

EXHIBIT A

MnDOT Contract No: 1036107

STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION

And CITY OF DULUTH COOPERATIVE CONSTRUCTION AGREEMENT

State Project Number (S.P.): 6982-322WP1 & 6982-322WP2
Trunk Highway Number (T.H.): 35
Federal Project Number: BLD-NHFP-NHPP 1350(129)
Lighting System Feed Point No.: XC, Y, and B
Temporary Signal System "A" : Garfield Avenue at West Railroad Street
Temporary Signal System "B": Piedmont Avenue at 24th Avenue West

This Agreement is between the State of Minnesota, acting through its Commissioner of Transportation ("State") and the City of Duluth acting through its City Council ("City").

Recitals

1. The State will perform Bituminous Paving, Concrete Sidewalk, Drainage System, Lighting, and a Temporary Signal System construction, and other associated construction upon, along, and adjacent to Trunk Highway No. 35 from 13th Avenue West to 26th Avenue West according to State-prepared plans, specifications, and special provisions designated by the State as State Project No. 6982-322WP1 (T.H. 35) ("Project"); and
2. The State requests the City to allow the construction of Bituminous Paving, Sidewalk, Drainage System, and a Temporary Signal System and the City is willing to allow said construction on City Right-of-Way; and
3. Minnesota Statutes § 161.20, subdivision 2 authorizes the Commissioner of Transportation to make arrangements with and cooperate with any governmental authority for the purposes of constructing, maintaining, and improving the trunk highway system.

Agreement

1. Term of Agreement; Survival of Terms; Plans; Incorporation of Exhibits

- 1.1. **Effective Date.** This Agreement will be effective on the date the State obtains all signatures required by Minnesota Statutes § 16C.05, subdivision 2.
- 1.2. **Expiration Date.** This Agreement will expire when all obligations have been satisfactorily fulfilled.
- 1.3. **Survival of Terms.** All clauses which impose obligations continuing in their nature and which must survive in order to give effect to their meaning will survive the expiration or termination of this Agreement, including, without limitation, the following clauses: 4. Maintenance by the City; 8. Liability; Worker Compensation Claims; Insurance; 10. State Audits; 11. Government Data Practices; 12. Governing Law; Jurisdiction; Venue; and 14. Force Majeure.
- 1.4. **Plans, Specifications, and Special Provisions.** Plans, specifications, and special provisions designated by the State as State Project No. 6982-322WP1 (T.H. 35) are on file in the office of the Commissioner of Transportation at St. Paul, Minnesota, and incorporated into this Agreement by reference ("Project Plans").

1.5. **Exhibits.** Exhibits A – Roadway and Sidewalk ownership and maintenance responsibility, B – Storm Sewer ownership and maintenance responsibility and C – Lighting ownership and maintenance responsibility are attached and incorporated into this agreement. Right-of-Way Use

2. Right-of-Way Use

2.1. **Limited Right to Occupy.** The City grants to the State (and its contractors and consultants) the right to occupy City Right-of-Way as necessary to perform the work described in the Project Plans. This right is limited to the purpose of constructing the project, and administering such construction.

3. Construction by the State

3.1. **Contract Award.** The State will advertise for bids and award a construction contract to the lowest responsible bidder according to the Project Plans.

3.2. **Direction, Supervision, and Inspection of Construction.**

A. **Supervision and Inspection by the State.** The State will direct and supervise all construction activities performed under the construction contract, and perform all construction engineering and inspection functions in connection with the contract construction. All contract construction will be performed according to the Project Plans.

3.3. **Plan Changes, Additional Construction, Etc.**

A. The State will make changes in the Project Plans and contract construction and will enter into any necessary addenda, change orders, supplemental agreements and work orders with the State's contractor that are necessary to cause the contract construction to be performed and completed in a satisfactory manner.

3.4. **Satisfactory Completion of Contract.** The State will perform all other acts and functions necessary to cause the construction contract to be completed in a satisfactory manner. Acceptance by the State of the completed contract construction will be final, binding, and conclusive upon the City as to the satisfactory completion of the contract construction.

4. Maintenance by the City

Upon completion of the project, the City will provide the following without cost or expense to the State:

4.1. **Roadways.** Maintenance and ownership of South 19th Avenue West, Superior Street, West 1st Street, North 21st Avenue West, North 22nd Avenue West, 1st Street, and Piedmont Avenue as shown in Exhibit A. Maintenance includes, but is not limited to, snow, ice, and debris removal, resurfacing, seal coating, pavement markings, and any other maintenance activities according to accepted City maintenance practices.

4.2. **Storm Sewers.** Routine maintenance and ownership of storm sewer facilities construction. Routine maintenance includes, but is not limited to, removal of sediment, debris, vegetation and ice from grates and catch basins, and any other maintenance activities necessary to preserve the facilities and to prevent conditions such as flooding, erosion, or sedimentation for those systems as shown in Exhibit B. For any MnDOT owned storm sewer that is maintained by the City this also includes informing the District Maintenance Engineer of any needed repairs.

4.3. **Sidewalks.** Maintenance and ownership of sidewalk construction, including stamped and colored concrete sidewalk (if any) and pedestrian ramps as shown in Exhibit A. Maintenance includes, but is not limited to, snow, ice, and debris removal, patching, crack repair, panel replacement, cross street pedestrian crosswalk

markings, mowing grass boulevards (if any), and any other maintenance activities necessary to perpetuate the sidewalks in a safe, useable, and aesthetically acceptable condition.

4.4. Lighting. Maintenance and ownership of lighting facilities construction as shown in Exhibit C. Maintenance of electrical lighting systems includes everything within the system, from the point of attachment to the power source or utility, to the last light on the feed point, including but not limited to re-lamping of lighting units or replacing of LED luminaires, repair or replacement of all damaged luminaire glassware, loose connections, luminaires when damaged or when ballasts fail, photoelectric control on luminaires, defective starter boards or drivers, damaged fuse holders, blown fuses, knocked down poles including wiring within the poles, damaged poles, pullboxes, underground wire, damaged foundations, equipment pad, installation of approved splices or replacement of wires, repair or extending of conduit, lighting cabinet maintenance including photoelectric cell, electrical distribution system, Gopher State One Call (GSOC) locates, and painting of poles and other equipment. The City will be responsible for the hook up cost and application to secure an adequate power supply to the service pad or pole and will pay all monthly electrical service expenses necessary to operate the lighting facility.

5. Authorized Representatives

Each party's Authorized Representative is responsible for administering this Agreement and is authorized to give and receive any notice or demand required or permitted by this Agreement.

5.1. The State's Authorized Representative will be:

Name, Title: Perry Collins, Assistant District Engineer – Operations (or successor)
Address: 1123 Mesaba Avenue, Duluth, MN 55811
Telephone: (218) 725-2827
E-Mail: perry.collins@state.mn.us

5.2. The City's Authorized Representative will be:

Name, Title: Cari Pederson, Transportation Engineer (or successor)
Address: 411 West 1st Street, Room 202, Duluth, MN 55802
Telephone: (218) 730-5091
E-Mail: cpederson@duluthmn.gov

6. Assignment; Amendments; Waiver; Contract Complete

- 6.1. Assignment.** No party may assign or transfer any rights or obligations under this Agreement without the prior consent of the other party and a written assignment agreement, executed and approved by the same parties who executed and approved this Agreement, or their successors in office.
- 6.2. Amendments.** Any amendment to this Agreement must be in writing and will not be effective until it has been executed and approved by the same parties who executed and approved the original Agreement, or their successors in office.
- 6.3. Waiver.** If a party fails to enforce any provision of this Agreement, that failure does not waive the provision or the party's right to subsequently enforce it.
- 6.4. Contract Complete.** This Agreement contains all prior negotiations and agreements between the State and the City. No other understanding regarding this Agreement, whether written or oral, may be used to bind either party.

7. Liability; Worker Compensation Claims; Insurance

7.1. Each party is responsible for its own acts, omissions, and the results thereof to the extent authorized by law and will not be responsible for the acts, omissions of others, and the results thereof. Minnesota Statutes § 3.736 and other applicable law govern liability of the State. Minnesota Statutes Chapter 466 and other applicable law govern liability of the City. Each party is responsible for its own employees for any claims arising under the Workers Compensation Act.

8. Nondiscrimination

Provisions of Minnesota Statutes § 181.59 and of any applicable law relating to civil rights and discrimination are considered part of this Agreement.

9. State Audits

Under Minnesota Statutes § 16C.05, subdivision 5, the City's books, records, documents, and accounting procedures and practices relevant to this Agreement are subject to examination by the State and the State Auditor or Legislative Auditor, as appropriate, for a minimum of six years from the end of this Agreement.

10. Government Data Practices

The City and State must comply with the Minnesota Government Data Practices Act, Minnesota Statutes Chapter 13, as it applies to all data provided under this Agreement, and as it applies to all data created, collected, received, stored, used, maintained, or disseminated by the City under this Agreement. The civil remedies of Minnesota Statutes §13.08 apply to the release of the data referred to in this clause by either the City or the State.

11. Governing Law; Jurisdiction; Venue

Minnesota law governs the validity, interpretation, and enforcement of this Agreement. Venue for all legal proceedings arising out of this Agreement, or its breach, must be in the appropriate state or federal court with competent jurisdiction in Ramsey County, Minnesota.

12. Termination; Suspension

12.1. *By Mutual Agreement.* This Agreement may be terminated by mutual agreement of the parties or by the State for insufficient funding as described below.

12.2. *Termination for Insufficient Funding.* The State may immediately terminate this Agreement if it does not obtain funding from the Minnesota Legislature, or other funding source; or if funding cannot be continued at a level sufficient to allow for the performance of contract construction under the Project. Termination must be by written or fax notice to the City.

12.3. *Suspension.* In the event of a total or partial government shutdown, the State may suspend this Agreement and all work, activities, and performance of work authorized through this Agreement.

13. Force Majeure

No party will be responsible to the other for a failure to perform under this Agreement (or a delay in performance), if such failure or delay is due to a force majeure event. A force majeure event is an event beyond a party's reasonable control, including but not limited to, unusually severe weather, fire, floods, other acts of God, labor disputes, acts of war or terrorism, or public health emergencies.

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CITY OF DULUTH

The undersigned certify that they have lawfully executed this contract on behalf of the Governmental Unit as required by applicable charter provisions, resolutions, or ordinances.

By: _____

Title: Mayor _____

Date: _____

Attested: _____

Title: City Clerk _____

Date: _____

Approved as to form:

By: _____

Title: City Attorney _____

Date: _____

Countersigned: _____

Title: City Auditor _____

Date: _____

**STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION**

DEPARTMENT OF TRANSPORTATION

Approved:

By: _____
(District Engineer)

Date: _____



COMMISSIONER OF ADMINISTRATION

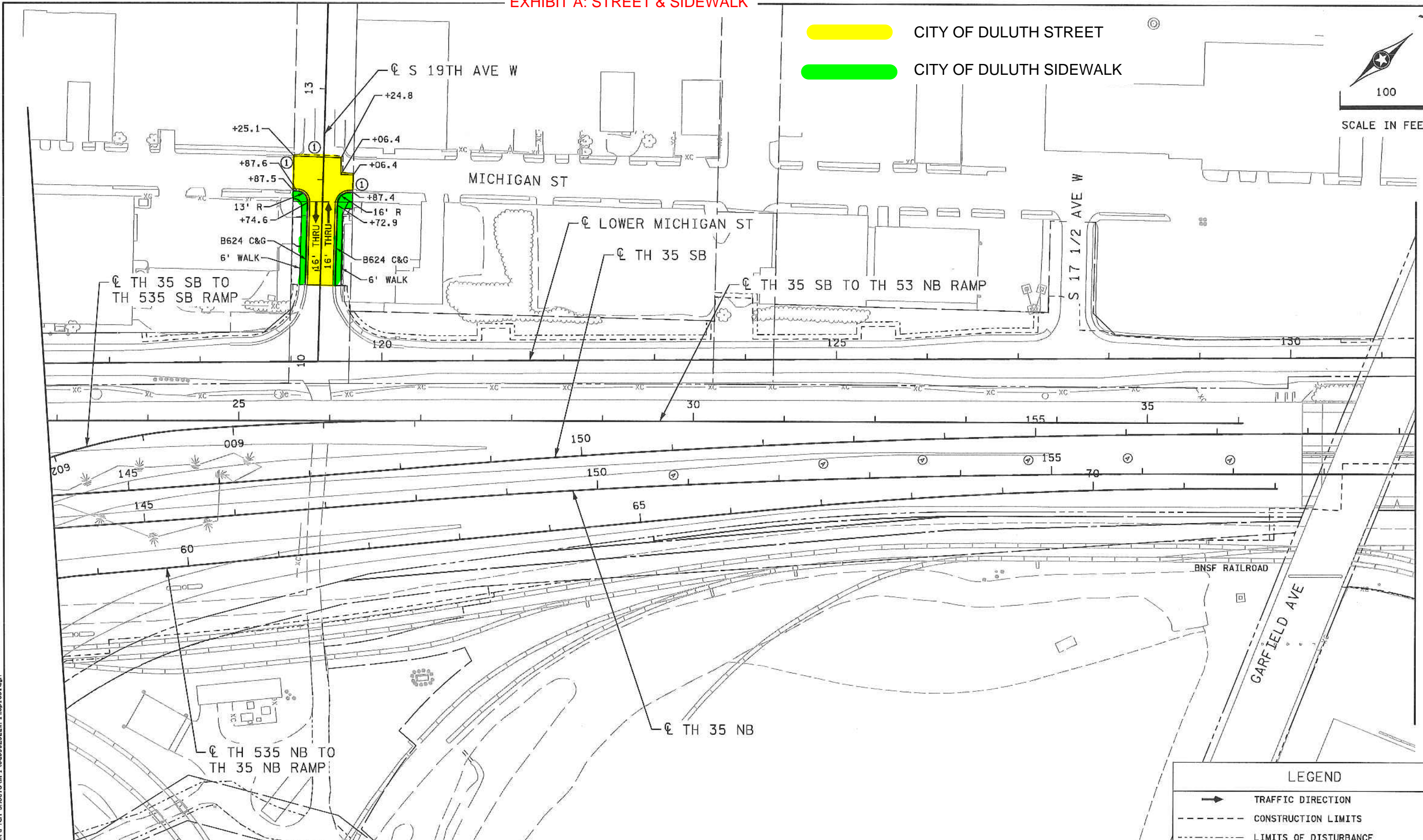
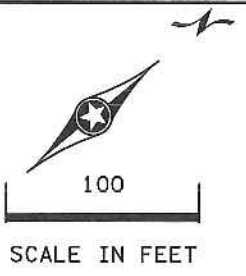
By: _____
(With Delegated Authority)

Date: _____

INCLUDE COPY OF RESOLUTION APPROVING THE AGREEMENT AND AUTHORIZING ITS EXECUTION.

EXHIBIT A: STREET & SIDEWALK

 CITY OF DULUTH STREET
 CITY OF DULUTH SIDEWALK




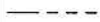



GENERAL NOTES:

1. STATION CALLOUTS REFERENCE THE ADJACENT ALIGNMENT UNLESS OTHERWISE NOTED.

SPECIFIC NOTES:

① MATCH EXISTING SURFACING ELEVATION AND CROSS SLOPE. TIE-INS TO EXISTING TO BE FIELD VERIFIED. PROVIDE FOR ANY TRANSITIONS TO CROSS SLOPES, PROFILES, AND MATCH POINTS AS REQUIRED BY THE ENGINEER (INCIDENTAL).

LEGEND	
	TRAFFIC DIRECTION
	CONSTRUCTION LIMITS
	LIMITS OF DISTURBANCE
	EXISTING R/W
	TEMPORARY EASEMENT

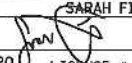
Page: 1 of 38

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NO	DATE	DWN	CKD	REVISIONS
0	1/13/20	ELV	SMF	PLAN LETTING



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.

PRINT NAME: SARAH FITCH
 SIGNATURE: 
 DATE: 1/13/20 LICENSE #: 56047

CONSTRUCTION PLAN
 TH 35 NB STA 144+00 TO STA 159+00

SP 6982-322WP1 (TH 35)
 SHEET NO. 279 OF 792 SHEETS

EXHIBIT A: STREET & SIDEWALK

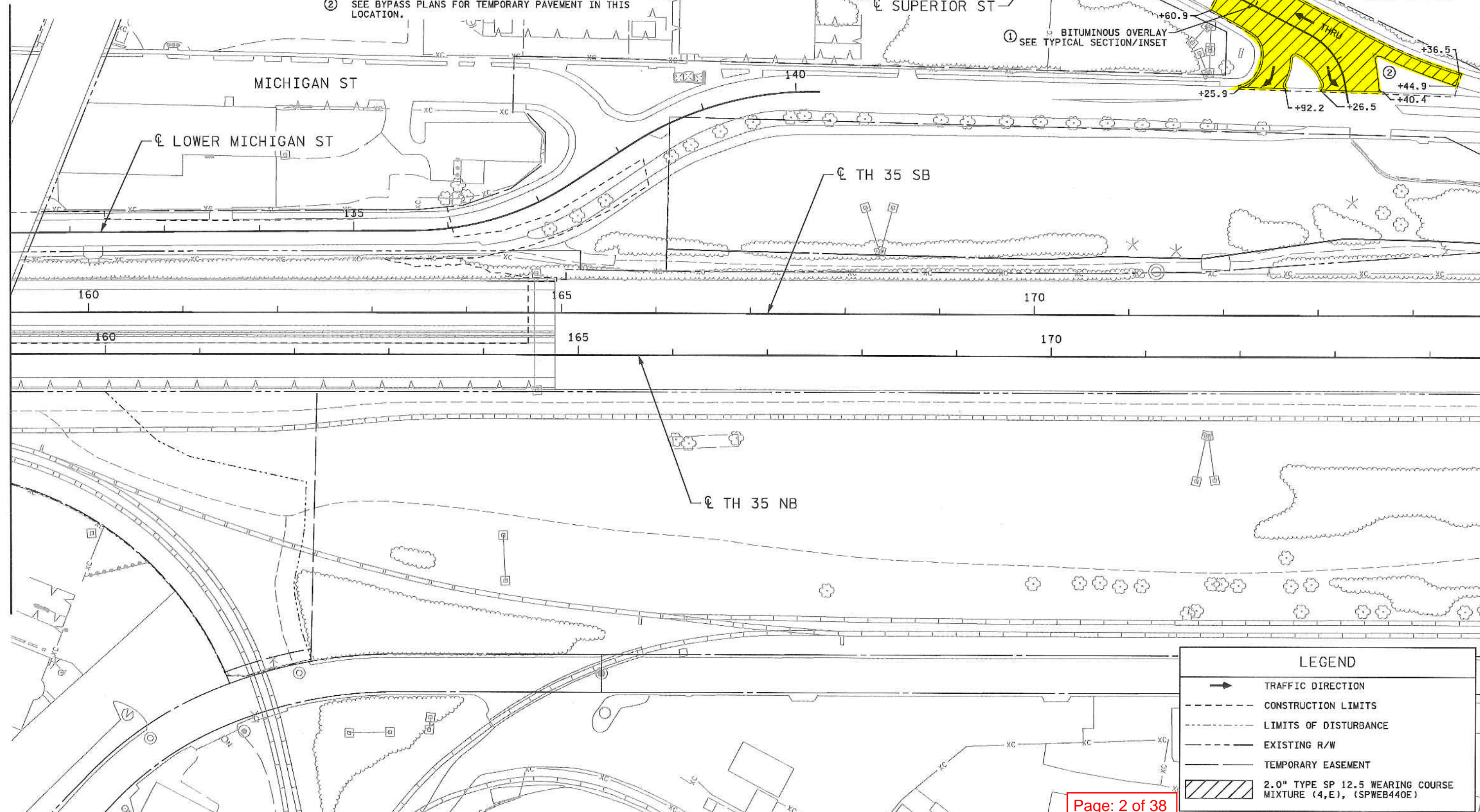
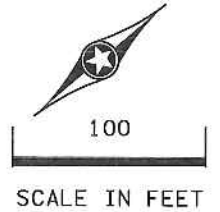
GENERAL NOTES:

I. STATION CALLOUTS REFERENCE THE ADJACENT ALIGNMENT UNLESS OTHERWISE NOTED.

SPECIFIC NOTES:

① MATCH EXISTING SURFACING ELEVATION AND CROSS SLOPE. TIE-INS TO EXISTING TO BE FIELD VERIFIED. PROVIDE FOR ANY TRANSITIONS TO CROSS SLOPES, PROFILES, AND MATCH POINTS AS REQUIRED BY THE ENGINEER (INCIDENTAL).

② SEE BYPASS PLANS FOR TEMPORARY PAVEMENT IN THIS LOCATION.



LEGEND	
	TRAFFIC DIRECTION
	CONSTRUCTION LIMITS
	LIMITS OF DISTURBANCE
	EXISTING R/W
	TEMPORARY EASEMENT
	2.0" TYPE SP 12.5 WEARING COURSE MIXTURE (4,E), (SPWEB440E)

Page: 2 of 38

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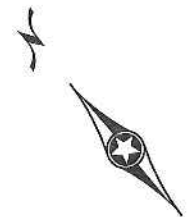


I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

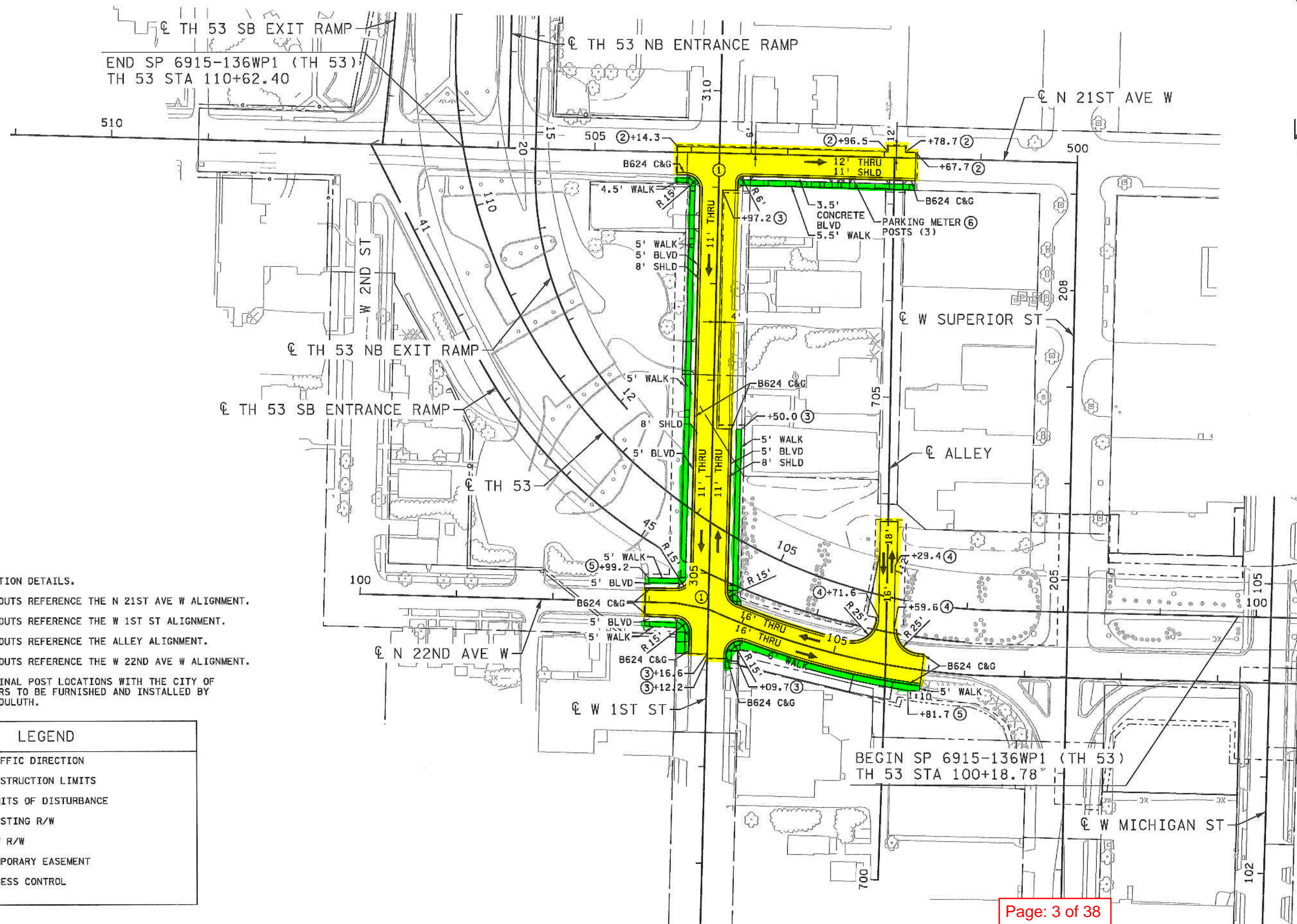
PRINT NAME: SARAH FITCH
 SIGNATURE:
 DATE: 1/13/20 LICENSE #: 56047

CONSTRUCTION PLAN
 TH 35 NB STA 159+00 TO STA 174+58

SP 6982-322WP1 (TH 35)
 SHEET NO. 280 OF 792 SHEETS



100
SCALE IN FEET



- SPECIFIC NOTES:**
- ① SEE INTERSECTION DETAILS.
 - ② STATION CALLOUTS REFERENCE THE N 21ST AVE W ALIGNMENT.
 - ③ STATION CALLOUTS REFERENCE THE W 1ST ST ALIGNMENT.
 - ④ STATION CALLOUTS REFERENCE THE ALLEY ALIGNMENT.
 - ⑤ STATION CALLOUTS REFERENCE THE W 22ND AVE W ALIGNMENT.
 - ⑥ COORDINATE FINAL POST LOCATIONS WITH THE CITY OF DULUTH. METERS TO BE FURNISHED AND INSTALLED BY THE CITY OF DULUTH.

