6) 4.5" FLATLOK SCREWS	FF390
F	RIDGE PURLIN	2X6/2X2 DFL/SYP M-23/2400 MSR 1.8E	GA122, GA152
G	PURLIN	2X6 DFL/SYP M-23/2400 MSR 1.8E	GA122
H	BTM CHD BRACE	2X6 SPF NO.2	GA176
	DESIGN DEAD LOAD: 5 PSF - SPACING: 1 @ 75; 3 @ 70; 1 @ 75		
I	FASCIA NAILER	2X6BEV DFL NO.2	IF222
J	SPLASH PLANK	2X8 SYP NO.2 TRD 0.14 MCA-C	FF417
K	EAVE NAILER	2X6BEV DFL NO.2	IF132, IF130
L	SOFFIT NAILER	2X6 DFL/SYP M-23/2400 MSR 1.8E	FF437
M	WALL GIRT	2X6 DFL/SYP M-23/2400 MSR 1.8E	FF437
N	EAVELITE TRANSITION	2X6 DFL/SYP M-23/2400 MSR 1.8E	FF437
O	DIAPHRAGM	EAVE DIAPHRAGM HARDWARE	IF202
P	DIAPHRAGM	RIDGE DIAPHRAGM HARDWARE	GA442
Q	R2 INSULATION	DRIPSTOP MOISTURE CONTROL	JF050
R	R2 FINISH	UNI-RIB 28GA - AZ50 SMP	JF044
S	R2 SOFFIT	0 3/8" VENTED SOFFIT	IF642
T	S1 FINISH	UNI-RIB 28GA - AZ50 SMP	MF044
U	S1 EAVELITE	UNI-RIB EAVE LITE PANEL	MF045
V	RIDGE TRIM	#152 VENTED RIDGECAP	OA050
W	EAVE TRIM	#170 STANDARD EAVE	JF154
X	EAVE TRIM	#672 FASCIA WITH STIFFENER	JF153
Y	BASE TRIM	#190 BOTTOM CLOSURE	MF113
Z	SOFFIT	#107 FJJ SOFFIT 1"/.375"THR	MF724
AA	WALL SPLICE	#230 Z-TRIM	MF359

B4 SIDEWALL S1 SECTION
35'-0" FROM E1 1/4" = 1'-0"

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BC633954 | TITLE1 TITLE2 | 8 PRE

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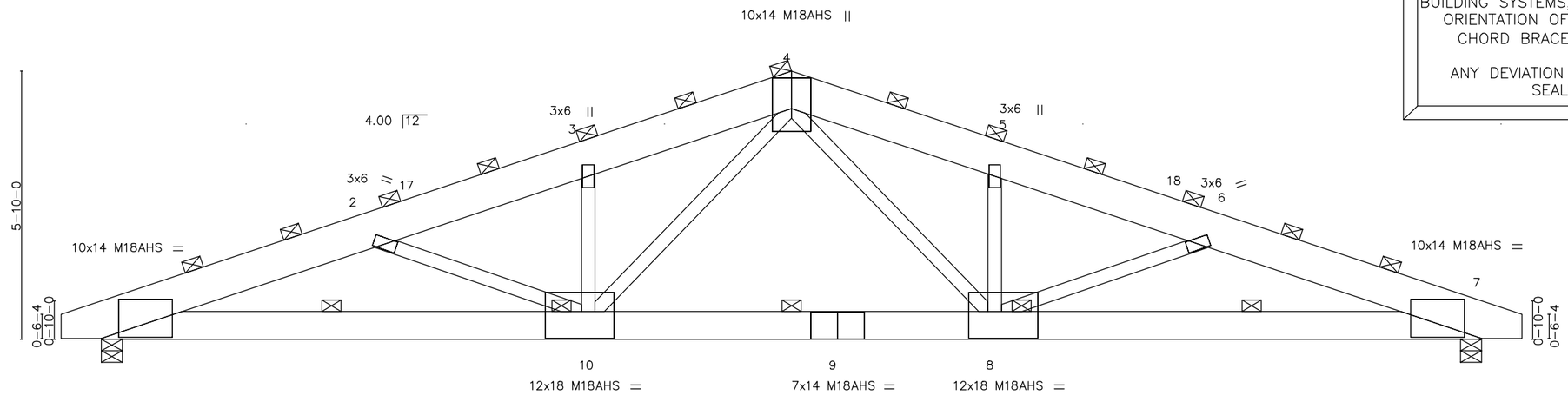
LESTER BUILDING SYSTEMS, LLC.
TOLL-FREE: 800-826-4439

Job	Truss	Truss Type	Qty	Ply	Lester Buildings\ R. Henry Construction
633954	T1-C001	FAN	6	1	10 1/2" OH EACH SIDE Job Reference (optional)

Lester Building Systems, Lester Prairie, MN 25.1.0 s Apr 28 2025 MiTek Industries, Inc. Thu Jun 26 13:19:09 2025 Page 1

-0-10-8	6-2-0	10-7-0	15-0-0	19-5-0	23-10-0	30-0-0	30-10-8
0-10-8	6-2-0	4-5-0	4-5-0	4-5-0	4-5-0	6-2-0	0-10-8

NOTE: THE TRUSSES FOR THIS JOB WERE DESIGNED AND MANUFACTURED BY LESTER BUILDING SYSTEMS, LLC WITH THE LOCATION AND ORIENTATION OF THE PURLINS AND BOTTOM CHORD BRACES AS SHOWN ON PAGE(S) 4,5
ANY DEVIATION FROM THIS WILL VOID THE SEALED DRAWING SET



10-7-0	19-5-0	30-0-0
10-7-0	8-10-0	10-7-0

Plate Offsets (X,Y)-- [1:0-4-8,0-0-4], [4:0-8-0,0-5-0], [7:0-4-8,0-0-4], [8:0-5-0,0-7-0], [10:0-8-8,0-7-0]

LOADING (psf)		SPACING- 10-0-0		CSI.		DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	39.4	Plate Grip DOL	1.15	TC	0.78	Vert(LL)	-0.61 8-10	>586	360	MT20	220/190
Snow (Ps/Pg)	39.4/50.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.77 8-10	>470	180	M18AHS	169/162
TCDL	4.0	Rep Stress Incr	NO	WB	0.81	Horz(CT)	0.24 7	n/a	n/a		
BCLL	0.0	Code	IBC2018/TPI2014	Matrix-MR						Weight: 266 lbFT = 10%	
BCDL	5.0										

LUMBER-
TC 2x10 M23/2400MSR 1.8E DF/SP
BC 2x8 M23/2400MSR 1.8E DF/SP
WB 2x4 M23/2400MSR 1.8E DF/SP *Except* W2: 2x4 #2 Lester
1 - Ply

BRACING-
TOP CHORD 2-4-0 oc purlins (2-5-11 max.).
BOT CHORD 5-10-0 oc bracing.

REACTIONS. (lb/size) 7=7257/0-5-8 (req. 0-7-12), 1=7257/0-5-8 (req. 0-7-12)
Max Horz 1=-172(LC 13)
Max Uplift 7=-796(LC 9), 1=-796(LC 8)
Max Grav 7=7284(LC 18), 1=7284(LC 17)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-16939/1855, 2-17=-14554/1534, 3-17=-14348/1558, 3-4=-14457/1704, 4-5=-14457/1703, 5-18=-14348/1558, 6-18=-14554/1534, 6-7=-16939/1860
BOT CHORD 1-10=-1743/15824, 9-10=-957/10892, 8-9=-957/10892, 7-8=-1629/15824
WEBS 3-10=-2804/351, 5-8=-2804/345, 2-10=-2686/454, 4-10=-590/5732, 4-8=-587/5732, 6-8=-2686/464

NOTES-
1) This truss has been checked for uniform roof live load only, except as noted.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=2.4psf; BCDL=1.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
3) TCLL: ASCE 7-16; Pr=39.4 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=50.0 psf; Ps=39.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=0.94; Ct=1.20; Unobstructed slippery surface
4) Roof design snow load has been reduced to account for slope.
5) Unbalanced snow loads have been considered for this design.
6) Dead loads shown include weight of truss. Top chord dead load of 5.0 psf (or less) is not adequate for a shingle roof. Architect to verify adequacy of top chord dead load.
7) All plates are MT20 plates unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) WARNING: Required bearing size at joint(s) 7, 1 greater than input bearing size.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 796 lb uplift at joint 7 and 796 lb uplift at joint 1.
11) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
12) Purlins are supported between trusses by means of a ledger strip or purlin hanger.

LOAD CASE(S) Standard

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature: Matthew Pjesky
Name: Matthew Pjesky
Date: 09-29-25 License Number: 61670

THIS CERTIFICATION IS LIMITED TO THE STRUCTURAL DESIGN OF THE FRAMING AND COVERING PARTS MANUFACTURED BY LESTER BUILDING SYSTEMS, ALL OTHER ITEMS SUCH AS EQUIPMENT, VENTILATION, PLUMBING, ELECTRICAL, ERECTION, DOORS, FIRE REQUIREMENTS, INSPECTION, CONCRETE FLOORS, ETC. IS THE RESPONSIBILITY OF OTHERS.

CT633954	TITLE1 TITLE2	8 PRE

DA003	ENG STAMP BOX - STRUCTURAL DESIGN FULL	384 R2

DATE: 9/29/2025
SHEET 05 OF 15
JOB-NUMBER 633954
DRWN BY: Amanda x5235
CHKD BY:
REV NO: 0

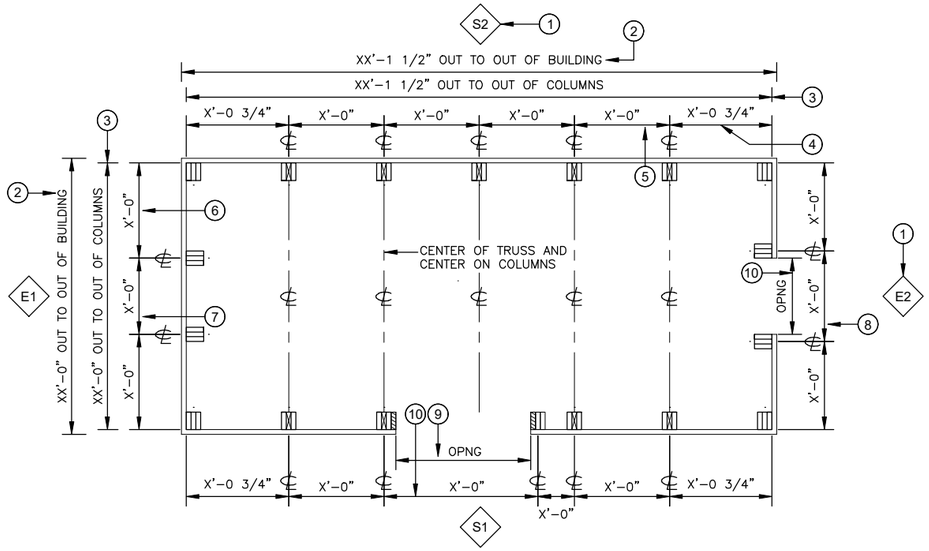
JOB DESCRIPTION: 30'x70'x20'

CUSTOMER: R. Henry Construction, Inc.
101 Power Dr
Mankato, MN 56001

DEALER: Jennifer Wight
25434 Cedar Lane
New Prague, MN 56071

LESTER BUILDING SYSTEMS, LLC.
TOLL-FREE: 800-826-4439
See Titleblock DRWN BY for Extension

SYMBOL MEANS "CENTER LINE"



SYMBOL SCHEDULE ○

1. ◇ THIS SYMBOL IS A REFERENCE THAT RELATES TO YOUR "WHERE USED". IT CALLS OUT THE WALL TYPE/LOCATION. S2 REFERS TO SIDEWALL 2. E2 REFERS TO ENDWALL 2. IT CAN HELP YOUR CONSTRUCTION CREW IDENTIFY WHERE TO STAGE BUILDING MATERIAL

2. OUT TO OUT OF BUILDING LENGTH AND WIDTH IS FROM OUTSIDE EDGE OF BYPASS WALL GIRT TO OUTSIDE EDGE OF BYPASS WALL GIRT.

3. OUT TO OUT OF COLUMNS LENGTH AND WIDTH IS MEASURED FROM OUTSIDE EDGE OF CORNER COLUMN TO THE OUTSIDE EDGE OF OPPOSITE CORNER COLUMN.

4. END BAYS (BAY NEXT TO ENDWALL) WILL HAVE A DIMENSION SLIGHTLY DIFFERENT THAN THE INTERMEDIATE BAYS. THIS DIMENSION MEASURES FROM THE CENTER OF THE INTERMEDIATE COLUMN TO THE OUTSIDE EDGE OF CORNER COLUMN.

5. INTERMEDIATE BAYS ARE DIMENSIONED FROM CENTER OF COLUMN TO CENTER OF COLUMN.

6. THE BAY NEXT TO EACH SIDEWALL MEASURES FROM THE CENTER OF COLUMN TO THE OUTSIDE EDGE OF CORNER COLUMN.

7. MIDDLE BAYS ON THE ENDWALL ARE DIMENSIONED FROM THE CENTER OF COLUMN TO CENTER OF COLUMN.

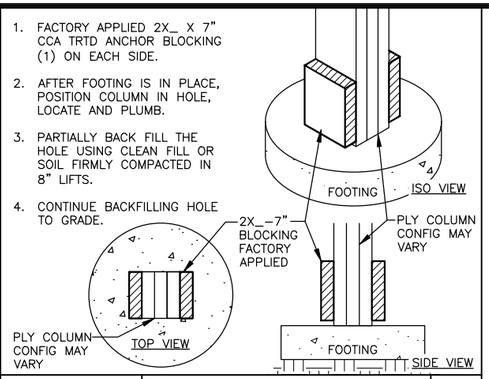
8. DIMENSION FOR ENDWALL COLUMNS AT DOOR OPENINGS ARE MEASURED FROM CENTER OF COLUMN TO CENTER OF COLUMN. AN OPENING DIMENSION WILL REPRESENT ACTUAL OPENING SIZE.

9. DIMENSION FOR SIDEWALL COLUMNS AT DOOR OPENINGS ARE MEASURED FROM CENTER OF COLUMN OR CENTER OF TRUSS TO CENTER OF COLUMN OR CENTER OF TRUSS. (REFER TO FLOOR PLAN OF YOUR PROJECT)

!!!PAY CAREFUL ATTENTION TO WHERE THE DIMENSION LINES MEASURE!!!

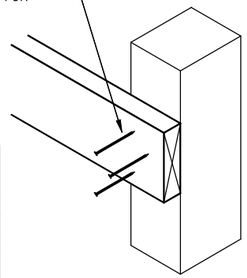
10. OPENING DIMENSION IS FROM SIDE OF COLUMN TO SIDE OF COLUMN.

1. FACTORY APPLIED 2X_ X 7" CCA TRTD ANCHOR BLOCKING (1) ON EACH SIDE.
2. AFTER FOOTING IS IN PLACE, POSITION COLUMN IN HOLE, LOCATE AND PLUMB.
3. PARTIALLY BACK FILL THE HOLE USING CLEAN FILL OR SOIL FIRMLY COMPACTED IN 8" LIFTS.
4. CONTINUE BACKFILLING HOLE TO GRADE.



EF211 | ANCHOR BLOCKS – FACTORY APPLIED COLUMN EMBEDMENT 1" | 32 R1

NAIL 2X_ FRAMING MEMBER TO COLUMN USING 16d GALV R.S. NAILS, SEE CHART BELOW FOR QTY.



