

**City of Ramsey**  
**Agenda**  
**Public Works Committee**  
**Tuesday, November 21, 2023**

**5:30 pm**

**Lake Itasca Room, 7550 Sunwood Drive NW**

Remote Attendance available at [www.cityoframsey.com/meetings](http://www.cityoframsey.com/meetings).  
Those joining remotely and requesting to speak are asked to use a webcam when speaking.

1. **Call to Order**
  
2. **Citizen Input**
  
3. **Approve Agenda**
  
4. **Approve Minutes**
  1. Approve the following meeting minutes.
    1. Public Works Committee meeting dated October 17, 2023.
  
5. **Committee Business**
  1. Consider Recommending City Council Approving Plans and Specifications and Authorizing Advertisement for Bids for Barthel's Rum River Acres and White Pines Estates Street Reconstructions, Improvement Project #24-01
  
  2. Update on Halls Dover Acres Street Reconstructions, Improvement Project #24-02
  
  3. Consider recommending City Council authorization to prepare plans and specifications for 2024 MSA Pavement Overlay Improvements, Improvement Project #24-06
  
  4. Consider recommending City Council authorization to prepare plans and specifications for 2024 Neighborhood Pavement Overlay Improvements, Improvement Project #24-07
  
  5. Consider Recommendation for City Council to Accept Bids and Award Contract for Water Treatment Plant Trunk Watermain Improvements, Improvement Project #21-08
  
6. **Committee/Staff Input**

1. Receive Updates on Improvement Projects, Studies and Items of Interest
2. Review Future Topics Calendar
7. **Adjournment**

**Public Works Committee**

**Meeting Date:** 11/21/2023

**Primary Strategic Plan Initiative:** Not Applicable

**Title:**

Approve the following meeting minutes.  
1. Public Works Committee meeting dated October 17, 2023.

**Purpose/Background:**

**Purpose:**

To review and approve meeting minutes.

**Background:**

The meeting minutes dated October 17, 2023, are attached for review.

**Notification:**

N/A

**Time Frame/Observations/Alternatives:**

Staff anticipates this case will take less than 5 minutes.

**Funding Source:**

N/A

**Recommendation:**

To review and approve meeting minutes dated October 17, 2023.

**Outcome/Action:**

Motion to approve meeting minutes dated October 17, 2023.

**Attachments**

PWC Mtg Min. 10.17.2023

**Form Review**

Inbox	Reviewed By	Date
Bruce Westby	Bruce Westby	10/12/2023 01:29 PM
Brian Hagen	Brian Hagen	10/12/2023 03:04 PM
Bruce Westby	Bruce Westby	11/16/2023 10:28 AM
Brian Hagen	Brian Hagen	11/16/2023 02:31 PM
Form Started By: Marsha Weidner		Started On: 10/03/2023 11:05 AM
Final Approval Date: 11/16/2023		

**PUBLIC WORKS COMMITTEE  
CITY OF RAMSEY  
ANOKA COUNTY  
STATE OF MINNESOTA**

The Public Works Committee conducted a regular meeting on Tuesday, October 17, 2023, at the Ramsey Municipal Center, 7550 Sunwood Drive NW, Ramsey, Minnesota.

Members Present:     Chairperson Chris Riley  
                              Councilmember Debra Musgrove  
                              Councilmember Matt Woestehoff

Also Present:         City Engineer/Public Works Director Bruce Westby  
                              Parks & Assistant Public Works Director Mark Riverblood

**1.     CALL TO ORDER**

Chairperson Riley called the regular meeting of the Public Works Committee to order at 5:30 p.m.

**2.     CITIZEN INPUT**

There was none.

**3.     APPROVE AGENDA**

Motion by Councilmember Musgrove, seconded by Councilmember Woestehoff, to approve the agenda, as presented.

Motion carried. Voting Yes: Chairperson Riley, Councilmembers Musgrove and Woestehoff.  
Voting No: None.

**4.     APPROVE MINUTES**

**4.01: Approve September 19, 2023, Meeting Minutes**

Motion by Councilmember Musgrove, seconded by Councilmember Woestehoff, to approve the following minutes with a note that the minutes were not drafted by Timesavers via recording:

Regular Meeting Minutes dated September 19, 2023

Motion carried. Voting Yes: Chairperson Riley, Councilmembers Musgrove and Woestehoff.  
Voting No: None.

**5.     COMMITTEE BUSINESS**

**5.01: Consider Ford Brook Estates Drainage Improvements**

City Engineer/Public Works Director Westby explained that the purpose of the case is to review the proposed preliminary plans and updated cost estimates and to consider authorizing staff to prepare final construction plans and specifications for drainage improvements at Ford Brook Estates residential development in the northeast corner of the city.

Councilmember Woestehoff asked if the reason this could not be terminated prior to the border with Nowthen is because of the elevation.

City Engineer/Public Works Director Westby confirmed that to be true.

Councilmember Musgrove asked if the proposed storm sewer improvements south of 180<sup>th</sup> Lane NW would be underground sewer or just ditch improvements.

City Engineer/Public Works Director Westby replied that would be underground sewer.

Chairperson Riley asked if the residents from 5725 180th Lane NW had any questions or concerns with the proposed plan.

Mr. Monserud replied that he does not and believes this plan would work.

Mrs. Monserud asked and received confirmation that they would receive ample notification of the project as she has a buried dog fence she would need to move.

Councilmember Musgrove noted the lack of easements on other properties and asked if the work would occur in the right-of-way or whether easements would be needed.

City Engineer/Public Works Director Westby replied thus far they believe the work could be done within the right-of-way along 180<sup>th</sup> Lane and Highway 47. He stated that more details will be flushed out in the final design and there may be a couple places where a right of entry would be needed from one or more property owners, but that typically people are receptive to that.

Motion by Councilmember Musgrove, seconded by Councilmember Woestehoff, to direct staff to move forward with the additional work needed to complete final design.

Motion carried. Voting Yes: Chairperson Riley, Councilmembers Musgrove and Woestehoff. Voting No: None.

#### **5.02: Consider Replacement of Entrance Monument at TH #47 and Bunker Lake Boulevard**

Parks & Assistant Public Works Director Mark Riverblood reviewed background information noting that around the later 1990s, the City placed an entrance monument at the northwest intersection of Bunker Lake Boulevard and St. Francis Boulevard and several years ago an automobile crash destroyed the same sign. The entrance sign to the city was not replaced due to the substantial construction taking place at the intersection, which has now been completed. The

purpose of this case is to ascertain if the Committee wishes to recommend to City Council to replace the entrance monument at this time.

Chairperson Riley asked if the sign would be lit.

Parks & Assistant Public Works Director Mark Riverblood replied that this design did not call for the sign to be lit. He noted that the previous lit sign received a power drop from Super America and the gas station has changed ownership since that time. He noted that the intersection has a lot of light spill from the well-lit location and therefore lighting would not necessarily be needed.

Chairperson Riley commented that he prefers the aluminum design.

Councilmember Musgrove commented that she also favors that design. She noted that this style does seem similar to Riversbend, which she likes.

Councilmember Woestehoff asked if it would be possible to have a design similar to Riversbend with the faux timbers.

Parks & Assistant Public Works Director Mark Riverblood replied that they could, but they may look odd with the scale of this sign proposed.

Councilmember Musgrove asked if the Riversbend sign uses the blue color that has been used in newer signage.

Parks & Assistant Public Works Director Mark Riverblood replied on the colors that he recalled in the Riversbend sign and did not believe there was blue in that sign.

Councilmember Specht commented that they have been discussing the consistency in branding and asked if that has been considered.

Chairperson Riley commented that the same logo and style is carried through as well as the sign design that they have chosen. He noted that the Highway 10 bridges will also have the City logo.

Parks & Assistant Public Works Director Mark Riverblood commented on the time that was spent by the Council in developing the sign plan which does provide consistency at an affordable price range.

Councilmember Musgrove referenced the landscaping and asked if they would add flowers or plantings that would need to be maintained. She recognized that there are plantings along 47 that require maintenance and that does add ongoing costs.

Parks & Assistant Public Works Director Mark Riverblood replied that he did not put much thought into the landscape other than understanding that this area is impacted by salt and snow storage and does not have irrigation, therefore he believes that some type of minimal green landscaping could be added that may hold up better in those conditions.

Motion by Councilmember Musgrove, seconded by Councilmember Woestehoff, to proceed with the aluminum monument sign with plantings as directed by staff with tolerance for salt at a cost not to exceed \$26,000.

Further discussion: Parks & Assistant Public Works Director Mark Riverblood asked for direction on funding, noting that the EDA budget does have available funds. Councilmember Woestehoff stated that he believes that EDA would be appropriate to fund a portion but believes the funding could be left to staff.

Motion carried. Voting Yes: Chairperson Riley, Councilmembers Musgrove and Woestehoff. Voting No: None.

### **5.03: Trail Gap Connection Planning**

Parks & Assistant Public Works Director Mark Riverblood presented the staff report noting that staff recommends continuing to look for cost effective means to connect the community through trails, with priority consideration for key gaps.

Councilmember Musgrove noted other gaps in the system, specifically a portion along 47.

Parks & Assistant Public Works Director Mark Riverblood confirmed that gap is mentioned and noted that there is development interest in one of those parcels which could provide an opportunity to address that gap along 47. He noted that more urban areas like that would have more complications and costs.

Chairperson Riley commented that he would like to hear more about that as the development moves forward as that is the most obvious gap and it has been discussed multiple times. He appreciated the overall circle of Ramsey approach, but noted a gap along Sunfish Lake Boulevard, south of Alpine and would like to hear a plan for that segment as well. He noted another gap on Nowthen Boulevard, perhaps on the church property, that may resolve itself. He stated that his intention was to address the glaring gaps between existing trail sections.

Parks & Assistant Public Works Director Mark Riverblood replied that he does have cost estimates for some of those gaps that have been mentioned but noted that some of those are costly because of the ditch sections. He commented that those could be moved up on the priority list. He stated that the segment along the church property would most likely be development driven as may the segment along Sunfish Lake Boulevard.

Chairperson Riley asked if they would like to focus on filling the existing gaps or purchasing the trail easements to complete the circle.

Councilmember Woestehoff commented that this is a frustrating topic, noting that off-street trails along 167<sup>th</sup> would have filled in a large gap in the circle and that was a missed opportunity. He noted a missing section near the new PACT development that should be listed on the map. He commented that Variolite was also a missed opportunity for off-street facilities. He agreed that

the gaps on Sunfish Lake and Alpine would make sense to fill. He noted that this is a difficult and expensive problem to solve, and they should look at every project to find opportunities.

Councilmember Musgrove commented that the segment along 47 would enhance safety for those that walk that area while also making those business parcels more attractive and therefore would want to prioritize that segment.

Parks & Assistant Public Works Director Mark Riverblood commented that there is a full-sized sidewalk along Xkimo for pedestrians which runs the same alignment.

Councilmember Musgrove commented that she appreciates that but believes that people walk and bike on the street in the winter.

Councilmember Woestehoff stated that it would not be a bad idea to talk with property owners about the right-of-way needed for the trail segments mentioned in the staff presentation, but did not think it would be a priority to construct the trail segment at this time.

Councilmember Musgrove suggested obtaining updated pricing for the 47 segment as it was indicated that there is development interest in one of the parcels.

## **6. COMMITTEE / STAFF INPUT**

### **6.01: Staff Updates on Improvement Projects and Items of Interest**

City Engineer/Public Works Director Westby provided an update on current and proposed City, County, and MnDOT improvement projects and studies and on other items of interest to the Committee.

### **6.02: Review Future Topics Calendar**

Chairperson Riley commented that he has been asked by two different residents about a potential roundabout at Sunwood and CR 5.

City Engineer/Public Works Director Westby replied that has been identified as a potential improvement for the corridor in that location. He stated that he could pass on that desire for priority to the County.

## **7. ADJOURNMENT**

Motion by Councilmember Woestehoff, seconded by Councilmember Musgrove, to adjourn the Public Works Committee meeting.

Motion carried.

The regular meeting of the Public Works Committee adjourned at 6:28 p.m.

Respectfully submitted,



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Bruce Westby  
City Engineer/Public Works Director

Drafted by Amanda Staple  
*TimeSaver Off Site Secretarial, Inc.*

**Public Works Committee****Meeting Date:** 11/21/2023**Primary Strategic Plan Initiative:** Address infrastructure needs.**Title:**

Consider Recommending City Council Approving Plans and Specifications and Authorizing Advertisement for Bids for Barthel's Rum River Acres and White Pines Estates Street Reconstructions, Improvement Project #24-01

**Purpose/Background:****Purpose:**

The purpose of this case is to consider recommending City Council approving plans and specifications and authorizing advertisement for bids for Barthel's Rum River Acres and White Pines Estates Street Reconstructions, Improvement Project #24-01.

**Background:**

City Improvement Project #24-01 proposes to reconstruct the streets within the Barthel's Rum River Acres and White Pines Estates subdivisions, generally located between 164<sup>th</sup> Lane and 165<sup>th</sup> Lane, adjacent to the Rum River. The 2023 – 2032 Capital Improvement Plan (CIP) identifies the streets within these subdivisions for street reconstruction in 2024. Street segment summaries are attached to this case.

Existing Conditions

The streets vary between 24 feet wide rural section and 31 feet wide urban section including bituminous curbing, totaling 1.33 miles in length. Traffic counts have not been taken, but Staff anticipates typical neighborhood traffic due to the location of the subdivision and lack of destinations which would increase traffic above normal.

Municipal sewer and water do not exist in the project area, and utility extensions to the area are not proposed. The existing drainage is through a combination of swales adjacent to the roadway, and on street drainage to curb cuts in the bituminous curbing area, as well as street crossing culverts. Additionally, Staff is aware of Northern Natural gas mainlines crossing in one location at 164<sup>th</sup> Lane, approximately 600 feet east of Trunk Highway 47.

Project History

- 2023 – 2032 Capital Improvement Program – listed as street reconstruction for 2024.
- June 13, 2023, Resolution #23-130 the Ramsey City Council accepted proposals for topographic survey of the project area.
- June 27, 2023, Resolution #23-129 the Ramsey City Council accepted proposals for geotechnical report of the project area.
- August 22, 2023, Resolution #23-197 the Ramsey City Council ordered Staff to prepare plans and specifications.
- October 10, 2023, Resolution #23-250 the Ramsey City Council accepted proposal for sewer cleaning and televising.

Pavement History

The streets within the Barthel's Rum River Acres subdivision were built in 1982. The streets received an overlay improvement in 1997, the only other pavement maintenance was a crack seal / seal coat improvement in 2009. Maintenance crews have performed patching over the last several years, included extensive patching in 2023.

The streets within the White Pines Estates subdivision were built in 1977. Pavement maintenance has included initial crack seal / seal coat improvements in 1984 and 1992. An overlay was performed in 2001, and the only pavement maintenance project since was a crack seal / seal coat improvement in 2009. Maintenance crews have

performed patching as needed over the last several years.

### Proposed Improvements

Staff review of the geotechnical report found generally sandy subsoil make up the roadway embankment throughout the project area. There are areas of silt and highly plastic clay below the roadway embankment zone. These would only impact the project if excavation goes deeper than 3 to 4 feet, generally for storm sewer installation. Where these soils are found during pipe installation, the plans call for subsoil corrections in the immediate areas, and have quantities built into the plans to accommodate such a circumstance.

In general, the current swales along the street within the Barthel's Rum River Acres subdivision are not proposed to be re-graded as part of this project. Due to the nature of street reconstruction, the in-slopes will likely be disturbed approximately 3 to 5 feet off of the edge of pavement. No changes to the current drainage pattern are proposed. The existing culverts crossing the streets are proposed to be removed and replaced, this is to ensure the culverts will last at least through the proposed 60-year design life of the street.

The bituminous curbing within the White Pines Estates subdivision is proposed to be replaced with surmountable concrete curb and gutter. At driveways, a curb cut similar to what is typically placed in B-Style curb will be placed, to avoid a high transition from the roadway to driveways. Additionally, concrete storm sewer inlets and piping will be added to better drain the urban section streets. As discussed previously, Staff is anticipating some subsoil corrections will be necessary as part of the storm sewer construction. This will consist of removing the poor soils and replacing with select granular sand, which is proper pipe bedding material.

Restoration of the impacted boulevard areas will include a minimum of 4-inches topsoil and hydroseed with a residential turf seed mix. Though the pavement is generally going back to the same location and elevation, driveway aprons will be replaced to match into the new bituminous pavement as minor changes will occur. In general, driveway aprons will be going back 8 feet to tie the driveways into the new pavement.

The majority of stormwater within these subdivisions drain to a ditch located on 16512 Germanium Street. Existing there is a large bump in the road at the culvert crossing location to this outlet, because of the lack of clearance above the pipe. This project proposes raising Germanium Street approximately 1-foot to allow clearance over the new crossing pipe. This will require the driveway at 16512 to be replaced further back, and additional grading to match into the new roadway, however, work is still anticipated to be contained within the right-of-way.

### Special Concrete Driveway

During the project open house held on November 2, 2023, Staff was made aware of two special concrete aprons. Initial review shows the driveways having colored concrete, and a stamped design. Previous practice on reconstruction projects is to replace the materials and patterns to match existing as best as practical. This is achieved by having a special concrete driveway pay item, and special provision in the specifications. It has required that City Staff coordinate with the Contractor and Property Owner to go over the special concrete, and potentially have the property owner present during the concrete pouring. In the past, this has been difficult to achieve, and has required removal and replacement of concrete several times to meet home owners' expectations. Staff would like to discuss the following options moving forward with special concrete driveway replacements:

- Continue to replace back concrete driveways to match existing as best as practical
- Replace back special concrete driveways with standard concrete, within the right-of-way
- Consider offering a budget to the home owner to cover the cost of standard concrete, with the home owner paying any cost over and above (potentially a separate contract to complete the work)

### Preliminary Schedule Remaining

- Council Approves Plans and Specifications / Authorizes Ad for Bids
  - November 28, 2023 or
  - December 12, 2023
- Staff Receives Bids
  - February 21, 2024
- Council Awards Contract to the Lowest Responsible Bidder

- February 27, 2024
- Contractor Begins Construction
  - Spring 2024
- Contractor Substantially Completes Construction
  - New bituminous pavement in-place, topsoil and seed in-place
  - August 2, 2024
- Contractor Final Completion
  - Verify final restoration; punch list created
  - August 30, 2024

Final plans are not attached to this case to prevent potential bidders from downloading plans attached to the case to prepare and submit their bids, rather than purchasing the plans through QuestCDN, the electronic bidding software used by the City of Ramsey. This ensures all bidders are bidding off the same set of plans, and all bidders are notified of any plan revisions (addenda) issued during the bidding process. Attached is the title sheet showing the scope of the improvements, as well as a plan sheet showing the typical sections, which includes information on the proposed pavement section. Plans are available upon request from the City Engineer.

**Notification:**

Notification is not required for this case.

**Time Frame/Observations/Alternatives:**

**Timeframe:**

Staff estimates up to 20 minutes will be needed to present this case and respond to questions.

**Observations:**

Discussion of driveway apron replacements may affect the final design and project estimated costs.

**Alternatives:**

Alternative #1 – Motion recommending City Council approving plans and specifications and authorizing advertisement for bids for Barthel’s Rum River Acres and White Pines Estates Street Reconstructions, Improvement Project #24-01.

Alternative #2 – Motion of other.

**Funding Source:**

Funding for this improvement is proposed to come from Pavement Management Funds and Stormwater Utility Funds.

Staff has completed an estimate based on final plans and anticipated 2024 construction costs, with a total estimated project cost of \$1,505,111, which includes 23-percent indirect costs for administrative, engineering, finance, and legal costs.

- Street Project Costs                    \$1,260,224
- Storm Sewer Project Costs        \$244,887
- Total Estimated Costs                \$1,505,111

**Recommendation:**

Staff recommends Alternative #1.

**Outcome/Action:**

**Action:**

Motion recommending City Council approving plans and specifications and authorizing advertisement for bids for Barthel's Rum River Acres and White Pines Estates Street Reconstructions, Improvement Project #24-01.

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**Attachments**

- 24-01 Title Sheet
- 24-01 Typical Section
- 24-01 Street Summary
- 24-01 Geotech Report

**Form Review**

**Inbox**

Bruce Westby  
Brian Hagen  
Form Started By: Joe Feriancek  
Final Approval Date: 11/16/2023

**Reviewed By**

Bruce Westby  
Brian Hagen

**Date**

11/16/2023 10:35 AM  
11/16/2023 02:28 PM  
Started On: 11/13/2023 02:30 PM

# CITY OF RAMSEY

## BARTHEL'S RUM RIVER ACRES & WHITE PINE ESTATES STREET RECONSTRUCTION

### CITY IMPROVEMENT PROJECT NO. 24-01

### GOVERNING SPECIFICATIONS

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AND THE "SUPPLEMENTAL SPECIFICATIONS" DATED SEPTEMBER 2022 SHALL GOVERN.

ALL FEDERAL, STATE AND LOCAL LAWS, REGULATIONS AND ORDINANCES SHALL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

#### SHEET INDEX

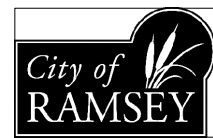
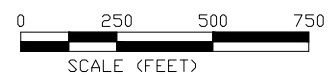
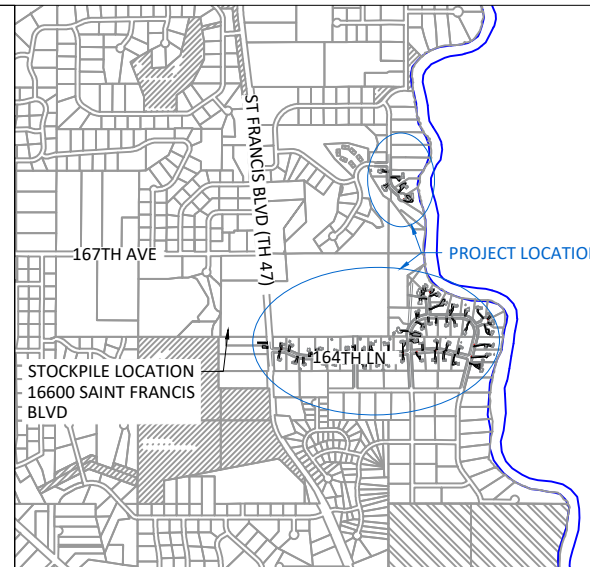
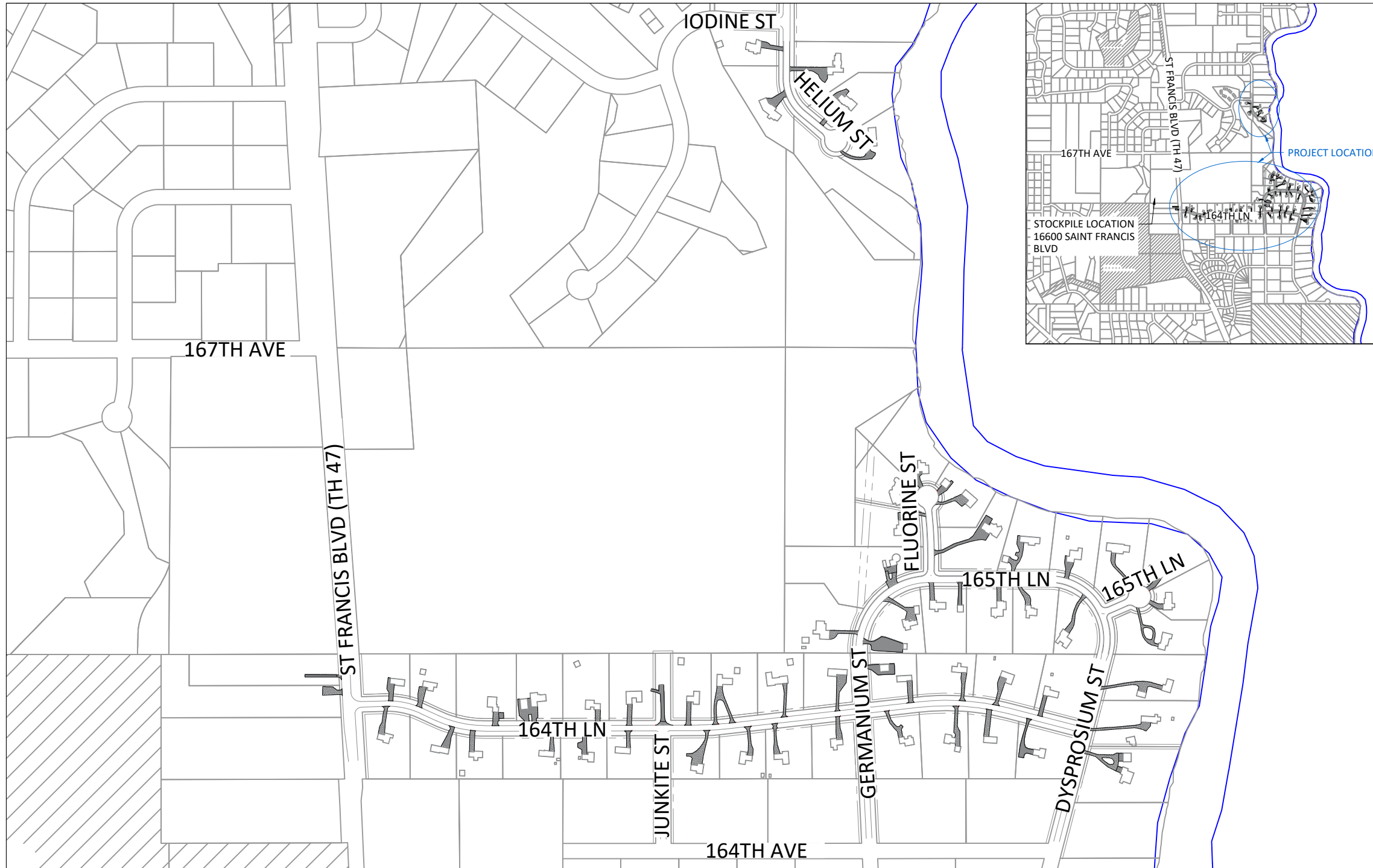
THIS PLAN CONTAINS 50 SHEETS

SHEET No.	DESCRIPTION
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01	TITLE SHEET
02	STATEMENT OF ESTIMATED QUANTITIES
03	ALIGNMENT LAYOUT
04	TYPICAL SECTION
05	CITY DETAILS
06-07	SWPPP
08-13	EROSION CONTROL
14-19	REMOVALS
20-30	STREET CONSTRUCTION
31-50	CROSS SECTIONS

#### LEGEND

	SANITARY MANHOLE		Easement - Drainage & Utility
	STORM SEWER MANHOLE		Easement - Northern Natural Gas
	CATCH BASIN MANHOLE		Easement - Roadway
	CATCH BASIN		LOT LINE
	CATCH BASIN - GROUT		ELECTRIC LINE
	CATCH BASIN - RESET		ELECTRIC LINE - BURIED
	FLARED END SECTION		ELECTRIC LINE - OVERHEAD
	CULVERT END SECTION		GAS LINE
	HYDRANT		TELECOMMUNICATION LINE
	VALVE		TELECOMM - OVERHEAD
	TREE - CONIFEROUS		FIBER OPTIC LINE
	TREE - DECIDUOUS		TREE LINE
	SHRUB		LANDSCAPE
	LIGHT POLE		RETAINING WALL
	SIGN		FENCE
	MAILBOX		SILT FENCE
	PEDESTAL - TELECOM		FLOTATION SILT CURTAIN
	PEDESTAL - ELECTRIC		INLET PROTECTION
	HAND HOLE		EROSION CONTROL LOG
	BITUMINOUS PAVEMENT		WATERMAIN
	DRIVE - BITUMINOUS		SANITARY SEWER
	DRIVE - CONCRETE		STORM SEWER
	DRIVE - GRAVEL		DRAIN TILE
	CONCRETE WALK		DRAINAGE ARROW
	BITUMINOUS TRAIL		LANDSCAPE - ROCK
	REMOVE BIT PAVE		LANDSCAPE - MULCH
	REMOVE CONCRETE PAVE		LANDSCAPE - RIP RAP
	REMOVE GRAVEL SURFACE		EROSION CONTROL BLANKET
	REMOVE BITUMINOUS FLUME		PR. DRIVE - BITUMINOUS
	MILL BIT PAVEMENT		PR. DRIVE - CONCRETE
	RECLAIM BIT PAVEMENT		PR. DRIVE - GRAVEL
	CONSTRUCTION ENTRANCE		PR. CONCRETE WALK
	RIPRAP CLASSIII		PR. CONCRETE
	VALLEY GUTTER		PR. SEEDING AREA
	B618 CURB & GUTTER		
	SURMOUNTABLE CURB & GUTTER		



CITY OF RAMSEY  
7550 SUNWOOD DRIVE  
RAMSEY, MN 55303  
(763) 427-1410 FAX (763) 433-9898

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

NOTE: EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY GOPHER STATE ONE CALL 1-800-252-1166 OR 651-454-0002



Call before you dig  
811  
651 454-0002 Metro  
800 252-1166 Outstate  
[www.gopherstateonecall.org](http://www.gopherstateonecall.org)

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.

