

Attachment 1 - Permit Application

WATER RESOURCE PERMIT APPLICATION FORM

Use this form to notify/apply to the Minnehaha Creek Watershed District (MCWD) of a proposed project or work which may fall within their jurisdiction. Fill out this form completely and submit with your site plan, maps, etc. to the MCWD at:
15320 Minnetonka Blvd. Minnetonka, MN 55345.

Keep a copy for your records.

YOU MUST OBTAIN ALL REQUIRED AUTHORIZATIONS BEFORE BEGINNING WORK.

1. Name of each property owner: Kristy Morter - Hennepin County

Mailing Address: 1600 Prairie Drive City: Medina State: MN Zip: 55340

Email Address: Kristy.Morter@hennepin.us Phone: 612-596-0384 Fax: _____

2. Property Owner Representative Information (not required) (licensed contractor, architect, engineer, etc...)

Business Name: SRF Consulting Group, Inc. Representative Name: Jacques DuVal

Business Address: One Carlson Parkway North City: Minneapolis State: MN Zip: 55447

Email Address: jduval@srfconsulting.com Phone: 763-475-0010 Fax: _____

3. Project Address: CSAH 112 - Phase 2 City: Long Lake / Orono

State: MN Zip: 55356 Qtr Section(s): N/A Section(s): 35 Township(s): 118 Range(s): 23

Lot: N/A Block: N/A Subdivision: N/A PID: N/A

4. Size of project parcel (square feet or acres): N/A

Area of disturbance (~~square feet~~): 13.70 ac Volume of excavation/fill (cubic yards): N/A

Area of existing impervious surface: 7.43 ac Area of proposed impervious surface: 7.50 ac (non-exempt)

Length of shoreline affected (feet): N/A Waterbody (& bay if applicable): N/A

5. Type of permit being applied for (Check all that apply):

- | | |
|---|---|
| <input checked="" type="checkbox"/> EROSION CONTROL | <input type="checkbox"/> WATERBODY CROSSINGS/STRUCTURES |
| <input type="checkbox"/> FLOODPLAIN ALTERATION | <input type="checkbox"/> STORMWATER MANAGEMENT |
| <input checked="" type="checkbox"/> WETLAND PROTECTION | <input type="checkbox"/> APPROPRIATIONS |
| <input type="checkbox"/> DREDGING | <input type="checkbox"/> ILLICIT DISCHARGE |
| <input type="checkbox"/> SHORELINE/STREAMBANK STABILIZATION | |

6. Project purpose (Check all that apply):

- | | |
|---|--|
| <input type="checkbox"/> SINGLE FAMILY HOME | <input type="checkbox"/> MULTI FAMILY RESIDENTIAL (apartments) |
| <input checked="" type="checkbox"/> ROAD CONSTRUCTION | <input type="checkbox"/> COMMERCIAL or INSTITUTIONAL |
| <input checked="" type="checkbox"/> UTILITIES | <input type="checkbox"/> SUBDIVISIONS (include number of lots) |
| <input type="checkbox"/> DREDGING | <input type="checkbox"/> LANDSCAPING (pools, berms, etc.) |
| <input type="checkbox"/> SHORELINE/STREAMBANK STABILIZATION | <input type="checkbox"/> OTHER (DESCRIBE): |

7. NPDES/SDS General Stormwater Permit Number (if applicable): Will provide when submitted

8. Waterbody receiving runoff from site: Long Lake, Long Lake Creek

9. Project Timeline: Start Date: 4/1/2018 Completion Date: 10/31/2019

Permits have been applied for: City County MN Pollution Control Agency DNR COE

Permits have been received: City County MN Pollution Control Agency DNR COE

By signing below, I hereby request a permit to authorize the activities described herein. I certify that I am familiar with MCWD Rules and that the proposed activity will be conducted in compliance with these Rules. I am familiar with the information contained in this application and, to the best of my knowledge and belief, all information is true, complete and accurate. I understand that proceeding with work before all required authorizations are obtained may be subject to federal, state and/or local administrative, civil and/or criminal penalties.

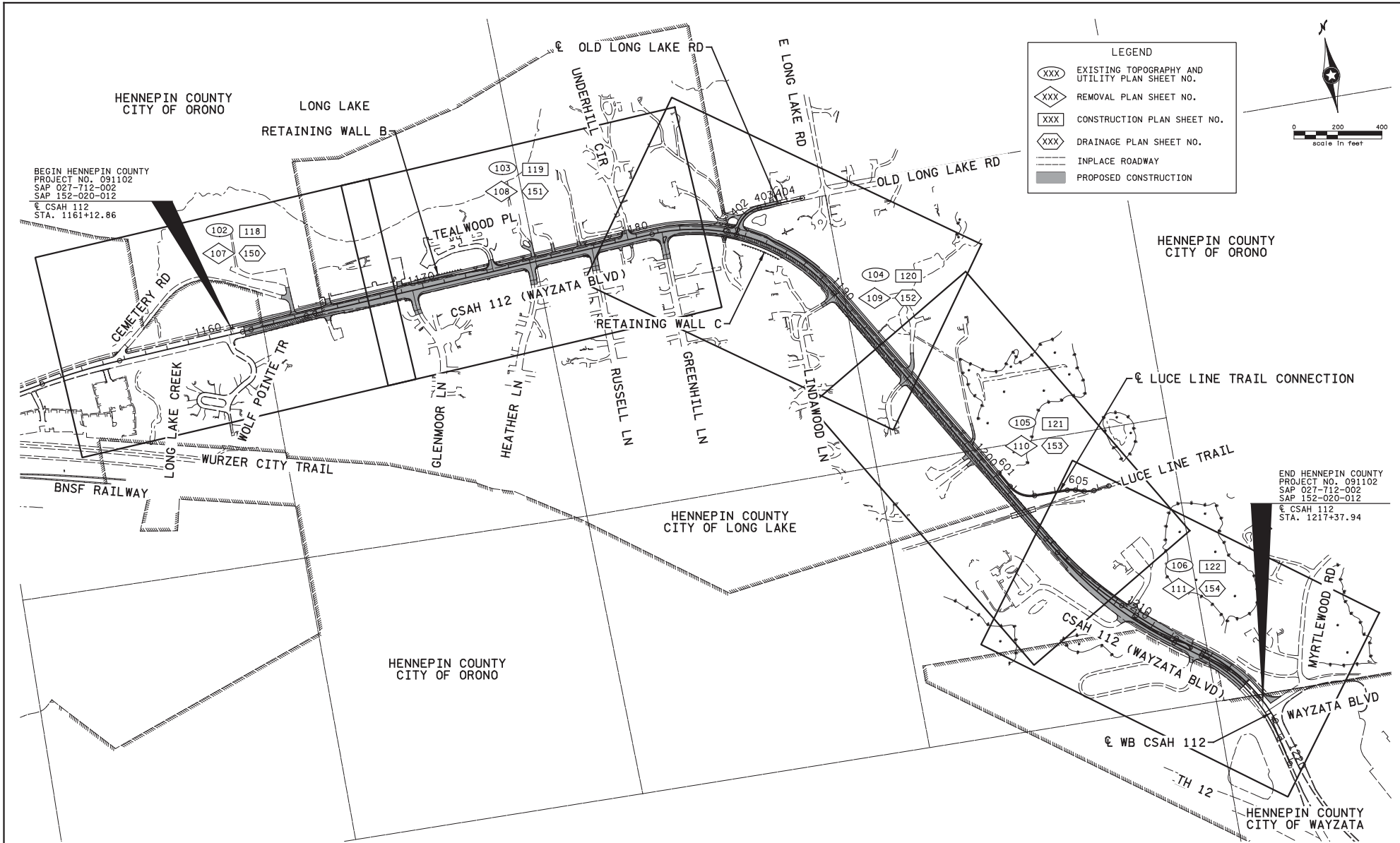
Kristy Morter


Signature of Each Property Owner

4/26/17

Date

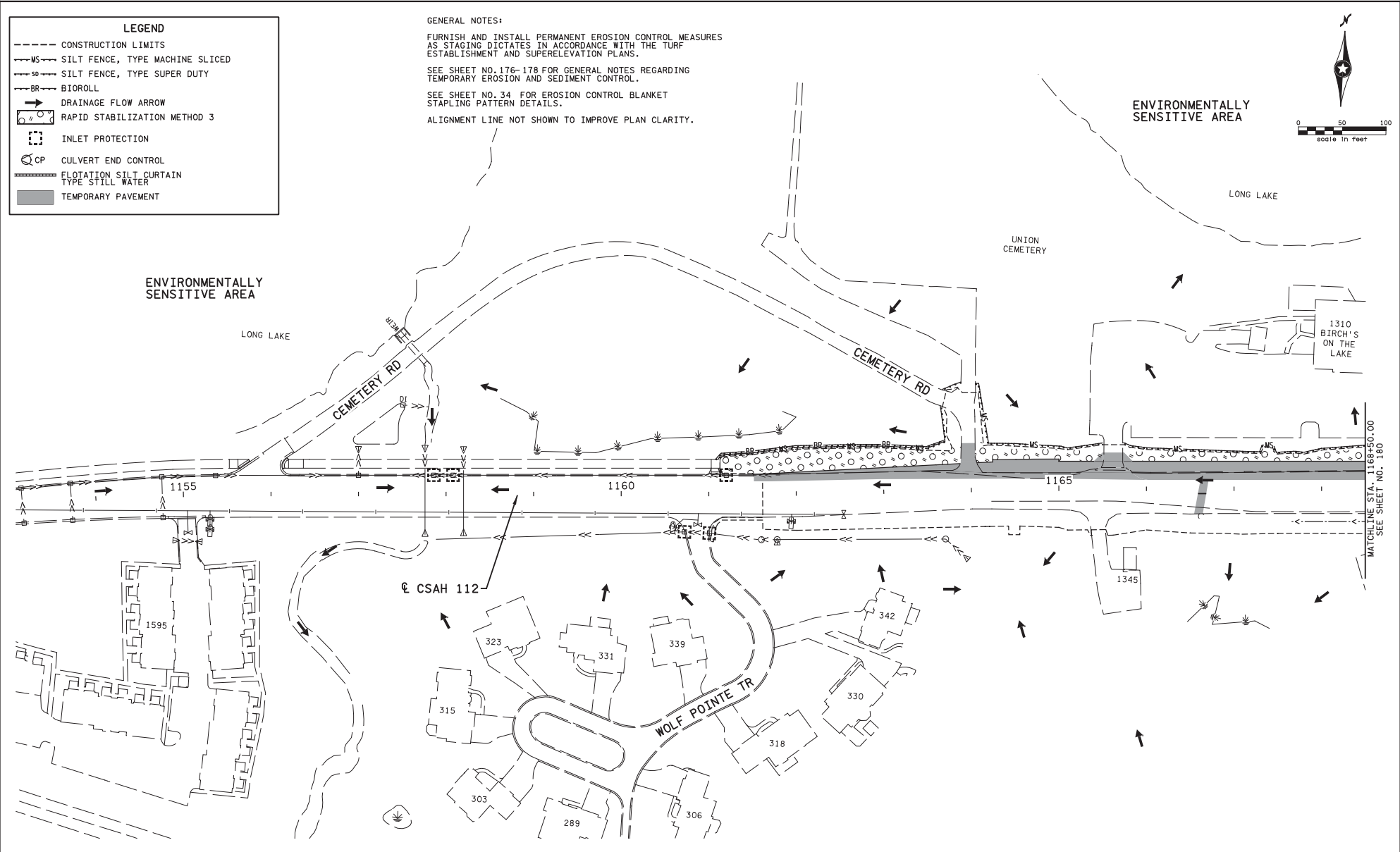
Attachment 2 - Site Plan



 <p>I HEREBY CERTIFY THAT THIS PLAN 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.</p>	<p>DESIGN BY: <u>B. MAAS</u></p>	<p>GENERAL LAYOUT</p>		<p>SHEET</p>
	<p>CAD BY: <u>J. VAN BECK</u></p>			
<p>AMBER H. KLEIN, PROFESSIONAL ENGINEER</p> <p>SRF CONSULTING GROUP, INC</p>	<p>CHECKED BY: <u>A. KLEIN</u></p>	<p>LAST REVISION: _____</p>	<p>281</p>	

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Attachment 3 - Erosion Control Plan (16 pages)



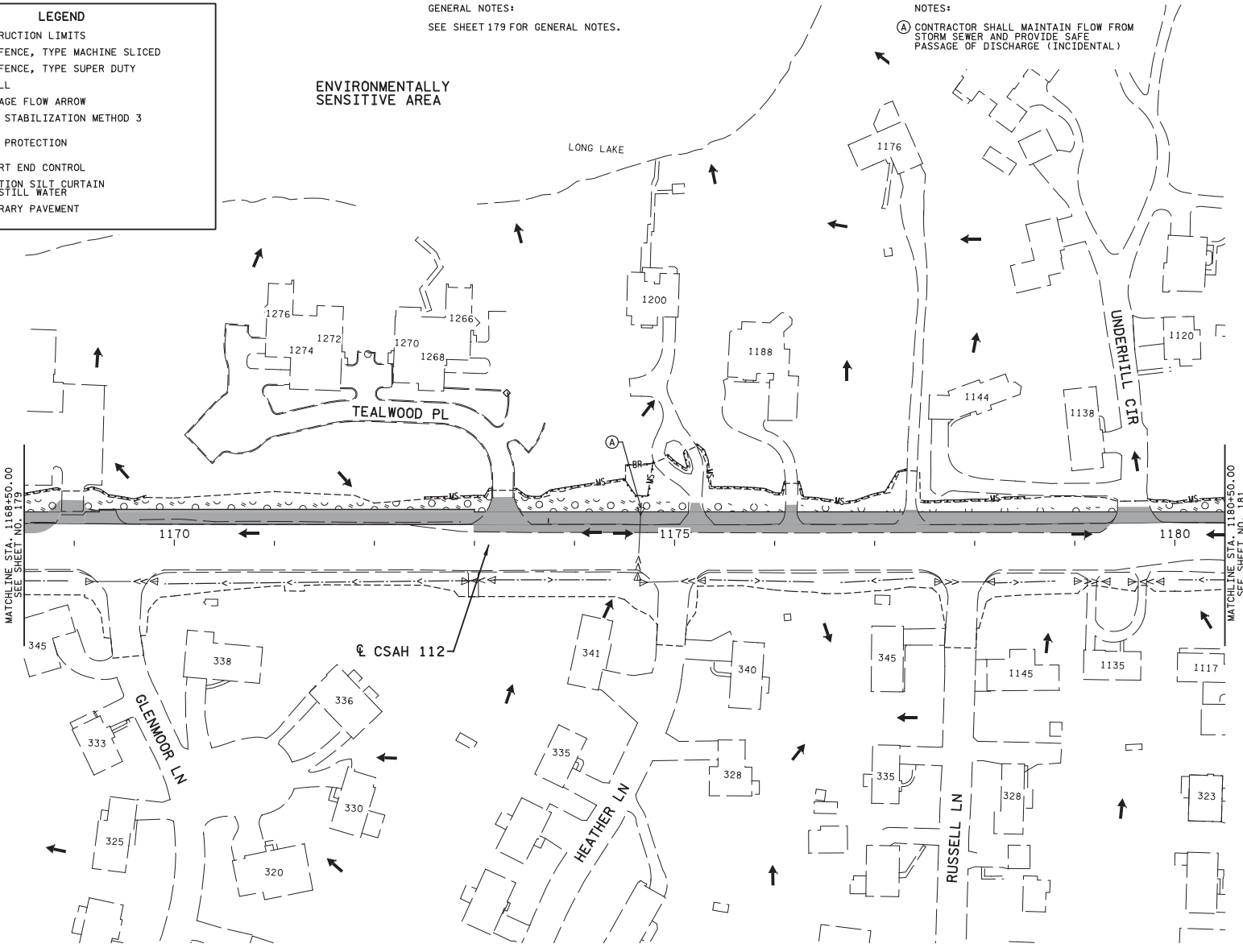
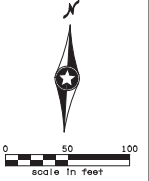
	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	DESIGN BY: <u>B. MAAS</u> CAD BY: <u>J. VAN BECK</u> CHECKED BY: <u>N. WILL</u> LAST REVISION: _____	TEMPORARY EROSION AND SEDIMENT CONTROL PLAN - STAGE 1	SHEET
	BRANDON J. MAAS, PROFESSIONAL ENGINEER SRF CONSULTING GROUP, INC.	53788 09/08/17 LICENSE NO. DATE	CSAH 112 / HENNEPIN COUNTY PROJECT NO. 091102 SAP 027-712-002 & SAP 152-020-012	179 285

LEGEND	
---	CONSTRUCTION LIMITS
MS	SILT FENCE, TYPE MACHINE SLICED
SD	SILT FENCE, TYPE SUPER DUTY
BR	BIOROLL
→	DRAINAGE FLOW ARROW
○	RAPID STABILIZATION METHOD 3
□	INLET PROTECTION
CP	CULVERT END CONTROL
▬	FLOTATION SILT CURTAIN TYPE STILL WATER
■	TEMPORARY PAVEMENT

GENERAL NOTES:
SEE SHEET 179 FOR GENERAL NOTES.

NOTES:
A CONTRACTOR SHALL MAINTAIN FLOW FROM STORM SEWER AND PROVIDE SAFE PASSAGE OF DISCHARGE (INCIDENTAL)

ENVIRONMENTALLY SENSITIVE AREA



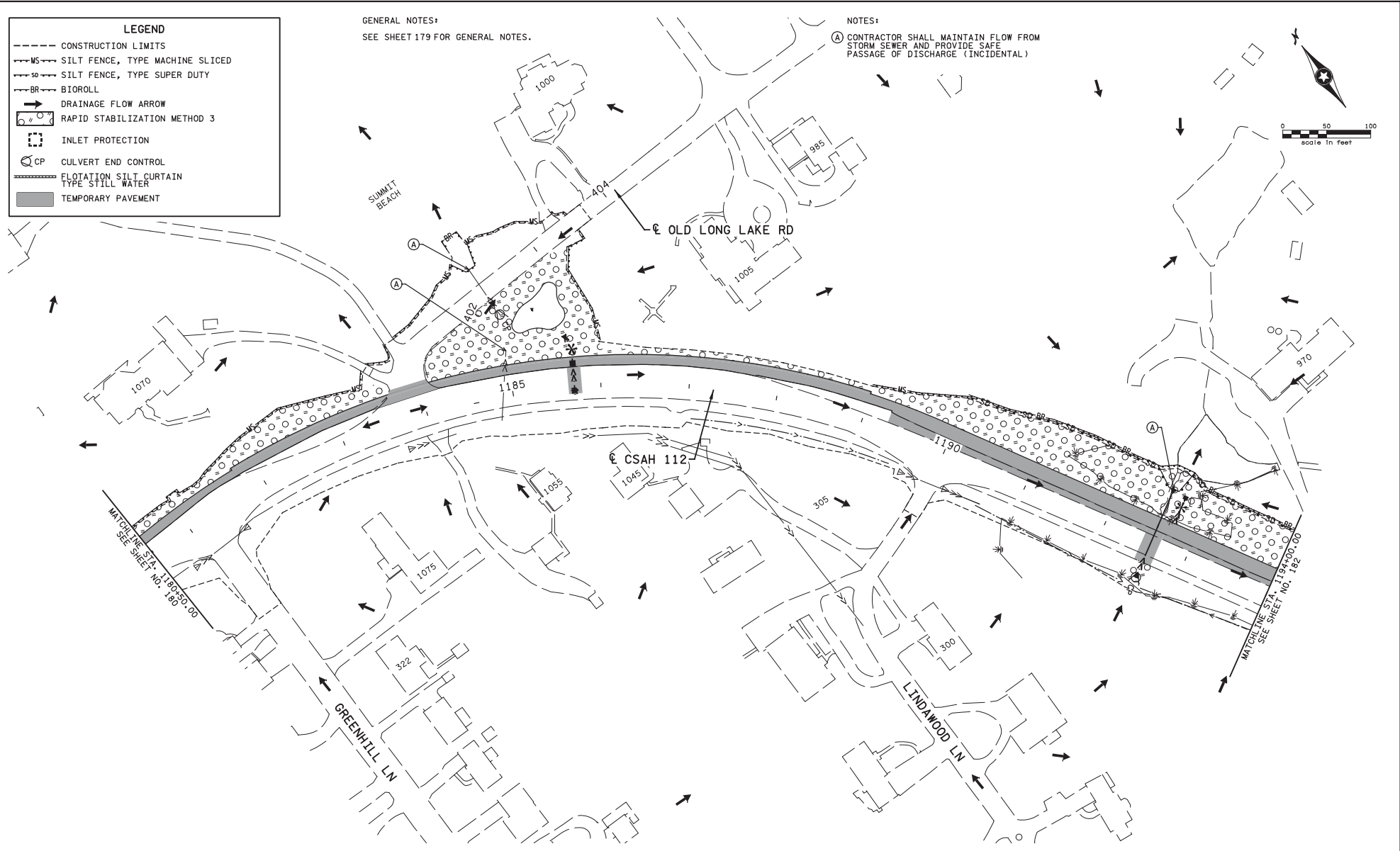
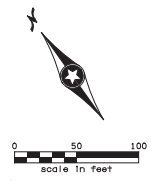
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LEGEND	
---	CONSTRUCTION LIMITS
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---SD---	SILT FENCE, TYPE SUPER DUTY
---BR---	BIOROLL
→	DRAINAGE FLOW ARROW
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	INLET PROTECTION
	CULVERT END CONTROL
	FLOTATION SILT CURTAIN TYPE STILL WATER
	TEMPORARY PAVEMENT

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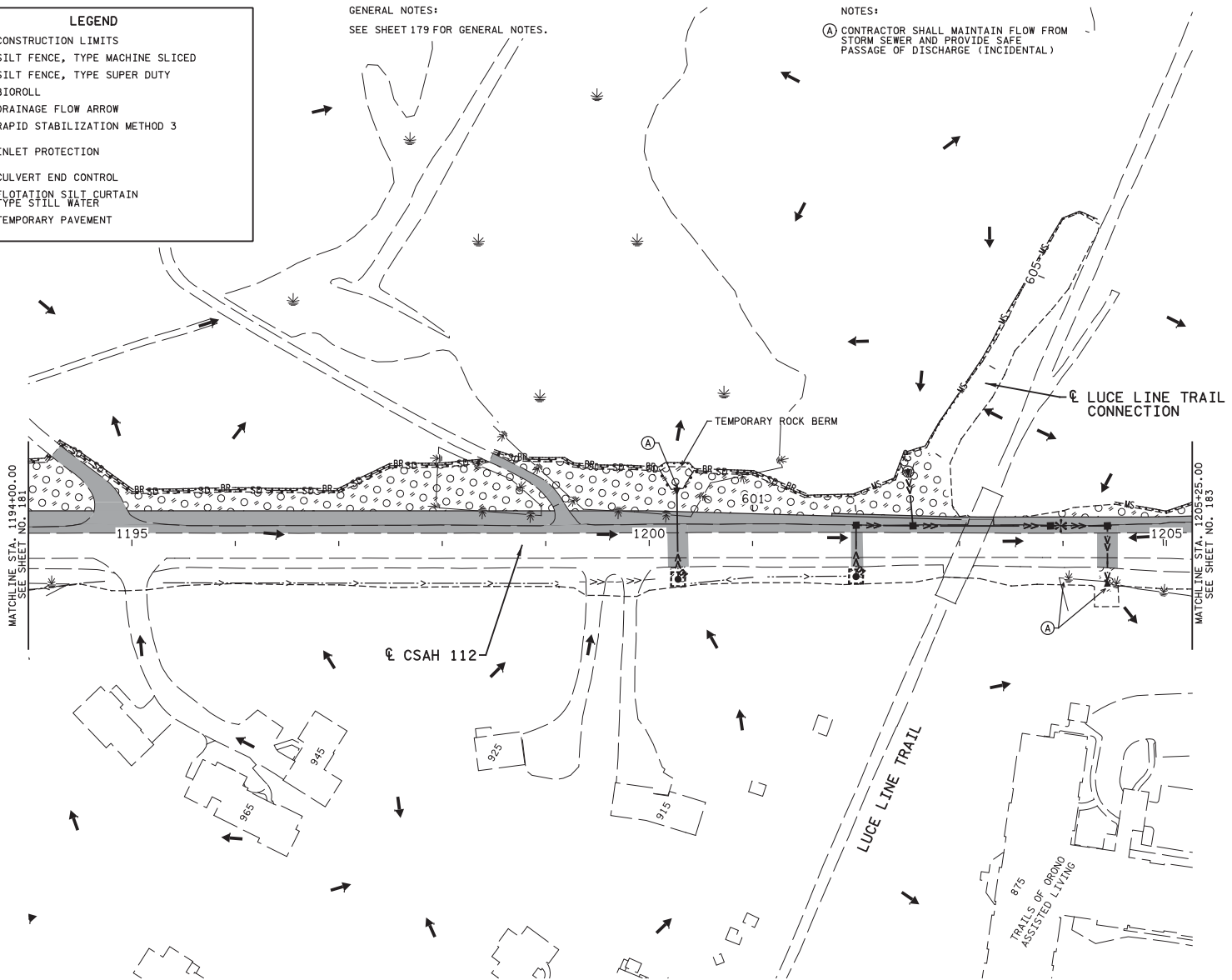