FRAMING MEMBER SIZE	QTY. 16d GALV R.S. NAILS (P/N: 040140)
2X4	(2)
2X6	(2)
2X8	(3)
2X10	(3)
2X12	(4)

FF001 | TYPICAL 2X_ FRMG TO COLUMN CONN WALL FRAMING FASTENING 1.5" | 48 R1

DA568 | BYPASS FRAME DIMENSION STANDARDS FLOOR PLAN LAYOUT GUIDE 3/8" | 12 R2

CONVERSION TO GUN NAIL

TLN NAILS REQUIRED FOR TREATED LUMBER

HAND NAIL	GUN NAIL	MULTIPLICATION WOOD–WOOD	MULTIPLICATION HANGER–WOOD	EXAMPLE: GUN NAIL REPLACEMENT FOR COMMON DETAILS (IF GUN NAILING SHOWN ON DETAILS – FOLLOW DETAIL)		
16d COM	0.131"x3.25	1.5	1.7	2X4 FLAT PURLIN	HAND NAIL	(2) 16d COMMONS
					GUN NAIL	(3) 0.131 X 3.25 SMOOTH
16d R.S.	0.131"x3.25	1.4	1.4	BYPASS WALL GIRTS	HAND NAIL	(2) 16d R.S. NAILS
					GUN NAIL	(3) 0.131 X 3.25 SMOOTH
				SPLASH PLANK	HAND NAIL	(2) 16d R.S. NAILS
					GUN NAIL	(3) 0.131 X 3.25 SMOOTH
10d COM	0.131"x3.25	1	1.2	BOOKSHELF GIRTS	HAND NAIL	(4) 10d BOX NAILS
					GUN NAIL	(4) 0.131 X 3.25 SMOOTH
8d COM	0.131"x3.25	1	1	5/8" SHEATHING	HAND NAIL	(2) 16d COMMONS
					GUN NAIL	(3) 0.131 X 3.25 SMOOTH
10d C.C.	0.131"x3.25	1	1			

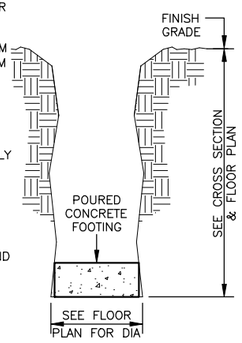
ONLY POWER DRIVEN NAILS LISTED IN "NATIONAL EVALUATION SERVICES REPORT NER–272 (POWER DRIVEN STAPLES AND NAILS FOR USE IN ALL TYPES OF BUILDING CONSTRUCTION) MAY BE USED. FULL HEAD OR CLIPPED HEAD POWER DRIVEN NAILS ONLY. T–HEADED NAILS AND STAPLES "MAY NOT" BE SUBSTITUTED FOR CONNECTIONS INDICATED ON DRAWINGS.

DA600 | GUN NAIL CONVERSION CHART GENERAL INFORMATION | 32 R1

1) AUGER HOLE AS PER DIAMETER REQUIRED FOR THE FOOTING.
2) REMOVE ALL LOOSE DIRT FROM BOTTOM OF HOLE, "TAMP" BOTTOM OF HOLE WELL.
3) POUR CONCRETE FOOTING TO REQUIRED DEPTH SPECIFIED ON FLOOR PLAN.
4) ALLOW CONCRETE TO PROPERLY CURE.

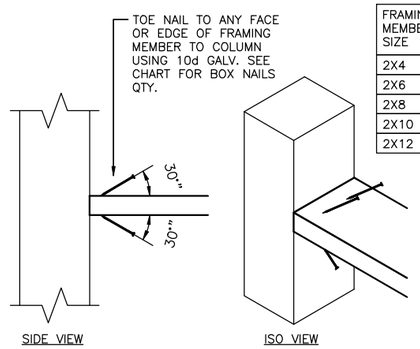
SEE CROSS SECTION AND FLOOR PLAN FOR EMBEDMENT DEPTH AND FOOTING SIZE.

UNDISTURBED SOIL BELOW FOOTING



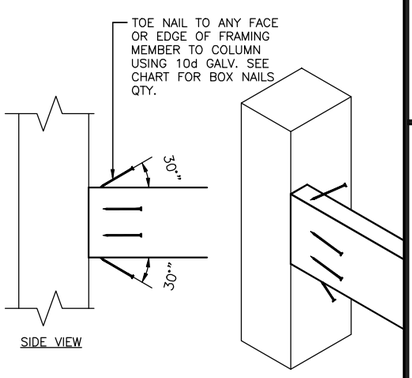
EF203 | POURED CONCETE FOOTING COLUMN EMBEDMENT 1/2" | 16 R1

TOE NAIL TO ANY FACE OR EDGE OF FRAMING MEMBER TO COLUMN USING 10d GALV. SEE CHART FOR BOX NAILS QTY.



FRAMING MEMBER SIZE	QTY. 10d GALV BOX NAILS (P/N: 040076)
2X4	(3)
2X6	(3)
2X8	(4)
2X10	(5)
2X12	(6)

TOE NAIL TO ANY FACE OR EDGE OF FRAMING MEMBER TO COLUMN USING 10d GALV. SEE CHART FOR BOX NAILS QTY.



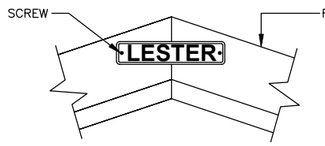
FF002 | TOE–NAILED 2X_ FRMG TO COLUMN CONN WALL FRAMING FASTENING 1.5" | 48 R1

CONVERSION TO GALVANIZED NAIL

(P/N: 040021) 4d COMMON BRIGHT = (P/N: 040082) 4d GALV COMMON
(P/N: 040025) 8d COMMON BRIGHT = (P/N: 040086) 8d GALV COMMON
(P/N: 040026) 10d COMMON BRIGHT = (P/N: 040087) 10d GALV COMMON
(P/N: 040028) 16d COMMON BRIGHT = (P/N: 040089) 16d GALV COMMON
(P/N: 040016) 10d CC BOX = (P/N: 040076) 10d GALV BOX

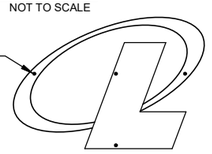
DA603 | NAIL CONVERSION TO GALV NAILS GENERAL INFORMATION 1" | 32 R0

SCREW — RAKE TRIM

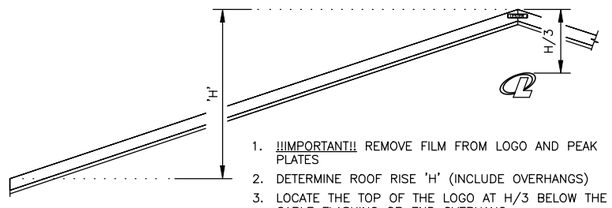


PEAK PLATE
NOT TO SCALE

SCREW



LOGO
NOT TO SCALE



1. !!IMPORTANT!! REMOVE FILM FROM LOGO AND PEAK PLATES
2. DETERMINE ROOF RISE 'H' (INCLUDE OVERHANGS)
3. LOCATE THE TOP OF THE LOGO AT H/3 BELOW THE GABLE FLASHING OR END OVERHANG
4. FASTEN W/SCREWS WHEN INSTALLED OVER TOP OF MAJOR RIB(S), FASTEN W/SCREWS & SPACERS IN ALL OTHER HOLES IF THEY DO NOT LAND ON A MAJOR RIB(S).
   NOTE: ALL SCREWS GET SPACERS IF FASTENING TO FLAT SIDING
5. INSTALL PEAK PLATE AS SHOWN ABOVE

DD001 | PEAK & LOGO PLATE INSTALLAION BUILDING SIGNAGE | 8 R1

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature: Matthew Pjesky

Name: Matthew Pjesky

Date: 09-29-25 License Number: 61670

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DA003 | ENG STAMP BOX – STRUCTURAL DESIGN FULL | 384 R2

DATE: 9/29/2025
SHEET 06 OF 15
JOB–NUMBER 633954
DRWN BY: Amanda x5235
CHKD BY:
REV NO: 0

JOB DESCRIPTION: 30'x70'x20'

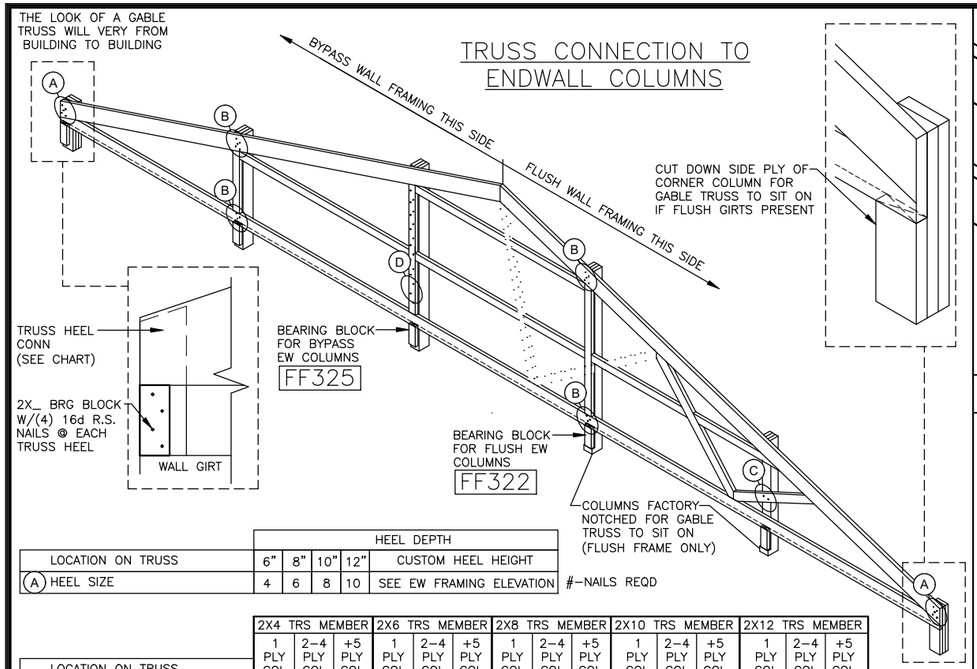
CUSTOMER: R. Henry Construction, Inc.
101 Power Dr
Mankato, MN 56001

DEALER: Jennifer Wight
25434 Cedar Lane
New Prague, MN 56071

LESTER BUILDING SYSTEMS, LLC.
TOLL-FREE: 800-826-4439

See Titleblock DRWN BY for Extension

TRUSS CONNECTION TO ENDWALL COLUMNS



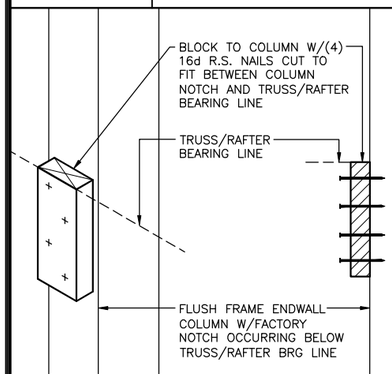
LOCATION ON TRUSS	HEEL DEPTH 6"	8"	10"	12"	CUSTOM HEEL HEIGHT
(A) HEEL SIZE	4	6	8	10	SEE EW FRAMING ELEVATION

#–NAILS REQD

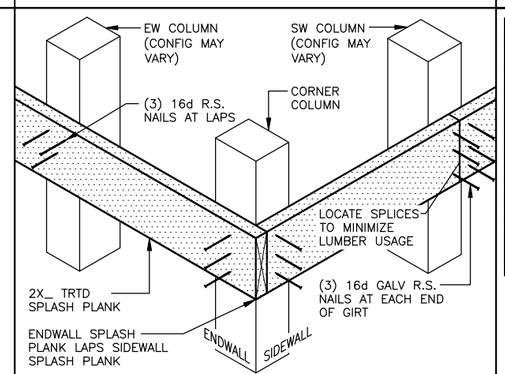
LOCATION ON TRUSS	2X4 TRS MEMBER 1 PLY COL	2–4 PLY COL	+5 PLY COL	2X6 TRS MEMBER 1 PLY COL	2–4 PLY COL	+5 PLY COL	2X8 TRS MEMBER 1 PLY COL	2–4 PLY COL	+5 PLY COL	2X10 TRS MEMBER 1 PLY COL	2–4 PLY COL	+5 PLY COL	2X12 TRS MEMBER 1 PLY COL	2–4 PLY COL	+5 PLY COL	
(B) TOP & BTM CHORD	2	4	6	3	6	9	3	6	9	4	8	12	4	8	12	#–NAILS REQD
(C) DIAGONAL & HORIZONTAL WEBS	2	2	3	2	3	4	2	3	4	4	5	6	2	3	4	#–NAILS REQD
(D) VERTICAL WEBS	12" O.C. IN EACH PLY															

FF300	GABLE TRUSS TO ENDWALL COLUMN CONN WALL FRAMING FASTENING 1/4"	8	R1

FOR A 2–PLY GABLE TRUSS SEE FRAME ELEVATION OF DRWGS

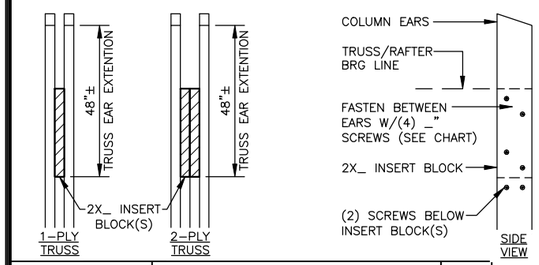


FF325	BYPASS ENDWALL COLUMN PREP FOR TRUSS WALL FRAMING FASTENING 1.5"	48	R3

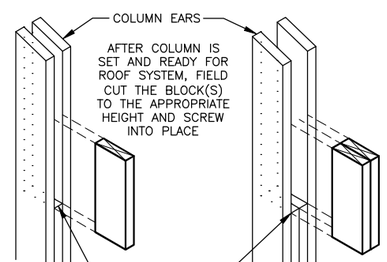


FF417	2X_ SPLASH PLANK CONN – BYPASS UNI–FRAME WALL FASTENING 1"	32	R1

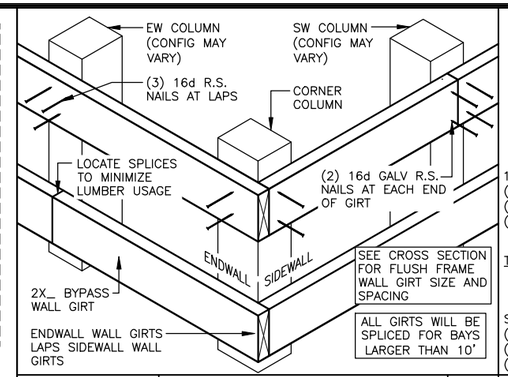
INSERT BLOCK LENGTH	INSERT BLOCK FASTENERS
LESS THAN 3"	(2) 10d NAILS
BETWEEN 3" – 9"	(2) STRUC SCREWS
GREATER THAN 9"	(4) STRUC SCREWS



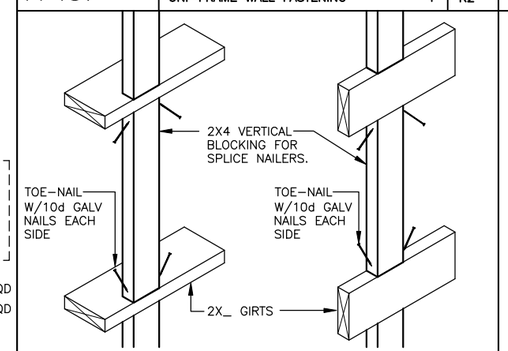
COL # PLYS	SCREW LENGTH
3	4.5" STRUC SCR (P/N: 042074)
4	6" STRUC SCR (P/N: 042076)
5	8" SPIDER SCR (P/N: 042249)



FF390	2X6, 2X8, OR 2X10 COL PREP FOR TRUSS WALL FRAMING FASTENING 3/4"	24	R8



FF437	BYPASS WALL GIRTS CONN – STANDARD UNI–FRAME WALL FASTENING 1"	32	R2

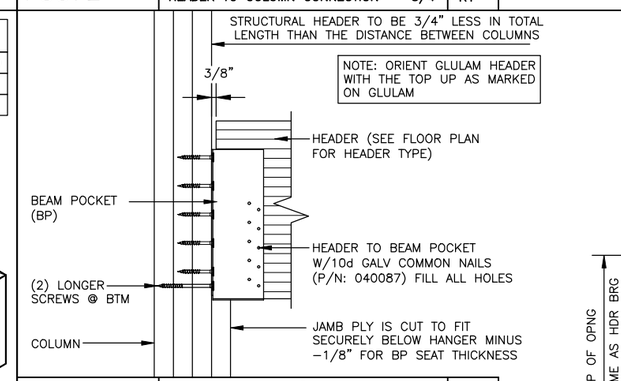


FF482	VERTICAL BLOCKING BETWEEN GIRTS UNI–FRAME WALL FASTENING 1"	32	R2

LUMBER PLY HEADER QTY./SIZE	10d GALV. BOX NAILS INTO HEADER	INTO COLUMN	JA–_ CLIP (PER. FLANGE)	JA–_ CLIP QTY./SIZE	KIT #
2–PLY 2X8	8	3	4	JA–3	741370
3–PLY 2X8	8	3	4	JA–3	741370
4–PLY 2X8	8	3	6	JA–5	741371
5–PLY 2X8	8	3	4	(2) JA–3	741372
6–PLY 2X8	8	3	4 & 6	JA–3/JA–5	741373
2–PLY 2X10	10	4	4	JA–3	741380
3–PLY 2X10	10	4	4	JA–3	741380
4–PLY 2X10	10	4	6	JA–5	741381
5–PLY 2X10	10	4	4	(2) JA–3	741382
6–PLY 2X10	10	4	4 & 6	JA–3/JA–5	741383
2–PLY 2X12	12	5	4	JA–3	741390
3–PLY 2X12	12	5	4	JA–3	741390
4–PLY 2X12	12	5	6	JA–5	741391
5–PLY 2X12	12	5	4	(2) JA–3	741392
6–PLY 2X12	12	5	4 & 6	JA–3/JA–5	741393