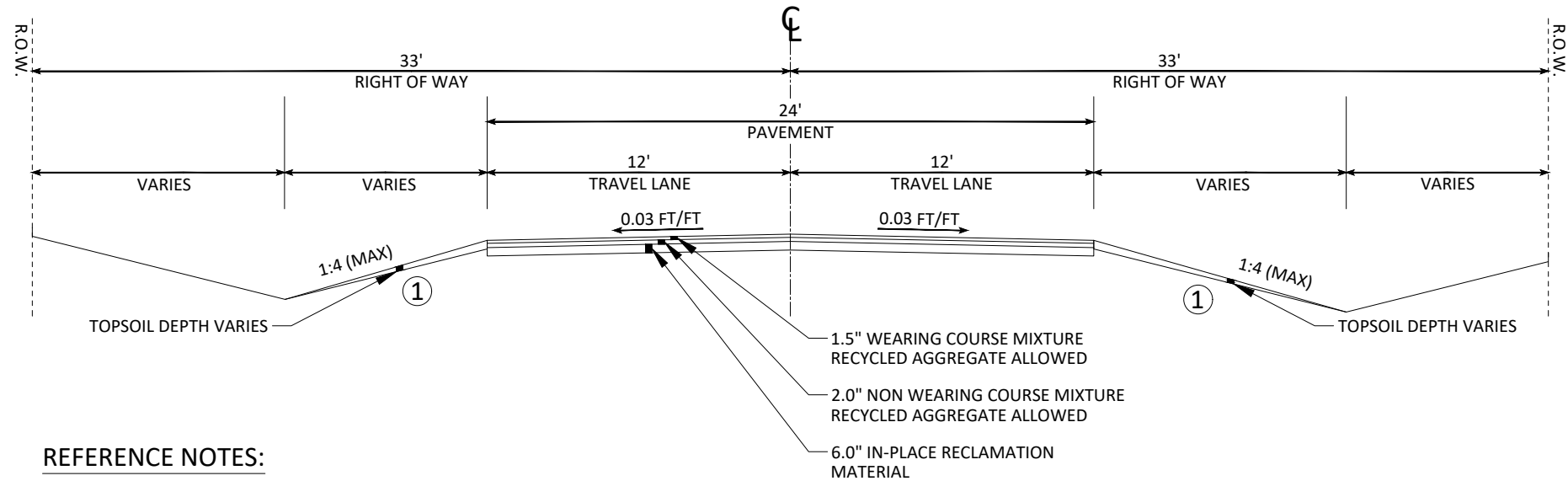
JOE FERIANCEK, P.E.  
ASSISTANT CITY ENGINEER

57095 DATE XX/XX/XX  
LIC. NO.

DATE	REVISION

Nov 09, 2023 - 2:46pm G:\Engineering\AutoCad Dwg\Projects A-M\Barthels Rum River Acres & White Pine Estates IP 24-01\Plan Drawings\TITLE SHEET.dwg

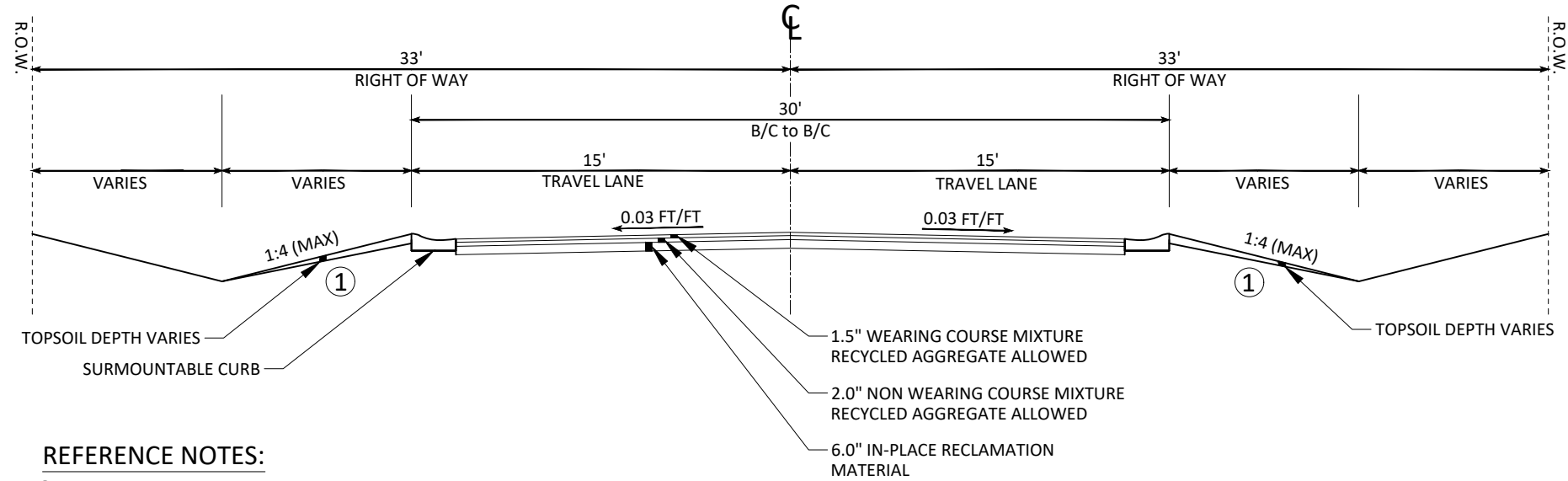
## TYPICAL SECTION: RECONSTRUCTION (164TH LN, DYSPROSIUM ST, GERMANIUM ST, JUNKITE ST)



**REFERENCE NOTES:**

① GRADE TO MATCH EXISTING GROUND. ESTABLISH TURF USING TOPSOIL AND HYDROSEED WITH MNDOT SEED MIXTURE 25-151.

## TYPICAL SECTION: CURB & GUTTER (165TH LN, DYSPROSIUM ST, FLUORINE ST, GERMANIUM ST, HELIUM ST)



**REFERENCE NOTES:**

① GRADE TO MATCH EXISTING GROUND. ESTABLISH TURF USING TOPSOIL AND HYDROSEED WITH MNDOT SEED MIXTURE 25-151.

DATE	REVISION

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

JOE FERIANCEK  
Date XX/XX/XX Lic. No. 57095

DESIGNED BY:	LWC	DATE:	XX/XX/XX
DRAWN BY:	LWC	FILE:	24-01
CHECKED BY:	JJF		

**CITY OF RAMSEY**  
7550 SUNWOOD DRIVE  
RAMSEY, MN 55303  
(763) 427-1410 FAX (763) 433-9898

TYPICAL SECTION

**BARTHEL'S RUM RIVER ACRES & WHITE PINE ESTATES**  
STREET RECONSTRUCTION  
CITY PROJECT NO. 24-01  
CITY OF RAMSEY, MINNESOTA

IP 24-01 Barthel's Rum River Acres & White Pine Estates Street Reconstructions														
Street Segment Summary														
Subdivision	Street	Segment Description	Length (feet)	Section (Urban / Rural)	2023 PASER	Year Built	Maint. 1	Maint. 2	Maint. 3	Maint. 4	Maint. 5	Avg HMA (inches)	Avg Agg. Base (inches)	Avg Section (inches)
Barthel's Rum River Acres	164th Lane	TH 47 / Dysprosium Street	3206	Rural	3	1982	OL 1997	SC 2009				3.2	3.9	7.1
	Dysprosium Street	S EOP / N EOP	549	Rural	3	1982	OL 1997	SC 2009				3.5	3.9	7.4
	Germanium Street	S EOP / N EOP	536	Rural	3	1982	OL 1997	SC 2009				3.9	3.3	7.2
<i>Barthel's Rum River Acres Total Length</i>			<i>4291</i>	<i>0.813 mi.</i>										
White Pines Estates	165th Lane	Dysprosium Street / E CDS	227	Urban (Bit Curb)	4	1977	SC 1984	SC 1992	OL 2001	SC 2009		3.9	3.3	7.2
	165th Lane	Fluorine Street / Dysprosium Street	624	Urban (Bit Curb)	4	1977	SC 1984	SC 1992	OL 2001	SC 2009		3.9	3.3	7.2
	Dysprosium Street	S EOP / 165th Lane	352	Urban (Bit Curb)	4	1977	SC 1984	SC 1992	OL 2001	SC 2009		3.5	3.9	7.4
	Fluorine Street	165th Lane / N CDS	423	Urban (Bit Curb)	4	1977	SC 1984	SC 1992	OL 2001	SC 2009		4.2	3.2	7.4
	Germanium Street	S EOP / Fluorine Street	506	Urban (Bit Curb)	4	1977	SC 1984	SC 1992	OL 2001	SC 2009		3.9	3.3	7.2
	Helium Street	N EOP / S CDS	578	Urban (Bit Curb)	4	1977	SC 1984	OL 2010	SC 2015			5.6	4.1	9.7
<i>White Pines Estates Total</i>			<i>2710</i>	<i>0.513 mi.</i>										
Barthel's Rum River Acres & White Pine Estates Total Length			7001	1.326 mi.										



**INDEPENDENT TESTING TECHNOLOGIES**

337 31<sup>st</sup> Avenue South • Waite Park, MN 56387 • (320) 253-4338 • [www.independenttestingtech.com](http://www.independenttestingtech.com)

**AUGUST 2, 2023**

**PROJECT 23-190  
REPORT OF GEOTECHNICAL EXPLORATIONS**

**For**

**CITY PROJECT #24-01  
BARTHEL'S RUM RIVER &  
WHITE PINES ESTATES  
STREET RECONSTRUCTION  
RAMSEY, MINNESOTA**

**Prepared For:**

**CITY OF RAMSEY**



# INDEPENDENT TESTING TECHNOLOGIES

337 31<sup>st</sup> Avenue South • Waite Park, MN 56387 • (320) 253-4338 • [www.independenttestingtech.com](http://www.independenttestingtech.com)

August 2, 2023

Mr. Joe Jeriancek  
City of Ramsey  
7550 Sunwood Drive NW  
Ramsey, MN 55303

RE: 23-190      Report of Geotechnical Exploration  
City Project #24-01  
Barthel's Rum River &  
White Pines Estates Street Reconstruction  
Ramsey, Minnesota

Dear Mr. Jeriancek:

Independent Testing Technologies, Inc. is pleased to submit the results of our subsurface investigation program for this project in Ramsey, Minnesota. This report represents our work on this project as authorized by you. It includes our recommendations regarding earthwork, fill and compaction, subgrade preparation, and pavement design. An electronic copy is enclosed.

The soils encountered were mostly fine grained sands (SM, SP-SM, SP) with layered silt (ML) and highly plastic clay (CH). The sands (SP, SM) are excellent for roadway embankment material and roadway subgrade material. However, the silt (ML) and highly plastic clay (CH) are considered very poor for pavement support. Silt (ML) is highly susceptible to frost heave and can lead to premature pavement failure. Highly plastic clays (CH) are susceptible to shrinking and swelling with seasonal moisture changes and can also cause premature pavement failure. We recommend the silt (ML) and highly plastic clay (CH) soils be removed from the top four feet of finished roadway subgrade.

Mr. Jeriancek, it has been our pleasure to work with you on this project. Independent Testing appreciated the opportunity to perform this geotechnical evaluation and look forward to continuing our participation during the construction phase of this project. Please contact Patrick Johnson if you have any questions regarding this report. Please contact Tyler Burkes if you would like a proposal for the materials testing services that will be needed.

Sincerely,

A handwritten signature in blue ink that reads "Patrick A. Johnson".

Patrick A. Johnson, P.E.  
Minnesota License #22037

A handwritten signature in blue ink that reads "Kevin T. Reller".

Kevin T. Reller  
President

## CERTIFICATION

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



---

**Patrick A. Johnson**

**Date: August 2, 2023      License No.: 22037**

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**GEOTECHNICAL EXPLORATIONS  
CITY OF RAMSEY  
CITY PROJECT # 24-01  
BARTHEL'S RUM RIVER & WHITE PINES ESTATES  
STREET RECONSTRUCTION  
RAMSEY, MINNESOTA  
ITT PROJECT 23-190**

### **A. Introduction**

**This report is being prepared for use by our client on this specific project. We intend to present this report and our findings in the same logical manner that led us to arrive at our recommendations. This report is based on some general assumptions regarding the anticipated construction based on experience with similar projects. These assumptions and the entire report should be reviewed immediately upon receipt.**

**Purpose:**

The purpose of our investigation was to evaluate the existing soil and water conditions on this site for the purpose of reconstructing the existing roadway. The project will consist of reconstruction of the existing streets in Barthel's Rum River and White Pines Estates in Ramsey, Minnesota. The streets include Helium Street, south of Iodine Street NW in Barthel's Rum Rive Addition and 164<sup>th</sup> Lane NW, Germain Street NW, 165<sup>th</sup> Lane NW, Junkite Street NW, Germanium Street NW, Flourine Street NW, and Dysprosium Street NW in White Pines Estates Addition. The streets will be reconstructed to an urban section. New storm sewers and watermains will be installed. In accordance with your written authorization, we have conducted a subsurface exploration program for the proposed project.

**Scope of Services:**

Our authorized scope of services included the following:

1. To core the pavement at seventeen (17) locations to determine the existing pavement thickness.
2. To investigate the subsurface soil and water conditions encountered at those same seventeen (17) locations using split spoon sampling. The borings were planned to depths of just under ten (10) feet at each location.

3. To provide a report of our findings including a summary of our findings with pavement thickness at each boring location as well as recommendations regarding earthwork, fill and compaction, subgrade preparation, and pavement design with an estimated design R-value.

**General Site Conditions:**

The projects are located along the west side of the Rum River, between Minnesota Highway 47 and the river on the northeast side of the City of Ramsey. The Rum River Hills Golf Club separate the residential neighborhoods. The sites are fairly level, with slopes of 2-6 percent.

**Available Subsurface Information:**

According to the Geologic Map of Minnesota, Quaternary Geology, prepared by Howard C. Hobbs and Joseph E. Goebel (1982, Minnesota Geological Survey), this site lies within an outwash unit not associated with a particular moraine. It is associated with the Des Moines glaciation of Pleistocene, Late Wisconsinan age. The drift is derived from parent material in North Dakota and Manitoba.

According to the Soil Survey of Anoka County prepared by the Soil Conservation Service, the site lies within the Hubbard- Nymore Soil Associations. These consist of nearly level to gently sloping, excessively drained soils that are sandy throughout. The individual soils mapped on the Barthel's Rum River site are sandy with few limitations for development of local streets. Most of the soils mapped on the White Pine Estates site are also sandy and have few limitations for development of local roads and streets. However, silt loams are mapped along 164<sup>th</sup> Lane NW east of Junkite Street NW and Germanium Street NW and Dysprosium Street NW south of 164<sup>th</sup> Lane NW. These soils have severe limitations for local street construction due to low strength, shallow depth to saturated soil, shrink swell and frost heave.

## B. Exploration Program

Seventeen (17) split-spoon soil borings were conducted on this project. The borings were advanced to depths of 10 feet using a 3 ¼ inch I.D. hollow stem auger. Samples were obtained every 2 ½ feet using a 2-inch O.D. split-spoon sampler in accordance with the American Society for Testing and Materials (ASTM D1586). Standard penetration values (N-values) were obtained at each sample interval by driving the sampler into the soil using a 140-pound hammer falling 30 inches. After an initial set of 6 inches, the number of blows required to drive the sampler 12 inches is known as the standard penetration resistance or N-value. Where the sampler cannot be driven at least 6 inches by 50 blows of the hammer, the total number of blows as well as the distance driven is reported on the boring logs.

Groundwater levels were noted during drilling and immediately after completion. The holes were backfilled with the auger cuttings and patched with bituminous cold patch. Some settlement of the bore holes may be expected. All the borings were conducted with a truck mounted rig.

### Exploration Results:

The pavement was cored at each boring location prior to drilling the boring. The cores were obtained to get accurate pavement thickness. Photos of each core are included in appendix 1.

The borings were all conducted in the existing paved road and encountered 2.5 to 6.5 inches of bituminous over 4.0 to 11.0 inches of aggregate base. The depth of bituminous and aggregate encountered at each location are shown in the following table:

Boring	Bituminous	Aggregate	Boring	Bituminous	Aggregate	Boring	Bituminous	Aggregate
SB-1	6.5"	10.0"	SB-7	3.5"	4.0"	SB-13	3.0"	6.0"
SB-2	3.75"	4.5"	SB-8	3.75"	4.0"	SB-14	3.25"	6.0"
SB-3	3.5"	5.0"	SB-9	4.5"	5.0"	SB-15	3.5"	5.0"
SB-4	4.0"	5.0"	SB-10	4.5"	4.0"	SB-16	3.5"	6.0"
SB-5	3.0"	5.0"	SB-11	3.5"	5.0"	SB-17	3.0"	6.0"
SB-6	2.5"	6.0"	SB-12	3.75"	11.0"			

Below the pavement and aggregate, boring SB-1 encountered fine grained, silty sand (SM) to 4.0 feet, followed by poorly graded sand (SP) to 7.5 feet, silty sand (SM) to 10.0 feet and then poorly graded sand (SP) to termination at 11.5 feet. Below the pavement and aggregate, boring SB-2 encountered fine grained, silty sand (SM) fill to 2.0 feet, followed by highly plastic clay (CH) to 7.5 feet and then fine grained, poorly graded sand (SP) to termination at 11.5 feet.

Below the pavement and aggregate, borings SB-3, SB-4, SB-6, SB-7, SB-8, SB-9, SB-10, SB-14, SB-16 and SB-17 all encountered sandy outwash soils consisting of silty sand (SM), poorly graded sand with silt (SP-SM) or poorly graded sand (SP) to termination at 11.5 feet.

Below the pavement and aggregate, boring SB-5 encountered silty sand (SM) fill to 2.0 feet, followed by grey silt (ML) to 5.0 feet and then fine grained, poorly graded sand (SP) to termination at 11.5 feet. Below the pavement and aggregate, boring SB-11 encountered clayey sand (SC) fill to 4.0 feet, followed by highly plastic clay (CH) to 7.5 feet and then poorly graded sand (SP) to termination at 11.5 feet. Below the pavement and aggregate, boring SB-12 encountered fine grained, silty sand (SM) fill to 2.0 feet, followed by native, fine grained, silty sand (SM) to 5.0 feet, poorly graded sand (SP) to 10.0 feet, and highly plastic clay (CH) to termination at 11.5 feet. Below the pavement and aggregate, boring SB-13 encountered native, fine grained, poorly graded sand (SP) to 5.0 feet, followed by highly plastic clay (CH) to 7.5 feet and then poorly graded sand (SP) to termination at 11.5 feet. Below the pavement and aggregate, boring SB-15 encountered fine grained, poorly graded sand (SP) fill to 5.0 feet, followed by silty clayey sand (SC-SM) to 7.5 feet, silty sand (SM) to 10.0 feet and then fine grained, poorly graded sand (SP) to termination at 11.5 feet.

#### **Penetration Test Results:**

The blow counts in the sandy soils (SM, SP-SM, SM, SC-SM) ranged from 3 to 21 which are very low to moderate, indicating they are in a very loose to medium dense condition. The blow counts in the silt (ML) and clay (CH) soils ranged from 3 to 11 which are very low to moderate, indicating they are in a very soft to stiff condition. Refusal of the spoon or auger did not occur in any of the borings. Drilling was relatively easy.

#### **Water Level Observations:**

Observations of the subsurface water conditions were made during drilling operations. Groundwater was only encountered in five of the borings at the time of drilling. The following table shows the depth to water at each boring:

Boring	Water	Boring	Water	Boring	Water	Boring	Water
SB-1	10' 0"	SB-6	None	SB-11	None	SB-16	None
SB-2	None	SB-7	None	SB-12	9' 0"	SB-17	None
SB-3	None	SB-8	None	SB-13	None		
SB-4	10' 0"	SB-9	None	SB-14	None		
SB-5	5' 7"	SB-10	None	SB-15	10' 0"		

The water levels were observed over a short period of time. However, we feel they are an accurate representation of the true groundwater conditions on this site due to the high permeability of the native sandy soils. It should be noted that fluctuations in the level of the groundwater can occur due to variations in rainfall, temperature, spring thaw and other factors not evident at the time of our investigation.

Mottled soils were observed. Mottled native soils are a historical indication of a temporarily or seasonally saturated soil condition. Grey soils were also observed. Grey native soils are an indication of a permanently saturated soil condition.

**Laboratory Testing**

Moisture Content Tests- Moisture content tests were performed on every split spoon sample in accordance with ASTM method D2216; *Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass*. Individual test results are shown on the boring logs adjacent to the sample that was tested.

**C. Engineering Review**

**Discussion:**

The soils encountered near the surface on these sites are predominantly fine grained, silty sands (SM), poorly graded sands with silt (SP-SM) and poorly graded sands (SP). They appear to mostly be outwash materials. The native sands (SM, SP-SM, SP) are considered excellent material for use

as roadway subgrade material and for bituminous pavement support.

Highly plastic clay was encountered in SB-2 at the south end of Helium Street in Barthel's Rum River Addition and in borings SB-11, SB-12, and SB-13 in White Pine Estates. Silt (ML) was encountered in SB-5 in White Pine Estates. The silt (ML) and highly plastic clay (CH) encountered in these borings are very poor for subgrade material.

The silt (ML) is very susceptible to frost heave and can move several inches between the frozen and thawed state during seasonal changes. The highly plastic clays are very susceptible to seasonal moisture variations and can also have movements of several inches between wet periods and dry periods. Neither the silt (ML) or highly plastic clay (CH) should remain within four (4) feet of finished grade in pavement areas.

Based on our observation, it appears the roadway embankment was stable through the entire project area. Unless it is known that there is some issue in the embankment in the project area, it is our opinion that the existing roadway embankment can remain in place.

## **D. Recommendations**

**The following recommendations are based on our understanding of the proposed project. If our understanding of the project is not accurate or if changes are made to the project scope, please inform us so that our recommendations can be amended, if necessary. We have included recommendations regarding earthwork and construction that may help in cost estimates and aid in design. We should be allowed to review the proposed construction plans to provide further detailed recommendations, if necessary. Without the opportunity to review the final construction plans, the recommendations made in this report may no longer be valid.**

### **Utility Installation:**

We recommend that all utility pipes lay in non-organic mineral soils capable of supporting the pipes. Excessive over-excavation beneath the pipes should be avoided. We recommend that 2 to 6 inches of granular bedding material be placed and compacted around the pipe to aid in aligning the pipe for line and grade. The natural sand (SP) soils appear suitable for this purpose. The silt (ML) and clay (CL, CH) are not. Compaction should be done very carefully by hand to prevent

the pipe from shifting. We recommend that the backfill be compacted with a vibratory sheep's foot roller after the backfill is 2 feet above the top of the pipe. Vibratory compaction should only be used on clean sands or silty sands at or below optimum moisture.

We recommend that excavations slope at a 1.5:1 (horizontal: vertical) ratio from the bottom of the excavation to the surface. Stockpiled material should be kept at least 2 feet from the edge of the excavation. This is the minimum required by OSHA. We recommend all construction vehicles be kept at least 5 feet from the edge of the excavation. An escape ladder should be provided at all times while workers are in the excavation. All excavations must meet OSHA standards (29 CFR1926).

**Trench Backfill:**

The on-site soils consisting of poorly graded sands (SM, SP) are considered excellent for use as utility trench backfill. These soils are generally easy to work with and compact with vibratory compaction equipment.

The on-site soils consisting of silt (ML) and highly plastic clay (CH) are considered very poor material for backfill. These soils will be wet and will require drying or mixing to reach optimum moisture for compaction. In addition, they are highly susceptible to seasonal moisture variations and frost heave. The silts (ML) and highly plastic clay (CH) should not be used as utility trench backfill within 4 feet of finished subgrade.

No organic soils, roots, stumps, logs, brush, etc. should be used as structural fill below any pavement section. We recommend that all fill material be free of soft, wet, or frozen soils, highly expansive soils, rubble, debris, and rocks in excess of 6 inches in diameter. The fill should be as uniform as possible both in composition and moisture content.

We recommend all fill be compacted to the minimum relative density levels shown in the table below:

Location	Recommended Compaction Level (Percent of Std. Proctor ASTM D698)
Below Pavements, deeper than 3 feet from finished subgrade	95%
Below Pavements within 3 feet of finished subgrade	100%
Landscape Areas	90%

We recommend all fill placed in the roadway areas be compacted in 8-inch loose lifts. All fill should be compacted at a moisture content within plus or minus 3% of the optimum moisture as determined by a standard proctor. We recommend compaction tests be taken on any utility trench backfill at a rate of one test per 200 feet in the bottom, middle and top thirds of the trench backfill. We recommend compaction tests be taken at a rate of one test for two feet depth of fill per 200 linear feet of roadway fill. We recommend compaction tests be taken at a rate of one test per 200 linear feet on the finished roadway subgrade and aggregate base layer.