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		LICENSE NO. <u>53788</u> DATE <u>09/08/17</u>	CSAH 112 / HENNEPIN COUNTY PROJECT NO. 091102 SAP 027-712-002 & SAP 152-020-012	181
	BRANDON J. MAAS, PROFESSIONAL ENGINEER SRF CONSULTING GROUP, INC	LICENSE NO. DATE		285

LEGEND	
---	CONSTRUCTION LIMITS
---MS---	SILT FENCE, TYPE MACHINE SLICED
---SD---	SILT FENCE, TYPE SUPER DUTY
---BR---	BIOROLL
→	DRAINAGE FLOW ARROW
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Brandon J. Maas
BRANDON J. MAAS, PROFESSIONAL ENGINEER
SRF CONSULTING GROUP, INC

53788 09/08/17
LICENSE NO. DATE

DESIGN BY: B. MAAS
CAD BY: J. VAN BECK
CHECKED BY: N. WILL
LAST REVISION:

TEMPORARY EROSION AND SEDIMENT CONTROL PLAN - STAGE 1

CSAH 112 / HENNEPIN COUNTY PROJECT NO. 091102
SAP 027-712-002 & SAP 152-020-012

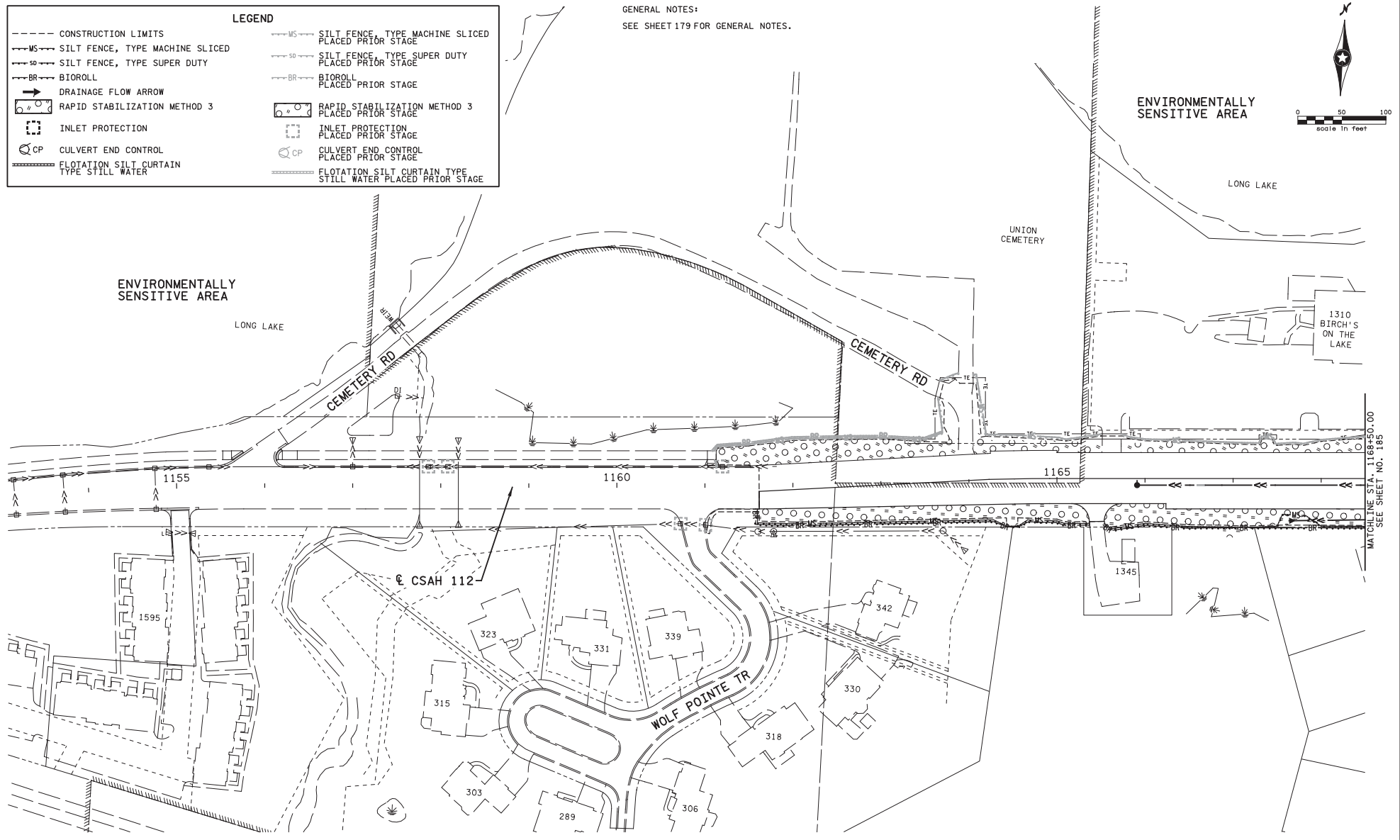
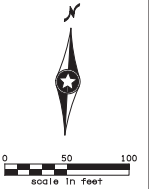
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LEGEND	
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---MS--- SILT FENCE, TYPE MACHINE SLICED	---SD--- SILT FENCE, TYPE SUPER DUTY PLACED PRIOR STAGE
---SD--- SILT FENCE, TYPE SUPER DUTY	---BR--- BIOROLL PLACED PRIOR STAGE
---BR--- BIOROLL	---RSM3--- RAPID STABILIZATION METHOD 3 PLACED PRIOR STAGE
→ DRAINAGE FLOW ARROW	---IP--- INLET PROTECTION PLACED PRIOR STAGE
---RSM3--- RAPID STABILIZATION METHOD 3	---CP--- CULVERT END CONTROL PLACED PRIOR STAGE
---IP--- INLET PROTECTION	---FSC--- FLOTATION SILT CURTAIN TYPE STILL WATER PLACED PRIOR STAGE
---CP--- CULVERT END CONTROL	
---FSC--- FLOTATION SILT CURTAIN TYPE STILL WATER	

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Brandon J. Maas
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SRF CONSULTING GROUP, INC

53788 09/08/17
LICENSE NO. DATE

DESIGN BY: B. MAAS
CAD BY: J. VAN BECK
CHECKED BY: N. WILL
LAST REVISION:

TEMPORARY EROSION AND SEDIMENT CONTROL PLAN - STAGE 2A

CSAH 112 / HENNEPIN COUNTY PROJECT NO. 091102
SAP 027-712-002 & SAP 152-020-012

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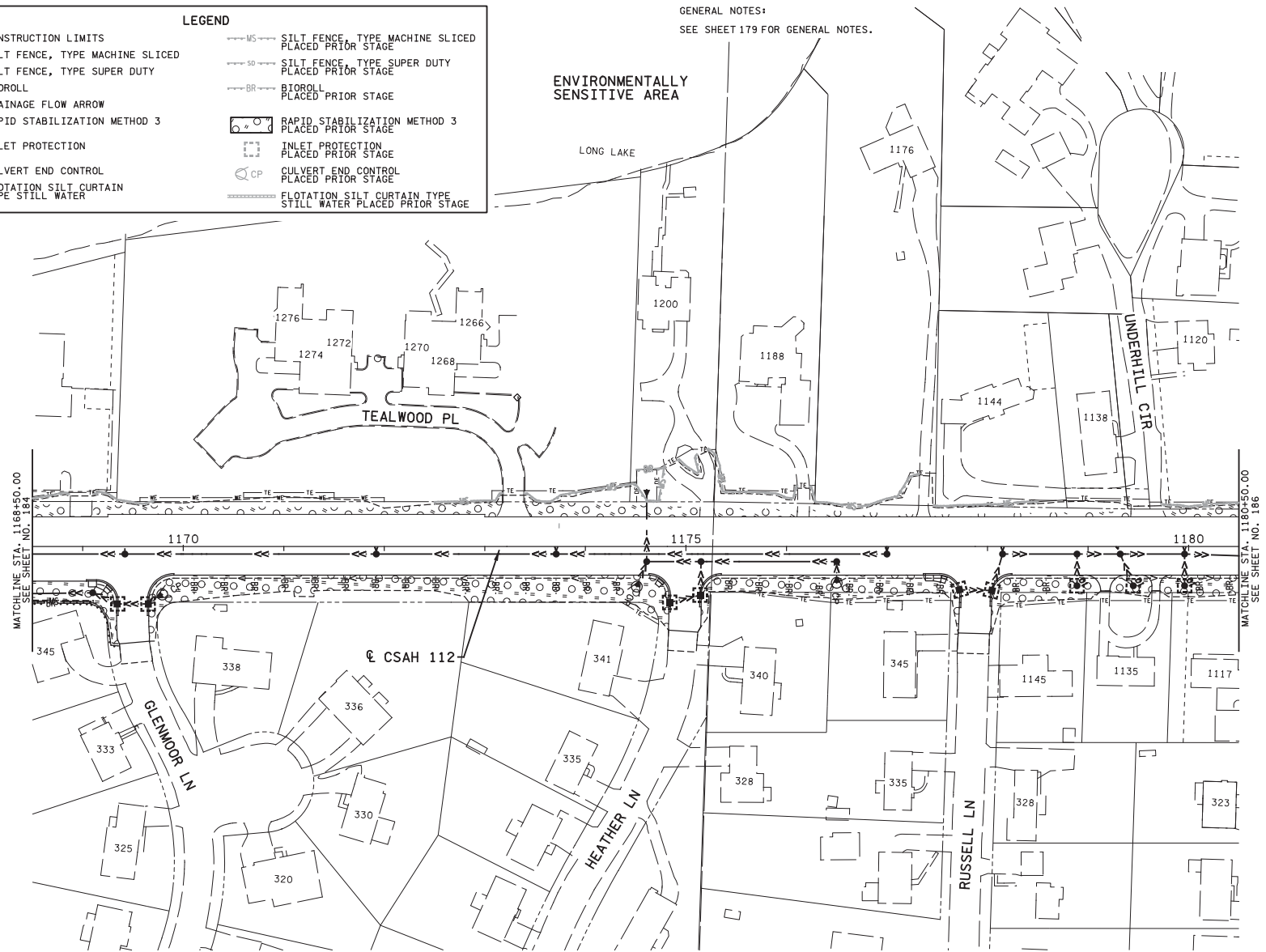
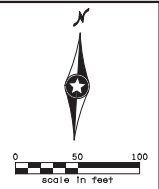
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---SD---	SILT FENCE, TYPE SUPER DUTY
---BR---	BIOROLL
→	DRAINAGE FLOW ARROW
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	INLET PROTECTION
	CULVERT END CONTROL
	FLOTATION SILT CURTAIN TYPE STILL WATER
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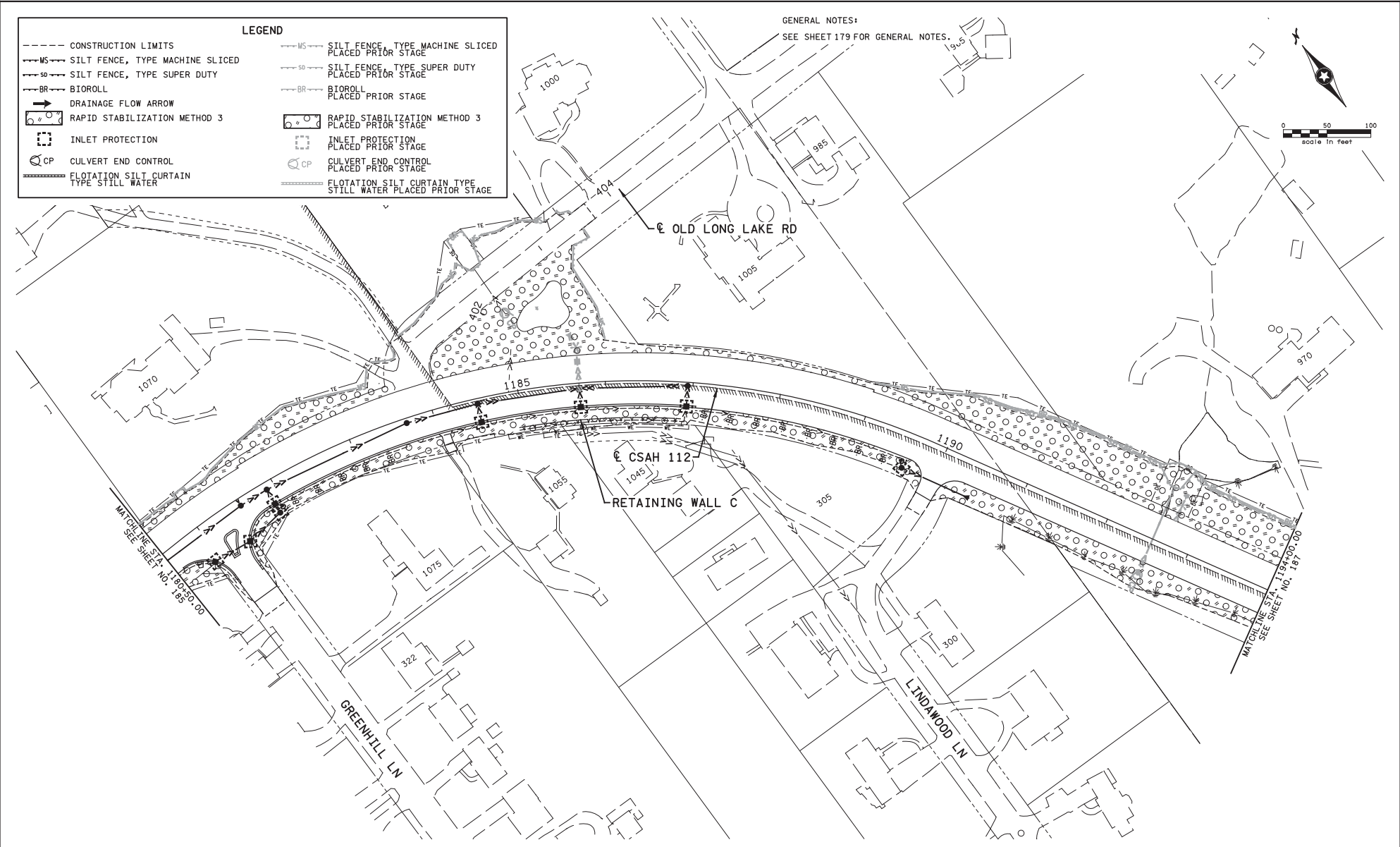
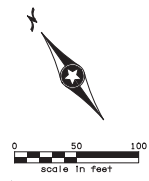
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---SD--- SILT FENCE, TYPE SUPER DUTY	---BR--- BIOROLL PLACED PRIOR STAGE
---BR--- BIOROLL	→ DRAINAGE FLOW ARROW
→ DRAINAGE FLOW ARROW	○ RAPID STABILIZATION METHOD 3
○ RAPID STABILIZATION METHOD 3	□ INLET PROTECTION
□ INLET PROTECTION	○ CP CULVERT END CONTROL
○ CP CULVERT END CONTROL	▨ FLOTATION SILT CURTAIN TYPE STILL WATER
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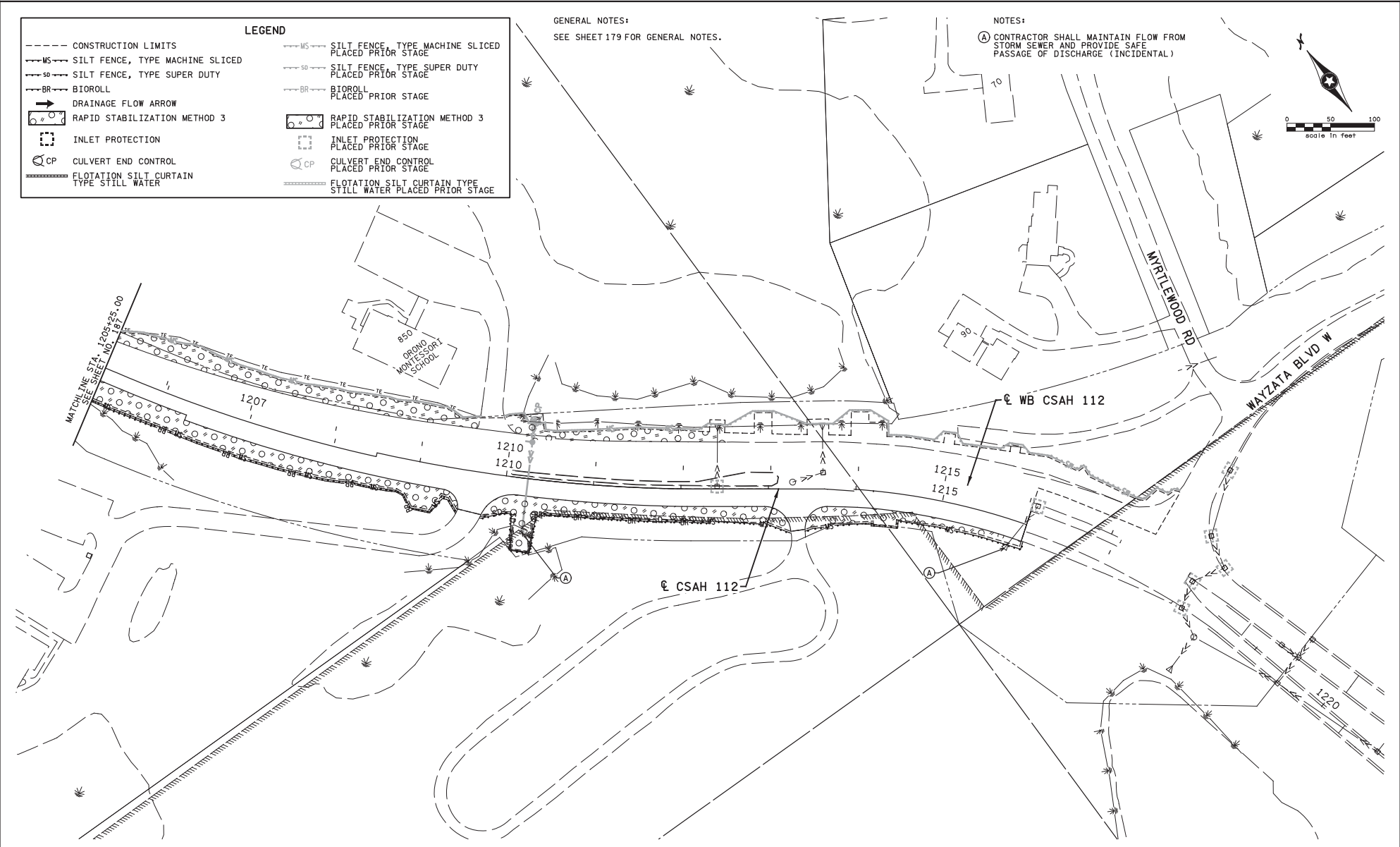
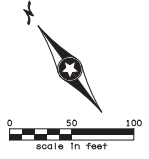


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LEGEND	
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---BR--- BIOROLL	→ DRAINAGE FLOW ARROW
→ DRAINAGE FLOW ARROW	○ RAPID STABILIZATION METHOD 3
○ RAPID STABILIZATION METHOD 3	□ INLET PROTECTION
□ INLET PROTECTION	○ CP CULVERT END CONTROL
○ CP CULVERT END CONTROL	▨ FLOTATION SILT CURTAIN TYPE STILL WATER
▨ FLOTATION SILT CURTAIN TYPE STILL WATER	○ RAPID STABILIZATION METHOD 3 PLACED PRIOR STAGE
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□ INLET PROTECTION PLACED PRIOR STAGE	○ CP CULVERT END CONTROL PLACED PRIOR STAGE
○ CP CULVERT END CONTROL PLACED PRIOR STAGE	▨ FLOTATION SILT CURTAIN TYPE STILL WATER PLACED PRIOR STAGE
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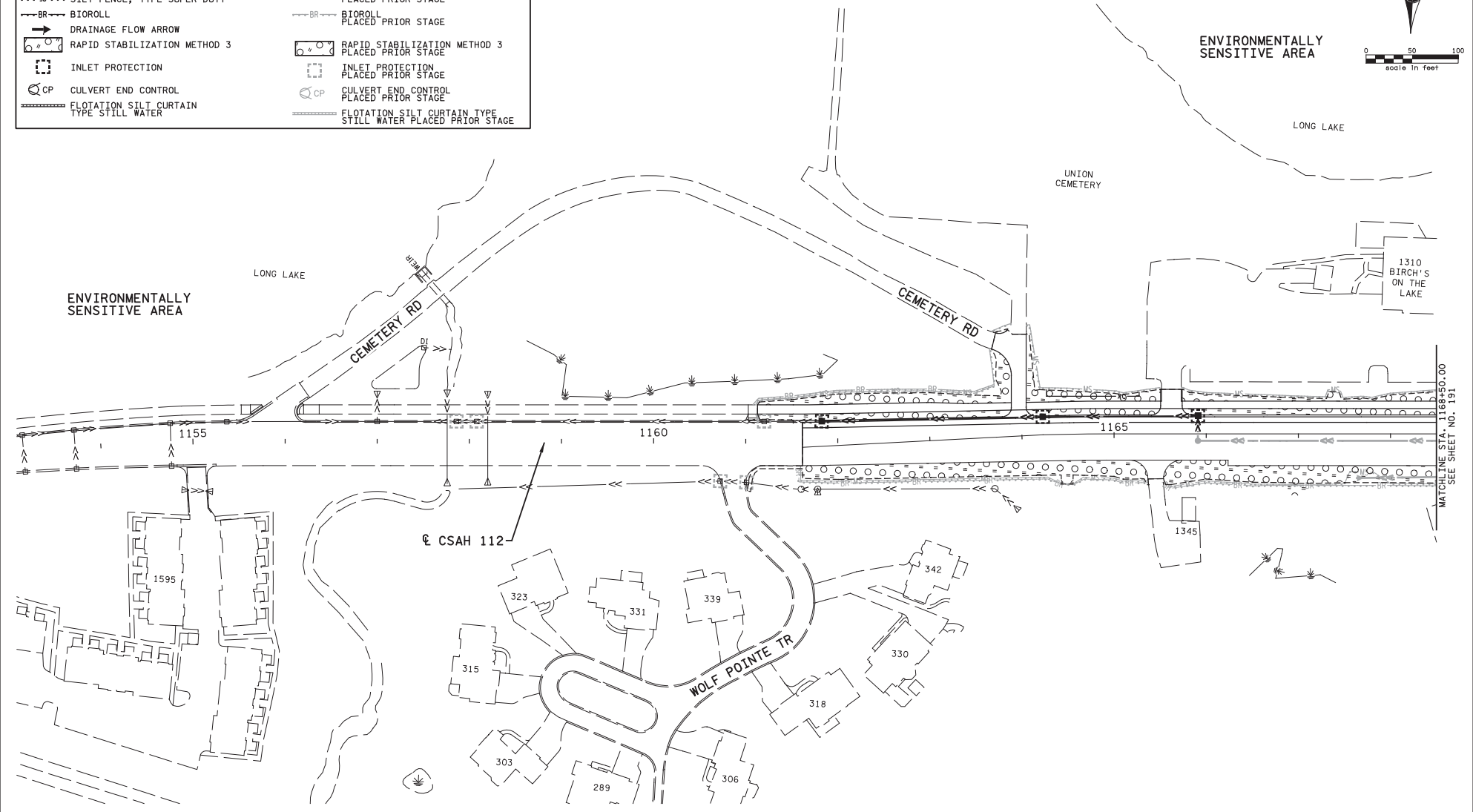
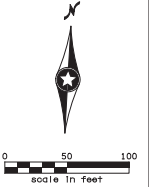