LEGEND	
	TRAFFIC DIRECTION
	CONSTRUCTION LIMITS
	LIMITS OF DISTURBANCE
	EXISTING R/W
	NEW R/W
	TEMPORARY EASEMENT
	ACCESS CONTROL

Page: 3 of 38

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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.

PRINT NAME: ANDREA LYNN WOODS FASTENOW
SIGNATURE: *Andrea Lynn Woods Fastenow*
DATE: 1/13/20 LICENSE #: 45076

CONSTRUCTION PLAN
W 1ST ST, N 21ST AVE W, N 22ND AVE W, ALLEY

SP 6982-322WP1 (TH 35)
SHEET NO. 281 OF 792 SHEETS

EXHIBIT A: STREET & SIDEWALK

GENERAL NOTES:

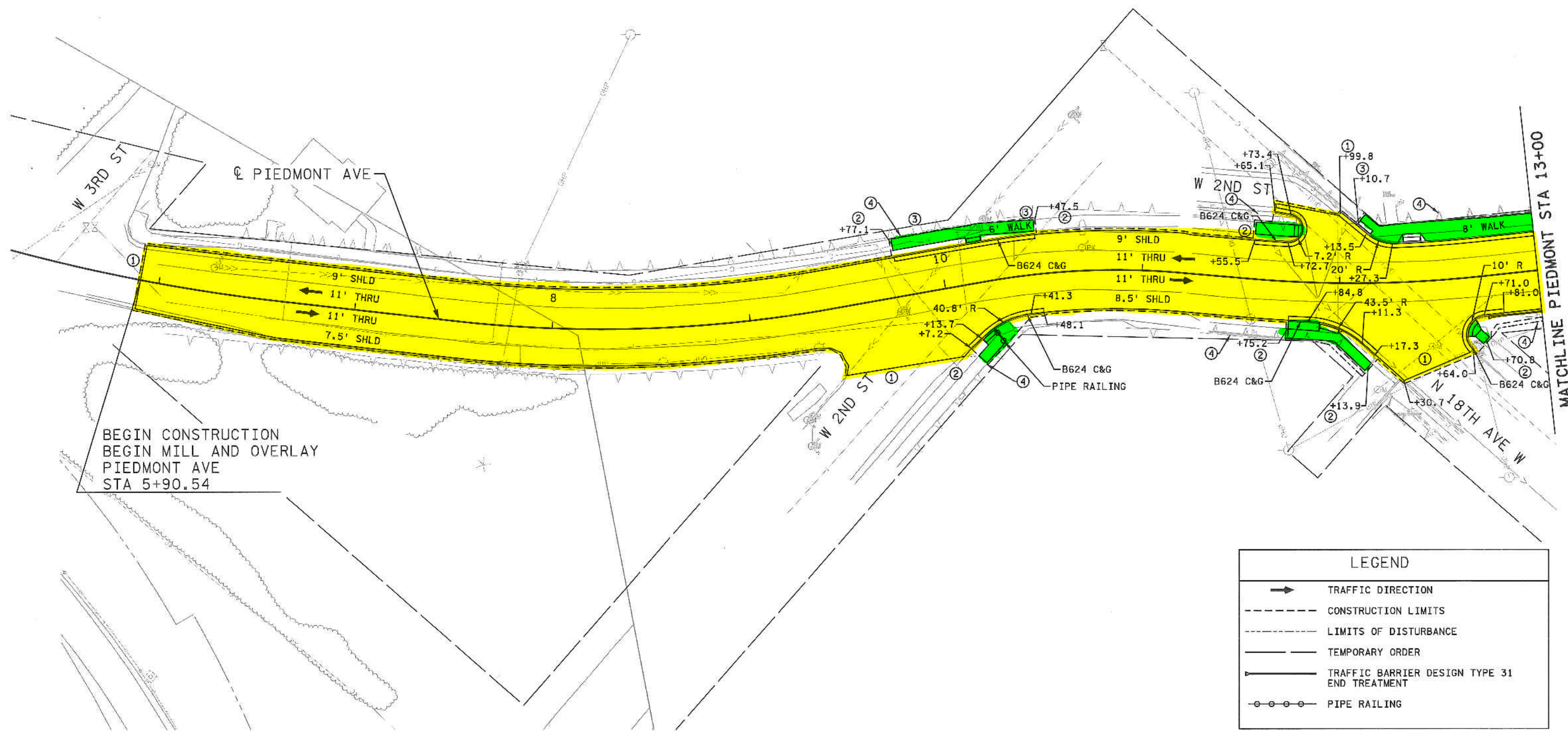
I. STATION CALLOUTS REFERENCE THE ADJACENT ALIGNMENT UNLESS OTHERWISE NOTED.

SPECIFIC NOTES:

- ① MATCH EXISTING SURFACING ELEVATION AND CROSS SLOPE. TIE-INS TO EXISTING TO BE FIELD VERIFIED. PROVIDE FOR ANY TRANSITIONS TO CROSS SLOPES, PROFILES, AND MATCH POINTS AS REQUIRED BY THE ENGINEER (INCIDENTAL).
- ② MATCH INPLACE WALK
- ③ MATCH INPLACE STEPS
- ④ EXISTING RETAINING WALL IS AN AREA OF ENVIRONMENTAL SENSITIVITY



50
SCALE IN FEET



BEGIN CONSTRUCTION
BEGIN MILL AND OVERLAY
PIEDMONT AVE
STA 5+90.54

LEGEND	
	TRAFFIC DIRECTION
	CONSTRUCTION LIMITS
	LIMITS OF DISTURBANCE
	TEMPORARY ORDER
	TRAFFIC BARRIER DESIGN TYPE 31 END TREATMENT
	PIPE RAILING

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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.

PRINT NAME: OYEWOLE DHANRAJ JOHNSON
SIGNATURE: *Wol Johnson*
DATE 01/06/2020 LICENSE # 53129

CONSTRUCTION PLAN
PIEDMONT AVE STA 5+90 TO STA 13+00

SP 6982-322WP1 (TH 35)
SHEET NO. 282 OF 792 SHEETS

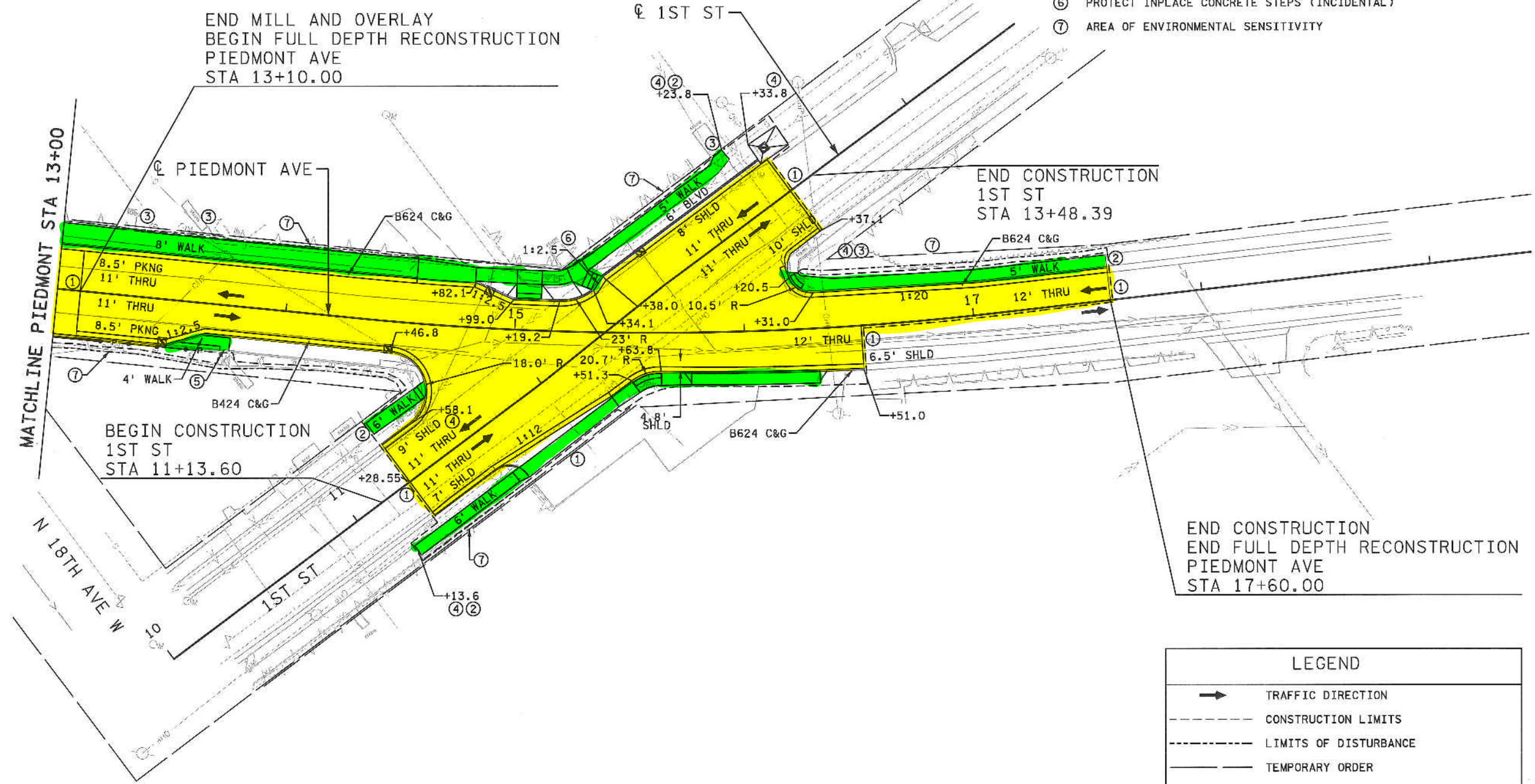
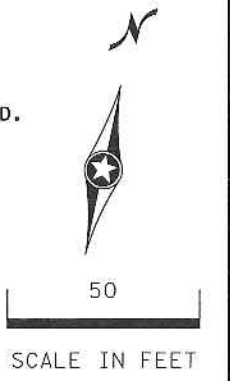
EXHIBIT A: STREET & SIDEWALK

GENERAL NOTES:

- I. STATION CALLOUTS REFERENCE THE ADJACENT ALIGNMENT UNLESS OTHERWISE NOTED.
- II. SEE SUPERELEVATION PLAN FOR CROSS SLOPE TRANSITIONS

SPECIFIC NOTES:

- ① MATCH EXISTING SURFACING ELEVATION AND CROSS SLOPE. TIE-INS TO EXISTING TO BE FIELD VERIFIED. PROVIDE FOR ANY TRANSITIONS TO CROSS SLOPES, PROFILES, AND MATCH POINTS AS REQUIRED BY THE ENGINEER (INCIDENTAL).
- ② MATCH INPLACE WALK
- ③ MATCH INPLACE STEPS
- ④ STATION CALLOUT REFERENCES THE 1ST ST ALIGNMENT.
- ⑤ TIE WALK TO INPLACE C & G
- ⑥ PROTECT INPLACE CONCRETE STEPS (INCIDENTAL)
- ⑦ AREA OF ENVIRONMENTAL SENSITIVITY



LEGEND	
	TRAFFIC DIRECTION
	CONSTRUCTION LIMITS
	LIMITS OF DISTURBANCE
	TEMPORARY ORDER
	TRAFFIC BARRIER DESIGN TYPE 31
	PROPOSED DRAINAGE STRUCTURE

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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.

PRINT NAME: OYEWOLE DHANRAJ JOHNSON
 SIGNATURE: *Wale Johnson*
 DATE 01/06/2020 LICENSE # 53129

CONSTRUCTION PLAN
 PIEDMONT AVE STA 13+00 TO STA 17+60 / 1ST ST 11+13 TO 13+48

SP 6982-322WP1 (TH 35)
 SHEET NO. 283 OF 792 SHEETS

EXHIBIT A: STREET & SIDEWALK

SPECIFIC NOTES:

- ① ENTRANCE NOSE (URBAN DESIGN), SEE STD PLATE 7107.
- ② EXIT NOSE (URBAN DESIGN), SEE STD PLATE 7108.
- ③ CONSTRUCT CONCRETE CURB TO MATCH ADJACENT 7.5" PAVEMENT DEPTH.
- ④ MODIFY CURB AND GUTTER TO MATCH THICKNESS OF ADJACENT PAVEMENT.
- ⑤ TRANSITION CURB BETWEEN DR4-8 CURB AND BR6-8 CURB, PAID FOR AS DR4-8 CURB.
- ⑥ CURB TRANSITION B424 (MOD) C&G TO D424 (MOD) C&G, PAID FOR AS D424 (MOD) C&G.
- ⑦ CURB TRANSITION B624 (MOD) C&G TO DR4-8 CURB, PAID FOR AS DR4-8 CURB.

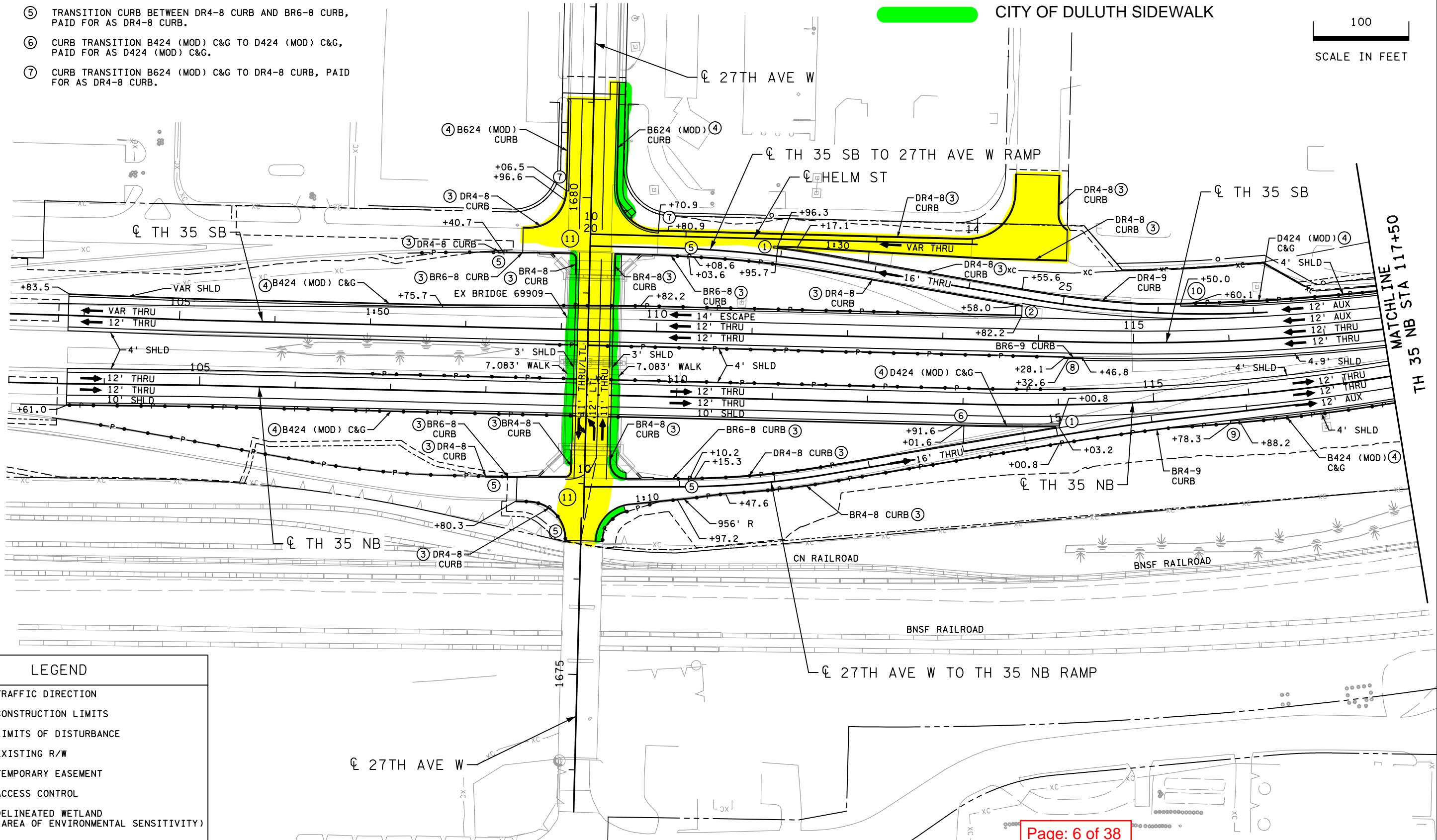
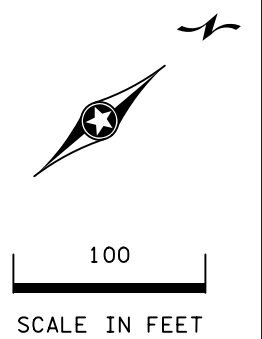
GENERAL NOTES:

- ⑧ TRANSITION AS BR6-9 CURB.
- ⑨ CURB TRANSITION BR4-9 CURB TO B424 (MOD) C&G, PAID FOR AS B424 (MOD) C&G.
- ⑩ CURB TRANSITION DR4-9 CURB TO D424 (MOD) C&G, PAID FOR AS D424 (MOD) C&G.
- ⑪ SEE INTERSECTION DETAIL SHEETS FOR INTERSECTION GEOMETRY INFORMATION.

GENERAL NOTES:

- I. STATION CALLOUTS REFERENCE THE ADJACENT ALIGNMENT UNLESS OTHERWISE NOTED.

CITY OF DULUTH STREET
CITY OF DULUTH SIDEWALK



LEGEND

- ➔ TRAFFIC DIRECTION
- - - CONSTRUCTION LIMITS
- - - LIMITS OF DISTURBANCE
- - - EXISTING R/W
- - - TEMPORARY EASEMENT
- ACCESS CONTROL
- ▨ DELINEATED WETLAND (AREA OF ENVIRONMENTAL SENSITIVITY)

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NO	DATE	DWN	CKD	REVISIONS



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.

PRINT NAME: **DRAFT COPY**
 SIGNATURE: **DRAFT COPY**
 DATE: _____

CONSTRUCTION PLAN
 TH 35 NB STA 103+61 TO STA 117+50

Page: 6 of 38

SP 6982-322WP2 (TH 35)
 SHEET NO. 447 OF 1315 SHEETS

EXHIBIT A: STREET & SIDEWALK

LEGEND

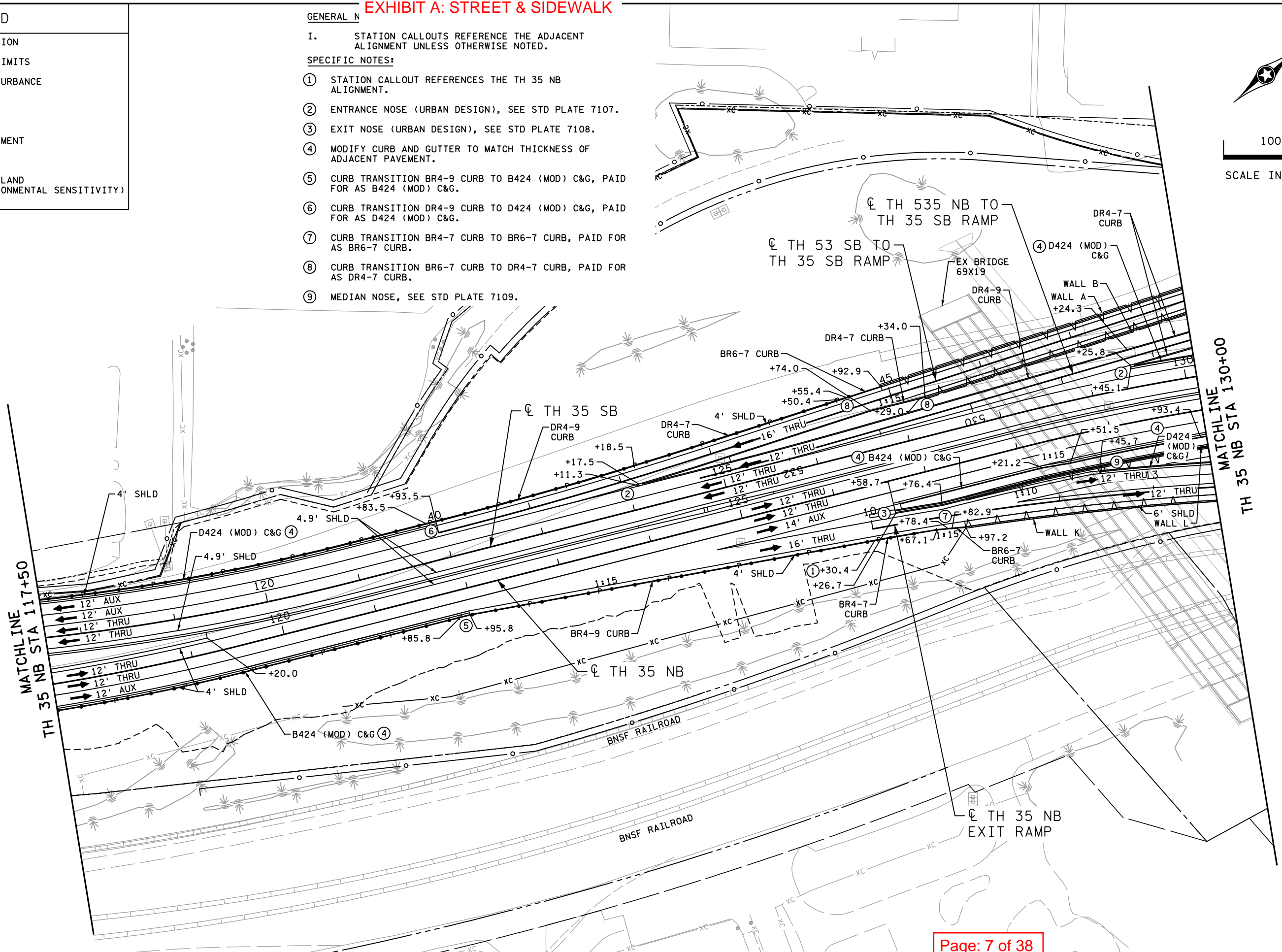
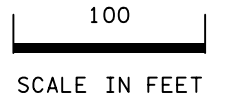
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- - - - CONSTRUCTION LIMITS
- - - - LIMITS OF DISTURBANCE
- - - - EXISTING R/W
- - - - R/W
- - - - TEMPORARY EASEMENT
- ACCESS CONTROL
- ☼ DELINEATED WETLAND (AREA OF ENVIRONMENTAL SENSITIVITY)

GENERAL N

I. STATION CALLOUTS REFERENCE THE ADJACENT ALIGNMENT UNLESS OTHERWISE NOTED.

SPECIFIC NOTES:

- ① STATION CALLOUT REFERENCES THE TH 35 NB ALIGNMENT.
- ② ENTRANCE NOSE (URBAN DESIGN), SEE STD PLATE 7107.
- ③ EXIT NOSE (URBAN DESIGN), SEE STD PLATE 7108.
- ④ MODIFY CURB AND GUTTER TO MATCH THICKNESS OF ADJACENT PAVEMENT.
- ⑤ CURB TRANSITION BR4-9 CURB TO B424 (MOD) C&G, PAID FOR AS B424 (MOD) C&G.
- ⑥ CURB TRANSITION DR4-9 CURB TO D424 (MOD) C&G, PAID FOR AS D424 (MOD) C&G.
- ⑦ CURB TRANSITION BR4-7 CURB TO BR6-7 CURB, PAID FOR AS BR6-7 CURB.
- ⑧ CURB TRANSITION BR6-7 CURB TO DR4-7 CURB, PAID FOR AS DR4-7 CURB.
- ⑨ MEDIAN NOSE, SEE STD PLATE 7109.