**Embankment/ Road Fill:**

The on-site soils consisting of fine grained, poorly graded sand (SP), poorly graded sand with silt (SP-SM) and silty sands (SM) are considered excellent material for use as roadway subgrade material. These soils are easy to compact using vibratory compaction equipment near their optimum moisture contents.

The silt (ML) and highly plastic clay (CH) should be avoided for embankment fill material within four feet of finished grade.

We recommend that any imported fill and utility trench backfill material consist of mineral soils meeting the requirements specified below. No organic soils, roots, stumps, logs, brush, etc. should be used as structural fill below any utility structure or pavement section. We recommend that all fill and utility trench backfill material be free of soft, wet, or frozen soils, highly expansive soils, rubble, debris, and rocks in excess of 6 inches in diameter. The fill material should be as uniform as possible both in composition and moisture content.

We recommend that all embankment fill material be placed in 12-inch loose lifts and compacted to a minimum of 95% of standard proctor maximum density (ASTM D698). Any fill placed in the top 3 feet of the road subgrade should be compacted to at least 100% of standard proctor maximum density. All fill material should be compacted at a moisture content within plus or minus 2% of the optimum moisture as determined by a standard proctor. We recommend compaction tests be taken at a minimum rate of one test per two feet of fill per 200 linear feet of roadway subgrade, and aggregate base material.

### **E. Pavement Recommendations**

We recommend the subgrade consist of poorly graded sand (SP). The silt (ML) and highly plastic clay (CH) should not be placed within 4 feet of finished subgrade. The silty sand (SM), poorly graded sand with silt (SP-SM) and poorly graded sand (SP) outwash soils on site this site are classified as A-3 soils in accordance with the American Association of State Highway Transportation Officials (AASHTO) classification system. A-3 soils are rated as excellent material for use as roadway subgrade material. Without benefit of a laboratory R-value determination and based on Mn/Dot guidelines, we recommend an R-value of 70 be assumed for the onsite soils.

In using the above R-value for bituminous pavement design, it is essential that the subgrade be constructed of uniform soils at a moisture content and density in accordance with Mn Dot specification 2105 and capable of passing a test roll in accordance with Mn Dot specification 2111. The native, undisturbed soils may need preparation (drying and compacting) to pass a proof roll. If the subgrade is not compacted, uniform and capable of passing a test roll, then we recommend the subgrade be scarified and recompactd or subcut and geotextile fabric placed along with select granular material meeting Mn Dot specification 3149. The top of subgrade should be compacted to a minimum of 100% of standard proctor maximum density. The subgrade should be sloped towards the edges to provide drainage.

## **F. Closing**

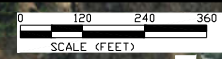
Our work was performed for geotechnical purposes only and not to document the presence or extent of any contamination on the site. We can note that our crew did not detect any obvious contamination by sight or smell during drilling operations. However, human senses are limited in terms of contamination detection and, therefore, the lack of detection through human sensing does not preclude the possibility of the presence of contamination of the site.

This report represents the result of our subsurface investigation and is based on information gathered at specific locations. Subsurface conditions can change a great deal over short horizontal distances. Also, the actual interface between strata will likely be a gradual transition rather than an abrupt change as represented on the boring logs.

Geotechnical engineering is based extensively on opinion. Therefore, the data contained in this report should be used as a guide, and we recommend that construction monitoring be performed by a qualified geotechnical engineer or technician. We recommend ITT be retained to perform construction observation and materials testing on this project due to our familiarity with the soils. Any changes in the subsurface conditions from those found during this geotechnical exploration should be brought to the attention of a soils engineer.

# APPENDIX 1

## BORING LOCATION PLAN



DATE	REVISION

DESIGNED BY: ---
DRAWN BY: LWC
CHECKED BY: ---

DATE: 05/31/23
FILE: 24-01

**CITY OF RAMSEY**  
 7560 SUNWOOD DRIVE  
 RAMSEY, MN 55303  
 (763) 427-1410 FAX (763) 433-9898

24-01 SOIL BORING LOCATION MAP

**BARTHEL'S RUM RIVER ACRES & WHITE PINE ESTATES STREET RECONSTRUCTION CITY PROJECT NO. 24-01**  
 CITY OF RAMSEY, MINNESOTA

SHEET 1 OF 1 SHEETS

## APPENDIX 2

# SOIL BORING LOGS

# INDEPENDENT TESTING TECHNOLOGIES, INC.      LOG OF SOIL BORING

**PROJECT: 23-190 CITY OF RAMSEY**  
**BARTHEL'S RUM RIVER & WHITE PINES**  
**ESTATES STREET RECONSTRUCTION**  
**RAMSEY, MINNESOTA**

**DATE: 7/13/23      BORING #: SB-1**  
**START TIME: 8:30      END TIME: 8:50**

**METHOD: 3 1/4" I.D. Hollow Stem Auger**  
**CREW: CD/NH**

**LOCATION: Helium St. NW- See Boring Location**

**ELEVATION:**

Depth (Feet)	ASTM Symbol	Soil Description	Sample #	N Value	W <sub>n</sub>	Notes	
16.5"		6.5 inches Bituminous, 10.0 inches Aggregate					
4.0	SM	SILTY SAND, fine grained, brown.	1	4	13.4		
5.0	SP	POORLY GRADED SAND, fine grained, brown.					
7.5			2	3	5.2		
10.0	SM	SILTY SAND, fine grained, grey.	3	4	26.5		
11.5	SP	POORLY GRADED SAND, fine to medium grained, brown.	4	4	24.3	<b>V Water encountered at 10.0 feet during drilling.</b>	
		Boring complete to 11.5 feet. Water encountered at 10.0 feet during drilling. No water encountered to cave-in at 6' 5" after completion.					

# INDEPENDENT TESTING TECHNOLOGIES, INC.      LOG OF SOIL BORING

**PROJECT: 23-190 CITY OF RAMSEY**  
**BARTHEL'S RUM RIVER & WHITE PINES**  
**ESTATES STREET RECONSTRUCTION**  
**RAMSEY, MINNESOTA**

**DATE: 7/13/23      BORING #: SB-2**  
**START TIME: 8:55      END TIME: 9:15**

**METHOD: 3 1/4" I.D. Hollow Stem Auger**  
**CREW: CD/NH**

**LOCATION: Helium St NW- See Boring Location**

**ELEVATION:**

Depth (Feet)	ASTM Symbol	Soil Description	Sample #	N Value	W <sub>n</sub>	Notes
8.25'		3.75 inches Bituminous, 4.5 inches Aggregate				
2.0	SM	SILTY SAND, fine grained, dark brown. FILL				
5.0	CH	HIGHLY PLASTIC CLAY, brown, grey, mottled.	1	3	39.4	
7.5			2	4	34.0	
10.0	SP	POORLY GRADED SAND, fine grained, brown.  mottled.	3	11	10.1	
11.5			4	15	5.4	
		Boring complete to 11.5 feet. No water encountered during drilling. No water encountered to cave-in at 7' 2" after completion.				

# INDEPENDENT TESTING TECHNOLOGIES, INC. LOG OF SOIL BORING

**PROJECT: 23-190 CITY OF RAMSEY  
 BARTHEL'S RUM RIVER & WHITE PINES  
 ESTATES STREET RECONSTRUCTION  
 RAMSEY, MINNESOTA**

**DATE: 7/13/23 BORING #: SB-3  
 START TIME: 10:40 END TIME: 11:00**

**METHOD: 3 1/4" I.D. Hollow Stem Auger  
 CREW: CD/NH**

**LOCATION: Junkite St NW- See Boring Location**

**ELEVATION:**

**Page 1 of 1**

Depth (Feet)	ASTM Symbol	Soil Description	Sample #	N Value	W <sub>n</sub>	Notes
8.5"		<b>3.5 inches Bituminous, 5.0 inches Aggregate</b>				
	SP	POORLY GRADED SAND, fine grained, reddish brown.				
		FILL				
			1	13	4.8	
4.5						
5.0	SP-SM	POORLY GRADED SAND w/ SILT, fine grained, dark brown.				
			2	3	10.7	
6.5						
	SP	POORLY GRADED SAND, fine grained, brown.				
			3	5	5.1	
10.0		mottled.				
			4	10	8.3	
11.5						
		Boring complete to 11.5 feet. No water encountered during drilling. No water encountered to cave-in at 5' 2" after completion.				

# INDEPENDENT TESTING TECHNOLOGIES, INC. LOG OF SOIL BORING

**PROJECT: 23-190 CITY OF RAMSEY**  
**BARTHEL'S RUM RIVER & WHITE PINES**  
**ESTATES STREET RECONSTRUCTION**  
**RAMSEY, MINNESOTA**

**DATE: 7/13/23 BORING #: SB-4**  
**START TIME: 11:10 END TIME: 11:30**

**METHOD: 3 1/4" I.D. Hollow Stem Auger**  
**CREW: CD/NH**

**LOCATION: Germanium St NW- See Boring Location**

**ELEVATION:**

Depth (Feet)	ASTM Symbol	Soil Description	Sample #	N Value	W <sub>n</sub>	Notes
9.0"		4.0 inches Bituminous, 5.0 inches Aggregate				
5.0	SP	POORLY GRADED SAND, fine grained, brown.  light brown.  fine to medium grained, grey.	1	8	6.7	V Water encountered at 10' 0" during drilling.
			2	7	4.4	
10.0			3	11	10.7	
11.5			4	5	24.2	
		Boring complete to 11.5 feet. Water encountered at 10' 0" during drilling. No water encountered to cave-in at 6' after completion.				

# INDEPENDENT TESTING TECHNOLOGIES, INC. LOG OF SOIL BORING

**PROJECT: 23-190 CITY OF RAMSEY**  
**BARTHEL'S RUM RIVER & WHITE PINES**  
**ESTATES STREET RECONSTRUCTION**  
**RAMSEY, MINNESOTA**

**DATE: 7/13/23 BORING #: SB-5**  
**START TIME: 3:10 END TIME: 3:30**

**METHOD: 3 1/4" I.D. Hollow Stem Auger**  
**CREW: CD/NH**

**LOCATION: Germanium St NW- See Boring Location**

**ELEVATION:**

Depth (Feet)	ASTM Symbol	Soil Description	Sample #	N Value	W <sub>n</sub>	Notes
8.0"		3.0 inches Bituminous, 5.0 inches Aggregate				
	SM	SILTY SAND, fine grained, dark brown.				* roots
2.0		FILL				
	ML	SILT, grey.				
			1	3	27.3	
5.0						
	SP	POORLY GRADED SAND, fine grained, grey.				
			2	10	22.1	V Water encountered at 5' 7" during drilling.
		fine to medium grained.	3	4	23.5	
10.0						
			4	5	3.7	
11.5						
		Boring complete to 11.5 feet. Water encountered at 5' 7" during drilling. No water encountered to cave-in at 4' 10" after completion.				

# INDEPENDENT TESTING TECHNOLOGIES, INC.      LOG OF SOIL BORING

**PROJECT: 23-190 CITY OF RAMSEY**  
**BARTHEL'S RUM RIVER & WHITE PINES**  
**ESTATES STREET RECONSTRUCTION**  
**RAMSEY, MINNESOTA**

**DATE: 7/13/23      BORING #: SB-6**  
**START TIME: 1:00      END TIME: 1:20**

**METHOD: 3 1/4" I.D. Hollow Stem Auger**  
**CREW: CD/NH**

**LOCATION: Dysprosium St NW- See Boring Location**

**ELEVATION:**

Depth (Feet)	ASTM Symbol	Soil Description	Sample #	N Value	W <sub>n</sub>	Notes
8.5"		<b>2.5 inches Bituminous, 6.0 inches Aggregate</b>				
	SP	<b>POORLY GRADED SAND, fine grained, brown.</b>				
5.0			1	10	5.8	
			2	7	9.7	
			3	6	8.9	
10.0			4	7	11.5	
11.5						
		<b>Boring complete to 11.5 feet.</b> <b>No water encountered during drilling.</b> <b>No water encountered to cave-in at 5' 10" after completion.</b>				

# INDEPENDENT TESTING TECHNOLOGIES, INC.      LOG OF SOIL BORING

**PROJECT: 23-190 CITY OF RAMSEY**  
**BARTHEL'S RUM RIVER & WHITE PINES**  
**ESTATES STREET RECONSTRUCTION**  
**RAMSEY, MINNESOTA**

**DATE: 7/13/23      BORING #: SB-7**  
**START TIME: 2:20      END TIME: 2:35**

**METHOD: 3 1/4" I.D. Hollow Stem Auger**  
**CREW: CD/NH**

**LOCATION: Dysprosium St NW- See Boring Location**

**ELEVATION:**

Depth (Feet)	ASTM Symbol	Soil Description	Sample #	N Value	W <sub>n</sub>	Notes
7.5"		3.5 inches Bituminous, 4.0 inches Aggregate				
4.0	SP-SM	POORLY GRADED SAND w/ SILT, fine grained, reddish brown.	1	6	7.0	
5.0	SP	POORLY GRADED SAND, fine to medium grained, brown.	2	7	6.3	
		fine grained, light brown.	3	6	9.6	
10.0		fine to medium grained, brown.	4	8	7.5	
11.5		Boring complete to 11.5 feet. No water encountered during drilling. No water encountered to cave-in at 5' 4" after completion.				

# INDEPENDENT TESTING TECHNOLOGIES, INC.      LOG OF SOIL BORING

**PROJECT: 23-190 CITY OF RAMSEY**  
**BARTHEL'S RUM RIVER & WHITE PINES**  
**ESTATES STREET RECONSTRUCTION**  
**RAMSEY, MINNESOTA**

**DATE: 7/13/23      BORING #: SB-8**  
**START TIME: 11:35      END TIME: 12:30**

**METHOD: 3 1/4" I.D. Hollow Stem Auger**  
**CREW: CD/NH**

**LOCATION: Flourine St NW- See Boring Location**

**ELEVATION:**

Depth (Feet)	ASTM Symbol	Soil Description	Sample #	N Value	W <sub>n</sub>	Notes
7.75"		<b>3.75 inches Bituminous, 4.0 inches Aggregate</b>				
5.0	SP	POORLY GRADED SAND, fine grained, light greyish brown.	1	10	5.5	
			2	7	4.2	
10.0			3	10	6.7	
11.5			4	14	4.2	
		Boring complete to 11.5 feet. No water encountered during drilling. No water encountered to cave-in at 4' 4" after completion.				

# INDEPENDENT TESTING TECHNOLOGIES, INC.      LOG OF SOIL BORING

**PROJECT: 23-190 CITY OF RAMSEY**  
**BARTHEL'S RUM RIVER & WHITE PINES**  
**ESTATES STREET RECONSTRUCTION**  
**RAMSEY, MINNESOTA**

**DATE: 7/13/23      BORING #: SB-9**  
**START TIME: 12:40      END TIME: 1:00**

**METHOD: 3 1/4" I.D. Hollow Stem Auger**  
**CREW: CD/NH**

**LOCATION: 165th Ln NW- See Boring Location**

**ELEVATION:**

Depth (Feet)	ASTM Symbol	Soil Description	Sample #	N Value	W <sub>n</sub>	Notes
9.5"		4.5 inches Bituminous, 5.0 inches Aggregate				
5.0	SP	POORLY GRADED SAND, fine grained, brown.  light grey	1	5	3.7	
			2	8	4.4	
10.0			3	10	5.2	
11.5			4	7	3.0	
		Boring complete to 11.5 feet. No water encountered during drilling. No water encountered to cave-in at 5' 4" after completion.				

# INDEPENDENT TESTING TECHNOLOGIES, INC. LOG OF SOIL BORING

**PROJECT: 23-190 CITY OF RAMSEY**  
**BARTHEL'S RUM RIVER & WHITE PINES**  
**ESTATES STREET RECONSTRUCTION**  
**RAMSEY, MINNESOTA**

**DATE: 7/13/23 BORING #: SB-10**  
**START TIME: 2:50 END TIME: 3:10**

**METHOD: 3 1/4" I.D. Hollow Stem Auger**  
**CREW: CD/NH**

**LOCATION: 165th Ln NW- See Boring Location**

**ELEVATION:**

Depth (Feet)	ASTM Symbol	Soil Description	Sample #	N Value	W <sub>n</sub>	Notes	
8.5"		<b>4.5 inches Bituminous, 4.0 inches Aggregate</b>					
	SP	<b>POORLY GRADED SAND, fine grained, brown.</b>				* roots	
5.0			1	21	3.3		
			2	8	3.1		
		iron staining	3	9	7.7		
10.0		fine to medium grained	4	12	9.4		
11.5							
		<b>Boring complete to 11.5 feet.</b> <b>No water encountered during drilling.</b> <b>No water encountered to cave-in at 5' 8" after completion.</b>					

# INDEPENDENT TESTING TECHNOLOGIES, INC.      LOG OF SOIL BORING

**PROJECT: 23-190 CITY OF RAMSEY**  
**BARTHEL'S RUM RIVER & WHITE PINES**  
**ESTATES STREET RECONSTRUCTION**  
**RAMSEY, MINNESOTA**

**DATE: 7/13/23      BORING #: SB-11**  
**START TIME: 2:35      END TIME: 2:50**

**METHOD: 3 1/4" I.D. Hollow Stem Auger**  
**CREW: CD/NH**

**LOCATION: 165th Ln NW- See Boring Location**

**ELEVATION:**

Depth (Feet)	ASTM Symbol	Soil Description	Sample #	N Value	W <sub>n</sub>	Notes	
8.5"		<b>3.5 inches Bituminous, 5.0 inches Aggregate</b>					
	SC	CLAYEY SAND, fine grained, black, grey.  FILL				* roots	
4.0			1	7	27.7		
5.0	CH	HIGHLY PLASTIC CLAY, brown, mottled.					
7.5			2	7	27.1		
	SP	POORLY GRADED SAND, fine grained, light brown.					
10.0			3	19	3.0		
11.5			4	16	3.2		
		Boring complete to 11.5 feet. No water encountered during drilling. No water encountered to cave-in at 5' 10" after completion.					

# INDEPENDENT TESTING TECHNOLOGIES, INC. LOG OF SOIL BORING

**PROJECT: 23-190 CITY OF RAMSEY**  
**BARTHEL'S RUM RIVER & WHITE PINES**  
**ESTATES STREET RECONSTRUCTION**  
**RAMSEY, MINNESOTA**

**DATE: 7/13/23 BORING #: SB-12**  
**START TIME: 9:30 END TIME: 9:50**

**METHOD: 3 1/4" I.D. Hollow Stem Auger**  
**CREW: CD/NH**

**LOCATION: 164th Ln NW- See Boring Location**

**ELEVATION:**

**Page 1 of 1**

Depth (Feet)	ASTM Symbol	Soil Description	Sample #	N Value	W <sub>n</sub>	Notes	
14.75"		3.75 inches Bituminous, 11.0 inches Aggregate					
2.0	SM	SILTY SAND, fine grained, dark brown. FILL				* root/wood in cuttings	
5.0	SM	SILTY SAND, fine grained, brown, mottled.	1	5	13.2		
10.0	SP	POORLY GRADED SAND, fine to medium grained, brown.	2	9	16.8	V Water encountered at 9' during drilling.	
		greyish brown, mottled.	3	8	22.2		
11.5	CH	HIGHLY PLASTIC CLAY, grey.	4	3	34.5		
		Boring complete to 11.5 feet. Water encountered at 9' during drilling. No water encountered to cave-in at 5' 6" after completion.					

# INDEPENDENT TESTING TECHNOLOGIES, INC.      LOG OF SOIL BORING

**PROJECT: 23-190 CITY OF RAMSEY**  
**BARTHEL'S RUM RIVER & WHITE PINES**  
**ESTATES STREET RECONSTRUCTION**  
**RAMSEY, MINNESOTA**

**DATE: 7/13/23      BORING #: SB-13**  
**START TIME: 9:50      END TIME: 10:10**

**METHOD: 3 1/4" I.D. Hollow Stem Auger**  
**CREW: CD/NH**

**LOCATION: 164th Ln NW- See Boring Location**

**ELEVATION:**

**Page 1 of 1**

Depth (Feet)	ASTM Symbol	Soil Description	Sample #	N Value	W <sub>n</sub>	Notes
9.0"		3.0 inches Bituminous, 6.0 inches Aggregate				
5.0	SP	POORLY GRADED SAND, fine to medium grained, brown.	1	7	4.9	
7.5	CH	HIGHLY PLASTIC CLAY, brown, mottled.	2	11	33.1	
10.0	SP	POORLY GRADED SAND, fine grained, light brown.  reddish brown, mottled.	3	12	2.7	
			4	10	3.8	
11.5		Boring complete to 11.5 feet. No water encountered during drilling. No water encountered to cave-in at 4' 7" after completion.				

# INDEPENDENT TESTING TECHNOLOGIES, INC.      LOG OF SOIL BORING

**PROJECT: 23-190    CITY OF RAMSEY**  
**BARTHEL'S RUM RIVER & WHITE PINES**  
**ESTATES STREET RECONSTRUCTION**  
**RAMSEY, MINNESOTA**

**DATE: 7/13/23    BORING #: SB-14**  
**START TIME: 10:15    END TIME: 10:35**

**METHOD: 3 1/4" I.D. Hollow Stem Auger**  
**CREW: CD/NH**

**LOCATION: 164th Ln NW- See Boring Location**

**ELEVATION:**

Depth (Feet)	ASTM Symbol	Soil Description	Sample #	N Value	W <sub>n</sub>	Notes
9.25"		3.25 inches Bituminous, 6.0 inches Aggregate				
5.0	SP	POORLY GRADED SAND, fine grained, brown.  fine to medium grained, grey.	1	12	22.3	
			2	8	5.8	
			3	6	3.3	
			4	9	2.3	
10.0		fine grained.				
11.5		Boring complete to 11.5 feet. No water encountered during drilling. No water encountered to cave-in at 5' 7" after completion.				



# INDEPENDENT TESTING TECHNOLOGIES, INC. LOG OF SOIL BORING

**PROJECT: 23-190 CITY OF RAMSEY**  
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**ESTATES STREET RECONSTRUCTION**  
**RAMSEY, MINNESOTA**

**DATE: 7/13/23 BORING #: SB-16**  
**START TIME: 1:40 END TIME: 2:00**

**METHOD: 3 1/4" I.D. Hollow Stem Auger**  
**CREW: CD/NH**

**LOCATION: 164th Ln NW- See Boring Location**

**ELEVATION:**

**Page 1 of 1**

Depth (Feet)	ASTM Symbol	Soil Description	Sample #	N Value	W <sub>n</sub>	Notes
9.5"		3.5 inches Bituminous, 6.0 inches Aggregate				
5.0	SP	POORLY GRADED SAND, fine grained, brown.	1	7	14.7	
			2	4	5.7	
10.0		fine to medium grained.	3	8	4.5	
11.5			4	5	5.7	
		Boring complete to 11.5 feet. No water encountered during drilling. No water encountered to cave-in at 5' 4" after completion.				

# INDEPENDENT TESTING TECHNOLOGIES, INC. LOG OF SOIL BORING

**PROJECT: 23-190 CITY OF RAMSEY  
 BARTHEL'S RUM RIVER & WHITE PINES  
 ESTATES STREET RECONSTRUCTION  
 RAMSEY, MINNESOTA**

**DATE: 7/13/23 BORING #: SB-17  
 START TIME: 2:00 END TIME: 2:20**

**METHOD: 3 1/4" I.D. Hollow Stem Auger  
 CREW: CD/NH**

**LOCATION: 164th Ln NW- See Boring Location**

**ELEVATION:**

Depth (Feet)	ASTM Symbol	Soil Description	Sample #	N Value	W <sub>n</sub>	Notes
9.0"		3.0 inches Bituminous, 6.0 inches Aggregate				
5.0	SP	POORLY GRADED SAND, fine grained, light greyish brown.  fine to medium grained, light grey	1	10	4.8	
			2	4	13.9	
			3	3	17.1	
			4	8	4.2	
11.5		Boring complete to 11.5 feet. No water encountered during drilling. No water encountered to cave-in at 5' 7" after completion.				

## Unified Soil Classification (USC) System (from ASTM D 2487)

Major Divisions		Group Symbol	Typical Names
<b>Course-Grained Soils</b> More than 50% retained on the 0.075 mm (No. 200) sieve	<b>Gravels</b> 50% or more of course fraction retained on the 4.75 mm (No. 4) sieve	Clean Gravels	GW Well-graded gravels and gravel-sand mixtures, little or no fines
		Gravels with Fines	GP Poorly graded gravels and gravel-sand mixtures, little or no fines
		Gravels with Fines	GM Silty gravels, gravel-sand-silt mixtures
		Gravels with Fines	GC Clayey gravels, gravel-sand-clay mixtures
	<b>Sands</b> 50% or more of course fraction passes the 4.75 (No. 4) sieve	Clean Sands	SW Well-graded sands and gravelly sands, little or no fines
		Sands with Fines	SP Poorly graded sands and gravelly sands, little or no fines
		Sands with Fines	SM Silty sands, sand-silt mixtures
		Sands with Fines	SC Clayey sands, sand-clay mixtures
<b>Fine-Grained Soils</b> More than 50% passes the 0.075 mm (No. 200) sieve	<b>Silts and Clays</b> Liquid Limit 50% or less	ML Inorganic silts, very fine sands, rock flour, silty or clayey fine sands	
		CL Inorganic clays of low to medium plasticity, gravelly/sandy/silty/lean clays	
		OL Organic silts and organic silty clays of low plasticity	
	<b>Silts and Clays</b> Liquid Limit greater than 50%	MH Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts	
		CH Inorganic clays or high plasticity, fat clays	
		OH Organic clays of medium to high plasticity	
<b>Highly Organic Soils</b>		PT Peat, muck, and other highly organic soils	

Prefix: G = Gravel, S = Sand, M = Silt, C = Clay, O = Organic

Suffix: W = Well Graded, P = Poorly Graded, M = Silty, L = Clay, LL < 50%, H = Clay, LL > 50%

**Public Works Committee****Meeting Date:** 11/21/2023**Primary Strategic Plan Initiative:** Address infrastructure needs.**Title:**

Update on Halls Dover Acres Street Reconstructions, Improvement Project #24-02

**Purpose/Background:****Purpose:**

The purpose of this case is to update the Public Works Committee on the Halls Dover Acres Street Reconstructions, Improvement Project #24-02.

**Background:**

City Improvement Project #24-02 proposes to reconstruct the streets within the Halls Dover Acres subdivision, generally located east of Nowthen Boulevard between 157<sup>th</sup> Lane and 158<sup>th</sup> Lane. The 2023 – 2032 Capital Improvement Program (CIP) identifies the streets within this subdivision for street reconstruction in 2024. A street segment summary is attached to this case.