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→ DRAINAGE FLOW ARROW	---IP--- INLET PROTECTION PLACED PRIOR STAGE
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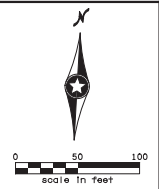


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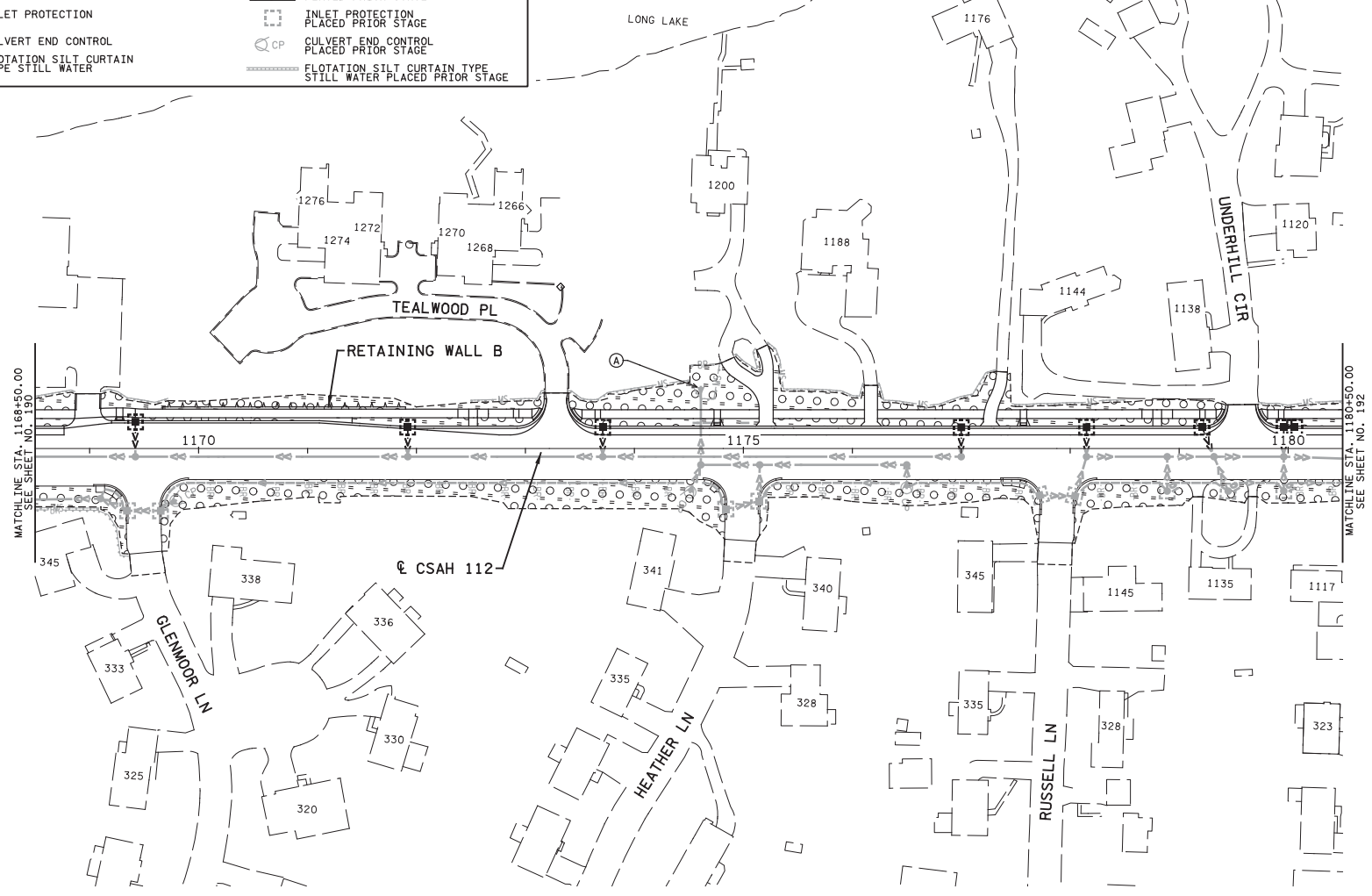
LEGEND	
-----	CONSTRUCTION LIMITS
---MS---	SILT FENCE, TYPE MACHINE SLICED
---SD---	SILT FENCE, TYPE SUPER DUTY
---BR---	BIOROLL PLACED PRIOR STAGE
→	DRAINAGE FLOW ARROW
	RAPID STABILIZATION METHOD 3
	INLET PROTECTION
	CULVERT END CONTROL
	FLOTATION SILT CURTAIN TYPE STILL WATER
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ENVIRONMENTALLY SENSITIVE AREA

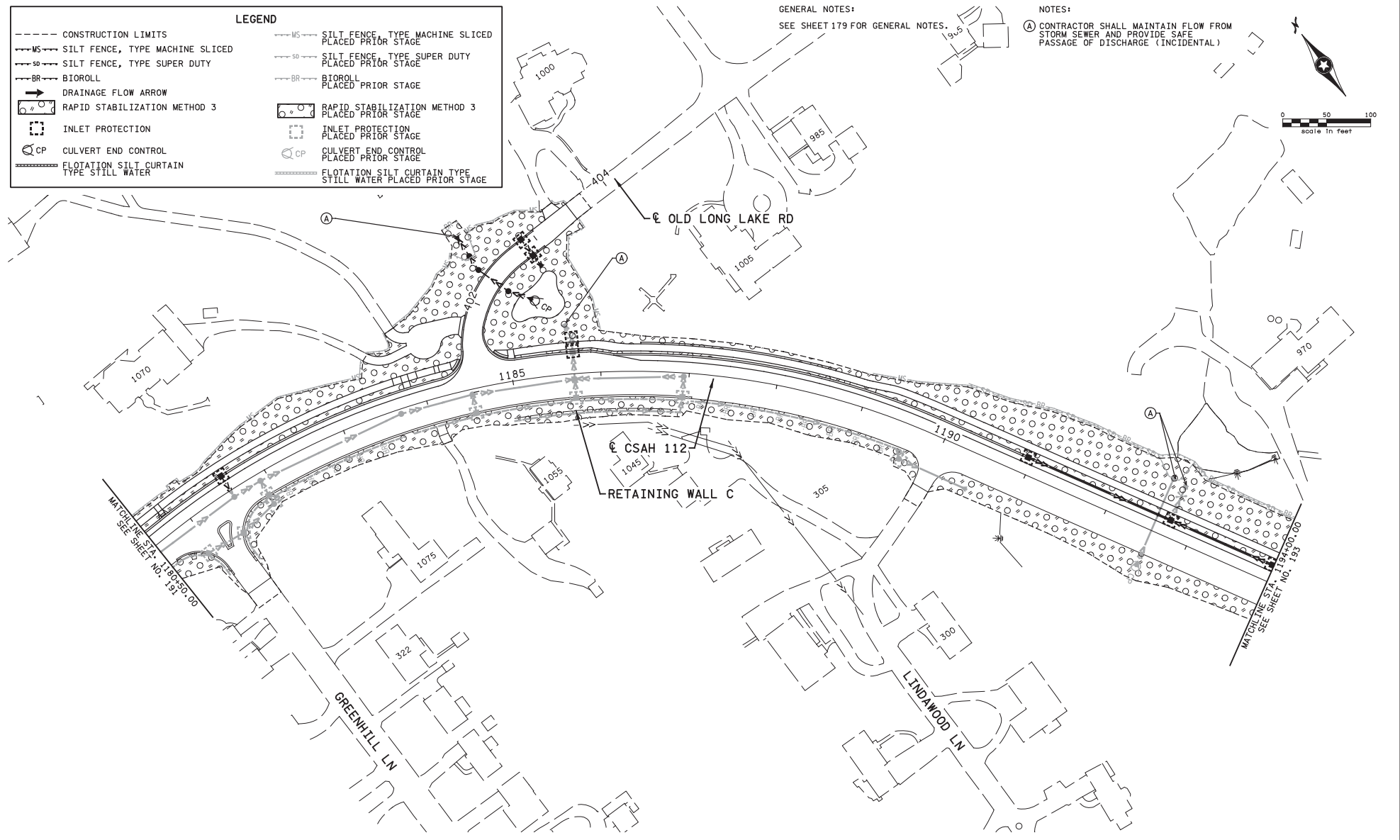
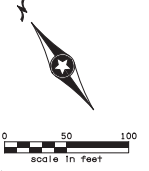


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LEGEND			
--- CL	CONSTRUCTION LIMITS	--- MS	SILT FENCE, TYPE MACHINE SLICED PLACED PRIOR STAGE
--- MS	SILT FENCE, TYPE MACHINE SLICED	--- SD	SILT FENCE, TYPE SUPER DUTY PLACED PRIOR STAGE
--- SD	SILT FENCE, TYPE SUPER DUTY	--- BR	BIOROLL PLACED PRIOR STAGE
--- BR	BIOROLL	→	DRAINAGE FLOW ARROW
○	RAPID STABILIZATION METHOD 3	○	RAPID STABILIZATION METHOD 3 PLACED PRIOR STAGE
□	INLET PROTECTION	□	INLET PROTECTION PLACED PRIOR STAGE
CP	CULVERT END CONTROL	CP	CULVERT END CONTROL PLACED PRIOR STAGE
---	FLOTATION SILT CURTAIN TYPE STILL WATER	---	FLOTATION SILT CURTAIN TYPE STILL WATER PLACED PRIOR STAGE

GENERAL NOTES:
SEE SHEET 179 FOR GENERAL NOTES.

NOTES:
Ⓐ CONTRACTOR SHALL MAINTAIN FLOW FROM STORM SEWER AND PROVIDE SAFE PASSAGE OF DISCHARGE (INCIDENTAL)

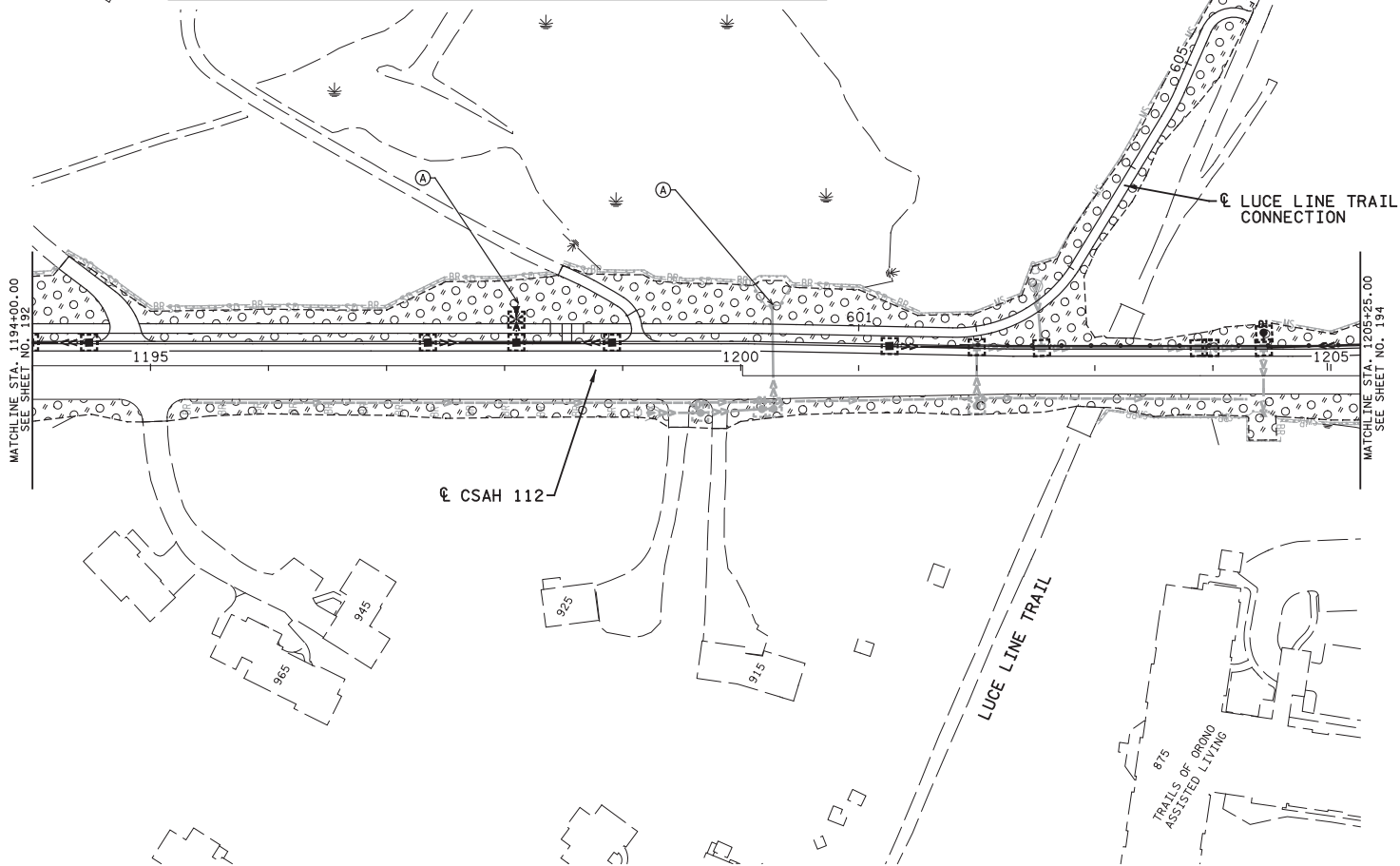
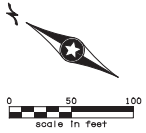


	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>Brandon J. Maas</i> BRANDON J. MAAS, PROFESSIONAL ENGINEER SRF CONSULTING GROUP, INC	53788 LICENSE NO.	09/08/17 DATE	DESIGN BY: <u>B. MAAS</u> CAD BY: <u>J. VAN BECK</u> CHECKED BY: <u>N. WILL</u> LAST REVISION: _____	TEMPORARY EROSION AND SEDIMENT CONTROL PLAN - STAGE 3 CSAH 112 / HENNEPIN COUNTY PROJECT NO. 091102 SAP 027-712-002 & SAP 152-020-012	SHEET 192 285
--	--	----------------------	------------------	---	---	---------------------

LEGEND	
--- CONSTRUCTION LIMITS	---MS--- SILT FENCE, TYPE MACHINE SLICED PLACED PRIOR STAGE
---MS--- SILT FENCE, TYPE MACHINE SLICED	---SO--- SILT FENCE, TYPE SUPER DUTY PLACED PRIOR STAGE
---SO--- SILT FENCE, TYPE SUPER DUTY	---BR--- BIOROLL PLACED PRIOR STAGE
---BR--- BIOROLL	→ DRAINAGE FLOW ARROW
→ DRAINAGE FLOW ARROW	○ RAPID STABILIZATION METHOD 3
○ RAPID STABILIZATION METHOD 3	□ INLET PROTECTION
□ INLET PROTECTION	○ CP CULVERT END CONTROL
○ CP CULVERT END CONTROL	--- FLOTATION SILT CURTAIN TYPE STILL WATER
--- FLOTATION SILT CURTAIN TYPE STILL WATER	○ RAPID STABILIZATION METHOD 3 PLACED PRIOR STAGE
○ RAPID STABILIZATION METHOD 3 PLACED PRIOR STAGE	□ INLET PROTECTION PLACED PRIOR STAGE
□ INLET PROTECTION PLACED PRIOR STAGE	○ CP CULVERT END CONTROL PLACED PRIOR STAGE
○ CP CULVERT END CONTROL PLACED PRIOR STAGE	--- FLOTATION SILT CURTAIN TYPE STILL WATER PLACED PRIOR STAGE
--- FLOTATION SILT CURTAIN TYPE STILL WATER PLACED PRIOR STAGE	

GENERAL NOTES:
SEE SHEET 179 FOR GENERAL NOTES.

NOTES:
A CONTRACTOR SHALL MAINTAIN FLOW FROM STORM SEWER AND PROVIDE SAFE PASSAGE OF DISCHARGE (INCIDENTAL)



I HEREBY CERTIFY THAT THIS PLAN 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.

Brandon J. Maas
BRANDON J. MAAS, PROFESSIONAL ENGINEER
SRF CONSULTING GROUP, INC.

53788 09/08/17
LICENSE NO. DATE

DESIGN BY: B. MAAS
CAD BY: J. VAN BECK
CHECKED BY: N. WILL
LAST REVISION:

TEMPORARY EROSION AND SEDIMENT CONTROL PLAN - STAGE 3

CSAH 112 / HENNEPIN COUNTY PROJECT NO. 091102
SAP 027-712-002 & SAP 152-020-012

SHEET

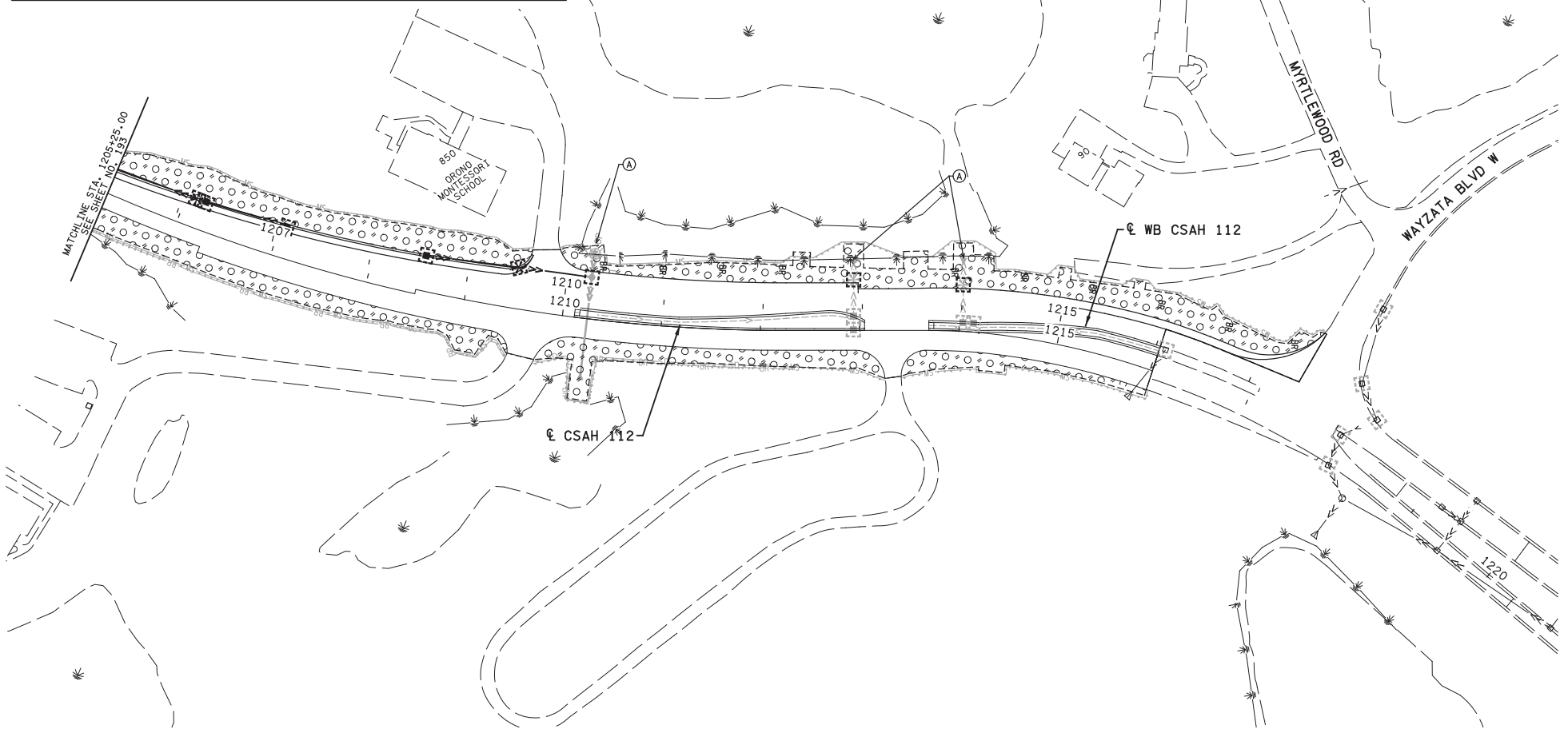
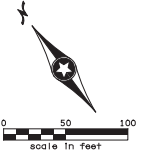
193

285

LEGEND	
-----	CONSTRUCTION LIMITS
---MS---	SILT FENCE, TYPE MACHINE SLICED
---SD---	SILT FENCE, TYPE SUPER DUTY
---BR---	BIOROLL
→	DRAINAGE FLOW ARROW
○	RAPID STABILIZATION METHOD 3
□	INLET PROTECTION
CP	CULVERT END CONTROL
---	FLOTATION SILT CURTAIN TYPE STILL WATER
---MS---	SILT FENCE, TYPE MACHINE SLICED PLACED PRIOR STAGE
---SD---	SILT FENCE, TYPE SUPER DUTY PLACED PRIOR STAGE
---BR---	BIOROLL PLACED PRIOR STAGE
○	RAPID STABILIZATION METHOD 3 PLACED PRIOR STAGE
□	INLET PROTECTION PLACED PRIOR STAGE
CP	CULVERT END CONTROL PLACED PRIOR STAGE
---	FLOTATION SILT CURTAIN TYPE STILL WATER PLACED PRIOR STAGE

GENERAL NOTES:
SEE SHEET 179 FOR GENERAL NOTES.

NOTES:
A CONTRACTOR SHALL MAINTAIN FLOW FROM STORM SEWER AND PROVIDE SAFE PASSAGE OF DISCHARGE (INCIDENTAL)



I HEREBY CERTIFY THAT THIS PLAN 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.

Brandon J. Maas
BRANDON J. MAAS, PROFESSIONAL ENGINEER
SRF CONSULTING GROUP, INC

53788 09/08/17
LICENSE NO. DATE

DESIGN BY: B. MAAS
CAD BY: J. VAN BECK
CHECKED BY: N. WILL
LAST REVISION:

TEMPORARY EROSION AND SEDIMENT CONTROL PLAN - STAGE 3

CSAH 112 / HENNEPIN COUNTY PROJECT NO. 091102
SAP 027-712-002 & SAP 152-020-012

SHEET

194

285



Minnesota Pollution Control Agency

COVERAGE CARD

Construction Stormwater National Pollutant Discharge Elimination System/State Disposal System General Permit MNR100001

The Construction site identified below is covered under the National Pollutant Discharge Elimination System/State Disposal System General Permit MNR100001 and is authorized by the Minnesota Pollution Control Agency (MPCA) to discharge stormwater associated with construction activities.