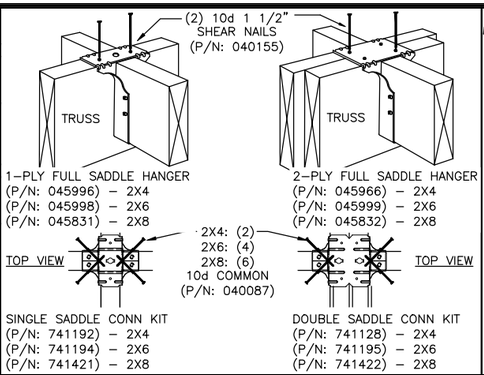
HEADER LOCATION AT COLUMN BASED ON OPNG TYPE.
FOR OVHD DOOR SEE DETAIL F0344

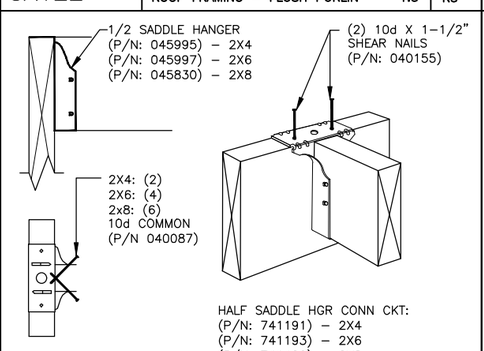
F0372	HEADER BEARING AT 1 1/2" ABOVE OPNG HEADER TO COLUMN CONNECTION 3/4"	24	R1



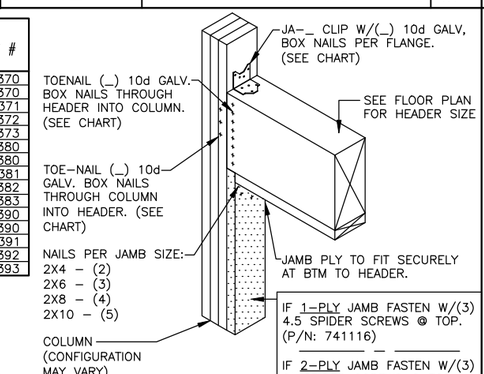
F0380	BP TO COL – 11.75" HIGH BEAM POCKET HDR. BRG. @ TOP OF DR. OPNG. 1.5"	48	R4

GA122	2X_ PURLIN SINGLE/DOUBLE SADDLE HGR ROOF FRAMING – FLUSH PURLIN 1.5"	48	R5

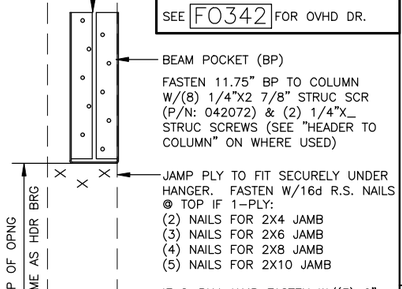




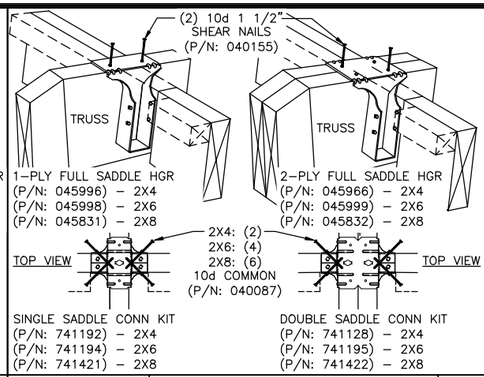
GA142	2X_ PURLIN HALF SADDLE HANGER ROOF FRAMING – FLUSH PURLIN 2"	64	R4

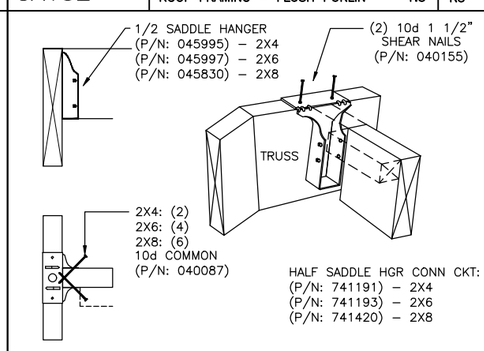


HEADER LOCATION AT COLUMN BASED ON OPENING TYPE:
SEE F0340 FOR SLDG DR.
SEE F0342 FOR OVHD DR.



GA152	RIDGE NAILER W/ OR W/O 2X2 IN SADDLE ROOF FRAMING – FLUSH PURLIN 1.5"	48	R5

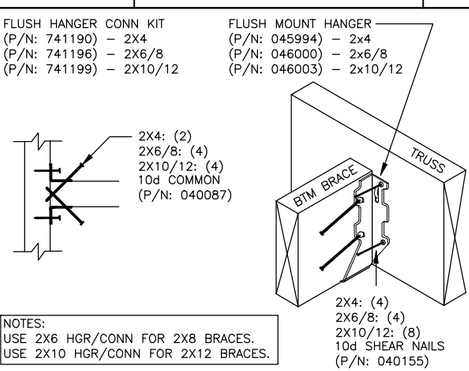




GA162	RIDGE NAILER W/ OR W/O 2X2 HALF SAD ROOF FRAMING – FLUSH PURLIN 1.5"	48	R8

FLUSH HANGER CONN KIT (P/N: 741190) – 2X4 (P/N: 741196) – 2X6/8 (P/N: 741199) – 2X10/12

FLUSH MOUNT HANGER (P/N: 045994) – 2x4 (P/N: 046000) – 2x6/8 (P/N: 046003) – 2x10/12



NOTES:
USE 2X6 HGR/CONN FOR 2X8 BRACES.
USE 2X10 HGR/CONN FOR 2X12 BRACES.

GA172	2X_ BTM BRACE IN FLUSH MOUNT HANGER ROOF/CEILING FRAMING 2"	64	R3

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature: Matthew Pjesky

Name: Matthew Pjesky

Date: 09-29-25 License Number: 61670

THIS CERTIFICATION IS LIMITED TO THE STRUCTURAL DESIGN OF THE FRAMING AND COVERING PARTS MANUFACTURED BY LESTER BUILDING SYSTEMS, ALL OTHER ITEMS SUCH AS EQUIPMENT, VENTILATION, PLUMBING, ELECTRICAL, ERECTION, DOORS, FIRE REQUIREMENTS, INSPECTION, CONCRETE FLOORS, ETC. IS THE RESPONSIBILITY OF OTHERS.

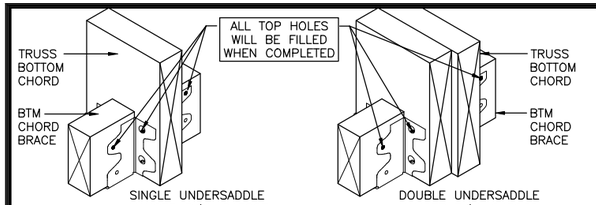
DA003	ENG STAMP BOX – STRUCTURAL DESIGN FULL	384	R2

DATE: 9/29/2025
SHEET 07 OF 15
JOB–NUMBER 633954
DRWN BY: Amanda x5235
CHKD BY:
REV NO: 0
JOB DESCRIPTION: 30'x70'x20'

CUSTOMER:
R. Henry Construction, Inc.
101 Power Dr
Mankato, MN 56001

DEALER:
Jennifer Wight
25434 Cedar Lane
New Prague, MN 56071

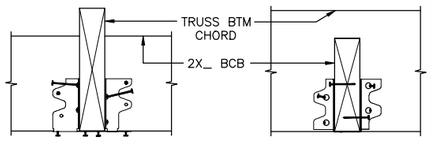
LESTER BUILDING SYSTEMS, LLC.
TOLL–FREE : 800-826-4439
See Tileblock DRWN BY for Extension



BOTTOM VIEW

FASTEN UNDERSADDLE HANGER W/(12) #10x1.5" STRUCTURAL SCREW (P/N: 042223):
3 TOTAL SCREWS INTO EACH BCB
(1) SCREWS FROM THE BOTTOM
(2) SCREWS FROM SIDES PLACED IN TOP HOLES
6 TOTAL SCREWS INTO TRUSS BOTTOM CHORD
(2) SCREWS FROM BOTTOM
(4) SCREWS INTO FACE PLACED IN TOP HOLES

SINGLE UNDERSADDLE STD CONN KIT P/N: 741140
DOUBLE UNDERSADDLE STD CONN KIT P/N: 741141

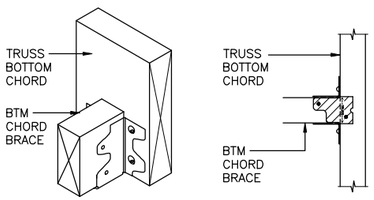


SIDE VIEW

GA176	2X_ BCB SGL/DBL UNDERSADDLE HGR ROOF FRAMINGS – STANDARD LOAD 2"	64 R2

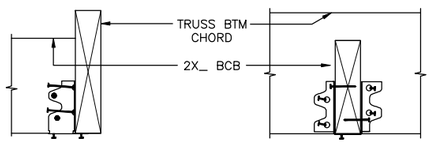
1 1/4" SHEAR NAILS (P/N: 040155) HAVE BEEN SENT TO FILL IN BOTTOM HOLES IF CEILING IS PRESENT.

HALF UNDERSADDLE HANGER P/N: 045961
HALF UNDERSADDLE CONN KIT P/N: 741139



BOTTOM VIEW

FASTEN THE HALF UNDERSADDLE HANGER W/(10) #10x1.5" STRUCTURAL SCREW (P/N: 042223):
5 TOTAL SCREWS INTO EACH BCB
(1) SCREWS FROM THE BOTTOM
(4) SCREWS FROM SIDES
5 TOTAL SCREWS INTO TRUSS BOTTOM CHORD
(1) SCREWS FROM BOTTOM
(4) SCREWS INTO FACE

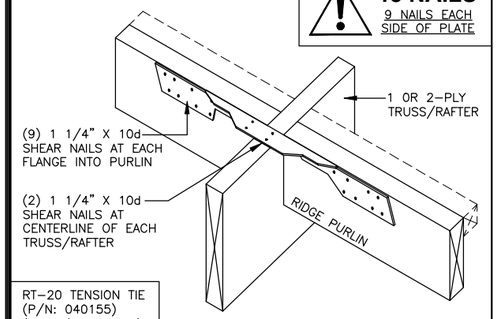


SIDE VIEW

GA178	HALF UNDERSADDLE BCB HANGER ROOF FRAMINGS – STANDARD LOAD 2"	64 R3

1 1/4" SHEAR NAILS (P/N: 040155) HAVE BEEN SENT TO FILL IN BOTTOM HOLES IF CEILING IS PRESENT.

18 NAILS
9 NAILS EACH SIDE OF PLATE



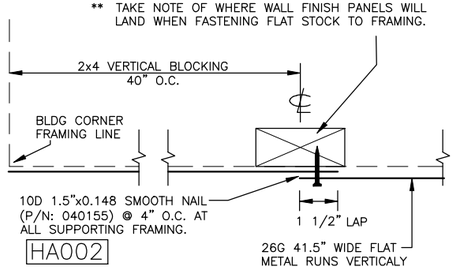
RT-20 TENSION TIE
(P/N: 040155)
(KIT P/N: 741040)

GA442	SINGLE ROW AT RIDGE PURLIN DIAPHRAGM HARDWARE 1.5"	48 R4

IF HOUSE WRAP IS CONFIGURED ON PROJECT THEN INSTALL THIS FIRST THEN FLAT METAL

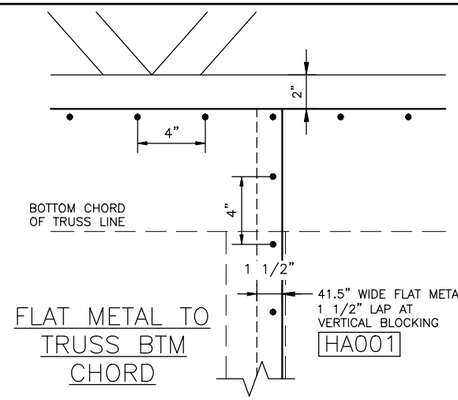
2X4 VERTICAL BLOCKING BETWEEN GIRTS AT EACH SPLICE. ROUGHLY EVERY 40" O.C. FF482

** TAKE NOTE OF WHERE WALL FINISH PANELS WILL LAND WHEN FASTENING FLAT STOCK TO FRAMING.



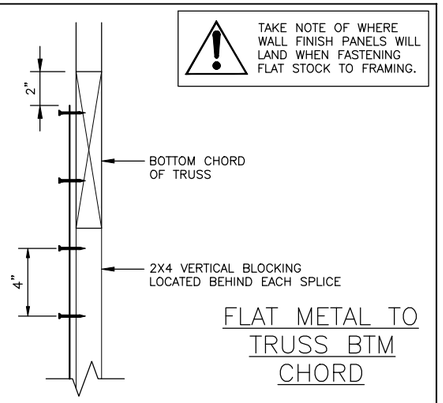
HA002

HA001	FLAT METAL START & FASTENING 0" THICK FLAT METAL – SHEAR WALL 3"	96 R0

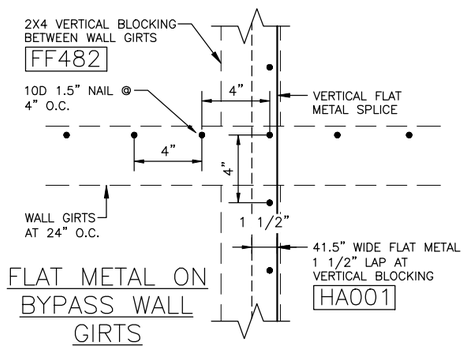


FLAT METAL TO TRUSS BTM CHORD

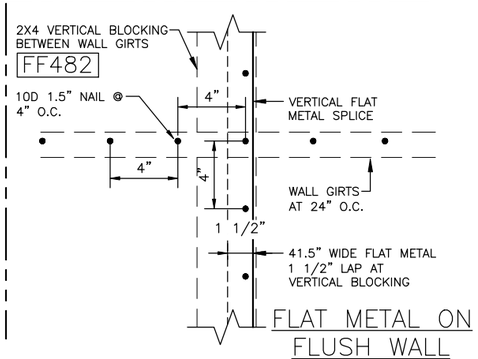
TAKE NOTE OF WHERE WALL FINISH PANELS WILL LAND WHEN FASTENING FLAT STOCK TO FRAMING.



FLAT METAL TO TRUSS BTM CHORD



FLAT METAL ON BYPASS WALL GIRTS



FLAT METAL ON FLUSH WALL GIRTS

HA002	FLAT METAL CONN TO WALL GIRTS & TRUSS 0" THICK FLAT METAL – SHEAR WALL 2"	64 R1

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature: Matthew Pjesky

Name: Matthew Pjesky

Date: 09-29-25 License Number: 61670

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DA003	ENG STAMP BOX – STRUCTURAL DESIGN FULL	384 R2

DATE: 9/29/2025

JOB-NUMBER 633954

SHEET 08 OF 15

DRWN BY: Amanda x5235

CHKD BY: . .