Existing Conditions

The streets are 24 feet wide rural section with drainage swales adjacent to the roadway, totaling 0.98 miles in length. Traffic counts have not been taken, but Staff anticipates higher than typical neighborhood traffic along 157<sup>th</sup> Lane due to the daycare center located at the intersection of 157<sup>th</sup> Lane and Nowthen Boulevard, but not rising to the level of a collector street.

Sewer and water exist in the subdivision to the east, but the Halls Dover Acres subdivision is not located within the MUSA. The 2040 Comprehensive Plan proposed water system improvements does include extending 12-inch trunk watermain along 157<sup>th</sup> Lane from Potassium Street to Nowthen Boulevard as part of a trunk system loop. This trunk watermain extension is proposed to occur as part of this project.

Project History

- 2023 – 2032 Capital Improvement Program – listed as street reconstruction for 2024.
- June 13, 2023, Resolution #23-130 the Ramsey City Council accepted proposals for topographic survey of the project area.
- June 27, 2023, Resolution #23-129 the Ramsey City Council accepted proposals for geotechnical report of the project area.
- August 22, 2023, Resolution #23-198 the Ramsey City Council ordered Staff to prepare plans and specifications.

Pavement History

The streets within Halls Dover Acres were built in 1976. The street received an overlay improvement in 1990, followed by crack seal / seal coat improvements in 1996 and 2004. Maintenance crews have performed patching over the last several years, including extensive patching in 2023.

Proposed Improvements

Staff review of the geotechnical report found generally sandy subsoils, ideal for both roadway embankment and utility support, throughout the project area. Because of this, subsoil corrections are not anticipated, and the full-depth reclamation (FDR) design process will be used. The existing alignment and profile of the streets are proposed to generally be put back to existing. However, Staff found the roadway curves and centerlines tend to meander within the right-of-way, this will cause the edge of pavement to move several inches horizontally, and

up to a foot from existing. Additionally, Staff found the existing roadway crown varies significantly throughout the project, with some areas having no crown or unanticipated super elevation. This project proposes to place a 3-percent crown throughout, which has become typical practice for rural reconstructions in Ramsey. The proposed section is 3.5-inches new bituminous pavement over 4 inches aggregate base, which will be made up of reclamation material. Driveway aprons will be going back approximately 8 feet to tie the driveways into the new pavement, materials are proposed to match existing.

In general, the current swales along the streets within Halls Dover Acres are not proposed to be re-graded as part of this project. Staff is aware of standing water issues within the Radium Circle cul-de-sac, which are proposed to be addressed. Additionally, the existing swale at the northwest quadrant of 157<sup>th</sup> Lane and Radium Street has filled, completely covering the culvert. The soils are so well draining that water does not stand, however, Staff must do grading work in the ditch for the new culvert to be properly installed. Otherwise, due to the nature of street reconstruction, the in-slopes of the swales along the pavement will likely be disturbed approximately 3 to 5 feet off the edge of pavement. No changes to the current drainage patterns are proposed. The existing culverts crossing the streets are proposed to be removed and replaced, this is to ensure the culverts will last at least through the proposed 60-year design life of the street.

A 12-inch trunk watermain is proposed to be extended from the existing end of line at Potassium Street, at the east edge of the Halls Dover Acres plat, along 157<sup>th</sup> Lane to Nowthen Boulevard. From there, the watermain will follow Nowthen Boulevard to Sunfish Lake Boulevard, and connect to an existing trunk watermain stub off of the Sodium Way cul-de-sac. In total the trunk watermain extension is approximately 2,100 lineal feet. Additionally, an 8-inch watermain line is proposed to extend down the Radium Street stub to the south, to serve future development to the south. Hydrants are proposed to be added at the corner of 157<sup>th</sup> Lane and Nowthen Boulevard, 157<sup>th</sup> Lane and Radium Street, and at the end of the stub on Radium Street. Because Halls Dover Acres is not in the MUSA, the project does not propose to extend sanitary sewer to the subdivision.

Staff has received some inquiries from residents if water and sewer will be available for hook-up during the project, though no formal requests have been made. Because the subdivision is not within the MUSA, sanitary sewer hook-ups would require a comprehensive plan amendment, and would delay the project beyond 2024 construction. There are some instances of properties within the City connecting to municipal water and not municipal sewer, staying on a private septic system, though it is not a common occurrence.

Staff would like Public Works Committee input on the following watermain decisions as part of this project:

- Does the Public Works Committee support the trunk watermain extension as part of this project?
  - If so, is the preference to extend only to Nowthen Boulevard, or complete the loop extension to Sodium Way off of Sunfish Lake Boulevard?
  - For reference, the corner of Nowthen Boulevard is approximately halfway along the 2,100 lineal foot route.
- Does the Public Works Committee support connections to the trunk watermain?
  - If so, do you wish for Staff to be pro-active and reach out to the residents along the proposed trunk watermain route, to see if they are interested in connecting?
  - Staff supports connections to the watermain if residents are able to make immediate connections, but would not support placing services out for potential connections only.

#### Preliminary Schedule Remaining

- Council Approves Plans and Specifications / Authorizes Ad for Bids
  - January 9, 2024
- Staff Receives Bids
  - February 21, 2024
- Council Awards Contract to the Lowest Responsible Bidder
  - February 27, 2024
- Contractor Begins Construction
  - Spring 2024

- Contractor Substantially Completes Construction
  - Watermain construction in-place
  - New bituminous pavement in-place, topsoil and seed in-place
  - August 2, 2024
- Contractor Final Completion
  - Watermain testing complete
  - Verify final restoration; punch list created
  - August 30, 2024

**Notification:**

Notification is not required for this case.

**Time Frame/Observations/Alternatives:**

**Timeframe:**

Staff estimates up to 20 minutes will be needed to present this case and respond to questions.

**Observations:**

Staff has completed the majority of design work for this project, though final plans have not been completed. To keep on a timeline for late winter / early spring project award Staff proposes to bring the final plans to City Council at the first meeting in January, which does not allow Public Works Committee to review the plans beforehand.

Estimates are CIP level, an updated estimate based on final plans will be brought to City Council during final plan approval and authorization to advertise for bids.

**Funding Source:**

Funding for this improvement is proposed to come from Pavement Management Funds, Storm Water Utility Funds, and Water Utility Funds.

- Street Project Costs           \$554,288
- Storm Sewer Project Costs   \$55,429
- Watermain Project Costs     \$250,000
- Total Estimated Costs       \$859,717

**Recommendation:**

Staff recommends completing the 12-inch trunk watermain extension from Potassium Street to the Sodium Way cul-de-sac off of Sunfish Lake Boulevard. Additionally, Staff recommends allowing service connections off of the trunk watermain to properties along the proposed route. However, Staff only supports allowing connections which will be ready for immediate hook-up, and does not recommend extending watermain in the subdivision beyond what is necessary for the trunk watermain loop connection.

**Outcome/Action:**

**Action:**

Staff would welcome committee input on completion of the trunk watermain loop connection and individual service connections as part of this project. Additionally, input on the level of outreach to impacted residents as to availability of service connections, if desired.

**Attachments**

- 24-02 Street Summary
- 24-02 Project Layout

## 2040 Comp Plan - Water Plan

### **Inbox**

Bruce Westby

Brian Hagen

Form Started By: Joe Feriancek

Final Approval Date: 11/16/2023

### **Reviewed By**

Bruce Westby

Brian Hagen

## **Form Review**

### **Date**

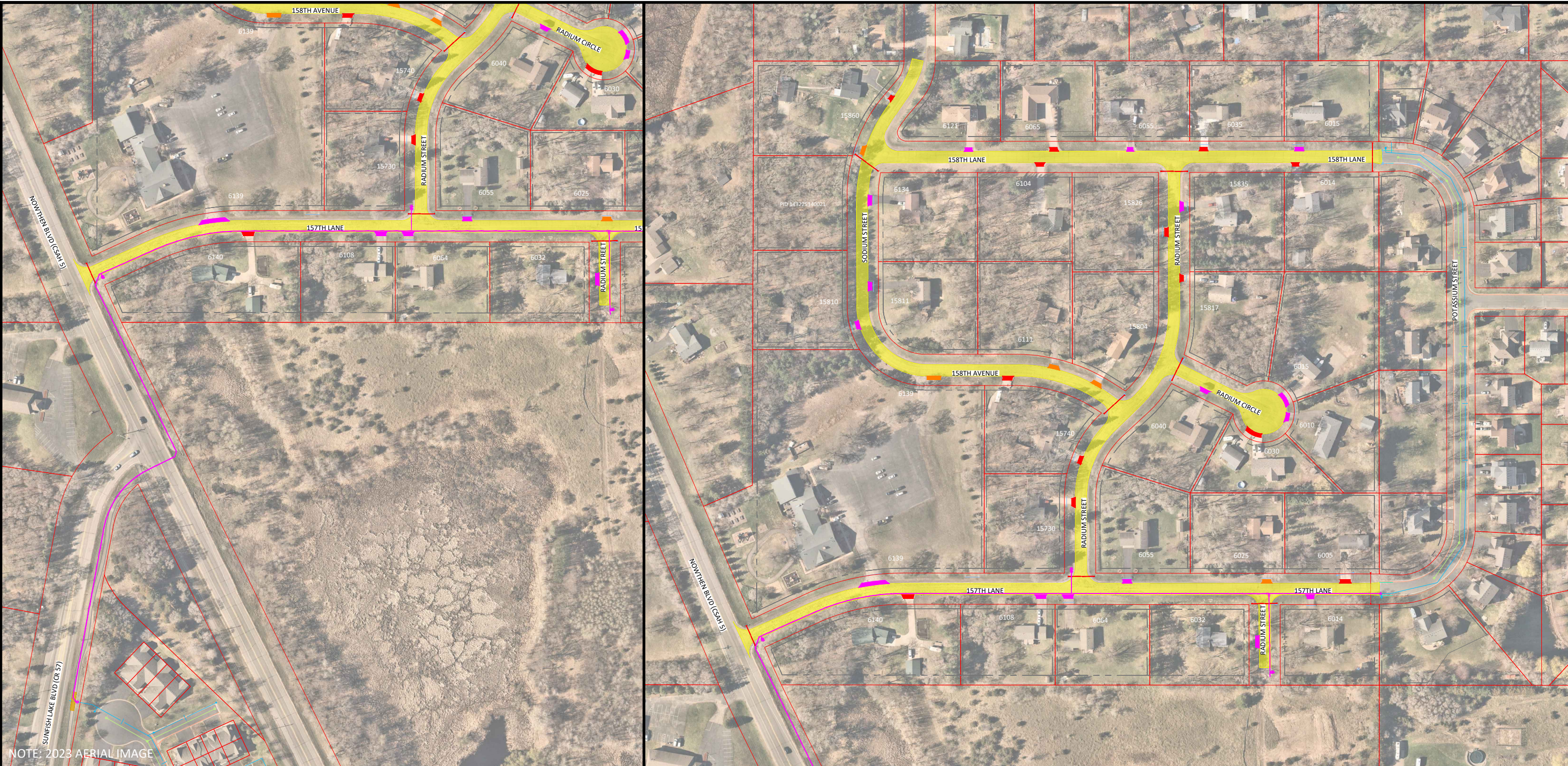
11/16/2023 10:47 AM

11/16/2023 03:29 PM

Started On: 11/14/2023 08:26 AM

**IP 24-02 Halls Dover Acres Street Reconstructions  
Street Segment Summary**

Subdivision	Street	Segment Description	Length (feet)	Section (Urban / Rural)	2021 PASER	Year Built	Maint. 1	Maint. 2	Maint. 3	Maint. 4	Maint. 5	Avg HMA (inches)	Avg Agg. Base (inches)	Avg Section (inches)
Halls Dover Acres	157th Lane	Nowthen Blvd / E EOP	1401	Rural	2	1976	SC 1981	OL 1990	SC 1996	SC 2004		3.7	3.8	7.5
	158th Avenue	NW PC Sodium Street & 158th Avenue / Radium Street	510	Rural	2	1976	SC 1981	OL 1990	SC 1996	SC 2004		3.2	5.0	8.2
	158th Lane	Sodium Street / E EOP	1130	Rural	2	1976	SC 1981	OL 1990	SC 1996	SC 2004		3.2	5.0	8.2
	Quicksilver Street	S EOP / 157th Lane	187	Rural	2	1976	SC 1981	OL 1990	SC 1996	SC 2004		3.7*	3.8*	7.5*
	Radium Circle	Radium Street / E CDS	289	Rural	2	1976	SC 1981	OL 1990	SC 1996	SC 2004		3.7	3.9	7.6
	Radium Street	157th Lane / 158th Lane	971	Rural	2	1976	SC 1981	OL 1990	SC 1996	SC 2004		3.7	4.3	8.0
	Sodium Street	NW PC 158th Avenue & Soium Street / N EOP	696	Rural	2	1976	SC 1981	OL 1990	SC 1996	SC 2004		3.2	3.4	6.8
	<i>Halls Dover Acres Total Length</i>			<i>5184</i>	<i>0.98 mi.</i>	<i>*GPR not available, depth estimated</i>								

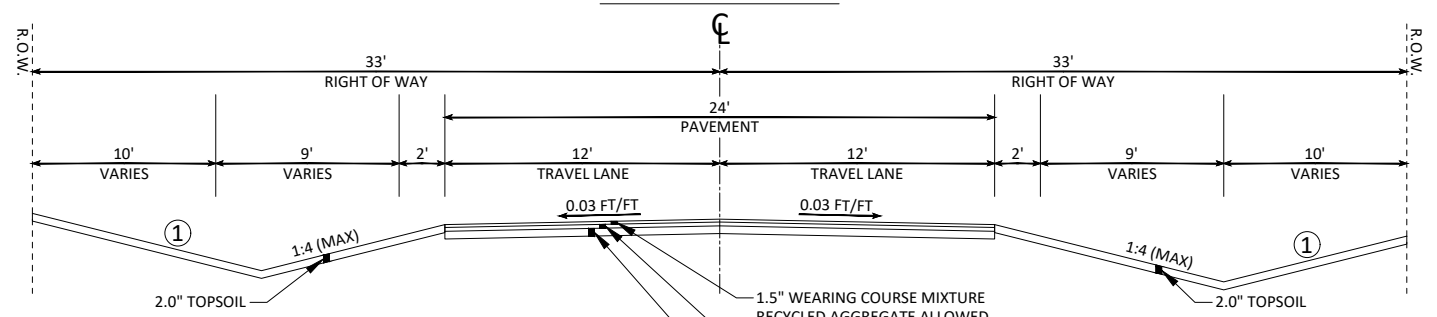


NOTE: 2023 AERIAL IMAGE

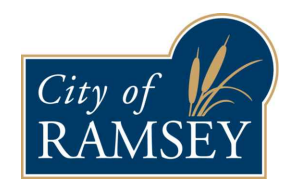
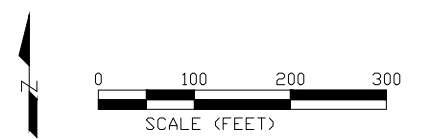
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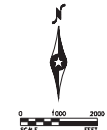
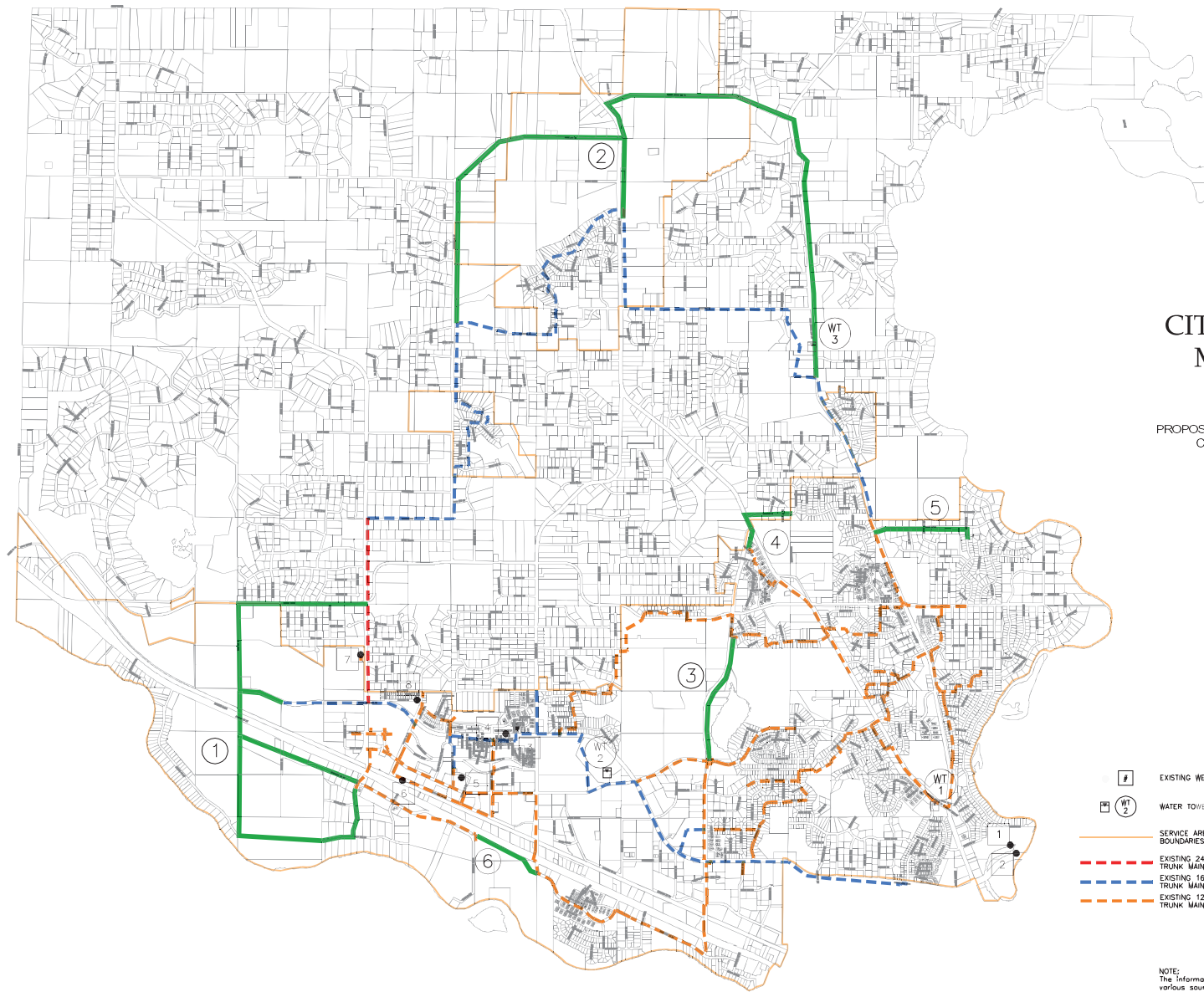
- |  |                             |  |                         |
|--|-----------------------------|--|-------------------------|
|  | BITUMINOUS ROADWAY          |  | EXISTING WATERMAIN      |
|  | BITUMINOUS TRAIL            |  | PROPOSED WATERMAIN      |
|  | DRIVEWAY - BITUMINOUS       |  | EXISTING STORM SEWER    |
|  | DRIVEWAY - CONCRETE         |  | PROPOSED STORM SEWER    |
|  | DRIVEWAY - GRAVEL           |  | EXISTING SANITARY SEWER |
|  | CITY-OWNED RIGHT OF WAY     |  |                         |
|  | DRAINAGE & UTILITY EASEMENT |  |                         |

### TYPICAL SECTION



**REFERENCE NOTES:**  
 ① GRADE TO MATCH EXISTING GROUND. ESTABLISH TURF USING A MINIMUM OF 2" TOPSOIL AND HYDROSEED WITH MNDOT SEED MIXTURE 25-151.





# CITY OF RAMSEY MINNESOTA

## FIGURE 1

PROPOSED WATER SYSTEM IMPROVEMENTS  
COMPREHENSIVE WATER PLAN  
SEPTEMBER 2017

### LEGEND

- |  |                         |             |                        |
|--|-------------------------|-------------|------------------------|
|  | EXISTING WELL           |             | 12" PROPOSED WATERMAIN |
|  | WATER TOWER             | <b>LOOP</b> | <b>LOCATION</b>        |
|  | SERVICE AREA BOUNDARIES | ①           | SOUTHWEST LOOP         |
|  | EXISTING 24" TRUNK MAIN | ②           | NORTH CENTRAL LOOP     |
|  | EXISTING 16" TRUNK MAIN | ③           | COUNTY ROAD 57         |
|  | EXISTING 12" TRUNK MAIN | ④           | CSAH 6/167th AVE NW    |
|  |                         | ⑤           | 158th LANE NW          |
|  |                         | ⑥           | RIVERDALE BOULEVARD    |

NOTE:  
The information for this map was obtained from various sources of existing maps, construction plans, and City records, some of which were prepared by others. While this information is believed to be reliable Bolton & Menk, Inc. is not responsible for its accuracy nor for errors or omissions which may have been incorporated into this document as a result.

**Public Works Committee****Meeting Date:** 11/21/2023**Primary Strategic Plan Initiative:** Address infrastructure needs.**Title:**

Consider recommending City Council authorization to prepare plans and specifications for 2024 MSA Pavement Overlay Improvements, Improvement Project #24-06

**Purpose/Background:****Purpose:**

The purpose of this case is to consider recommending City Council authorization to prepare plans and specifications for 2024 MSA Pavement Overlay Improvements, Improvement Project #24-06.

**Background:**

The proposed 2024 – 2033 Capital Improvement Program (CIP) identifies five (5) Municipal State Aid (MSA) street segments for pavement overlay improvements for 2024. Street segment summaries are attached to this case.

Project Scope

This project proposes to mill and overlay 5 street segments, generally spread across 3 areas across the City. The projects total approximately 1.44 miles in length, and all segments are anticipated to receive a 2-inch thick mill and overlay improvements. The project areas include:

- 142<sup>nd</sup> Avenue & Armstrong Boulevard
  - Generally located south of Riverdale Drive
  - Construction between 1981 and 1986
    - 0.84 miles of 24' wide rural section
  - Overlay improvement in 2006
  - Crack seal / seal coat improvement in 2011
- 160<sup>th</sup> Lane & Jasper Street
  - Generally located west of Ramsey Boulevard
  - Construction in 1985
    - 0.47 miles of mix 24' wide rural and urban section with bituminous curbing
  - Overlay improvement in 2000
  - Crack seal / seal coat in 2007 and 2018
- McKinley Street
  - Generally located west of Azurite Street
    - West end terminates at the property line for the Public Works Facility
  - Construction in 1997
    - 0.14 miles of 40' wide urban section with concrete curb and gutter
  - Crack seal / seal coat in 2003 and 2012

Proposed Improvements

Review of ground penetrating radar (GPR) data indicates sufficient existing bituminous thickness to perform a 2-inch mill and bituminous overlay in all project areas, which is being proposed. Per typical overlay improvements, spot concrete curb and gutter repairs will be performed on damaged curb. Where feasible, the City has switched to a saw & seal method for curb cracks at a significant cost savings. This is performed on hairline cracks, without vertical displacement. For the areas of bituminous curbing, repairs are not anticipated.

Municipal sewer and water only exist under McKinley Street. Staff is not proposing any repairs to watermain or sanitary sewer with this project. Minor storm sewer structure repairs, typically re-grouting catch basins, is

proposed.

The project areas do not have any pedestrian facilities, so no upgrades to pedestrian ramps will be required with these improvements.

**Project Timelines**

Staff is proposing to prepare plans and specifications for these improvements in-house, as part of their normal duties. The following are the proposed general project timelines:

- November 28, 2023 City Council authorization to prepare plans and specifications
- Jan. – Mar. 2024 Staff prepares plans and specifications
- Mar. – Apr. 2024 City Council approves plans, authorize bidding
- May – June 2024 Bid opening, City Council awards contracts
- Summer 2024 Construction

Staff proposes to bid 2024 projects separately, but to bid and award projects as close together as practical, which generally allows for a better bidding environment for the City.

**Notification:**

Notification is not required for this case.

**Time Frame/Observations/Alternatives:**

**Timeframe:**

Staff anticipates this case will take approximately 10 minutes to present and respond to questions.

**Observations:**

Estimates are CIP level and will be updated during the design process.

**Alternatives:**

Alternative #1: Motion to recommend City Council authorization to prepare plans and specifications for 2024 MSA Pavement Overlay Improvements, Improvement Project #24-06.

Alternative #2: Motion of other.

**Funding Source:**

Funding for this improvement is proposed to come from Municipal State Aid Funds and Stormwater Utility Funds.

- Street project costs \$366,900
- Stormwater project costs \$18,345
- Total project costs \$385,245

**Recommendation:**

Staff recommends alternative #1.

**Outcome/Action:**

Motion to recommend City Council authorization to prepare plans and specifications for 2024 MSA Pavement Overlay Improvements, Improvement Project #24-06.

