NORTH BRANCH
—Minnesota—

Charles Klopp
Chair

Bob Bernier
Commissioner

Farfum Ladroma
Commissioner

Lynn Wilson
Commissioner

Wendy Chelberg
Commissioner

PARKS, TRAILS AND OPEN SPACE COMMISSION
REGULAR AGENDA
MONDAY, MAY 5, 2025 @ 7:00 PM
CITY HALL, 6408 ELM STREET, NORTH BRANCH, MN 55056

1. CALL TO ORDER
2. PLEDGE OF ALLEGIANCE
3. ROLL CALL
4. AGENDA APPROVAL
   a. Approve Agenda — ACTION
5. CONSENT AGENDA
   a. Approval of April 7, 2025 PTOS Commission Meeting Minutes — ACTION
6. REPORTS
   a. Park Fund Balances — INFO
   b. Project Updates — INFO
   c. Riverwalk Park Eagle Scout Project — ACTION
   d. Main Street Apartments — ACTION
   e. Cedar Ridge Community — ACTION
   f. Northwood Park - Outdoor Recreation Grant - Landscaping — ACTION
   g. Flink Ave Trail Phase II - MNDOT AT Grant - Approve Plan and Specs and Authorize advertising for Bids — ACTION
   h. Parks, Trails and Open Space Capital Improvement Plan 2026-2035 — ACTION
   i. Comprehensive Plan Update — INFO
7. NEXT MEETING - June 2, 2025 - WILDRIDGE PARK
8. ADJOURNMENT

PARKS, TRAILS AND OPEN SPACE COMMISSION

MEETING MINUTES

MONDAY APRIL, 07 2025

CITY OF NORTH BRANCH

1. CALL TO ORDER

2. PLEDGE OF ALLEGIANCE

3. ROLL CALL

LYNN WILSON, FARFUM LADROMA, CHARLES KLOPP, WENDY CHELBERG, ROBERT BERNIER

MAYOR KEVIN SCHIEBER, CITY STAFF

4. AGENDA APPROVAL

a. Member Robert Bernier motions to approve agenda, seconded by Ladroma. All aye, motion passed unanimously.

5. PUBLIC COMMENT

6. CONSENT AGENDA

7. REPORTS

a. Park Fund Balances

Sondrol gives overview of park balances.

b. Project Updates

Sondrol gives updates on Northwoods Park, Central Park, Clayton Anderson Park Arbor day event, Riverwalk Park improvements, Park signage installs, Ballfield improvements, Flink Ave Trail plans, County Rd 30/Safe Road to School project and the Arch Grant.

Arbor Day

Arbor Day Celebration at Clayton Anderson Park put on by Chisago County Master Gardner's. The city is working toward becoming a designated tree city which requires the Arbor Day Proclamation and event.

Member Bernier moves to approve the official proclamation and recommend that the city adopts it, seconded by Lynn Wilson. All aye, motion approved unanimously.

d. PTOS Strategic Plan

Sondrol encourages commission to review the comp plan.

8. NEXT MEETING - MAY 5, 2025

9. ADJOURNMENT

Member Wilson motions to adjourn the meeting, seconded by Bernier. All aye, motion approved unanimously.

City of North Branch
Staff Report

Prepared By: Nathan Sondrol, Community Development Director

Presenter: Nathan Sondrol, Community Development Director

Date: 04/29/2025

Board & Commission: Parks, Trails and Open Space Commission

Subject: Park Fund Balances

Below is an overview of the Park Fund Balances:

Park Dedication Fund Balance	$205,802.98
Committed Funds	
Meadows North Park	$6,459.75
Riverwalk Dome Structure Electric	$3,000.00
Disc Golf Course	$3,635.53
CSAH 30 SRTS Trail	$33,962.00
Northwood Pickleball Court/Site Imp	$9,812.01
Harder/Tower Ballfield Fencing	$970.00
Tower Fields Drainage	$6,654.88
Total Committed Funds	$64,494.17
Adjusted Balance	$141,308.81

Community Center Fund (475)	$177,822.31
Park Improvement Fund (403)	$121,522.00
Committed Funds	
Fox Run PUD	$60,000.00
Lions Park Benches	$600.00
ECRAC Summer Concerts 2025	$16,310.00
MERC Foundation HP Field 1 Dugouts	$6,000.00
Total Committed Funds	$82,910.00

Park Improvement Fund Adjusted Balance	$38,612.00

Voting Requirements:

Voting Options	**Simple Majority**

Parks, Trails & Open Space Commission Project Updates

Current Projects	Progress and Next Steps	Approval Date	Estimated Completion Date	Estimated Cost
Northwood Park Pickleball Court and Site Improvements	The City received a grant of $140,000 from the Outdoor Recreation grant program from the DNR. The bids were awarded for the pickleball courts to Winberg Companies LLC. The playground surfacing has been replaced by public works and the base grading for the trail is completed. The pickleball courts complete. Site amenities including benches trash receptacles,etc and pathways are in the process of being installed. Improvements will be completed in Spring 2025	3/23	Spring 2025	Total $280,000 **City Match $140,000**
Central Park	The new Central Park monument sign has been installed. A tribute to the troops event is scheduled to be held on May 17, 2025. Midsummer Days are scheduled for Jun 18-22			
Clayton Anderson Park	The PTOS Commission recommended approval of up to $2,500 to acquire and place the limestone rock in the park. The City Council approved this at their April 9, 2024. The limestone has been moved to the park. The CCMG are looking to establish an Oak Savanna at the park. . They will be continuing the buckthorn removal from the park and are looking to remove the knapweed. North Woods and Waters have obtained a $23,000 grant to support the pollinator planting and 2 year maintenance plan at the park. A huge thank you to Tom Anderson for securing the grant funding. Thanks to CCMG and Chisago SWCD on the Arbor Day event on April 25			
Harder Park Dense Forest	Dawn White and the CCMG are looking to remove the fencing and drip irrigation at the dense forest at HP and are looking for reusing the materials at another location.			
Riverwalk Park	Natural Space Domes donated the dome structure at the park. They would like to add a plaque at the dome structure. Below is proposed language: *This Park Dome was donated by Natural Spaces Domes of North Branch in memory and honor of MN State Senator Janet Johnson and Kids for Saving Earth*			

	founder 11 year old Clinton Hill. Both were defenders of the Planet (R) and would want you to work to protect our beautiful Earth.			
Park Signage	The City Council approved the purchase of new monument signage at 7 parks. The signs have been installed at all parks except Tower Fields and Central Park. All of the signs have been installed. The City received a request for signage at Williams Park.	3/23	Summer 2024	
Harder Park Disc Golf Course	The NBDGA is in the process of designing signage for the course. The PTOS commission approved moving forward with the concept kiosk and to bring the final design back for approval. The City Council approved the NBDGA funding request of $5,000 for alternate short tees and an alternate basket location for full build out of the course. The tee pads and kiosk sign will be installed in the spring. Trees have been planted around the course. A draft kiosk sign has been created. Public Works will be working with the NBDGC on site/landscaping improvements at the park for the kiosk. New concrete tee pads were installed on the course. There is a disc golf tournament scheduled for April 5, 2025	6/23	Spring 2024	
Ballfield Improvements	The fencing improvements at Harder and Tower Park have been completed. Future improvements to be addressed are aglime, dugout roofs; drainage, base/bench replacement and fence toprail covers;	Dec 2022	Fall 2023/Spring 24	$125,000
MERC Grant	The City received grant funding for new dugout roofs for Field 1 at Harder Park. These will be installed in Spring 2025		Spring 2025	
RJMP	The Commission recommend city staff work with the Football association to identify improvements to fields, lighting and storage at the park.			
Veterans Memorial	The City Council approved the site plan and MOU with the North Branch Veterans Memorial Group at the July 25, 2023 meeting and are working on their marketing and fundraising efforts. The coming soon sign has been installed in the park. The City Council approved the fiscal agreement.		2025/2026	
Tower Fields Drainage Improvements	The City was notified that it received a $7,000 grant from the MN Twins – Field for Kids Grant for drainage improvements to Tower Fields. The City Council approved up to $13,000 to complete the drainage improvements in fall 2023. The City		Spring 2024	

<table>
<tr><td></td><td>has been notified that it will be provided an additional $8,000 of funding thanks to player donations for the full grant request amount of $15,000!</td><td></td><td></td><td></td></tr>
<tr><td>Flink Ave Trail
Sunrise Bluff 2
Phase II
(Co Mkt – 392)</td><td>City Staff submitted a grant to MNDOT AT program received funding of $574,332 to complete the trail section. The City Council approved the final engineering for the project with construction planned to start in June 2025.</td><td></td><td>June 2025</td><td>$99,901</td></tr>
<tr><td>Safe Route to Schools

CSAH 30 Trail</td><td>The City Council recommended approval of submitting the grant application to construct a trail along the east side of CSAH 30 from 379th St to Maple St and on Maple St from CSAH 30 to Oak St at the 12.7.21 meeting The estimated engineering City Cost is $55,004.90. The City has been notified that the project was selected for funding in the amount of $366,700. The Council approved the plans and specs and the project is out for bid. The bids came in below budget and project is expected to begin Spring 2025. Project is under construction expected to be completed by October 2025.

Project Page

https://www.ci.north-branch.mn.us/residents/parks/safe_routes_to_school.php</td><td></td><td>June 30, 2025</td><td></td></tr>
<tr><td>SRTS Plan</td><td>The SRTS Plan is over 12 years old and is need of an update. Will look to apply for grant funding to update this. The City was notified that it was awarded funding to complete its safe routes to school plan.</td><td></td><td>2025</td><td></td></tr>
<tr><td>Arts Grant</td><td>The Council approved the summer concert grant application and staff were notified the grant was awarded.<table><tr><td>Minnesota State Band</td><td>6/17/2025</td></tr><tr><td>Native American Dance and Drum Exhibit/Keith Secola</td><td>6/24/2025</td></tr><tr><td>Church of Cash</td><td>7/8/2025</td></tr><tr><td>Whitesidewalls</td><td>7/15/2025</td></tr><tr><td>Monroe Crossing</td><td>7/29/2025</td></tr><tr><td>Hard Days Night</td><td>8/12/2025</td></tr></table></td><td></td><td></td><td></td></tr>
<tr><td>Pollinator Friendly</td><td>The legislature approved language allowing</td><td></td><td></td><td></td></tr>
</table>

City/Monarch Community	property owners to maintain native prairies on all properties. The city will need to amend its existing ordinances to align with this.			
Tree City	The CCMG planted 8 trees in Clayton Anderson park despite the rained out Arbor Day event. City staff will work on tree ordinance and will bring it to a future meeting for review/discussion.		Spring 2025	
Skateboard Park	The Commission and Council approved the replacement of the surfacing at the skateboard park. Public Works has installed the new ramp surfaces and the park is getting a lot of use. 3rd Lair has held provided a concept of a tiered quarter pipe. The PTOS Commission discussed providing up to $4,000 in funding match for a tiered quarter pipe.	5/3/21		
Williams Park Community Garden	The community gardens have been tilled up for the season and are accepting applications for garden plots for 2025.			
Malmquist Property	The PTOS Commission recommended to strongly support Mr. Malmquist's proposal for his property to be entrusted to the city at the appropriate time and to care and that the city would care best for it and properly use it at the 1/9/23 meeting. City Staff is working with Mr. Malmquist on next steps. An appraisal ($3,500 - $5,000) would be required for DNR grant acquisitions. City staff met with the MN Trust for Public Lands to explore options to help protect the site until grant funding could be acquired.			
North Branch Beautification Association	The NBBA is continuing to work on the Vet Memorial, Flower Baskets, Banners and Memorial Benches.			
Splash Pad	The Commission and City Council have identified a splash pad as top priority improvement and has discussed Williams Park as the location for the splash pad to be tied to a community center location. The Commission discussed hosting a community input meeting on the desired amenities and type of facility the community would desire in in winter 2024. The City is conducting a facility assessment and will help guide the location for a future community center. The Commission would like to hold a joint meeting with other commissions and council through this process.			
Strategic Parks, Trails and Open Space Plan	The City Council approved the Comprehensive Plan at the Oct 23, 2018 meeting. The next steps will be to develop a strategic plan and		Spring 2025	

	implementation. Including a bicycle/pedestrian plan and development of a bike friendly community initiatives and to accommodate site amenities within the design i.e. benches at various locations. This is an agenda item. A facility assessment is in the process of conducted and is estimated to be completed in mid-July 2024.			
Subdivision Review				
Westside Commons	The PTOS Commission recommended the acceptance of cash and to work with the developer on the construction of the extension of the trail from 386th St to TH95. The developer has agreed to construct the trail from 386th St to TH95 and will receive a credit for park dedication fees.	3/6/23		
Westside Commons Sr Housing	The PTOS Commission recommended the acceptance of cash on 10/7/24			
Preserve at Spring Hill 2	The PTOS Commission recommend the acceptance of cash on 9/9/24			
Sneep Acres	The PTOS Commission recommended the acceptance of cash on 11/04/2024.			
Sunrise Bluff 3	The PTOS Commission recommended the acceptance of the construction of the trail from Everett Ave to Flink Ave along 392nd St and to accept the dedication of the land along the Sunrise River and to provide an easement across the west outlot to extend the access to the west of the development.	4/1/24		
Meadows Ridge (LGI)	The PTOS Commission reviewed and recommended approval of the open space in the preliminary plat and recommend the acceptance of cash for units above the park credit utilization area. A park credit utilization area was approved and has been paid for up to 591 total units to be constructed. 308 units have been platted to date.	9/11/23		
Chain Lake Shores	The PTOS Commission reviewed the concept plan and provided feedback of a combination of cash and land for park dedication with a more detailed review with a preliminary/final plat submittal.	9/11/23		
Townsedge Master Plan	The PTOS Commission to recommend an acceptance a combo of land and cash for park dedication funds with the land not to exceed 4 acres.	5/2/22		
Casselberry Outlot	The PTOS Commission requested the City Council to reserve the parcel of land located at the northeast		2027	

	corner of Lincoln Trail and Hemingway Ave as park/open space. The City Council discussed this at their November 10, 2022 meeting and noted that the parcel is being reserved as right-of-way for a future intersection improvement (2027) and that any additional space would be preserved as park/open space.			
Long-term Planning and Goals	**Progress and Next Steps**			
CIP 2024-2035	The Commission discussed focusing on Williams Park and to add the Malmquist Property, Luchts Trail Connection and park expansions to the CIP. The City Council will be reviewing in May/June 2023. – Additional resident support has been provided for the Luchts Crossing trail connection.			
Council Commission	The PTOS Commission appointed Lynn Wilson to serve on the planning committee			

Northwood Park	Pickleball Court, Playground Resurfacing, Walkways	DNR Grant/	2025	$240,000
Splash Pad	Location to be determined		2025	$300,000
Central Park	Basketball Court resurfacing		2025	$25,000
Northwood Park	Parking Lot Resurfacing		2025	$20,000
Northwood Park	Basketball Court resurfacing		2025	$25,000
Co Rd 30 Trail	379th St to Maple St (East side)	*Final Design*	2025	$500,000
Co Rd 30 Crosswalk	Pedestrian crossing near the library to Sunrise Prairie Regional Trail	*Final Design*	2025	$600,000
Flink Ave Trail Phase II	Trail connection from existing trail to 392nd St to NB Marketplace.	*Grant ?*	2025	$600,000

Harder Park	Parking Lot microsurfacing		2025	$65,000
Falcon Ave Trail	385th – 386th St		2025	$55,000
RJMP	Parking Lot Microsurfacing		2025	$20,000
Outdoor Archery Range	Location to be determined		2025	$42,000
Malmquist Property	Acquisition and Development		2025	$600,000
Sunrise Prairie Regional Trail	Maintenance		2026	$6,000
Wildridge Park	Park Development – parking lot, soccer fields		2026	$545,000
Williams Park	Park Development		2026	$1,850,000
Clayton Anderson	Parking lot surfacing		2026	$200,000
Harder Park Trail Connection			2026	$1,000,000
Northwood Park Playground Equipment	Replace existing playground equipment		2026	$100,000
Luchts Crossing	Park Development		2027	$100,000
Wildridge Park	Basketball Court Resurfacing		2027	$20,000
Luchts Crossing Trail Connection	Trail Connection from Luchts Crossing to Casselberry		2027	$100,000
Northwood Park	Irrigation System		2028	$70,000
Tower Fields	Irrigation System		2028	$70,000
Townsedge Park	Park Development		2028	$200,000
Harder Park Playground Equipment	Replace existing playground equipment		2028	$100,000
North Branch Oaks Playground Equipment	Replace existing playground equipment		2028	$100,000
Roger Johnson Park	Safety and Security Lighting		2028	$100,000
Tower Fields	Parking Lot Paving		2029	$70,000
Meadows North Park	Expansion to west		2029	$50,000
Dog Park	Dog Park Development - Location TBD		2030	$30,000
Roger Johnson Playground Equipment	Replace existing playground equipment		2030	$
Roger Johnson Park	Expansion to east		2031	$80,000
Sunrise Prairie Regional Trail	Maintenance		2032	$6,000

Wildridge Park Playgrund Equipment	Replace existing playground equipment		2032	$100,000
Grand Ave Trail	Pedestrian bridge across Sunrise River		2033	$515,000

City of North Branch
Staff Report

Prepared By: Nathan Sondrol, Community Development Director

Presenter: Nathan Sondrol, Community Development Director

Date: 05/01/2025

Board & Commission: Parks, Trails and Open Space Commission

Subject: Riverwalk Park Eagle Scout Project

Background
The PTOS

Christopher Capaul presented a proposal to the PTOS Commission on August 5, 2024, to install concrete access paths, bench pads and native plantings and landscaping at the Riverwalk Park Dome Structure for his Eagle Scout project.

The Commission reviewed and approved the request at that meeting. Mr. Capaul has been working on project planning and fundraising for the project and will be providing an update to the commission on the project. Attached is a general overview of the project. He will be providing additional information at the meeting.

Requested action
To Christopher Capaul's request for funding assistance for the installation of concrete paths, bench pads and pollinator plantings in Riverwalk Park for his eagle scout project.

Voting Requirements:

Voting Options **Simple Majority**



Bench and Library





Capaul



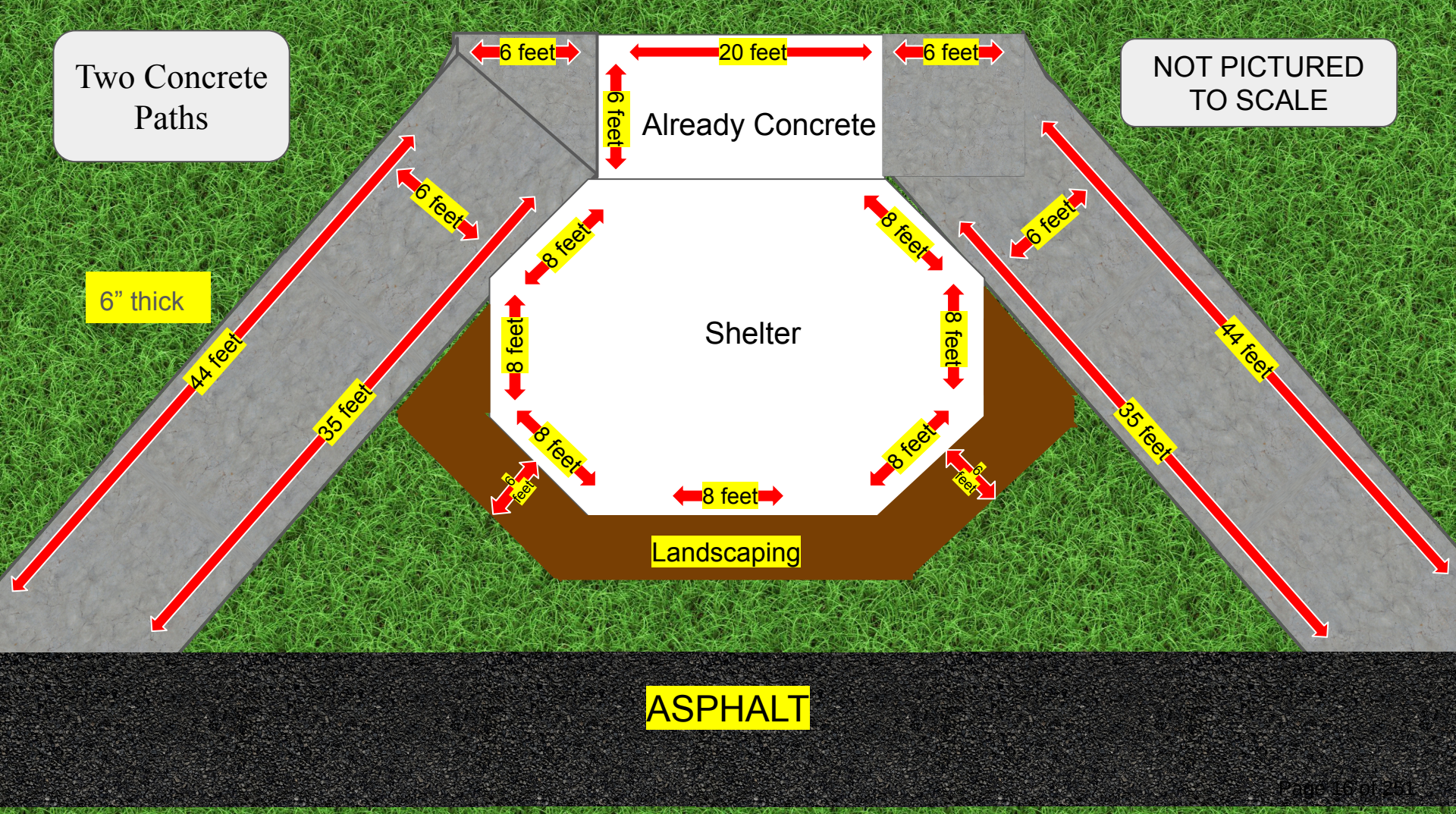
Shelter Path Area



Second Bench

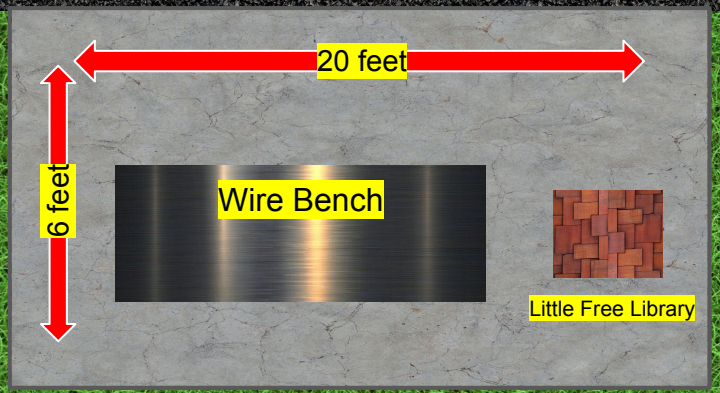





Two Concrete Paths
NOT PICTURED TO SCALE
6 feet
20 feet
6 feet
6 feet
Already Concrete
6 feet
6 feet
6” thick
8 feet
8 feet
8 feet
Shelter
8 feet
8 feet
8 feet
8 feet
6 feet
8 feet
6 feet
6 feet
44 feet
35 feet
35 feet
44 feet
Landscaping
ASPHALT

ASPHALT

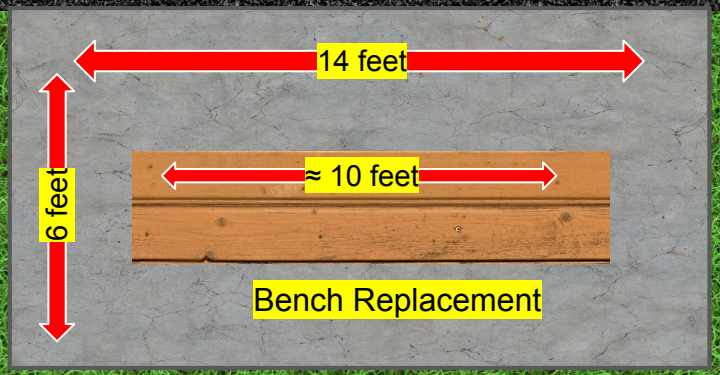
6” thick



Bench and Library Pad PAD A

ASPHALT

6” thick



Second Replaced Bench Pad PAD B

Values



Concrete paths: 4.88 yards per path - 5.1 yds order amount

9.77 yds for both paths - 10.5yds order amount

Pad A: 6’ by 20’, 6” thick, 2.22yds - 2.5yds order amount

Pad B: 6’ by 14’, 6” thick, 1.5yds - 1.65 order amount

Total: 13.49yds - 14.5yds order amount

City of North Branch
Staff Report

Prepared By: Nathan Sondrol, Community Development Director

Presenter: Nathan Sondrol, Community Development Director

Date: 02/12/2025

Board & Commission: Parks, Trails and Open Space Commission

Subject: Main Street Apartments

Background Information:
Bigfork Valley LLC has provided plans for a development named Main Street Apartments. The site is located on the north side of Main Street between the Elm Street, 3rd Street and 4th Street (see the attached map). The plan consists of 4 apartment buildings with 8 units in each building for a total of 32 units. The site has a total of 2.4 acres. The site is predominately relatively flat. Soils consist of fine sand and the landcover consists of a vacant turf lot. Sidewalks are planned to be constructed around the entire block.

Discussion/Analysis:
State Statute allows cities the ability to require that a reasonable portion of the buildable land of any proposed subdivision to be dedicated to the public to address infrastructure needs created by the development; including, parks, recreational facilities, playgrounds, trails, sidewalks, wetlands and open space.

In lieu of land dedication for parks, recreational facilities, playgrounds, trails, wetlands or open space, cities may require a developer to pay cash or "park dedication fees." Park dedication fees excuse the developer from a local land dedication for park and recreation purposes, but still allow the city to purchase and acquire new, off-site facilities to serve the recreation needs created by the subdivision.

Sec. 54-465. Conditions for contributions.
It shall be deemed to be in the public interest to require land dedication, cash contribution, or any combination thereof when the city council after review and recommendation makes one or more of the following findings of fact:
(1) All or part of the proposed subdivision has been designated as park, playground, public open space, storm sewer holding areas or ponds on an adopted city plan;
(2) Such contribution is necessary in order to protect adjacent land uses from potential conflicting land uses which could exist on the land subdivided;

(3) The increased number of residents to reside or be employed within the subdivision will increase the recreational demands upon the city;
(4) The land proposed to be subdivided contains or borders upon existing unique topographical features including but not limited to ponds, lakes, streams, timber stands, water holding areas, hills, steep slopes, drainage areas, or bluffs which should be preserved to prevent foreseeable safety, pollution, or erosion hazards or to provide unique recreational and aesthetic qualities and enjoyment to the city; Such contribution is necessary to comply with or fulfill the goals, policies, and programs of the city.

Based on North Branch City Code and the current fee schedule, the following options are available for park dedication for the proposed development.

Cash Option	32/Units @ $1,800 per lot = $57,600
Land Option	2.4 acres @ 10% = 0.2 acres
Cash/Land Option	Various Combinations of the above

The property is served by the Riverwalk Park and the Main Street Skating Rink park areas.

Deadline: May 5, 2025

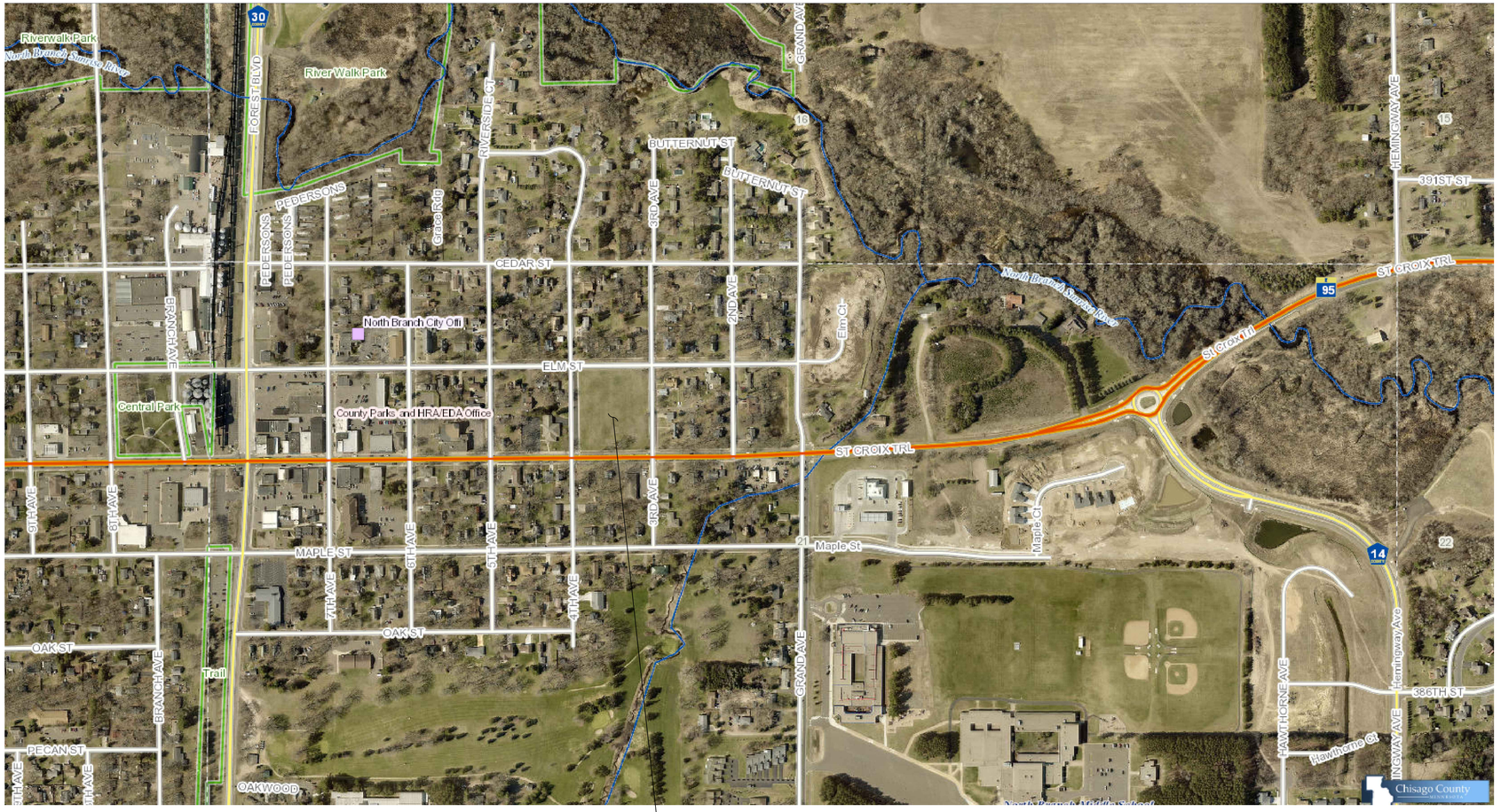
Requested Action & Recommendation:
The requested action is for the Commission to make a recommendation on deeming if there is a public interest to require a land dedication, cash contribution or any combination thereof for parks, trails and open space of the proposed plat.

Staff recommends the acceptance of cash for the parks, trails and open space as the increased number of residents within the subdivision will increase the demands upon the city parks, trails and open space system.

Voting Requirements:

Voting Options **Simple Majority**

MAIN STREET APARTMENTS



PROJECT AREA

SHEET INDEX

1 – TITLE SHEET
2 – EXISTING CONDITIONS AND REMOVALS PLAN
3 – SITE PLAN
4 – GRADING AND EROSION CONTROL PLAN
5 – UTILITY PLAN
6–8 – STANDARD DETAILS
9–10 – STORMWATER POLLUTION PREVENTION PLAN
11 – LANDSCAPE PLAN

ZONING:

THE PROPERTY IS CURRENTLY ZONED FOR THE FOLLOWING: RESIDENTIAL

GOVERNING STANDARDS: COUNTY OF CHISAGO STANDARDS, CITY OF NORTH BRANCH STANDARD CONTRACT DOCUMENTS AND TECHNICAL SPECIFICATIONS FOR UTILITY AND STREET CONSTRUCTION, 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" , LATEST VERSION OF THE "MINNESOTA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (MMUTCD)

UTILITIES:

GOPHER STATE ONE CALL
(651) 454–0002
gopherstateonecall.org

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 3-2, ENTITLED "STANDARD GUILDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."
CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. GSOC INFORMATION ABOVE.

DEVELOPER:

TOMMY FOSTER
BIGFORK VALLEY LOG CABINS LLC
NORTHWOODS DEVELOPMENT GROUP LLC
1275 WEST 4TH ST
RUSH CITY, MN
(612) 290–3828

ENGINEER:

KRYSTLE BLOCH, P.E. (MN 49893)
BLOCH ENGINEERING, PLLC
32210 XEON ST NW
CAMBRIDGE MN 55008
(507) 995–2981

SURVEYOR:

JOSHUA P. SCHNEIDER, PLS
9140 BALTIMORE ST NE, STE 100
BLAINE, MN 55449
(763) 238–6278

BLOCH ENGINEERING

BLOCH ENGINEERING, PLLC
blochengineering.com

32210 XEON ST NW
CAMBRIDGE, MN 55008

krystle@blochengineering.com

JOB NO. 24–02

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.

PRELIMINARY

KRYSTLE L. BLOCH — 49893
4–29–2025 — LIC. NO.
DATE

MAIN STREET APARTMENTS
OWNER: TOMMY FOSTER
1275 WEST 4TH ST, RUSH CITY, MN

REVISIONS

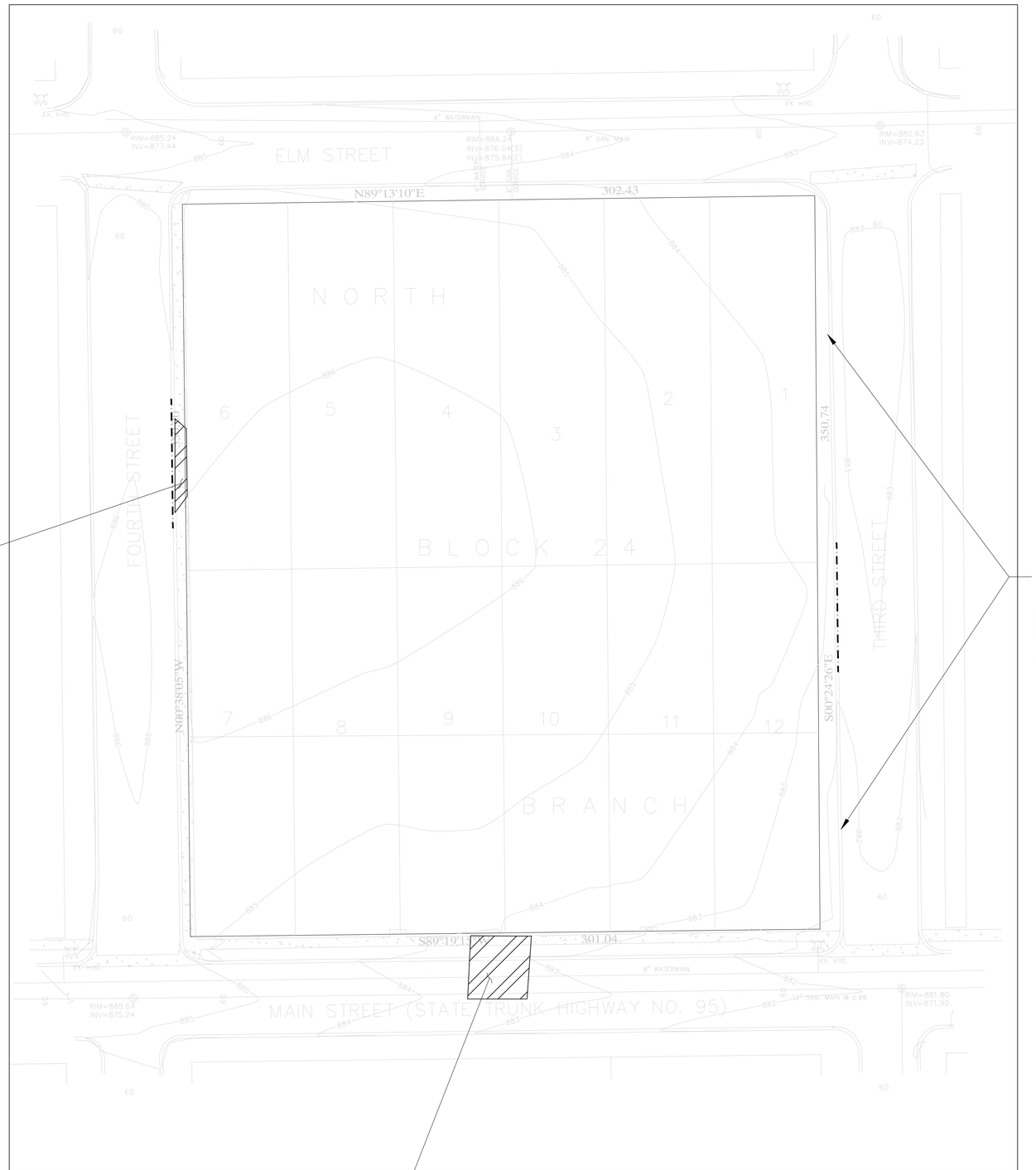
NO.	DATE	BY	DESCRIPTION

SHEET C1 — SHEETS 11

LEGEND

CURB REMOVAL

PAVEMENT OR SIDEWALK REMOVAL



REMOVE WALK FOR NEW ENTRANCE

REPLACE ENTIRE LENGTH OF DEPRESSED CURB ALONG EAST CURBLINE WITH B618 (CONFIRM THIS MATCHES EXISTING), EXCEPT IN LOCATION OF NEW ENTRANCE.

REMOVE AND REPLACE WALK AND PAVEMENT FOR UTILITY CONNECTIONS

BLOCH ENGINEERING

BLOCH ENGINEERING, PLLC
blochengineering.com

32210 XEON ST NW
CAMBRIDGE, MN 55008

krystle@blochengineering.com

JOB NO. 24-02

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.

PRELIMINARY

KRYSTLE L. BLOCH — LIC. NO. 49893

4-29-2025 — DATE

MAIN STREET APARTMENTS
OWNER: TOMMY FOSTER
1275 WEST 4TH ST, RUSH CITY, MN

EXISTING CONDITIONS AND REMOVALS PLAN

REVISIONS		
NO.	DATE	BY	DESCRIPTION

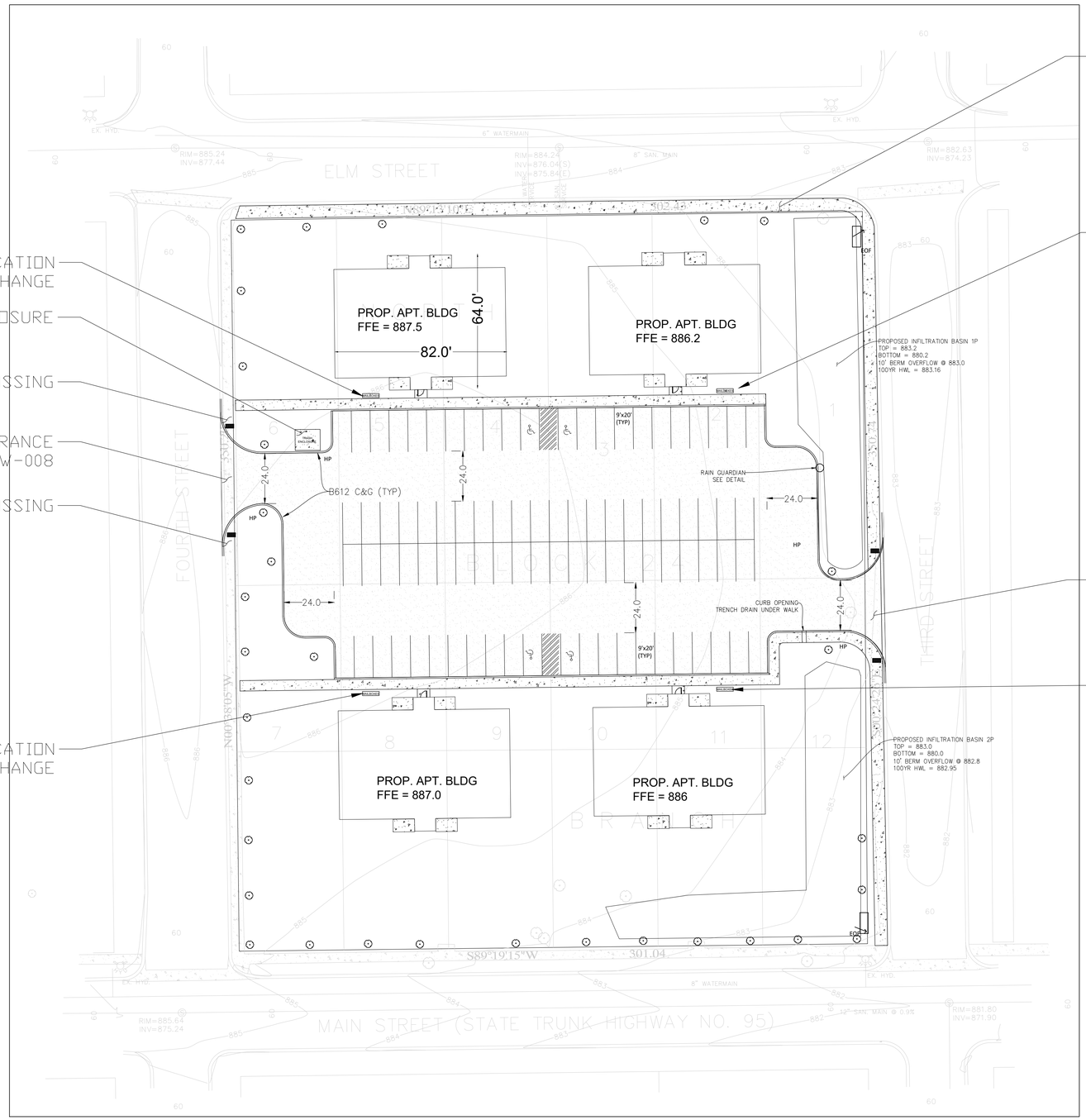
0 30 60
SCALE FEET

SHEET C2 — SHEETS 11

LEGEND

PROPOSED B618 CURB AND GUTTER

PROPOSED BITUMINOUS PAVEMENT



6' PERIMETER SIDEWALK
PER CITY STANDARDS

TENTATIVE MAILBOX (8) LOCATION
SUBJECT TO LOCATION CHANGE

TENTATIVE MAILBOX (8) LOCATION
SUBJECT TO LOCATION CHANGE

TRASH ENCLOSURE

ADA RAMP AT DRIVEWAY CROSSING

COMMERCIAL ENTRANCE
PER CITY STD DETAIL RDW-008

ADA RAMP AT DRIVEWAY CROSSING

COMMERCIAL ENTRANCE
PER CITY STD DETAIL RDW-008

TENTATIVE MAILBOX (8) LOCATION
SUBJECT TO LOCATION CHANGE

TENTATIVE MAILBOX (8) LOCATION
SUBJECT TO LOCATION CHANGE

BLOCH ENGINEERING

BLOCH ENGINEERING, PLLC
blochengineering.com

32210 XEON ST NW
CAMBRIDGE, MN 55008

krystle@blochengineering.com

JOB NO. 24-02

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.

PRELIMINARY

KRYSTLE L. BLOCH — 49893
4-29-2025 — LIC. NO.
DATE

MAIN STREET APARTMENTS
OWNER: TOMMY FOSTER
1275 WEST 4TH ST, RUSH CITY, MN

SITE PLAN

REVISIONS

NO.	DATE	BY	DESCRIPTION

0 30 60
SCALE FEET

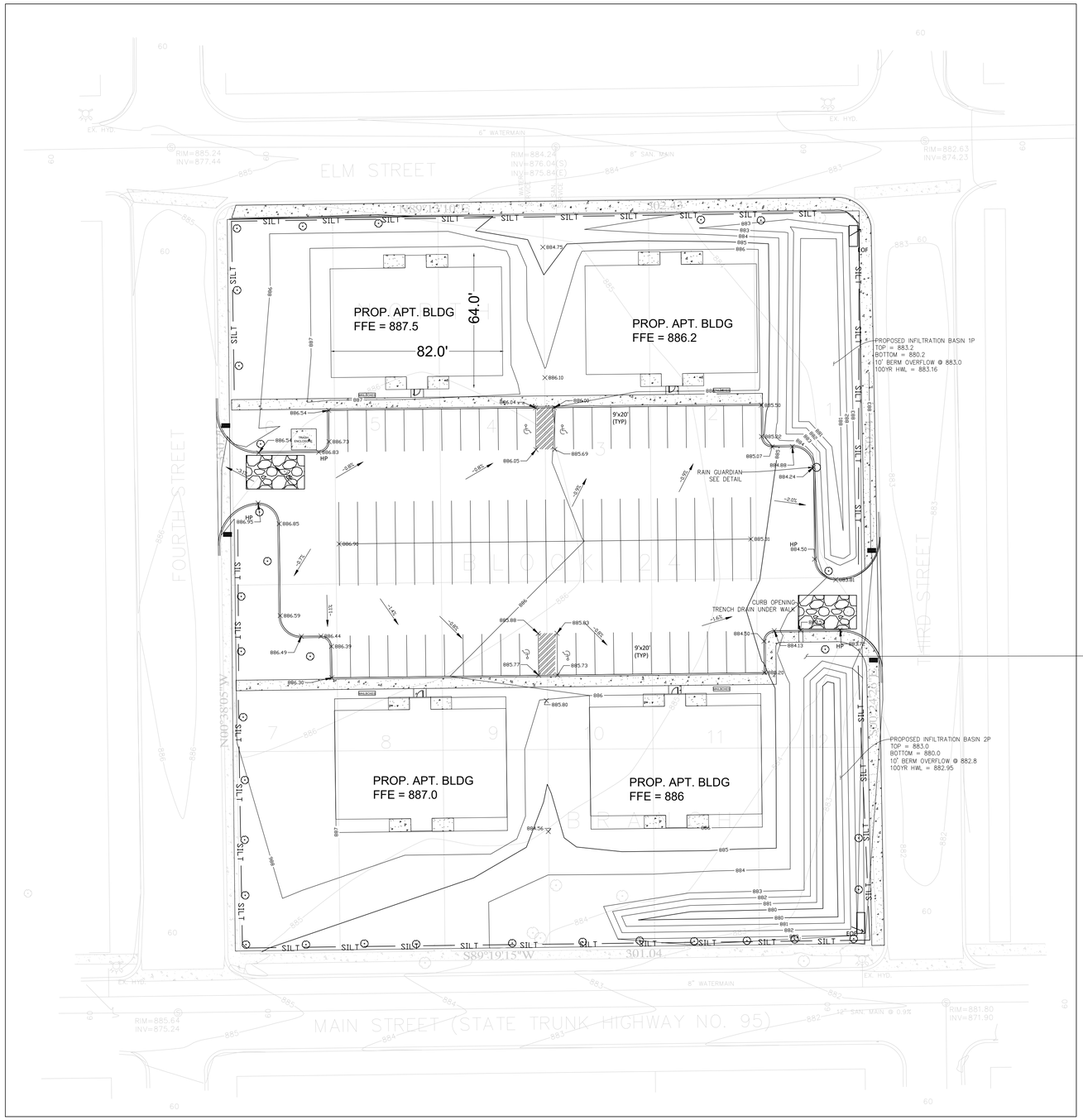
SHEET C3 SHEETS 11

LEGEND

- SILT — SILT FENCE
- TEMP. CONSTRUCTION EXIT
- DRAINAGE DIRECTION ARROW
- INLET PROTECTION

SITE GRADING NOTES:
1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL VERIFY THE FIELD LOCATION OF ALL PUBLIC AND PRIVATE UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT (651) 454-0002.
2. ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
3. EXISTING GRADE CONTOUR INTERVALS SHOWN AT 2 FOOT INTERVALS (TOPOGRAPHIC/SURVEY SHOT-BASED SURFACE),
4. PROPOSED GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT INTERVALS.
5. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
6. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED/GRAVEL AREAS.
7. TOPOGRAPHIC INFORMATION TAKEN FROM A TOPOGRAPHIC SURVEY BY LAND SURVEYORS, IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, HE SHALL HAVE MADE, AT HIS EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR AND SUBMIT TO THE OWNER FOR REVIEW.
8. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.
9. ALL PROPOSED SPOT ELEVATIONS ARE FLOWLINE UNLESS OTHERWISE NOTED.

EROSION CONTROL NOTES:
1. ALL DISTURBED AREAS TO BE SEEDED AND MULCHED. 4IN MIN TOPSOIL, EXCEPT IN RIGHT OF WAY. RIGHT OF WAY TO BE SODDED.
2. MULCH TYPE 1 (DISK ANCHORED) IN DISTURBED AREAS
3. SEED MNDOT TYPE 35-221, AT A RATE OF 36.5 LB/AC
4. ALL SLOPES STEEPER THAN 4:1, SHALL BE RESTORED WITH SEED AND PROTECTED WITH EROSION CONTROL BLANKET PER MnDOT SPEC. 3885.1 OR SODDED AND STAKED.
5. SILT FENCE AROUND ENTIRE PERIMETER/PROPERTY LINE. MAY NEED TO USE EC LOGS IN LIEU OF SILT FENCE FOR MOBILITY IN AREAS WHERE THE BMPS WILL BE MOVED (NEAR PROPOSED SIDEWALKS)



BLOCH ENGINEERING

BLOCH ENGINEERING, PLLC
blochengineering.com

32210 XEON ST NW
CAMBRIDGE, MN 55008

krystle@blochengineering.com

JOB NO. 24-02

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.

PRELIMINARY

KRYSTLE L. BLOCH — 49893
4-29-2025 — LIC. NO.
DATE

MAIN STREET APARTMENTS
OWNER: TOMMY FOSTER
1275 WEST 4TH ST, RUSH CITY, MN

GRADING AND EROSION CONTROL PLAN

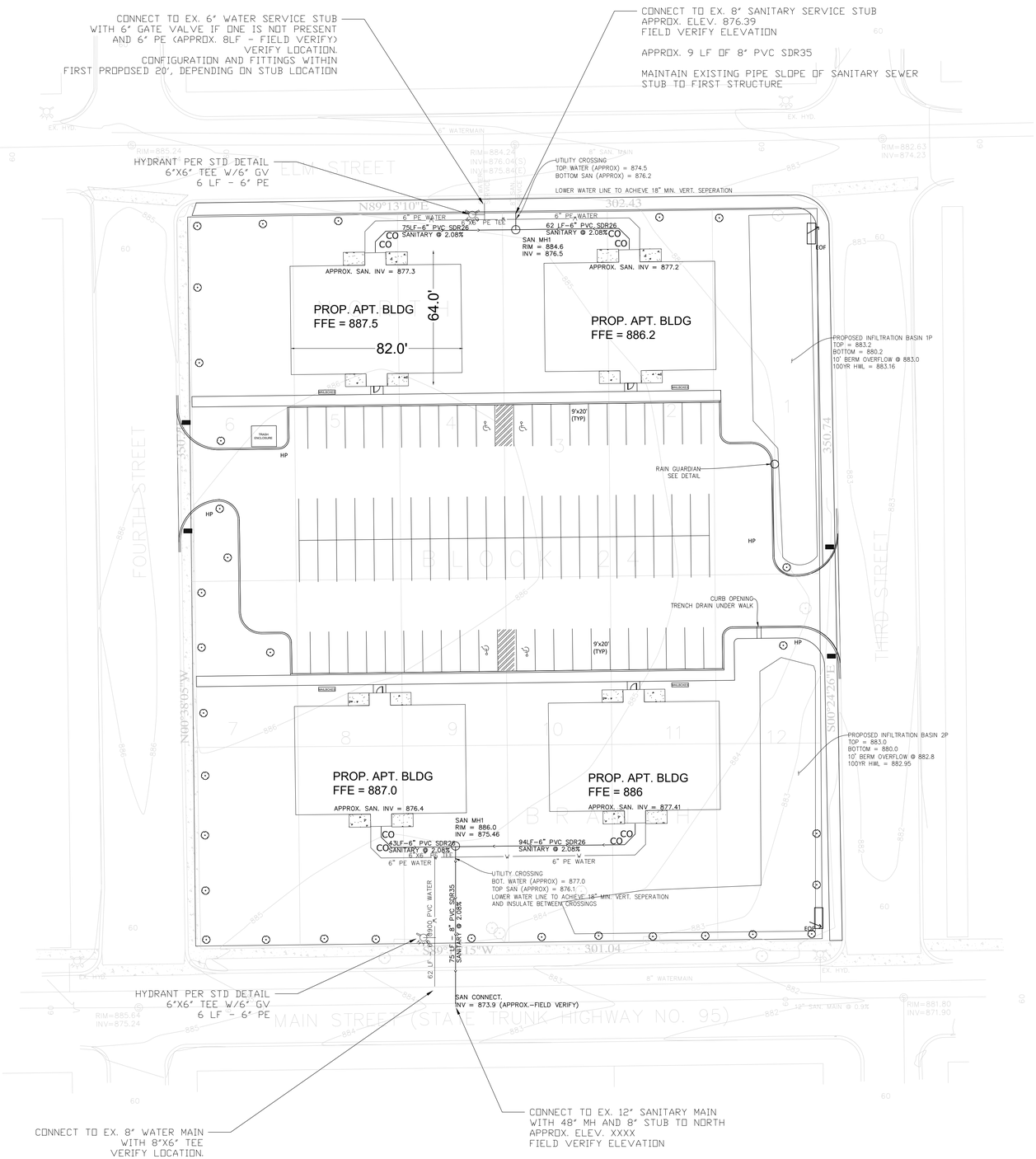
REVISIONS

NO.	DATE	BY	DESCRIPTION

0 30 60
SCALE FEET

SHEET C4 SHEETS 11

UTILITY NOTES:
1. ALL EXISTING UTILITIES MUST BE FIELD VERIFIED (SEE GSOC NOTE BELOW). CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATION OF ALL UTILITIES.
2. CONTRACTOR TO CONTACT ENGINEER IMMEDIATELY IF THERE ARE EXISTING DISCREPANCIES OR VARIATIONS FROM THE PLAN
3. PROPOSED SANITARY SERVICE (MAIN RUN) IS 8" PVC SDR 35. SIDE RUNS TO BUILDING ARE 6" PVC SDR26.
4. PROPOSED WATER SERVICE (MAIN RUN) IS 6" C900 PVC. ALL FITTINGS FOR C900 TO BE DIP.
5. ALL UTILITIES AND PLUMBING TO BE COMPLETED PER CITY CODE AND 2015 MINNESOTA PLUMBING CODE.
6. CONTRACTOR SHALL COORDINATE ALL WORK WITH PUBLIC AND PRIVATE UTILITY COMPANIES.
7. UTILITIES ON PLAN ARE SHOWN WITHIN 5' OF THE BUILDINGS. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR FINAL CONNECTION TO BUILDING LINES. COORDINATE WITH ARCHITECTURAL AND MECHANICAL PLANS ACCORDINGLY.
8. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT GOPHER STATE ONE CALL FOR UTILITY LOCATIONS AT LEAST 48 HOURS PRIOR TO CONSTRUCTION OR EXCAVATION.
9. CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES DAMAGED DURING CONSTRUCTION.
10. MECHANICALLY RESTRAINED JOINTS AT WATERMAIN PIPE BENDS PER CODE.
11. MINIMUM OF 7 FEET OF COVER IS REQUIRED OVER ALL WATERMAIN AND WATER SERVICES, UNLESS OTHERWISE NOTED. NO MORE THAN 10' MAX WITH APPROVAL FROM CITY WATER DEPARTMENT. EXTRA DEPTH MAY BE REQUIRED TO MAINTAIN MINIMUM OF 18" VERTICAL SEPARATION TO SANITARY OR STORM SEWER LINES. WATERMAIN AT EXTRA DEPTH IS INCIDENTAL. INSULATE AT CROSSINGS WITH 18" OR LESS VERTICAL CLEARANCE.
12. MINIMUM OF 10 FEET CLEAR HORIZONTAL SEPARATION AND 18" VERTICAL SEPARATION IS REQUIRED FOR ALL MAIN UTILITIES.
13. SANITARY MANHOLES ARE TYPE 3 MANHOLES PER CITY STANDARD PLAT. CASTING AND WATERPROOFING PER CITY STANDARDS.
14. ALL CONSTRUCTION TO BE PER LATEST CITY OF NORTH BRANCH STANDARD DETAILS AND SPECIFICATIONS.
15. CONTRACTOR TO OBTAIN ALL UTILITY CONNECTION PERMITS FROM THE CITY OF NORTH BRANCH PUBLIC WORKS DEPARTMENT PRIOR TO BEGINNING CONSTRUCTION.



BLOCH ENGINEERING

BLOCH ENGINEERING, PLLC
blochengineering.com

32210 XEON ST NW
CAMBRIDGE, MN 55008

krystle@blochengineering.com

JOB NO. 24-02

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.

PRELIMINARY

KRYSTLE L. BLOCH — 49893
4-29-2025 — LIC. NO.
DATE

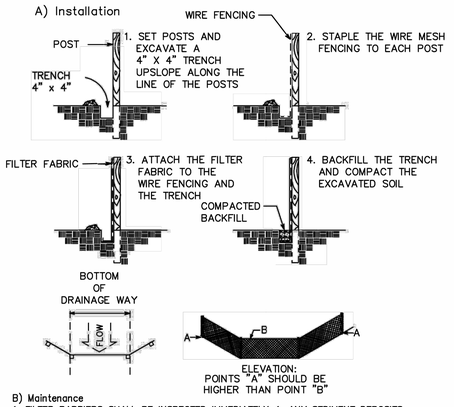
MAIN STREET APARTMENTS
OWNER: TOMMY FOSTER
1275 WEST 4TH ST, RUSH CITY, MN

UTILITY PLAN

REVISIONS		
NO.	DATE	BY	DESCRIPTION

0 30 60
SCALE FEET

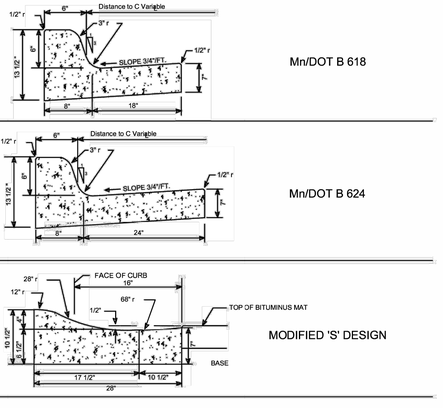
SHEET C5 — SHEETS 11



B) Maintenance

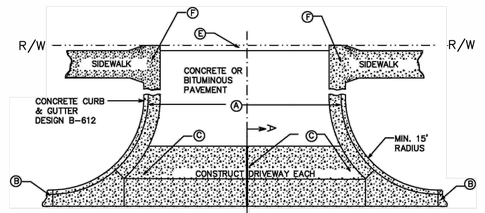
1. FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USEABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY 1/3 THE HEIGHT OF THE BARRIER.
4. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED, OR REMOVED

CITY OF NORTH BRANCH	CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
NORTH BRANCH	PLACEMENT AND CONSTRUCTION OF SILT FENCE NO SCALE	DETAIL NO. ERO-001



NOTE: A MINIMUM OF 3" OF CLASS 5 AGGREGATE BASE SHALL BE USED UNDER ALL CURB AND GUTTER.

CITY OF NORTH BRANCH	CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
NORTH BRANCH	CONCRETE CURB AND GUTTER NO SCALE	DETAIL NO. RDW - 003



NOTES:
1 WHERE THERE IS NO EXISTING CURB AND GUTTER, END PROPOSED CURB AND GUTTER TO END RADIUS WITH "BEAVER TAIL".
2 PAYMENT FOR CONCRETE DRIVEWAY SHALL BE FROM BACK OF CURB.
3 CONCRETE MIX DESIGNATION SHALL CONFORM TO THE CURRENT MnDOT STANDARD SPECIFICATIONS.

(A) TYPICAL 28' F-F DRIVEWAY WIDTH IN EXISTING CONDITIONS MIN 24' MAX. 40' F-F DRIVEWAY WIDTH

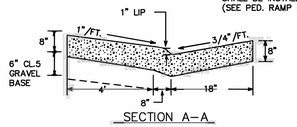
(B) 1/2" EXPANSION JOINT

(C) CONTRACTION JOINT

(D) IF DRIVEWAY NOT POURED MONOLITHICALLY WITH CURB AND GUTTER, INSTALL #4 X 2'-6" DEFORMED TIE BARS (EPOXY COATED) AT 2'-6" O.C., PLACED AT MID-DEPTH SLAB.

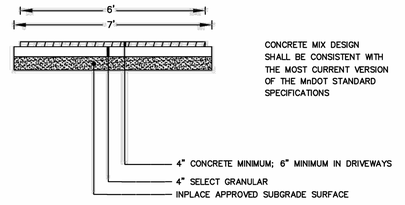
(E) WHERE THERE ARE EXISTING OR PROPOSED CONCRETE WALKS, THE CONCRETE DRIVEWAY SHALL EXTEND TO THE BACK OF THE WALK

(F) IF EXISTING OR PROPOSED CURB AND GUTTER EXTENDS THROUGH SIDEWALK, PEDESTRIAN RAMPS SHALL BE INSTALLED (SEE PED. RAMP DETAIL)



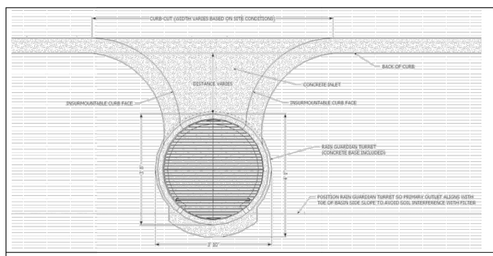
SECTION A-A

CITY OF NORTH BRANCH	CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
NORTH BRANCH	TYPICAL COMMERCIAL DRIVEWAY ENTRANCE NO SCALE	DETAIL NO. RDW-008



6' WIDE CONCRETE WALK
TYPICAL SECTION

CITY OF NORTH BRANCH	CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
NORTH BRANCH	TYPICAL CONCRETE WALK NO SCALE	DETAIL NO. RDW - 012

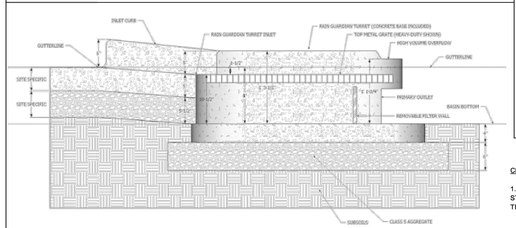


PLAN VIEW NOTES

1. INLET WIDTH AND DISTANCE BETWEEN BACK OF CURB AND RAIN GUARDIAN TURRET MAY VARY WITH SITE CONDITIONS.
2. CONCRETE BASE EXTENDS BEYOND THE FILTER WALL OF THE RAIN GUARDIAN TURRET TO SERVE AS A SPLASH DISSIPATOR.

INSTALLED VIEWS





CROSS-SECTION VIEW NOTES

1. THE TOP OF THE CLASS 5 BASE (COMPACTED TO 95% STANDARD PROCTOR) IS PRECISELY 1' 4" BELOW THE GUTTERLINE ELEVATION.

SPECIFICATIONS

1. STEEL REINFORCED, COLD JOINT SECURED MONOLITHIC CONCRETE STRUCTURE (1,030 LBS). CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS. CONCRETE AIR ENTRAINED (4% TO 8% BY VOLUME). MANUFACTURED AND DESIGNED TO ASTM C858.
2. THREE-POINT PICK USING RECESSED LIFTING POCKETS WITH A STANDARD HOOK.
3. TWO-PIECE LIGHT-DUTY GALVANIZED GRATE (34.5 LBS/PIECE) FOR 541 LB CONCENTRATED LOAD OR 309 LB/SQ FT UNIFORM LOAD.
4. TWO-PIECE HEAVY-DUTY GALVANIZED GRATE (77.5 LBS/PIECE) FOR 2,456 LB CONCENTRATED LOAD OR 1,404 LB/SQ FT UNIFORM LOAD.

INSTALLATION NOTES

1. INSTALL THE CLASS 5 BASE (COMPACTED TO 95% STANDARD PROCTOR). THE DISTANCE FROM THE BACK OF THE CURB MAY VARY BASED ON SITE CONDITIONS, BUT CONSIDERATIONS SHOULD INCLUDE SLOPE OF THE INLET AND BASIN SIDE SLOPES ADJACENT TO THE RAIN GUARDIAN TURRET. POSITION RAIN GUARDIAN TURRET SO PRIMARY OUTLET ALIGNS WITH TOE OF BASIN SIDE SLOPE TO AVOID SOIL INTERFERENCE WITH REMOVABLE FILTER WALL. EXCAVATE 1' 10" BELOW THE GUTTERLINE ELEVATION (I.E. THE BIORETENTION OVERFLOW ELEVATION) TO ACCOMMODATE THE 1' PONDING DEPTH, 6" CLASS 5 AGGREGATE, AND 4" RAIN GUARDIAN TURRET BASE (INCLUDED). THEREFORE, THE TOP OF THE CLASS 5 COMPACTED BASE IS PRECISELY 1' 4" BELOW THE GUTTERLINE ELEVATION. THE TOP OF THE RAIN GUARDIAN TURRET METAL GRATE WILL BE 10-1/2" ABOVE THE TOP OF THE CONCRETE BASE AND 1-1/2" BELOW THE GUTTERLINE ELEVATION TO ACCOMMODATE A SLOPED INLET FROM THE GUTTER TO THE RAIN GUARDIAN TURRET.
2. SET RAIN GUARDIAN TURRET ON THE PREPARED CLASS 5 BASE.
3. INSTALL FRAMING FOR INLET BETWEEN RAIN GUARDIAN TURRET AND BACK OF CURB. TOP ELEVATIONS OF THE FRAMING SHOULD MATCH THE TOP OF THE CURB ON THE STREET SIDE AND THE TOP OF THE RAIN GUARDIAN TURRET ON THE BIORETENTION SIDE.
4. INSTALL EXPANSION/CONTRACTION JOINT MATERIAL OR A SHEET OF POLY TO SERVE AS A BOND BREAK BETWEEN RAIN GUARDIAN TURRET AND CONCRETE INLET BEFORE POURING INLET.
5. SIDE CURBS OF THE POURED INLET MUST HAVE AN INSURMOUNTABLE PROFILE TO PREVENT WATER FLOW FROM OVERTOPPING THE DOWNSTREAM SIDE OF THE INLET.
6. REMOVABLE FILTER WALL SHOULD BE INSTALLED WITH FILTER FABRIC FACING THE RAIN GUARDIAN TURRET INLET.

MANUFACTURED BY:
FORTERRA

RAIN GUARDIAN
PRETREATMENT FOR BIORETENTION
Rain Gardens • Swales • Filtration Basins • Infiltration Basins
www.RainGuardian.biz

RAIN GUARDIAN TURRET
PRETREATMENT CHAMBER
BIORETENTION PONDING DEPTH: 1'
TYPICAL DETAIL

REVISION HISTORY

REV	BY	DATE	DESCRIPTION
A	MDH	12/1/15	TURRET—1'
SCALE		VARIABLE	
U.S. PATENT		8,501,016	

ANOKA CONSERVATION DISTRICT
Anoka Conservation District
1318 McKay Dr. NE, Suite 300
Ham Lake, MN 55304
763-434-2030

BLOCH ENGINEERING

BLOCH ENGINEERING, PLLC
blochengineering.com
32210 XEON ST NW
CAMBRIDGE, MN 55008
krystle@blochengineering.com

JOB NO. 24-02

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.

PRELIMINARY

KRYSTLE L. BLOCH — LIC. NO. 49893
4-29-2025 — DATE

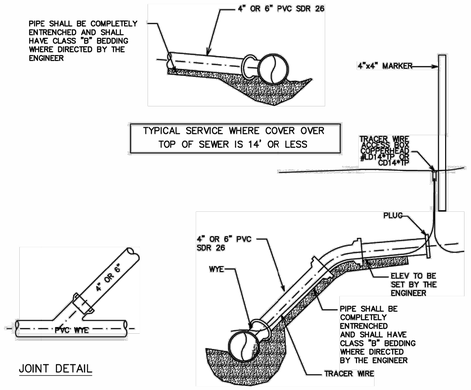
MAIN STREET APARTMENTS
OWNER: TOMMY FOSTER
1275 WEST 4TH ST, RUSH CITY, MN

STANDARD DETAILS

REVISIONS

NO.	DATE	BY	DESCRIPTION

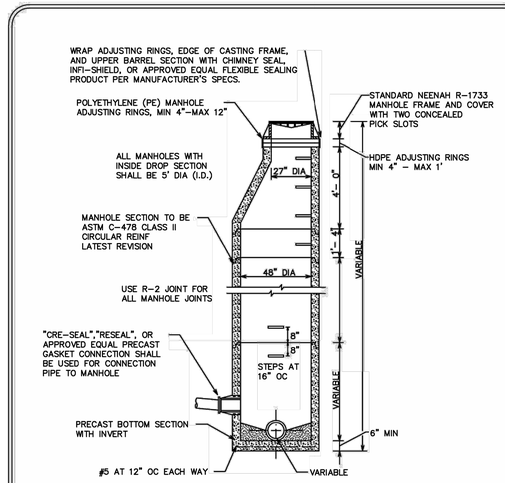
SHEET C6 — SHEETS 11



NOTES:

1) ALL SERVICE CONNECTIONS INCLUDING NECESSARY BENDS AND SPECIAL FITTINGS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER LINEAR FOOT OF 4" OR 6". NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR CONCRETE ENCASEMENT OR PIPE BEDDING.
2) ALL SERVICE CONNECTIONS SHALL TERMINATE 10' INSIDE PROPERTY LINE, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
3) SERVICE STUB SHALL BE PLUGGED AND MARKED WITH A 4" x 4" TIMBER PROTRUDING 3' OUT OF GROUND. (PAINTED GREEN)
4) NO SADDLES WILL BE ALLOWED
5) RETRO-FIT INSTALLATIONS TO BE CONSTRUCTED BY CUTTING IN A PVC WYE AND PVC SLEEVE
6) SEWER SERVICES ARE TO BE LOCATED 3' DOWNSTREAM OF WATER SERVICE IF IN THE SAME TRENCH

CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
SANITARY SEWER SERVICE DETAIL NO SCALE	DETAIL NO. SAN-001

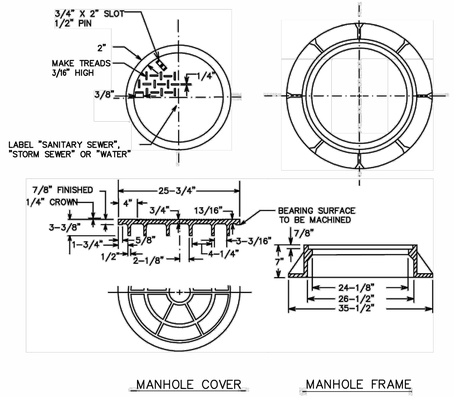


NOTES:

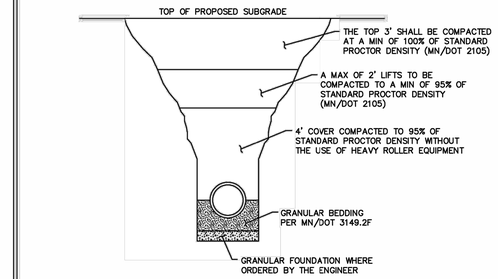
1. MANHOLE STEPS SHALL BE CAST IRON OR MA MODEL PS-I-PF (BY MA INDUSTRIAL INC.) CONFORMING TO ALL OSHA REGULATIONS AND SPACED 16" OC.
2. ALL MANHOLE JOINTS SHALL BE SEAL WRAPPED AS DESCRIBED IN THE SPECIFICATION (INCIDENTAL).

CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
STANDARD MANHOLE FOR SANITARY SEWER NO SCALE	DETAIL NO. SAN-002

NOTE:
1. FRAME AND SOLID COVER TO BE NEENAH NO. R-1733 WITH NO.MF 25572 CONCEALED PICKHOLE OR APPROVED EQUAL.
2. USE NEENAH R-1755G FOR WATERTIGHT APPLICATIONS.

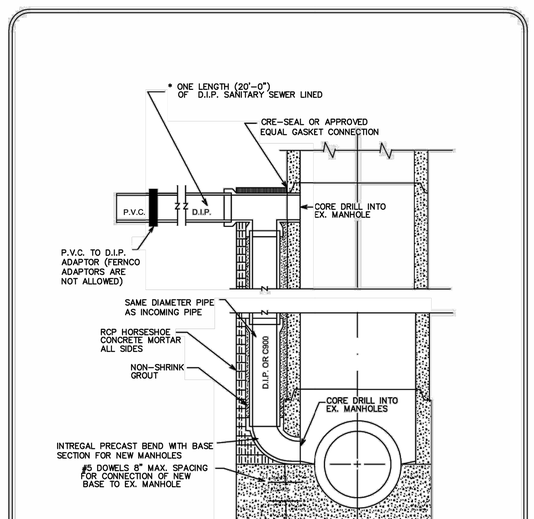


CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
STANDARD SANITARY & STORM SEWER FRAME & COVER FOR MANHOLE NO SCALE	DETAIL NO. SAN-004

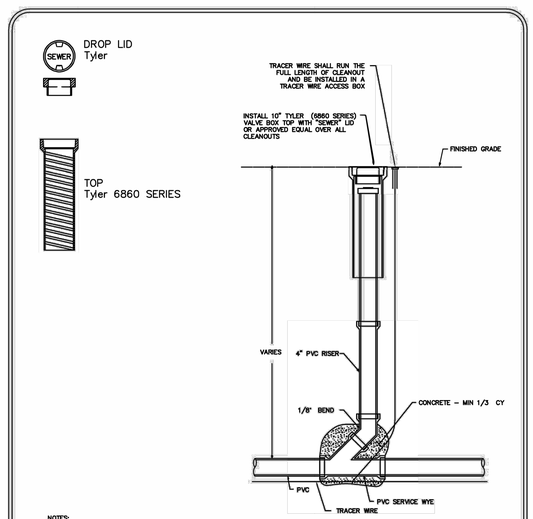


SHOVEL, PLACE, AND HAND COMPACT AROUND PIPE TO 12" ABOVE PIPE. VBRATORY COMPACTION REQUIRED EACH SIDE OF PIPE, AS DIRECTED BY THE ENGINEER.

CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
TYPICAL TRENCH COMPACTING AND CLASS B BEDDING NO SCALE	DETAIL NO. SAN-006



CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
OUTSIDE DROP SECTION FOR SANITARY SEWER NO SCALE	DETAIL NO. SAN-007



NOTES:

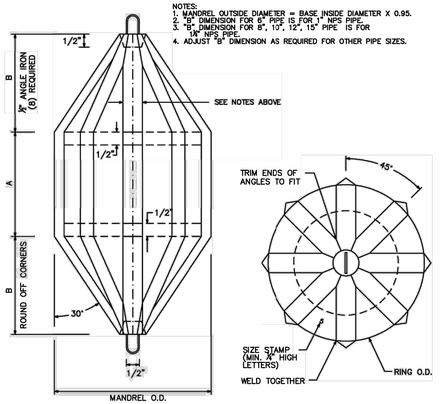
1. TRACER WIRE ACCESS BOX FOR NON-ROADWAY APPLICATIONS SHALL BE GRADE LEVEL COPPERHEAD LITE DUTY #LD14"TP.
2. TRACER WIRE ACCESS BOX FOR CONCRETE/DRIVEWAY APPLICATIONS SHALL BE COPPERHEAD #CD14"TP.
3. CLEANOUTS LOCATED IN DRIVEWAYS SHALL BE COVERED WITH A FORD A-1 METER BOX COVER.

CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
SANITARY SEWER SERVICE CLEANOUT NO SCALE	DETAIL NO. SAN - 008

ASTM D3034

PIPE SIZE	A	BASE INSIDE DIAMETER	MANDREL OUTSIDE DIAMETER	RING OUTSIDE DIAMETER	B	BASE INSIDE DIAMETER	MANDREL OUTSIDE DIAMETER	RING OUTSIDE DIAMETER	B
INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES
6	4	5.742	5.46	4.74	3.6	5.612	5.33	4.62	3.5
8	6	7.665	7.28	6.57	4.9	7.488	7.11	6.40	4.7
10	6	9.563	9.08	8.37	6.4	9.342	8.87	8.16	6.2
12	8	11.361	10.79	10.08	7.9	11.102	10.55	9.84	7.7
15	9	13.898	13.20	12.49	10.0	13.575	12.90	12.19	9.7

NOTES:
1. MANDREL OUTSIDE DIAMETER = BASE INSIDE DIAMETER X 0.95.
2. "B" DIMENSION FOR 6" PIPE IS FOR 4" NPS PIPE.
3. "B" DIMENSION FOR 8", 10", 12", 15" PIPE IS FOR 6" NPS PIPE.
4. ADJUST "B" DIMENSION AS REQUIRED FOR OTHER PIPE SIZES.



CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
GO, NO GO 5% DEFLECTION TESTING MANDREL FOR FLEXIBLE SEWER PIPE NO SCALE	DETAIL NO. SAN - 009

BLOCH ENGINEERING

BLOCH ENGINEERING, PLLC
blochengineering.com

32210 XEON ST NW
CAMBRIDGE, MN 55008

krystle@blochengineering.com

JOB NO. 24-02

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.

PRELIMINARY

KRYSTLE L. BLOCH — LIC. NO. 49893

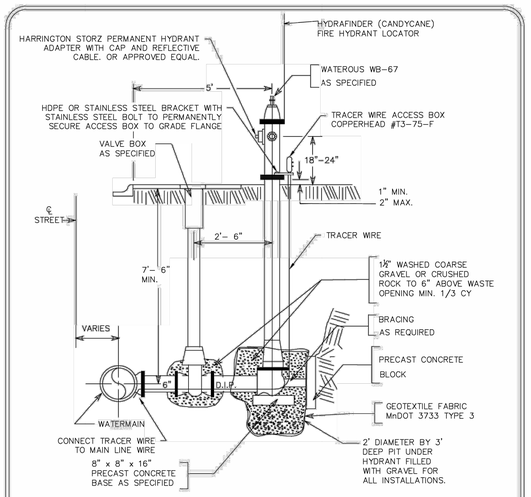
4-29-2025 — DATE

MAIN STREET APARTMENTS
OWNER: TOMMY FOSTER
1275 WEST 4TH ST, RUSH CITY, MN

STANDARD DETAILS

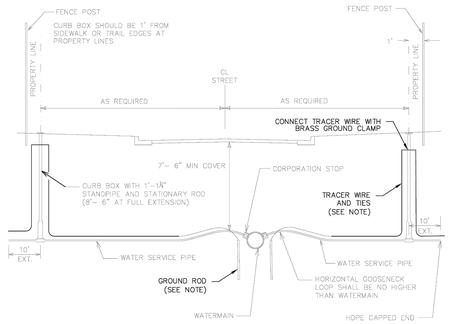
REVISIONS			
NO.	DATE	BY	DESCRIPTION

SHEET C7 — SHEETS 11



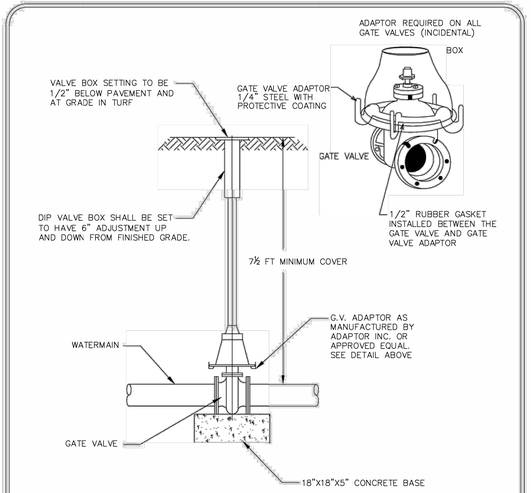
NOTE:
ALL HYDRANT LEADS SHALL BE TIED WITH ¾" GALVANIZED STEEL TIE RODS, EXTENDING FROM TEE TO VALVE AND FROM VALVE TO HYDRANT OR MEGA-LUG BRAND THRUST RETAINER GLANDS AT JOINTS (INCIDENTAL).

CITY OF NORTH BRANCH	CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
NORTH BRANCH	TYPICAL HYDRANT ASSEMBLY INSTALLATION NO SCALE	DETAIL NO. WM-001



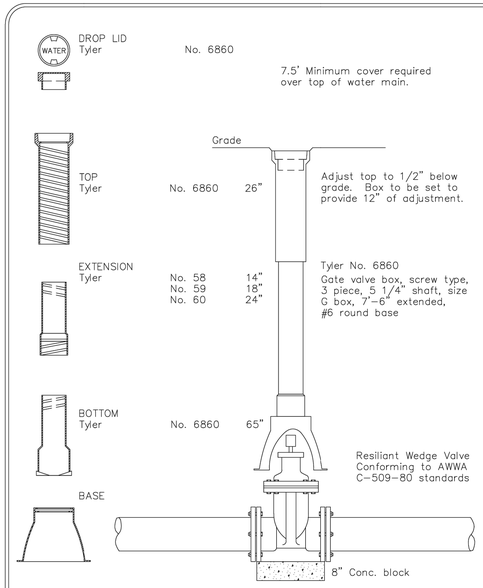
NOTES:
1. CURB BOXES INSTALLED IN AREAS WHERE BOULEVARD IS TO BE CUT AT A LATER DATE SHALL BE INSTALLED AT DEPTH REQUIRED, CURB BOX EXTENTION FOR BOXES EXCEEDING 7.5' IN LENGTH ARE TO BE BID AT CONTRACT PRICE AND SHALL INCLUDE STACK COUPLINGS, CONNECTIONS, ETC..
2. CURB BOX LOCATIONS SHALL BE MARKED WITH A STEEL FENCE POST PAINTED BLUE.
3. WATER SERVICE SHALL BE INSTALLED WITH A HORIZONTAL SEPARATION OF THREE FEET (3') FROM THE SANITARY SEWER SERVICE AND SHALL BE INSTALLED UPSTREAM OF THE SANITARY SEWER SERVICE.
4. CURB BOXES LOCATED IN A DRIVEWAY OR PARKING LOT SHALL BE COVERED WITH A FORD A-1 METER BOX COVER OR ENGINEER APPROVED EQUAL.
5. HDPE WATER SERVICES - INSTALL MAGNESIUM GROUNDING ANODE ROD, LOCATING WIRE, WIRE CONNECTORS, AND TIES PER SPECIFICATIONS.

CITY OF NORTH BRANCH	CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
NORTH BRANCH	TYPICAL WATER SERVICE NO SCALE	DETAIL NO. WM-002

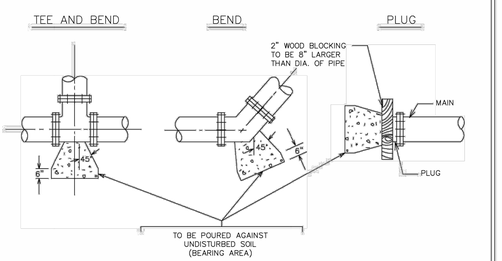


NOTES:
1. VALVE BOX INSERTS ARE NOT ALLOWED UNLESS APPROVED BY THE ENGINEER.
2. VALVE BOXES SHALL BE INSTALLED PLUMB AND SHALL ALLOW A 4" P.V.C. PIPE TO PASS ENTIRELY OVER THE GATE VALVE NUT AFTER INSTALLATION IS COMPLETE.
3. ALL VALVES SHALL BE TIED WITH ¾" THREADED TIE RODS TO THE MAIN. MEGA LUGS MAY BE USED IN LIEU OF TIE RODS.
4. THE INITIAL & FINAL RAISING OF VALVE BOXES SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
5. ROCK BEDDING FOR DRAINAGE SHALL BE INSTALLED AT GATE VALVE, AS DIRECTED BY THE ENGINEER.

CITY OF NORTH BRANCH	CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
NORTH BRANCH	VALVE BOX INSTALLATION NO SCALE	DETAIL NO. WM-003



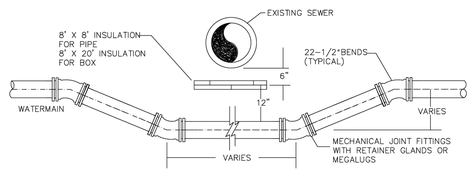
CITY OF NORTH BRANCH	CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
NORTH BRANCH	BUTTERFLY VALVE INSTALLATION NO SCALE	DETAIL NO. WM - 004



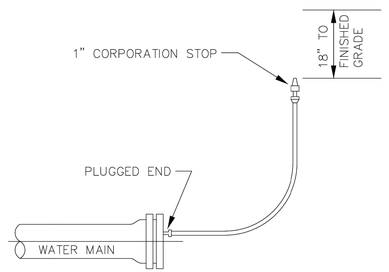
PIPE SIZE	BEARING AREA
6"	4.0 SQ. FT.
8"	6.0 "
10" – 12"	12.0 "
16"	20.0 "

NOTE:
1. RETAINER GLANDS/MEGA LUGS ARE TO BE USED AS SPECIFIED AT ALL CHANGES IN DIRECTION, FITTINGS, AND VALVES.
2. THRUST BLOCKING TO BE USED FOR BENDS 22-1/2° AND OVER.
3. THRUST BLOCKING SHALL ONLY BE USED WHERE WORKING PRESSURES ARE LESS THAN 150 PSI.
4. COVER FITTINGS WITH POLYETHYLENE (4 MIL) PRIOR TO POURING CONCRETE.
5. CONCRETE SHALL HAVE 2500 PSI, 28 DAY STRENGTH.

CITY OF NORTH BRANCH	CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
NORTH BRANCH	THRUST BLOCKING NO SCALE	DETAIL NO. WM-005



CITY OF NORTH BRANCH	CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
NORTH BRANCH	WATERMAIN LOWERING AND INSULATION DETAILS NO SCALE	DETAIL NO. WM-006



AFTER MEETING TEST REQUIREMENTS THE AIR BLEED LINE SHALL BE DISCONNECTED AT THE PLUG WITH NO ADDITIONAL COMPENSATION.

CITY OF NORTH BRANCH	CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
NORTH BRANCH	AIR BLEED INSTALLATION DETAIL NO SCALE	DETAIL NO. WM - 007

BLOCH ENGINEERING
BLOCH ENGINEERING, PLLC
blochengineering.com
32210 XEON ST NW
CAMBRIDGE, MN 55008
krystle@blochengineering.com

JOB NO. 24-02

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.

PRELIMINARY

KRYSTLE L. BLOCH — 49893 LIC. NO.

4-29-2025 DATE

MAIN STREET APARTMENTS
OWNER: TOMMY FOSTER
1275 WEST 4TH ST, RUSH CITY, MN

STANDARD DETAILS

REVISIONS			
NO.	DATE	BY	DESCRIPTION

SHEET C8 SHEETS 11

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

PROJECT DESCRIPTION:

The existing site is a total of 2.4 acres, which will be regraded as part of this current project. Runoff from this site is routed to proposed infiltration ponds.
Grading, infiltration, and paving will be installed as part of this project along with building construction.

SWPPP IMPLEMENTATION

The Project Engineer and the Contractor are responsible for implementation of the SWPPP and the installation, inspection, and maintenance of the erosion prevention and sediment control BMPs before and during construction. The Contractor will have an Erosion Control Supervisor who is responsible for coordinating the erosion prevention and sediment control BMPs.

PROJECT CONTACT IMPLEMENTATION/MAINTENANCE:

Erosion and Sediment Control, BMP Inspection Performed By:
Individual contact TBD
Erosion Works
Elk River, MN
763-262-7458

Long Term Pond Maintenance Provided By:
Bigfork Valley Log Cabins, LLC

TIMING OF BMP INSTALLATION

The erosion prevention and sediment control BMPs shall be installed as necessary to minimize erosion from disturbed surfaces and capture sediment on site.

1. Erosion and sediment control BMPs must be installed prior to the start of construction.
2. Where applicable, disturbed areas will immediately be temporarily stabilized prior to permanent turf establishment whenever construction ceases for 7 days, with special consideration of areas within 200 feet continuous positive slope of a surface water.
3. Temporary or permanent energy dissipation shall be placed at pipe outlets within 24 hours after connection to a surface water.
4. Temporary stabilization of stockpiles must be initiated immediately to limit soil erosion whenever any construction activity has permanently ceased on any portion of the site and will not resume for a period exceeding 7 calendar days.
5. Planned slopes of 1:3 (V:H) or steeper and greater than 75 ft. in length will be temporarily or permanently stabilized in increments not to exceed 75 ft., prior to constructing or disturbing a new increment.
6. BMPs must remain in place until final stabilization is achieved and permit NOT has been submitted to the MPCA.
7. The normal wetted perimeter of any temporary or permanent drainage ditch or swale that drains water from any portion of the construction site, or diverts around the site, must be stabilized within 200 lineal feet from the property edge, or from the point of discharge into any surface water. Stabilization of the last 200 lineal feet must be completed within 24 hours after connecting to a surface water.

CONSTRUCTION SEQUENCE:

Construction to begin spring 2025. Silt fence around where specified and Rock entrances to be installed before any of the following scheduled events take place. Existing structures shall also be protected from sediment from the start of construction.

1. Grading
2. Install Utilities
3. Building Construction
4. Infiltration basin(s) constructed
5. Landscaping and Turf Restoration

Construction completion expected Fall 2025. All temporary erosion control measures will be removed and disposed of according to MPCA requirements. Final stabilization will be established.

If construction is not completed before winter, stockpiles and any slopes must be stabilized with appropriate BMPs (mulch, seed, erosion control blanket) as applicable to avoid erosion in the following spring season.

See NPDES CWS Permit Part 11 for inspection frequency adjustments throughout the course of scheduled construction.

IMPAIRED AND SPECIAL WATERS

The Sunrise River is within one mile of discharge point, and has impairments for the following: Fecal Coliform, Fishes Bioassessments, Mercury in Fish Tissue.

KARST AREA PROTECTION:

This area is not considered Karst area.

CALCAREOUS FENS:

No calcareous Fen sites exist on this project.

MITIGATION DUE TO REVIEWS:

There are no stormwater mitigation measures proposed as part of environmental, endangered species, archaeological or other required local, state or federal reviews conducted for the project.

CALCULATIONS:

Total Area of Grading = 2.4 Ac
Total Existing Impervious = 0 Square Feet
Total New Impervious = 51250 Square Feet
WATER QUALITY VOLUME = (1")(1'/12")(51250 SF) = 4271 CF

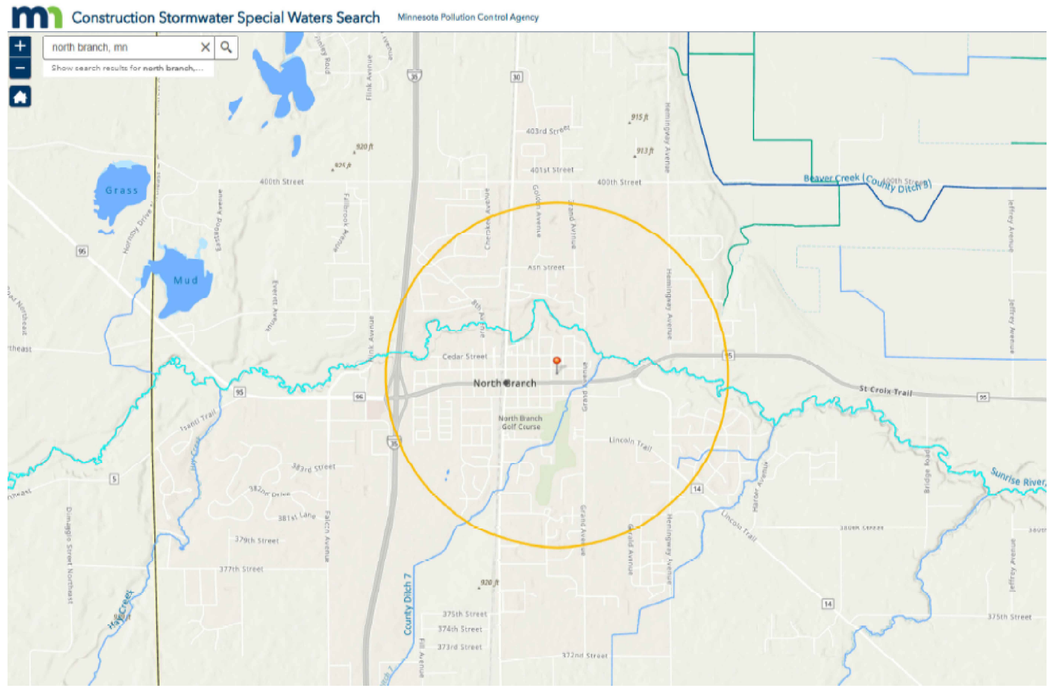
SOIL TYPES:

Majority A Soils (Web Soil Survey)

EROSION CONTROL QUANTITIES:

EROSION CONTROL QUANTITIES		
	UNIT	QUANTITY
SILT FENCE	EACH	1300
TEMP. CONSTRUCTION EXIT	EACH	1
SEED	ACRE	2.40
MULCH	TON	5

APPLICATION RATES:
SEED TYPE 25-151 @ 120 LB/AC
MULCH TYPE 1 @ 2 TON/AC



BLOCH ENGINEERING

BLOCH ENGINEERING, PLLC
blochengineering.com
32210 XEON ST NW
CAMBRIDGE, MN 55008
krystle@blochengineering.com

JOB NO. 24-02

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.

PRELIMINARY

KRYSTLE L. BLOCH — 49893
4-29-2025 — LIC. NO.
DATE

MAIN STREET APARTMENTS
OWNER: TOMMY FOSTER
1275 WEST 4TH ST, RUSH CITY, MN

STORMWATER POLLUTION PREV. PLAN
SWPPP

REVISIONS

NO.	DATE	BY	DESCRIPTION

SHEET C9 — SHEETS 11

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

CONSTRUCTION NOTES:

Construction shall be in accordance with the MPCA NPDES General Stormwater Permit for construction activity, plans, Mn/DOT Spec. Book, Standard Specifications for Construction and the special provisions.
The Contractor shall maintain a stockpile of erosion control devices at all times for immediate usage.
The Contractor shall keep the inspection and maintenance log.
See permit Part 20 for SWPPP record retention requirements. SWPPP must be kept on site during construction by permittee who has operational control of that portion of the site.
In the event of accidental sediment or pollutant discharge, the City, MPCA local contact and/or State Duty Officer shall be notified. The MPCA State Duty Officer can be reached at (800) 422-0798.

TRAINING REQUIREMENTS:

1. The Permittee(s) shall ensure the individuals identified in this part have been trained in accordance with the NPDES CSW Permit's training requirements. The Permittee(s) shall ensure the training is recorded in or with the SWPPP before the start of construction or as soon as the personnel for the project have been determined.

   a. Who must be trained:
      i. Individual(s) preparing the SWPPP for the project.
      ii. Individual(s) overseeing implementation of, revising, and amending the SWPPP and individual(s) performing inspections. One of these individual(s) must be available for an on site inspection within 72 hours upon request by the MPCA.
      iii. Individual(s) performing or supervising the installation, maintenance, and repair of BMPs. At least one individual on a project must be trained in these job duties.
   b. Training content. The content and extent of training must be commensurate with the individual's job duties and responsibilities with regard to activities covered under this permit for the project. At least one individual present on the permitted project site (or available to the project site in 72 hours) must be trained in the job duties described in Permit Part 20.
   c. Training documentation:
      i. Documentation must be recorded with the SWPPP prior to the start of construction.
      ii. Names of the personnel associated with this project that are required to be trained per Part III.F of this permit.
      iii. Dates of training and name of instructor(s) and entity providing training.
      iv. Content of training course or workshop (including number of hours of training).
   d. The Permittee(s) shall ensure that the individuals are trained by local, state, federal agencies, professional organizations, or other entities with expertise in erosion prevention, sediment control or permanent stormwater management such as the University of Minnesota, Minnesota Erosion Control Association, Soil and Water Conservation Districts or the MPCA.

EROSION PREVENTION MEASURES:

1. Temporary or permanent stabilization of exposed soils, including stockpiles, shall be initiated immediately to limit soil erosion whenever any construction activity has temporarily or permanently ceased on that portion of the site and will not resume for a period exceeding 7 calendar days. (Permit Part 8.4 and 23.9).
2. The normal wetted perimeter of any temporary or permanent drainage ditch or swale that drains water for any portion of the construction site, within 200 lineal feet, must be completed within 24 hours after connecting to a surface water or property edge. Mulch, hydromulch, tackifier, polyacrylamide, or similar practice is not acceptable stabilization in any part of a drainage ditch or swale with continuous slop greater than 2%. (Permit Part 8.6-8.8).
3. Use check dams along length of conveyance channels. (Permit Part 8.7).
4. Temporary or permanent energy dissipation devices must be installed at pipe outlets within 24 hours after connection to a surface water.
5. Temporary or permanent ditches or swales that are being used as a sediment containment system during construction must be stabilized within 24 hours after no longer being used as a sediment containment system.

SEDIMENT CONTROL MEASURES:

1. In order to maintain sheet flow and minimize rills and/or gullies, there shall be no unbroken slope length of greater than 75 feet for slopes with a grade of 1:3 or steeper.
2. Sediment control practices must be established on all down gradient perimeters and upgradient of any buffer zones. These practices shall remain in place until final stabilization has been achieved and the Permit NOT form has been submitted to the MPCA.
3. Temporary soil stockpiles must have silt fence or other effective sediment controls, and cannot be placed in surface waters, including stormwater conveyances such as curb and gutter systems, or conduits and ditches unless there is a bypass in place for the stormwater.
4. Vehicle tracking of sediment from the construction site (or onto streets within the site) must be minimized by Best Management Practices (BMPs) such as stone pads, concrete or steel wash racks, or equivalent systems. Tracked sediment onto paved surfaces must be removed daily, at minimum.
5. Per Part 9.3, if down gradient sediment controls are overloaded, additional upgradient sediment control practices or redundant BMPs to eliminate overloading must be installed, and the SWPPP must be amended.
6. See permit 9.6 and Part 11 for instructions on re-installation of sediment control practices after they've been adjusted.
7. See permit Part 9.7 and 9.8 for instructions on the removal of storm drain inlet protection BMPs.
8. Direct discharges from BMPs to vegetated areas, unless infeasible.
9. Water discharged to infiltration shall be pre-treated in the form of ponds, forebays, filter strips, etc.

DEWATERING AND BASIN DRAINING:

1. If dewatering is required on the site, there must be a plan in place to prevent nuisance conditions, erosion and inundation of wetlands.
2. If using filters with backwash water, backwash water must be hauled away for disposal, returned to the beginning of the treatment process, or incorporated into the site in a manner that does not erode into runoff.

THE DESCRIPTION OF INSPECTIONS AND MAINTENANCE:

1. The Permittee(s) (either the owner or operator, whoever is identified in the SWPPP) must routinely inspect the entire construction site at least once every seven (7) days during active construction and within 24 hours after a rainfall event greater than 0.5 inches in 24 hours.

INSPECTION AND MAINTENANCE REQUIREMENTS MUST INCLUDE:

- Date and time of inspections. All inspections and maintenance conducted during construction shall be recorded within 24 hours in writing and these records must be retained in the SWPPP
- Name of person(s) conducting inspections.
- Findings of inspections, including specific locations where there are recommendations for corrective actions.
- Corrective actions taken (including dates, times, and party completing maintenance activities).
- Date and amount of all rainfall events greater than 1/2 inch (0.5 inches) in 24 hours. Rainfall amounts must be obtained by a properly maintained rain gauge onsite, a weather station within 1 mile of the project location, or a weather reporting system that provides site specific rainfall data from radar summaries.
- See permit Part 6.1-6.4 for amendments to SWPPP.
- Construction site vehicle exit locations must be inspected for evidence of off-site sediment tracking onto paved surfaces. Tracked sediment must be removed from all paved surfaces within 24 hours of discovery (NPDES CSW Permit Part 9.12).
- Infiltration and Bioretention facility must be inspected for sedimentation.
- Discharges discovered during inspections shall be documented per NPDES CSW Permit part 11.11.f

MAINTENANCE PERFORMANCE:

1. All nonfunctional BMPs must be repaired, replaced, or supplemented with functional BMPs by the end of the next business day after discovery, or as soon as field conditions allow access unless another time frame is specified that is not less restrictive than permit requirements. See permit Part 11.4 for specific requirements.
2. Perimeter control devices must be repaired, replaced, or supplemented when nonfunctional or sediment reaches on-half the height of the device.
3. Temporary and permanent sediment basins must be drained and sediment removed when the depth of sediment collected reaches on-half storage volume
4. All sediment deposits and deltas must be removed from surface waters (including drainage ways, catch basins, and other drainage systems) and the removal areas restabilized within 7 days.
5. Permanent stormwater treatment BMPs must be inspected and maintained per NPDES CSW Permit 11.3
6. Final inspection and maintenance of storm sewer shall include cleaning of any sediment accumulation in system.

POLLUTION PREVENTION MANAGEMENT:

1. Solid Waste: Sediment, asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other wastes must be properly collected, stored, and disposed of in accordance with Minn. R.ch.7035. This includes any materials used for erosion control.
2. Hazardous and Toxic Materials: Includes, but is not limited to: Oil, gasoline, paint and any hazardous substances must be properly stored, including secondary containment, to prevent spills, leaks or other discharge. Restricted access to storage areas must be provided to prevent vandalism. Storage and disposal of hazardous waste must be in accordance with Minn.R.Ch.7045
3. External washing of trucks and other construction vehicles must be limited to a defined area of the site. Runoff must be contained and waste properly disposed of.
4. No engine degreasing is allowed on site.
5. Concrete washout onsite: All liquid and solid wastes generated by concrete washout operations must be contained in a leak-proof containment facility or impermeable liner. A compacted clay liner that does not allow washout liquids to enter ground water is considered an impermeable liner. The liquid and solid wastes must not contact the ground, and there must not be runoff from the concrete washout operations or areas. Liquid and solid wastes must be disposed of properly and in compliance with MPCA regulations. A sign must be installed adjacent to each washout facility to inform concrete equipment operators to utilize the proper facilities.
7. Building products that have the potential to leach pollutants must be under cover. (NPDES CSW Permit Part 12.2)
8. Pesticides, herbicides, insecticides, fertilizers, treatment chemicals, and landscaped materials must be under cover. (NPDES Permit Part 12.3).
9. Portable toilets must be positioned so that they are secure and will no be tipped or knocked over. Sanitary waste must be disposed of properly in accordance with Minn.R.ch.7041. (NPDES CSW Permit Part 12.6)
10. Spill Prevention and Response Requirements: Adequate supplies must be available at all times to clean up discharged materials and an appropriate method must be available for recovered spilled materials. Spills must be reported and cleaned up immediately as required by Minn. Stat. 115.061 using dry cleanup measures where possible.

FINAL STABILIZATION:

1. Permanent stabilization of exposed soils, including stockpiles, shall be initiated immediately to limit soil erosion whenever any construction activity has permanently ceased on any portion of the site and will not resume for a period exceeding 7 calendar days.
2. The permanent stormwater treatment system must be constructed, meet all requirements, and operating as designed.
3. All sediment must be removed from permanent stormwater management system and conveyance systems.
4. All temporary synthetic erosion prevention and and sediment control BMPs must be removed.
5. See Landscape sheets for turf establishment.
6. Final stabilization is achieved by a uniform perennial vegetative cover with a density of 70% of expected growth over the entire pervious area.

DISCHARGE TO WETLANDS:

1. If there is a wetland impact caused by filling, draining, excavation or inundation, how has that impact been addressed by permits or other approvals from an official statewide program (U.S. Army Corps of Engineers 404 program, Minnesota Department of Natural Resources, or the State of Minnesota Wetland Conservation Act)? If the impact is considered exempted or non jurisdictional by theses programs, how is the impact in conformance with the sequence mitigation requirements of MPCA water quality standards in MN Rule 7050.0186 <https://www.revisor.leg.state.mn.us/rules/?id=7050.0186>

MISCELLANEOUS:

1. Conventional erosion and sediment control to be used. If neccessary to use chemical treatment, permittee must follow guidelines as stated in NPDES Permit Part 9.18
2. No Site assessment for groundwater or soil contamination required.

BLOCH ENGINEERING

BLOCH ENGINEERING, PLLC
blochengineering.com

32210 XEON ST NW
CAMBRIDGE, MN 55008

krystle@blochengineering.com

JOB NO. 24-02

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.

PRELIMINARY

KRYSTLE L. BLOCH — 49893
4-29-2025 — DATE — LIC. NO.

MAIN STREET APARTMENTS
OWNER: TOMMY FOSTER
1275 WEST 4TH ST, RUSH CITY, MN

STORMWATER POLLUTION PREV. PLAN
SWPPP

REVISIONS

NO.	DATE	BY	DESCRIPTION

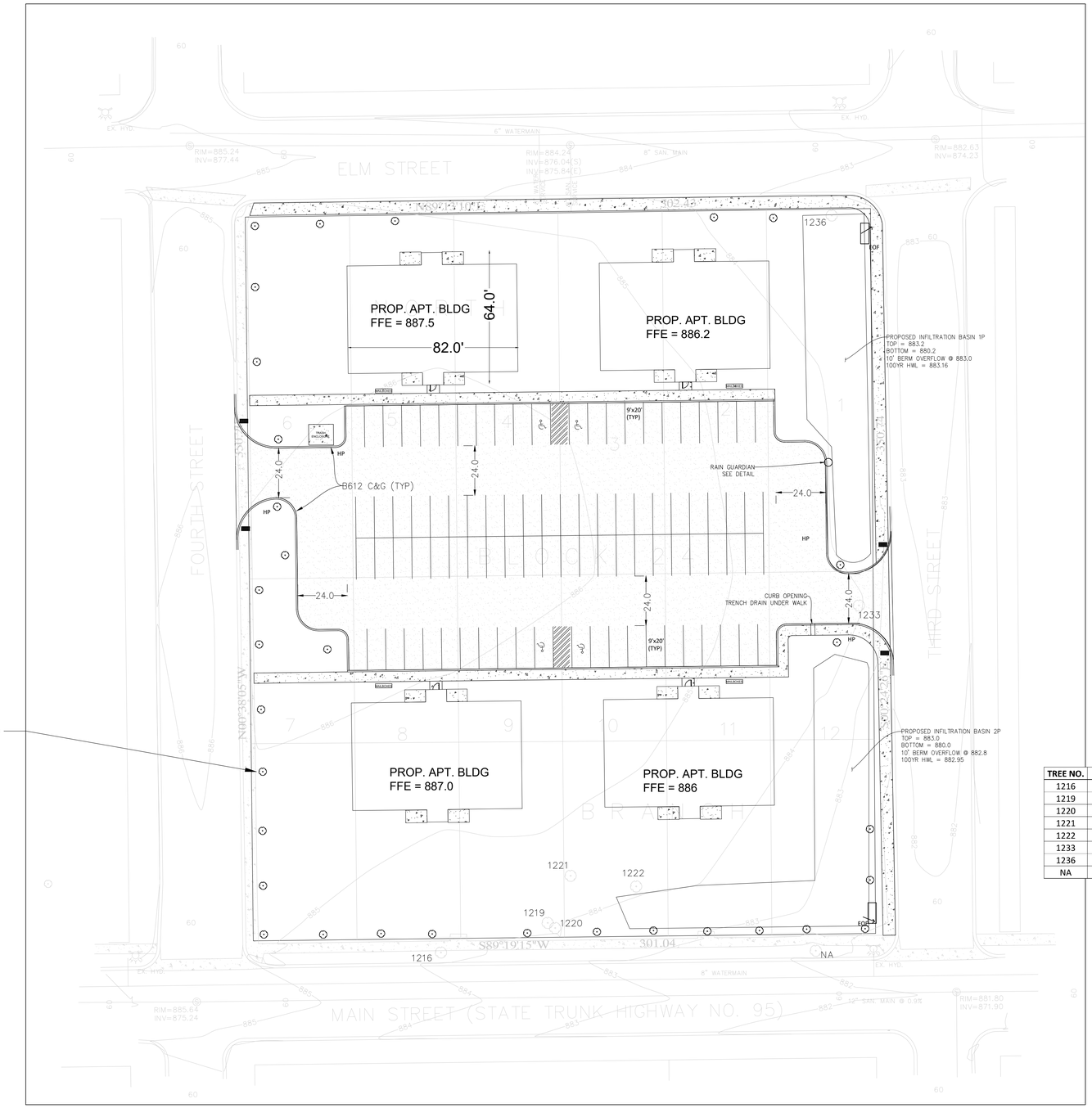
SHEET C10 — SHEETS 11

LEGEND

PROPOSED B618 CURB AND GUTTER

PROPOSED BITUMINOUS PAVEMENT

PROPOSED OVERSTORY TREE (TYP.)