REV NO: 0

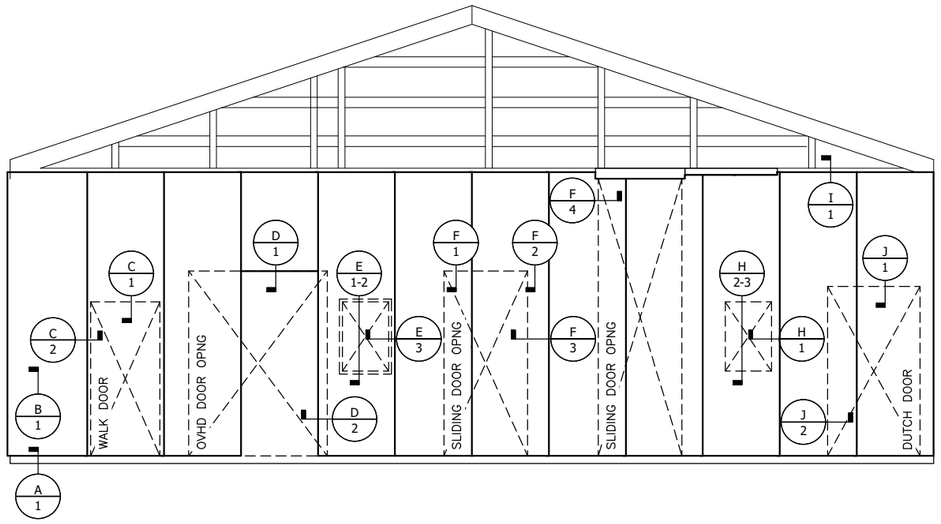
JOB DESCRIPTION: 30'x70'x20' . .

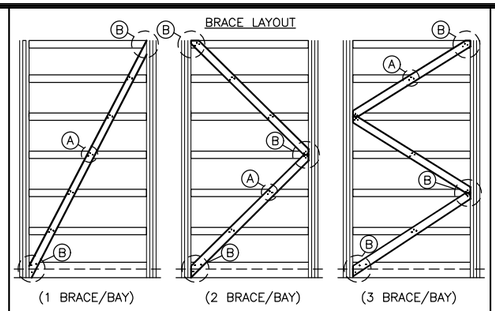
CUSTOMER: R. Henry Construction, Inc. 101 Power Dr Mankato, MN 56001

DEALER: Jennifer Wight 25434 Cedar Lane New Prague, MN 56071

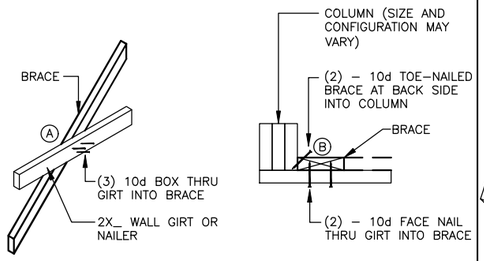
LESTER BUILDING SYSTEMS, LLC. TOLL-FREE : 800-826-4439

See Titleblock DRWN BY for Extension



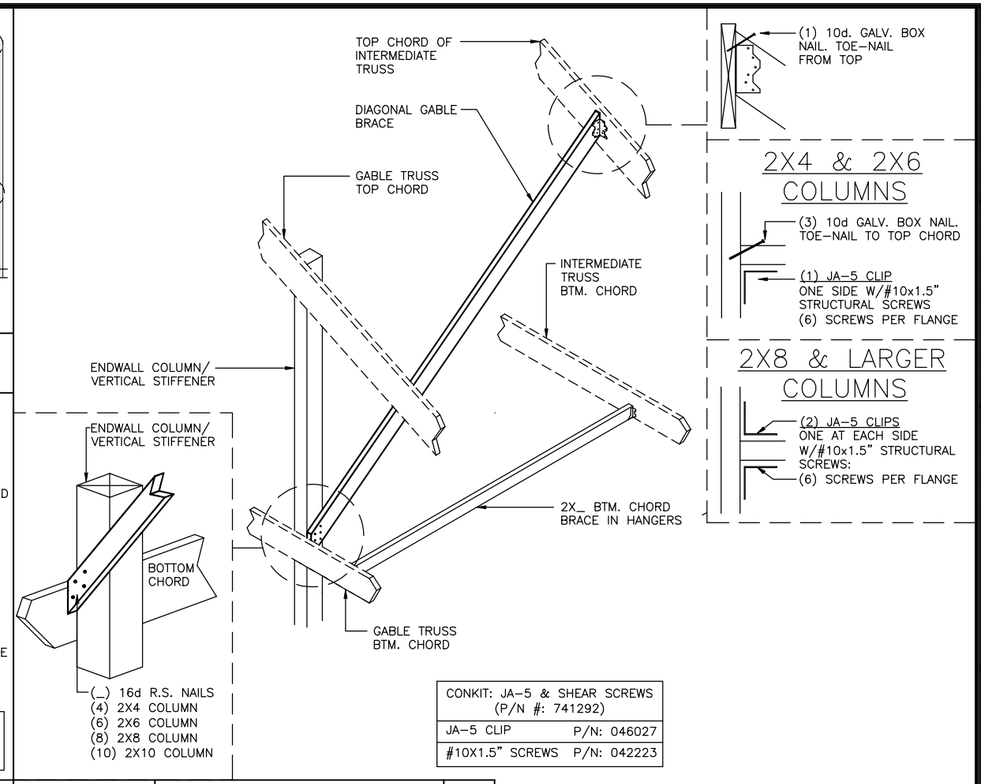


SEE ELEVATIONS FOR CONFIGURATION
SEE WHERE USED REPORT FOR LUMBER SIZE AND GRADE
SEE FLOOR PLAN FOR LOCATIONS



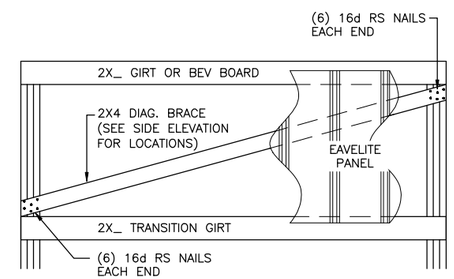
CORNER BRACES ARE TO BE CUT FROM 2X4 #2 LUMBER UNLESS NOTED OTHERWISE

HA527	WALL DIAGONAL BRACE – EMBEDDED BRACING INSTALLATION – CONFIGURED 1/4"	8 R3

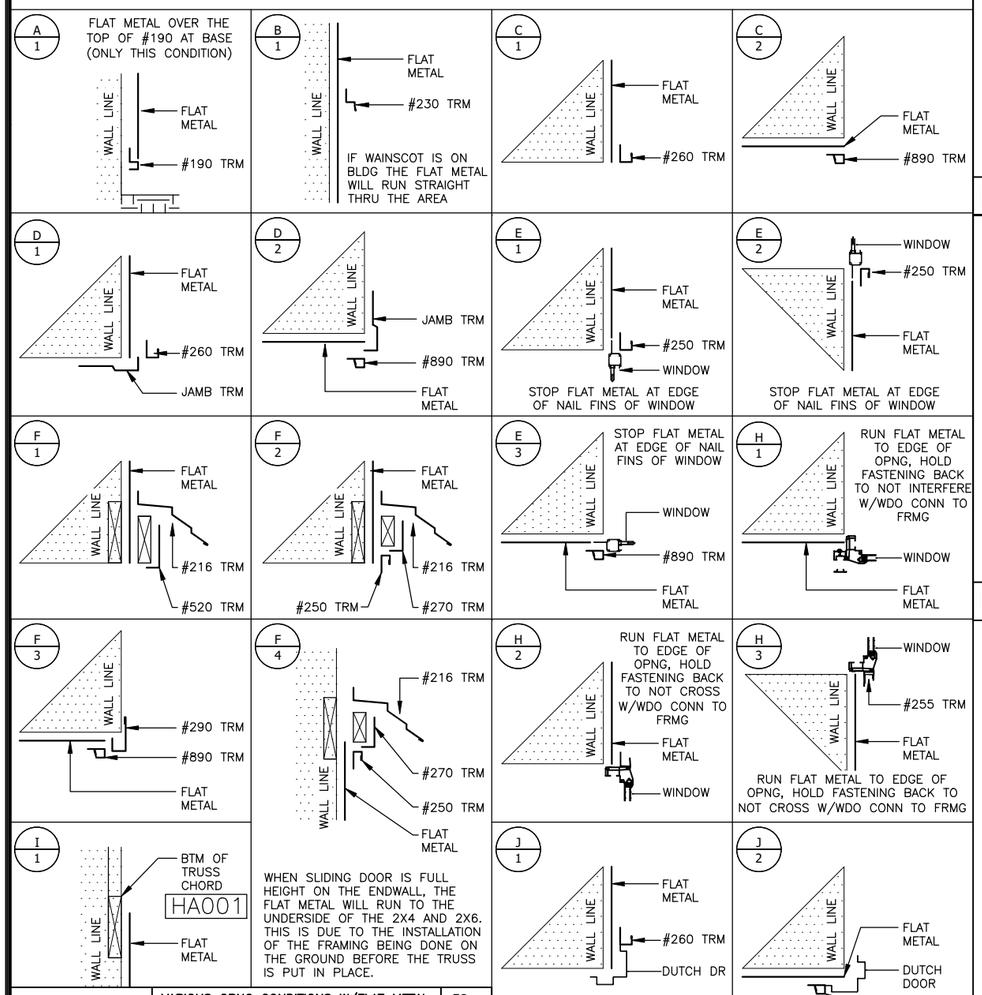


CONKIT: JA–5 & SHEAR SCREWS (P/N #: 741292)	
JA–5 CLIP	P/N: 046027
#10X1.5" SCREWS	P/N: 042223

HB100	DIAGONAL GABLE BRACE CONNECTION STANDARD TRUSS BRACING 3/8"	12 R3



HA550	SHEAR BRACE AT EAVE LITE – BYPASS WALL BRACING 1/2"	16 R1



HA004	VARIOUS OPNG CONDITIONS W/FLAT METAL 0" THICK FLAT METAL – SHEAR WALL 1"	32 R1

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Name: Matthew Pjesky

Date: 09-29-25 License Number: 61670

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DA003	ENG STAMP BOX – STRUCTURAL DESIGN FULL	384 R2

DATE: 9/29/2025
SHEET 09 OF 15
JOB–NUMBER 633954
DRWN BY: Amanda x5235
CHKD BY:
REV NO: 0

JOB DESCRIPTION: 30'x70'x20'

CUSTOMER: R. Henry Construction, Inc.
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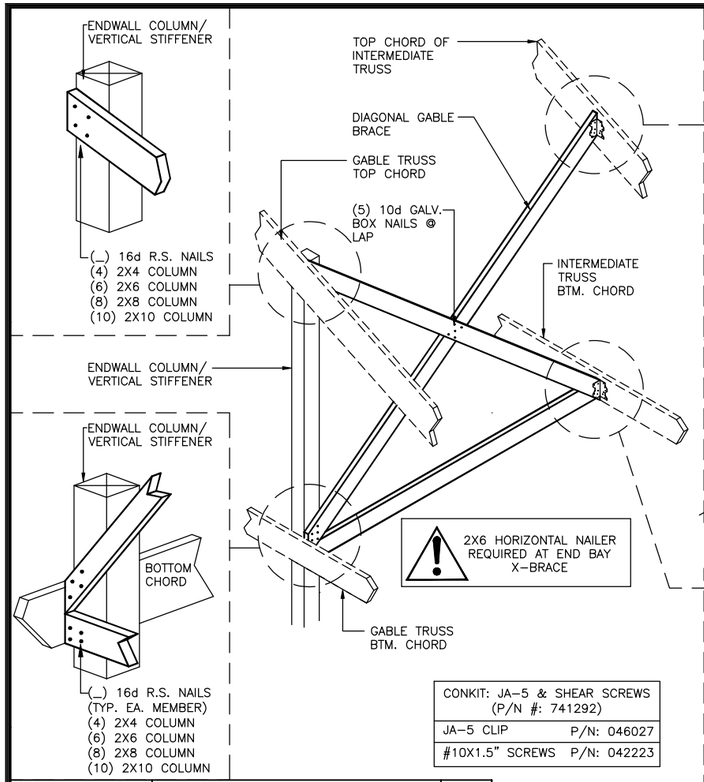
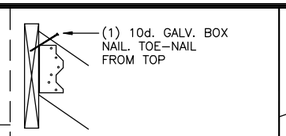
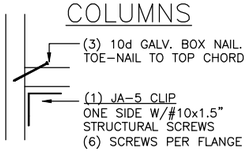


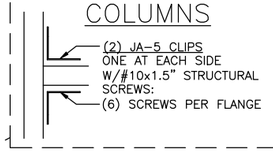
CONKIT: JA-5 & SHEAR SCREWS (P/N #: 741292)	
JA-5 CLIP	P/N: 046027
#10X1.5" SCREWS	P/N: 042223

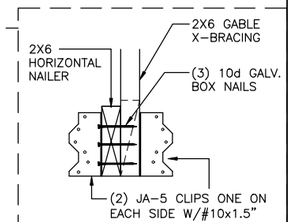


2X4 & 2X6 COLUMNS

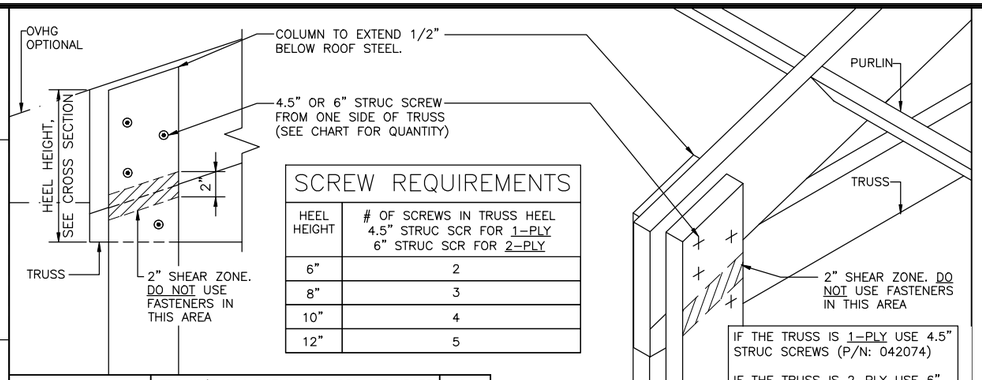


2X8 & LARGER COLUMNS





HB101	DIAGONAL GABLE X-BRACING CONNECTION STANDARD TRUSS BRACING 3/8"	12 R3

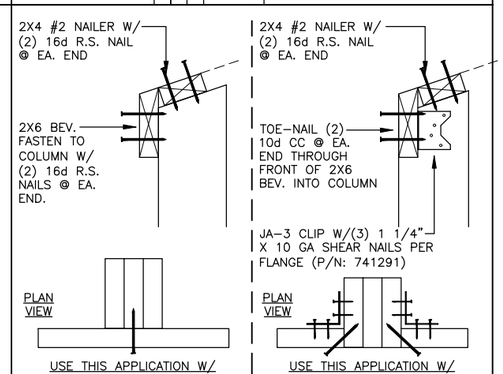


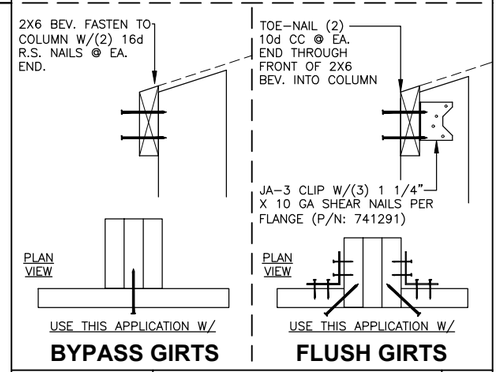
SCREW REQUIREMENTS	
HEEL HEIGHT	# OF SCREWS IN TRUSS HEEL 4.5" STRUC SCR FOR 1-PLY 6" STRUC SCR FOR 2-PLY
6"	2
8"	3
10"	4
12"	5

IF THE TRUSS IS 1-PLY USE 4.5" STRUC SCREWS (P/N: 042074)

IF THE TRUSS IS 2-PLY USE 6" STRUC SCREWS (P/N: 042076)

HD631	TRS W/FLUSH PURLINS TO COL *STANDARD* TRUSS TO COL CONN. 1.5"	48 R4



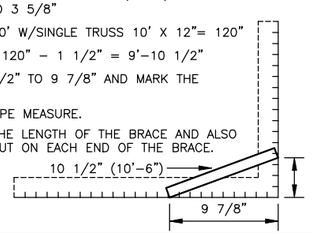


IF130	2x6 & 2x6/2X4 BEV EAVE NAILER CONN BEV EAVE NAILER CONN 1.5"	48 R6

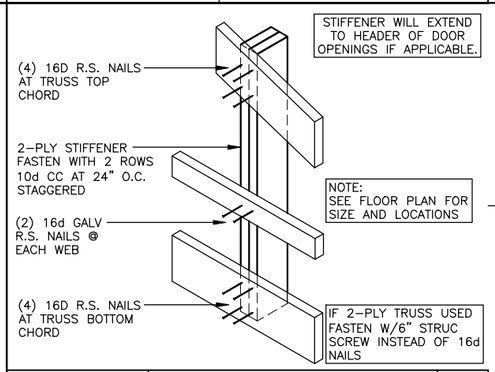
1. MEASURE THE RISE IN FEET AND INCHES.
2. SUBTRACT 6 INCHES FOR HEIGHT OF BRACE CUT.
3. MEASURE THE BAY WIDTH IN FEET AND INCHES. MEASURE FROM THE INSIDE FACE TO INSIDE FACE OF THE TRUSSES.
4. KEEP THESE TWO MEASUREMENTS IN MIND AND GET OUT YOUR RAFTER FRAMING SQUARE.
5. THINK OF THE INCHES ON YOUR SQUARE IN TERMS OF FEET AND FRACTIONS OF A FOOT.
   1" = 1'
   2" = 2'
   3" = 3' AND SO ON
   1/2" = 6"
   1/4" = 3" AND SO ON
6. MEASURE ACROSS THE SQUARE WITH THE BAY WIDTH.
7. MEASURE UP THE VERTICAL LEG OF THE SQUARE FOR THE TRUSS RISE
8. WITH THESE TWO POINTS MARKED ON YOUR SQUARE, USE A TAPE MEASURE TO MEASURE THE DIAGONAL.
9. THIS MEASUREMENT, WHEN THOUGHT OF AS FEET AND INCHES, WILL GIVE YOU THE LENGTH OF THE BRACE FROM THE LONG POINT TO THE SHORT POINT ON THE 2X6 BRACE.