---

**Attachments**

24-06 Street Summary

# Draft 2024 PMP Project Map

## Inbox

Bruce Westby

Brian Hagen

Form Started By: Joe Feriancek

Final Approval Date: 11/16/2023

## Reviewed By

Bruce Westby

Brian Hagen

## Form Review

### Date

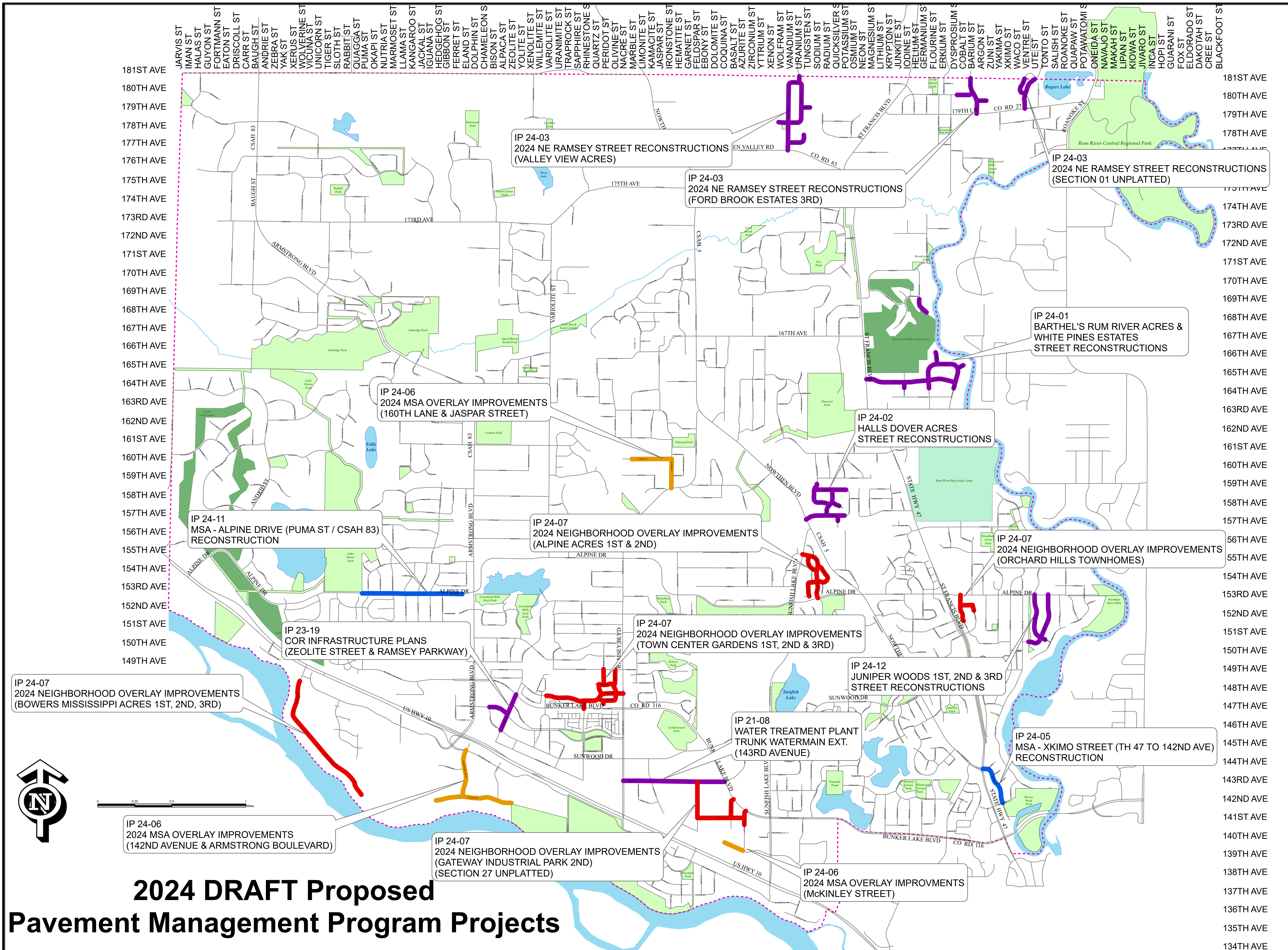
11/16/2023 10:40 AM

11/16/2023 02:30 PM

Started On: 11/14/2023 08:27 AM

IP 24-06  
2024 MSA Pavement Overlay Improvements  
Street Segment Summary

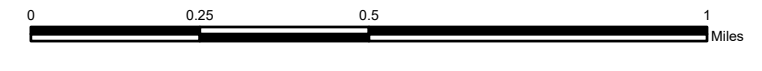
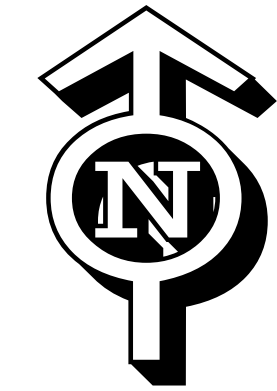
Subdivision	Street	Segment Description	Length (feet)	Section (Urban / Rural)	Curb (Bit / Conc.)	2023 PASER	Year Built	Maint. 1	Maint. 2	Maint. 3	Maint. 4	Maint. 5	Avg HMA (inches)	Avg Agg. Base (inches)	Avg Section (inches)
MSA 142nd Avenue & Armstrong Boulevard	142nd Avenue	Alpaca Street / EOP west	926	Rural	n/a	6	1981	SC 1987	SC 1997	OL 2006	SC 2011		3.6	3.3	6.9
	142nd Avenue	Armstrong Boulevard / EOP east	325	Rural	n/a	6	1986	SC 1994	OL 2006	SC 2011			3.6	3.3	6.9
	142nd Avenue	Cul-de-sac east / Alpaca Street	524	Rural	n/a	6	1981	SC 1987	SC 1997	OL 2006	SC 2011		3.6	3.3	6.9
	142nd Avenue	Cul-de-sac west / Armstrong Boulevard	964	Rural	n/a	6	1986	SC 1994	OL 2006	SC 2011			3.6	3.3	6.9
	Armstrong Boulevard	142nd Avenue / 144th Avenue	1025	Rural	n/a	6	1986	SC 1994	OL 2006	SC 2011			3.9	n/a**	n/a**
	Armstrong Boulevard	144th Avenue / EOP north	336	Rural	n/a	6	1986	SC 1994	OL 2006	SC 2011			3.9	n/a**	n/a**
	Armstrong Boulevard	Riverdale Drive / EOP south	328	Rural	n/a	9	1981	SC 1987	SC 1997				3.9	n/a**	n/a**
	<i>MSA - 142nd Avenue &amp; Armstrong Boulevard Total</i>			<i>4428</i>	<i>0.84 mi.</i>										
MSA 160th Lane & Jaspar Street	160th Lane	Cul-de-sac west / Jaspar Street	1423	Urban	Bit	6	1985	SC 1987	SC 1993	OL 2000	SC 2007	SC 2018	3.4	3.6	7.0
	Jaspar Street	Ramsey Boulevard / 160th Lane	1043	Rural	n/a	7	1985	SC 1987	SC 1993	OL 2000	SC 2007	SC 2018	3.4	2.8	6.2
	<i>MSA - 160th Lane &amp; Jaspar Street Total</i>			<i>2466</i>	<i>0.47 mi.</i>										
MSA McKinley Street	McKinley Street	County Line Section 24 / Azurite Street	717	Urban	Conc.	8	1997	SC 2003	SC 2012				4.2	0.0	4.2
	<i>MSA - McKinley Street Total</i>			<i>717</i>	<i>0.14 mi.</i>										
<b>2024 MSA Pavement Overlay Total</b>			<b>7611</b>	<b>1.44 mi.</b>											
													* Per As-Built, GPR not available **GPR poor GPS Reception		



## Legend

- 2024 MSA Recon.
- 2024 MSA Overlay
- 2024 Overlay
- 2024 Reconstruction
- Streets
- MuniBndry
- ScoutCamp
- Golf\_Courses
- Parks
- Rivers
- Lakes\_Ponds
- Creeks

# 2024 DRAFT Proposed Pavement Management Program Projects



181ST AVE  
180TH AVE  
179TH AVE  
178TH AVE  
177TH AVE  
176TH AVE  
175TH AVE  
174TH AVE  
173RD AVE  
172ND AVE  
171ST AVE  
170TH AVE  
169TH AVE  
168TH AVE  
167TH AVE  
166TH AVE  
165TH AVE  
164TH AVE  
163RD AVE  
162ND AVE  
161ST AVE  
160TH AVE  
159TH AVE  
158TH AVE  
157TH AVE  
156TH AVE  
155TH AVE  
154TH AVE  
153RD AVE  
152ND AVE  
151ST AVE  
150TH AVE  
149TH AVE  
148TH AVE  
147TH AVE  
146TH AVE  
145TH AVE  
144TH AVE  
143RD AVE  
142ND AVE  
141ST AVE  
140TH AVE  
139TH AVE  
138TH AVE  
137TH AVE  
136TH AVE  
135TH AVE  
134TH AVE

JARVIS ST  
IMAN ST  
HALAS ST  
GUYON ST  
FORTMANN ST  
EATON ST  
DRISCOLL ST  
CARR ST  
BAUGH ST  
ANDRIE ST  
ZEBRA ST  
YAK ST  
XERUS ST  
WOLVERINE ST  
VICUNA ST  
UNICORN ST  
TIGER ST  
SLOTH ST  
RABBIT ST  
QUAGGA ST  
PUMA ST  
OKAPI ST  
NUTRIA ST  
MARMOSSET ST  
LLAMA ST  
KANGAROO ST  
JACKAL ST  
IGUANA ST  
HEDGEHOG ST  
GIBBON ST  
FERRET ST  
ELAND ST  
DOLPHIN ST  
CHAMELEON S  
BISON ST  
ALPACA ST  
ZEOLITE ST  
YOLITE ST  
XENOLITE ST  
WILLEMITE ST  
VARIOLITE ST  
URANIMITE ST  
TRAPROCK ST  
SAPPHIRE ST  
RHINESTONE S  
QUARTZ ST  
PERIDOT ST  
OLIVINE ST  
NAGRE ST  
MARBLE ST  
LIMONITE ST  
KAMACITE ST  
JASPAR ST  
IRONSTONE ST  
HEMATITE ST  
GARNET ST  
FELDSPAR ST  
EBONY ST  
DOLOMITE ST  
COQUINA ST  
BASALT ST  
ZIRCONIUM ST  
YTRIUM ST  
XENON ST  
WOLFRAM ST  
VANADIUM ST  
URANIUM ST  
TUNGSTEN ST  
SODIUM ST  
RADIUM ST  
QUICKSILVER S  
POTASSIUM ST  
OSMIUM ST  
NEON ST  
MAGNESIUM ST  
LITHIUM ST  
KRYPTON ST  
JUNKITE ST  
IODINE ST  
HELIUM ST  
GERMANIUM S  
FLOURINE ST  
ERKLIUM ST  
DYSPROSIUM S  
COBALT ST  
BARIUM ST  
ARGON ST  
ZUNI ST  
YAKIMA ST  
XKIMO ST  
WACO ST  
VENTRE ST  
UTE ST  
TONTO ST  
SALISH ST  
ROANOKE ST  
QUAPAW ST  
POTAWATOMI S  
ONEIDA ST  
NAVAJO ST  
MAKAH ST  
LIPAN ST  
KIOWA ST  
JIVARO ST  
INCA ST  
HOPI ST  
GUARANI ST  
FOX ST  
ELDORADO ST  
DAKOTAH ST  
CREE ST  
BLACKFOOT ST

**Public Works Committee****Meeting Date:** 11/21/2023**Primary Strategic Plan Initiative:** Address infrastructure needs.**Title:**

Consider recommending City Council authorization to prepare plans and specifications for 2024 Neighborhood Pavement Overlay Improvements, Improvement Project #24-07

**Purpose/Background:****Purpose:**

The purpose of this case is to consider recommending City Council authorization to prepare plans and specifications for 2024 Neighborhood Pavement Overlay Improvements, Improvement Project #24-07.

**Background:**

The proposed 2024 – 2033 Capital Improvement Program (CIP) identifies seven (7) subdivisions for pavement overlay improvements in 2024. Street segment summaries are attached to this case.

This project proposes to mill and overlay 7 subdivisions across the City. The projects total approximately 4.16 miles in length, with a varying mill thicknesses proposed. The project areas include:

- **Alpine Acres 1st & 2nd**

- Generally located east of Sunfish Lake Blvd and north of Alpine Drive
  - Residential townhouse subdivision
  - Construction in 2004
    - 0.85 miles of 32' wide urban section with concrete curb & gutter
  - Crack seal / seal coat improvements in 2009 and 2016
  - Crack seal improvement in 2023
- Subdivision was prioritized due to pavement stripping

- **Bowers Mississippi Acres 1st, 2nd, & 3rd**

- Generally located south of Riverdale Drive and 148<sup>th</sup> Avenue
  - Residential single-family house subdivision
  - Construction in 1982
    - 0.99 miles of mix 24' wide urban section with bituminous curbing and rural section with drainage swales adjacent to roadway
  - Crack seal / seal coat improvement in 1996
  - Overlay improvement in 2004
  - Crack seal / seal coat improvements in 2009 and 2016
- Subdivision was prioritized due to concerns pavement conditions falling beyond scope of pavement overlay improvement

- **Gateway Industrial Park 2nd**

- Generally located southwest of Bunker Lake Blvd and Sunfish Lake Blvd
  - Commercial / Industrial subdivision
  - Constructed between 1991 and 2003
    - 0.32 miles of 38' wide urban section with concrete curb and gutter
  - Crack seal / seal coat improvements in 2003, 2012 and 2017

- **Section 27 Unplatted**

- Generally located southwest of Bunker Lake Blvd and Sunfish Lake Blvd
  - Commercial / Industrial subdivision
  - Constructed in 2001
    - 0.47 miles of 40' wide urban section with concrete curb and gutter
  - Crack seal / seal coat improvements in 2006 and 2018

- **Orchard Hills Townhomes**

- Generally located south of Alpine Drive and east of TH 47
  - Residential townhouse subdivision
  - Construction in 2001
    - 0.30 miles of 32' wide urban section with concrete curb & gutter
  - Crack seal / seal coat improvements in 2006 and 2013
  - Crack seal improvement in 2021

- **Seasons of Ramsey**

- Generally located north of Bunker Lake Blvd, east of Center Street
  - Residential single-family and townhouse subdivision
  - Construction in 2013
    - 0.08 miles of 31' wide urban section with concrete curb & gutter
  - Subdivision was prioritized due to pavement condition and project location
    - Street patching due to Garden View development service connections
    - Development contributed funds towards overlay improvements

- **Town Center Gardens 1st, 2nd, & 3rd**

- Generally located north of Bunker Lake Blvd, west of Ramsey Blvd
  - Residential townhouse subdivision
  - Construction between 2004 and 2005
    - 1.14 miles of 32' wide urban section with concrete curb & gutter
  - Crack seal / seal coat improvement in 2010
  - Crack seal improvement in 2021

### Proposed Improvements

Review of ground penetrating radar (GPR), as-built plans, and the Bowers Drive Mill and Overlay Evaluation performed by Braun Intertec indicates three separate mill and overlay thicknesses will be used on the various street segments. Orchard Hills Townhomes subdivision does not have sufficient pavement thickness for a 2-inch mill and overlay improvements, therefore a 1.5-inch mill and bituminous overlay will likely be used. During design, other mill depths will be explored to determine the most efficient pavement section. After review of the Bowers Drive Mill and Overlay Evaluation, which is attached to this case for reference, Staff is proposing to perform a full-depth mill and pavement overlay. Additionally, some minor base corrections are anticipated to be required. All remaining subdivisions have sufficient existing bituminous thickness to perform a 2-inch mill and bituminous overlay.

Per typical overlay improvements, spot concrete curb and gutter repairs will be performed on damaged curb. Where feasible, the City has switched to a saw & seal method for curb cracks at a significant cost savings. This is performed on hairline cracks, without vertical displacement. For areas of bituminous curbing, repairs to the curbing are not anticipated, though the City typically updates curb adjacent to storm sewer inlets to concrete during mill and overlay projects.

Municipal sewer and water exist under all street segments in the project except for Bowers Drive. This project is not proposing any repairs to watermain or sanitary sewer. Minor storm sewer structure repairs, typically

re-grouting catch basins, is proposed. Additionally, Staff will review sanitary sewer castings to determine if they meet the current specifications.

Four of the townhouse subdivisions include extensive pedestrian ramps which do not meet current American with Disability Act (ADA) standards, and will require upgrades. On November 14, 2023, City Council accepted a proposal from Bolton & Menk, Inc to perform a topographic survey of the pedestrian ramps, which Staff will use to design the ADA pedestrian ramp improvements.

Project Timelines

Staff is proposing to prepare plans and specifications for these improvements in-house, as part of their normal duties. The following are the proposed general project timelines:

- November 28, 2023 City Council authorization to prepare plans and specifications
- Jan. – Mar. 2024 Staff prepares plans and specifications
- Mar. – Apr. 2024 City Council approves plans, authorize bidding
- May – June 2024 Bid opening, City Council awards contracts
- Summer 2024 Construction

Staff proposes to bid 2024 projects separately, but to bid and award projects as close together as practical, which generally allows for a better bidding environment for the City.

**Notification:**

Notification is not required for this case.

**Time Frame/Observations/Alternatives:**

**Timeframe:**

Staff anticipates this case will take approximately 15 minutes to present and respond to questions.

**Observations:**

Estimates are CIP level and will be updated during the design process.

**Alternatives:**

Alternative #1: Motion to recommend City Council authorization to prepare plans and specifications for 2024 Neighborhood Pavement Overlay Improvements, Improvement Project #24-07.

Alternative #2: Motion of other.

**Funding Source:**

Funding for this improvement is proposed to come from Pavement Management Funds and Stormwater Utility Funds.

- Street project costs \$1,571,100
- Stormwater project costs \$114,195
- Total project costs \$1,685,295

**Recommendation:**

Staff recommends alternative #1.

**Outcome/Action:**

Motion to recommend City Council authorization to prepare plans and specifications for 2024 Neighborhood Pavement Overlay Improvements, Improvement Project #24-07.

---

## Attachments

2024 PMP Project Map  
Bowers Drive Mill and Overlay Evaluation  
24-07 Street Summary

## Form Review

**Inbox**

Bruce Westby

Brian Hagen

Form Started By: Joe Feriancek

Final Approval Date: 11/16/2023

**Reviewed By**

Bruce Westby

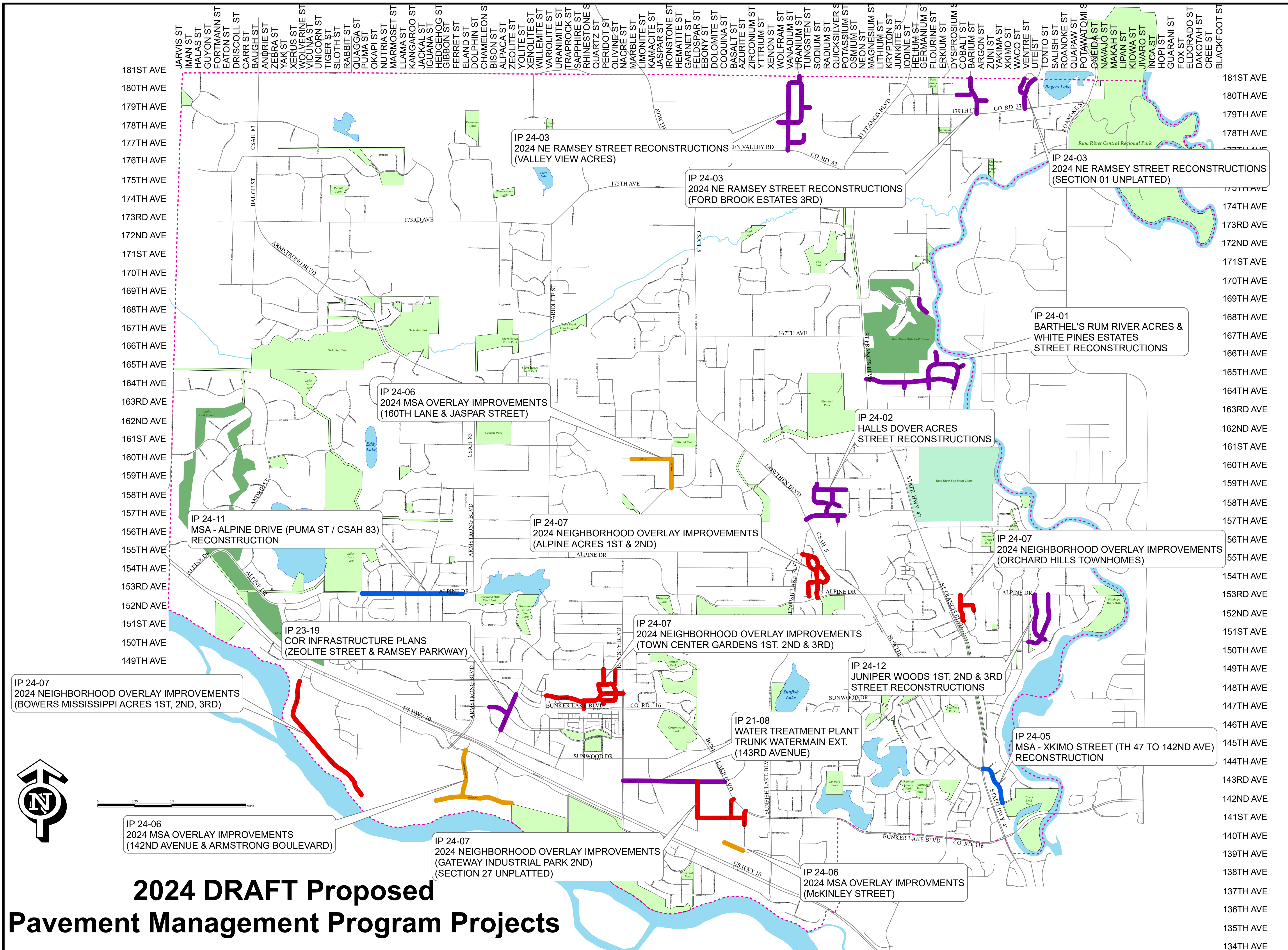
Brian Hagen

**Date**

11/16/2023 10:38 AM

11/16/2023 02:31 PM

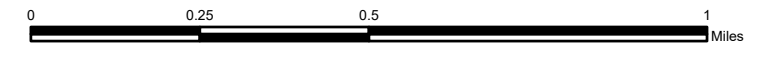
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## Legend

- 2024 MSA Recon.
- 2024 MSA Overlay
- 2024 Overlay
- 2024 Reconstruction
- Streets
- MuniBndry
- ScoutCamp
- Golf\_Courses
- Parks
- Rivers
- Lakes\_Ponds
- Creeks

# 2024 DRAFT Proposed Pavement Management Program Projects



181ST AVE  
180TH AVE  
179TH AVE  
178TH AVE  
177TH AVE  
176TH AVE  
175TH AVE  
174TH AVE  
173RD AVE  
172ND AVE  
171ST AVE  
170TH AVE  
169TH AVE  
168TH AVE  
167TH AVE  
166TH AVE  
165TH AVE  
164TH AVE  
163RD AVE  
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161ST AVE  
160TH AVE  
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158TH AVE  
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153RD AVE  
152ND AVE  
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146TH AVE  
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141ST AVE  
140TH AVE  
139TH AVE  
138TH AVE  
137TH AVE  
136TH AVE  
135TH AVE  
134TH AVE

IP 24-07  
2024 NEIGHBORHOOD OVERLAY IMPROVEMENTS  
(BOWERS MISSISSIPPI ACRES 1ST, 2ND, 3RD)

IP 24-11  
MSA - ALPINE DRIVE (PUMA ST / CSAH 83)  
RECONSTRUCTION

IP 23-19  
COR INFRASTRUCTURE PLANS  
(ZEOLITE STREET & RAMSEY PARKWAY)

IP 24-06  
2024 MSA OVERLAY IMPROVEMENTS  
(142ND AVENUE & ARMSTRONG BOULEVARD)

IP 24-07  
2024 NEIGHBORHOOD OVERLAY IMPROVEMENTS  
(GATEWAY INDUSTRIAL PARK 2ND)  
(SECTION 27 UNPLATTED)

IP 24-07  
2024 NEIGHBORHOOD OVERLAY IMPROVEMENTS  
(ALPINE ACRES 1ST & 2ND)

IP 24-07  
2024 NEIGHBORHOOD OVERLAY IMPROVEMENTS  
(TOWN CENTER GARDENS 1ST, 2ND & 3RD)

IP 21-08  
WATER TREATMENT PLANT  
TRUNK WATERMAIN EXT.  
(143RD AVENUE)

IP 24-06  
2024 MSA OVERLAY IMPROVEMENTS  
(MCKINLEY STREET)

IP 24-12  
JUNIPER WOODS 1ST, 2ND & 3RD  
STREET RECONSTRUCTIONS

IP 24-07  
2024 NEIGHBORHOOD OVERLAY IMPROVEMENTS  
(ORCHARD HILLS TOWNHOMES)

IP 24-05  
MSA - XKIMO STREET (TH 47 TO 142ND AVE)  
RECONSTRUCTION

IP 24-02  
HALLS DOVER ACRES  
STREET RECONSTRUCTIONS

IP 24-06  
2024 MSA OVERLAY IMPROVEMENTS  
(160TH LANE & JASPAR STREET)

IP 24-03  
2024 NE RAMSEY STREET RECONSTRUCTIONS  
(FORD BROOK ESTATES 3RD)

IP 24-03  
2024 NE RAMSEY STREET RECONSTRUCTIONS  
(VALLEY VIEW ACRES)

IP 24-03  
2024 NE RAMSEY STREET RECONSTRUCTIONS  
(SECTION 01 UNPLATTED)

IP 24-01  
BARTHEL'S RUM RIVER ACRES &  
WHITE PINES ESTATES  
STREET RECONSTRUCTIONS

October 11, 2023

Project B2307595

Joe Feriancek, PE  
City of Ramsey  
7500 Sunwood Drive NW  
Ramsey, MN 55303

Re: Pavement Evaluation  
Bowers Drive Mill and Overlay Evaluation  
US 10 to Cul-de-sac  
Ramsey, Minnesota

Dear Mr. Feriancek:

We are pleased to present this Pavement Evaluation Report for the Bowers Drive Mill and Overlay project in Ramsey, Minnesota. The purpose of our evaluation was to extract pavement cores, perform hand auger soil borings, and provide this letter with our recommendations for the project.

We performed our work in general accordance with our Authorization for Services (QTB182268) for the project dated July 28, 2023.

### Coring and Hand Auger Borings

In August 2023, we conducted a subsurface investigation by extracting bituminous pavement cores at 11 locations selected by the City of Ramsey. In six of these locations, we extended manual soil borings (hand auger borings) to depths of about 2 feet below the surface. A sketch of these exploration locations is attached to this report.

Table 1 summarizes the bituminous and aggregate base thicknesses as well as the subgrade soils encountered. The table also provides comments on the condition of the bituminous materials. Photos of the cores are attached to this report along with a Descriptive Terminology of Soil for interpreting terms and abbreviations used below.

**Table 1. Pavement Core and Hand Auger Boring Summary**

Core	Bit. Thickness (inches)	Core Condition	Apparent Aggregate Base Thickness (inches)	Apparent Aggregate Base Layer Description	Subbase/Subgrade Soil
PC-1	3	Crack through core, low-severity stripping	5	Sand and gravel	Silty sand (SM), fine-grained, trace gravel, dark brown, moist (to 26 inches)
PC-2	3 1/2	Cracks through core	**	**	**
PC-3	3 3/4	Crack through core	3	Sand and gravel (fine)	Poorly graded sand (SP), fine-grained, brown, moist (to 26 inches)

Core	Bit. Thickness (inches)	Core Condition	Apparent Aggregate Base Thickness (inches)	Apparent Aggregate Base Layer Description	Subbase/Subgrade Soil
PC-4	3 1/4	Cracks through core, low-severity stripping	**	**	**
PC-5	5	Crack through core, low-severity stripping	12	Sand and gravel	Poorly graded sand with silt (SP-SM), fine-grained, brown, moist (to 28 inches)
PC-6	2 1/4	Cracks through core	**	**	**
PC-7	2 3/4	Cracks through core; high severity stripping, debonding	4	Sand and gravel	Silty sand (SM), fine-grained, dark brown, moist (to 17 inches) Sandy lean clay (CL), brown, moist (17 to 27 inches)
PC-8	3 3/4	Cracks through core	**	**	**
PC-9	2 3/4	Cracks through core; high severity stripping, debonding	4	Sand and gravel	Silty sand (SM), fine-grained, dark brown, moist (to 17 inches) Sandy lean clay (CL), brown, moist (17 to 27 inches)
PC-10	3	Cracks through core; high severity stripping, debonding	**	**	**
PC-11	3 1/2	Cracks through core	24	Sand and gravel	Poorly graded sand (SP), fine-grained, brown, moist (to 36 inches)

\*\*Hand auger not performed

The bituminous materials varied in condition, though many included stripping, cracking, and/or debonding. Stripping nearly always begins at the bottom of the bituminous layer where it may be in contact with saturated aggregate or soil and proceeds upward. Low-severity stripping is common in bituminous pavements over time. However, those that have stripped to moderate or severe degrees should not be considered for rehabilitation methods that may leave the damaged portion of the pavement in place, such as mill and overlay.