EROSION CONTROL NOTES:
1. ALL DISTURBED AREAS TO BE SEEDED AND MULCHED. 4IN MIN TOPSOIL, EXCEPT IN RIGHT OF WAY. RIGHT OF WAY TO BE SODDED.
2. MULCH TYPE 1 (DISK ANCHORED) IN DISTURBED AREAS
3. SEED MNDOT TYPE 35-221, AT A RATE OF 36.5 LB/AC
4. ALL SLOPES STEEPER THAN 4:1, SHALL BE RESTORED WITH SEED AND PROTECTED WITH EROSION CONTROL BLANKET PER MnDOT SPEC. 3885.1 OR SODDED AND STAKED.

TREE PLANTING NOTES
1. TREE LOCATION SUBJECT TO CHANGE TO AVOID UTILITY CONFLICT.
2. ALTERNATE RED OAK AND WHITE MAPLE TREES OR SIMILAR SPECIES. VERIFY SPECIES WITH CITY.

MINIMUM SIZE OF PLANTINGS
OVERSTORY DECIDUOUS: 2" CALIPER
CONIFEROUS: 6FT IN HEIGHT
ORNAMENTAL TREES: 1.5" CALIPER

PLANTING NUMBER REQUIREMENTS:

TOTAL BUILDING UNITS = 32

TOTAL TREE REQUIREMENT = ONE OVERSTORY TREE PER UNIT
= 32 TREES

TREE NO.	TYPE	DIA. (IN)	KEEP/REMOVE	NOTES
1216	ASH	16	KEEP	IN MAIN ST ROW
1219	OAK	15	KEEP	
1220	OAK	17	KEEP	
1221	OAK	29	KEEP	
1222	OAK	22	KEEP	PROTECT ROOTS IN INFIL. POND EXCAVATION
1233	OAK	22	REMOVE	DEAD
1236	OAK	25	KEEP	PROTECT ROOTS IN INFIL. POND EXCAVATION
NA	OAK?	?	KEEP	IN MAIN ST ROW - SIDEWALK BUILT AROUND IT

BLOCH ENGINEERING

BLOCH ENGINEERING, PLLC
blochengineering.com

32210 XEON ST NW
CAMBRIDGE, MN 55008

krystle@blochengineering.com

JOB NO. 24-02

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.

PRELIMINARY

KRYSTLE L. BLOCH — 49893
4-29-2025 — LIC. NO.
DATE

MAIN STREET APARTMENTS
OWNER: TOMMY FOSTER
1275 WEST 4TH ST, RUSH CITY, MN

LANDSCAPE AND TREE PRESERVATION PLAN

REVISIONS

NO.	DATE	BY	DESCRIPTION

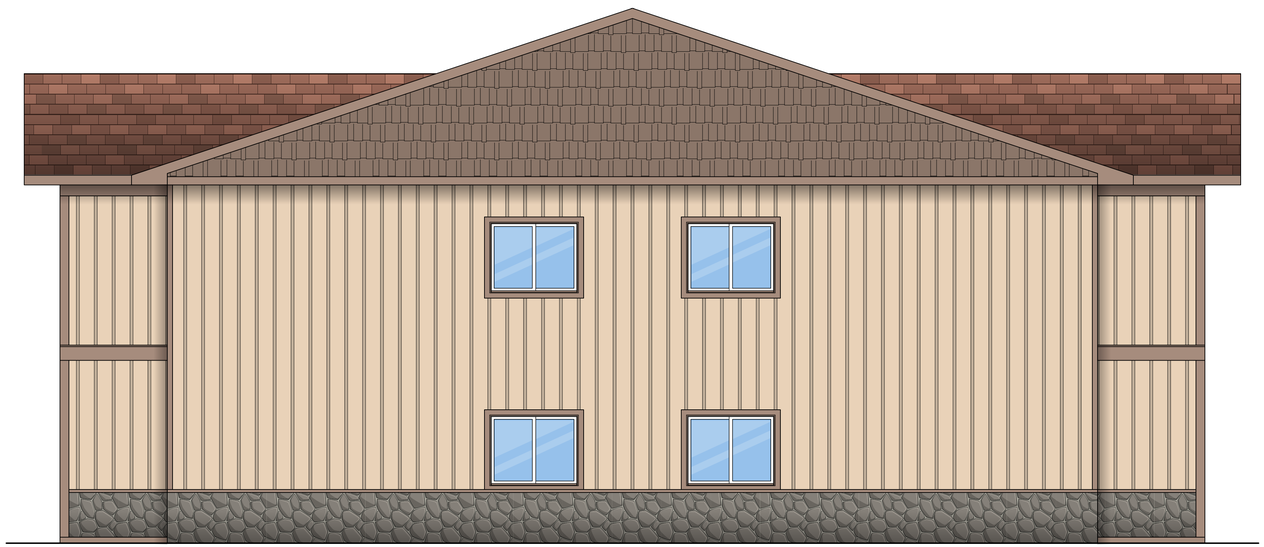
0 30 60
SCALE FEET

SHEET C11 SHEETS 11



FRONT ELEVATION

SCALE: 1/4" = 1' (1/2 SCALE ON 11X17)



SIDE ELEVATIONS

SCALE: 1/4" = 1' (1/2 SCALE ON 11X17)

DISCLAIMER:

THESE PLANS ARE FOR GENERAL INFORMATION OR GUIDANCE ONLY. EME DRAFTING MAKES NO WARRANTIES THAT ARE IMPLIED OR EXPRESSED THAT THESE PLANS ARE COMPLETE OR ACCURATE. THE RESPONSIBILITY FOR CONSTRUCTION REST WITH THE BUILDER, OWNER OR USER OF THESE PLANS.

INTELLECTUAL PROPERTY:

ANY INFORMATION, IDEAS, OR CONCEPTS IN THIS PLAN ARE THE PROPERTY OF EME DRAFTING. THESE PLANS ARE NO TO BE REPRODUCED IN ANY WAY, WITHOUT WRITTEN PERMISSION FROM EME DRAFTING.

DRAFTING

E.M.E. DRAFTING

ERIC EGGERT

900 MAPLE AVE. E.

MORA, MN 55051

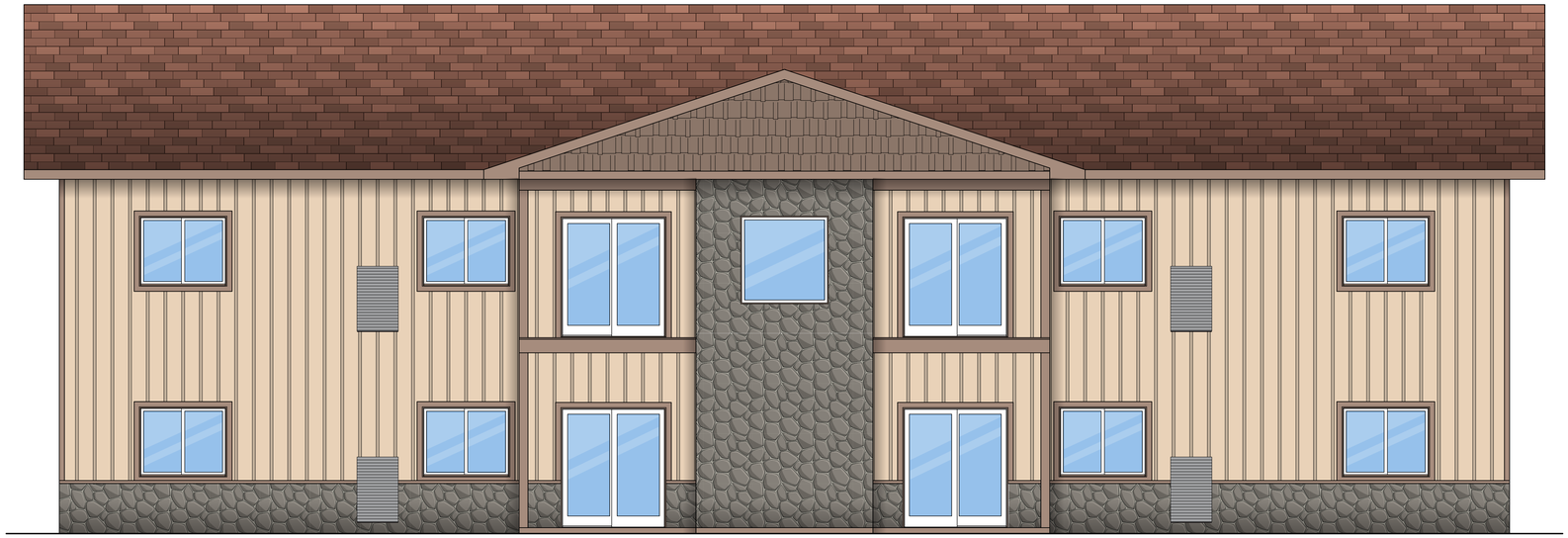
8 UNIT

NORTH BRANCH, MN 55056

FILE NAME:	8 UNIT
DRAWN BY:	EME
DATE:	4/7/25
REVISED:	----
REVISED:	----
REVISED:	----
REVISED:	----
REVISED:	----

ELEVATION

A1.1



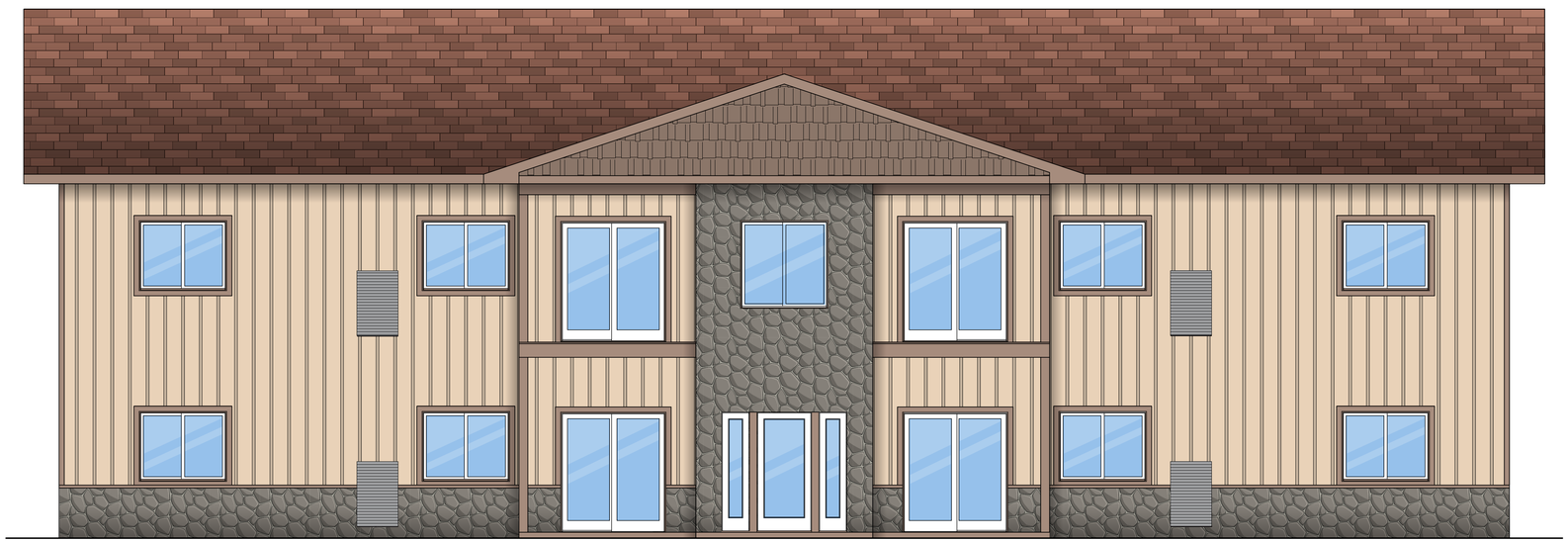
REAR ELEVATION

SCALE: 1/4" = 1' (1/2 SCALE ON 11X17)



REAR ELEV @ H.C. UNIT

SCALE: 1/4" = 1' (1/2 SCALE ON 11X17)



REAR ELEV @ STREET

SCALE: 1/4" = 1' (1/2 SCALE ON 11X17)

DISCLAIMER:

THESE PLANS ARE FOR GENERAL INFORMATION OR GUIDANCE ONLY. EME DRAFTING MAKES NO WARRANTIES THAT ARE IMPLIED OR EXPRESSED THAT THESE PLANS ARE COMPLETE OR ACCURATE. THE RESPONSIBILITY FOR CONSTRUCTION REST WITH THE BUILDER, OWNER OR USER OF THESE PLANS.

INTELLECTUAL PROPERTY:

ANY INFORMATION, IDEAS, OR CONCEPTS IN THIS PLAN ARE THE PROPERTY OF EME DRAFTING. THESE PLANS ARE NO TO BE REPRODUCED IN ANY WAY, WITHOUT WRITTEN PERMISSION FROM EME DRAFTING.

DRAFTING

E.M.E. DRAFTING

ERIC EGGERT

900 MAPLE AVE. E.

MORA, MN 55051

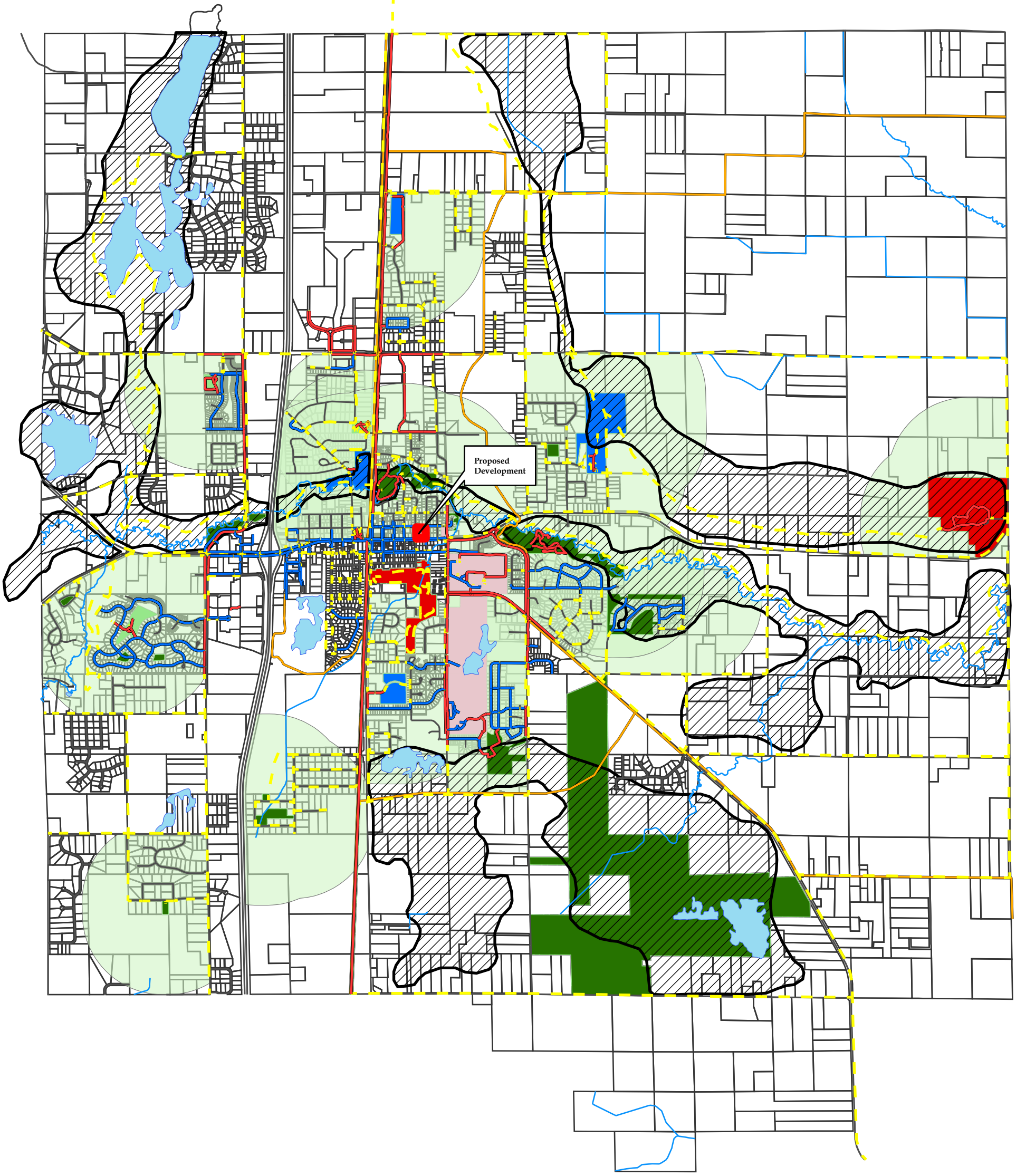
8 UNIT

NORTH BRANCH, MN 55056

FILE NAME:	8 UNIT
DRAWN BY:	EME
DATE:	4/7/25
REVISED:	----
REVISED:	----
REVISED:	----
REVISED:	----
REVISED:	----

ELEVATION 2

A1.2



PTOS Comp Plan
Cedar Ridge Community

CITY OF NORTH BRANCH EST. 1881

- Proposed Development
- 1/2 Mile Service Area Adjusted
- Community Playfield
- Natural Resource Area
- Neighborhood Park
- Regional
- Public Waters
- Streams/Ditches
- Conceptual Open Space/Wildlife Corridor
- Existing Sidewalks
- Existing Trails

N

Disclaimer:
The data on this map is provided "as is" and does not represent a survey. NO liability is assumed to accuracy of the data delineated hereon.

City of North Branch
Staff Report

Prepared By: Nathan Sondrol, Community Development Director

Presenter: Nathan Sondrol, Community Development Director

Date: 02/12/2025

Board & Commission: Parks, Trails and Open Space Commission

Subject: Cedar Ridge Community

Background Information:
Cedar Ridge Community LLC has provided plans for a preliminary plat for a subdivision named Cedar Ridge Community. The site is located on the east side of Falcon Ave near the intersection of 382nd Drive and 381st Lane and adjacent to I35.(see the attached map). The preliminary plat consists of 78 lots and 4 outlots. The site has a total of 62.03 acres. The development is proposed to consist of a mix of 75 single family homes with future phases to include seven (7) apartment buildings ranging from 20 – 30 units (167 total units) along with commercial development on the proposed outlots along the interstate. The site is predominately relatively flat. Soils consist of loam and the landcover consists of predominately vacant land. A 10' bituminous trail is planned for the east side of Falcon Ave and pedestrian crossings at 381st Lane and 382nd Drive to provide a trail connection to the park. Outlot B is proposed a 0.62 acre parcel that is proposed as park/open space.

Discussion/Analysis:
State Statute allows cities the ability to require that a reasonable portion of the buildable land of any proposed subdivision to be dedicated to the public to address infrastructure needs created by the development; including, parks, recreational facilities, playgrounds, trails, sidewalks, wetlands and open space.

In lieu of land dedication for parks, recreational facilities, playgrounds, trails, wetlands or open space, cities may require a developer to pay cash or "park dedication fees." Park dedication fees excuse the developer from a local land dedication for park and recreation purposes, but still allow the city to purchase and acquire new, off-site facilities to serve the recreation needs created by the subdivision.

Sec. 54-465. Conditions for contributions.
It shall be deemed to be in the public interest to require land dedication, cash contribution, or any combination thereof when the city council after review and recommendation makes one or

more of the following findings of fact:
(1) All or part of the proposed subdivision has been designated as park, playground, public open space, storm sewer holding areas or ponds on an adopted city plan;
(2) Such contribution is necessary in order to protect adjacent land uses from potential conflicting land uses which could exist on the land subdivided;
(3) The increased number of residents to reside or be employed within the subdivision will increase the recreational demands upon the city;
(4) The land proposed to be subdivided contains or borders upon existing unique topographical features including but not limited to ponds, lakes, streams, timber stands, water holding areas, hills, steep slopes, drainage areas, or bluffs which should be preserved to prevent foreseeable safety, pollution, or erosion hazards or to provide unique recreational and aesthetic qualities and enjoyment to the city; Such contribution is necessary to comply with or fulfill the goals, policies, and programs of the city.

Based on North Branch City Code and the current fee schedule, the following options are available for park dedication for the proposed development.

Cash Option	75 Lots/Units @ $1,800 per lot = $135,000
Land Option	62 acres @ 10% = 6.2 acres
Cash/Land Option	Various Combinations of the above

The property is served by the Wildridge Park Area.

Deadline: May 5, 2025

Requested Action & Recommendation:
The requested action is for the Commission to make a recommendation on deeming if there is a public interest to require a land dedication, cash contribution or any combination of thereof for parks, trails and open space of the proposed plat.

Staff recommends the installation of 10’ bituminous trail along Falcon Ave along with pedestrian crossing improvements to be installed at 381st Ln and 38nd Dr and the acceptance of a combination of cash and land (Outlot B) for the parks, trails and open space as the increased number of residents within the subdivision will increase the demands upon the city parks, trails and open space system.

Voting Requirements:

Voting Options **Simple Majority**

CEDAR RIDGE COMMUNITY LLC

CEDAR RIDGE COMMUNITY

FALCON AVE N

CITY OF NORTH BRANCH, CHISAGO COUNTY, MN

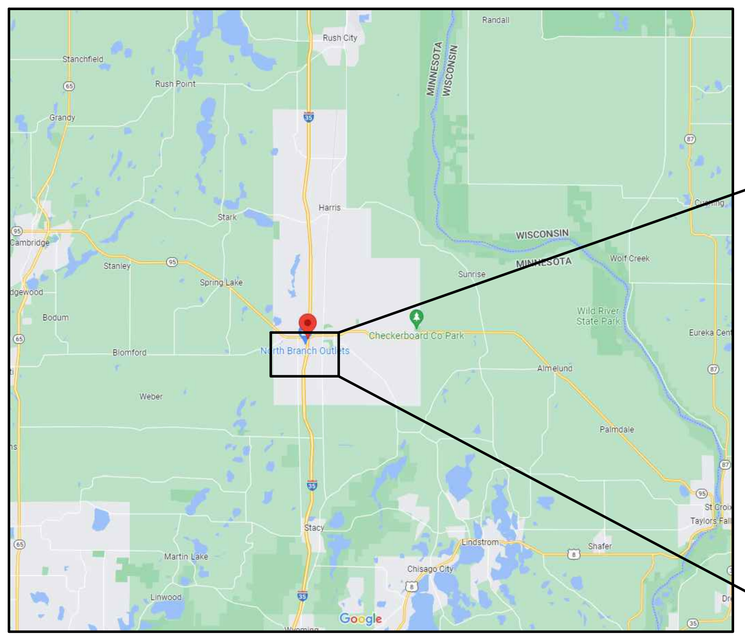
APRIL, 2025

PRELIMINARY PLANS

CIVIL & SURVEY PLANS PREPARED BY:

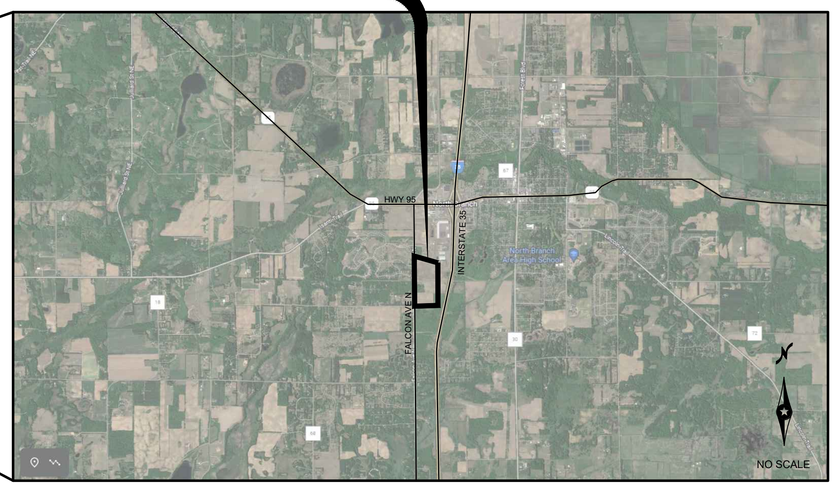
Bogart, Pederson & Associates, Inc.
CIVIL ENGINEERING
LAND SURVEYING
ENVIRONMENTAL SERVICES
Traditional Values · Creative Solutions

Sheet List Table	
Sheet Number	Sheet Title
C0	Cover
C1.1	Existing Conditions
C1.2	Tree Preservation & Removals
C2.0	Overall Site Plan
C2.1	North Site Plan
C2.2	South Site Plan
C2.3	Future Development
C3.1	North Grading Plan
C3.2	South Grading Plan
C4.1	North Utility Plan
C4.2	South Utility Plan
C5.1	382nd & Falk Ave (Street & Storm)
C5.2	Falk Ave (Street & Storm)
C5.3	381st Lane (Street & Storm)
C5.4	Farnham Ct (Street & Storm)
C5.5	379th Street (Street & Storm)
C5.6	Fallcrest Ct (Street & Storm)
C6.1	382nd & Falk Ave (Sani. & Water)
C6.2	Falk Ave (Sani. & Water)
C6.3	381st Lane (Sani. & Water)
C6.4	Farnham Ct (Sani. & Water)
C6.5	379th Street (Sani. & Water)
C6.6	Fallcrest Ct (Sani. & Water)
C6.7	Falcon Avenue N (Water)
C6.8	Service Information
C7.1	Turn Lane Plan
C7.2	Traffic Control Plan (Turn Lane)
C7.3	Traffic Control Plan (Detour)
C8.1	North Erosion Control Plan
C8.2	South Erosion Control Plan
C8.3	SWPPP Narrative
C9.1	Details
C9.2	Details
C9.3	Details
C9.4	Details
C9.5	Details
C10.1	North Landscape Plan
C10.2	South Landscape Plan



CHISAGO COUNTY, MINNESOTA

PROJECT LOCATION



VICINITY MAP

REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

PRIVATE UTILITIES SHOWN ARE QUALITY LEVEL D.
QUALITY LEVEL D PROVIDES THE MOST BASIC LEVEL OF INFORMATION. IT INVOLVES COLLECTING DATA FROM EXISTING UTILITY RECORDS. RECORDS MAY INCLUDE AS-BUILT DRAWINGS, DISTRIBUTION AND SERVICES MAPS, EXISTING GEOGRAPHIC INFORMATION SYSTEM DATABASES, CONSTRUCTION PLANS, ETC.

N:\Projects Current\22-0030-02 Bender North Branch Plat\Civil\CAD Files\NB Cover\SWPPP.dwg
3:06 PM
4/24/2025



LEGEND:

- Denotes catch basin
- Denotes electrical cabinet
- Denotes mailbox
- Denotes gas service
- Denotes gas marker
- Denotes manhole
- Denotes watervalve
- Denotes power pole
- Denotes guy wire
- Denotes telephone pedestal
- Denotes cable television box
- Denotes hydrant
- Denotes soil boring
- Denotes well
- Denotes flared end section
- Denotes proposed wetland interior
- Denotes soils classification type
- LS 40361 Denotes Thomas Ballurf, LS
- LS 13115 Denotes Terrance Johnson, LS
- LS 14945 Denotes Robert Stransky, LS
- Denotes bituminous surface
- Denotes gravel surface
- Denotes barbwire fence
- Denotes underground telephone
- Denotes overhead electric
- Denotes underground fiber optics
- Denotes underground gas line
- Denotes easement
- Denotes right of way
- Denotes major contour
- Denotes minor contour
- Denotes sanitary sewer
- Denotes storm sewer
- Denotes waterline
- Denotes existing adjoiners
- Denotes building setback line
- Denotes field edge
- Denotes soil type boundary
- Denotes delineated wetland
- Denotes proposed wetland edge
- Denotes underground electric
- Denotes tree line

See Preliminary Plat, provided by Bogart, Pederson & Associates for more information

0' 80' 160'
SCALE: 1"=80'

CALL 48 HOURS BEFORE DIGGING:
GOPHER STATE ONE CALL
TWIN CITY AREA 651-454-0002
MINNESOTA TOLL FREE 1-800-252-1166

REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE:
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn
Date: Lic. No. 58628

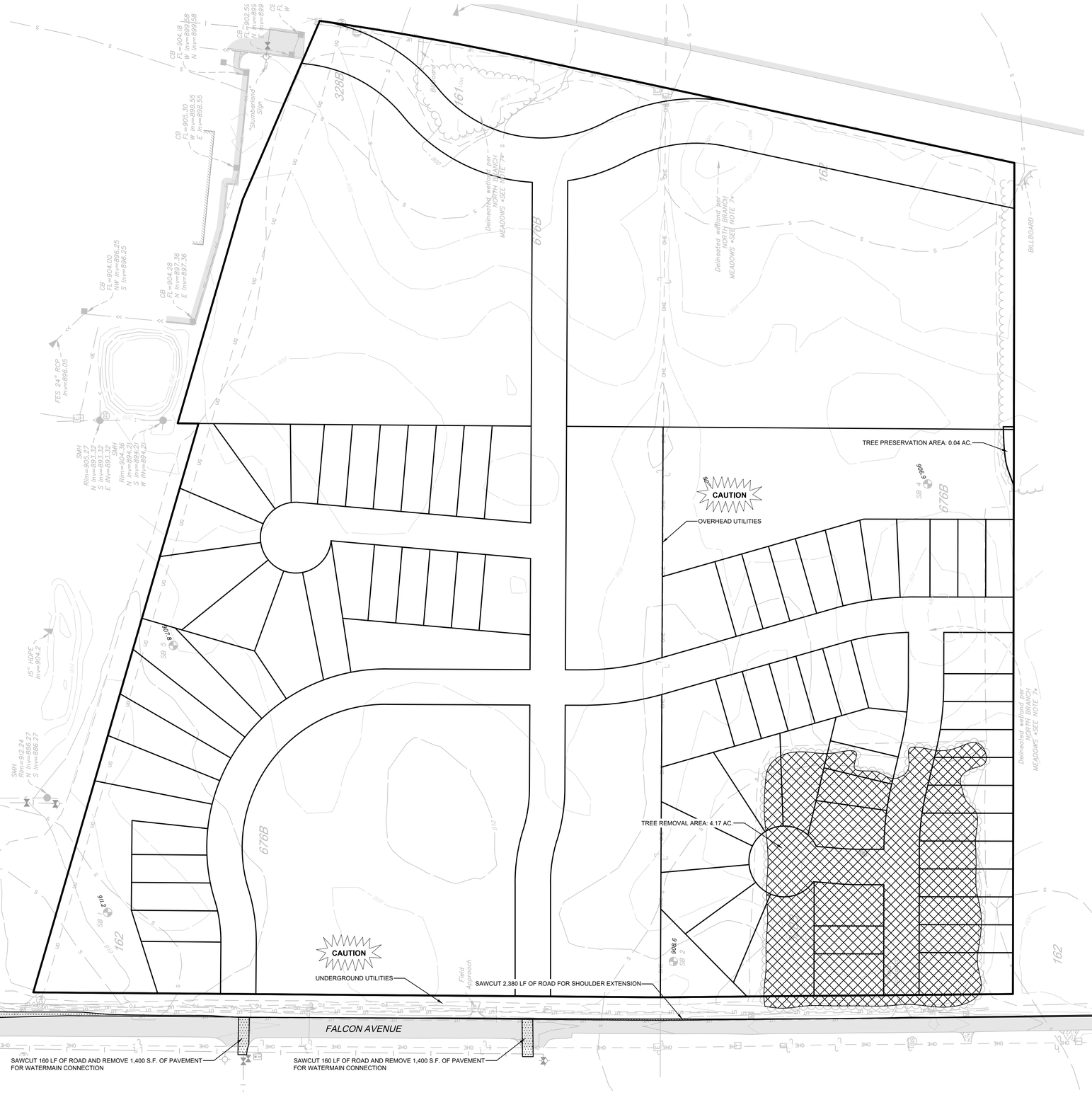
BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13076 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-261-3822 FAX: 763-262-9844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

EXISTING CONDITIONS

SHEET NO.
C1.1

4/24/2025 3:06 PM N:\Projects Current\22-0030.02 Bebber North Branch\Plat\Civil\CAD Files\NB Site Existing.dwg



LEGEND:

- REMOVE PAVEMENT SECTION (AS INDICATED).
- REMOVE EXISTING TREES (AS INDICATED)
- REMOVE FEATURE (AS INDICATED)
- SALVAGE (AS INDICATED)
- SAW-CUT

N

0' 100' 200'
SCALE: 1"=100'

DEMOLITION GENERAL NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM OR COORDINATE ALL UTILITY CONNECTIONS AND RELOCATIONS FROM EXISTING UTILITY LOCATIONS TO THE PROPOSED BUILDING, AS WELL AS TO ALL ON-SITE AMENITIES. THESE CONNECTIONS INCLUDE BUT ARE NOT LIMITED TO WATER, SANITARY SEWER, UNDERGROUND GAS, ETC.
2. THE CONNECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH STATE AND LOCAL STANDARD SPECIFICATIONS FOR CONSTRUCTION. UTILITY CONNECTIONS (UNDERGROUND GAS, WATERMAIN, AND STORM SEWER) MAY REQUIRE A PERMIT FROM THE CITY.
3. THE CONTRACTOR SHALL VERIFY THE ELEVATIONS AT PROPOSED CONNECTIONS TO EXISTING UTILITIES PRIOR TO ANY DEMOLITION.
4. CONTRACTOR SHALL COORDINATE WITH THE CITY OF NORTH BRANCH FOR ALL UTILITY DISCONNECTIONS, SERVICE TERMINATIONS AND REMOVALS. CONTRACTOR SHALL COORDINATE UTILITY DISCONNECTIONS AND RELOCATIONS WITH THE UTILITY PROVIDERS PRIOR TO THE START OF CONSTRUCTION. ALL SERVICE CONNECTIONS/DISCONNECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH STATE AND LOCAL STANDARD SPECIFICATIONS FOR CONSTRUCTION. CONTRACTOR SHALL OBTAIN ALL NECESSARY STATE AND LOCAL PERMITS NECESSARY FOR UTILITY CONSTRUCTION AND WORK WITHIN ADJACENT RIGHT-OF-WAYS.
5. IF DEWATERING IS REQUIRED FOR THIS PROJECT, THE PUMP DISCHARGE SHALL BE TREATED PRIOR TO BEING DISCHARGED OFF-SITE OR INTO A SURFACE WATER. THE DISCHARGE SHALL BE VISUALLY CHECKED TO ENSURE THAT IT IS VISIBLY CLEAN WATER.
6. CONTRACTOR SHALL PROTECT UTILITIES, STRUCTURES AND TREES (NOTED AND NOT NOTED) TO REMAIN AND SHALL BE RESPONSIBLE TO REPAIR DAMAGES TO ANY FEATURES TO REMAIN.
7. TREES 6" AND LARGER AND OTHER NOTABLE VEGETATION WERE IDENTIFIED AND LOCATED DURING THE COURSE OF THE SURVEY. CONTRACTOR SHALL FIELD VERIFY THE EXISTING CONDITIONS OF THE PROJECT AREA AND REMOVE ALL TREES NOT DESIGNATED TO BE SAVED AND PROTECTED. ALL TREES, DEBRIS, ROOTS, BOULDERS AND TOPSOIL SHALL BE REMOVED FROM THE SITE.

TREE PRESERVATION NOTES:

• TREE REMOVAL AREA:	4.17 ACRES
• TREE PRESERVATION AREA:	0.04 ACRES
• TREE PRESERVATION %:	1%
• 50% OF TREE REMOVAL AREA:	2.08 ACRES
• ASSUMPTIONS FOR REPLACEMENT:	500 S.F. OF COVERAGE PER TREE
• 2.08 ACRES / 500 S.F.	182 TREES TO BE REPLACED

CALL 48 HOURS BEFORE DIGGING:
GOPHER STATE ONE CALL
TWIN CITY AREA 651-454-0002
MINNESOTA TOLL FREE 1-800-252-1166

REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: DEMOLITION
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn Lic. No. 58628
Date:

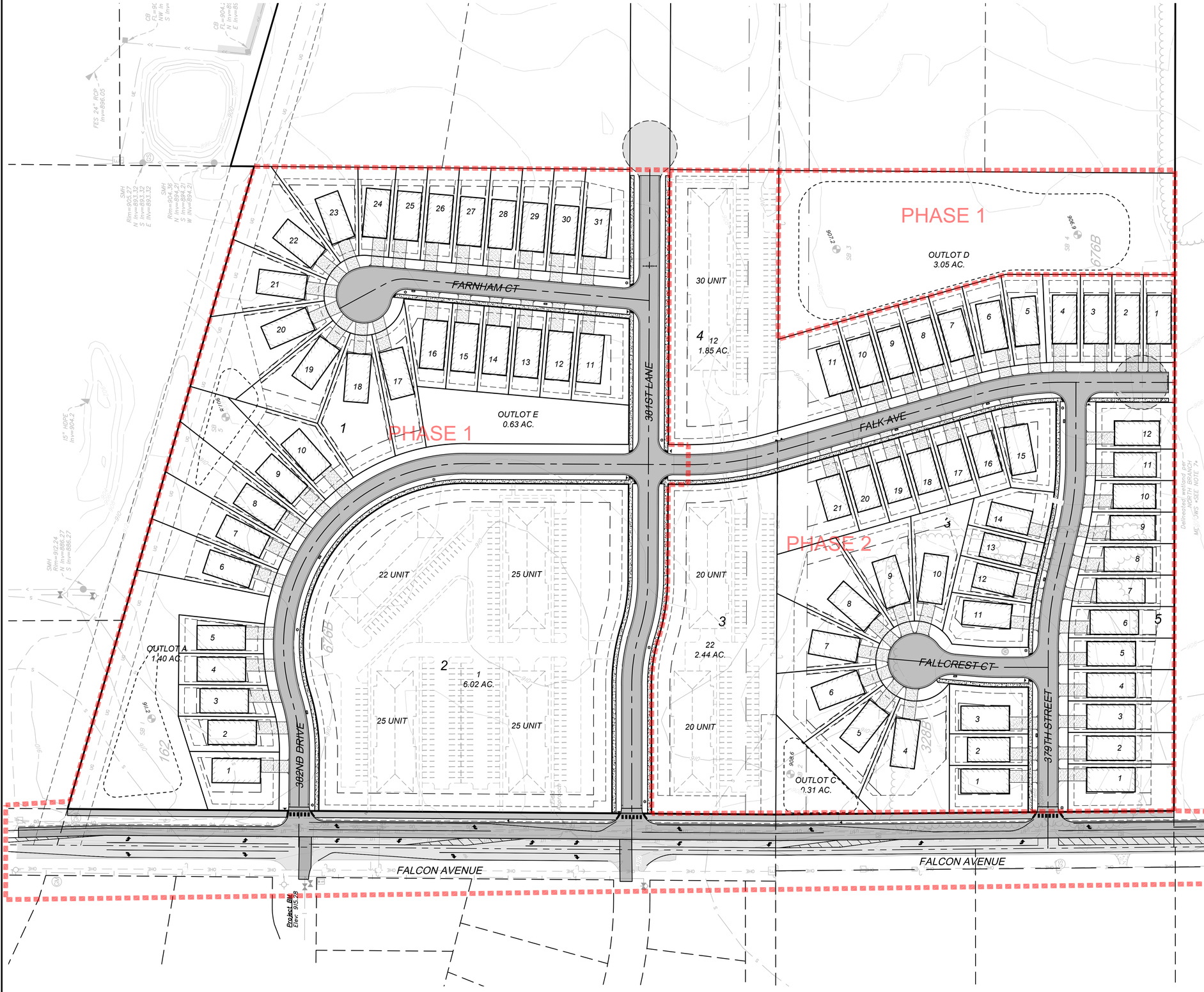
BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13076 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-262-9822 FAX: 763-262-9844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

TREE PRESERVATION & REMOVALS

SHEET NO.
C1.2

N:\Projects Current\22-0030.02 Bebber North Branch Port\Civil\CAD Files\NB Tree Preserve.dwg
4/24/2025 3:06 PM



LEGEND:

- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- MOUNTABLE CURB AND GUTTER
- PROPOSED HOUSE PAD
- PHASING LINE
- PROPOSED SIGN
- PROPOSED LIGHT POLE
- PROPOSED MAILBOX CLUSTER

SITE PLAN NOTES:

1. PAINTED PAVEMENT MARKING DIMENSIONS ARE SHOWN TO FACE OF CURB. ALL OTHER DIMENSIONS ARE SHOWN TO BACK OF CURB.
2. ALL CONCRETE RAMPS, SIDEWALKS AND ACCESSIBLE HANDICAPPED PARKING STALLS TO CONFORM TO CURRENT A.D.A. REQUIREMENTS.
3. CONTRACTOR SHALL FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION.
4. CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES PRIOR TO THE START OF CONSTRUCTION.
5. CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE CITY, COUNTY AND STATE REGULATIONS.
6. SITE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS APPROVED BY THE CITY.
7. LANDSCAPING AND TURF ESTABLISHMENT PER LANDSCAPE PLANS & SPECIFICATIONS.
8. ALL DISTURBED AREAS OUTSIDE THE BUILDING PAD WHICH ARE NOT DESIGNATED TO BE PAVED OR RECEIVE AGLIME, SHALL RECEIVE AT LEAST 6" OF TOPSOIL AND SHALL BE SEEDED OR SODDED. REFER TO THE EROSION CONTROL PLAN FOR SOD AND SEED LOCATIONS. ALL OTHER AREAS DISTURBED BY CONSTRUCTION NOT SPECIFICALLY IDENTIFIED TO RECEIVE A CERTAIN SEED MIX SHALL BE MIXED WITH SEED MIX 25-131.
9. WHERE NEW SOD MEETS EXISTING SOD, EXISTING SOD EDGE SHALL BE CUT TO ALLOW FOR A CONSISTENT, UNIFORM STRAIGHT EDGE. JAGGED OR UNEVEN EDGES WILL NOT BE ACCEPTABLE. REMOVE TOPSOIL AT JOINT BETWEEN EXISTING AND NEW AS REQUIRED TO ALLOW NEW SOD SURFACE TO BE FLUSH WITH EXISTING.

DENSITY CALCULATION:

- DENSITY FOR R-3 ZONING: 6 UNITS/ACRE
- TOTAL ACRES: 38.42
- TOTAL UNITS: 230
- VILLA UNITS: 63
- APARTMENT UNITS: 167
- ASSUMING 2 STORY, UNDERGROUND PARKING, BUILDING EXTENTS MAY VARY.
  - LOT 2, BLOCK 1: 97 — 197 OUTDOOR STALLS
  - LOT 22, BLOCK 3: 40 — 90 OUTDOOR STALLS
  - LOT 12, BLOCK 4: 30 — 61 OUTDOOR STALLS

CALL 48 HOURS BEFORE DIGGING:
GOPHER STATE ONE CALL
TWIN CITY AREA 651-454-0002
MINNESOTA TOLL FREE 1-800-252-1166

REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: SITE BASE
FILE NO.: 22-0030.00

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.

Signed: Christopher J. Dahn Lic. No. 58628
Date:

NOT FOR CONSTRUCTION

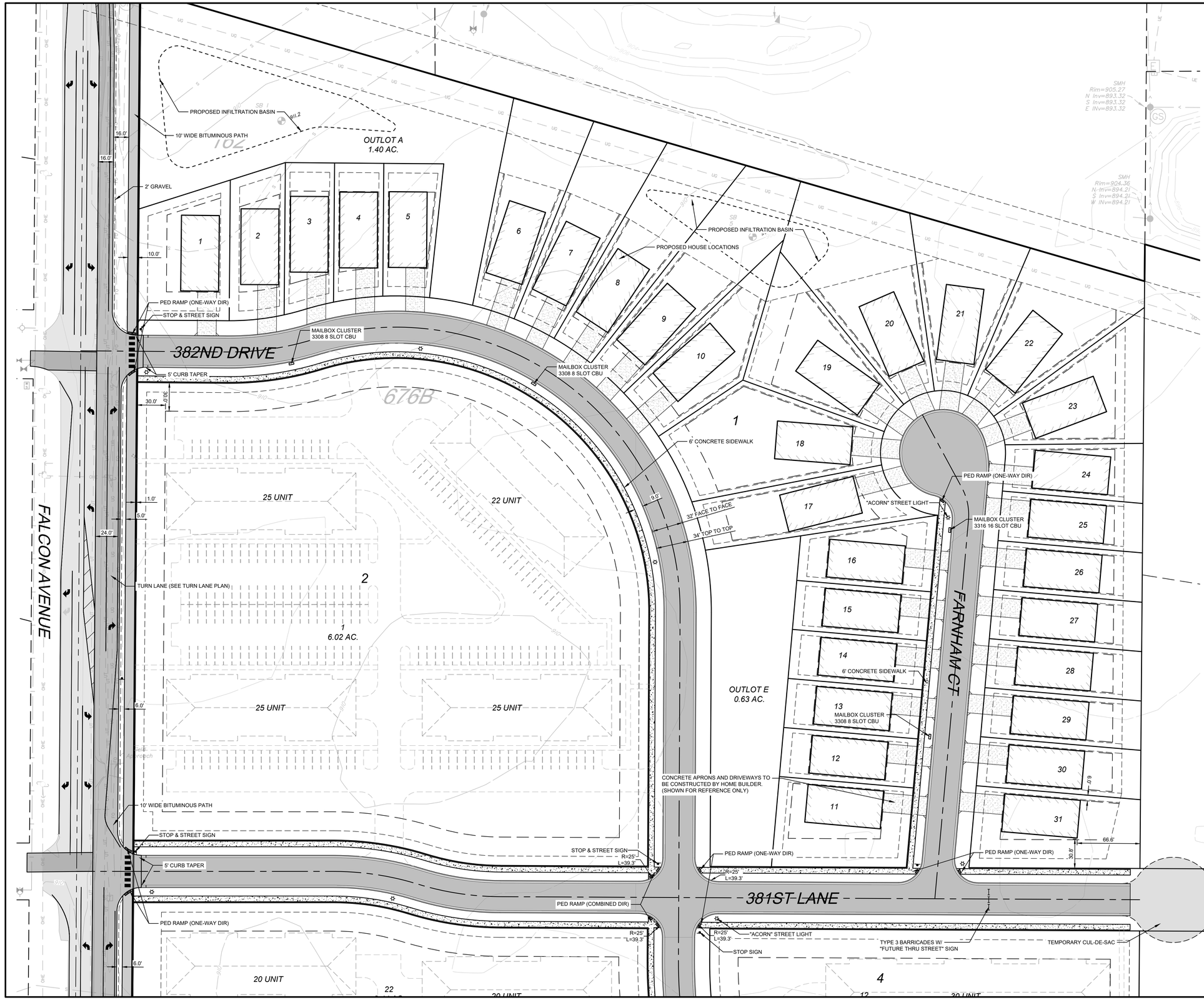
BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13078 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-262-9622 FAX: 763-262-9844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

OVERALL SITE PLAN

SHEET NO.
C2.0

4/24/2025 3:06 PM N:\Projects Current\22-0030.02 Behler North Branch Plat\Civil\CAD\ FinalWE Site Base.dwg



0' 50' 100'
SCALE: 1"=50'

LEGEND:

- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- MOUNTABLE CURB AND GUTTER
- PROPOSED HOUSE PAD
- PHASING LINE
- PROPOSED SIGN
- PROPOSED LIGHT POLE
- PROPOSED MAILBOX CLUSTER

SITE PLAN NOTES:

1. PAINTED PAVEMENT MARKING DIMENSIONS ARE SHOWN TO FACE OF CURB. ALL OTHER DIMENSIONS ARE SHOWN TO BACK OF CURB.
2. ALL CONCRETE RAMPS, SIDEWALKS AND ACCESSIBLE HANDICAPPED PARKING STALLS TO CONFORM TO CURRENT A.D.A. REQUIREMENTS.
3. CONTRACTOR SHALL FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION.
4. CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES PRIOR TO THE START OF CONSTRUCTION.
5. CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE CITY, COUNTY AND STATE REGULATIONS.
6. SITE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS APPROVED BY THE CITY.
7. LANDSCAPING AND TURF ESTABLISHMENT PER LANDSCAPE PLANS & SPECIFICATIONS.
8. ALL DISTURBED AREAS OUTSIDE THE BUILDING PAD WHICH ARE NOT DESIGNATED TO BE PAVED OR RECEIVE AGLIME, SHALL RECEIVE AT LEAST 6" OF TOPSOIL AND SHALL BE SEEDED OR SODDED. REFER TO THE EROSION CONTROL PLAN FOR SOD AND SEED LOCATIONS. ALL OTHER AREAS DISTURBED BY CONSTRUCTION NOT SPECIFICALLY IDENTIFIED TO RECEIVE A CERTAIN SEED MIX SHALL BE MIXED WITH SEED MIX 25-131.
9. WHERE NEW SOD MEETS EXISTING SOD, EXISTING SOD EDGE SHALL BE CUT TO ALLOW FOR A CONSISTENT, UNIFORM STRAIGHT EDGE. JAGGED OR UNEVEN EDGES WILL NOT BE ACCEPTABLE. REMOVE TOPSOIL AT JOINT BETWEEN EXISTING AND NEW AS REQUIRED TO ALLOW NEW SOD SURFACE TO BE FLUSH WITH EXISTING.

CALL 48 HOURS BEFORE DIGGING:
GOPHER STATE ONE CALL
TWIN CITY AREA 651-454-0002
MINNESOTA TOLL FREE 1-800-252-1166

REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: SITE BASE
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn Lic. No. 58628
Date:

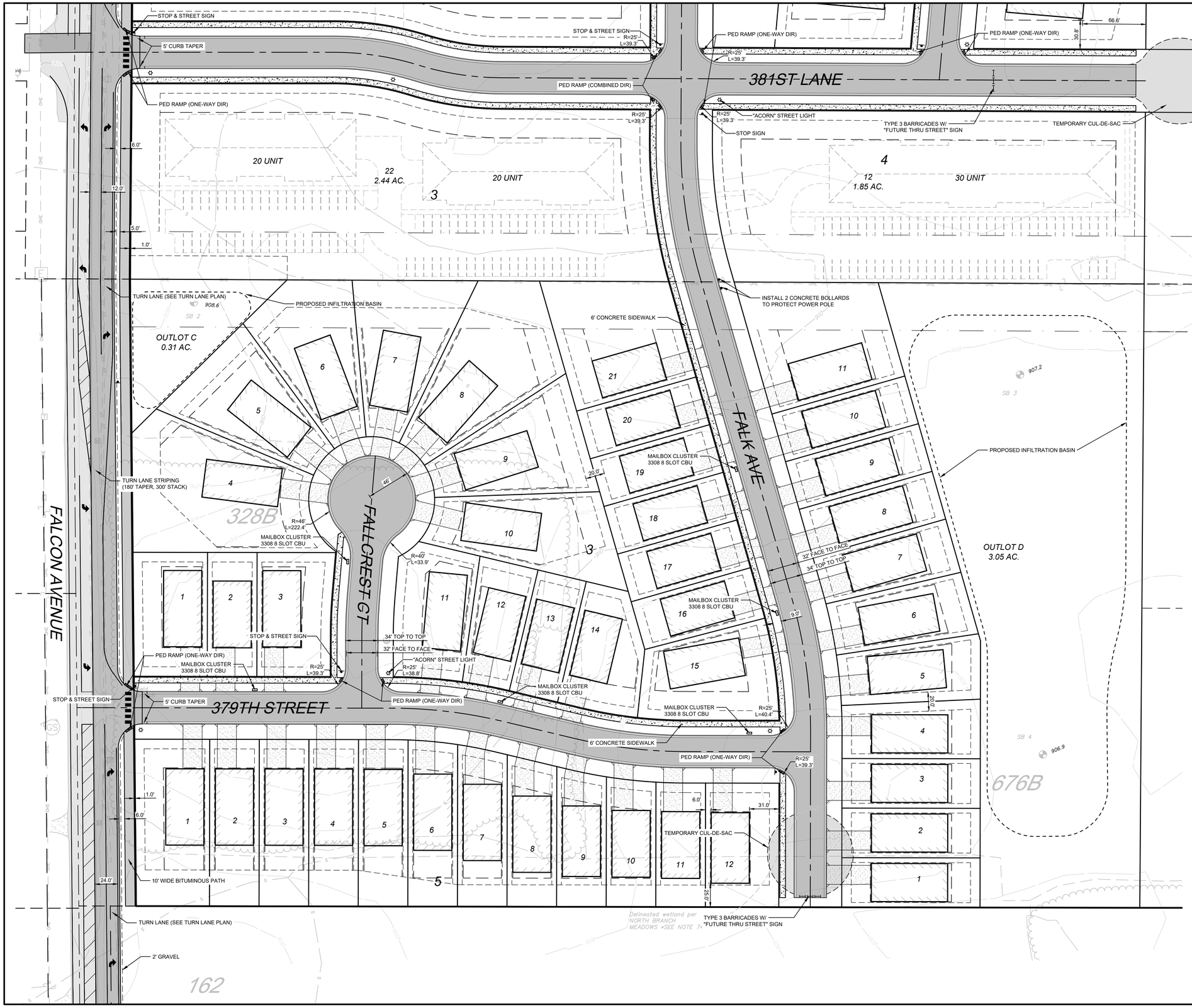
BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13879 FIRST STREET, BECKER, MN 55308-9322
TEL: 763.262.9822 FAX: 763.262.9844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

NORTH SITE PLAN

SHEET NO.
C2.1

4/24/2025 3:06 PM N:\Projects\Current\22-0030.03 Bredeer North Branch\Plat\Civil\CAD Files\NB Site Base.dwg



0' 50' 100'
SCALE: 1"=50'

LEGEND:

- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- MOUNTABLE CURB AND GUTTER
- PROPOSED HOUSE PAD
- PHASING LINE
- PROPOSED SIGN
- PROPOSED LIGHT POLE
- PROPOSED MAILBOX CLUSTER

SITE PLAN NOTES:

1. PAINTED PAVEMENT MARKING DIMENSIONS ARE SHOWN TO FACE OF CURB. ALL OTHER DIMENSIONS ARE SHOWN TO BACK OF CURB.
2. ALL CONCRETE RAMPS, SIDEWALKS AND ACCESSIBLE HANDICAPPED PARKING STALLS TO CONFORM TO CURRENT A.D.A. REQUIREMENTS.
3. CONTRACTOR SHALL FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION.
4. CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES PRIOR TO THE START OF CONSTRUCTION.
5. CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE CITY, COUNTY AND STATE REGULATIONS.
6. SITE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS APPROVED BY THE CITY.
7. LANDSCAPING AND TURF ESTABLISHMENT PER LANDSCAPE PLANS & SPECIFICATIONS.
8. ALL DISTURBED AREAS OUTSIDE THE BUILDING PAD WHICH ARE NOT DESIGNATED TO BE PAVED OR RECEIVE AGLIME, SHALL RECEIVE AT LEAST 6" OF TOPSOIL AND SHALL BE SEEDED OR SODDED. REFER TO THE EROSION CONTROL PLAN FOR SOD AND SEED LOCATIONS. ALL OTHER AREAS DISTURBED BY CONSTRUCTION NOT SPECIFICALLY IDENTIFIED TO RECEIVE A CERTAIN SEED MIX SHALL BE MIXED WITH SEED MIX 25-131.
9. WHERE NEW SOD MEETS EXISTING SOD, EXISTING SOD EDGE SHALL BE CUT TO ALLOW FOR A CONSISTENT, UNIFORM STRAIGHT EDGE. JAGGED OR UNEVEN EDGES WILL NOT BE ACCEPTABLE. REMOVE TOPSOIL AT JOINT BETWEEN EXISTING AND NEW AS REQUIRED TO ALLOW NEW SOD SURFACE TO BE FLUSH WITH EXISTING.

CALL 48 HOURS BEFORE DIGGING:
GOPHER STATE ONE CALL
TWIN CITY AREA 651-454-0002
MINNESOTA TOLL FREE 1-800-252-1166

REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: SITE BASE
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn Lic. No. 58628
Date:

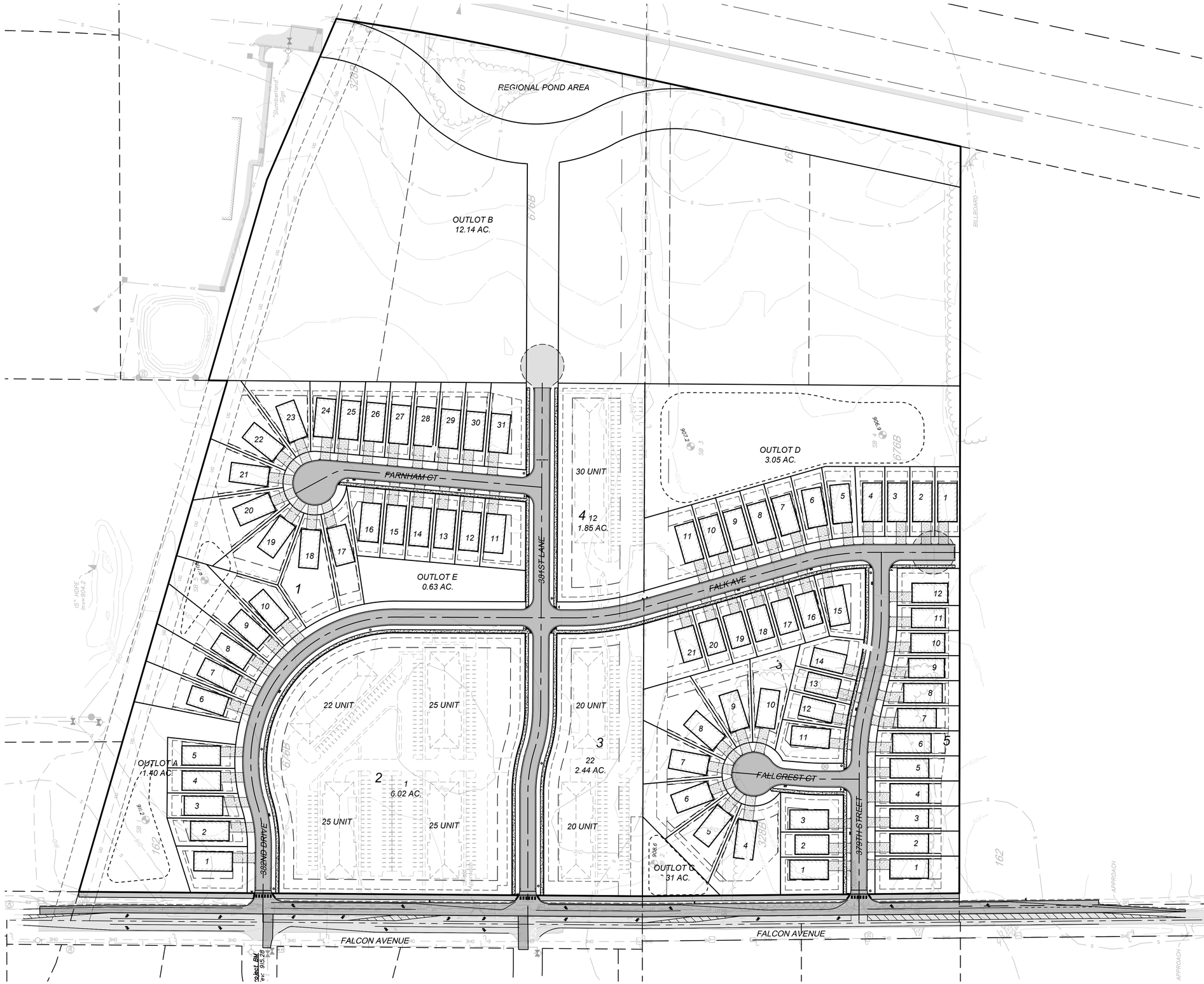
BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13076 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-262-9822 FAX: 763-262-9844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

SOUTH SITE PLAN

SHEET NO.
C2.2

N:\Projects Current\22-0030.02 Bekker North Branch Port\Civil\CAD Files\NB Site Base.dwg
4/24/2025 3:06 PM



0' 100' 200'
SCALE: 1"=100'

LEGEND:

- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- MOUNTABLE CURB AND GUTTER
- PROPOSED HOUSE PAD
- PHASING LINE
- PROPOSED SIGN
- PROPOSED LIGHT POLE
- PROPOSED MAILBOX CLUSTER

SITE PLAN NOTES:

1. PAINTED PAVEMENT MARKING DIMENSIONS ARE SHOWN TO FACE OF CURB. ALL OTHER DIMENSIONS ARE SHOWN TO BACK OF CURB.
2. ALL CONCRETE RAMPS, SIDEWALKS AND ACCESSIBLE HANDICAPPED PARKING STALLS TO CONFORM TO CURRENT A.D.A. REQUIREMENTS.
3. CONTRACTOR SHALL FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION.
4. CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES PRIOR TO THE START OF CONSTRUCTION.
5. CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE CITY, COUNTY AND STATE REGULATIONS.
6. SITE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS APPROVED BY THE CITY.
7. LANDSCAPING AND TURF ESTABLISHMENT PER LANDSCAPE PLANS & SPECIFICATIONS.
8. ALL DISTURBED AREAS OUTSIDE THE BUILDING PAD WHICH ARE NOT DESIGNATED TO BE PAVED OR RECEIVE AGLIME, SHALL RECEIVE AT LEAST 6" OF TOPSOIL AND SHALL BE SEEDED OR SODDED. REFER TO THE EROSION CONTROL PLAN FOR SOD AND SEED LOCATIONS. ALL OTHER AREAS DISTURBED BY CONSTRUCTION NOT SPECIFICALLY IDENTIFIED TO RECEIVE A CERTAIN SEED MIX SHALL BE MIXED WITH SEED MIX 25-131.
9. WHERE NEW SOD MEETS EXISTING SOD, EXISTING SOD EDGE SHALL BE CUT TO ALLOW FOR A CONSISTENT, UNIFORM STRAIGHT EDGE. JAGGED OR UNEVEN EDGES WILL NOT BE ACCEPTABLE. REMOVE TOPSOIL AT JOINT BETWEEN EXISTING AND NEW AS REQUIRED TO ALLOW NEW SOD SURFACE TO BE FLUSH WITH EXISTING.

DENSITY CALCULATION:

- DENSITY FOR R-3 ZONING: 6 UNITS/ACRE
- TOTAL ACRES: 38.42
- TOTAL UNITS: 230
- VILLA UNITS: 63
- APARTMENT UNITS: 167
- ASSUMING 2 STORY, UNDERGROUND PARKING, BUILDING EXTENTS MAY VARY.
  - LOT 2, BLOCK 1: 97 — 197 OUTDOOR STALLS
  - LOT 22, BLOCK 3: 40 — 90 OUTDOOR STALLS
  - LOT 12, BLOCK 4: 30 — 61 OUTDOOR STALLS

CALL 48 HOURS BEFORE DIGGING:
GOPHER STATE ONE CALL
TWIN CITY AREA 651-454-0002
MINNESOTA TOLL FREE 1-800-252-1166

REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: SITE BASE
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn Lic. No. 58628
Date:

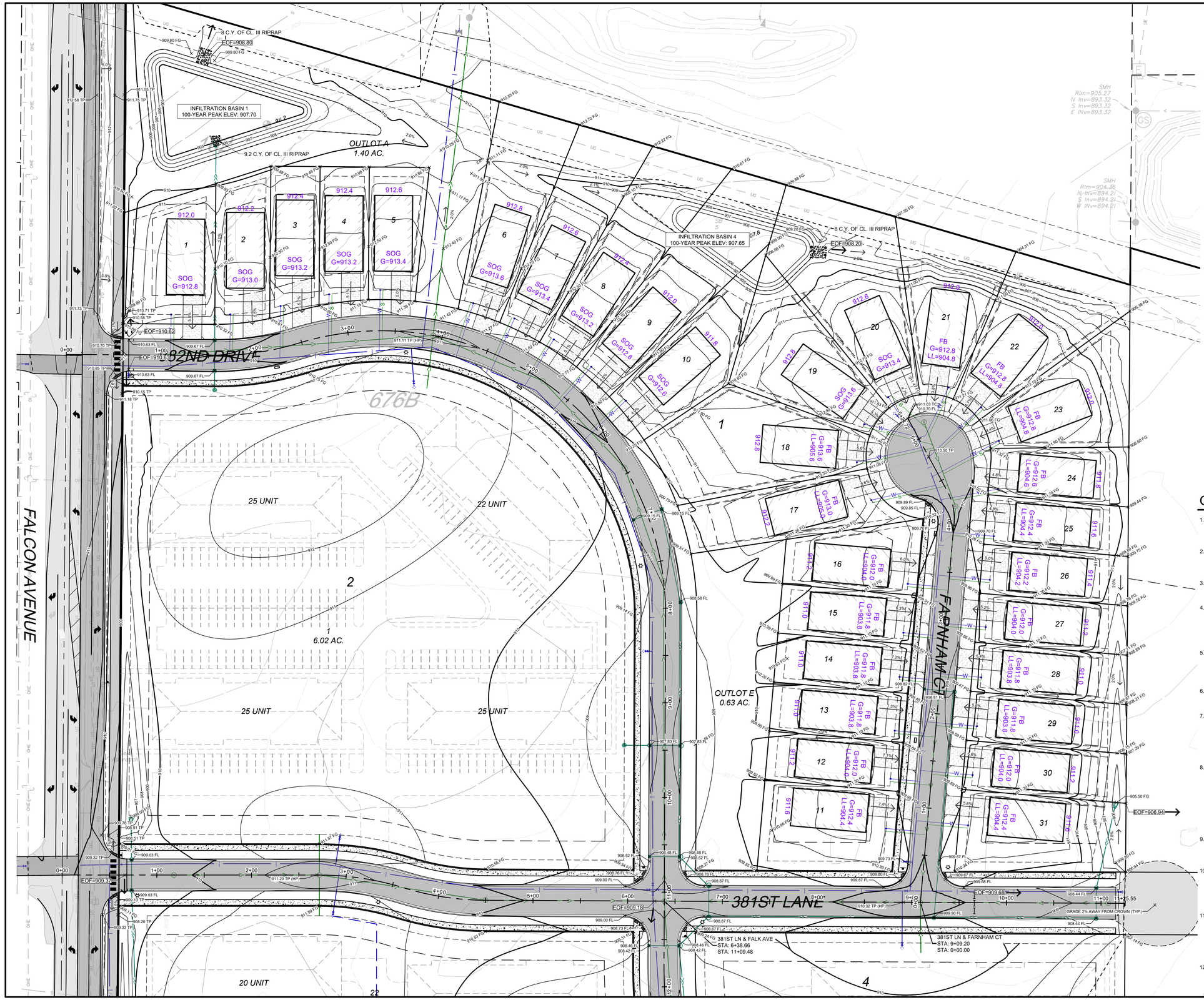
BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13076 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-262-9822 FAX: 763-262-9844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

FUTURE DEVELOPMENT

SHEET NO.
C2.3

4/24/2025 3:06 PM N:\Projects Current\22-0030.02 Bebber North Branch Plat\Civil\CAD Files\NB Site Base.dwg



0' 50' 100'
SCALE: 1"=50'

FB
G=913.0
LL=905.0
911.5

-HOUSE TYPE
-GARAGE ELEVATION
-LOWER LEVEL ELEVATION

FB: FULL BASEMENT
SOG: SLAB ON GRADE

-BACKYARD ELEVATION

GRADING GENERAL NOTES:

1. THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS IN THE FIELD REPRESENTED WITHIN THE PLANS AS SHOWN AND ALERT THE ENGINEER BEFORE BIDDING THE PROJECT AND BEGINNING CONSTRUCTION.
2. CONTRACTOR SHALL LOCATE AND VERIFY ALL UTILITIES WHICH MAY AFFECT THIS WORK AND NOTIFY THE OWNER OF ANY CHANGES. CONTACT LOCAL UTILITY COMPANIES FOR EXACT LOCATIONS PRIOR TO BIDDING THE PROJECT AND COMMENCING WORK.
3. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT SILT AND DEBRIS RUN-OFF DURING GRADING OPERATIONS (I.E. SILT FENCE, STRAW BALES, ETC.).
4. CONTRACTOR SHALL VERIFY CRITICAL ELEVATIONS TO ENSURE CONFORMANCE WITH GRADING PLAN, PARTICULARLY WITH EXISTING STRUCTURES AND/OR PAVEMENTS TO REMAIN. MEET EXISTING GRADES ALONG STREETS, PROPERTY LINES, AND DRIVEWAY ENTRANCES. RESTORE ALL PAVEMENTS THAT REMAIN TO THEIR ORIGINAL IF NOT BETTER CONDITION. NOTIFY OWNER OF ANY CONFLICTS PRIOR TO BIDDING THE PROJECT.
5. TURF ESTABLISHMENT AREAS SHALL RECEIVE MINIMUM OF 4" DEPTH AS MEASURED IN PLACE OF TOPSOIL. TOPSOIL SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. ALL GRADED SLOPES GREATER THAN OR EQUAL TO 5:1 SHALL BE HYDROSEEDED, EROSION CONTROL BLANKETED, OR MULCHED TO HELP STABILIZE THE SLOPES BY GENERAL CONTRACTOR.
6. PROPOSED SPOT ELEVATIONS ARE TO THE TOP OF CURB UNLESS NOTED OTHERWISE. ELEVATION OF FLOW LINE IS 6" BELOW TOP OF CURB UNLESS OTHERWISE SHOWN.
7. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING QUANTITIES OF CUT, FILL AND WASTE MATERIALS TO BE HANDLED, AND FOR AMOUNT OF GRADING TO BE DONE IN ORDER TO COMPLETELY PERFORM ALL WORK INDICATED ON THE DRAWINGS. IMPORT SUITABLE MATERIAL AND EXPORT UNSUITABLE / EXCESS / WASTE MATERIAL AS REQUIRED. ALL COSTS ASSOCIATED WITH IMPORTING AND EXPORTING MATERIALS SHALL BE INCIDENTAL TO THE CONTRACT.
8. IT IS INTENDED THAT EARTHWORK (CUT VS. FILL) WILL NOT BALANCE ON SITE. THE CONTRACTOR SHALL SUBMIT THE QUANTITY OF MATERIAL AND AMOUNT OF ANTICIPATED GRADE ADJUSTMENT FOR REVIEW BY THE ENGINEER A MINIMUM OF FOUR WEEKDAYS PRIOR TO MAKING ADJUSTMENTS. ALL GRADE ADJUSTMENTS MUST BE APPROVED BY THE ENGINEER. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR WORK ASSOCIATED WITH GRADING ADJUSTMENTS, INCLUDING, BUT NOT LIMITED TO, EARTHWORK OPERATIONS, STORM SEWER PIPING AND STRUCTURE ADJUSTMENTS, CONSTRUCTION SURVEYING FOR ADJUSTING FEATURE LOCATIONS ACCORDINGLY, SILT FENCE, ETC.
9. FAILURE OF TURF DEVELOPMENT: IN THE EVENT THE CONTRACTOR FAILS TO PROVIDE AN ACCEPTABLE TURF, THE CONTRACTOR SHALL RE-SEED OR RE-SOD ALL APPLICABLE AREAS, AT NO ADDITIONAL COST TO THE OWNER, TO THE SATISFACTION OF THE ENGINEER.
10. ANY MANHOLE, CATCH BASIN, STORM SEWER, SANITARY SEWER, DRAINTILE, OR OTHER POTENTIAL SOURCE FOR CONTAMINATION SHALL BE INSTALLED AT LEAST 10 FEET HORIZONTALLY FROM ANY WATERMAIN PER MINNESOTA PLUMBING CODE. THIS ISOLATION DISTANCE SHALL BE MEASURED FROM THE OUTER EDGE OF THE PIPE TO THE OUTER EDGE OF THE CONTAMINATION SOURCE (OUTER EDGE OF STRUCTURES OR PIPING OR SIMILAR)
11. CONTRACTOR SHALL MAINTAIN DRAINAGE FROM EXISTING BUILDING AT ALL TIMES. PROVIDE TEMPORARY STORM SEWER (INCLUDING, BUT NOT LIMITED TO, CATCH BASINS, MANHOLES, PIPING, ETC.) AS REQUIRED. EXISTING STORM SEWER SHALL NOT BE REMOVED UNTIL TEMPORARY OR PERMANENT STORM SEWER IS INSTALLED AND FUNCTIONAL. COORDINATE ALL REMOVALS WITH APPROPRIATE TRADES (SITE UTILITY CONTRACTOR, MECHANICAL CONTRACTOR, ETC.) AS REQUIRED.
12. ALL GRADING AND CONSTRUCTION IN THE SMALL UTILITY EASEMENTS WILL NEED TO BE APPROVED AND COORDINATED WITH THE UTILITY PROVIDER.

REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: GRADING
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn Lic. No. 58628
Date:

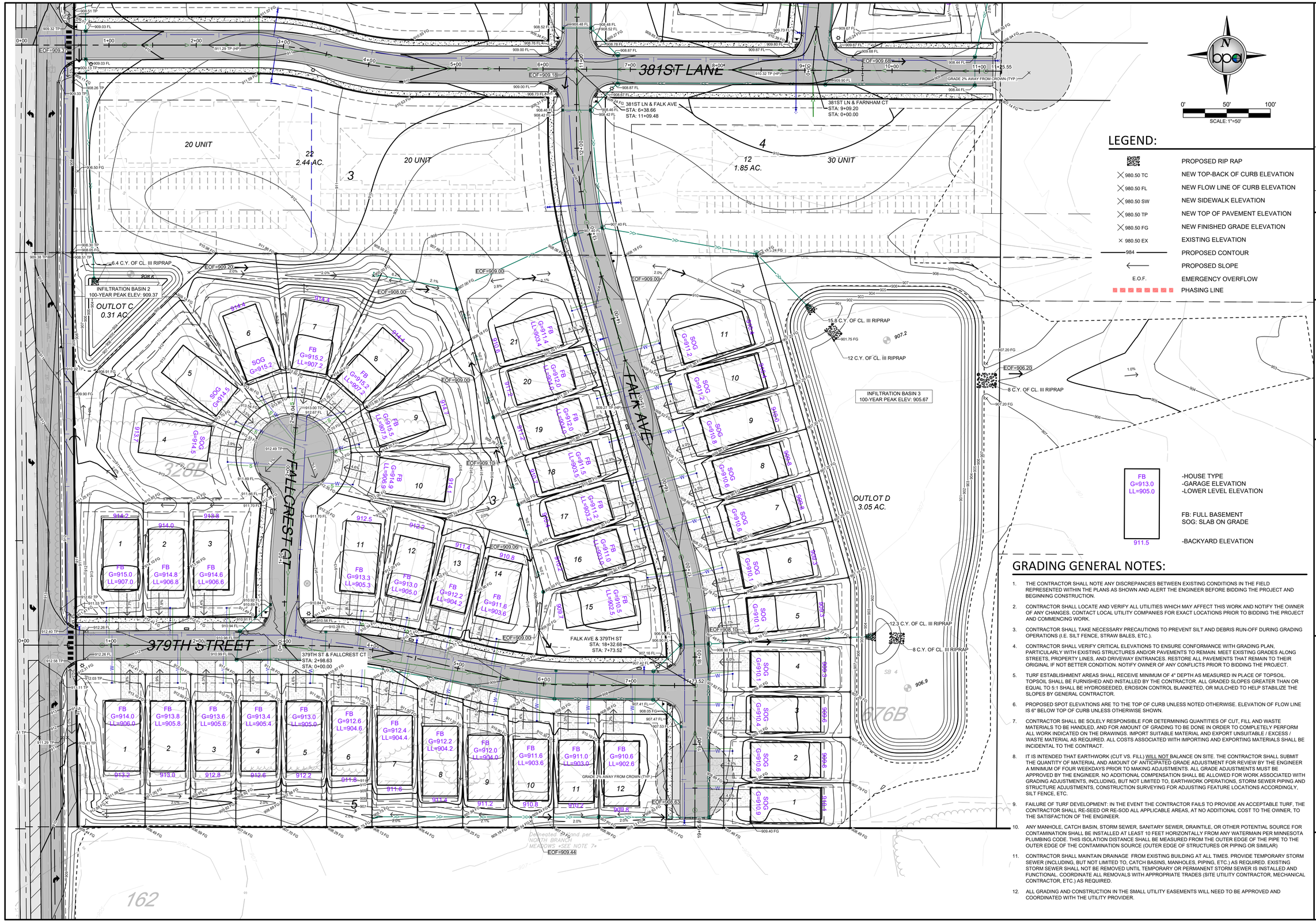
BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13070 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-262-9822 FAX: 763-262-9844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

NORTH GRADING PLAN

SHEET NO.
C3.1

4/24/2025 3:07 PM N:\Projects Current\22-0030.02 Bebber North Branch Plat\Civil\CAD Files\NB Grading.dwg



LEGEND:

- PROPOSED RIP RAP
- 980.50 TC — NEW TOP-BACK OF CURB ELEVATION
- 980.50 FL — NEW FLOW LINE OF CURB ELEVATION
- 980.50 SW — NEW SIDEWALK ELEVATION
- 980.50 TP — NEW TOP OF PAVEMENT ELEVATION
- 980.50 FG — NEW FINISHED GRADE ELEVATION
- × 980.50 EX — EXISTING ELEVATION
- 984 — PROPOSED CONTOUR
- PROPOSED SLOPE
- E.O.F. — EMERGENCY OVERFLOW
- PHASING LINE

FB
G=913.0
LL=905.0
911.5

-HOUSE TYPE
-GARAGE ELEVATION
-LOWER LEVEL ELEVATION

FB: FULL BASEMENT
SOG: SLAB ON GRADE

-BACKYARD ELEVATION

GRADING GENERAL NOTES:

1. THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS IN THE FIELD REPRESENTED WITHIN THE PLANS AS SHOWN AND ALERT THE ENGINEER BEFORE BIDDING THE PROJECT AND BEGINNING CONSTRUCTION.
2. CONTRACTOR SHALL LOCATE AND VERIFY ALL UTILITIES WHICH MAY AFFECT THIS WORK AND NOTIFY THE OWNER OF ANY CHANGES. CONTACT LOCAL UTILITY COMPANIES FOR EXACT LOCATIONS PRIOR TO BIDDING THE PROJECT AND COMMENCING WORK.
3. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT SILT AND DEBRIS RUN-OFF DURING GRADING OPERATIONS (I.E. SILT FENCE, STRAW BALES, ETC.).
4. CONTRACTOR SHALL VERIFY CRITICAL ELEVATIONS TO ENSURE CONFORMANCE WITH GRADING PLAN, PARTICULARLY WITH EXISTING STRUCTURES AND/OR PAVEMENTS TO REMAIN. MEET EXISTING GRADES ALONG STREETS, PROPERTY LINES, AND DRIVEWAY ENTRANCES. RESTORE ALL PAVEMENTS THAT REMAIN TO THEIR ORIGINAL IF NOT BETTER CONDITION. NOTIFY OWNER OF ANY CONFLICTS PRIOR TO BIDDING THE PROJECT.
5. TURF ESTABLISHMENT AREAS SHALL RECEIVE MINIMUM OF 4" DEPTH AS MEASURED IN PLACE OF TOPSOIL. TOPSOIL SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. ALL GRADED SLOPES GREATER THAN OR EQUAL TO 5:1 SHALL BE HYDROSEEDED, EROSION CONTROL BLANKETED, OR MULCHED TO HELP STABILIZE THE SLOPES BY GENERAL CONTRACTOR.
6. PROPOSED SPOT ELEVATIONS ARE TO THE TOP OF CURB UNLESS NOTED OTHERWISE. ELEVATION OF FLOW LINE IS 6" BELOW TOP OF CURB UNLESS OTHERWISE SHOWN.
7. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING QUANTITIES OF CUT, FILL AND WASTE MATERIALS TO BE HANDLED, AND FOR AMOUNT OF GRADING TO BE DONE IN ORDER TO COMPLETELY PERFORM ALL WORK INDICATED ON THE DRAWINGS. IMPORT SUITABLE MATERIAL AND EXPORT UNSUITABLE / EXCESS / WASTE MATERIAL AS REQUIRED. ALL COSTS ASSOCIATED WITH IMPORTING AND EXPORTING MATERIALS SHALL BE INCIDENTAL TO THE CONTRACT.
8. IT IS INTENDED THAT EARTHWORK (CUT VS. FILL) WILL NOT BALANCE ON SITE. THE CONTRACTOR SHALL SUBMIT THE QUANTITY OF MATERIAL AND AMOUNT OF ANTICIPATED GRADE ADJUSTMENT FOR REVIEW BY THE ENGINEER A MINIMUM OF FOUR WEEKDAYS PRIOR TO MAKING ADJUSTMENTS. ALL GRADE ADJUSTMENTS MUST BE APPROVED BY THE ENGINEER. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR WORK ASSOCIATED WITH GRADING ADJUSTMENTS, INCLUDING, BUT NOT LIMITED TO, EARTHWORK OPERATIONS, STORM SEWER PIPING AND STRUCTURE ADJUSTMENTS, CONSTRUCTION SURVEYING FOR ADJUSTING FEATURE LOCATIONS ACCORDINGLY, SILT FENCE, ETC.
9. FAILURE OF TURF DEVELOPMENT. IN THE EVENT THE CONTRACTOR FAILS TO PROVIDE AN ACCEPTABLE TURF, THE CONTRACTOR SHALL RE-SEED OR RE-SOD ALL APPLICABLE AREAS, AT NO ADDITIONAL COST TO THE OWNER, TO THE SATISFACTION OF THE ENGINEER.
10. ANY MANHOLE, CATCH BASIN, STORM SEWER, SANITARY SEWER, DRAINTILE, OR OTHER POTENTIAL SOURCE FOR CONTAMINATION SHALL BE INSTALLED AT LEAST 10 FEET HORIZONTALLY FROM ANY WATERMAIN PER MINNESOTA PLUMBING CODE. THIS ISOLATION DISTANCE SHALL BE MEASURED FROM THE OUTER EDGE OF THE PIPE TO THE OUTER EDGE OF THE CONTAMINATION SOURCE (OUTER EDGE OF STRUCTURES OR PIPING OR SIMILAR)
11. CONTRACTOR SHALL MAINTAIN DRAINAGE FROM EXISTING BUILDING AT ALL TIMES. PROVIDE TEMPORARY STORM SEWER (INCLUDING, BUT NOT LIMITED TO, CATCH BASINS, MANHOLES, PIPING, ETC.) AS REQUIRED. EXISTING STORM SEWER SHALL NOT BE REMOVED UNTIL TEMPORARY OR PERMANENT STORM SEWER IS INSTALLED AND FUNCTIONAL. COORDINATE ALL REMOVALS WITH APPROPRIATE TRADES (SITE UTILITY CONTRACTOR, MECHANICAL CONTRACTOR, ETC.) AS REQUIRED.
12. ALL GRADING AND CONSTRUCTION IN THE SMALL UTILITY EASEMENTS WILL NEED TO BE APPROVED AND COORDINATED WITH THE UTILITY PROVIDER.

REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: GRADING
FILE NO.: 22-0030.00

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.

Signed: Christopher J. Dahn
Date: Lic. No. 58628

NOT FOR CONSTRUCTION

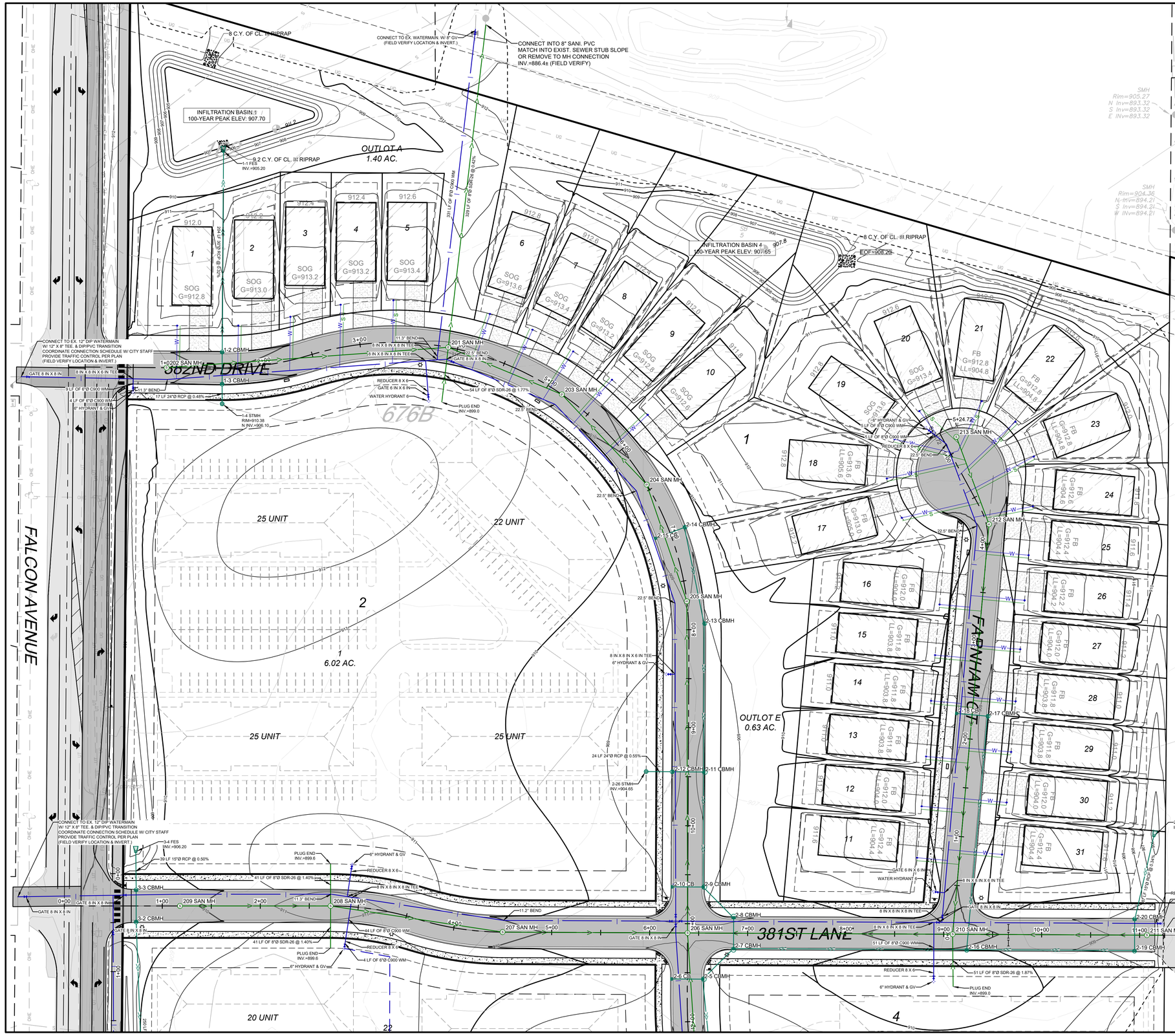
BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
1307B FIRST STREET, BECKER, MN 55308-9322
TEL: 763-261-3822 FAX: 763-262-9844

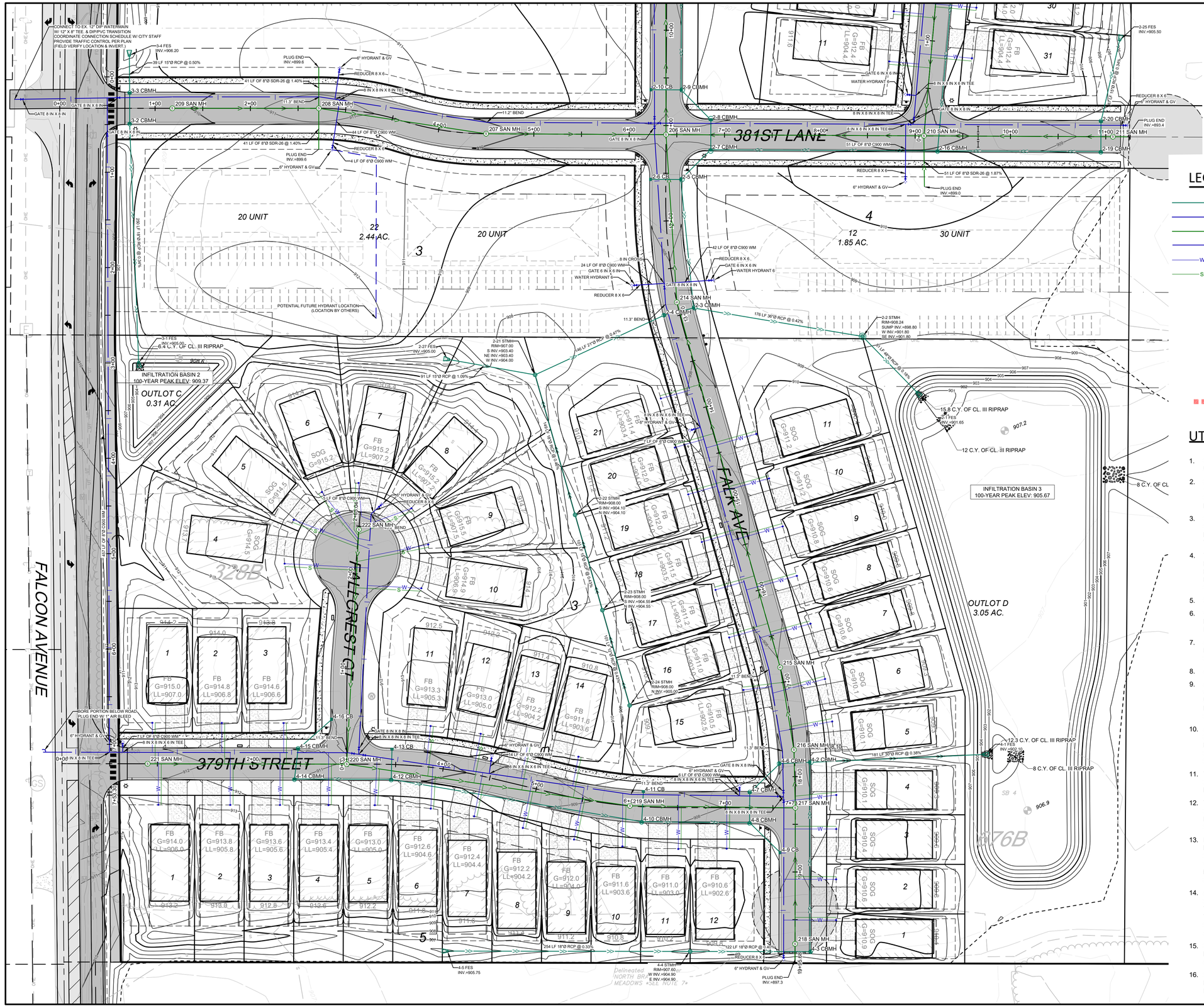
CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

SOUTH GRADING PLAN

SHEET NO.
C3.2

N:\Projects Current\22-0030.02 Bebber North Branch Plat\Civil\CAD Files\NB Grading.dwg
4/24/2025 3:07 PM


8 C.Y. OF CL. III RIPRAP
CONNECT TO EX. WATERMAIN W/ 8" GV (FIELD VERIFY LOCATION & INVERT.)
CONNECT INTO 8" SANI. PVC MATCH INTO EXIST. SEWER STUB SLOPE OR REMOVE TO MH CONNECTION INV.=886.4± (FIELD VERIFY)
INFILTRATION BASIN 3
100-YEAR PEAK ELEV: 907.70
OUTLOT A
1.40 AC.
8.2 C.Y. OF CL. III RIPRAP
1-1 FES
INV.=905.20
204 LF 30"Ø RCP @ 0.52%
201 LF OF 8"Ø C900 WM
329 LF OF 8"Ø SDR-26 @ 0.40%
INFILTRATION BASIN 4
100-YEAR PEAK ELEV: 907.65
8 C.Y. OF CL. III RIPRAP
EOF=908.26
SMH
Rim=905.27
N Inv=893.32
S Inv=893.32
E INV=893.32
SMH
Rim=904.36
N Inv=894.21
S Inv=894.21
W INV=894.21
CONNECT TO EX. 12" DIP WATERMAIN W/ 12" X 8" TEE. & DIP/PVC TRANSITION COORDINATE CONNECTION SCHEDULE W/ CITY STAFF PROVIDE TRAFFIC CONTROL PER PLAN (FIELD VERIFY LOCATION & INVERT.)
GATE 8 IN X 8 IN
8 IN X 8 IN X 6 IN TEE
9 LF OF 8"Ø C900 WM
11.3° BEND
17 LF 24"Ø RCP @ 0.48%
6" HYDRANT & GV
1-4 STMH
RIM=910.38
N INV.=906.10
1+02 SAN MH
1-2 CBMH
1-3 CBMH
3+00
3+50
11.3° BEND
8 IN X 8 IN X 8 IN TEE
22.5° BEND
GATE 8 IN X 8 IN
REDUCER 8 X 6
GATE 6 IN X 6 IN
WATER HYDRANT 6
54 LF OF 8"Ø SDR-26 @ 1.77%
PLUG END
INV.=899.0
201 SAN MH
203 SAN MH
5+20
22.5° BEND
204 SAN MH
22.5° BEND
205 SAN MH
2-14 CBMH
2-15 CB
2-13 CBMH
8+00
8 IN X 8 IN X 6 IN TEE
6" HYDRANT & GV
9+00
24 LF 24"Ø RCP @ 0.55%
2-12 CBMH
2-11 CBMH
2-26 STMH
INV.=904.65
10+00
2-10 CB
2-9 CBMH
2-8 CBMH
2-7 CBMH
2-6 CB
2-5 CBMH
11+00
2-20 CBMH
2-19 CBMH
2-16 CBMH
211 SAN MH
PLUG END
INV.=893.4
212 SAN MH
213 SAN MH
5+24.72
5 LF OF 8"Ø C900 WM
22.5° BEND
2-18 CB
2-17 CBMH
4+00
GATE 6 IN X 6 IN
WATER HYDRANT 6
8 IN X 8 IN X 6 IN TEE
51 LF OF 8"Ø SDR-26 @ 1.87%
REDUCER 8 X 6
6" HYDRANT & GV
PLUG END
INV.=899.0
2-25 FES
INV.=905.50
57 LF OF 8"Ø SDR-26 @ 0.44%
REDUCER 8 X 6
6" HYDRANT & GV
PLUG END
INV.=893.4
CONNECT TO EX. 12" DIP WATERMAIN W/ 12" X 8" TEE & DIP/PVC TRANSITION COORDINATE CONNECTION SCHEDULE W/ CITY STAFF PROVIDE TRAFFIC CONTROL PER PLAN (FIELD VERIFY LOCATION & INVERT.)
3-4 FES
INV.=906.20
39 LF 15"Ø RCP @ 0.50%
PLUG END
INV.=899.6
6" HYDRANT & GV
REDUCER 8 X 6
41 LF OF 8"Ø SDR-26 @ 1.40%
8 IN X 8 IN X 8 IN TEE
3-3 CBMH
0+00
GATE 8 IN X 8 IN
1+00
209 SAN MH
2+00
11.3° BEND
208 SAN MH
3+00
3-2 CBMH
44 LF OF 8"Ø C900 WM
41 LF OF 8"Ø SDR-26 @ 1.40%
REDUCER 8 X 6
PLUG END
INV.=899.6
6" HYDRANT & GV
4 LF OF 6"Ø C900 WM
4+00
207 SAN MH
5+00
6+00
206 SAN MH
7+00
8+00
8 IN X 8 IN X 8 IN TEE
9+00
210 SAN MH
10+00
GATE 8 IN X 8 IN
51 LF OF 8"Ø C900 WM
2-16 CBMH
2-19 CBMH
211 SAN MH
1+00
3-5 CBMH
2-4 CB
2-3 CBMH
2-1 CB
2-2 CBMH
2-21 CBMH
2-22 CBMH
2-23 CBMH
2-24 CBMH
2-27 CBMH
2-28 CBMH
2-29 CBMH
2-30 CBMH
2-31 CBMH
2-32 CBMH
2-33 CBMH
2-34 CBMH
2-35 CBMH
2-36 CBMH
2-37 CBMH
2-38 CBMH
2-39 CBMH
2-40 CBMH
2-41 CBMH
2-42 CBMH
2-43 CBMH
2-44 CBMH
2-45 CBMH
2-46 CBMH



LEGEND:

- PROPOSED STORM SEWER
- PROPOSED WATER LINE
- PROPOSED SANITARY SEWER
- PROPOSED FITTING
- PROPOSED WATER SERVICE
- PROPOSED SANITARY SERVICE
- PROPOSED SANITARY MANHOLE
- PROPOSED FLARED END SECITON
- PROPOSED STORM MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED GATE VALVE & BOX
- PROPOSED HYDRANT
- PROPOSED CLEANOUT
- PROPOSED RIP RAP
- PHASING LINE

UTILITY GENERAL NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL UTILITY RELOCATIONS.
2. CONTRACTOR SHALL LOCATE AND VERIFY ALL UTILITIES WHICH MAY AFFECT THIS WORK AND NOTIFY OWNER OF ANY CHANGES. CONTACT LOCAL UTILITY COMPANIES FOR EXACT LOCATIONS PRIOR TO BIDDING THE PROJECT AND COMMENCING WORK.
3. CONTRACTOR SHALL VERIFY CRITICAL ELEVATIONS TO ENSURE CONFORMANCE WITH GRADING PLAN AND EXISTING UTILITIES, PARTICULARLY WITH EXISTING STRUCTURES AND/OR PAVEMENTS TO REMAIN.
4. THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AS EXISTING IN THE FIELD AND AS REPRESENTED WITHIN THE PLANS AS SHOWN AND ALERT THE ENGINEER BEFORE BIDDING THE PROJECT AND BEGINNING CONSTRUCTION.
5. WATER LINE TO MINIMUM 8.0 FEET DEPTH.
6. VERIFY INVERT ELEVATIONS OF EXISTING SANITARY LINE AT POINT OF CONNECTION WITH NEW SANITARY LINE PRIOR TO INSTALLING ANY NEW UTILITIES.
7. ALL CROSSING ELEVATIONS OF NEW UTILITIES & SIZES OF THE EXISTING UTILITIES ARE BASED ON ASSUMED ELEVATIONS AND SIZES PROVIDED BY THE SURVEY.
8. ALL SANITARY SERVICE PIPE AND FITTINGS WILL BE SCHDULE 40.
9. ALL STORM SEWER SHALL BE PVC SCHEDULE 40 WHEN LESS THAN 8" IN DIAMETER. ALL RCP STORM SEWER SHALL BE CLASS V PIPE UNLESS OTHERWISE NOTED. ALL HDPE STORM SEWER SHALL BE DUAL WALL HIGH PERFORMANCE POLYPROPYLENE PIPE AND SHALL CONFORM TO AASHTO M330.
10. ALL WATER LINES 4" OR GREATER SHALL CONFORM TO AWWA C900 OR GRADE PE-3408 OR GRADE PE4710 PIPE AND SHALL BE RATED FOR 200 PSI. ALL WATER LINES LESS THAT 4" SHALL CONFORM TO AWWA C901 SIDR 7 (HDPE WATER LINE) OR TYPE K COPPER PIPE.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING TWO CONSECUTIVE PASSING BACTERIOLOGICAL TESTS FROM THE PROPOSED WATER SERVICE.
12. THE APPLICANT SHALL BE RESPONSIBLE FOR REPLACING ANY CONCRETE PAVEMENT WHICH IS DAMAGED OR REMOVED AS A RESULT OF THE PROPOSED WATER, SANITARY, STORM SEWER SERVICE INSTALLATION.
13. IF DEWATERING IS REQUIRED FOR THIS PROJECT, THE PUMP DISCHARGE SHALL BE TREATED PRIOR TO BEING DISCHARGED OFF-SITE OR INTO A SURFACE WATER. THE DISCHARGE SHALL BE VISUALLY CHECKED TO ENSURE THAT IT IS VISIBLY CLEAN WATER. NO DEWATERING IS EXPECTED FOR THIS SITE DUE TO SANDY SOIL CONDITIONS.
14. ALL EXISTING CASTINGS FOR SANITARY SEWER AND STORM STRUCTURES WITHIN PROPOSED WORK AREAS THAT ARE WITHIN THE CITY RIGHT OF WAY WILL BE REPLACED WITH TYPE A OR TYPE E CASTINGS AS SHOWN ON APPLICABLE CITY STD. PLATE STRT-14. ALL ADJUSTING RINGS WILL BE REPLACED WITH HDPE ADJUSTING RINGS.
15. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL PLAN FOR PAVEMENT REMOVAL, UTILITY INSTALLATION, AND REPLACEMENT AS NEEDED.
16. SANITARY SERVICE RISER PIPE SHALL BE OUTSIDE OF THE ROAD RIGHT OF WAY. RISERS SHALL BE PLACED ON THE PROPERTY LINE IF REQUIRED. SEE DETAIL SAN-001.

0' 50' 100'
SCALE: 1"=50'

REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: UTILITY
FILE NO.: 22-0030.00

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.

Signed: Christopher J. Dahn Lic. No. 58628
Date:

NOT FOR CONSTRUCTION

BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13078 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-262-9622 FAX: 763-262-9644

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

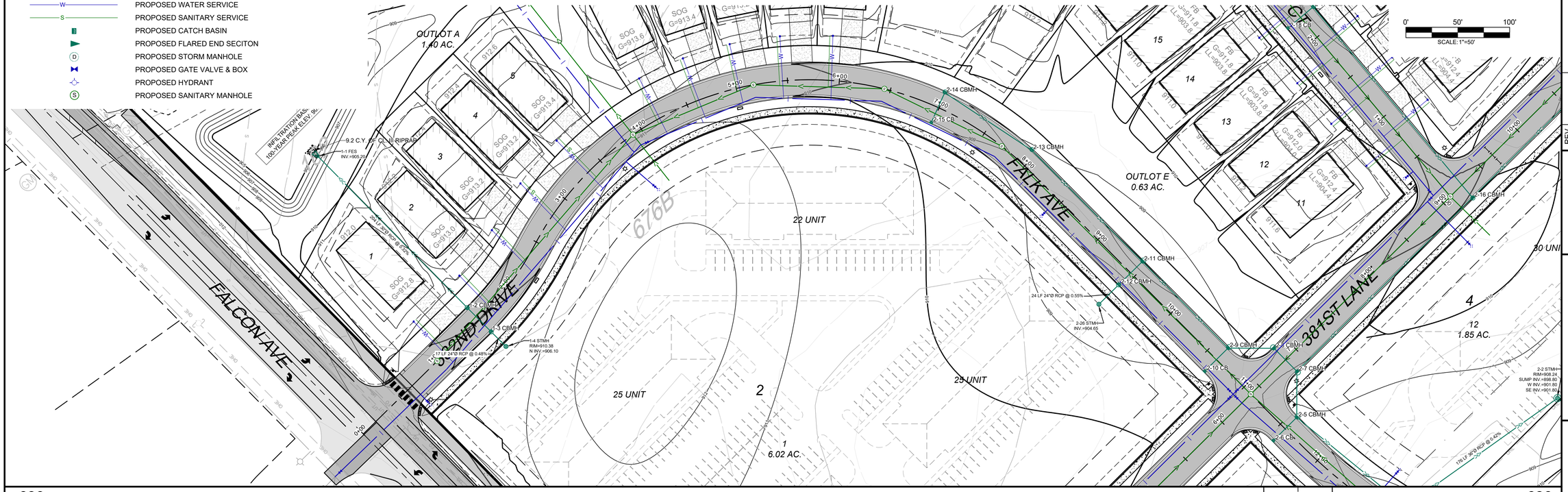
SOUTH UTILITY PLAN

SHEET NO.
C4.2

N:\Projects Current\22-0030.02 Bebber North Branch Plat\Civil\CAD Files\NB Utility.dwg
4/24/2025 3:06 PM

LEGEND:

- PROPOSED RIP RAP
- 984 — PROPOSED CONTOUR
- PROPOSED STORM SEWER
- PROPOSED WATER LINE
- PROPOSED SANITARY SEWER
- W — PROPOSED WATER SERVICE
- S — PROPOSED SANITARY SERVICE
- PROPOSED CATCH BASIN
- PROPOSED FLARED END SECITON
- D — PROPOSED STORM MANHOLE
- PROPOSED GATE VALVE & BOX
- PROPOSED HYDRANT
- S — PROPOSED SANITARY MANHOLE



0' 50' 100'
SCALE: 1"=50'

REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: GRADING
FILE NO.: 22-0030.00

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.