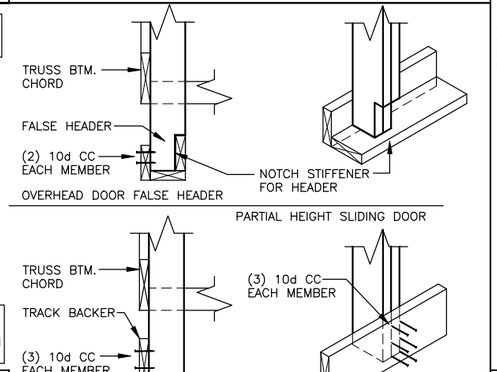
EXAMPLE: 10' BAY SPACING, 4/12 ROOF PITCH
BRACE 10' IN FROM SIDEWALL
10" HEEL ON TRUSS

1. 10 X 4" (4" RISE PER 1') = 40"
2. ADD 10" FOR HEEL HGT = 10"
3. SUBTRACT 6" FOR BRACE HGT = 6"
   44" (3'-8")
4. CONVERT 3'-8" TO 3 5/8"
5. BAY SPACING IS 10' W/SINGLE TRUSS 10' X 12"= 120"
6. SUBTRACT TRUSS: 120" - 1 1/2" = 9'-10 1/2"
7. CONVERT 9'-10 1/2" TO 9 7/8" AND MARK THE FRAMING SQUARE.
8. NOW READ THE TAPE MEASURE.
9. THIS GIVES YOU THE LENGTH OF THE BRACE AND ALSO THE ANGLES TO CUT ON EACH END OF THE BRACE.

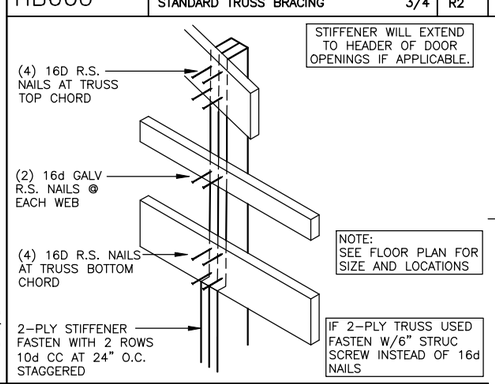


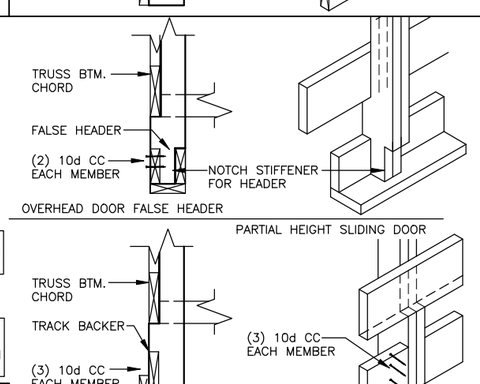
HB160	TRUSS DIAGONAL BRACE STEP BY STEP INSTRUCTIONS 3"	96 R1





HB660	VERTICAL STIFFENER BYPASS CONN - EW STANDARD TRUSS BRACING 3/4"	24 R2





HB661	VERTICAL STIFFENER FLUSH CONN - EW STANDARD TRUSS BRACING 3/4"	24 R0

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature: Matthew Pjesky

Name: Matthew Pjesky

Date: 09-29-25 License Number: 61670

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DA003	ENG STAMP BOX - STRUCTURAL DESIGN FULL	384 R2

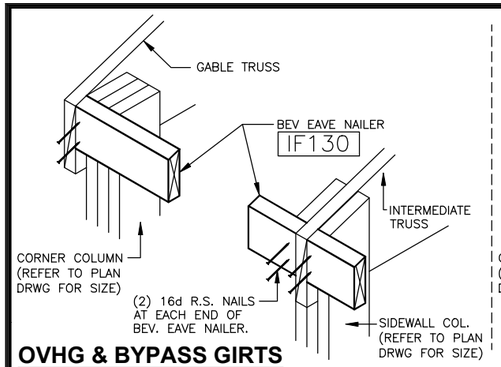
DATE: 9/29/2025
SHEET 10 OF 15
JOB-NUMBER 633954
DRWN BY: Amanda x5235
CHKD BY:
REV NO: 0

JOB DESCRIPTION: 30'x70'x20'

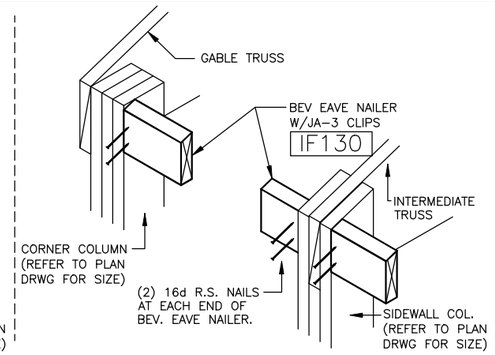
CUSTOMER:
R. Henry Construction, Inc.
101 Power Dr
Mankato, MN 56001

DEALER:
Jennifer Wight
25434 Cedar Lane
New Prague, MN 56071

LESTER BUILDING SYSTEMS, LLC.
TOLL-FREE: 800-826-4439
See Titleblock DRWN BY for Extension

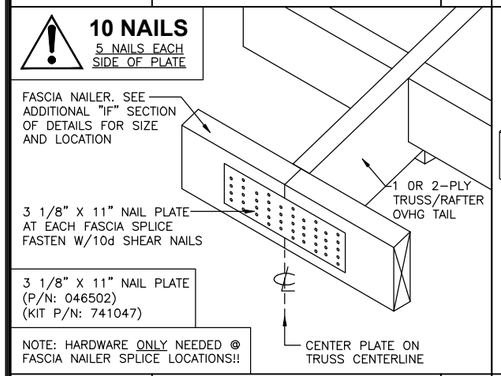


OVHG & BYPASS GIRTS



IF132	BEVELED EAVE NAILER TO COLUMN CONN. EAVE FASTENING – FLUSH PURLINS 1"	32 R2

10 NAILS
5 NAILS EACH SIDE OF PLATE

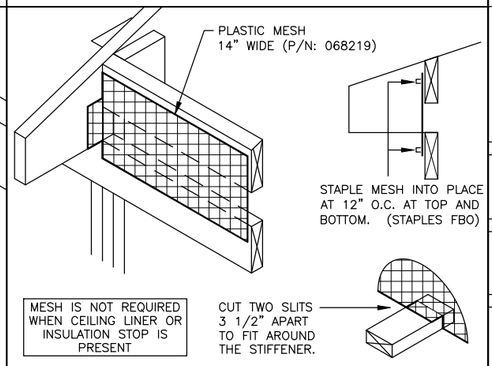


3 1/8" X 11" NAIL PLATE (P/N: 046502) (KIT P/N: 741047)

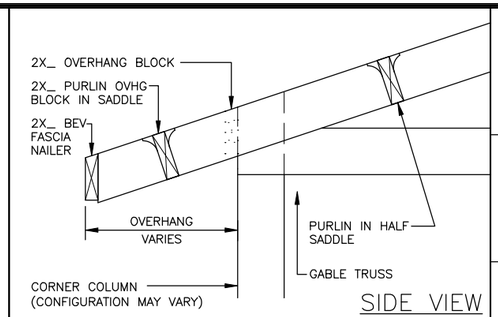
NOTE: HARDWARE ONLY NEEDED @ FASCIA NAILER SPLICE LOCATIONS!!

IF202	NAIL PLATE AT FASCIA NAILER W/10 NAILS DIAPHRAGM HARDWARE 1.5"	48 R4

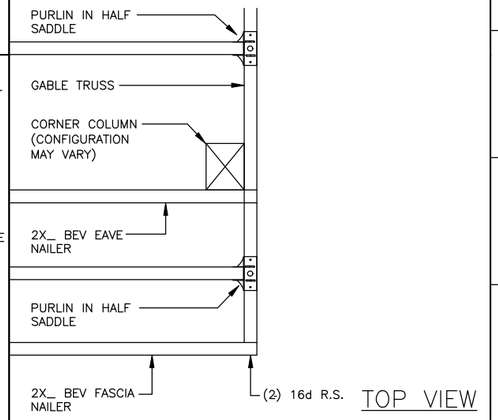
NO OVHG W/FLUSH GIRTS



IF261	14" PLASTIC MESH/NETTING INSTALLATION EAVE OVHG FRAMING 1"	32 R4

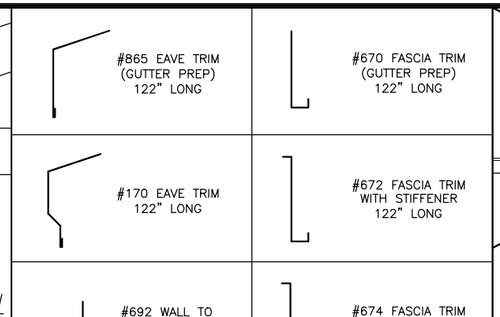


SIDE VIEW



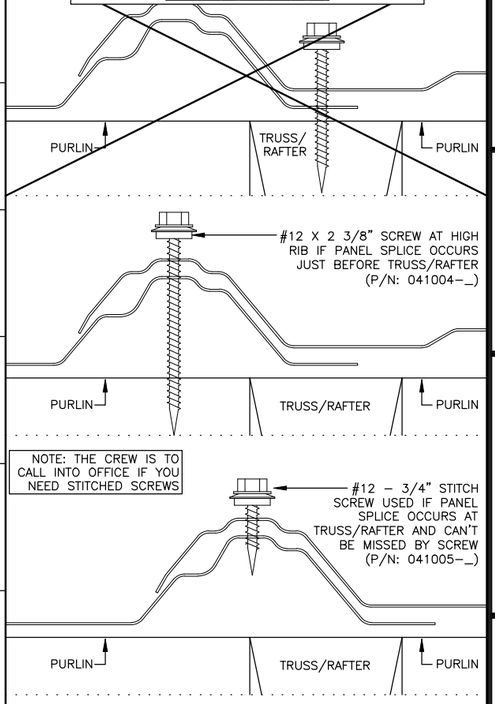
TOP VIEW

IF462	0" EW OVHG & SW OVHG W/PURLIN CORNER FRAMING – FLUSH PURLIN 1"	32 R1

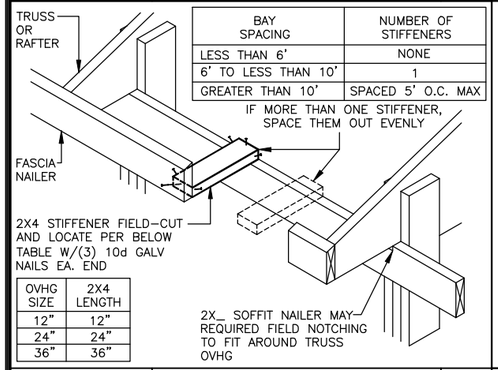


JF001	COMMON ROOF TRIM IDENTIFICATIONS UNI-RIB ROOF FINISH & FLASHING 2"	64 R0

!!! IMPORTANT !!!
DO NOT ATTACH ROOF PANELS TO TRUSSES/RAFTERS
ATTACH ONLY TO PURLINS



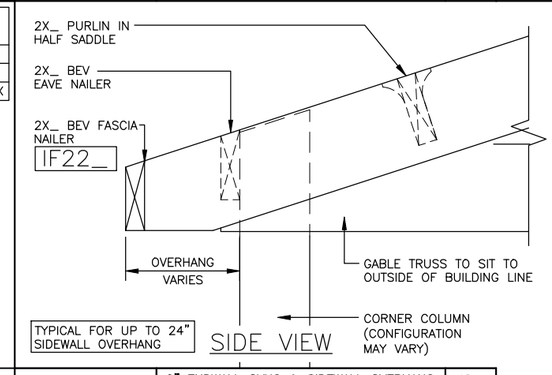
JF039	STITCH SCREW FASTENING ON ROOF UNI-RIB ROOF FINISH & FLASHING FULL	384 R2



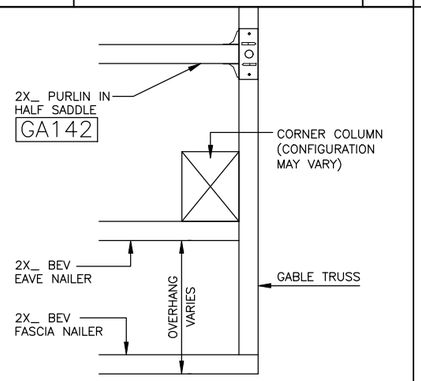
BAY SPACING	NUMBER OF STIFFENERS
LESS THAN 6'	NONE
6' TO LESS THAN 10'	1
GREATER THAN 10'	SPACED 5' O.C. MAX

OVHG SIZE	2X4 LENGTH
12"	12"
24"	24"
36"	36"