The apparent aggregate base was typically thin and consisted of sand/gravel. The aggregate was sometimes underlain by fill material of a similar nature, making it more difficult to distinguish from the aggregate base.

The subgrade soils underlying apparent aggregate base consisted of mainly of granular soils with varying silt content. The exception is PC-7, where we penetrated a layer of sandy lean clay between 17 inches deep and the termination of the hand auger boring.

## Discussion and Recommendations

The bituminous materials recovered by coring were mostly thin, and in most cases included cracks through the cores, debonding, stripping, or some combination thereof. A previous overlay was visible in these cores that was usually in better condition than the underlying materials, which are of unknown age.

The service life of a mill and overlay will usually range from about 10 to 16 years with materials in fair or good condition. However, the widespread cracking and material degradation will reduce this service life by several years and can also complicate or slow construction by causing the machine to break through or damage the pavements left in place. A detailed evaluation of pavement surface conditions, which will influence the suitability and service life of the overlay, was outside of the scope of our evaluation. This will be the primary factor influencing the performance of mill and overlay as a rehabilitation option.

If mill and overlay will proceed, we recommend a mill depth of 1 1/2 inches, with a 1 1/2-inch-thick replacement mix meeting SPWEA240B. Thicker mill depths will risk breaking through the thin or damaged areas or will leave too little pavement to support construction equipment.

The risk and additional cost of repairs with additional milling and/or excavation to reach a suitable surface for overlay placement should be considered. This may include repair of severe longitudinal and transverse cracking, alligator/fatigue cracking of any severity, potholes, and other similar failures. MnDOT defines these distresses as follows in their surface rating procedure:

- High-severity linear cracking: Any crack with significant adjacent random cracking (12 inches or more apart), large areas of spalling, missing material and/or potholes.
- Alligator cracking: A series of interconnected cracks forming many-sided, sharp-angled pieces, 6 inches or less in size typically located in the wheelpaths or where traffic loads are concentrated.

We recommend full depth milling or sawcutting and complete removal of pavements exhibiting these conditions, recompaction of the exposed soils and replacement with the same thickness of bituminous materials used for the overlay. We recommend having an experienced engineer walk the milled surface to delineate areas where further repair may be warranted based on conditions exposed by the milling process.

If the potential service life or cost of the mill and overlay as described above is not acceptable, an option is to full depth mill the damaged pavements and replace them with at least 3 inches of SPWEA240C in two lifts. This will provide the opportunity to recompact aggregate materials, test roll and treat soft subgrades and perform fine grading, all of which will contribute to a more uniform pavement section that will have a service life of 15 to 20 years.

All mixes should meet the requirements outlined in MnDOT Specification 2360. We recommend tack coat meeting MnDOT Specification 2357 be placed between the lifts and along vertical faces where paving will match adjacent pavement. We recommend Gyrotory tests on bituminous mixes to evaluate strength and air voids, and density tests to evaluate compaction.

## General Remarks

This report is for the exclusive use of the addressed parties. Without written approval, we assume no responsibility to other parties regarding this report. Our evaluation, analyses, and recommendations may not be appropriate for other parties or projects.

In performing its services, Braun Intertec used that degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession currently practicing in the same locality. No warranty, express or implied, is made.

We appreciate the opportunity to be of service to you for this pavement evaluation. If you have any questions about this report, please contact Neil Lund at 952.995.2284.

Sincerely,

BRAUN INTERTEC CORPORATION

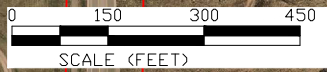
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Neil G. Lund, PE  
Technical Manager, Senior Engineer  
License Number: 46212  
October 11, 2023

Brian J. Schreurs, PE  
Account Manager, Senior Engineer

### Appendix:

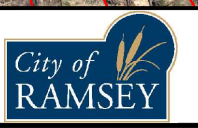
Bowers Drive Pavement Cores Exhibit (provided by City of Ramsey)  
Descriptive Terminology of Soil  
Core Photo Log



DATE	REVISION

DESIGNED BY: ---
DRAWN BY: ---
CHECKED BY: ---

DATE: 7/25/23
FILE: ---



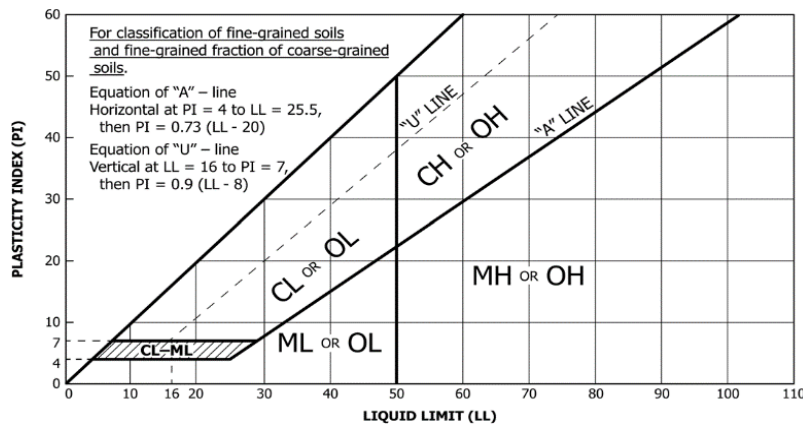
CITY OF RAMSEY  
7550 SUNWOOD DRIVE  
RAMSEY, MN 55303  
(763) 427-1410 FAX (763) 433-9898

**BOWERS DRIVE PAVEMENT CORES**

--  
CITY PROJECT NO. --  
CITY OF RAMSEY, MINNESOTA

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests <sup>A</sup>			Soil Classification		
			Group Symbol	Group Name <sup>B</sup>	
Coarse-grained Soils (more than 50% retained on No. 200 sieve)	Gravels (More than 50% of coarse fraction retained on No. 4 sieve)	Clean Gravels (Less than 5% fines <sup>C</sup> )	$C_u \geq 4$ and $1 \leq C_c \leq 3^D$	GW	Well-graded gravel <sup>E</sup>
		Gravels with Fines (More than 12% fines <sup>C</sup> )	$C_u < 4$ and/or ( $C_c < 1$ or $C_c > 3^D$ )	GP	Poorly graded gravel <sup>E</sup>
			Fines classify as ML or MH	GM	Silty gravel <sup>EFG</sup>
		Sands (50% or more coarse fraction passes No. 4 sieve)	Clean Sands (Less than 5% fines <sup>H</sup> )	$C_u \geq 6$ and $1 \leq C_c \leq 3^D$	SW
	Sands with Fines (More than 12% fines <sup>H</sup> )		$C_u < 6$ and/or ( $C_c < 1$ or $C_c > 3^D$ )	SP	Poorly graded sand <sup>I</sup>
			Fines classify as ML or MH	SM	Silty sand <sup>FGI</sup>
	Fines classify as CL or CH		SC	Clayey sand <sup>FGI</sup>	
	Fine-grained Soils (50% or more passes the No. 200 sieve)	Silts and Clays (Liquid limit less than 50)	Inorganic	PI > 7 and plots on or above "A" line <sup>J</sup>	CL
PI < 4 or plots below "A" line <sup>J</sup>				ML	Silt <sup>KLM</sup>
Organic			Liquid Limit - oven dried	OH	Organic clay <sup>KLMN</sup>
			Liquid Limit - not dried < 0.75		
Silts and Clays (Liquid limit 50 or more)		Inorganic	PI plots on or above "A" line	CH	Fat clay <sup>KLM</sup>
			PI plots below "A" line	MH	Elastic silt <sup>KLM</sup>
		Organic	Liquid Limit - oven dried	OH	Organic clay <sup>KLMN</sup>
			Liquid Limit - not dried < 0.75		
Highly Organic Soils	Primarily organic matter, dark in color, and organic odor		PT	Peat	

- A. Based on the material passing the 3-inch (75-mm) sieve.
- B. If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.
- C. Gravels with 5 to 12% fines require dual symbols:  
GW-GM well-graded gravel with silt  
GW-GC well-graded gravel with clay  
GP-GM poorly graded gravel with silt  
GP-GC poorly graded gravel with clay
- D.  $C_u = D_{60} / D_{10}$        $C_c = (D_{30})^2 / (D_{10} \times D_{60})$
- E. If soil contains  $\geq 15\%$  sand, add "with sand" to group name.
- F. If fines classify as CL-ML, use dual symbol GC-GM or SC-SM.
- G. If fines are organic, add "with organic fines" to group name.
- H. Sands with 5 to 12% fines require dual symbols:  
SW-SM well-graded sand with silt  
SW-SC well-graded sand with clay  
SP-SM poorly graded sand with silt  
SP-SC poorly graded sand with clay
- I. If soil contains  $\geq 15\%$  gravel, add "with gravel" to group name.
- J. If Atterberg limits plot in hatched area, soil is CL-ML, silty clay.
- K. If soil contains 15 to < 30% plus No. 200, add "with sand" or "with gravel", whichever is predominant.
- L. If soil contains  $\geq 30\%$  plus No. 200, predominantly sand, add "sandy" to group name.
- M. If soil contains  $\geq 30\%$  plus No. 200 predominantly gravel, add "gravelly" to group name.
- N. PI  $\geq 4$  and plots on or above "A" line.
- O. PI < 4 or plots below "A" line.
- P. PI plots on or above "A" line.
- Q. PI plots below "A" line.



<b>DD</b> Dry density, pcf	<b>q<sub>p</sub></b> Pocket penetrometer strength, tsf
<b>WD</b> Wet density, pcf	<b>q<sub>u</sub></b> Unconfined compression test, tsf
<b>P200</b> % Passing #200 sieve	<b>LL</b> Liquid limit
<b>MC</b> Moisture content, %	<b>PL</b> Plastic limit
<b>OC</b> Organic content, %	<b>PI</b> Plasticity index

**Particle Size Identification**

- Boulders..... over 12"
- Cobbles..... 3" to 12"
- Gravel  
Coarse..... 3/4" to 3" (19.00 mm to 75.00 mm)  
Fine..... No. 4 to 3/4" (4.75 mm to 19.00 mm)
- Sand  
Coarse..... No. 10 to No. 4 (2.00 mm to 4.75 mm)  
Medium..... No. 40 to No. 10 (0.425 mm to 2.00 mm)  
Fine..... No. 200 to No. 40 (0.075 mm to 0.425 mm)
- Silt..... No. 200 (0.075 mm) to .005 mm
- Clay..... < .005 mm

**Relative Proportions<sup>L-M</sup>**

- trace..... 0 to 5%
- little..... 6 to 14%
- with.....  $\geq 15\%$

**Inclusion Thicknesses**

- lens..... 0 to 1/8"
- seam..... 1/8" to 1"
- layer..... over 1"

**Apparent Relative Density of Cohesionless Soils**

- Very loose ..... 0 to 4 BPF
- Loose ..... 5 to 10 BPF
- Medium dense..... 11 to 30 BPF
- Dense..... 31 to 50 BPF
- Very dense..... over 50 BPF

**Consistency of Cohesive Soils      Blows Per Foot      Approximate Unconfined Compressive Strength**

- Very soft..... 0 to 1 BPF..... < 0.25 tsf
- Soft..... 2 to 4 BPF..... 0.25 to 0.5 tsf
- Medium..... 5 to 8 BPF..... 0.5 to 1 tsf
- Stiff..... 9 to 15 BPF..... 1 to 2 tsf
- Very Stiff..... 16 to 30 BPF..... 2 to 4 tsf
- Hard..... over 30 BPF..... > 4 tsf

**Moisture Content:**

- Dry:** Absence of moisture, dusty, dry to the touch.
- Moist:** Damp but no visible water.
- Wet:** Visible free water, usually soil is below water table.

**Drilling Notes:**

**Blows/N-value:** Blows indicate the driving resistance recorded for each 6-inch interval. The reported N-value is the blows per foot recorded by summing the second and third interval in accordance with the Standard Penetration Test, ASTM D1586.

**Partial Penetration:** If the sampler could not be driven through a full 6-inch interval, the number of blows for that partial penetration is shown as #/x" (i.e. 50/2"). The N-value is reported as "REF" indicating refusal.

**Recovery:** Indicates the inches of sample recovered from the sampled interval. For a standard penetration test, full recovery is 18", and is 24" for a thinwall/shelby tube sample.

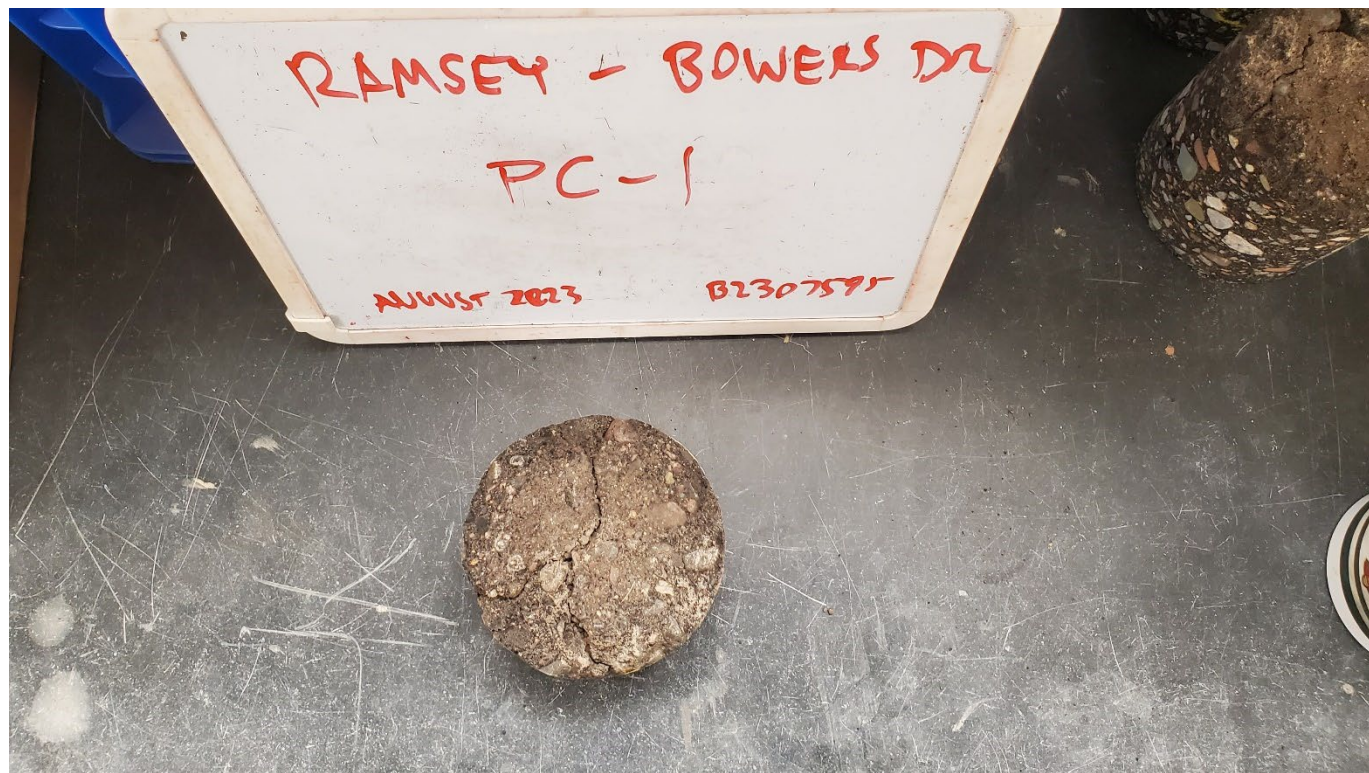
**WOH:** Indicates the sampler penetrated soil under weight of hammer and rods alone; driving not required.

**WOR:** Indicates the sampler penetrated soil under weight of rods alone; hammer weight and driving not required.

**Water Level:** Indicates the water level measured by the drillers either while drilling ( ), at the end of drilling ( ), or at some time after drilling ( ).

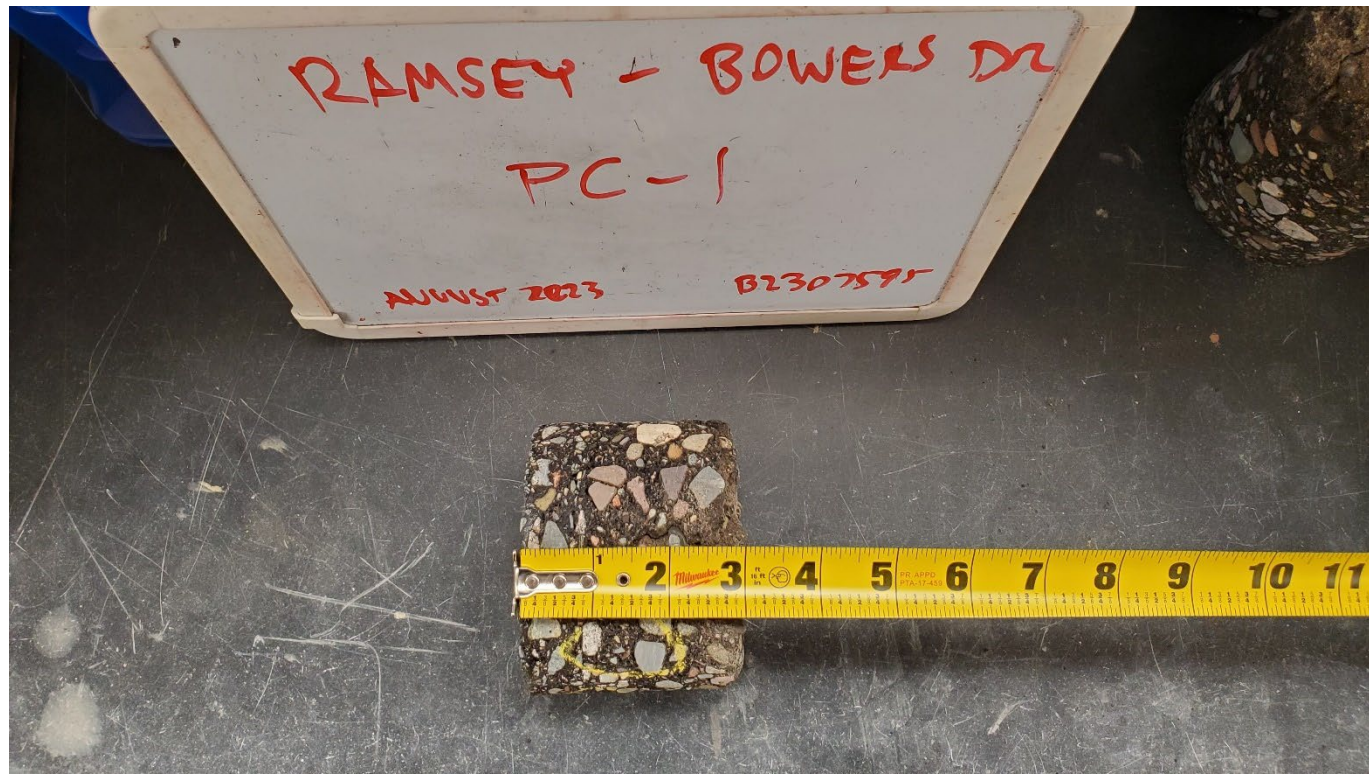
**Sample Symbols**

Standard Penetration Test	Rock Core
Modified California (MC)	Thinwall (TW)/Shelby Tube (SH)
Auger	Texas Cone Penetrometer
Grab Sample	Dynamic Cone Penetrometer



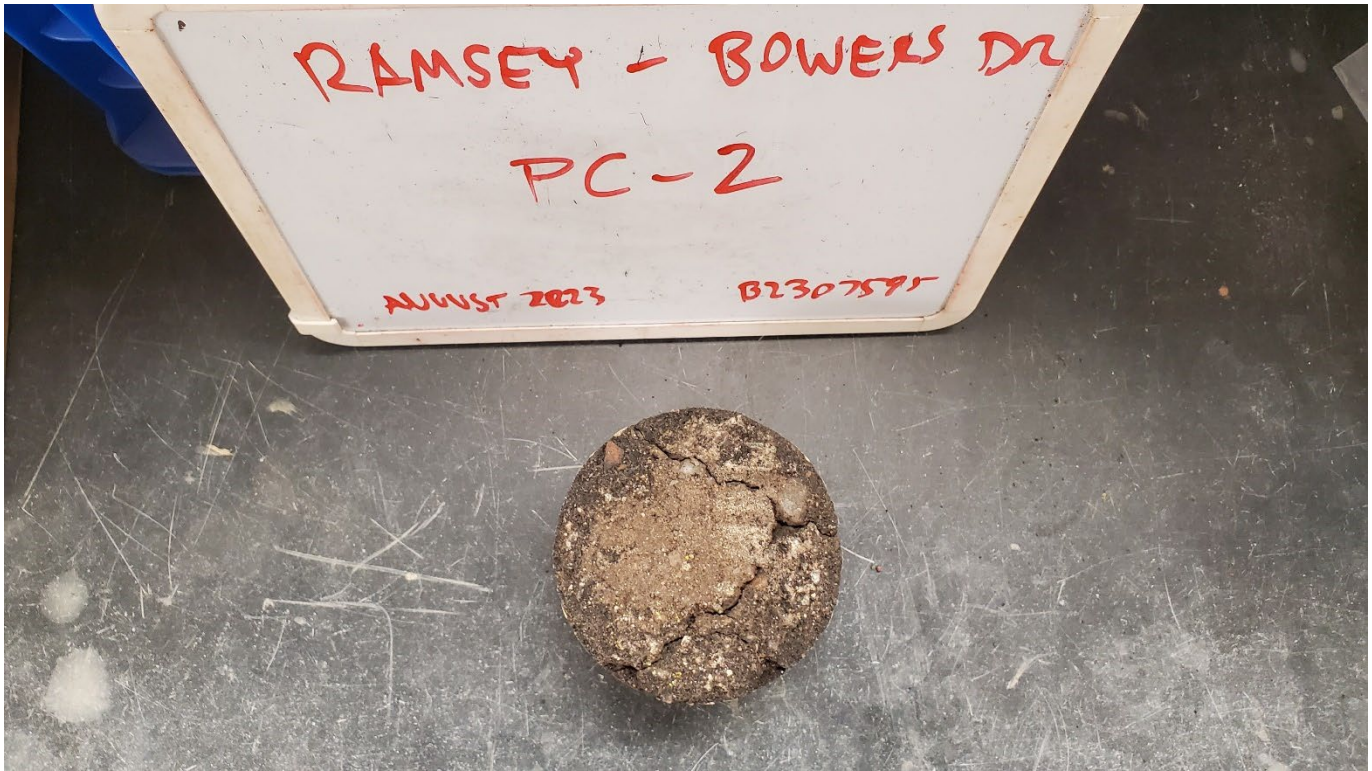
Core #:	PC-1			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness:	3 inches	Agg base thickness:	5 inches	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes: Bottom view



Core #:	PC-1			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness:	3 inches	Agg base thickness:	5 inches	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes: Side view



Core #:	PC-2			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness:	3 1/2 inches	Agg base thickness:	--	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes: Bottom view. No hand auger completed



Core #:	PC-2			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness:	3 1/2 inches	Agg base thickness:	--	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes: Side view. No hand auger completed



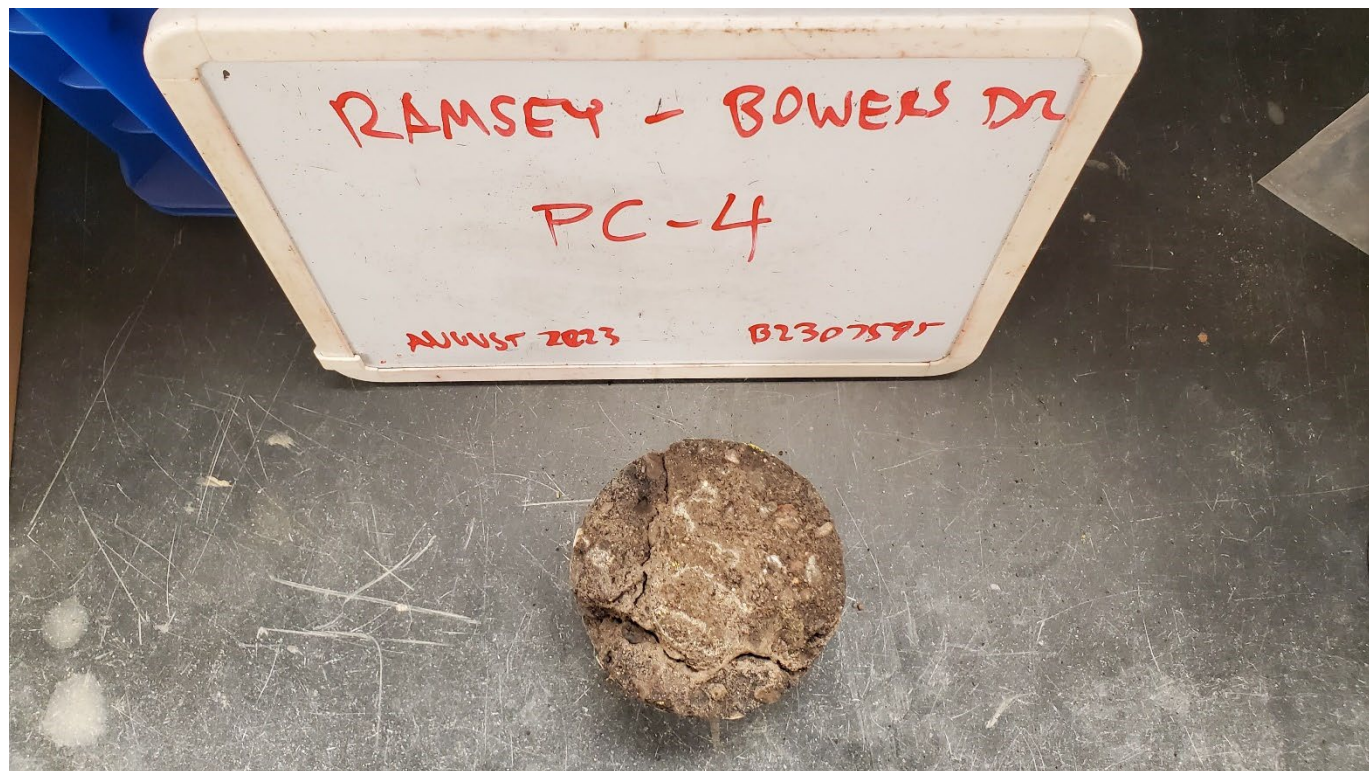
Core #:	PC-3			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness:	3 3/4 inches	Agg base thickness:	3 inches	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes: Bottom view