Signed: Christopher J. Dahn Lic. No. 58628
Date:

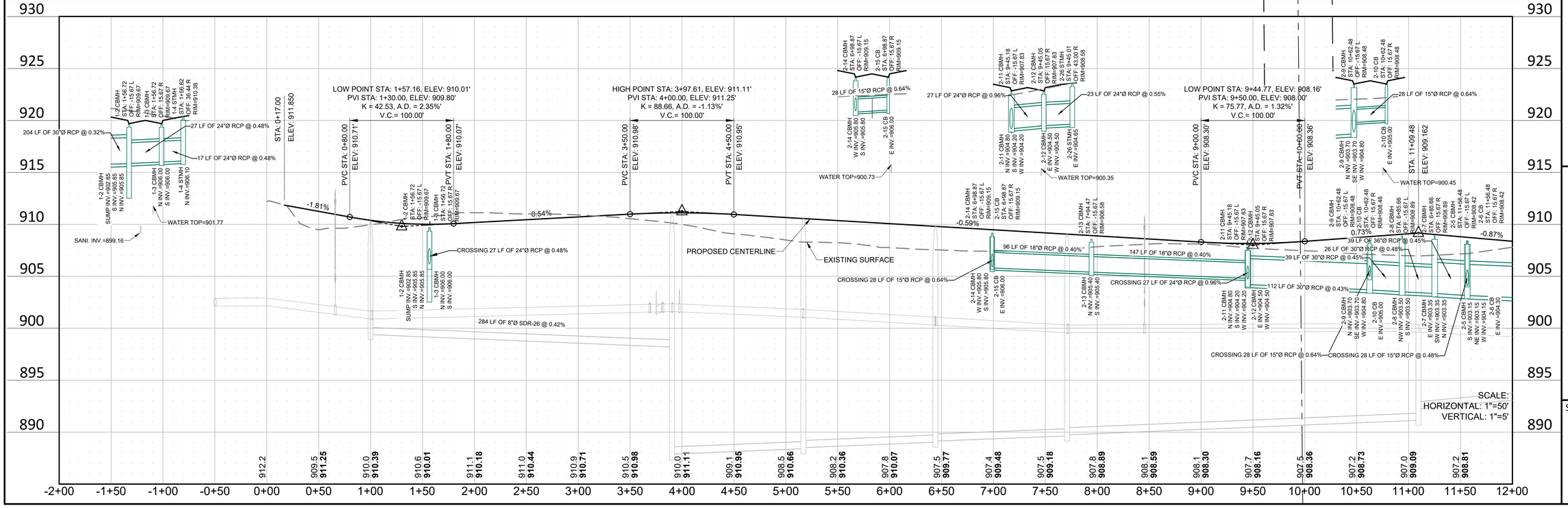
NOT FOR CONSTRUCTION

BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13076 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-262-9822 FAX: 763-262-9844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

382ND & FALK AVE (STREET & STORM)

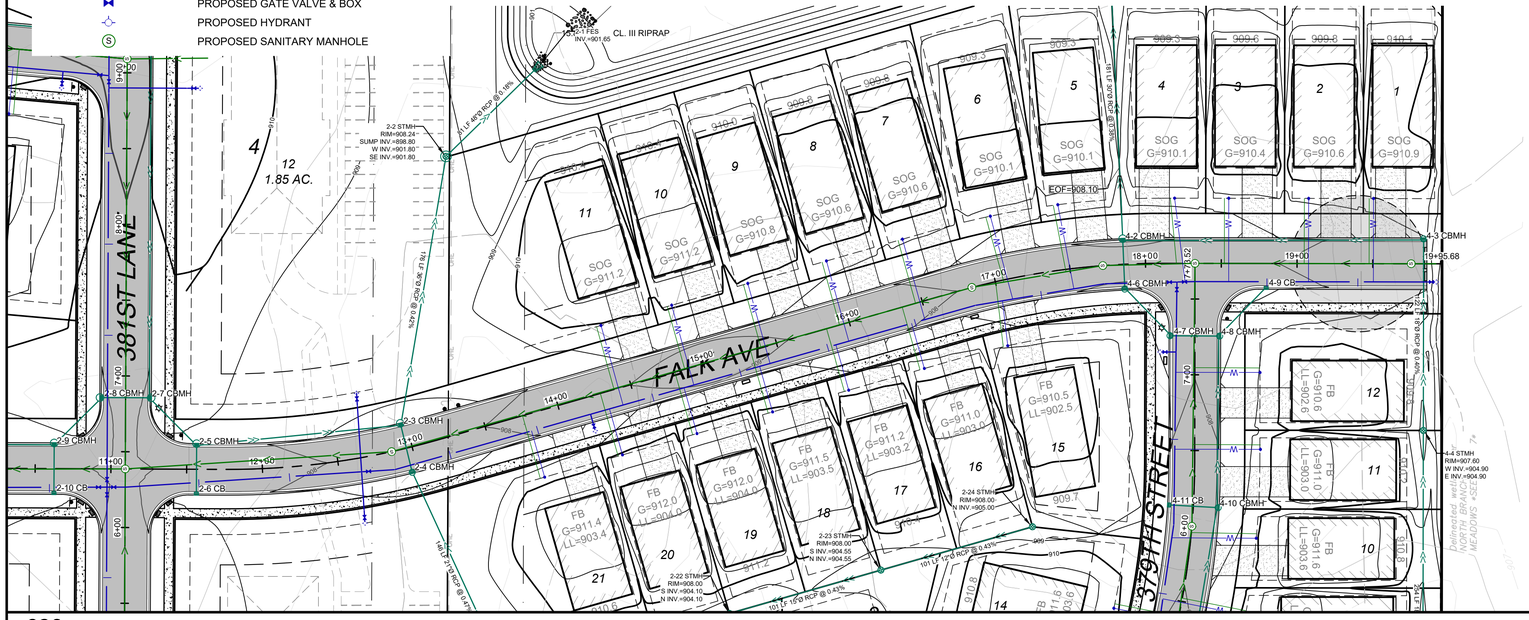
SHEET NO.
C5.1

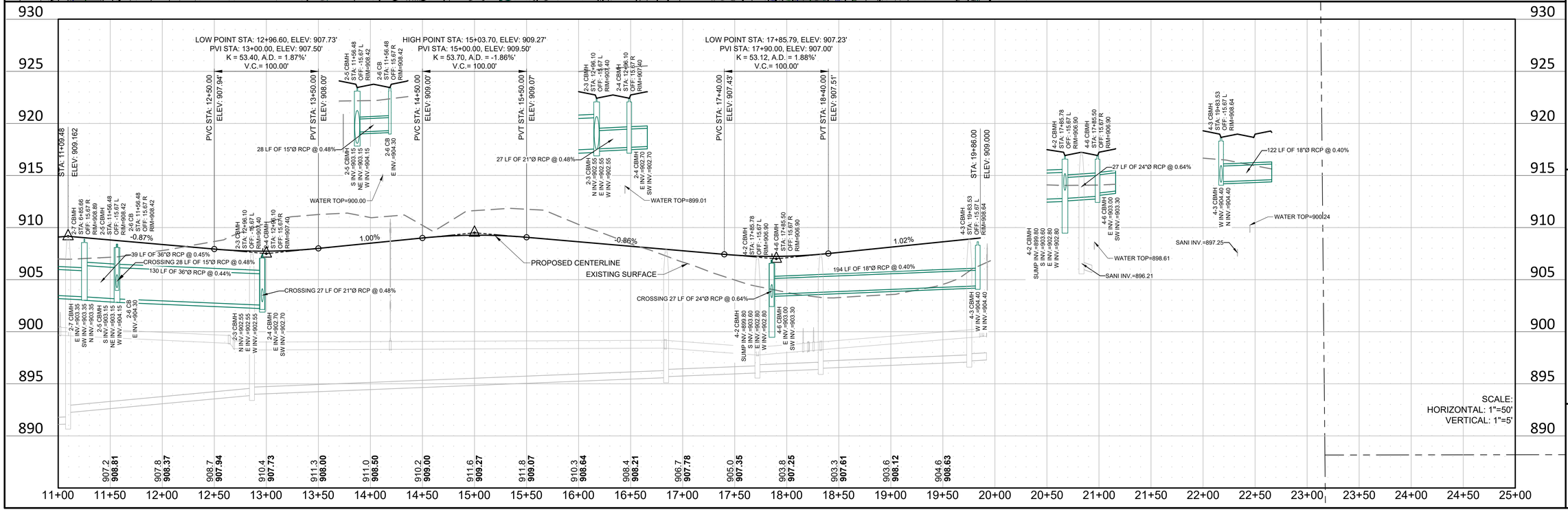


4/24/2025 3:08 PM N:\Projects Current\22-0030.02 Belden North Branch Plat\Civil\CAD Files\NB Utility.dwg

LEGEND:

- PROPOSED RIP RAP
- 984 — PROPOSED CONTOUR
- PROPOSED STORM SEWER
- PROPOSED WATER LINE
- PROPOSED SANITARY SEWER
- W — PROPOSED WATER SERVICE
- S — PROPOSED SANITARY SERVICE
- PROPOSED CATCH BASIN
- PROPOSED FLARED END SECITON
- D — PROPOSED STORM MANHOLE
- PROPOSED GATE VALVE & BOX
- PROPOSED HYDRANT
- S — PROPOSED SANITARY MANHOLE





REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: GRADING
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn
Date: Lic. No. 58628

BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13076 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-262-9822 FAX: 763-262-9844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

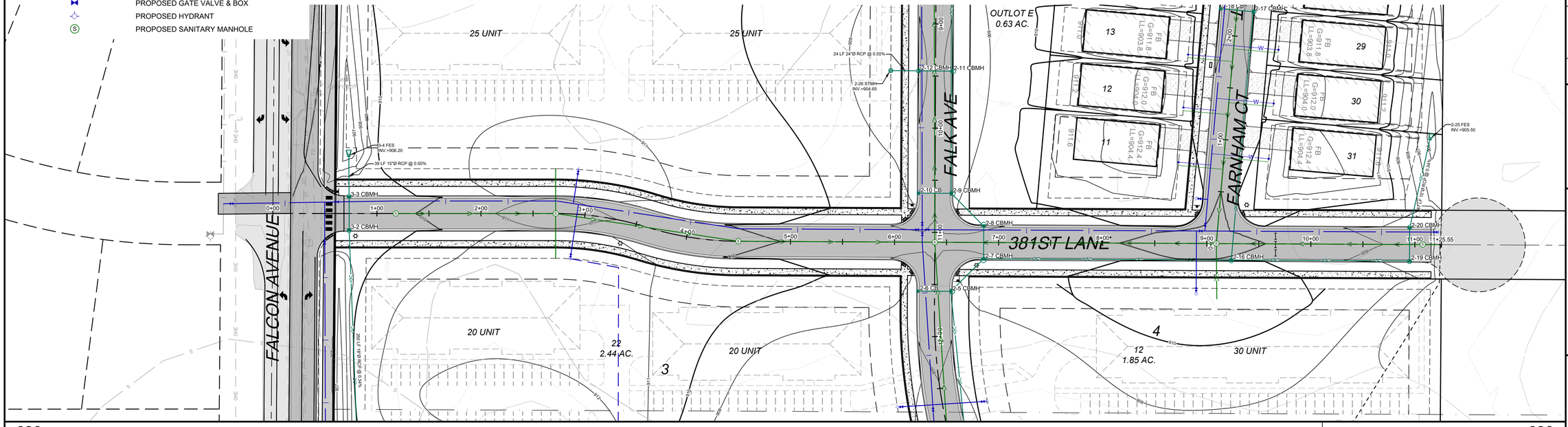
FALK AVE (STREET & STORM)

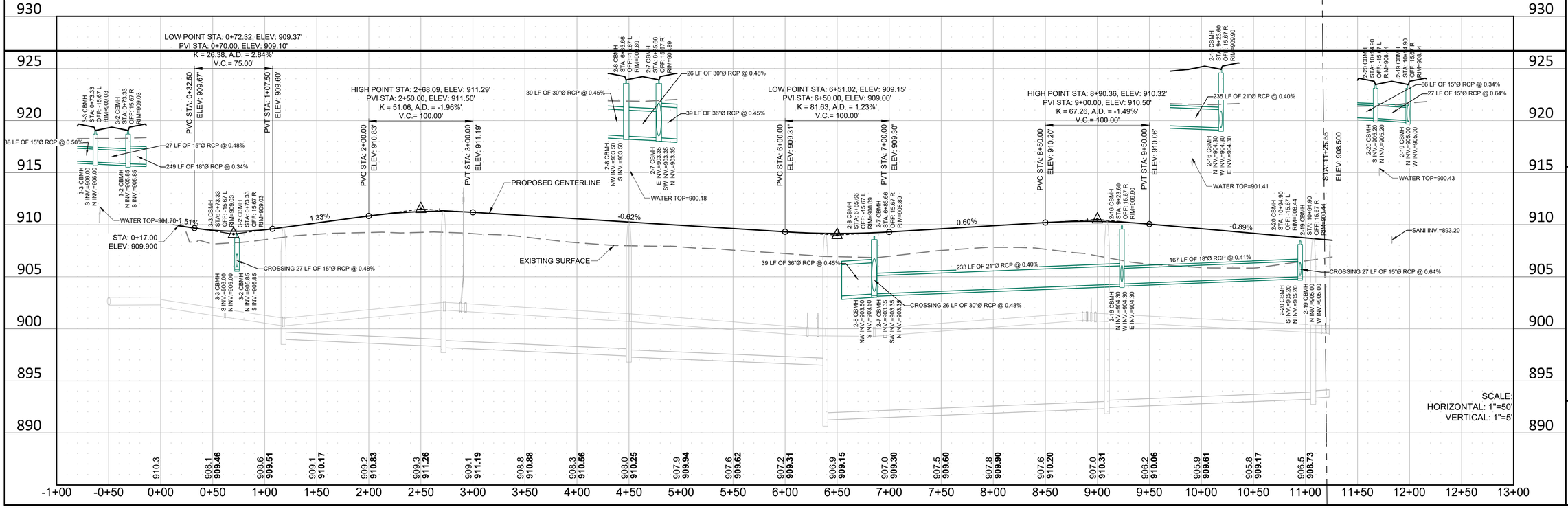
SHEET NO.
C5.2

N:\Projects Current\22-0030.02 Belden North Branch Plat\Civil\CAD Files\NB Utility.dwg
4/24/2025 3:09 PM

LEGEND:

- PROPOSED RIP RAP
- 984 PROPOSED CONTOUR
- PROPOSED STORM SEWER
- PROPOSED WATER LINE
- PROPOSED SANITARY SEWER
- W PROPOSED WATER SERVICE
- S PROPOSED SANITARY SERVICE
- PROPOSED CATCH BASIN
- PROPOSED FLARED END SECITON
- D PROPOSED STORM MANHOLE
- PROPOSED GATE VALVE & BOX
- PROPOSED HYDRANT
- S PROPOSED SANITARY MANHOLE





REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: GRADING
FILE NO.: 22-0030.00

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.

Signed: Christopher J. Dahn Lic. No. 58628

Date:

NOT FOR CONSTRUCTION

BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13076 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-262-9822 FAX: 763-262-9844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

381ST LANE (STREET & STORM)

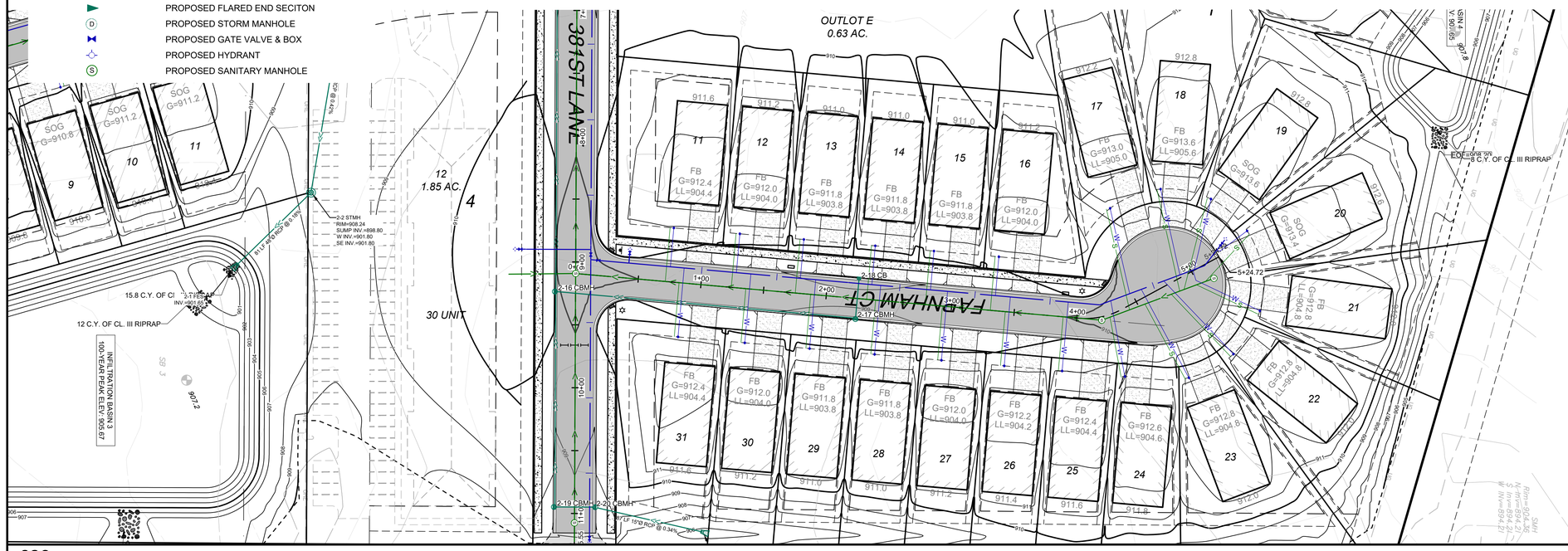
SHEET NO.
C5.3

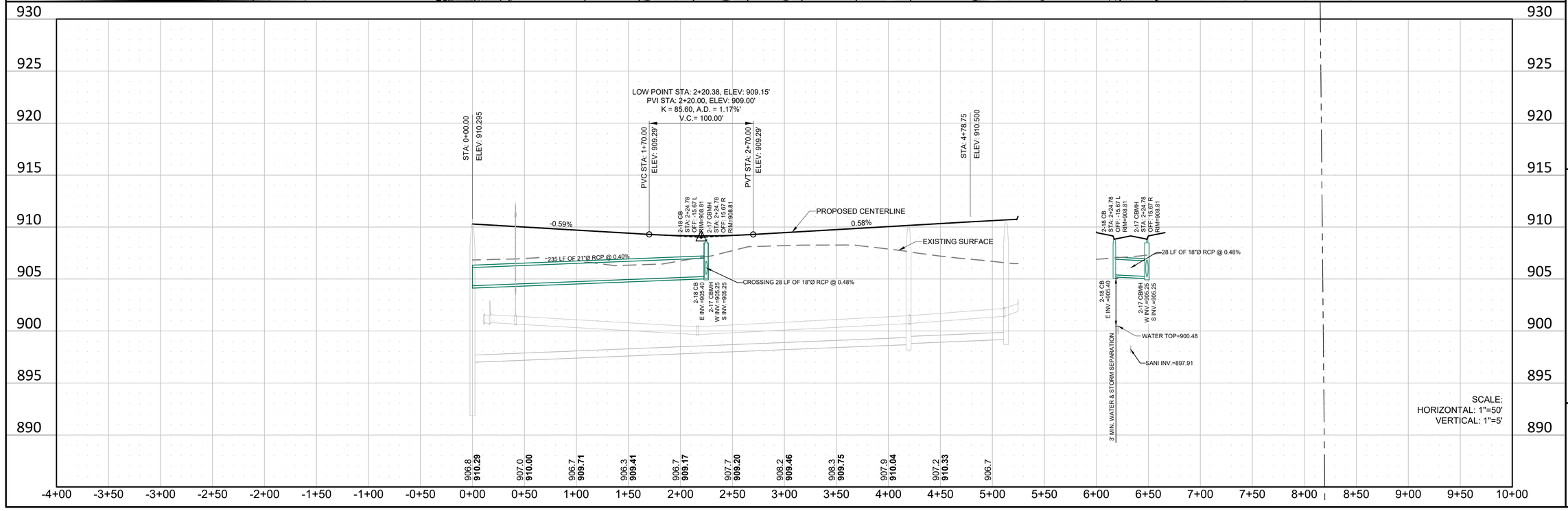
4/24/2025 3:09 PM N:\Projects Current\22-0030.02 Belden North Branch Plat\Civil\CAD Files\NB Utility.dwg

SCALE:1" =50'

LEGEND:

- PROPOSED RIP RAP
- PROPOSED CONTOUR
- PROPOSED STORM SEWER
- PROPOSED WATER LINE
- PROPOSED SANITARY SEWER
- PROPOSED WATER SERVICE
- PROPOSED SANITARY SERVICE
- PROPOSED CATCH BASIN
- PROPOSED FLARED END SECITON
- PROPOSED STORM MANHOLE
- PROPOSED GATE VALVE & BOX
- PROPOSED HYDRANT
- PROPOSED SANITARY MANHOLE





REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: GRADING
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn
Date: Lic. No. 58628

BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13076 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-262-9822 FAX: 763-262-9844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

FARNHAM CT (STREET & STORM)

SHEET NO.
C5.4

LEGEND:

- PROPOSED RIP RAP
- 984 PROPOSED CONTOUR
- PROPOSED STORM SEWER
- PROPOSED WATER LINE
- PROPOSED SANITARY SEWER
- W PROPOSED WATER SERVICE
- S PROPOSED SANITARY SERVICE
- PROPOSED CATCH BASIN
- PROPOSED FLARED END SECITON
- D PROPOSED STORM MANHOLE
- PROPOSED GATE VALVE & BOX
- PROPOSED HYDRANT
- S PROPOSED SANITARY MANHOLE



REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: GRADING
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

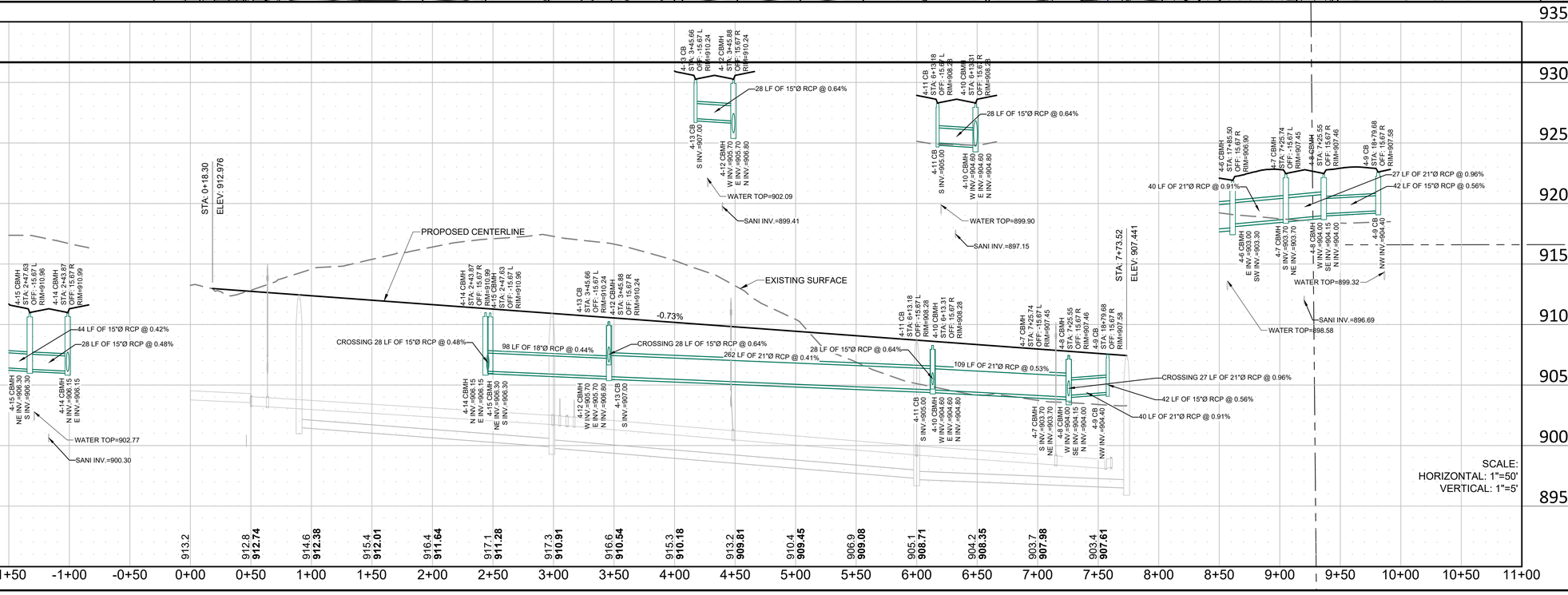
Signed: Christopher J. Dahn
Date: Lic. No. 58628

BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13076 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-262-9822 FAX: 763-262-9844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

379TH STREET (STREET & STORM)

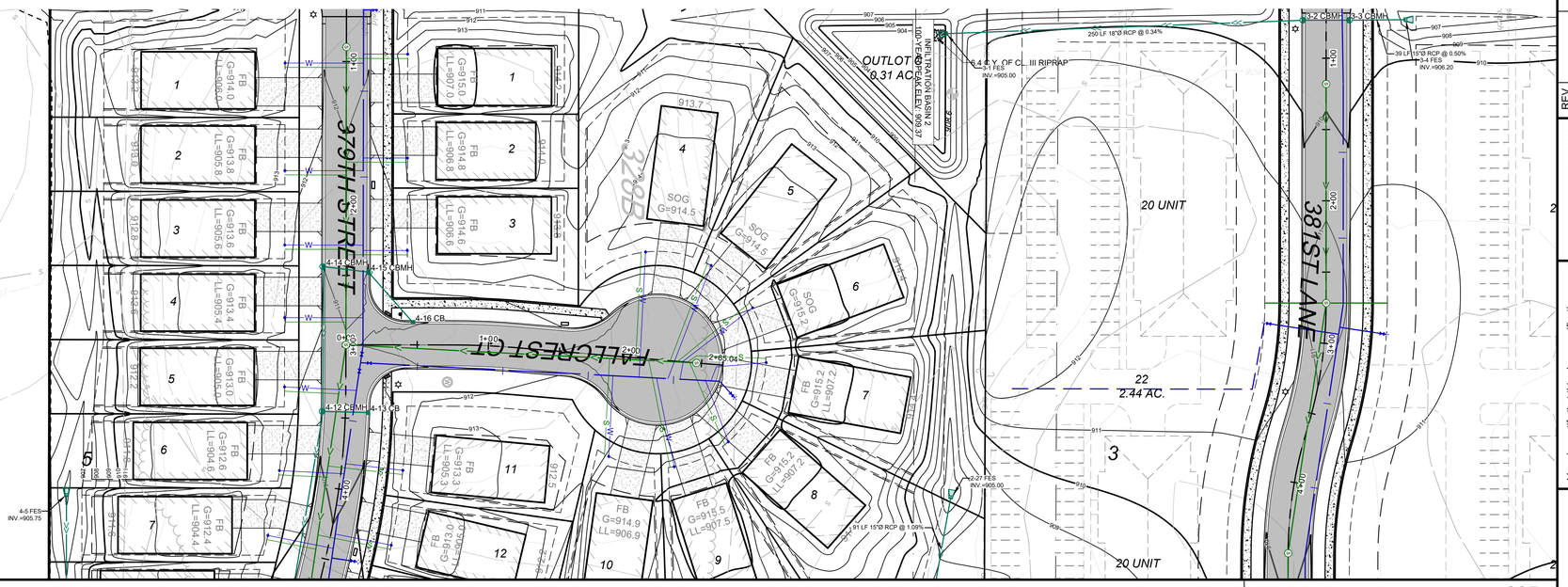
SHEET NO.
C5.5

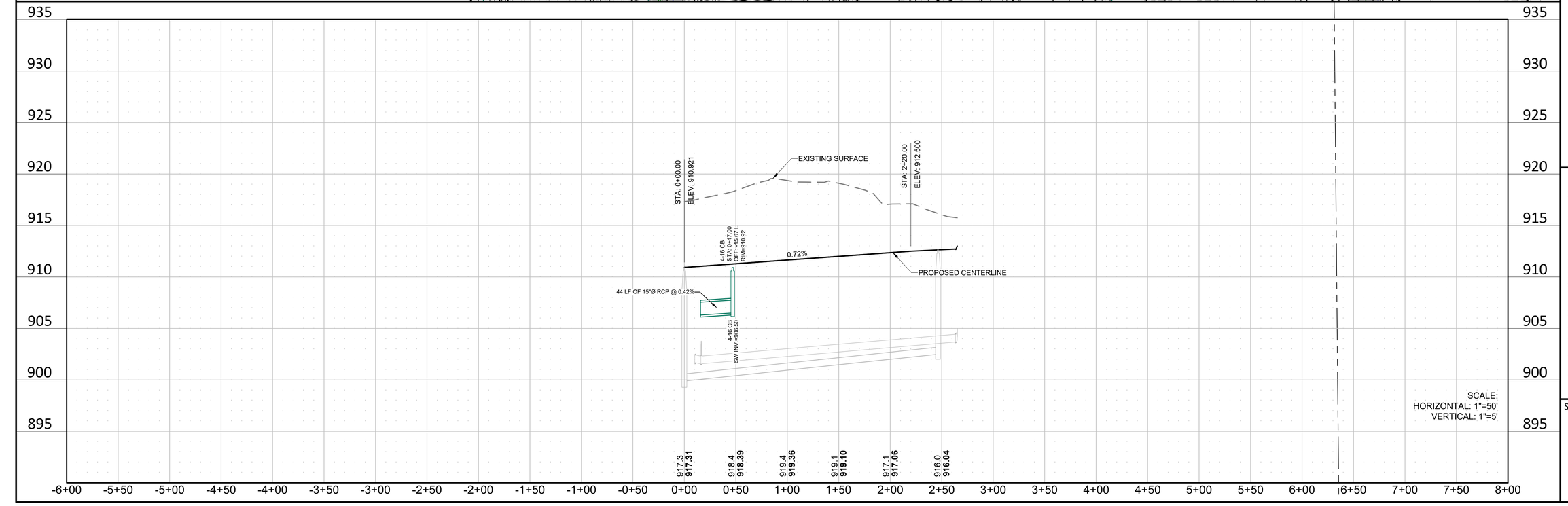


N:\Projects Current\22-0030.02 Belden North Branch Plat\Civil\CAD Files\NB Utility.dwg
4/24/2025 3:09 PM

LEGEND:

- PROPOSED RIP RAP
- PROPOSED CONTOUR
- PROPOSED STORM SEWER
- PROPOSED WATER LINE
- PROPOSED SANITARY SEWER
- PROPOSED WATER SERVICE
- PROPOSED SANITARY SERVICE
- PROPOSED CATCH BASIN
- PROPOSED FLARED END SECITON
- PROPOSED STORM MANHOLE
- PROPOSED GATE VALVE & BOX
- PROPOSED HYDRANT
- PROPOSED SANITARY MANHOLE





REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: GRADING
FILE NO.: 22-0030.00

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.

Signed: Christopher J. Dahn
Date: Lic. No. 58628

NOT FOR CONSTRUCTION

BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13076 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-262-9822 FAX: 763-262-9844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

FALLCREST CT (STREET & STORM)

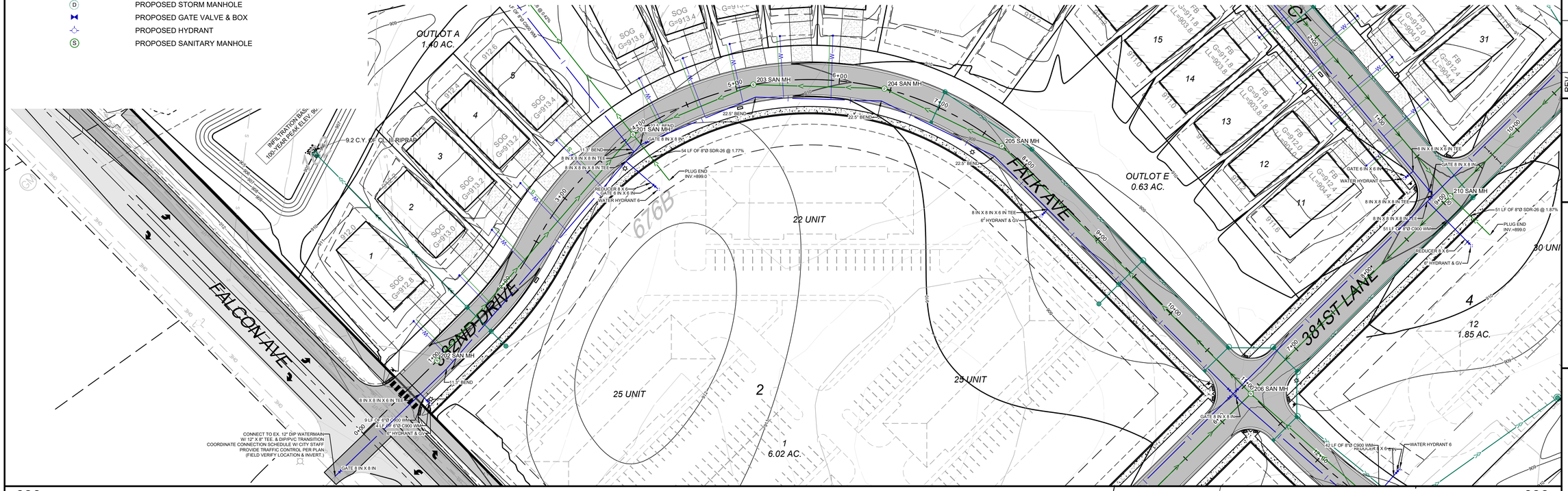
SHEET NO.
C5.6

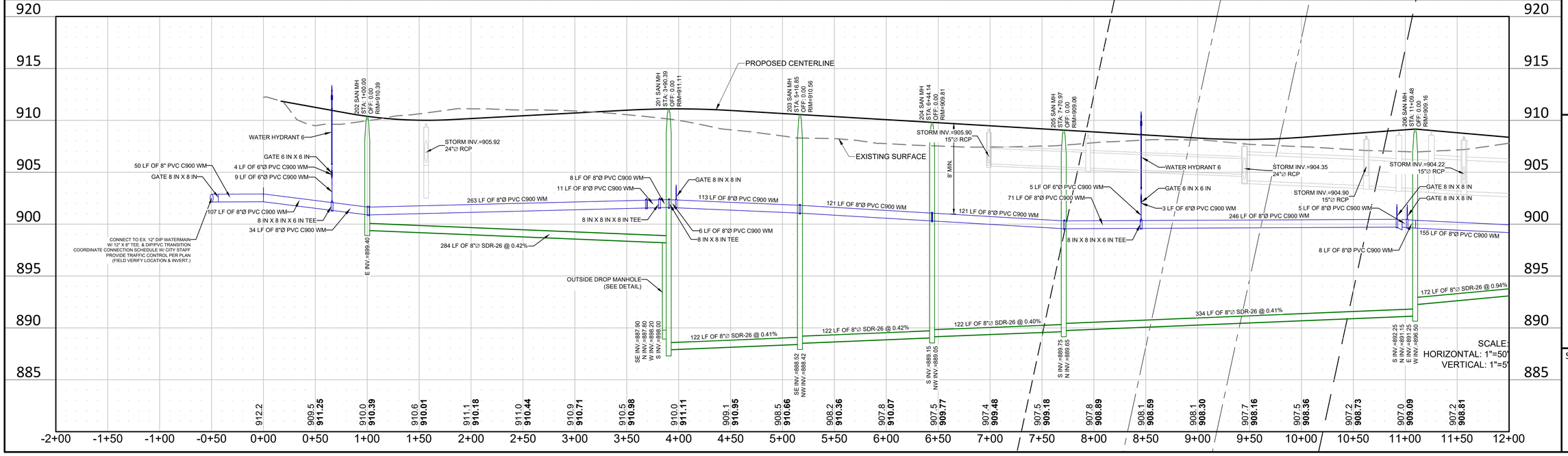
N:\Projects Current\22-0030.02 Belden North Branch Plat\Civil\CAD Files\NB Utility.dwg
4/24/2025 3:10 PM

LEGEND:

- PROPOSED RIP RAP
- 984 — PROPOSED CONTOUR
- PROPOSED STORM SEWER
- PROPOSED WATER LINE
- PROPOSED SANITARY SEWER
- W — PROPOSED WATER SERVICE
- S — PROPOSED SANITARY SERVICE
- PROPOSED CATCH BASIN
- PROPOSED FLARED END SECITON
- D — PROPOSED STORM MANHOLE
- PROPOSED GATE VALVE & BOX
- PROPOSED HYDRANT
- S — PROPOSED SANITARY MANHOLE

0' 50' 100'
SCALE: 1"=50'





REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: GRADING
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn Lic. No. 58628

Date:

BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13076 FIRST STREET BECKER, MN 55308-9322
TEL: 763-262-9822 FAX: 763-262-9844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

382ND & FALK AVE (SANI. & WATER)

SHEET NO.
C6.1

N:\Projects Current\22-0030.02 Bedder North Branch\Plat\Civil\C4D Files\NB Utility.dwg
4/24/2025 3:10 PM

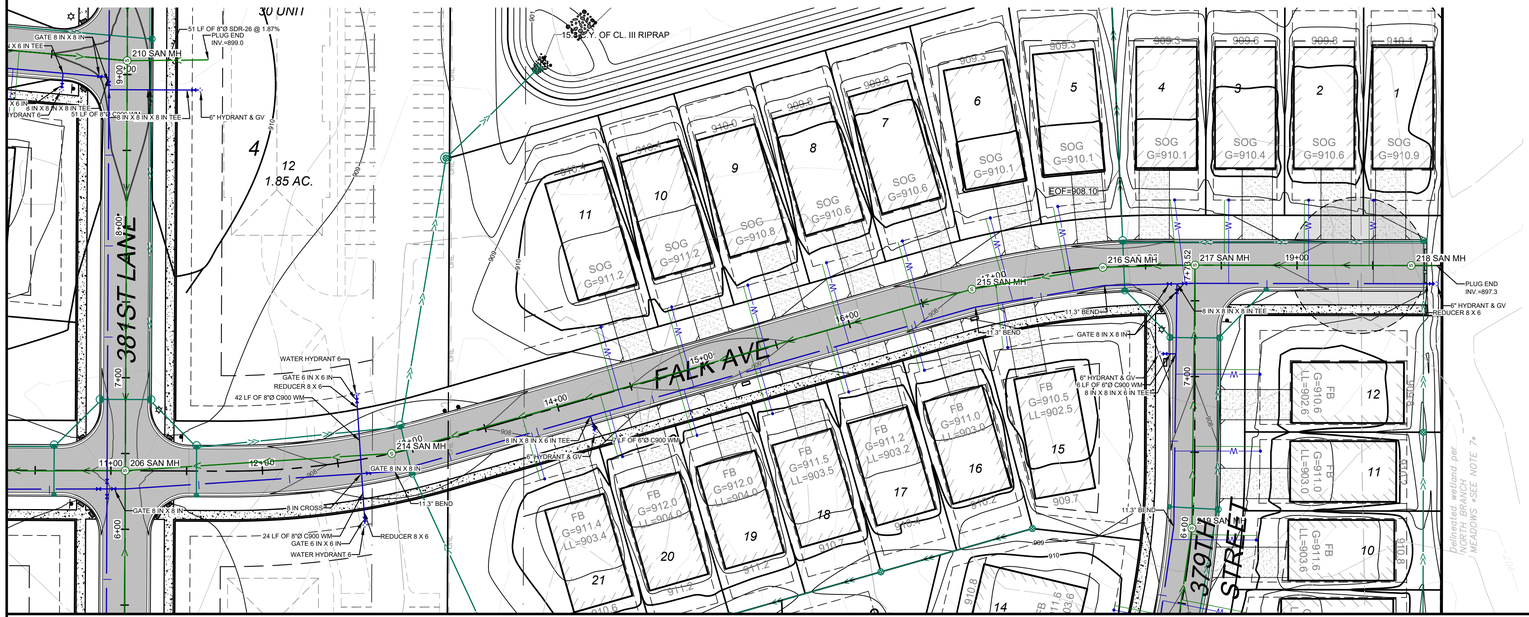
LEGEND:

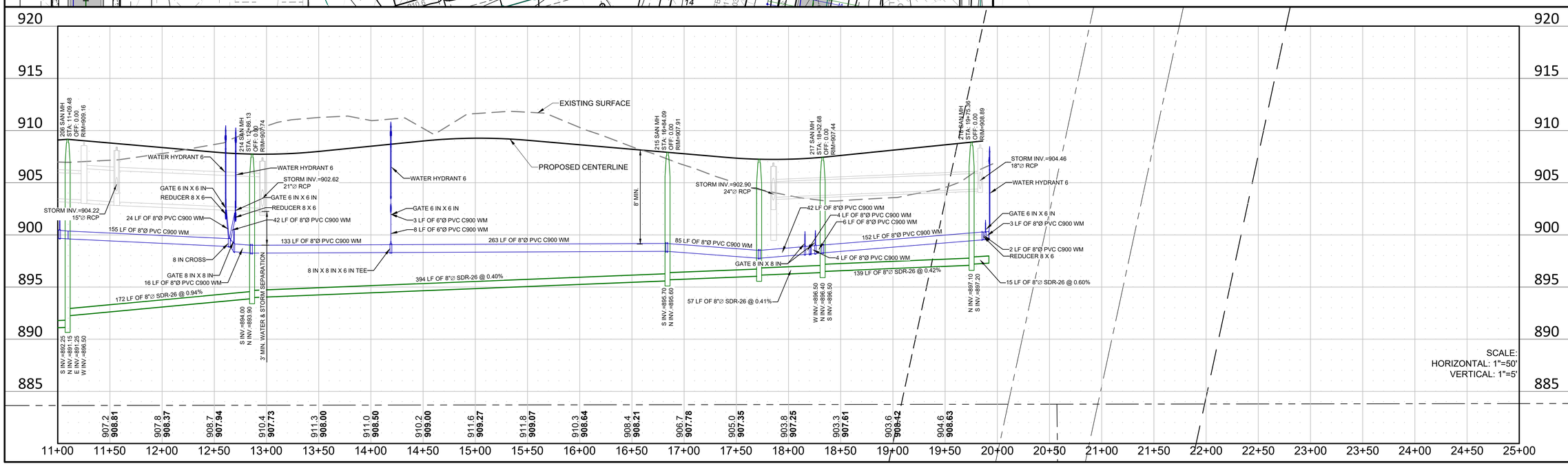
- PROPOSED RIP RAP
- 984 — PROPOSED CONTOUR
- PROPOSED STORM SEWER
- PROPOSED WATER LINE
- PROPOSED SANITARY SEWER
- W — PROPOSED WATER SERVICE
- S — PROPOSED SANITARY SERVICE
- PROPOSED CATCH BASIN
- PROPOSED FLARED END SECITON
- D — PROPOSED STORM MANHOLE
- PROPOSED GATE VALVE & BOX
- PROPOSED HYDRANT
- S — PROPOSED SANITARY MANHOLE

N

0' 50' 100'

SCALE: 1"=50'





REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: GRADING
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn Lic. No. 58628

Date:

BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13079 FIRST STREET, BECKER, MN 55308-9322
TEL: 763.262.9822 FAX: 763.262.9844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

FALK AVE (SANI. & WATER)

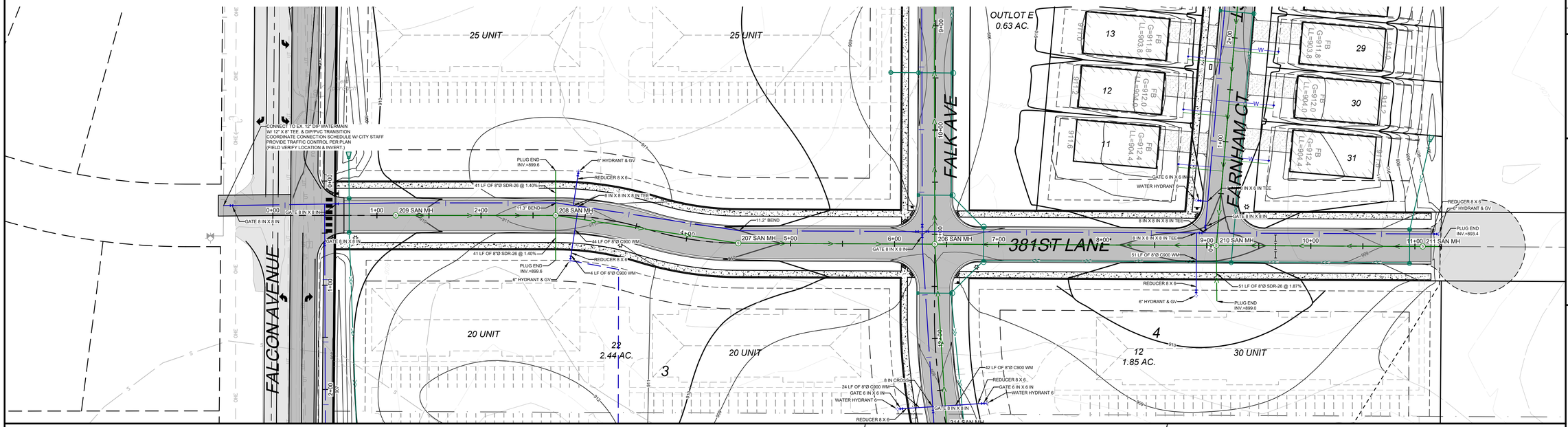
SHEET NO.
C6.2

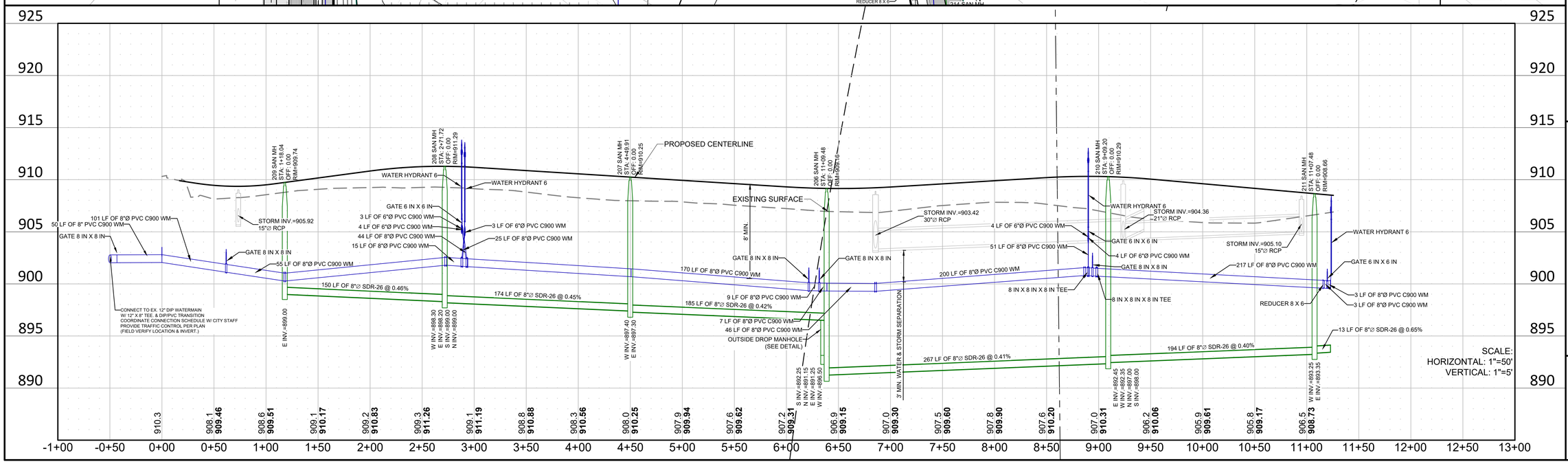
Delineated wetland per... NORTH BRANCH MEADOWS - SEE NOTE 7

N:\Projects-Current\22-0030.00 Becker North Branch\Plat\Civil\CAD Files\NB Utility.dwg
4/24/2025 3:10 PM

LEGEND:

- PROPOSED RIP RAP
- 984 — PROPOSED CONTOUR
- PROPOSED STORM SEWER
- PROPOSED WATER LINE
- PROPOSED SANITARY SEWER
- W — PROPOSED WATER SERVICE
- S — PROPOSED SANITARY SERVICE
- PROPOSED CATCH BASIN
- PROPOSED FLARED END SECITON
- D — PROPOSED STORM MANHOLE
- PROPOSED GATE VALVE & BOX
- PROPOSED HYDRANT
- S — PROPOSED SANITARY MANHOLE





REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: GRADING
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn
Date: Lic. No. 58628

BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13076 FIRST STREET BECKER, MN 55308-9322
TEL: 763-262-3822 FAX: 763-262-3844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

3815T LANE (SANI. & WATER)

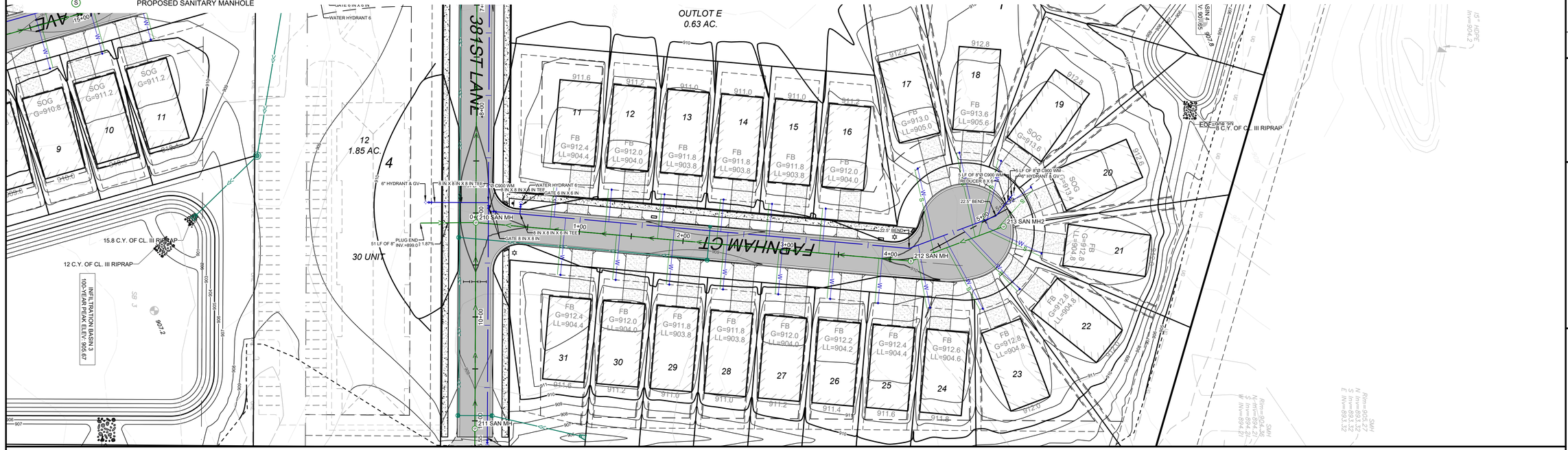
SHEET NO.
C6.3

N:\Projects\Current\22-0030.03 Bredeer North Branch\Plat\Civil\CAD Files\NB Utility.dwg
4/24/2025 3:10 PM

LEGEND:

- PROPOSED RIP RAP
- PROPOSED CONTOUR
- PROPOSED STORM SEWER
- PROPOSED WATER LINE
- PROPOSED SANITARY SEWER
- PROPOSED WATER SERVICE
- PROPOSED SANITARY SERVICE
- PROPOSED CATCH BASIN
- PROPOSED FLARED END SECITON
- PROPOSED STORM MANHOLE
- PROPOSED GATE VALVE & BOX
- PROPOSED HYDRANT
- PROPOSED SANITARY MANHOLE

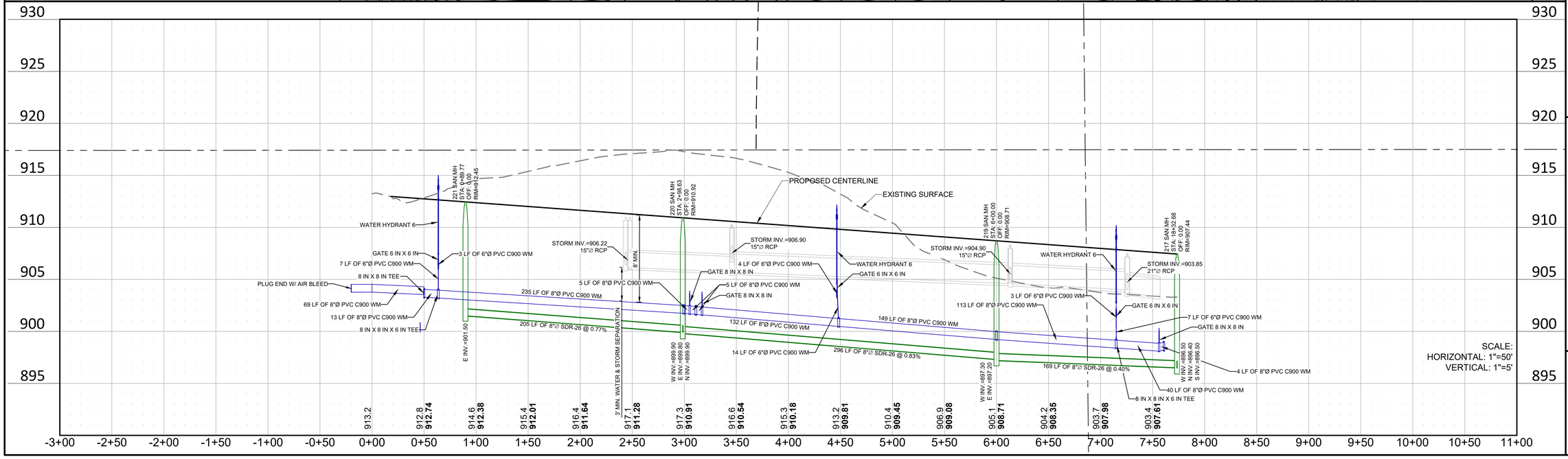
0' 50' 100'
SCALE: 1"=50'


381ST LANE
FARNHAM CT
OUTLOT E
0.63 AC.
12
1.85 AC.
4
30 UNIT
210 SAN MH
211 SAN MH
212 SAN MH
213 SAN MH2
WATER HYDRANT 6
6" HYDRANT & GV
8 IN X 8 IN X 8 IN TEE
GATE 8 IN X 8 IN
GATE 6 IN X 6 IN
8 IN X 6 IN X 6 IN TEE
PLUG END
51 LF OF 8" INV.=899.01 1.87%
5 LF OF 8"Ø C900 WM
22.5° BEND
REDUCER 8 X 6
15.8 C.Y. OF CL. III RIPRAP
12 C.Y. OF CL. III RIPRAP
8 C.Y. OF CL. III RIPRAP
INFILTRATION BASIN 3
100-YEAR PEAK ELEV. 905.67
SOG G=910.8
SOG G=911.2
SOG G=913.6
FB G=912.4 LL=904.4
FB G=912.0 LL=904.0
FB G=911.8 LL=903.8
FB G=913.0 LL=905.0
FB G=913.6 LL=905.6
FB G=912.8 LL=904.8
FB G=912.6 LL=904.6
FB G=912.2 LL=904.2
FB G=912.0 LL=904.0
FB G=911.8 LL=903.8
FB G=912.4 LL=904.4
FB G=912.8 LL=904.8
FB G=912.0 LL=904.0
FB G=911.8 LL=903.8
FB G=912.4 LL=904.4
FB G=912.6 LL=904.6
FB G=912.8 LL=904.8

LEGEND:

- PROPOSED RIP RAP
- PROPOSED CONTOUR
- PROPOSED STORM SEWER
- PROPOSED WATER LINE
- PROPOSED SANITARY SEWER
- PROPOSED WATER SERVICE
- PROPOSED SANITARY SERVICE
- PROPOSED CATCH BASIN
- PROPOSED FLARED END SECITON
- PROPOSED STORM MANHOLE
- PROPOSED GATE VALVE & BOX
- PROPOSED HYDRANT
- PROPOSED SANITARY MANHOLE





REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: GRADING
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn
Date: Lic. No. 58628

BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13078 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-262-9822 FAX: 763-262-9844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

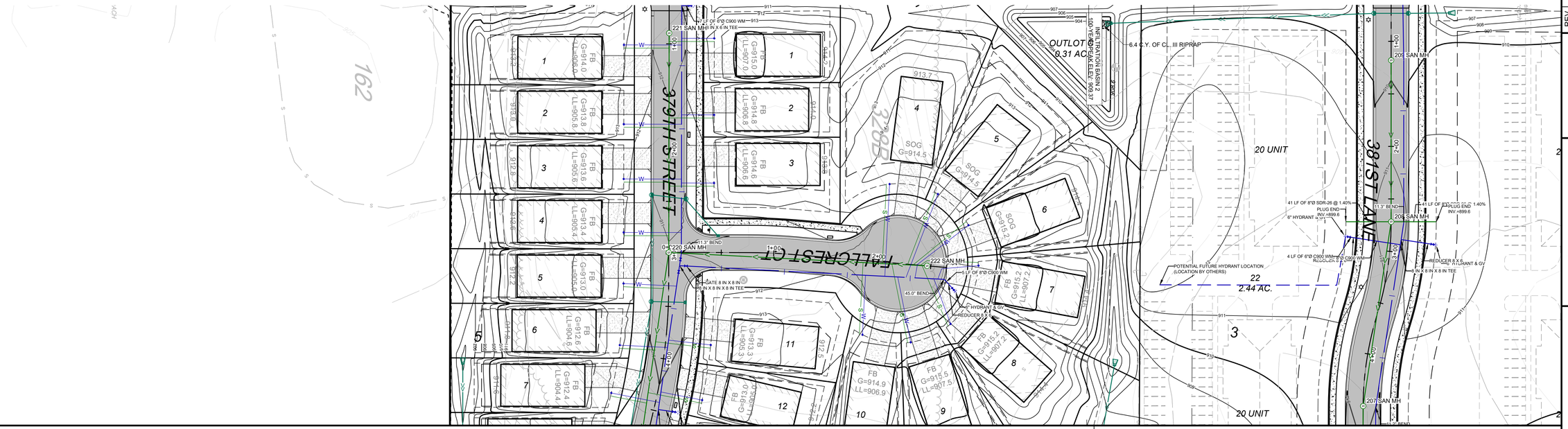
379TH STREET (SANI. & WATER)

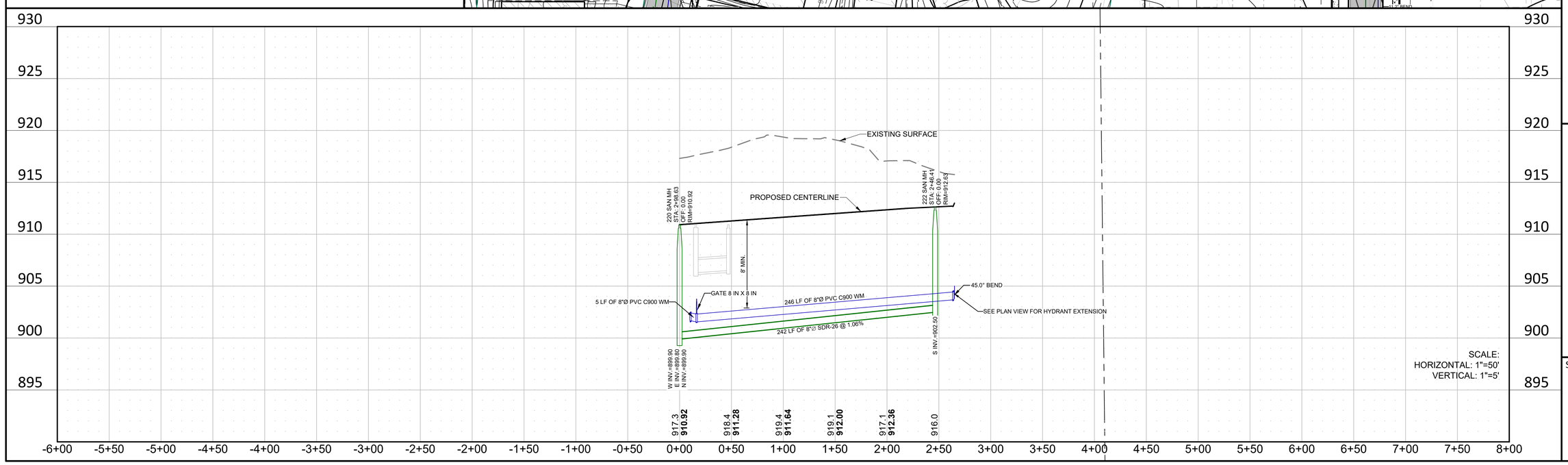
SHEET NO.
C6.5

N:\Projects Current\22-0030.02 Belzer North Branch Pine\Civil\CAD Files\NB Utility.dwg
4/24/2025 3:11 PM

LEGEND:

- PROPOSED RIP RAP
- PROPOSED CONTOUR
- PROPOSED STORM SEWER
- PROPOSED WATER LINE
- PROPOSED SANITARY SEWER
- PROPOSED WATER SERVICE
- PROPOSED SANITARY SERVICE
- PROPOSED CATCH BASIN
- PROPOSED FLARED END SECITON
- PROPOSED STORM MANHOLE
- PROPOSED GATE VALVE & BOX
- PROPOSED HYDRANT
- PROPOSED SANITARY MANHOLE





0' 50' 100'
SCALE: 1"=50'

REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: GRADING
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn
Date: Lic. No. 58628

BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13076 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-262-4822 FAX: 763-262-4844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

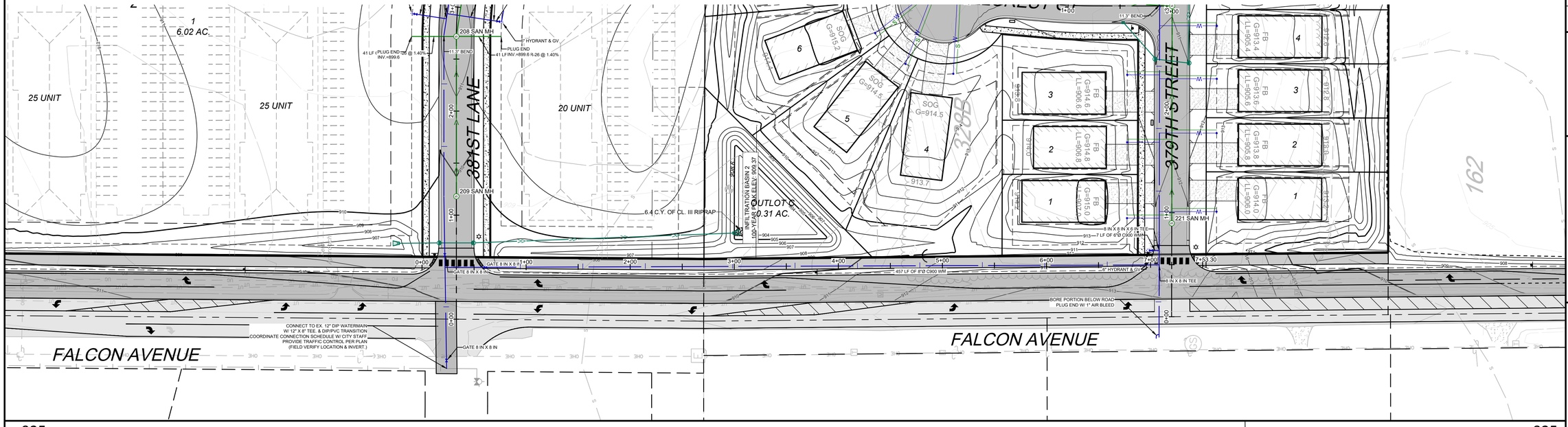
FALLCREST CT (SANI. & WATER)

SHEET NO.
C6.6

N:\Projects Current\22-0030.02 Belden North Branch Plat\Civil\CAD Files\NB Utility.dwg
4/24/2025 3:11 PM

LEGEND:

- PROPOSED RIP RAP
- 984 — PROPOSED CONTOUR
- PROPOSED STORM SEWER
- PROPOSED WATER LINE
- PROPOSED SANITARY SEWER
- W — PROPOSED WATER SERVICE
- S — PROPOSED SANITARY SERVICE
- PROPOSED CATCH BASIN
- PROPOSED FLARED END SECITON
- D — PROPOSED STORM MANHOLE
- PROPOSED GATE VALVE & BOX
- PROPOSED HYDRANT
- S — PROPOSED SANITARY MANHOLE


1
6.02 AC.
25 UNIT
25 UNIT
20 UNIT
208 SAN MH
209 SAN MH
221 SAN MH
41 LF (PLUG END INV.=899.6 @ 1.40%
11.3° BEND
PLUG END
41 LF INV.=899.6 R-26 @ 1.40%
1" HYDRANT & GV
284TH LANE
379TH STREET
OUTLOT C
0.31 AC.
INFILTRATION BASIN 2
100-YEAR HIGH WATER ELEV. 908.37
6.4 C.Y. OF CL. III RIPRAP
GATE 8 IN X 8 IN
457 LF OF 8"Ø C900 WM
6" HYDRANT & GV
8 IN X 8 IN X 8 IN TEE
7 LF OF 8"Ø C900 WM
BORE PORTION BELOW ROAD
PLUG END W/ 1" AIR BLEED
CONNECT TO EX. 12" DIP WATERMAIN W/ 12" X 8" TEE, & DIP/PVC TRANSITION
COORDINATE CONNECTION SCHEDULE W/ CITY STAFF
PROVIDE TRAFFIC CONTROL PER PLAN
(FIELD VERIFY LOCATION & INVERT.)
FALCON AVENUE
FALCON AVENUE
SOG G=915.2
SOG G=914.5
SOG G=914.5
FB G=914.6 LL=906.6
FB G=914.8 LL=906.8
FB G=915.0 LL=907.0
FB G=913.4 LL=906.4
FB G=913.6 LL=905.6
FB G=913.8 LL=905.8
FB G=914.0 LL=906.0
912.8
913.0
913.7
912.6
913.2
913.4
913.6
913.8
914.0
913.7
913.9
914.1
913.9
914.1
914.3
913.7
913.9
914.1
913.7
913.9
914.1
913.7
913.9
914.1

CEDAR RIDGE COMMUNITY SERVICE INFORMATION

Lot Design			Elevation Information		Sanitary Service							
Block	Lot	House Type	Basement	Street	Wye Sta.	Dist. From Down MH	Main Inv.	Length	Riser Height	End Inv.	Basement to End Inv.	Diam. & Mat.
1	1	SOG	912.8	382ND DRIVE	1+13.2	272	899.34	42.0	**2**	902.85	9.95	4" PVC SDR-26
1	2	SOG	913.0	382ND DRIVE	1+76.0	209	899.08	37.5	**3**	903.50	9.50	4" PVC SDR-26
1	3	SOG	913.2	382nd DRIVE	2+29.7	156	898.86	42.6	**3**	903.38	9.82	4" PVC SDR-26
1	4	SOG	913.2	382nd DRIVE	2+80.7	105	898.65	51.2	**3**	903.34	9.86	4" PVC SDR-26
1	5	SOG	913.4	382nd DRIVE	3+36.3	51	898.42	51.8	**3**	903.13	10.27	4" PVC SDR-26
1	6	SOG	913.6	382nd DRIVE	4+17.3	29	888.01	47.5	**14**	903.63	9.97	4" PVC SDR-26
1	7	SOG	913.4	382nd DRIVE	4+59.0	71	888.19	49.6	**14**	903.85	9.55	4" PVC SDR-26
1	8	SOG	913.2	382nd DRIVE	5+00.2	111	888.35	46.1	**14**	903.94	9.26	4" PVC SDR-26
1	9	SOG	912.8	382nd DRIVE	5+42.0	22	888.63	47.4	**13**	903.25	9.55	4" PVC SDR-26
1	10	SOG	912.6	382nd DRIVE	5+89.6	70	888.82	49.5	**13**	903.48	9.12	4" PVC SDR-26
1	11	FB	904.4	FARNHAM CT	0+71.5	69	897.29	43.0	0	898.82	5.58	4" PVC SDR-26
1	12	FB	904.0	FARNHAM CT	1+24.2	122	897.50	43.0	0	899.03	4.97	4" PVC SDR-26
1	13	FB	903.8	FARNHAM CT	1+75.31	172	897.71	43.0	0	899.24	4.56	4" PVC SDR-26
1	14	FB	903.8	FARNHAM CT	2+32.3	230	897.94	43.0	0	899.47	4.33	4" PVC SDR-26
1	15	FB	903.8	FARNHAM CT	2+79.1	277	898.13	43.0	0	899.66	4.14	4" PVC SDR-26
1	16	FB	904.0	FARNHAM CT	3+30.9	328	898.34	43.0	0	899.87	4.13	4" PVC SDR-26
1	17	FB	905.0	FARNHAM CT	4+42.2	21	898.90	82.1	0	901.21	3.79	4" PVC SDR-26
1	18	FB	905.6	FARNHAM CT	4+84.3	63	899.08	82.7	0	901.40	4.20	4" PVC SDR-26
1	19	SOG	913.6	FARNHAM CT	4+88.07	67	899.10	74.8	**2**	903.27	10.33	4" PVC SDR-26
1	20	SOG	913.4	FARNHAM CT	5+05.9	85	899.17	51.3	**3**	903.87	9.53	4" PVC SDR-26
1	21	FB	904.8	FARNHAM CT	4+98.5	78	899.14	54.4	0	900.90	3.90	4" PVC SDR-26
1	22	FB	904.8	FARNHAM CT	4+77.2	56	899.05	68.5	0	901.09	3.71	4" PVC SDR-26
1	23	FB	904.8	FARNHAM CT	4+55.1	34	898.96	68.0	0	900.99	3.81	4" PVC SDR-26
1	24	FB	904.6	FARNHAM CT	4+26.0	4	898.83	48.6	0	900.47	4.13	4" PVC SDR-26
1	25	FB	904.4	FARNHAM CT	3+89.1	387	898.58	43.0	0	900.11	4.29	4" PVC SDR-26
1	26	FB	904.2	FARNHAM CT	3+42.8	340	898.39	43.0	0	899.92	4.28	4" PVC SDR-26
1	27	FB	904.0	FARNHAM CT	2+92.7	290	898.19	43.0	0	899.72	4.28	4" PVC SDR-26
1	28	FB	903.8	FARNHAM CT	2+39.4	237	897.97	43.0	0	899.50	4.30	4" PVC SDR-27
1	29	FB	903.8	FARNHAM CT	1+87.5	185	897.76	43.0	0	899.29	4.51	4" PVC SDR-26
1	30	FB	904.0	FARNHAM CT	1+35.8	133	897.55	43.0	0	899.08	4.92	4" PVC SDR-26
1	31	FB	904.4	FARNHAM CT	0+82.5	80	897.33	43.0	0	898.86	5.54	4" PVC SDR-26
3	1	FB	907.0	379TH STREET	0+97.7	199	901.44	43.0	0	902.97	4.03	4" PVC SDR-26
3	2	FB	906.8	379TH STREET	1+70.5	125	900.89	43.0	0	902.42	4.38	4" PVC SDR-26
3	3	FB	906.6	379TH STREET	2+35.4	61	900.38	43.0	0	901.91	4.69	4" PVC SDR-26
3	4	SOG	914.5	FALLCREST CT	2+03.8	201	902.05	75.9	0	904.24	10.26	4" PVC SDR-26
3	5	SOG	914.5	FALLCREST CT	2+27.7	225	902.30	73.3	0	904.44	10.06	4" PVC SDR-26
3	6	SOG	915.2	FALLCREST CT	2+32.8	230	902.36	65.7	0	904.34	10.86	4" PVC SDR-26
3	7	FB	907.2	FALLCREST CT	2+39.7	237	902.46	56.8	0	904.27	2.93	4" PVC SDR-26
3	8	FB	907.2	FALLCREST CT	2+41.6	239	902.45	62.5	0	904.37	2.83	4" PVC SDR-27
3	9	FB	907.5	FALLCREST CT	2+12.9	210	902.14	76.6	0	904.34	3.16	4" PVC SDR-28
3	10	FB	906.9	FALLCREST CT	1+85.4	182	901.85	68.6	0	903.89	3.01	4" PVC SDR-29
3	11	FB	905.3	379TH STREET	3+84.8	84	899.09	52.5	0	900.81	4.49	4" PVC SDR-26
3	12	FB	905.0	379TH STREET	4+34.7	123	898.66	51.8	0	900.37	4.63	4" PVC SDR-26
3	13	FB	904.2	379TH STREET	4+85.4	183	898.25	47.7	0	899.87	4.33	4" PVC SDR-26
3	14	FB	903.6	379TH STREET	5+39.8	237	897.80	43.0	0	899.33	4.27	4" PVC SDR-26
3	15	FB	902.5	FALK AVE	17+00	13	895.76	42.0	0	897.27	5.23	4" PVC SDR-26
3	16	FB	903.0	FALK AVE	16+36.3	348	895.41	43.0	0	896.94	6.06	4" PVC SDR-27
3	17	FB	903.2	FALK AVE	15+84.3	296	895.20	43.0	0	896.73	6.47	4" PVC SDR-28
3	18	FB	903.5	FALK AVE	15+32.1	244	894.99	43.3	0	896.53	6.97	4" PVC SDR-29
3	19	FB	904.0	FALK AVE	14+80.2	191	894.78	43.4	0	896.32	7.68	4" PVC SDR-30
3	20	FB	904.0	FALK AVE	14+29.1	141	894.58	43.5	0	896.12	7.88	4" PVC SDR-31
3	21	FB	903.4	FALK AVE	13+75.6	87	894.36	43.7	0	895.90	7.50	4" PVC SDR-32
4	1	SOG	910.9	FALK AVE	19+47.5	112	896.98	43.0	**3**	901.51	9.39	4" PVC SDR-33
4	2	SOG	910.6	FALK AVE	19+04.7	68	896.80	43.0	**3**	901.33	9.27	4" PVC SDR-34
4	3	SOG	910.4	FALK AVE	18+52.0	16	896.58	43.0	**3**	901.11	9.29	4" PVC SDR-35
4	4	SOG	910.1	FALK AVE	18+20.5	46	896.35	43.5	**3**	900.89	9.21	4" PVC SDR-36
4	5	SOG	910.1	FALK AVE	17+47.3	60	895.95	44.5	**3**	900.51	9.59	4" PVC SDR-37
4	6	SOG	910.1	FALK AVE	17+05.5	416	895.79	44.5	**3**	900.35	9.75	4" PVC SDR-38
4	7	SOG	910.6	FALK AVE	16+45.4	356	895.44	43.1	**4**	900.97	9.63	4" PVC SDR-39
4	8	SOG	910.6	FALK AVE	15+93.2	303	895.24	43.0	**4**	900.77	9.83	4" PVC SDR-40
4	9	SOG	910.8	FALK AVE	15+39.3	250	895.02	42.7	**5**	901.54	9.26	4" PVC SDR-41
4	10	SOG	911.2	FALK AVE	14+87.0	198	894.81	42.6	**5**	901.33	9.87	4" PVC SDR-42
4	11	SOG	911.2	FALK AVE	14+38.5	150	894.61	42.5	**6**	902.13	9.07	4" PVC SDR-43
5	1	FB	906.0	379TH STREET	1+04.0	192	901.39	43.0	0	902.92	3.08	4" PVC SDR-44
5	2	FB	905.8	379TH STREET	1+79.5	117	900.81	43.0	0	902.34	3.46	4" PVC SDR-45
5	3	FB	905.6	379th STREET	2+31.7	64	900.42	43.0	0	901.95	3.65	4" PVC SDR-46
5	4	FB	905.4	379th STREET	2+82.6	14	900.02	43.0	0	901.55	3.85	4" PVC SDR-47
5	5	FB	905.0	379th STREET	3+33.1	263	899.51	38.0	0	900.94	4.06	4" PVC SDR-48
5	6	FB	904.6	379th STREET	3+92.8	203	899.03	34.2	0	900.38	4.22	4" PVC SDR-49
5	7	FB	904.4	379th STREET	4+44.8	153	898.59	34.2	0	899.94	4.46	4" PVC SDR-50
5	8	FB	904.2	379th STREET	4+97.1	100	898.15	38.8	0	899.60	4.60	4" PVC SDR-51
5	9	FB	904.0	379th STREET	5+52.2	45	897.69	43.0	0	899.22	4.78	4" PVC SDR-52
5	10	FB	903.6	379th STREET	5+95.5	2	897.34	43.1	0	898.87	4.73	4" PVC SDR-53
5	11	FB	903.0	379th STREET	6+53.9	116	896.98	44.6	0	898.54	4.46	4" PVC SDR-54
5	12	FB	902.6	379th STREET	7+04.7	66	896.78	43.7	0	898.32	4.28	4" PVC SDR-55

REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: DETAILS
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn
Date: Lic. No. 58628

BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13978 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-262-9622 FAX: 763-262-9644

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

SERVICE INFORMATION

SHEET NO.
C6.8

4/24/2025 3:12 PM N:\Projects Current\22-0030.02 Belzer North Branch Pine\Civil\CAD Files\NB Cover\SW\PPP.dwg

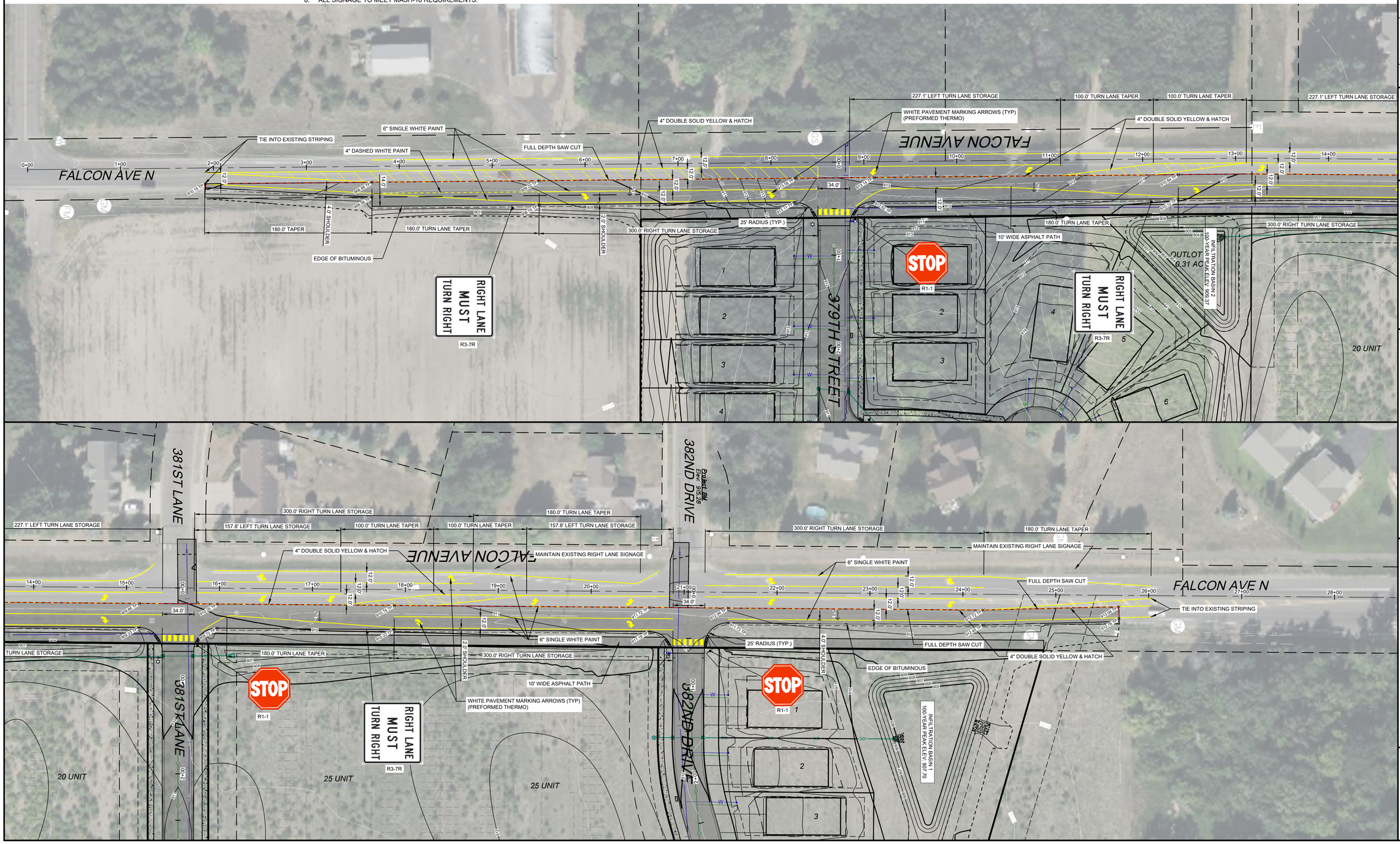
LEGEND:

- SAWCUT LOCATION (FULL DEPTH)
- TURN ARROW (TYPICAL)
- STRAIGHT ARROW (TYPICAL)
- PERMANENT SIGNAGE
- 980.50 TP — NEW TOP OF PAVEMENT ELEVATION

TURN LANE NOTES:

1. THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS IN THE FIELD REPRESENTED WITHIN THE PLANS AS SHOWN AND ALERT THE ENGINEER BEFORE BIDDING THE PROJECT AND BEGINNING CONSTRUCTION.
2. CONTRACTOR SHALL LOCATE AND VERIFY ALL UTILITIES WHICH MAY AFFECT THIS WORK AND NOTIFY THE OWNER OF ANY CHANGES. CONTACT LOCAL UTILITY COMPANIES FOR EXACT LOCATIONS PRIOR TO BIDDING THE PROJECT AND COMMENCING WORK.
3. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT SILT AND DEBRIS RUN-OFF DURING GRADING OPERATIONS (I.E. SILT FENCE, STRAW BALES, ETC.).
4. CONTRACTOR SHALL VERIFY CRITICAL ELEVATIONS TO ENSURE CONFORMANCE WITH GRADING PLAN, PARTICULARLY WITH EXISTING STRUCTURES AND/OR PAVEMENTS TO REMAIN. MEET EXISTING GRADES ALONG STREETS, PROPERTY LINES, AND DRIVEWAY ENTRANCES. RESTORE ALL PAVEMENTS THAT REMAIN TO THEIR ORIGINAL IF NOT BETTER CONDITION. NOTIFY OWNER OF ANY CONFLICTS PRIOR TO BIDDING THE PROJECT.
5. LONGITUDINAL PAVEMENT MARKINGS SHALL BE LATEX PAINT. THE TURN ARROWS SHALL BE PREFORMED THERMO.
6. EXISTING CONFLICTING PAVEMENT MARKINGS WILL NEED TO BE REMOVED BEFORE FINAL PERMANENT STRIPING IS PLACED.
7. DURING CONSTRUCTION, CONFLICTING PAVEMENT MARKINGS WILL NEED TO BE COVERED WITH BLACK REMOVABLE LANE TAPE OR WATER BLASTED AND THEN HAVE PAVEMENT MARKINGS INSTALLED FOR TEMPORARY CENTERLINE DURING CONSTRUCTION.
8. ALL SIGNAGE TO MEET MASH-16 REQUIREMENTS.

0' 50' 100'
SCALE: 1"=50'



REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: EROSION
FILE NO.: 22-0030.00

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.

Signed: Christopher J. Dahn
Date: Lic. No. 58628

NOT FOR CONSTRUCTION

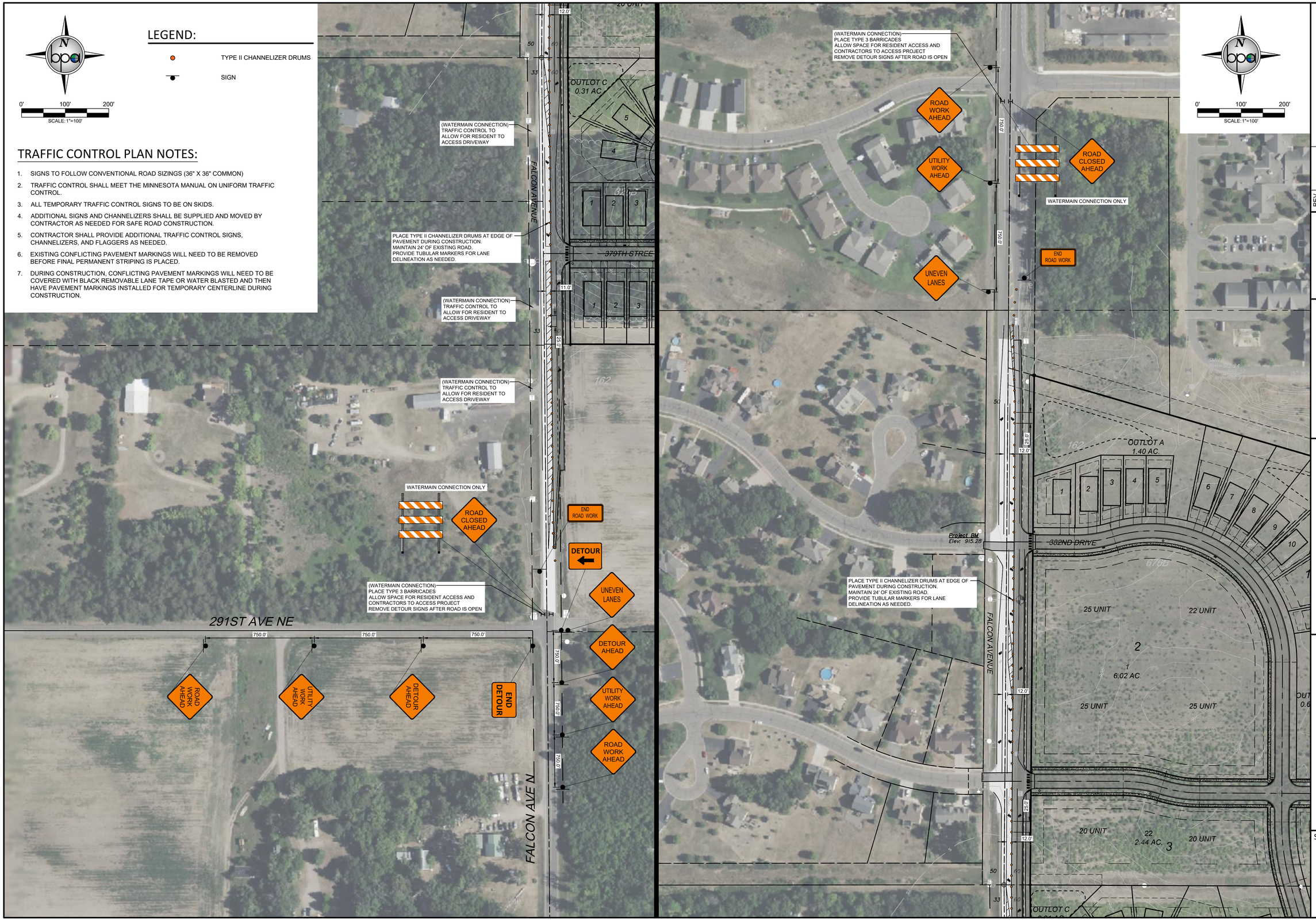
BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13079 FIRST STREET | BECKER, MN 55308-9322
TEL 763-262-9032 | FAX 763-262-9044

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

TURN LANE PLAN

SHEET NO.
C7.1

N:\Projects Current\22-0030.02 Becker North Branch Plat\Civil\CAD Files\NB Turn Lane.dwg
4/24/2025 3:13 PM



REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: SITE BASE
FILE NO.: 22-0030.00

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.

Signed: Christopher J. Dahn Lic. No. 58628

Date:

NOT FOR CONSTRUCTION

BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13079 FIRST STREET | BECKER, MN 55308-9322
TEL: 763.262.9022 | FAX: 763.262.9044

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

TRAFFIC CONTROL PLAN (TURN LANE)

SHEET NO.
C7.2

4/24/2025 3:13 PM N:\Projects Current\22-0030.02 Becker North Branch Plat\Civil\CAD Files\NB Traffic Control.dwg

REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: SITE BASE
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn
Date: Lic. No. 58628

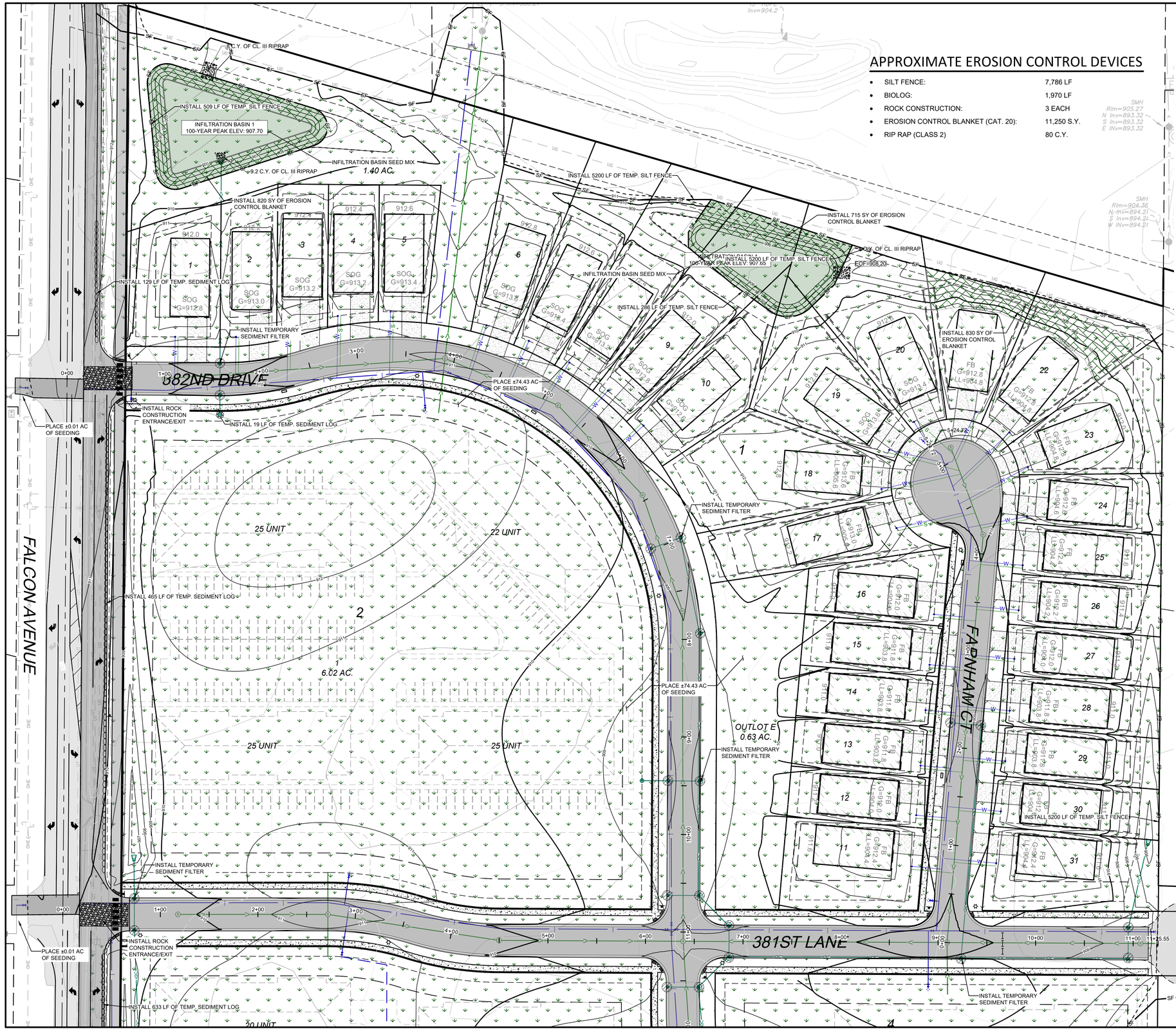
BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13079 FIRST STREET | BECKER, MN 55308-9322
TEL: 763.262.9082 | FAX: 763.262.9084

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

TRAFFIC CONTROL PLAN (DETOUR)

SHEET NO.
C7.3

4/24/2025 3:13 PM N:\Projects Current\22-0030.02 Becker North Branch Plat\Civil\CAD Files\NB Traffic Control.dwg



APPROXIMATE EROSION CONTROL DEVICES

• SILT FENCE:	7,786 LF
• BIOLOG:	1,970 LF
• ROCK CONSTRUCTION:	3 EACH
• EROSION CONTROL BLANKET (CAT. 20):	11,250 S.Y.
• RIP RAP (CLASS 2)	80 C.Y.

0' 50' 100'
SCALE: 1"=50'

LEGEND:

- TEMPORARY ROCK CONSTRUCTION ENTRANCE
- EROSION CONTROL BLANKET (CAT. 20)
- SF — GRADING LIMITS AND PROPOSED TEMPORARY SILT FENCE
- FIBER-LOG ROLLS
- PROPOSED RIP RAP
- 984 — PROPOSED CONTOUR
- E.O.F. — EMERGENCY OVERFLOW
- TEMPORARY SEDIMENT FILTER- HIGH FLOW

EROSION CONTROL NOTES:

1. CONTRACTOR SHALL CONFINE CONSTRUCTION OPERATIONS TO THE CONSTRUCTION/GRADING LIMITS SHOWN.
2. ALL WORK SHALL CONFORM TO THE MINNESOTA POLLUTION CONTROL AGENCY'S STORM WATER PERMIT REQUIREMENTS. CONTRACTOR SHALL OBTAIN ALL PERMITS AND COMPLY WITH ALL PERMIT REQUIREMENTS.
3. THE SITE SOIL EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE INSTALLED PRIOR TO ANY DEMOLITION OR GRADING OPERATIONS AND MAINTAINED TO CONFORM WITH THE STANDARDS SPECIFIED BY THE PERMIT.
4. CONTRACTOR SHALL INSPECT TEMPORARY EROSION CONTROL MEASURES ON THE ENTIRE SITE AT LEAST EVERY 7 DAYS AND WITHIN 24 HOURS OF ANY MEASURABLE RAINSTORM. DAMAGED SILT FENCE OR OTHER EROSION CONTROL DEVICES OR PRACTICES SHALL BE REPAIRED IMMEDIATELY. INSPECTION AND MAINTENANCE OF DEVICES SHALL CONTINUE UNTIL THE SITE HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO THE MPCA.
5. ALL GRADING OPERATIONS SHALL BE CONDUCTED IN A MANNER TO MINIMIZE THE POTENTIAL FOR SITE EROSION.
6. THE SITE SOIL EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE INSTALLED AND MAINTAINED TO CONFORM WITH THE STANDARDS SPECIFIED BY THE CITY OF NORTH BRANCH AND THE MPCA.
7. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE DISTURBANCE OF ANY AREAS AND MAINTAINED UNTIL ALL TRIBUTARY DISTURBED AREAS ARE RESTORED.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL EROSION CONTROL MEASURES, INCLUDING SILT FENCE AND BALES, UPON ESTABLISHMENT OF PERMANENT VEGETATION IN SAID AREAS.
9. ALL SOILS TRACKED ONTO PAVEMENT OR ANY OTHER OFF-SITE AREA SHALL BE REMOVED DAILY.
10. THE SITE SEDIMENT CONTROL FACILITIES FOR THE PROJECT MUST BE INSTALLED PRIOR TO ANY GRADING OPERATION.
11. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED AND VEGETATED AS SOON AS POSSIBLE. ANY FINISHED AREAS SHALL BE SEEDED AND MULCHED WITHIN 7 DAYS AFTER FINISHED GRADING IS COMPLETED IN ACCORDANCE TO MN/DOT 2575.
12. ALL DISTURBED AREAS SHALL BE REVEGETATED WITH MN/DOT SEED MIX, MULCHED, FERTILIZED & DISK ANCHORED, PER THE FOLLOWING SCHEDULE:

STANDARD SEED MIX 25-131:	220 LB/AC.
INFILTRATION BASIN SEED MIX 33-261:	35 LB/AC.
FERTILIZER 22-5-10:	350 LB/AC.
MULCH TYPE 3:	2 TONS/AC.

13. CONTRACTOR SHALL INSTALL TEMPORARY SEDIMENT BMP'S SHOWN AND NOT SHOWN ON PLANS DURING PHASING ON PROJECT TO COMPLY WITH MPCA, CITY INSPECTOR AND DEVELOPER REQUEST.

REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: EROSION
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn Lic. No. 58628
Date:

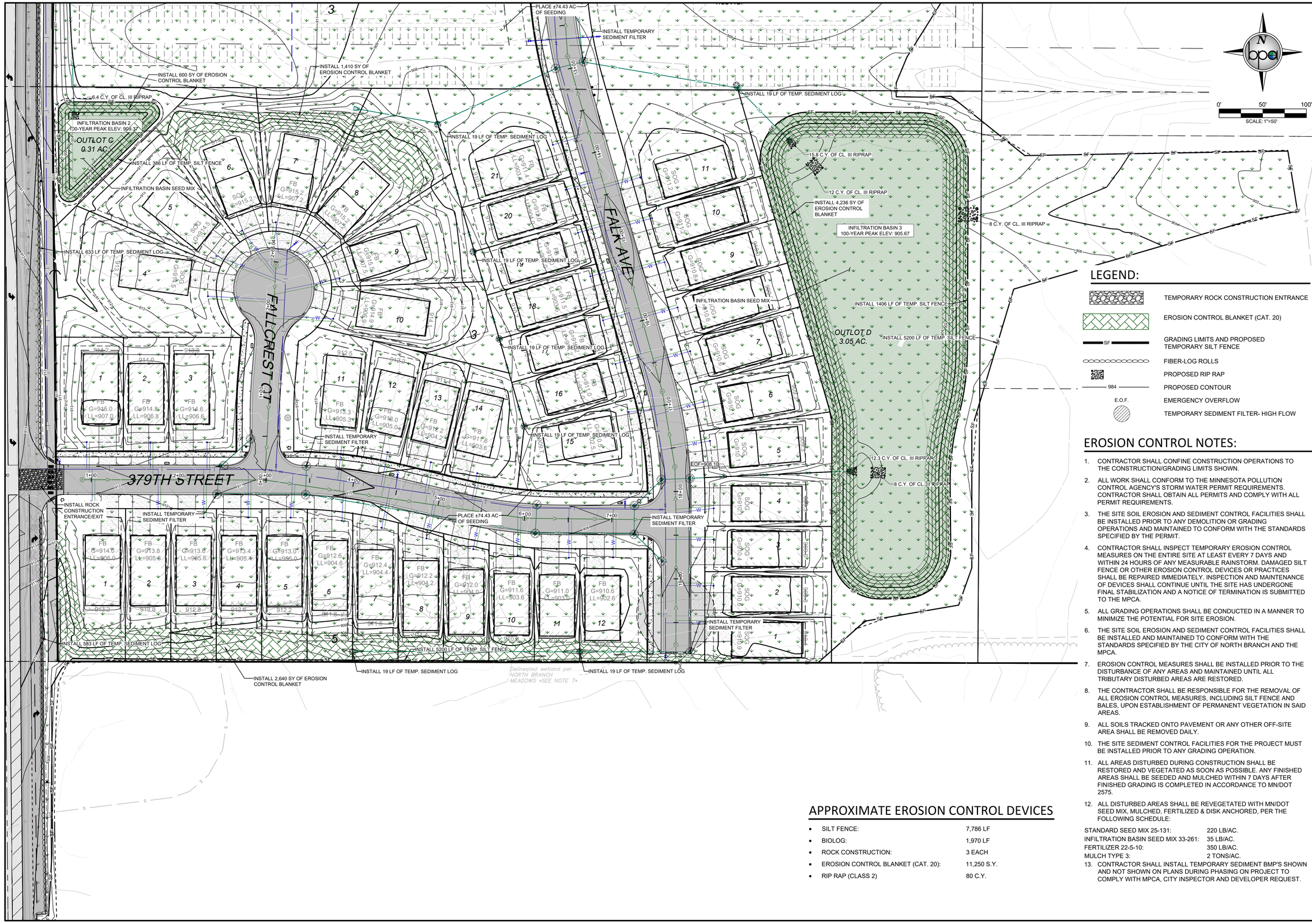
BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13076 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-262-9822 FAX: 763-262-9844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

NORTH EROSION CONTROL PLAN

SHEET NO.
C8.1

4/24/2025 3:13 PM N:\Projects Current\22-0030.02 Bettner North Branch Plat\Civil\CAD Files\NB Erosion Control.dwg



LEGEND:

- TEMPORARY ROCK CONSTRUCTION ENTRANCE
- EROSION CONTROL BLANKET (CAT. 20)
- SF — GRADING LIMITS AND PROPOSED TEMPORARY SILT FENCE
- FIBER-LOG ROLLS
- PROPOSED RIP RAP
- 984 — PROPOSED CONTOUR
- E.O.F. — EMERGENCY OVERFLOW
- TEMPORARY SEDIMENT FILTER- HIGH FLOW

EROSION CONTROL NOTES:

1. CONTRACTOR SHALL CONFINE CONSTRUCTION OPERATIONS TO THE CONSTRUCTION/GRADING LIMITS SHOWN.
2. ALL WORK SHALL CONFORM TO THE MINNESOTA POLLUTION CONTROL AGENCY'S STORM WATER PERMIT REQUIREMENTS. CONTRACTOR SHALL OBTAIN ALL PERMITS AND COMPLY WITH ALL PERMIT REQUIREMENTS.
3. THE SITE SOIL EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE INSTALLED PRIOR TO ANY DEMOLITION OR GRADING OPERATIONS AND MAINTAINED TO CONFORM WITH THE STANDARDS SPECIFIED BY THE PERMIT.
4. CONTRACTOR SHALL INSPECT TEMPORARY EROSION CONTROL MEASURES ON THE ENTIRE SITE AT LEAST EVERY 7 DAYS AND WITHIN 24 HOURS OF ANY MEASURABLE RAINSTORM. DAMAGED SILT FENCE OR OTHER EROSION CONTROL DEVICES OR PRACTICES SHALL BE REPAIRED IMMEDIATELY. INSPECTION AND MAINTENANCE OF DEVICES SHALL CONTINUE UNTIL THE SITE HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO THE MPCA.
5. ALL GRADING OPERATIONS SHALL BE CONDUCTED IN A MANNER TO MINIMIZE THE POTENTIAL FOR SITE EROSION.
6. THE SITE SOIL EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE INSTALLED AND MAINTAINED TO CONFORM WITH THE STANDARDS SPECIFIED BY THE CITY OF NORTH BRANCH AND THE MPCA.
7. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE DISTURBANCE OF ANY AREAS AND MAINTAINED UNTIL ALL TRIBUTARY DISTURBED AREAS ARE RESTORED.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL EROSION CONTROL MEASURES, INCLUDING SILT FENCE AND BALES, UPON ESTABLISHMENT OF PERMANENT VEGETATION IN SAID AREAS.
9. ALL SOILS TRACKED ONTO PAVEMENT OR ANY OTHER OFF-SITE AREA SHALL BE REMOVED DAILY.
10. THE SITE SEDIMENT CONTROL FACILITIES FOR THE PROJECT MUST BE INSTALLED PRIOR TO ANY GRADING OPERATION.
11. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED AND VEGETATED AS SOON AS POSSIBLE. ANY FINISHED AREAS SHALL BE SEEDED AND MULCHED WITHIN 7 DAYS AFTER FINISHED GRADING IS COMPLETED IN ACCORDANCE TO MN/DOT 2575.
12. ALL DISTURBED AREAS SHALL BE REVEGETATED WITH MN/DOT SEED MIX, MULCHED, FERTILIZED & DISK ANCHORED, PER THE FOLLOWING SCHEDULE:

STANDARD SEED MIX 25-131:	220 LB/AC.
INFILTRATION BASIN SEED MIX 33-261:	35 LB/AC.
FERTILIZER 22-5-10:	350 LB/AC.
MULCH TYPE 3:	2 TONS/AC.

13. CONTRACTOR SHALL INSTALL TEMPORARY SEDIMENT BMP'S SHOWN AND NOT SHOWN ON PLANS DURING PHASING ON PROJECT TO COMPLY WITH MPCA, CITY INSPECTOR AND DEVELOPER REQUEST.

APPROXIMATE EROSION CONTROL DEVICES

• SILT FENCE:	7,786 LF
• BIOLOG:	1,970 LF
• ROCK CONSTRUCTION:	3 EACH
• EROSION CONTROL BLANKET (CAT. 20):	11,250 S.Y.
• RIP RAP (CLASS 2)	80 C.Y.

REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: EROSION
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn Lic. No. 58628
Date:

BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13076 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-262-4822 FAX: 763-262-4844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

SOUTH EROSION CONTROL PLAN

SHEET NO.
C8.2

4/24/2025 3:14 PM N:\Projects Current\22-0030.02 Belden North Branch\Plat\Civil\CAD Files\NB Erosion Control.dwg

STORM WATER POLLUTION PREVENTION PLAN NARRATIVE:

GENERAL INFORMATION

THIS STORMWATER POLLUTION PREVENTION PLAN IS PREPARED IN ACCORDANCE TO THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT NO. MN R1000001 FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY.
PROJECT NAME: CEDAR RIDGE COMMUNITY
LOCATION: FALCON AVE N, NORTH BRANCH MN. 55056
CHISAGO COUNTY
LAT/LONG: 45.501044, -93.000047

DESCRIPTION OF CONSTRUCTION ACTIVITY:

DEVELOPMENT CONSISTS OF PAVING, GRADING, UTILITY INSTALLATION, AND TURF ESTABLISHMENT.

PROJECT CONTACTS

CEDAR RIDGE COMMUNITY LLC AND THE CONTRACTOR ARE RESPONSIBLE FOR IMPLEMENTATION OF THE SWPPP AND THE INSTALLATION, INSPECTION, AND MAINTENANCE OF THE EROSION PREVENTION AND SEDIMENT CONTROL BMP'S BEFORE AND DURING CONSTRUCTION.

SWPPP PREPARATION:
SWPPP PREPARER: MICHAEL MORDAL-HUEBSCH
-BOGART, PEDERSON & ASSOCIATES
TRAINING: ENGINEER AND SWPPP DESIGNER (EXP 2023)
ADDRESS: 13076 FIRST STREET
BECKER, MN 53308-9322
TELEPHONE: 763-262-8822
EMAIL; CDAHN@BOGART-PEDERSON,COM
OWNER:
OWNER CONTACT: JASON BETZLER
ADDRESS: 12222 313TH AVE, PRINCETON, MN 55371
TELEPHONE: (763)-360-1453
EMAIL; MILLELACSWALLEYE@LIVE.COM

CONTRACTOR (TO BE FILLED OUT BY THE CONTRACTOR):
BUSINESS NAME _____
OWNER NAME _____
MAILING ADDRESS _____
CITY _____
TELEPHONE _____
EMAIL _____
CONTACT NAME _____
MAILING ADDRESS _____
CITY _____
TELEPHONE _____
EMAIL _____

ESTIMATED DATES OF CONSTRUCTION:

START DATE ___/___/___ (TO BE FILLED IN BY CONTRACTOR)
COMPLETION DATE ___/___/___ (TO BE FILLED IN BY CONTRACTOR)

PERMANENT STORMWATER DESIGN CALCULATIONS:

SEE THE STORM WATER MANAGEMENT REPORT FOR MORE INFORMATION. CONTACT BOGART, PEDERSON & ASSOCIATES FOR REPORT. PROPOSED FLOW RATE IS LIMITED THROUGH DIRECTING STORM WATER TO FOUR INFILTRATION BASINS.
SOIL GROUP: A

DESCRIPTION OF EROSION CONTROL ACTIVITY:

EROSION CONTROL CONSISTS OF SILT FENCE PERIMETER CONTROL, TURF ESTABLISHMENT THROUGH SEEDING AND EROSION CONTROL BLANKET, AND ROCK CONSTRUCTION ENTRANCE PLACEMENT.

CUMULATIVE IMPERVIOUS SURFACES:

AREA OF DISTURBANCE:	42.6	ACRES
PRE-CONSTRUCTION IMPERVIOUS AREA:	1.49	ACRES
POST CONSTRUCTION IMPERVIOUS AREA:	14.32	ACRES
NEW IMPERVIOUS AREA:	12.83	ACRES

RECEIVING WATERS:

STORM WATER FROM THIS SITE WILL BE DISCHARGED TO THE FOUR INFILTRATION BASINS ON SITE.

PLANS AND SPECIFICATIONS

THE PLAN SHEETS OF THIS PLAN SET INDICATE THE FOLLOWING ITEMS:
- THE PROJECT LOCATION AND CONSTRUCTION LIMITS.
- LOCATIONS OF IMPERVIOUS SURFACES.
- LOCATIONS OF AREAS NOT TO BE DISTURBED (E.G., BUFFER ZONES, WETLANDS, ETC.).
- STEEP SLOPE LOCATIONS.
- LOCATIONS OF ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL BMP'S TO BE INSTALLED ON THE PROJECT.
- THE DETAIL SHEETS INDICATE EROSION AND SEDIMENT CONTROL BMPS TO BE INSTALLED ON THE PROJECT.
- IF DEWATERING IS REQUIRED FOR THIS PROJECT, THE PUMP DISCHARGE SHALL BE TREATED PRIOR TO BEING DISCHARGED OFF-SITE OR INTO A SURFACE WATER. THE DISCHARGE SHALL BE VISUALLY CHECKED TO ENSURE THAT IT IS VISIBLY CLEAN WATER.

TEMPORARY SEDIMENT CONTROL PRACTICES

DOWN GRADIENT SILT FENCE AND SEDIMENT LOG INSTALLATIONS ARE TO BE INPLACE PRIOR TO THE COMMENCEMENT OF ANY EARTHWORK OPERATIONS.

TOPSOIL IS TO BE WINDROWED ALONG THE CONSTRUCTION LIMITS AND PLACED AS SLOPE DRESSING IMMEDIATELY FOLLOWING COMPLETION OF THE GRADING OPERATIONS, AS THE GRADING OPERATIONS PROCEED.

TOPSOIL PLACEMENT ALONG THE EMBANKMENT SLOPES THOUGH THE WETLANDS AREA IS TO BE SPREAD BY A LOW IMPACT CRAWLER TRACTOR OPERATING UP AND DOWN THE SLOPES SO AS TO PROVIDE TRACK PRINTS PARALLEL WITH THE CONTOURS.

INSTALLATION OF MN/DOT CATEGORY 3 EROSION CONTROL BLANKET ALONG THE EMBANKMENT SLOPES ADJACENT THE WETLANDS AREA.

ALL TEMPORARY SOILS STOCKPILES WILL REQUIRE AN EFFECTIVE MEANS OF SEDIMENT CONTROL SUCH AS AN EROSION CONTROL BLANKET COVERING OR SILT FENCE INSTALLATION ALONG THE TOE OF SLOPE.

ALL COMPLETED SWALES SLOPES AND BOTTOMS NOT DRAINING TOWARDS WETLAND AREAS ARE TO BE STABILIZED WITHIN 7 DAYS.

TEMPORARY STABILIZATION WILL BE REQUIRED IN AREAS WHERE GRADING OPERATIONS ARE SUSPENDED OR CEASED FOR A PERIOD OF 7 DAYS OR GREATER.

A ROCK CONSTRUCTION ENTRANCE FOR SEDIMENT CONTROL IS TO BE PROVIDED AT THE PROJECT ENTRANCE ON FALCON AVE N.

STREET SWEEPING OF THE PAVED SURFACES WILL BE REQUIRED AS DIRECTED BY THE ENGINEER.

TIMING OF EROSION CONTROL:

SILT FENCE AND SEDIMENT LOGS WILL BE INSTALLED PRIOR TO CONSTRUCTION.

RIPRAP AND FILTER BLANKET WILL BE PLACED AT THE OUTLETS WITHIN 24 HOURS OF THE OUTLET PLACEMENT.

THE CONTRACTOR MUST STABILIZE ALL EXPOSED SOIL AREAS IMMEDIATELY FOLLOWING CONSTRUCTION WHEREVER CONSTRUCTION WILL NOT OCCUR FOR A PERIOD GREATER THAN OR EQUAL TO 7 DAYS.

STABILIZATION WORK MUST BE COMPLETE WITHIN 7 CALENDAR DAYS AFTER THE CONSTRUCTION WORK IN THAT AREA HAS TEMPORARILY OR PERMANENTLY CEASED.

AREAS THAT ARE WITHIN 200 FT OF A PUBLIC WATER MUST BE STABILIZED WITHIN 24 HOURS OF COMPLETING CONSTRUCTION DURING PERIODS OF "WORK IN WATER RESTRICTIONS" FOR TIME PERIODS DECLARED BY THE DNR.

THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN THE DISTURBED AREA UNTIL VEGETATION IN ESTABLISHED.

ONCE VEGETATION IS ESTABLISHED AND CONSTRUCTION IS COMPLETE, THE SILT FENCE AND ANY OTHER TEMPORARY EROSION CONTROL THAT IS NOT BIODEGRADABLE SHALL BE REMOVED.

STREET SWEEPING TO BE PROVIDED AS DIRECTED BY THE ENGINEER OR OWNER. THE CITY REQUIRES STREET SWEEPING TO OCCUR WITHIN 8 HOURS OF NOTICE FROM THE CITY.