Permit ID Number: C00047862

Owner: Hennepin County

General Contractor: Hennepin County

Project Name: County State Aid Highway 112 - Phase 2

Permit Coverage Date: 10/09/2017

If you have questions regarding the stormwater program for construction activity, please access the MPCA Stormwater website at <http://www.pca.state.mn.us/stormwater>, or call the Construction Stormwater Program at 651-757-2119 or toll free at 800-657-3804.

Attachment 5 - Wetlands within Phase II (2 pages)

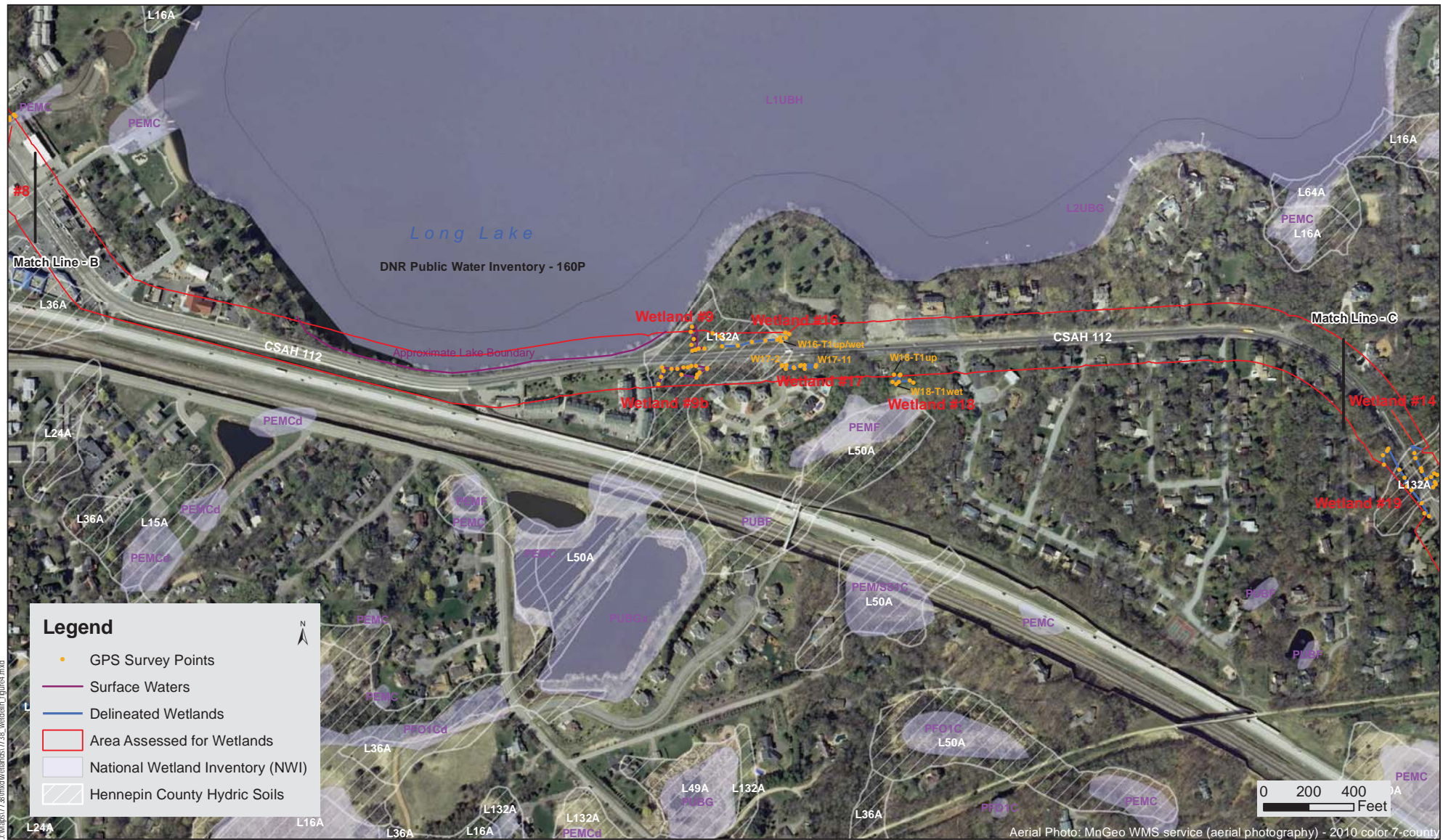


Figure 4

Minnesota Wetland Conservation Act

Notice of Decision

Local Government Unit (LGU) Minnehaha Creek Watershed District	Address 18202 Minnetonka Blvd Deephaven, MN 55391
--	---

1. PROJECT INFORMATION

Applicant Name Hennepin County Transportation Department	Project Name CSAH 112	Date of Application 9/20/12	Application Number W12-43
--	---------------------------------	---------------------------------------	-------------------------------------

Attach site locator map.

Type of Decision:

Wetland Boundary or Type
 No-Loss
 Exemption
 Sequencing
 Replacement Plan
 Banking Plan

Technical Evaluation Panel Findings and Recommendation (if any):

Approve
 Approve with conditions
 Deny

Summary (or attach):

2. LOCAL GOVERNMENT UNIT DECISION

Date of Decision: **2/14/13**

Approved
 Approved with conditions (include below)
 Denied

LGU Findings and Conclusions (attach additional sheets as necessary):

A wetland delineation for a future project area along CSAH 112 from the intersection of Wayzata Blvd W & CSAH 112 (eastern limit) to the intersection of CSAH 6 & CSAH 112 (western limit) in the cities of Orono, Long Lake, and Wayzata was performed by SRF Consulting Group Inc. (SRF) between June 1 & August 2, 2012. The boundary & type determination for the Orono & Long Lake portions of the project area only was reviewed in the field on October 15, October 17, November 9, and November 21, 2012 by Minnehaha Creek Watershed District (MCWD) staff. The delineator from SRF was present at the November 21, 2012 field review. The City of Wayzata is the Wetland Conservation Act Local Government Unit for the portion of the project area in Wayzata.

The original application was submitted on September 20, 2012, and the 60-day deadline for making a decision on the application was extended 60 days from 11/19/12 on 11/19/12 by the MCWD. The deadline was again extended an additional 30 days from 1/18/13 on 1/17/13 per written request by the applicant. The extensions were made to allow additional time to work out issues identified with the original delineation before a decision had to be made and to determine incidental status.

A total of 23 wetlands were identified within the Orono & Long Lake portion of the project area and are described in Table 2 of the final delineation report (below):

TABLE 2. PROJECT AREA WETLANDS

Area ID*	Township, Range, Section	Type Eggers & Reed/Circ. 39,	Dominant Vegetation
Wetland 1 <i>DNR PIW-841w</i>	T118N, R23W, Sect.32	Type 3 Shallow marsh	Cattails
Wetland 2 <i>DNR PIW-162p</i>	T118N, R23W, Sect.32	Type 3 Shallow marsh	Cattails and reed canary grass
Wetland 3 <i>DNR PIW-841w</i>	T118N, R23W, Sect.33	Type 3 Shallow marsh	Cattails
Wetland 4 <i>DNR PIW-162p</i>	T118N, R23W, Sect.33	Type 3 Shallow marsh	Cattails
Wetland 5 (Stormwater pond)	T118N, R23W, Sect.33	Type 5 Shallow open water	Duckweed
Wetland 6 (Incidental stormwater pond)	T118N, R23W, Sect.34	Type 5 Shallow open water	Duckweed
Wetland 7 (Incidental swale)	T118N, R23W, Sect.34	Type 3 Shallow marsh	Cattails
Wetland 8	T118N, R23W, Sect.34	Type 2/3 Wet meadow/ shallow marsh	Cannel lined with rocks – outside edges dominated by cattails and reed canary grass.
Wetland 10 (Incidental stormwater pond)	T117N, R23W, Sect.1	Type 5 Shallow open water	Duckweed, fringe of cattails
Wetland 11 <i>DNR PIW-831W</i>	T118N, R23W, Sect.35	Type 3/Type 6 Fresh wet meadow/ scrub shrub	Cattails
Wetland 12 <i>DNR PIW-851W</i>	T118N, R23W, Sect.35	Type 3 Shallow marsh	Jewelweed, reed canary grass, green ash
Wetland 13	T118N, R23W, Sect.35	Type 3 Shallow marsh	Cattails
Wetland 14, 14b, 14c	T118N, R23W, Sect.35	Type 5, 3 2 Shallow open water Shallow marsh Wet meadow	Reed canary grass, duckweed, cattails
Wetland 15	T118N, R23W, Sect.33	Type 2 Wet meadow	Foxtail barley, reed canary grass
Cattail ditch south of W 15 (Incidental)	T118N, R23W, Sect.33	Type 3 Shallow marsh	Cattails
Wetland 16	T118N, R23W, Sect.35	Type 1/2 Floodplain forest/wet meadow	Reed canary grass
Wetland 17	T118N, R23W, Sect.35	Type 1L Floodplain forest	Green ash, box elder
Wetland 18	T118N, R23W, Sect.35	Type 1L/Type 2 Floodplain forest/ wet meadow	European buckthorn, Canada wood nettle, clearweed, late boneset, Virginia creeper
Wetland 19	T118N, R23W, Sect.35	Type 1L Floodplain forest	Green ash, box elder
Wetland H	T118N, R23W, Sect.33	Type 2 Wet meadow	Cattails and reed canary grass
Wetland F	T118N, R23W, Sect.33	Type 2 Wet meadow	Cattails and reed canary grass

Wetlands H & F

A boundary & type decision for Wetlands H & F was issued on May 6, 2011 for a separate delineation

performed in 2010 for a proposed project area near Old Crystal Bay Rd N, and the decision is still valid (WCA application #W10-22). The original boundaries of Wetlands H & F within the CSAH 112 project area shown in the final delineation report are re-approved with this decision.

Incidental Determination

Four of the wetlands were determined to be incidental and are indicated as such in bold in the table above. The documentation supporting the determination is in the final delineation report. Due to the incidental determination a no-loss decision under Chapter 8420.0315 Subp. B is being issued in addition to the boundary & type decision.

The boundary & type determination as described above and in the attached final delineation report dated February 2013 are approved by the MCWD. This approval only applies to the portions of the project area for which the MCWD is the WCA LGU (Orono & Long Lake). Please disregard the original delineation report dated August 2012 that was sent out with the Notice of Application since it has since been revised. This decision is valid for five years. A project on this property may require a permit from the MCWD.

For Replacement Plans using credits from the State Wetland Bank:

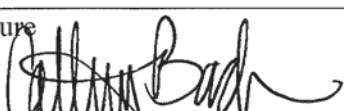
Bank Account #	Bank Service Area	County	Credits Approved for Withdrawal (sq. ft. or nearest .01 acre)

Replacement Plan Approval Conditions. In addition to any conditions specified by the LGU, the approval of a Wetland Replacement Plan is conditional upon the following:

- Financial Assurance:** For project-specific replacement that is not in-advance, a financial assurance specified by the LGU must be submitted to the LGU in accordance with MN Rule 8420.0522, Subp. 9 (List amount and type in LGU Findings).
- Deed Recording:** For project-specific replacement, evidence must be provided to the LGU that the BWSR “Declaration of Restrictions and Covenants” and “Consent to Replacement Wetland” forms have been filed with the county recorder’s office in which the replacement wetland is located.
- Credit Withdrawal:** For replacement consisting of wetland bank credits, confirmation that BWSR has withdrawn the credits from the state wetland bank as specified in the approved replacement plan.

Wetlands may not be impacted until all applicable conditions have been met!

LGU Authorized Signature:

Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 5 provides notice that a decision was made by the LGU under the Wetland Conservation Act as specified above. If additional details on the decision exist, they have been provided to the landowner and are available from the LGU upon request.		
Name Catherine Bach	Title District Technician	
Signature 	Date 2/14/13	Phone Number and E-mail (952) 641-4504 cbach@minnehahacreek.org

THIS DECISION ONLY APPLIES TO THE MINNESOTA WETLAND CONSERVATION ACT. Additional approvals or permits from local, state, and federal agencies may be required. Check with all appropriate authorities before commencing work in or near wetlands.

Applicants proceed at their own risk if work authorized by this decision is started before the time period for appeal (30 days) has expired. If this decision is reversed or revised under appeal, the applicant may be responsible for restoring or replacing all wetland impacts.

This decision is valid for three years from the date of decision unless a longer period is advised by the TEP and specified in this notice of decision.

3. APPEAL OF THIS DECISION

Pursuant to MN Rule 8420.0905, any appeal of this decision can only be commenced by mailing a petition for appeal, including applicable fee, within thirty (30) calendar days of the date of the mailing of this Notice to the following as indicated:

Check one:

<input checked="" type="checkbox"/> Appeal of an LGU staff decision. Send petition and \$0 fee (if applicable) to: Minnehaha Creek Watershed District 18202 Minnetonka Blvd Deephaven, MN 55391	<input type="checkbox"/> Appeal of LGU governing body decision. Send petition and \$500 filing fee to: Executive Director Minnesota Board of Water and Soil Resources 520 Lafayette Road North St. Paul, MN 55155
---	---

4. LIST OF ADDRESSEES

<input checked="" type="checkbox"/> SWCD TEP member: Stacey Lijewski – Stacey.lijewski@co.hennepin.mn.us <input checked="" type="checkbox"/> BWSR TEP member: Lynda Peterson – Lynda.peterson@state.mn.us <input type="checkbox"/> LGU TEP member (if different than LGU Contact): <input checked="" type="checkbox"/> DNR TEP member: Jack Gleason – john.gleason@state.mn.us <input checked="" type="checkbox"/> DNR Regional Office (if different than DNR TEP member): Melissa Doperalski – Melissa.doperalski@state.mn.us <input type="checkbox"/> WD or WMO (if applicable): <input checked="" type="checkbox"/> Applicant (notice only) and Landowner (if different): Hennepin County Transportation Department (Jim Grube) – transportation@co.hennepin.mn.us <input checked="" type="checkbox"/> Members of the public who requested notice (notice only): Consultant: SRF Consulting Group, Inc. (Matt Meyer or Jeff Olson) – mmeyer@srfconsulting.com or jolson@srfconsulting.com City of Orono – Christine Mattson – cmattson@ci.orono.mn.us City of Long Lake – Marv Wurzer & Terry Post – mwurzer@ci.long-lake.mn.us & tpost@ci.long-lake.mn.us City of Wayzata – Mike Kelly – mike@wayzata.org <input checked="" type="checkbox"/> Corps of Engineers Project Manager (notice only): Melissa Jenny – Melissa.m.jenny@usace.army.mil <input type="checkbox"/> BWSR Wetland Bank Coordinator (wetland bank plan applications only)
--

5. MAILING INFORMATION

- For a list of BWSR TEP representatives: www.bwsr.state.mn.us/aboutbwsr/workareas/WCA_areas.pdf
- For a list of DNR TEP representatives: www.bwsr.state.mn.us/wetlands/wca/DNR_TEP_contacts.pdf
- Department of Natural Resources Regional Offices:

NW Region: Reg. Env. Assess. Ecol.	NE Region: Reg. Env. Assess. Ecol.	Central Region: Reg. Env. Assess. Ecol.	Southern Region: Reg. Env. Assess. Ecol.
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Div. Ecol. Resources 2115 Birchmont Beach Rd. NE Bemidji, MN 56601	Div. Ecol. Resources 1201 E. Hwy. 2 Grand Rapids, MN 55744	Div. Ecol. Resources 1200 Warner Road St. Paul, MN 55106	Div. Ecol. Resources 261 Hwy. 15 South New Ulm, MN 56073
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For a map of DNR Administrative Regions, see: http://files.dnr.state.mn.us/aboutdnr/dnr_regions.pdf

- For a list of Corps of Project Managers: www.mvp.usace.army.mil/regulatory/default.asp?pageid=687
or send to:

US Army Corps of Engineers
St. Paul District, ATTN: OP-R
180 Fifth St. East, Suite 700
St. Paul, MN 55101-1678

- For Wetland Bank Plan applications, also send a copy of the application to:

Minnesota Board of Water and Soil Resources
Wetland Bank Coordinator
520 Lafayette Road North
St. Paul, MN 55155

6. ATTACHMENTS

In addition to the site locator map, list any other attachments:

Final delineation report dated February 2012 (replaces original delineation report dated August 2012 sent out with Notice of Application)

Minnesota Wetland Conservation Act

Notice of Decision

Local Government Unit (LGU) Minnehaha Creek Watershed District	Address 15320 Minnetonka Blvd Minnetonka, MN 55345
--	---

1. PROJECT INFORMATION

Applicant Name Hennepin County Public Works	Project Name CSAH 112 Phase 2	Date of Application 4/14/2017 (Incomplete) 5/16/2017 (Incomplete) 6/6/17 (Incomplete) 6/26/2017 (Complete)	Application Number W17-06
---	---	---	-------------------------------------

Type of Decision:

<input type="checkbox"/> Wetland Boundary or Type	<input checked="" type="checkbox"/> No-Loss	<input type="checkbox"/> Exemption	<input type="checkbox"/> Sequencing
<input type="checkbox"/> Replacement Plan	<input type="checkbox"/> Banking Plan		

Technical Evaluation Panel Findings and Recommendation (if any):

<input type="checkbox"/> Approve	<input type="checkbox"/> Approve with conditions	<input type="checkbox"/> Deny
Summary (or attach):		

2. LOCAL GOVERNMENT UNIT DECISION

Date of Decision: 7/18/2017		
<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Approved with conditions (include below)	<input type="checkbox"/> Denied

LGU Findings and Conclusions (attach additional sheets as necessary):

Hennepin County Public Works has applied for a WCA No Loss Decision for temporary impacts to wetlands related to reconstruction of CSAH 112 between Wolfe Pointe Trail and Wayzata Blvd (Phase 2) in the Cities of Long Lake and Orono, Hennepin County, Minnesota
 Legal description: Section 1 Township 117N, Range 23W.

A Wetland Boundary and Type Notice of Decision was issued on February 14th, 2013 (W12-43). Ten wetlands were delineated within this project area (Wetland 11, 12, 13, 14, 14b, 14c, 16, 17, 18, 19). This project proposes 0.124 square feet of temporary impacts to Wetland 11, 12, 13, 14, and 14c as a result of equipment access related to culvert installation and road reconstruction. Reconstruction of the road is necessary to meet safety and design standards.

Following the reconstruction of CSAH 112, temporary fill will be removed from the wetland, wetland contours will be restored, and disturbed areas will be re-seeded with seed mixture 34-171.

This proposed temporary disturbance (<180 days) meets the conditions of 8420.0410 and criteria of 8420.0415 Subp. H.

This project also proposed 0.345 acres of permanent wetland impact to be replaced through BWSR's Local Road Wetland Replacement Program.

This decision is valid for five years. Any proposed changes to the project that are outside of the scope of this no-loss decision or approved through the Local Road Wetland Replacement Program may not begin without approval from the MCWD.

For Replacement Plans using credits from the State Wetland Bank:

Bank Account #	Bank Service Area	County	Credits Approved for Withdrawal (sq. ft. or nearest .01 acre)
N/A	N/A	N/A	

Replacement Plan Approval Conditions. In addition to any conditions specified by the LGU, the approval of a Wetland Replacement Plan is conditional upon the following:


- Financial Assurance:** For project-specific replacement that is not in-advance, a financial assurance specified by the LGU must be submitted to the LGU in accordance with MN Rule 8420.0522, Subp. 9 (List amount and type in LGU Findings).
- Deed Recording:** For project-specific replacement, evidence must be provided to the LGU that the BWSR "Declaration of Restrictions and Covenants" and "Consent to Replacement Wetland" forms have been filed with the county recorder's office in which the replacement wetland is located.
- Credit Withdrawal:** For replacement consisting of wetland bank credits, confirmation that BWSR has withdrawn the credits from the state wetland bank as specified in the approved replacement plan.

Wetlands may not be impacted until all applicable conditions have been met!

LGU Authorized Signature:

Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 5 provides notice that a decision was made by the LGU under the Wetland Conservation Act as specified above. If additional details on the decision exist, they have been provided to the landowner and are available from the LGU upon request.

Name Heidi Quinn	Title Permitting Technician
----------------------------	---------------------------------------

Signature 	Date 7/18/2017	Phone Number and E-mail (952) 641-4504 hquinn@minnehahacreek.org
--	-------------------	--

THIS DECISION ONLY APPLIES TO THE MINNESOTA WETLAND CONSERVATION ACT. Additional approvals or permits from local, state, and federal agencies may be required. Check with all appropriate authorities before commencing work in or near wetlands.

Applicants proceed at their own risk if work authorized by this decision is started before the time period for appeal (30 days) has expired. If this decision is reversed or revised under appeal, the applicant may be responsible for restoring or replacing all wetland impacts.

This decision is valid for three years from the date of decision unless a longer period is advised by the TEP and specified in this notice of decision.

3. APPEAL OF THIS DECISION

Pursuant to MN Rule 8420.0905, any appeal of this decision can only be commenced by mailing a petition for appeal, including applicable fee, within thirty (30) calendar days of the date of the mailing of this Notice to the following as indicated:

Check one:

<input checked="" type="checkbox"/> Appeal of an LGU staff decision. Send petition and \$0 fee (if applicable) to: Minnehaha Creek Watershed District 15320 Minnetonka Blvd Minnetonka, MN 55345	<input type="checkbox"/> Appeal of LGU governing body decision. Send petition and \$500 filing fee to: Executive Director Minnesota Board of Water and Soil Resources 520 Lafayette Road North St. Paul, MN 55155
--	---

4. LIST OF ADDRESSEES

<input checked="" type="checkbox"/> SWCD TEP member: Stacey Lijewski <input checked="" type="checkbox"/> BWSR TEP member: Ben Meyer; Sarma Straumanis <input type="checkbox"/> LGU TEP member (if different than LGU Contact): <input checked="" type="checkbox"/> DNR TEP member: Kate Drewry; Becky Horton <input type="checkbox"/> DNR Regional Office (if different than DNR TEP member): <input checked="" type="checkbox"/> WD or WMO (if applicable): Mike Hayman <input checked="" type="checkbox"/> Applicant (notice only) and Landowner (if different): Hennepin County (Kristy Morter) <input checked="" type="checkbox"/> Members of the public who requested notice (notice only): SRF Consulting (Nicole Zappetillo, Jacques DuVal, Nathan Will), City of Orono (Adam Edwards), City of Long Lake (Jason Goehring) <input checked="" type="checkbox"/> Corps of Engineers Project Manager (notice only): Ryan Malterud <input type="checkbox"/> BWSR Wetland Bank Coordinator (wetland bank plan applications only)
--

5. MAILING INFORMATION

➤ For a list of BWSR TEP representatives: www.bwsr.state.mn.us/aboutbwsr/workareas/WCA_areas.pdf

➤ For a list of DNR TEP representatives: www.bwsr.state.mn.us/wetlands/wca/DNR_TEP_contacts.pdf

➤ Department of Natural Resources Regional Offices:

<u>NW Region:</u> Reg. Env. Assess. Ecol.	<u>NE Region:</u> Reg. Env. Assess. Ecol.	<u>Central Region:</u> Reg. Env. Assess.	<u>Southern Region:</u> Reg. Env. Assess. Ecol.
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Div. Ecol. Resources 2115 Birchmont Beach Rd. NE Bemidji, MN 56601	Div. Ecol. Resources 1201 E. Hwy. 2 Grand Rapids, MN 55744	Ecol. Div. Ecol. Resources 1200 Warner Road St. Paul, MN 55106	Div. Ecol. Resources 261 Hwy. 15 South New Ulm, MN 56073
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For a map of DNR Administrative Regions, see: http://files.dnr.state.mn.us/aboutdnr/dnr_regions.pdf

- For a list of Corps of Project Managers: www.mvp.usace.army.mil/regulatory/default.asp?pageid=687 or send to:

US Army Corps of Engineers
St. Paul District, ATTN: OP-R
180 Fifth St. East, Suite 700
St. Paul, MN 55101-1678

- For Wetland Bank Plan applications, also send a copy of the application to:

Minnesota Board of Water and Soil Resources
Wetland Bank Coordinator
520 Lafayette Road North
St. Paul, MN 55155

6. ATTACHMENTS

<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Application
---	--------------------



Local Road Wetland Replacement Program Mitigation Verification

The wetland mitigation request for the public road project identified below has been accepted into the BWSR Local Road Wetland Replacement Program. The wetland impact and the processed required replacement is defined below.