Core #:	PC-3			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness:	3 3/4 inches	Agg base thickness:	3 inches	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes: Side view



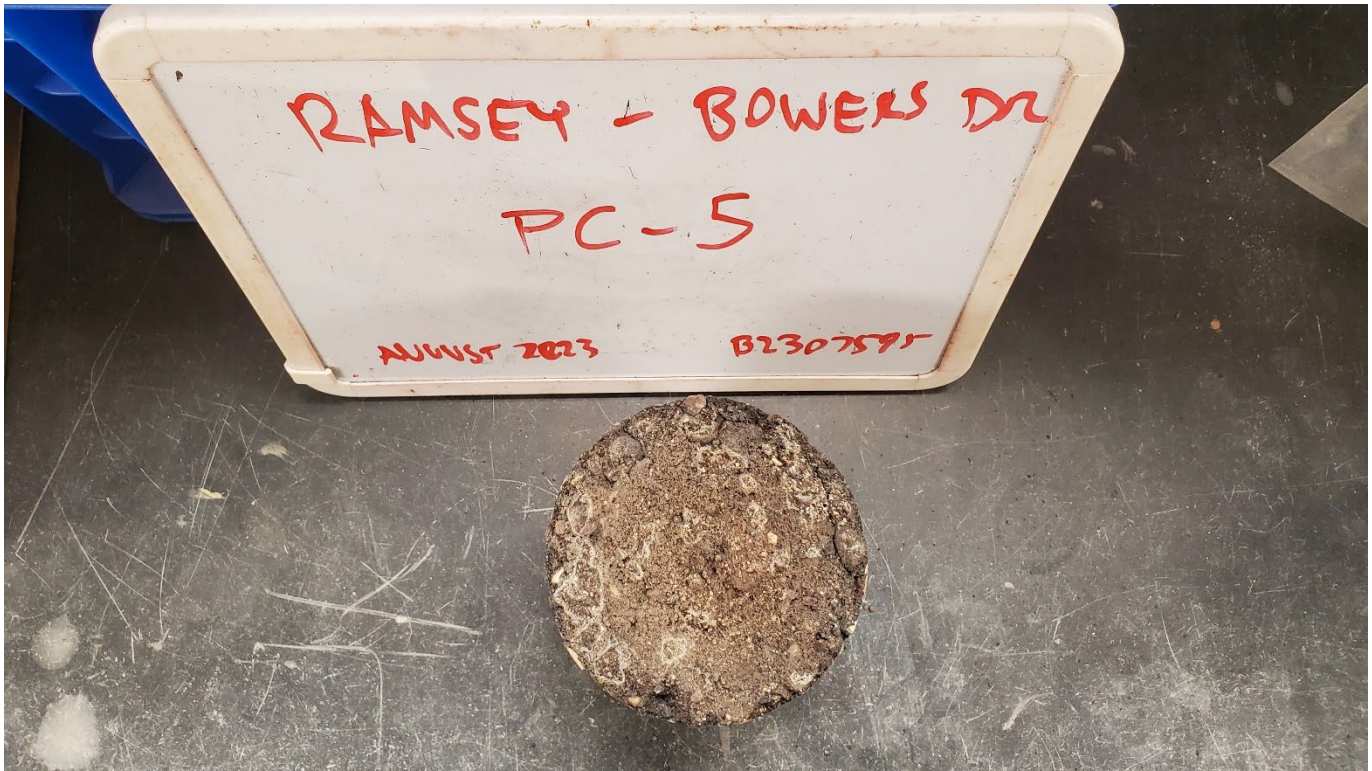
Core #:	PC-4			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness:	3 1/4 inches	Agg base thickness:	--	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes: Bottom view. No hand auger completed



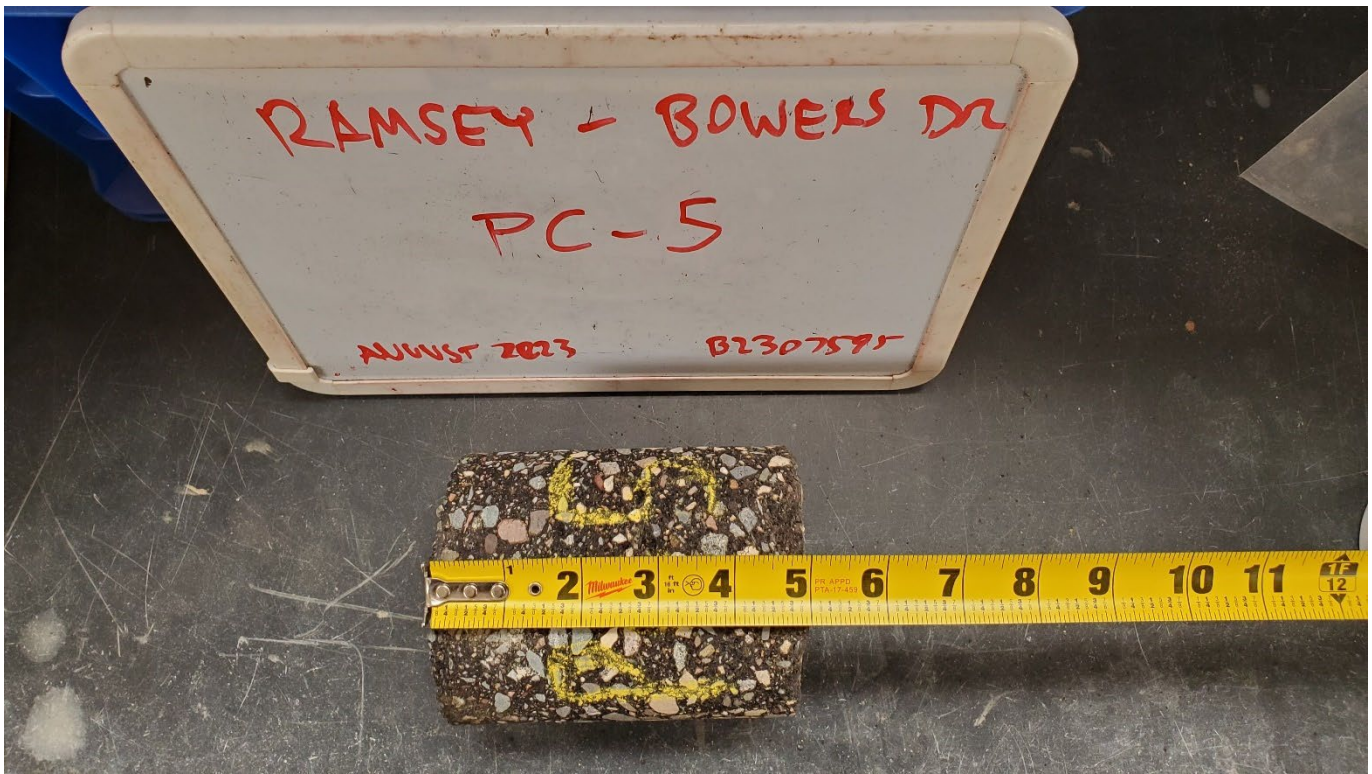
Core #:	PC-4			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness	3 1/4 inches	Agg base thickness:	--	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes:



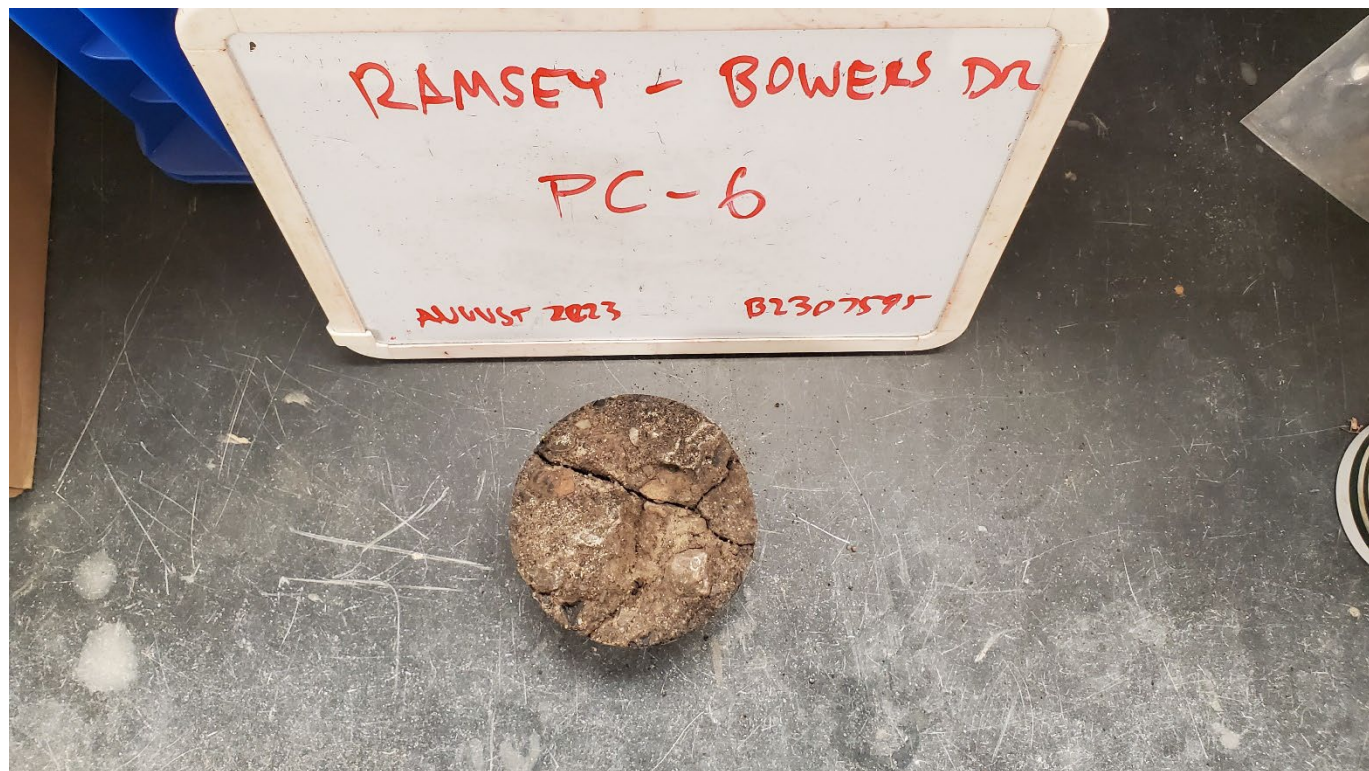
Core #:	PC-5			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness:	5 inches	Agg base thickness:	12 inches	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes: Bottom view



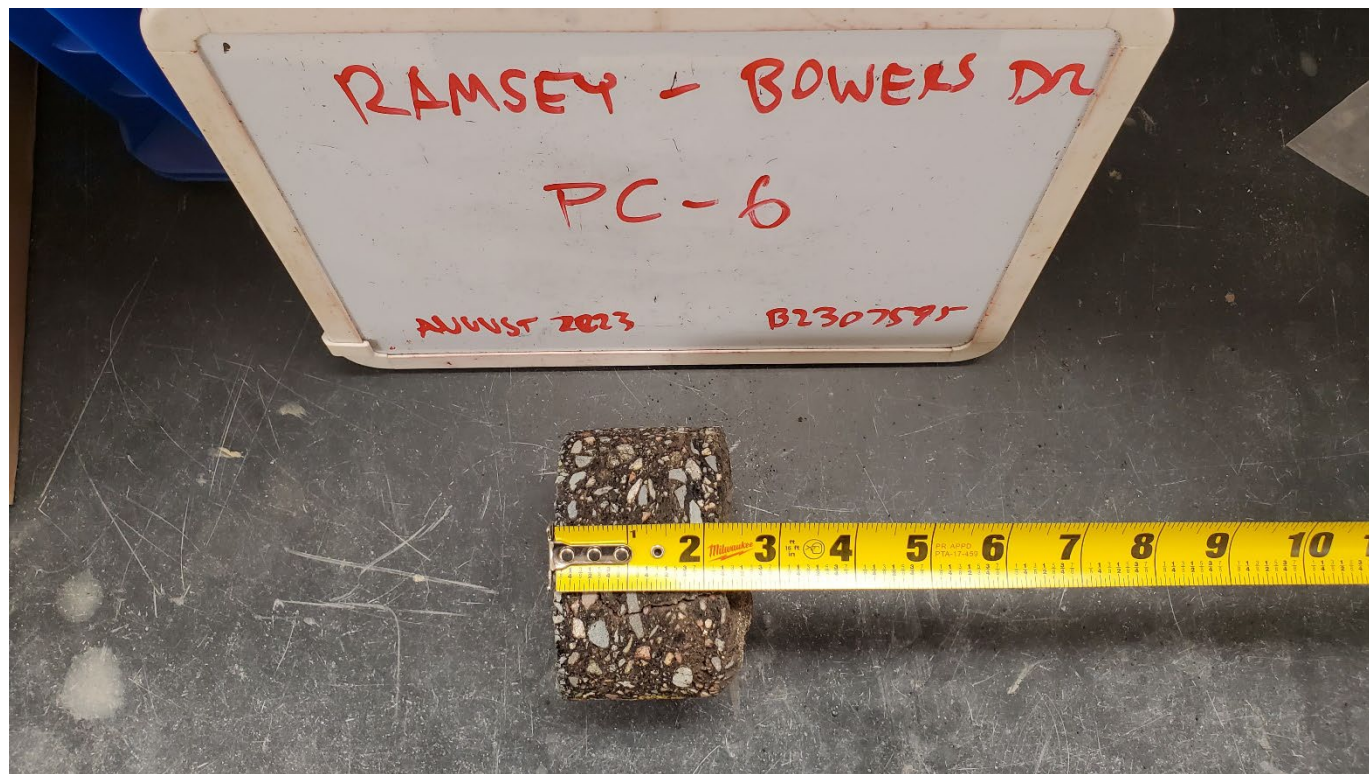
Core #:	PC-5			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness:	5 inches	Agg base thickness:	12 inches	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes: Side view



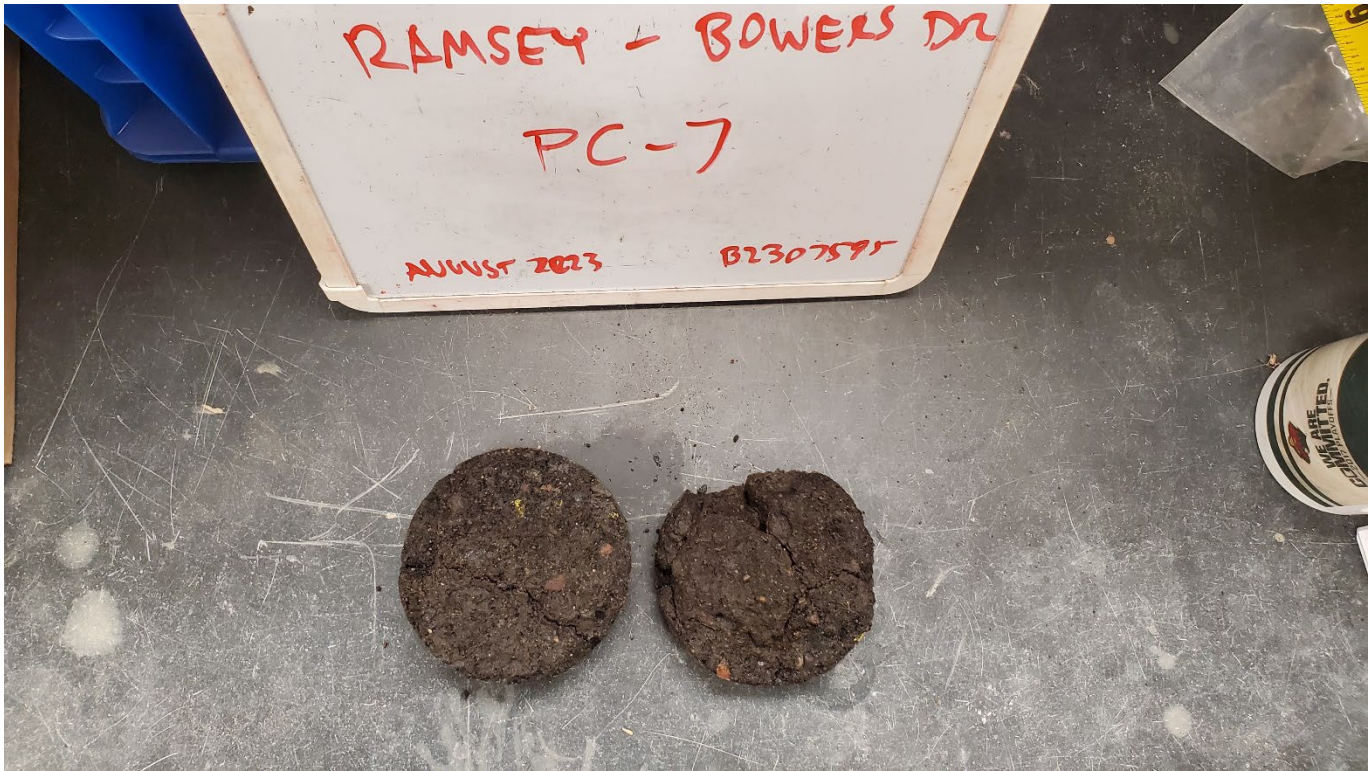
Core #:	PC-6			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness:	2 1/4 inches	Agg base thickness:	--	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes: Bottom view. No hand auger completed



Core #:	PC-6			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness:	2 1/4 inches	Agg base thickness:	--	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes: Side view. No hand auger completed



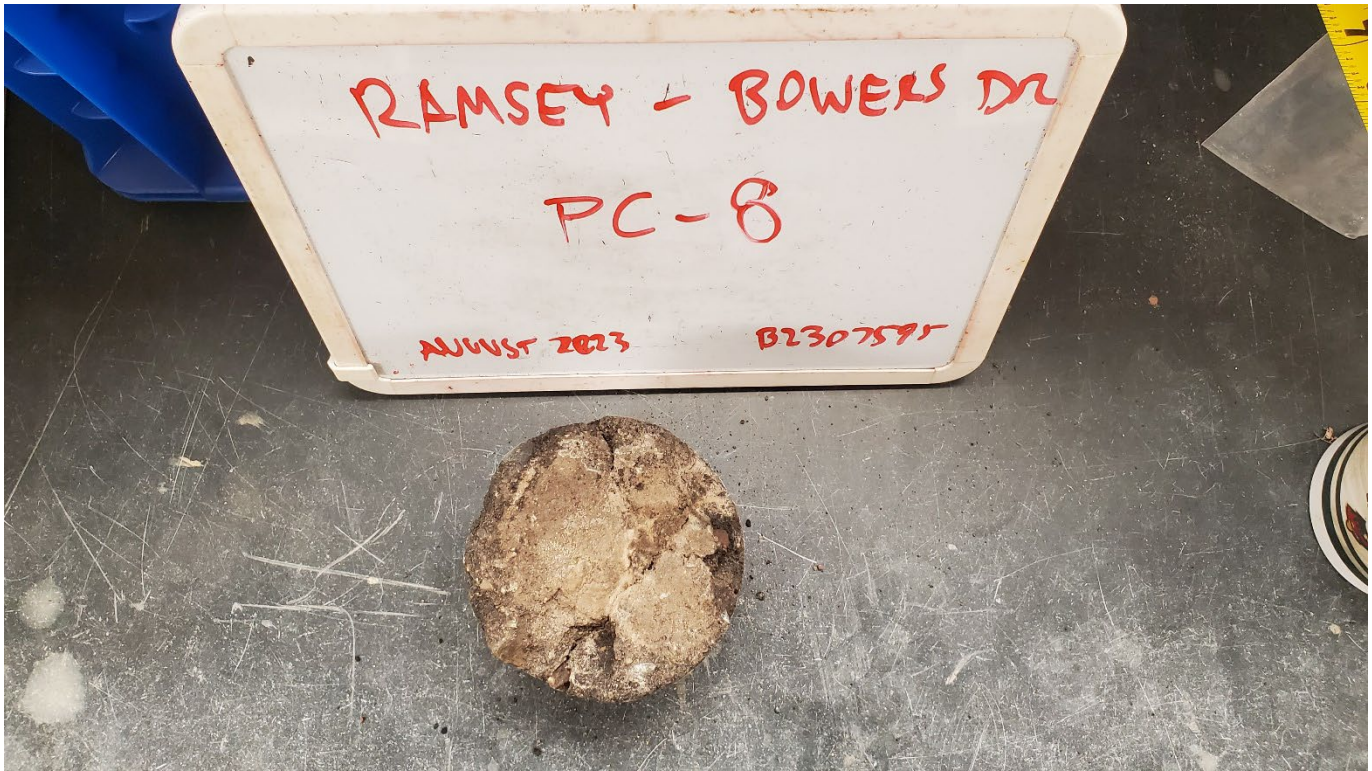
Core #:	PC-7			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness:	2 3/4 inches	Agg base thickness:	4 inches	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes: Bottom view



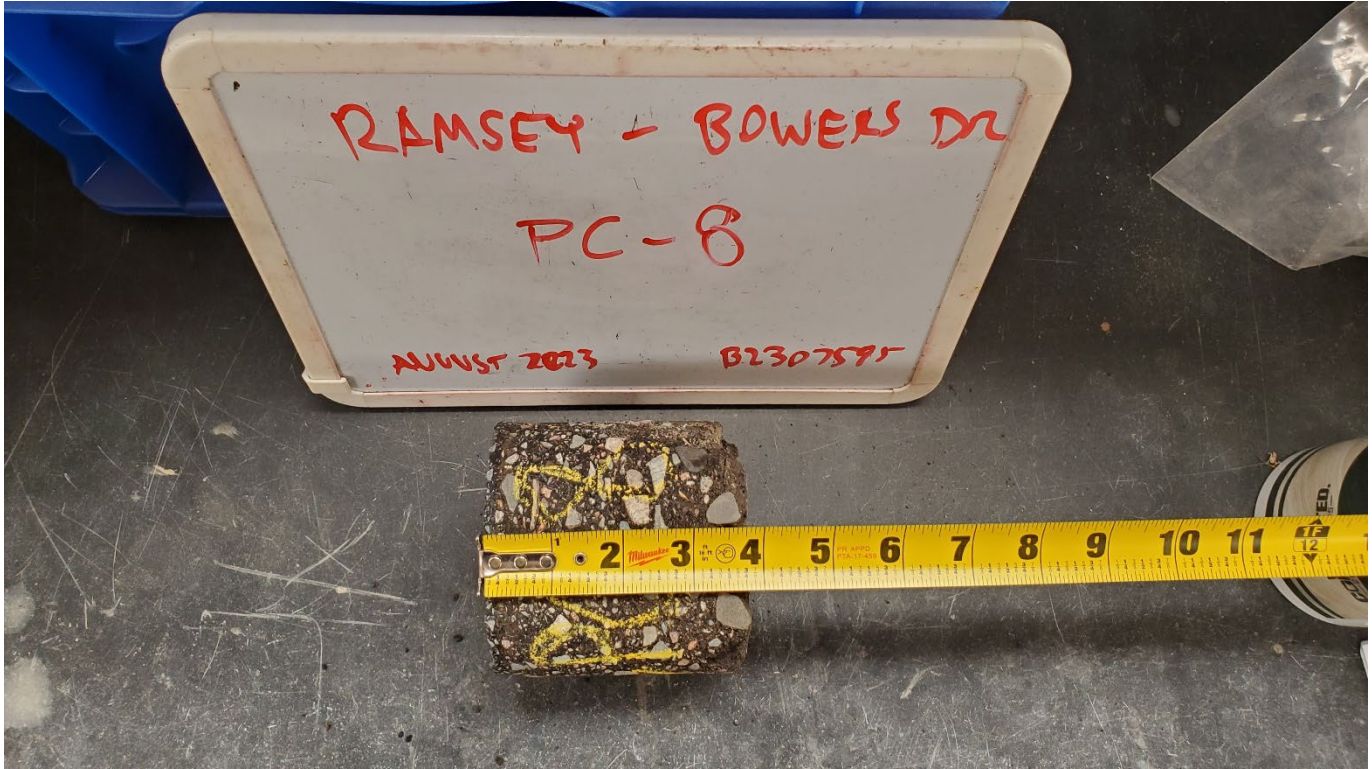
Core #:	PC-7			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness	2 3/4 inches	Agg base thickness:	4 inches	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes: Side view



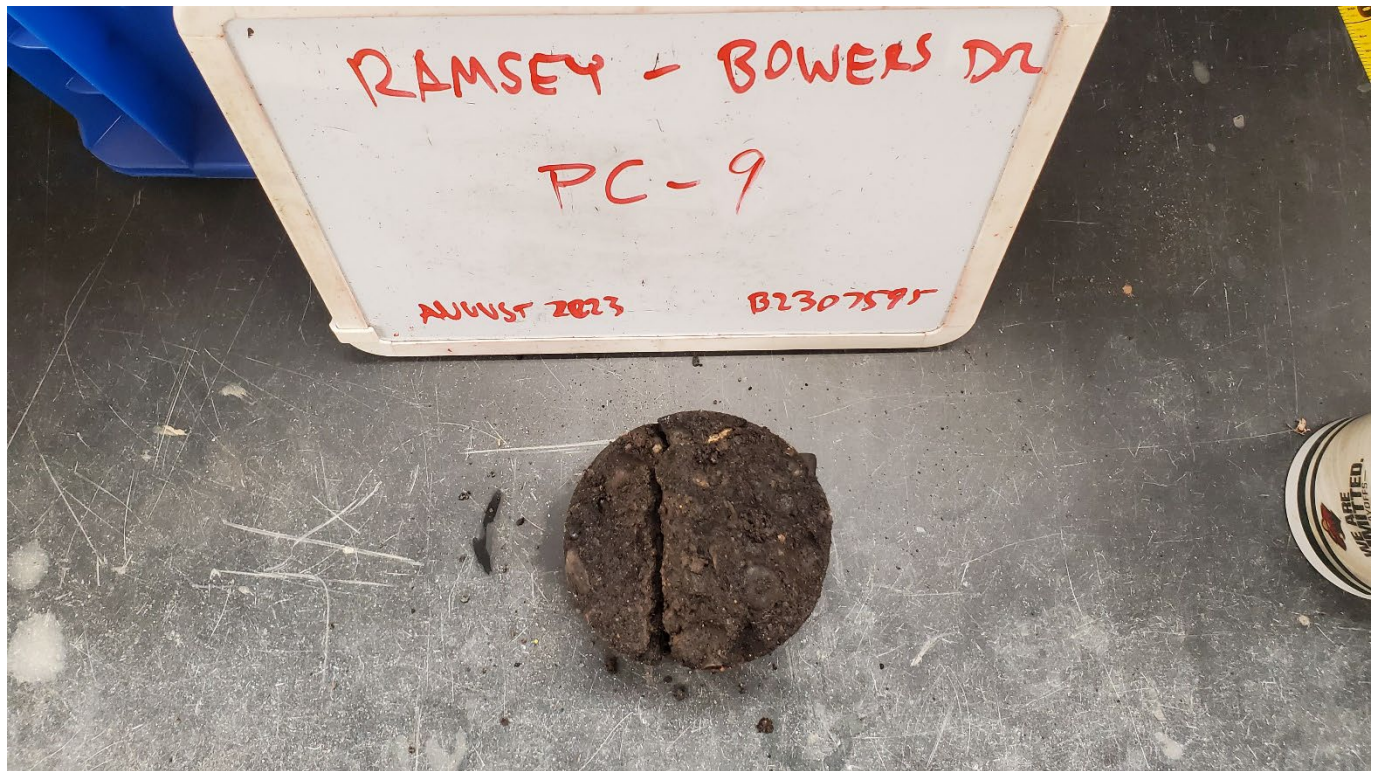
Core #:	PC-8			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness:	3 3/4 inches	Agg base thickness:	--	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes: Bottom view. No hand auger completed