APPLYING MULCH, HYDROMULCH, TACKIFIER, POLYACRYLAMIDE OR SIMILAR EROSION PREVENTION PRACTICES IS NOT ACCEPTABLE STABILIZATION IN ANY PART OF A TEMPORARY OR PERMANENT DRAINAGE DITCH OR SWALE. BLANKETS OR OTHER APPROVED, BY THE ENGINEER, METHOD SHALL BE USED.

INSPECTION AND MAINTENANCE ACTIVITIES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND SCHEDULING THE WORK OF ALL OPERATIONS, INCLUDING SUBCONTRACTORS AND UTILITY COMPANIES, SUCH THAT EROSION AND SEDIMENT CONTROL MEASURES ARE FULLY EXECUTED FOR EACH OPERATION AND IN A TIMELY MANNER OVER THE DURATION OF THE PROJECT. OPERATORS HAVE DAILY ACCESS TO THE PROJECT SITE. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE SWPPP IMPLEMENTATION UNTIL THE ENTIRE SITE HAS UNDERGONE FINAL STABILIZATION AND N.O.T HAS BEEN SUBMITTED TO THE MPCA.

THE CONTRACTOR IS TO PROVIDE A TRAINED INDIVIDUAL RESPONSIBLE FOR THE IMPLEMENTATION, INSPECTION AND MAINTENANCE OF THE EROSION AND SEDIMENT CONTROL BMPS ON THE PROJECT. THAT INDIVIDUAL IS TO BE IDENTIFIED AT THE PRE-CONSTRUCTION CONFERENCE AND LISTED IN THE MINUTES THEREOF.

THE APPOINTED INDIVIDUAL IS TO PERFORM A ROUTINE INSPECTION OF THE ENTIRE SITE AT LEAST ONCE EVERY SEVEN DAYS DURING CONSTRUCTION OPERATIONS AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS.

A INSPECTION FORM WILL BE PROVIDED BY THE CONTRACTOR. ANY DEFICIENCIES IN THE EROSION AND SEDIMENT CONTROL BMPS ARE TO BE NOTED ON THE INSPECTION FORM AND CORRECTED BY THE END OF THE NEXT BUSINESS DAY.

PERIMETER CONTROL DEVICES ARE TO BE REPAIRED OR REPLACED WHEN THEY ARE NO LONGER EFFECTIVE OR WHEN THE SEDIMENT REACHES ONE-HALF THE HEIGHT OF THE DEVICE.

TRAINING DOCUMENTATION:
SWPPP IMPLEMENTATION, REVISING, AMENDING, AND INSPECTING (TO BE FILLED IN BY THE CONTRACTOR)
NAME OF INDIVIDUAL
OVERSEEING & INSPECTING _____
DATE OF TRAINING _____
NAME OF INSTRUCTOR _____
ENTITY PROVIDING TRAINING _____
CONTENT OF TRAINING _____
TOTAL HOURS OF TRAINING _____

BMP INSTALLATION, MAINTENANCE, AND REPAIR (TO BE FILLED IN BY THE CONTRACTOR)
NAME OF INDIVIDUAL
OVERSEEING & INSPECTING _____
DATE OF TRAINING _____
NAME OF INSTRUCTOR _____
ENTITY PROVIDING TRAINING _____
CONTENT OF TRAINING _____
TOTAL HOURS OF TRAINING _____

POLLUTION PREVENTION

FERTILIZERS ARE TO BE APPLIED ONLY IN THE AMOUNTS AS SPECIFIED AND WORKED INTO THE SOIL TO MINIMIZE EXPOSURE TO STORMWATER RUNOFF.

ONSITE REFUELING OPERATIONS ARE TO BE CONDUCTED WITH CARE. ANY INADVERTENT SPILLAGE OF FUEL OR CHEMICALS IS TO BE IMMEDIATELY CLEANED UP, REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE TO STATE AND LOCAL REGULATIONS. MAJOR SPILLS ARE TO BE REPORTED TO THE MPCA 24 HOUR NOTIFICATION NETWORK AT 800 422 0798. ALL VEHICLES ON-SITE ARE TO BE MONITORED FOR LEAKS AND SUBJECT TO ROUTINE PREVENTIVE MAINTENANCE EFFORTS TO REDUCE THE LIKELIHOOD OF LEAKAGE AND OR SPILLS.

PORTABLE SANITARY WASTE FACILITIES ARE TO BE PROVIDED ONSITE AND EMPTIED ON A BI-WEEKLY BASIS.

CONCRETE BATCH TRUCKS WILL NOT BE ALLOWED TO DISCHARGE DRUM AND CHUTE WASHOUT DIRECTLY ON THE GROUND. A PORTABLE WASHOUT RECEPTACLE IS TO BE PROVIDED BY THE CONTRACTOR AT THE LOCATION AS PROVIDED BY THE OWNER.

FINAL STABILIZATION

FINAL STABILIZATION OCCURS WHEN 70 PERCENT OF THE PERVIOUS AREA IS COVERED WITH UNIFORM, PERMANENT VEGETATION.

ALL TEMPORARY EROSION AND SEDIMENT CONTROL FEATURES ARE TO BE REMOVED AND THE NPDES NOTICE OF TERMINATION IS TO BE PREPARED AND SUBMITTED TO THE MPCA.

LOCATION OF SWPPP REQUIREMENTS IN PROJECT PLAN

DESCRIPTION	TITLE	LOCATION
EROSION CONTROL DETAILS	CONSTRUCTION DETAILS	C9.1-C9.4
EROSION CONTROL LOCATIONS	EROSION CONTROL LOCATIONS	C8.1-C8.2

24 HOUR MPCA EMERGENCY NOTIFICATION:
TELEPHONE NUMBERS: 651-649-5451
800-422-0798

ESTIMATED QUANTITIES:

THE FOLLOWING QUANITITES IS AN ESTIMATED PRELIMINARY AMOUNT REQUIRED FOR SEDIMENT CONTROL BMP'S AT THE START OF THE PROJECT. THIS ESTIMATE IS PROVIDED AS REQUIRED BY THE MINNESOTA POLLUTION CONTROL AGENCY GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY, ANY ADDITIONAL AND/OR REPLACEMENT BMP'S QUANTITIES WILL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

ESTIMATED PRELIMINARY QUANTITIES AT START OF PROJECT:

ITEM	UNIT	ESTIMATED INITIAL QUANTITY
TEMPORARY CONSTRUCTION ENTRANCE	EA	3
TEMPORARY SEDIMENT FILTER	EA	35
TEMPORARY CONCRETE WASHOUT	EA	1
TEMPORARY PUMP SEDIMENT CONTROL DEVICE	EA	1
TEMPORARY SEDIMENT LOGS	LF	1,970
TEMPORARY SILT FENCE	LF	7,786
EROSION CONTROL BLANKET (CAT. 20)	SY	11,250

TEMPORARY EROSION AND SEDIMENT CONTROL SPECIFICATIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. PREVENTION OF SEDIMENTATION OF WATERWAYS, OPEN DRAINAGE WAYS, AND STORM AND SANITARY SEWERS DUE TO CONSTRUCTION ACTIVITIES.

1.02 REFERENCE STANDARDS

A. GENERAL PERMIT AUTHORIZATION TO DISCHARGE STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM. MINNESOTA PERMIT NO: MN R100001.

1.03 PERFORMANCE REQUIREMENTS

A. COMPLY WITH ALL REQUIREMENTS OF THE MINNESOTA POLLUTION CONTROL AGENCY FOR EROSION AND SEDIMENT CONTROL.

B. DO NOT BEGIN CLEARING, GRADING, OR OTHER WORK INVOLVING DISTURBANCE OF GROUND SURFACE COVER UNTIL APPLICABLE PERMITS HAVE BEEN OBTAINED; FURNISH ALL DOCUMENTATION REQUIRED TO OBTAIN APPLICABLE PERMITS.
1. OBTAIN AND PAY FOR PERMITS REQUIRED BY AUTHORITY HAVING JURISDICTION.

C. TIMING: PUT PREVENTIVE MEASURES IN PLACE PRIOR TO DISTURBANCE OF SURFACE COVER AND BEFORE PRECIPITATION OCCURS.

D. EROSION OFF SITE: PREVENT EROSION OF SOIL AND DEPOSITION OF SEDIMENT ON OTHER PROPERTIES CAUSED BY WATER LEAVING THE PROJECT SITE DUE TO CONSTRUCTION ACTIVITIES FOR THIS PROJECT.
1. PREVENT TRACKING OF MUD ONTO PUBLIC ROADS OUTSIDE SITE.
2. PREVENT MUD AND SEDIMENT FROM FLOWING ONTO PAVEMENTS.

E. SEDIMENTATION OF WATERWAYS OFF SITE: PREVENT SEDIMENTATION OF WATERWAYS OFF THE PROJECT SITE, INCLUDING RIVERS, STREAMS, LAKES, PONDS, OPEN DRAINAGE WAYS, STORM SEWERS, AND SANITARY SEWERS.
1. IF SEDIMENTATION OCCURS, INSTALL OR CORRECT PREVENTIVE MEASURES IMMEDIATELY AT NO COST TO OWNER; REMOVE DEPOSITED SEDIMENTS; COMPLY WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.

F. MAINTENANCE: MAINTAIN TEMPORARY PREVENTIVE MEASURES UNTIL PERMANENT MEASURES HAVE BEEN ESTABLISHED.

PART 2 PRODUCTS

2.01 MATERIALS

A. TEMPORARY SILT FENCE: WOVEN POLYPROPYLENE GEOTEXTILE RESISTANT TO COMMON SOIL CHEMICALS, MILDEW, AND INSECTS; NON-BIODEGRADABLE; IN LONGEST LENGTHS POSSIBLE; FABRIC INCLUDING SEAMS WITH THE FOLLOWING MINIMUM AVERAGE ROLL LENGTHS:
1. AVERAGE OPENING SIZE: 20 U.S. STD. SIEVE, MAXIMUM, WHEN TESTED IN ACCORDANCE WITH ASTM D4751.
2. PERMITTIVITY: 0.05 SEC^-1, MINIMUM, WHEN TESTED IN ACCORDANCE WITH ASTM D4491.
3. ULTRAVIOLET RESISTANCE: RETAINING AT LEAST 70 PERCENT OF TENSILE STRENGTH, WHEN TESTED IN ACCORDANCE WITH ASTM D4355/D4355M AFTER 500 HOURS EXPOSURE.
4. TENSILE STRENGTH: 100 LB-F, MINIMUM, IN CROSS-MACHINE DIRECTION; 124 LB-F, MINIMUM, IN MACHINE DIRECTION; WHEN TESTED IN ACCORDANCE WITH ASTM D4632.
5. ELONGATION: 15 TO 30 PERCENT, WHEN TESTED IN ACCORDANCE WITH ASTM D4632.
6. TEAR STRENGTH: 55 LB-F, MINIMUM, WHEN TESTED IN ACCORDANCE WITH ASTM D4533.
7. COLOR: MANUFACTURER'S STANDARD, WITH EMBEDMENT AND FASTENER LINES PREPRINTED.
8. SILT FENCE POSTS: ONE OF THE FOLLOWING, MINIMUM 5 FEET LONG:
a. STEEL U- OR T-SECTION, WITH MINIMUM MASS OF 1.33 LB PER LINEAR FOOT.
b. SOFTWOOD, 4 BY 4 INCHES IN CROSS SECTION.
c. HARDWOOD, 2 BY 2 INCHES IN CROSS SECTION.

B. TEMPORARY SEDIMENT LOGS: FILTER LOGS SHALL CONSIST OF TYPE WOOD FIBER BIOROLLS AND THE REQUIREMENTS OF MNDOT SPEC. 3897.
1. SHALL BE ONE OF THE FOLLOWING.
a. SHALL BE SILTSOXX PERIMETER CONTROL BY FILTREXX, INC., OR EQUAL.

C. TEMPORARY SEDIMENT FILTER.
1. SHALL BE ONE OF THE FOLLOWING.
a. DROP-IN SEDIMENT FILTER UNIT THAT INSERTS INTO THE INLET.
1) SHALL BE FLEXSTORM PURE: PERMANENT INLET FILTER BY ADS, INC., OR EQUAL.
(a)PROVIDE CURB OPENING PROTECTION FOR EXISTING INLETS WITH CURB OPENINGS.

D. TEMPORARY ROCK CONSTRUCTION ENTRANCE.
1. ROCK SHALL BE CLEAN 1 TO 2 INCH WASHED ROCK.

E. TEMPORARY SLOPE EROSION PROTECTION.
1. SHALL BE ONE OF THE FOLLOWING.
a. EROSION CONTROL BLANKET.
1) SHALL CONSIST OF A UNIFORM WEB OF INTERLOCKING STRAW OR WOOD FIBERS SANDWICHED BETWEEN AN ATTACHED TOP AND BOTTOM LAYER OF NET BACKING.
2) THE NETTING SHALL BE BIODEGRADABLE CONTAINING SUFFICIENT UV STABILIZATION FOR BREAKDOWN TO OCCUR WITHIN A NORMAL GROWING SEASON.
3) STAPLES USED TO ANCHOR THE BLANKETS SHALL BE U-SHAPED, 11 GAUGE OR HEAVIER STEEL WIRE HAVING A SPAN WIDTH OF 1 INCH AND A LENGTH OF 8 INCHES OR MORE FROM TOP TO BOTTOM AFTER BENDING.
4) THE EROSION CONTROL BLANKETS ACCEPTABLE FOR USE ON THIS PROJECT INCLUDE:
(a)GEO-SYNTHETICS, INC., - LANDLOK 52.
(b)NORTH AMERICAN GREEN - S150.
(c)OR EQUAL.
b. BONDED FIBER MATRIX.
1) THE FIBERS SHALL BE COMPOSED OF 100% WOOD OR WOOD BY-PRODUCTS. A MINIMUM OF 25% OF THE FIBERS SHALL AVERAGE 10.16 MM (0.4 INCHES) IN LENGTH AND 50% OR MORE SHALL BE RETAINED ON A CLARK FIBER CLASSIFIER 24 MESH SCREEN. FIBERS SHALL BE COLORED WITH A WATER SOLUBLE, NON-TOXIC DYE, TO AID IN UNIFORM APPLICATION OVER THE SITE.
2) THE BINDER SHALL BE A HYDRO COLLOID BASED (GUAR GUM) WITH ADDED SLOW-RELEASE AND AGRICULTURAL BASED FERTILIZERS. THE BINDER SHALL NOT DISSOLVE OR DISPERSE UPON REWETTING.
3) THE BFM SLURRY SHALL DRY TO FORM A CRUST APPROXIMATELY 3-6 MM (1/8 TO 1/4 INCHES) THICK ADHERING TO THE SOIL SURFACE.
4) THE MOISTURE CONTENT OF THE MATRIX SHALL BE 12% +/- 3% BY WEIGHT.
5) THE MATRIX SHALL CONSIST OF MATERIALS THAT ARE 100% BIODEGRADABLE AND 100% BENEFICIAL TO PLANT LIFE.
6) THE MATRIX SHALL PROVIDE 100% CONTINUOUS COVERAGE AND SHALL HAVE NO HOLES GREATER THAN 1MM IN SIZE.
7) THE HYDRATED MIXTURE DENSITY SHALL BE APPROXIMATED BY A SLUMP TEST PRIOR TO APPLICATION.
8) THE BFM MULCH: WATER RATIO SHALL BE AS MANUFACTURER RECOMMENDATIONS. THE MINIMUM BFM MULCH TO WATER RATIO IS 50LBS BFM MULCH AND 100 GALLONS WATER. THE WATER RATE WILL VARY BETWEEN 100 GALLONS AND 125 GALLONS PER 50LBS, DEPENDING ON WHICH OF THE PRODUCTS IS USED.
9) THE BONDED FIBER MATRIX MULCH PRODUCTS ACCEPTABLE FOR USE ON THIS PROJECT INCLUDE.
(a)ECOAEGIS - MANUFACTURED BY CANFOR.
(b)SOIL GUARD - MANUFACTURED BY MAT, INC.
(c)CONWED 3000 - MANUFACTURED BY CONWED FIBERS, INC.

F. TEMPORARY PUMPED SEDIMENT CONTROL DEVICE.
1. NON-WOVEN GEOTEXTILE FABRIC SEWN INTO A BAG USING A DOUBLE NEEDLE MACHINE AND HIGH STRENGTH THREAD.
a. SEAMS SHALL HAVE AN AVERAGE WIDTH STRENGTH OF 60LB/INCH AS PER ASTM D4883 AND MEET OR EXCEED THE FOLLOWING.
1) GRAB TENSILE OF 205 LBS AS PER ASTM D 4632.
2) PUNCTURE OF 110 LBS AS PER ASTM D 4833.
3) FLOW RATE OF 95 GAL/MIN/SF AS PER ASTM D 4491.
4) PERMITTIVITY OF 1.5 SEC-1 AS PER ASTM D 4491.
5) MULLEN BURST STRENGTH OF 350 PSI AS PER ASTM D 3786.
6) AOS% OF 80% US SIEVE AS PER ASTM D 4751.
2. SPOUT LARGE ENOUGH TO ACCOMMODATE A 4 INCH DISCHARGE HOSE WITH STRAP TO TIE UNIT CLOSED.
3. SHALL BE ONE OF THE FOLLOWING.
a. DIRTBAG.
1) ACF ENVIRONMENTAL, INC., 2831 CARDWELL ROAD, RICHMOND, VIRGINIA 23234, 800-448-3636.
b. DANDY DEWATERING BAG.
1) DANDY PRODUCTS, INC., P.O. BOX 1980, WESTERVILLE, OHIO 43086, 800-591-2284.
c. OR EQUAL.

PART 3 EXECUTION

3.01 PREPARATION

A. SCHEDULE WORK SO THAT SOIL SURFACES ARE LEFT EXPOSED FOR THE MINIMUM AMOUNT OF TIME.

B. THE CONSTRUCTION SITE OPERATOR SHALL FOLLOW ALL REQUIREMENTS OF THE MINNESOTA STORMWATER PERMIT NO. MN R100001.

C. THE CONTRACTOR SHALL COMPLETE AND SIGN THE NOTICE OF INTENT, OBTAIN THE OWNER'S SIGNATURE, AND SUBMIT TO THE MPCA.
1. PROVIDE A SIGNED COPY TO THE OWNER.

3.03 INSTALLATION

A. TEMPORARY ROCK CONSTRUCTION ENTRANCE.
1. THE ROCK AREA SHALL BE A MINIMUM OF 6 INCHES DEEP, EXTEND THE FULL WIDTH OF THE EGRESS AREA AND SHALL BE AT LEAST 50FT LONG, HOWEVER, LONGER ENTRANCES MAY BE REQUIRED TO ADEQUATELY CLEAN THE TIRES.
2. GEOTEXTILE FABRIC MAY BE USED TO PREVENT MIGRATION OF MUD FROM THE UNDERLYING SOIL INTO THE ROCK.

B. TEMPORARY SILT FENCES:
1. STORE AND HANDLE FABRIC IN ACCORDANCE WITH ASTM D4873.
2. USE NOMINAL 30 INCH HIGH BARRIERS, MINIMUM 60 INCH LONG POSTS SPACED AT 6 FEET MAXIMUM SPACING.
3. EMBED BOTTOM OF FABRIC IN A TRENCH ON THE UPSLOPE SIDE OF FENCE, WITH 6 INCHES OF FABRIC LAID FLAT ON BOTTOM OF TRENCH FACING UPSLOPE; BACKFILL TRENCH AND COMPACT.
4. MINIMUM POST EMBEDMENT.
a. STEEL POST = 24 INCHES, MINIMUM.
b. WOOD POST = 18 INCHES, MINIMUM.
5. DO NOT SPLICE FABRIC WIDTH; MINIMIZE SPLICES IN FABRIC LENGTH; SPLICE AT POST ONLY, OVERLAPPING AT LEAST 18 INCHES, WITH EXTRA POST.
6. FASTEN FABRIC TO WOOD POSTS USING ONE OF THE FOLLOWING:
a. FOUR NAILS PER POST WITH 3/4 INCH DIAMETER FLAT OR BUTTON HEAD, 1 INCH LONG, AND 14 GAGE, 0.083 INCH SHANK DIAMETER.
b. FIVE STAPLES PER POST WITH AT LEAST 17 GAGE, 0.0453 INCH WIRE, 3/4 INCH CROWN WIDTH AND 1/2 INCH LONG LEGS.
7. FASTEN FABRIC TO STEEL POSTS USING WIRE, NYLON CORD, OR INTEGRAL POCKETS.

C. TEMPORARY SEDIMENT LOGS:
1. PERIMETER CONTROL SHOULD BE INSTALLED PARALLEL TO THE BASE OF THE SLOPE OR OTHER DISTURBED AREA.
2. STAKES SHOULD BE INSTALLED THROUGH THE MIDDLE OF THE PERIMETER CONTROL ON 10 FT CENTERS, USING 2 IN BY 2 IN BY 3 FT WOODEN STAKES. IN THE EVENT STAKING IS NOT POSSIBLE, I.E., WHEN PERIMETER CONTROL IS USED ON PAVEMENT, HEAVY CONCRETE BLOCKS SHALL BE USED BEHIND THE PERIMETER CONTROL TO HELP STABILIZE DURING RAIN EVENTS.

D. TEMPORARY SEDIMENT FILTERS.
1. DROP-IN SEDIMENT TRAP.
a. PLACE AS RECOMMENDED BY THE MANUFACTURER.

E. TEMPORARY PUMPED SEDIMENT CONTROL DEVICE.
1. INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS.

F. TEMPORARY SLOPE EROSION PROTECTION.
1. PLACE AT ANY AND ALL FINISH SLOPES THAT ARE STEEPER THAN 10H:1V.
2. SEED AND FERTILIZE PER SPECIFICATION 32 9219 PRIOR TO INSTALLING TEMPORARY SLOPE EROSION PROTECTION.
3. BONDED FIBER MATRIX.
a. INSTALL THE BFM AS PER THE MANUFACTURER'S INSTRUCTIONS WITH THE FOLLOWING MINIMUM GUIDELINES.
1) THE BFM SHALL BE APPLIED WITH HYDRAULIC SPRAY EQUIPMENT BY A MANUFACTURER'S CERTIFIED APPLICATOR.
2) APPLICATION SHALL BE DONE AT LEAST 24 HOURS IN ADVANCE OF PROJECTED RAINFALL TO ALLOW THE BFM MULCH ADEQUATE TIME TO DRY.
3) THE BFM MULCH SHALL BE APPLIED IN TWO STAGES (ONE-HALF RATE) WITH AMPLE TIME TO DEWATER THE FIRST APPLICATION.
4) THE BFM MULCH SHALL BE APPLIED FROM AT LEAST TWO ALTERNATE DIRECTIONS, PREFERABLY 90 DEGREES APART, IF POSSIBLE, TO ENSURE ALL SOIL FACES ARE COVERED.
5) THE INSTALLATION RATE OF THE BFM MULCH SHALL BE 3500 LBS PER ACRE, MINIMUM AND 100% COVERAGE.
4. EROSION CONTROL BLANKET.
a. INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS.

3.04 MAINTENANCE

A. INSPECT PREVENTIVE MEASURES WEEKLY, WITHIN 24 HOURS AFTER THE END OF ANY STORM THAT PRODUCES 0.5 INCHES OR MORE RAINFALL AT THE PROJECT SITE, AND DAILY DURING PROLONGED RAINFALL.

B. REPAIR DEFICIENCIES IMMEDIATELY.

C. TEMPORARY SILT FENCES:
1. PROMPTLY REPLACE FABRIC THAT DETERIORATES UNLESS NEED FOR FENCE HAS PASSED.
2. REMOVE SILT DEPOSITS THAT EXCEED ONE-THIRD OF THE HEIGHT OF THE FENCE.
3. REPAIR FENCES THAT ARE UNDERCUT BY RUNOFF OR OTHERWISE DAMAGED, WHETHER BY RUNOFF OR OTHER CAUSES.

D. TEMPORARY CONSTRUCTION EXIT.
1. PERIODIC ADDITION OF ROCK, OR REMOVAL AND REPLACEMENT OF PAD SHALL BE PROVIDED AS VOIDS BECOME FILLED WITH SOIL.

E. TEMPORARY PUMPED SEDIMENT CONTROL DEVICE.
1. REPLACE THE UNIT WHEN 1/2 FULL OF SEDIMENT OR WHEN SEDIMENT HAS REDUCED THE FLOW RATE OF THE PUMP DISCHARGE TO AN IMPRACTICAL RATE.

F. PLACE SEDIMENT IN APPROPRIATE LOCATIONS ON SITE; DO NOT REMOVE FROM SITE.

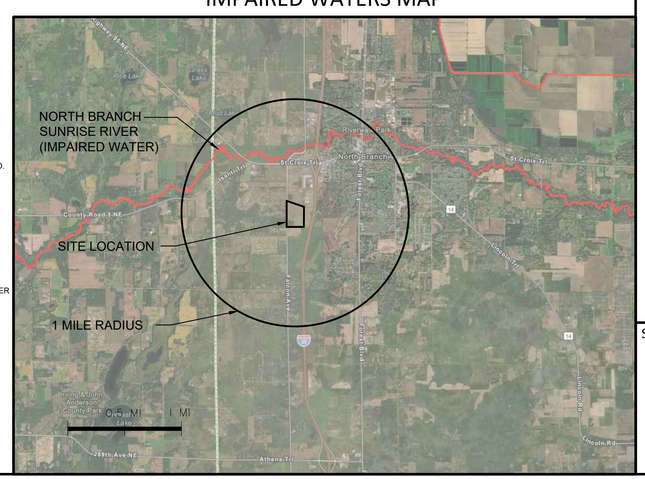
3.05 CLEAN UP

A. REMOVE TEMPORARY MEASURE AFTER PERMANENT VEGETATION HAS BEEN ESTABLISHED.

B. WHERE REMOVAL OF TEMPORARY MEASURES WOULD LEAVE EXPOSED SOIL, SHAPE SURFACE TO AN ACCEPTABLE GRADE AND FINISH TO MATCH ADJACENT GROUND SURFACES.

END OF SECTION

IMPAIRED WATERS MAP



REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: SWPPP
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn Lic. No. 58628
Date:

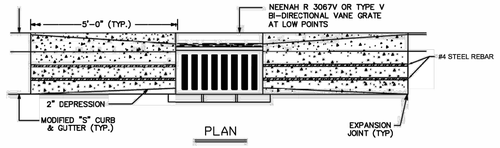
BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13076 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-262-8822 FAX: 763-262-8844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

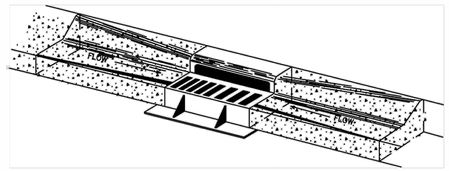
SWPPP NARRATIVE

SHEET NO.
C8.3

N:\Projects Current\22-0030.03 Bedker North Branch Plat\Civil\CAD Files\NB Cover\SWPPP.dwg
4/24/2025 3:14 PM

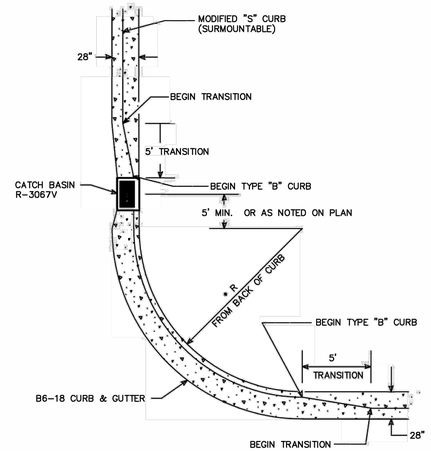


PLAN



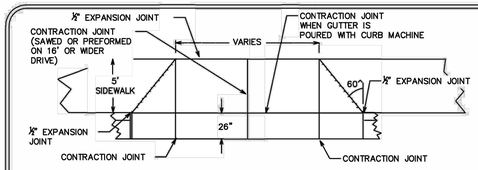
NOTE: MODIFIED "S" CURB & GUTTER TO BE FORMED INTO B618 TYPE CURB AT CATCH BASIN CASTING

CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
SURMOUNTABLE CURB AND GUTTER AT CATCH BASIN NO SCALE	DETAIL NO. RDW - 004

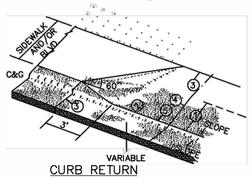


NOTES:
1. SEE STANDARD DETAIL PLATE FOR CONCRETE CURB AND GUTTER DETAILS

CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
STREET RADIUS FOR CONCRETE CURB AND GUTTER NO SCALE	DETAIL NO. RDW - 005

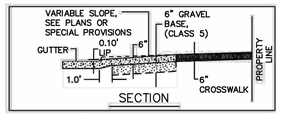


PLAN



CURB RETURN

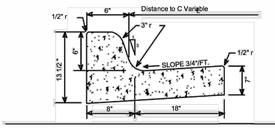
① WITHOUT SIDEWALK PAVEMENT ONLY TO END OF CURB RETURN WHEN ENTRANCE IS UNSURFACED OR CONSTRUCTION IS NOT NEEDED BEYOND THIS POINT.
② WITH SIDEWALK PAVEMENT TO BACK EDGE OF SIDEWALK PAID FOR AS CONCRETE DRIVEWAY PAVEMENT
③ 1/2" EXPANSION JOINT
④ CONTRACTION JOINT (FORMED OR SAWED)
⑤ DRIVEWAY NEED NOT BE POURED MONOLITHICALLY WITH CURB & GUTTER



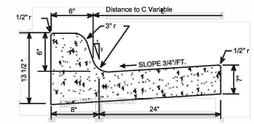
SECTION

NOTE:
1 PAYMENT SHALL BE FROM BACK OF CURB
2 WHERE SIDEWALKS EXIST OR ARE PROPOSED THE DRIVEWAY APRON SHALL EXTEND TO THE BACK OF SIDEWALK
3 #4 STEEL AT 2' OC TO BE USED WHEN DRIVEWAY SLAB IS NOT POURED INTEGRAL WITH GUTTER

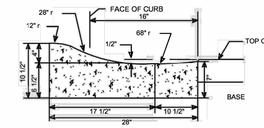
CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
TYPICAL RESIDENTIAL CONCRETE DRIVEWAY APRON NO SCALE	DETAIL NO. RDW - 006



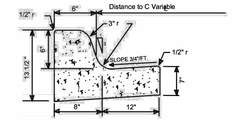
Mn/DOT B 618



Mn/DOT B 624



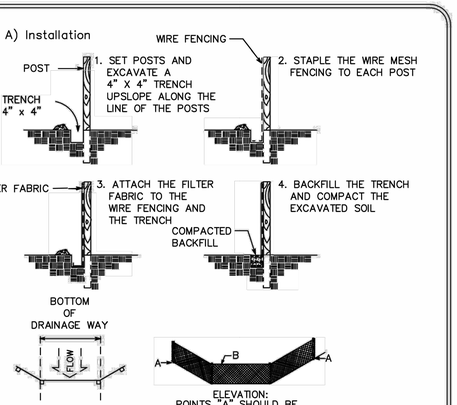
MODIFIED 'S' DESIGN



Mn/DOT B 612

NOTE: A MINIMUM OF 3" OF CLASS 5 AGGREGATE BASE SHALL BE USED UNDER ALL CURB AND GUTTER.

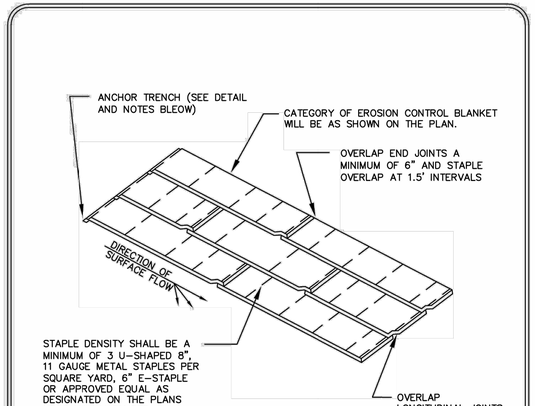
CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
CONCRETE CURB AND GUTTER NO SCALE	DETAIL NO. RDW - 003



B) Maintenance

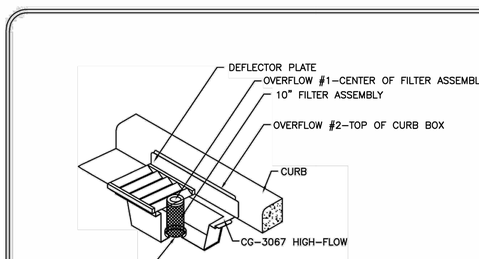
1. FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USEABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY 1/3 THE HEIGHT OF THE BARRIER.
4. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED, OR REMOVED

CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
PLACEMENT AND CONSTRUCTION OF SILT FENCE NO SCALE	DETAIL NO. ERO-001



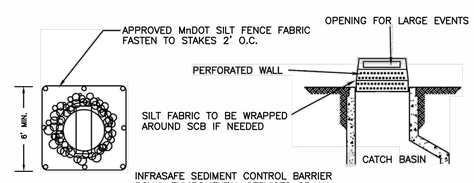
ANCHOR TRENCH
1. DIG 6" X 6" TRENCH
2. LAY BLANKET IN TRENCH
3. STAPLE AT 1.5' INTERVALS OR AS DIRECTED ON THE PLANS
4. BACKFILL WITH NATURAL SOIL AND COMPACT
5. ANCHOR TRENCHES SHALL BE PLACED AT THE TOP OF SLOPE, AND EVERY 100 LINEAR FEET OF SLOPE

CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
EROSION CONTROL BLANKET NO SCALE	DETAIL NO. ERO-006



WIMCO MODEL # CG-3067 HIGH-FLOW INLET PROTECTION OR APROVED EQUAL

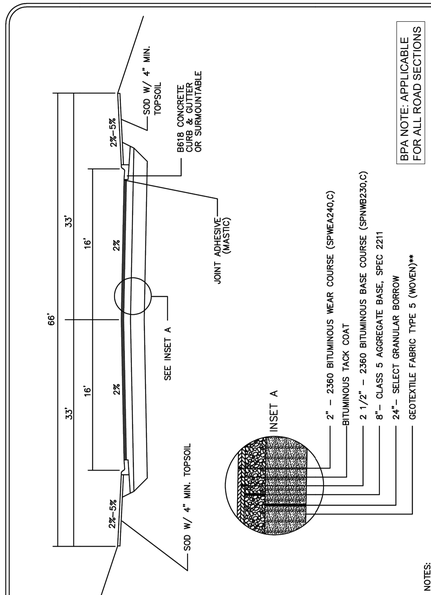
CURB AND GUTTER INLET PROTECTION
NO SCALE



INFRASAFE SEDIMENT CONTROL BARRIER ROYAL ENVIROMENTAL SERVICES OR AN ENGINEER APPROVED EQUAL.

REAR YARD INLET PROTECTION
NO SCALE

CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
STORM SEWER INLET PROTECTION NO SCALE	DETAIL NO. ERO-003



NOTES:
1. DESIGN MAY CHANGE UPON REVIEW OF THE SOIL CONDITIONS.
2. NO STREET CUTS ARE ALLOWS AFTER NOVEMBER 1. STREET CUT PERMIT IS VALID FOR 30 DAYS.
3. PAVEMENT SHALL BE LAID TO MINIMIZE SEAMS. PAVER SCREED SHALL BE 16' WIDE.

**WHERE UNSUITABLE MATERIALS EXIST, AS DIRECTED BY THE ENGINEER

CITY OF NORTH BRANCH	2025 STANDARD DETAIL
TYPICAL RESIDENTIAL URBAN STREET NO SCALE	DETAIL NO. RDW - 001

REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: DETAILS
FILE NO.: 22-0030.00

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.

Signed: Christopher J. Dahn
Date: Lic. No. 58628

NOT FOR CONSTRUCTION

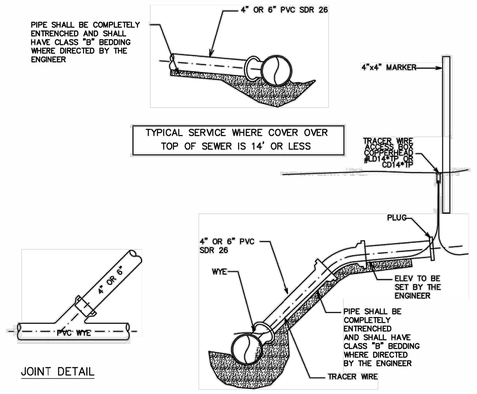
BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13076 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-262-9822 FAX: 763-262-9844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

DETAILS

SHEET NO.
C9.1

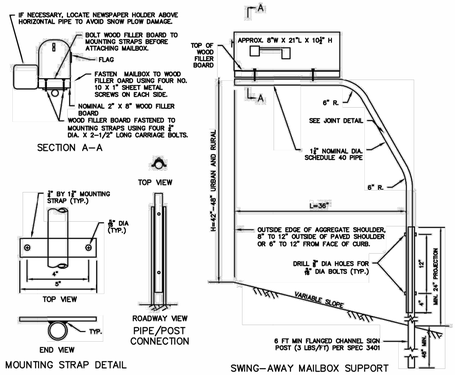
N:\Projects Current\22-0030.02 Bebber North Branch Plat\Civil\CAD Files\NB Cover\SW999.dwg
4/24/2025 3:14 PM

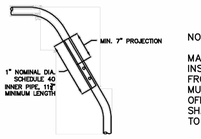


NOTES:

1) ALL SERVICE CONNECTIONS INCLUDING NECESSARY BENDS AND SPECIAL FITTINGS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER LINEAR FOOT OF 4" OR 6", NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR CONCRETE ENCASEMENT OR PIPE BEDDING.
2) ALL SERVICE CONNECTIONS SHALL TERMINATE 10' INSIDE PROPERTY LINE, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
3) SERVICE STUB SHALL BE PLUGGED AND MARKED WITH A 4" x 4" TIMBER PROTRUDING 3' OUT OF GROUND. (PAINTED GREEN)
4) NO SADDLES WILL BE ALLOWED
5) RETRO-FIT INSTALLATIONS TO BE CONSTRUCTED BY CUTTING IN A PVC WYE AND PVC SLEEVE
6) SEWER SERVICES ARE TO BE LOCATED 3' DOWNSTREAM OF WATER SERVICE IF IN THE SAME TRENCH

CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
SANITARY SEWER SERVICE DETAIL (NO SCALE)	DETAIL NO. SAN-001



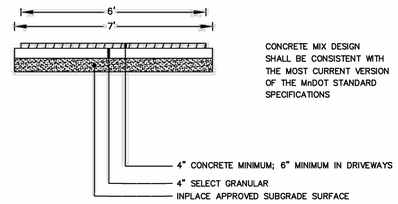


NOTES:

MAILBOX LOCATIONS SHOW BE STAKED BEFORE INSTALLATION FOR PROPER HEIGHT AND DISTANCE FROM ROADWAY. ONCE STAKED, THE INSTALLER MUST NOTIFY THE ENGINEER AND THE POST OFFICE. THE ENGINEER AND THE POSTMASTER SHALL APPROVE THE STAKED LOCATIONS PRIOR TO FINAL INSTALLATION.

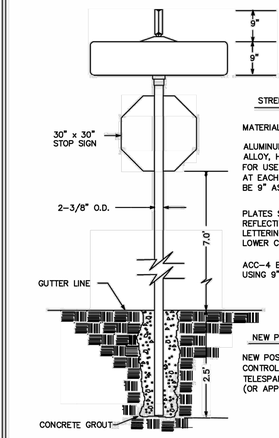
THE MINIMUM SPACING (CENTER TO CENTER) BETWEEN MULTIPLE SUPPORTS SHALL BE EQUAL TO THE HEIGHT OF THE MAILBOX SUPPORT.

CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
MAIL BOX INSTALLATION DETAIL (NO SCALE)	DETAIL NO. RDW - 013



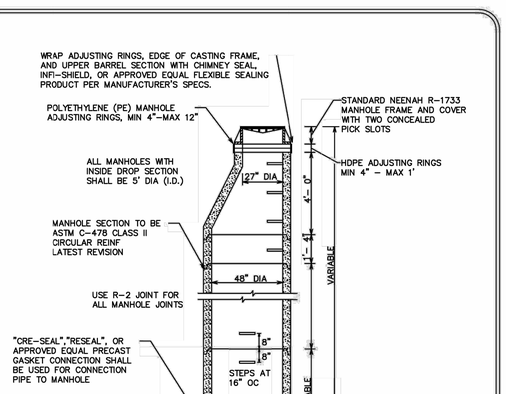
6' WIDE CONCRETE WALK
TYPICAL SECTION

CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
TYPICAL CONCRETE WALK (NO SCALE)	DETAIL NO. RDW - 012



NAME	ABBREVIATION
AVENUE	Ave
BOULEVARD	Blvd
CIRCLE	Cir
COURT	Ct
DRIVE	Dr
EAST	E
PARKWAY	Pkwy
PLACE	Pl
STREET	St
TERRACE	Ter
TRAIL	Trl
WEST	W

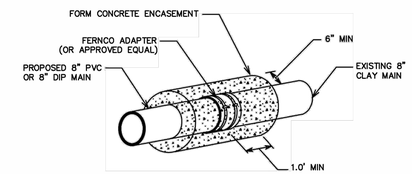
CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
TYPICAL STREET SIGN (NO SCALE)	DETAIL NO. RDW - 010



NOTES:

1. MANHOLE STEPS SHALL BE CAST IRON OR MA MODEL PS-I-PF (BY MA INDUSTRIAL INC.) CONFORMING TO ALL OSHA REGULATIONS AND SPACED 16" OC.
2. ALL MANHOLE JOINTS SHALL BE SEAL WRAPPED AS DESCRIBED IN THE SPECIFICATION (INCIDENTAL).

CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
STANDARD MANHOLE FOR SANITARY SEWER (NO SCALE)	DETAIL NO. SAN-002



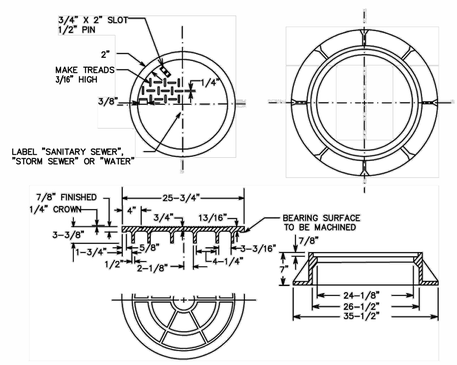
FOR 8" PVC = FERNCO #1002-88 OR EQUAL
FOR 8" DIP = FERNCO # 1003-85 OR EQUAL

NOTES:

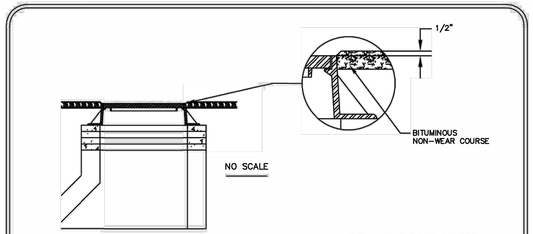
1) ALL FERNCO ADAPTORS USED MUST BE MADE FOR CLAY TO PVC TRANSITIONS
2) FOR ABANDONED SEWER/WATER LINES, SEWER LINES SHALL BE REMOVED TO THE MAIN AND CAPPED AT WYE. WATERMAIN SERVICES SHALL BE REMOVED TO THE MAIN WITH THE CORPORATION STOP REMOVED AND CAPPED WITH A BRASS PLUG.

CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
SANITARY SEWER MAIN TO CLAY PIPE CONNECTION DETAIL (NO SCALE)	DETAIL NO. SAN - 003

NOTE:
1. FRAME AND SOLID COVER TO BE NEENAH NO. R-1733 WITH NO.MF 25572 CONCEALED PICKHOLE OR APPROVED EQUAL.
2. USE NEENAH R-1755G FOR WATERTIGHT APPLICATIONS.



CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
STANDARD SANITARY & STORM SEWER FRAME & COVER FOR MANHOLE (NO SCALE)	DETAIL NO. SAN-004



CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
CASTING ADJUSTMENT FOR SANITARY AND STORM SEWER (NO SCALE)	DETAIL NO. SAN-005

REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: DETAILS
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn
Date: Lic. No. 58628

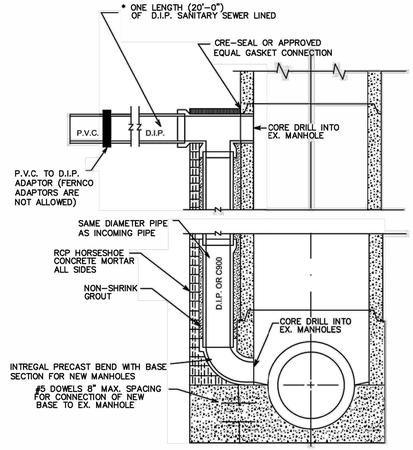
BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13079 FIRST STREET BECKER, MN 55308-9322
TEL: 763.262.9822 FAX: 763.262.9844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

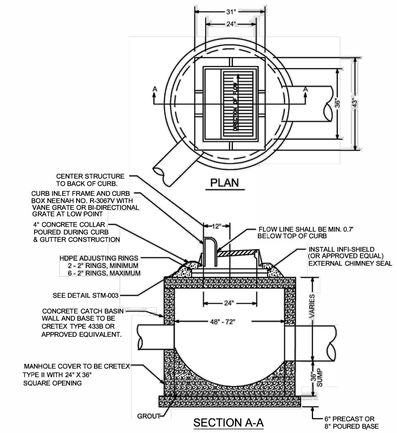
DETAILS

SHEET NO.
C9.2

N:\Projects Current\22-0030.03 Bedder North Branch\Plat\Civil\CAD Files\NB Cover\NVPP.dwg
3:14 PM
4/24/2025

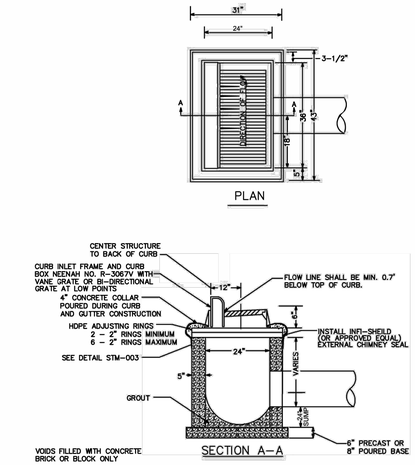


CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
OUTSIDE DROP SECTION FOR SANITARY SEWER	DETAIL NO. SAN-007
NO SCALE	



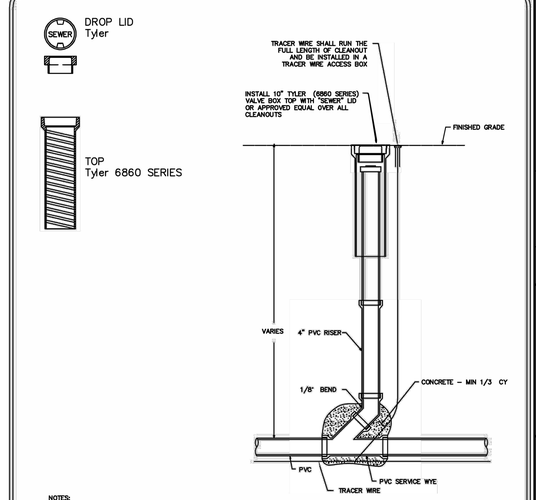
NOTES:
1. REINFORCING TO CONSIST OF #4 BARS @ 8" O.C. BOTH WAYS
2. MANHOLE STEPS SHALL BE CAST ALUMINUM OR MA INDUSTRY WITH VINYL COATING OR APPROVED EQUIVALENT AND SHALL BE LOCATED @ 16" O.C. PARALLEL WITH THE CURB
3. GROUT BOTTOM TO DRAIN TO CENTER
4. PIPE CUT-OUTS TO BE LOCATED WHERE REQUIRED
5. ADJUSTING RINGS SHALL BE HDPE INSTALLED ACCORDING TO MANUFACTURERS' REQUIREMENTS.
6. WIMCO OR APPROVED EQUAL INLET PROTECTION SHALL BE MAINTAINED AND KEPT IN GOOD SHAPE UNTIL WEAR COURSE IS PAVED
7. SURMOUNTABLE CURB DRIVE OVER CASTING - NEENAH 3501-TB
8. B-618 CURB DRIVE OVER CASTING - NEENAH 3290A

CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
STANDARD STORM SEWER CATCH BASIN MANHOLE	DETAIL NO. STM-002
NO SCALE	



NOTES:
1. REINFORCING TO CONSIST OF #4 BARS @ 8" O.C. BOTH WAYS
2. GROUT BOTTOM TO DRAIN TO CENTER
3. PIPE CUT-OUTS TO BE LOCATED WHERE REQUIRED
4. ADJUSTING RINGS SHALL BE HDPE AND INSTALLED ACCORDING TO MANUFACTURERS' REQUIREMENTS.
5. WIMCO OR APPROVED EQUAL INLET PROTECTION SHALL BE MAINTAINED AND KEPT IN GOOD SHAPE UNTIL WEAR COURSE IS PAVED.
6. SURMOUNTABLE CURB DRIVE OVER CASTING -- NEENAH 3501-TB
7. B-618 CURB DRIVE OVER CASTING -- NEENAH 3290A

CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
STANDARD STORM SEWER MANHOLE, MNDOT 4020 MANHOLE	DETAIL NO. STM-001
NO SCALE	



NOTES:
1. TRACER WIRE ACCESS BOX FOR NON-ROADWAY APPLICATIONS SHALL BE GRADE LEVEL COPPERHEAD LITE DUTY #LD14**1P.
2. TRACER WIRE ACCESS BOX FOR CONCRETE/DRIVEWAY APPLICATIONS SHALL BE COPPERHEAD #C20**1P.
3. CLEANOUTS LOCATED IN DRIVEWAYS SHALL BE COVERED WITH A FORD A-1 METER BOX COVER.

CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
SANITARY SEWER SERVICE CLEANOUT	DETAIL NO. SAN - 008
NO SCALE	

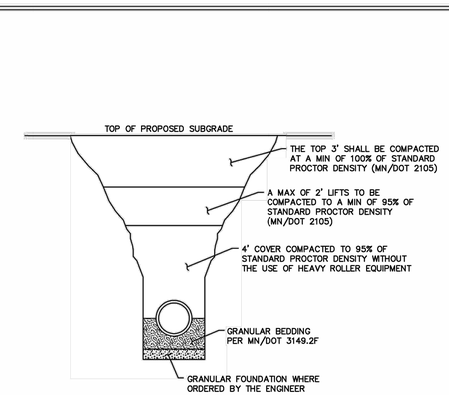
REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: DETAILS
FILE NO.: 22-0030.00

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.

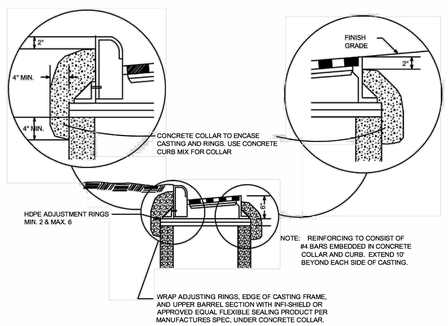
NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn
Date: Lic. No. 58628



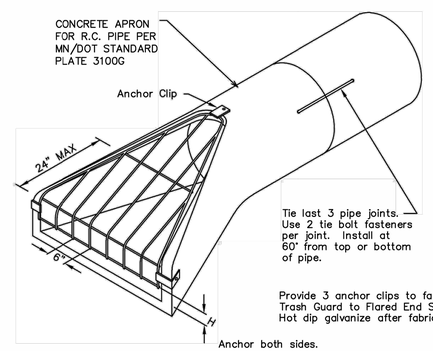
SHOVEL, PLACE, AND HAND COMPACT AROUND PIPE TO 12" ABOVE PIPE. VIBRATORY COMPACTION REQUIRED EACH SIDE OF PIPE, AS DIRECTED BY THE ENGINEER.

CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
TYPICAL TRENCH COMPACTING AND CLASS B BEDDING	DETAIL NO. SAN-006
NO SCALE	



CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
CONCRETE COLLAR FOR CATCH BASIN CASTING	DETAIL NO. STM-003
NO SCALE	

See City Detail No. STM-007 for riprap placement.

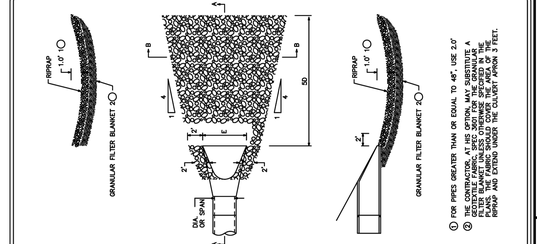


TRASH GUARD SIZING

Pipe Size	Bars	'H'	Bolts
12"-18"	3/4"Ø	4"	5/8"
21"-42"	1"Ø	6"	3/4"
48"-72"	1 1/4"Ø	12"	1"

NOTES:
1. Entire Trash Guard assembly to be HOT-DIP galvanized after fabrication.
2. Size of Trash Guard variable dependent on size of Flared End Section.
3. Trash Guards required on all Aprons 21" and larger unless otherwise noted.
4. Galvanized metal apron per MN/DOT standard plate 3129A to be used with HDPE pipe in green areas.
5. Install 7 foot 3lb galvanized post with 360 degree reflector (X4-13) at all flared end sections.

CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
FLARED END SECTIONS AND TRASH GUARD DETAIL	DETAIL NO. STM-005
NO SCALE	



DIA ROUND PIPE	CLASS III Dg = 9" 18" DEPTH RIPRAP (CY/LF)	CLASS III Dg = 9" 18" DEPTH GRANULAR (CY/LF)	CLASS IV Dg = 12" 18" DEPTH RIPRAP (CY/LF)	CLASS IV Dg = 12" 18" DEPTH GRANULAR (CY/LF)	CLASS V Dg = 15" 24" DEPTH RIPRAP (CY/LF)	CLASS V Dg = 15" 24" DEPTH GRANULAR (CY/LF)
12"	4.9 (CY/LF)	1.1 (CY/LF)	6.9 (CY/LF)	1.5 (CY/LF)	9.2 (CY/LF)	2.1 (CY/LF)
15"	5.1 (CY/LF)	1.2 (CY/LF)	7.2 (CY/LF)	1.6 (CY/LF)	9.6 (CY/LF)	2.2 (CY/LF)
18"	5.3 (CY/LF)	1.4 (CY/LF)	7.5 (CY/LF)	1.7 (CY/LF)	10.0 (CY/LF)	2.3 (CY/LF)
21"	5.5 (CY/LF)	1.5 (CY/LF)	7.8 (CY/LF)	1.8 (CY/LF)	10.4 (CY/LF)	2.5 (CY/LF)
24"	5.7 (CY/LF)	1.6 (CY/LF)	8.1 (CY/LF)	1.9 (CY/LF)	10.8 (CY/LF)	2.6 (CY/LF)
27"	5.9 (CY/LF)	1.8 (CY/LF)	8.4 (CY/LF)	2.1 (CY/LF)	11.2 (CY/LF)	2.8 (CY/LF)
30"	6.1 (CY/LF)	1.9 (CY/LF)	8.7 (CY/LF)	2.2 (CY/LF)	11.6 (CY/LF)	2.9 (CY/LF)
36"	6.5 (CY/LF)	2.2 (CY/LF)	9.3 (CY/LF)	2.5 (CY/LF)	12.4 (CY/LF)	3.3 (CY/LF)
42"	6.9 (CY/LF)	2.5 (CY/LF)	9.9 (CY/LF)	2.8 (CY/LF)	13.2 (CY/LF)	3.7 (CY/LF)
48"	7.3 (CY/LF)	2.8 (CY/LF)	10.5 (CY/LF)	3.2 (CY/LF)	14.0 (CY/LF)	4.1 (CY/LF)
54"	7.7 (CY/LF)	3.1 (CY/LF)	11.1 (CY/LF)	3.5 (CY/LF)	14.8 (CY/LF)	4.5 (CY/LF)
60"	8.1 (CY/LF)	3.4 (CY/LF)	11.7 (CY/LF)	3.9 (CY/LF)	15.6 (CY/LF)	5.0 (CY/LF)
66"	8.5 (CY/LF)	3.8 (CY/LF)	12.3 (CY/LF)	4.3 (CY/LF)	16.4 (CY/LF)	5.5 (CY/LF)
72"	8.9 (CY/LF)	4.2 (CY/LF)	12.9 (CY/LF)	4.8 (CY/LF)	17.2 (CY/LF)	6.1 (CY/LF)
78"	9.3 (CY/LF)	4.6 (CY/LF)	13.5 (CY/LF)	5.3 (CY/LF)	18.0 (CY/LF)	6.7 (CY/LF)
84"	9.7 (CY/LF)	5.1 (CY/LF)	14.1 (CY/LF)	5.8 (CY/LF)	18.8 (CY/LF)	7.3 (CY/LF)
90"	10.1 (CY/LF)	5.6 (CY/LF)	14.7 (CY/LF)	6.4 (CY/LF)	19.6 (CY/LF)	8.0 (CY/LF)
96"	10.5 (CY/LF)	6.1 (CY/LF)	15.3 (CY/LF)	7.0 (CY/LF)	20.4 (CY/LF)	8.8 (CY/LF)
102"	10.9 (CY/LF)	6.7 (CY/LF)	15.9 (CY/LF)	7.7 (CY/LF)	21.2 (CY/LF)	9.6 (CY/LF)
108"	11.3 (CY/LF)	7.3 (CY/LF)	16.5 (CY/LF)	8.4 (CY/LF)	22.0 (CY/LF)	10.5 (CY/LF)
114"	11.7 (CY/LF)	7.9 (CY/LF)	17.1 (CY/LF)	9.1 (CY/LF)	22.8 (CY/LF)	11.4 (CY/LF)
120"	12.1 (CY/LF)	8.6 (CY/LF)	17.7 (CY/LF)	9.9 (CY/LF)	23.6 (CY/LF)	12.4 (CY/LF)
126"	12.5 (CY/LF)	9.3 (CY/LF)	18.3 (CY/LF)	10.7 (CY/LF)	24.4 (CY/LF)	13.4 (CY/LF)
132"	12.9 (CY/LF)	10.0 (CY/LF)	18.9 (CY/LF)	11.5 (CY/LF)	25.2 (CY/LF)	14.5 (CY/LF)
138"	13.3 (CY/LF)	10.8 (CY/LF)	19.5 (CY/LF)	12.4 (CY/LF)	26.0 (CY/LF)	15.6 (CY/LF)
144"	13.7 (CY/LF)	11.6 (CY/LF)	20.1 (CY/LF)	13.3 (CY/LF)	26.8 (CY/LF)	16.8 (CY/LF)

SPAN ROUND PIPE	CLASS III Dg = 9" 18" DEPTH RIPRAP (CY/LF)	CLASS III Dg = 9" 18" DEPTH GRANULAR (CY/LF)	CLASS IV Dg = 12" 18" DEPTH RIPRAP (CY/LF)	CLASS IV Dg = 12" 18" DEPTH GRANULAR (CY/LF)	CLASS V Dg = 15" 24" DEPTH RIPRAP (CY/LF)	CLASS V Dg = 15" 24" DEPTH GRANULAR (CY/LF)
18"	4.9 (CY/LF)	1.1 (CY/LF)	6.9 (CY/LF)	1.5 (CY/LF)	9.2 (CY/LF)	2.1 (CY/LF)
24"	5.7 (CY/LF)	1.6 (CY/LF)	8.1 (CY/LF)	1.9 (CY/LF)	10.8 (CY/LF)	2.6 (CY/LF)
30"	6.5 (CY/LF)	2.2 (CY/LF)	9.3 (CY/LF)	2.5 (CY/LF)	12.4 (CY/LF)	3.3 (CY/LF)
36"	7.3 (CY/LF)	2.8 (CY/LF)	10.5 (CY/LF)	3.2 (CY/LF)	14.0 (CY/LF)	4.1 (CY/LF)
42"	8.1 (CY/LF)	3.4 (CY/LF)	11.7 (CY/LF)	3.9 (CY/LF)	15.6 (CY/LF)	5.0 (CY/LF)
48"	8.9 (CY/LF)	4.2 (CY/LF)	12.9 (CY/LF)	4.8 (CY/LF)	17.2 (CY/LF)	6.1 (CY/LF)
54"	9.7 (CY/LF)	5.1 (CY/LF)	14.1 (CY/LF)	5.8 (CY/LF)	18.8 (CY/LF)	7.3 (CY/LF)
60"	10.5 (CY/LF)	6.1 (CY/LF)	15.3 (CY/LF)	7.0 (CY/LF)	20.4 (CY/LF)	8.8 (CY/LF)
66"	11.3 (CY/LF)	7.3 (CY/LF)	16.5 (CY/LF)	8.4 (CY/LF)	22.0 (CY/LF)	10.5 (CY/LF)
72"	12.1 (CY/LF)	8.6 (CY/LF)	17.7 (CY/LF)	9.9 (CY/LF)	23.6 (CY/LF)	12.4 (CY/LF)
78"	12.9 (CY/LF)	10.0 (CY/LF)	18.9 (CY/LF)	11.5 (CY/LF)	25.2 (CY/LF)	14.5 (CY/LF)
84"	13.7 (CY/LF)	11.6 (CY/LF)	20.1 (CY/LF)	13.3 (CY/LF)	26.8 (CY/LF)	16.8 (CY/LF)
90"	14.5 (CY/LF)	13.3 (CY/LF)	21.3 (CY/LF)	15.3 (CY/LF)	28.4 (CY/LF)	19.3 (CY/LF)
96"	15.3 (CY/LF)	15.2 (CY/LF)	22.5 (CY/LF)	17.5 (CY/LF)	30.0 (CY/LF)	22.1 (CY/LF)
102"	16.1 (CY/LF)	17.2 (CY/LF)	23.7 (CY/LF)	19.8 (CY/LF)	31.6 (CY/LF)	25.0 (CY/LF)
108"	16.9 (CY/LF)	19.3 (CY/LF)	24.9 (CY/LF)	22.2 (CY/LF)	33.2 (CY/LF)	28.0 (CY/LF)
114"	17.7 (CY/LF)	21.5 (CY/LF)	26.1 (CY/LF)	24.7 (CY/LF)	34.8 (CY/LF)	31.2 (CY/LF)
120"	18.5 (CY/LF)	23.8 (CY/LF)	27.3 (CY/LF)	27.4 (CY/LF)	36.4 (CY/LF)	34.5 (CY/LF)
126"	19.3 (CY/LF)	26.2 (CY/LF)	28.5 (CY/LF)	30.2 (CY/LF)	38.0 (CY/LF)	38.0 (CY/LF)
132"	20.1 (CY/LF)	28.7 (CY/LF)	29.7 (CY/LF)	33.1 (CY/LF)	39.6 (CY/LF)	41.7 (CY/LF)
138"	20.9 (CY/LF)	31.3 (CY/LF)	30.9 (CY/LF)	36.2 (CY/LF)	41.2 (CY/LF)	45.6 (CY/LF)
144"	21.7 (CY/LF)	34.0 (CY/LF)	32.1 (CY/LF)	39.4 (CY/LF)	42.8 (CY/LF)	49.6 (CY/LF)

NOTE: REQUIREMENTS FOR RIPRAP SIZE, THICKNESS, AND FILTER BLANKET WILL BE DESIGNATED IN PLANS.

CITY OF NORTH BRANCH	2025 - STANDARD DETAIL
HAND PLACED RIP RAP AT RCP OUTLETS	DETAIL NO. STM-007
NO SCALE	

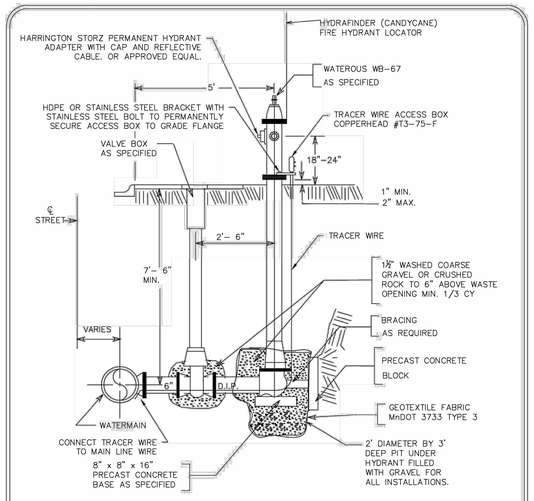
BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13019 FIRST STREET, BECKER, MN 55308-9322
TEL: 763.262.9822 FAX: 763.262.9844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

DETAILS

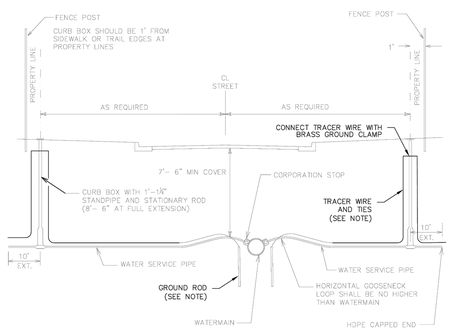
SHEET NO.
C9.3

N:\Projects Current\22-0030.03 Becker North Branch Plat\Civil\CAD Files\NB Cover\SWPPP.dwg
4/24/2025 3:14 PM



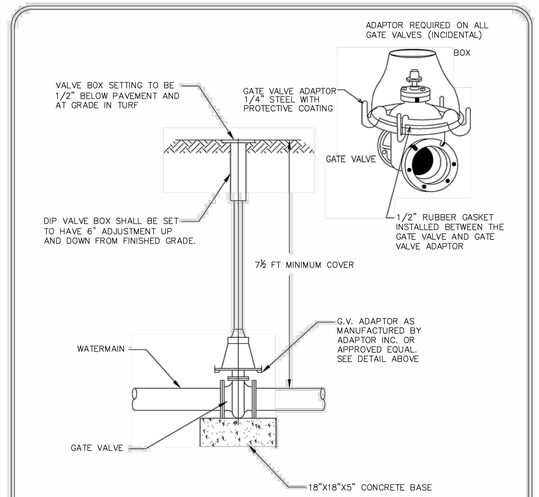
NOTE:
ALL HYDRANT LEADS SHALL BE TIED WITH ¾" GALVANIZED STEEL TIE RODS, EXTENDING FROM TEE TO VALVE AND FROM VALVE TO HYDRANT OR MEGA-LUG BRAND THRUST RETAINER GLANDS AT JOINTS (INCIDENTAL).

CITY OF NORTH BRANCH	CITY OF NORTH BRANCH TYPICAL HYDRANT ASSEMBLY INSTALLATION NO SCALE	2025 - STANDARD DETAIL DETAIL NO. WM-001



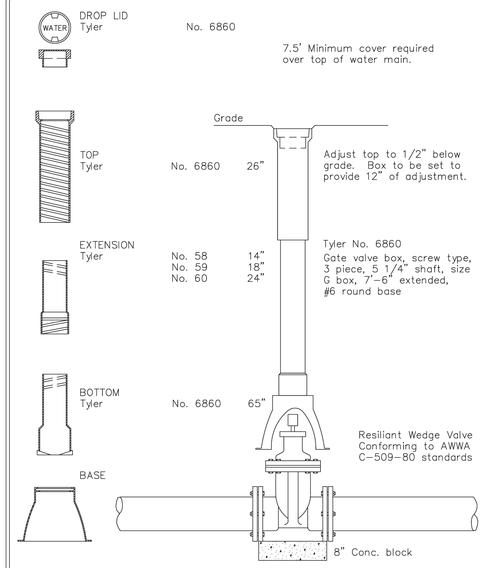
NOTES:
1. CURB BOXES INSTALLED IN AREAS WHERE BOULEVARD IS TO BE CUT AT A LATER DATE SHALL BE INSTALLED AT DEPTH REQUIRED, CURB BOX EXTENTION FOR BOXES EXCEEDING 7.5' IN LENGTH ARE TO BE BID AT CONTRACT PRICE AND SHALL INCLUDE STACK COUPLINGS, CONNECTIONS, ETC.
2. CURB BOX LOCATIONS SHALL BE MARKED WITH A STEEL FENCE POST PAINTED BLUE.
3. WATER SERVICE SHALL BE INSTALLED WITH A HORIZONTAL SEPARATION OF THREE FEET (3') FROM THE SANITARY SEWER SERVICE AND SHALL BE INSTALLED UPSTREAM OF THE SANITARY SEWER SERVICE.
4. CURB BOXES LOCATED IN A DRIVEWAY OR PARKING LOT SHALL BE COVERED WITH A FORD A-1 METER BOX COVER OR ENGINEER APPROVED EQUAL.
5. HDPE WATER SERVICES - INSTALL MAGNESIUM GROUNDING ANODE ROD, LOCATING WIRE, WIRE CONNECTORS, AND TIES PER SPECIFICATIONS.

CITY OF NORTH BRANCH	CITY OF NORTH BRANCH TYPICAL WATER SERVICE NO SCALE	2025 - STANDARD DETAIL DETAIL NO. WM-002



NOTES:
1. VALVE BOX INSERTS ARE NOT ALLOWED UNLESS APPROVED BY THE ENGINEER.
2. VALVE BOXES SHALL BE INSTALLED PLUMB AND SHALL ALLOW A 4" P.V.C. PIPE TO PASS ENTIRELY OVER THE GATE VALVE NUT AFTER INSTALLATION IS COMPLETE.
3. ALL VALVES SHALL BE TIED WITH 3/4" THREADED TIE RODS TO THE MAIN. MEGA LUGS MAY BE USED IN LIEU OF TIE RODS.
4. THE INITIAL & FINAL RAISING OF VALVE BOXES SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
5. ROCK BEDDING FOR DRAINAGE SHALL BE INSTALLED AT GATE VALVE, AS DIRECTED BY THE ENGINEER.

CITY OF NORTH BRANCH	CITY OF NORTH BRANCH VALVE BOX INSTALLATION NO SCALE	2025 - STANDARD DETAIL DETAIL NO. WM-003



CITY OF NORTH BRANCH	CITY OF NORTH BRANCH BUTTERFLY VALVE INSTALLATION NO SCALE	2025 - STANDARD DETAIL DETAIL NO. WM - 004

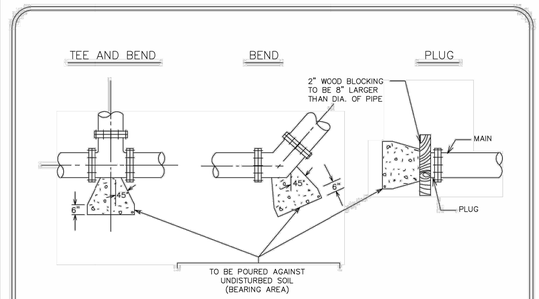
REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: DETAILS
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

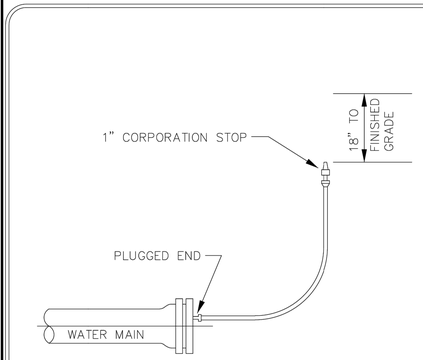
Signed: Christopher J. Dahn Lic. No. 58628
Date:



PIPE SIZE	BEARING AREA
6"	4.0 SQ. FT.
8"	6.0 "
10" – 12"	12.0 "
16"	20.0 "

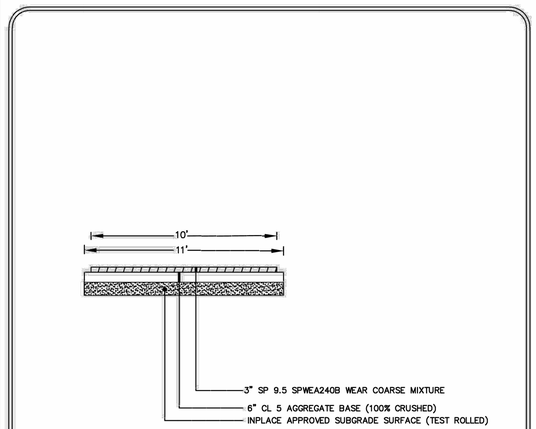
NOTE:
1. RETAINER GLANDS/MEGA LUGS ARE TO BE USED AS SPECIFIED AT ALL CHANGES IN DIRECTION, FITTINGS, AND VALVES.
2. THRUST BLOCKING TO BE USED FOR BENDS 22-1/2° AND OVER.
3. THRUST BLOCKING SHALL ONLY BE USED WHERE WORKING PRESSURES ARE LESS THAN 150 PSI.
4. COVER FITTINGS WITH POLYETHYLENE (4 MIL) PRIOR TO POURING CONCRETE.
5. CONCRETE SHALL HAVE 2500 PSI, 28 DAY STRENGTH.

CITY OF NORTH BRANCH	CITY OF NORTH BRANCH THRUST BLOCKING NO SCALE	2025 - STANDARD DETAIL DETAIL NO. WM-005



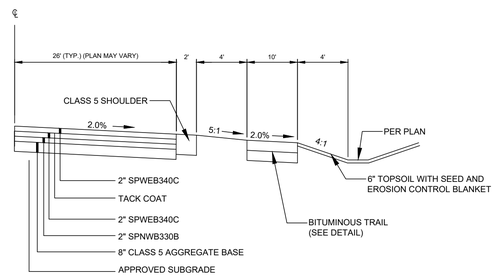
AFTER MEETING TEST REQUIREMENTS THE AIR BLEED LINE SHALL BE DISCONNECTED AT THE PLUG WITH NO ADDITIONAL COMPENSATION.

CITY OF NORTH BRANCH	CITY OF NORTH BRANCH AIR BLEED INSTALLATION DETAIL NO SCALE	2025 - STANDARD DETAIL DETAIL NO. WM - 007



10' WIDE TRAIL TYPICAL SECTION

CITY OF NORTH BRANCH	CITY OF NORTH BRANCH TYPICAL BITUMINOUS TRAIL NO SCALE	2025 - STANDARD DETAIL DETAIL NO. RDW - 011



TYPICAL COUNTY ROAD TURN LANE & REPLACEMENT
N.T.S.

BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13076 FIRST STREET | BECKER, MN 55308-9322
TEL: 763-261-4822 | FAX: 763-262-8844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

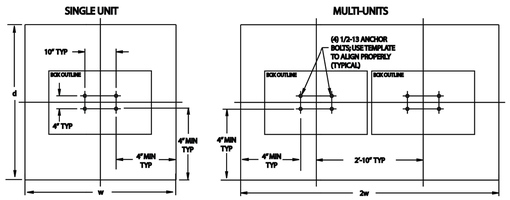
DETAILS

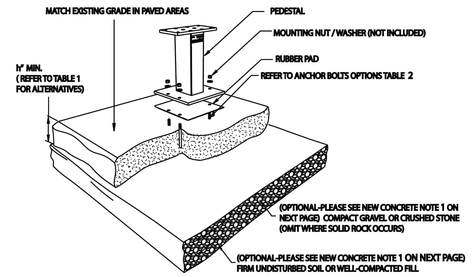
SHEET NO.
C9.4

N:\Projects Current\22-0030.02 Belden North Branch Plat\Civil\CAD Files\NB Cover\SWPPP.dwg
4/24/2025 3:14 PM

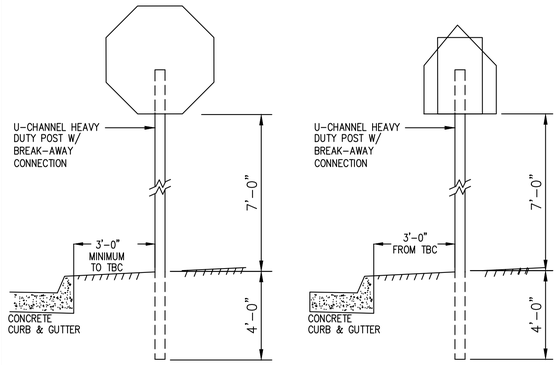
CONCRETE FOUNDATION PREPARATION (OR EQUAL)

vital™ cluster box unit - 1570 "F" Series

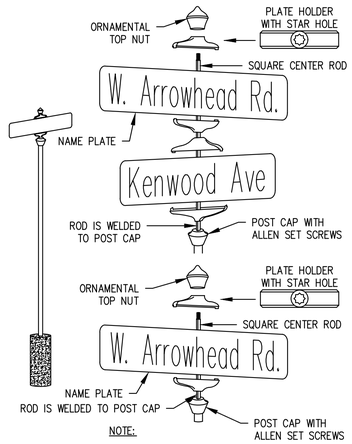




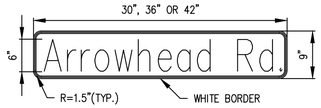
MAILBOX FOUNDATION
N.T.S.



TRAFFIC SIGNS
N.T.S.



NOTE:
SEE ASSEMBLY SPECIFICATIONS



NOTES:

LETTERS & NUMBERS SHALL BE SERIES 'C' 6" UPPER & LOWER CASE.

WHITE BORDER SHALL BE 3/8".

LEGEND

WHITE

GREEN

TRAFFIC SIGNS
N.T.S.



STREET LIGHTING
N.T.S.

REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: DETAILS
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn Lic. No. 58628

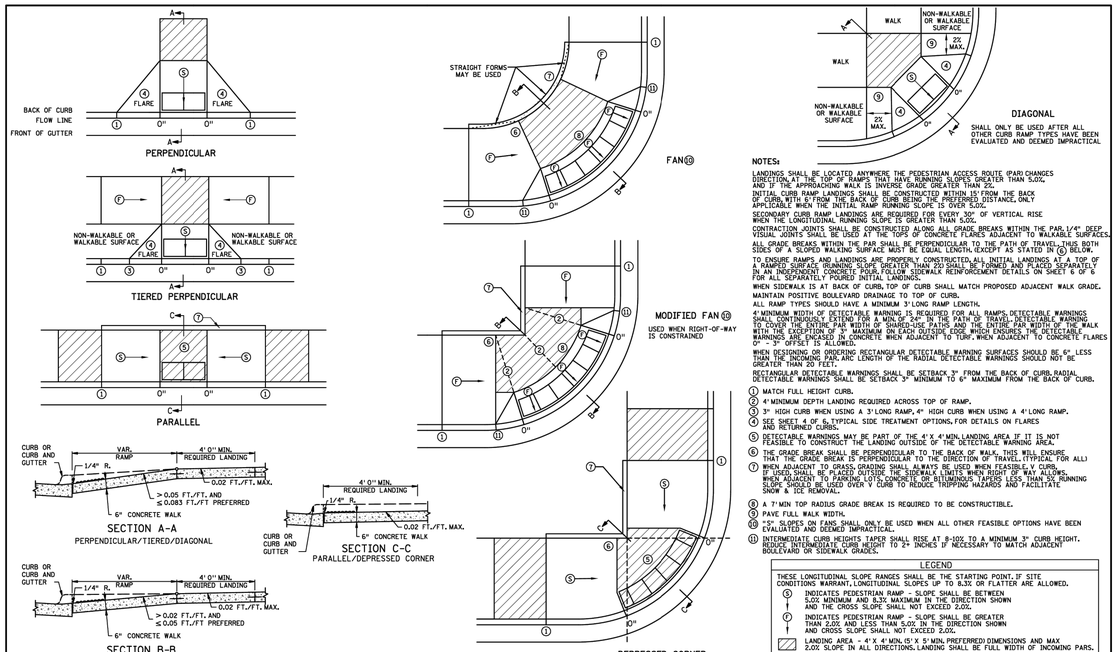
Date:

BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
1307B FIRST STREET, BECKER, MN 55308-9322
TEL: 763-261-4822 FAX: 763-262-8844

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

DETAILS

SHEET NO.
C9.5



NOTES:

1. LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.00%, AND IF THE APPROACHING WALK IS INVERSE GRADE GREATER THAN 2%.
2. INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE, ONLY APPLICABLE WHEN THE INITIAL RAMP RUNNING SLOPE IS OVER 5.00%.
3. SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL RUNNING SLOPE IS GREATER THAN 5.00%.
4. CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS WITHIN THE PAR, 1/4" DEEP VISUAL JOINTS SHALL BE USED AT THE TOPS OF CONCRETE FLARES ADJACENT TO WALKABLE SURFACES.
5. ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL, THUS BOTH SIDES OF A SLOPED WALKING SURFACE MUST BE EQUAL LENGTH, EXCEPT AS STATED IN (6) BELOW.
6. TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONSTRUCTED, ALL INITIAL LANDINGS AT A TOP OF A RAMPED SURFACE (RUNNING SLOPE GREATER THAN 2%) SHALL BE FORMED AND PLACED SEPARATELY IN AN INDEPENDENT CONCRETE POUR. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 OF 6 FOR ALL SEPARATELY POURED INITIAL LANDINGS.
7. WHEN SIDEWALK IS AT BACK OF CURB, TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.
8. MAINTAIN POSITIVE BOULEVARD DRAINAGE TO TOP OF CURB.
9. ALL RAMP TYPES SHOULD HAVE A MINIMUM 3'LONG RAMP LENGTH.
10. 4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MIN. OF 24" IN THE PATH OF TRAVEL. DETECTABLE WARNING TO COVER THE ENTIRE PAR WIDTH OF SHARED-USE PATHS AND THE ENTIRE PAR WIDTH OF THE WALK WITH THE EXCEPTION OF 3" MAXIMUM ON EACH OUTSIDE EDGE WHICH ENSURES THE DETECTABLE WARNINGS ARE ENCASED IN CONCRETE WHEN ADJACENT TO TURF, WHEN ADJACENT TO CONCRETE FLARES 0" ~ 3" OFFSET IS ALLOWED.
11. WHEN DESIGNING OR ORDERING RECTANGULAR DETECTABLE WARNING SURFACES SHOULD BE 6" LESS THAN THE INCOMING PAR, ARC LENGTH OF THE RADIAL DETECTABLE WARNINGS SHOULD NOT BE GREATER THAN 20 FEET.
12. RECTANGULAR DETECTABLE WARNINGS SHALL BE SETBACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB.

(1) MATCH FULL HEIGHT CURB.
(2) 4' MINIMUM DEPTH LANDING REQUIRED ACROSS TOP OF RAMP.
(3) 3" HIGH CURB WHEN USING A 3'LONG RAMP, 4" HIGH CURB WHEN USING A 4'LONG RAMP.
(4) SEE SHEET 4 OF 6 TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.
(5) DETECTABLE WARNINGS MAY BE PART OF THE 4' X 4' MIN. LANDING AREA IF IT IS NOT FEASIBLE TO CONSTRUCT THE LANDING OUTSIDE OF THE DETECTABLE WARNING AREA.
(6) THE GRADE BREAK SHALL BE PERPENDICULAR TO THE BACK OF WALK. THIS WILL ENSURE THAT THE GRADE BREAK IS PERPENDICULAR TO THE DIRECTION OF TRAVEL (TYPICAL FOR ALL)
(7) WHEN ADJACENT TO GRASS, GRADING SHALL ALWAYS BE USED WHEN FEASIBLE. V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. WHEN ADJACENT TO PARKING LOTS, CONCRETE OR BITUMINOUS TAPERS LESS THAN 5% RUNNING SLOPE SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.
(8) A 7' MIN TOP RADIUS GRADE BREAK IS REQUIRED TO BE CONSTRUCTIBLE.
(9) PAVE FULL WALK WIDTH.
(10) "5" SLOPES ON FANS SHALL ONLY BE USED WHEN ALL OTHER FEASIBLE OPTIONS HAVE BEEN EVALUATED AND DEEMED IMPRACTICAL.
(11) INTERMEDIATE CURB HEIGHTS TAPER SMALL RISE AT 8-10% TO A MINIMUM 3" CURB HEIGHT. REDUCE INTERMEDIATE CURB HEIGHT TO 2+ INCHES IF NECESSARY TO MATCH ADJACENT BOULEVARD OR SIDEWALK GRADES.

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

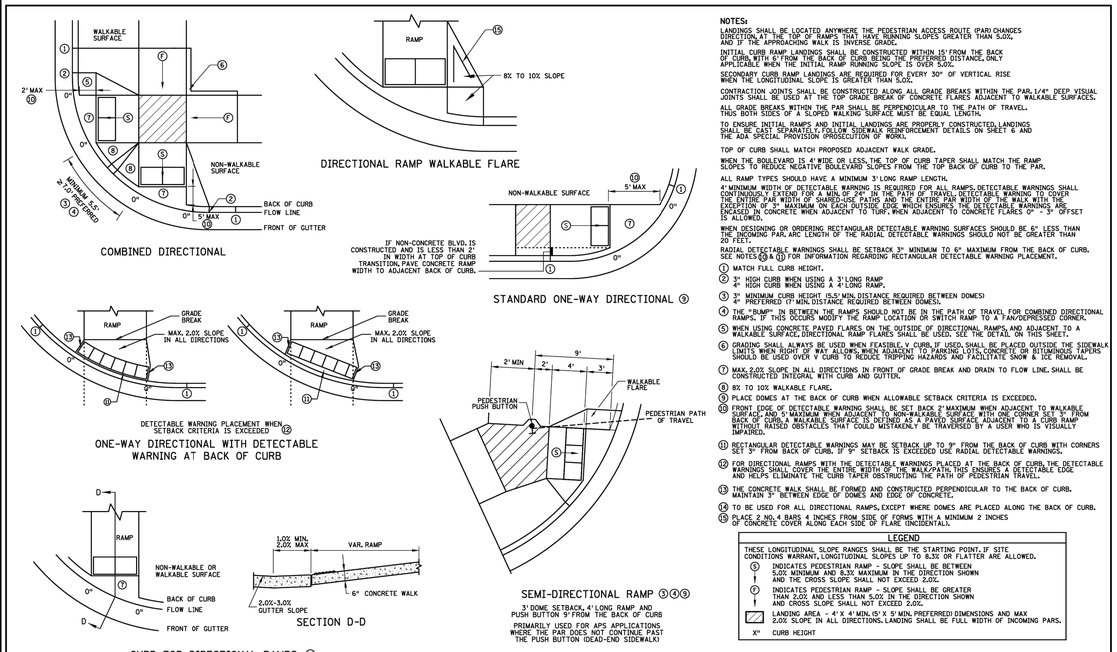
(S) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.00% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.
(F) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.

LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PARS.

X" CURB HEIGHT

REVISION:
APPROVED: 11-04-2021
OPERATIONS DIVISION

STANDARD PLAN 5-297.250	1 OF 6
APPROVED: 11-04-2021	PEDESTRIAN CURB RAMP DETAILS
REVISED:	
STATE PROJ. NO. (TH)	SHEET NO. OF SHEETS



NOTES:

LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.00%, AND IF THE APPROACHING WALK IS INVERSE GRADE.

INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE, ONLY APPLICABLE WHEN THE INITIAL RAMP RUNNING SLOPE IS OVER 5.00%.

SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS GREATER THAN 5.00%.

CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS WITHIN THE PAR, 1/4" DEEP VISUAL JOINTS SHALL BE USED AT THE TOP OF CONCRETE FLARES ADJACENT TO WALKABLE SURFACES.

ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL. THUS BOTH SIDES OF A SLOPED WALKING SURFACE MUST BE EQUAL LENGTH.

TO ENSURE INITIAL RAMPS AND INITIAL LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS SHALL BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 AND THE ADA SPECIAL PROVISION (PROSECUTION OF WORK).

TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.

WHEN THE BOULEVARD IS 4' WIDE OR LESS, THE TOP OF CURB TAPER SHALL MATCH THE RAMP SLOPES TO REDUCE NEGATIVE BOULEVARD SLOPES FROM THE TOP BACK OF CURB TO THE PAR.

ALL RAMP TYPES SHOULD HAVE A MINIMUM 3'LONG RAMP LENGTH.

4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MIN. OF 24" IN THE PATH OF TRAVEL. DETECTABLE WARNING TO COVER THE ENTIRE PAR WIDTH OF SHARED-USE PATHS AND THE ENTIRE PAR WIDTH OF THE WALK WITH THE EXCEPTION OF 3" MAXIMUM ON EACH OUTSIDE EDGE WHICH ENSURES THE DETECTABLE WARNINGS ARE ENCASED IN CONCRETE WHEN ADJACENT TO TURF. WHEN ADJACENT TO CONCRETE FLARES 0" ~ 3" OFFSET IS ALLOWED.

WHEN DESIGNING OR ORDERING RECTANGULAR DETECTABLE WARNING SURFACES SHOULD BE 6" LESS THAN THE INCOMING PAR, ARC LENGTH OF THE RADIAL DETECTABLE WARNINGS SHOULD NOT BE GREATER THAN 20 FEET.

RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB. SEE NOTES (10) & (11) FOR INFORMATION REGARDING RECTANGULAR DETECTABLE WARNING PLACEMENT.

(1) MATCH FULL CURB HEIGHT.
(2) 5" HIGH CURB WHEN USING A 3'LONG RAMP. 4" HIGH CURB WHEN USING A 4'LONG RAMP.
(3) 3" MINIMUM CURB HEIGHT (5.0' MIN. DISTANCE REQUIRED BETWEEN DOMES) 4" PREFERRED (7' MIN. DISTANCE REQUIRED BETWEEN DOMES).
(4) THE "BUMP" IN BETWEEN THE RAMPS SHOULD NOT BE IN THE PATH OF TRAVEL FOR COMBINED DIRECTIONAL RAMPS. IF THIS OCCURS MODIFY THE RAMP SLOPE OR SWITCH RAMP TO A FAN/DEPRESSED CORNER.
(5) WHEN USING CONCRETE PAVED FLARES ON THE OUTSIDE OF DIRECTIONAL RAMPS AND ADJACENT TO A WALKABLE SURFACE, DIRECTIONAL RAMP FLARES SHALL BE USED. SEE THE DETAIL ON THIS SHEET.
(6) GRADING SHALL ALWAYS BE USED WHEN FEASIBLE. V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. WHEN ADJACENT TO PARKING LOTS, CONCRETE OR BITUMINOUS TAPERS SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.
(7) MAX 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK AND DRAIN TO FLOW LINE. SHALL BE CONSTRUCTED INTEGRAL WITH CURB AND GUTTER.
(8) 8% TO 10% WALKABLE FLARE.
(9) PLACE DOMES AT THE BACK OF CURB WHEN ALLOWABLE SETBACK CRITERIA IS EXCEEDED.
(10) FRONT EDGE OF DETECTABLE WARNING SHALL BE SET BACK 2" MAXIMUM WHEN ADJACENT TO WALKABLE SURFACE AND 6" MAXIMUM WHEN ADJACENT TO TURF, WITH ONE CORNER SET 9" FROM BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE USED AS A RAISED SURFACE ADJACENT TO A CROSSWALK WITHOUT RAISED OBSTACLES THAT COULD BE TRAVERSED BY A USER WHO IS VISUALLY IMPAIRED.
(11) RECTANGULAR DETECTABLE WARNINGS MAY BE SETBACK UP TO 9" FROM THE BACK OF CURB WITH CORNERS SET 3" FROM BACK OF CURB. IF 9" SETBACK IS EXCEEDED USE RADIAL DETECTABLE WARNINGS.
(12) FOR DIRECTIONAL RAMPS WITH THE DETECTABLE WARNINGS PLACED AT THE BACK OF CURB, THE DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH OF THE PATH OF TRAVEL. THIS PROVIDES A DETECTABLE EDGE AND HELPS ELIMINATE THE CURB RAMP OBSTRUCTING THE PATH OF PEDESTRIAN TRAVEL.
(13) THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE BACK OF CURB. MAINTAIN 3" BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.
(14) TO BE USED FOR ALL DIRECTIONAL RAMPS, EXCEPT WHERE DOMES ARE PLACED ALONG THE BACK OF CURB.
(15) PLACE 2 NO. 4 BARS 4 INCHES FROM SIDE OF RAMPS WITH A MINIMUM 2 INCHES OF CONCRETE COVER ALONG EACH SIDE OF FLARE (INCIDENTAL).

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

(S) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.00% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.
(F) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.

LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PARS.

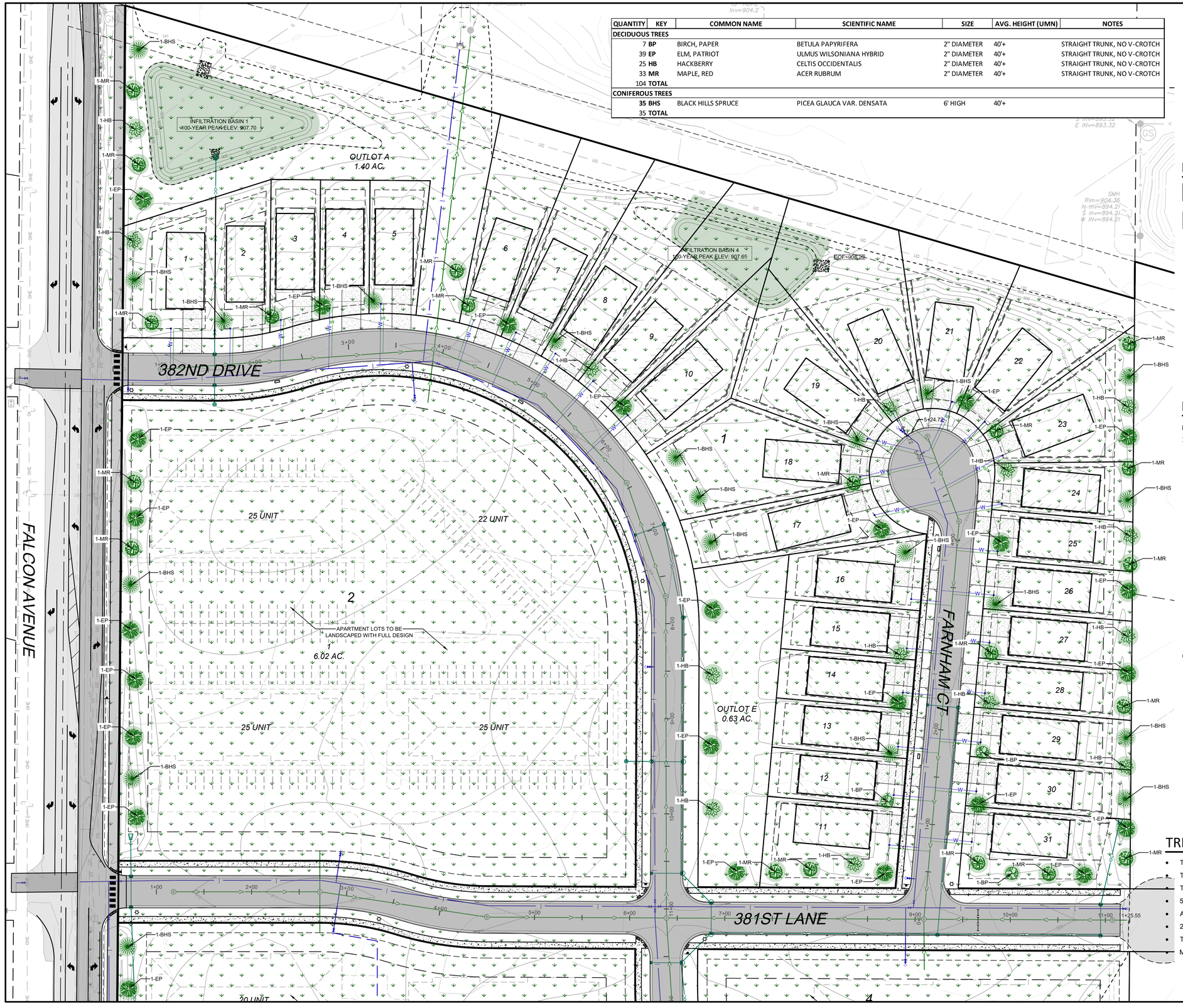
X" CURB HEIGHT

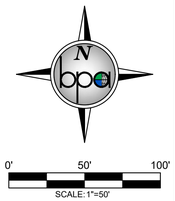
REVISION:
APPROVED: 11-04-2021
OPERATIONS DIVISION

STANDARD PLAN 5-297.250	2 OF 6
APPROVED: 11-04-2021	PEDESTRIAN CURB RAMP DETAILS
REVISED:	
STATE PROJ. NO. (T.H.)	SHEET NO. OF SHEETS

N:\Projects Current\22-0030.02 Bethel- North Branch Plat\Civil\CAD Files\NB Cover\SW999.dwg
4/24/2025 3:14 PM

QUANTITY	KEY	COMMON NAME	SCIENTIFIC NAME	SIZE	AVG. HEIGHT (UMN)	NOTES
DECIDUOUS TREES						
7	**BP**	BIRCH, PAPER	BETULA PAPYRIFERA	2" DIAMETER	40'+	STRAIGHT TRUNK, NO V-CROTCH
39	**EP**	ELM, PATRIOT	ULMUS WILSONIANA HYBRID	2" DIAMETER	40'+	STRAIGHT TRUNK, NO V-CROTCH
25	**HB**	HACKBERRY	CELTIS OCCIDENTALIS	2" DIAMETER	40'+	STRAIGHT TRUNK, NO V-CROTCH
33	**MR**	MAPLE, RED	ACER RUBRUM	2" DIAMETER	40'+	STRAIGHT TRUNK, NO V-CROTCH
104	**TOTAL**					
CONIFEROUS TREES						
35	**BHS**	BLACK HILLS SPRUCE	PICEA GLAUCA VAR. DENSATA	6' HIGH	40'+	
35	**TOTAL**					





LEGEND:

- PROPOSED BITUMINOUS PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED TURF ESTABLISHMENT
- PROPOSED INFILTRATION SEED EST.
- PROPOSED DECIDUOUS TREE
- PROPOSED CONIFEROUS TREE
- PROPOSED SHRUB

LANDSCAPE REQUIREMENTS:

PER CITY OF NORTH BRANCH ZONING ORDINANCE:
ALL LANDSCAPING INCORPORATED IN SAID PLAN SHALL CONFORM TO THE FOLLOWING STANDARDS AND CRITERIA:

A. ALL PLANTS MUST AT LEAST EQUAL THE FOLLOWING MINIMUM SIZE:

	POTTED/BARE ROOT OR BALLED & BURLAPPED
SHADE TREES	2-INCH DIAMETER
HALF TREES	1-1/2 INCH DIAMETER
EVERGREEN	6 FEET HIGH
TALL SHRUBS & HEDGE MAT.	6 FEET HIGH
LOW SHRUBS - DECIDUOUS	24 - 30 INCHES
-EVERGREEN	24 - 30 INCHES
-SPREADING EVERGREENS	18 - 24 INCHES

B. LANDSCAPE GUARANTEE: ALL NEW PLANTS SHALL BE GUARANTEED FOR TWO (2) FULL YEARS FROM THE TIME PLANTING HAS BEEN COMPLETED. ALL PLANTS SHALL BE ALIVE AND IN SATISFACTORY GROWTH AT THE END OF THE GUARANTEE PERIOD OR BE REPLACED.

(SEE CITY ORDINANCE FOR FULL REQUIREMENTS)

LANDSCAPE NOTES:

1. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED AND VEGETATED AS SOON AS POSSIBLE. ANY FINISHED AREAS SHALL BE SEEDED AND MULCHED WITHIN 7 DAYS AFTER FINISHED GRADING IS COMPLETED IN ACCORDANCE TO MN/DOT 2575.
2. PLANTING SOIL SHALL CONSIST 1:1:1 CONSISTING OF 33% SELECT LOAMY TOPSOIL, 33% PEAT MOSS, 33% PIT RUN SAND.
3. ALL DISTURBED AREAS SHALL BE REVEGETATED WITH MN/DOT SEED MIX, MULCHED, & DISK ANCHORED, PER THE FOLLOWING SCHEDULE:

SEED MIX 25-131: 220 LB/AC.
INFILTRATION BASIN SEED MIX 33-261: 35 LB/AC.
MULCH TYPE 3: 2 TONS/AC.

TREE PRESERVATION NOTES:

- TREE REMOVAL AREA: 4.17 ACRES
- TREE PRESERVATION AREA: 0.04 ACRES
- TREE PRESERVATION %: 1%
- 50% OF TREE REMOVAL AREA: 2.08 ACRES
- ASSUMPTIONS FOR REPLACEMENT: 500 S.F. OF COVERAGE PER TREE
- 2.08 ACRES / 500 S.F. 182 TREES TO BE REPLACED
- TREES PROPOSED: 139
- MISSING TREES TO BE PAID: 43

REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: EROSION
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn Lic. No. 58628
Date:

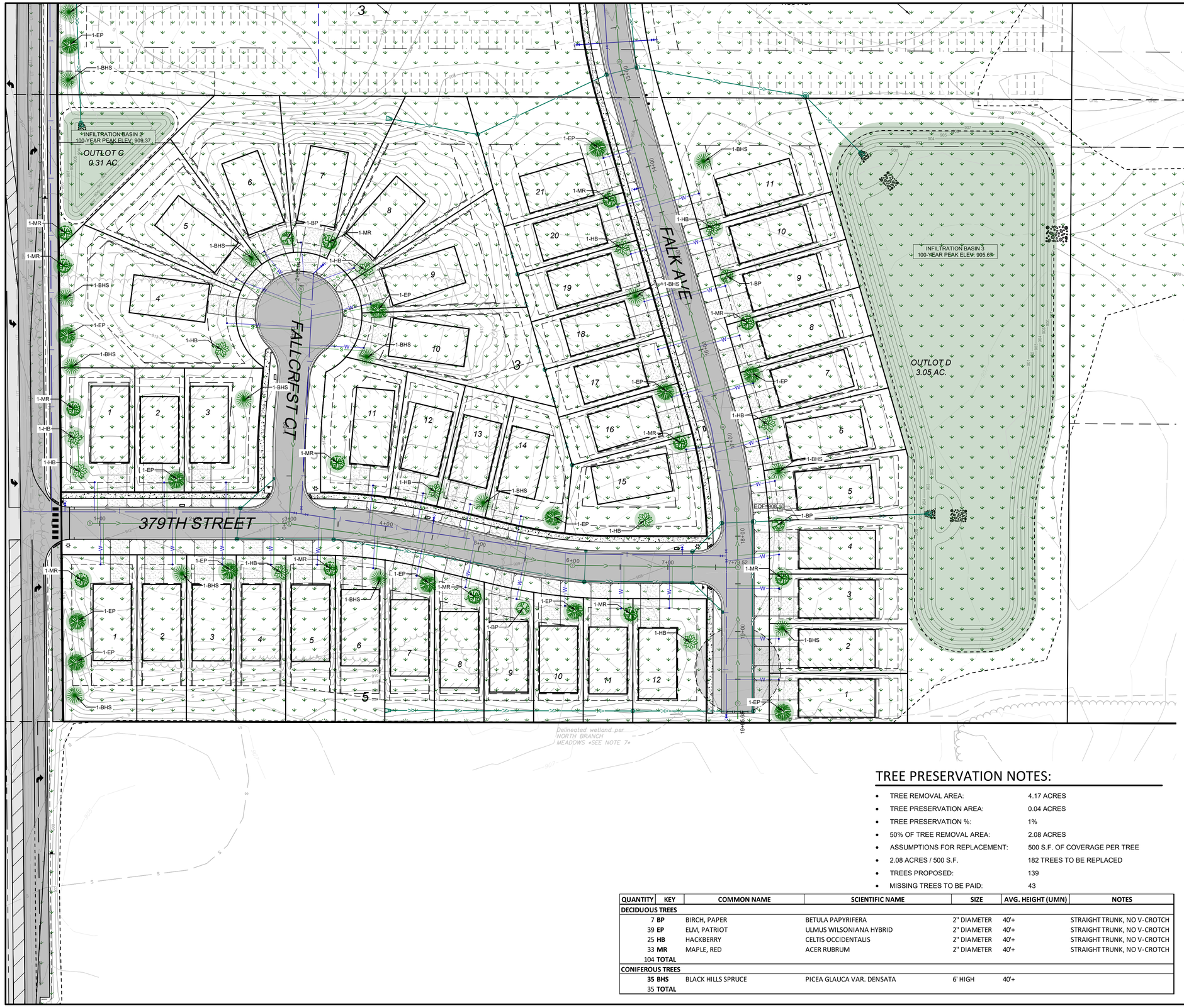
BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13179 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-262-9622 FAX: 763-262-9644

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

NORTH LANDSCAPE PLAN

SHEET NO.
C10.1

4/24/2025 3:16 PM N:\Projects Current\22-0030.02 Bebber North Branch Plat\Civil\CAD Files\NB Landscape.dwg



LEGEND:

- PROPOSED BITUMINOUS PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED TURF ESTABLISHMENT
- PROPOSED INFILTRATION SEED EST.
- PROPOSED DECIDUOUS TREE
- PROPOSED CONIFEROUS TREE
- PROPOSED SHRUB

LANDSCAPE REQUIREMENTS:

PER CITY OF NORTH BRANCH ZONING ORDINANCE:
ALL LANDSCAPING INCORPORATED IN SAID PLAN SHALL CONFORM TO THE FOLLOWING STANDARDS AND CRITERIA:

A. ALL PLANTS MUST AT LEAST EQUAL THE FOLLOWING MINIMUM SIZE:

	POTTED/BARE ROOT OR BALLED & BURLAPPED
SHADE TREES	2-INCH DIAMETER
HALF TREES	1-1/2 INCH DIAMETER
EVERGREEN	6 FEET HIGH
TALL SHRUBS & HEDGE MAT.	6 FEET HIGH
LOW SHRUBS - DECIDUOUS -EVERGREEN -SPREADING EVERGREENS	24 - 30 INCHES 24 - 30 INCHES 18 - 24 INCHES

B. LANDSCAPE GUARANTEE: ALL NEW PLANTS SHALL BE GUARANTEED FOR TWO (2) FULL YEARS FROM THE TIME PLANTING HAS BEEN COMPLETED. ALL PLANTS SHALL BE ALIVE AND IN SATISFACTORY GROWTH AT THE END OF THE GUARANTEE PERIOD OR BE REPLACED.

(SEE CITY ORDINANCE FOR FULL REQUIREMENTS)

TREE PRESERVATION NOTES:

- TREE REMOVAL AREA: 4.17 ACRES
- TREE PRESERVATION AREA: 0.04 ACRES
- TREE PRESERVATION %: 1%
- 50% OF TREE REMOVAL AREA: 2.08 ACRES
- ASSUMPTIONS FOR REPLACEMENT: 500 S.F. OF COVERAGE PER TREE
- 2.08 ACRES / 500 S.F. 182 TREES TO BE REPLACED
- TREES PROPOSED: 139
- MISSING TREES TO BE PAID: 43

QUANTITY	KEY	COMMON NAME	SCIENTIFIC NAME	SIZE	AVG. HEIGHT (UMN)	NOTES
DECIDUOUS TREES						
7	**BP**	BIRCH, PAPER	BETULA PAPYRIFERA	2" DIAMETER	40'+	STRAIGHT TRUNK, NO V-CROTCH
39	**EP**	ELM, PATRIOT	ULMUS WILSONIANA HYBRID	2" DIAMETER	40'+	STRAIGHT TRUNK, NO V-CROTCH
25	**HB**	HACKBERRY	CELTIS OCCIDENTALIS	2" DIAMETER	40'+	STRAIGHT TRUNK, NO V-CROTCH
33	**MR**	MAPLE, RED	ACER RUBRUM	2" DIAMETER	40'+	STRAIGHT TRUNK, NO V-CROTCH
104	**TOTAL**					
CONIFEROUS TREES						
35	**BHS**	BLACK HILLS SPRUCE	PICEA GLAUCA VAR. DENSATA	6' HIGH	40'+	
35	**TOTAL**					

LANDSCAPE NOTES:

1. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED AND VEGETATED AS SOON AS POSSIBLE. ANY FINISHED AREAS SHALL BE SEEDED AND MULCHED WITHIN 7 DAYS AFTER FINISHED GRADING IS COMPLETED IN ACCORDANCE TO MN/DOT 2575.
2. PLANTING SOIL SHALL CONSIST 1:1:1 CONSISTING OF 33% SELECT LOAMY TOPSOIL, 33% PEAT MOSS, 33% PIT RUN SAND.
3. ALL DISTURBED AREAS SHALL BE REVEGETATED WITH MN/DOT SEED MIX, MULCHED, & DISK ANCHORED, PER THE FOLLOWING SCHEDULE:

SEED MIX 25-131: 220 LB/AC.
INFILTRATION BASIN SEED MIX 33-261: 35 LB/AC.
MULCH TYPE 3: 2 TONS/AC.

REV NO.	DATE	DESCRIPTION
1	04/01/2025	REVISION PER CITY REVIEW
2	04/24/2025	REVISION PER CITY REVIEW

DATE: 04/24/2025
DESIGN BY: MJM
DRAWN BY: MJM
CHECKED BY: CJD
DWG FILE: EROSION
FILE NO.: 22-0030.00

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.