Withdrawn By:

Withdrawal Date:

RIBITS Entered:

Corps Regulatory File #:	2016-01240-MMJ	BWSR #:	10272M & 10274M WCA add'l
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Project Information

Applicant:	Hennepin Co Public Works	Representative:	Kristy Morter
Project Name/ID:	CSAH 112 ph 2 Wolfe Pointe to Wayzata Blvd SAP 027-712-002		
County:	Hennepin	Watershed:	20 ✓
Section:	01	Township:	117
Bank Service Area:			7
Range:			23 ✓

Impact and Required Replacement Information

CWA Section 404 Requirement				
Impact Acres	Impact BSA	Replacement BSA	Replacement Ratio	Required Credits
0.345 ✓	9	7	2.0	0.69 ✓
WCA Requirement				
Impact Acres	Impact BSA	Replacement BSA	Replacement Ratio	Required Credits
0.345	9	7	2.5	0.69 + 0.1725
				T = 0.8625

Credit Withdrawal Information

Bank Account #	Bank Watershed	Bank BSA	Subgroup	Federally Approved?	Wetland Type	Credits
1611	17	7	A	Yes	Wet meadow	0.69 ✓
1096 for WCA add'l	61	3	E	No	Upland buffer	0.1725 ✓
Total:						0.8625

Verification sent to:

Application: 10272M	County: ALL	Major Watershed: ALL	Wetland Area: ALL
Impact Wetland Type: ALL	Topography: ALL	Impact Acres: ALL	Project Date: N/A
Application Status: ALL	Land Owner Type: ALL		Impact Date Range: N/A

Road Mitigation - Banking Ledger Comparison

Minnesota Wetland Bank

August 9, 2017

IMPACT		REPLACEMENT BANKING - Credits Withdrawn	
Appl No	County	COE RAMS	Major Watershed
10272M	27 Hennepin	2016-01240-MMJ 20	Mississippi (metro)
		Impact Acres	Wdrwl Acct# Grp
		0.34	1611 A
			Credit Wetland Amt Type
			0.69 2
			CType
			SWC
			Site No
			7548
			County
			73 Stearns
			Major Watershed
			16 Sauk

GRAND TOTAL: 0.34 0.69

Application: 10274M County: ALL Major Watershed: ALL Wetland Area: ALL
 Impact Wetland Type: ALL Topography: ALL Impact Acres: ALL Project Date: N/A
 Application Status: ALL Land Owner Type: ALL Impact Date Range: N/A

Road Mitigation - Banking Ledger Comparison *Minnesota Wetland Bank*

August 9, 2017

Appl No	County	COE RAMS	Major Watershed	Impact Acres	Wdrwl Acct #	Grp	Credit Wetland Amt Type	CType	Site No	County	Major Watershed	REPLACEMENT BANKING - Credits Withdrawn	
												No	Count
10274M	27	Hennepin	2016-01240-MMJ 20	0.00	1096	E	0.17	U	2037	60	Polk	61	Sandhill
GRAND TOTAL:											0.00	0.17	



REPLY TO ATTENTION OF
REGULATORY BRANCH

DEPARTMENT OF THE ARMY
ST. PAUL DISTRICT, CORPS OF ENGINEERS
180 FIFTH STREET EAST, SUITE 700
ST. PAUL, MN 55101-1678

RECEIVED JUL 27 2017

July 27, 2017

Regulatory File No. 2016-01240-MMJ

Hennepin County
Attention: Kristy Mortar
1600 Prairie Drive
Medina, Minnesota 55340

Dear Ms. Mortar:

We have reviewed your request for Department of the Army authorization to conduct Phase 2 of the County State Aid Highway (CSAH) 112 Reconstruction Project, in the cities of Long Lake, Orono and Wayzata. The project will reconstruct the roadway to include a center two-way left-turn lane on CSAH 112 from Wolf Pointe Trail to just north of Luce Line State Trail, to meet design and safety standards. Construction activities will include grading, bituminous paving, bituminous base, aggregate base, pedestrian/bicycle trail or concrete walk, curb and gutter, pedestrian ramps, lighting, watermain, sanitary sewer, storm sewer, culverts, water quality baffles, and stormwater best management practices (BMPs). The project will result in the permanent discharge of fill material into approximately 0.345 acre of wetland, and the temporary discharge of fill material into approximately 0.124 acre of wetland, and will be constructed as shown on the enclosed figures labeled as MVP-2016-01240-MMJ, Figures 1-10. The project site is located in Section 1, Township 117 North, Range 23 West, and Sections 35 and 36, Township 118 North, Range 23 West, Hennepin County, Minnesota.

Department of the Army Regional General Permit-004-MN (RGP-004-MN) provides authorization under section 404 of the Clean Water Act for certain categories of activities involving the discharge of dredged or fill material into waters of the U.S. or activities conducted in/over/under waters covered by Section 10 of the Rivers and Harbors Act. We have determined that the described work is authorized by RGP-004-MN, provided the enclosed RGP-004-MN General Conditions and the Special Condition below are followed.

1. As compensatory mitigation for the authorized activities, a minimum of 0.6900 wetland credit shall be debited from a Corps-approved, Board of Water and Soil Resources (BWSR) Local Government Roads Wetland Replacement Program (LGRWRP) mitigation bank, serving Bank Service Area 7, specifically from the Shraemel Wetland Bank (Account #1611). Mitigation types and quantities shall be as follows: 0.6900 credit of wet meadow type wetland community.
 - a. Within 30 days from the date of this authorization, the permittee shall ensure that the Corps receives written verification from BWSR that the authorized impacts are eligible for replacement using the LGRWRP, and specifying the amount of credits that will be withdrawn.
 - b. Prior to undertaking the activities authorized by this permit, the permittee shall ensure that the Corps receives written verification from BWSR of the mitigation bank transaction, specifying the mitigation bank used, and the amount and type of credits withdrawn.

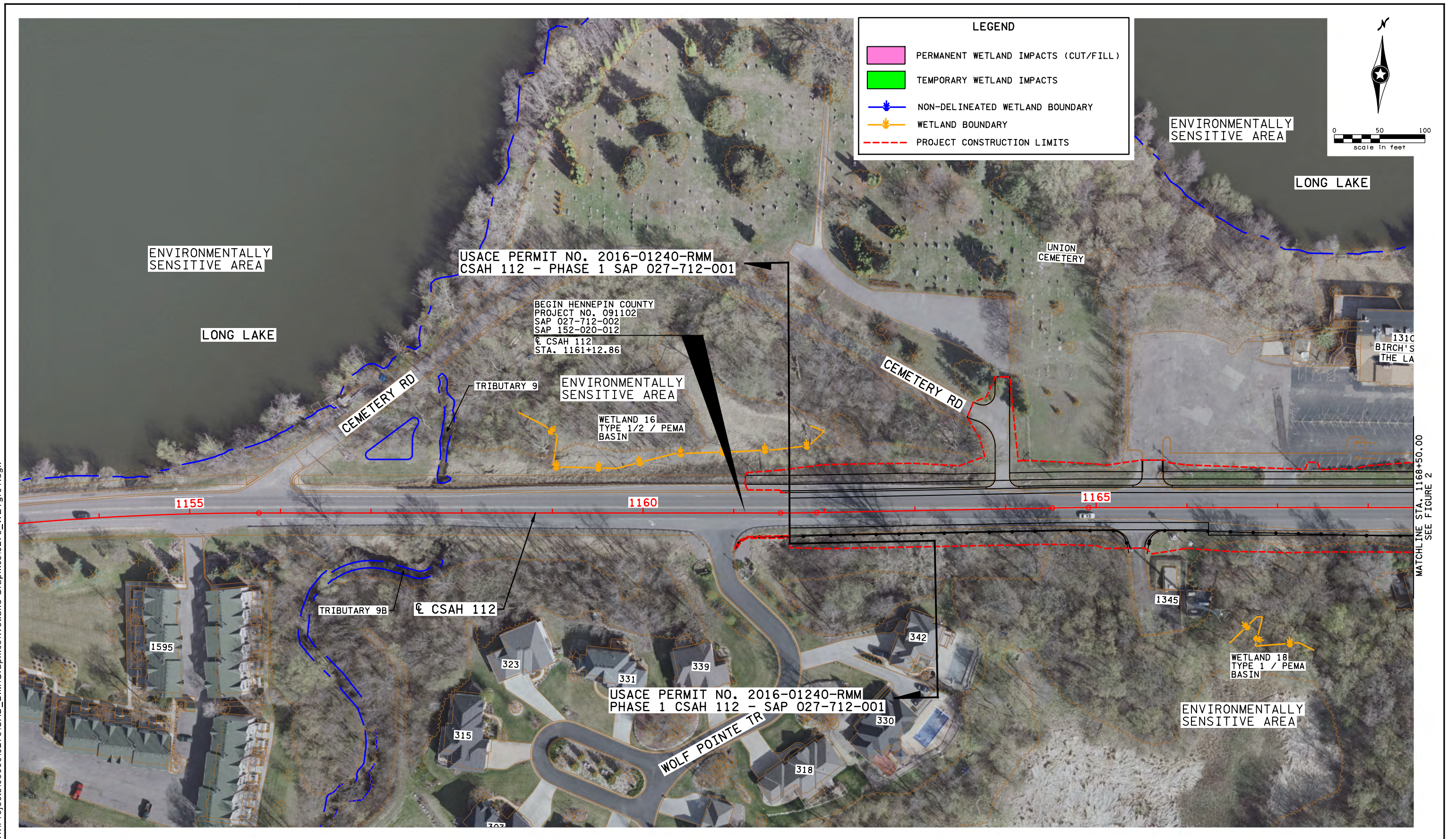


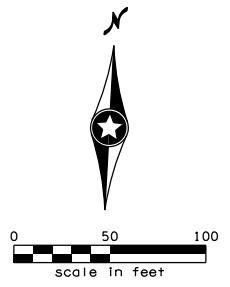
Figure 2

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LEGEND

- PERMANENT WETLAND IMPACTS (CUT/FILL)
- TEMPORARY WETLAND IMPACTS
- NON-DELINEATED WETLAND BOUNDARY
- WETLAND BOUNDARY
- PROJECT CONSTRUCTION LIMITS



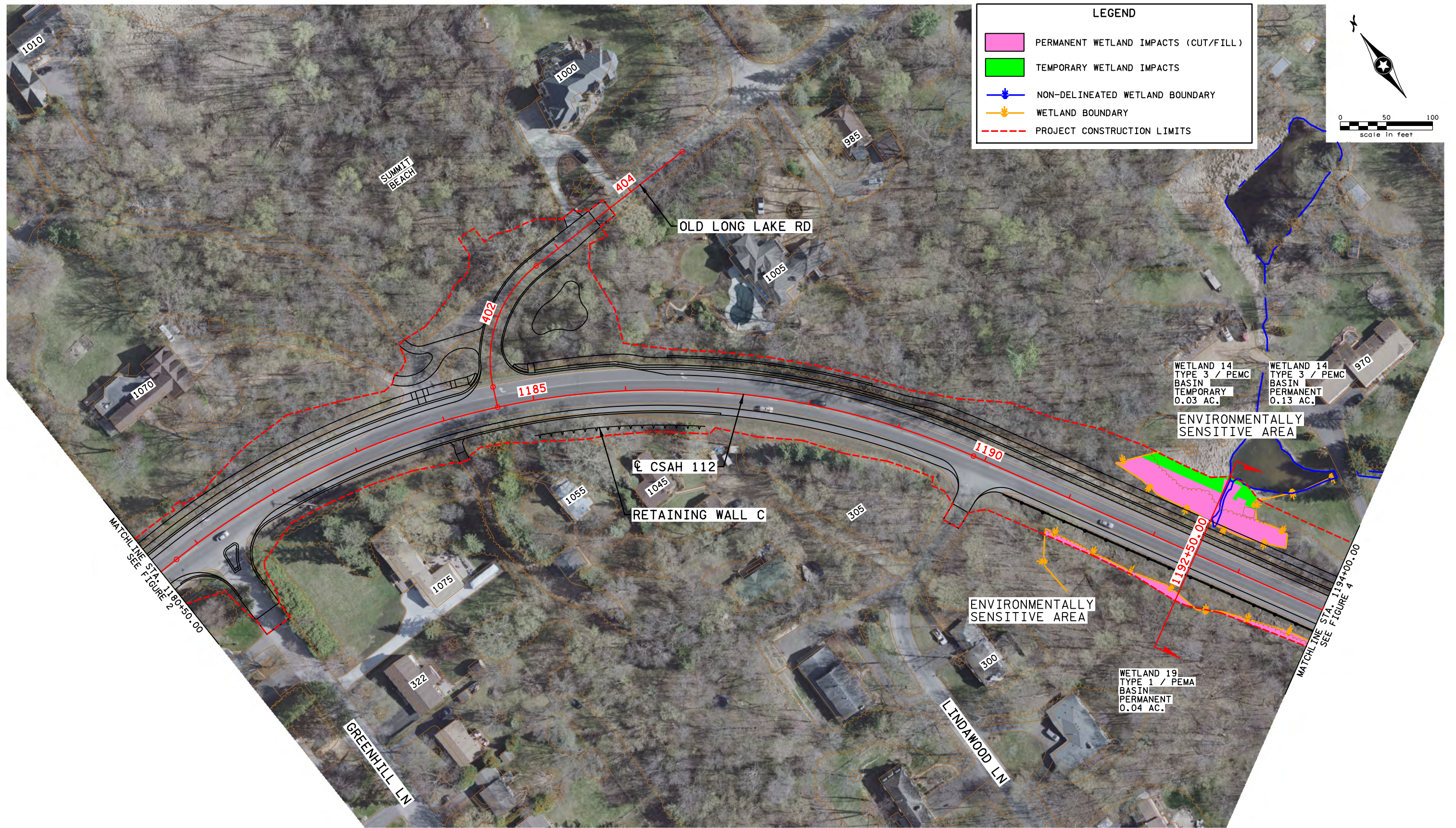
Aquatic Resources Impact Map

CSAH 112 FROM WOLF POINTE TRAIL TO WAYZATA BLVD / TH 12 EXIT RAMP
 HENNEPIN COUNTY NO. 091102; 027-712-002

Job #9275
 4/10/2017

Figure 3

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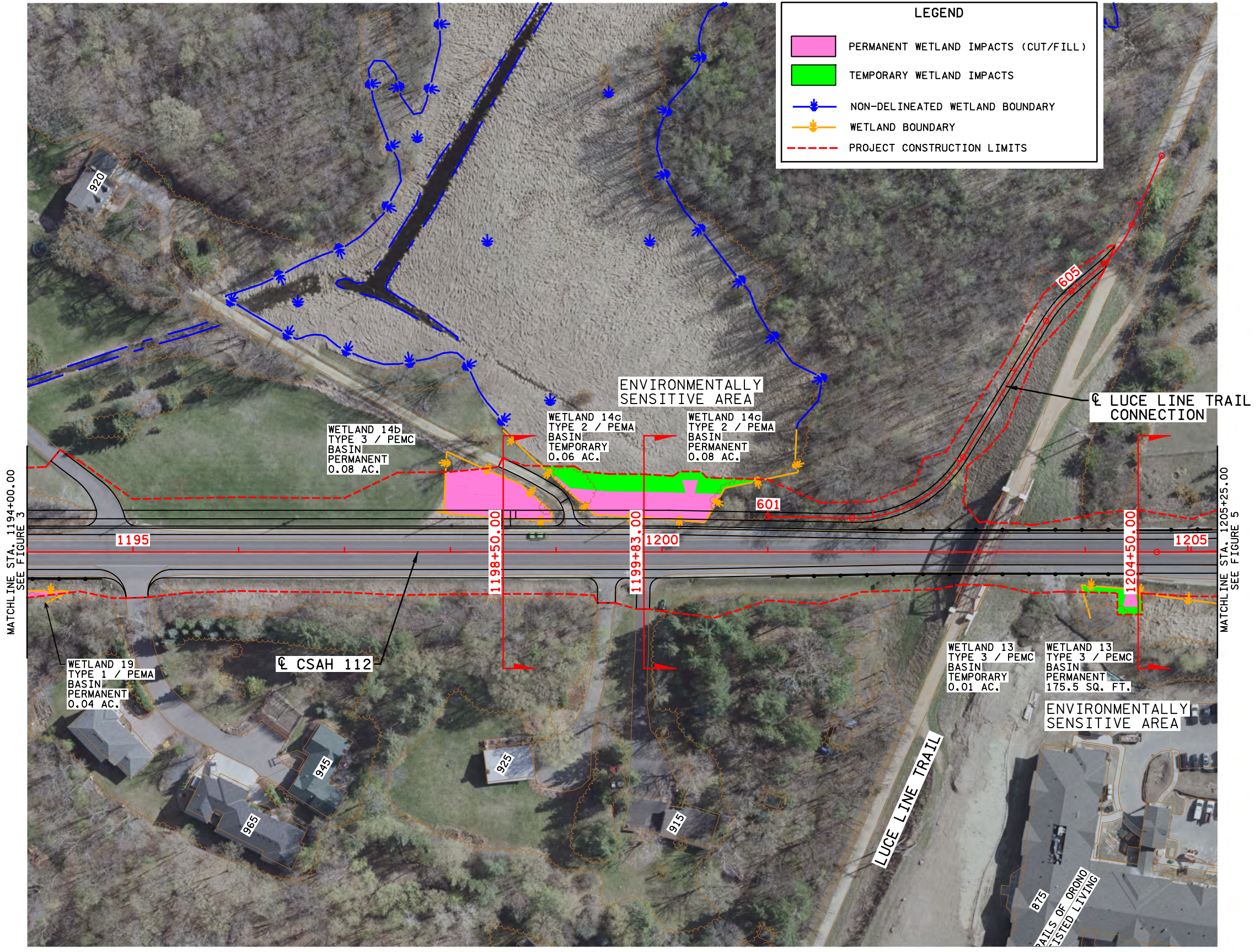
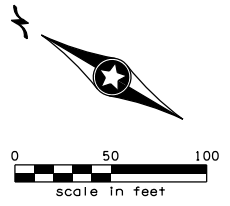
Aquatic Resources Impact Map