IF221	MID-BAY OVHG SOFFIT STIFFENER STANDARD EAVE FRAMING 3/4"	24 R3

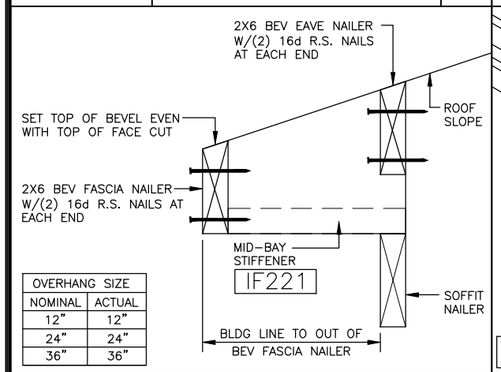


SIDE VIEW



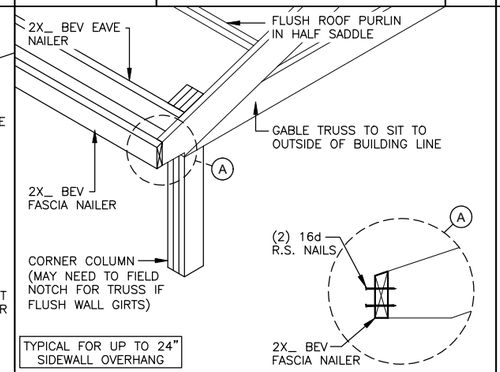
PLAN VIEW

IF402	0" ENDWALL OVHG & SIDEWALL OVERHANG CORNER FRAMING – FLUSH PURLIN 1.5"	48 R4

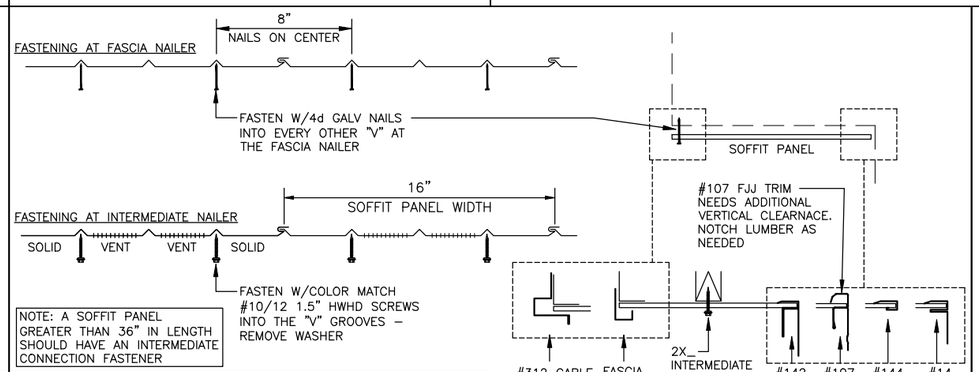


OVERHANG SIZE	
NOMINAL	ACTUAL
12"	12"
24"	24"
36"	36"

IF222	SW OVERHANG FRAMING – BYPASS GIRTS SW EAVE FRAMING – FLUSH PURLIN 2"	64 R1



IF403	0" ENDWALL OVHG & SIDEWALL OVHG (ISO) CORNER FRAMING – FLUSH PURLIN 1/2"	16 R3



IF642	COLORED METAL SOFFIT W/ FASTENERS OVERHANG SOFFIT CONNECTIONS 2"	64 R5

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature: Matthew Pjesky

Name: Matthew Pjesky

Date: 09-29-25 License Number: 61670

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DA003	ENG STAMP BOX – STRUCTURAL DESIGN FULL	384 R2

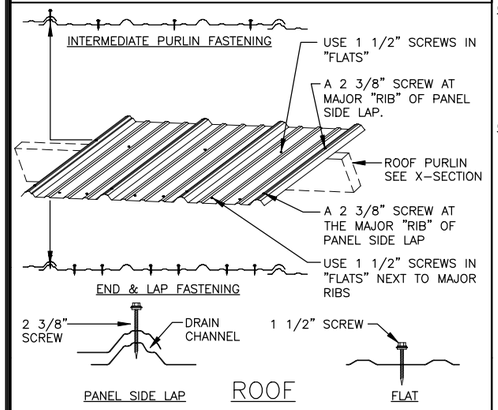
DATE: 9/29/2025
SHEET 11 OF 15
JOB-NUMBER 633954
DRWN BY: Amanda x5235
CHKD BY:
REV NO: 0
JOB DESCRIPTION: 30'x70'x20'

CUSTOMER:
R. Henry Construction, Inc.
101 Power Dr
Mankato, MN 56001

DEALER:
Jennifer Wight
25434 Cedar Lane
New Prague, MN 56071

LESTER BUILDING SYSTEMS, LLC.
TOLL-FREE: 800-826-4439
See Titleblock DRWN BY for Extension

!!DO NOT ATTACH ROOF PANELS TO TRUSS/RAFTER!!
ATTACH ONLY TO PURLINS JF039

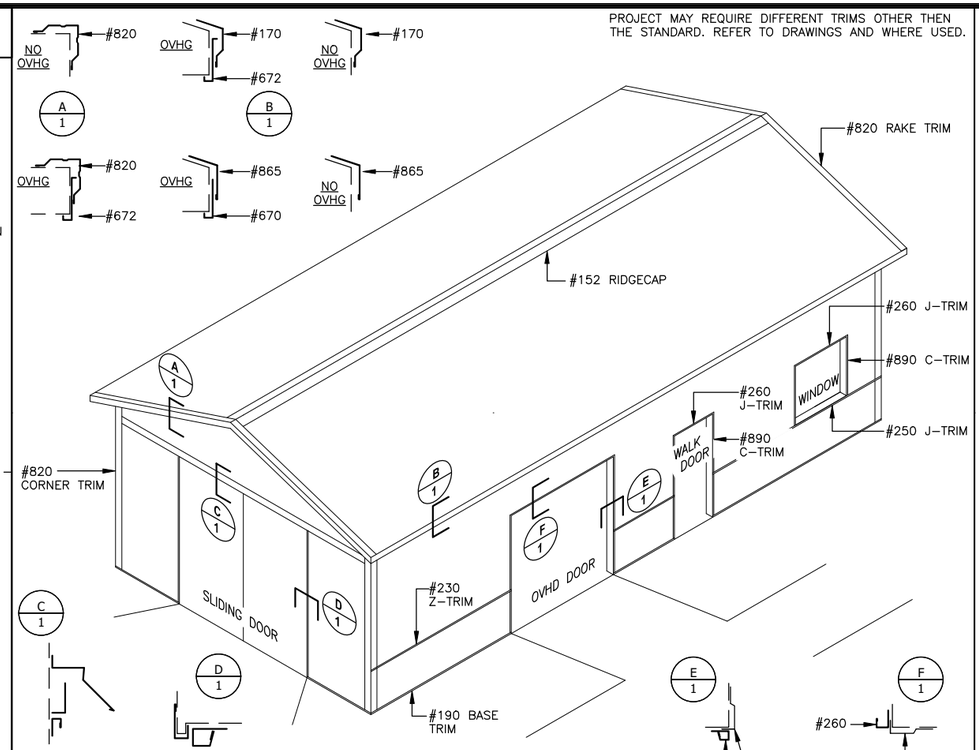


APPLICATION OF UNI-RIB PANELS WITH SCREWS

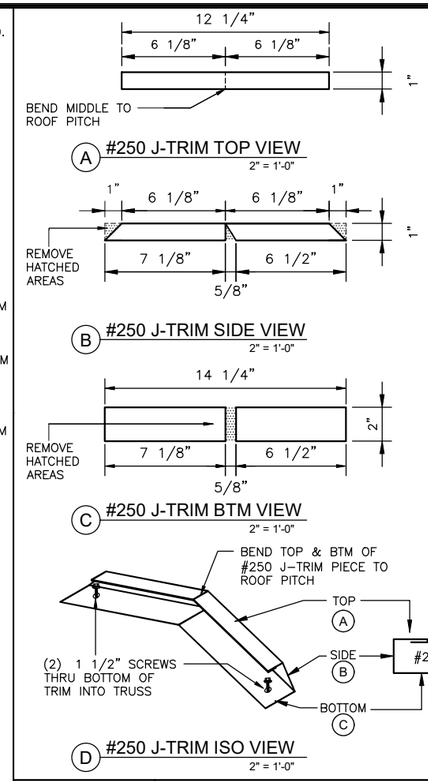
* USE 1 1/2" HWH EPDM AT "FLATS" OF PANEL. DO NOT OVER TIGHTEN. (P/N: 041003 W/SUFFIX RANGE)
* USE 2 3/8" HWH EPDM AT MAJOR "RIB" OF PANEL. DO NOT OVER TIGHTEN. (P/N: 041004 W/SUFFIX RANGE)
* AT PANEL LAP SPLICES AND AT THE ENDS, LOCATE SCREWS IN "FLATS" NEXT TO MAJOR RIBS, AND ON MAJOR "RIB" OF PANEL SIDE LAP.
* PROVIDE A MINIMUM GAP OF 1/8" BETWEEN ANY HORIZONTAL SURFACE AND THE BOTTOM OF THE UNI-RIB PANEL
* PRIOR TO PANEL APPLICATION, AVOID WALKING ON MAJOR "RIBS" IN ORDER TO PREVENT DAMAGE.
* IF RIGID INSULATION UP TO 1" THICK, INCREASED SCREW LENGTH BY THE THICKNESS OF THE INSULATION W/INCREMENTS OF 1/2"

JF044	SCREW FASTENING PATTERN UNI-RIB ROOF FINISH & FLASHING 3/4"	24 R7

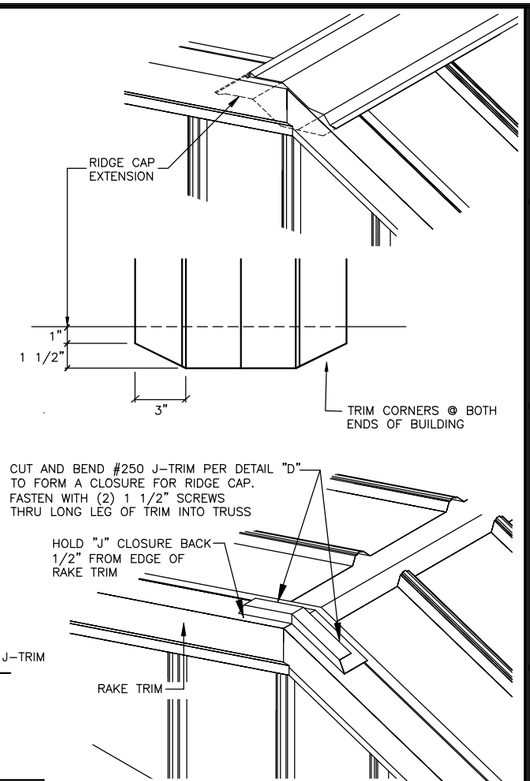
PROJECT MAY REQUIRE DIFFERENT TRIMS OTHER THEN THE STANDARD. REFER TO DRAWINGS AND WHERE USED.

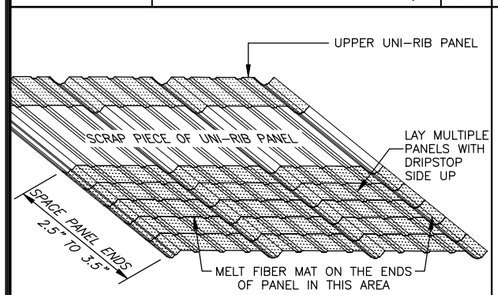


JF086	STANDARD TRIM LOCATIONS UNI-RIB ROOF FINISH & FLASHING 1/4"	64 R6



JF707	GABLE END CLOSURE ON GABLE ROOF RIDGECAP END CONDITION 2"	64 R4





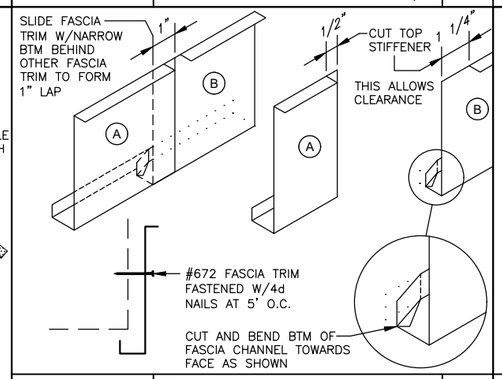
APPLICATION OF MELTING DRIPSTOP ON UNI-RIB PANELS

(MELT MULTIPLE PANELS AT ONE TIME)

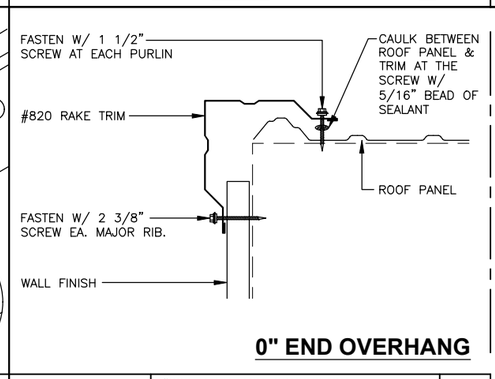
* PREPARE PANELS BY LAYING MULTIPLE UNI-RIB PANELS W/DRIPSTOP SIDE UP. REMEMBER TO LAY THEM IN A WAY TO NOT SCRATCH THE PAINTED SIDE.
* SPACE THE BOTTOM END OF EACH PANEL 2.5" TO 3.5" APART FROM EACH OTHER.
* USE A SCRAP PIECE OF UNI-RIB ON TOP ON THE UPPER PANEL.
* USE AN ELECTRICAL/GAS HEATER CCA. 650° C. AND MELT THE BOTTOM END OF ALL PANELS SUCH THAT THE FIBER MAT CONSOLIDATED AND THE PORES ARE ELIMINATED. THE FIBER MAT WILL MELT WITHIN SECONDS.

THE FIBER MAT OF DRIPSTOP CAN WICK WATER UP THE UNDERSIDE OF THE PANEL ANY TIME THE EDGE OF THE PANEL IS EXPOSED TO WATER. THIS OCCURS AT THE EAVE AND AT THE END LAP SPLICES. MELTING THE FIBER MAT ELIMINATES THE SMALL PORES THAT ALLOW WATER TO BE PULLED INTO THE MATERIAL.

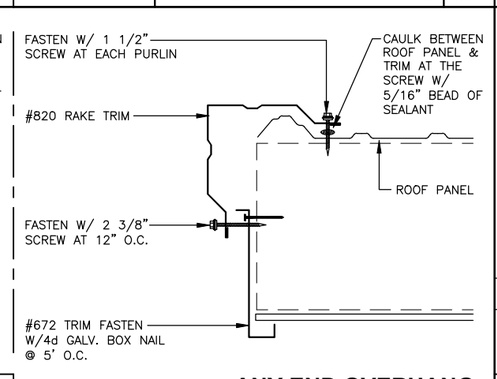
JF050	DRIPSTOP MELTING APPLICATION UNI-RIB ROOF FINISH & FLASHING 1/2"	16 R2

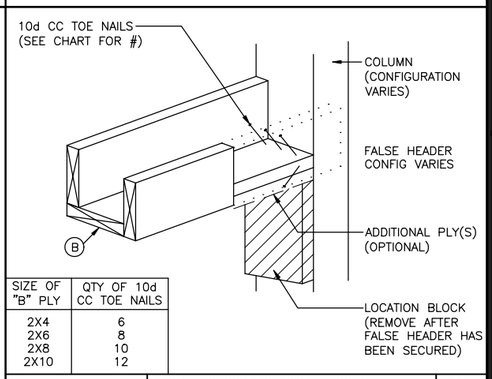


JF153	#672 FASCIA TRIM – SPLICE CONNECTION ROOF FINISH & FLASHING 3"	96 R1



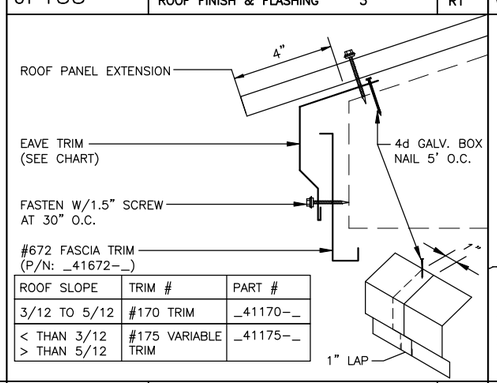
JF330	#820 RAKE TRIM CONNECTION UNI-RIB ROOF FINISH & FLASHING 3"	96 R5





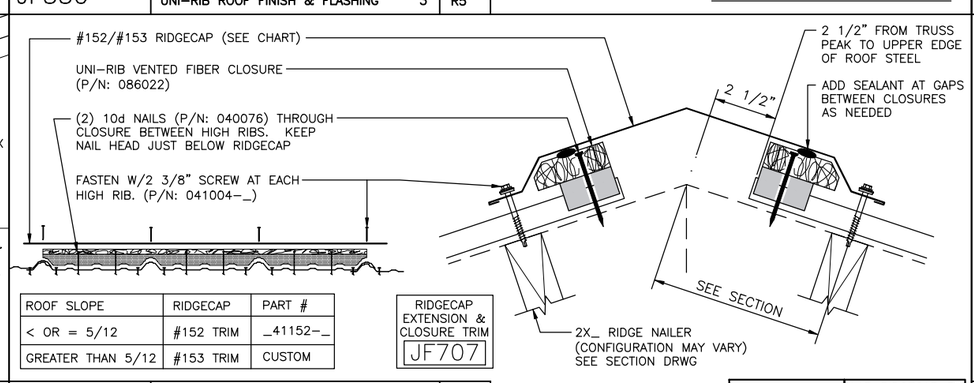
SIZE OF "B" PLY	QTY OF 10d CC TOE NAILS
2X4	6
2X6	8
2X8	10
2X10	12