NOT FOR CONSTRUCTION

Signed: Christopher J. Dahn Lic. No. 58628
Date:

BOGART, PEDERSON & ASSOCIATES, INC.
LAND SURVEYING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
13079 FIRST STREET, BECKER, MN 55308-9322
TEL: 763-262-9622 FAX: 763-262-9644

CEDAR RIDGE COMMUNITY LLC
CEDAR RIDGE COMMUNITY
City of North Branch, Chisago County, MN

SOUTH LANDSCAPE PLAN

SHEET NO.
C10.2

4/24/2025 3:15 PM N:\Projects Current\22-0030.02 Belcher North Branch Pixel Civil\CAD Files\NB Landscape.dwg

Proposed Development

PTOS Comp Plan
Cedar Ridge Community

CITY OF NORTH BRANCH EST. 1881

- Proposed Development
- 1/2 Mile Service Area Adjusted
- Community Playfield
- Natural Resource Area
- Neighborhood Park
- Regional
- Public Waters
- Streams/Ditches
- Conceptual Open Space/Wildlife Corridor
- Existing Sidewalks
- Existing Trails

N

Disclaimer:
The data on this map is provided "as is" and does not represent a survey. NO liability is assumed to accuracy of the data delineated hereon.

City of North Branch
Staff Report

Prepared By: Nathan Sondrol, Community Development Director

Presenter: Nathan Sondrol, Community Development Director

Date: 05/01/2025

Board & Commission: Parks, Trails and Open Space Commission

Subject: Northwood Park - Outdoor Recreation Grant - Landscaping

---

Background

The City of North Branch submitted an application to the MnDNR Outdoor Recreation Grant program for 4 pickleball courts, accessible paths, site amenities, playground resurfacing and associated landscaping in Northwood Park in March 2023 for a total project cost of $280,000. The City was notified that it received a $140,000 grant to complete the project with the remaining $140,000. The grant funds are reimbursed after the improvements have been completed. The original application included a landscaping budget item of $15,000. City staff is in the process of obtaining cost estimates for tree plantings for screening for the park and is placing this as a discussion item for the meeting.

Requested Action:

To recommend approval of the low quote for the landscaping at Northwood Park not to exceed the budgeted limits $15,000 amount of the grant with the funds coming from the park dedication fund (50%) and the DNR Grant (50%)

Voting Requirements:

Voting Options **Simple Majority**

City of North Branch
Staff Report

Prepared By: Nathan Sondrol, Community Development Director

Presenter: Nathan Sondrol, Community Development Director

Date: 05/01/2025

Board & Commission: Parks, Trails and Open Space Commission

Subject: Flink Ave Trail Phase II - MNDOT AT Grant - Approve Plan and Specs and Authorize advertising for Bids

---

Introduction

The City Council approved Resolution R-5-2024 in February 2024 authorizing City staff to submit an application to the MnDOT Active Transportation (AT) Grant Program for the Flink Ave Trail Phase II Improvement Project. The Flink Ave Phase II Improvement project consist of the construction of a 10' wide trail located on the west side of Flink Ave from 392nd Street to the existing pedestrian network located on the north side of the entrance to the North Branch Marketplace development.

The City was notified in May 2024 that the proposed project was selected for MnDOT Active Transportation Program Funds in the amount of $574,332 for infrastructure improvements for the project. Engineering expenditures were not considered eligible expenses for the grant. The City Council budgeted for this in 2024 and approved the carryover of $100,000 to the 2025 budget for engineering expenses for the project at the January 14, 2025 meeting.

The City Council approved a resolution authorizing WSB to provide engineering & construction inspection services for the project on January 28, 2025, based on the following schedule.

Data collection & topographic survey .....January 2025
60% plan submittal .....February 28, 2025
90% plan submittal .....March 14, 2025
100% plan submittal & State Aid review .....April 11, 2025
Wetland delineation .....Late April /Early May 2025
Bid opening ..... May 28, 2025
Award contract for construction..... June 10, 2025
Begin construction .....June 2025

Project closeout .....December 2025

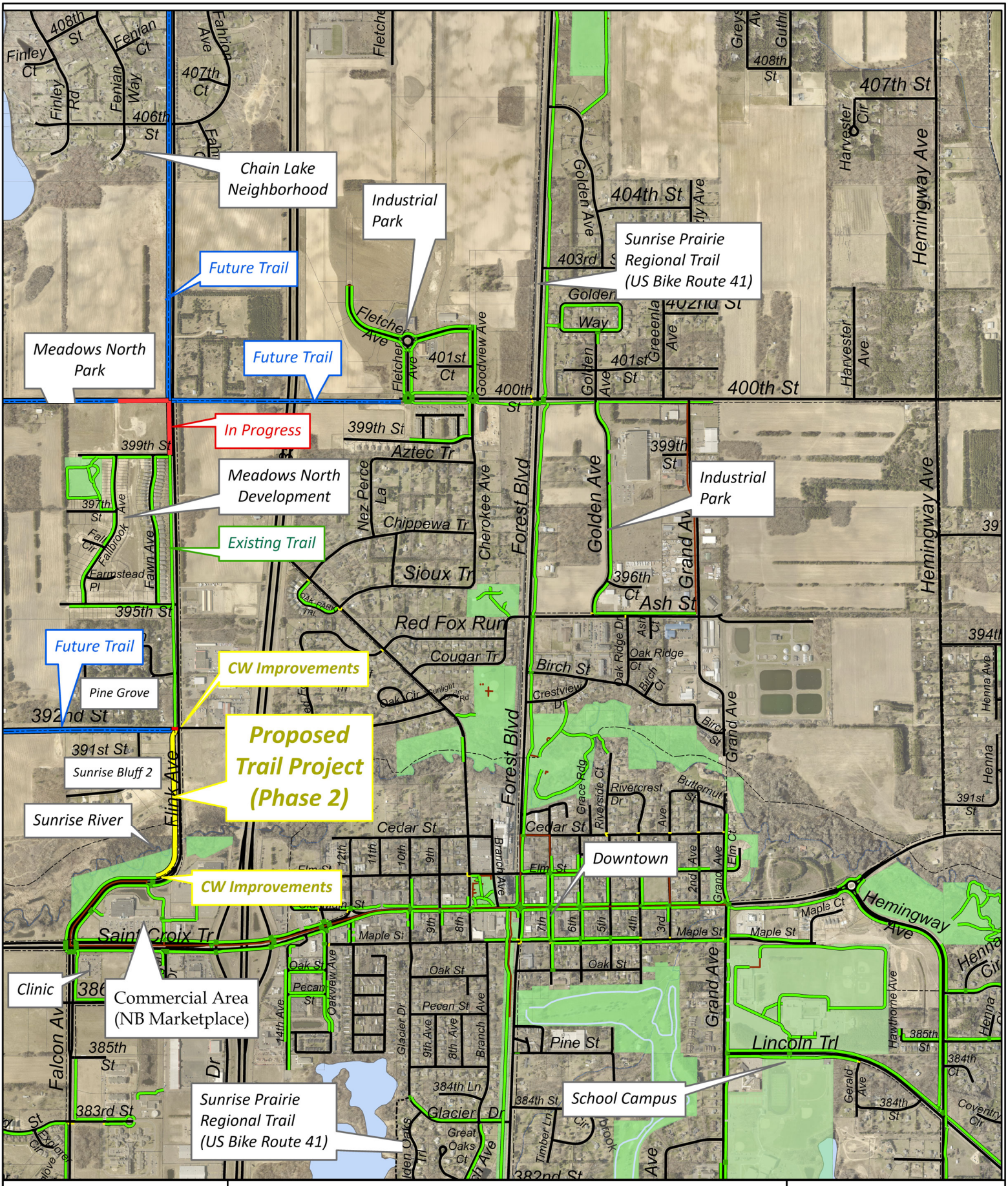
Deadline: May 5, 2025

REQUESTED ACTION
Recommend approval to approve the plans and specs and authorize advertising for bids.

Voting Requirements: Majority vote.
Attachments:
1. Project Location Map
2. Plans and Specs

Voting Requirements:

Voting Options **Simple Majority**



Proposed Trail
In Progress
Existing Facilities
Future Trail

Flink Ave Trail Project Phase II
392nd St - NB Marketplace
North Branch - Chisago County, MN

Project Location Map

CITY OF NORTH BRANCH

Date: Nov 30, 2023

Scale: 1":1,500'

MINNESOTA DEPARTMENT OF TRANSPORTATION
CITY OF NORTH BRANCH

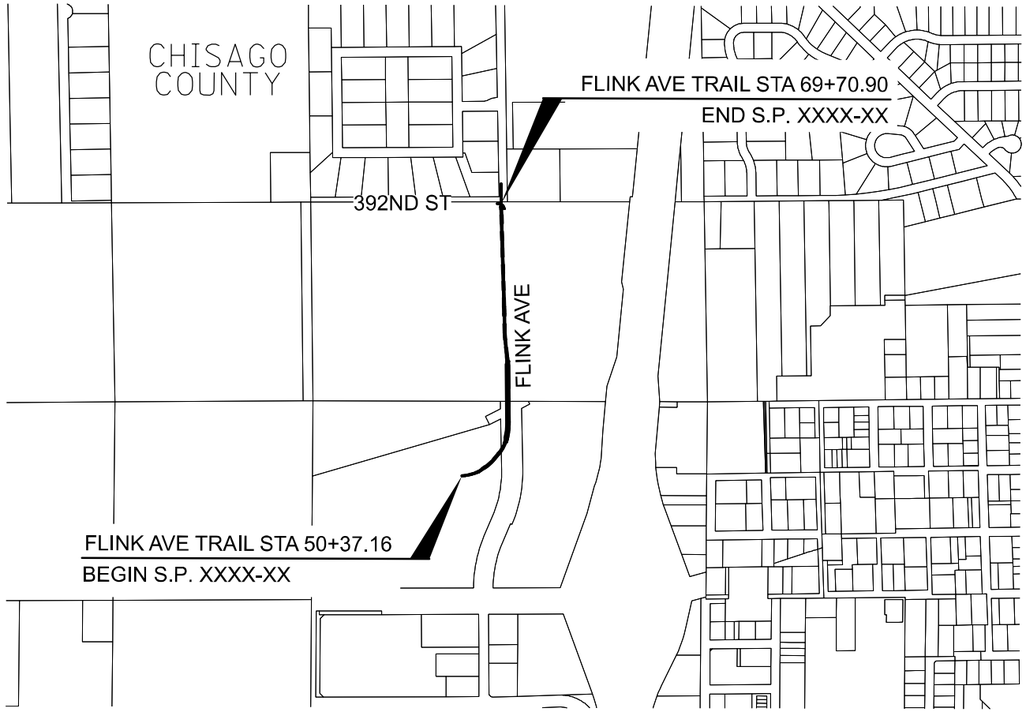
CONSTRUCTION PLAN FOR TRAIL, RETAINING WALL AND ADA IMPROVEMENTS

LOCATED ON FLINK AVE FROM 760' NORTH OF TH 95 TO 2790' NORTH OF TH 95

STATE PROJ. NO. XXXX-XXX (FLINK AVE)

GROSS LENGTH	2033.00	FEET	0.385	MILES
BRIDGES-LENGTH		FEET		MILES
EXCEPTIONS-LENGTH		FEET		MILES
NET LENGTH	2033.00	FEET	0.385	MILES
REF. POINT	000+00.000	TO REF. POINT	000+00.000	

LENGTH AND DESCRIPTION BASED ON THE TRAIL_CL ALIGNMENT



SCALES

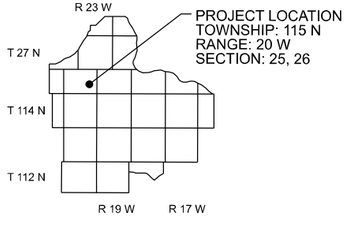
PLAN	50'	
PROFILE	50' HORIZ.	5' VERT.
INDEX MAP	1000'	
GENERAL LAYOUT	100'	

TRAIL DESIGN DESIGNATION:

DESIGN SPEED (MPH) 20

BASED ON 4.5 FT HEIGHT OF EYE

0.0 FT HEIGHT OF OBJECT



PLAN REVISIONS		
DATE	SHEET NO.	APPROVER

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-22, ENTITLED "STANDARD GUIDELINES FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES."



PROJECT LOCATION
COUNTY: CHISAGO
DISTRICT: 10

FOR PLANS AND UTILITIES SYMBOLS SEE INPLACE TOPOGRAPHY & UTILITY PLAN

STATE PROJ. NO. S.P. XXXX-XXX

CHARGE IDENTIFIER

FED. PROJ. NO.

GOVERNING SPECIFICATIONS

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL LAYOUT
3-4	ESTIMATED QUANTITIES
5	QUANTITY TABULATIONS
XX-XX	EARTHWORK SUMMARY & TABULATIONS
6	SOILS & CONSTRUCTION NOTES
7-8	TYPICAL SECTIONS
9	MISCELLANEOUS DETAILS
10	STANDARD PLAN & PLATES
11-12	ALIGNMENT PLAN & TABULATIONS
13-14	REMOVAL AND INPLACE UTILITIES PLAN
15-18	CONSTRUCTION & PROFILE PLAN
19	PEDESTRIAN RAMP DETAILS
20	RETAINING WALL PLAN
XX-XX	DRAINAGE PLAN
XX-XX	DRAINAGE PROFILES & TABULATIONS
XX-XX	DRAINAGE DETAILS
XX-XX	CONTOUR PLAN
21-23	EROSION CONTROL & TURF ESTABLISHMENT CROSS SECTIONS

THIS PLAN CONTAINS 23 SHEETS

ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITHIN THE CONSTRUCTION OF THIS PROJECT.

wsb

SIGNATURE: PRINTED NAME:

DESIGN ENGINEER: I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION, AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE: 4/25/2025 LICENSE NUMBER:

APPROVED
NORTH BRANCH CITY ENGINEER

DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE AID RULES

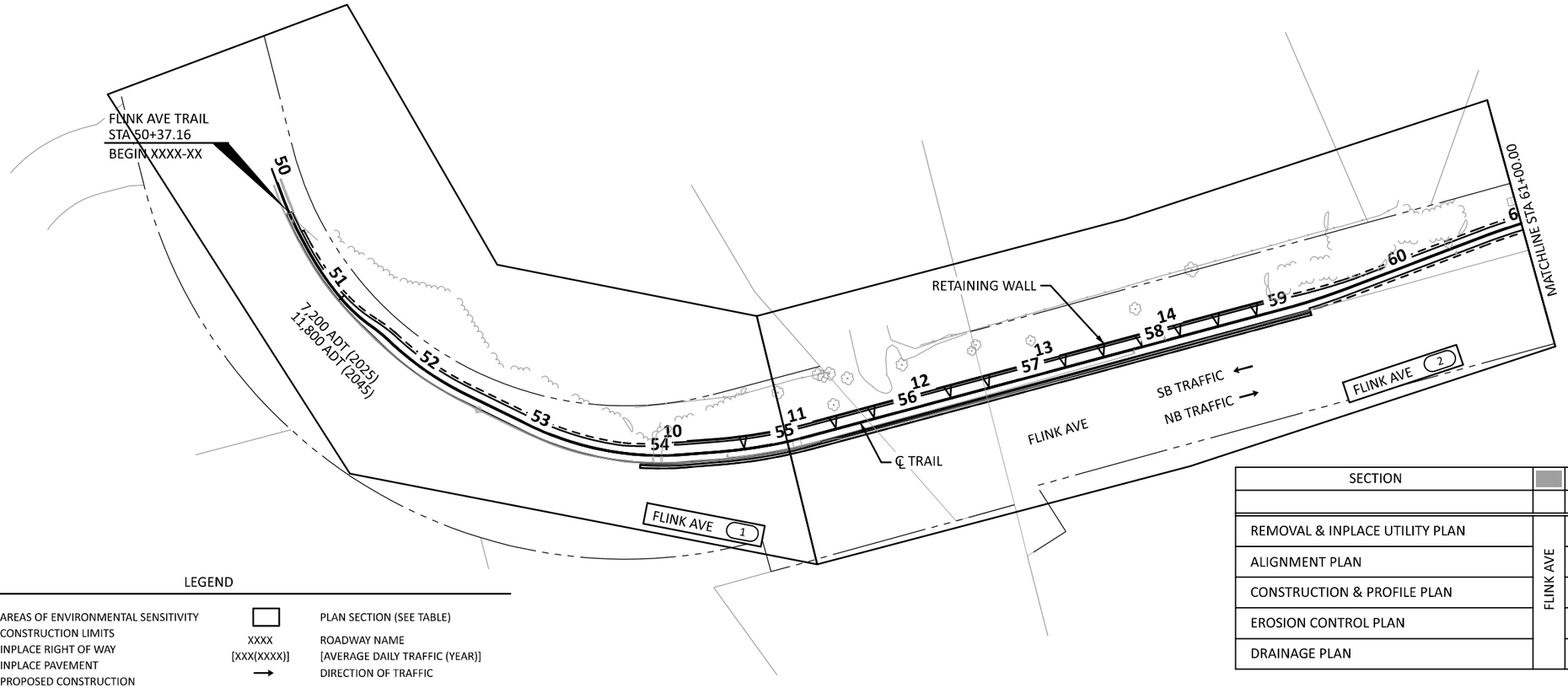
FOR STATE AID ENGINEER: APPROVED FOR STATE AID FUNDING

OFFICE OF LAND MANAGEMENT APPROVAL
DIRECTOR, LAND MANAGEMENT

APPROVED
STATE DESIGN ENGINEER

SP XXXX-XX (FLINK AVE) SHEET NO. 1 OF 23 SHEETS

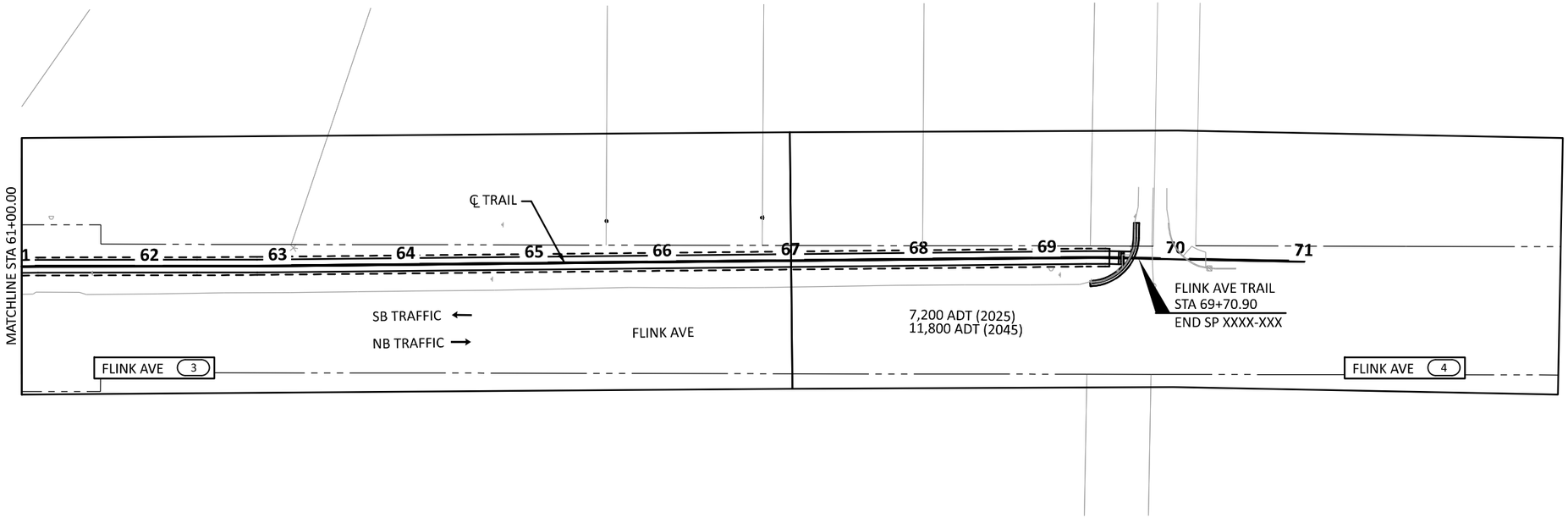
Date Printed: 4/25/2025
WSB Filename: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-100tsh-001.dgn



LEGEND

- AREAS OF ENVIRONMENTAL SENSITIVITY
- CONSTRUCTION LIMITS
- INPLACE RIGHT OF WAY
- INPLACE PAVEMENT
- PROPOSED CONSTRUCTION
- PLAN SECTION (SEE TABLE)
- XXXX ROADWAY NAME
- [XXX(XXXX)] [AVERAGE DAILY TRAFFIC (YEAR)]
- DIRECTION OF TRAFFIC

SECTION		1	2	3	4
		PLAN SHEET INDEX PER SECTION			
REMOVAL & INPLACE UTILITY PLAN	FLINK AVE	13	14		
ALIGNMENT PLAN		11	12		
CONSTRUCTION & PROFILE PLAN		15	16	17	18
EROSION CONTROL PLAN		22	23		
DRAINAGE PLAN		DR1	DR2		



DRAWN BY:
DESIGNED BY:
CHECKED BY:

I HEREBY CERTIFY THAT THIS SHEET 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.

NOT APPROVED FOR CONSTRUCTION

SIGNATURE:
PRINTED NAME:
DATE: LIC. NO.

wsb

MINNESOTA DEPARTMENT OF TRANSPORTATION
FLINK AVE TRAIL
NORTH BRANCH, CHISAGO COUNTY, MINNESOTA

GENERAL LAYOUT

SP XXXX-XXX
Sheet No. 2 of 23 Sheets

DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-000gl-001.dgn

DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027668-000-110est-001

DRAWN BY:	I HEREBY CERTIFY THAT THIS SHEET 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.	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION	STATEMENT OF ESTIMATED QUANTITIES	SP XXXX-XXX
DESIGNED BY:	SIGNATURE:		**FLINK AVE TRAIL**		Sheet No. 3 of 23 Sheets
CHECKED BY:	PRINTED NAME:		NORTH BRANCH, CHISAGO COUNTY, MINNESOTA		
	DATE: LIC. NO.				

NOT FOR CONSTRUCTION

NOTES:

(1) NO TREES SHALL BE CLEARED OR GRUBBED WITHOUT THE ENGINEER'S APPROVAL.

(2) LIMBING OF TREES 7' UP FROM GROUND IS INCIDENTAL TO CLEARING.

(3) DEPTH VARIES, SEE GEOTECHNICAL REPORT. NO ADDITIONAL PAYMENT FOR EXTRA THICKNESS.

(4) ALL LOGS SHALL BE STAKED.

(5) WATER TO BE USED FOR DUST CONTROL AS APPROVED BY THE ENGINEER IN THE FIELD. ALL WATER USED FOR COMPACTION IS INCIDENTAL.

(6) TO BE USED AS APPROVED BY THE ENGINEER. STREET SWEEPING FOR COMPLIANCE WITH ENVIRONMENTAL PERMITS WILL BE NON-COMPENSABLE, AS WILL SWEEPING THAT IS INCIDENTAL TO ANOTHER PAY ITEM.

(7) TO BE USED AS APPROVED BY THE ENGINEER FOR MINOR DITCH CLEANING.

(8) CONSISTS OF REMOVING AND DISPOSING OF TIMBER PLATFORM MEASURING APPROXIMATELY 10' X 12'.

(9) CL II

(10) SEE TABULATION FOR COLOR.

(11) TO BE USED FOR ROAD AND/OR DRIVEWAY ACCESS ONLY AS APPROVED BY THE ENGINEER

(12) PLACE A MINIMUM OF 2' FROM THE PAVED TRAIL SURFACE.

(13) HIGH EARLY, INCIDENTAL.

(14) HIGH EARY FOR CURB & GUTTER CONSTRUCTED ON 141ST STREET N, INCIDENTAL.

(15) THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR USE OF THE FLAG PERSON HOURS WHICH WILL BE REVIEWED AND APPROVED BY THE ENGINEER. FAILURE TO DO SO WILL RESULT IN NO PAYMENT.

(16) REFER TO LIMITED PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA) REPORT FOR GROUNDWATER FINDINGS.

(P) PLAN QUANTITY

DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027668-000-110est-001

DRAWN BY: DESIGNED BY: CHECKED BY:	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. SIGNATURE: PRINTED NAME: DATE: LIC. NO.	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION **FLINK AVE TRAIL** NORTH BRANCH, CHISAGO COUNTY, MINNESOTA	STATEMENT OF ESTIMATED QUANTITIES	SP XXXX-XXX Sheet No. 4 of 23 Sheets

NOT FOR CONSTRUCTION

REMOVALS — TAB-REM

LOCATION	CLEARING	GRUBBING	SAWING BIT PAVEMENT (FULL DEPTH) (1)	REMOVE			
				GUARDRAIL PLATE-PLATE BEAM	CURB & GUTTER	BITUMINOUS PAVEMENT (1)	CONCRETE WALK
	EACH	ACRE	LIN FT	LIN FT	LIN FT	SQ YD	SQ FT
FLINK AVE							
STA 50+37.16 TO STA 69+70.90	3	0.09	607	328	210	1650	70
PROJECT TOTAL	3	0.09	607	328	210	1650	70

BITUMINOUS & AGGREGATE — TAB-BIT

LOCATION	4" BITUMIOUS WALK	AGGREGATE BASE (CV) CLASS 5 (3)	TYPE SP 12.5 NON WEAR COURSE MIX (4,B)	TYPE SP 12.5 WEARING COURSE MIX (4,C)
	SQ FT	CU YD	TON	TON
FLINK AVE				
STA 50+37.16 TO STA 69+70.90	20884	131	31	32
PROJECT TOTAL	20884	**131**	**31**	**32**

CONCRETE — TAB-CONC

LOCATION	CONCRETE CURB RAMP WALK	DRILL & GROUT REINF BAR (EPOXY COATED)	CONCRETE CURB & GUTTER DESIGN B618	TRUNCATED DOMES
	SQ FT	EACH	LIN FT	SQ FT
FLINK AVE				
STA 50+37.16 TO STA 69+70.90	552	4	607	20
PROJECT TOTAL	**552**	**4**	**607**	**20**

EROSION CONTROL & TURF ESTABLISHMENT — TAB-ERC

LOCATION	SEDIMENT CONTROL LOG TYPE COMPOST	SOIL BED PREPARATION	FERTILIZER TYPE 4	RAPID STABILIZATION METHOD 4	ROLLED EROSION PREVENTION CATEGORY 20	SEEDING	WATER	RAPID STABILIZATION METHOD 3	MESIC INSLOPE
	LIN FT	ACRE	POUND	SQ YD	SQ YD	ACRE	MGAL	MGAL	POUND
FLINK AVE									
STA 50+37.16 TO STA 69+70.90	1924	0.6	87	2682	2776	0.6	54	1	38
PROJECT TOTAL	**1924**	**0.6**	**87**	**2682**	**2776**	**0.6**	**54**	**1**	**38**

DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027668-000-130tab-001.dgn

DRAWN BY:
DESIGNED BY:
CHECKED BY:

I HEREBY CERTIFY THAT THIS SHEET 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.

NOT FOR CONSTRUCTION

SIGNATURE:
PRINTED NAME:
DATE: LIC. NO.

wsb

MINNESOTA DEPARTMENT OF TRANSPORTATION
FLINK AVE TRAIL
NORTH BRANCH, CHISAGO COUNTY, MINNESOTA

QUANTITIY TABULATIONS

SP XXXX-XXX

Sheet No. 5 of 23 Sheets

SOILS AND CONSTRUCTION NOTES

1. STRIP ALL SOD AND TOPSOIL FROM AREAS TO BE DISTURBED BY CONSTRUCTION AND REUSE AS TOPSOIL. PAYMENT FOR TOPSOIL STRIPPING IS INCLUDED IN EXCAVATION-COMMON. PAYMENT FOR TOPSOIL INCLUDED IN COMMON EMBANKMENT (CV).

2. PROVIDE A SAW CUT WHERE PLACING NEW PAVEMENT NEXT TO IN-PLACE PAVEMENT TO ENSURE A UNIFORM JOINT.

3. WHEN CONNECTING TO EXISTING ROADWAYS AT THE TERMINI OF PROPOSED NEW CONSTRUCTION, CUT VERTICALLY TO THE BOTTOM OF THE EXISTING AGGREGATE BASE (OR TO THE BOTTOM OF THE NEW AGGREGATE BASE, WHICHEVER IS DEEPER); THEN AT A 1 VERTICAL (V) TO 20 HORIZONTAL (H) TAPER TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.

4. IN GENERAL, PROVIDE 1:20 (V:H) TAPERS WHEN CHANGING SUB-CUT DEPTHS NEAR TRUNK HIGHWAYS, OR COUNTY, CITY OR TOWNSHIP ROADS, OR WHEN CHANGING SUBGRADE MATERIALS.

5. WHEN CONNECTING NEW SURFACING ADJACENT TO ANY EXISTING PAVEMENTS TO BE WIDENED, CUT VERTICALLY TO THE BOTTOM OF THE EXISTING SURFACING (OR TO THE BOTTOM OF THE NEW SURFACING DESIGN, WHICHEVER IS DEEPER, THEN DIAGONALLY AT A 1 VERTICAL (V) TO 1 HORIZONTAL (H) SLOPE TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.

6. AS A PRECAUTIONARY MEASURE FROM A SOILS STANDPOINT, TRAFFIC LANES TO BE USED DURING CONSTRUCTION MUST BE DELINEATED TO KEEP VEHICLES A SAFE DISTANCE AWAY FROM THE ADJACENT EXCAVATION. THE DELINEATION SHOULD COINCIDE WITH POINTS ESTABLISHED BY PROJECTING A 1 VERTICAL (V) TO 2 HORIZONTAL (H) OR GREATER (FLATTER) SLOPE BETWEEN THE EDGE OF THE TRAFFIC SURFACE AND THE BOTTOM OF THE EXCAVATION. PROVIDE A 1:3 (V:H) OR FLATTER SLOPE IN MUCK EXCAVATION AREAS.

7. USE A TR10 ACCORDING TO TABLE 17 IN SECTION 5-692.270 OF THE MNDOT GRADING AND BASE MANUAL. COMPLY WITH TABLES 2106.3-1 AND TABLE 2106.3-4 AND THEN 2112 TEST ROLLING.

8. OBTAIN DENSITY ON THE GRADING PORTIONS OF ANY EMBANKMENT CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF MNDOT SPECIFICATION 2106. OBTAIN COMPACTION ON GRADING PORTIONS OF TEMPORARY CONSTRUCTION THAT WILL NOT BE INCORPORATED INTO THE PERMANENT WORK IN ACCORDANCE WITH THE “QUALITY COMPACTION METHOD” REQUIREMENTS. TEMPORARY GRADING AND AGGREGATE BASE PORTIONS PLACED BY THE “QUALITY COMPACTION METHOD” SHALL BE REMOVED AFTER CONSTRUCTION IS COMPLETE.

9. THIS IS A REMINDER THAT UNDER STATE LAW IT IS THE CONTRACTOR’S RESPONSIBILITY TO CONTACT ALL UTILITIES THAT MAY HAVE FACILITIES IN THE AREA. CONTACT MUST BE MADE THROUGH GOPHER STATE ONE CALL.

10. PROVIDE REINFORCED PANELS OVER CULVERTS, STORM SEWERS, AND WATERMAINS IN ACCORDANCE WITH MNDOT STANDARD PLATES. ACHIEVE PLACEMENT DEPTH OF REINFORCEMENT OF T/2 +/-1 INCH, WHERE T = CONCRETE THICKNESS.

11. PROVIDE A UNIFORM TACK COAT BETWEEN ALL BITUMINOUS LAYERS PRIOR TO PLACING ANY BITUMINOUS MIXTURES ON EXISTING PAVEMENT IN ACCORDANCE WITH SPECIFICATION 2357 (INCIDENTAL).

12. ALL BITUMINOUS MIXTURES SHALL BE COMPACTED MAXIMUM DENSITY METHOD IN ACCORDANCE WITH SPECIFICATION 2360.3D.1 UNLESS SPECIFIED OTHERWISE.

13. JOINT ADHESIVE SHALL BE USED ON LONGITUDINAL CONSTRUCTION JOINTS BETWEEN ADJACENT BITUMINOUS PAVEMENTS OR BETWEEN BITUMINOUS PAVEMENT AND CONCRETE PAVEMENT IN ACCORDANCE WITH SPECIAL PROVISION 2331 PAVEMENT JOINT ADHESIVE.

14. IN ANY PROPOSED WIDENING CONSTRUCTION, MATCH THE EXISTING SOIL IN THE UPPER 5 FEET OF ROADWAYS TO BE WIDENED WITH SOIL OF A SIMILAR CLASS, COLOR, MOISTURE CONTENT, AND PERFORMANCE CHARACTERISTICS. GRANULAR MATERIAL SHALL NOT BE PLACED ADJACENT TO NON-GRANULAR SOILS.

15. IN ANY CASE WHERE GRANULAR EMBANKMENTS JOIN NON-GRANULAR EMBANKMENTS, PROVIDE A 1:20 VERTICAL TO HORIZONTAL (V:H) TRANSITION BETWEEN THE CHANGE IN MATERIAL TO PREVENT AN ABRUPT SOILS DIFFERENTIAL. CONSTRUCT THE 1:20 VERTICAL TO HORIZONTAL (V:H) TRANSITION SUCH THAT THE GRANULAR MATERIAL OVERLAYS THE ADJACENT NON-GRANULAR SOIL.

16. CONSTRUCTION SLOPES MUST BE COVERED WITH 6" OF TOPSOIL MATERIAL. TOPSOIL SHALL MEET MNDOT STANDARD SPECIFICATION 3877 TABLE 3877-1. PAYMENT FOR TOPSOIL MATERIAL IS PAID FOR AS COMMON EMBANKMENT.

17. MINING OR OVER EXCAVATION BEYOND THE LINES AND GRADES SHOWN IN THE PLAN WILL NOT BE ALLOWED WITHIN PUBLIC RIGHTS-OF-WAY.

18. NO EXTRA PAYMENT WILL BE MADE FOR TEMPORARY STOCKPILING OF EXCAVATION OR EMBANKMENT MATERIAL.

19. ANY EXCAVATED MATERIALS NOT USED ON THIS PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF THE RIGHT OF WAY, AT NO ADDITIONAL COMPENSATION, AND IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.

20. TEMPORARY AND INTERMEDIATE EXCAVATION LIMITS AND SLOPES ARE TO BE DETERMINED BY THE CONTRACTOR DURING CONSTRUCTION. DEPENDING ON SOIL PROPERTIES AND SAFETY FACTORS, ADDITIONAL EXCAVATION AND BACKFILL BEYOND THE LIMITS SHOWN IN THE PLAN SHALL BE CONSIDERED THE CONTRACTOR EXPENSE.

21. WHEN REMOVING PAVEMENTS, FULL-DEPTH SAWCUTS SHALL BE MADE PERPENDICULAR TO THE ROADWAY CENTERLINE.

22. NON-STRUCTURAL GRADING MATERIAL ARE ALL MINERAL SOILS, EXCESS TOPSOIL, AND ORGANIC SOILS, CAPABLE OF SUPPORTING CONSTRUCTION EQUIPMENT. NON-STRUCTURAL GRADING MATERIAL SHALL ONLY BE PLACED OUTSIDE OF THE ROADWAY CORE AND IN A MANNER IN WHICH THE MATERIAL WILL MAINTAIN LONG TERM STABILITY.

23. THE TOP OF BACKSLOPES AND THE TOE OF FILL SLOPES SHALL BE ROUNDED TO NATURALIZE THE CONSTRUCTION EVEN THOUGH THE CROSS SECTIONS DO NOT SHOW ANY SUCH ROUNDING.

24. THE CONSTRUCTION LIMITS AS SHOWN IN THE PLANS REPRESENT THE POINT OF INTERSECTION BETWEEN THE REQUIRED FILL OR CUT SLOPE AND THE EXISTING GROUNDLINE AS DEPICTED ON THE CROSS SECTIONS. THE CONSTRUCTION LIMITS DO NOT INCLUDE AREAS REQUIRED FOR SLOPE ROUNDING.

25. UTILITY RELOCATIONS IN THE AREA WILL BE OCCURRING PRIOR TO AND DURING THE PROJECT. THE CONTRACTOR IS TO EXPECT UTILITY CONFLICTS AND ACCOUNT FOR THEM ACCORDINGLY IN THEIR WORK SCHEDULE AND ANTICIPATED PRODUCTION.

26. UNLESS SPECIFICALLY NOTED OTHERWISE, ANY USE OF BRACING, SHORING, SHEETING, OR OTHER MEANS AND METHODS OF CONSTRUCTION THAT ARE NECESSARY TO COMPLETE CONSTRUCTION WITHIN THE CONSTRUCTION LIMITS OR PROJECT EASEMENTS SHOWN IN THE PLANS WILL BE CONSIDERED INCIDENTAL.

27. THE EXISTING PAVEMENT THICKNESS VARIES THROUGHOUT THE PROJECT. SEE THE BORING LOGS FOR EXISTING PAVEMENT THICKNESSES AT BORING LOCATIONS. ALL INPLACE PAVEMENT REMOVAL ON THE PROJECT IS PAID FOR AS "REMOVE BITUMINOUS PAVEMENT" AND IS NOT INCLUDED IN THE EARTHWORK QUANTITIES.

28. THE EXCAVATION-COMMON QUANTITY INCLUDES TOPSOIL STRIPPING.

29. TOPSOIL IS INCLUDED IN COMMON EMBANKMENT.

30. PLACING, HAULING, AND DISPOSING OF EXCAVATED MATERIALS IS CONSIDERED INCIDENTAL.

31. ALL STOCKPILE AREAS SHALL BE APPROVED BY THE ENGINEER.

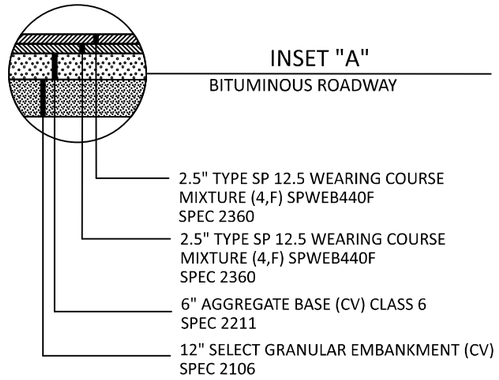
32. UNLESS APPROVED OTHERWISE BY THE PROJECT ENGINEER, ANY MATERIAL THAT IS FOUND TO BE UNNECESSARY FOR THE CONSTRUCTION OF THE ROADWAY EMBANKMENT AND DISPOSAL OF THE SAME BECOMES NECESSARY, ON OR OFF THE PROJECT, THE DISPOSAL AND ALL RELATED ITEMS WILL BE CONSIDERED INCIDENTAL.

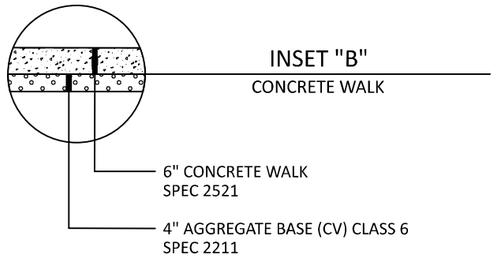
33. PROVIDE A 1:20 (V:H) TAPER WHEN CHANGING SUBGRADE DEPTHS, OR WHEN CHANGING SUBGRADE MATERIALS.

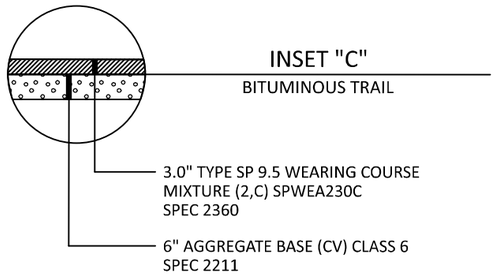
DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-125scn-001

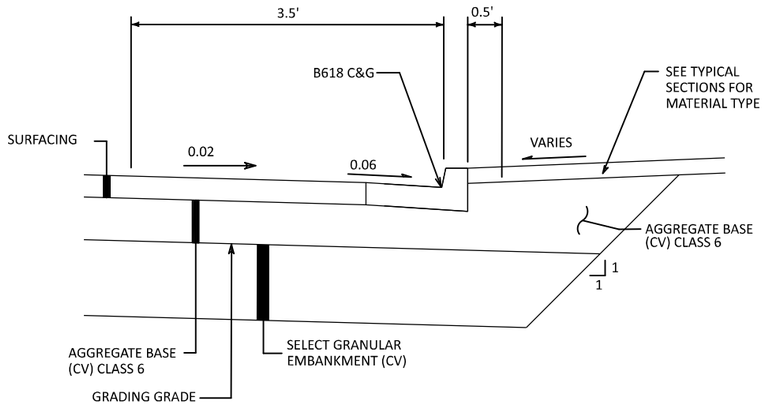
DRAWN BY:	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	SIGNATURE:	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION FLINK AVE TRAIL NORTH BRANCH, CHISAGO COUNTY, MINNESOTA	SP XXXX-XXX
DESIGNED BY:		PRINTED NAME:		SOILS AND CONSTRUCTION NOTES	Sheet No. 6 of 23 Sheets
CHECKED BY:		DATE: LIC. NO.			

NOT FOR CONSTRUCTION



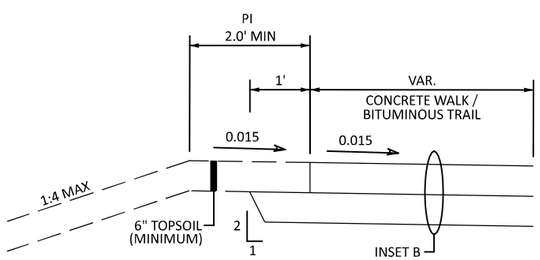






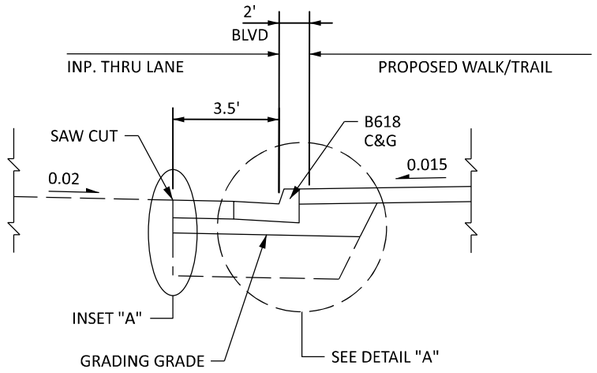
DETAIL A

CONCRETE CURB & GUTTER



DETAIL B

AGGREGATE EDGE UNDER CONCRETE WALK AND GRADING BEHIND



DETAIL C

REPLACE CURB AND GUTTER AT PEDESTRIAN RAMPS

GENERAL NOTES:

- THE GRADING GRADE CROSS SLOPE WILL BE THE SAME AS THE PAVEMENT CROSS SLOPE UNLESS OTHERWISE NOTED.
- THE PROFILE GRADE IS THE FINISHED GRADE AT CENTERLINE.
- ALL EDGE DIMENSIONS ARE TO THE EDGE OF PAVEMENT.
- ALL CROSS SLOPES ARE IN FT/FT.

DRAWN BY:
DESIGNED BY:
CHECKED BY:

I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE:
PRINTED NAME:
DATE: LIC. NO.

NOT APPROVED FOR CONSTRUCTION

wsb

MINNESOTA DEPARTMENT OF TRANSPORTATION
FLINK AVE TRAIL
NORTH BRANCH, CHISAGO COUNTY, MINNESOTA

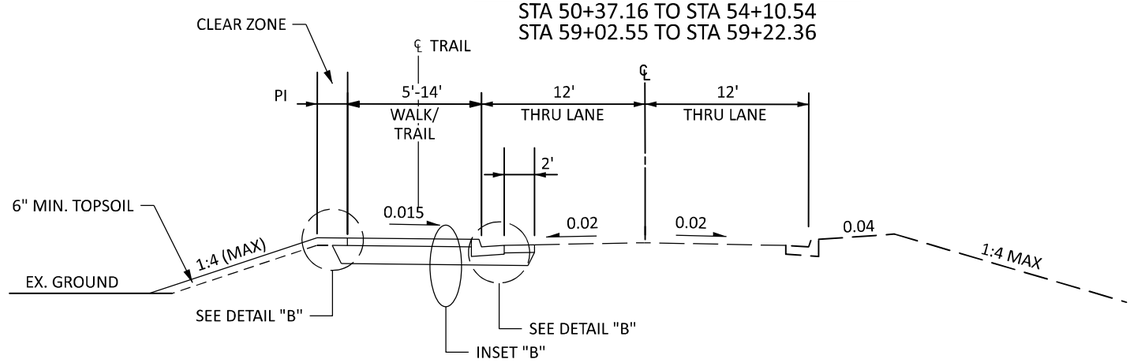
TYPICAL SECTIONS

SP XXXX-XXX

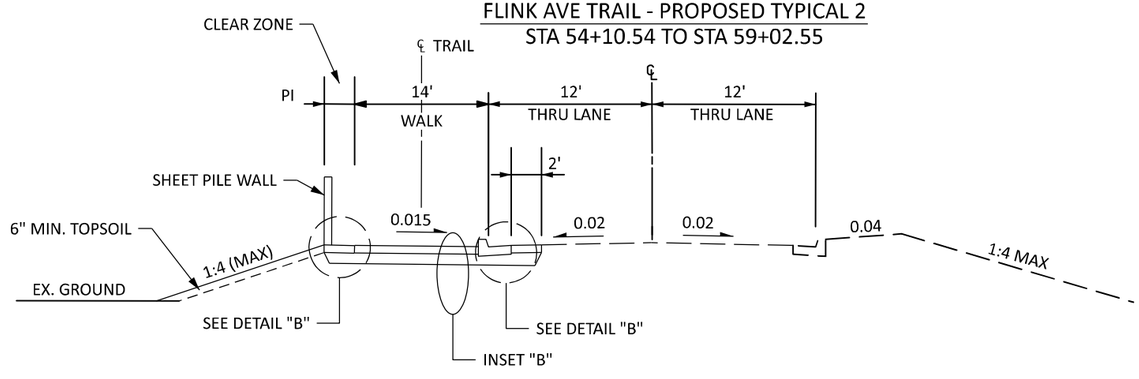
Sheet No. 7 of 23 Sheets

DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-000typ-001.dgn

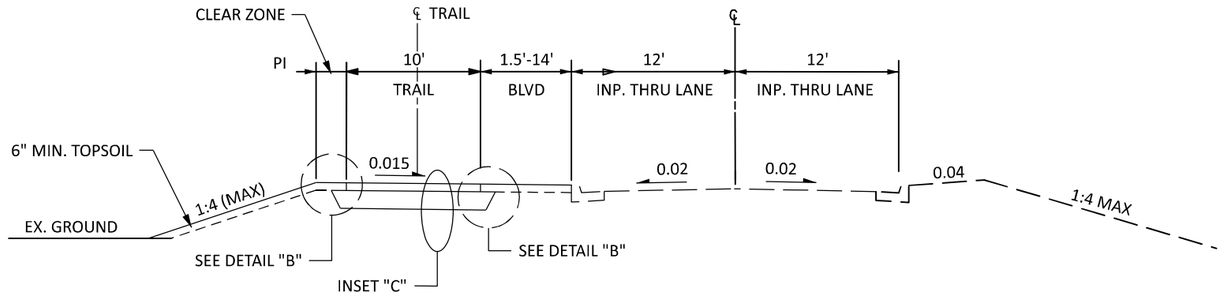
FLINK AVE TRAIL - PROPOSED TYPICAL 1
STA 50+37.16 TO STA 54+10.54
STA 59+02.55 TO STA 59+22.36



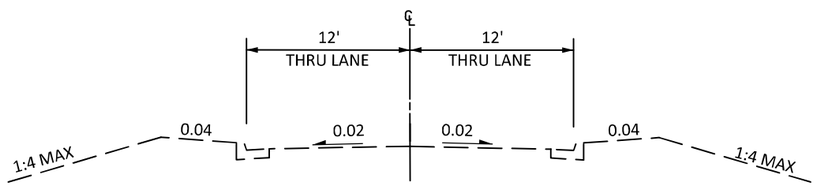
FLINK AVE TRAIL - PROPOSED TYPICAL 2
STA 54+10.54 TO STA 59+02.55



FLINK AVE TRAIL - PROPOSED TYPICAL 3
STA 59+22.36 TO STA 69+70.90



FLINK AVE TRAIL - EXISTING TYPICAL



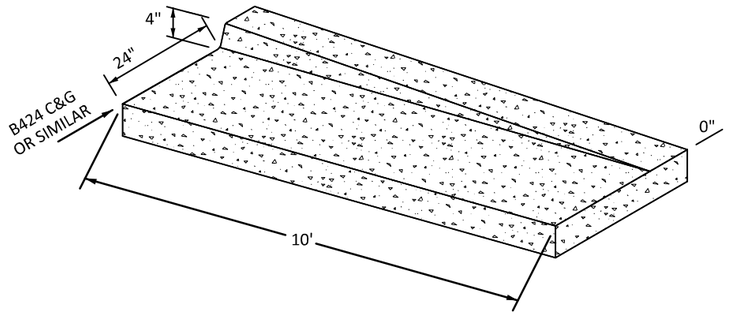
GENERAL NOTES:

- THE GRADING GRADE CROSS SLOPE WILL BE THE SAME AS THE PAVEMENT CROSS SLOPE UNLESS OTHERWISE NOTED.
- THE PROFILE GRADE IS THE FINISHED GRADE AT CENTERLINE.
- ALL EDGE DIMENSIONS ARE TO THE EDGE OF PAVEMENT.
- ALL CROSS SLOPES ARE IN FT/FT.

DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-000typ-001.dgn

DRAWN BY:	I HEREBY CERTIFY THAT THIS SHEET 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.	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS	SP XXXX-XXX
DESIGNED BY:	SIGNATURE:		FLINK AVE TRAIL		Sheet No. 8 of 23 Sheets
CHECKED BY:	PRINTED NAME: DATE: LIC. NO.		NORTH BRANCH, CHISAGO COUNTY, MINNESOTA		

NOT APPROVED FOR CONSTRUCTION



FOR OTHER DIMENSIONS SEE STANDARD PLATE NO. 7100
TO BE USED AT CURB AND GUTTER TERMINI
PAYMENT SHALL BE MADE AS CONCRETE CURB & GUTTER DESIGN B424 BY THE LINEAR FOOT

CURB & GUTTER TRANSITION TO 0" HEIGHT

NOT TO SCALE

DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027668-000-150ddt-001

DRAWN BY:	I HEREBY CERTIFY THAT THIS SHEET 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.	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION	MISCELLANEOUS DETAILS	SP XXXX-XXX
DESIGNED BY:	NOT FOR CONSTRUCTION		FLINK AVE TRAIL		Sheet No. 9 of 23 Sheets
CHECKED BY:	SIGNATURE: _____ PRINTED NAME: _____ DATE: _____ LIC. NO. _____		NORTH BRANCH, CHISAGO COUNTY, MINNESOTA		

MNDOT STANDARD PLANS	
STANDARD PLAN NO.	DESCRIPTION
5-297.115	STAKING INFORMATION SHEET (2 SHEETS)
5-297.250	PEDESTRIAN CURB RAMP DETAILS (6 SHEETS)
5-297.254	DRIVEWAY AND SIDEWALK DETAILS (4 SHEETS)
5-297.404	PERMANENT EROSION CONTROL - ALONG ROADS, DITCHES, AND FLUMES (3 SHEETS)
5-297.405	PERMANENT EROSION CONTROL - SILT CURTAIN OR SILT FENCE TYPE TB (SHEETS 2-6 OF 8)
5-597.811	ALTERNATE PEDESTRIAN ACCESS ROUTE (APR) LAYOUT (2 SHEETS)
5-597.813	TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) DEVICES - CHANNELIZERS, SIDEWALK BARRICADES, AND PORTABLE STANDS (2 SHEETS)

THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL

HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT.

MNDOT STANDARD PLATES

PLATE NO.	DESCRIPTION
1103M	TYPICAL DOWEL BAR ASSEMBLY
7038A	DETECTABLE WARNING SURFACE TRUNCATED DOMES
7100H	CONCRETE CURB & GUTTER (DESIGN B & V)

DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-425st-001.dgn

DRAWN BY:
DESIGNED BY:
CHECKED BY:

I HEREBY CERTIFY THAT THIS SHEET 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.

NOT FOR CONSTRUCTION

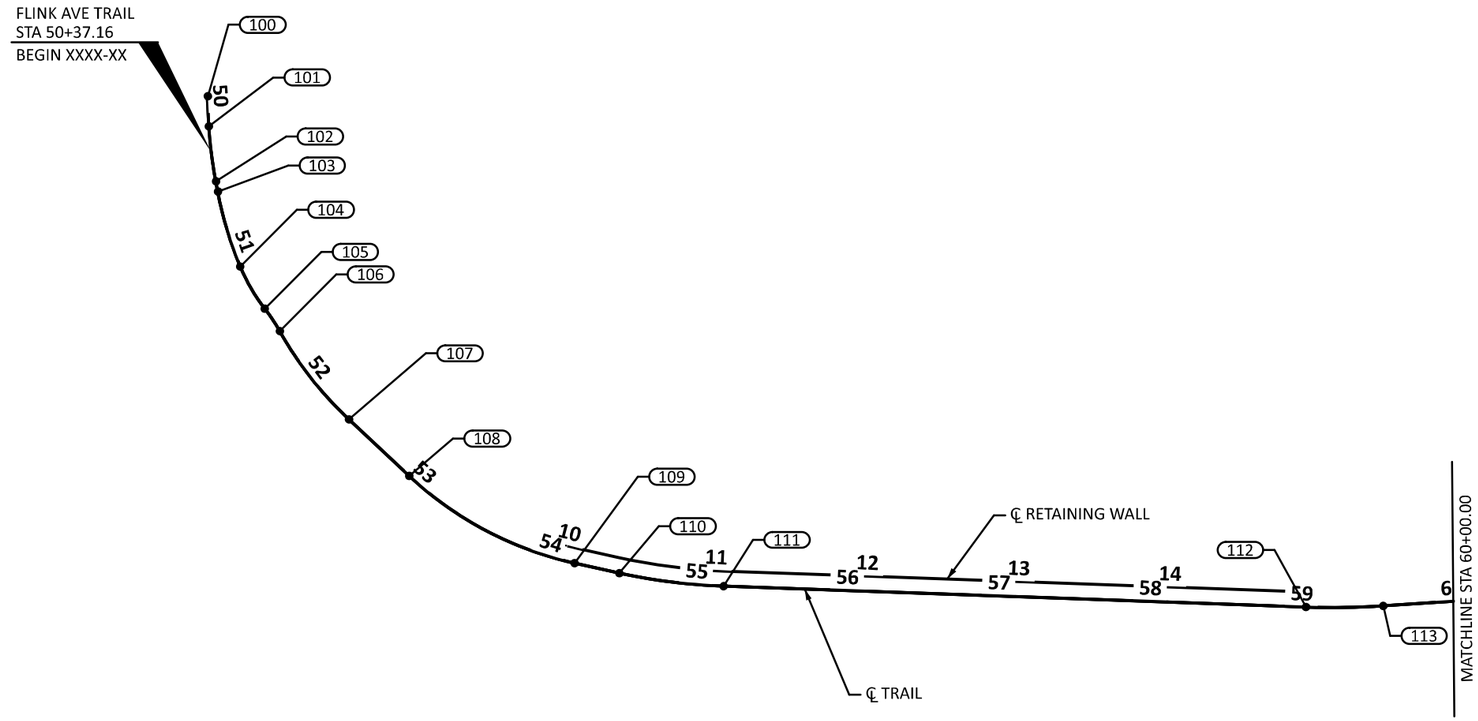
SIGNATURE:
PRINTED NAME:
DATE: LIC. NO.

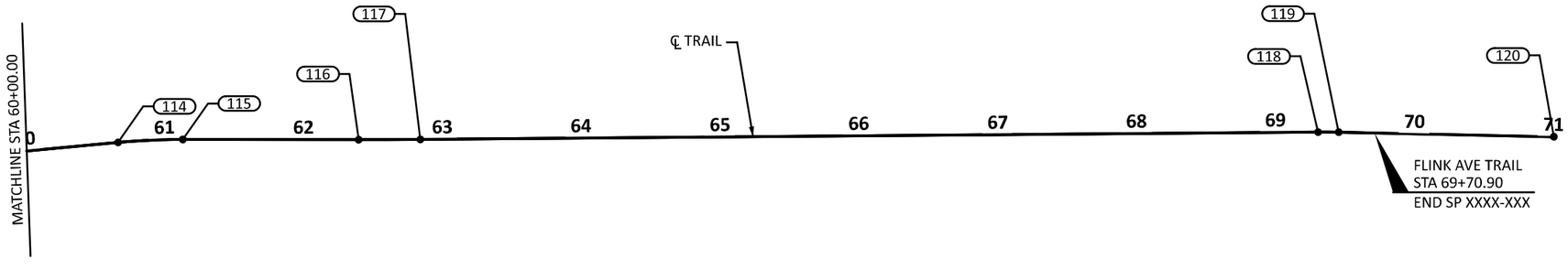
wsb

MINNESOTA DEPARTMENT OF TRANSPORTATION
FLINK AVE TRAIL
NORTH BRANCH, CHISAGO COUNTY, MINNESOTA

STANDARD PLAN & PLATES

SP XXXX-XXX
Sheet No. 10 of 23 Sheets





SCALE IN FEET
0 50 100

DRAWN BY: KM DESIGNED BY: KM CHECKED BY: MG	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. SIGNATURE: PRINTED NAME: DATE: LIC. NO.	NOT FOR CONSTRUCTION	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION **FLINK AVE TRAIL** NORTH BRANCH, CHISAGO COUNTY, MINNESOTA	ALINGMENT PLAN STA 50+37.16 TO STA 69+70.90	SAP 000-000-000 Sheet No. 11 of 23 Sheets

DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-000al-001.dgn

ALIGNMENT TABULATION

POINT NUMBER	POINT TYPE	STATION	CIRCULAR CURVE DATA					COORDINATES		DIRECTION AZIMUTH
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	EASTING (X)	NORTHING (Y)	
			SPIRAL CURVE DATA							
			THETA	DEGREE	ST	LT	LS			
ALIGNMENT: TRAIL										
100	START	50+00.000 R1						522026.704	178790.814	
101	PC	50+20.000 R1						522046.589	178792.962	N83°50'02.800"E
101	PC	50+20.000 R1						522046.589	178792.962	N83°50'02.800"E
	HPI	50+45.383 R1	10°05'59.437" LT	19°56'46.721"	287.25	25.383	50.635	522071.825	178795.689	PI
	CC							522015.736	179078.551	
102	PCC	50+70.635 R1						522096.192	178802.798	N73°44'03.363"E
102	PCC	50+70.635 R1						522096.192	178802.798	N73°44'03.363"E
	HPI	51+00.459 R1	16°57'46.789" LT	28°38'52.403"	200	29.824	59.212	522124.823	178811.152	PI
	CC							522040.174	178994.793	
103	PT	51+29.847 R1						522149.771	178827.495	N56°46'16.574"E
103	PT	51+29.847 R1						522149.771	178827.495	
104	PC	51+36.735 R1						522155.532	178831.269	N56°46'16.574"E
104	PC	51+36.735 R1						522155.532	178831.269	N56°46'16.574"E
	HPI	51+47.714 R1	02°30'57.523" RT	11°27'32.961"	500	10.98	21.956	522164.716	178837.286	PI
	CC							522429.523	178413.024	
105	PRC	51+58.691 R1						522174.156	178842.894	N59°17'14.098"E
105	PRC	51+58.691 R1						522174.156	178842.894	N59°17'14.098"E
	HPI	51+99.247 R1	18°52'27.410" LT	23°28'54.757"	244	40.556	80.378	522209.024	178863.607	PI
	CC							522049.537	179052.67	
106	PT	52+39.069 R1						522235.316	178894.487	N40°24'46.688"E
106	PT	52+39.069 R1						522235.316	178894.487	
107	PC	52+93.576 R1						522270.653	178935.988	N40°24'46.688"E
107	PC	52+93.576 R1						522270.653	178935.988	N40°24'46.688"E
	HPI	53+57.527 R1	30°34'15.437" LT	24°29'07.353"	234	63.951	124.854	522312.112	178984.68	PI
	CC							522092.487	179087.688	
108	PT	54+18.430 R1						522323.043	179047.69	N09°50'31.251"E
108	PT	54+18.430 R1						522323.043	179047.69	
109	PC	54+48.678 R1						522328.214	179077.493	N09°50'31.251"E
109	PC	54+48.678 R1						522328.214	179077.493	N09°50'31.251"E
	HPI	54+55.824 R1	04°05'32.947" LT	28°38'52.403"	200	7.146	14.285	522329.435	179084.534	PI
	CC							522131.157	179111.68	
110	PT	54+62.964 R1						522330.151	179091.644	N05°44'58.303"E
110	PT	54+62.964 R1						522330.151	179091.644	
	HPI	55+07.027 R1	00°17'19.951" RT	01°42'41.704"	3347.529	8.439	16.878	522332.212	179135.64	PI
	CC							525679.43	179089.201	
111	PT	55+15.465 R1						522332.35	179144.078	N00°56'21.489"E
111	PT	55+15.465 R1						522332.35	179144.078	
112	PC	58+13.949 R1						522330.082	179442.553	N00°26'07.914"W
112	PC	58+13.949 R1						522330.082	179442.553	N00°26'07.914"W
	HPI	58+40.465 R1	06°04'17.067" LT	11°27'32.961"	500	26.516	52.983	522329.88	179469.068	PI
	CC							521830.096	179438.752	
113	PT	58+66.932 R1						522326.875	179495.414	N06°30'24.981"W
113	PT	58+66.932 R1						522326.875	179495.414	
114	PC	59+71.338 R1						522315.043	179599.147	N06°30'24.981"W
114	PC	59+71.338 R1						522315.043	179599.147	N06°30'24.981"W
	HPI	59+94.696 R1	05°20'57.612" RT	11°27'32.961"	500	23.358	46.682	522312.396	179622.355	PI
	CC							522811.823	179655.809	
115	PT	60+18.020 R1						522311.925	179645.708	N01°09'27.369"W
115	PT	60+18.020 R1						522311.925	179645.708	
116	PC	62+36.631 R1						522307.508	179864.274	N01°09'27.369"W
116	PC	62+36.631 R1						522307.508	179864.274	N01°09'27.369"W
	HPI	62+60.185 R1	00°32'23.323" LT	01°08'45.296"	5000	23.554	47.107	522307.032	179887.823	PI
	CC							517308.529	179763.261	

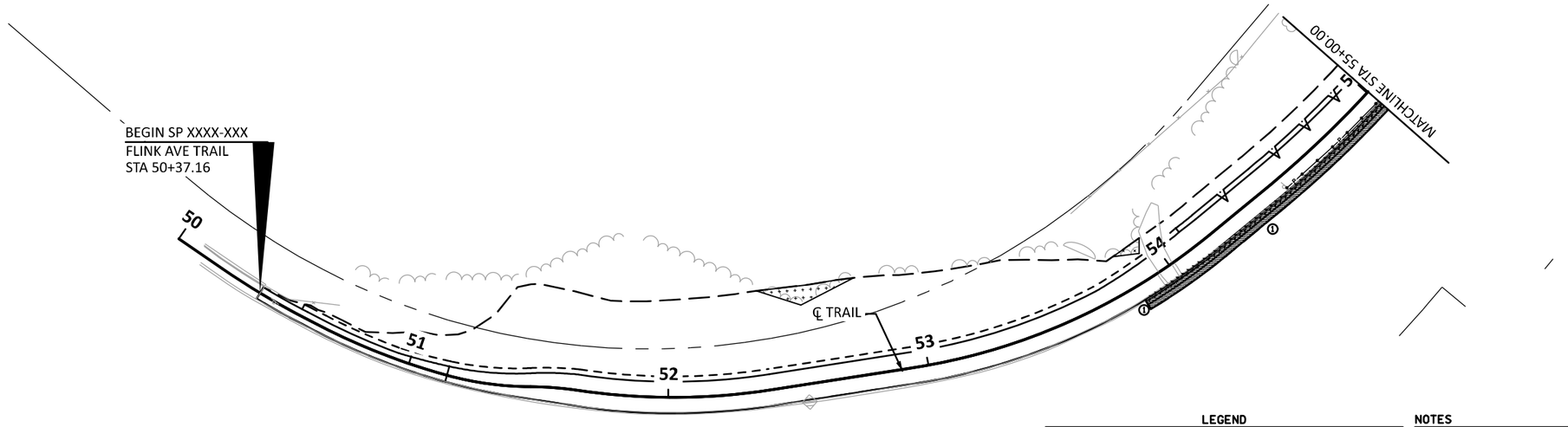
ALIGNMENT TABULATION

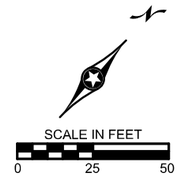
POINT NUMBER	POINT TYPE	STATION	CIRCULAR CURVE DATA					COORDINATES		DIRECTION AZIMUTH
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	EASTING (X)	NORTHING (Y)	
			SPIRAL CURVE DATA							
			THETA	DEGREE	ST	LT	LS			
ALIGNMENT: TRAIL										
117	PT	62+83.738 R1						522306.335	179911.367	N01°41'50.692"W
117	PT	62+83.738 R1						522306.335	179911.367	
118	PC	69+30.239 R1						522287.184	180557.584	N01°41'50.692"W
118	PC	69+30.239 R1						522287.184	180557.584	N01°41'50.692"W
	HPI	69+37.646 R1	01°41'50.692" RT	11°27'32.961"	500	7.407	14.813	522286.965	180564.988	PI
	CC							522786.965	180572.395	
119	PT	69+45.052 R1						522286.965	180572.395	N00°00'00.000"E
119	PT	69+45.052 R1						522286.965	180572.395	
120	END	71+00.000 R1						522286.965	180727.342	N00°00'00.000"W

DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-000al-001.dgn

DRAWN BY: KM	I HEREBY CERTIFY THAT THIS SHEET 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.	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION	ALINGMENT TABULATION	SAP 000-000-000
DESIGNED BY: KM	SIGNATURE:		FLINK AVE TRAIL		Sheet No. 12 of 23 Sheets
CHECKED BY: MG	PRINTED NAME:		NORTH BRANCH, CHISAGO COUNTY, MINNESOTA		
	DATE: LIC. NO.				

NOT FOR CONSTRUCTION



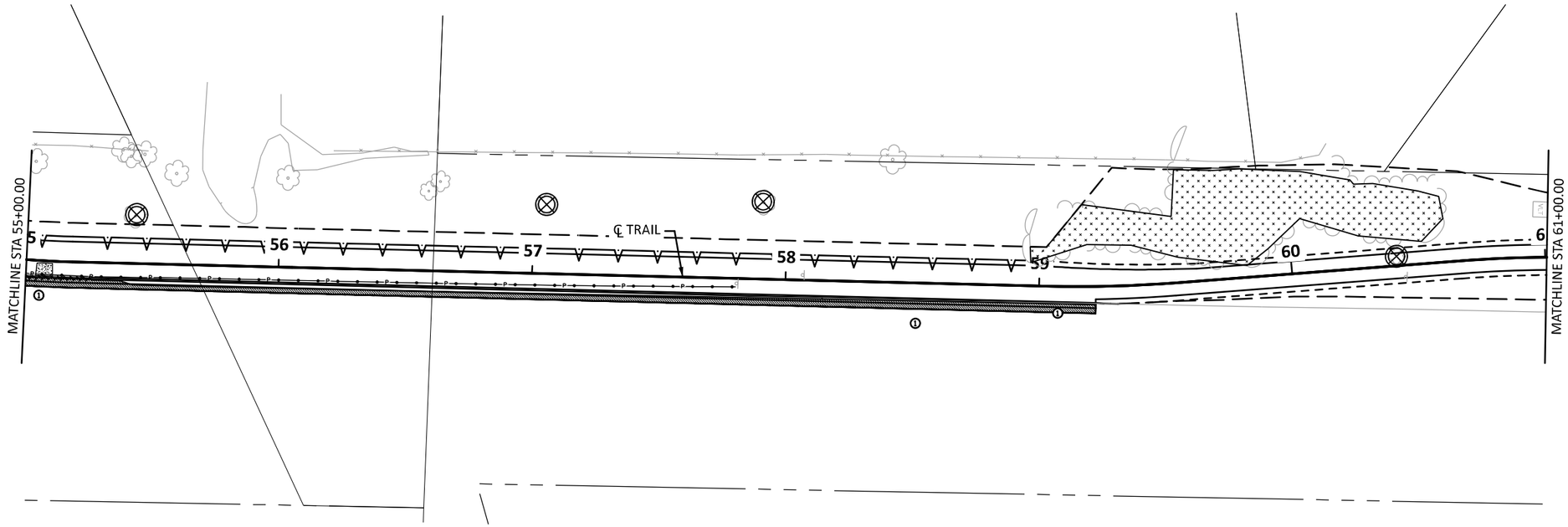


LEGEND

- REMOVE BITUMINOUS PAVEMENT
- REMOVE CONCRETE WALK
- CLEAR & GRUB TREE (ACRE)
- SAWING BIT. PAVEMENT (FULL DEPTH)
- CLEAR & GRUB TREE (EACH)
- REMOVE CURB AND GUTTER
- REMOVE GUARDRAIL-PLATE BEAM
- CONSTRUCTION LIMITS
- WETLAND DELINEATION AREA OF ENVIRONMENTAL SENSITIVITY

NOTES

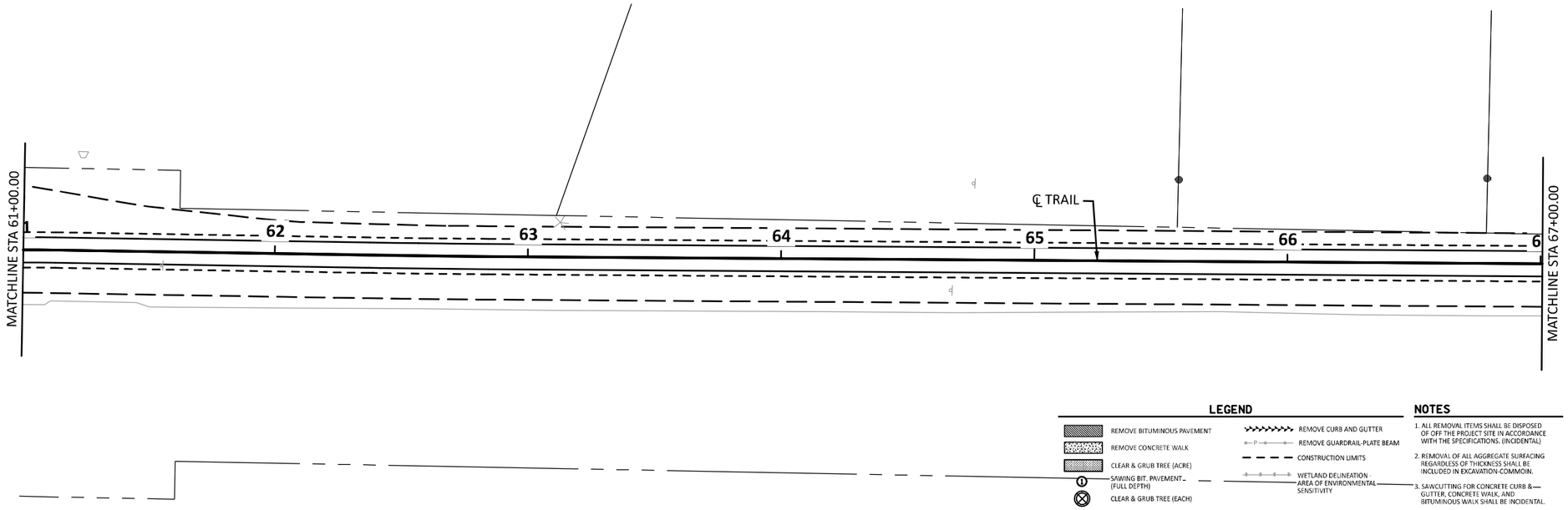
1. ALL REMOVAL ITEMS SHALL BE DISPOSED OF OFF THE PROJECT SITE IN ACCORDANCE WITH THE SPECIFICATIONS. (INCIDENTAL)
2. REMOVAL OF ALL AGGREGATE SURFACING REGARDLESS OF THICKNESS SHALL BE INCLUDED IN EXCAVATION-COMMOIN.
3. SAWCUTTING FOR CONCRETE CURB & GUTTER, CONCRETE WALK, AND BITUMINOUS WALK SHALL BE INCIDENTAL.





DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-000rem-001.dgn

DRAWN BY: KM DESIGNED BY: KM CHECKED BY: MG	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. SIGNATURE: PRINTED NAME: DATE: LIC. NO.	NOT FOR CONSTRUCTION	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION **FLINK AVE TRAIL** NORTH BRANCH, CHISAGO COUNTY, MINNESOTA	REMOVAL PLAN STA 50+37.16 TO STA 61+00.00	SAP XXXX-XX Sheet No. 13 of 23 Sheets



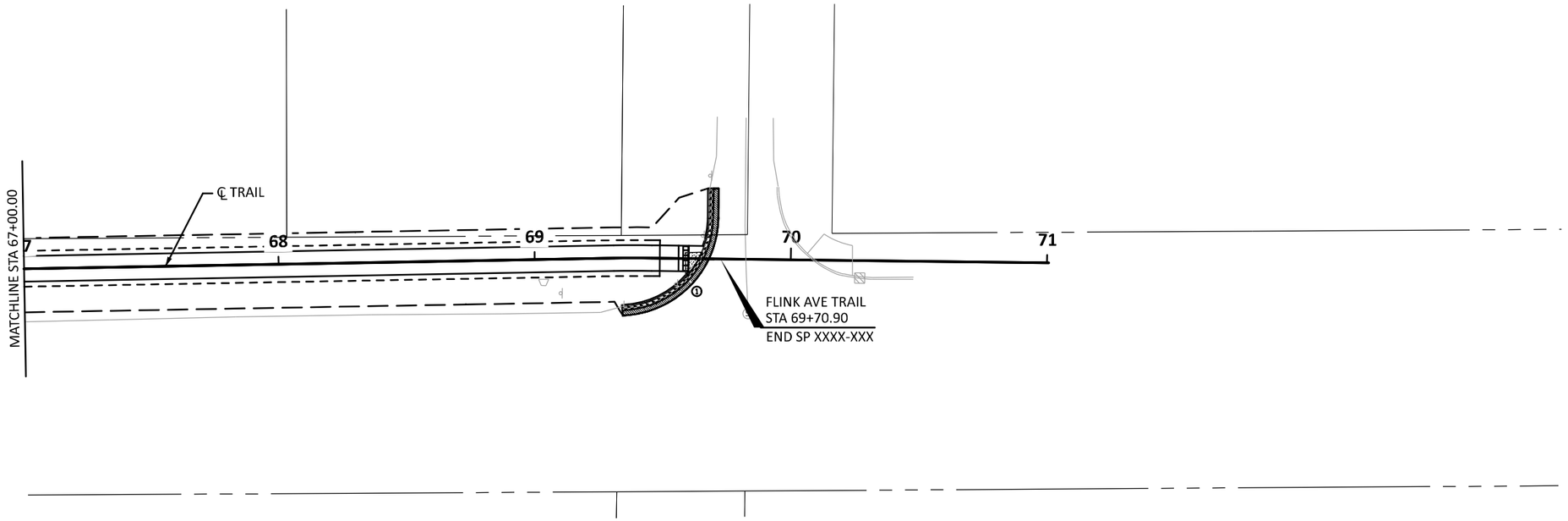
SCALE IN FEET
0 25 50

LEGEND

- REMOVE BITUMINOUS PAVEMENT
- REMOVE CONCRETE WALK
- CLEAR & GRUB TREE (ACRE)
- SAWING BIT. PAVEMENT - (FULL DEPTH)
- CLEAR & GRUB TREE (EACH)
- REMOVE CURB AND GUTTER
- REMOVE GUARDRAIL-PLATE BEAM
- CONSTRUCTION LIMITS
- WETLAND DELINEATION AREA OF ENVIRONMENTAL SENSITIVITY

NOTES

1. ALL REMOVAL ITEMS SHALL BE DISPOSED OF OFF THE PROJECT SITE IN ACCORDANCE WITH THE SPECIFICATIONS. (INCIDENTAL)
2. REMOVAL OF ALL AGGREGATE SURFACING REGARDLESS OF THICKNESS SHALL BE INCLUDED IN EXCAVATION-COMMOIN.
3. SAWCUTTING FOR CONCRETE CURB & GUTTER, CONCRETE WALK, AND BITUMINOUS WALK SHALL BE INCIDENTAL.



SCALE IN FEET
0 25 50

DRAWN BY: KM
DESIGNED BY: KM
CHECKED BY: MG

I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE:
PRINTED NAME:
DATE: LIC. NO.

NOT FOR CONSTRUCTION

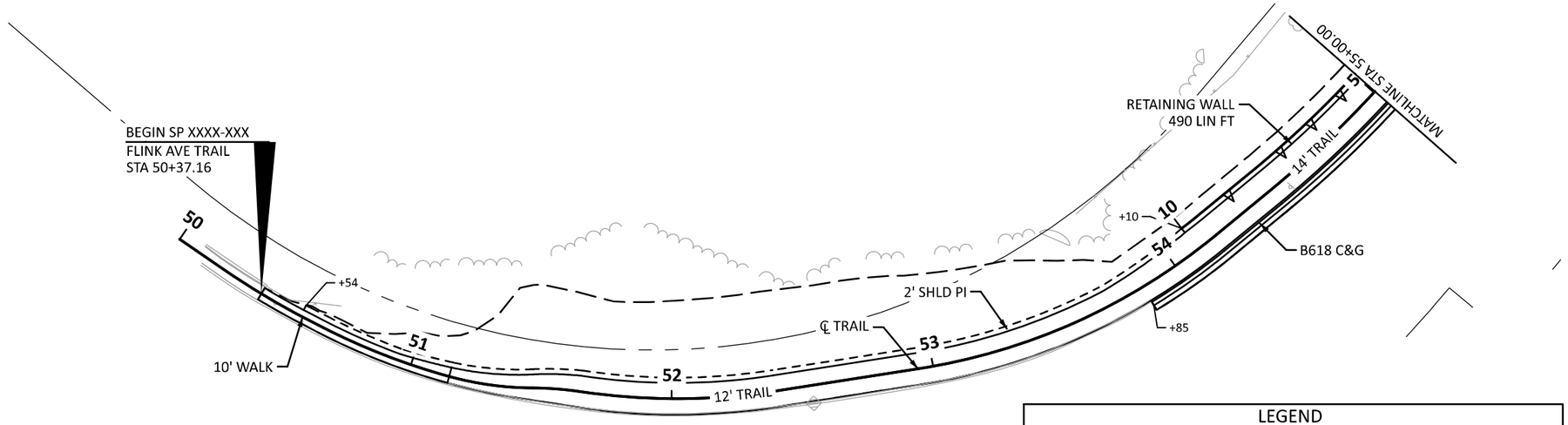
wsb

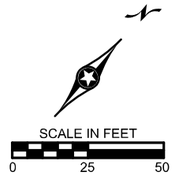
MINNESOTA DEPARTMENT OF TRANSPORTATION
FLINK AVE TRAIL
NORTH BRANCH, CHISAGO COUNTY, MINNESOTA

REMOVAL PLAN
STA 61+00.00 TO STA 69+70.90

SAP XXXX-XX
Sheet No. 14 of 23 Sheets

DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-000rem-001.dgn



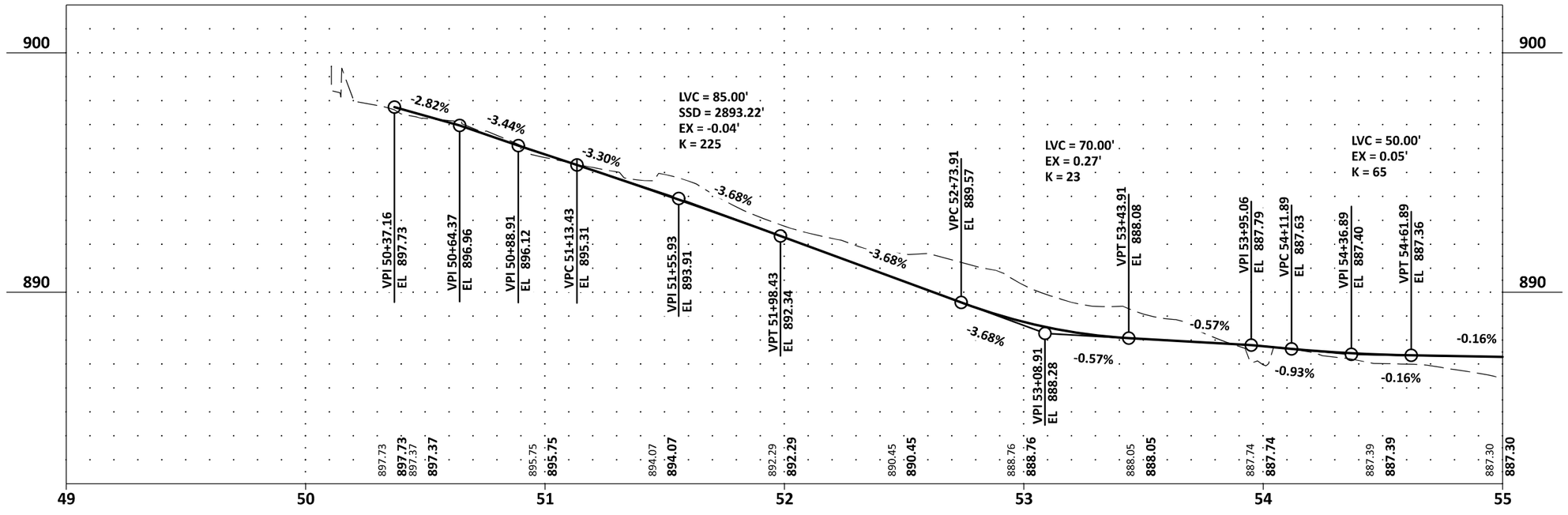


LEGEND

- ① CONCRETE PEDESTRIAN CURB RAMP W/ TRUNCATED DOMES
- INPLACE PAVEMENT
- PROPOSED CONSTRUCTION
- RETAINING WALL
- CONSTRUCTION LIMITS
- EXISTING R/W

NOTES

1. ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF BITUMINOUS EXCEPT FOR BERMS AND BOULEVARDS, WHERE THE DIMENSIONS MEASURED FROM BACK OF CURB.



DRAWN BY: KM
DESIGNED BY: KM
CHECKED BY: MG

I HEREBY CERTIFY THAT THIS SHEET 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.

NOT FOR CONSTRUCTION

SIGNATURE:
PRINTED NAME:
DATE: LIC. NO.

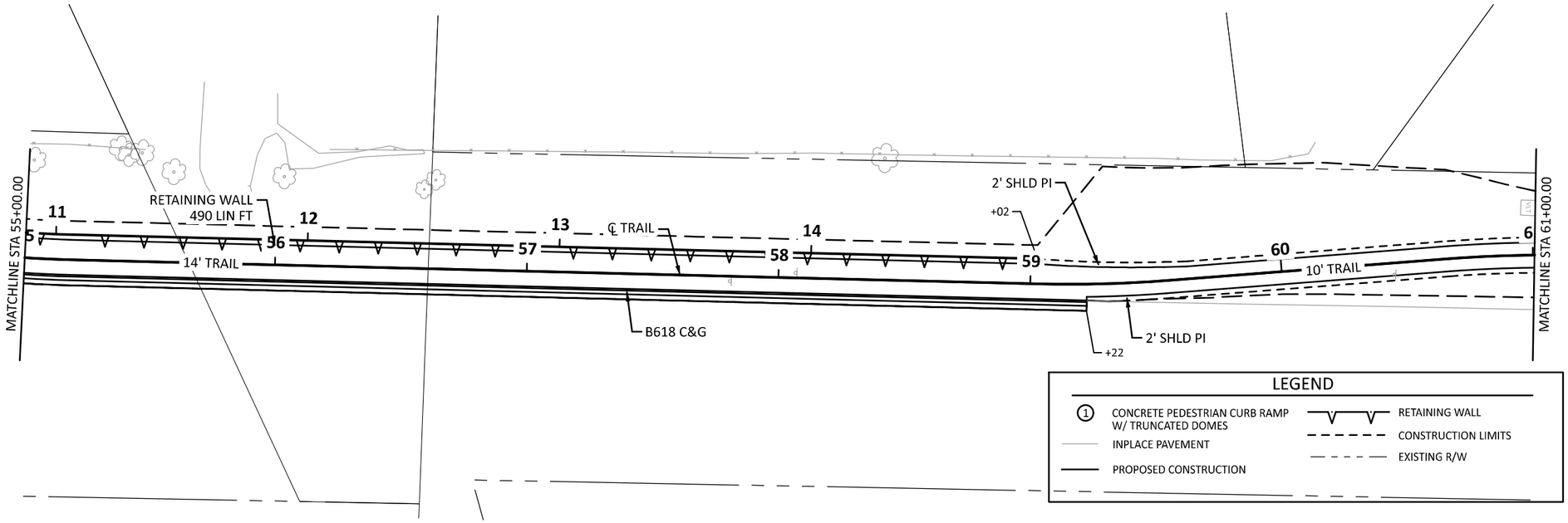
wsb

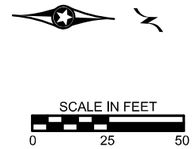
MINNESOTA DEPARTMENT OF TRANSPORTATION
FLINK AVE TRAIL
NORTH BRANCH, CHISAGO COUNTY, MINNESOTA

CONSTRUCTION PLAN & PROFILES
STA 50+37.16 TO STA 55+00.00

SAP XXXX-XX
Sheet No. 15 of 23 Sheets

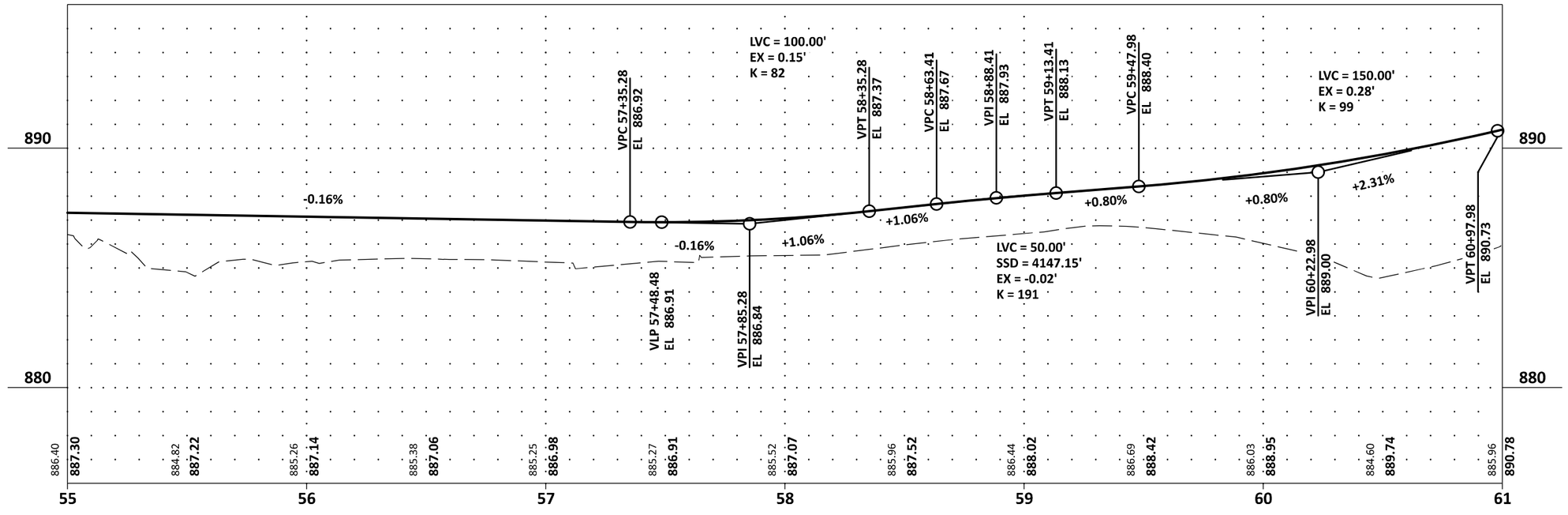
DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-000cp-001.dgn





NOTES

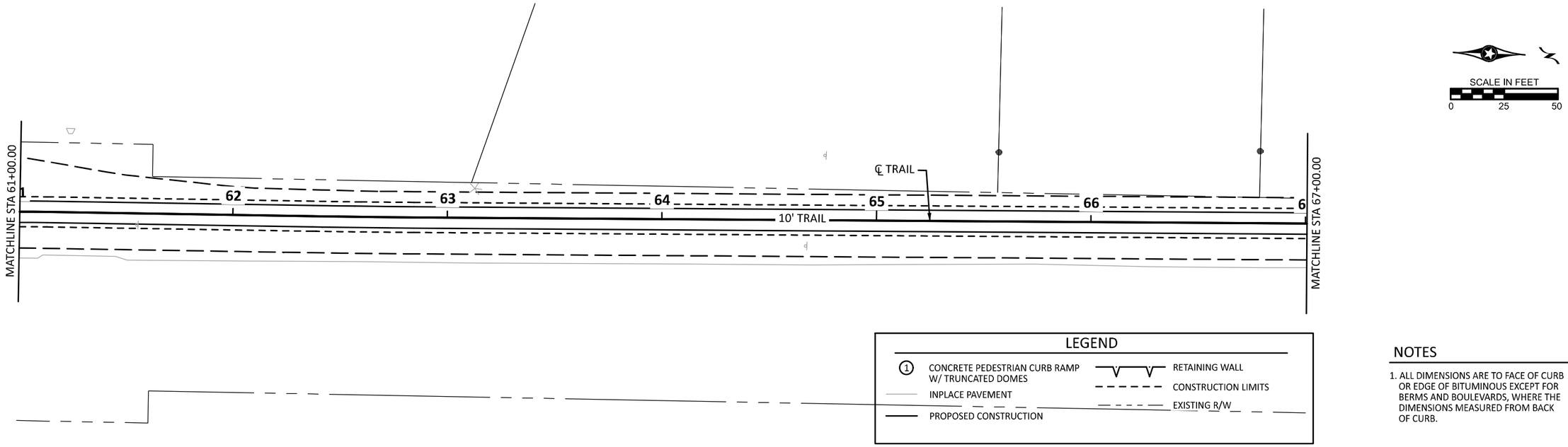
1. ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF BITUMINOUS EXCEPT FOR BERMS AND BOULEVARDS, WHERE THE DIMENSIONS MEASURED FROM BACK OF CURB.



DRAWN BY: KM DESIGNED BY: KM CHECKED BY: MG	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. SIGNATURE: PRINTED NAME: DATE: LIC. NO.	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION **FLINK AVE TRAIL** NORTH BRANCH, CHISAGO COUNTY, MINNESOTA	CONSTRUCTION PLAN & PROFILES STA 55+00.00 TO STA 61+00.00	SAP XXXX-XX Sheet No. 16 of 23 Sheets

NOT FOR CONSTRUCTION

DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-000cp-001.dgn

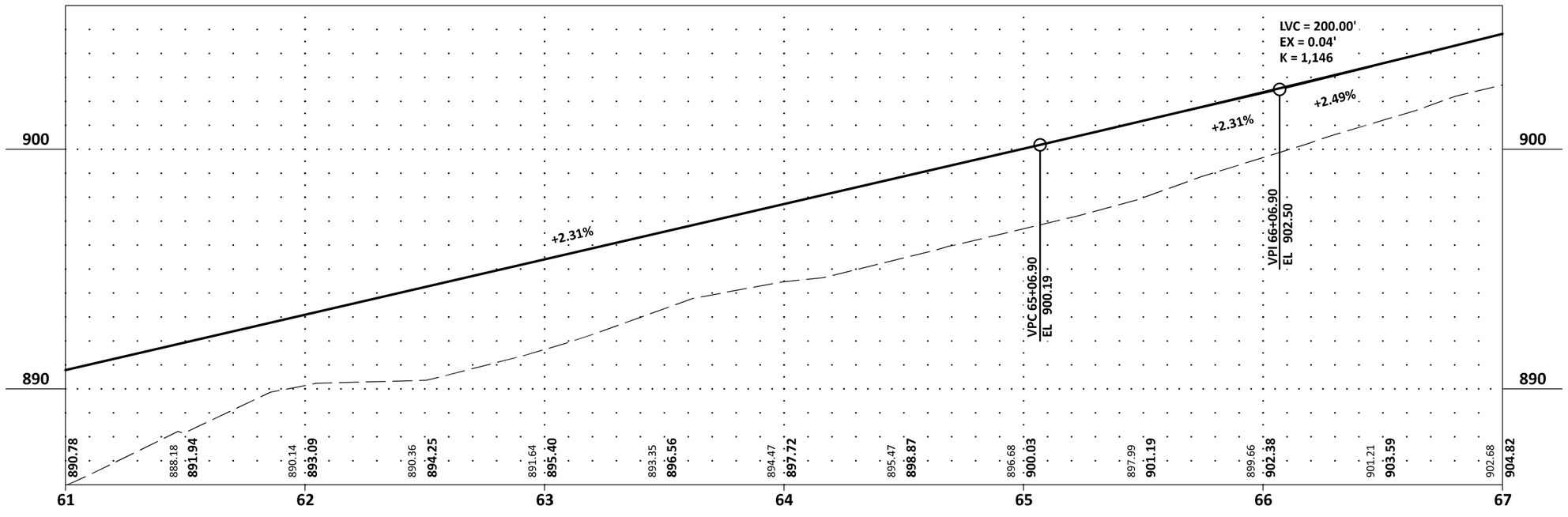


LEGEND

- ① CONCRETE PEDESTRIAN CURB RAMP W/ TRUNCATED DOMES
- INPLACE PAVEMENT
- PROPOSED CONSTRUCTION
- RETAINING WALL
- CONSTRUCTION LIMITS
- EXISTING R/W

NOTES

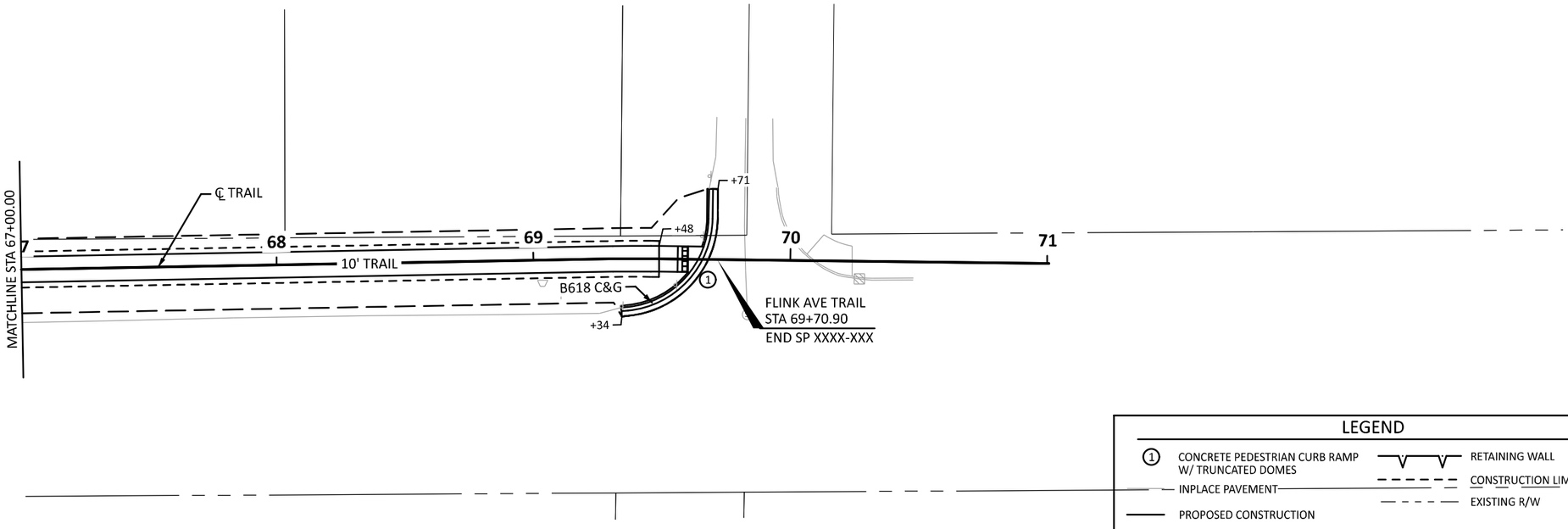
1. ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF BITUMINOUS EXCEPT FOR BERMS AND BOULEVARDS, WHERE THE DIMENSIONS MEASURED FROM BACK OF CURB.



DRAWN BY: KM DESIGNED BY: KM CHECKED BY: MG	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. SIGNATURE: PRINTED NAME: DATE: LIC. NO.	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION **FLINK AVE TRAIL** NORTH BRANCH, CHISAGO COUNTY, MINNESOTA	CONSTRUCTION PLAN & PROFILES STA 61+00.00 TO STA 67+00.00	SAP XXXX-XX Sheet No. 17 of 23 Sheets

NOT FOR CONSTRUCTION

DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-000cp-001.dgn



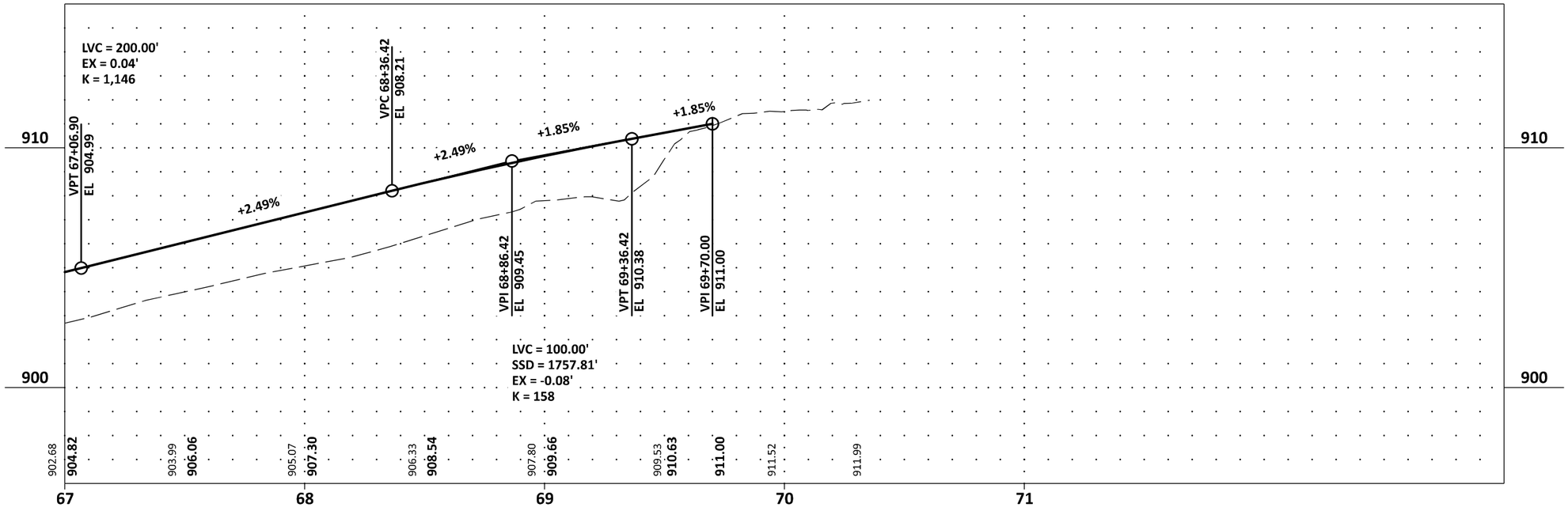
SCALE IN FEET
0 25 50

LEGEND

- (1) CONCRETE PEDESTRIAN CURB RAMP W/ TRUNCATED DOMES
- INPLACE PAVEMENT
- PROPOSED CONSTRUCTION
- RETAINING WALL
- CONSTRUCTION LIMITS
- EXISTING R/W

NOTES

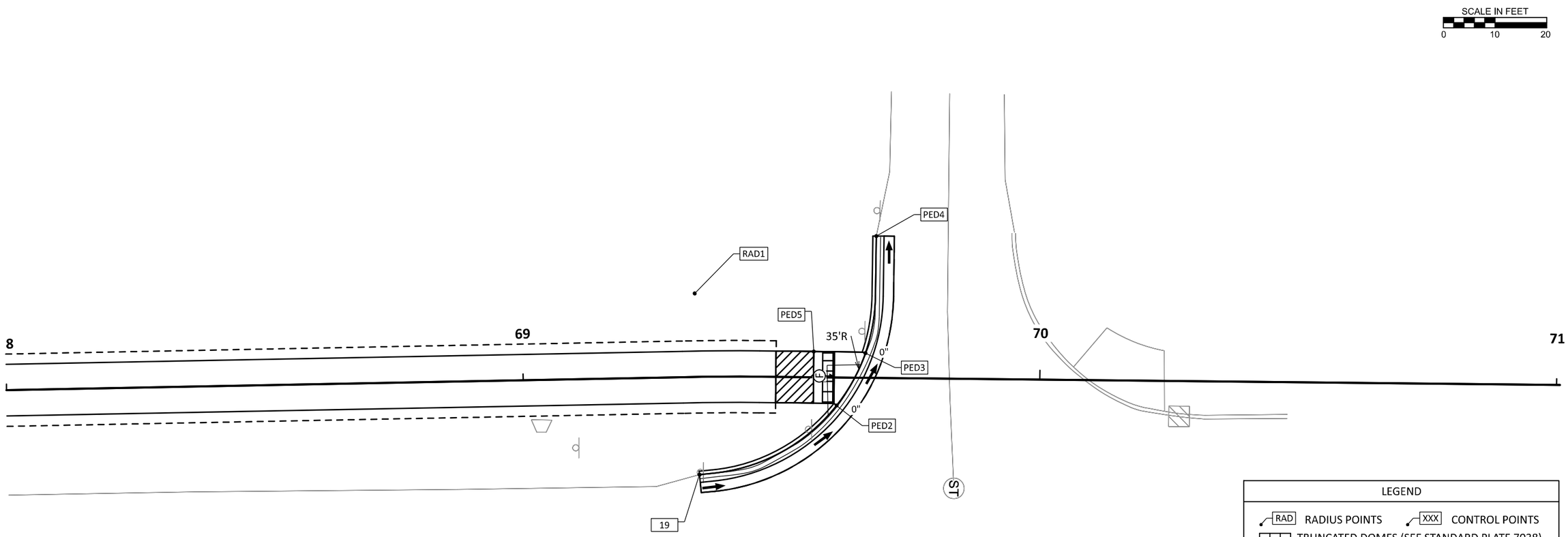
1. ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF BITUMINOUS EXCEPT FOR BERMS AND BOULEVARDS, WHERE THE DIMENSIONS MEASURED FROM BACK OF CURB.



DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-000cp-001.dgn

DRAWN BY: KM DESIGNED BY: KM CHECKED BY: MG	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	SIGNATURE: PRINTED NAME: DATE: LIC. NO.	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION **FLINK AVE TRAIL** NORTH BRANCH, CHISAGO COUNTY, MINNESOTA	CONSTRUCTION PLAN & PROFILES STA 67+00.00 TO STA 69+70.90	SAP XXXX-XX Sheet No. 18 of 23 Sheets

NOT FOR CONSTRUCTION



CONTROL POINTS			
POINT NUMBER	X	Y	ELEV
19	522306.05	180560.99	909.80
PED2	522292.37	180587.40	910.71
PED3	522282.18	180592.86	910.88
PED4	522259.50	180594.74	911.70
PED5	522281.97	180582.87	910.43

RADIUS POINTS		
POINT NUMBER	X	Y
RAD1	522270.97	180559.70

LEGEND

- RAD RADIUS POINTS — XXX CONTROL POINTS
- TRUNCATED DOMES (SEE STANDARD PLATE 7038)
- CONSTRUCT CONCRETE CURB AND GUTTER
- LANDING AREA - 4' X 4' MIN. DIMENSIONS AND MAX. 2.0% SLOPE IN ALL DIRECTIONS
- (1) MAX 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK AND DRAIN TO FLOW LINE. SHALL BE CONSTRUCTED INTEGRAL WITH CURB AND GUTTER.
- (S) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%
- (F) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 2.0% MINIMUM AND 5.0% MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%
- DRAINAGE FLOW ARROW — CATCH BASIN
- CONSTRUCTION LIMITS — X" CURB HEIGHT

NOTES: 1. ALL INITIAL LANDINGS TO BE POURED SEPARATELY.

DRAWN BY:
DESIGNED BY:
CHECKED BY:

I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE:
PRINTED NAME:
DATE: LIC. NO.

NOT FOR CONSTRUCTION

wsb

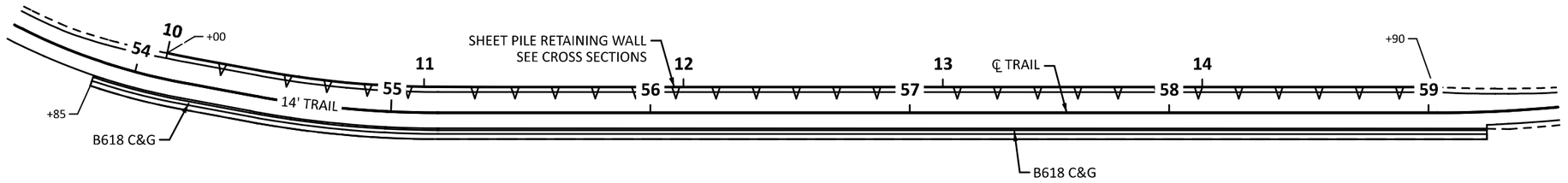
MINNESOTA DEPARTMENT OF TRANSPORTATION
FLINK AVE TRAIL
NORTH BRANCH, CHISAGO COUNTY, MINNESOTA

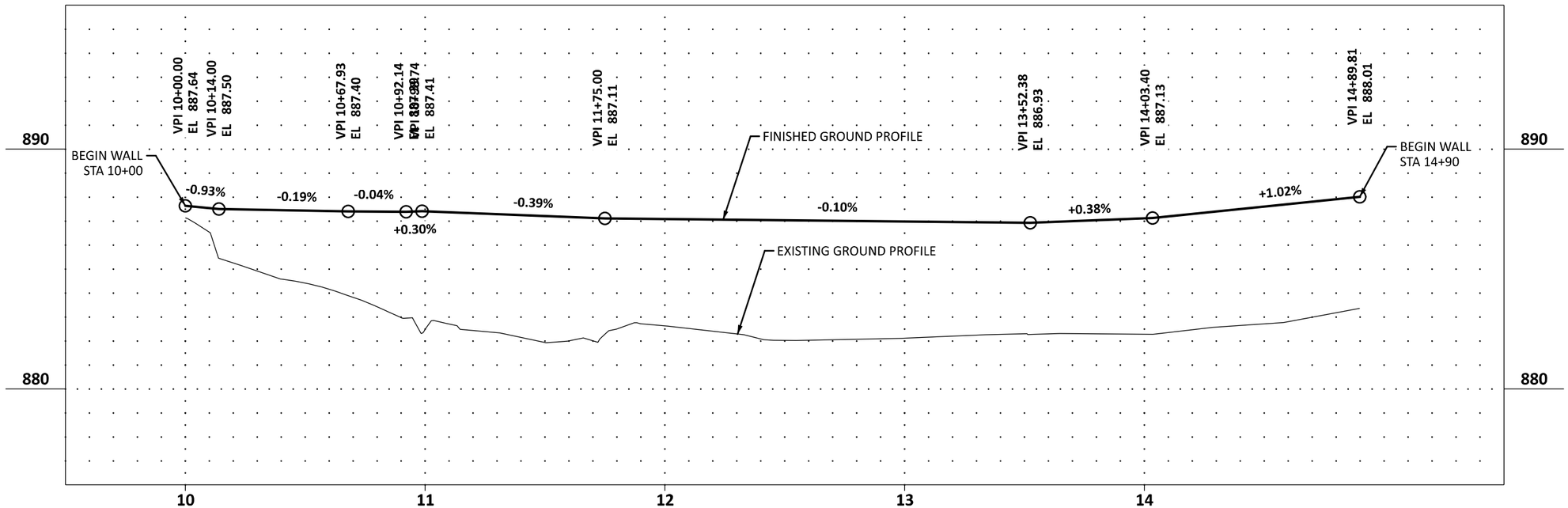
PEDESTRAIN RAMP DETAILS

SP XXXX-XXX

Sheet No. 19 of 23 Sheets

DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-000ped-001.dgn





SCALE IN FEET
0 25 50

DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-000rw-001.dgn

DRAWN BY:	I HAVE CONFIRMED THAT ALL OF THE COMMITMENTS LISTED IN THIS ENVIRONMENTAL MANAGEMENT PLAN ARE CONTAINED AS REQUIREMENTS IN THE CONTRACT.	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION	SHEET PILE WALL PLAN & PROFILE	SP XXXX-XXX
DESIGNED BY:	SIGNATURE:		FLINK AVE TRAIL		Sheet No. 20 of 23 Sheets
CHECKED BY:	PRINTED NAME:		NORTH BRANCH, CHISAGO COUNTY, MINNESOTA		
	DATE:				

NOT FOR CONSTRUCTION

EROSION / SEDIMENT CONTROL NOTES

SEDIMENT CONTROL PRACTICES:

1. SEDIMENT CONTROL MUST BE IN PLACE AND APPROVED BY THE ENGINEER BEFORE ANY PHASE OF CONSTRUCTION CAN BEGIN.
2. IF A 50' NATURAL BUFFER AROUND A SURFACE WATER IS INFEASIBLE, REDUNDANT PERIMETER CONTROLS MUST BE PROVIDED. REDUNDANT MEASURES TO BE INSTALLED 3'-5' FROM THE PRIMARY MEASURE WITH STABILIZED AREAS BETWEEN THE TWO BMPS.
3. INLET PROTECTION WILL BE INSTALLED AT ALL CATCH INLETS WITHIN THE PROJECT AREA PER STANDARD PLAN.
4. TEMPORARY STABILIZATION MEASURES SHALL BE EMPLOYED WITHIN 200' OF THE NORMAL WETTED PERIMETER OF ALL DISCHARGE POINTS WITHIN 24 HOURS. MULCH IS NOT AN APPROVED MEASURE.
5. IN THE EVENT THAT PERMANENT STABILIZATION MEASURES CANNOT BE IMPLEMENTED WITHIN 7 DAYS AFTER CONSTRUCTION ACTIVITY IN THE DISTURBED AREA HAS CEASED, TEMPORARY STABILIZATION BMPS MUST BE SCHEDULED TO OCCUR WITHIN THAT 7 DAY TIME FRAME (EXCEPT WHERE CALLED OUT IN THESE NOTES).
6. RAPID STABILIZATION METHOD 4 SHALL BE EMPLOYED WITHIN 200' OF THE NORMAL WETTED PERIMETER OF ALL DISCHARGE POINTS WITHIN 24 HOURS.
7. A SEDIMENT TRAP MUST BE INSTALLED PER THE APPROVED STANDARD DETAILS WITHIN 24 HOURS OF CONNECTING THE UTILITIES.
8. ALL STOCKPILES MUST HAVE DOWN GRADIENT PERIMETER SEDIMENT CONTROL IMPLEMENTED AND MAINTAINED AT ALL TIMES. STOCKPILES TO RECEIVE TEMPORARY STABILIZATION IF UNWORKED FOR 7 DAYS.
9. STOCKPILES MAY NOT BE PLACED WITHIN ANY DISCHARGE OR CURB LINE UNLESS PROPER BYPASS IS INSTALLED PRIOR TO STOCKPILE PLACEMENT.
10. CONTRACTOR TO INSTALL SEDIMENT CONTROL LOGS AND/OR SILT FENCE DOWN GRADIENT FROM ANY EXPOSED AREA.