CSAH 112 FROM WOLF POINTE TRAIL TO WAYZATA BLVD / TH 12 EXIT RAMP
HENNEPIN COUNTY NO. 091102; 027-712-002

Job #9275
4/10/2017

Figure 4

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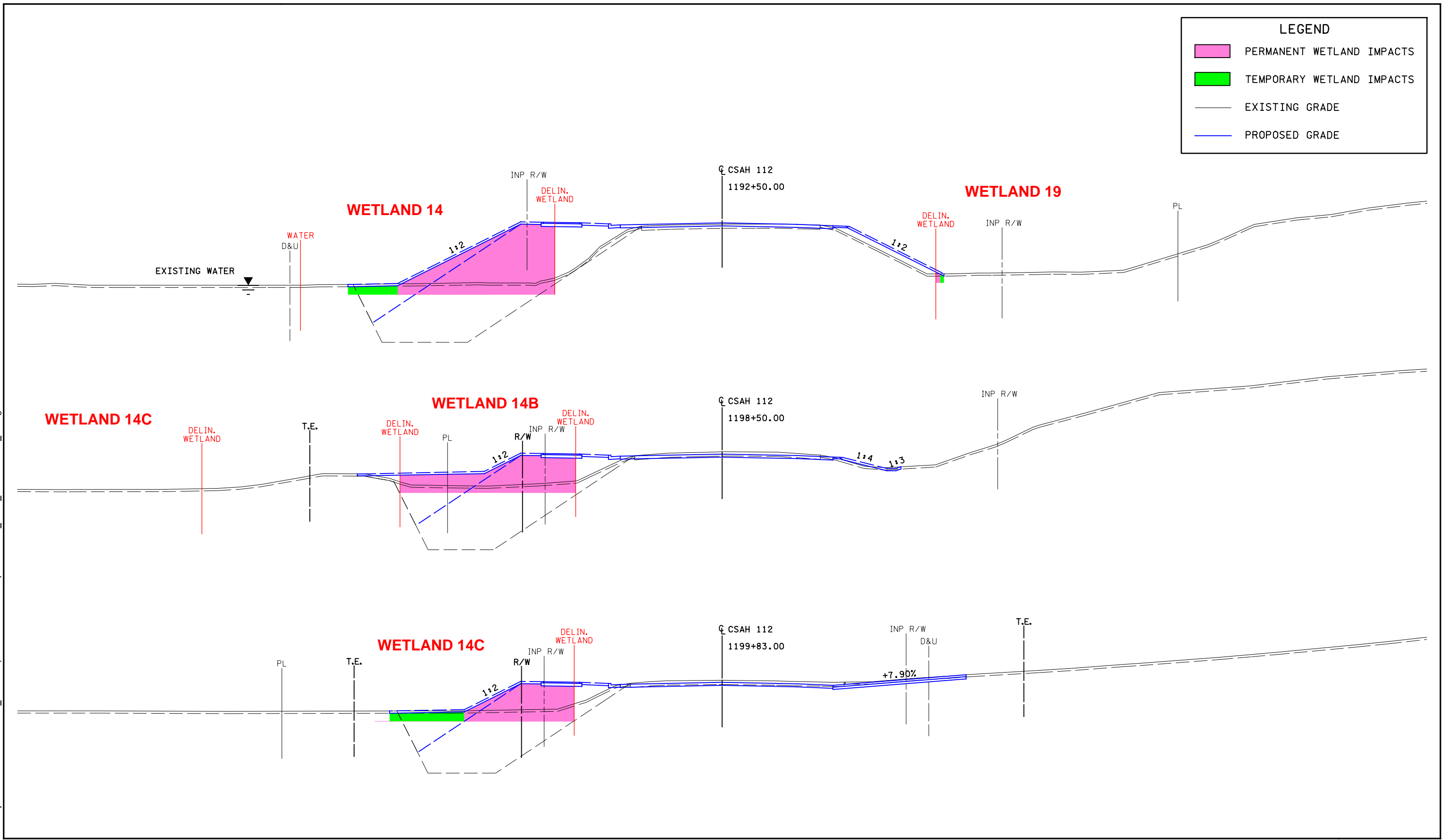
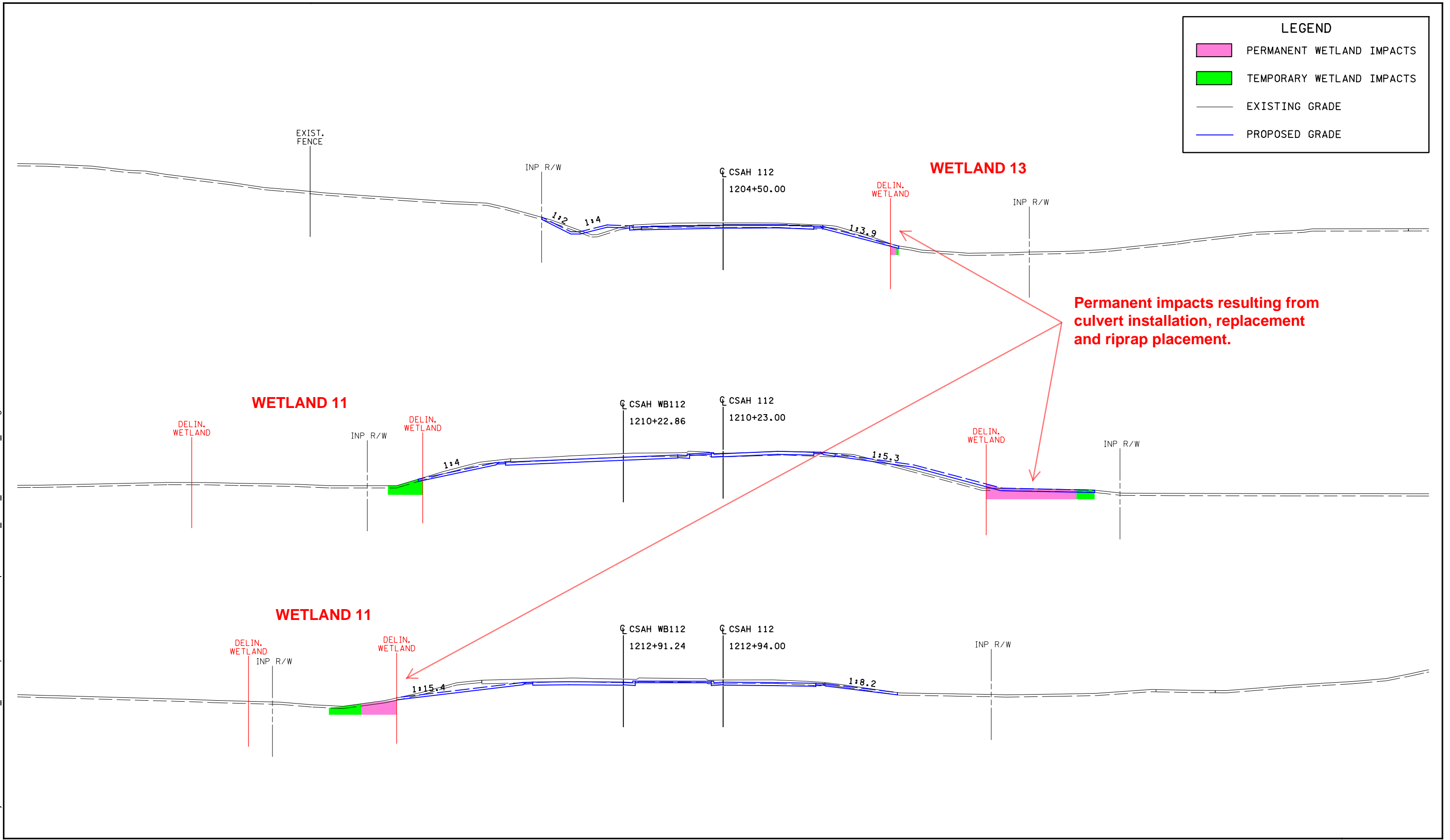
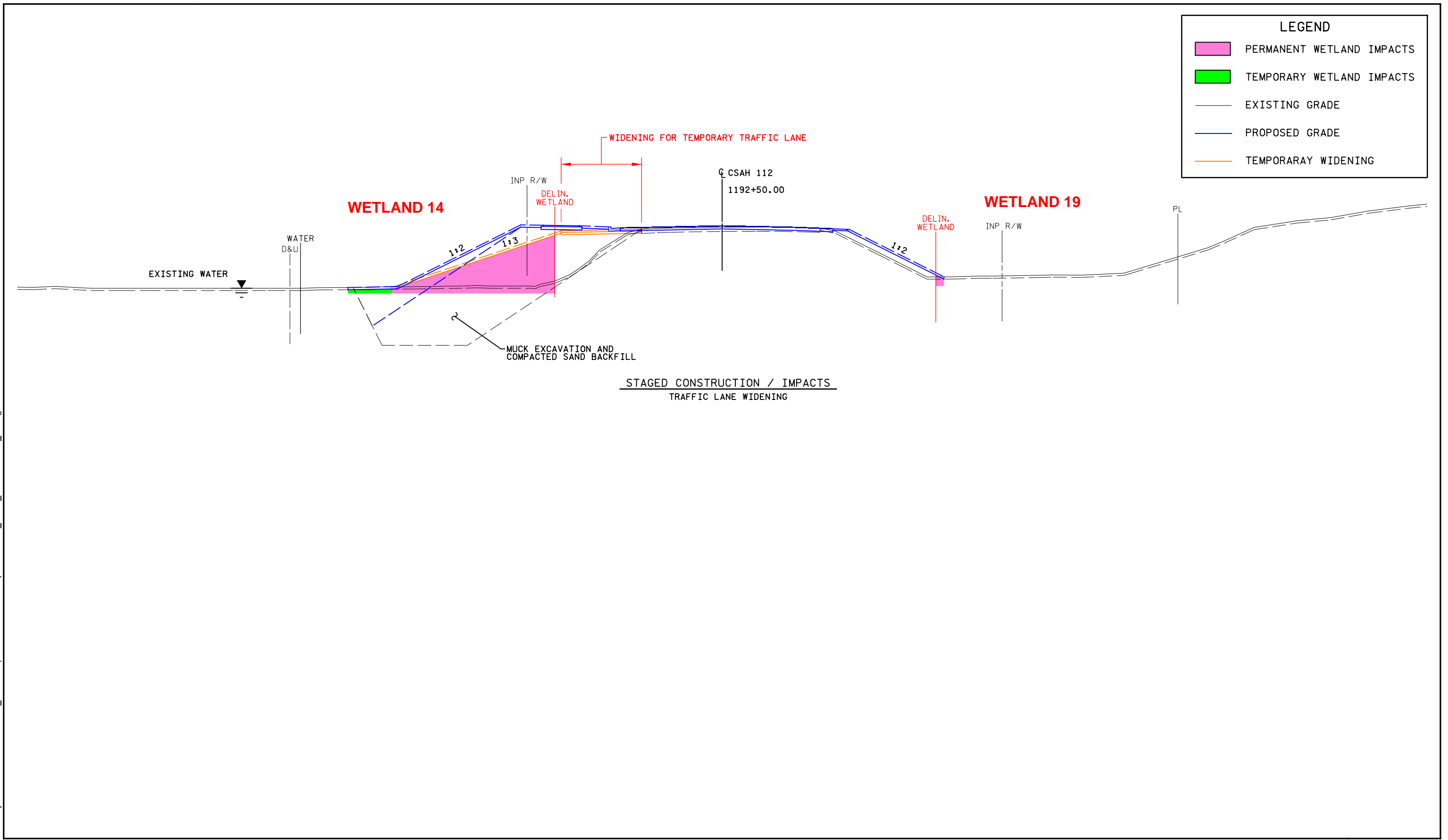


Figure 7

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Aquatic Resources Impact Cross Sections

CSAH 112 FROM WOLF POINTE TRAIL TO WAYZATA BLVD / TH 12 EXIT RAMP
HENNEPIN COUNTY NO. 091102; 027-712-002

Job #9275
4/12/2017

Figure 9



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Wetland Buffers

CSAH 112: Wolf Pointe Trail to TH 12 Exit Ramp
SAP 027-712-002
Hennepin County

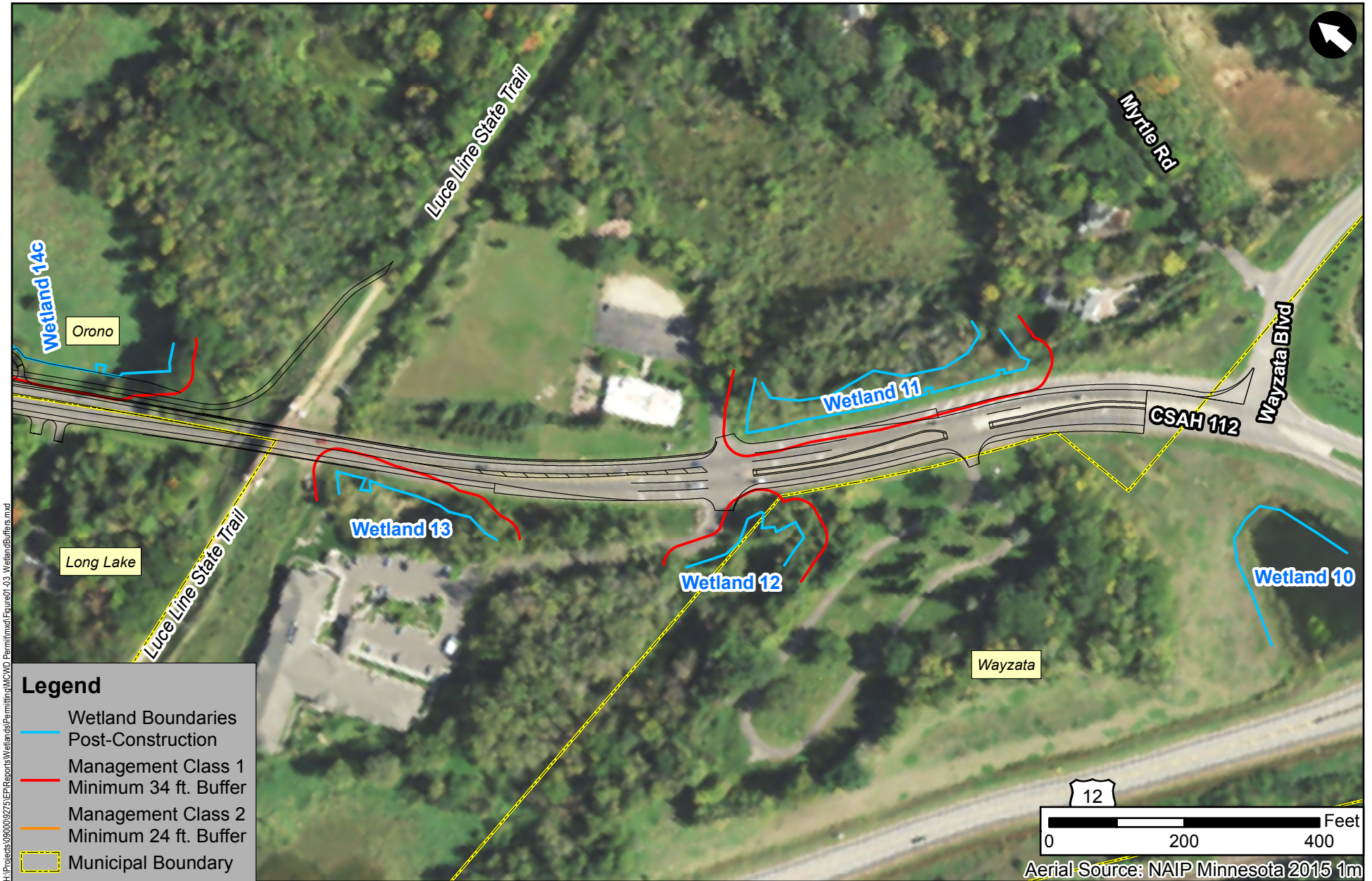
Figure 1



Wetland Buffers

CSAH 112: Wolf Pointe Trail to TH 12 Exit Ramp
 SAP 027-712-002
 Hennepin County

Figure 2



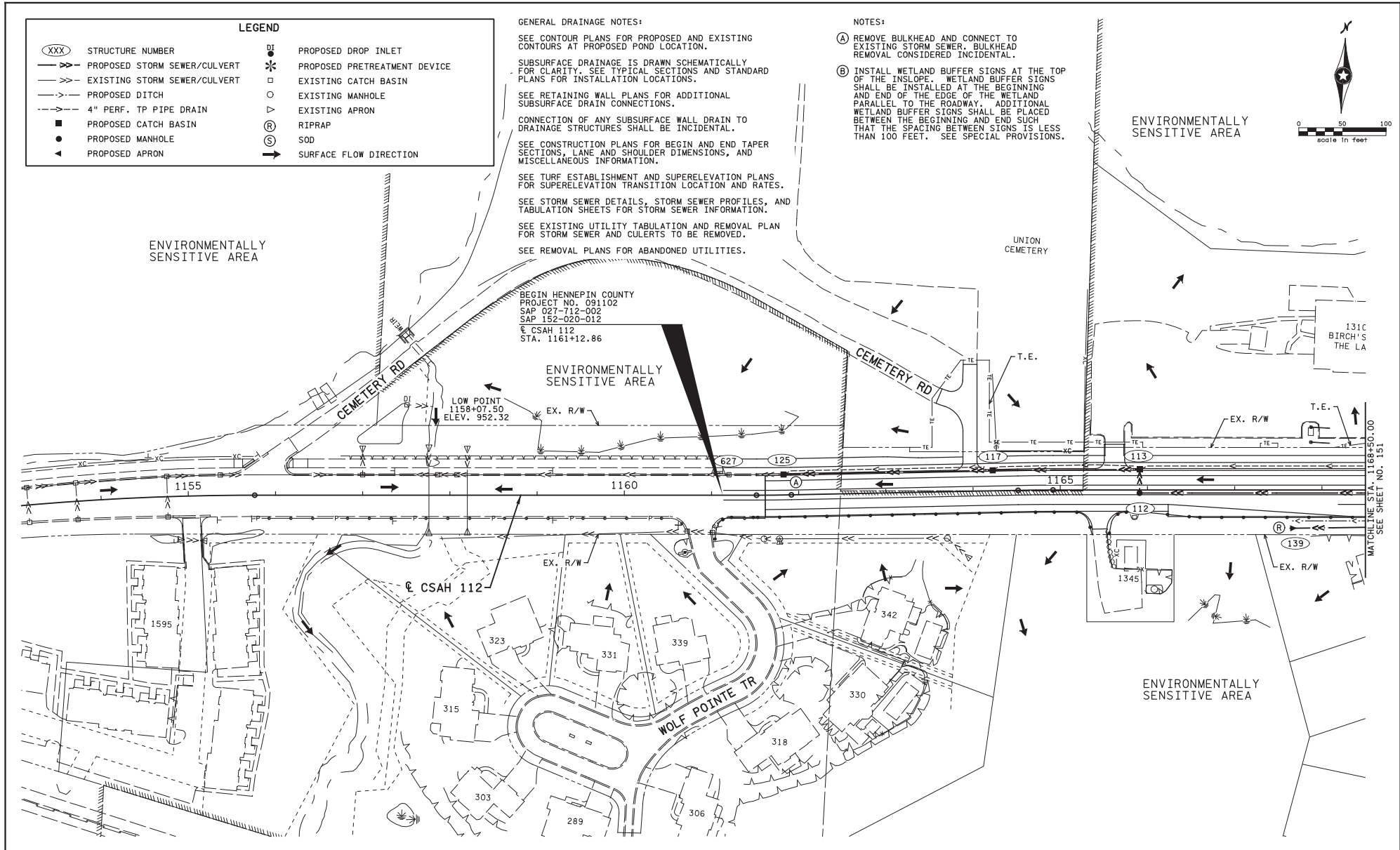
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Wetland Buffers

CSAH 112: Wolf Pointe Trail to TH 12 Exit RAMP
 SAP 027-712-002
 Hennepin County

Figure 3

Attachment 11 - Wetland Buffer Monumentation Note



LEGEND

(XXX)	STRUCTURE NUMBER	⬇	PROPOSED DROP INLET
—>	PROPOSED STORM SEWER/CULVERT	✱	PROPOSED PRETREATMENT DEVICE
- ->	EXISTING STORM SEWER/CULVERT	□	EXISTING CATCH BASIN
- - -	PROPOSED DITCH	▽	EXISTING MANHOLE
- - - -	4" PERF. TP PIPE DRAIN	○	EXISTING APRON
■	PROPOSED CATCH BASIN	(R)	RIPRAP
●	PROPOSED MANHOLE	(S)	SOD
▲	PROPOSED APRON	→	SURFACE FLOW DIRECTION

GENERAL DRAINAGE NOTES:

SEE CONTOUR PLANS FOR PROPOSED AND EXISTING CONTOURS AT PROPOSED POND LOCATION.

SUBSURFACE DRAINAGE IS DRAWN SCHEMATICALLY FOR CLARITY. SEE TYPICAL SECTIONS AND STANDARD PLANS FOR INSTALLATION LOCATIONS.

SEE RETAINING WALL PLANS FOR ADDITIONAL SUBSURFACE DRAIN CONNECTIONS.

CONNECTION OF ANY SUBSURFACE WALL DRAIN TO DRAINAGE STRUCTURES SHALL BE INCIDENTAL.

SEE CONSTRUCTION PLANS FOR BEGIN AND END TAPER SECTIONS, LANE AND SHOULDER DIMENSIONS, AND MISCELLANEOUS INFORMATION.

SEE TURF ESTABLISHMENT AND SUPERELEVATION PLANS FOR SUPERELEVATION TRANSITION LOCATION AND RATES.

SEE STORM SEWER DETAILS, STORM SEWER PROFILES, AND TABULATION SHEETS FOR STORM SEWER INFORMATION.

SEE EXISTING UTILITY TABULATION AND REMOVAL PLAN FOR STORM SEWER AND CULVERTS TO BE REMOVED.

SEE REMOVAL PLANS FOR ABANDONED UTILITIES.

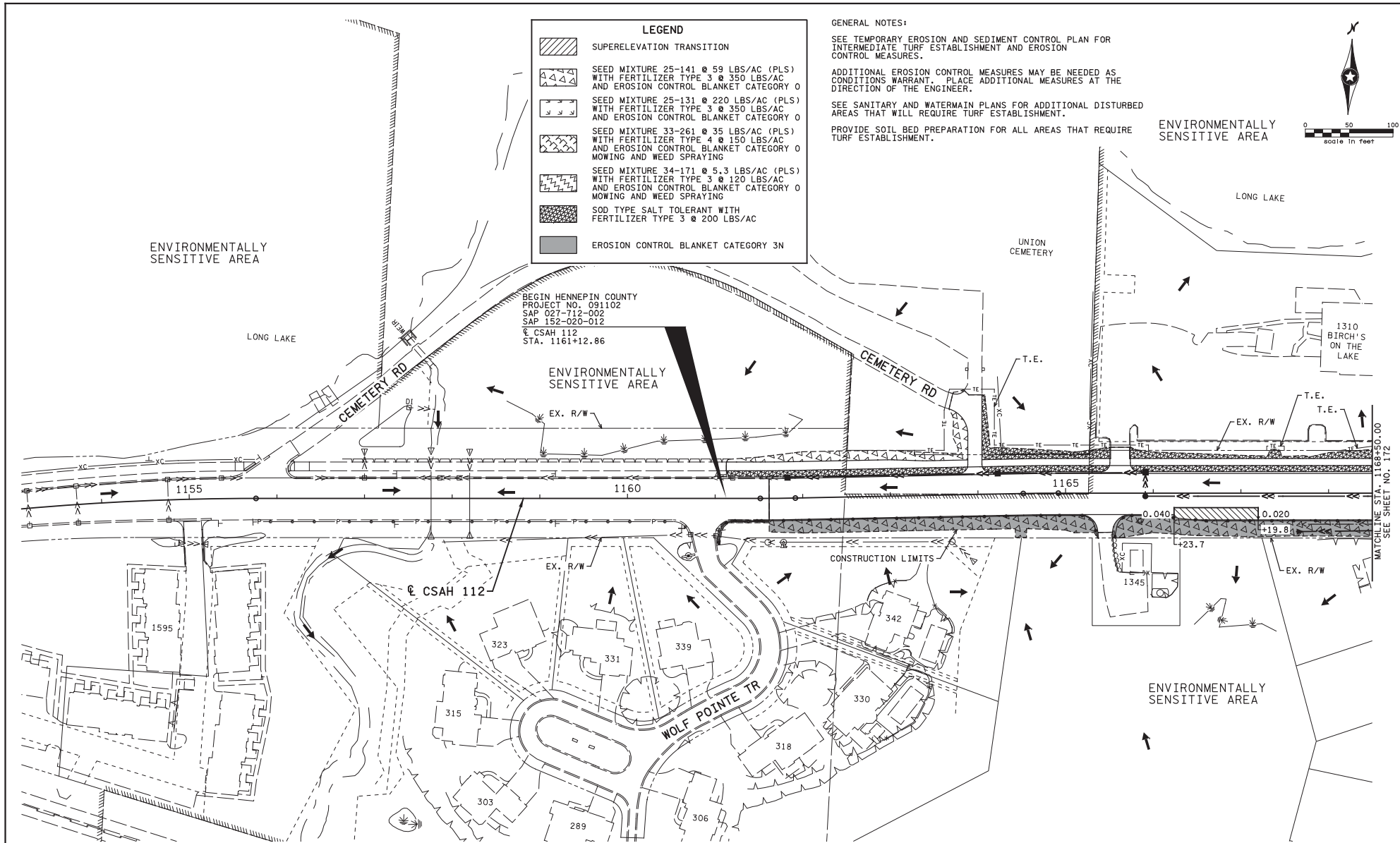
NOTES:


(A) REMOVE BULKHEAD AND CONNECT TO EXISTING STORM SEWER. BULKHEAD REMOVAL CONSIDERED INCIDENTAL.

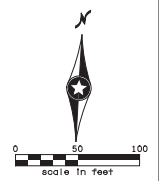
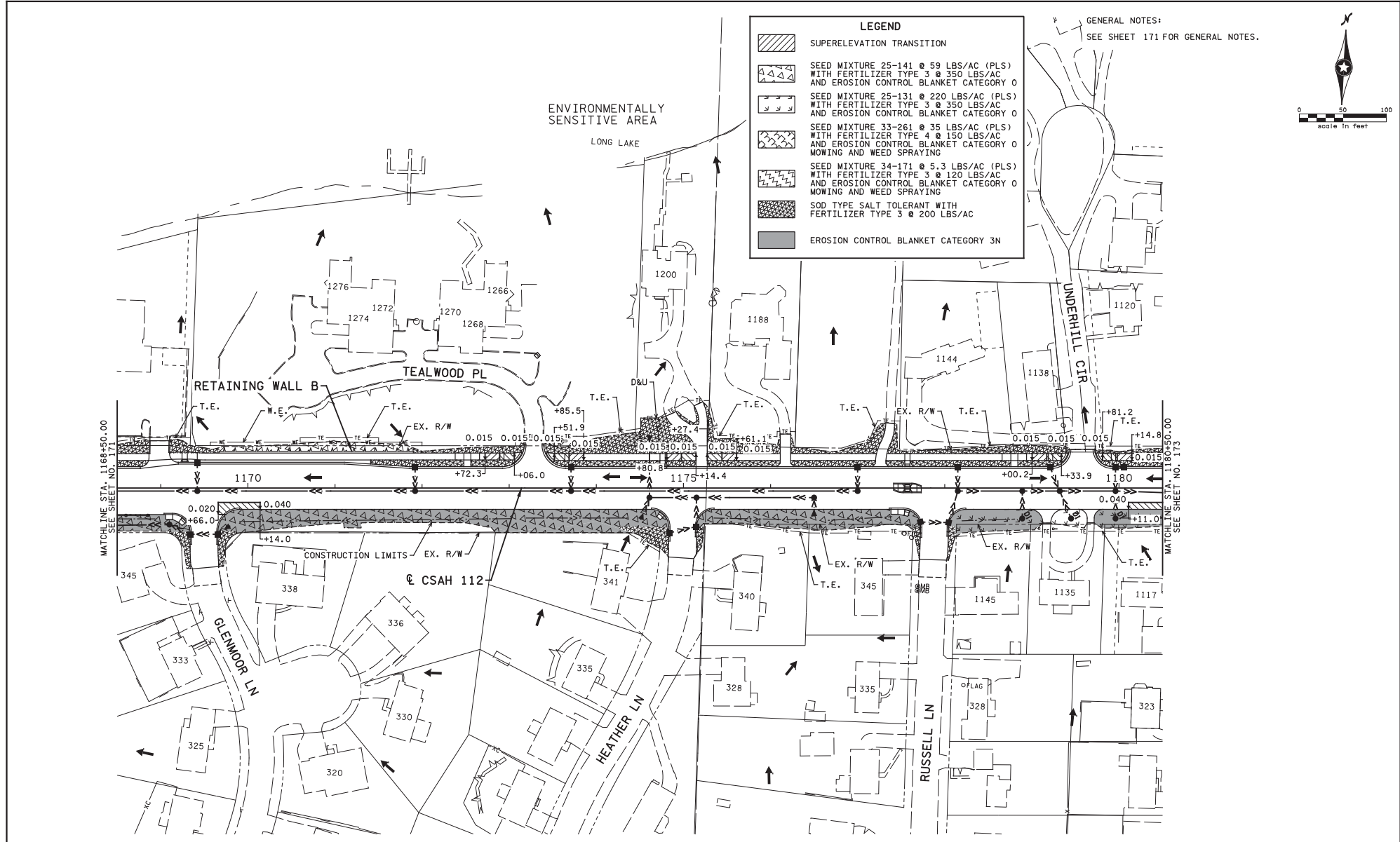
(B) INSTALL WETLAND BUFFER SIGNS AT THE TOP OF THE SLOPE. WETLAND BUFFER SIGNS SHALL BE INSTALLED AT THE BEGINNING AND END OF THE EDGE OF THE WETLAND PARALLEL TO THE ROADWAY. ADDITIONAL WETLAND BUFFER SIGNS SHALL BE PLACED BETWEEN THE BEGINNING AND END SUCH THAT THE SPACING BETWEEN SIGNS IS LESS THAN 100 FEET. SEE SPECIAL PROVISIONS.