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NO	DATE	DWN	CKD	REVISIONS



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.

PRINT NAME: _____
 SIGNATURE: _____
 DATE: _____
 LICENSE: _____

DRAFT COPY **DRAFT COPY**

CONSTRUCTION PLAN
 TH 35 NB STA 117+50 TO STA 130+00

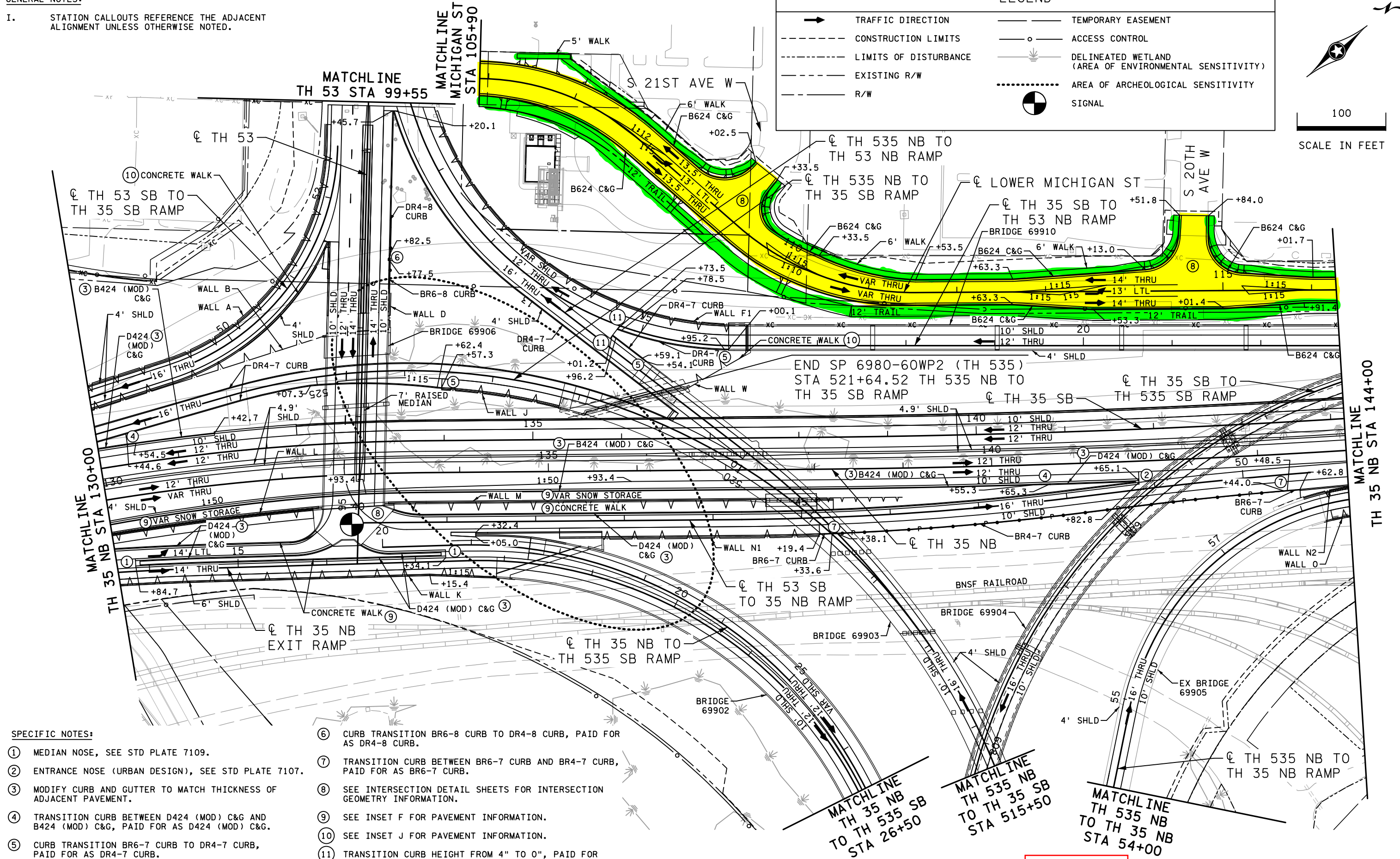
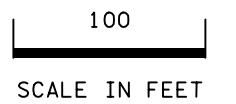
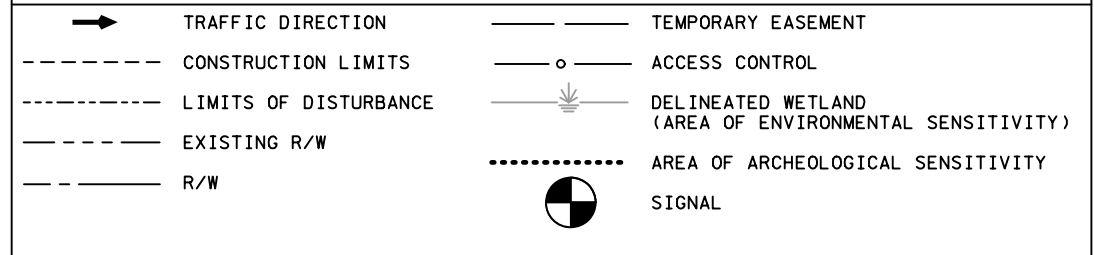
SP 6982-322WP2 (TH 35)
 SHEET NO. 448 OF 1315 SHEETS

EXHIBIT A: STREET & SIDEWALK

GENERAL NOTES:

I. STATION CALLOUTS REFERENCE THE ADJACENT ALIGNMENT UNLESS OTHERWISE NOTED.

LEGEND



SPECIFIC NOTES:

- ① MEDIAN NOSE, SEE STD PLATE 7109.
- ② ENTRANCE NOSE (URBAN DESIGN), SEE STD PLATE 7107.
- ③ MODIFY CURB AND GUTTER TO MATCH THICKNESS OF ADJACENT PAVEMENT.
- ④ TRANSITION CURB BETWEEN D424 (MOD) C&G AND B424 (MOD) C&G, PAID FOR AS D424 (MOD) C&G.
- ⑤ CURB TRANSITION BR6-7 CURB TO DR4-7 CURB, PAID FOR AS DR4-7 CURB.
- ⑥ CURB TRANSITION BR6-8 CURB TO DR4-8 CURB, PAID FOR AS DR4-8 CURB.
- ⑦ TRANSITION CURB BETWEEN BR6-7 CURB AND BR4-7 CURB, PAID FOR AS BR6-7 CURB.
- ⑧ SEE INTERSECTION DETAIL SHEETS FOR INTERSECTION GEOMETRY INFORMATION.
- ⑨ SEE INSET F FOR PAVEMENT INFORMATION.
- ⑩ SEE INSET J FOR PAVEMENT INFORMATION.
- ⑪ TRANSITION CURB HEIGHT FROM 4" TO 0", PAID FOR AS DR4-7 CURB.

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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.

PRINT NAME: SIGNATURE: DATE:

DRAFT COPY DRAFT COPY

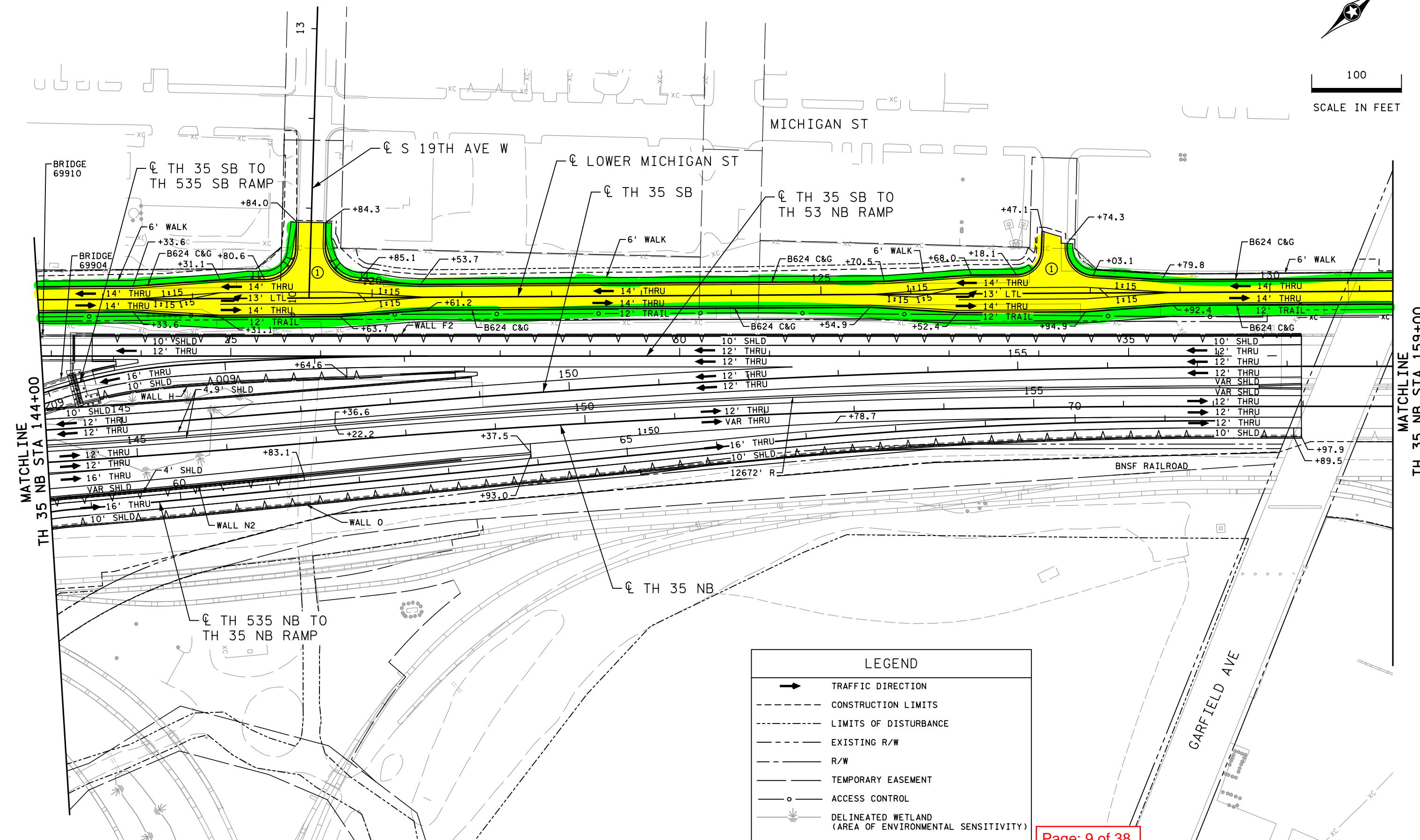
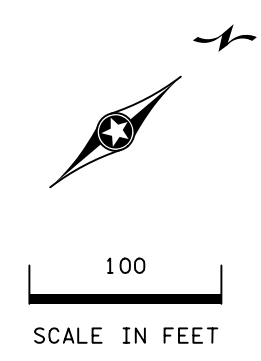
CONSTRUCTION PLAN TH 35 NB STA 130+00 TO STA 144+00

SP 6982-322WP2 (TH 35) SHEET NO. 449 OF 1315 SHEETS

EXHIBIT A: STREET & SIDEWALK

GENERAL NOTES:

- I. STATION CALLOUTS REFERENCE THE ADJACENT ALIGNMENT UNLESS OTHERWISE NOTED.
- ① SEE INTERSECTION DETAIL SHEETS FOR INTERSECTION GEOMETRY INFORMATION.



LEGEND

- TRAFFIC DIRECTION
- - - CONSTRUCTION LIMITS
- - - LIMITS OF DISTURBANCE
- - - EXISTING R/W
- - - R/W
- - - TEMPORARY EASEMENT
- ACCESS CONTROL
- ▭ DELINEATED WETLAND (AREA OF ENVIRONMENTAL SENSITIVITY)

Page: 9 of 38

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NO	DATE	DWN	CKD	REVISIONS



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.

PRINT NAME: **DRAFT COPY** **DRAFT COPY**
 SIGNATURE: _____
 DATE: _____

CONSTRUCTION PLAN
 TH 35 NB STA 144+00 TO STA 159+00

SP 6982-322WP2 (TH 35)
 SHEET NO. 450 OF 1315 SHEETS

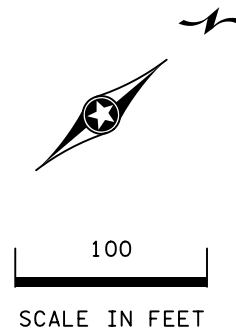
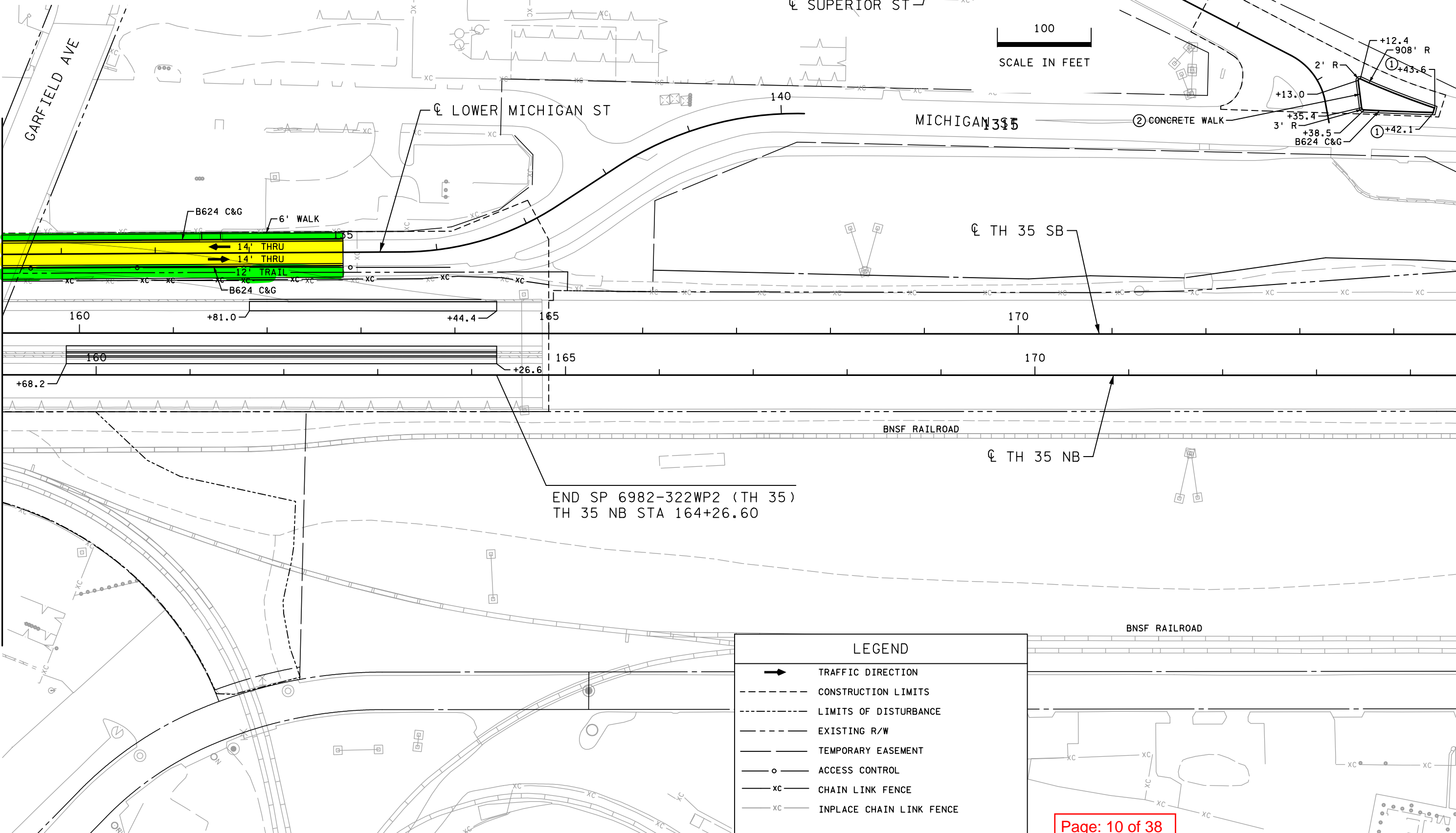
EXHIBIT A: STREET & SIDEWALK

GENERAL NOTES:

I. STATION CALLOUTS REFERENCE THE ADJACENT ALIGNMENT UNLESS OTHERWISE NOTED.

SPECIFIC NOTES:

- ① STATION CALLOUT REFERENCES THE TH 35 SB ALIGNMENT.
- ② SEE INSET J FOR PAVEMENT INFORMATION.



MATCHLINE
TH 35 NB STA 159+00

END SP 6982-322WP2 (TH 35)
TH 35 NB STA 164+26.60

LEGEND	
	TRAFFIC DIRECTION
	CONSTRUCTION LIMITS
	LIMITS OF DISTURBANCE
	EXISTING R/W
	TEMPORARY EASEMENT
	ACCESS CONTROL
	CHAIN LINK FENCE
	INPLACE CHAIN LINK FENCE

Page: 10 of 38

NO	DATE	DWN	CKD	REVISIONS



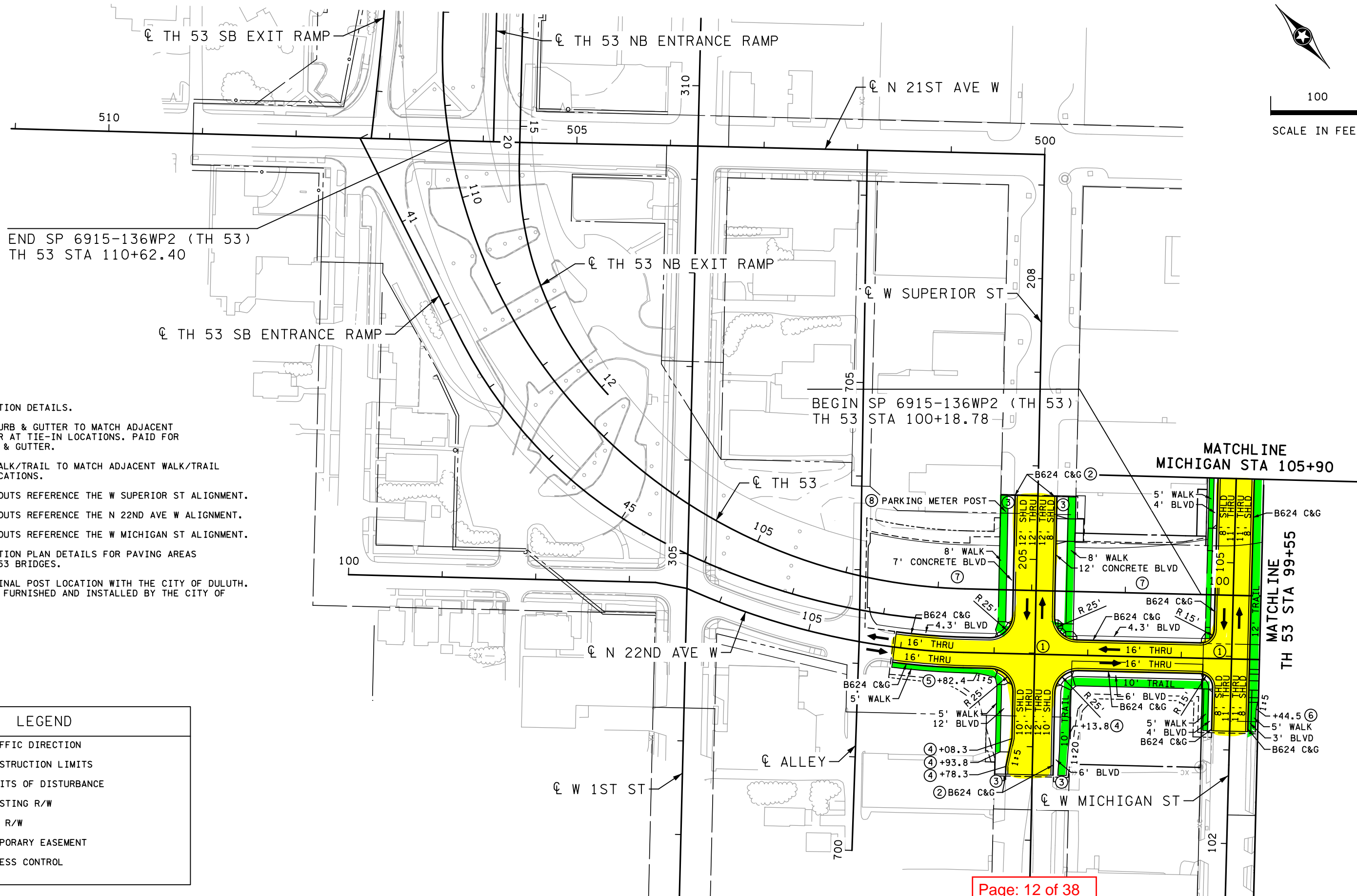
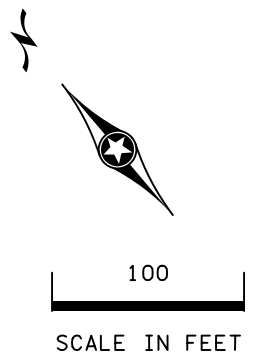
I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: **DRAFT COPY**
SIGNATURE: **DRAFT COPY**
DATE: _____

CONSTRUCTION PLAN
TH 35 NB STA 159+00 TO STA 174+00

SP 6982-322WP2 (TH 35)
SHEET NO. 451 OF SHEETS

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SPECIFIC NOTES:

- ① SEE INTERSECTION DETAILS.
- ② TRANSITION CURB & GUTTER TO MATCH ADJACENT CURB & GUTTER AT TIE-IN LOCATIONS. PAID FOR AS B624 CURB & GUTTER.
- ③ TRANSITION WALK/TRAIL TO MATCH ADJACENT WALK/TRAIL AT TIE-IN LOCATIONS.
- ④ STATION CALLOUTS REFERENCE THE W SUPERIOR ST ALIGNMENT.
- ⑤ STATION CALLOUTS REFERENCE THE N 22ND AVE W ALIGNMENT.
- ⑥ STATION CALLOUTS REFERENCE THE W MICHIGAN ST ALIGNMENT.
- ⑦ SEE CONSTRUCTION PLAN DETAILS FOR PAVING AREAS BENEATH THE 53 BRIDGES.
- ⑧ COORDINATE FINAL POST LOCATION WITH THE CITY OF DULUTH. METERS TO BE FURNISHED AND INSTALLED BY THE CITY OF DULUTH.