EROSION PREVENTION PRACTICES:

1. STABILIZATION OF DISTURBED AREAS SHALL BE DONE BY PERMANENT TURF ESTABLISHMENT WHENEVER POSSIBLE.

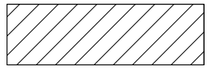
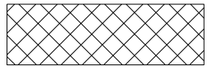
POLLUTION PREVENTION MANAGEMENT MEASURES:

1. A ROCK CONSTRUCTION ENTRANCE WILL BE PLACED AT ALL ENTRANCES THAT LEAD TO THE PROJECT SITE IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN AND THE APPROVED STANDARD DETAILS. STABILZED CONSTRUCTION EXITS MUST BE A MINIMUM OF 50' PER NPDES PERMIT.
2. ALL STREETS IN AND ADJACENT TO THE PROJECT SHALL REMAIN CLEAN AND PASSABLE AT ALL TIMES. ADJACENT STREET AND CURB LINES TO BE SWEPT FREE OF DEBRIS AT THE END OF EACH WORK DAY, OR AS OFTEN AS NEEDED TO ENSURE PUBLIC SAFETY.
3. SLURRY FROM CONCRETE OPERATIONS MUST BE VACUUMED UP IMMEDIATELY. NO CONCRETE WASHOUT SHALL COME IN CONTACT WITH THE GROUND AND MUST BE PROPERLY DISPOSED OF. ALL HAZARDOUS MATERIALS MUST BE KEPT UNDER COVER AND WITHIN PROPER CONTAINMENT WHEN NOT IN USE.
4. THE CONTRACTOR SHALL AMEND THE SWPPP AND EROSION CONTROL PLAN SHEETS TO SHOW THE LOCATIONS OF PROPOSED STOCKPILES, STAGING AREAS, AND POTENTIAL POLLUTANT GENERATING ACTIVITIES (IF DESIGNATED CONCRETE WASHOUT AREAS, FUELING LOCATIONS, CHEMICAL STORAGE, ETC.)
5. RAPID STABILIZATION METHOD #4: THIS METHOD SHALL CONSIST OF CATEGORY 20/25 EROSION CONTROL BLANKET (NATURAL NET ONLY) IN COMBINATION WITH MNDOT SEED MIX OATS FORMALLY 22-111 (2 LBS PER 100 SQ YD) AND TYPE 3 OR 4 SLOW RELEASE FERTILIZER (8 LBS PER 100 SQ YD). THIS IS AN ACCEPTABLE BMP FOR DISURBED AREAS ADJACENT TO ENVIRONMENTALLY SENSITIVE AREAS, SURFACE WATERS, AND WITHIN THE LAST 200 FEET OF DITCH BOTTOMS.

MISCELLANEOUS:

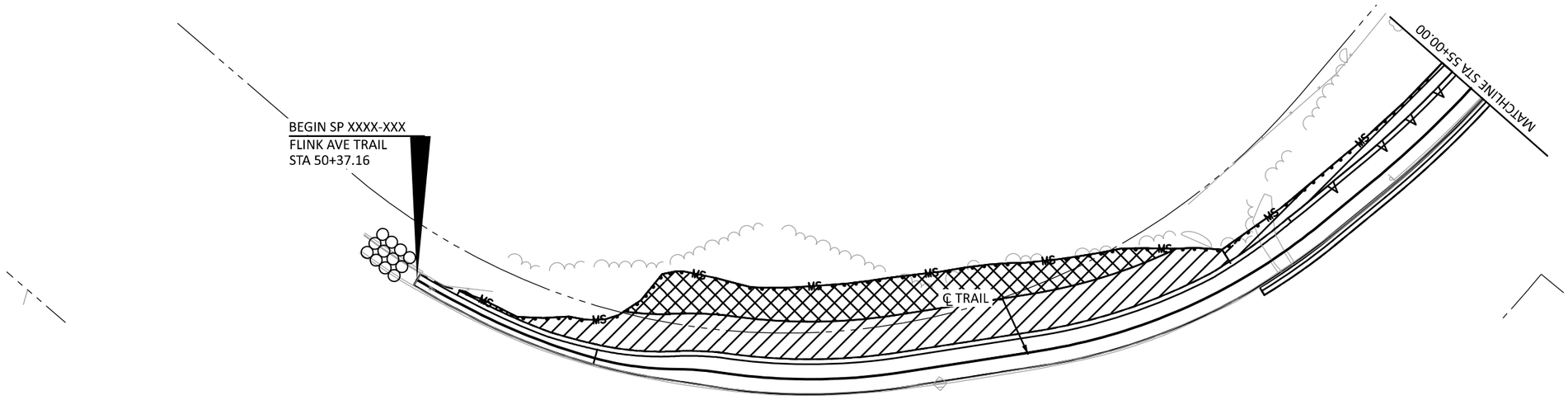
1. ADDITIONAL EROSION AND SEDIMENT CONTROL MAY BE ADDED DURING ANY PHASE OF CONSTRUCTION AS APPROVED BY THE ENGINEER.
2. IF PROJECT CONSISTS OF MILL & OVERLAY OF SECTIONS, ENSURE MILLINGS ARE NOT A THREAT FROM WASHING OFF THE PROJECT RIGHT OF WAY.
3. CONTRACTOR TO PROTECT ALL WETLAND AREAS WITH PERIMETER CONTROL (AND REDUNDANT MEASURES) UNTIL WORK IN THE PERMITTED AREAS IS NEEDED.

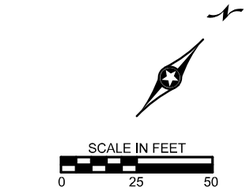
EROSION CONTROL & TURF ESTABLISHMENT LEGEND

PATTERN	USE	PERMANENT	TEMPORARY
	INSLOPES WITHIN 15' OF SHOULDER OR TRAIL	SEED MESIC INSLOPE @ 65 LBS/ACRE FERTILIZER TYPE 4, 18-1-8 @ 150 LBS/ACRE ROLLED EROSION PREVENTION CATEGORY 20	RAPID STABILIZATION METHOD 3 @ 6 MGAL/ACRE
	NORTHEAST ROADSIDE MIX	SEED RESIDENTIAL TURFGRASS @ 200 LBS/ACRE FERTILIZER TYPE 4, 18-1-8 @ 150 LBS/ACRE ROLLED EROSION PREVENTION CATEGORY 20	RAPID STABILIZATION METHOD 3 @ 6 MGAL/ACRE

DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-000ec-001.dgn

DRAWN BY: KM DESIGNED BY: KM CHECKED BY: MG	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. SIGNATURE: PRINTED NAME: DATE: LIC. NO.	NOT FOR CONSTRUCTION	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION **FLINK AVE TRAIL** NORTH BRANCH, CHISAGO COUNTY, MINNESOTA	TURF ESTABLISHMENT AND EROSION CONTROL NOTES / LEGEND	SAP XXXX-XX Sheet No. 21 of 23 Sheets





LEGEND

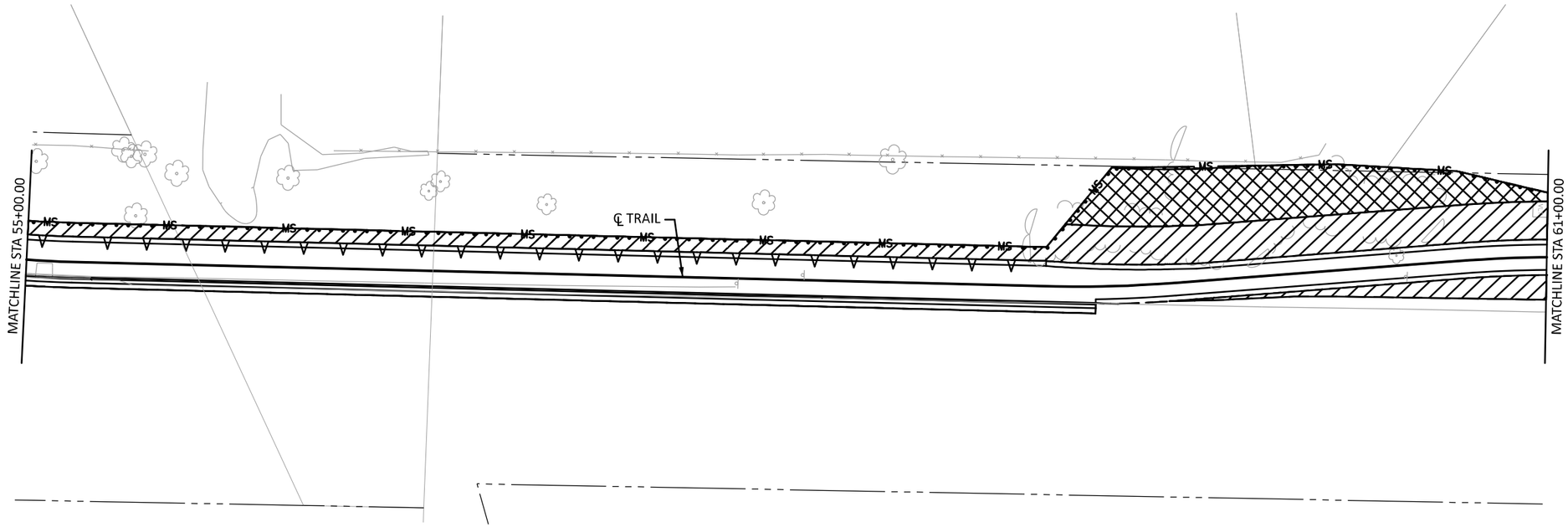
- CONSTRUCTION LIMITS
- EXISTING RIGHT OF WAY
- CP — CULVERT END CONTROL
- STORM DRAIN INLET PROTECTION
- SEDIMENT CONTROL LOG TYPE COMPOST
- SURFACE FLOW DIRECTION
- STABILIZED CONSTRUCTION EXIT

PERMANENT:
SEED MESIC INSLOPE
FERTILIZER TYPE 4
ROLLED EROSION PREVENTION CATEGORY 20

TEMPORARY:
RAPID STABILIZATION METHOD 4

PERMANENT:
NORTHEAST ROADSIDE MIX
FERTILIZER TYPE 4
ROLLED EROSION PREVENTION CATEGORY 20

TEMPORARY:
RAPID STABILIZATION METHOD 3





LEGEND

- CONSTRUCTION LIMITS
- EXISTING RIGHT OF WAY
- CP — CULVERT END CONTROL
- STORM DRAIN INLET PROTECTION
- SEDIMENT CONTROL LOG TYPE COMPOST
- SURFACE FLOW DIRECTION
- STABILIZED CONSTRUCTION EXIT

PERMANENT:
SEED MESIC INSLOPE
FERTILIZER TYPE 4
ROLLED EROSION PREVENTION CATEGORY 20

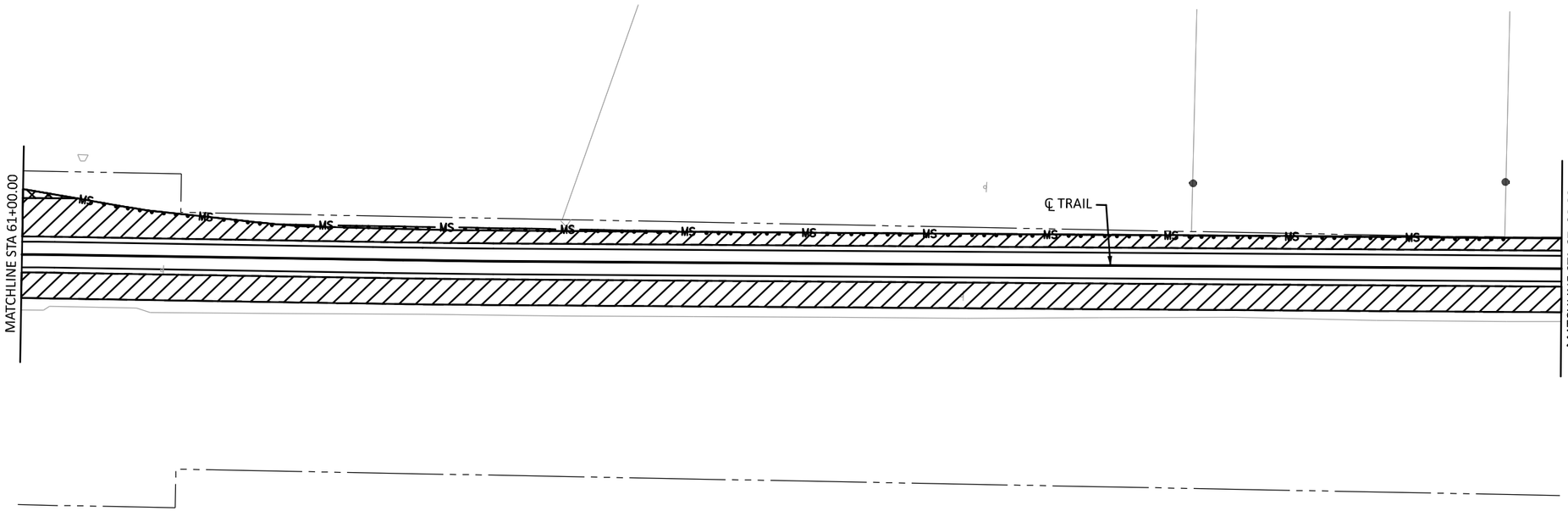
TEMPORARY:
RAPID STABILIZATION METHOD 4

PERMANENT:
NORTHEAST ROADSIDE MIX
FERTILIZER TYPE 4
ROLLED EROSION PREVENTION CATEGORY 20

TEMPORARY:
RAPID STABILIZATION METHOD 3

DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-000ec-001.dgn

DRAWN BY: KM DESIGNED BY: KM CHECKED BY: MG	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. SIGNATURE: PRINTED NAME: DATE: LIC. NO.	NOT FOR CONSTRUCTION	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION **FLINK AVE TRAIL** NORTH BRANCH, CHISAGO COUNTY, MINNESOTA	TURF ESTABLISHMENT & EROSION CONTROL STA 50+37.16 TO STA 61+00.00	SAP XXXX-XX Sheet No. 22 of 23 Sheets



SCALE IN FEET
0 25 50

LEGEND

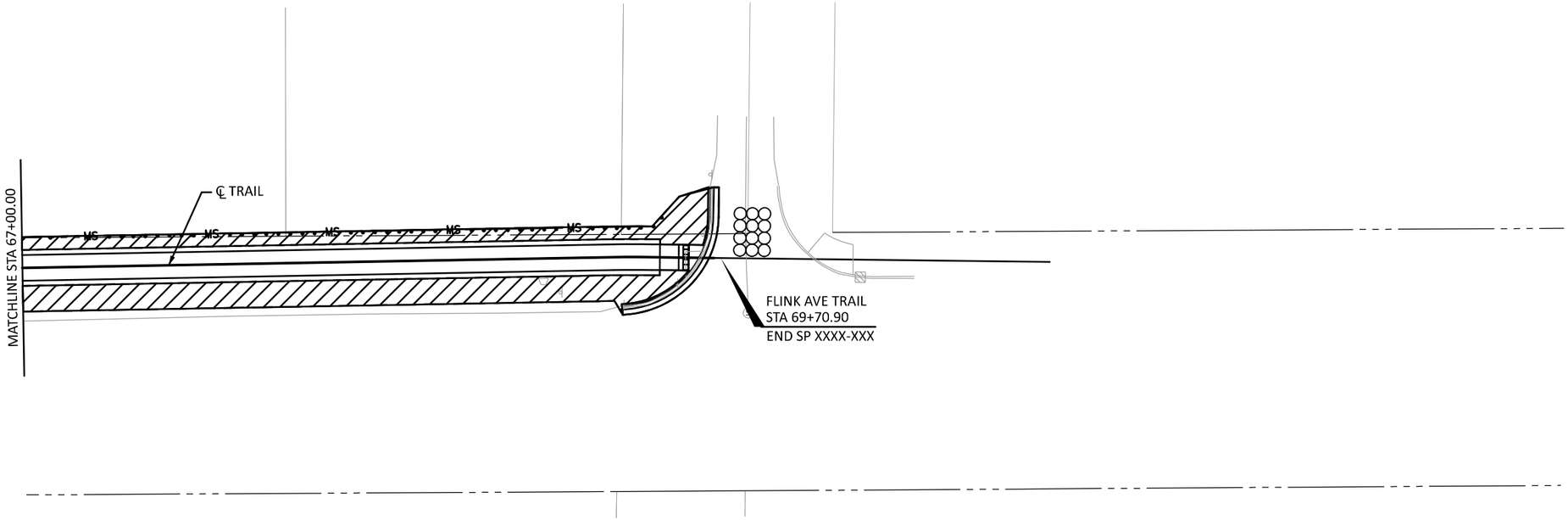
- CONSTRUCTION LIMITS
- EXISTING RIGHT OF WAY
- CP — CULVERT END CONTROL
- STORM DRAIN INLET PROTECTION
- SEDIMENT CONTROL LOG TYPE COMPOST
- SURFACE FLOW DIRECTION
- STABILIZED CONSTRUCTION EXIT

PERMANENT:
SEED MESIC INSLOPE
FERTILIZER TYPE 4
ROLLED EROSION PREVENTION CATEGORY 20

TEMPORARY:
RAPID STABILIZATION METHOD 4

PERMANENT:
NORTHEAST ROADSIDE MIX
FERTILIZER TYPE 4
ROLLED EROSION PREVENTION CATEGORY 20

TEMPORARY:
RAPID STABILIZATION METHOD 3



SCALE IN FEET
0 25 50

LEGEND

- CONSTRUCTION LIMITS
- EXISTING RIGHT OF WAY
- CP — CULVERT END CONTROL
- STORM DRAIN INLET PROTECTION
- SEDIMENT CONTROL LOG TYPE COMPOST
- SURFACE FLOW DIRECTION
- STABILIZED CONSTRUCTION EXIT

PERMANENT:
SEED MESIC INSLOPE
FERTILIZER TYPE 4
ROLLED EROSION PREVENTION CATEGORY 20

TEMPORARY:
RAPID STABILIZATION METHOD 4

PERMANENT:
NORTHEAST ROADSIDE MIX
FERTILIZER TYPE 4
ROLLED EROSION PREVENTION CATEGORY 20

TEMPORARY:
RAPID STABILIZATION METHOD 3

DRAWN BY: KM
DESIGNED BY: KM
CHECKED BY: MG

I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE:
PRINTED NAME:
DATE: LIC. NO.

NOT FOR CONSTRUCTION

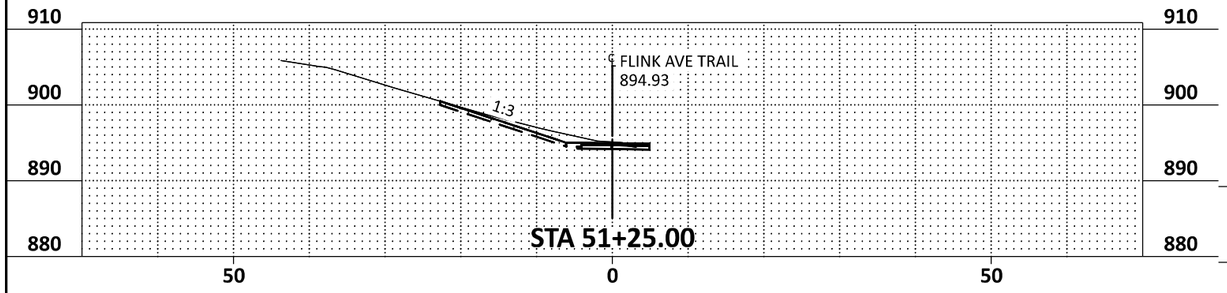
wsb

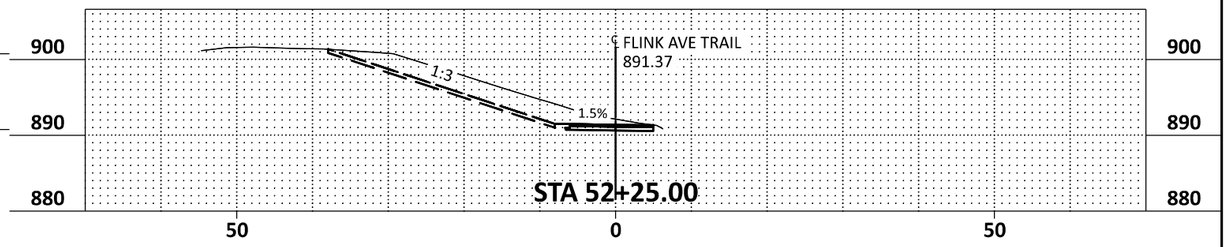
MINNESOTA DEPARTMENT OF TRANSPORTATION
FLINK AVE TRAIL
NORTH BRANCH, CHISAGO COUNTY, MINNESOTA

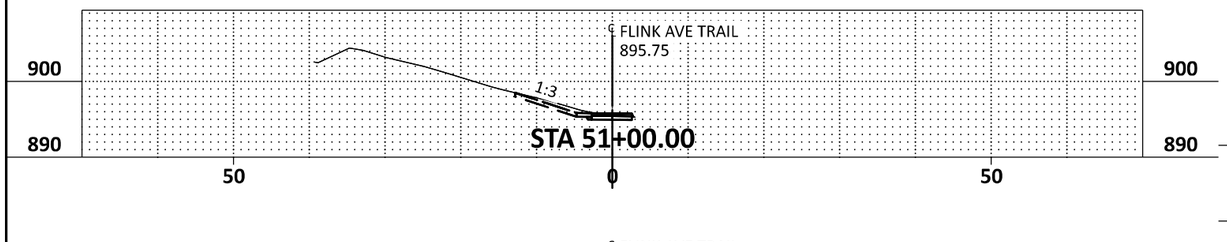
TURF ESTABLISHMENT & EROSION CONTROL
STA 61+00.00 TO STA 69+70.90

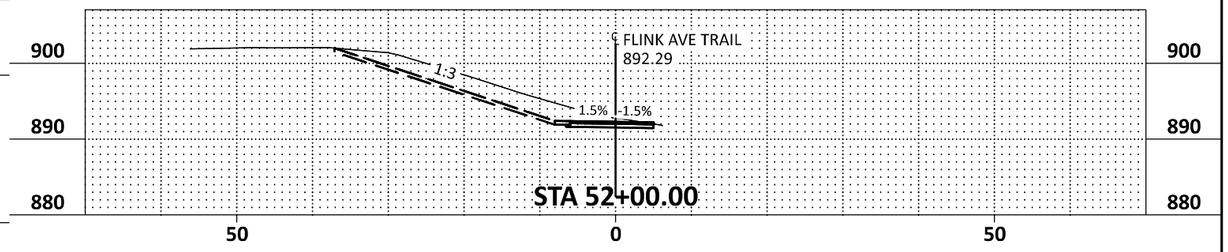
SAP XXXX-XX
Sheet No. 23 of 23 Sheets

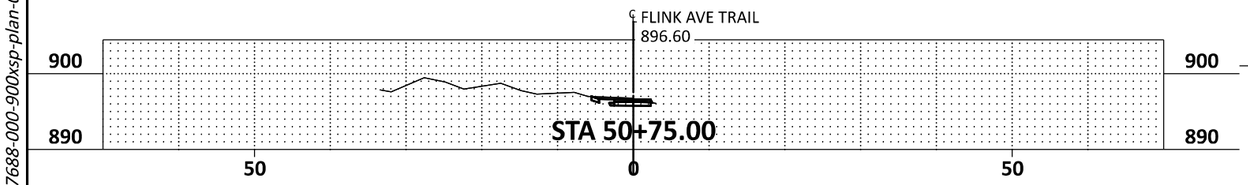
DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-000ec-001.dgn

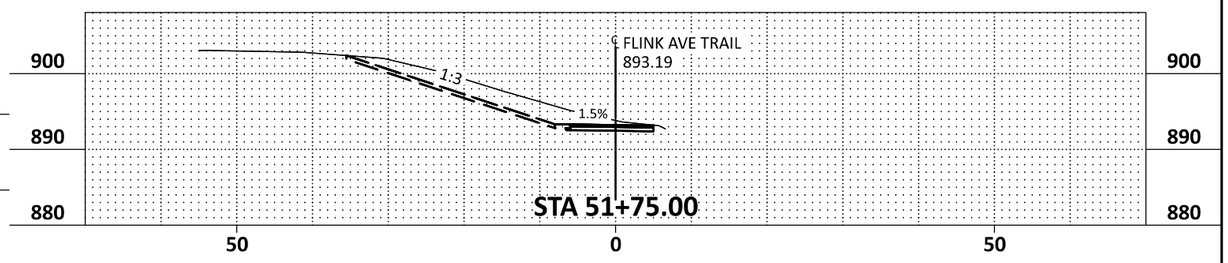


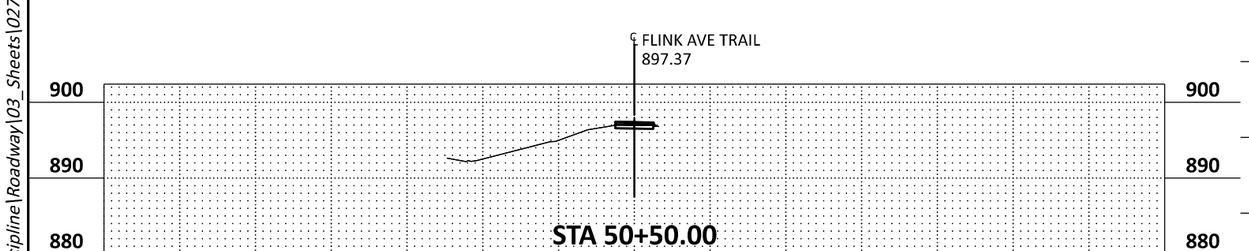


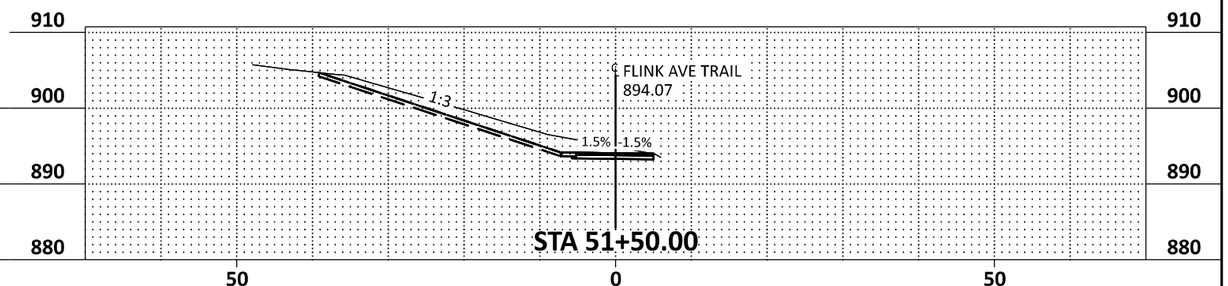


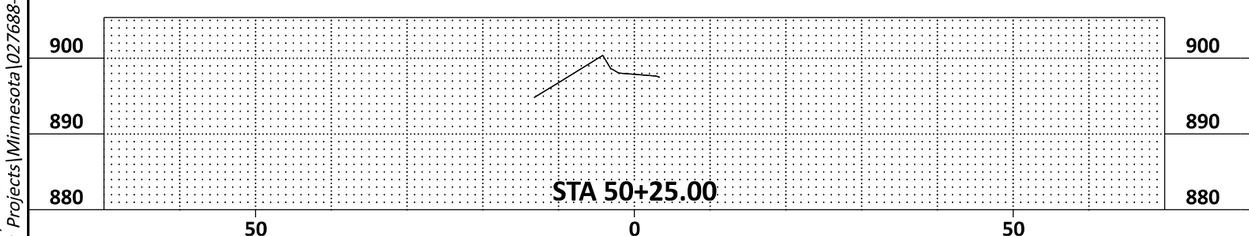






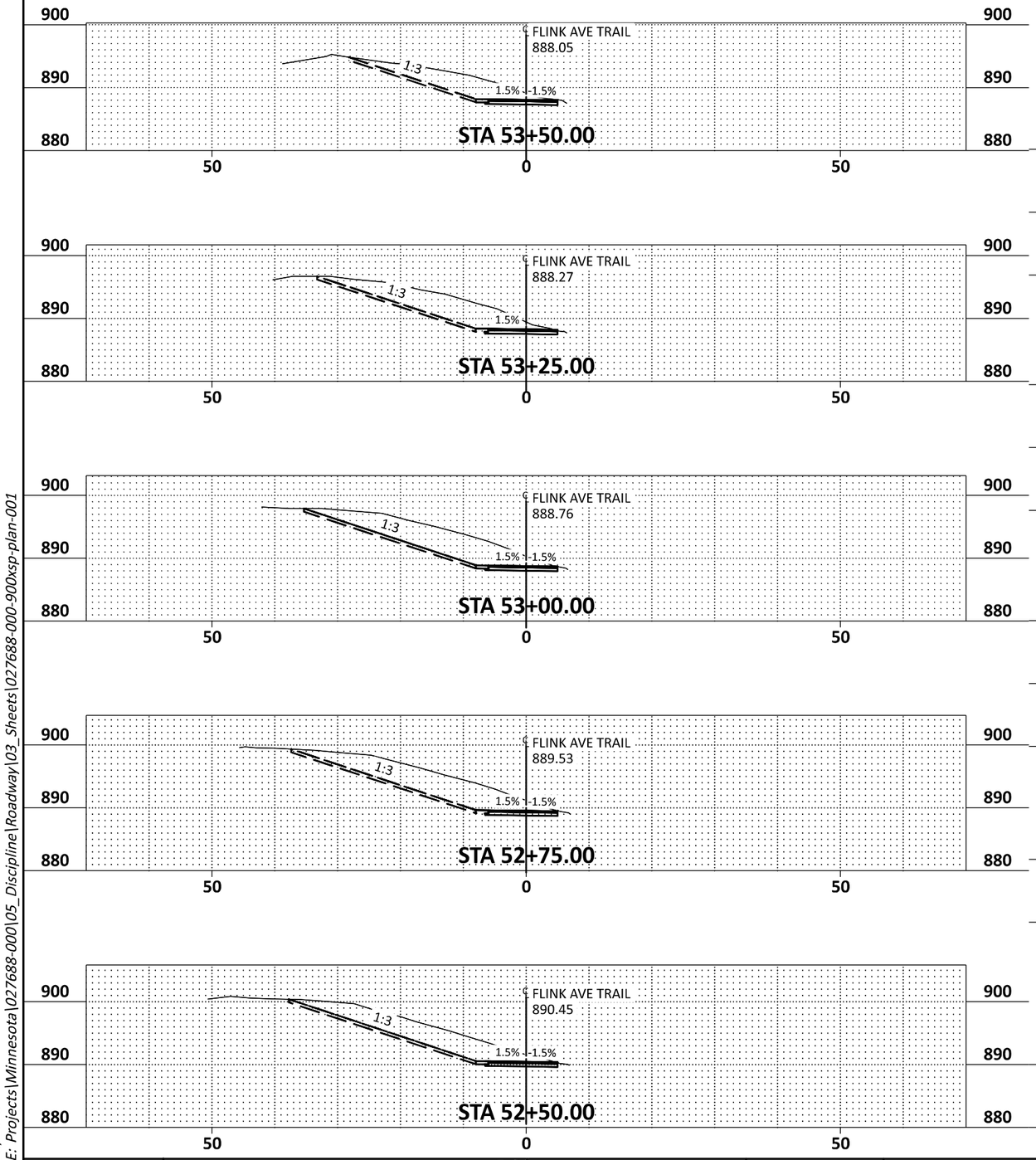


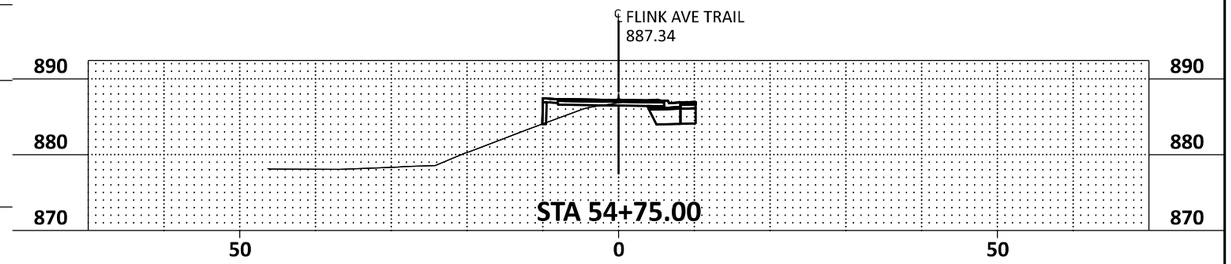


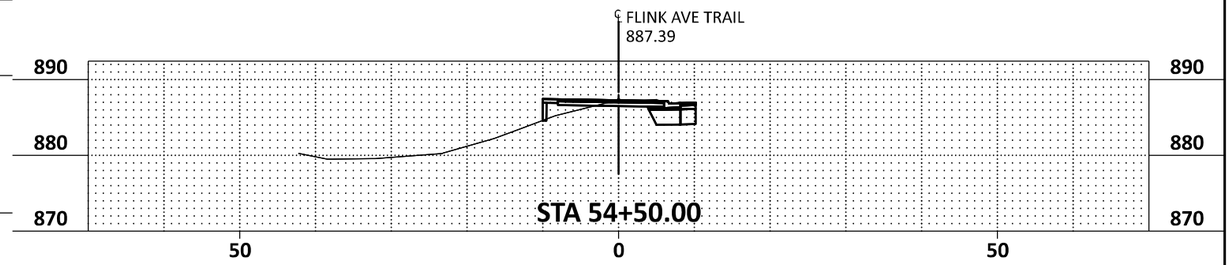


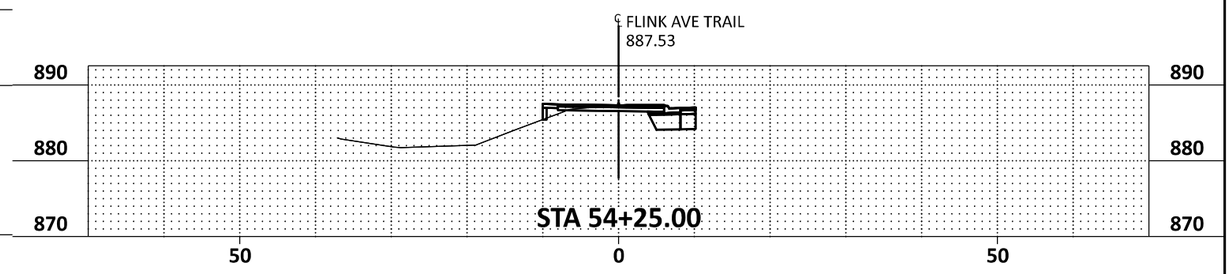
DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-900xsp-plan-001

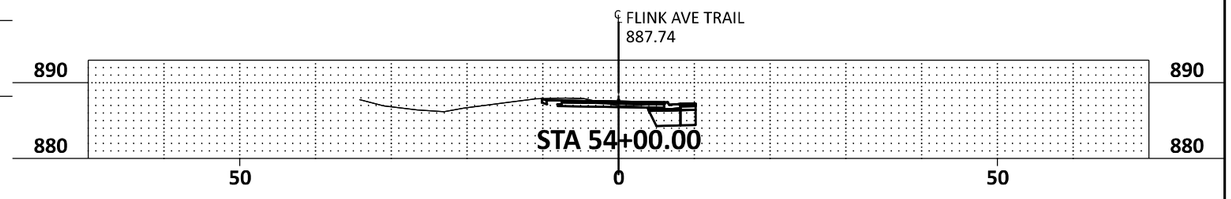
DRAWN BY:	NOT FOR CONSTRUCTION	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION **FLINK AVE TRAIL** NORTH BRANCH, CHISAGO COUNTY, MINNESOTA	**FLINK AVE TRAIL 50+25.00 - 52+25.00** CROSS SECTIONS	SP XXXX-XXX Sheet No. XS1 of XS9 Sheets
DESIGNED BY:					
CHECKED BY:					

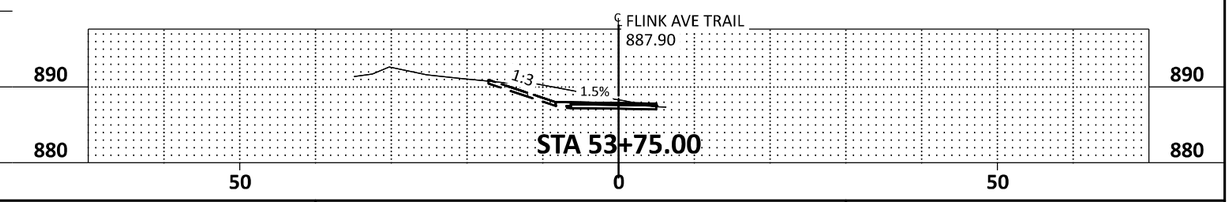






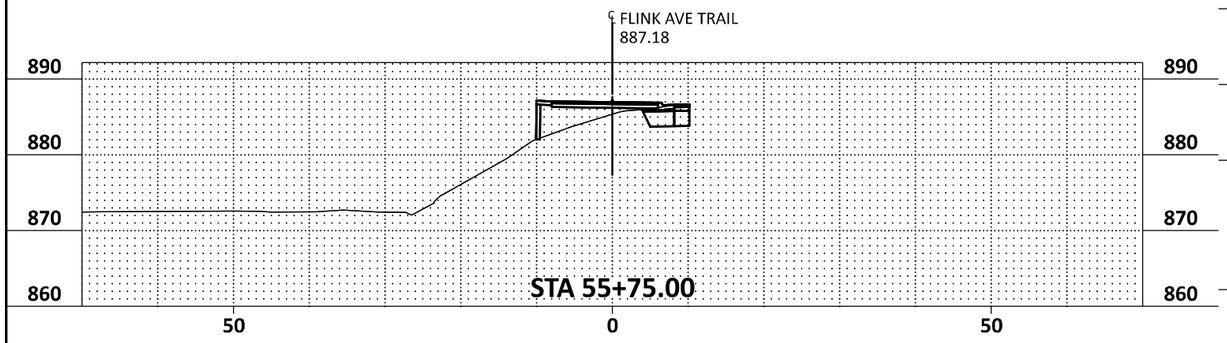


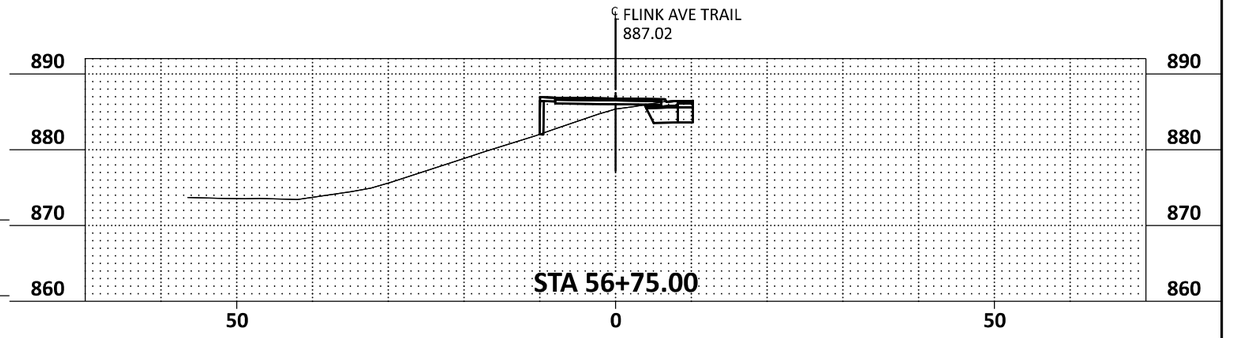


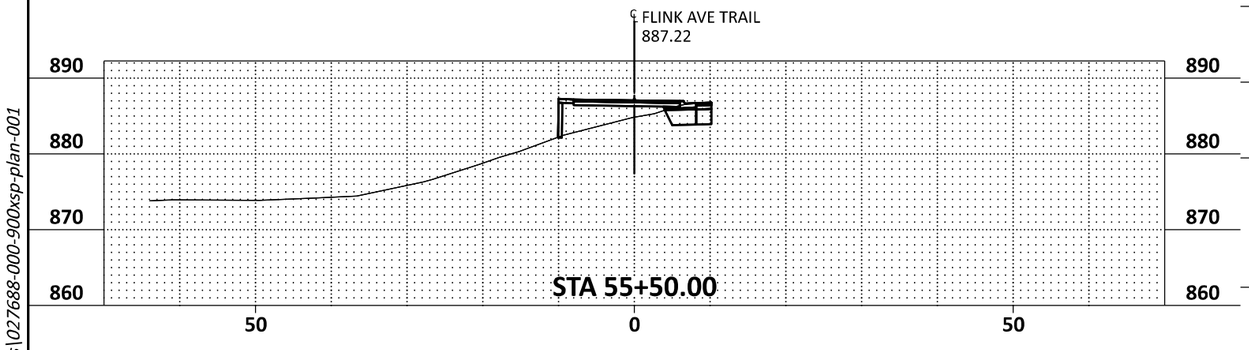


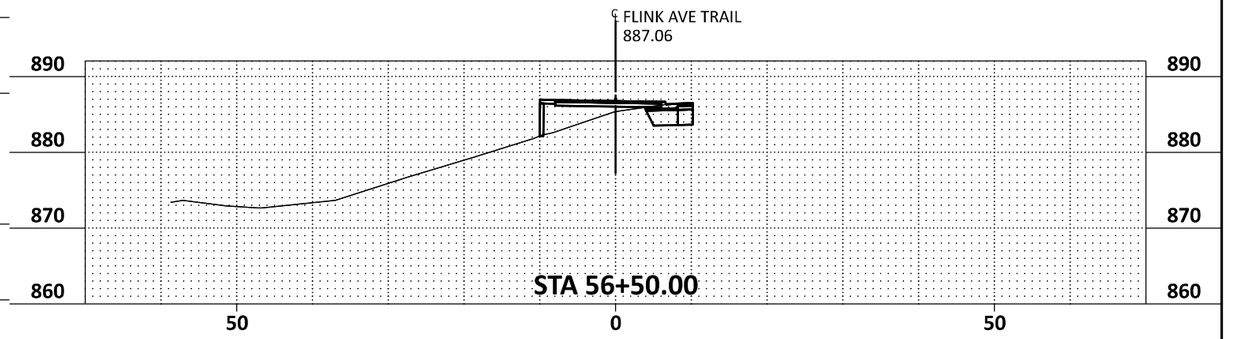
DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-900xsp-plan-001

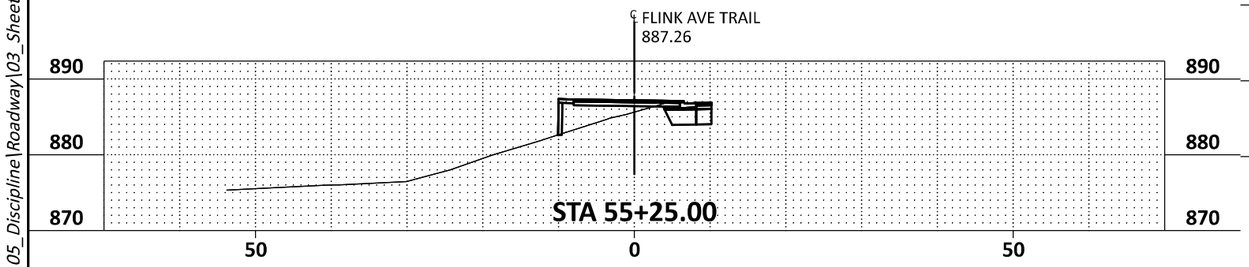
DRAWN BY:	NOT FOR CONSTRUCTION	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION **FLINK AVE TRAIL** NORTH BRANCH, CHISAGO COUNTY, MINNESOTA	**FLINK AVE TRAIL 52+50.00 - 54+75.00** CROSS SECTIONS	SP XXXX-XXX Sheet No. XS2 of XS9 Sheets
DESIGNED BY:					
CHECKED BY:					

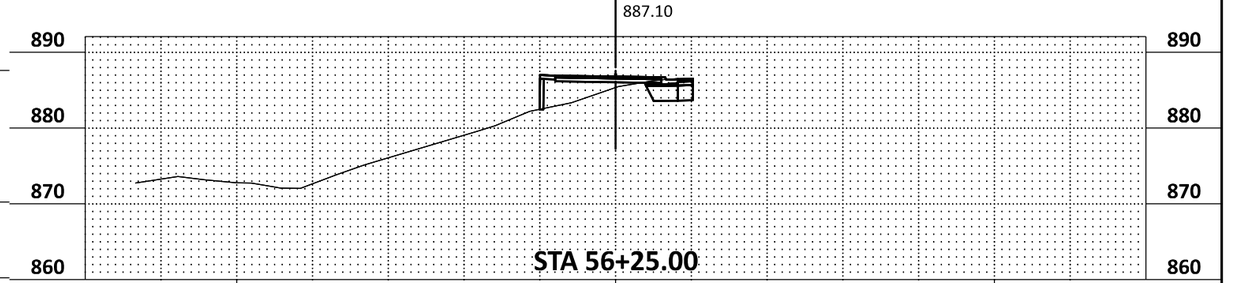


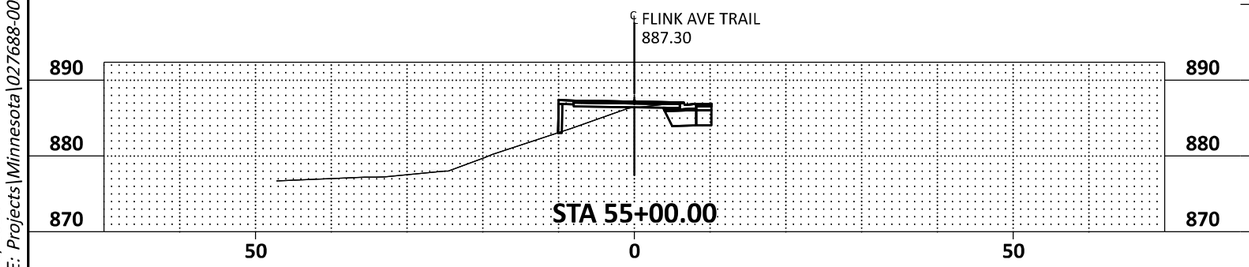


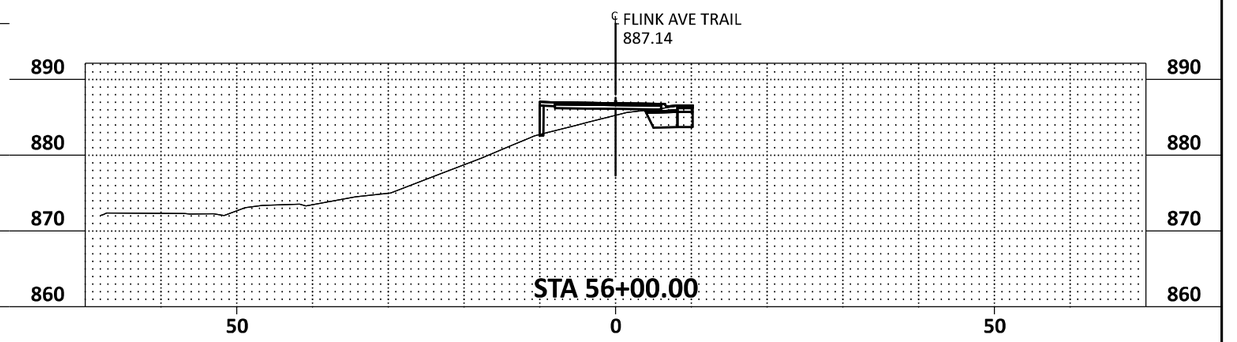






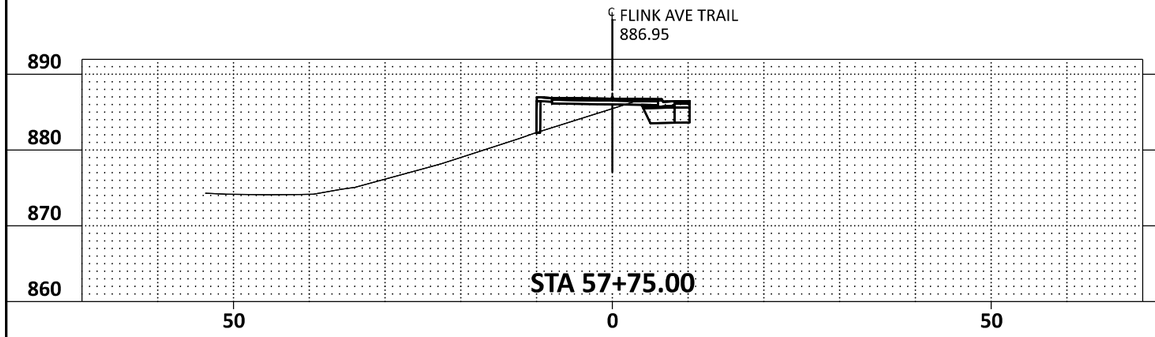


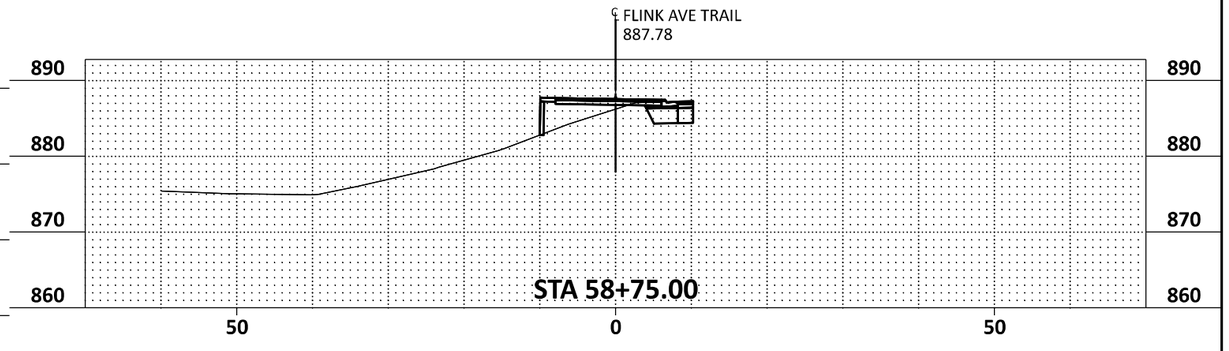


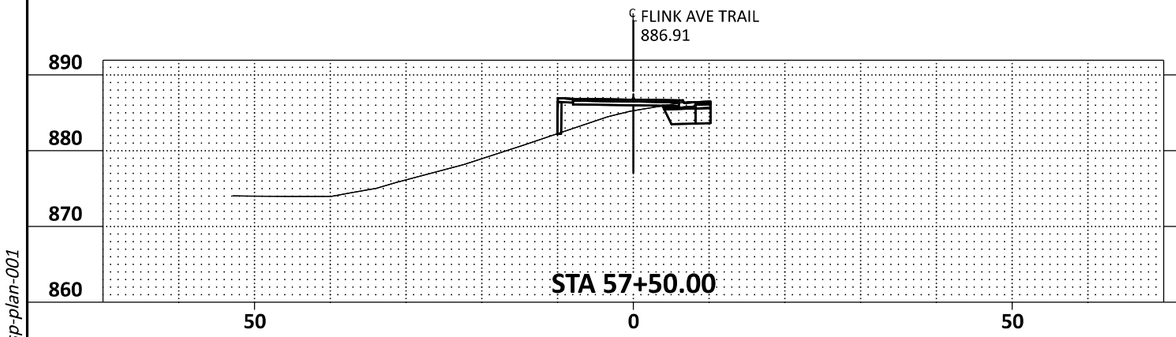


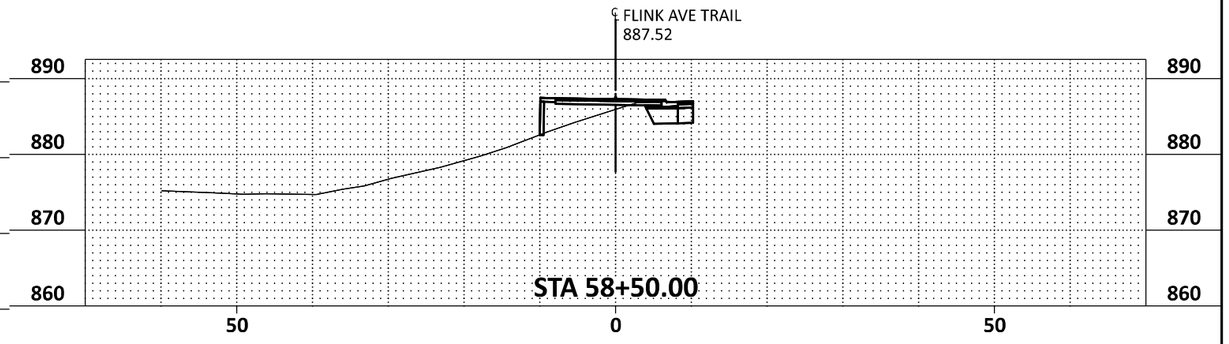
DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-900xsp-plan-001

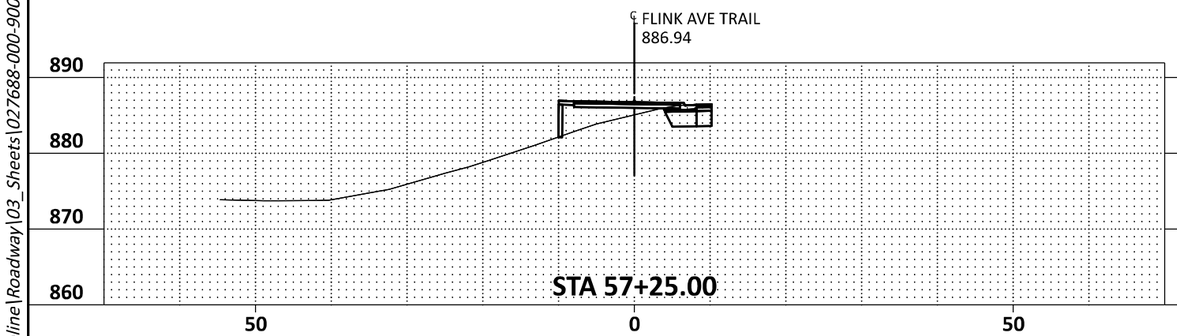
DRAWN BY:	NOT FOR CONSTRUCTION	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION **FLINK AVE TRAIL** NORTH BRANCH, CHISAGO COUNTY, MINNESOTA	**FLINK AVE TRAIL 55+00.00 - 56+75.00** CROSS SECTIONS	SP XXXX-XXX Sheet No. XS3 of XS9 Sheets
DESIGNED BY:					
CHECKED BY:					

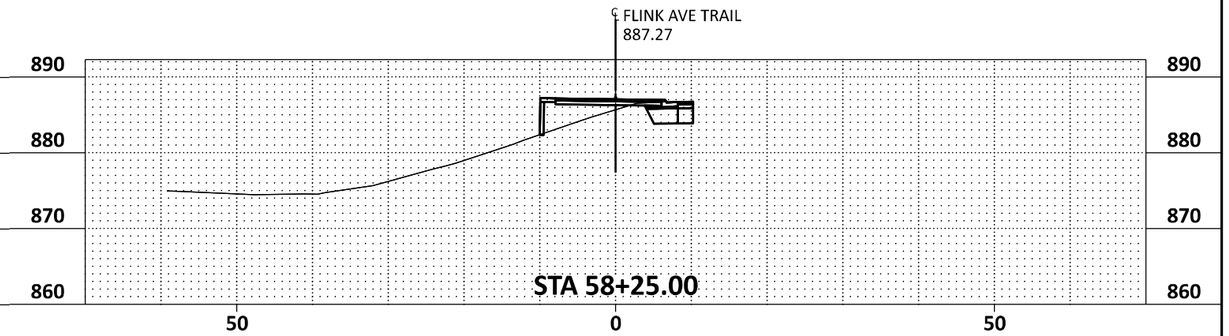


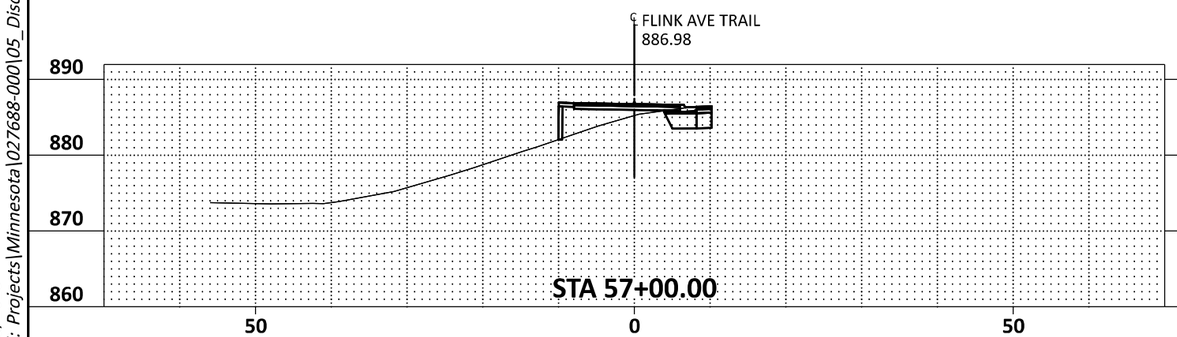


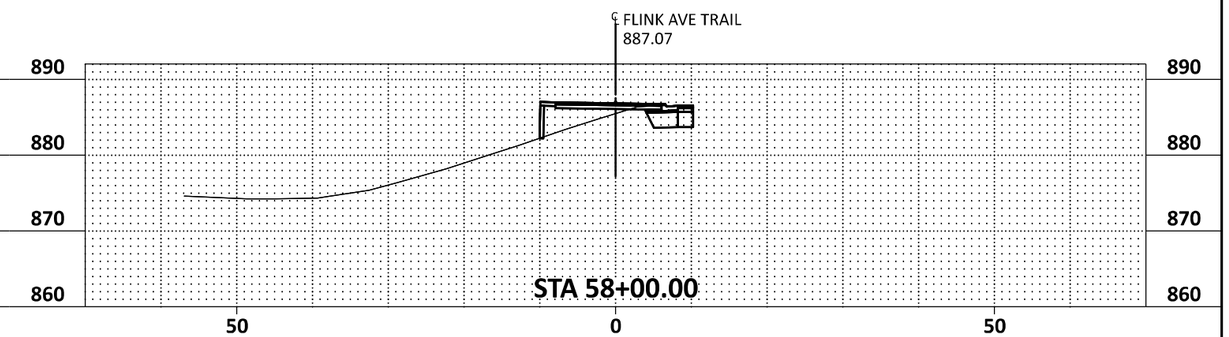






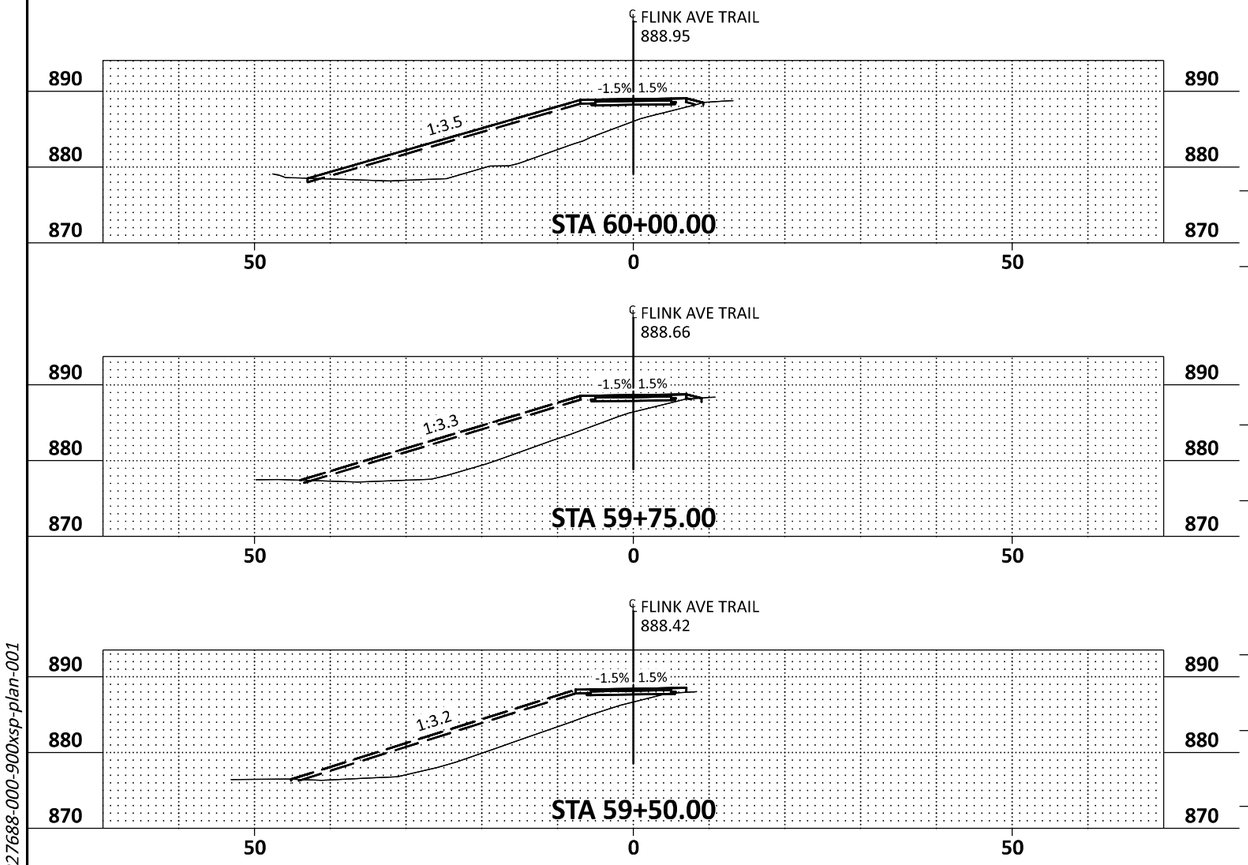


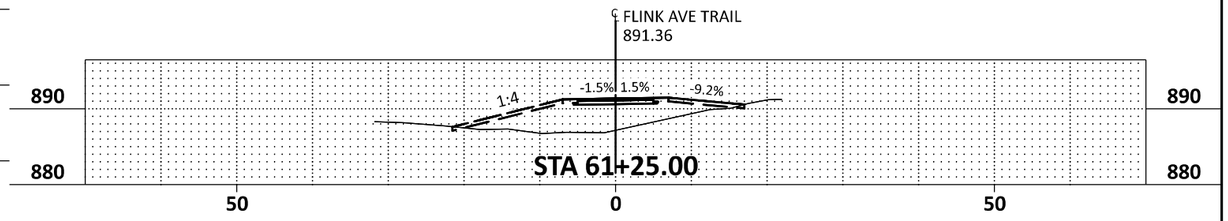


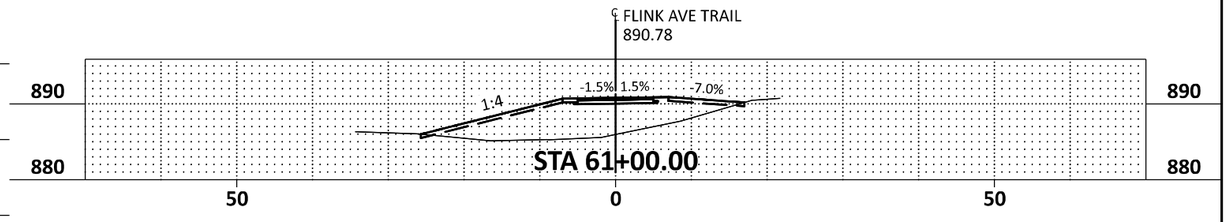


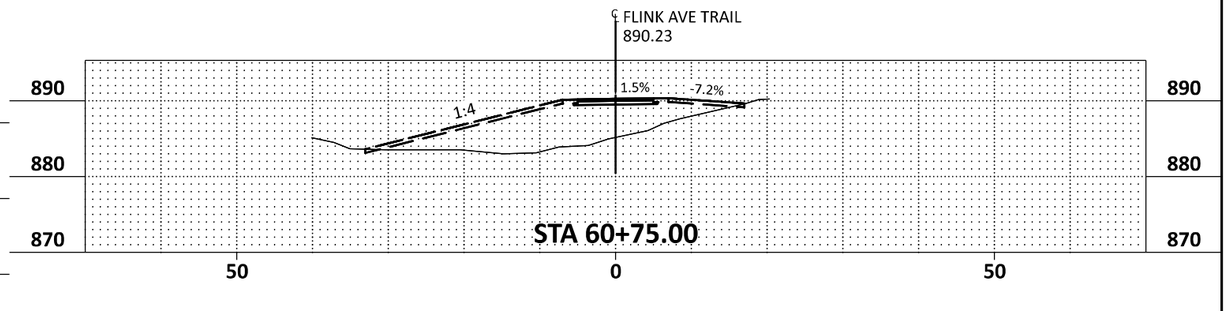
DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-900xsp-plan-001

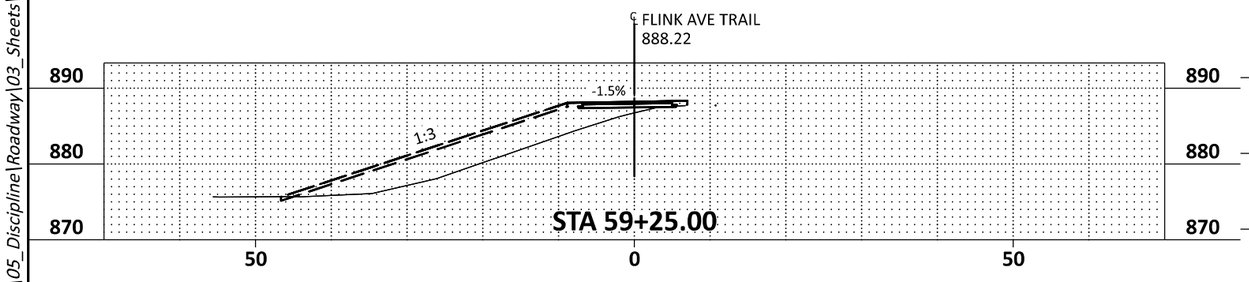
DRAWN BY:	NOT FOR CONSTRUCTION	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION **FLINK AVE TRAIL** NORTH BRANCH, CHISAGO COUNTY, MINNESOTA	**FLINK AVE TRAIL 57+00.00 - 58+75.00** CROSS SECTIONS	SP XXXX-XXX Sheet No. XS4 of XS9 Sheets
DESIGNED BY:					
CHECKED BY:					

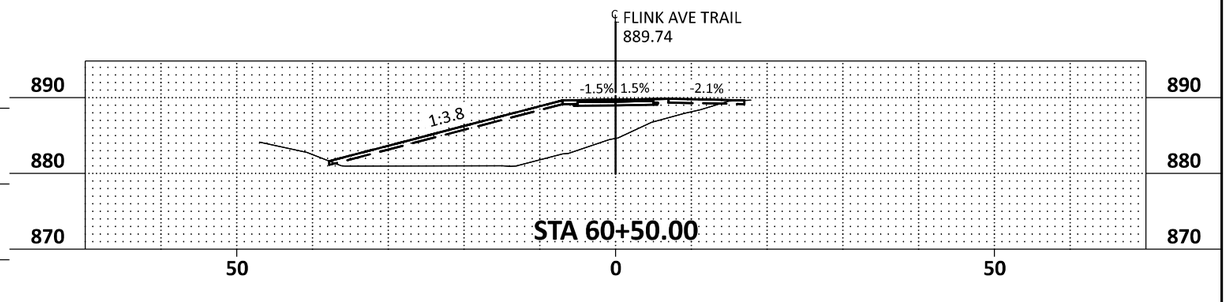


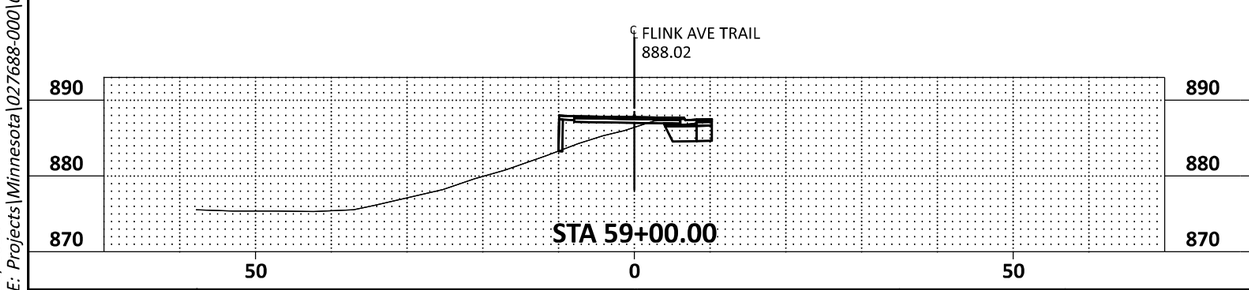


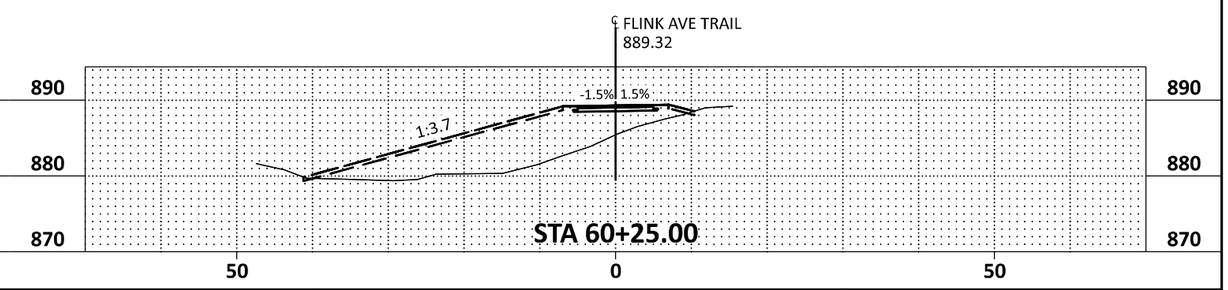






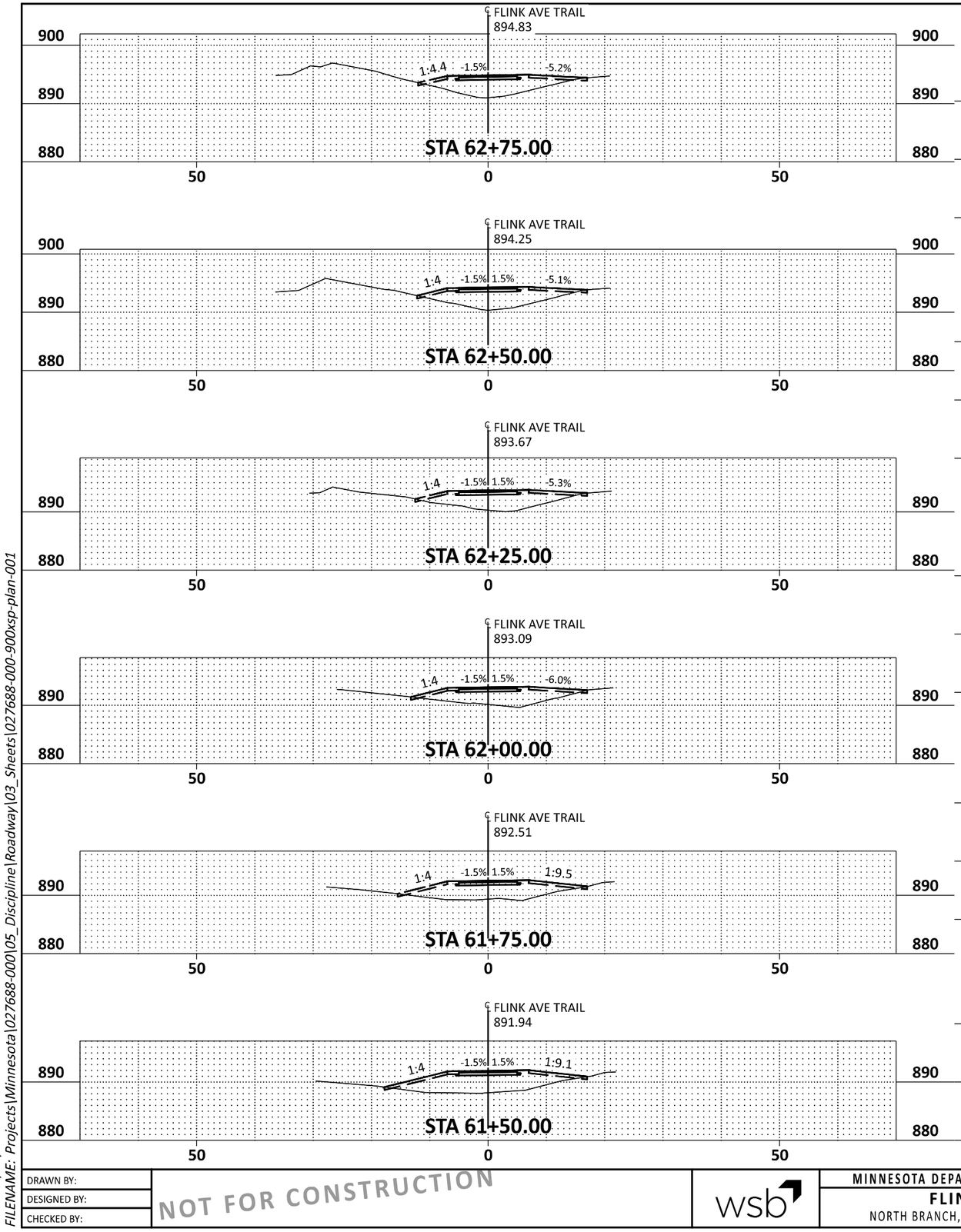


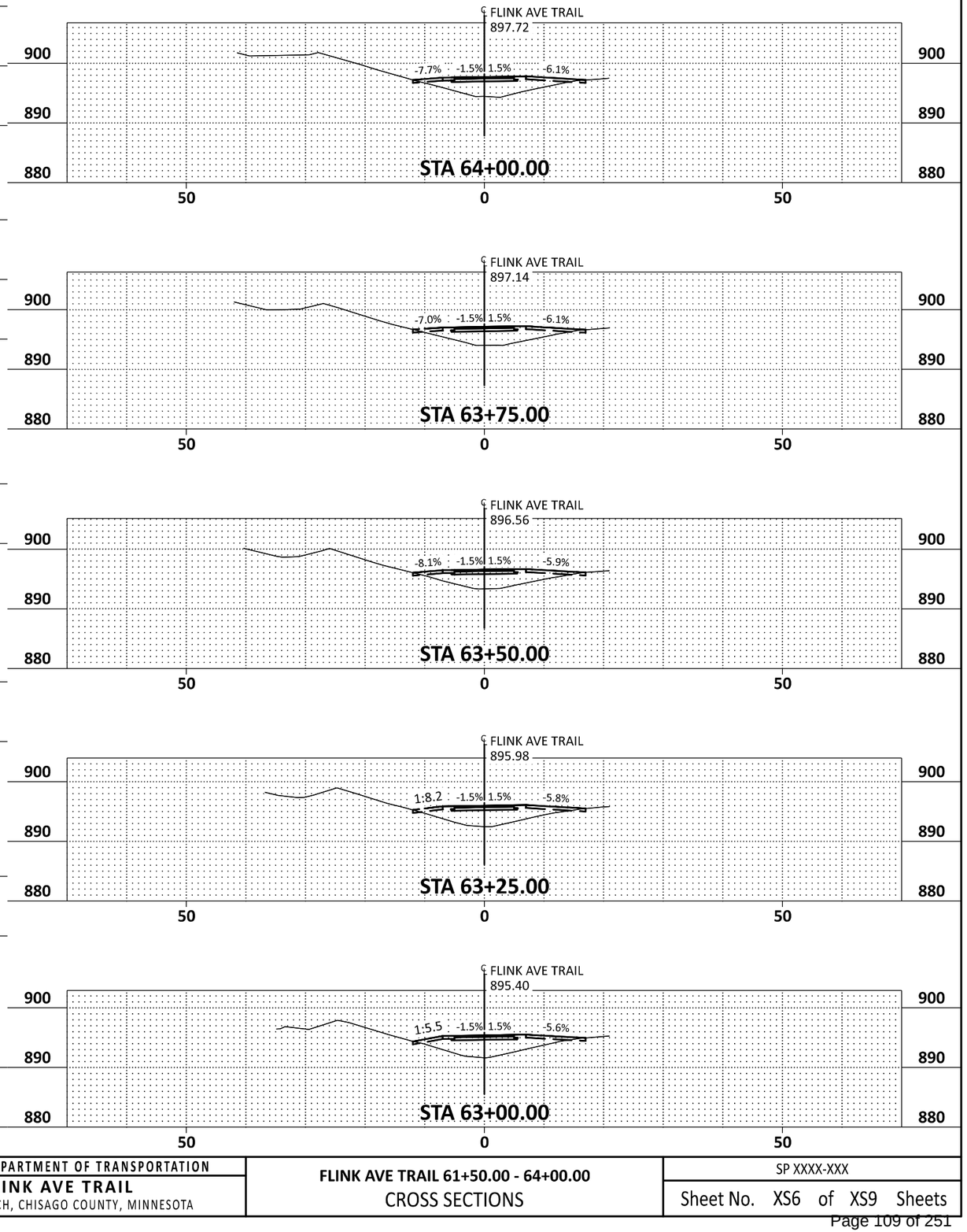




DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-900xsp-plan-001

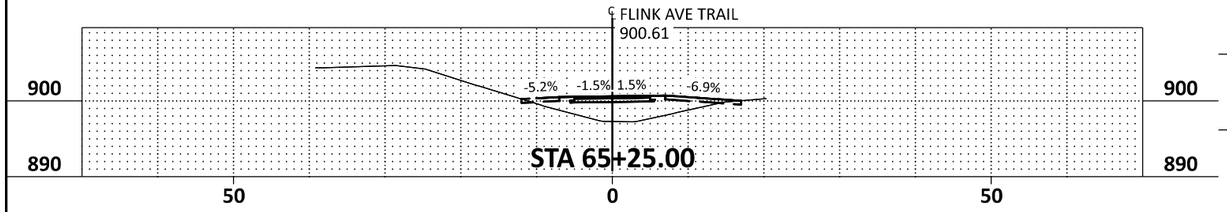
DRAWN BY:	NOT FOR CONSTRUCTION	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION FLINK AVE TRAIL NORTH BRANCH, CHISAGO COUNTY, MINNESOTA	FLINK AVE TRAIL 59+00.00 - 61+25.00 CROSS SECTIONS	SP XXXX-XXX Sheet No. XS5 of XS9 Sheets
DESIGNED BY:					
CHECKED BY:					

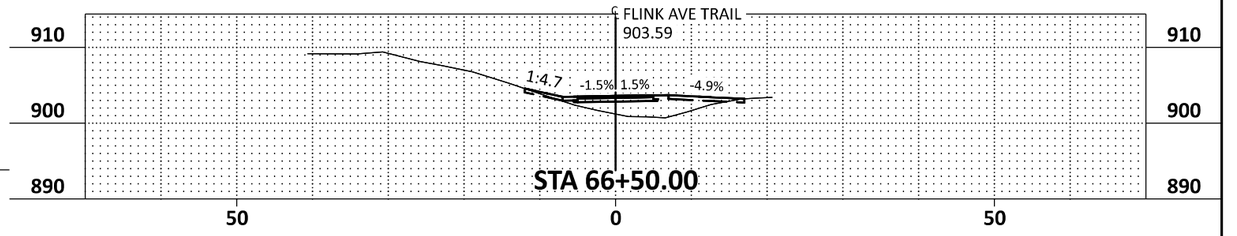


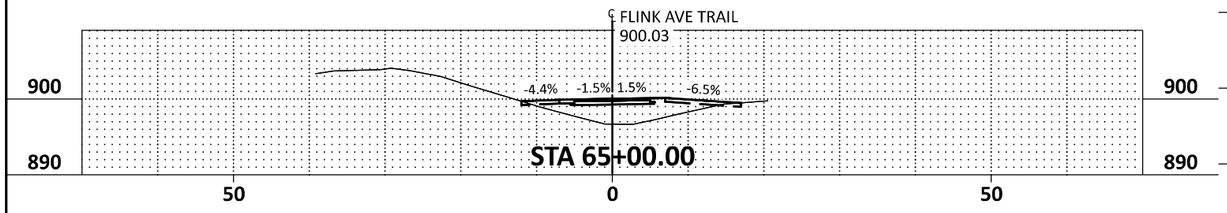


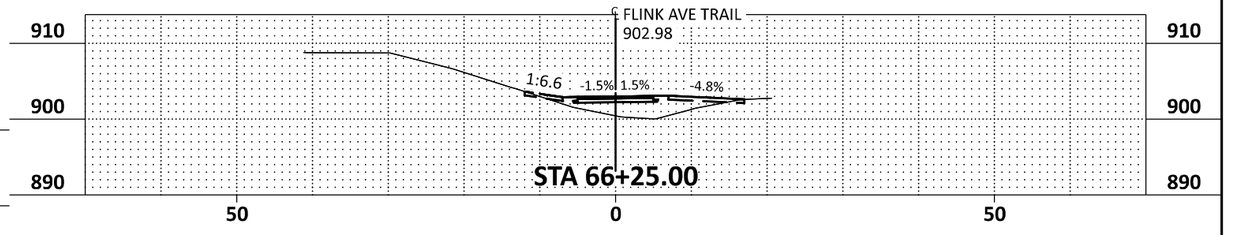
DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-900xsp-plan-001

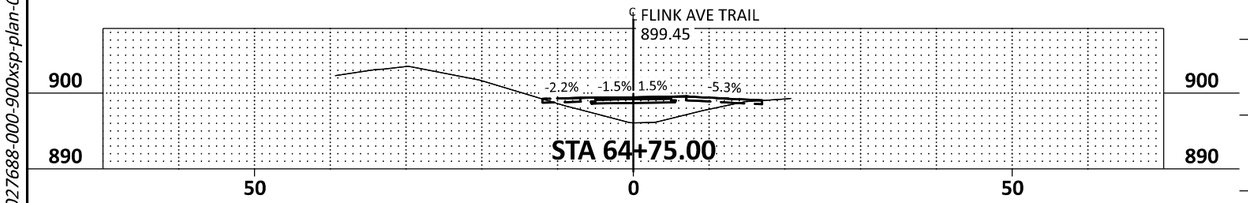
DRAWN BY:	NOT FOR CONSTRUCTION	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION **FLINK AVE TRAIL** NORTH BRANCH, CHISAGO COUNTY, MINNESOTA	**FLINK AVE TRAIL 61+50.00 - 64+00.00** CROSS SECTIONS	SP XXXX-XXX Sheet No. XS6 of XS9 Sheets
DESIGNED BY:					
CHECKED BY:					

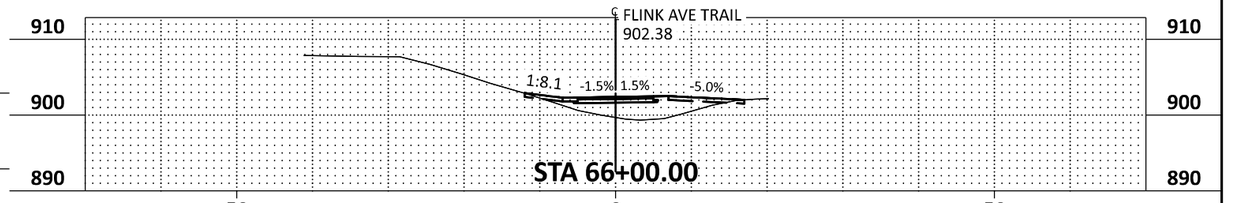


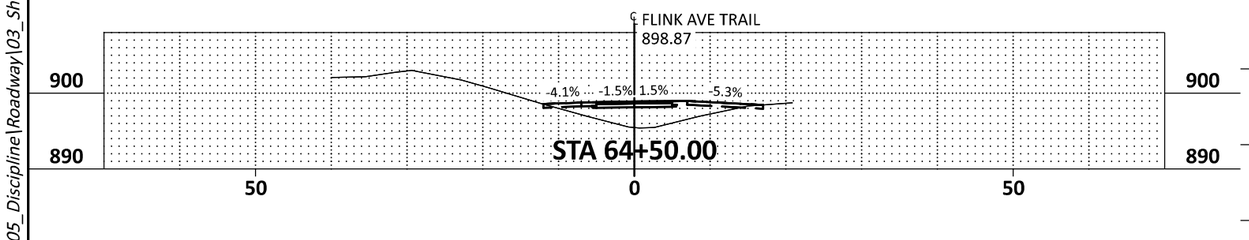


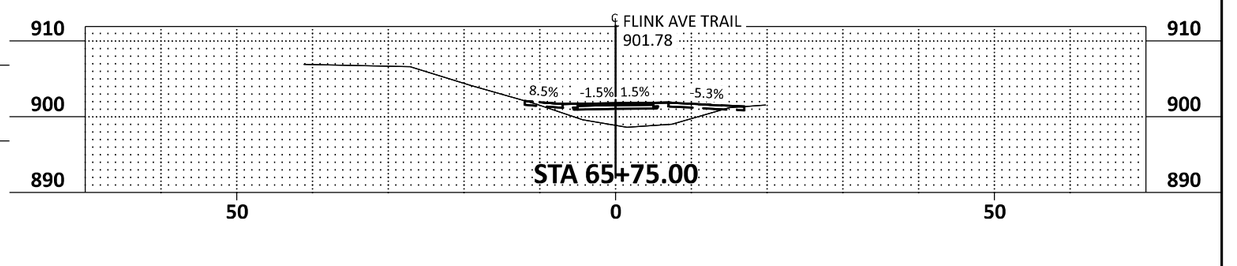


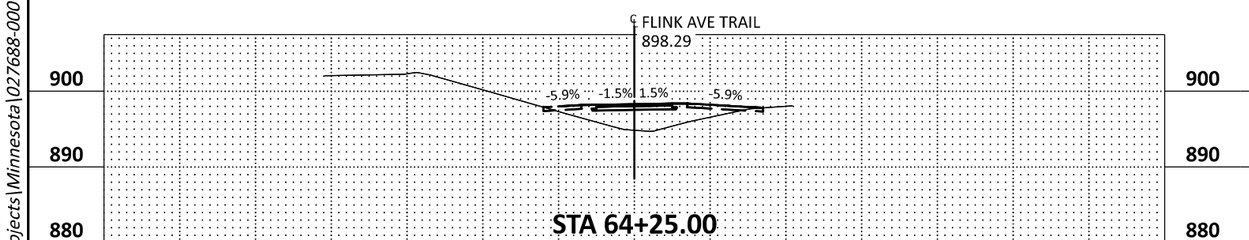


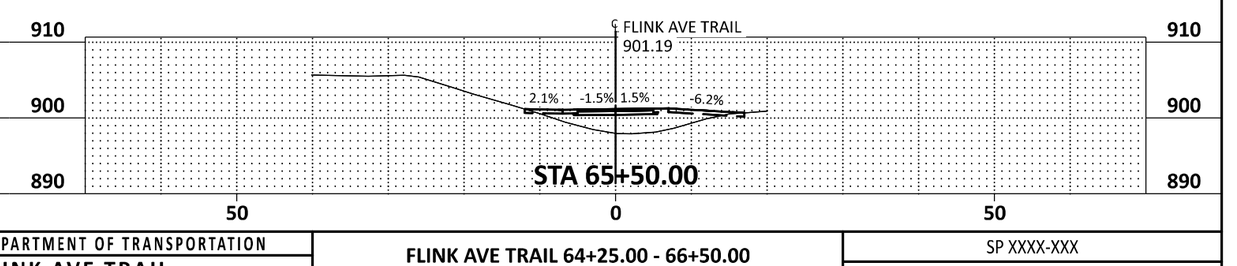






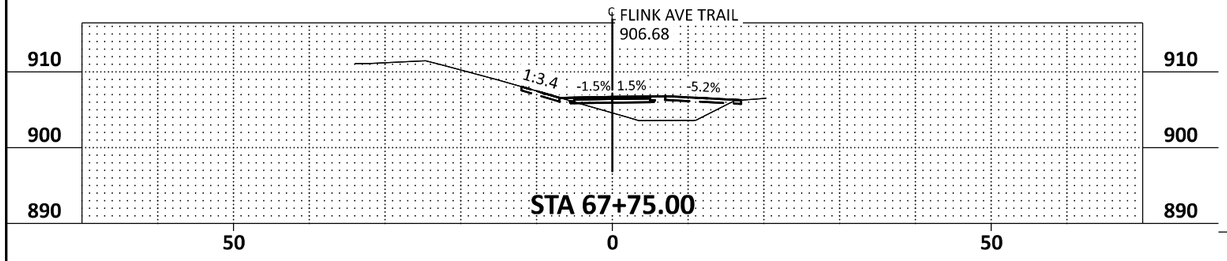


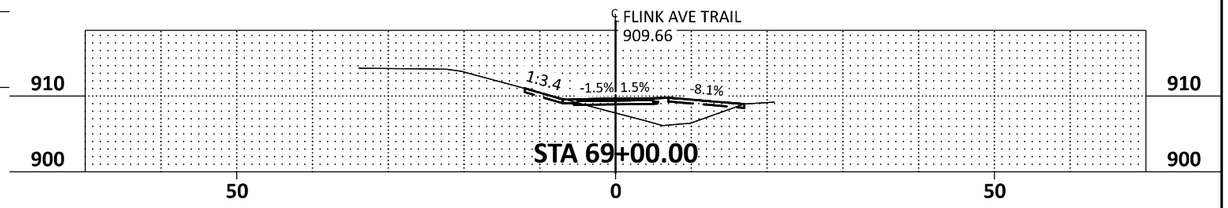


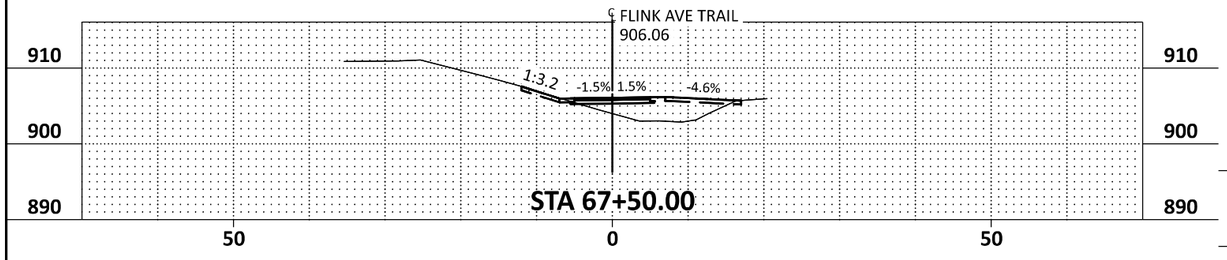


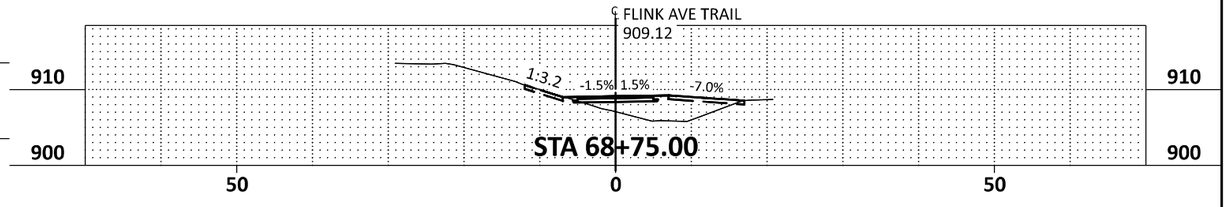
DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-900xsp-plan-001

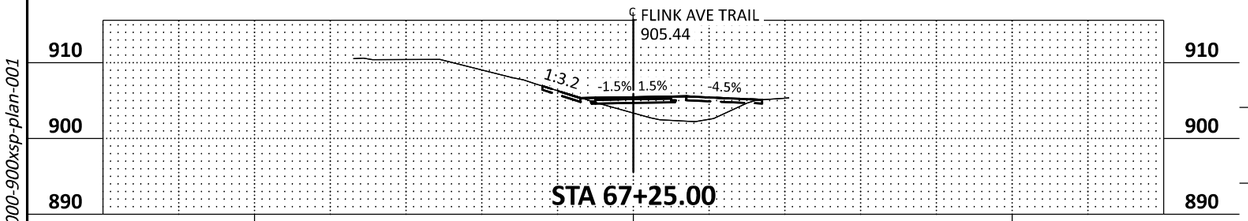
DRAWN BY:	NOT FOR CONSTRUCTION	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION **FLINK AVE TRAIL** NORTH BRANCH, CHISAGO COUNTY, MINNESOTA	**FLINK AVE TRAIL 64+25.00 - 66+50.00** CROSS SECTIONS	SP XXXX-XXX Sheet No. XS7 of XS9 Sheets
DESIGNED BY:					
CHECKED BY:					

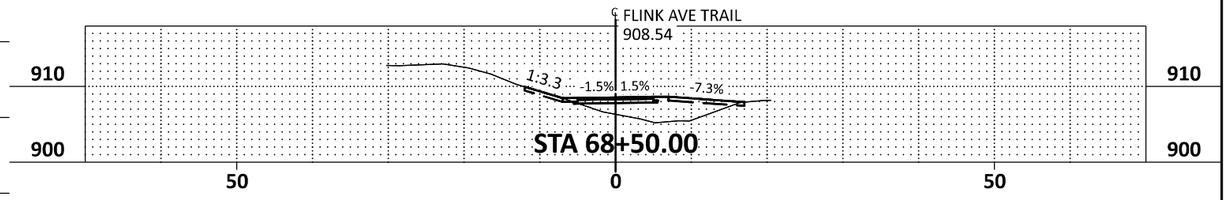


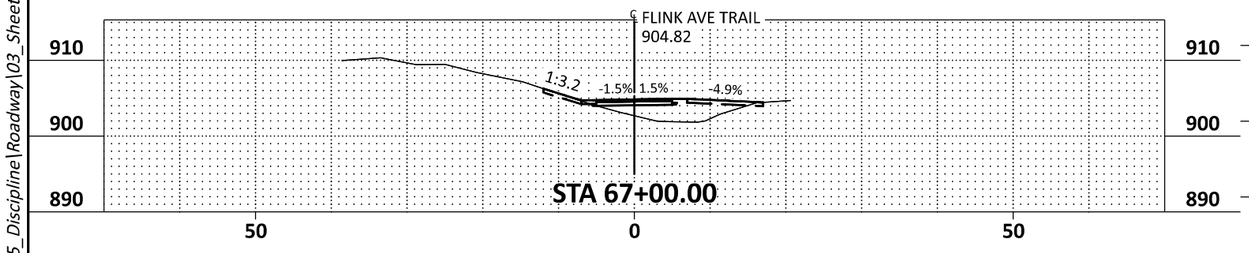


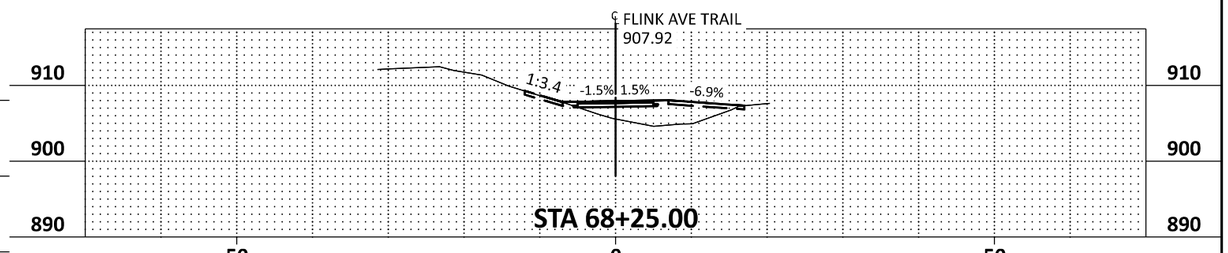


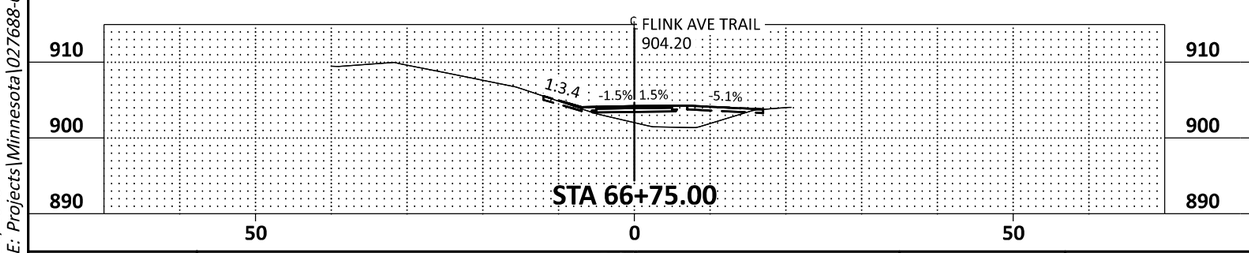


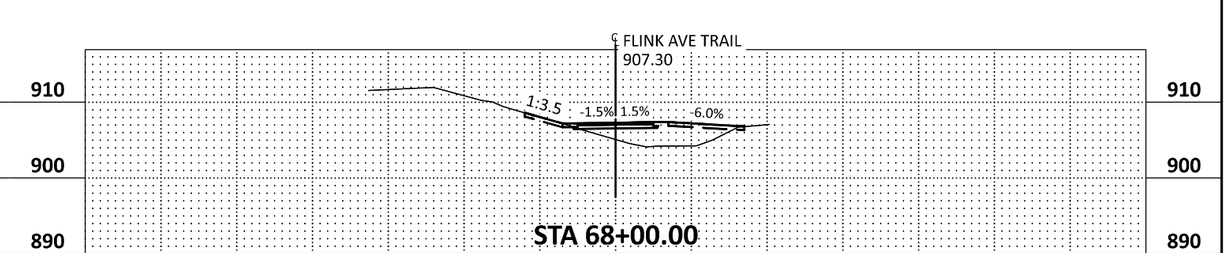






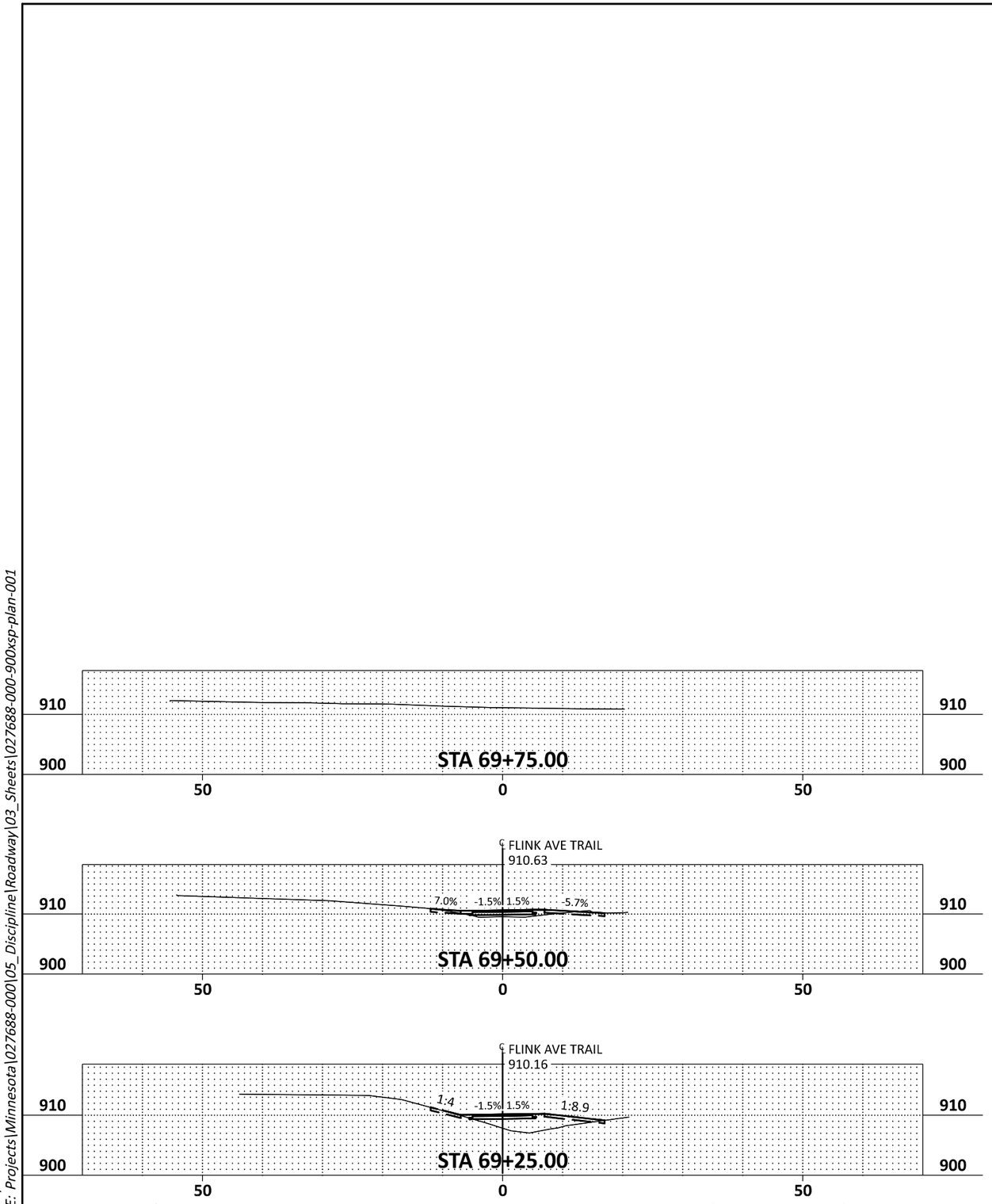






DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-900xsp-plan-001

DRAWN BY:	NOT FOR CONSTRUCTION	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION	FLINK AVE TRAIL 66+75.00 - 69+00.00	SP XXXX-XXX
DESIGNED BY:			FLINK AVE TRAIL	CROSS SECTIONS	Sheet No. XS8 of XS9 Sheets
CHECKED BY:			NORTH BRANCH, CHISAGO COUNTY, MINNESOTA		



DATE: 4/25/2025
FILENAME: Projects\Minnesota\027688-000\05_Discipline\Roadway\03_Sheets\027688-000-900xsp-plan-001

DRAWN BY:	NOT FOR CONSTRUCTION	wsb	MINNESOTA DEPARTMENT OF TRANSPORTATION **FLINK AVE TRAIL** NORTH BRANCH, CHISAGO COUNTY, MINNESOTA	**FLINK AVE TRAIL 69+25.00 - 70+50.00** CROSS SECTIONS	SP XXXX-XXX Sheet No. XS9 of XS9 Sheets
DESIGNED BY:					
CHECKED BY:					

City of North Branch
Staff Report

Prepared By: Nathan Sondrol, Community Development Director

Presenter: Nathan Sondrol, Community Development Director

Date: 05/01/2025

Board & Commission: Parks, Trails and Open Space Commission

Subject: Parks, Trails and Open Space Capital Improvement Plan 2026-2035

Background Information:
The City Council is in the process of updating its 10-year Capital Improvement Plan (CIP) for 2026-2035. The purpose of the CIP is to help identify future capital projects and equipment purchases. It also provides a planning schedule and identifies options for financing the plan. The City Council and staff are looking for the PTOS Commission to review the parks, trails and recreation portion of the CIP.

The City Council will be reviewing this in May 2025.

Attached is the 2025-2034 CIP.

Staff Recommendation:
Staff is recommending the Commission provide feedback on any additional projects to be added or prioritized on the 2026-2035 CIP.