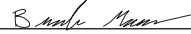
	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.		DESIGN BY: J. SEIDL	DRAINAGE PLAN	SHEET
	JACQUES A. DUVAL, PROFESSIONAL ENGINEER LICENSE NO. 51399		CAD BY: J. SEIDL		
DATE: XX/XX/XX		CHECKED BY: D. POWER	LAST REVISION:	281	

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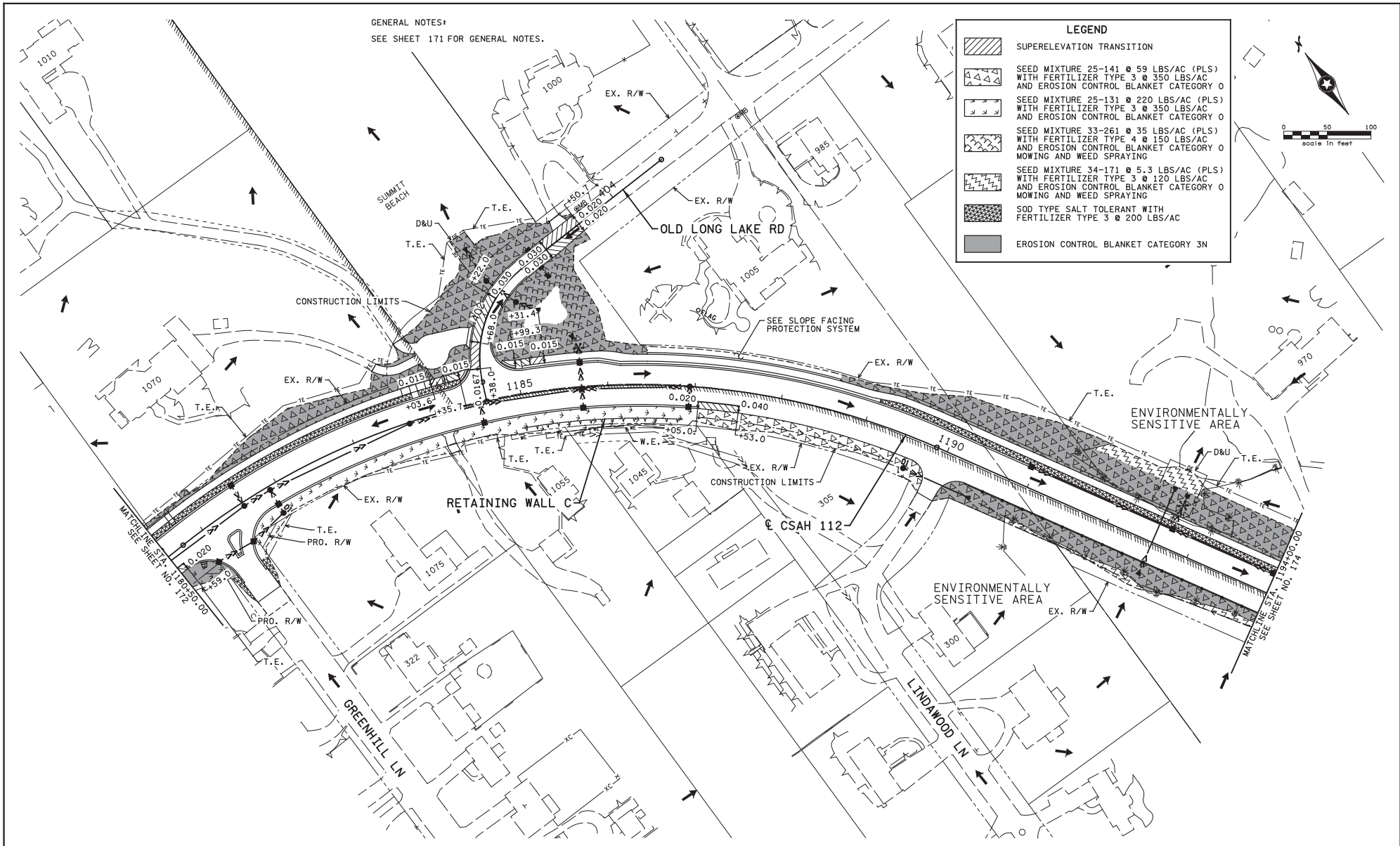


 <p>I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.</p> <p><i>Brandon J. Maas</i> BRANDON J. MAAS, PROFESSIONAL ENGINEER SRF CONSULTING GROUP, INC.</p>	53788 LICENSE NO.	09/08/17 DATE	DESIGN BY: <u>B. MAAS</u> CAD BY: <u>J. VAN BECK</u> CHECKED BY: <u>N. WILL</u> LAST REVISION: _____	TURF ESTABLISHMENT & SUPERELEVATION PLAN CSAH 112 / HENNEPIN COUNTY PROJECT NO. 091102 SAP 027-712-002 & SAP 152-020-012	SHEET 171 285
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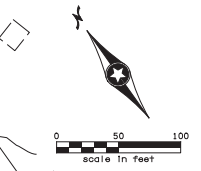
	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.		DESIGN BY: <u>B. MAAS</u> CAD BY: <u>J. VAN BECK</u> CHECKED BY: <u>N. WILL</u> LAST REVISION: _____	TURF ESTABLISHMENT & SUPERELEVATION PLAN CSAH 112 / HENNEPIN COUNTY PROJECT NO. 091102 SAP 027-712-002 & SAP 152-020-012	SHEET 172 285
	 BRANDON J. MAAS, PROFESSIONAL ENGINEER SRP CONSULTING GROUP, INC.	53788 LICENSE NO.	09/08/17 DATE		

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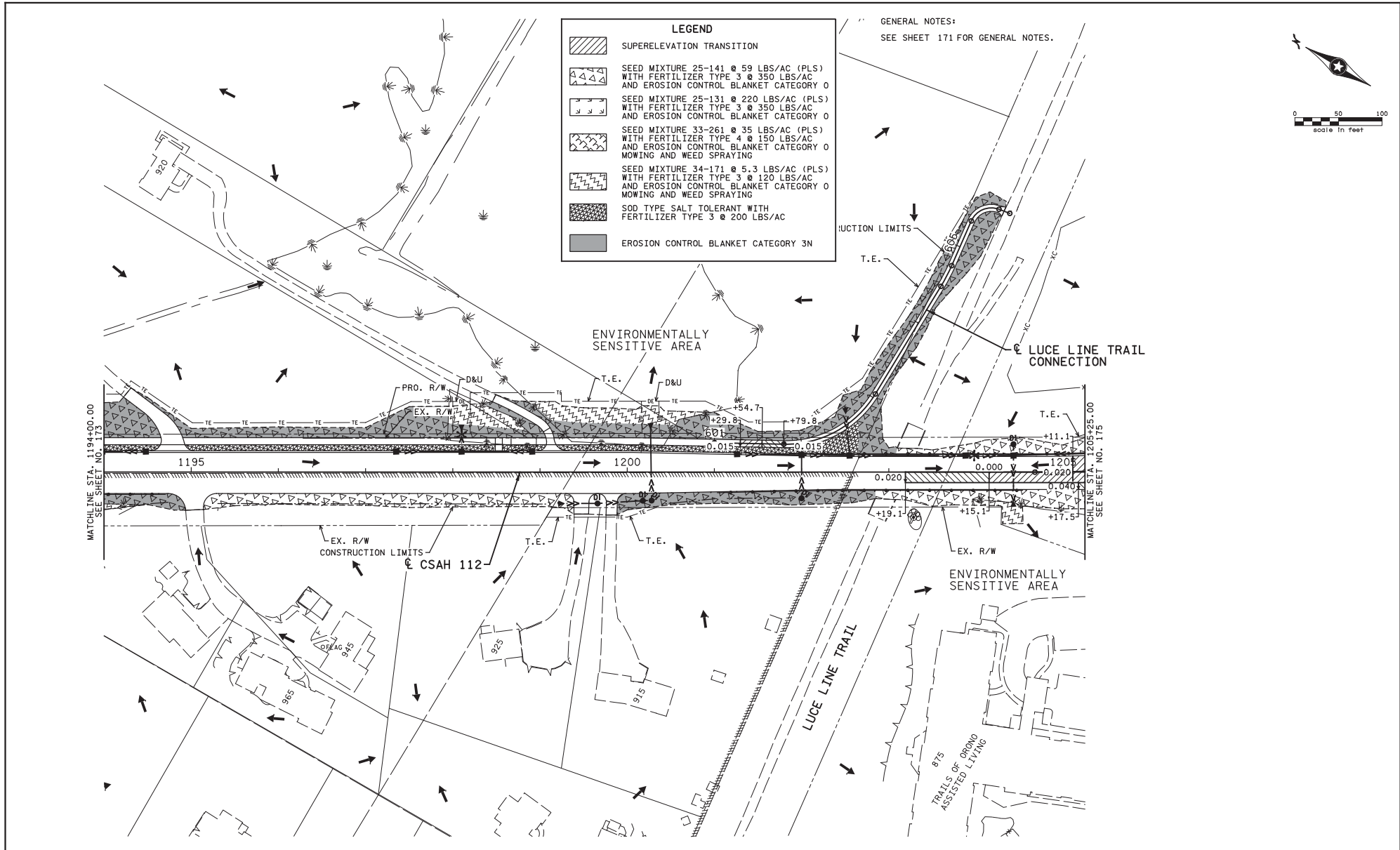
GENERAL NOTES:
SEE SHEET 171 FOR GENERAL NOTES.

LEGEND	
	SUPERELEVATION TRANSITION
	SEED MIXTURE 25-141 @ 59 LBS/AC (PLS) WITH FERTILIZER TYPE 3 @ 350 LBS/AC AND EROSION CONTROL BLANKET CATEGORY 0
	SEED MIXTURE 25-131 @ 220 LBS/AC (PLS) WITH FERTILIZER TYPE 3 @ 350 LBS/AC AND EROSION CONTROL BLANKET CATEGORY 0
	SEED MIXTURE 33-261 @ 35 LBS/AC (PLS) WITH FERTILIZER TYPE 4 @ 150 LBS/AC AND EROSION CONTROL BLANKET CATEGORY 0 MOWING AND WEED SPRAYING
	SEED MIXTURE 34-171 @ 5.3 LBS/AC (PLS) WITH FERTILIZER TYPE 3 @ 120 LBS/AC AND EROSION CONTROL BLANKET CATEGORY 0 MOWING AND WEED SPRAYING
	SOD TYPE SALT TOLERANT WITH FERTILIZER TYPE 3 @ 200 LBS/AC
	EROSION CONTROL BLANKET CATEGORY 3N



	I HEREBY CERTIFY THAT THIS PLAN 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.			DESIGN BY: <u>B. MAAS</u> CAD BY: <u>J. VAN BECK</u> CHECKED BY: <u>N. WILL</u> LAST REVISION: _____	TURF ESTABLISHMENT & SUPERELEVATION PLAN CSAH 112 / HENNEPIN COUNTY PROJECT NO. 091102 SAP 027-712-002 & SAP 152-020-012	SHEET 173 285
	BRANDON J. MAAS, PROFESSIONAL ENGINEER <small>SRF CONSULTING GROUP, INC</small>	53788 LICENSE NO.	09/08/17 DATE			

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	I HEREBY CERTIFY THAT THIS PLAN 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.	DESIGN BY: B. MAAS CAD BY: J. VAN BECK CHECKED BY: N. WILL LAST REVISION:	TURF ESTABLISHMENT & SUPERELEVATION PLAN	SHEET
	BRANDON J. MAAS, PROFESSIONAL ENGINEER <small>SRF CONSULTING GROUP, INC</small>	53788 LICENSE NO.	09/08/17 DATE	CSAH 112 / HENNEPIN COUNTY PROJECT NO. 091102 SAP 027-712-002 & SAP 152-020-012

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Attachment 13 - Drainage Plan (6 pages)

WATER RESOURCES NOTES

THE FOLLOWING NOTES GIVE INFORMATION ABOUT CRITICAL FEATURES AND ELEVATIONS FOR THE DRAINAGE ON THIS PROJECT:

1.CHANGING THE FLOW DIRECTION SHOWN ON THE PLANS COULD HAVE ADVERSE EFFECTS OFF THE PROJECT CORRIDOR. DIRECTION CHANGES SHOULD BE REVIEWED WITH THE HYDRAULICS ENGINEERS.

2.SPECIAL STRUCTURES INCLUDED IN THESE DRAINAGE PLANS:

STRUCTURE 262 (DESIGN SPECIAL 1) - OUTLET CONTROL STRUCTURE FOR LONG LAKE POND. THIS STRUCTURE PROVIDES PRETREATMENT OF STORMWATER RUNOFF VIA SEDIMENTATION. THE CAPACITY OF THE 6" ORIFACE IN COMBINATION WITH RECTANGULAR WEIR PROVIDES RATE CONTROL.

STRUCTURES 242, 329, 347, 357, 427, 402, 504, AND 514 (DESIGN SPECIAL 2) - WATER QUALITY BAFFLE. STEEL BAFFLE IN A SUMPED MANHOLE PROVIDES PRETREATMENT OF STORMWATER RUNOFF FROM THE PROPOSED PROJECT BEFORE DISCHARGING TO SURFACE WATERS.

3.PONDING AREAS (SEE THE DRAINAGE PLANS FOR LOCATIONS)

EXISTING CEMETERY DRY POND
 BOTTOM = 944.5 FT, HWL = 947.3 FT
 OUTLET ELEVATION IS CONTROLLED BY A PERFORATED PE PIPE. THIS POND PROVIDES WATER QUALITY TREATMENT VIA FILTRATION AND RATE CONTROL PRIOR TO DISCHARGING TO LONG LAKE CREEK.

LONG LAKE POND (WET POND)
 BOTTOM = 980.0 FT, NWL = 983.5 FT, HWL = 987.1 FT
 OUTLET ELEVATION IS CONTROLLED BY STRUCTURE 263 (DESIGN SPECIAL 1). THIS POND PROVIDES WATER QUALITY TREATMENT VIA SEDIMENTATION AND RATE CONTROL PRIOR TO DISCHARGING TO LONG LAKE CREEK.

4.ENVIRONMENTALLY SENSITIVE AREAS

AREAS MARKED "ENVIRONMENTALLY SENSITIVE AREAS" IN THIS PLAN ARE TO BE TREATED AS SUCH. BEST MANAGEMENT PRACTICES ARE TO BE USED FOR EROSION AND SEDIMENT CONTROL THROUGHOUT THE JOB SITE.

5.THE FOLLOWING CONSTRUCTION PERMITS APPLY:

NPDES
 U.S. CORPS OF ENGINEERS
 WETLAND CONSERVATION ACT
 MINNEHAHA CREEK WATERSHED DISTRICT

PLEASE REFER TO THE PERMIT APPLICATION AND PERMITS FOR SPECIAL CONDITIONS.

6.NPDES PERMIT:

THE WESTBOUND DRIVING LANES SEGMENT BETWEEN E.B. CSAH 112 STATIONS 1161+13 AND 1177+00 WILL DRAIN THROUGH PROPOSED STORM SEWER BEFORE DISCHARGING TO THE EXISTING CEMETERY DRY POND.

THE EASTBOUND DRIVING LANES SEGMENT BETWEEN E.B. CSAH 112 STATIONS 1161+13 AND 1174+33 WILL DRAIN TO A ROADSIDE DITCH AND THROUGH PROPOSED STORM SEWER BEFORE DISCHARGING TO A WETLAND WEST OF GLENMOOR LANE. STORMWATER WILL BE TREATED VIA A WATER QUALITY BAFFLE BEFORE DISCHARGING TO THE WETLAND.

THE EASTBOUND DRIVING LANES SEGMENT BETWEEN E.B. CSAH 112 STATIONS 1174+33 AND 1177+52 WILL DRAIN TO A ROADSIDE DITCH AND THROUGH PROPOSED STORM SEWER BEFORE DISCHARGING TO AN EXISTING SWALE NORTH OF THE INTERSECTION WITH HEATHER LANE.

THE ROADWAY SEGMENT BETWEEN E.B. CSAH 112 STATIONS 1177+52 AND 1186+95 WILL DRAIN THROUGH PROPOSED STORM SEWER BEFORE DISCHARGING TO LONG LAKE POND.


THE EASTBOUND DRIVING LANES SEGMENT BETWEEN E.B. CSAH 112 STATIONS 1186+95 AND 1216+00 WILL DRAIN TO A ROADSIDE DITCH AND THROUGH PROPOSED STORM SEWER EVENTUALLY DISCHARGING TO NEARBY WETLANDS WEST OF CSAH 112. STORMWATER WILL BE PRETREATED VIA A WATER QUALITY BAFFLE BEFORE DISCHARGING TO WETLANDS.

THE WESTBOUND DRIVING LANES SEGMENT BETWEEN E.B. CSAH 112 STATIONS 1186+95 AND 1216+00 WILL DRAIN THROUGH PROPOSED STORM SEWER BEFORE DISCHARGING TO NEARBY WETLANDS EAST OF CSAH 112. STORMWATER WILL BE PRETREATED VIA A WATER QUALITY BAFFLE BEFORE DISCHARGING TO WETLANDS.

7.EXISTING STORM SEWER REMOVAL:

IT IS THE INTENT OF THE DRAINAGE DESIGN TO FACILITATE REMOVAL OF THE MAJORITY OF EXISTING STORM SEWER UNDER NEW PAVEMENT AS SHOWN IN THE REMOVALS TABULATION.

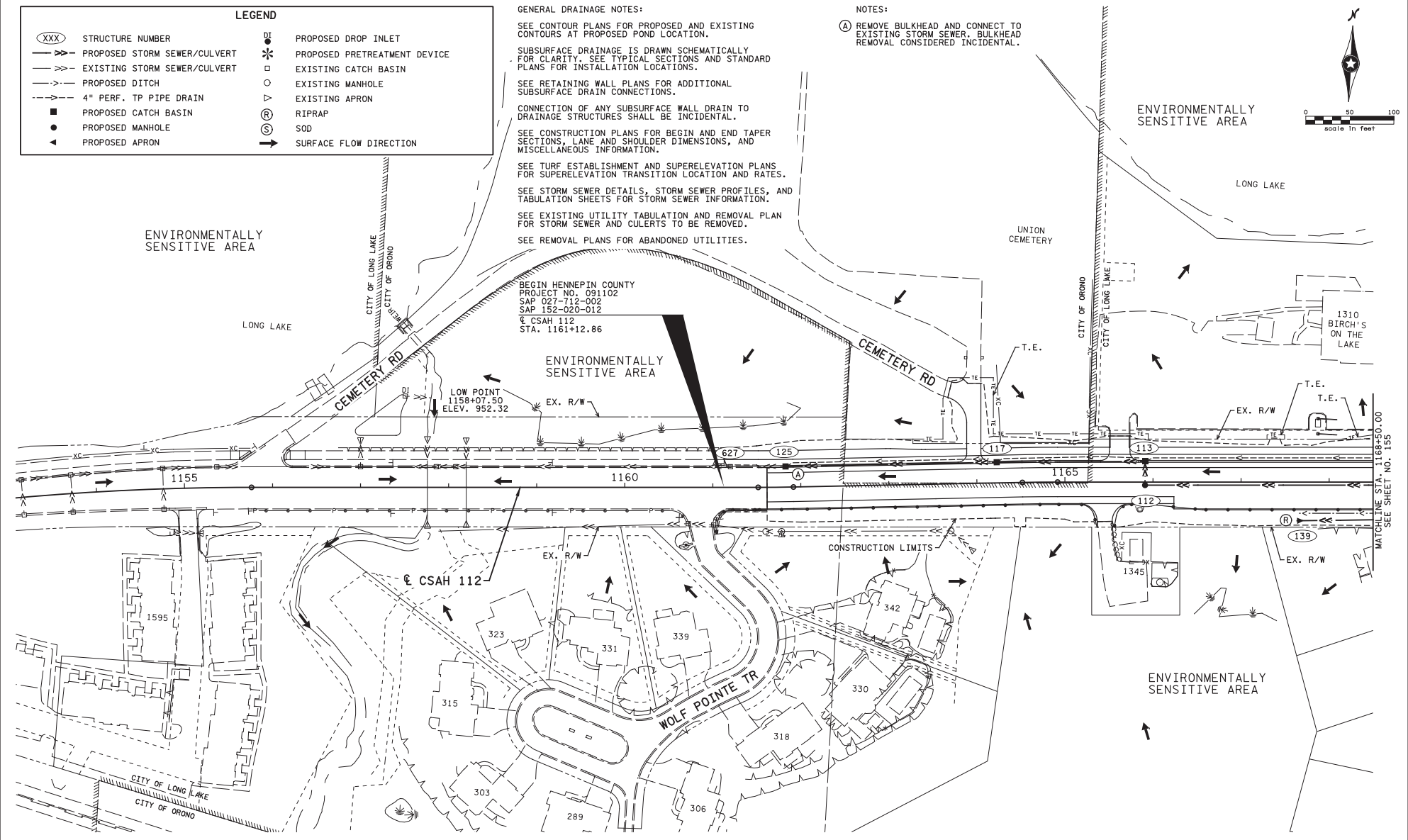
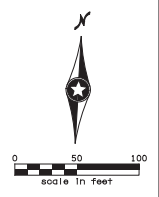
CONNECT STRUCTURE 125 TO THE EXISTING PIPE STUB OUT FROM STRUCTURE 627. REMOVE EXISTING PIPE BULK HEAD PRIOR TO CONNECTION.