LEGEND	
	TRAFFIC DIRECTION
	CONSTRUCTION LIMITS
	LIMITS OF DISTURBANCE
	EXISTING R/W
	NEW R/W
	TEMPORARY EASEMENT
	ACCESS CONTROL

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NO	DATE	DWN	CKD	REVISIONS



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.

PRINT NAME: _____
 SIGNATURE: _____
 DATE: _____
 LICENSE # _____

DRAFT COPY DRAFT COPY

CONSTRUCTION PLAN
 LOCAL ROADS (TH 53 STA 99+55 TO STA 112+00)

SP 6982-322WP2 (TH 35)
 SHEET NO. 453 OF 1315 SHEETS

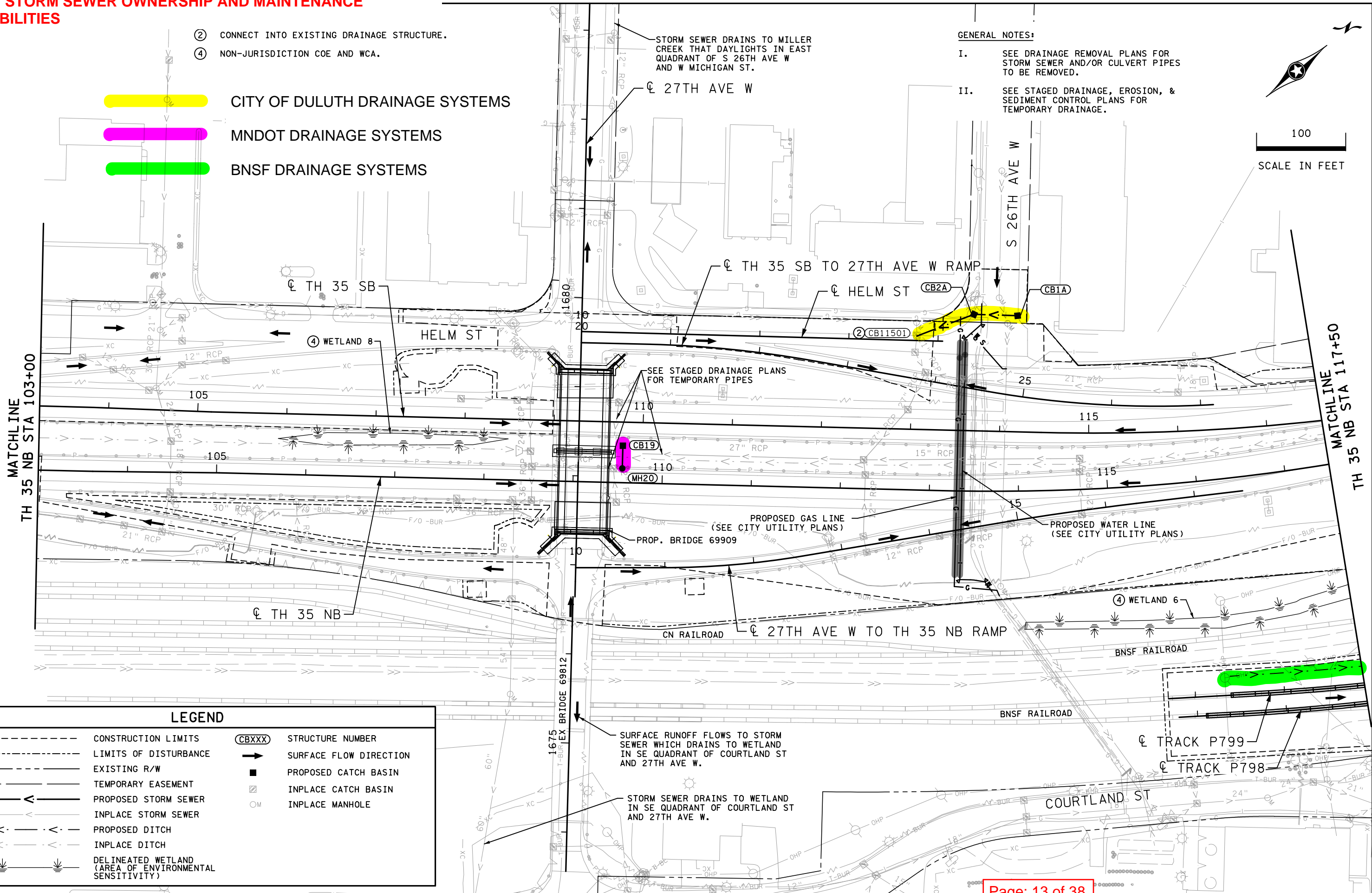
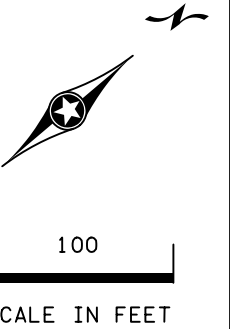
EXHIBIT B: STORM SEWER OWNERSHIP AND MAINTENANCE RESPONSIBILITIES

- ② CONNECT INTO EXISTING DRAINAGE STRUCTURE.
- ④ NON-JURISDICTION COE AND WCA.

- CITY OF DULUTH DRAINAGE SYSTEMS
- MNDOT DRAINAGE SYSTEMS
- BNSF DRAINAGE SYSTEMS

GENERAL NOTES:

- I. SEE DRAINAGE REMOVAL PLANS FOR STORM SEWER AND/OR CULVERT PIPES TO BE REMOVED.
- II. SEE STAGED DRAINAGE, EROSION, & SEDIMENT CONTROL PLANS FOR TEMPORARY DRAINAGE.



LEGEND

	CONSTRUCTION LIMITS		STRUCTURE NUMBER
	LIMITS OF DISTURBANCE		SURFACE FLOW DIRECTION
	EXISTING R/W		PROPOSED CATCH BASIN
	TEMPORARY EASEMENT		INPLACE CATCH BASIN
	PROPOSED STORM SEWER		INPLACE MANHOLE
	INPLACE STORM SEWER		
	PROPOSED DITCH		
	INPLACE DITCH		
	DELINEATED WETLAND (AREA OF ENVIRONMENTAL SENSITIVITY)		

Page: 13 of 38

0	1/13/20	AMJ	MAW	PLAN LETTING
NO	DATE	DWN	CKD	REVISIONS



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.

PRINT NAME: MATTHEW A. WASSMAN
 SIGNATURE: *Matthew A. Wassman*
 DATE: 7/1/20 LICENSE #: 26883

DRAINAGE PLAN
 TH 35 NB STA 103+00 TO STA 117+50

SP 6982-322WP1 (TH 35)
 SHEET NO. 312 OF 792 SHEETS

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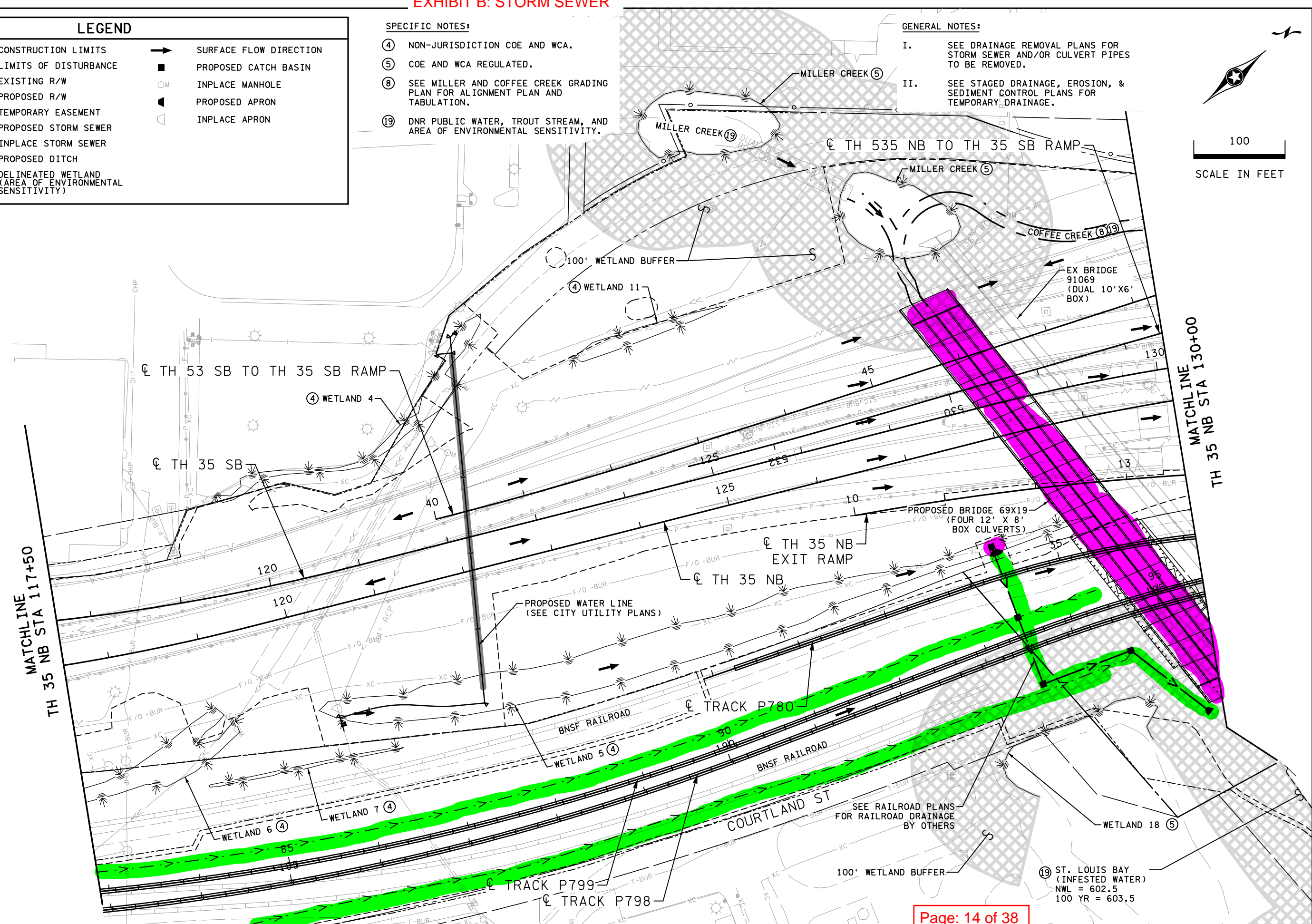
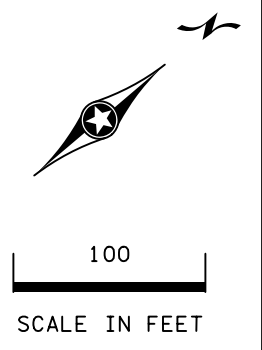
EXHIBIT B: STORM SEWER

LEGEND

---	CONSTRUCTION LIMITS	→	SURFACE FLOW DIRECTION
---	LIMITS OF DISTURBANCE	■	PROPOSED CATCH BASIN
---	EXISTING R/W	○	INPLACE MANHOLE
---	PROPOSED R/W	◀	PROPOSED APRON
---	TEMPORARY EASEMENT	◁	INPLACE APRON
---	PROPOSED STORM SEWER		
---	INPLACE STORM SEWER		
---	PROPOSED DITCH		
---	DELINEATED WETLAND (AREA OF ENVIRONMENTAL SENSITIVITY)		

- SPECIFIC NOTES:**
- ④ NON-JURISDICTION COE AND WCA.
 - ⑤ COE AND WCA REGULATED.
 - ⑧ SEE MILLER AND COFFEE CREEK GRADING PLAN FOR ALIGNMENT PLAN AND TABULATION.
 - ⑱ DNR PUBLIC WATER, TROUT STREAM, AND AREA OF ENVIRONMENTAL SENSITIVITY.

- GENERAL NOTES:**
- I. SEE DRAINAGE REMOVAL PLANS FOR STORM SEWER AND/OR CULVERT PIPES TO BE REMOVED.
 - II. SEE STAGED DRAINAGE, EROSION, & SEDIMENT CONTROL PLANS FOR TEMPORARY DRAINAGE.



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0	1/13/20	AMJ	MAW	PLAN LETTING
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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.

PRINT NAME: MATTHEW A. WASSMAN
SIGNATURE: *Matthew A. Wassman*
DATE: 7/1/20 LICENSE #: 26883

DRAINAGE PLAN
TH 35 NB STA 117+50 TO STA 130+00

SP 6982-322WP1 (TH 35)
SHEET NO. 313 OF 792 SHEETS

EXHIBIT B: STORM SEWER

GENERAL NOTES:

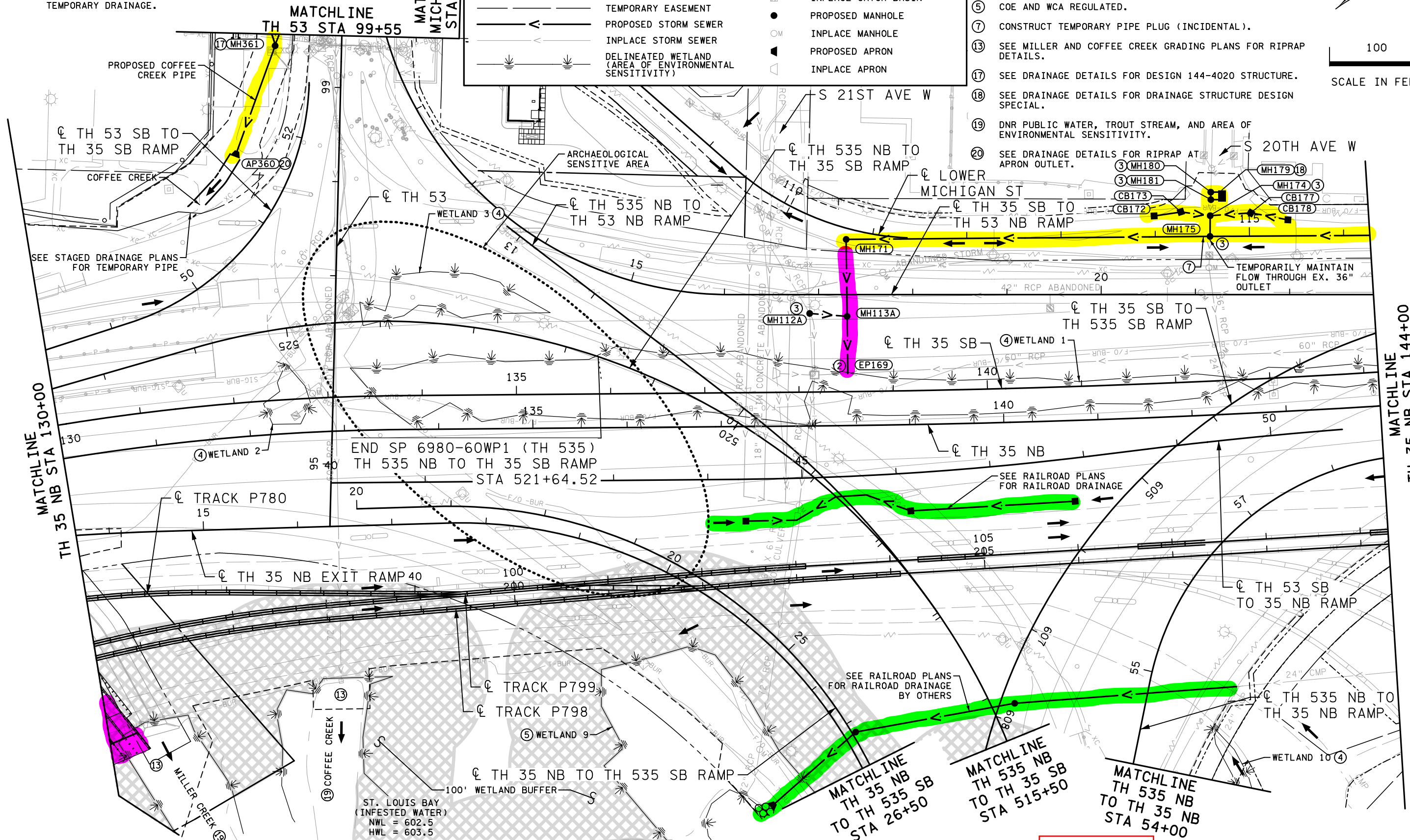
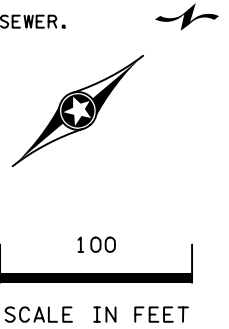
- I. SEE DRAINAGE REMOVAL PLANS FOR STORM SEWER AND/OR CULVERT PIPES TO BE REMOVED.
- II. SEE STAGED DRAINAGE, EROSION, & SEDIMENT CONTROL PLANS FOR TEMPORARY DRAINAGE.

LEGEND

	CONSTRUCTION LIMITS		STRUCTURE NUMBER
	LIMITS OF DISTURBANCE		SURFACE FLOW DIRECTION
	EXISTING R/W		PROPOSED CATCH BASIN
	PROPOSED R/W		INPLACE CATCH BASIN
	TEMPORARY EASEMENT		PROPOSED MANHOLE
	PROPOSED STORM SEWER		INPLACE MANHOLE
	INPLACE STORM SEWER		PROPOSED APRON
	DELINEATED WETLAND (AREA OF ENVIRONMENTAL SENSITIVITY)		INPLACE APRON

SPECIFIC NOTES:

- ② CONNECT 36" STEEL CASING PIPE INTO EXISTING 60" RC PIPE SEWER. PAID FOR AS CONNECT INTO EXISTING DRAINAGE STRUCTURE.
- ③ CONNECT TO EXISTING STORM SEWER.
- ④ NON-JURISDICTION COE AND WCA.
- ⑤ COE AND WCA REGULATED.
- ⑦ CONSTRUCT TEMPORARY PIPE PLUG (INCIDENTAL).
- ⑬ SEE MILLER AND COFFEE CREEK GRADING PLANS FOR RIPRAP DETAILS.
- ⑰ SEE DRAINAGE DETAILS FOR DESIGN 144-4020 STRUCTURE.
- ⑱ SEE DRAINAGE DETAILS FOR DRAINAGE STRUCTURE DESIGN SPECIAL.
- ⑲ DNR PUBLIC WATER, TROUT STREAM, AND AREA OF ENVIRONMENTAL SENSITIVITY.
- ⑳ SEE DRAINAGE DETAILS FOR RIPRAP AT APRON OUTLET.



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NO	DATE	DWN	CKD	REVISIONS
0	1/13/20	AMJ	MAW	PLAN LETTING



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.

PRINT NAME: MATTHEW A. WASSMAN
 SIGNATURE: *Matthew A. Wassman*
 DATE: 7/1/20 LICENSE #: 26883

DRAINAGE PLAN
 TH 35 NB STA 130+00 TO STA 144+00

SP 6982-322WP1 (TH 35)
 SHEET NO. 314 OF 792 SHEETS

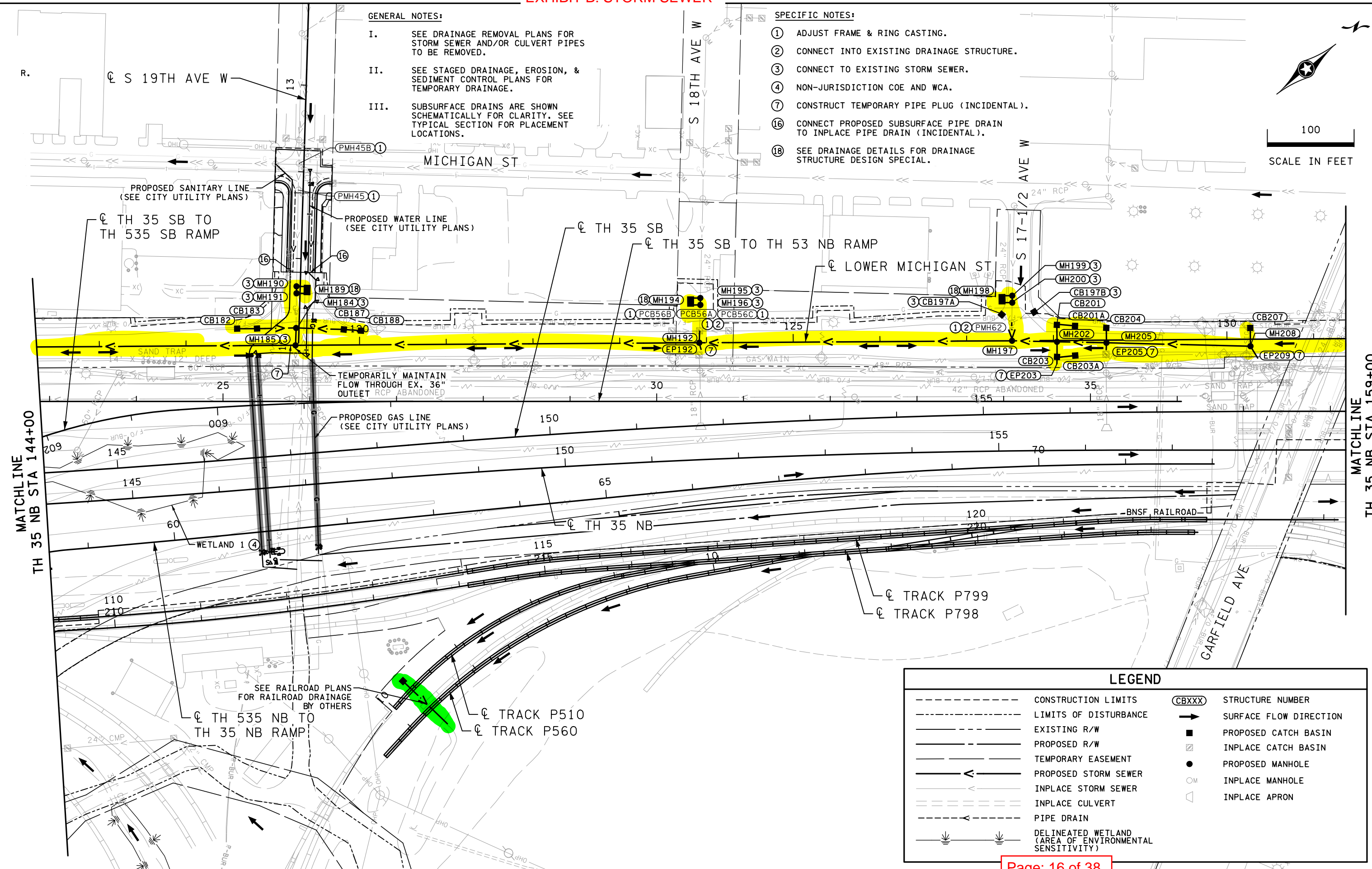
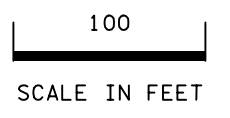
EXHIBIT B: STORM SEWER

GENERAL NOTES:

- I. SEE DRAINAGE REMOVAL PLANS FOR STORM SEWER AND/OR CULVERT PIPES TO BE REMOVED.
- II. SEE STAGED DRAINAGE, EROSION, & SEDIMENT CONTROL PLANS FOR TEMPORARY DRAINAGE.
- III. SUBSURFACE DRAINS ARE SHOWN SCHEMATICALLY FOR CLARITY. SEE TYPICAL SECTION FOR PLACEMENT LOCATIONS.