Core #:	PC-8			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness:	3 3/4 inches	Agg base thickness:	--	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes: Side view. No hand auger completed



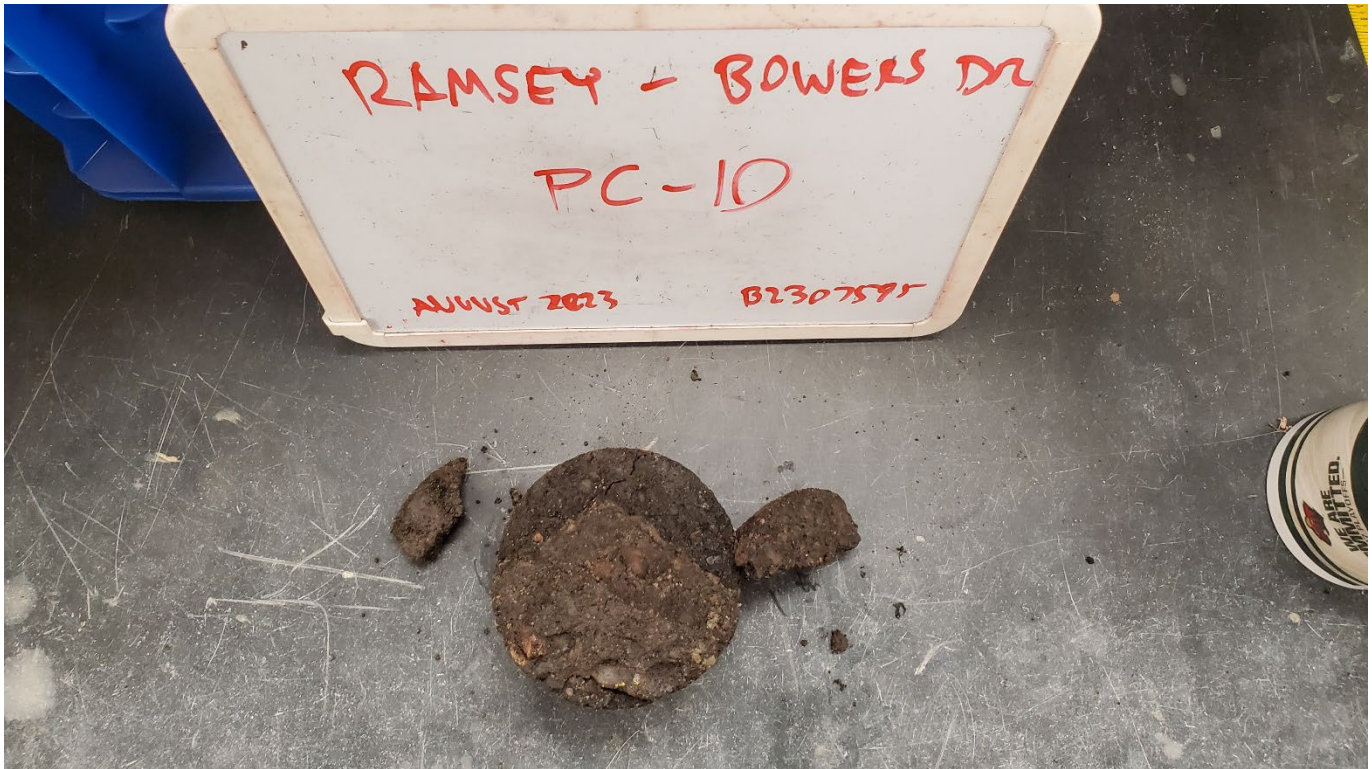
Core #:	PC-9			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness:	2 3/4 inches	Agg base thickness:	4 inches	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes: Bottom view



Core #:	PC-9			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness:	2 3/4 inches	Agg base thickness:	4 inches	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes: Side view



Core #:	PC-10			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness:	3 inches	Agg base thickness:	--	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes: Bottom view. No hand auger completed



Core #:	PC-10			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness:	3 inches	Agg base thickness:	--	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes: Side view. No hand auger completed



Core #:	PC-11			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness:	3 1/2 inches	Agg base thickness:	24 inches	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes: Bottom view



Core #:	PC-11			Project: B2307595 <b>BRAUN</b> INTERTEC
Pavement thickness:	3 1/2 inches	Agg base thickness:	24 inches	
Facility:	City of Ramsey - Bowers Drive			
Date:	August 2023			

Notes: Side view

**IP 24-07  
2024 Neighborhood Pavement Overlay Improvements  
Street Segment Summary**

Subdivision	Street	Segment Description	Length (feet)	Section (Urban / Rural)	Curb (Bit / Conc.)	2023 PASER	Year Built	Maint. 1	Maint. 2	Maint. 3	Maint. 4	Maint. 5	Avg HMA (inches)	Avg Agg. Base (inches)	Avg Section (inches)
Alpine Acres	153rd Lane	Sodium Street / Radium Street	296	Urban	Conc.	6	2004	SC 2009	SC 2016	CS 2023			3.5*	4.0*	7.5*
	Radium Street	153rd Lane / Sodium Street	745	Urban	Conc.	6	2004	SC 2009	SC 2016	CS 2023			3.5*	4.0*	7.5*
	Sodium Street	Alpine Drive / CR 57	1949	Urban	Conc.	6	2004	SC 2009	SC 2016	CS 2023			3.5*	4.0*	7.5*
	<i>Alpine Acres Total</i>			2990	<i>0.57 mi.</i>										
Alpine Acres 2nd	153rd Lane	Sodium Street / Tungsten Street	317	Urban	Conc.	6	2004	SC 2009	SC 2016	CS 2023			3.5*	4.0*	7.5*
	Tungsten Street	153rd Lane / CDS south	484	Urban	Conc.	6	2004	SC 2009	SC 2016	CS 2023			4.3	5.1	9.4
	Tungsten Street	Sodium Street / Sodium Street	703	Urban	Conc.	6	2004	SC 2009	SC 2016	CS 2023			4.1	4.6	8.7
	<i>Alpine Acres 2nd Total</i>			1504	<i>0.28 mi.</i>										
Bowers Mississippi Acres 1st, 2nd & 3rd	Bowers Drive	CDS south / 148th Avenue	5227	Urban / Rural	Bit	6	1982	SC 1996	OL 2004	SC 2009	SC 2016		3.6**	3.0**	6.6**
<i>Bowers Mississippi Acres 1st, 2nd &amp; 3rd Total</i>			5227	<i>0.99 mi.</i>											
Gateway Industrial Park 2	141st Avenue	Basalt Avenue / Azurite Street	481	Urban	Conc.	8	1991	SC 2003	SC 2017				4.1	1.8	5.9
	Azurite Street	Bunker Lake Boulevard / EOP south	507	Urban	Conc.	7	1991	SC 2003	SC 2012				4.5	0.0	4.5
	Basalt Street	Bunker Lake Boulevard / 141st Avenue	702	Urban	Conc.	7	2003	SC 2017					4.1	1.8	5.9
	<i>Gateway Industrial Park 2 Total</i>			1690	<i>0.32 mi.</i>										
Orchard Hills Townhomes	152nd Lane	Cobalt Street / Barium Street	434	Urban	Conc.	6	2001	SC 2006	SC 2013	CS 2021			2.9	5.6	8.5
	Barium Street	152nd Lane / EOP south	199	Urban	Conc.	6	2001	SC 2006	SC 2013	CS 2021			2.6	6.0	8.6
	Cobalt Street	152nd Lane / EOP south	582	Urban	Conc.	6	2001	SC 2006	SC 2013	CS 2021			3.0	3.8	6.8
	Cobalt Street	Alpine Drive / 152nd Lane	367	Urban	Conc.	4	2001	SC 2006	SC 2013	CS 2021			3.0	3.8	6.8
<i>Orchard Hills Townhomes Total</i>			1582	<i>0.3 mi.</i>											
Seasons of Ramsey	147th Lane	147th Circle / Center Street	444	Urban	Conc.	7	2013						4.7	6.1	10.8
<i>Seasons of Ramsey Total</i>			444	<i>0.08 mi.</i>											
Section 27 Unplatted	141st Avenue	Basalt Street / Ebony Street	1194	Urban	Conc.	7	2001	SC 2006	SC 2018				4.5*	6.0*	10.5*
	Ebony Street	141st Avenue / 143rd Avenue	1291	Urban	Conc.	7	2001	SC 2006	SC 2018				3.5*	6.0*	9.5*
	<i>Section 27 Unplatted Total</i>			2485	<i>0.47 mi.</i>										

\* Per As-Built, GPR not available  
\*\*GPR poor GPS Reception

IP 24-07  
2024 Neighborhood Pavement Overlay Improvements  
Street Segment Summary

Subdivision	Street	Segment Description	Length (feet)	Section (Urban / Rural)	Curb (Bit / Conc.)	2023 PASER	Year Built	Maint. 1	Maint. 2	Maint. 3	Maint. 4	Maint. 5	Avg HMA (inches)	Avg Agg. Base (inches)	Avg Section (inches)
Town Center Gardens	147th Lane	Rhinestone Street / Ramsey Boulevard	1509	Urban	Conc.	6	2004	SC 2010	CS 2021				3.5*	4.0*	7.5*
	147th Terrace	147th Lane / Olivine Street	594	Urban	Conc.	6	2004	SC 2010	CS 2021				3.5*	4.0*	7.5*
	Olivine Street	147th Terrace / 147th Lane	241	Urban	Conc.	6	2004	SC 2010	CS 2021				3.5*	4.0*	7.5*
	Periodot Street	147th Terrace / Well House	113	Urban	Conc.	6	2004	SC 2010	CS 2021				3.5*	4.0*	7.5*
	Rhinestone Street	Bunker Lake Boulevard / 147th Lane	275	Urban	Conc.	5	2004	SC 2010	CS 2021				3.5*	4.0*	7.5*
<i>Town Center Gardens Total</i>			<i>2732</i>	<i>0.52 mi.</i>											
Town Center Gardens 2nd	Olivine Street	147th Lane / EOP north	330	Urban	Conc.	7	2004	SC 2010	CS 2021				3.5*	4.0*	7.5*
	Periodot Street	147th Lane / 148th Lane	363	Urban	Conc.	7	2004	SC 2010	CS 2021				3.5*	4.0*	7.5*
<i>Town Center Gardens 2nd Total</i>			<i>693</i>	<i>0.13 mi.</i>											
Town Center Gardens 3rd	147th Lane	147th Circle / 147th Circle	654	Urban	Conc.	7	2005	SC 2010	CS 2021				3.5*	4.0*	7.5*
	147th Lane	147th Circle / Rhinestone Street	263	Urban	Conc.	7	2005	SC 2010	CS 2021				3.5*	4.0*	7.5*
	148th Lane	Peridot Street / Olivine Street	542	Urban	Conc.	7	2005	SC 2010	CS 2021				3.5*	4.0*	7.5*
	Olivine Street	148th Lane / 149th Avenue	582	Urban	Conc.	7	2005	SC 2010	CS 2021				3.5*	4.0*	7.5*
	Periodot Street	148th Lane / 149th Avenue	551	Urban	Conc.	7	2005	SC 2010	CS 2021				3.5*	4.0*	7.5*
<i>Town Center Gardens 3rd Total</i>			<i>2592</i>	<i>0.49 mi.</i>											
<b>2024 Neighborhood Pavement Overlay Total</b>			<b>21939</b>	<b>4.16 mi.</b>											
													* Per As-Built, GPR not available **GPR poor GPS Reception		

**Public Works Committee****Meeting Date:** 11/21/2023**Primary Strategic Plan Initiative:** Address infrastructure needs.**Title:**

Consider Recommendation for City Council to Accept Bids and Award Contract for Water Treatment Plant Trunk Watermain Improvements, Improvement Project #21-08

**Purpose/Background:****Purpose:**

The purpose of this case is to consider a recommendation for the City Council to accept bids and award a construction contract for Water Treatment Plant Trunk Watermain Improvements, Improvement Project #21-08.

**Background:**

On March 9, 2021, the Ramsey City Council adopted Resolution #21-061 awarding a contract to SEH Inc. to prepare plans and specifications for Improvement Project #21-08, Water Treatment Plant Trunk Watermain Improvements.

On October 26, 2021, the Ramsey City Council adopted Resolution #21-303 approving final plans and specifications and authorizing advertisements for bids using a base bid and an alternate bid as follows;

- Base bid – The base bid specified a combination of construction techniques whereby open trenching of watermain is specified along the south side of Bunker Lake Boulevard and the north side of 143<sup>rd</sup> Avenue, while directional drilling of watermain is specified at intersections, through Cottonwood Park, under Sunwood Drive, and under the stormwater pond between Hoya and Anderson Dahlen north of 143<sup>rd</sup> Avenue.
- Alternate bid – The alternate bid specified directional drilling of watermain across as much of the project area as feasible.

On January 25, 2022, the Ramsey City Council adopted Resolution #22-003 rejecting all bids and authorizing Staff to work with SEH, Inc. to revise the approved plans to reduce project costs and to monitor the bidding environment to identify the most favorable time to bid the project again.

On July 25, 2023, the Ramsey City Council adopted Resolution #23-168 executing a new Professional Services Agreement with SEH, Inc. to revise the previously approved plans and to re-bid said improvements for 2024 construction in advance of the Water Treatment Plant commissioning in the Spring of 2025.

The plan revisions from the 2021 bid set are the result of staff additions to the water system and contractor feedback from previous bids. The changes consist of the following elements:

1. Adding an underground meter vault near well #8 on the existing water main in the park, including associated instrumentation for operation ease.
2. Adding a new water main between Bunker Lake Boulevard and 147th Terrace to complete the loop. The water main is anticipated to be installed on City owned property where Well No. 3 is located. Also, a new 1-inch service line is proposed to be installed off this line to the existing well house for priming the Well No. 3 pumps.

3. Re-design the water main in Town Center Drive south of Bunker Lake Boulevard and remove the water main in the open space easement to open this parcel up for future development.
  
4. Install a new 1-inch service line off Town Center Drive to the wellhouse building at Well No. 5 for pump priming purposes.
  
5. Modify the plans for the 24-inch raw water main on the trail north of Sunwood Drive to use open cut installation rather than Horizontal Directional Drilling (HDD), with the exception of under Sunwood Drive, which will still be HDD to avoid impacting the recently reconstructed street.
  
6. Include trenchless installation of the water main crossing Bunker Lake Boulevard at 143rd Avenue to avoid impacts to the recent improvements to Bunker Lake Boulevard.
  
7. The trunk water main under 143rd Avenue will now be fully installed via open cut trench installation followed up with full depth bituminous pavement replacement due to the age and condition of the existing pavement, and to avoid reconstructing one side of the street and overlaying the other, putting the two sides of the street on different maintenance schedules. Due to construction traffic using this route for the WTP construction and maintaining access to adjacent commercial properties, phased pavement removal is anticipated to maintain a hard driving surface to the greatest extent possible.

On September 26, 2023, the Ramsey City Council adopted Resolution #23-236 approving final plans and specifications as prepared by SEH, Inc. and authorized the advertisement of bids.

Bids were advertised in Finance and Commerce and the Anoka Union Herald on Friday, September 29, and Friday, October 6, 2023, and were also advertised and managed online on QuestCDN.

On November 1, 2023, seven (7) bids were received. All bids were competitive, and the low bid received, both for the base bid and the alternate bid, was submitted by Northdale Construction Company Inc. of Albertville, Minnesota.

<b>CONTRACTOR</b>	<b>TOTAL BASE BID</b>	<b>TOTAL ALTERNATE BID</b>
Northdale Construction Co. Inc.	\$6,671,413.99	\$6,671,414.00
Park Construction Company	\$7,106,594.45	\$7,106,594.46
Geislinger & Sons	\$7,230,597.00	\$7,264,597.00
S.M. Hentges & Sons, Inc.	\$7,357,844.80	\$7,357,845.80
RL Larson Excavating, Inc.	\$7,613,079.74	\$7,613,079.75
Meyer Contracting Inc.	\$7,929,324.30	\$7,929,324.31
Minger Construction Co., Inc.	\$8,768,848.98	\$8,768,848.98
<i>Engineer's Estimate</i>	<i>\$7,519,839.00</i>	<i>\$7,519,839.00</i>

**Notification:**

Notifications are not required for this case.

**Time Frame/Observations/Alternatives:**

Staff anticipates up to 15 minutes will be required to present this case and respond to questions.

**Alternatives:**

Alternative #1 – Motion to recommend that the City Council accept bids and award a construction contract for Improvement Project #21-08 to Northdale Construction Company Inc. in the amount of \$6,671,414.00 for the Alternate bid.

Alternative #2 – Motion of other.

**Funding Source:**

The engineer’s construction cost estimate for the base bid was \$7,519,839. A 10% contingency was added to estimated unit prices to address changes that may result during construction.

The alternate bid was added to include prevailing wages in case state grant funding is utilized. It was anticipated that this alternate bid would add an additional 5-10% to unit prices. However, the bids received included alternate bid prices ranging from \$0.00 to \$34,000. Northdale Construction Company Inc.’s alternate bid price was \$0.01.

Funding for this project is proposed to come from water enterprise funds and potentially from state grant funding, if legislatively appropriated. For almost two decades, municipal water users have contributed to a future water treatment plant, which includes off-site trunk watermain improvements required to provide the plant with raw water, and to transport treated (finished) water out to the distribution mains. In addition, the legislature approved sales and use tax exemptions for the Water Treatment Plant project. Staff is working to have these exemptions apply to the trunk watermain improvements as well.

**Recommendation:**

Staff and SEH recommend approving alternative #1. Upon approval from the Public Works Committee, Staff will present a case to the City Council to accept bids and award a contract for construction on November 28, 2023.

**Outcome/Action:**

Motion to recommend that the City Council accept bids and award a construction contract for Improvement Project #21-08 to Northdale Construction Company Inc. in the amount of \$6,671,414.00 for the Alternate bid.

**Attachments**

*No file(s) attached.*

**Form Review**

<b>Inbox</b>	<b>Reviewed By</b>	<b>Date</b>
Brian Hagen	Brian Hagen	11/16/2023 02:32 PM
Form Started By: Bruce Westby		Started On: 11/16/2023 10:16 AM
Final Approval Date: 11/16/2023		

**Public Works Committee****Meeting Date:** 11/21/2023**Primary Strategic Plan Initiative:** Not Applicable**Title:**

Receive Updates on Improvement Projects, Studies and Items of Interest

**Purpose/Background:****Purpose/Background:**

The purpose of this case is to update the Public Works Committee on current and proposed City, County and MnDOT improvement projects and studies, and on other items of interest to the Committee.

**City Improvement Projects**

- **2024 PMP Projects**
  - Design in progress on 9 projects
  - Conducting open houses
- **161<sup>st</sup> Avenue Reconstruction (IP #23-01)**
  - Construction substantially complete
  - Punch list work in progress
- **Central Park Parking Lot Reconstruction (IP #23-02)**
  - Construction substantially complete
  - Punch list work in progress
- **167<sup>th</sup> Avenue Reconstruction (IP #23-04)**
  - Construction substantially complete
  - Punch list work in progress
- **Barthels Rum River Acres 2nd Reconstruction (IP #23-05)**
  - Construction substantially complete
  - Punch list work in progress
- **2023 MSA Pavement Overlay Improvements (IP #23-06)**
  - Construction substantially complete
  - Punch list work in progress
- **Whispering Pines Estates Plat 3 Reconstructions (IP #23-10)**
  - Construction substantially complete
  - Punch list work in progress
- **Trott Brook Crossing Sanitary Sewer Lift Station Improvements (IP #23-11)**
  - Construction substantially complete
  - Punch list work in progress
- **HY-10 Ramsey Improvements (IP #23-12)**
  - Construction substantially complete
  - Punch list work in progress
- **COR Mass Grading (IP #23-20)**
  - Approximately 90% complete
  - Completion anticipated December 2023
- **Highway 47 Sound Wall north of Xkimo Street (IP #22-17)**
  - MnDOT Cooperative Construction Agreement required
  - Staff anticipates requesting Council approval to authorize bids Spring/Summer 2024
- **WTP Trunk Watermain Improvements (#21-08)**
  - *See separate agenda item*

- **Centralized Water Treatment Plant (#21-09)**
  - Construction in progress
  - Substantial completion scheduled for May 1, 2025
  - Final completion scheduled for August 1, 2025
- **Ramsey Gateway Highway 10 Improvements (IP #20-11)**
  - Riverdale Drive east of SLB & temporary US 10 widening work nearly complete
  - Ames Construction awarded contract October 11, 2023
  - Construction in progress
  - Final completion anticipated June 2026

### City of Anoka Improvement Projects

- **Highway 47 Corridor Improvements**
  - 3-lane design proposed south of Bunker Lake Boulevard
  - City received regional solicitation funds for 2027 construction
  - Signal system at McKinley Street is proposed to be permanent
  - Anoka webpage <https://clients.bolton-menk.com/anokahwy47/>

### Anoka County Improvement Projects

- **2024 Pavement Overlay Improvements**
  - Plans and specifications are being prepared
  - Staff anticipates receiving plans for review soon

### MnDOT Improvement Projects

- **Anoka Solution Highway 10 Improvements**
  - Substantial completion December 2023
  - Final completion Spring 2024
  - Anoka webpage <https://clients.bolton-menk.com/hwy10/>
  - MnDOT webpage <http://www.dot.state.mn.us/metro/projects/hwy10-anoka/>
- **US 10 / 169 & Ferry Street / TH 47 Interchange**
  - Final completion Spring 2024
  - MnDOT webpage <http://www.dot.state.mn.us/metro/projects/hwy10-anoka/>
- **Ferry Street / Trunk Highway 47 Grade Separation @ BNSF Rail Crossing**
  - Preliminary design suspended; exploring S-curve realignment and stormwater impacts
  - \$45M in bonds authorized October 2020
  - Construction proposed for 2024 or later
  - MnDOT webpage <http://www.dot.state.mn.us/metro/projects/hwy47rr-anoka/>
- **Rum River Bridge Replacement**
  - Three lanes each direction
  - Final completion Spring 2024
  - MnDOT webpage <http://www.dot.state.mn.us/metro/projects/hwy10-anoka/>

### Studies & Items of Interest

- **Commercial/Industrial/Residential Developments**
  - Staff will respond to questions as needed
- **Elk River Highway 10 Corridor Study**
  - Study website <https://www.highway10corridorstudy.com/>

**Notification:**

N/A

**Time Frame/Observations/Alternatives:**

Staff estimates up to 10 minutes will be needed for updates and discussion.

**Funding Source:**

N/A

**Recommendation:**

N/A

**Outcome/Action:**

No formal action required. For Committee review and discussion purposes only.

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**Attachments**

*No file(s) attached.*

**Form Review**

**Inbox**

Brian Hagen

Form Started By: Bruce Westby

Final Approval Date: 11/16/2023

**Reviewed By**

Brian Hagen

**Date**

11/16/2023 02:32 PM

Started On: 11/16/2023 10:20 AM

**Public Works Committee****Meeting Date:** 11/21/2023**Primary Strategic Plan Initiative:** Not Applicable**Title:**

Review Future Topics Calendar

**Purpose/Background:**

Attached is a calendar of future topics for review and discussion by the Public Works Committee. The calendar includes topics drawn from Committee requests received during meetings and/or unresolved topics previously discussed by the Committee. Calendar dates are subject to change based on the availability of information and required attendees, staff workload, and competing interests and objectives.

**Notification:**

N/A

**Time Frame/Observations/Alternatives:**

Less than 5 minutes is anticipated to be necessary to review the future topics calendar and address questions.

**Funding Source:**

Dependent on discussions.

**Recommendation:**

Staff recommends reviewing the attached calendar and to either approve the calendar by consensus or to direct Staff to revise the calendar as follows; \_\_\_\_\_.

**Outcome/Action:**

No formal action required. For Committee review and discussion purposes only.

**Attachments**

PWC Calendar Now2023

**Form Review****Inbox**

Brian Hagen

Form Started By: Bruce Westby

Final Approval Date: 11/16/2023

**Reviewed By**

Brian Hagen

**Date**

11/16/2023 02:32 PM

Started On: 11/16/2023 10:21 AM

## **Public Works Committee Future Topics Calendar \***

<b>Date</b>	<b>Topics for Discussion – Committee Action</b>
February 2024	Sunfish Lake Sedimentation Basin Improvements ( <i>Westby</i> )
Future/TBD	Sunwood Drive Roundabout Landscaping ( <i>Riverblood</i> )
<b>Date</b>	<b>Topics for Discussion – Regulatory</b>
January 2024	Sunfish Lake Blvd./CSAH 57 Speed Study Results ( <i>Westby</i> )
January 2024	Bunker Lake Blvd./CSAH 116 Speed Study Results ( <i>Westby</i> )
<b>Date</b>	<b>Topics for Discussion – Policy</b>
Future/TBD	Landscaped Median Maintenance Policy ( <i>Riverblood</i> )
March 2024	Draft Trail Maintenance Policy ( <i>Riverblood</i> )
March 2024	Draft Stormwater Pond Maintenance Policy ( <i>Westby</i> )
<b>Date</b>	<b>Topics for Discussion – Planning and Budget</b>
January 2024	Asset Management Programming Update ( <i>Westby</i> )
February 2024	Replace City monument sign TH 47 & Bunker Lk Blvd. ( <i>Riverblood</i> )
February 2024	Targeted Trail Gap Connection Planning ( <i>Riverblood</i> )
<b>Date</b>	<b>Topics for Discussion – Staff Updates</b>
January 2024	Elk River Highway 10 Corridor Study ( <i>Westby</i> )
Ongoing	Project Review Process Improvements ( <i>Westby</i> )
Ongoing	Flashing Yellow Arrow Improvement Opportunities ( <i>Westby</i> )
Ongoing	TH 47 Improvements, Bunker Lk Blvd to Hwy 10 ( <i>Westby</i> )

\* Dates subject to change based on availability of information, required attendees, staff workload, and competing interests and objectives.