Voting Requirements:

Voting Options **Simple Majority**

CAPITAL IMPROVEMENT PLAN

Parks

Trails Maintenance/Repairs	Where	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Target		44,000.00	44,000.00	52,000.00	46,000.00	47,000.00	47,000.00	48,000.00	48,000.00	56,000.00	-
Current Actual											
Ongoing Maintenance	General	44,000.00	44,000.00	46,000.00	46,000.00	47,000.00	47,000.00	48,000.00	48,000.00	50,000.00	
DNR Required - Trail Maintenance	Sunrise Prairie Regional Trail			6,000.00						6,000.00	
Total Trails Maintenance											

Construction	Where		2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Target			1,125,000.00	697,000.00	100,000.00	600,000.00	-	-	-	-	-	1,530,000.00
Current Actual			-									
Pedestrian Bridge	Grand Ave	Butternut St	-	-	-	-	-	-	-	-	-	530,000.00
Archery Range			-	42,000.00								
Splash Pad			300,000.00									
Falcon Ave Trail	385th to 386th			55,000.00								
St. Croix Trail	Hemingway to Harder											1,000,000.00
Pedestrian Underpass	Sunrise Prairie Trail to Library			600,000.00								
Flink Ave Trail - Phase 2	392nd to NB Marketplace		545,000.00									
Pickleball Court	Northwoods Park		280,000.00									
Trail Connection	Trail to Harder Park				100,000.00							
Trail Connection	Trail to Luchts Crossing				600,000.00							
Total Construction												

Parks	Where	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Target		2,965,000.00	50,000.00	410,000.00	220,000.00	540,000.00	50,000.00	130,000.00	80,000.00	100,000.00	-
Current Actual											
Soccer Fields	Wildridge Park	515,000.00									
Underground Sprinklers	Northwoods Park					70,000.00					
Ball Fields, Picnic Area, Skating Rink, etc	Williams Park	1,850,000.00									
Underground Sprinklers	Tower Fields					70,000.00					
Basketball Court Surface	Wildridge Park				20,000.00						
Construct Parking Lot, Gazebo, and Trails	Schoolside Village Park			310,000.00							
Basketball Court	Central Park		25,000.00								
Basketball Court	Northwoods Park		25,000.00								
Playground, Shelter, and amenities	Lucht's Crossing Park				200,000.00						
Playground, Shelter, and amenities	Townsedge Park					200,000.00					
Purchase Land for Athletic Fields	Meadows North Park						50,000.00				
Purchase Land for Athletic Fields and Parking	RJMP Park								80,000.00		
Purchase Land for parks and open space	Mud Lake	600,000.00									
Dog Park								30,000.00			
Playground Equipment	Northwoods Park			100,000.00							
Playground Equipment	Harder Park					100,000.00					
Playground Equipment	North Branch Oaks					100,000.00					

Playground Equipment	RJMP Park							100,000.00			
Playground Equipment	Wildridge Park									100,000.00	
Total Parks											

Other	**Where**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**
Target		65,000.00	20,000.00	-	-	100,000.00	154,500.00	-	-	-	-
Current Actual											
Parking Lot Paving	Tower Fields						154,500.00				
Parking Lot Microsurfacing	Harder Park	65,000.00									
Parking Lot Microsurfacing	RJMP		20,000.00								
Lighting	RJMP					100,000.00					
Total Other											

Park Acquisition funds	**Where**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**
Target		10,000.00	20,000.00	30,000.00	40,000.00	50,000.00	60,000.00	70,000.00	80,000.00	90,000.00	100,000.00
Current Actual											
Future Park Improvements		10,000.00	20,000.00	30,000.00	40,000.00	50,000.00	60,000.00	70,000.00	80,000.00	90,000.00	100,000.00
Total Park Acquisition Funds											

Grand Total			4,209,000.00	831,000.00	592,000.00	906,000.00	737,000.00	311,500.00	248,000.00	208,000.00	246,000.00	1,630,000.00

Budgeted Sources of Support	**Fund**	**Object**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**
Property Taxes			119,000.00	134,000.00	82,000.00	106,000.00	197,000.00	107,000.00	118,000.00	128,000.00	146,000.00	630,000.00
Bond - Property Taxes			2,365,000.00									
State Grant			1,045,000.00	642,000.00	80,000.00	700,000.00						
Other Grants			140,000.00									
Park Improvement Fund	403		300,000.00		100,000.00		200,000.00		100,000.00		100,000.00	
Park Dedication Fund	486		100,000.00	55,000.00	330,000.00	100,000.00	270,000.00	50,000.00	30,000.00	80,000.00		1,000,000.00
Other Funding Sources			140,000.00				70,000.00	154,500.00				
Total Sources of Support			4,209,000.00	831,000.00	592,000.00	906,000.00	737,000.00	311,500.00	248,000.00	208,000.00	246,000.00	1,630,000.00

2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	TOTAL REVS
-	-	-	-	-	-	-	-	-	-	-	-	-	-	432,000.00
														-
														420,000.00
														12,000.00
														-
			-	-	-	-	-	-	-	-	-	-	-	864,000.00

2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	TOTAL REVS
-														4,052,000.00
														-
														530,000.00
														42,000.00
														300,000.00
														55,000.00
														-
		-	-	-	-	-	-	-	-	-	-	-	-	4,052,000.00

2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	TOTAL REVS
-	-	-	-	-	-	-	-	-	-	-	-			4,545,000.00
														-
														515,000.00
														70,000.00
														1,850,000.00
														70,000.00
														20,000.00
														310,000.00
														25,000.00
														25,000.00
														200,000.00
														200,000.00
														50,000.00
														80,000.00
														600,000.00
														30,000.00
														100,000.00
														100,000.00
														100,000.00

														100,000.00
														100,000.00
														-

2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	TOTAL REVS
-	-	-	-	-	-	-	-	-	-	-	-	-	-	339,500.00
														-
														154,500.00
														65,000.00
														20,000.00
														100,000.00
														-
		-	-	-	-	-	-	-	-	-	-	-	-	

2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	TOTAL REVS
-														550,000.00
														-
														550,000.00
														-
		-	-	-	-	-	-	-	-	-	-	-	-	-

-	-	-	-	-	-	-	-	-	-	-	-	-	-	9,918,500.00

2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	TOTAL REVS
														1,767,000.00
														2,365,000.00
														2,467,000.00
														800,000.00
														2,015,000.00
														364,500.00
-	-	-	-	-	-	-	-	-	-	-	-	-	-	9,778,500.00

City of North Branch
Staff Report

Prepared By: Nathan Sondrol, Community Development Director

Presenter: Nathan Sondrol, Community Development Director

Date: 04/29/2025

Board & Commission: Parks, Trails and Open Space Commission

Subject: Comprehensive Plan Update

The City Council discussed the roll-out of the Comprehensive Plan Update at their meeting on April 29, 2025.

The Council is looking for discussion and input from the commission on Comprehensive Plan from the PTOS Commission as it relates to Natural Environments, Parks, Trails and Recreation.

Voting Requirements:

Voting Options	**Simple Majority**

City of North Branch 2025 Comprehensive Plan Review

Agenda

Introduction

Building the team

Engaging the community

Comprehensive Plan Review

Final tips & takeaways



Overview

North Branch Comprehensive Plan was completed in 2018 with a purpose of serving as a vision and roadmap for where the community is headed.

Our goal is to review the Plan and discuss potential revisions, ensuring community understanding and buy-in.



2018

The intension of the plan was to be used in day-to-day activities by City Staff, City Council, and other Commissions and Stakeholders to help form important policy decisions such as…

Infrastructure and development

Capital improvements

Zoning and regulatory changes

And communicating a consistent vision.

2018

The current plan was initiated and completed in 2018 using valuable input from the community.

A series of four community meetings

In-person and on-line surveys

Public Meetings of the Planning, Economic Development Authority, and Parks/Trails/Open Space Commissions, and the City Council.

Comments were received via the project website, emails, and social media outlets.

Vision

North Branch is a growing and safe community with outstanding natural and recreational amenities and opportunities for all, and well-maintained infrastructure, vibrant business districts and neighborhoods, and provides residents with an excellent quality of life.



Building the Team

Co-Chairs – To provide direction and be a conduit of information to the rest of the team.

- Kevin Schieber, Mayor
- Matthew Hill, City Administrator

Update Coordinating Team – too be determined

- City Staff
- City Council Members
- Planning Commissioners
- EDA Commissioners
- Parks, Trails, and Open Space Commissioners
- North Branch Area Public Schools
- North Branch Area Chamber of Commerce
- Residents!

Calendar/Goals

May – Request input from Council, Commissions, and Community Orgainizations

May 5 – PTOS Committee

May 6 – Planning Commission

May 13 – North Branch Chamber of Commerce

May 20 – Economic Development Authority Commission

May 20 – City Council Special Meeting including request to residents for their input with invitation for first of two community meetings to gather general input on June 17



Needs assessment of current Comprehensive Plan



Vision and Values – has anything changed that requires the City to add or change?

Land Use – Do the existing land use ordinances and zoning maps need to be altered or adjusted to meet the current and future needs?

Housing – Does the current housing plans for maintaining and developing quality future housing stock still hold true?

Economic Development – Has the economic climate changed creating new opportunities for economic growth and redevelopment in areas of the City?

Needs assessment of current Comprehensive Plan



Transportation – Does the existing and future improvements noted in the 2018 Comprehensive Plan still meet the needs of the Community?

Utilities – Review of the current improvement plans and confirm that it meets the needs of both housing and industrial growth.

Natural Environment, Parks, Trails, and Recreation – Make sure that the trail connections and being met to connect the new housing development and have plans available for new and future park dedication fees.

Needs assessment of current Comprehensive Plan

Staff, Council and Commissioners have identified the following areas within the Comprehensive Plan that need updates

- **Land Use** – Zoning, Urban Service Area, Ordinance Updates.
- **Business Development** – Identify new ways of supporting existing businesses and new industry with guidance, direction, and financial support.
- **Municipal Utilities** – Assure that our long term plans can accommodate the expected growth of the Community.
- **Public Safety** – Possibility of adding an outline of the Community's vision and goals for addressing safety concerns, including road and pedestrian safety, emergency response, and crime prevention.

Next Steps



- **August and September** - The Update Coordinating Team will gather the input provided and work together to provide guidance to the City Council on a proposal of needed changes.

- **June and July** - Commissions, Council, School and Chamber Boards, and Residents will provide the Advisory Committee with their thoughts on the current plan and requests for change at their meetings in June and July. The City will provide two community gatherings to review the current plan and ask for feedback, one on June 17 at City Hall and one on July 15 at the North Branch Public Library.

THANK YOU!

- The City of North Branch looks forward to hearing from you!

CITY OF EST. 1881 NORTH BRANCH

NORTH BRANCH

Minnesota

COMPREHENSIVE PLAN
2018



NORTH BRANCH COMPREHENSIVE PLAN

Contents

3 Introduction

6 Acknowledgements

7 Values And Vision

11 Land Use & Growth

28 Housing

39 Economic Development

48 Transportation

70 Utilities

104 Natural Environment, Parks, Trails, And Recreation

The purpose of the Comprehensive Plan is to serve as a vision and roadmap for where the community is headed.



1

Introduction

Purpose of the Plan

The purpose of the Comprehensive Plan is to serve as a vision and roadmap for where the community is headed. The ideas and goals expressed in this plan are intended to be a reflection of the community's values and the desire for what North Branch is to become. Each chapter of the Comprehensive Plan provides the "big picture" of several important topics that are intertwined and have an impact on quality of life in North Branch.

It is the intention that this plan will be used on a day-to-day basis by city staff, the City Council, and other commissions and stakeholders to help inform important policy decisions, such as decisions involving infrastructure and development, the acquisition and sale of public land, capital improvements, zoning and regulatory changes, and communicating a consistent vision. It is anticipated that residents may use the plan to determine property use, understand decisions made by the City, and make improvements to property in a manner consistent with the plan. Developers may use the plan as a way to make decisions based on the goals and identified improvements.

The city of North Branch was formed in 1994 from the consolidated cities of Branch and North Branch. Shortly after consolidation, the city undertook a comprehensive planning process. Resulting from that process was the Comprehensive Plan adopted in 1995 for the consolidated city of North Branch comprised of 36 square miles in Chisago County, Minnesota. The plan was updated in 2003 and again in 2009. The comprehensive plan approach is intended to cover approximately a 10 - 20 year time period and may be amended and updated from time to time as conditions change. Time has passed and current growth and development necessitated a comprehensive update to the plan.

Planning Process

This Comprehensive Plan update was initiated and completed in 2018. Valuable input was gathered from those in the community through a series of four community cafes, in person and on-line surveys, and various public meetings conducted by the Planning Commission, Economic Development Authority (EDA), Parks Trails and Open Spaces (PTOS), and the City Council. A booth was held at the community's Expo and Job Fair event in April 2018, and a survey was administered to 7th and 8th graders at the North Branch Middle School as a way to gather input from younger stakeholders with regard to the city's parks and amenities.

As the plan evolved, drafts were available on the city's website and were presented and commented on at Planning Commission, PTOS, EDA and/or City Council meetings. Comments were also received via the project website, emails, and through the project Social Pinpoint page. The plan was reviewed by both the Planning Commission and City Council at their respective regular meetings in August, 2018. A public hearing was held before the Planning Commission on September 20, 2018, and adopted by the City Council on October 23, 2018.

Organization of the Plan

The Comprehensive Plan provides a "big picture" look at several important areas that have an impact on quality of life for North Branch. The Comprehensive Plan covers the following chapters:

Chapter 1: Introduction

This chapter provides an overview of what the Comprehensive Plan is and its purpose. It discusses the process for developing the plan and how it is organized.

Chapter 2: Vision and Values

This chapter outlines the vision and values for the community that is intended to be expressed through all other chapters.

Chapter 3: Land Use

This chapter establishes an existing and future land use for all property in the City. It also identifies future growth areas.

Chapter 4: Housing

This chapter provides an overview of existing housing conditions and a plan for maintaining and developing a quality future housing stock.

Chapter 5: Economic Development

This chapter provides an analysis of the existing economic climate and opportunities for economic growth and redevelopment areas.

Chapter 6: Transportation

This chapter analyzes the existing transportation system and future improvements, mostly as it relates to auto-oriented transportation. Non-motorized transportation is discussed further in Chapter 8: Natural Environment, Parks, Trails, and Recreation.

Chapter 7: Utilities

This chapter examines the existing system and future improvements to public utilities as it relates to the water, wastewater, and stormwater systems.

Chapter 8: Natural Environment, Parks, Trails, and Recreation

This chapter examines the city's natural resources, including open space and natural habitats, existing park and trail system, as well as recreational opportunities and establishes planning criteria, guidelines and standards for protecting the natural environments and future development of various amenities.



Implementing the Plan

Summary of Land Use Implementation Strategies

The North Branch Comprehensive Plan is a flexible document working to the advantage of the community. The Plan Goals and Objectives should be reviewed every three years ensuring relevancy to current conditions and priorities. The Planning Agency should advocate use of the plan, review various projects for consistency with the Plan, and advise the City Council in matters related to implementation. In addition, any projects implemented should detail a timeline and have a funded budget. The Plan encourages interaction with governmental agencies, non-profits, and local citizens. Capital Improvement Programs (CIPs) shall be reviewed and updated annually.

Summary of Non-Land Use Implementation Strategies

North Branch, like most cities having faced financial difficulties, faces a number of challenges towards expanding affordable housing, replacing aging infrastructure and attracting new development and administrators to involve a variety of organizations. Additional difficulties include finding funding sources to address those issues over time and seeking to provide maximum flexibility in the planning and timing of needed public improvements. The Plan recognizes that North Branch has limited financial resources and vast human resources. The citizens of North Branch, through their involvement with government and various civic and charitable organizations, will be a key component of the actions necessary to implement the Comprehensive Plan. The City should involve other City Boards and Commissions, volunteer groups, local non-profit organizations such as the Chamber of Commerce, and other governmental agencies in planning and funding these future projects.

ACKNOWLEDGEMENTS

2018 COMPREHENSIVE PLAN UPDATE COORDINATING TEAM

Carla Vita
Nate Sondrol
Ragini Varma
Renae Fry
Shawn Williams

CONSULTANTS

Breanne Rothstein, WSB
Kyle Seifert, WSB
Lee Gustafson, WSB

SPECIAL THANKS TO 2018 CITY COUNCIL:

Mayor Kirsten Hagen-Kennedy
City Councilmembers:
Bob Canada
Jim Swenson
Kathy Blomquist
Kelly Neider

2018 PLANNING COMMISSION

MacKenzie Guptil, Chair
Brian Voss
Gary Schaefer
Joel McPherson
Laurie Warner

2018 ECONOMIC DEVELOPMENT AUTHORITY

Lorraine Moeller, Chair
Bob Streater
Brad Larson
Chuck Sinn
Dennis Johnson
Kathy Blomquist
Kirsten Hagen-Kennedy

2018 PARKS, TRAILS, & OPEN SPACE COMMISSION

John Pantelis, Chair
Beth Thorp
Bob Bernier
Jaime Souza
Robert Walz

AND AN EXTRA SPECIAL THANKS TO BRIAN VOSS FOR HIS FANTASTIC PHOTOS AND TO ALL OF THE RESIDENTS, STUDENTS AND BUSINESS OWNERS WHO PARTICIPATED IN COMMUNITY SURVEYS, ATTENDED COMMUNITY CAFES, AND PROVIDED VALUABLE INPUT TO THE COMPREHENSIVE PLAN UPDATE, OUR SUPPORTERS AND TO THE TEAM THAT HELPED GET THE WORD OUT ABOUT THE COMPREHENSIVE PLAN INPUT SESSIONS, INCLUDING THE NORTH BRANCH DOMINOS AND THE NORTH BRANCH AREA CHAMBER.

2

Values and Vision

Values

Residents and other stakeholders were asked what they loved about North Branch at the Community Expo, at a chamber meeting, and at the first community café. The values expressed most often were:

- The strong sense of community
- A home town feel
- The city's commitment to its parks and trails
- A community that encourages biking and walking
- Quality schools

These values were reiterated at each of the other three community cafes and served as the foundation for the vision statements expressed below.

Vision for North Branch in 10 years .....

North Branch is a growing and safe community with outstanding natural and recreational amenities and opportunities for all, and well maintained infrastructure, vibrant business districts and neighborhoods, and provides residents with an excellent quality of life.

Vision for Land Use

The City of North Branch is a complete community that provides a well-balanced and wide range of places to live, work, shop and play. Land uses make efficient use of existing infrastructure, contribute to a strong local economy, preserve natural resources and contribute to a high quality of life.

Residential Uses

A diverse housing stock allows people at any stage in their life to be able to find a home in North Branch. Older housing is well maintained while new development expands housing options to complement existing neighborhoods.

Commercial and Industrial Uses

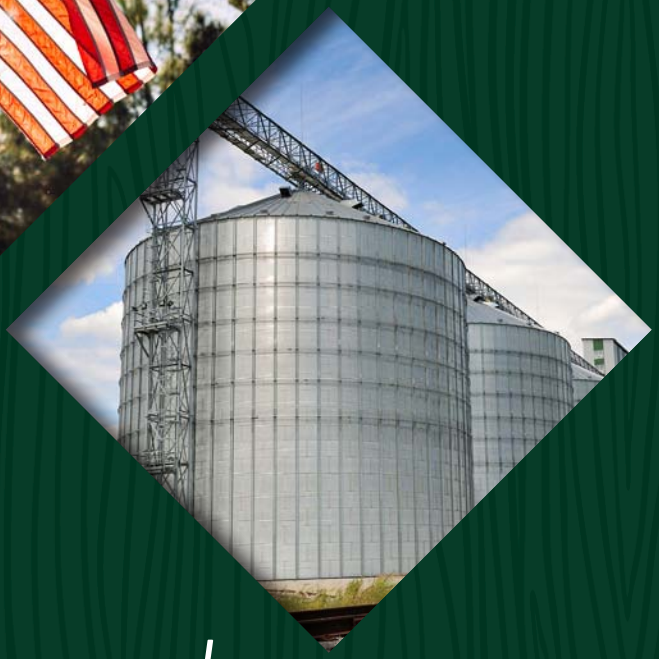
A significant amount of commercial and industrial uses can be found within the City that allow residents to work in North Branch, while also being able to meet all of their day-to-day needs. Commercial and industrial uses are compatible with their surrounding land uses.

Public/Institutional

Public and institutional uses are viewed as valued resources to the community and contribute to making North Branch a better place to live and do business.







North Branch is a growing and safe community with outstanding natural and recreational amenities and opportunities for all, and well maintained infrastructure, vibrant business districts and neighborhoods, and provides residents with an excellent quality of life.

Parks, Open Spaces and Trails

Quality parks and open space are within close proximity to all residents, providing recreational opportunities to encourage an active lifestyle. A wide variety of community facilities are provided to serve a range of interests. The City of North Branch has a proposed trail system that will allow bicycle and pedestrian access to most of the major pedestrian generators within the city, including schools, shopping areas, and parks. Many of the proposed trails are destinations in themselves, offering scenic walks or rides around many of the city's scenic views. With recreational activities such as running, bicycling, and walking increasing in popularity, the city's trail system will not only offer a recreational opportunity in itself, but will also help to connect the community's parks with the neighborhoods.

Vision for Economic Development

A strong business community is the cornerstone of a vibrant city. Economic development encompasses the policies and activities that improve the long term economic and social wellbeing of the community. Communities with strong economies have financial resources to support the levels of service that their residents need and desire. Successful communities realize that economic development is about bringing together social, natural, infrastructure, and economic assets in the community to sustain the "whole" community.

Vision for Municipal Utilities

The City of North Branch, individually and in collaboration with the North Branch Water & Light Utility, has a significant investment in its existing public utilities systems (water, wastewater and stormwater). The continued expansion and development within the Urban Service Area will require the extension of public utilities. In general, the existing infrastructure system is well-positioned and of adequate size to support expansion. However, coordination will be required between community development and the required expansion of the utility system. In some cases, the cost of providing utility service may dictate where and when future growth will occur.

Vision for Transportation

North Branch is located at the cross roads of I35 and TH95, providing for ease in and out of the city. Within the city limits, however, these features will require a coordinated approach to providing movement of traffic through the city to local destinations, safe pedestrian and bike corridors, and improved intersections to safely serve the increasing number of commercial vehicles passing through North Branch.

Vision for the Environment and Sustainability

Natural infrastructure includes all systems that relate to natural resources and contribute to an improved public life. Natural infrastructure considers the full range of natural resource uses including economic, environmental, health, cultural, and aesthetic. This broad view leads us to include surface water, groundwater, stormwater, wastewater, drinking water, geology, topography, soils, natural areas, open space, green spaces, urban forest, habitat, vegetation, scenic views, and parks and trails in natural infrastructure.

Natural infrastructure is a key element in planning where development should or should not take place within a city. This element is important to communities and development as it avoids certain development hazards, provides health benefits to citizens, protects ecological systems and enhances biological diversity, and offers communities unique quality of life components. Consideration of natural infrastructure ensures that homes are built upon stable dry soils, provides clean drinking water, accounts for resource based economic activities, provides scenic views and open spaces, and plans development that respect the integrity of natural systems and incorporate natural features into development.

Minnesota GreenStep City

In 2018, the Mayor and City Council approved a resolution to make North Branch a GreenStep City through the MPCA and League of Minnesota Cities' program. Minnesota GreenStep Cities is a voluntary challenge, assistance and recognition program to help cities achieve their sustainability and quality-of-life goals. This free continuous improvement program, managed by a public-private partnership, is based upon 29 best practices. Each best practice can be implemented by completing one or more actions at a 1, 2 or 3-star level, from a list of four to eight actions. These actions are tailored to all Minnesota cities, focus on cost savings and energy use reduction, and encourage civic innovation. North Branch is currently a Step 1 City. As North Branch plans for the future, it will continue to consider GreenStep City Best Management Practices as they relate to the goals and objectives of this comprehensive plan.



3
Land Use & Growth

Introduction

The Land Use & Growth Management Chapter is a roadmap that helps guide City officials and staff on how to make policy decisions related to land use and future growth. These policies may influence the type, location and density of future development within the community. This chapter is intended to result in orderly and efficient development that utilizes land efficiently and makes the most of the community's resources. It offers guidance on key initiatives for the community which is consistent with the City's vision and goals.

In this chapter is a description of existing land use patterns, as well as an overview of how the City anticipates land will be used and developed in the future. It accommodates growth and applies the desired qualities of the community.

Another important aspect of this chapter is that it also serves as the foundation for reviewing the City's Zoning Ordinances, Zoning Map, Subdivision Regulations and other implementation tools. Implementation of the Land Use Plan produces several important implications:

Uses

Every parcel is placed into a specific land use category. Each category includes a description of the type of land use or uses intended for that category. This description should match with the types and forms of development currently found in North Branch and desired for the future.

Relationships

Much like a jigsaw puzzle, the true picture comes from how each piece fits together into a whole. The Land Use Plan guides how elements of the built and natural environment come together in North Branch. These relationships will determine how North Branch will look, function and feel.

Actions

The Land Use Plan sets the framework for public actions and investments. Utilities, streets, parks, and facilities are all influenced by the form and pace of development.

Figure 3-1: Existing Land Use

Identifies the location, amount, and types of existing land uses in the City of North Branch in 2018. The inventory as conducted as part of this planning process reflects general development patterns and is intended for general planning purposes only.

The City of North Branch is a complete community that provides a well-balanced and wide range of places to live, work, shop and play.







Table 3-A: Summary of Existing Land Use - 2018 summarizes the amount and type of existing land uses designated (whether or not fully developed) in North Branch.

Table 3 – A: Summary of Existing Zoning 2018		
Existing Land Use Designation	*Gross Acres**	*Net Percent of City*
Agriculture (AG1 and AG2)	*8,680.2*	*37.6%*
Rural Residential (RR)	*9,961*	*43%*
Low Density Residential (R1 and R1A)	*1,869.7*	*8.1%*
Medium Density Residential (R2)	*403.4*	*1.7%*
High Density Residential (R3)	*216.6*	*.9%*
Manufactured Home Residential (R4)	*27.2*	*.11%*
Central Business District (CBD)	*43*	*.18%*
Limited Business District (B2)	*214.8*	*.9%*
Regional Business District (B3)	*437.3*	*1.9%*
General Industrial District (I2)	*858.1*	*3.7%*
Planned Industrial District (I3)	*21.6*	*.09%*
Industrial District (I4)	*158.6*	*.7%*

**Gross acres of use determined by GIS mapping data.*

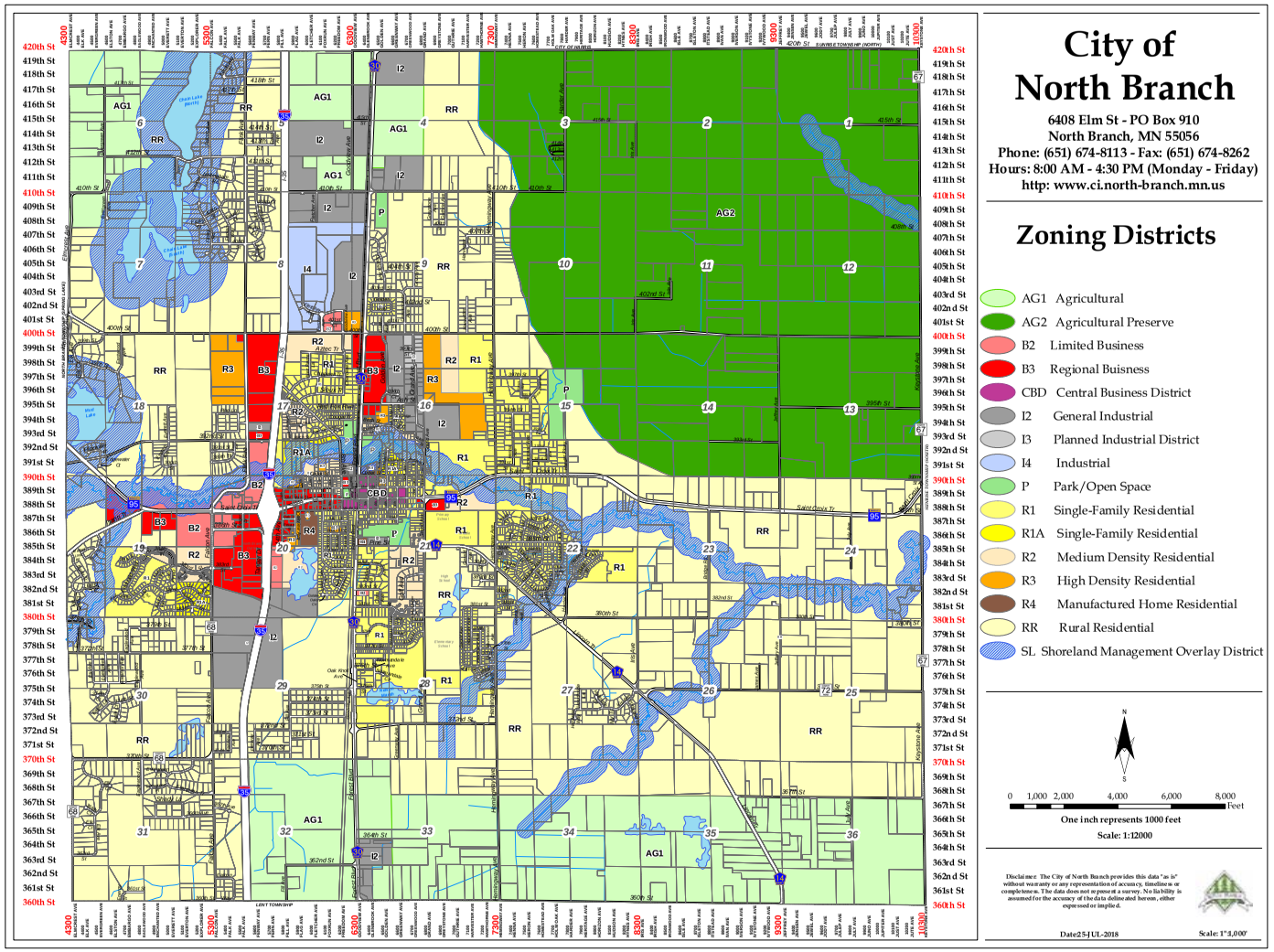


Figure 3-1:
Existing Zoning

Existing Zoning

Agriculture (AG1 and AG2)

Over one-third of the city's land area (37.6%) is currently used for agricultural purposes. Housing densities are low, and this zoning is characterized by active farms, hobby farms and homes on large lots. The northeast corner of the city is the historic river bottom of the St. Croix River and is framed by the historic river bluff line. Soils are well suited for sod farming and the production of produce. By maintaining a low density of development, it is the City's intent to preserve and protect the many natural resources found in this part of North Branch, including lakes, streams, wetlands and woodlands.

Rural Residential (RR)

Rural Residential makes up 9,961 acres or 43% of the total acreage in the City of North Branch. This land use is largely characterized by single family residences set on larger lot sizes to accommodate on-site sewage treatment systems. Some of these areas are located within the city's designated Urban Service Area and no new development is allowed within this zoning district without connecting to municipal services. Areas located outside of the Urban Service Area must meet a minimum buildable acre standard so as to ensure that there is sufficient land area with the appropriate soil separation to support both a primary and a future secondary on-site sewage treatment system.

Low Density Residential (R1 and R1A)

Low Density Residential makes up 1,869.7 acres or 8.1% of the total acreage in the City of North Branch. This land use is largely characterized by single-family homes with densities of 1 to 4 dwelling units per acre in those areas served by municipal utilities. Older areas of the city were platted before municipal utilities were established, resulting in larger lot sizes to accommodate on-site sewage treatment systems. The city has a limited inventory of older, historic homes that are located primarily in the one square mile area that had been the original city of North Branch. The areas around the historic center feature homes built approximately 50 years ago, with new development happening neighborhood by neighborhood since that time. 2017 marked the start of a new housing boom with new single family homes being constructed on existing lot inventory and multiple developments platted for the purpose of constructing even more single family homes. The new development that is planned or in process as of the writing of this plan is intended to provide the city with a more diverse mix of housing styles and at a wider range of price points.

Medium Density Residential (R2)

Medium Density Residential makes up 403.4 acres or 1.7% of the total acreage in the City of North Branch. Medium Density Residential is characterized by single family homes on smaller lots that required for R1, townhome style development, and two-family attached homes densities of 1 to 6 dwelling units per acre.

High Density Residential (R3)

High Density Residential makes up 216.6 acres or .9% of the total acreage in the City of North Branch. High Density Residential is characterized by land use that consists of all forms of multi-family attached housing units such as two-family attached homes, townhomes and apartment buildings.

High density residential has densities of up to 18 dwelling units per acre.

Manufactured Home Residential (R4)
The Manufactured Home Residential zoning classification only exists for the benefit of the four established manufactured home parks. It currently makes up 27.2 acres or .1% of the total acreage in the City of North Branch. Changes in Minnesota laws now allow manufactured homes in any zoning district that allows twin homes, subject to all applicable lot standards, such as lot size, frontage, road widths, etc. The new land use map and updates to the zoning map will include areas previously zoned at R4 within either an R2 or R3 zoning class.

Central Business District (CBD)
The Central Business District is a unique classification intended to provide for a planned, unified development of the City's historical downtown area. This zoning classification makes up 43 acres or .18% of the total acreage in the City of North Branch. Permitted uses include service based businesses, office uses, retail uses, apartments and hotel uses, among other things, in close proximity to one another to promote pedestrian movement between businesses. The area offers a mix of street and lot parking, with the parking lots being located behind buildings at various locations throughout the district. The existing land use is primarily commercial buildings, many of which are vacant and in need of rehabilitation. The area is dotted with existing single family homes which were intended to be phased out of use and converted to commercial uses over time. The area is adjacent to TH95, with sidewalks that provide pedestrian passage, but pedestrian movement across TH95 is difficult and poses a significant challenge to the goal of this area being an inviting public space offering a "range of retail and civic experiences" as hoped by the authors of the 2009 Comprehensive Plan.

Limited Business District (B2)
The Limited Business District makes up 214.8 acres or .9% of the total acreage in the City of North Branch. This land use is characterized by business uses and services, lodging, and retail that are also permitted in the CBD, but that are dependent on automobile traffic. Additionally, the area is intended to serve as a transition zone between the CBD and the Regional Business District (B3).

Regional Business District (B3)
The Regional Business District makes up 437.3 acres or 1.9% of the total acreage in the City of North Branch. This land use is characterized by business uses and services, lodging, and retail that are also permitted in the CBD and B2, but also provide for the location of commercial activities that serve primarily regional or nonlocal market. The lot sizes are larger so as to provide the area needed for retail and commercial activities that require very large buildings.

Light Industrial/Office District (I1)
The Light Industrial/Office District is defined as a region characterized by office, manufacturing and warehousing uses, but currently no part of the city is zoned for this use.

General Industrial District (I2)
The General Industrial District makes up 858.1 acres or 3.7% of the total acreage in the City of North Branch. This land use is characterized by manufacturing, assembly, warehousing, storage, showrooms and contractor shops.

Planned Industrial District (I3)
The Planned Industrial District is similar to I1, and makes up 21.6 acres or .09% of the total acreage in the city.

Industrial District (I4)
The Industrial District makes up 158.6 acres or .7% of the total acreage in the City of North Branch. This land use is characterized by manufacturing, assembly, warehousing, storage, showrooms and contractor shops as can be found in I2, but its location adjacent to I35 makes this area highly visible and is subject to stricter design standards. Currently, over 200 acres in the I2 and I4 zoning classifications are vacant but ready for development in the industrial park owned by the City through its Economic Development Authority.

Overlay Districts
Sensitive areas, such as those adjacent to bodies of water or within a designated flood plain or flood fringe are managed by the City in accordance with applicable Minnesota Statutes. Setbacks, design standards and other restrictions on use within the overlay district are imposed so as to limit ecological impact and loss.

Analysis of Existing Land Use
With over 36 square miles of land, an analysis of the existing land use illustrates several important issues about current and future development:

The largest land use category in terms of area in the City is agriculture. Followed by the rural residential land use category. It is anticipated that the agricultural areas will continue to be used for agricultural production due to its geologic characteristics and the community's desire to support its rich agricultural heritage and industry. The rural residential areas, which are served by private wells and septic systems, will also have agricultural or hobby farm uses. The total land areas for these two uses will not likely change, but development within these areas will occur at a much slower pace than the low density residential uses served by municipal utilities.

The second largest residential land use category is low density residential. It is anticipated that expanded development within this zoning classification will continue to grow throughout the life of this plan, resulting in greater intensity of the use without increasing the overall land area designated for this use. The three primary residential categories (R1 and R2) account for 9.8% of the total land use in the City.

The Central Business District is characterized by a development style common among other older downtowns. It is pedestrian oriented in nature with buildings built to the sidewalk. Parking for these uses is typically on street, in the rear of buildings, or shared among several users. The transition from residential uses to commercial uses did not occur as anticipated when the zoning district was created. There are numerous vacant buildings and the area is ripe for redevelopment.

The City, through its Economic Development Authority, owns over 200 acres of land zoned for industrial uses. Until this land is sold and developed, no additional industrial zoned land is needed within the Urban Service Area. If the city were to allow for heavy industrial uses, consideration should be given for compatibility with adjacent land uses. Controls should be in place that protect against negative impacts to neighboring property.

The nation's third largest solar farm is partially located within the City's limits. Other smaller solar installations are located entirely within the City. The solar installations feature native plantings intended to re-establish prairie habitat and support pollinator species, such as the Monarch butterfly.

The City benefits from existing park facilities, trails and open spaces. Approximately .6% of the total acreage in the City of North Branch is utilized as city owned park and open space uses. The City is also home to the Janet Johnson WMA, owned and managed by Minnesota Department of Natural Resources. The Sunrise Prairie Regional Trail and other city sidewalks and trails serve the city's goal of being walkable and bikeable, but it is the goal of the city to expand those opportunities and consideration should be given to identify areas for preservation for these purposes.

There are significant residential development opportunities in the northwest portion of the city. Large tracts of land are currently undeveloped and the opportunity exists to establish traffic corridors without the need for redevelopment.

Vision for Land Use

The City of North Branch is a complete community that provides a well-balanced and wide range of places to live, work, shop and play. Land uses make efficient use of existing infrastructure, contribute to a strong local economy, preserve natural resources and contribute to a high quality of life.

Residential Uses

A diverse housing stock allows people at any stage in their life to be able to find a home in North Branch, which may include housing options suitable to multigenerational households. Older housing is well maintained while new development expands housing options to complement existing neighborhoods.

Commercial and Industrial Uses

A significant amount of commercial and industrial uses can be found within the City that allow residents to work in North Branch, while also being able to meet all of their day-to-day needs. Commercial and industrial uses are compatible with their surrounding land uses.

Public/Institutional

Public and institutional uses are viewed as valued resources to the community and contribute to making North Branch a better place to live and do business.

Parks, Open Spaces and Trails

Quality parks and open space are within close proximity to all residents, providing recreational opportunities to encourage an active lifestyle. A wide variety of community facilities are provided to serve a range of interests. The City of North Branch has a proposed trail system that will allow bicycle and pedestrian access to most of the major pedestrian generators within the city, including schools, shopping areas, and parks. Many of the proposed trails are destinations in themselves, offering scenic walks or rides around many of the city's scenic views. With recreational activities such as running, bicycling, and walking increasing in popularity, the city's trail system will not only offer a recreational opportunity in itself, but will also help to connect the community's parks with the neighborhoods.

GOAL 1

Maximize the use of land within the City of North Branch in a way that strengthens the local economy, preserves natural resources, and ensures a high-quality of life for all residents.

Goals, Objectives, and Policies

The following is the primary goal for land use followed by a series of objectives and policies intended to influence future land use decisions in a direction that is aligned with the Vision Statement.

Objective 1.1

Preserve and enhance the small business environment of the downtown.

Policy 1.1.1

Encourage and promote the renovation and rehabilitation of existing buildings within the downtown.

Policy 1.1.2

Connect businesses with façade improvement grants and loans.

Policy 1.1.3

Make infrastructure improvements that enhance the pedestrian realm such as lighting and seating and gathering places for community activities.

Objective 1.2

Use land in a manner that strengthens the economy of North Branch.

Policy 1.2.1

Strive for a balance of areas guided for industrial uses and areas guided for commercial uses.

Policy 1.2.2

Continue to identify all areas prime for redevelopment and analyze the best use for each property. Work to re-zone these properties and amend this plan as appropriate.

Policy 1.2.3

Increase the number of residential housing units in the City to attract new residents to increase the workforce and thereby improve the local market for commercial and industrial opportunities.

Policy 1.2.4

Actively work to infill vacant land within the Urban Service Area that will be connected to municipal services, while preserving a network of functional ecologic areas.



Policy 1.2.5
Allow for mixed uses within some zoning districts to accommodate commercial, retail and residential uses.

Policy 1.2.6
Discourage "leapfrog" patterns of development on municipal utilities.

Objective 1.3
Protect and preserve natural resources for long term environmental sustainability and the enjoyment of residents.

Policy 1.3.1
Work with landowners and other governmental entities to either obtain property or ensure protection of natural areas with high ecological value.

Policy 1.3.2
Discourage patterns of development that would stress existing infrastructure and ecosystems.

Objective 1.4: Use land in a manner that ensures a high quality of life for residents.

Policy 1.4.1
Expand parks, trails, sidewalks and other amenities as the City's population continues to grow.

Policy 1.4.2
Review and encourage methods of development which promote linkages among residential, civic, commercial, industrial and recreational facilities using trails and sidewalks for safe and enjoyable pedestrian uses and provides pedestrian connections between complementary land uses.

Policy 1.4.3
Review and encourage street and sidewalk designs to provide for easy access by police, fire and ambulance services, school buses, and plowing.

Land Use Plan

The land use plan provides the framework for the growth and development of the City. The land use plan serves as a guide for the character and intensity of development and will be supported by other land use controls and public actions taken pursuant to the Comprehensive Plan.

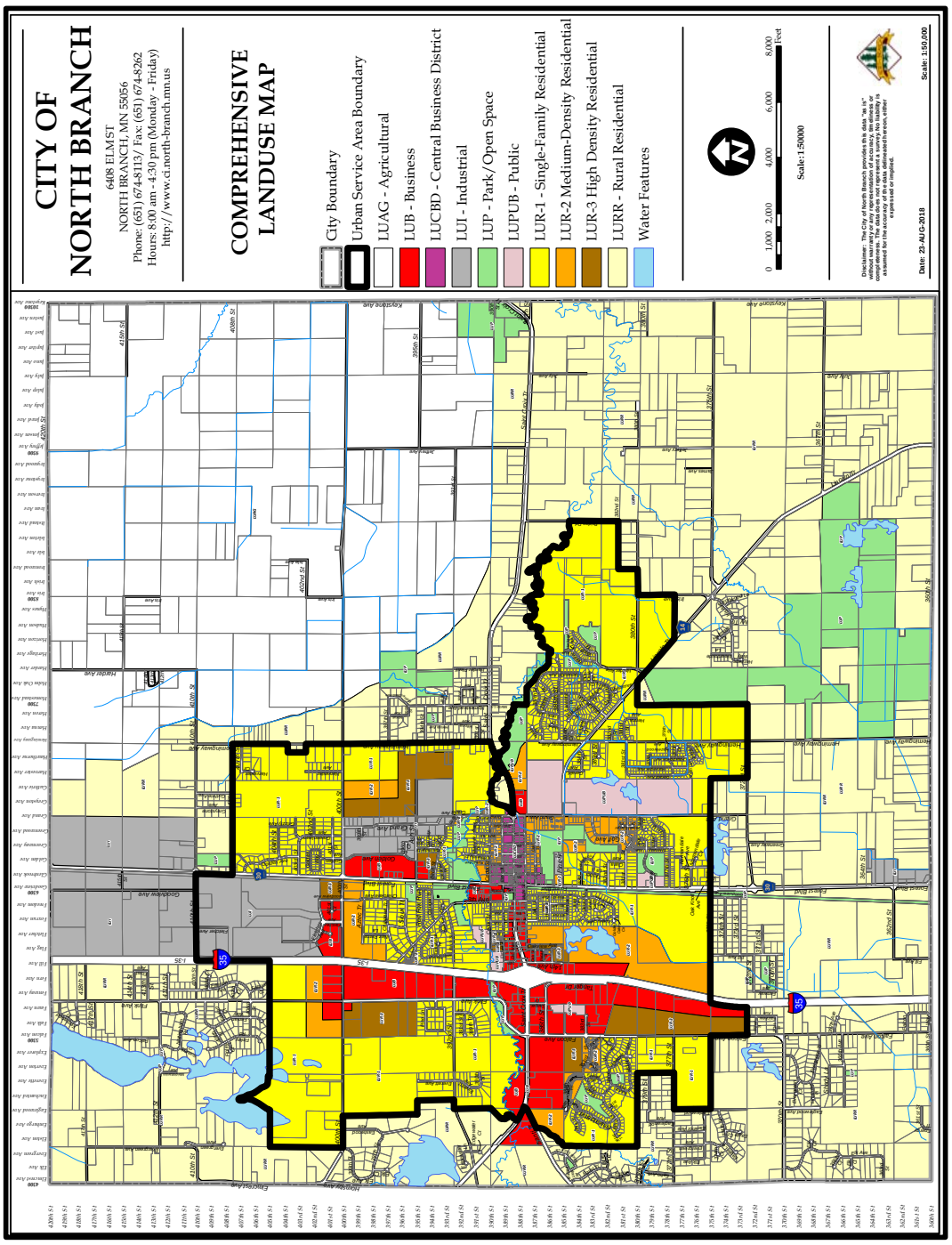
The land use map appears in Figure 3-2: Future Land Use. The plan illustrated by this map evolved from inputs and evaluations received through the planning process. The Plan builds on the existing community pattern to achieve the desired vision for the future of North Branch. Where the Future Land Use map guides property for something different than the existing zoning, zoning approvals such as variances and conditional use permits should not be considered inconsistent with the comprehensive plan if otherwise deemed appropriate.

Table 3 – B: Summary of Future Land Use		
Future Land Use by Designation	*Gross Acres**	*Net Percent of City*
Agriculture (AG)	*5,271.4*	*22.9%*
Rural Residential (RR)	*9,992.6*	*43.3%*
Low Density Residential (R1)	*3,492.5*	*15.1%*
Medium Density Residential (R3)	*577.2*	*2.5%*
High Density Residential (R3)	*330.8*	*1.4%*
Central Business District (CBD)	*71.4*	*.3%*
General Business District (B)	*802.2*	*3.5%*
Industrial District (I)	*1,123.7*	*4.9%*

*Gross acres of use determined by GIS mapping data and does not include public and institutional areas which are separately defined under the proposed land use map.



Figure 3-2:
Future Land Use



Residential

Rural Residential

The land use in this category is hobby farms and homes on large lots. The area is outside of the designated Urban Service Area and will be served by wells and individual septic systems. Individual lots must be a minimum size of one acre buildable, and the presence of wetlands and other natural features may result in actual lot sizes much larger than one acre in order to achieve the required one acre buildable standard. This lowest density of residential development is intended to reduce demands on the rural roads and protect the natural resources found in North Branch. The primary zoning district that would generally correspond to this land use designation would be the LURR Rural Residential District.

Low Density Residential

The land use in this category is single-family detached homes served by municipal utilities. This plan anticipates that this is where the majority of new housing units will be added over the next 20 years. One of the biggest strengths of the City of North Branch is its attractiveness to young families. Part of this attraction is due to the anticipated development of quality affordable single-family homes, and the existing parks and trails system, school district and proximity to the metropolitan areas of Minneapolis and St. Paul. Continuing to add new housing units will provide more opportunities for all families to locate in North Branch, while making older housing more affordable. Densities targeted in this category are limited to no more than 4 dwelling units per acre. The primary zoning district that would generally correspond to this land use designation would be the LUR-1 Single Family District.

Medium Density Residential

Medium density residential uses are typically in the form of single family homes on smaller lot sizes, townhomes, duplexes, and small scale apartment and condo buildings and served by municipal utilities. Advantages of these types of housing are that less property maintenance may be required since yards are smaller and some medium density developments may have associations that handle lawn care and snow removal. As a result, these types of housing tend to be very attractive to seniors and professionals. Densities targeted in this category are up to 6 dwelling units per acre. The primary zoning district that would generally correspond to this land use designation would be the LUR-2 Medium Density District.

High Density Residential

The High Density Residential land use category consists of multiple family attached housing oriented in a vertical fashion, more commonly referred to as apartments and condominiums and served by municipal utilities. Housing units may be owner or renter occupied. High density housing is an efficient land use because it contains more dwelling units per acre than other residential uses.

High density residential uses are located in places with compatible adjacent land uses and where the local street system will accommodate the traffic. Ideally, they are located near commercial uses or employment centers to maximize the number of people who can walk or use alternative modes of transportation.

The densities targeted in this category are over 6 dwelling units per acre. The primary zoning district that would correspond to this land use designation would be the LUR-3 High Density Residential.

Agriculture

Agriculture

The city's strong agricultural heritage is clearly visible in the farm fields located in the northeast corner of the city. The fields, bordered by the historic St. Croix River bluff line, are dotted with artesian wells, have deep pockets of organic soils generally not conducive to development, and are linked by a series of more traditional farm style roads. Single family homes are present and seem accessory to the commercial operations of the farms. Non-agricultural uses will be limited and densities targeted in this category are no more than one dwelling unit per 10 acres. The primary zoning district that would correspond to this land use designation would be the LUAG Agriculture.

Commercial

Downtown Business

Although a number of single family homes currently exist in the Central Business District, new residential development should be part of a mixed use plan with a balance of housing and commercial uses within a single building or complex. Replacing single family homes with mixed use structures and redeveloping existing commercial buildings will help support a healthy business environment and allow more people to be able to walk to their destinations.

Buildings should be located close to the street but with ample space for sidewalks. Parking should generally remain in the rear of the property when on-premise parking is offered. Streetscape improvements that enhance the pedestrian realm, such as planters, hanging baskets, street trees, outdoor seating, public art, street lighting, should be prioritized here. The City should continue to work with business owners and encourage façade improvements by connecting them to grant and funding opportunities. The primary zoning district that would correspond to this land use designation would be the LUCBD Central Business District.

General Business

The General Business guiding designation allows a wide variety of uses including those for convenience oriented, neighborhood-oriented, community-oriented and bulk retail-oriented markets and consumers. These areas provide a wide range of goods and services to serve many of the shopping and dining needs of people who live, work in or visit the City. Certain commercial uses, such as those devoted to motor vehicle-oriented retail or service activities (e.g., vehicle service and fuel sales, drive-through businesses and sales of motor vehicles) depend on access to major transportation routes and often have characteristics that are incompatible with residential areas. Other commercial uses, such as those involving wholesale and retail trade of large volume or bulk commercial items with on-site storage and warehousing, may have both commercial and industrial characteristics.

This guiding designation also allows a variety of uses including professional offices, administrative offices, research and laboratory facilities, wholesale showrooms, service facilities (e.g., conference

centers, lodging and reception halls), and business uses having limited contact with the general public. These areas may provide for limited retail sale of convenience-type products and services for the immediate surrounding area.

Commercial uses in this classification are expected to develop with the highest standards of design and performance, with a higher level of amenities such as landscaping, preservation of natural features, architectural controls, pedestrian trails and other features. Office parks and campus-style developments are encouraged in these areas. Commercial office uses can also serve as, and provide for, an orderly and progressive transition between higher and lower intensity land uses. Locations adjacent to the Central Business District, TH95 and I35 may be subject to stricter design standards so as to achieve an attractive, inviting and high quality retail shopping and commercial services in areas of high visibility and sensitivity to surrounding uses. The primary zoning district that would correspond to this land use designation would be the LUB General Business District.

Industrial
Industrial uses include all forms of businesses with manufacturing, distribution, warehousing or other industrial uses that may have consequences typically associated an industrial activity such as noise, odor, dust or low quality aesthetics. As a result, when these uses are in close proximity to residential, park and open space uses, additional restrictions may be appropriate. These uses may generate truck traffic and may involve outdoor storage. Locations adjacent to residential uses, I35, TH95 or other high visibility areas may be subject to additional design standards. The primary zoning district that would correspond to this land use designation would be the LUI Industrial District.

Public/Institutional
Public, semi-public or institutional uses are comprised of churches, schools, city offices, public works facilities, fire stations, public utilities, and other governmental or non-profit entities. This use may also include parks, designated open spaces and regional storm water management, such as publicly maintained storm water management ponds. This land use classification is intended to differentiate these sites as providing a common amenity or service and not land that is intended to be developed. The primary zoning district that would correspond to this land use designation would be the LUPUB Public/Institutional District.

Required Zoning Changes
The City has adopted zoning regulations for the purpose of carrying out the policies and goals of the land use plan element of the Comprehensive Plan. The application of zoning districts and the specific regulations should support the objectives of the Plan. As a result, an outcome of adopting the plan will be the review and modification of the Zoning Ordinance and Zoning Map as necessary.

The land use plan provides the basis for guiding zoning decisions that will be made by the City and private property owners. Minnesota Statutes Section 462.357 states that ".....the planning agency shall study and propose to the governing body reasonable and practical means for putting the plan into effect. Subject to the limitations of the following sections, such means include, but not limited to, zoning regulations, for the subdivision of land, an official map....." This statute anticipates that the

zoning regulations will be reviewed and updated to ensure implementation of the land use plan. In a broad sense, this review of the zoning ordinance should examine the following:

- The regulations for each zoning district should be reviewed to determine if they fit with the intent of the Comprehensive Plan.
- Zoning districts should be examined in relationship to the land use designation. Changes in zoning districts may be needed to match zoning with land use.
- The City will need to thoroughly review and update its Ordinances to address inconsistencies and conflicts to integrate the concepts described in this Comprehensive Plan. Updating the Zoning Ordinance will be a large undertaking that will require significant input, time and energy.

One of the policy decisions the City will need to make is how to implement the land use plan through the zoning map. Unlike the Metropolitan Land Planning Act (Minnesota Statutes Section 473), which requires consistency between the land use plan and zoning in cities within the Twin Cities metropolitan area, North Branch may choose to take a number of implementation strategies. Each has varying implications for existing property uses and current zoning. The strategies include, but are not limited to, the following:

- Keep current zoning in place until such time as the use terminates or redevelopment is initiated.
- Rezone property to a zoning district compatible with a land use plan category.
- Develop an interim strategy to address current use situations as they relate to long term objectives.



4
Housing

Introduction

Housing is an important component of all communities. Not only do the quality, availability, affordability, and diversity of housing enhance the quality of life in the City, it also supports economic development and contributes to a community's sense of place.

Housing is not a single, one size fits all, commodity. Personal housing needs change as life passes from young, single adults to family, to empty nesters to elderly. This chapter provides an inventory and analysis of North Branch's existing housing and paints a broad picture of future residential development.

North Branch has experienced significant population growth since 2000. The US Census estimated the city's population at 8,023 in 2000 and 10,125 in 2010, representing a 26.2% increase. The Minnesota State Demographer estimates North Branch's population at 10,608 as of April 1, 2017, representing another increase in population of approximately 5% despite the effects of the recession. The population is expected to continue to increase over the next 10 years, resulting in a projected population of 11,934 by 2030, with the 75-84 age group growing the fastest, at a projected rate of 40% according to the recent Maxfield Research and Consulting Comprehensive Housing Needs Analysis for Chisago County, dated June, 2018 (the "Maxfield Study"). Over this same period of time, the number of households has grown from 2,815 in 2000, 3,604 in 2010 and 3,801 as of 2017 and the projected number of households is 4,276 by 2030.

Housing Supply

Quantity and Types of Housing Units

As of April 1, 2017, the number of households is estimated at 3,801 according to the state demographer's office. Data describing the household type, as shown in Table 4-A, is based on data available as an estimate. Refer to Table 4-A: Housing Supply by Type, for more information.

Table 4-A Housing Supply by Type/Units Per Structure	Number Units	Percentage of units
Single-Family detached	*3,040*	*80%*
Single-Family Attached	*164*	*4%*
2-4 Unit multi-family	*129*	*3%*
5 + Unit multi-family	*305*	*8%*
Mobile home	*177*	*5%*
TOTAL UNITS	*3815*	*100%*

By US Census 2016

Comparison of Owner-Occupied and Renter-Occupied Units

It is important for communities to have a mixture of both owner-occupied and renter-occupied units. In general, many communities strive to have roughly 65-70% of their housing units owner-occupied. As of 2016, approximately 84.1% of the housing units in North Branch were owner-occupied, significantly higher than the national average (63.6%).

Table 4-B Housing Tenure by occupied	Number Units	Percentage of units
Owner-Occupied	*3094*	*84.10%*
Renter-Occupied	*585*	*15.90%*
TOTAL	*3679*	*100%*

By US Census 2016

According to the US Census Bureau, the median gross rent (2012 – 2016) was $872.00. Refer to Table 4-C: Rental Rates – 2016, for additional information.

Table 4-C Occupied Units Paying Rent - 2016	Number Units	Percentage of units
Less than $500	*53*	*9%*
$500 to $999	*313*	*54%*
$1,000 to $1,499	*165*	*29%*
$1,500 to $1,999	*24*	*4%*
$2,000 to $2,499	*7*	*1%*
$2,500 to $2,999	*0*	*0%*
$3,000+	*13*	*2%*
TOTAL	*575*	*100%*
Median Dollars	*$872*	

By US Census 2016

Few owner occupied houses are sold and converted to rentals, leaving a significant shortage of single family homes for rental. In addition, the existing multi-tenant properties experience a very low vacancy rate. The Maxfield Study (as commissioned by the Chisago County HRA/EDA in 2018) estimated the rental vacancy rate for North Branch and the immediate surrounding area at 2.4%. The US Census data from 2016 estimates the vacancy rates for North Branch specifically at 1.2% for owner occupied homes and 0% for rental units. Policies encouraging and promoting rental housing, whether traditional apartment style or via townhome-style construction, targeting all age groups and incomes, should be considered.

Value of Housing

According to the US Census Bureau, the median value of owner-occupied housing units in North Branch (2012 - 2016) was $163,000. Refer to Table 4-D: Owner- Occupied Housing by Value, for additional information. According to the US Census Bureau, a median selected monthly owner cost with a mortgage (2012 – 2016) was $1,500.00 and median selected monthly owner costs without a mortgage (2012 – 2016) was $500.00.

Table 4 – D Owner-Occupied Housing Units by Value	Number Units	Percentage of units
Less than $50,000	*151*	*5%*
$50,000 to $99,999	*236*	*8%*
$100,000 to $149,999	*823*	*27%*
$150,000 to $199,999	*959*	*31%*
$200,000 to $299,999	*673*	*22%*
$300,000 to $499,999	*210*	*7%*
$500,000 to $999,999	*25*	*1%*
$1,000,000 +	*17*	*1%*
TOTAL	*3094*	*100%*
Median Dollars	*$163,000*	

By US Census 2016

Residential Construction

1,219 new housing units were added in North Branch between 2000 and 2017. This includes 80 multifamily units and 1,139 single family homes.

At the peak of the past 18 years (from 2000 – 2005), single family home construction averaged about 150 homes per year. During the early years of the recession (from 2006 – 2011), the average number of new homes was only 13 homes per year, meaning some new housing growth, but in very limited numbers. The last 6 years of this period (from 2012 – 2017) has seen on average 41 new homes per year, demonstrating that North Branch remained a viable new housing market when other communities saw little or no growth for the past ten years.

Table 4-E Building Permit Trends 2000 thru 2017			
Year	*Single Family Dwellings*	*Multi-Family Dwellings*	*TOTAL*
2000	*200*		*200*
2001	*156*		*156*
2002	*132*	*24*	*156*
2003	*153*		*153*
2004	*87*	*56*	*143*
2005	*90*		*90*
2006	*29*		*29*
2007	*27*		*27*
2008	*8*		*8*
2009	*5*		*5*
2010	*2*		*2*
2011	*5*		*5*
2012	*31*		*31*
2013	*41*		*41*
2014	*36*		*36*
2015	*45*		*45*
2016	*50*		*50*
2017	*42*		*42*

Tenure by Age of Householder

Demand is great for affordable owner-occupied homes. Demand overall is calculated for approximately 1,000 new for-sale units over the next 10 years. Existing lot supply is low, therefore new lots will need to be platted soon to meet the growing demand for new construction over the next decade. Price points to accommodate a range of incomes and desired amenities will need to be balanced and future new housing inventory should be offered in a variety of layouts and styles, at a variety of different prices, and in locations throughout the city to address demand from all age groups and income brackets.

The city has a relatively small number of senior housing facilities, with a county wide vacancy rate of 1.7% based on the Maxfield Study. The Maxfield Study also indicated that market equilibrium is typically 3%. Consequently, the Maxfield Study concluded that there is a strong demand for senior housing (2017 – 2030), with the majority of demand in the form of independent/active living housing (i.e. no services). The Maxfield Study recommended several new senior housing concepts including a senior co-operative, active adult rental, affordable rental, independent living with some services, a memory care units.

Life-Cycle Housing and Profile of Households

The housing needs of a community relate to the demographic profile of the household. Typically,









The City of North Branch has a high quality housing stock and variety of affordable options that allow residents to find housing at all stages of life.

households move through several life-cycle stages; including entry-level households, first time homeowners, move-up buyers, empty nesters/young seniors, and older seniors. The following describes each of these household types and the effect that they have on housing demands in North Branch.

Entry-Level Households

People in the 19 to 24 year old age group typically leave their childhood home and establish their own household. They often rent a house or an apartment because they generally do not have the income and savings needed to buy a home. In addition, many people in this age group move frequently, so they are hesitant to buy a house. They are also more apt to share housing with other unrelated people of similar age.

The entry-level household population in North Branch will fluctuate annually. Many North Branch residents that graduate from high school move to other communities to attend a university or to pursue other job opportunities. In the long term, unless current conditions and trends change, North Branch will not see a significant increase in the 19 to 24 year old age group.

First Time Homeowners

First time homeowners are typically in their 20s and 30s. They are usually "move-up" renters, meaning they "move up" from an apartment to a home. They are often married with young children and prone to moving within a few years of buying their first home for several reasons; including, increased salaries allowing them to move to more expensive housing, an increased number of children may require larger housing, and job opportunities may require that they move to another community.

Move-Up Buyers

Move-up buyers are typically in their 30s and 40s. They move up from the smaller, less expensive house that they had purchased earlier. From an economic growth perspective, this is an important age group of people.

Typically, move-up buyers have children in school and an established job. They are less apt to move to another community and start over. Also, professionals who are moving to a community to advance their career are generally looking to move to a more expensive house than what they had in their previous community. North Branch should continue to ensure that it has adequate choices for those who are looking for move-up housing that will satisfy their needs until they are in their late 50s and beyond.

Empty Nesters and Young Seniors

Empty nesters and young seniors are generally in their 50s and 60s. Often, their children have moved out of their house and left them with a larger house than needed. Empty nesters

and young seniors often want to live in a smaller house, like a townhouse, that has less maintenance. As the baby boom generation moves into this age group, this population will likely increase in North Branch and there may also be a shift in this population group from their homes into apartments. There has already been a notable increase in demand for apartment and townhome style rentals in North Branch by members of the baby boom generation.

Advanced Seniors

Those in their 80s and older are often looking for low maintenance or assisted living housing. As the population ages, North Branch should continually ensure that it has adequate housing to meet the needs of seniors, including the opportunity for multi-generational housing options, such as "senior or mother-in-law apartments".

Special Needs

Housing for those with special needs includes housing for older adults and individuals with mental and/or physical disabilities or health issues whether it be temporary care, transitional housing, or long term care. The number of people with special housing needs is expected to increase as the population of North Branch continues to age. Ecumen offers a range of housing options at its North Branch facility. Bickford of North Branch offers assisted living and memory care. Apartment complexes including Shields Plaza and Splittstoser Apartments are tailored to the 55+ population and those needed wheel chair accessibility. A new supportive housing, 20 unit apartment complex intended for individuals with mental illness, called Willow Grove, is in development and construction is anticipated in 2019. North Branch is also home to Karcher Services, Provide Care and Progressive Living Solutions that offer a variety of care options.

Affordable Housing

The United States Department of Housing and Urban Development (HUD) generally defines housing as affordable if it costs less than thirty (30) percent of a household's income. However, HUD's Section 8 Income Guidelines are the basis for most affordable housing programs. Section 8 guidelines define low and moderate incomes on a sliding scale, depending on the number of persons in the family. For example, a four person household is considered "moderate income" if their family income is eighty (80) percent of the area's median family income.

It is noted most housing affordability programs and data place emphasis on creating owner-occupied units at eighty (80) percent of the median family income (moderate income) and rental units at fifty (50) percent of the median family income (low income). Since low income persons are typically renters, the definition of "low income" is tied to the number of persons in each unit. This plan identifies "affordable owner occupied units" as those affordable for moderate income families (eighty (80) percent of median income). Affordable rental units are based on fifty (50) percent of the median income and reflected on a per capita and per family basis. While there are no units of designated as "subsidized" under HUD standards, there are 49 housing units that are subsidized under the USDA subsidy program in North Branch.

A new 48 unit, townhome style, affordable housing project is planned for construction in 2019. This workforce rental housing project will feature homes with 1 – 3 bedrooms, garages and on-site management an amenities.

Income by Age of Householder in North Branch.
Looking at income data is also important when predicting future housing demands in the City of North Branch. As of 2000 US Census, the median household income was $50,924. By 2016, the median household income increased to approximately $69,419 and the top employment industries, according to Data USA (2016), are health care and social service (912), manufacturing (680) and construction (656). The total population in 2017 age 16 and over was approximately 7,690, of which approximately 71.6% were considered to be in the labor force (US Census). The unemployment rate in the City of North Branch in September 2015 was approximately 3.4%. During this same time, Minnesota had an unemployment rate of about 3.2% (City-Data.com).

Income distributions as reported by the U.S. Census Bureau can be compared to affordability standards to determine how many households and families in the City of North Branch may require affordable housing. An estimated 1,144 households (30%) have annual household incomes of less than 80% of the median household income reported by the American Community Survey in 2016.

Table 4 - F Household income and benefits	*Number Units*	*Percentage of units*
Less than $10,000	*214*	*6%*
$10,000 to $14,999	*147*	*4%*
$15,000 to $24,999	*128*	*3%*
$25,000 to $34,999	*306*	*8%*
$35,000 to $49,999	*349*	*9%*
$50,000 to $74,999	*921*	*25%*
$75,000 to $99,999	*754*	*20%*
$100,000 to $149,999	*631*	*17%*
$150,000 to $199,999	*199*	*5%*
$200,000 +	*30*	*1%*
TOTAL HOUSEHOLDS	*3679*	*100%*
Median Household Income (dollars)	*$ 69,419.00*	
Mean Household Income (dollars)	*$ 73,436.00*	

By US Census Bureau, 2012-2016 American Community Survey

Table 4 -G Owner Monthy Costs as Percent of Household Income - 2016	*Number Units*	*Percentage of units*
Less than 20.0%	*810*	*34%*
20.0 to 24.9%	*677*	*28%*
25.0 to 29.9%	*223*	*9%*
30.3 to 34.9%	*233*	*10%*
35.0 % +	*461*	*19%*
Total	*2404*	*100%*

By US Census 2016

Table 4-H Gross Rent as a Percentage of Household Income	*Number Units*	*Percentage of units*
Less than 15%	*58*	*10%*
15.0 to 19.9%	*37*	*6%*
20.0 to 24.9%	*50*	*9%*
25.0 to 29.9%	*23*	*4%*
30.0 to 34.9%	*88*	*15%*
35.0% +	*319*	*55%*
Total	*575*	*100%*

By US Census 2016

Future Population and Household Projections

The future housing projections reported in the Maxfield Study assume that approximately 1,000 new housing units are needed to be constructed over the next 10 years to address pent up demand. The City recognizes that there are many factors and demographic trends that influence the number of housing units constructed and household size and that these numbers will likely change from year to year.

Vision for Housing

The City of North Branch has a high quality housing stock and variety of affordable options that allow residents to find housing at all stages of life. Quality housing is available for all income and age ranges. Existing homes have been well maintained and renovated, as the unique character of each neighborhood is preserved. The City is open to creatively seeking opportunities to meet our housing needs and responsibly providing our share of affordable housing. Housing in North Branch continues to be a strength in attracting young families to the area and supporting the desires of existing residents to find alternative housing options for their senior years that allows them to transition from their large single family homes into something more manageable with the amenities they desire all while remaining in North Branch.

Goals, Objectives, and Policies

The following is a series of goals, objectives, and policies intended to achieve the vision for housing stated above.

GOAL 1

Allow all people the opportunity to call North Branch their home.

OBJECTIVE 1.1

PROVIDE A FULL RANGE OF HOUSING CHOICES THAT MEET RESIDENTS' NEEDS AT EVERY STAGE OF THEIR LIVES.

Policy 1.1.1
Attract a variety of residential developers to ensure a diversity of housing styles, layouts and costs.

Policy 1.1.2
Provide a variety of different residential zoning districts that have varying regulations with regard to setbacks, height, density, lot coverage and possible opportunity for accessory dwelling units.

Policy 1.1.3
Ensure that land is available in applicable zoning districts to allow for senior living options for all abilities (independent to assisted).

Policy 1.1.4
Encourage projects that include amenities to build and encourage active lifestyles.

OBJECTIVE 1.2

PROVIDE QUALITY AND SUFFICIENT AFFORDABLE HOUSING THAT MEETS THE AREA'S DEMAND.

Policy 1.2.1
Work with developers on providing affordable market rate housing.

Policy 1.2.2
Develop policies for naturally occurring affordable multi-family housing that encourage the maintenance and upgrading of aging apartment buildings, while maintaining affordability and preventing displacement of residents.

Policy 1.2.3
Promote additional housing diversity to serve families at all stages of their life cycle through housing finance programs and possible public-private partnerships.



GOAL 2

Provide attractive and desirable residential properties.

Objective 2.1

Provide residential neighborhoods that are well designed.

Policy 2.2.1

For new development or redevelopment, consider streetscape improvements such as attractive street lighting, boulevards, sidewalks on at least one side of the street, landscaping and vegetation, and other amenities that enhance the visual appearance of neighborhoods. Consider similar opportunities in existing neighborhoods as street reconstruction projects occur.

Policy 2.2.2

Seek opportunities to provide additional green space and recreation amenities in residential areas that may be lacking them.

Policy 2.2.3

Promote moderate and higher density housing, such as apartment style and townhome style units, in areas where appropriate, such as within and near downtown, commercial areas, and along arterial roadways. Promote development practices that result in low traffic volumes near low density residential areas.

Policy 2.2.4

Promote residential development that occurs in an orderly manner consistent with the future land use plan and that makes efficient and responsible use of municipal utilities and infrastructure expansion and incentivizes (for example, through access to technical assistance) construction of more energy efficient and water efficient housing).

Policy 2.2.5

Implement housing codes and support programs which lead to a housing stock that reflects the City's commitment to sustainability and healthy living.



5
Economic Development

Introduction

A strong business community is the cornerstone of a vibrant city. Economic development encompasses the policies and activities that improve the long term economic and social wellbeing of the community. Communities with strong economies have financial resources to support the levels of service that their residents need and desire. Successful communities realize that economic development is about bringing together social, natural, infrastructure, and economic assets in the community to sustain the "whole" community.

The City's Economic Development Authority recently adopted a strategic plan to guide and inform its decision making over the next 3 – 5 years. The EDA identified the following strategic priorities:

- Expansion of broadband (high speed internet)
- Business growth, including continued land sales and development
- Transportation
- Community
- Housing

Inventory and Analysis

Existing Characteristics of the Economy

A significant number of North Branch residents commute to work, but have indicated via survey and other tools, that they would prefer to work in the city if comparable jobs were available. Therefore, retaining and attracting jobs is an ongoing objective for the City of North Branch. As of 2018 Assessment Year, non-residential property values amounted to $146,754,700, as follows: commercial $91,277,300, industrial $22,953,100 and apartments $32,524,300. The Minnesota Department of Employment and Economic Development estimates the unemployment rate in Chisago County at 3 percent, higher than the state average of 2.9 percent.

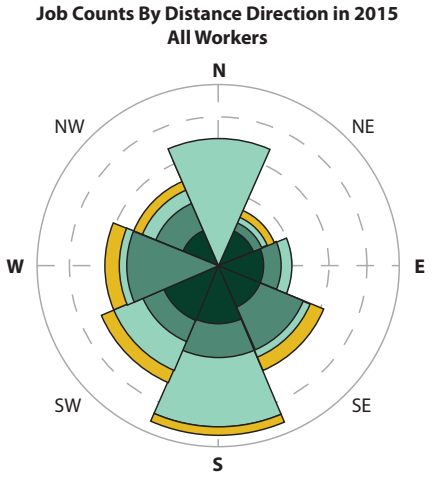
Table 5-A shows the employment and business profile of North Branch. The highest employment industry is health care and social assistance which provides 17.5 percent of all jobs in North Branch. Educational services is the second highest source of employment (13.1 percent), and construction, and other services provide about 12.6 percent each of the community's total jobs. (Data-USA.com)

Table 5 -A Business and Employment Statistics		
Name	*Industry*	*Approximate # of Employees*
North Branch School District	*Education*	*388*
Villages of North Branch	*Elder Care*	*185*
Andersen Windows	*Manufacturing*	*180*
Lakes Region EMS	*Emergency Medical Services*	*92*
County Market	*Retail*	*90*
Fairview Health System	*Health Care*	*85*
Branch Manufacturing	*Manufacturing*	*72*
Environmental Stoneworks	*Manufacturing*	*69*
Zinpro	*Manufacturing*	*62*
ShopKo	*Retail*	*60*
Wisconsin Coil Spring	*Manufacturing*	*56*

Commuting

According to the US Census as of 2015, 59.4 percent of North Branch residents commute more than 10 miles to work, resulting in an average commute time of 32.3 minutes trip.

Figure 5-1: Commute Distances



Jobs by Distance | Work Census Block to Home Census Block

	2015	
	Count	*Share*
Total Primary Jobs	*3,366*	*100.0%*
Less than 10 miles	*1,368*	*40.6%*
10 to 24 miles	*1,148*	*34.1%*
25 to 50 miles	*614*	*18.2%*
Greater than 50 miles	*236*	*7.0%*

Finance Tools

Community development actions require a framework for financial decision-making. The investment of public dollars to achieve community development objectives should be guided by several key principles:

- Financial resources are limited. The city has limited funding to apply to community development initiatives, so the use of resources must be targeted to achieve the greatest effect on community needs.
- Financial decisions require a long-term perspective. The current use of financial resources may reduce monies available in the future. In evaluating short-term opportunities, it is important to question the long-term impact on community development.
- Public funds should lead to private investment. While this section focuses on public finance actions, the Comprehensive Plan cannot become reality without private investment. The use of public funds should be targeted to actions that encourage private investment in North Branch.

The area of North Branch located north of TH95 received Opportunity Zone designation by the US Department of Treasury. While the tax credit opportunities that this designation allows are a private sector concern, the City will promote this designation as a tool for land sales and development in the City's Interstate Business Park as well as the other undeveloped portions of the City within the designated Opportunity Zone census tract.

Tax Increment Financing

Tax increment financing (TIF) is the primary development finance tool available to Minnesota cities (Minnesota Statutes, Sections 469.174 through 469.179). TIF is simple in concept, but complex in its application. Through tax increment financing, the property taxes created by new development (or redevelopment) are captured and used to finance activities needed to encourage the development. The challenge in using TIF lies with the complex and ever-changing statutory limitations.

Tax Abatement

Tax abatement acts like a simpler and less powerful version of tax increment financing. With TIF, the city controls the entire property tax revenue from new development. Under the abatement statute (Minnesota Statutes, Sections 469.1812 through 469.1815), the city, county and school district have independent authority to grant tax abatement.

Special Assessments

Public improvements are often financed using the power to levy special assessments (Minnesota Statutes Chapter 429). A special assessment is a means for benefiting properties to pay for all or part of the costs associated with improvements, and to spread the impact over a period of years. This tool can be applied to both the construction of new improvements and the rehabilitation of existing improvements.

Grant Programs

Cities can leverage funding from various grant programs to help take on economic development initiatives. There are numerous grant programs available to cities provided by various state and federal agencies related to economic development and downtown redevelopment. The Community Development Block Grant program (CDBG) administered by the U.S. Department of Housing and Urban Development (HUD) provides grants on an annual basis to states and eligible local governments for community development activities. In some cases, communities may choose to use these dollars for business retention and job growth activities. The City should also explore the use of these dollars for downtown redevelopment. The Minnesota Department of Employment and Economic Development is another agency with financial assistance available to local governments for business development, infrastructure, community development and site cleanup and redevelopment. Many other funding sources exist and city staff should monitor and pursue these opportunities when appropriate.





A significant number of North Branch residents commute to work, but have indicated via survey and other tools, that they would prefer to work in the city if comparable jobs were available.

GOAL 1

Encourage economic growth to meet the demand for commercial and industrial development.

Vision for Economic Development

The City of North Branch will remain focused on retaining a high quality of life, while at the same time working to encourage and facilitate job growth in its commercial and industrial sectors.

Goals, Objectives, and Policies

The following section outlines the primary goals for economic development, followed by a series of objectives and policies intended to influence future economic development efforts that align with the community visions in this plan.

Objective 1.1
Develop the Interstate Business Park.

Policy 1.1.1

Strive to maximize the community's strategic location as a valuable resource, promoting the Opportunity Zone designation whenever possible.

Policy 1.1.2

Actively target companies, both large and small, that offer good employment prospects, draw from the local labor pool, and are good corporate citizens.

Policy 1.1.3

Work to maintain a labor force in the immediate area that supports the growth of business and industry in the Interstate Business Park, including but not limited to expanding the inventory of affordable housing, providing transportation alternatives and encouraging expansion of services.

Policy 1.1.4

Coordinate with stakeholders and regional partners to identify users of rail and support development of rail spur adjacent to the Interstate Business Park.



Objective 1.2
Revitalize the historic downtown areas of North Branch.

Policy 1.2.1
Address unique development challenges including the reuse and redevelopment of vacant buildings in the historic downtown areas.

Policy 1.2.2
Explore and implement plans to enhance pedestrian friendly features, promote available parking, and collaborate with Minnesota Department of Transportation to establish safe pedestrian crossings at intersections within the downtown area.

GOAL 2

Balance the use of undeveloped land and infill development throughout the City.

Objective 2.1

Continue and expand redevelopment efforts.

Policy 2.1.1

Foster private investment and economic activity without compromising community objectives to maintain and enhance North Branch's natural environment.

Policy 2.1.2

Promote the areas north of TH95 as being designated for Opportunity Zone tax treatment to further enhance private investment in those areas.



GOAL 3

Enhance North Branch's reputation as a resource to new and expanding businesses.

Objective 3.1

Retain and support local business and industry.

Policy 3.1.1

Set attracting new, and retention of existing, businesses and industries as a priority of the City's economic development plan.

Policy 3.1.2

Continue outreach by City Staff and Elected Officials whereby the City representatives meet periodically on an individual basis with businesses and industries to listen to concerns and discuss opportunities for success. During these meetings, identify any perceived or real barriers or obstacles (such as overly restrictive ordinances) that the City could potentially remove or minimize to help industries and businesses prosper, while still protecting the overall health, safety and welfare of the community.

Policy 3.1.3

Coordinate with regional organizations, the North Branch School District, higher education institutions, and others in their efforts to promote training opportunities that can help businesses and industries prosper. If appropriate, co-sponsor and/or offer City facilities and/or meeting space for employee training programs.

Policy 3.1.4

Continue to promote North Branch's high quality of life as a means to help attract new businesses and industries.

Policy 3.1.5

Continue to work with local businesses and industries to ensure needs for expansion and development are adequately met.

Policy 3.1.6

Pursue ways to streamline the development approval process while still maintaining high quality development standards, by using consistent work flow practices, checklists, and hosting developer information sessions regularly.

Policy 3.1.7

Periodically review and promote economic development incentive programs such as Tax Increment Financing (TIF), Tax Abatement, utility energy and water efficiency design and improvement programs, county and state waste and pollution prevention assistance and other regional, state and national loan, grant and incentive programs to support business growth and development.



6

Transportation

Introduction

The purpose of the Transportation chapter of the Comprehensive Plan is to provide guidance to the City of North Branch, as well as existing and future landowners in preparing for future growth and development. As such, whether an existing roadway is proposed for upgrading or a land use change is proposed on a property, this Plan provides the framework for decisions regarding the nature of roadway infrastructure improvements necessary to achieve safety, adequate access, mobility, and performance of the existing and future roadway system. The primary goal of this Plan is to establish local policies, standards, and guidelines to guide major transportation investments and policy decisions.

Transportation System Principles And Standards

The transportation system principles and standards included in this Plan create the foundation for developing the transportation system, evaluating its effectiveness, determining future system needs, and implementing strategies to fulfill the goals and objectives identified.

Functional Classification

It is recognized that individual roads and streets do not operate independently in any major way. Most travel involves movement through a network of roadways. It becomes necessary to determine how this travel can be channelized within the network in a logical and efficient manner. Functional classification defines the nature of this channelization process by defining the part that any particular road or street should play in serving the flow of trips through a roadway network. Functional classification is the process by which streets and highways are grouped into classes according to the character of service they are intended to provide. Functional classification involves determining what functions each roadway should perform prior to determining its design features, such as street widths, speed, and intersection control.

The Minnesota Department of Transportation (MnDOT) has developed definitions and criteria for roadway classification based on function. The functional classification system typically consists of four major classes of roadways: Principal Arterials, Minor Arterials, Major Collectors, and Minor Collectors. Roadways are classified as either arterials, collectors, or local streets based on several criteria including (but not limited to) geographic units connected, types of streets connected, length of trip served, distance between streets of the same classification, volume of traffic carried by the facility, speed limit and design (right-of-way width and access provisions).

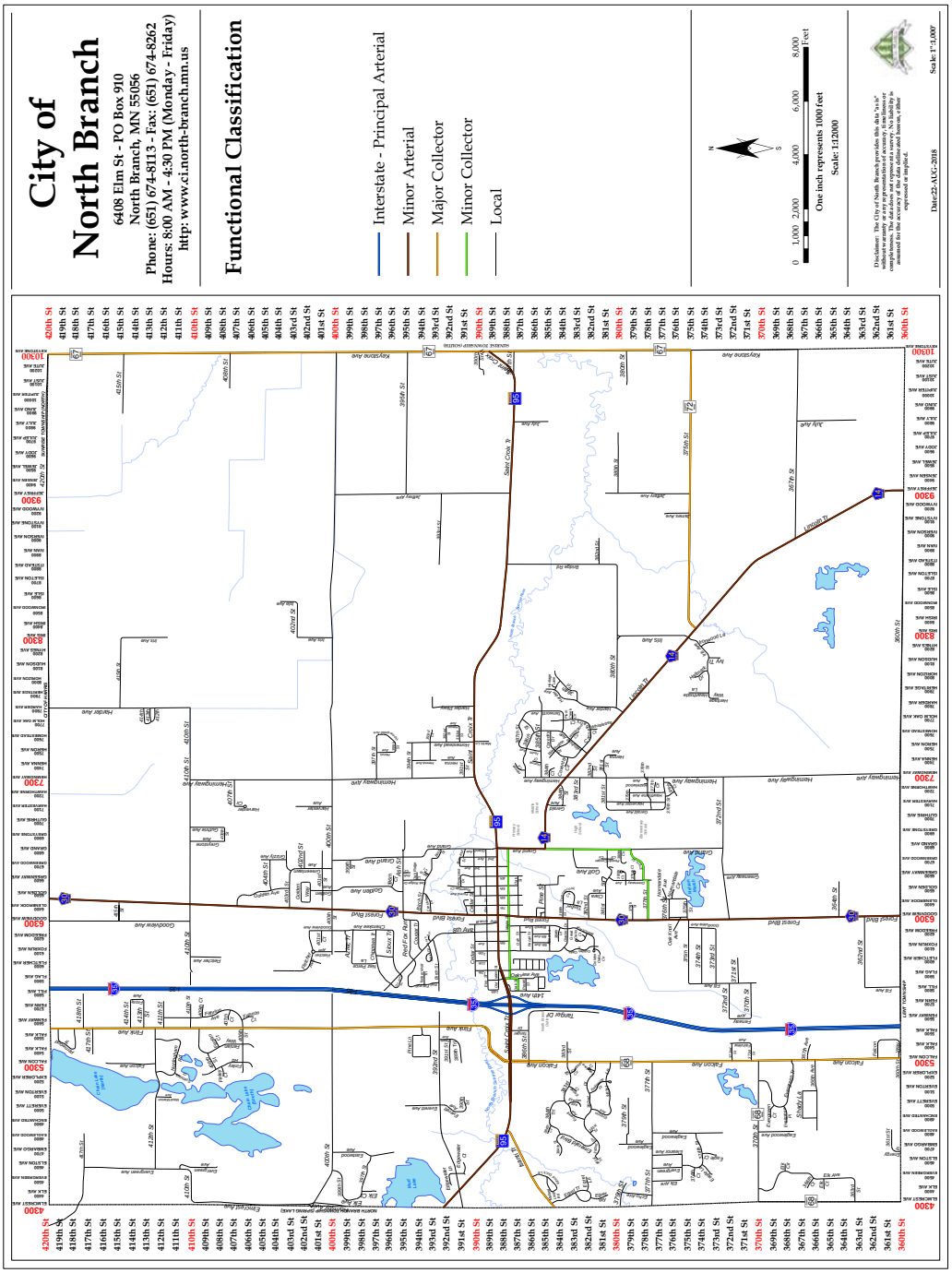
This Plan provides the framework for decisions regarding the nature of roadway infrastructure improvements necessary to achieve safety, adequate access, mobility, and performance of the existing and future roadway system







Figure 6-1:
Functional Classification
Map



The existing roadway classifications in North Branch are described below.

A. Principal Arterials

Roadways of this classification typically connect large urban areas to other large urban areas or they connect metro centers to regional business concentrations via a continuous roadway without stub connections. They are designed to accommodate the longest trips. Their emphasis is focused on mobility rather than access. They connect only with other Principal Arterials, interstate freeways, and select Minor Arterials and Collector Streets. There is one Principal Arterial roadway in the City of North Branch, Interstate 35 that runs north/south through the state of Minnesota and extending to Texas.

B. Minor Arterials

Roadways of this classification typically link urban areas and rural Principal Arterials to larger towns and other major traffic generators capable of attracting trips over similarly long distances. Minor Arterials service medium length trips, and their emphasis is on mobility as opposed to access in urban areas. They connect with Principal Arterials, other Minor Arterials, and Collector Streets. Connections to Local Streets should be avoided if possible. Minor Arterials are responsible for accommodating thru-trips, as well as trips beginning or ending outside the North Branch area. Minor Arterial roadways are typically spaced approximately ½ to 1 mile in developed areas and approximately 1 to 2 miles in developing areas. TH95, which runs east-west from the Wisconsin boarder on the east end and St. Cloud on the west end, Chisago County Rd. 14 and Chisago County Rd. 30 are identified as Minor Arterial roadways in North Branch.

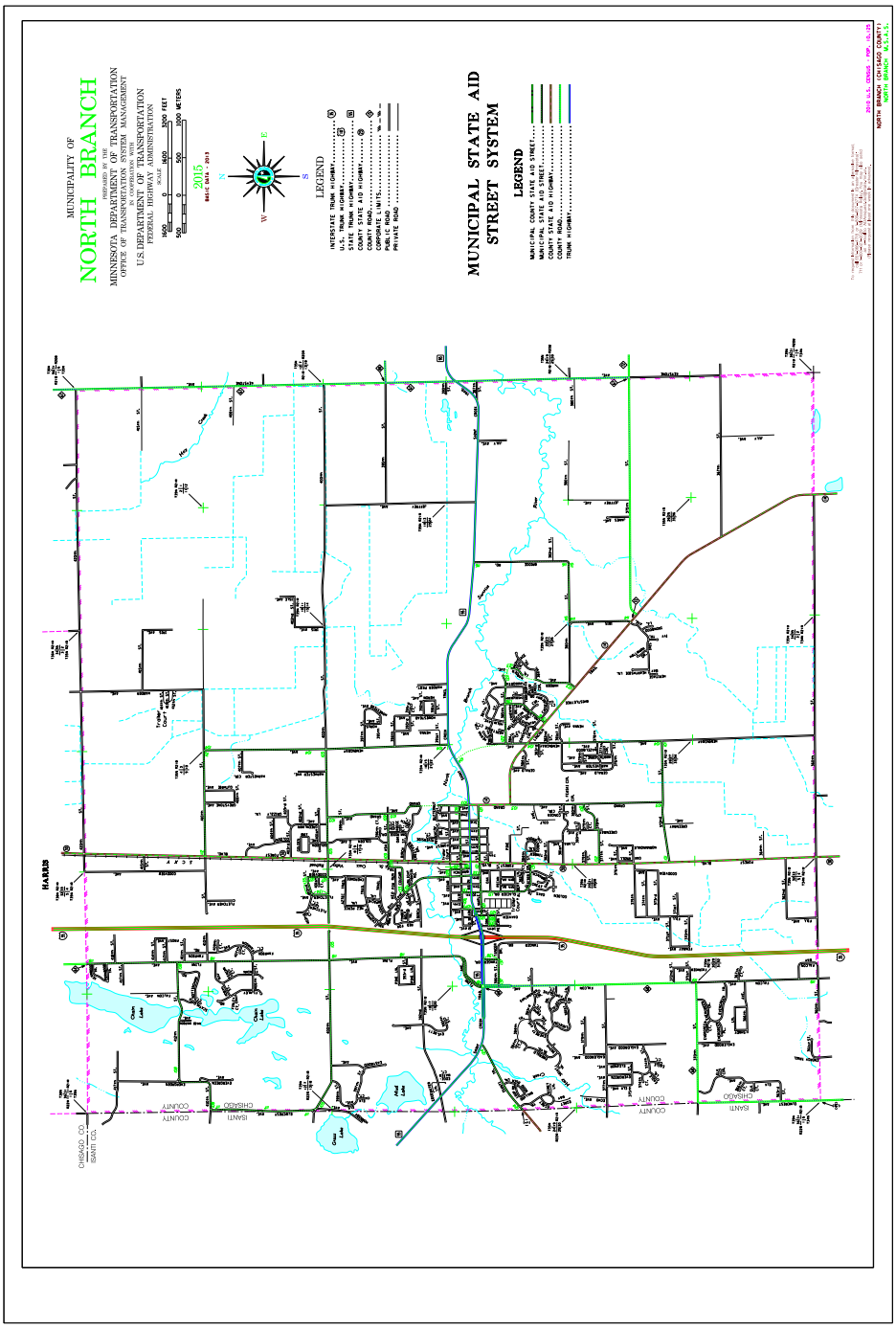
C. Major Collectors

Roadways of this classification typically link neighborhoods together within a city or they link neighborhoods to business concentrations. In highly urban areas, they also provide connectivity between major traffic generators. A trip length of less than 5 miles is most common for Major Collector roadways. A balance between mobility and access is desired. Major Collector street connections are predominately to Minor Arterials, but they can be connected to any of the other four roadway functional classes. Local access to Major Collectors should be provided via public streets and individual property access should be avoided. Generally, Major Collector streets are predominantly responsible for providing circulation within a city. However, the natural features associated with wetland and drainage complexes and parks, and location of principal arterials through the community results in circulation within North Branch being reliant on a combination of the Minor Arterial and Major Collector roadways. Major Collectors are typically spaced approximately ¼ to ¾ mile in developed areas and approximately ½ to 1 mile in developing areas. Flink Ave., Falcon Ave., portions of Keystone and Chisago County Rd. 72, and Isanti Trail are functionally classified as Major Collector roadways in the North Branch area.

D. Minor Collector Streets

Roadways of this classification typically include city streets and rural township roadways, which facilitate the collection of local traffic and convey it to Major Collectors and Minor Arterials. Minor Collector streets serve short trips at relatively low speeds. Their emphasis is focused on access rather than mobility. Minor Collectors are responsible for providing connections between neighborhoods and the Major Collector/Minor Arterial roadways. These roadways should be designed to discourage short- cut trips through the neighborhood by creating jogs in the roadway (i.e. not direct, through routes). Portions of Oakview, Oak, Maple, Grand, 378th, 377th and Greenway are functionally classified as Minor Collector roadways in the North Branch area.

Figure 6-2:
Municipal State Aid
Street System Map



Roadway Capacity
Capacities of roadway systems vary based on the roadway's functional classification. Based on accepted standards, roadway capacity per lane for divided arterials is 700 to 1,000 vehicles per hour and 600 to 900 vehicles per hour for undivided arterials. These values tend to be around 10% of the daily physical roadway capacity.

Principal and Minor Arterials
Based on the per lane capacity figures cited above, a two-lane arterial roadway has a daily capacity of 12,000 to 18,000 vehicles per day, a four-lane divided arterial street has a daily capacity of 28,000 to 40,000 vehicles per day, and a four-lane freeway has a daily capacity of approximately 70,000 vehicles per day. The variability in capacities are directly related to many roadway characteristics including access spacing, traffic control, adjacent land uses, as well as traffic flow characteristics, such as percentage of trucks and number of turning vehicles. Therefore, it is important that the peak hour conditions are reviewed to determine the actual volume-to-capacity on roadway segments with average daily traffic volumes approaching these capacity values.

Major Collectors and Minor Collector Streets
Major Collector and Minor Collector streets have physical capacities similar to those of a two-lane arterial street, however the acceptable level of traffic on a residential street is typically significantly less than the street's physical capacity. The acceptable level of traffic volumes on Major Collectors and Minor Collector streets vary based on housing densities and setbacks, locations of parks and schools, and overall resident perceptions. Typically, traffic levels on Major Collector streets in residential/ educational areas are acceptable when they are at or below 50% of the roadway's physical capacity, resulting in an acceptable capacity of 6,000 to 9,000 vehicles per day. Acceptable traffic levels on Minor Collector streets are considerably less. Typically, a daily traffic volume of 1,000 to 1,500 vehicles per day is acceptable on Minor Collector streets in residential areas.

Table 6-A: Roadway Types and Capacities, identifies various roadway types and the estimated daily capacities that the given roadway can accommodate.

Table 6-A: Roadway Types and Capacity	
Roadway Type	*Daily Capacities*
Minor Collector Street	*Up to 1,000*
Urban 2-Lane	*7,500 – 12,000*
Urban 3-Lane or 2-Lane Divided	*12,000 – 18,000*
Urban 4-Lane Undivided	*Up to 20,000*
Urban 4-Lane Divided	*28,000 to 40,000*
4-Lane Freeway	*Up to 70,000*

The capacity of a transportation facility reflects its ability to accommodate a moving stream of people or vehicles. It is a measure of a supply side of transportation facilities. Level of Service (LOS) is a measure of the quality of flow. The concept of LOS uses qualitative measures that characterize

operational conditions with a traffic stream and their perception by motorists. Six LOS are defined for roadways. They are LOS A, B, C, D, E, and F. LOS A represents the best operating conditions and LOS F represents the worst. The LOS of a multilane roadway can be dictated by its volume-to-capacity (v/c) ratio. The LOS of a two-lane roadway is defined in terms of both percent time-spent-following and average travel speed. LOS F is determined when v/c ratio is over 1.00. The criteria for LOS and general v/c ratio for multilane highways and speed for two-lane highways are provided in Table 6-B below:

Table 6-B: Highway Level of Service		
LOS	*Multilane*	*Two-Lane*
	v/c Ratio	*Avg. Travel Speed (mph)*
A	*<0.28*	*>55*
B	*>0.28 – 0.45*	*>50-55*
C	*>0.45 – 0.65*	*>45-50*
D	*>0.65 – 0.86*	*>40-45*
E	*>0.86 – 1.00*	*≤40*
F	*> 1.00*	*v/c >1.00*

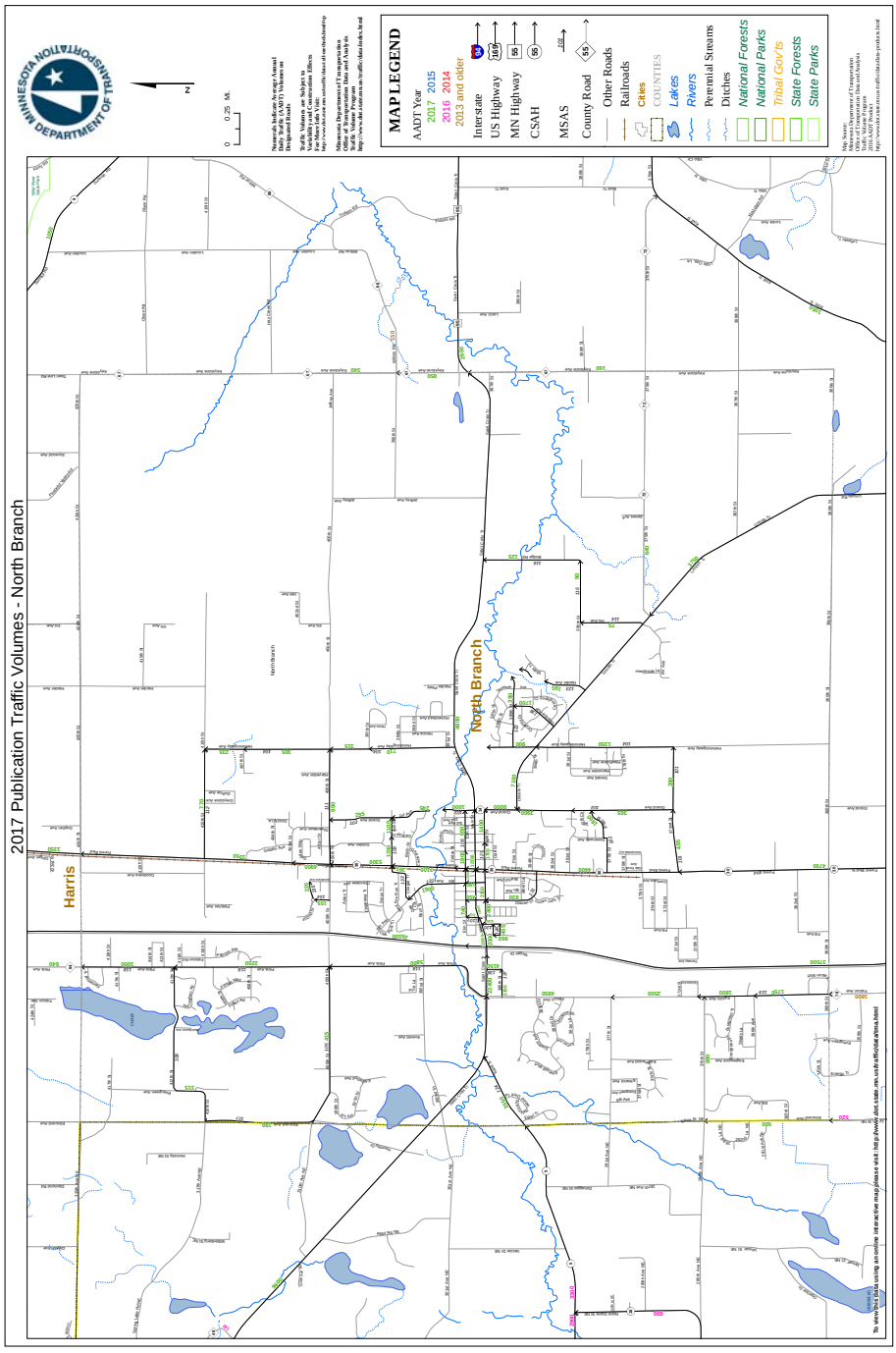
For roadways in urban sections, the urban street class and average travel speed determine the LOS. This is generally similar to the LOS for two-lane highways but takes into account the free flow speed of the facility (average speed achieved with no other vehicles present on roadway) and the addition of traffic control.

This criterion is established in Table 6-C below:

Table 6-C: Urban Street Level of Service				
Range of Free-Flow Speed	55 to 45	45 to 35	35 to 30	35 to 25
LOS	Avg. Travel Speed (mph)			
A	>42	>35	>30	>25
B	>34-42	>28-35	>24-30	>19-25
C	>27-34	>22-28	>18-24	>13-19
D	>21-27	>17-22	>14-18	>9-13
E	>16-21	>13-17	>10-14	>7-9
F	≤16	≤13	≤10	≤7

Generally, the City of North Branch should consider capacity improvements on roadways with a LOS D or worse and volume-to-capacity ratios over 0.75 during the peak hours.

Figure 6-3:
MNDOT
Traffic
Volumes

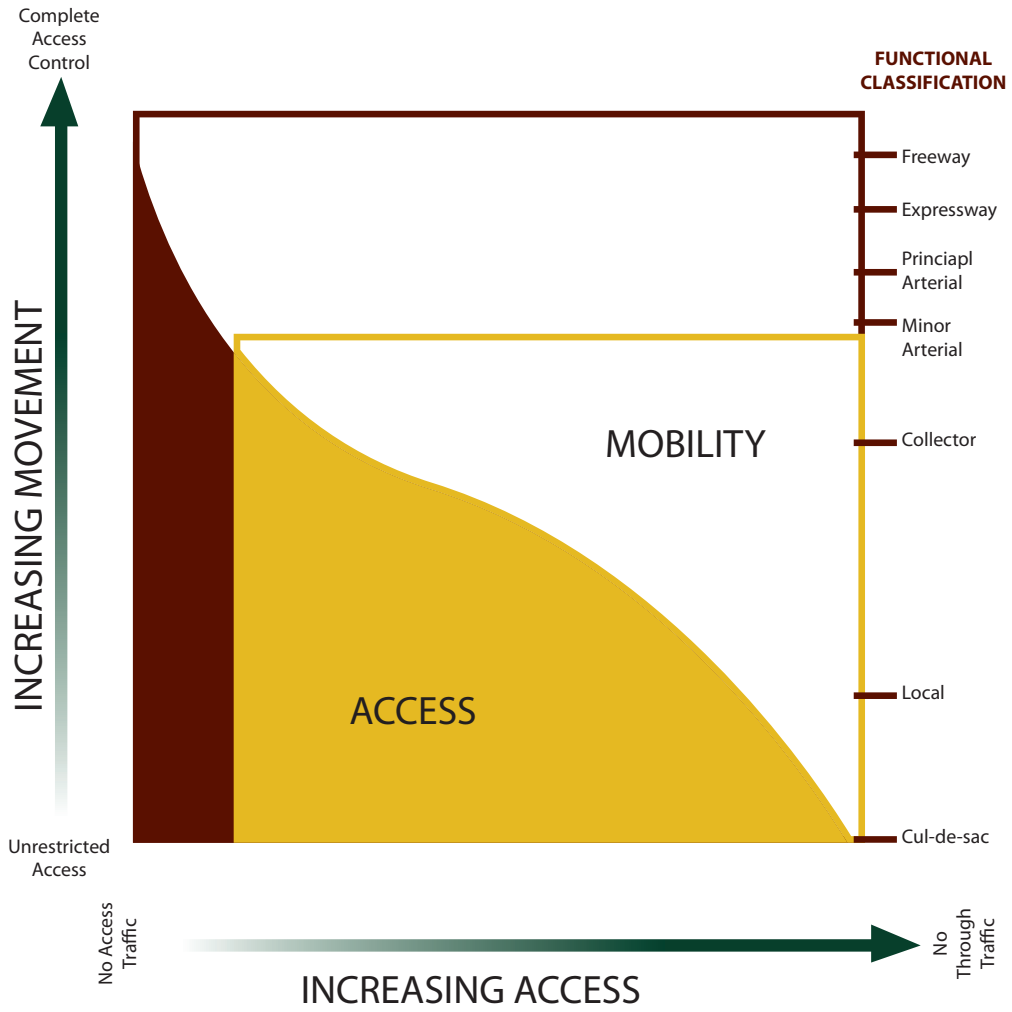


Access Management Guidelines

Access management guidelines are developed to maintain traffic flow on the network so each roadway can provide its functional duties, while providing adequate access for private properties to the transportation network. This harmonization of access and mobility is the keystone to effective access management.

Mobility, as defined for this Transportation Plan, is the ability to move people, goods, and services via a transportation system component from one place to another. The degree of mobility depends on a number of factors, including the ability of the roadway system to perform its functional duty, the capacity of the roadway, and the operational level of service on the roadway system.

Access, as applied to the roadway system in North Branch, is the relationship between local land use and the transportation system. There is an inverse relationship between the amount of access provided and the ability to move through-traffic on a roadway. As higher levels of access are provided, the ability to move traffic is reduced. The graphic below illustrates the relationship between access and mobility.



Each access location (i.e. driveway and/or intersection) creates a potential point of conflict between

vehicles moving through an area and vehicles entering and exiting the roadway. These conflicts can result from the slowing effects of merging and weaving that takes place as vehicles accelerate from a stop turning onto the roadway, or deceleration to make a turn to leave the roadway. At signalized intersections, the potential for conflicts between vehicles is increased, because through-vehicles are required to stop at the signals. If the amount of traffic moving through an area on the roadway is high and/or the speed of traffic on the roadway is high, the number and nature of vehicle conflicts are also increased.
Accordingly, the safe speed of a road, the ability to move traffic on that road, and safe access to cross streets and properties adjacent to the roadway all diminish as the number of access points increase along a specific segment of roadway. Because of these effects, there must be a balance between the level of access provided and the desired function of the roadway.

Roadway Width
Right-of-way width is directly related to the roadway's width and its ability to carry vehicular and pedestrian traffic in a safe and efficient manner. For Minor Collector streets in residential areas, a minimum right-of-way width of 80 feet is recommended for the added roadway width, as well as to provide added setback distance between the roadway and homes along the roadway. Right-of-way widths of 80 feet to greater than 100 feet may be required on Minor Arterials and Major Collector roadways within commercial areas to accommodate the potential for higher traffic volumes and the need for additional lanes.

For the City of North Branch, geometric design standards for the reconstruction or construction of new Minor Arterial, Major Collector, and Minor Collector Streets will be based on MnDOT State- Aid standards.

Table 6-D: Access Spacing Guidelines for Collector Roadways in North Branch (1) (2)

Type of Access by Land Use Type	Minor Arterial/Major Collector	Minor Collector
Low & Medium Density Residential		
Private Access	Not Permitted (3)	As Needed (4)
Minimum Corner Clearance from a Collector Street	660'	300'
Commercial, Industrial or High Density Residential		
Private Access	Not Permitted (3)	As Needed (4)
Minimum Corner Clearance from a Collector Street	660'	660'

(1) Some existing City streets that are currently functionally classified as Minor Arterial, Major Collector, or Minor Collector do not meet these criteria. These guidelines should be used for new streets and roadways that will functionally classified as Minor Arterial, Major Collector, or Minor Collector
(2) These guidelines apply to City streets only. Chisago County and MnDOT have access authority for roadways under their jurisdiction.

(3) Access to Minor Arterials and Major Collectors should be limited to public street access. Steps should be taken to redirect private accesses on Major Collectors to other local streets. New private access to Major Collectors is not permitted unless deemed necessary.
(4) Private access to Minor Collectors is to be evaluated by other factors. Whenever possible, residential access should be directed to non-continuous streets rather than Minor Collector roadways. Commercial/Industrial properties are encouraged to provide common accesses with adjacent properties when access is located on the Minor Collector system. Cross-traffic between adjacent compatible properties is to be accommodated when feasible. A minimum spacing between accesses of 660' in commercial, industrial, or high density residential areas is encouraged for the development of turn lanes and driver decision reaction areas.

Geometric Design Standards

Geometric design standards are directly related to a roadway's functional classification and the amount of traffic that the roadway is designed to carry. The following is a discussion of various geometric design elements and how each element relates to a particular roadway's ability to perform its function in the roadway network.

Roadway Width

Roadway and travel lane widths are directly associated with a roadway's ability to carry vehicular traffic. On Minor Arterial roadways, Major Collector roadways, Minor Collector streets and local streets, a 12-foot lane is required for each direction of travel unless the road meets the criteria for a more flexible design based on environmental factors as per the most recent State-Aid Operations Guide. The 24-foot total travel width is needed to accommodate anticipated two-way traffic volumes without delay. In addition to the travel width, minimum shoulder/parking lane widths are also required to accommodate parked or stalled vehicles. Roadway widths not meeting the Geometric Design Standards will result in decreased performance of the particular roadway and additional travel demand on the adjacent roadway network components. For example, a substandard Major Collector roadway may result in additional travel demand on an adjacent Minor Collector street resulting in an overburden for adjacent landowners. Similarly, additional local circulation may result on an adjacent Minor Arterial resulting in reduced mobility for regional trips.

Sidewalk/Trail

Sidewalks and/or trails are recommended to be adjacent to all Minor Arterial, Major Collector and Minor Collector roadways within North Branch to accommodate pedestrian, bicycle, and other non-motorized travel in a safe and comfortable manner. These roadways are expected to carry a significant amount of vehicular traffic and separation of travel modes is necessary. In commercial and industrial areas, the requirements for trails and sidewalks may vary to accommodate additional pedestrian and bicycle traffic.

Along Minor Arterials and Major Collector roadways, an 8-10 foot wide bituminous or concrete trail and/or 6-foot wide concrete sidewalk is recommended on either side of the roadway to accommodate local pedestrian and bicycle travel. The pedestrian facilities on both sides of these roadways allow

for pedestrian travel within the corridor without introducing excessive crossing demand on Minor Arterials and Major Collectors. A sidewalk and trail will accommodate pedestrian and bicycle travel along the corridor, as well as provide a safe, comfortable link between lower volume residential streets and the other pedestrian and trail facilities within the community. A 10-foot wide trail would be more desirable as the 10-foot width would better accommodate two-way bicycle traffic. The City of North Branch's comprehensive trail plan will be utilized to determine where bike trails are required.

Along Minor Collector roadways, a 6-foot concrete sidewalk is recommended on at least one side of the roadway both sides being preferred. With the anticipated vehicular volumes on Minor Collector streets, pedestrians can safely cross the roadway, however, pedestrian travel along the roadway may become uncomfortable.

Design Speed

The design speed of a roadway is directly related to the roadway's function in the roadway system. The focus of Minor Arterial roadways is mobility; therefore these roadways should be designed to accommodate higher travel speeds. Likewise, Minor Collector roadways are more focused on accessibility and should be designed to accommodate lower travel speeds. The function of Major Collectors is balanced between mobility and accessibility; therefore these roadways should be designed accordingly. Table 6-F below presents the recommended design speed for the North Branch roadway network.

Table 6-E: Roadway Design Speed Guidelines	
Functional Classification	*Design Speed (1)*
Minor Collector Street	*30 mph*
Major Collector Roadway	*35 - 40 mph*
Minor Arterial Roadway	*45 - 55 mph*

At the discretion of the City Engineer for City roadways, with approval by the City Council.