SPECIFIC NOTES:

- ① ADJUST FRAME & RING CASTING.
- ② CONNECT INTO EXISTING DRAINAGE STRUCTURE.
- ③ CONNECT TO EXISTING STORM SEWER.
- ④ NON-JURISDICTION COE AND WCA.
- ⑦ CONSTRUCT TEMPORARY PIPE PLUG (INCIDENTAL).
- ⑬ CONNECT PROPOSED SUBSURFACE PIPE DRAIN TO INPLACE PIPE DRAIN (INCIDENTAL).
- ⑮ SEE DRAINAGE DETAILS FOR DRAINAGE STRUCTURE DESIGN SPECIAL.



LEGEND			
--- (dashed line)	CONSTRUCTION LIMITS	CBXXX	STRUCTURE NUMBER
--- (dashed line)	LIMITS OF DISTURBANCE	→	SURFACE FLOW DIRECTION
--- (dashed line)	EXISTING R/W	■	PROPOSED CATCH BASIN
--- (dashed line)	PROPOSED R/W	▣	INPLACE CATCH BASIN
--- (dashed line)	TEMPORARY EASEMENT	●	PROPOSED MANHOLE
--- (dashed line)	PROPOSED STORM SEWER	○	INPLACE MANHOLE
--- (dashed line)	INPLACE STORM SEWER	◻	INPLACE APRON
--- (dashed line)	INPLACE CULVERT		
--- (dashed line)	PIPE DRAIN		
--- (dashed line)	DELINEATED WETLAND (AREA OF ENVIRONMENTAL SENSITIVITY)		

Page: 16 of 38

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NO	DATE	DWN	CKD	REVISIONS
0	1/13/20	AMJ	MAW	PLAN LETTING



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.

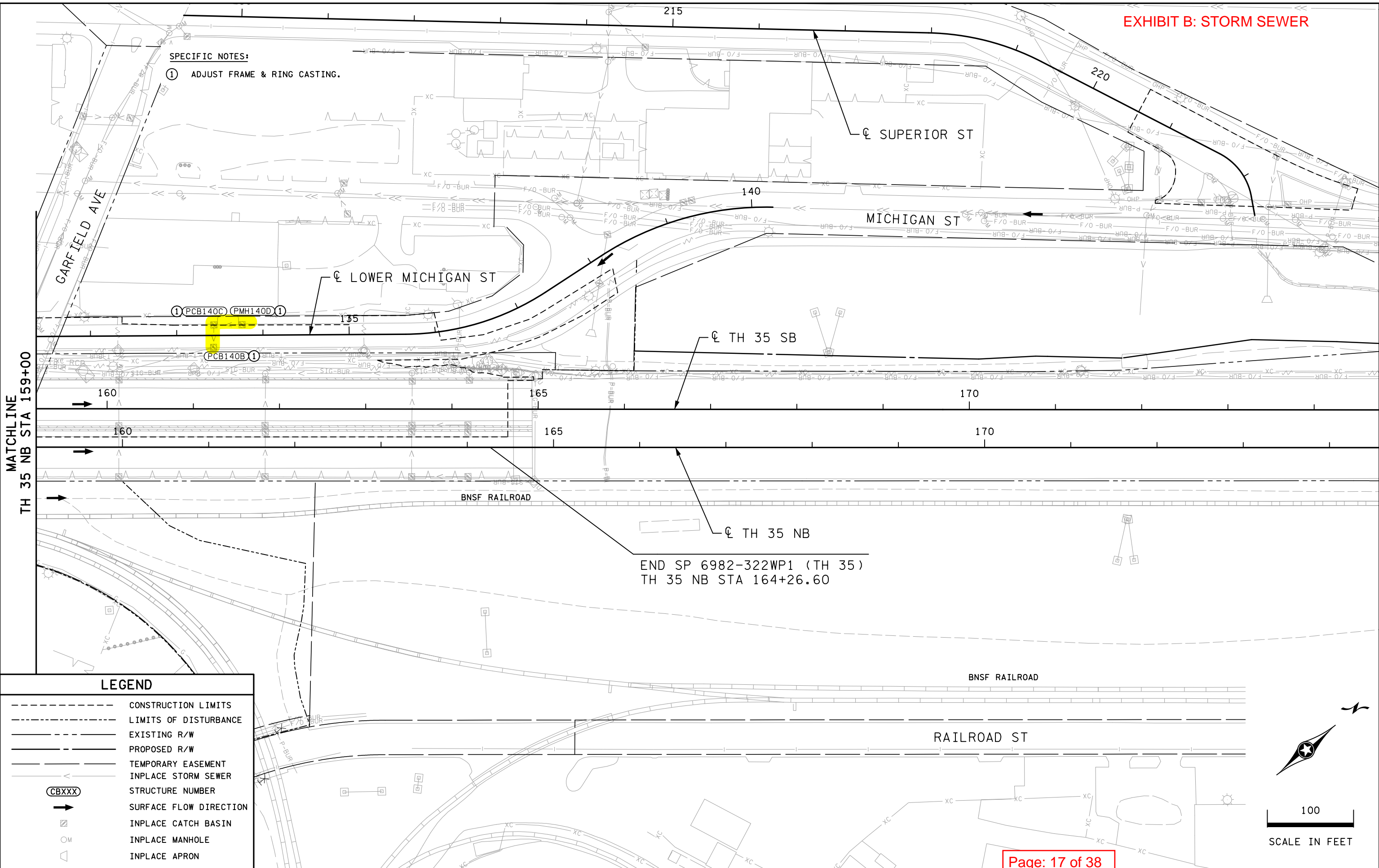
PRINT NAME: MATTHEW A. WASSMAN
 SIGNATURE: *Matthew A. Wassman*
 DATE: 7/1/20 LICENSE #: 26883

DRAINAGE PLAN
 TH 35 NB STA 144+00 TO STA 159+00

SP 6982-322WP1 (TH 35)
 SHEET NO. 315 OF 792 SHEETS

SPECIFIC NOTES:

- ① ADJUST FRAME & RING CASTING.

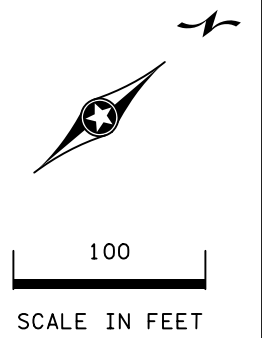


MATCHLINE
TH 35 NB STA 159+00

LEGEND

- CONSTRUCTION LIMITS
- LIMITS OF DISTURBANCE
- EXISTING R/W
- PROPOSED R/W
- TEMPORARY EASEMENT
- INPLACE STORM SEWER
- CBXXX STRUCTURE NUMBER
- SURFACE FLOW DIRECTION
- ☒ INPLACE CATCH BASIN
- INPLACE MANHOLE
- △ INPLACE APRON

END SP 6982-322WP1 (TH 35)
TH 35 NB STA 164+26.60



Page: 17 of 38

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... Sheets: WP1, Cdb6982322WP1_dr106.dgn

NO	DATE	DWN	CKD	REVISIONS
0	1/13/20	AMJ	MAW	PLAN LETTING



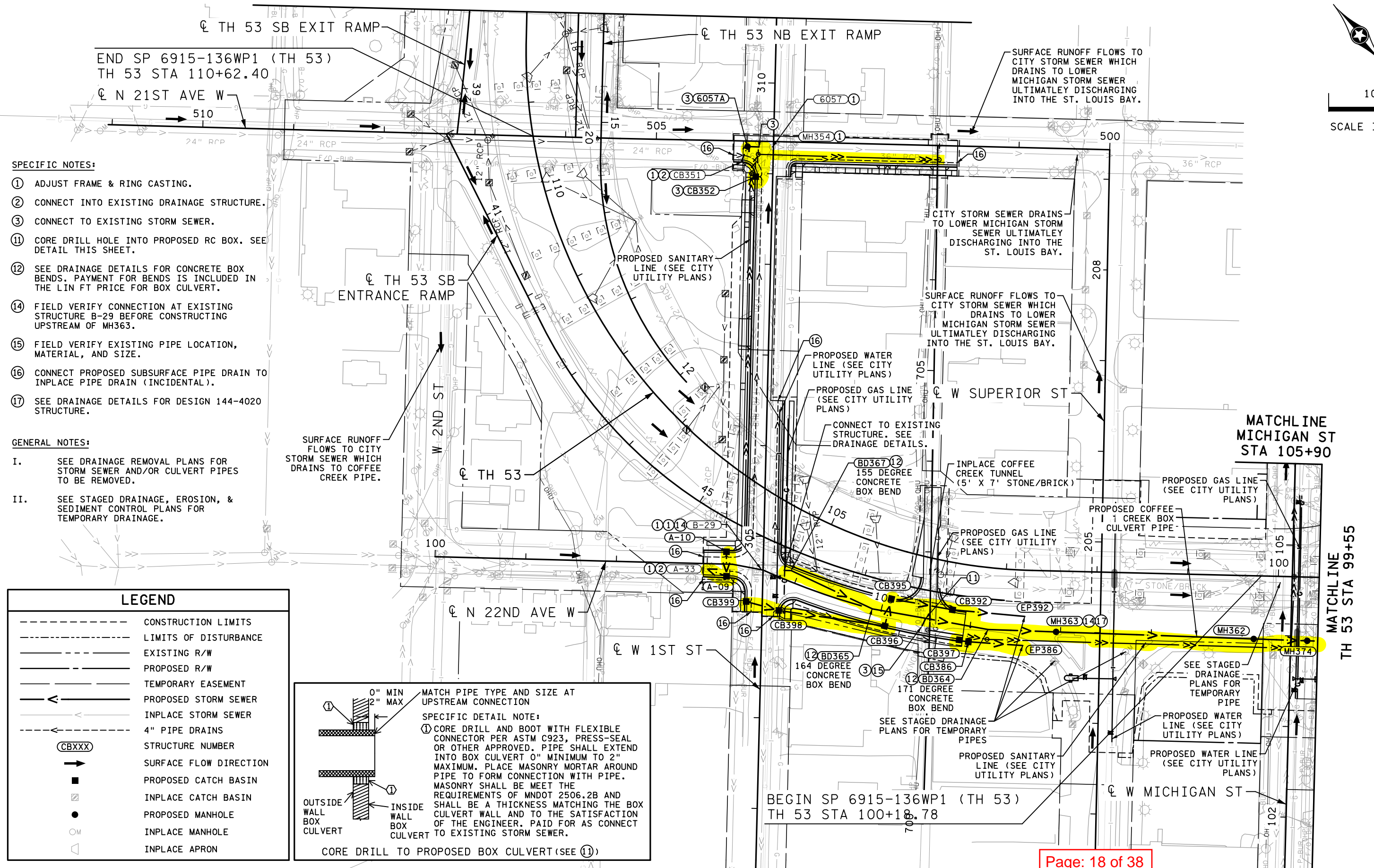
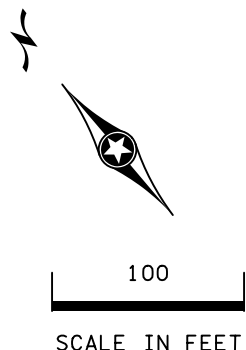
I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: MATTHEW A. WASSMAN
SIGNATURE: *Matthew A. Wassman*
DATE: 1/13/20 LICENSE #: 26883

DRAINAGE PLAN
TH 35 NB STA 159+00 TO STA 174+58

SP 6982-322WP1 (TH 35)
SHEET NO. 316 OF 792 SHEETS

EXHIBIT B: STORM SEWER

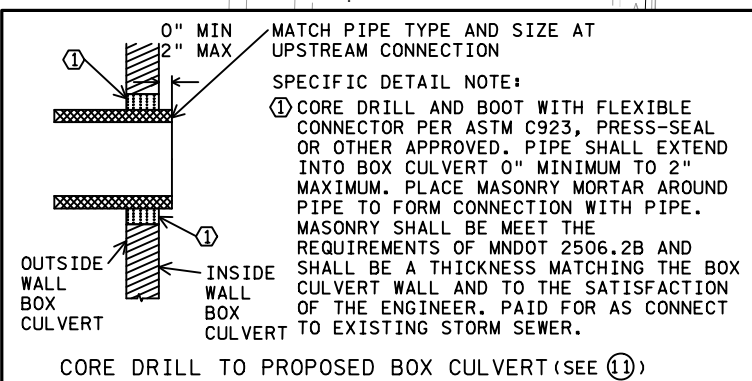


- SPECIFIC NOTES:**
- ① ADJUST FRAME & RING CASTING.
 - ② CONNECT INTO EXISTING DRAINAGE STRUCTURE.
 - ③ CONNECT TO EXISTING STORM SEWER.
 - ⑪ CORE DRILL HOLE INTO PROPOSED RC BOX. SEE DETAIL THIS SHEET.
 - ⑫ SEE DRAINAGE DETAILS FOR CONCRETE BOX BENDS. PAYMENT FOR BENDS IS INCLUDED IN THE LINE ITEM PRICE FOR BOX CULVERT.
 - ⑭ FIELD VERIFY CONNECTION AT EXISTING STRUCTURE B-29 BEFORE CONSTRUCTING UPSTREAM OF MH363.
 - ⑮ FIELD VERIFY EXISTING PIPE LOCATION, MATERIAL, AND SIZE.
 - ⑯ CONNECT PROPOSED SUBSURFACE PIPE DRAIN TO INPLACE PIPE DRAIN (INCIDENTAL).
 - ⑰ SEE DRAINAGE DETAILS FOR DESIGN 144-4020 STRUCTURE.

- GENERAL NOTES:**
- I. SEE DRAINAGE REMOVAL PLANS FOR STORM SEWER AND/OR CULVERT PIPES TO BE REMOVED.
 - II. SEE STAGED DRAINAGE, EROSION, & SEDIMENT CONTROL PLANS FOR TEMPORARY DRAINAGE.

LEGEND

- CONSTRUCTION LIMITS
- - - LIMITS OF DISTURBANCE
- EXISTING R/W
- - - PROPOSED R/W
- - - TEMPORARY EASEMENT
- PROPOSED STORM SEWER
- - - INPLACE STORM SEWER
- 4" PIPE DRAINS
- CBXXX STRUCTURE NUMBER
- SURFACE FLOW DIRECTION
- PROPOSED CATCH BASIN
- ▣ INPLACE CATCH BASIN
- PROPOSED MANHOLE
- INPLACE MANHOLE
- ▽ INPLACE APRON



NO	DATE	DWN	CKD	REVISIONS
0	1/13/20	KJH	CRJ	PLAN LETTING



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.

PRINT NAME: CRAIG JOHNSON
 SIGNATURE: *Craig Johnson*
 DATE: 7/1/20 LICENSE #: 42372

DRAINAGE PLAN
 LOCAL ROADS (TH 53 STA 99+55 TO STA 112+00)

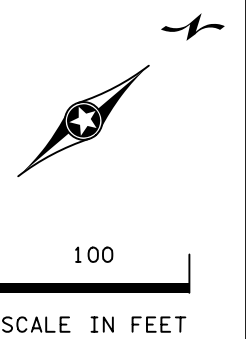
SP 6982-322WP1 (TH 35)
 SHEET NO. 318 OF 792 SHEETS

EXHIBIT B: STORM SEWER

SPECIFIC NOTES:

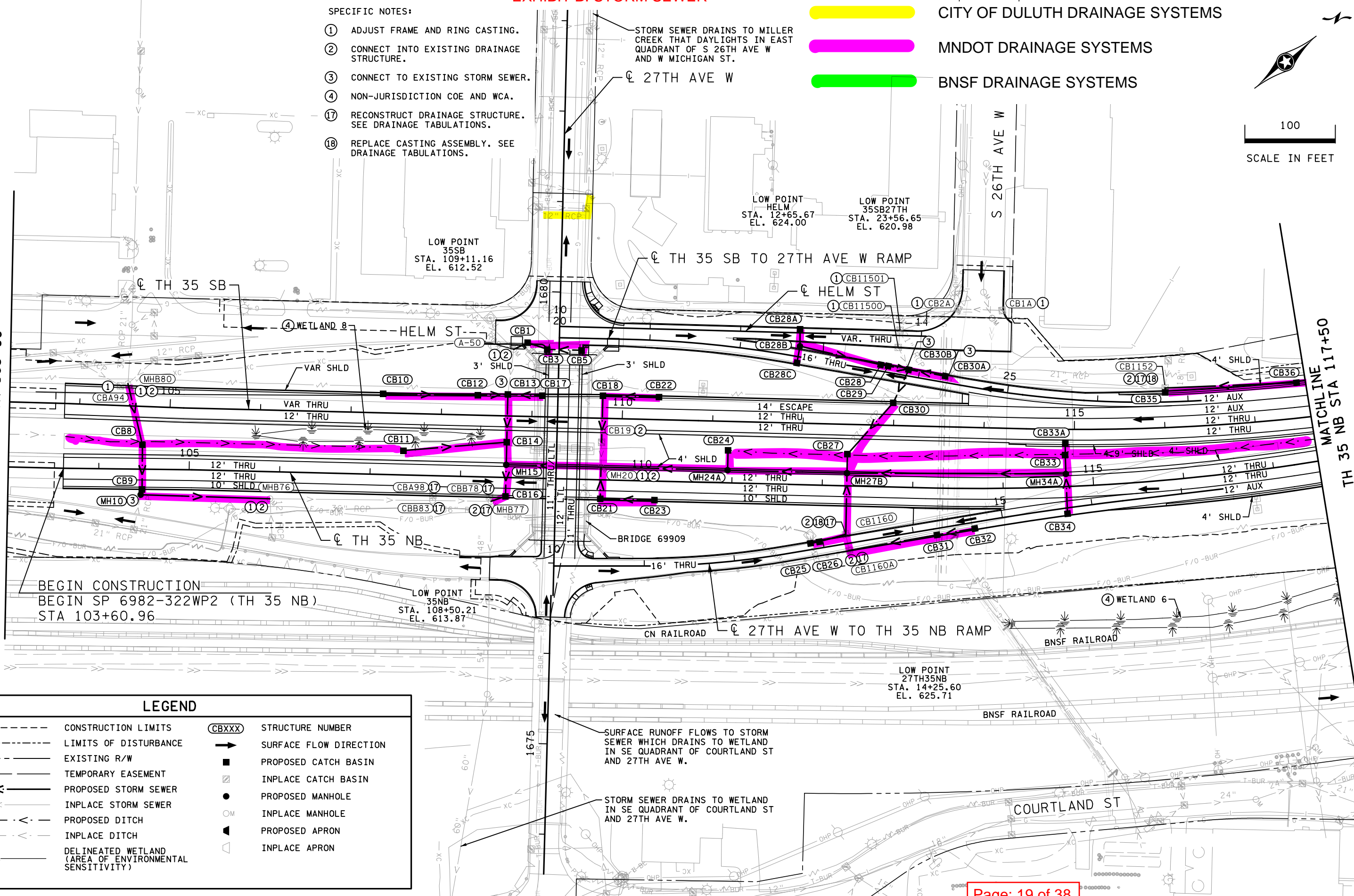
- ① ADJUST FRAME AND RING CASTING.
- ② CONNECT INTO EXISTING DRAINAGE STRUCTURE.
- ③ CONNECT TO EXISTING STORM SEWER.
- ④ NON-JURISDICTION COE AND WCA.
- ⑰ RECONSTRUCT DRAINAGE STRUCTURE. SEE DRAINAGE TABULATIONS.
- ⑱ REPLACE CASTING ASSEMBLY. SEE DRAINAGE TABULATIONS.

- CITY OF DULUTH DRAINAGE SYSTEMS
- MNDOT DRAINAGE SYSTEMS
- BNSF DRAINAGE SYSTEMS



MATCHLINE
TH 35 NB STA 103+00

MATCHLINE
TH 35 NB STA 117+50



BEGIN CONSTRUCTION
BEGIN SP 6982-322WP2 (TH 35 NB)
STA 103+60.96

LOW POINT
35NB
STA. 108+50.21
EL. 613.87

LOW POINT
27TH35NB
STA. 14+25.60
EL. 625.71

SURFACE RUNOFF FLOWS TO STORM SEWER WHICH DRAINS TO WETLAND IN SE QUADRANT OF COURTLAND ST AND 27TH AVE W.

STORM SEWER DRAINS TO WETLAND IN SE QUADRANT OF COURTLAND ST AND 27TH AVE W.

LEGEND

	CONSTRUCTION LIMITS		STRUCTURE NUMBER
	LIMITS OF DISTURBANCE		SURFACE FLOW DIRECTION
	EXISTING R/W		PROPOSED CATCH BASIN
	TEMPORARY EASEMENT		INPLACE CATCH BASIN
	PROPOSED STORM SEWER		PROPOSED MANHOLE
	INPLACE STORM SEWER		INPLACE MANHOLE
	PROPOSED DITCH		PROPOSED APRON
	INPLACE DITCH		INPLACE APRON
	DELINEATED WETLAND (AREA OF ENVIRONMENTAL SENSITIVITY)		

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Page: 19 of 38

NO	DATE	DWN	CKD	REVISIONS



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.