LK247	FALSE HEADER TO COLUMN CONN. HEADER FRAMING 1"	32 R1



ROOF SLOPE	TRIM #	PART #
3/12 TO 5/12	#170 TRIM	_41170-_
< THAN 3/12 > THAN 5/12	#175 VARIABLE TRIM	_41175-_

JF154	SW OVERHANG W/#170 EAVE TRIM UNI-RIB ROOF FINISH & FLASHING 3"	96 R9



ROOF SLOPE	RIDGECAP	PART #
< OR = 5/12	#152 TRIM	_41152-_
GREATER THAN 5/12	#153 TRIM	CUSTOM

RIDGECAP EXTENSION & CLOSURE TRIM JF707

JF708	CONTINUOUS VENTED RIDGE – GABLE ROOF UNI-RIB ROOF VENTILATION 3"	96 R8

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature: Matthew Pjesky

Name: Matthew Pjesky

Date: 09-29-25 License Number: 61670

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USE SEALANT AT ALL SPLICES	LAP RIDGECAP 5" AT ALL SPLICES

DA003	ENG STAMP BOX – STRUCTURAL DESIGN FULL	384 R2

DATE: 9/29/2025
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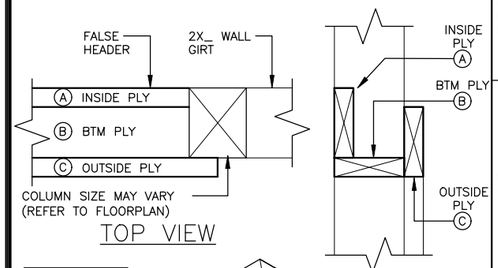
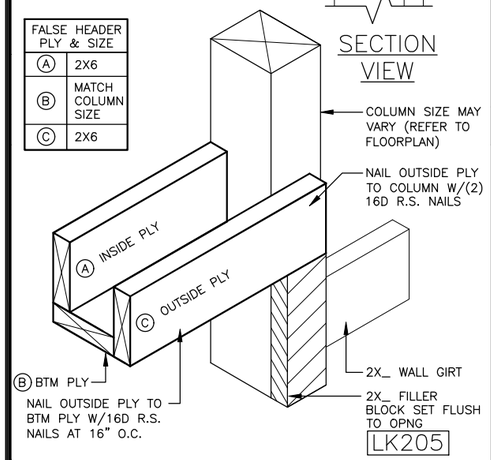


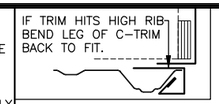
TOP VIEW

SECTION VIEW

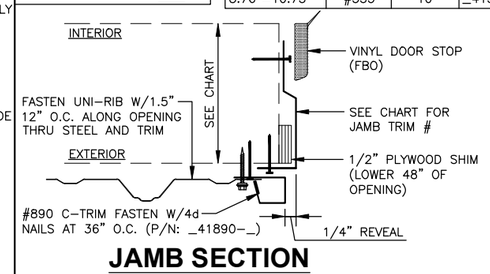
FALSE HEADER PLY & SIZE	
A	2X6
B	MATCH COLUMN SIZE
C	2X6



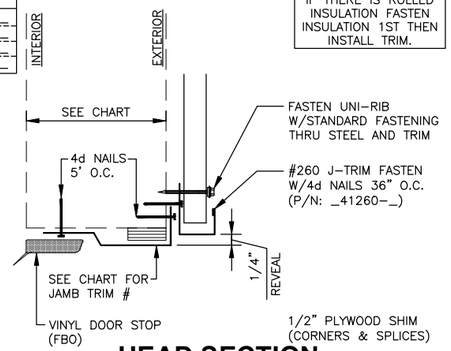
LK205



JAMB DEPTH	TRIM STYLE	TRIM LEG DEPTH	PART #
4"–5.5"	#522	5"	_41522–_
5.51"–7.75"	#512	7"	_41512–_
7.76"–8.75"	#552	8"	_41552–_
8.76"–10.75"	#555	10"	_41555–_

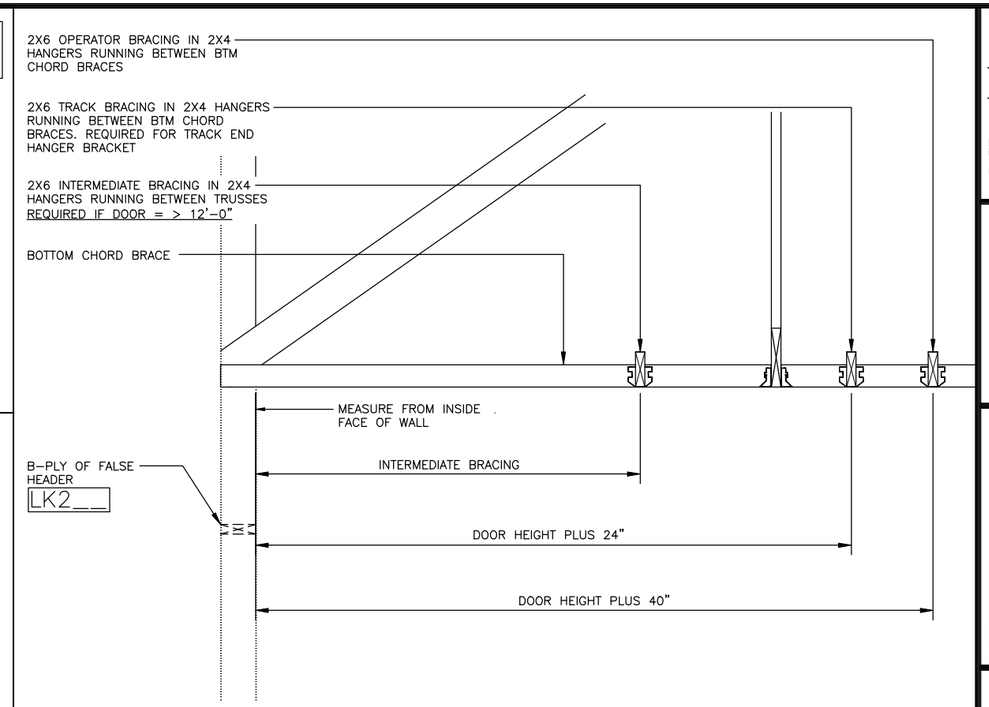


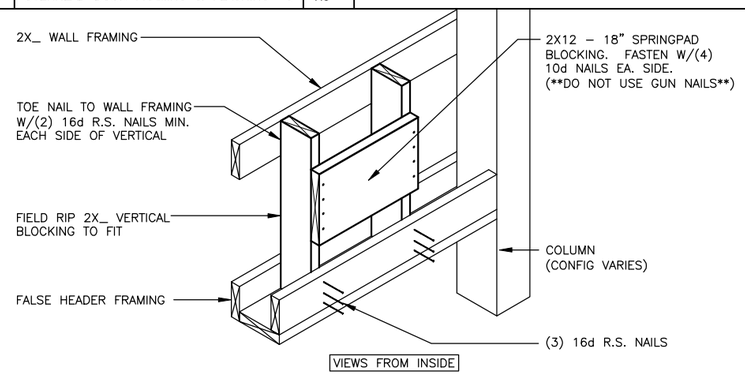
JAMB SECTION



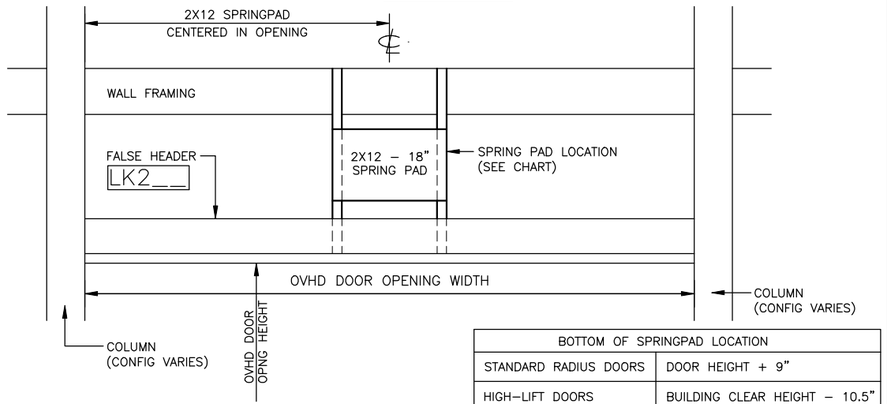
HEAD SECTION

LK424	DOOR OPNG TRIM – EXTERIOR UNI–RIB OVERHEAD DOOR FRAMING & FLASHING 3"	96 R5





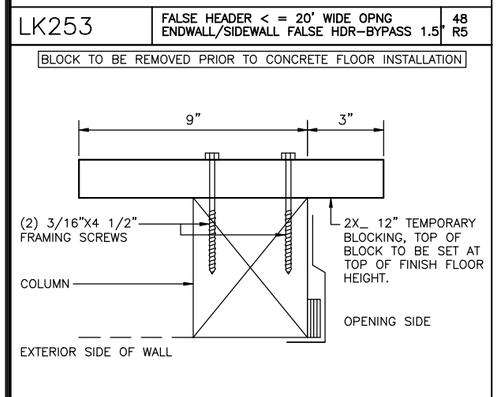
VIEWS FROM INSIDE



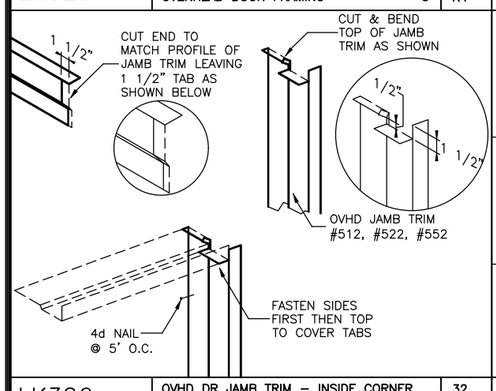
BOTTOM OF SPRINGPAD LOCATION	
STANDARD RADIUS DOORS	DOOR HEIGHT + 9"
HIGH–LIFT DOORS	BUILDING CLEAR HEIGHT – 10.5"
FULL VERTICAL DOORS	2 X DOOR HEIGHT

LK623	STANDARD RADIUS TRACK BRACING – EW OVERHEAD DOOR FRAMING 3/4"	24 R3

OVERHEAD DOOR IN ENDWALL



LK325	2X_ TEMPORARY DOOR SUPPORT OVERHEAD DOOR FRAMING 3"	96 R4

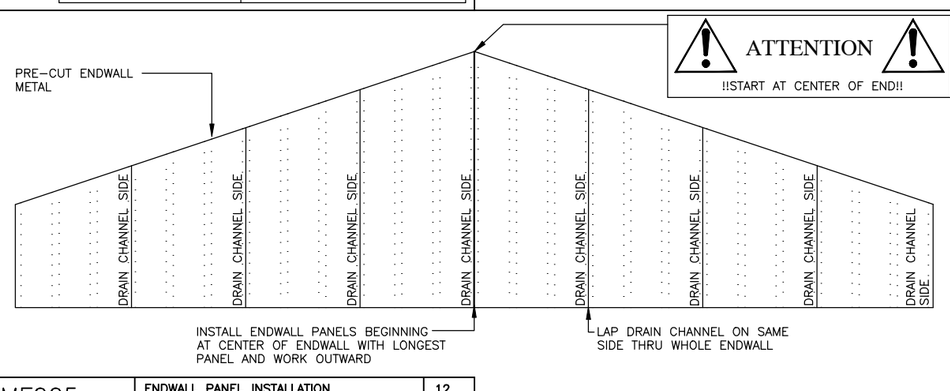


LK326	OVHD DR JAMB TRIM – INSIDE CORNER METAL FLASHINGS FIELD WORK 1	32 R0

LK621	SPRINGPAD LOCATION <=16' DOOR OPNG. OVERHEAD DOOR FRAMING 3/4"	24 R7

#190 BASE TRIM 122" LONG	#312 BTM CLOSURE 122" LONG	#820 RAKE/CORNER 183" LONG 244" LONG
#250 J–TRIM 122" LONG	#260 J–TRIM 122" LONG 198" LONG	#270 3.5" L–TRIM #510 7" L–TRIM #520 5" L–TRIM #550 8.5" L–TRIM 122" LONG
#890 C–TRIM 170" LONG 244" LONG	#230 Z–TRIM 122" LONG	#512 7" JAMB TRIM #522 5" JAMB TRIM #552 8" JAMB TRIM #555 10" JAMB TRIM 122" LONG

MF001	COMMON WALL TRIM IDENTIFICATIONS UNI–RIB ROOF FLASHING 2"	64 R0



MF005	ENDWALL PANEL INSTALLATION UNI–RIB WALL PANELS 3/8"	12 R1

ATTENTION
!!START AT CENTER OF END!!

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature: Matthew Pjesky

Name: Matthew Pjesky

Date: 09-29-25 License Number: 61670

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DA003	ENG STAMP BOX – STRUCTURAL DESIGN FULL	384 R2

DATE: 9/29/2025

JOB–NUMBER 633954

SHEET 13 OF 15

DRWN BY: Amanda x5235

CHKD BY:

REV NO: 0

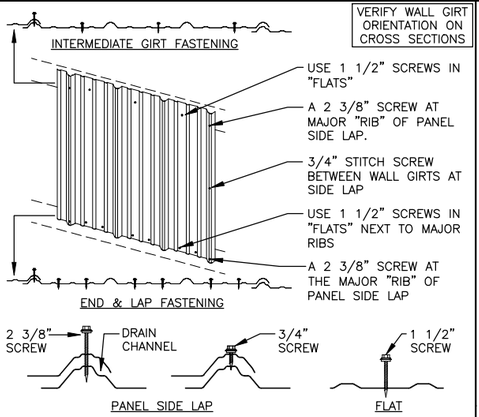
JOB DESCRIPTION: 30'x70'x20'

CUSTOMER: R. Henry Construction, Inc. 101 Power Dr Mankato, MN 56001

DEALER: Jennifer Wight 25434 Cedar Lane New Prague, MN 56071

LESTER BUILDING SYSTEMS, LLC. TOLL–FREE : 800-826-4439

See Titleblock DRWN BY for Extension

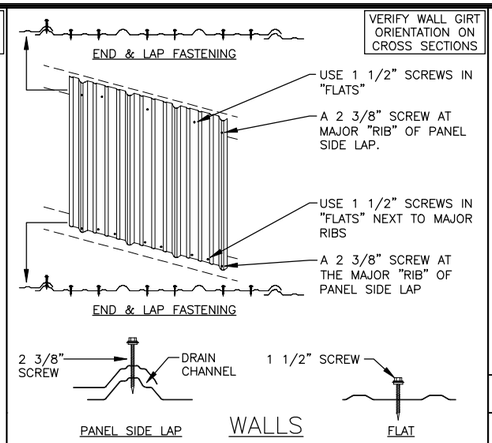


WALLS

APPLICATION OF UNI–RIB PANELS WITH SCREWS

* USE 1 1/2" HWH EPDM AT "FLATS" OF PANEL. DO NOT OVER TIGHTEN. (P/N: 041003 W/SUFFIX RANGE)
* USE 2 3/8" HWH EPDM AT MAJOR "RIB" OF PANEL. DO NOT OVER TIGHTEN. (P/N: 041004 W/SUFFIX RANGE)
* USE 3/4" HWH EPDM STITCH SCREW BETWEEN WALL GIRTS AT AT ALL LAP JOINTS. (P/N: 041005 W/SUFFIX RANGE)
* AT INTERMEDIATE GIRT CONNECTIONS, LOCATE SCREWS INSIDE "FLATS", AND AT THE MAJOR "RIB" OF PANEL.
* AT PANEL LAP SPLICES AND AT THE ENDS, LOCATE SCREWS IN "FLATS" NEXT TO MAJOR RIBS, AND ON MAJOR "RIB" OF PANEL SIDE LAP.
* PROVIDE A MINIMUM GAP OF 1/8" BETWEEN ANY HORIZONTAL SURFACE AND THE BOTTOM OF THE UNI–RIB PANEL

MF043	(1) STITCH SCR FASTENING PATTERN UNI–RIB WALLS FINISH & FLASHING 3/4"	24 R3

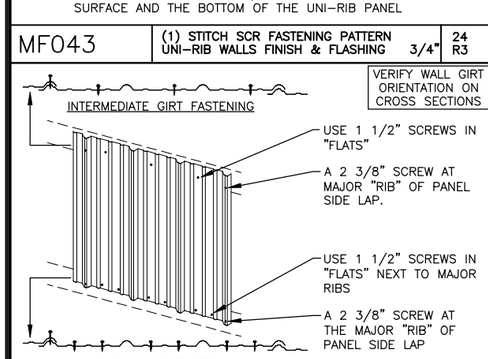


CAULK SIDE LAPS IF THERMO–EAVE LITE PANELS ARE BEING INSTALLED

APPLICATION OF UNI–RIB ACRYLIT PANELS WITH SCREWS

* USE 1 1/2" HWH EPDM AT "FLATS" OF PANEL. DO NOT OVER TIGHTEN. (P/N: 041003–100)
* USE 2 3/8" HWH EPDM AT MAJOR "RIB" OF PANEL. DO NOT OVER TIGHTEN. (P/N: 041004–100)
* AT INTERMEDIATE GIRT CONNECTIONS, LOCATE SCREWS INSIDE "FLATS", AND AT THE MAJOR "RIB" OF PANEL.
* AT PANEL LAP SPLICES AND AT THE ENDS, LOCATE SCREWS IN "FLATS" NEXT TO MAJOR RIBS, AND ON MAJOR "RIB" OF PANEL SIDE LAP.
* PROVIDE A MINIMUM GAP OF 1/8" BETWEEN ANY HORIZONTAL SURFACE AND THE BOTTOM OF THE UNI–RIB PANEL
* PRIOR TO PANEL APPLICATION, AVOID WALKING ON MAJOR "RIBS" IN ORDER TO PREVENT DAMAGE.