	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	DESIGN BY: <u>D. POWER</u> CAD BY: <u>D. POWER</u> CHECKED BY: <u>J. DUVAL</u> LAST REVISION: _____	WATER RESOURCES NOTES	SHEET
	JACQUES A. DUVAL, PROFESSIONAL ENGINEER SRF CONSULTING GROUP, INC.	51399 09/08/17 LICENSE NO. DATE	CSAH 112 / HENNEPIN COUNTY PROJECT NO. 091102 SAP 027-712-002 & SAP 152-020-012	153 285

LEGEND	
(XXX)	STRUCTURE NUMBER
	PROPOSED STORM SEWER/CULVERT
	EXISTING STORM SEWER/CULVERT
	PROPOSED DITCH
	4" PERF. TP PIPE DRAIN
	PROPOSED CATCH BASIN
	PROPOSED MANHOLE
	PROPOSED APRON
	PROPOSED DROP INLET
	PROPOSED PRETREATMENT DEVICE
	EXISTING CATCH BASIN
	EXISTING MANHOLE
	EXISTING APRON
	RIPRAP
	SOD
	SURFACE FLOW DIRECTION

GENERAL DRAINAGE NOTES:
 SEE CONTOUR PLANS FOR PROPOSED AND EXISTING CONTOURS AT PROPOSED POND LOCATION.
 SUBSURFACE DRAINAGE IS DRAWN SCHEMATICALLY FOR CLARITY. SEE TYPICAL SECTIONS AND STANDARD PLANS FOR INSTALLATION LOCATIONS.
 SEE RETAINING WALL PLANS FOR ADDITIONAL SUBSURFACE DRAIN CONNECTIONS.
 CONNECTION OF ANY SUBSURFACE WALL DRAIN TO DRAINAGE STRUCTURES SHALL BE INCIDENTAL.
 SEE CONSTRUCTION PLANS FOR BEGIN AND END TAPER SECTIONS, LANE AND SHOULDER DIMENSIONS, AND MISCELLANEOUS INFORMATION.
 SEE TURF ESTABLISHMENT AND SUPERELEVATION PLANS FOR SUPERELEVATION TRANSITION LOCATION AND RATES.
 SEE STORM SEWER DETAILS, STORM SEWER PROFILES, AND TABULATION SHEETS FOR STORM SEWER INFORMATION.
 SEE EXISTING UTILITY TABULATION AND REMOVAL PLAN FOR STORM SEWER AND CULVERTS TO BE REMOVED.
 SEE REMOVAL PLANS FOR ABANDONED UTILITIES.

NOTES:
 (A) REMOVE BULKHEAD AND CONNECT TO EXISTING STORM SEWER. BULKHEAD REMOVAL CONSIDERED INCIDENTAL.



	I HEREBY CERTIFY THAT THIS PLAN 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.	DESIGN BY: J. SEIDL CAD BY: J. SEIDL CHECKED BY: D. POWER LAST REVISION:	DRAINAGE PLAN	SHEET
	JACQUES A. DUVAL, PROFESSIONAL ENGINEER LICENSE NO. 51399 DATE 09/08/17	CSAH 112 / HENNEPIN COUNTY PROJECT NO. 091102 SAP 027-712-002 & SAP 152-020-012	154	285

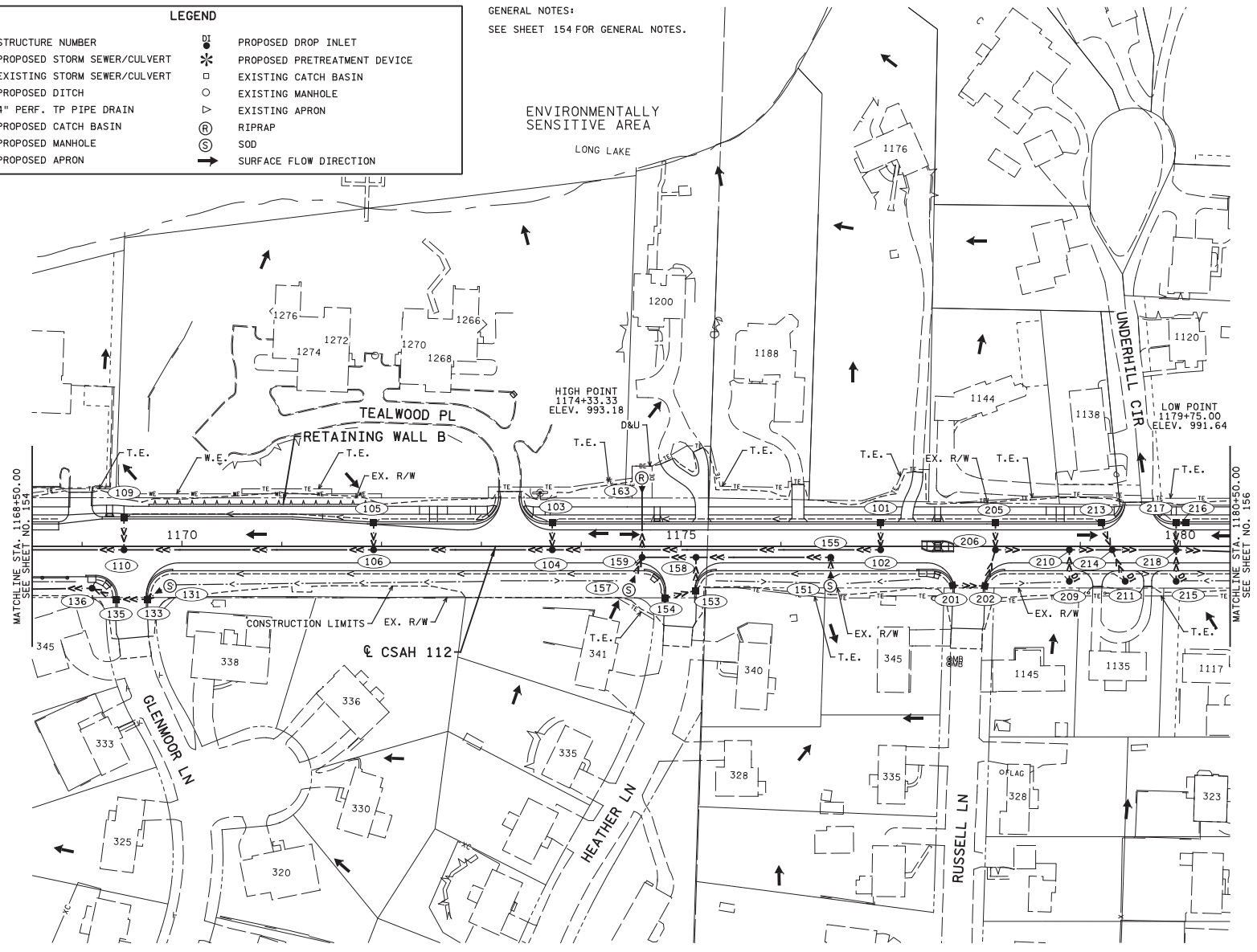
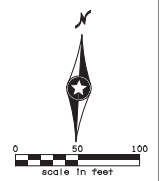
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LEGEND	
(XXX)	STRUCTURE NUMBER
—V—	PROPOSED STORM SEWER/CULVERT
—V—	EXISTING STORM SEWER/CULVERT
—V—	PROPOSED DITCH
—V—	4" PERF. TP PIPE DRAIN
■	PROPOSED CATCH BASIN
●	PROPOSED MANHOLE
▲	PROPOSED APRON
DI	PROPOSED DROP INLET
✱	PROPOSED PRETREATMENT DEVICE
□	EXISTING CATCH BASIN
○	EXISTING MANHOLE
⊙	RIPRAP
⊙	SOD
→	SURFACE FLOW DIRECTION

GENERAL NOTES:
SEE SHEET 154 FOR GENERAL NOTES.

ENVIRONMENTALLY SENSITIVE AREA

LONG LAKE



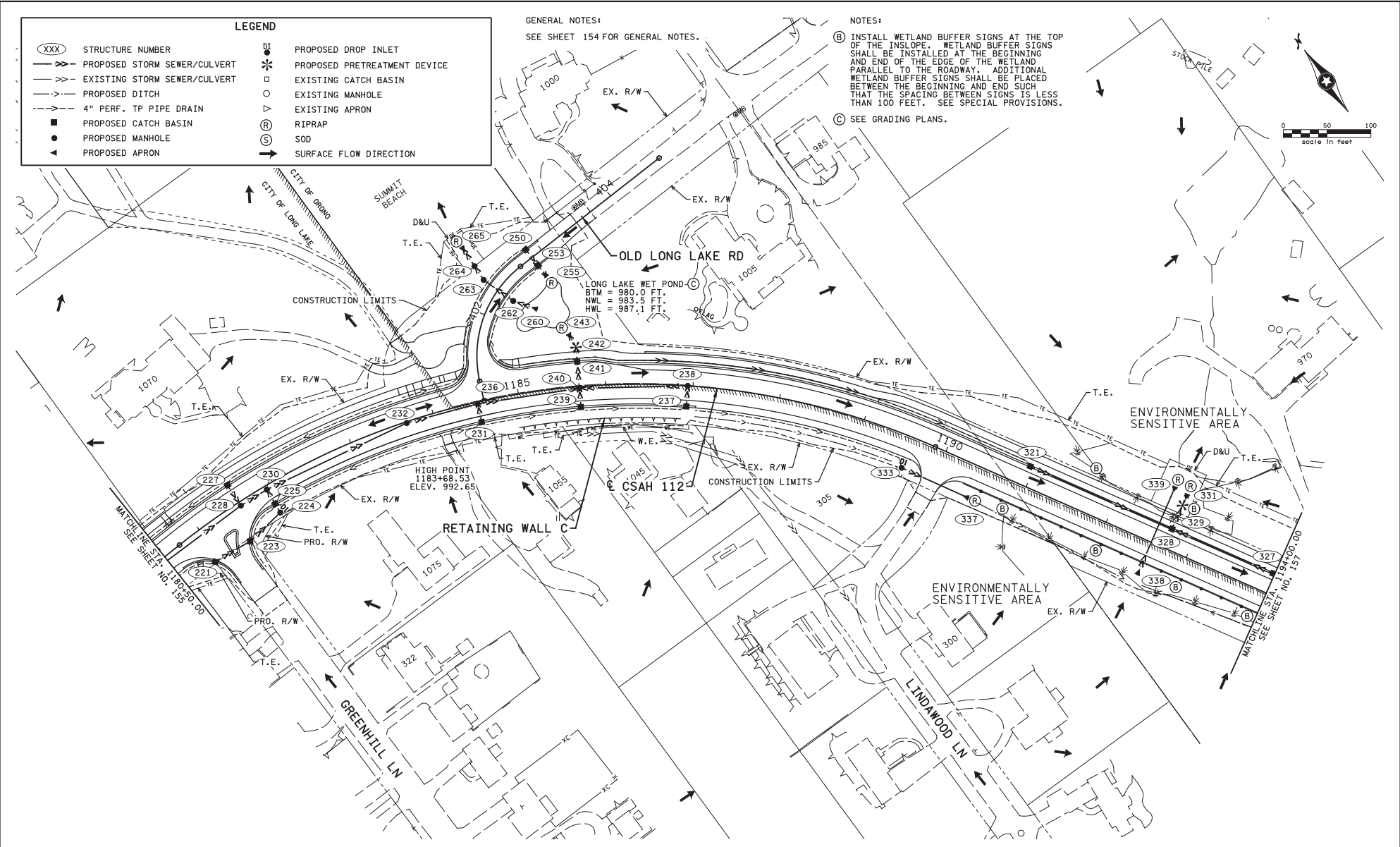
	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.		DESIGN BY: <u>J. SEIDL</u> CAD BY: <u>J. SEIDL</u> CHECKED BY: <u>D. POWER</u> LAST REVISION: _____	DRAINAGE PLAN	SHEET
	JACQUES A. DUVAL, PROFESSIONAL ENGINEER <small>SRF CONSULTING GROUP, INC.</small>	51399 LICENSE NO.	09/08/17 DATE	CSAH 112 / HENNEPIN COUNTY PROJECT NO. 091102 SAP 027-712-002 & SAP 152-020-012	

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LEGEND	
(XXX)	STRUCTURE NUMBER
	PROPOSED STORM SEWER/CULVERT
	EXISTING STORM SEWER/CULVERT
	PROPOSED DITCH
	4" PERF. TP PIPE DRAIN
	PROPOSED CATCH BASIN
	PROPOSED MANHOLE
	PROPOSED APRON
	PROPOSED DROP INLET
	PROPOSED PRETREATMENT DEVICE
	EXISTING CATCH BASIN
	EXISTING MANHOLE
	EXISTING APRON
(R)	RIPRAP
(S)	SOD
	SURFACE FLOW DIRECTION

GENERAL NOTES:
SEE SHEET 154 FOR GENERAL NOTES.

NOTES:
(B) INSTALL WETLAND BUFFER SIGNS AT THE TOP OF THE INSLOPE. WETLAND BUFFER SIGNS SHALL BE INSTALLED AT THE BEGINNING AND END OF THE EDGE OF THE WETLAND PARALLEL TO THE ROADWAY. ADDITIONAL WETLAND BUFFER SIGNS SHALL BE PLACED BETWEEN THE BEGINNING AND END SUCH THAT THE SPACING BETWEEN SIGNS IS LESS THAN 100 FEET. SEE SPECIAL PROVISIONS.
(C) SEE GRADING PLANS.



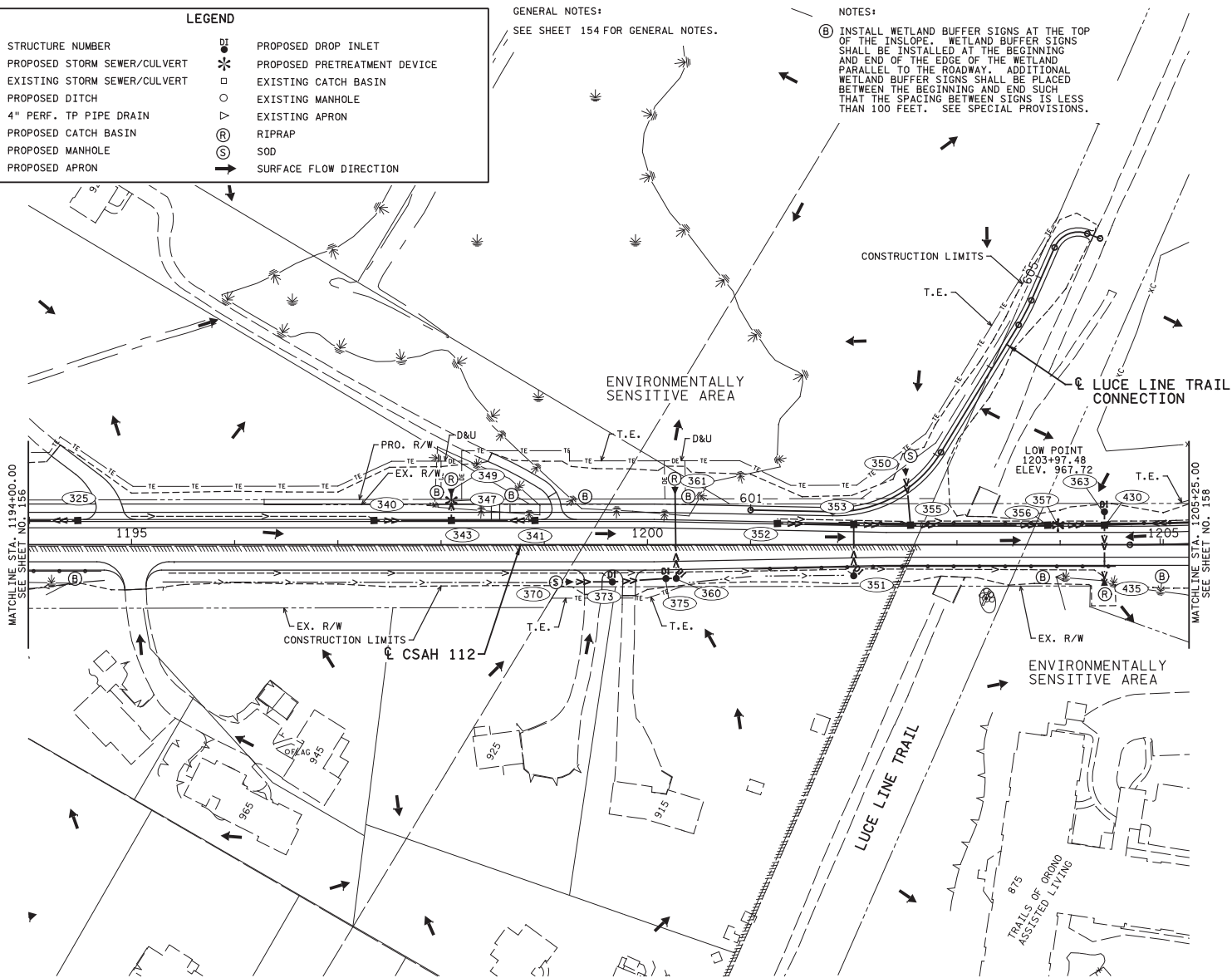
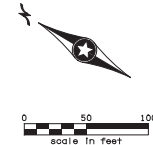
	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.		DESIGN BY: <u>J. SEIDL</u>	DRAINAGE PLAN	SHEET
	JACQUES A. DUVAL, PROFESSIONAL ENGINEER <small>SRF CONSULTING GROUP, INC</small>		CAD BY: <u>J. SEIDL</u>		
51399 09/08/17 LICENSE NO. DATE		CHECKED BY: <u>D. POWER</u>			285
		LAST REVISION: _____			

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LEGEND	
(XXX)	STRUCTURE NUMBER
—X—	PROPOSED STORM SEWER/CULVERT
—Y—	EXISTING STORM SEWER/CULVERT
- - -	PROPOSED DITCH
- - -	4" PERF. TP PIPE DRAIN
■	PROPOSED CATCH BASIN
●	PROPOSED MANHOLE
▲	PROPOSED APRON
⊠	PROPOSED DROP INLET
⊛	PROPOSED PRETREATMENT DEVICE
□	EXISTING CATCH BASIN
○	EXISTING MANHOLE
○	EXISTING APRON
(R)	RIPRAP
(S)	SOD
→	SURFACE FLOW DIRECTION

GENERAL NOTES:
SEE SHEET 154 FOR GENERAL NOTES.

NOTES:
(B) INSTALL WETLAND BUFFER SIGNS AT THE TOP OF THE INSLOPE. WETLAND BUFFER SIGNS SHALL BE INSTALLED AT THE BEGINNING AND END OF THE EDGE OF THE WETLAND PARALLEL TO THE ROADWAY. ADDITIONAL WETLAND BUFFER SIGNS SHALL BE PLACED BETWEEN THE BEGINNING AND END SUCH THAT THE SPACING BETWEEN SIGNS IS LESS THAN 100 FEET. SEE SPECIAL PROVISIONS.



I HEREBY CERTIFY THAT THIS PLAN 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.

JACQUES A. DUVAL, PROFESSIONAL ENGINEER
SRF CONSULTING GROUP, INC.

51399 09/08/17
LICENSE NO. DATE

DESIGN BY: J. SEIDL
CAD BY: J. SEIDL
CHECKED BY: D. POWER
LAST REVISION:

DRAINAGE PLAN

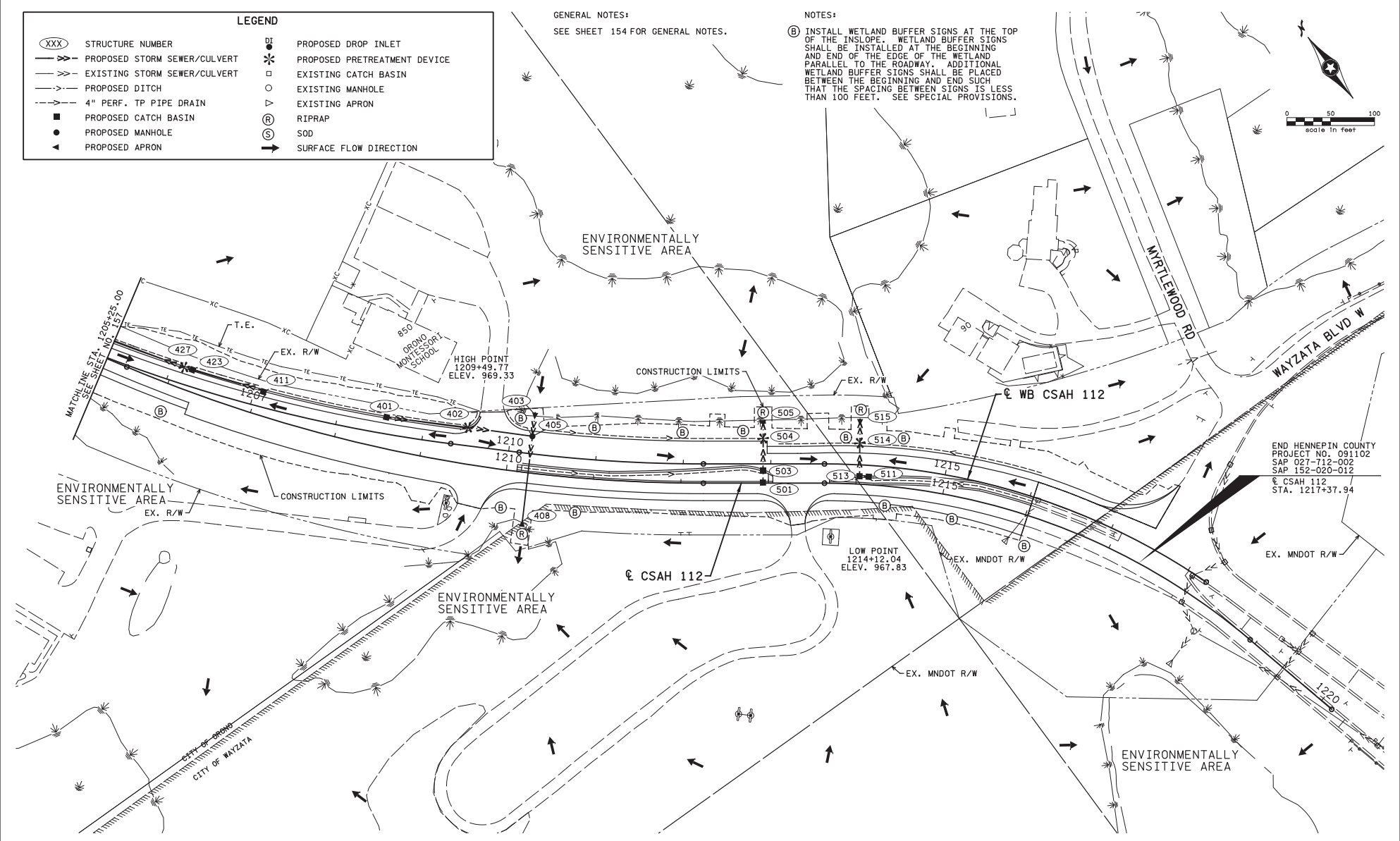
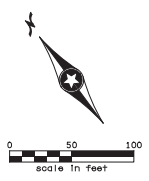
CSAH 112 / HENNEPIN COUNTY PROJECT NO. 091102
SAP 027-712-002 & SAP 152-020-012

SHEET
157
285

LEGEND	
(XXX)	STRUCTURE NUMBER
	PROPOSED STORM SEWER/CULVERT
	EXISTING STORM SEWER/CULVERT
	PROPOSED DITCH
	4" PERF. TP PIPE DRAIN
	PROPOSED CATCH BASIN
	PROPOSED MANHOLE
	PROPOSED APRON
	PROPOSED DROP INLET
	PROPOSED PRETREATMENT DEVICE
	EXISTING CATCH BASIN
	EXISTING MANHOLE
	EXISTING APRON
	RIPRAP
	SOD
	SURFACE FLOW DIRECTION

GENERAL NOTES:
SEE SHEET 154 FOR GENERAL NOTES.

NOTES:
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	JACQUES A. DUVAL, PROFESSIONAL ENGINEER <small>SRF CONSULTING GROUP, INC.</small>	51399 LICENSE NO.	09/08/17 DATE	CSAH 112 / HENNEPIN COUNTY PROJECT NO. 091102 SAP 027-712-002 & SAP 152-020-012	158

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