PRINT NAME: MATTHEW A. WASSMAN
SIGNATURE: [Signature]
DATE: 7/2/2018
LICENSE: 26883

DRAINAGE PLAN
TH 35 NB STA 103+00 TO STA 117+50

SP 6982-322WP2 (TH 35)
SHEET NO. 714 OF 1204 SHEETS

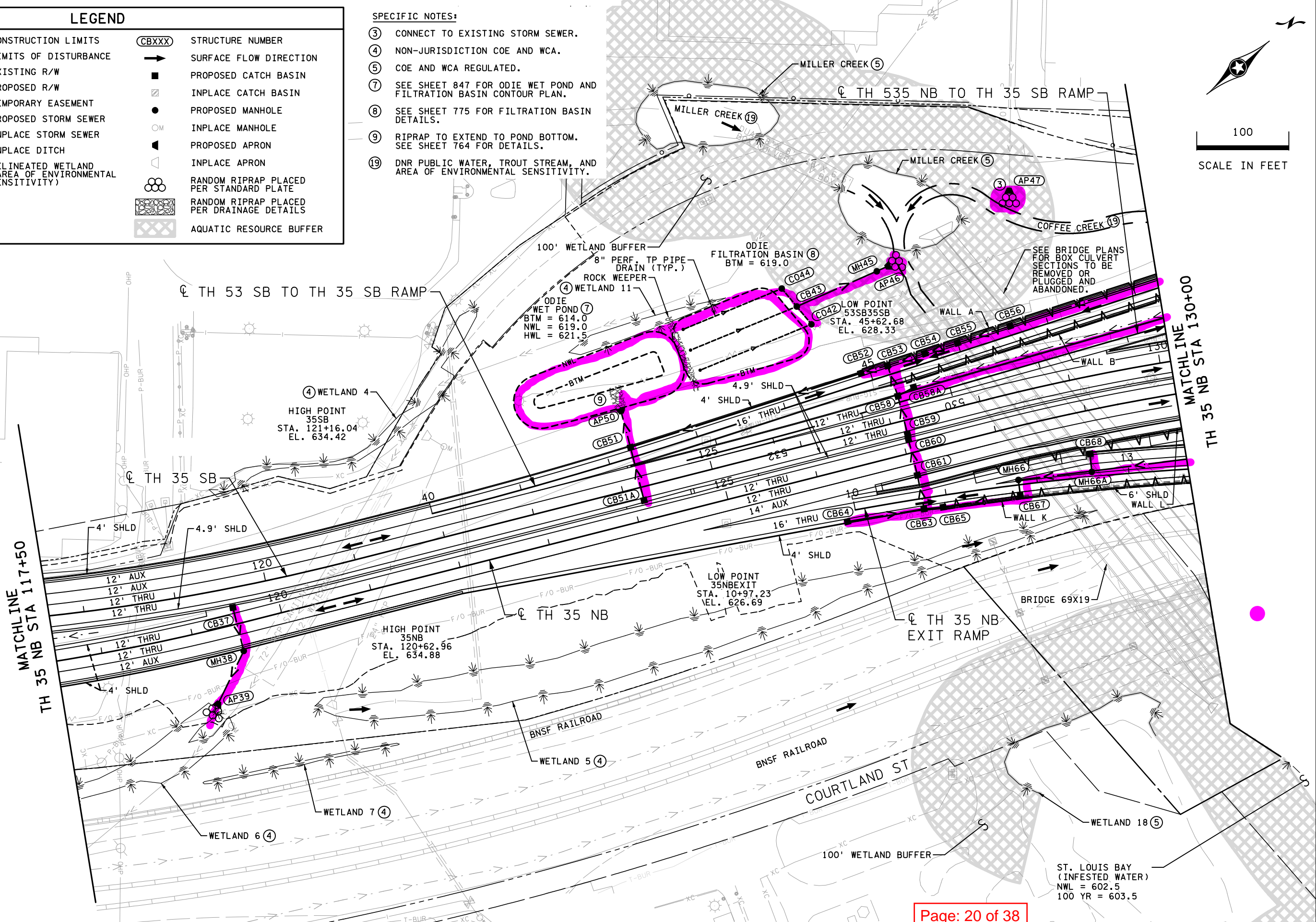
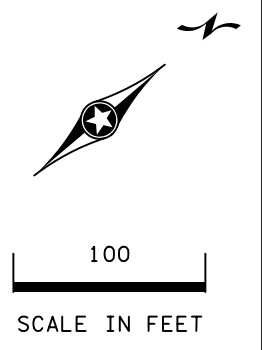
EXHIBIT B: STORM SEWER

LEGEND

	CONSTRUCTION LIMITS		STRUCTURE NUMBER
	LIMITS OF DISTURBANCE		SURFACE FLOW DIRECTION
	EXISTING R/W		PROPOSED CATCH BASIN
	PROPOSED R/W		INPLACE CATCH BASIN
	TEMPORARY EASEMENT		PROPOSED MANHOLE
	PROPOSED STORM SEWER		INPLACE MANHOLE
	INPLACE STORM SEWER		PROPOSED APRON
	INPLACE DITCH		INPLACE APRON
	DELINEATED WETLAND (AREA OF ENVIRONMENTAL SENSITIVITY)		RANDOM RIPRAP PLACED PER STANDARD PLATE
			RANDOM RIPRAP PLACED PER DRAINAGE DETAILS
			AQUATIC RESOURCE BUFFER

SPECIFIC NOTES:

- ③ CONNECT TO EXISTING STORM SEWER.
- ④ NON-JURISDICTION COE AND WCA.
- ⑤ COE AND WCA REGULATED.
- ⑦ SEE SHEET 847 FOR ODIE WET POND AND FILTRATION BASIN CONTOUR PLAN.
- ⑧ SEE SHEET 775 FOR FILTRATION BASIN DETAILS.
- ⑨ RIPRAP TO EXTEND TO POND BOTTOM. SEE SHEET 764 FOR DETAILS.
- ⑰ DNR PUBLIC WATER, TROUT STREAM, AND AREA OF ENVIRONMENTAL SENSITIVITY.



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NO	DATE	DWN	CKD	REVISIONS



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.

PRINT NAME: MATTHEW A. WASSMAN
SIGNATURE: [Signature]
DATE: 7/2/2020 LICENSE: 26883

DRAINAGE PLAN
TH 35 NB STA 117+50 TO STA 130+00

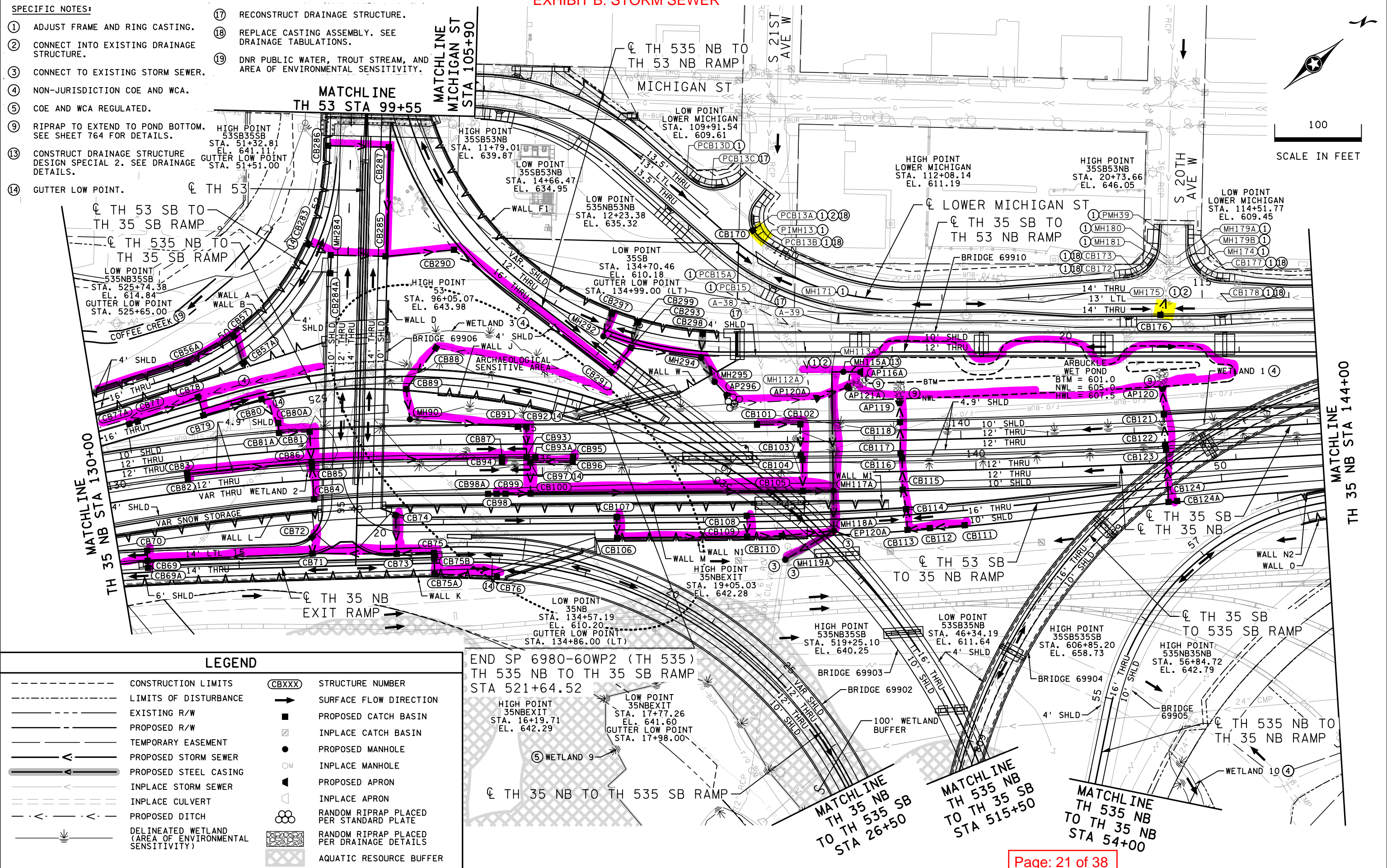
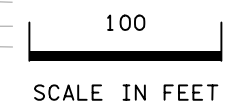
Page: 20 of 38

SP 6982-322WP2 (TH 35)
SHEET NO. 715 OF 1204 SHEETS

EXHIBIT B: STORM SEWER

SPECIFIC NOTES:

- ① ADJUST FRAME AND RING CASTING.
- ② CONNECT INTO EXISTING DRAINAGE STRUCTURE.
- ③ CONNECT TO EXISTING STORM SEWER.
- ④ NON-JURISDICTION COE AND WCA.
- ⑤ COE AND WCA REGULATED.
- ⑨ RIPRAP TO EXTEND TO POND BOTTOM. SEE SHEET 764 FOR DETAILS.
- ⑬ CONSTRUCT DRAINAGE STRUCTURE DESIGN SPECIAL 2. SEE DRAINAGE DETAILS.
- ⑭ GUTTER LOW POINT.
- ⑰ RECONSTRUCT DRAINAGE STRUCTURE.
- ⑱ REPLACE CASTING ASSEMBLY. SEE DRAINAGE TABULATIONS.
- ⑲ DNR PUBLIC WATER, TROUT STREAM, AND AREA OF ENVIRONMENTAL SENSITIVITY.



LEGEND

	CONSTRUCTION LIMITS		STRUCTURE NUMBER
	LIMITS OF DISTURBANCE		SURFACE FLOW DIRECTION
	EXISTING R/W		PROPOSED CATCH BASIN
	PROPOSED R/W		INPLACE CATCH BASIN
	TEMPORARY EASEMENT		PROPOSED MANHOLE
	PROPOSED STORM SEWER		INPLACE MANHOLE
	PROPOSED STEEL CASING		PROPOSED APRON
	INPLACE STORM SEWER		INPLACE APRON
	INPLACE CULVERT		RANDOM RIPRAP PLACED PER STANDARD PLATE
	PROPOSED DITCH		RANDOM RIPRAP PLACED PER DRAINAGE DETAILS
	DELINEATED WETLAND (AREA OF ENVIRONMENTAL SENSITIVITY)		AQUATIC RESOURCE BUFFER

END SP 6980-60WP2 (TH 535) TH 535 NB TO TH 35 SB RAMP STA 521+64.52

HIGH POINT 35NBEXIT STA. 17+77.26 EL. 641.60
GUTTER LOW POINT STA. 17+98.00

LOW POINT 35NB STA. 134+57.19 EL. 610.20
GUTTER LOW POINT STA. 134+86.00 (LT)

LOW POINT 35NB STA. 17+77.26 EL. 641.60
GUTTER LOW POINT STA. 17+98.00

LOW POINT 35NB STA. 134+57.19 EL. 610.20
GUTTER LOW POINT STA. 134+86.00 (LT)

LOW POINT 35NB STA. 17+77.26 EL. 641.60
GUTTER LOW POINT STA. 17+98.00

LOW POINT 35NB STA. 134+57.19 EL. 610.20
GUTTER LOW POINT STA. 134+86.00 (LT)

NO	DATE	DWN	CKD	REVISIONS



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.

PRINT NAME: **MATTHEW A. WASSMAN**
SIGNATURE: *[Signature]*
DATE: 7/2/2020 LICENSE: 26883

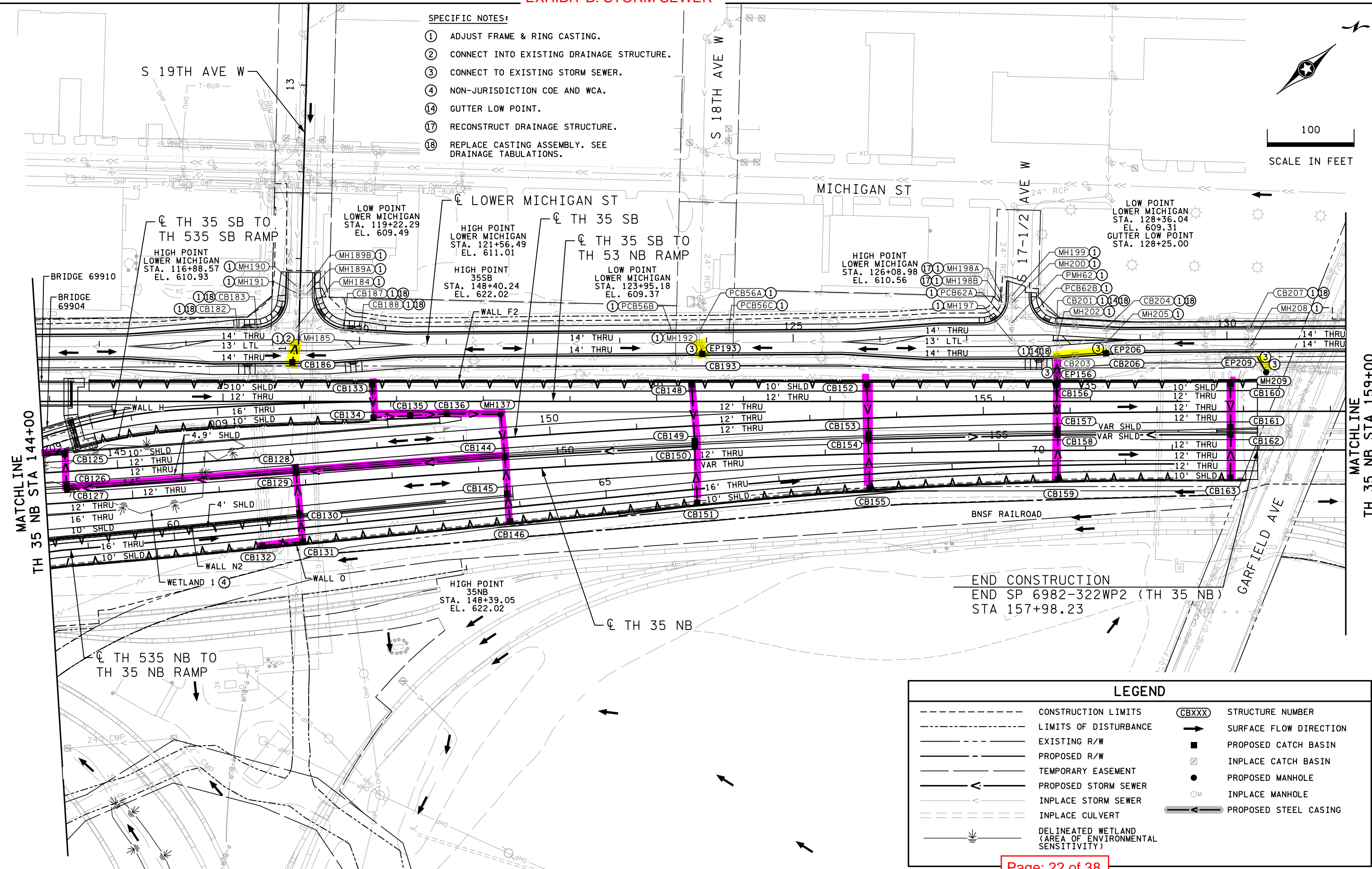
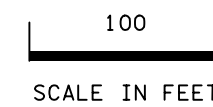
DRAINAGE PLAN
TH 35 NB STA 130+00 TO STA 144+00

SP 6982-322WP2 (TH 35)
SHEET NO. 716 OF 1204 SHEETS

EXHIBIT B: STORM SEWER

SPECIFIC NOTES:

- ① ADJUST FRAME & RING CASTING.
- ② CONNECT INTO EXISTING DRAINAGE STRUCTURE.
- ③ CONNECT TO EXISTING STORM SEWER.
- ④ NON-JURISDICTION COE AND WCA.
- ⑭ GUTTER LOW POINT.
- ⑰ RECONSTRUCT DRAINAGE STRUCTURE.
- ⑱ REPLACE CASTING ASSEMBLY. SEE DRAINAGE TABULATIONS.



LEGEND			
--- (dashed line)	CONSTRUCTION LIMITS	(CBXXX)	STRUCTURE NUMBER
--- (long dashed line)	LIMITS OF DISTURBANCE	→	SURFACE FLOW DIRECTION
--- (solid line)	EXISTING R/W	■	PROPOSED CATCH BASIN
--- (dashed line)	PROPOSED R/W	▣	INPLACE CATCH BASIN
--- (dotted line)	TEMPORARY EASEMENT	●	PROPOSED MANHOLE
--- (solid line with arrow)	PROPOSED STORM SEWER	○	INPLACE MANHOLE
--- (dashed line with arrow)	INPLACE STORM SEWER	— —	PROPOSED STEEL CASING
--- (dashed line with arrow)	INPLACE CULVERT		
--- (dotted line with wavy symbol)	DELINEATED WETLAND (AREA OF ENVIRONMENTAL SENSITIVITY)		

Page: 22 of 38

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NO	DATE	DWN	CKD	REVISIONS



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.

PRINT NAME: MATTHEW A. WASSMAN
 SIGNATURE: [Signature]
 DATE: 7/2/2020 LICENSE # 26883

DRAINAGE PLAN
 TH 35 NB STA 144+00 TO STA 159+00

SP 6982-322WP2 (TH 35)
 SHEET NO. 717 OF 1204 SHEETS

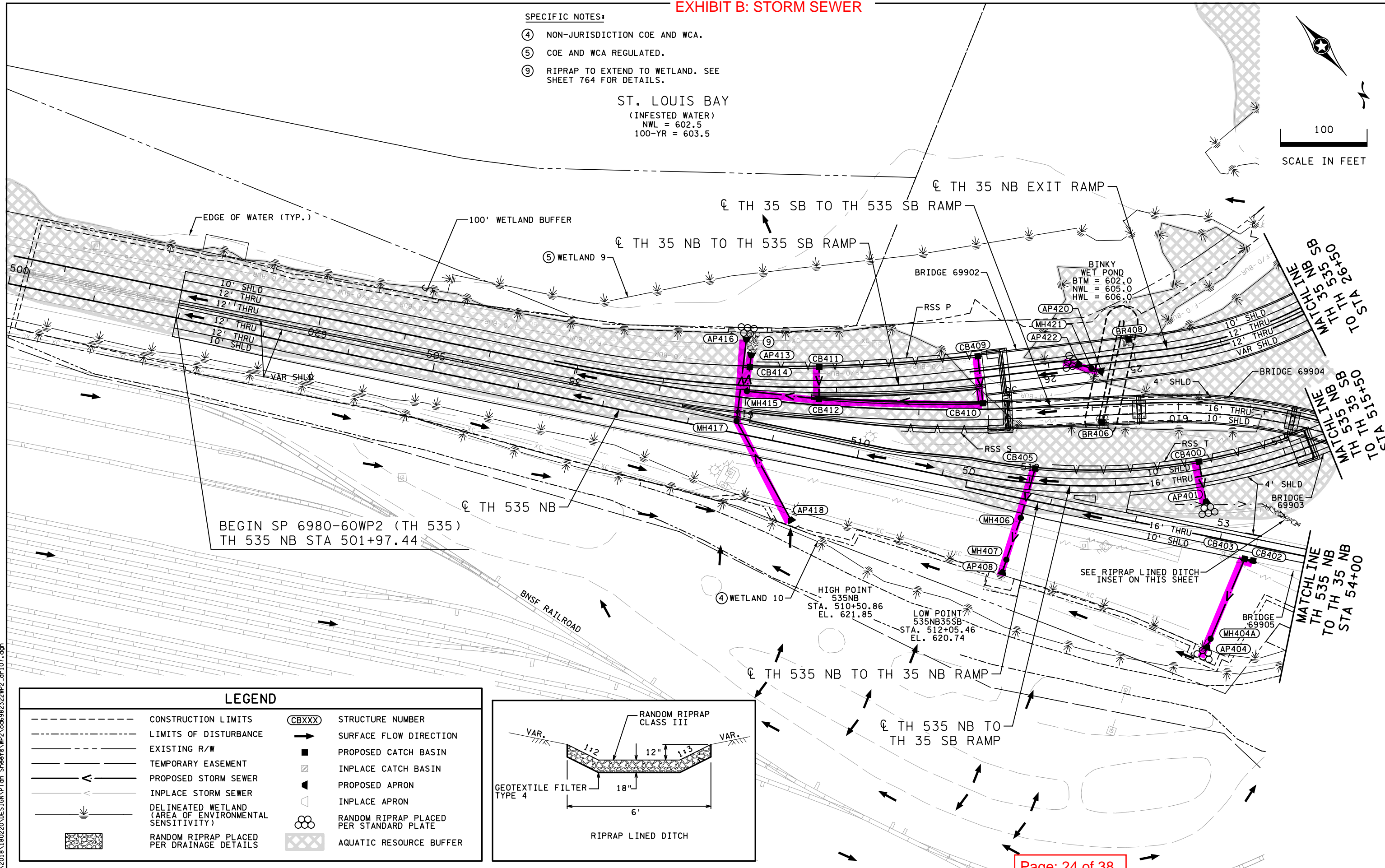
EXHIBIT B: STORM SEWER

SPECIFIC NOTES:

- ④ NON-JURISDICTION COE AND WCA.
- ⑤ COE AND WCA REGULATED.
- ⑨ RIPRAP TO EXTEND TO WETLAND. SEE SHEET 764 FOR DETAILS.