Roadway Jurisdiction

Roadway jurisdiction directly relates to functional classification of roadways. Generally, roadways with higher mobility functions (such as arterials) fall under the jurisdiction of the State of Minnesota or Chisago County. Recognizing that these roadways serve greater areas resulting in longer trips and higher volumes, jurisdiction of Principal Arterial and Minor Arterial roadways should remain under the jurisdiction of the state and county, respectively. Similarly, roadways with more emphasis on local circulation and access (such as collectors) will likely fall under the jurisdiction of the local government unit. These roadways serve more localized areas and result in shorter trip lengths and lower volumes. Major Collector and Minor Collector roadways should fall under the jurisdiction of the City of North Branch.

As roadway segments are considered for turn-back to the City, efforts will be taken to evaluate the roadway features for conformance to current standards, structural integrity, and safety. This effort will help the City develop short and long-range programs to assume the responsibilities of jurisdictional

authority.

Current Transportation Conditions

The City is located at the cross roads of I35 and TH95. TH95 also intersects with several Chisago County roads, including Co 30, formerly known as Hwy. 61, the historic highway that runs along the eastern border of Minnesota spanning from the Iowa border and running up along the north shore of Lake Superior. Based 2017 MnDOT traffic data, daily traffic counts along I35 heading north to North Branch average 37,500. An estimated 22,400 cars move west from I35 along TH95 each day. The daily traffic count is estimated at 22,500 cars moving east from I35 along TH95. An estimated 15,400 cars pass through the intersection of TH95 and Co. 30, making this intersection an area of concern due to ineffective turn lanes and a reduced turning radius for large vehicles such as fifth wheel RV's, passenger vehicles with trailers and semi's needing to turn from or onto TH95 at that intersection.

Truck and passenger vehicle traffic also pose an issue with regard to the city's minor arterial and collector roads. The City's industrial park, located north of 400th Street, could benefit from more direct access to I35, reducing truck traffic at the intersection of TH95 and Co. 30, relieving pressure on the existing bridge at I35 and providing for movement east/west through the City. As and when appropriate, the City should engage MnDOT about a new bridge and interchange on I35 at 400th Street.

The city of North Branch has 105 miles of local streets and road infrastructure to maintain. This consists of 70 miles of asphalt pavement, and 35 miles of gravel. Of the 70 miles that are currently paved, 17.1 are state aid and 52.9 are non-state aid. Assuming streets are overlaid once every 20 years, the city of North Branch should be overlaying 2.65 miles per year so all 52.9 miles of the currently paved non-state aid street system is overlaid once every 20 years. As more streets are constructed, the number of paved streets increases adding to the total of streets that should be overlaid on a regular schedule. There are currently 17.9 miles of paved local streets that are over 20 years old, and have never been overlaid.

Issues facing the City include:

- Lack of effective controls at various intersections between City/County Roads and TH95, including the intersections at 392nd and Isanti Trail.
- Existing intersection controls at TH95 and Grand and along Lincoln (Co. Rd. 14) at Grand and Hemingway are inefficient and pose significant accident hazards because of the volume and number of traffic movements.
- The intersection at TH95 and Co. 30 is not adequate for truck/trailer movement, lacking adequate area of turns, poor sight lines and lacking adequate stacking for vehicles waiting to turn.
- TH 95 passes through the historic downtown area and pedestrian crossings are difficult at best.
- Several intersections have cross traffic approaching the intersection at a 45° approach, impairing sight lines at the intersections.
- There are only limited marked pedestrian crossings along Co. 30.
- High pedestrian roads, such as Maple Street, do not have sidewalks, forcing pedestrians to walk in the street.

Pavement Management Plan

Local Streets (non-State Aid Streets)

Funding local street rehabilitation is not a one-time need. It's a permanent need that must be addressed in order to preserve this huge asset. Assuming streets are overlaid once every 20 years, the city of North Branch should be overlaying 2.65 miles per year so all 52.9 miles of the currently paved non-state aid street system is overlaid once every 20 years. This equates to a cost of approximately $1,250,000 per year. As more streets are constructed, the number of paved streets increases adding to the total of streets that should overlaid on a regular schedule.

There are currently 17.9 miles of paved local streets that are over 20 years old, and have never been overlaid. See attached map. As the years pass, more streets will reach that 20 year mark thereby adding to the total that should be overlaid.

All cities need to have a continuous program for maintaining streets. The typical program includes rehabilitating a number of streets each year to keep the overall pavement condition at an acceptable level, spreading out the cost of maintenance over a long period of time. Funding PMP's vary across the state, but the goal for each one is to have a continuous long-term funding plan.

Street Rehabilitation Funding

Funding PMP's typically involve tax levies, assessments, franchise fees, local option sales tax or a combination thereof.

- Tax rates are very competitive for attracting business and using 100% property taxes puts an undue burden on moderate to higher-valued businesses and homes to pay for a street system that serves the entire City. Nonprofit organizations do not pay property tax and would not pay their share of the improvement cost if general taxes are solely used for this purpose.
- Special assessments are a common way to fund improvements and maintenance as the City can spread the cost to property owners over a period of time. However, there is a limit to the amount that can be levied. Assessments can be highly controversial and often are unanticipated costs by the property owner. As such, it can be difficult to enact an assessment roll and effectively collect the necessary funding to pay for the improvements. Often, the projects will not move forward until the street is in complete failure, adding to the cost of the repair.
- Franchise fees spread costs out to everyone over a longer period of time and provide a dedicated fee to ensure local control of the revenue and that repairs stay on schedule with the Pavement Management Plan.
- Local Option Sales Taxes (LOST) can also be used to fund pavement management programs.

Pavement Management Program

As mentioned above, funding PMP's vary considerably and many times include a variety of funding sources. As with all PMP programs, funding sources can be changed and modified as situations and conditions change in the future.

In addition to researching how best to fund a PMP, staff also reviewed the city's standard details for road construction to determine if changes should be made that would extend the life of new roads. Staff reviewed standards from other cities and the life expectancy results these cities were experiencing, and determined a few changes should be made to the city's road standards. These changes are as follows:

- Increase the bituminous thickness from 3.5 to 4.5 inches.
- Use a flexible sealer between the bituminous and concrete curbing to eliminate water infiltration.
- In areas where there is the potential for bad soil conditions, require soil borings and a geological report/recommendation for the pavement section.

PMP Plan 2019-2044

All city streets will be evaluated based on the following criteria:

- Age and condition of street surface
- Type of street usage
- Volume of traffic
- Annual maintenance costs
- Relationship to other construction or projects
    - Planned county road improvements
    - Planned MnDOT improvements (if any)
    - Utility projects
    - Planned new construction
    - Public safety considerations

Those roads demonstrating the greatest need for Paving or resurfacing projects for those roads demonstrating the greatest need based on the above mentioned criteria will be designed and constructed to the extent of available funding until all city non-state aid streets have completed one full cycle of resurfacing. Phase 1 of the project will consist of overlays to the 17.9 miles that have never been overlaid. See attached map. Phase 2 of the project will consist of paving high traffic gravel roads. If funding is available phases 1 and 2 will be undertaken concurrently. Once Phases 1 and 2 have been completed, funds will be used for Phase 3 with consists of overlaying the remaining 35 miles of city streets existing as of the date of the plan.

Future Transportation System

The City will monitor traffic and upgrade roads and intersections based on new housing and commercial development. Several intersections were identified by residents, staff, appointed committee members and elected officials as needing upgraded traffic controls utilizing best management practices such as roundabouts. Future growth and development will likely require roundabouts for efficient and safe movement in and through high volume intersections.

North Branch is located at the crossroads of I35 and TH95, but the current route of TH95 extends through the historic downtown of North Branch creating congestion and conflict between pedestrian, passenger vehicles and truck traffic at the intersection of TH95 and Co. 30 and extending west to

the existing overpass at I35. Citizens, staff and elected officials recognize that traffic volume and additional development within the community have created a need for alternatives to the existing TH95 corridor. Two possible options were mentioned at the city's community café relative to transportation concerns.

The first option is to plan for a new interchange on I35 at 400th Street, diverting traffic from Main Street north to 400th, crossing and accessing I35, and then extending to the west into Isanti County along 400th on the west side of I35. This option was considered by a citizen committee in 2016 and it remains a viable option, subject to funding, construction of a bridge overpass and the dedication of land for the new public rights of way. A second option is to utilize a split pair approach, diverting east or west bound TH95 traffic onto a parallel street. Additionally, expanding development in the Interstate Business Park, congestion along TH95 and current traffic volumes at the existing interchange at TH95 and I35 will drive the need for a new interchange at 400th and I35. [insert future transportation system map]



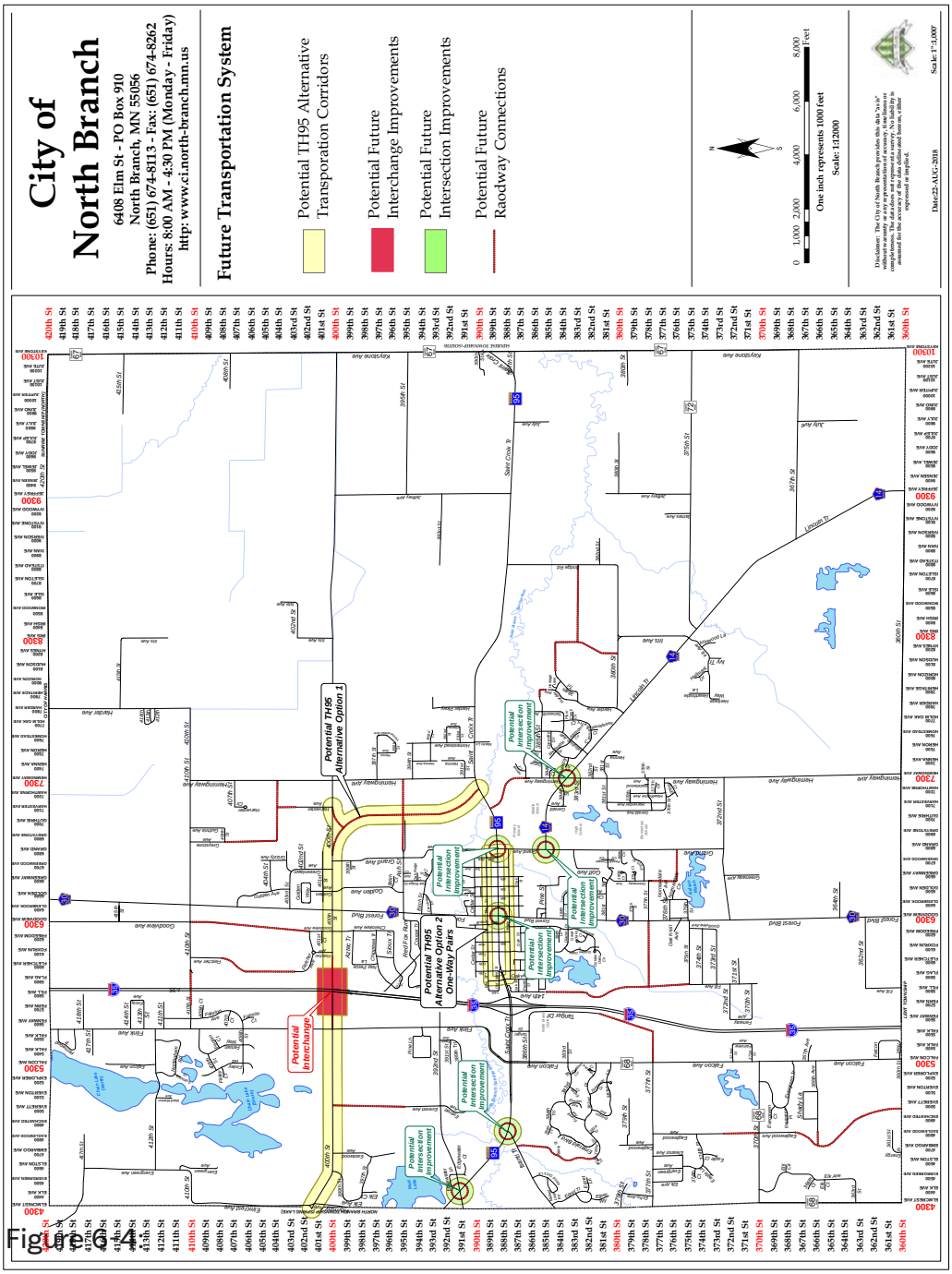

City of North Branch
6408 Elm St - PO Box 910
North Branch, MN 55056
Phone: (651) 674-8113 - Fax: (651) 674-8262
Hours: 8:00 AM - 4:30 PM (Monday - Friday)
http: www.ci.north-branch.mn.us
Future Transportation System
Potential TH95 Alternative Transporation Corridors
Potential Future Interchange Improvements
Potential Future Intersection Improvements
Potential Future Raodway Connections
One inch represents 1000 feet
Scale: 1:12000
Date:22-AUG-2018
Scale: 1"=1,000'
Potential TH95 Alternative Option 1
Potential TH95 Alternative Option 2 One-Way Pairs
Potential Interchange
Potential Intersection Improvement

Figure 6.4

GOAL 1

Implement and enforce standards for new streets and roadways within identified growth areas.

Transportation System Goals, Objectives, And Policies

The following section outlines the primary goals for the transportation system followed by a series of objectives and policies intended to influence future development efforts that align with the community visions in this plan.

Objective 1.1

Assign appropriate functional classification to existing and new streets and roadways.

Policy 1.1.1

Monitor traffic and other transportation characteristics of existing streets and roadways and make recommendations regarding changes to the functional classification of the existing streets and roadways.

Objective 1.2

Implement and enforce standards for existing and new streets and roadways.

Policy 1.2.1

Incorporate standards related to complete street standards and geometric design standards as outlined herein into the City's zoning ordinances related to new streets and roadways insuring developers are aware of City standards.

Policy 1.2.2

Monitor best practices and incorporate new standards related to complete streets and geometric design as outlined herein into the reconstruction of existing streets and roadways and implement to the extent practical.

Policy 1.2.3

Prevent the creation of "private streets" or alleys or the like unless in full compliance with the street detail sheets in effect at the time; internal driveways should be constructed and maintained by an association.

Policy 1.2.4

Periodically, review and assess road design standards, including those set forth in the Big Book of Ideas, version 1.1 as may be amended or updated, prepared by ch2m:Team for Chisago County as a result of the Towards Zero Deaths initiative, Complete Streets Implementation Guide for Minnesota Local Agencies (MnDOT, MN Local Roads Research Board:2013) and incorporate new engineering techniques to extend the useful life of the road surface and promote public safety.



GOAL 2

Establish a transportation plan to more effectively move traffic in and through the city.

Objective 2.1

Identify a possible corridor for moving traffic east/west through the city via a by-pass or split pairs

Policy 2.1.1

Zone developable land near the corridor that is compatible with a future truck by-pass.

Policy 2.1.2

Work with developers along the corridor for future dedications of public right of way for this purpose.

Policy 2.1.3

Restrict new driveways or other access onto Elm Street, from Grand Ave. west to 14th Ave. to preserve Elm Street as a possible path for a split pair approach to managing increasing traffic counts TH95

Objective 2.2

Identify locations for future through streets and connectors to more efficiently move traffic within the city

Policy 2.2.1

Develop a master plan for connecting existing streets to loop traffic and provide for alternative routes throughout existing developments.

Policy 2.2.2

Work with developers to obtain dedications of public right of way for construction of future through streets.



GOAL 3

Develop, implement and promote alternative transportation modes in order to achieve a walkable and bikeable community.

Objective 3.1

Expand bike and pedestrian plans to promote safe and efficient movement along streets, local and regional trails, bike paths and sidewalks.

Policy 3.1.1
Encourage walking as a healthy mode of transportation for short trips, within neighborhoods and to nearby commercial areas.

Policy 3.1.2
Create more complete networks of pedestrian facilities, and improve the quality of the pedestrian environment, by connecting to neighborhoods, regional and community parks, preserves, facilities, schools, and commercial areas and by connecting to destinations and pedestrian/bicycle facilities in neighboring communities.

Policy 3.1.3
Improve pedestrian safety, accessibility, and convenience for people of all ages and abilities for example, use neighborhood context and Complete Streets Policies to guide the design of trail and sidewalk projects

Policy 3.1.4
Expand bicycle transportation options that are safe, comfortable, and accessible to people of all ages and abilities, including other surface transportation models, such as bike lanes.

Policy 3.1.5
Use traffic calming tools, traffic diversion and other available tools and methods to create and maintain sufficiently low automotive volumes and speeds on city streets to improve bicycle and pedestrian safety.



Objective 3.2

Create a safe, multi-purpose and all season trail system.

Policy 3.2.1
Sign paved shoulders when utilized to supplement the non-motorized system, transitioning to off-road facilities or bike lanes where and when possible.

Policy 3.2.2
Add system wayfinding and signage at key locations.

Policy 3.2.3
Consider options for hiking, biking, walking, skating and cross-country skiing.

Policy 3.2.4
Update the Snow and Ice Control Policy on an annual basis to ensure the appropriate prioritization of the network.

Objective 3.3

Development and implement options for mass transit.

Policy 3.3.1
Support a public transit system and regional transportation to provide increased mobility options and access.

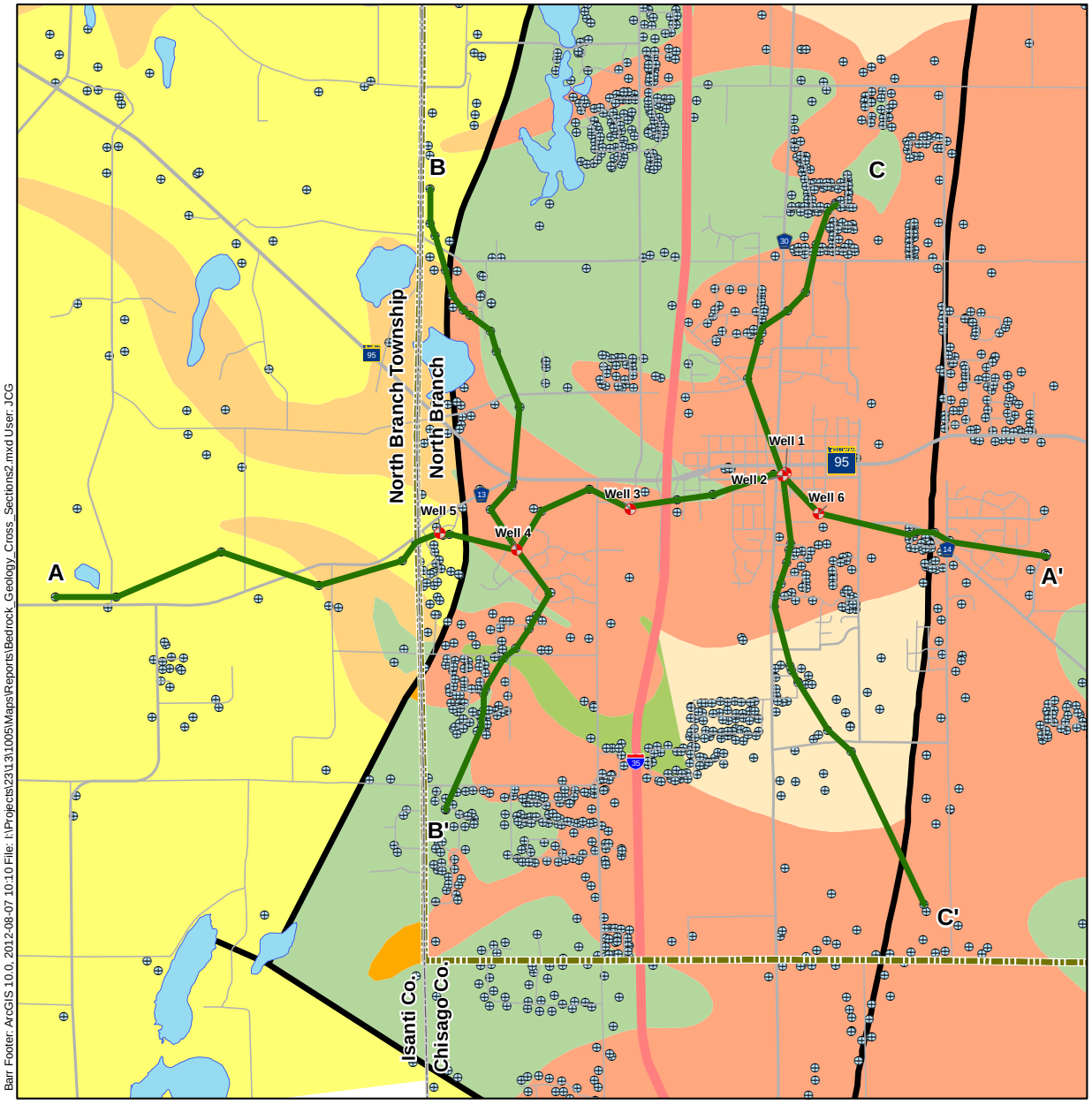
Policy 3.3.2
Support regional efforts to expand transit options, such as bus rapid transit, park and ride lots, ride sharing and express bus service to Minneapolis and St. Paul.

7
Utilities
Introduction

Water System
Existing Systems
The City's water system is operated and managed by a separate municipal utility, North Branch Water & Light (NBWL). NBWL has six municipal water supply wells including Well 1 (unique number 217922), Well 2 (unique number 112244), Well 3 (unique number 522767), Well 4 (unique number 706844), Well 5 (unique number 749383), and Well 6 (unique number 593584). Wells 1, 2, and 6 pump water from the Middle Proterozoic sedimentary aquifer and the Mount Simon – Hinckley aquifer. Well 3 and Well 5 pump water from the Mount Simon–Hinckley aquifer. Well 4 pumps from a buried Quaternary sand and gravel aquifer. Well locations are shown on Figure 7-A and well construction data are presented in Table 7-A.



Figure 7-1: Well Locations



Bedrock Geology

CAMBRIAN

- *Tunnel City Group*
- *Wonewoc Sandstone*
- *Eau Claire Formation*
- *Mt. Simon Sandstone*

MESOPROTEROZOIC

- *Sandstone, Siltstone, Shale (St. Croix Horst Sandstone)*
- *Chengwatana Volcanic Group*

- Geologic Cross Section
- North Branch Water & Light Well
- County Boundaries - Line.lyr
- Muncipal Boundary
- Water Body
- Well - County Well Index
- Fault

Miles

0 1

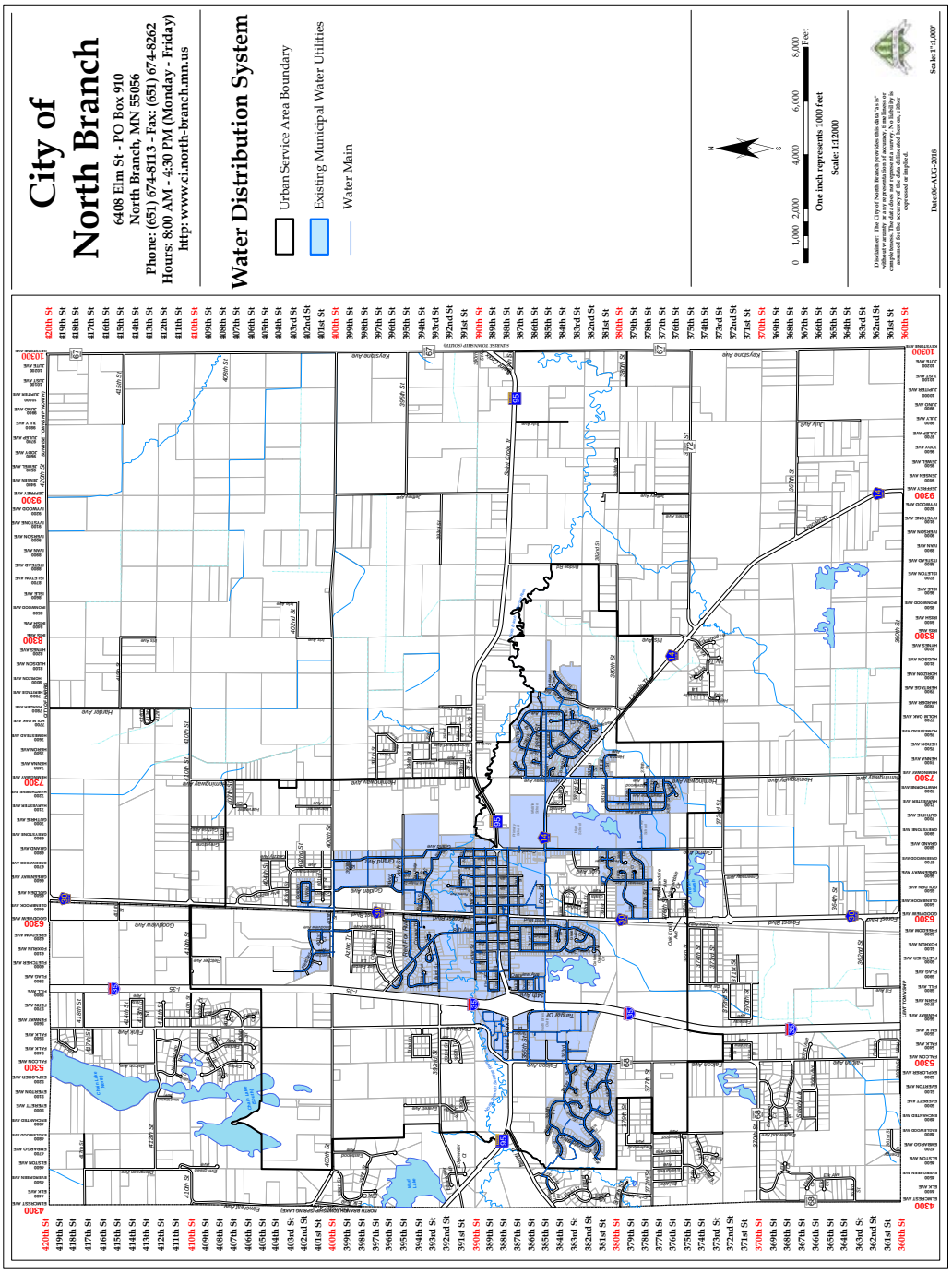
N

BARR

Figure 1

BEDROCK GEOLOGY
WHPP Part 1
North Branch Municipal Water and Light
Chisago County, MN

Figure 7-2:
Water Distribution
System Map



In response to the 2003 Comprehensive Water System Plan study (2002 thru the year 2043), based on land use, gross development acreages, and potential ultimate service area, the utility built two new water treatment plants, added new wells, raw water lines to the water system and storage capacity, this to meet the growing need of our community. The study also considered the quantity and timing of future water demands with estimated land use planning maps, estimated developable acreage, and water demand per acre for each land use type. Both average and peak day demands were estimated. The resulting projected average water demand is 1.9 mgd, 3.3 mgd and 7.2 mgd in 10, 20 and 40 years, respectively. See Table 7-B for pumping capacity and projections. Today, the treatment capacity is 3,500 gpm and the storage capacity is 2,000,000 gallons; average residential customer use as of 2016 is 4.22 thousand gallons of water per month. As areas develop in the community going forward, there will need to be new infrastructure added, including new trunk lines and elevated storage. However, Well No. 5 was found to produce water in quantities much greater than originally anticipated. It is likely that Well No. 5 would be expanded to produce the necessary amount of water to meet consumer demand before a new well would be drilled. See Figure 7-3 ad 7-4 for anticipated Trunk Water Main locations and phasing.







The Utility will continue to supply sufficient water quantity for system users and emergency needs.

Figure 7-3:
Trunk Water Main
System Map

Figure 7-4:
North Branch Trunk Water
Main System Phasing

NBWL has an approved wellhead protection plan that addresses municipal water supply wells used by North Branch (6 municipal wells) and the associated source water aquifers (the Middle Proterozoic Sedimentary Aquifer, the Mount Simon – Hinckley Aquifer and Buried Quaternary Sand and Gravel Aquifer– the aquifers from which the municipal wells pump water). Part 1 of the Plan was completed and approved by the Minnesota Department of Health (MDH) in August of 2012. The WHP Plan Part 1 presented the delineation of the Wellhead Protection Area (WHPA), the Drinking Water Supply Management Area (DWSMA), and the vulnerability assessments for the system's wells and aquifers within the DWSMA. The vulnerability assessment for the aquifers within the DWSMA was performed using available information and indicates that the vulnerability of the aquifers used by the system is classified as low. In 2015, the plan was updated to include Part 2. In Part 2, NBWL acknowledged that while water utility has jurisdiction over the drinking water system within the City, it does not have jurisdiction over land use planning within the City. NBWL indicated its desire to work collaboratively with the City as to future development. The goals for water quality adopted by NBWL included the following:

Goal 1
The Utility will maintain or improve the current level of water quality so that the municipal water supply will continue to meet or exceed all applicable state and federal water quality standards.

Goal 2
The Utility will continue to supply sufficient water quantity for system users and emergency needs.

Goal 3
The Utility will provide and promote activities that protect the source water aquifer that provides water to the municipal system.

Goal 4
The Utility will continue to collect data to support future wellhead and source water protection efforts.

Table 7-A: Well Construction Data					
Local Well Name	*nique Number*	*Aquifer*	*Casing Depth (ft)*	*Well Depth (ft)*	*Date*
NB 1	*217922*	*Middle Proterozoic Sedimentary and Mt. Simon-Hinckley*	*263 feet*	*762 feet*	*03/13/1947*
NB 2	*112244*	*Middle Proterozoic Sedimentary and Mt. Simon-Hinckley*	*261 feet*	*733 feet*	*10/06/1978*
NB 3	*522767*	*Mt. Simon-Hinckley*	*186 feet*	*304 feet*	*1993*
NB 4 or "Water & Light"	*706844*	*Buried Quaternary Sand and Gravel*	*171 feet*	*240 feet*	*02/10/2004*
NB 5	*749383*	*Mt. Simon-Hinckley*	*329 feet*	*467 feet*	*09/14/2007*
NB 6 or "NB Golf Course"	*593584*	*Middle Proterozoic Sedimentary and Mt. Simon-Hinckley*	*300 feet*	*410 feet*	*4/22/1999*

Table 7-B: Annual and Projected Pumping Rates for North Branch Wells						
		Total Annual Withdrawal (gal/yr)				
Unique Number	*Well Name*	*2006*	*2007*	*2008*	*2009*	*2010*
217922	*1*	*159,891,000*	*158,063,000*	*91,027,000*	*3,942,000*	*209,000*
112244	*2*	*36,396,000*	*50,106,000*	*12,814,000*	*350,000*	*0*
522767	*3*	*5,872,000*	*3,352,000*	*65,103,000*	*129,316,000*	*124,964,000*
706844	*4*	*28,112,000*	*27,832,000*	*43,557,000*	*81,604,000*	*74,783,000*
749383	*5*	*0*	*0*	*0*	*13,254,000*	*806,000*
593584	*6*	*0*	*0*	*0*	*0*	*15,390*
TOTALS		*230,271,000*	*239,353,000*	*212,501,000*	*228,466,000*	*200,777,390*

Source: MN DNR SWUDS Database

		Percentage of Annual Withdrawal					Average Annual % of Withdrawal
Unique Number	Well Name	2006	2007	2008	2009	2010	
217922	1	69.4%	66.0%	42.8%	1.7%	0.1%	36.0%
112244	2	15.8%	20.9%	6.0%	0.2%	0.0%	8.6%
522767	3	2.6%	1.4%	30.6%	56.6%	62.2%	30.7%
706844	4	12.2%	11.6%	20.5%	35.7%	37.2%	23.5%
749383	5	0.0%	0.0%	0.0%	5.8%	0.4%	1.2%
593584	6	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

		Projected Water Use (2015)			Maximum Total Pumping for Model Input[2]		
Unique Number	Well Name	Total1 (gal/yr	% of Total Projected	Projected Well Pumpage Based on % (gal/yr)	gal/yr	gal/day	m3/day
217922	1		36.0%	105,372,000	159,891,000	438,058	1,658
112244	2		8.6%	25,172,200	50,106,000	137,277	520
522767	3		30.7%	89,858,900	129,316,000	354,290	1,341
706844	4		23.5%	68,784,500	81,604,000	223,573	846
74938	5		1.2%	3,512,400	13,254,000	36,312	137
593584	6		0.0%	0	21,000,000	57,534	218
	TOTALS	292,700,000		292,700,000	455,171,000	1,247,044	4,720

1 Percentages for Wells 1 through 6 are based the average annual % of annual withdrawal for the period 2005 through 20009.
2 Well 6 rate of 21 mg/yr represents sum of estimated pumping for irrigation (17 mg/yr) and municipal peak demand (4 mg/yr) that was provided by WSB & Associates

GOAL 1

Expand existing wastewater system infrastructure to meet the demands generated by continued development.

Water System Goals, Objectives, and Policies

The following section outlines the primary goals for the water system followed by a series of objectives and policies intended to influence future development efforts that align with the community visions in this plan.

Objective 1.1

Expand the trunk watermain system within the Urban Service Area.

Policy 1.1.1

Implement the expansion of the trunk watermain system within the Urban Service Area through orderly development.

Policy 1.1.2

The trunk watermain system within the future growth areas should generally follow the configuration as shown in Figure 7-4 Final trunk watermain sizes and locations should be based on the type, location and sequence of development within the projected growth areas.

Policy 1.1.3

Develop a financing strategy for funding the expansion of the trunk watermain system.



GOAL 2

Monitor, evaluate and improve the condition of the City's existing wastewater system infrastructure.

Objective 2.1

Replace aging water distribution system infrastructure.

Policy 2.1.1
Prepare a study to document the condition of deficient watermains based on age, materials and history of breaks, leaks, freezing and other deficiencies.

Policy 2.1.2
Utilize the information from the watermain condition study, in conjunction with the condition information for other infrastructure elements, to develop, expand and prioritize projects to be included in the capital improvements.

Objective 2.2

Monitor the condition of existing water supply, treatment, and storage infrastructure and replace as required.

Policy 2.2.1
Monitor the condition of the existing wells and related equipment and continue with regular inspections, maintenance and miscellaneous equipment replacement as required.

Policy 2.2.2
Monitor the condition of the water storage facilities and related equipment and continue with regular inspections, maintenance and miscellaneous equipment replacement as required.

Policy 2.2.3
Support planning intended to provide well head protection for wells supplying the municipal water system.



Wastewater System

Existing Systems

The existing wastewater collection system within the City of North Branch consists of a network of sanitary sewers ranging in size from 8 inches to 30 inches in diameter, totaling 40 miles of sanitary sewer pipe line throughout the city. There are also 12 wet well lift stations located throughout the City which collect and pump the wastewater from those areas which cannot be served by gravity sewers. The sanitary sewers and lift stations throughout the City collect into 2 main trunk sewers. The interconnected systems of lift stations pump all of the wastewater generated within the City North Branch to the City of North Branch's wastewater treatment facility. The City of North Branch has a mechanical treatment plant that came on line in 2004. The type of plant is an activated sludge extended aeration with aerated ash holding tanks and sludge storage tanks. The plant has an effluent phosphorus limit of 1 mg/l and the effluent is disinfected before being discharged into the North Branch of the Sunrise River. Figure No. 7-5 shows the trunk sewers system.

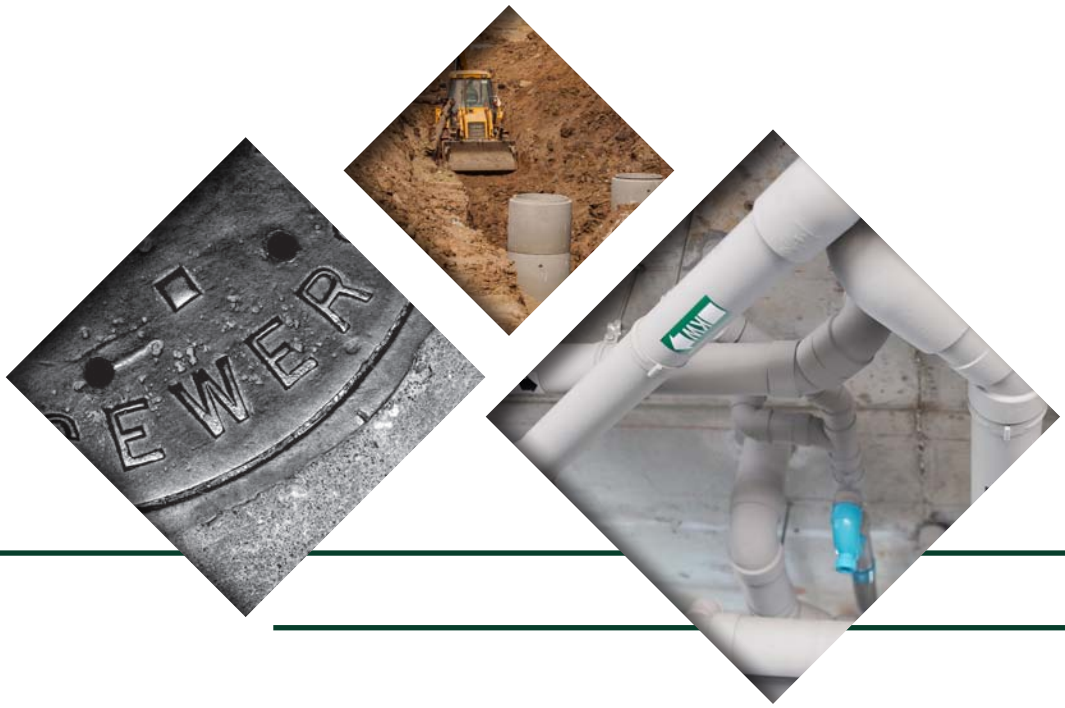
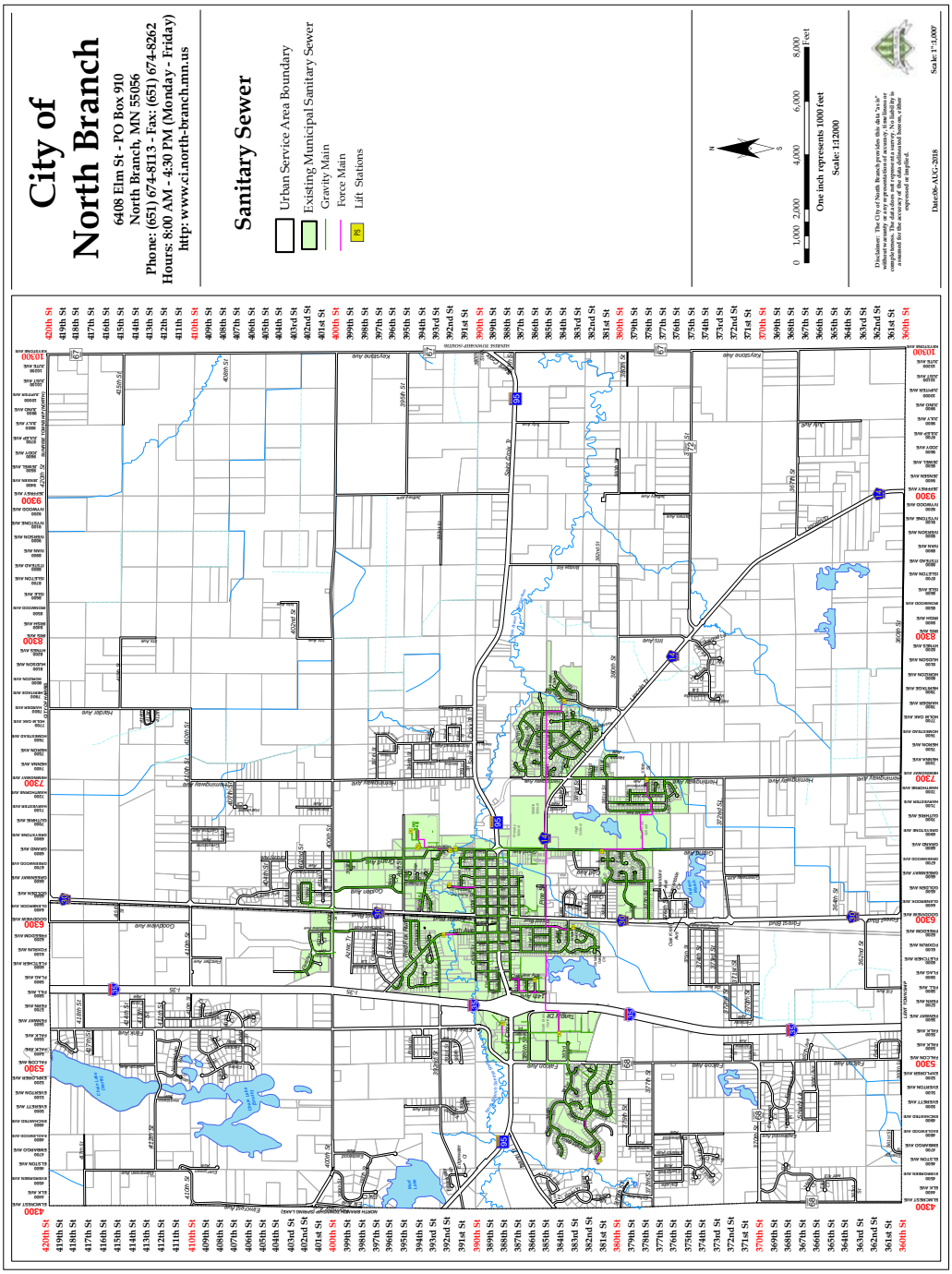


Figure 7-5:
Existing Sanitary
Sewer Map

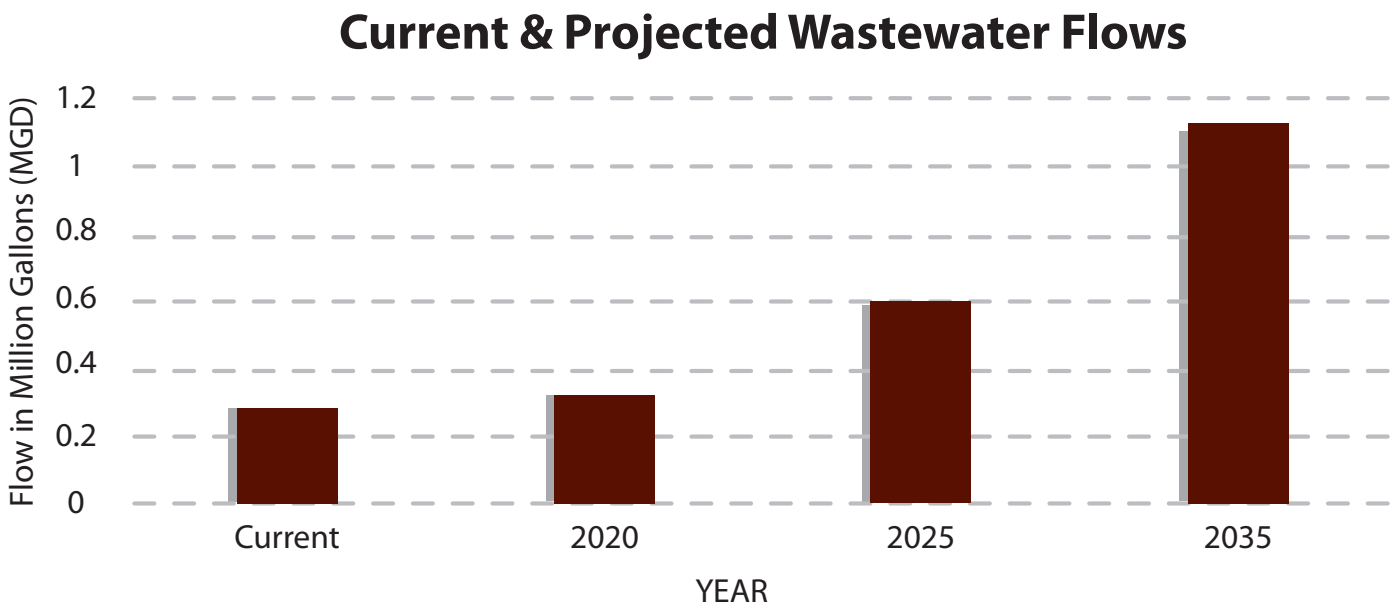


The capacity of the existing wastewater collection system is controlled, for the most part, by the capacity of the existing lift stations, trunk sewers, and the City's wastewater treatment plant. The treatment plant capacity is .812 MGD wet weather flow, and has a current flow of .290 MGD. The sanitary sewer system and the lift stations within the City of North Branch are well maintained and well managed. Lift stations are cleaned every six months and the complete sanitary sewer system is cleaned annually. The sanitary sewer system is televised to verify the pipe condition and assure reliability of the system. Older segments of the municipal sanitary sewer pipes segments should be replaced as street construction projects are implemented using newer materials less susceptible to inflow and infiltration of ground water and surface water into the system. The City will continue to implement an on-going lift station maintenance and equipment replacement program to maximize the useful lives of the lift stations. Periodic repairs and replacements will be performed as required.

Future Improvements

The following table shows the current and projected wastewater flows from the City of North Branch:

Table 7-E:



The average daily wastewater flow is the total annual volume of wastewater collected within the City of North Branch and pumped to the North Branch Wastewater Treatment Plant divided by 365 days. The average wet weather wastewater flow is average daily flow for the 30 consecutive days that have the highest total flow during that 30-day period in each year.

The capacity of the existing wastewater collection system is controlled, for the most part, by the capacity of the existing lift stations, trunk sewers, and the City's wastewater treatment plant.



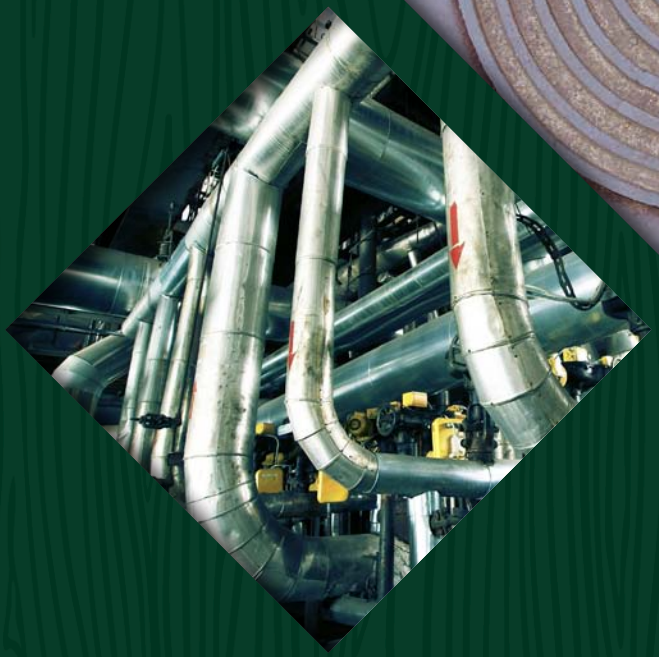




Figure 7-6:
Future Trunk Wastewater

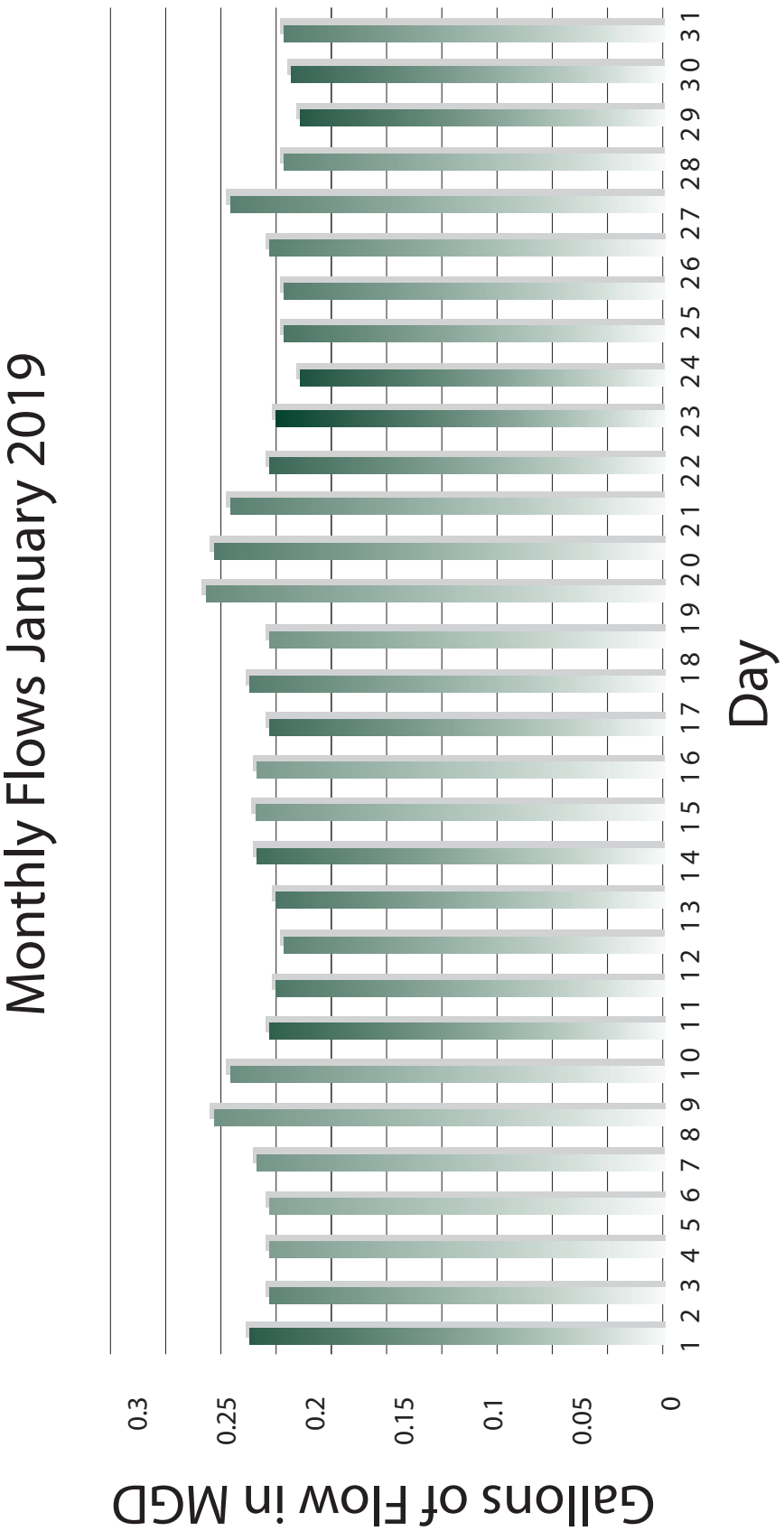
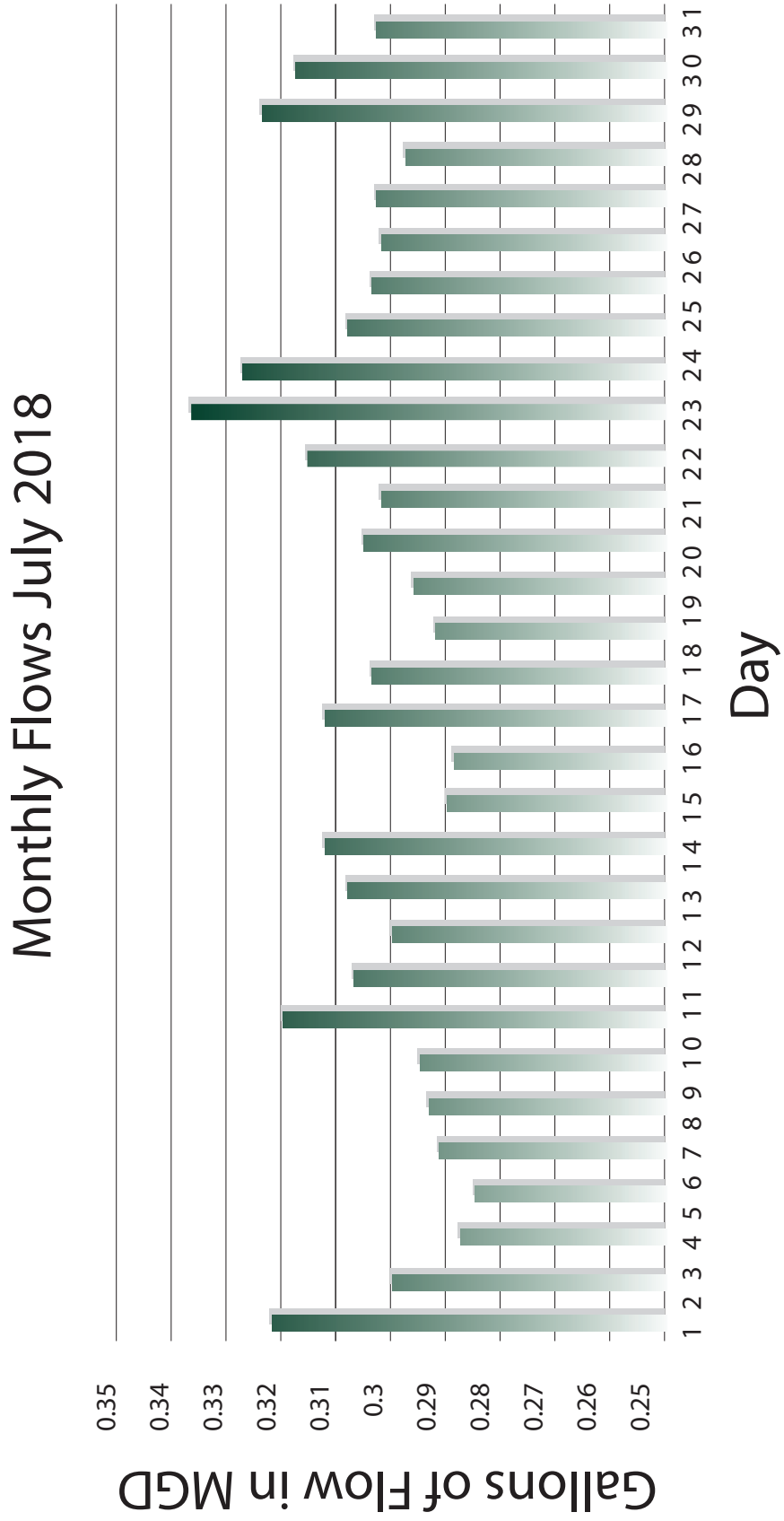


Figure 7-7:
Trunk Wastewater System



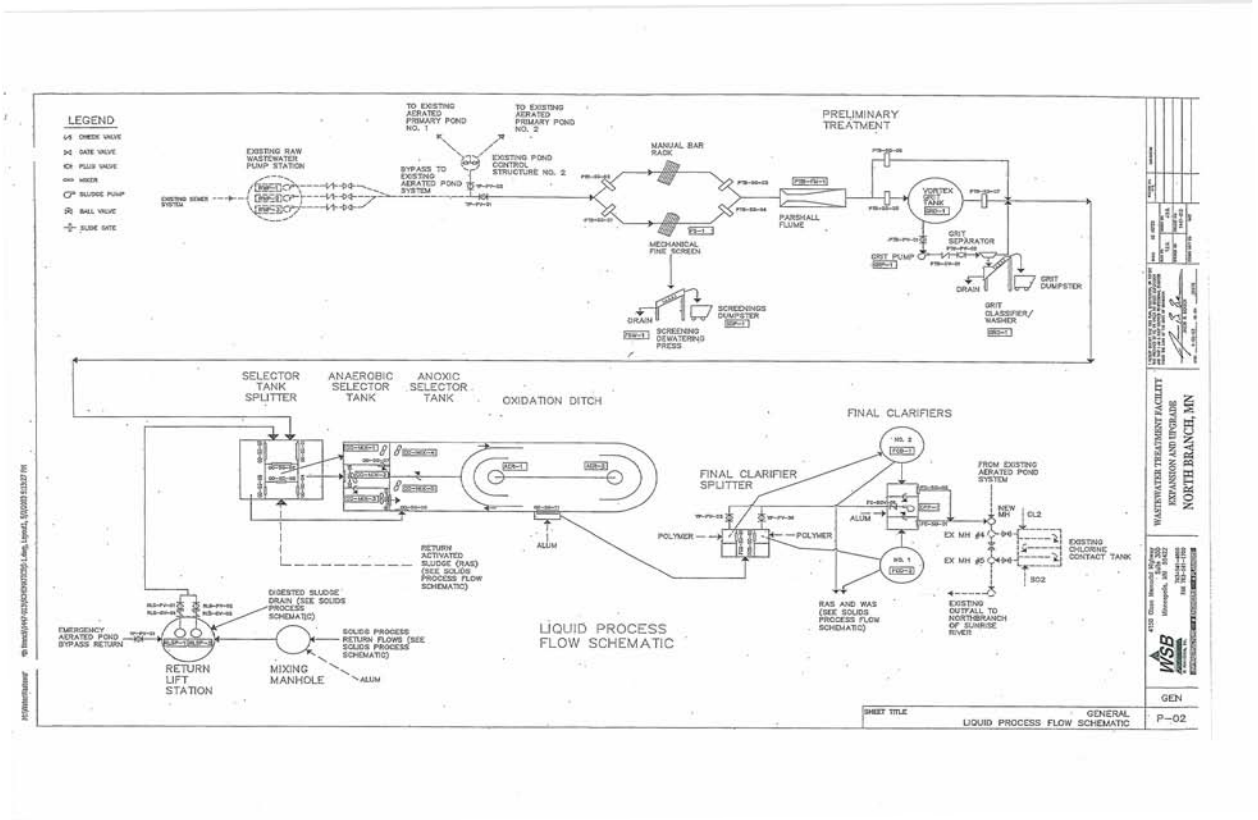


Figure 7-8:
Wastewater Treatment Facility Expansion & Upgrade

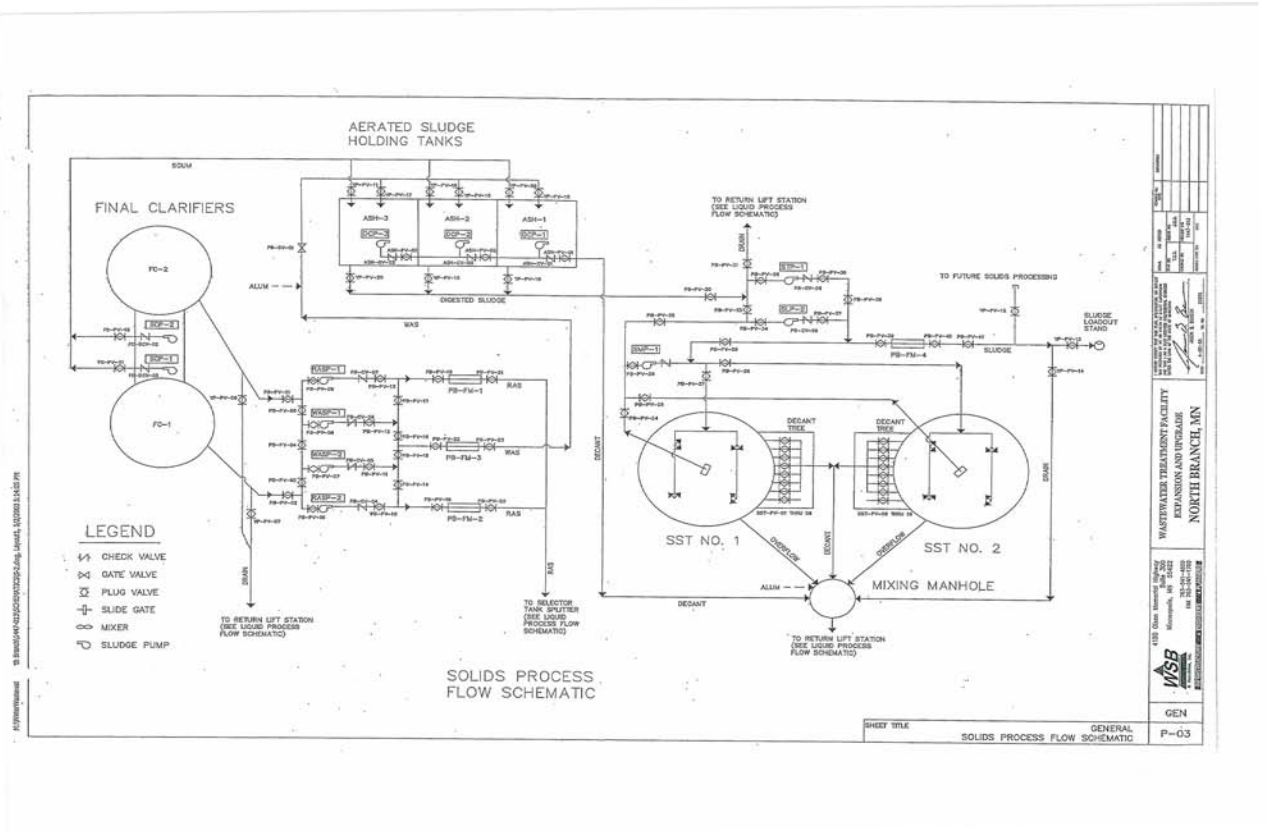


Figure 7-9:
Wastewater Treatment Facility Expansion & Upgrade

A system of sanitary sewers will be extended from the trunk sewer into the development areas. These trunk sewers will range in size from 8 inches to 15 inches in diameter. The exact size and configuration of the sanitary sewer system will be dependent on the type and density of development, existing and proposed topography, and in the case of commercial and industrial areas, the extent of water usage/ wastewater discharged. The approximate configuration of the primary network of sanitary sewers and lift stations within the projected development areas is shown in Figures 7-5.



The following section outlines the primary goals for the wastewater system followed by a series of objectives and policies intended to influence future development efforts that align with the community visions in this plan.

Wastewater System Goals, Objectives, and Policies

Objective 1.1

Expand the trunk wastewater system into future growth areas.

Policy 1.1.1
Implement the expansion of the trunk sanitary sewer system as areas within the Urban Service Area are developed.

Policy 1.1.2
The trunk wastewater collection system within the future growth areas should generally follow the configuration as shown in Figures 7-6. Final trunk sanitary sewer and lift station sizes and locations should be based on the type, location and sequence of development within the projected growth areas.

Policy 1.1.3
Develop a financing strategy for funding the expansion of the trunk sanitary sewer system; monitor sewer access and trunk fees being assessed to insure that they reflect the costs of the system as it expands; explore assistance programs to reduce demands on the waste water system, resulting in reduced energy and other costs.

GOAL 1

Expand existing wastewater system infrastructure to meet the demands generated by continued development.



GOAL 2

Monitor, evaluate and improve the condition of the City's existing wastewater system infrastructure.

Objective 2.1

Replace aging sanitary sewer system infrastructure.

Policy 2.1.1

Prepare a study to document the condition of deficient sanitary sewers and collection system lift stations based on age, materials and deficiencies identified in sewer televising reports.

Policy 2.1.2

Utilize the information from the sanitary sewer condition study, in conjunction with the condition information for other infrastructure elements, to develop, expand and prioritize projects to be included in the capital improvements.

Objective 2.2

Monitor the condition of existing wastewater pumping and treatment infrastructure and replace as required

Policy 2.2.1

Monitor NPDES wastewater quality standards and identify possible changes to the treatment processes currently utilized by the City.

Policy 2.2.2

Monitor the condition of the City's main lift stations, including the pumps, and continue with regular inspections, maintenance and miscellaneous equipment replacement, with emphasis on higher efficiency equipment, as required to accommodate existing and new users of the system.

Policy 2.2.3

Remove old wastewater ponds/infrastructure to accommodate future expansion as needed.



Stormwater System

General

The goal of the plan is to maintain and improve surface water quality and minimize impacts of increased water quantity through appropriate planning, policy enforcement and capital improvement projects.

Most Minnesota cities have existing pipe networks that were designed to relieve ponding within the original platted city limits. When these systems were designed, the concern for the downstream properties was not a consideration. The goal was the efficient and cost effective removal of stormwater runoff from developed areas. In North Branch's case, this meant the construction of direct pipelines to the Sunrise River with eventual transfer to the St. Croix River.

As little as 20 years ago, the urban storm sewer pipe design recommended by the Minnesota Department of Transportation (MnDOT) on County State Aid Highways for cities the size of North Branch was a 3-year design storm. That is, the pipe system was designed to handle less than a typical 3.5-inch rainfall. Now, as rainfall intensities appear to be increasing and construction costs are increasing faster than material costs, the recommended design is for the pipes to handle a 10-year storm while ensuring that overflow spillway routes prevent property damage for larger storms.

Based on the existing system, the effects of unmitigated growth on the downstream systems can be devastating and can lead to legal action against the governing authority. One of the best methods of mitigating the effects of growth is through the construction of stormwater retention basins. These basins are designed to store excess runoff at elevations where there is no adjacent property damage. The runoff is stored until the existing storm sewer system can take it away. Studies have shown that these basins not only provide flood protection, but can also help to remove stormwater pollutants.

Typically, the most efficient and most economical retention basins serve larger areas. Hence, an effort has been made to locate regional retention ponds as opposed to scattering smaller, localized development basins throughout the City. However, topography and available space must provide optimum locations for regional ponds. Regional ponds cannot be located in an existing wetland without the costly mitigation of the impacted wetland. They are also not recommended in floodplains. Recently, a Minnesota suburb was fined by the Minnesota Pollution Control Agency (MPCA) for illicit discharge of sediment into the Minnesota River associated with its floodplain stormwater treatment pond having its containment bank eroded away by the flooded river. This comprehensive plan considers these factors when recommending Best Management Practices (BMPs). It also considers information from long term residents of North Branch and City staff regarding the observation of the natural ponding associated with heavy rainfalls when siting regional basins.

One drawback associated with regional pond planning is finding a funding mechanism to purchase the land needed and finding ways to have new development assist in their construction. Ideal planning of regional basins includes the purchase of the needed land while constructing the basin with funding generated from area charges on the new developments that generate the excess runoff. The trouble is that the land acquisition should be made before the development occurs, but the development fees are used to pay for the land and regional pond. Greater Minnesota cities are also reluctant to

impose development charges, because their goal is to attract new businesses with low cost, and not to burden them with additional fees.

Although regional ponds are the most cost effective method of hydraulically managing flooding, they are not necessarily the best method of handling the new water quality regulations for stormwater. The water quality regulations for stormwater are ever changing. For example, since 2007, the City of North Branch has been required to obtain a permit for its Municipally Separate Storm Sewer System (MS4).

This MS4 permit is renewed every 5 years and the permit rules continue to evolve. The MS4 permit and in the coincidental Construction Stormwater Permit, municipalities and developers are required to reduce the runoff volume from new construction sites by removing the first 1-inch of runoff. To accomplish this, each new construction site having more than 1-acre of new impervious surfacing must take all appropriate measures to reduce the additional runoff volume created by the proposed new impervious surfaces (roofs and pavement).

Typically the most cost effective ways of accomplishing the required volume reduction is through infiltration or rainwater harvesting. Infiltration practices have the benefit of using the soil to assist in filtering the runoff. They also reduce runoff volumes from a developed area by taking a portion of the runoff and recharging the ground water. As such, they are often touted by surface water management agencies and review authorities. However, they must also be strategically placed to prevent the potential for contamination of City wells. Many cities have restricted the use of infiltration practices inside their wellhead protection area or well capture zone.

Filtration practices, such as filtration basins, biofilters, iron infused sand filters, etc., are similar to the more common infiltration practices, but are designed so that the stormwater filters through plants and filter media before draining into a storm sewer and not infiltrating into the ground. Filtration basins are recommended to manage stormwater runoff and improve water quality within the 1-year Wellhead Protection Area (WHPA). Filtration basins are recommended wherever they will fit into the designs and encouraged wherever local private property owners might request retrofitting them into their landscaping. Any private filtration basins that are installed will help lessen the load on the existing storm sewer system and improve water quality.

The northwest quadrant of North Branch is ideally suited for infiltration because the underlying soils are predominately sandy. On the other hand, much of the southern portion of North Branch has clay soils that are not conducive to infiltration. Because of these water quality regulation changes, it may be advantageous to plan regional ponds for flood prevention associated with extreme rainfall events, while planning smaller water quality BMPs on a neighborhood or individual development scale.

Wetlands

In 1991, the Minnesota Legislature passed the Wetlands Conservation Act (WCA). The WCA is administered according to Minnesota Rules Chapter 8420 to implement the purpose of the Act, which is to:

1. Achieve no net loss in the quantity, quality, and biological diversity of Minnesota's existing wetlands;
2. Increase the quantity, quality and biological diversity of Minnesota wetlands by restoring or enhancing diminished or drained wetlands;
3. Avoid direct and indirect impacts from activities that destroy or diminish the quantity, quality, or biological diversity of wetlands;
4. Replace wetland values where avoidance of activities is not feasible and prudent.

Pretreatment of all stormwater from new developments is required prior to discharge into any wetlands. Wetlands may be, and are currently being used for stormwater storage for larger rainfall events. They may continue to be used for this purpose even after upstream development, provided that:

1. There is acceptable Best Management Practice pretreatment of the runoff in accordance with the MPCA NPDES/ SDS Construction Permit, Section III.D., Permanent Stormwater Management System.
2. The bounce from the normal water level to the high water level does not exceed two feet.

The Minnesota Wetland Conservation Act (WCA) requires the designated Local Governmental Unit (LGU) in charge of administering the WCA to generate a Notice of Wetland Conservation Act Decision for any impact to wetlands within the City of North Branch. For North Branch, the wetland LGU is Chisago County. In all but minor decisions, the LGU will call for a Technical Evaluation Panel (TEP) review of the application or impact prior to issuing a decision. The LGU must give notice of proposed actions affecting wetlands to all of the following:

1. The Minnesota Board of Water and Soil Resources
2. The Soil and Water Conservation District
3. The Minnesota Department of Natural Resources
4. The City of North Branch
5. The U.S. Army Corps of Engineers
6. Interested citizens requesting notification of such actions

If a TEP meeting is required, all listed parties are invited to review the proposed action. However, it is not uncommon for a TEP meeting to consist of only a small contingent of this list, as some invitees may have no jurisdiction over the proposed action.

NPDES Phase II Considerations

General City Permits

In 1987, the US Congress amended the Clean Water Act to include stormwater pollution and directed the Environmental Protection Agency (EPA) to initiate rulemaking. The first round of EPA rules were implemented in 1991 when NPDES Phase I permits were required for all cities exceeding 100,000 in population. Phase II was implemented in 2003 and targeted all cities with populations exceeding 10,000. In 2008, the Phase II rulemaking expanded the list of targeted cities to include cities with

populations exceeding 5,000 and that discharge into an impaired water. The Minnesota Pollution Control Agency (MPCA) assumed responsibility for implementing the rules and issuing all Phase II permits. The NPDES Phase II rules apply to all construction disturbances of one acre or more.

The federal mandates are intended to regulate these sources of continued environmental degradation. New developments have become increasingly targeted. All new developments, creating more than one acre of impervious surfacing, are required to have some form of stormwater treatment. In general, this need can be satisfied by properly designed infiltration/ filtration basins or wet retention basins. The following is a listing of the available stormwater quality and quantity systems currently being designed to handle the water quality/quantity issue:

a. Regional Wet Retention Basins
Numerous studies have been done on the water quality treatment afforded by wet retention basins, most notably one by William Walker Jr. for the Vadnais Lake Area Water Management Area (1987). The Walker study found that properly sized wet retention basins can effectively remove pollutants through sediment removal. When properly sized, these ponds can significantly reduce the contaminant levels, including phosphorus, commonly found in urban stormwater runoff. According to the MPCA's Stormwater Manual, on average wet retention basins can remove 84% of suspended solids, 50% of total phosphorus, and 30% of total nitrogen. Wet retention basins also provide flood storage. Wet retention basins are also well known for their stormwater quantity handling capabilities and work well for areas with Hydrologic Soil Group Type D (clay) soils.

b. Bioretention Systems
Another method of managing stormwater runoff is to install bioretention practices in strategic locations where stormwater will be collected and allowed to filtrate through the planting media or be taken up by vegetation before entering the storm sewer.

c. Infiltration/Filtration Bioretention Basins
According to the MPCA's Stormwater Manual 2, bioretention facilities capture rainwater runoff to be filtered through a prepared soil medium. Pollutants are removed by a number of processes including adsorption, filtration, volatilization, ion exchange and decomposition (Prince George's County, MD, 1993). Filtered runoff from bioretention basins can either be allowed to infiltrate into the surrounding soil (functioning as an infiltration basin or rainwater garden), or collected by an under-drain system and discharged to the storm sewer system or directly to receiving waters ("filtration only" bioretention basin). Due to the groundwater vulnerability and the WHPA covering a portion of lower North Branch, lined filtration basins are recommended for the areas of North Branch within the 1-year WHPA. Runoff from larger storms is generally allowed to bypass the filled bioretention basin and flow directly to the storm drain system. Infiltration/filtration basins are typically designed for treating the water quality and not for the water quantity of urban stormwater runoff.

That is, the MPCA requirement for water quality is to treat the first 1 inch of runoff from a site (water

quality volume). This is in contrast to the larger amount of runoff that may be actually leaving the site for a 3 to 6 inch rainfall (water quantity). Because stormwater quality has become a greater issue, bioretention basins have become a significant design tool for municipal stormwater systems. Bioretention basins can remove 85% of suspended solids, 100% of total phosphorus, and 50% of total nitrogen.

NPDES Phase II Construction Permits

The NPDES Phase II construction stormwater permit requirements have also taken effect. As of August 1, 2013 a new NPDES permit is in effect. A construction permit is required for any disturbance of more than 1 acre. The permit process is best summarized in the following table:

Table 7-E: Construction Stormwater Permit Requirements	
Item	*Requirement*
Minimum Disturbance Triggering a permit	*1 acre*
New Homes	*Permit required if part of the larger development*
Permit Fee	*$400*
Stormwater Pollution Prevention Plan (SWPPP)	*1. Must be on file* *2. Must be submitted if over 50 acres and is within 1 mile and discharges into a Special Water*
Responsibility for compliance	*Contractor is responsible for erosion controls.*
Responsibility after land sale	*Owner is responsible for implementation of the SWPPP*
	Transferred with the property until Notice of Termination

SWPPP for Construction Permits

The construction permit also requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP) for the disturbed site. The SWPPP requirements are as follows:

a. Must be designed prior to permit application and available on site.
b. Should typically use BMPs that are recognized as effective.
c. Unique innovative designs may be used, but have formal review and monitoring requirements.
d. Owner must identify a person with approved training in accordance with the Permit who will oversee the implementation of the SWPPP.
e. Owner must identify a person with approved training in accordance with the Permit that will be responsible for long-term operation and maintenance of the permanent BMPs.
f. Owner must develop a chain of responsibility to ensure that the SWPPP will be implemented and stay in effect until termination. The SWPPP must have the following:
    1. Location and type of all temporary and permanent erosion controls and sediment control BMPs.

2. Standard plates and specifications for the BMPs.
3. A site map with existing and final grades, subwatershed limits and direction of flow for both the pre and post development drainage areas. The site map must include existing and proposed impervious surfaces and soil types.
4. Locations of areas not to be disturbed (construction limits).
5. Locations of areas of phased construction to minimize duration of exposed soil.
6. All surface waters and wetlands within 1 mile that can be identified on a quadrangle map and will receive runoff from the site.
7. Methods used for final stabilization of exposed soils.
8. The range of soil particles expected to be present at the site.

Permanent Sedimentation Pond Requirements

If more than one acre of new impervious surface is created by the construction, permanent water quality BMPs are required as part of the permanent SWPPP. If the filtration or infiltration alternatives listed above are not possible, a permanent wet retention basin is the most utilized method of meeting the requirements. The new construction stormwater permit requires that the stormwater volume equivalent of 1 inch over any new impervious surface area be retained on site through infiltration or other volume reduction practices. There are some exceptions to this requirement, including projects that have Hydrologic Soil Group D (clay) soils. In the case of D soils, a permanent stormwater pond is a good option. The permanent pond requirements are summarized as follows:

a. A permanent volume (dead storage) of 1,800 cubic feet per acre draining to the basin.
b. A water quality volume (equal to 1 inch multiplied by the new impervious surface) that cannot be discharged at a rate exceeding 5.66 cfs per acre of pond surface area (when the pond has both the permanent volume and water quality volume in it).
c. A 3 foot minimum depth and a 10 foot maximum depth.
d. Outlets placed to minimize short circuiting and designed to skim floating debris.
e. An emergency overflow.
f. Adequate public access (typically 8 feet wide).

Regional Pond Considerations

An area regional pond may be used provided that:

a. The regional pond is not a wetland.
b. Must be designed to meet the treatment pond criteria for all impervious surfaces.
c. Regional pond owner's authorization must be secured as part of the permitting process.

Existing Systems

The City of North Branch is a Municipally Separate Storm Sewer System (MS4). The City of North Branch ultimately drains to the Sunrise River. The City of North Branch operates an extensive stormwater treatment system, serving residential, commercial and industrial users. There are several stormwater ponds in the City's stormwater system.

All areas served by public ditches are subject to the rules governed by Minnesota Statute 103E and

under the governance of Nicollet County. Minnesota Statute 103E states that all connections to the ditch, or in this case, the County Tile, must be petitioned to the County Auditor.

There is no other record that the City has entered into any water resource management related agreements with its neighboring cities, the county, watershed district, lake associations or the state of Minnesota. The City of North Branch has been responsible for construction, maintenance, and other projects in or along the City's stormwater collection systems outside of the mainline County ditch and tile systems.

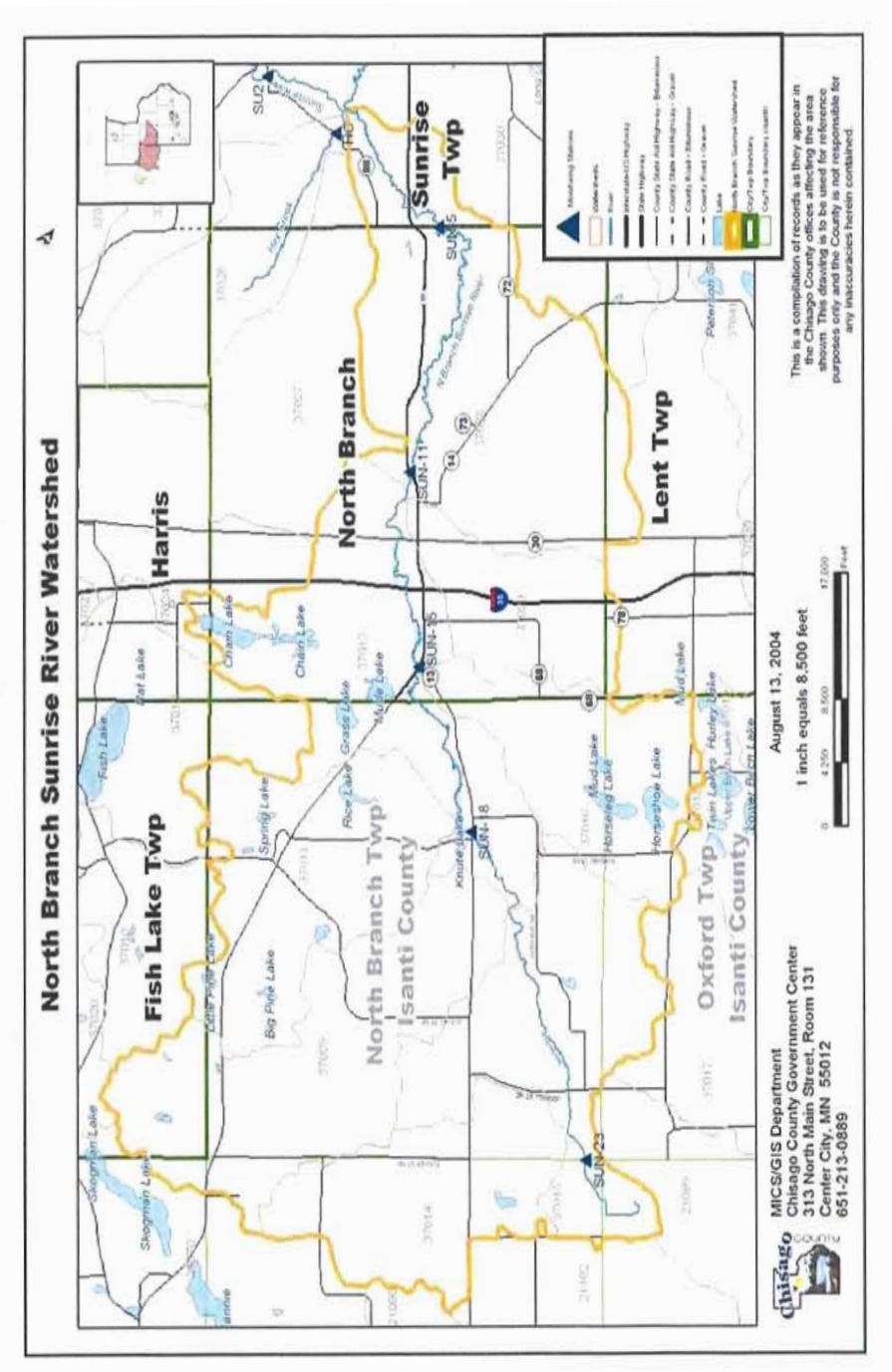
In 1998, the Minnesota Pollution Control Agency (MPCA) listed the North Branch of the Sunrise River as an impaired water for excessive E. coli fecal coliform TMDL under section 303 (d) of the Clean Water Act. The river, from its headwaters near Weber in Isanti County to its confluence with the main stem of the Sunrise River near Hay Creek in Chisago County, was listed as impaired for primary contact recreation swimming. The North Branch of the Sunrise River is located in east central Minnesota. It is a tributary of the Sunrise River and is part of the larger St. Croix River basin.

Future Improvements

Generally, the City will work to ensure erosion control and surface water quality standards are met through enforcement of the City's permitting requirements and implementation of Best Management Practices (BMPs) such as regional stormwater ponds. The City will ensure compliance with the National Pollutant Discharge Elimination System (NPDES) Phase II permits for municipal operations and for construction activity greater than 1 acre. City cooperation with the Minnesota Pollution Control Agency (MPCA) is key to maintaining the relevance of the City's plan.



Figure 7-10:
Map of the North Branch of the Sunrise River Watershed



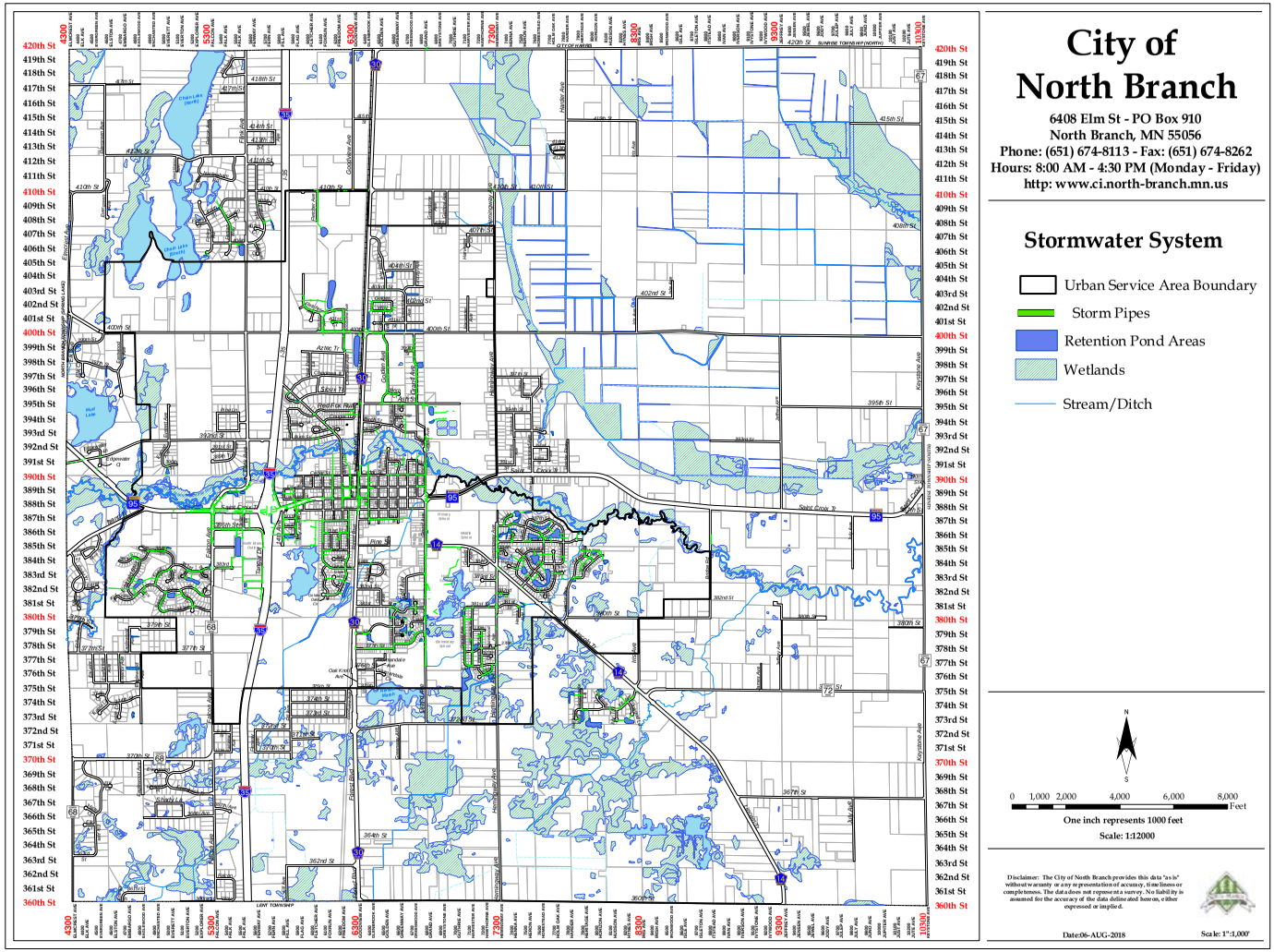


Figure 7-11:
Storm Sewer
Existing Map

GOAL 1

Expand existing stormwater management system infrastructure to meet the demands generated by continued development.

Stormwater System Goals, Objectives, and Policies

The following section outlines the primary goals for the stormwater system followed by a series of objectives and policies intended to influence future development efforts that align with the community visions in this plan.

Objective 1.1

Expand the stormwater collection, treatment and outfall system into future growth areas.

Policy 1.1.1

Include in existing stormwater system maps the locations of culverts serving the rural areas of the city (with dates of installation) so as to better anticipate repairs, replacements and future maintenance of the public ditch systems.

Policy 1.1.2

Implement the expansion of the stormwater collection, treatment and outfall system as areas outside the limits of the existing stormwater collection system are developed, with a focus on regional stormwater ponds, where possible and infiltration Minimal Impact Design Standards (green infrastructure).

Policy 1.1.3

Final collection, treatment and outfall sizes and locations should be based on the type, location and sequence of development within the projected growth areas.

Policy 1.1.4

Develop a financing strategy for funding the expansion of the stormwater collection, treatment and outfall system.



GOAL 2

Monitor, evaluate and improve the condition of the City's existing stormwater system infrastructure.

Objective 2.1

Replace aging storm sewer system infrastructure.

Policy 2.1.1: Prepare a study to document the condition of deficient storm sewers and ponds based on age, materials and other known deficiencies.

Policy 2.1.2: Utilize the information from the storm sewer condition study, in conjunction with the condition information for other infrastructure elements, to develop, expand and prioritize projects, including those to implement green infrastructure science practices, to be included in the capital improvements.

Objective 2.2

Address sedimentation issues in the City's existing stormwater treatment ponds.

Policy 2.2.1
Develop a study to determine the levels and characteristics of sediment in the City's existing stormwater ponds.

Policy 2.2.2
Develop a plan for cleaning sediment from ponds and for disposal of sediment.



8

Natural Environment, Parks, Trails, and Recreation

Introduction

Natural resources are beneficial to the social, environmental, and economic vitality of a community. To ensure their quality and benefits, it is essential to plan and manage natural resources and areas as we do residential and commercial areas. The City of North Branch will promote, preserve and enhance the natural resources within the city and protect them from adverse effects occasioned by poorly sited development or incompatible activities by regulating land disturbances or development activities that would have an adverse and potentially irreversible impact on water quality and unique and fragile environmentally sensitive land; by minimizing conflicts and encouraging compatibility between land disturbing and development activities and water quality and environmentally sensitive land; and by requiring detailed review standards and procedures for land disturbing or development activities proposed for such areas, thereby achieving a balance between urban growth and development and protection of water quality and natural areas.

Wildlife Corridor

The Minnesota DNR has identified a regional greenway corridor in North Branch as part of the Metro Wildlife Corridors project (a 12-county metro area). The project, "ensuring that people and nature in the Twin Cities Area can grow together for generations to come" seeks to protect and restore key natural lands in the metro area by:

- Focusing pro-actively on strategic areas, of which North Branch is a part
- Efficiently leveraging private and public partners and resources
- Building upon prior investments in public lands, and
- Enhancing the cost-effectiveness of conservation efforts by coordinating them within a regional framework.

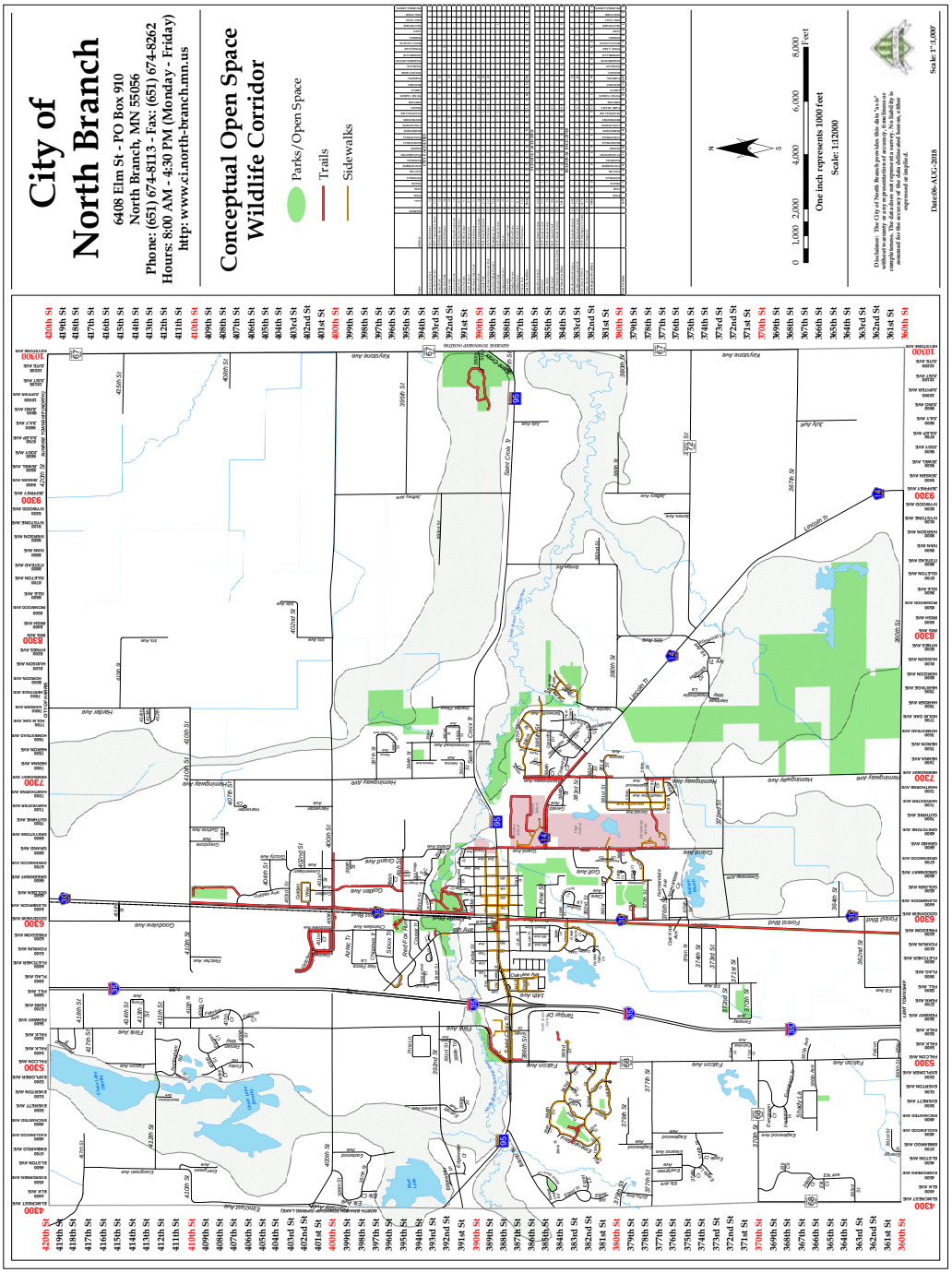
This corridor is specifically designed to incorporate, the high quality natural areas such as those identified in the Natural Resource Inventory or mapped by the MnDNR, natural corridors such as the Sunrise River, and areas that connect these features.

The City of North Branch supports the preservation of natural and open spaces along the north branch of the Sunrise River, the city's name sake. It has also identified a conceptual greenway corridor, and as much as possible, development within the greenway corridor, should be encouraged to use conservation design strategies, conservation easements, park dedication, parcel evaluation, and the strategic siting of open space and natural areas parks to develop and improve habitat quality and connectivity within the greenways. Strategies to avoid fragmentation of existing natural areas are especially important for maintaining ecological function of the natural areas.



The City of North Branch will promote, preserve and enhance the natural resources within the city

Figure 8-1:
Conceptual Open
Space Wildlife Corridor



Tree Preservation

The City's tree preservation ordinance acknowledges the benefits and amenities trees offer to the community and acknowledges that trees are part of a more complex, interrelated system. Trees protect the environment by moderating climate, improving air quality, reducing erosion and stormwater runoff, and harboring wildlife. The ordinance focuses on protection of quality wooded areas rather than of individual trees. To preserve wooded areas in the City, each new development is required to submit a Tree Preservation Plan. The regulation also provides guidance for permitted tree removal, mitigation procedures, and tree replacement provisions.

Minnesota GreenStep City

In 2018, the Mayor and City Council approved a resolution to make North Branch a GreenStep City through the Minnesota Pollution Control Agency and League of Minnesota Cities' program. Minnesota GreenStep Cities is a voluntary challenge, assistance and recognition program to help cities achieve their sustainability and quality-of-life goals. This free continuous improvement program, managed by a public-private partnership, is based upon 29 best practices. Each best practice can be implemented by completing one or more actions at a 1, 2 or 3-star level, from a list of four to eight actions. These actions are tailored to all Minnesota cities, focus on cost savings and energy use reduction, and encourage civic innovation. North Branch is currently a Step 1 City. As North Branch plans for the future, it will continue to consider GreenStep City Best Management Practices as they relate to the goals and objectives of this comprehensive plan.

Parks, Trails and Recreation

The comprehensive parks and recreation plan is the first planning document devoted to establishing park, recreation, and trail planning criteria, guidelines, and standards, for future development of these amenities within the City of North Branch. The existing park system is already fairly developed with a strong emphasis and need placed on youth recreation opportunities. The community has done a good job of including sidewalks in various neighborhoods, but currently lacks a comprehensive trail system along TH 95 and the Sunrise Prairie Trail needs to be extended from 410th north to the city limits. Pedestrian and bike crossings are needed throughout the City. In addition, alternative transportation and exercise options through the use of trails should continue to be expanded and enhanced.

North Branch is part of the Metro Wildlife Corridors project (a 12-county metro area)



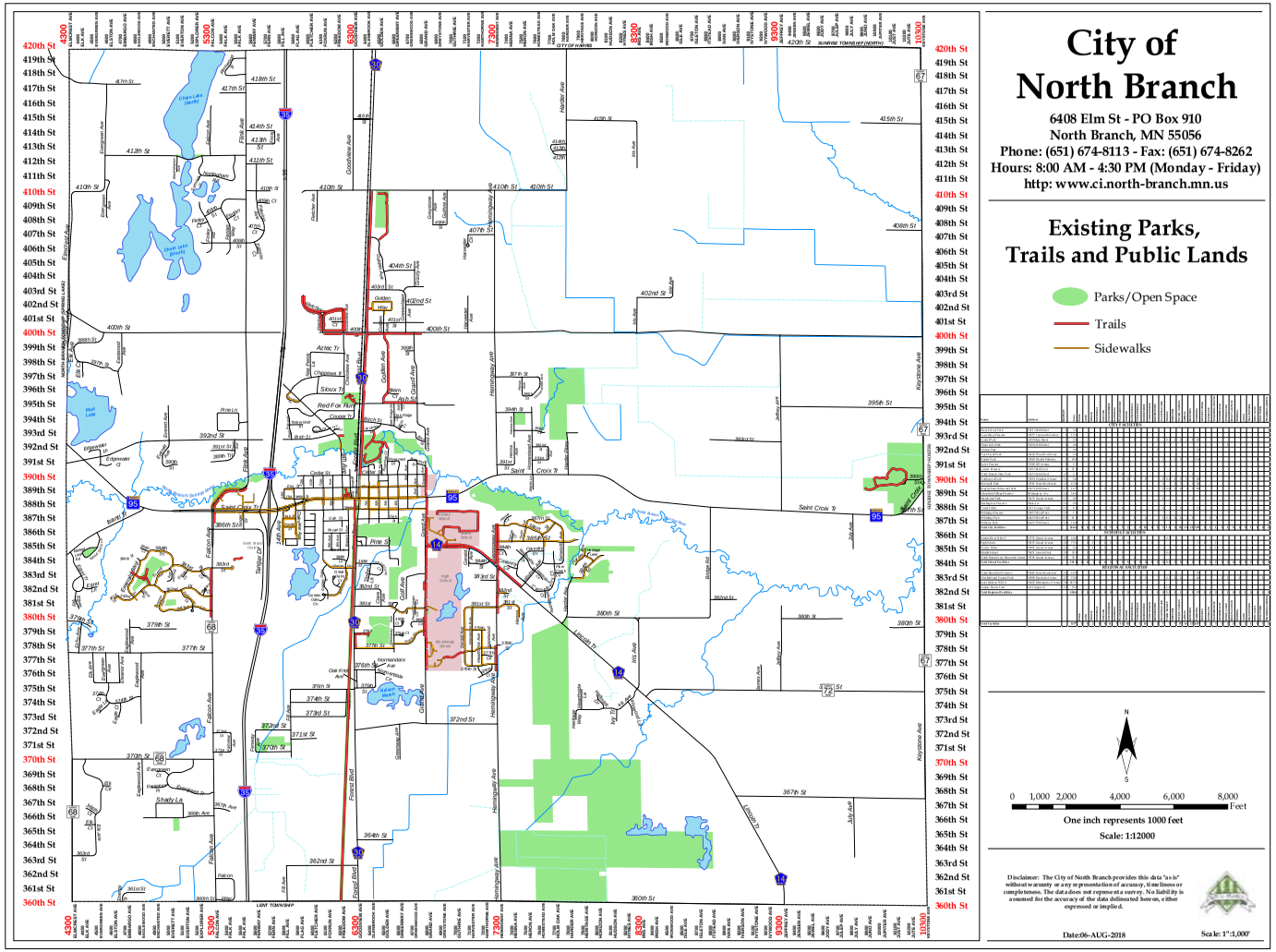


Figure 8-2:
Existing Parks, Trails & Public Lands

Vision for Natural Environment

Natural infrastructure includes all systems that relate to natural resources and contribute to an improved public life. Natural infrastructure considers the full range of natural resource uses including economic, environmental, health, cultural, and aesthetic. This broad view leads us to include surface water, groundwater, stormwater, wastewater, drinking water, geology, topography, soils, natural areas, open space, green spaces, urban forest, habitat, vegetation, scenic views, and parks and trails in natural infrastructure.

Natural infrastructure is a key element in planning where development should or should not take place within a city. This element is important to communities and development as it avoids certain development hazards, provides health benefits to citizens, protects ecological systems and enhances biological diversity, supports economic activities such as mining and forestry, and offers communities unique quality of life components. Consideration of natural infrastructure ensures that homes are built upon stable dry soils, provides clean drinking water, accounts for resource based economic activities, provides scenic views and open spaces, and plans development that respect the integrity of natural systems and incorporate natural features into development.



GOAL 1

Develop an integrated plan that balances community growth, natural resources, cultural and historical features.

Objective 1.1
Preserve open space and wildlife corridor.

Policy 1.1.1
Build upon the Metro Area Green Corridor System within North Branch incorporating the wooded edge while maintaining the rural character of the City's major natural amenities into the Open Space System.

Policy 1.1.2
Identify and conserve critical wildlife habitat including nesting sites, foraging areas, and migration corridors within or adjacent to natural areas, open spaces, and the developing urban areas, preserve sensitive habitat sites that support threatened species and urban wildlife habitat.

Policy 1.1.3
Identify and conserve forested and woodland cover and the scenic attributes provide between rural and urban land uses, preserve and protect significant environmental features including unique wetlands, open spaces, woodlands, shorelines, waterfronts and other characteristics that support wildlife and reflect the cities resource heritage.

Policy 1.1.4
Develop Partnerships with other organizations, institutions, and local units of government on planning and zoning, land use, preservation and conservation related issues, capitalize on the development and promotion of the North Branch of the Sunrise River and take ownership and promote the advantages of the City's relationship to the Saint Croix National Scenic Riverway and the importance the North Branch of the Sunrise River has to the river's federally protected status.



Objective 1.2

Maintain healthy urban forest and park system.

Policy 1.2.1

Continue high standards of park and public land maintenance, and management by continued investment in personnel, equipment, and methods, expand sustainable practices and invasive species management (i.e. the Emerald Ash Borer, buckthorn, etc.) and obtain the information, training and resources needed to effectively address planning, preservation and conservation issues.

Policy 1.2.2

Undertake citizen-based planning designed to manage growth and build needed infrastructure, while at the same time preserving the natural qualities with which the region is blessed.

Policy 1.2.3

Increase natural areas and open space linkages within the developing urban areas

Objective 1.3

Foster natural park development.

Policy 1.3.1

Promote native landscaping and greening initiatives, support use of best management practices and reduction of chemical use, establish community gardens, and encourage the use and planting of pollinator friendly habitats.

Objective 1.4

Identify, preserve, and enhance North Branch's multicultural heritage, traditions, and cultural features within historical sites, buildings, artwork, parks, open space, and trails to preserve interest and provide a balanced social experience.

Policy 1.4.1

Identify, designate and protect significant historic structures and sites, establish history and heritage preservation programs utilizing existing resources to help increase knowledge and promote the history and heritage of North Branch.

Policy 1.4.2

Implement natural resources and environmental educational and interpretive programs.

Vision for Parks, Trails, and Recreation

To provide a comprehensive and balanced system of parks, greenways, trails, and support for providers of recreation- orientated activities / programs for city residents in an as cost effective manner as possible.

Park Goals, Objectives, and Policies

The following section outlines the primary goals for parks followed by a series of objectives and policies intended to influence future development efforts that align with the community visions in this plan.

GOAL 1

Plan for a sustainable park and trail system.

OBJECTIVE 1.1

PLAN AND DESIGN PARKS, TRAILS, SIDEWALKS, AND BIKE PATHS IN A WAY THAT ENSURES THEIR LONG TERM VIABILITY.

Policy 1.1.1

All park properties that are set aside (and/or are proposed in the future) must take into account the long-term commitments required to develop, operate, and maintain across their lifecycles, with buildings constructed to the state's SB2030 performance standards for on-going cost reductions, when feasible.

Policy 1.1.2

Balance maintained turf areas with natural areas to add aesthetic appeal, control maintenance costs, infiltrate stormwater, eliminate toxic chemical use and provide wildlife habitat, and reduce carbon emissions.

Policy 1.1.3

Update parks plan every 5-10 years depending on the amount of change and development within the city.

Policy 1.1.4

Explore alternative methods for parkland dedication that will assure sufficient park facilities well into the future.

Policy 1.1 5

Phase Improvements based on replacement needs and available funding. Manage system investments through analysis of applicable data.



Objective 1.2

Understand current trends and community issues, opportunities, and needs as related to parks within the city.

Policy 1.2.1
Discuss local and regional park and trails issues and opportunities with the Department of Natural Resources, Chisago County, adjacent communities, environmental organizations, and others.

Policy 1.2.2
Master plans should be prepared for each park prior to their development to ensure that the right mix of amenities are provided and the park's design is cohesive and complementary to the design for other parks and public spaces.

Policy 1.2.3
Ensure public participation in the master planning process is included for each park development project.

Policy 1.2.4
Analyze the placement and use of "nature play" equipment in existing and proposed parks.

Objective 1.3

Use Sustainable Design Practices.

Policy 1.3.1
Use renewable energy where possible (i.e. solar lights for trails, solar power at athletic facilities).
Policy 1.3.2: Consider use of recycled materials and promote recycling in all park areas.

Objective 1.4

Identify alternative, sustainable revenue sources.

Policy 1.4.1
Expand grassroots parks and recreation advocacy.

Policy 1.4.2
Pursue alternative revenue sources such as program fees, community funds, grants, charitable gaming, memorials, commemoratives, and donations, etc.

Policy 1.4.3
Encourage business involvement, sponsorship, and naming rights of parks, recreation facilities and events.

Policy 1.4.4
Apply marketing strategies to increase income potential and broaden awareness.

GOAL 2

Provide additional park and recreation opportunities in areas of new development throughout the city.

Objective 2.1

Service local park and recreation needs by providing neighborhood and community parks as residential growth occurs.

Policy 2.1.1
Ensure neighborhood parks are developed as part of new residential neighborhoods with buildings constructed to the state's SB2030 performance standards for on-going cost reductions, when feasible.

Policy 2.1.2
Explore the possibility of including a community park in appropriate areas of the City.

Policy 2.1.3
Locate new parks based on how they can be best integrated with the new development that the park will serve.



GOAL 3

Adhere to Park Master Planning and Facility Design Quality / Development Standards.

Objective 3.1

Ensure the quality standard for built features within the park system is consistent with industry standards for safety, durability, and accessibility.

Policy 3.1.1

Periodically inspect and repair all parks, trails, and recreation facilities for hazardous conditions, including unsafe play equipment, fallen vegetation, etc.

Policy 3.1.2

The design of individual parks should be of a consistent quality, with buildings constructed to the state's SB 2030 performance standards for on-going cost reductions, when feasible.



GOAL 4

North Branch's parks meet the diverse recreation needs of the community.

Objective 4.1

Create and sustain critical partnership.

Policy 4.1.1
Partner with the North Branch School District, local athletic organizations, private enterprises, surrounding communities, and others to address those community and regional needs that cannot be met exclusively by the city or others.

Policy 4.1.2
Cultivate and support public/private partnerships with organizations like the YMCA, Park Trail Council and similar non-governmental organizations whose mission is to promote active living and recreation.

Policy 4.1.3
Involve representatives from the North Branch School District, athletic organizations, and others when developing new parks that may be co-located with educational and daycare facilities.

Policy 4.1.4
Consider the desire of the community to offer a multi-use athletic facility to the residents and attract regional tournaments and events.

Policy 4.1.5
Explore the impacts of developing such facilities, including impacts to adjacent neighborhoods.

Policy 4.1.6:
New facilities should provide year-round activities and programs for all age groups and all income levels.

Policy 4.1.7
Identify and build relationships with local special interest groups, such as scouting programs, Chisago County Master Gardeners, North Branch Monarch Strategy Group, North Branch Garden Club, North Branch Arts Group, Lions, Rotary, etc.



Policy 4.1.8

Identify and build relationships with regional organizations, such as Chisago County Parks and Recreation Department, Chisago Soil & Water Conservation District, Friends of Wild River State Park and association with the St. Croix River National Scenic Riverway and the Lower St Croix Management Commission, Chisago County Historical Society, etc.

Objective 4.2

Promote the City's parks and recreation activities and opportunities

Policy 4.2.1

Utilize diverse methods of communication, including social and digital media, and highlight youth, families, volunteers, etc. Provide information on the City's website and in outside publications about parks, facilities and programming that is accessible to all people.

Policy 4.2.2

Highlight the quality of life benefits of parks, trails, recreation and open space.



GOAL 5

Provide a welcoming and safe parks and recreation system.

Objective 5.1

Use park design to make them welcoming.

Policy 5.1.1

Ensure visible and legible signage at park entrances, use recognizable branding to indicate that parks are open to all people, provide entrances on public streets, and utilize vegetation that does not obscure views into and through the parks.

Objective 5.2

Improve the perception of public safety.

Policy 5.2.1

Utilize planning techniques, designs and site planning to improve safety, such as cluster compatible activities to avoid conflicts and increase social observation, locate parking lots and facilities near streets so they are easily observable at night, locate restrooms and playgrounds in areas that are easily observable, and use the principles of Crime Prevention Through Environmental Design (CPTED) in the design of parks.

Objective 5.3

Ensure safety through regular maintenance and equipment upgrades.

Policy 5.3.1

Conduct annual inspections of parks, buildings, restrooms, shelters, ballfields, play courts, skate park, outdoor ice rinks, parking lots, trails, and nature areas. Input annual inspections into asset management system and use to analyze and prioritize system investments.