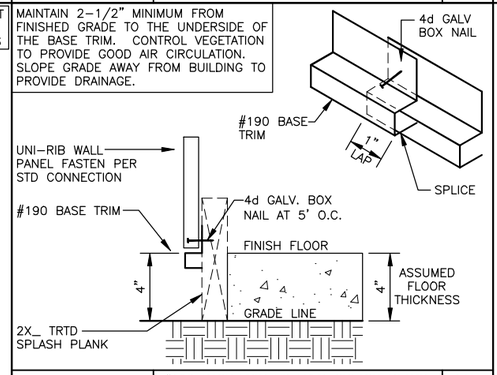
MF045	EAVE ACRYLIT SCREW FASTENING PATTERN UNI–RIB WALLS FINISH & FLASHING 3/4"	24 R6



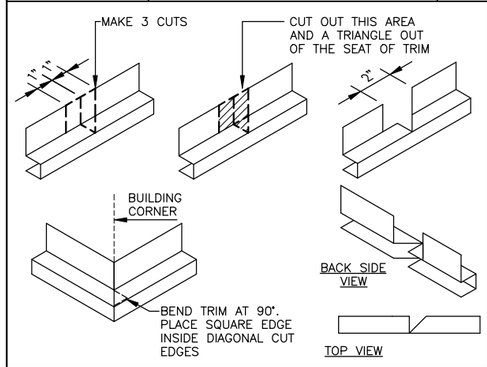
APPLICATION OF UNI–RIB PANELS WITH SCREWS

* USE 1 1/2" HWH EPDM AT "FLATS" OF PANEL. DO NOT OVER TIGHTEN. (P/N: 041003 W/SUFFIX RANGE)
* USE 2 3/8" HWH EPDM AT MAJOR "RIB" OF PANEL. DO NOT OVER TIGHTEN. (P/N: 041004 W/SUFFIX RANGE)
* AT INTERMEDIATE GIRT CONNECTIONS, LOCATE SCREWS INSIDE "FLATS", AND AT THE MAJOR "RIB" OF PANEL.
* AT PANEL LAP SPLICES AND AT THE ENDS, LOCATE SCREWS IN "FLATS" NEXT TO MAJOR RIBS, AND ON MAJOR "RIB" OF PANEL SIDE LAP.
* PROVIDE A MINIMUM GAP OF 1/8" BETWEEN ANY HORIZONTAL SURFACE AND THE BOTTOM OF THE UNI–RIB PANEL
* PRIOR TO PANEL APPLICATION, AVOID WALKING ON MAJOR "RIBS" IN ORDER TO PREVENT DAMAGE.

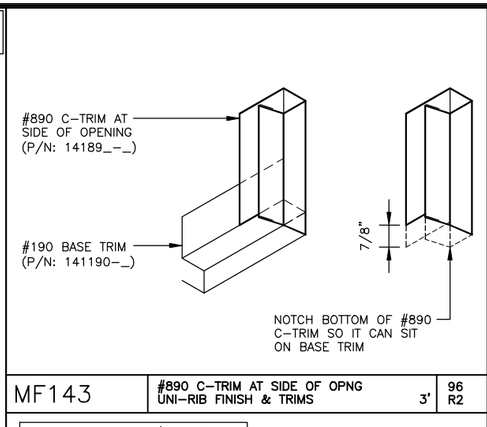
MF044	SCREW FASTENING PATTERN UNI–RIB WALLS FINISH & FLASHING 3/4"	24 R5



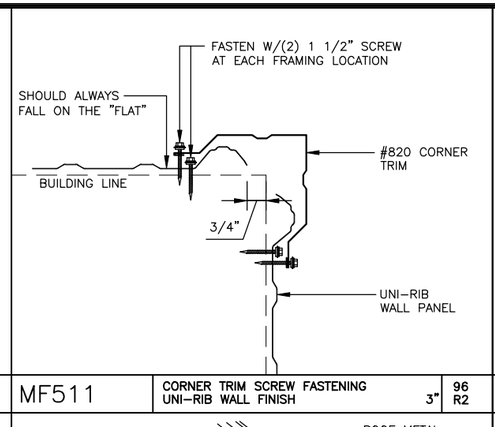
MF113	#190 BASE TRIM TO TRTD SPLASH PLANK BASE TRIM PLACEMENT (UNI–I) 2"	64 R2



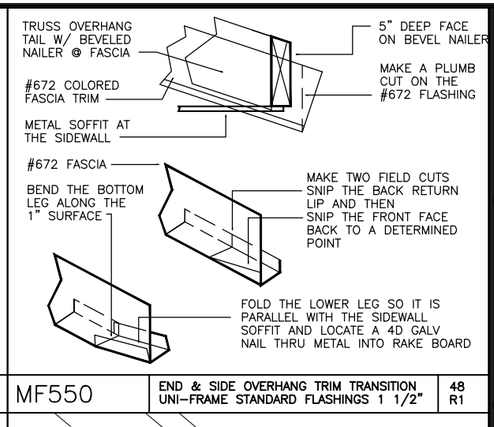
MF142	#190 BASE TRIM AT CORNER OF BLDG UNI–RIB WALL FINISH & FLASHING 2"	64 R1



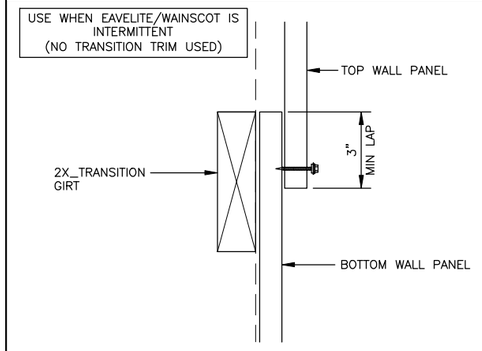
MF143	#890 C–TRIM AT SIDE OF OPNG UNI–RIB FINISH & TRIMS 3'	96 R2



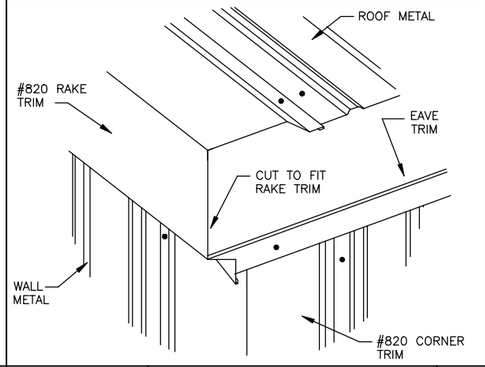
MF511	CORNER TRIM SCREW FASTENING UNI–RIB WALL FINISH 3"	96 R2



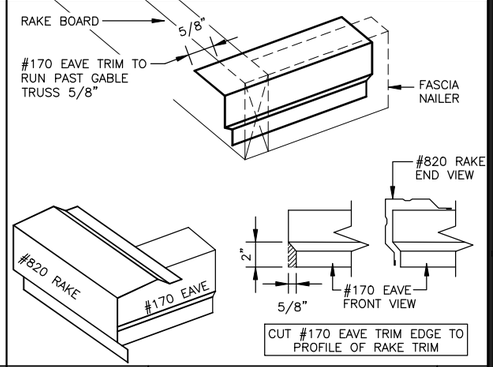
MF550	END & SIDE OVERHANG TRIM TRANSITION UNI–FRAME STANDARD FLASHINGS 1 1/2"	48 R1



MF344	WALL PANEL LAP – EAVELITE/WAINSCOT UNI–RIB WALL PANEL & TRIM 3"	96 R2

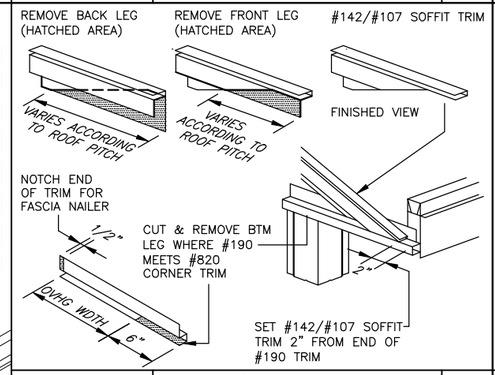


MF530	TRIM CONFIG AT EAVE LINE CORNER WALL METAL & TRIM FASTENING 3/4"=1	24 R3

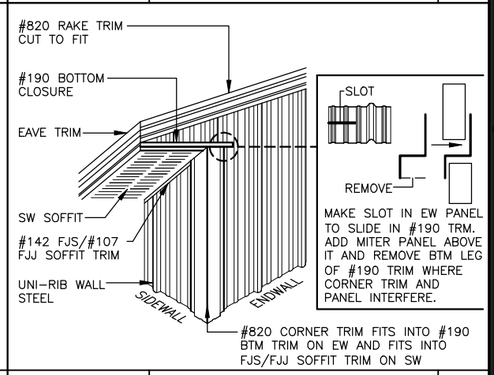


MF551	#170 EAVE TRIM – CORNER – OVERHANG UNI–RIB WALL PANEL & TRIMS 1.5"	48 R1

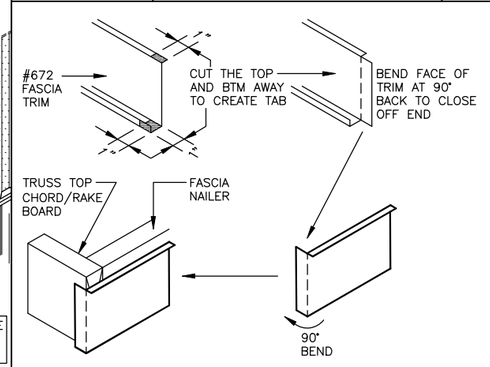
MF359	EAVE LITE ON SIDEWALL – OVERHANG UNI–RIB WALL PANEL & TRIMS 3/4"	24 R5



MF548	TRIM AT SW/EW CORNER OVHG UNI–RIB WALL FINISH & FLASHING	32 R2



MF562	0" ENDWALL OVHG – SIDEWALL OVHG UNI–RIB WALL PANEL & TRIMS 1/2"	16 R7



MF549	#672 FASCIA TRIM ON SW OVHG CORNER UNI–RIB WALL FINISH & FLASHING 1.5"	48 R1

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature: Matthew Pjesky

Name: Matthew Pjesky

Date: 09-29-25 License Number: 61670

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DA003	ENG STAMP BOX – STRUCTURAL DESIGN FULL	384 R2

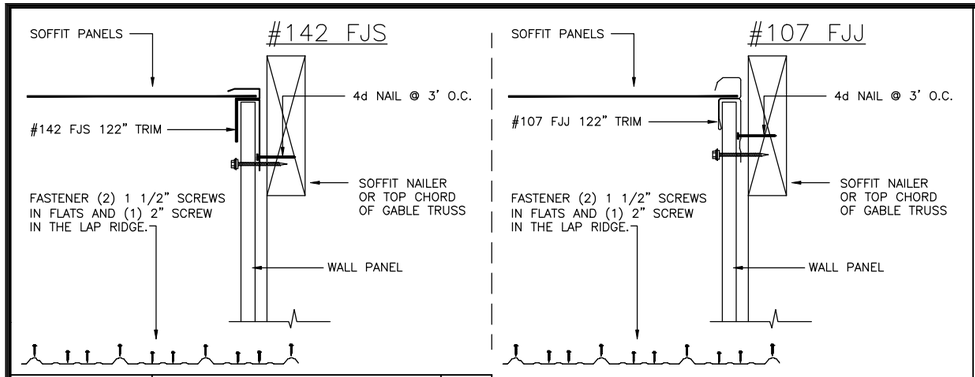
DATE: 9/29/2025
SHEET 14 OF 15
JOB–NUMBER 633954
DRWN BY: Amanda x5235
CHKD BY:
REV NO: 0

JOB DESCRIPTION: 30'x70'x20' . . .

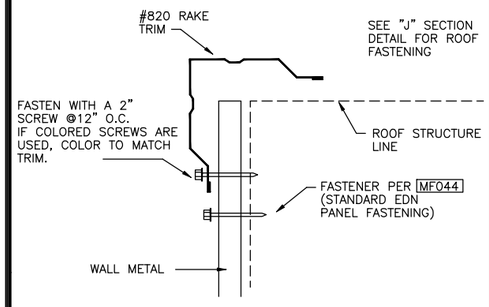
CUSTOMER:
R. Henry Construction, Inc.
101 Power Dr
Mankato, MN 56001

DEALER:
Jennifer Wight
25434 Cedar Lane
New Prague, MN 56071

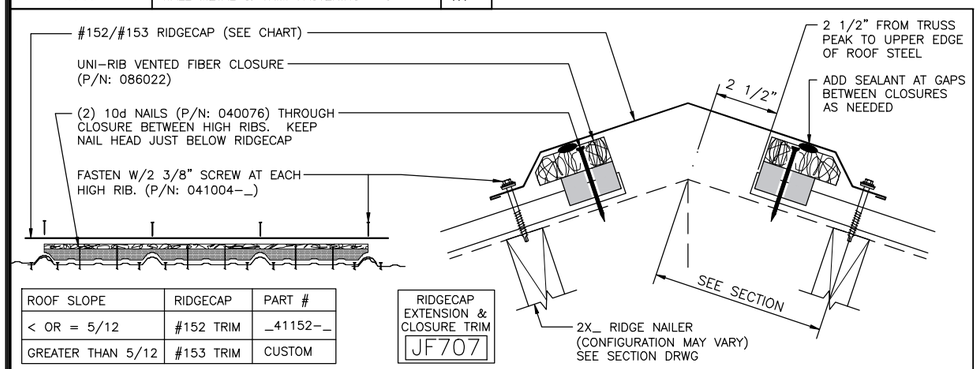
LESTER BUILDING SYSTEMS, LLC.
TOLL–FREE: 800-826-4439
. See Titleblock DRWN BY for Extension



MF724	"F" TRIM AT SOFFIT STEEL SIDING & TRIM FASTENING 3"	96 R4



MF738	#820 RAKE TRIM TO WALL METAL WALL METAL & TRIM FASTENING 3"	96 R4



ROOF SLOPE	RIDGECAP	PART #
< OR = 5/12	#152 TRIM	_41152-_
GREATER THAN 5/12	#153 TRIM	CUSTOM

RIDGECAP EXTENSION & CLOSURE TRIM: JF707

OA050	CONTINUOUS VENTED RIDGE – GABLE ROOF UNI-RIB ROOF VENTILATION 3"	96 R8

USE SEALANT AT ALL SPLICES | LAP RIDGECAP 5" AT ALL SPLICES

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Signature: Matthew Pjesky

Name: Matthew Pjesky

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