ST. LOUIS BAY
(INFESTED WATER)
NWL = 602.5
100-YR = 603.5

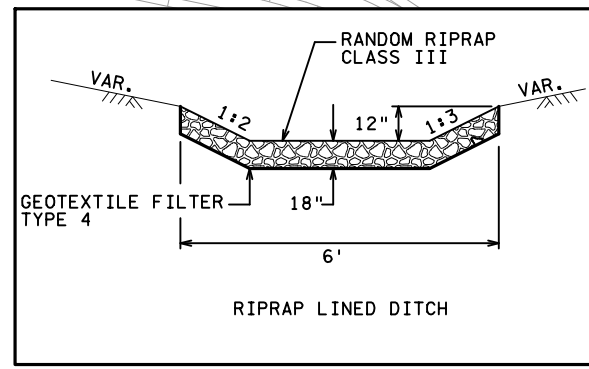
100
SCALE IN FEET



BEGIN SP 6980-60WP2 (TH 535)
TH 535 NB STA 501+97.44

LEGEND

	CONSTRUCTION LIMITS		STRUCTURE NUMBER
	LIMITS OF DISTURBANCE		SURFACE FLOW DIRECTION
	EXISTING R/W		PROPOSED CATCH BASIN
	TEMPORARY EASEMENT		INPLACE CATCH BASIN
	PROPOSED STORM SEWER		PROPOSED APRON
	INPLACE STORM SEWER		INPLACE APRON
	DELINEATED WETLAND (AREA OF ENVIRONMENTAL SENSITIVITY)		RANDOM RIPRAP PLACED PER STANDARD PLATE
	RANDOM RIPRAP PLACED PER DRAINAGE DETAILS		AQUATIC RESOURCE BUFFER



Page: 24 of 38

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NO	DATE	DWN	CKD	REVISIONS

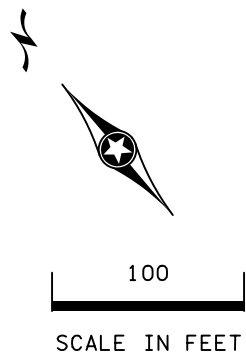


I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: MATTHEW A. WASSMAN
SIGNATURE: [Signature]
DATE: 7/2/2020 LICENSE: 26883

DRAINAGE PLAN
TH 535 NB STA 500+00 TO TH 535 NB TO TH 35 SB RAMP STA 515+50

SP 6982-322WP2 (TH 35)
SHEET NO. 719 OF 1204 SHEETS



- GENERAL NOTES:**
- I. SEE DRAINAGE REMOVAL PLANS FOR STORM SEWER AND/OR CULVERT PIPES TO BE REMOVED.
 - II. SEE STAGED DRAINAGE, EROSION, & SEDIMENT CONTROL PLANS FOR TEMPORARY DRAINAGE.

END SP 6915-136WP2 (TH 53)
TH 53 STA 110+62.40

GUTTER LOW POINT
TH 35 SB TO
TH 53 NB RAMP
STA. 11+24.35
EL. 638.25

**MATCHLINE
MICHIGAN ST
STA 105+90**

**MATCHLINE
TH 53 STA 99+55**

LEGEND			
	CONSTRUCTION LIMITS		STRUCTURE NUMBER
	LIMITS OF DISTURBANCE		SURFACE FLOW DIRECTION
	EXISTING R/W		PROPOSED CATCH BASIN
	PROPOSED R/W		INPLACE CATCH BASIN
	TEMPORARY EASEMENT		PROPOSED MANHOLE
	PROPOSED STORM SEWER		INPLACE MANHOLE
	INPLACE STORM SEWER		INPLACE APRON

NO	DATE	DWN	CKD	REVISIONS



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.

PRINT NAME: TRAI JOHNSON
SIGNATURE: [Signature]
DATE: [Date]
LICENSE # 1372

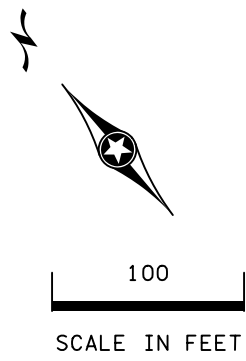
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DRAINAGE PLAN
TH 53 STA 99+55 TO STA 112+00

Page: 25 of 38

SP 6982-322WP2 (TH 35)
SHEET NO. 720 OF 1204 SHEETS

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GENERAL NOTES:

- I. SEE DRAINAGE REMOVAL PLANS FOR STORM SEWER AND/OR CULVERT PIPES TO BE REMOVED.
- II. SEE STAGED DRAINAGE, EROSION, & SEDIMENT CONTROL PLANS FOR TEMPORARY DRAINAGE.

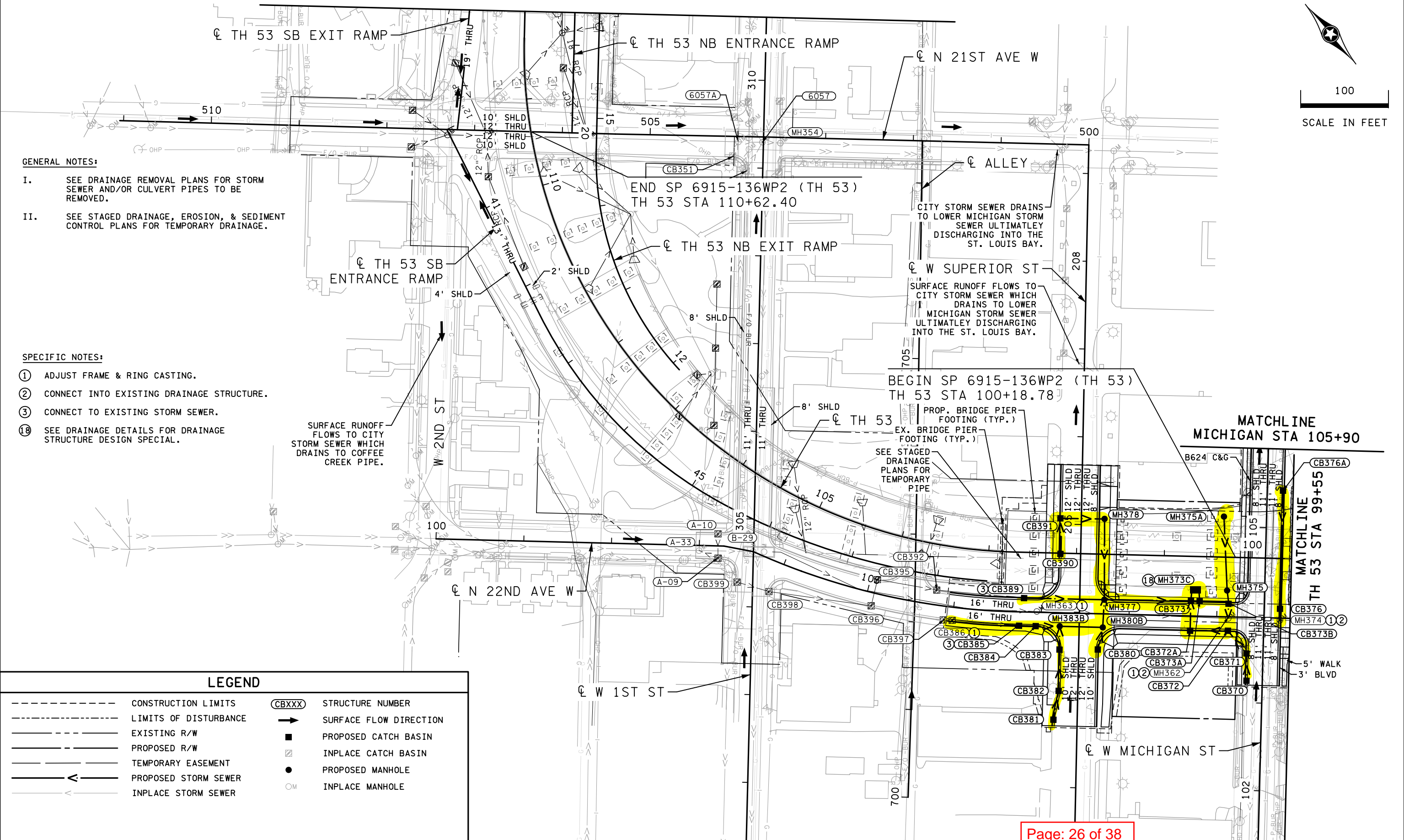
SPECIFIC NOTES:

- ① ADJUST FRAME & RING CASTING.
- ② CONNECT INTO EXISTING DRAINAGE STRUCTURE.
- ③ CONNECT TO EXISTING STORM SEWER.
- ⑬ SEE DRAINAGE DETAILS FOR DRAINAGE STRUCTURE DESIGN SPECIAL.

SURFACE RUNOFF FLOWS TO CITY STORM SEWER WHICH DRAINS TO COFFEE CREEK PIPE.

CITY STORM SEWER DRAINS TO LOWER MICHIGAN STORM SEWER ULTIMATLEY DISCHARGING INTO THE ST. LOUIS BAY.

SURFACE RUNOFF FLOWS TO CITY STORM SEWER WHICH DRAINS TO LOWER MICHIGAN STORM SEWER ULTIMATLEY DISCHARGING INTO THE ST. LOUIS BAY.



LEGEND

---	CONSTRUCTION LIMITS	CBXXX	STRUCTURE NUMBER
---	LIMITS OF DISTURBANCE	→	SURFACE FLOW DIRECTION
---	EXISTING R/W	■	PROPOSED CATCH BASIN
---	PROPOSED R/W	▨	INPLACE CATCH BASIN
---	TEMPORARY EASEMENT	●	PROPOSED MANHOLE
---	PROPOSED STORM SEWER	○	INPLACE MANHOLE
---	INPLACE STORM SEWER		

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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.

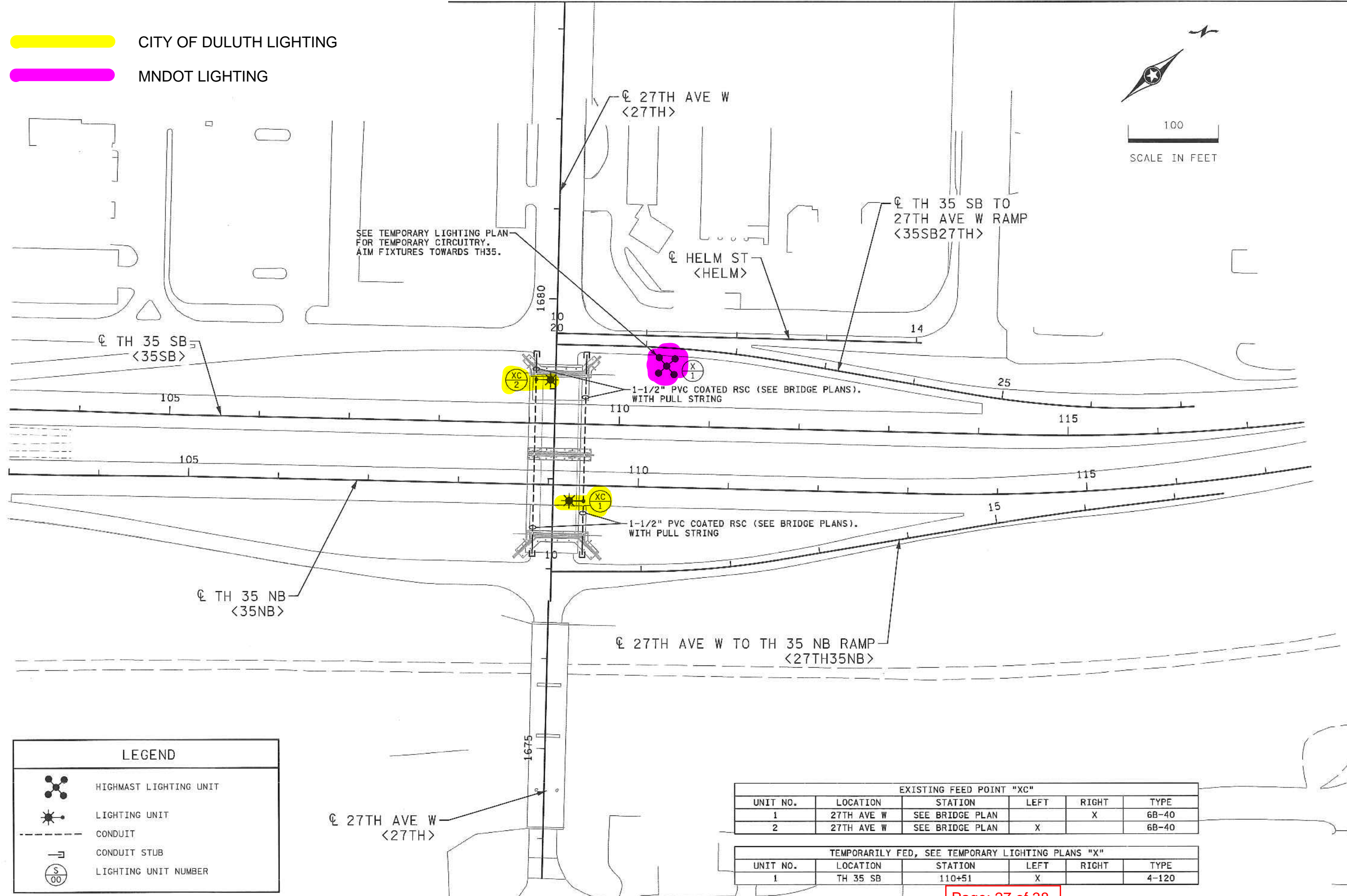
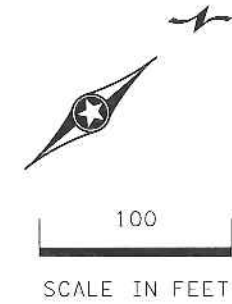
PRINT NAME: TRAI JOHNSON
 SIGNATURE: [Signature]
 DATE: [Date]
 LICENSE: 13372

DRAINAGE PLAN
 LOCAL ROADS (TH 53 STA 99+55 TO STA 112+00)

SP 6982-322WP2 (TH 35)
 SHEET NO. 721 OF 1204 SHEETS

EXHIBIT C: LIGHTING OWNERSHIP AND MAINTENANCE RESPONSIBILITY

- CITY OF DULUTH LIGHTING
- MNDOT LIGHTING



SEE TEMPORARY LIGHTING PLAN FOR TEMPORARY CIRCUITRY. AIM FIXTURES TOWARDS TH35.

TH 35 SB TO 27TH AVE W RAMP <35SB27TH>

HELM ST <HELM>

TH 35 SB <35SB>

TH 35 NB <35NB>

27TH AVE W TO TH 35 NB RAMP <27TH35NB>

LEGEND	
	HIGHMAST LIGHTING UNIT
	LIGHTING UNIT
	CONDUIT
	CONDUIT STUB
	LIGHTING UNIT NUMBER

EXISTING FEED POINT "XC"					
UNIT NO.	LOCATION	STATION	LEFT	RIGHT	TYPE
1	27TH AVE W	SEE BRIDGE PLAN		X	6B-40
2	27TH AVE W	SEE BRIDGE PLAN	X		6B-40

TEMPORARILY FED, SEE TEMPORARY LIGHTING PLANS "X"					
UNIT NO.	LOCATION	STATION	LEFT	RIGHT	TYPE
1	TH 35 SB	110+51	X		4-120

Page: 27 of 38

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NO	DATE	DWN	CKD	REVISIONS
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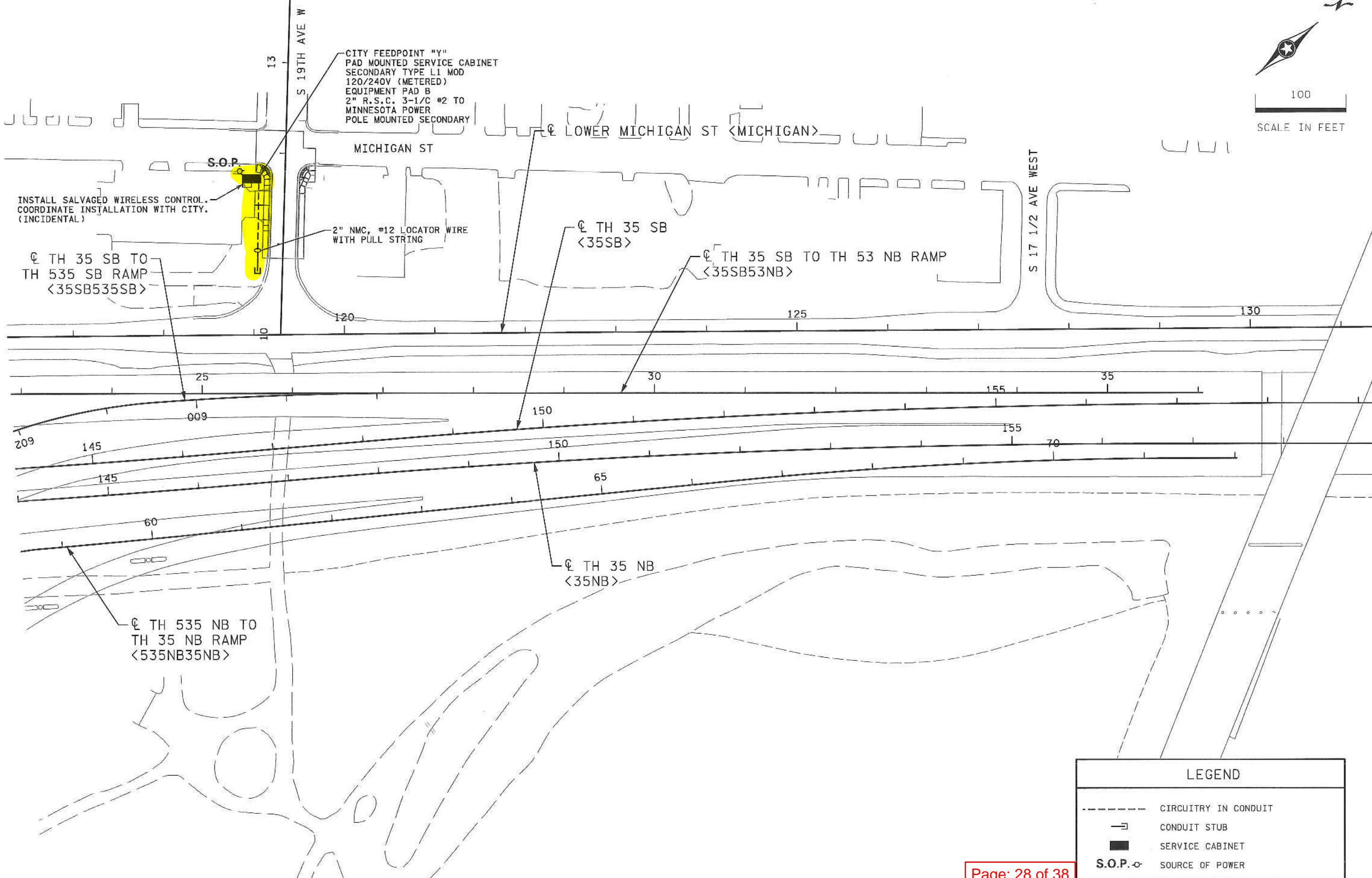
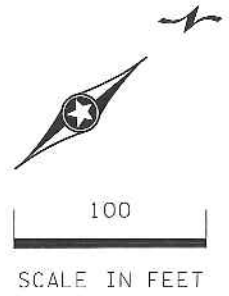


I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: JOHN P. CARLSON
 SIGNATURE: *John P. Carlson*
 DATE: 1/13/20 LICENSE #: 24001

LIGHTING PLAN
 TH 35 NB STA 103+00 TO STA 117+50

SP 6982-322WP1 (TH 35)
 SHEET NO. 599 OF 792 SHEETS

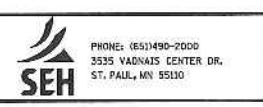


LEGEND	
	CIRCUITRY IN CONDUIT
	CONDUIT STUB
	SERVICE CABINET
	SOURCE OF POWER

Page: 28 of 38

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NO	DATE	DWN	CKD	REVISIONS
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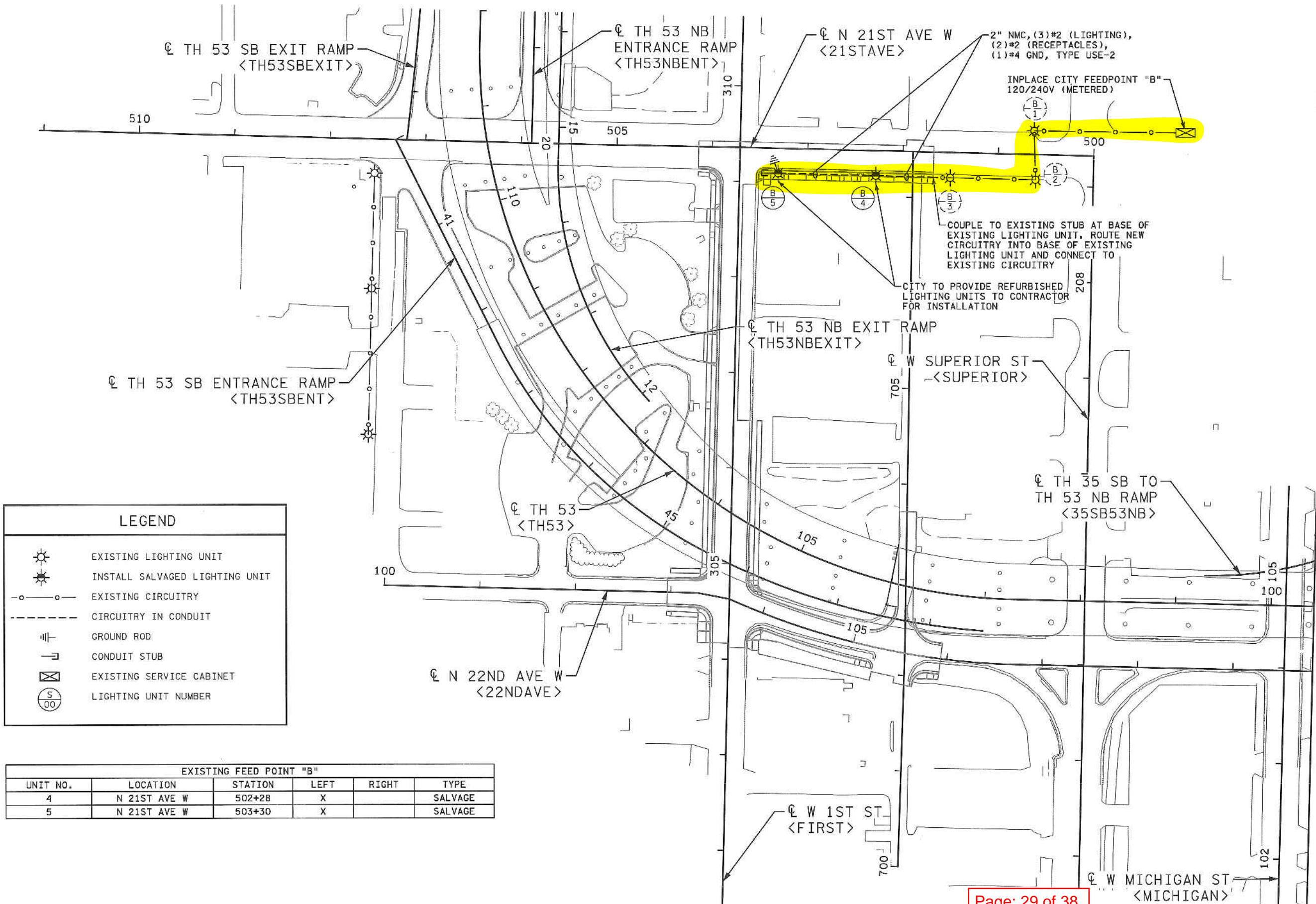
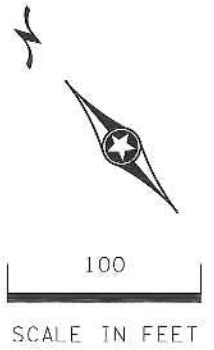
I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: JOHN P. CARLSON
 SIGNATURE: *John P. Carlson*
 DATE: 1/13/20 LICENSE #: 24001

LIGHTING PLAN
 TH 35 NB 144+00 TO STA 159+00

SP 6982-322WP1 (TH 35)
 SHEET NO. 600 OF 792 SHEETS

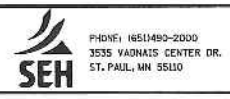
EXHIBIT C: LIGHTING



Page: 29 of 38

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NO	DATE	DWN	CKD	REVISIONS
0	1/13/20	JEK	AKF	PLAN LETTING





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.

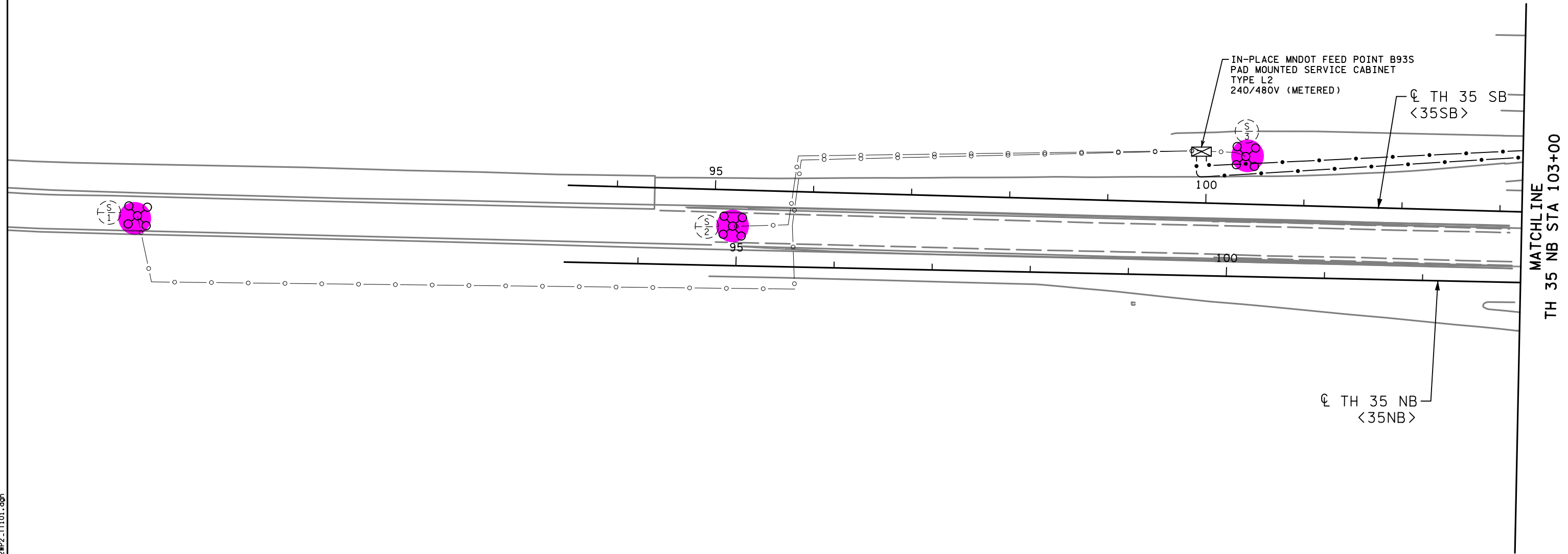
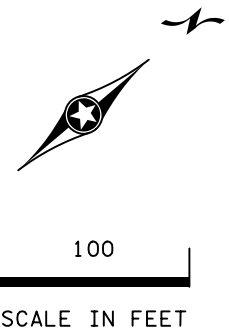
PRINT NAME: JOHN P. CARLSON
SIGNATURE: *John P. Carlson*
DATE: 1/13/20 LICENSE #: 24001

LIGHTING PLAN
TH 53 STA 99+55 TO STA 112+00






SP 6982-322WP1 (TH 35)
SHEET NO. 601 OF 792 SHEETS

EXHIBIT C: LIGHTING

 CITY OF DULUTH LIGHTING
 MNDOT LIGHTING



LEGEND

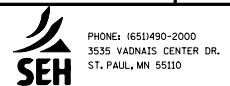
-  EXISTING HIGHMAST LIGHTING UNIT
-  EXISTING CIRCUITRY
-  DIRECT BURIED CABLE
-  EXISTING SERVICE CABINET
-  LIGHTING UNIT NUMBER

- GENERAL NOTES
1. ALL CITY CONDUIT SHALL BE 2" NMC, SCHEDULE 40. UNLESS NOTED OTHERWISE
 2. ALL MNDOT CONDUIT SHALL BE 3" NMC, SCHEDULE 80 UNLESS NOTED OTHERWISE
 3. ALL CITY CONDUCTORS IN CONDUIT SHALL BE 3-1/4 4 AWG AND 1-1/4 8 AWG GND, TYPE USE-2. UNLESS NOTED OTHERWISE
 4. ALL DIRECT BURIED LIGHTING CABLE SHALL BE 4/C 4 AWG. UNLESS OTHERWISE NOTED
 5. ALL LIGHTING AND ELECTRICAL EQUIPMENT SHALL BE STAKED AND VERIFIED BY FIELD ENGINEER PRIOR TO INSTALLATION

Page: 30 of 38

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NO	DATE	DWN	CKD	REVISIONS



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.

PRINT NAME: _____
 SIGNATURE: _____
 DATE: _____
 LICENSE # _____

DRAFT COPY DRAFT COPY

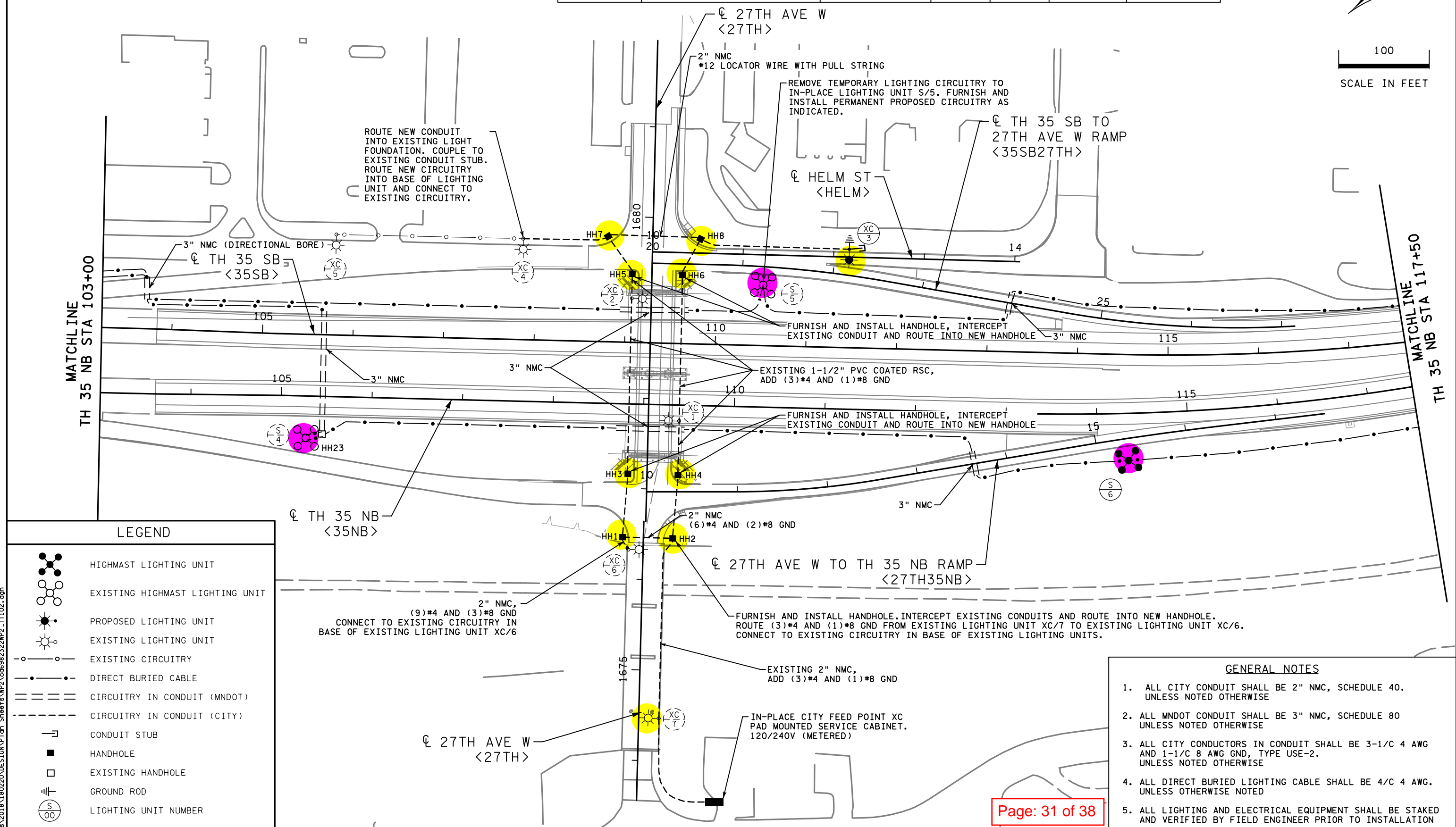
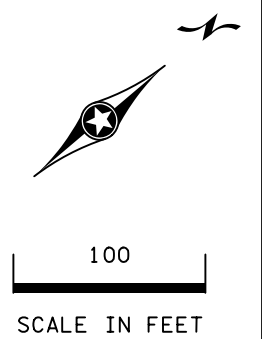
LIGHTING PLAN
 TH 35 NB STA 93+25 TO STA 103+00

SP 6982-322WP2 (TH 35)
 SHEET NO. 1018 OF 1314 SHEETS

EXHIBIT C: LIGHTING

EXISTING FEED POINT "S"							
UNIT NO.	LOCATION	STATION	LEFT	RIGHT	TYPE	DISTRIBUTION	FOUNDATION
6	27TH AVE W TO TH 35 NB RAMP	15+33		X	4-120	ASYMMETRICAL	T-120 (MAT)

EXISTING FEED POINT "XC"						
UNIT NO.	LOCATION	STATION	LEFT	RIGHT	TYPE	FOUNDATION
3	HELM ST	12+17	X		9-40	DESIGN E



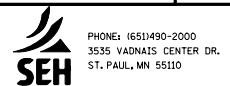
LEGEND	
	HIGHMAST LIGHTING UNIT
	EXISTING HIGHMAST LIGHTING UNIT
	PROPOSED LIGHTING UNIT
	EXISTING LIGHTING UNIT
	EXISTING CIRCUITRY
	DIRECT BURIED CABLE
	CIRCUITRY IN CONDUIT (MNDOT)
	CIRCUITRY IN CONDUIT (CITY)
	CONDUIT STUB
	HANDHOLE
	EXISTING HANDHOLE
	GROUND ROD
	LIGHTING UNIT NUMBER

GENERAL NOTES	
1.	ALL CITY CONDUIT SHALL BE 2" NMC, SCHEDULE 40. UNLESS NOTED OTHERWISE
2.	ALL MNDOT CONDUIT SHALL BE 3" NMC, SCHEDULE 80 UNLESS NOTED OTHERWISE
3.	ALL CITY CONDUCTORS IN CONDUIT SHALL BE 3-1/C 4 AWG AND 1-1/C 8 AWG GND, TYPE USE-2. UNLESS NOTED OTHERWISE
4.	ALL DIRECT BURIED LIGHTING CABLE SHALL BE 4/C 4 AWG. UNLESS OTHERWISE NOTED
5.	ALL LIGHTING AND ELECTRICAL EQUIPMENT SHALL BE STAKED AND VERIFIED BY FIELD ENGINEER PRIOR TO INSTALLATION

Page: 31 of 38

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


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.

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LIGHTING PLAN
 TH 35 NB STA 103+00 TO STA 117+50

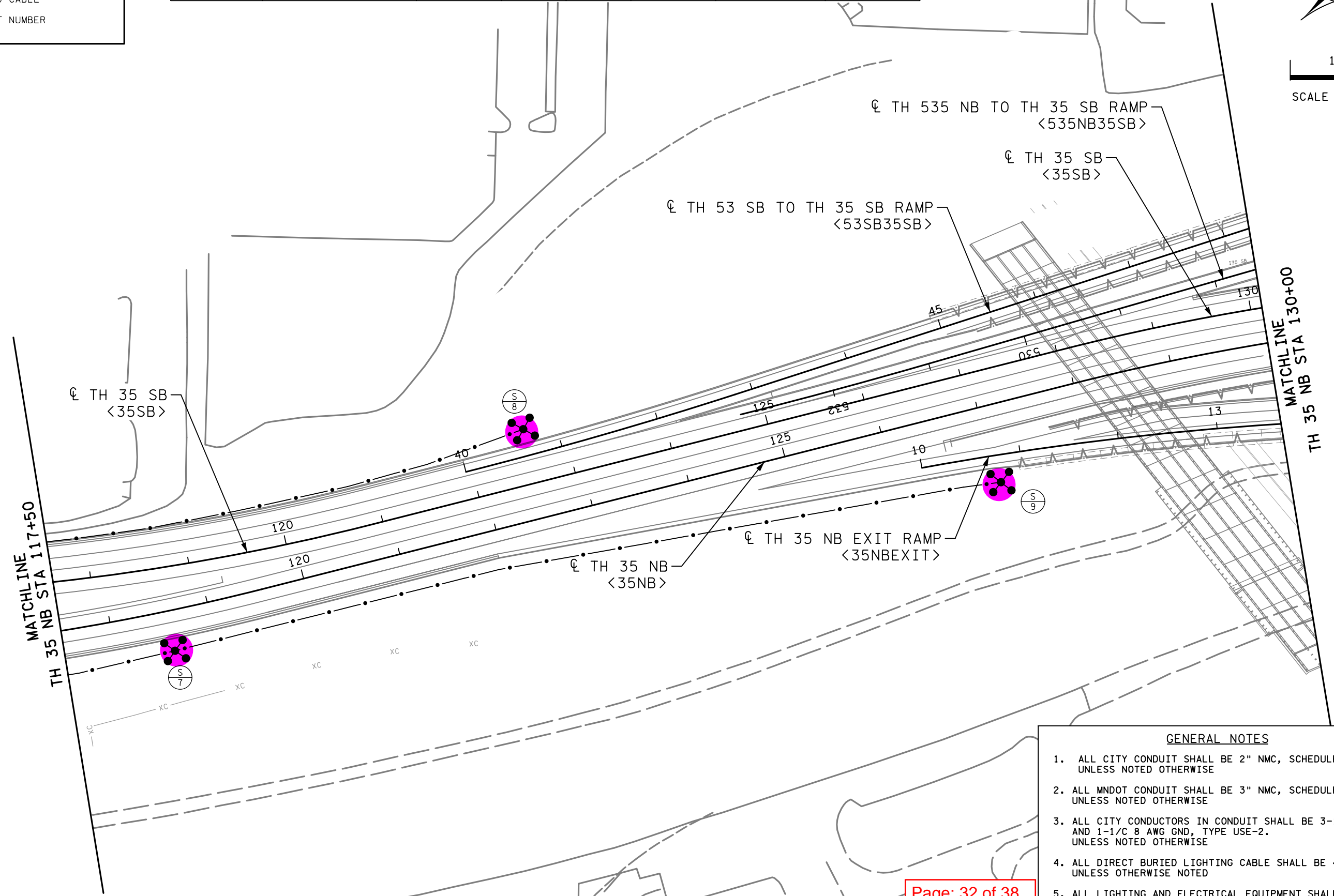
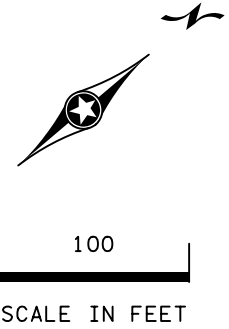
SP 6982-322WP2 (TH 35)
 SHEET NO. 1019 OF 1314 SHEETS

LEGEND

-  HIGHMAST LIGHTING UNIT
-  DIRECT BURIED CABLE
-  LIGHTING UNIT NUMBER

EXISTING FEED POINT "S"							
UNIT NO.	LOCATION	STATION	LEFT	RIGHT	TYPE	DISTRIBUTION	FOUNDATION
7	TH 35 NB	118+58		X	4-100	ASSYMETRICAL	T-100 (PILE)
8	TH 53 TO TH 35 SB RAMP	40+67	X		4-100	ASSYMETRICAL	T-100 (MAT)
9	TH 35 NB EXIT RAMP	10+76		X	4-140	ASSYMETRICAL	T-140 (MAT)

EXHIBIT C: LIGHTING

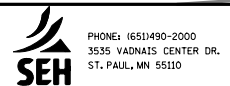


- GENERAL NOTES**
- ALL CITY CONDUIT SHALL BE 2" NMC, SCHEDULE 40. UNLESS NOTED OTHERWISE
 - ALL MNDOT CONDUIT SHALL BE 3" NMC, SCHEDULE 80 UNLESS NOTED OTHERWISE
 - ALL CITY CONDUCTORS IN CONDUIT SHALL BE 3-1/4 AWG AND 1-1/4 8 AWG GND, TYPE USE-2. UNLESS NOTED OTHERWISE
 - ALL DIRECT BURIED LIGHTING CABLE SHALL BE 4/C 4 AWG. UNLESS OTHERWISE NOTED
 - ALL LIGHTING AND ELECTRICAL EQUIPMENT SHALL BE STAKED AND VERIFIED BY FIELD ENGINEER PRIOR TO INSTALLATION

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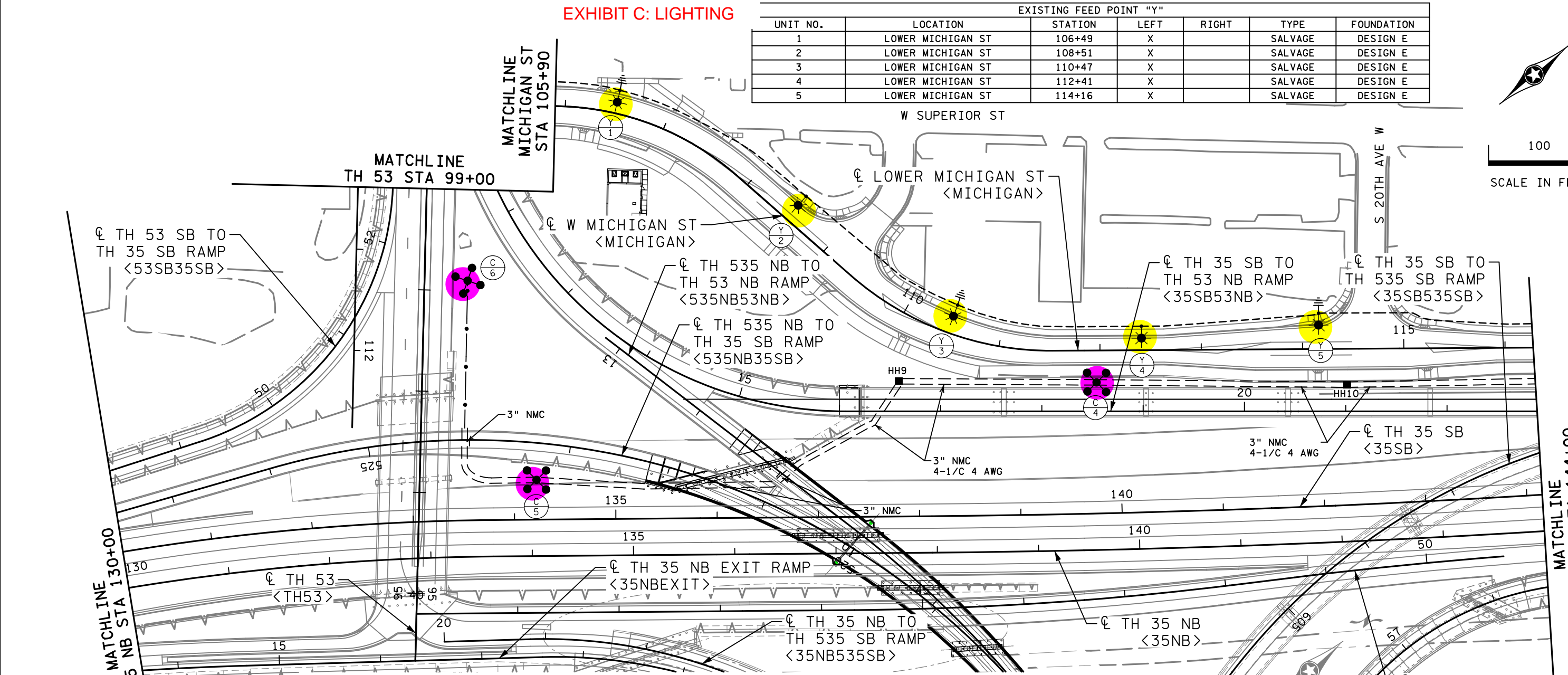
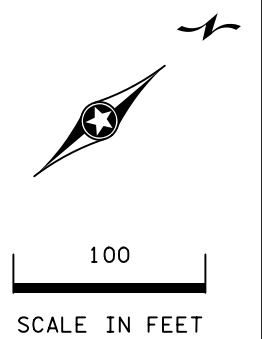
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LIGHTING PLAN
 TH 35 NB STA 117+50 TO STA 130+00

SP 6982-322WP2 (TH 35)
 SHEET NO. 1020 OF 1314 SHEETS

EXHIBIT C: LIGHTING

EXISTING FEED POINT "Y"						
UNIT NO.	LOCATION	STATION	LEFT	RIGHT	TYPE	FOUNDATION
1	LOWER MICHIGAN ST	106+49	X		SALVAGE	DESIGN E
2	LOWER MICHIGAN ST	108+51	X		SALVAGE	DESIGN E
3	LOWER MICHIGAN ST	110+47	X		SALVAGE	DESIGN E
4	LOWER MICHIGAN ST	112+41	X		SALVAGE	DESIGN E
5	LOWER MICHIGAN ST	114+16	X		SALVAGE	DESIGN E



FEED POINT "C"							
UNIT NO.	LOCATION	STATION	LEFT	RIGHT	TYPE	DISTRIBUTION	FOUNDATION
4	TH 35 SB TO TH 53 NB RAMP	18+54	X		4-120	ASYMMETRICAL	T-120 (PILE)
5	TH 53	134+22	X		4-140	ASYMMETRICAL	T-140 (MAT)
6	TH 35 SB	98+10		X	4-140	SYMMETRICAL	T-140 (MAT)

FEED POINT "U"							
UNIT NO.	LOCATION	STATION	LEFT	RIGHT	TYPE	DISTRIBUTION	FOUNDATION
2	TH 535 NB TO TH 35 NB RAMP	54+61		X	5-140	ASYMMETRICAL	T-140 (PILE)
3	TH 35 NB TO TH 535 SB RAMP	25+56		X	4-140	ASYMMETRICAL	T-140 (PILE)

LEGEND

- HIGHMAST LIGHTING UNIT
- LIGHTING UNIT
- DIRECT BURIED CABLE
- CIRCUITRY IN CONDUIT (MNDOT)
- CIRCUITRY IN CONDUIT (CITY)
- HANDHOLE
- GROUND ROD
- LIGHTING UNIT NUMBER

- GENERAL NOTES**
- ALL CITY CONDUIT SHALL BE 2" NMC, SCHEDULE 40, UNLESS NOTED OTHERWISE
 - ALL MNDOT CONDUIT SHALL BE 3" NMC, SCHEDULE 80 UNLESS NOTED OTHERWISE
 - ALL CITY CONDUCTORS IN CONDUIT SHALL BE 3-1/C 4 AWG AND 1-1/C 8 AWG GND, TYPE USE-2, UNLESS NOTED OTHERWISE
 - ALL DIRECT BURIED LIGHTING CABLE SHALL BE 4/C 4 AWG, UNLESS OTHERWISE NOTED
 - ALL LIGHTING AND ELECTRICAL EQUIPMENT SHALL BE STAKED AND VERIFIED BY FIELD ENGINEER PRIOR TO INSTALLATION

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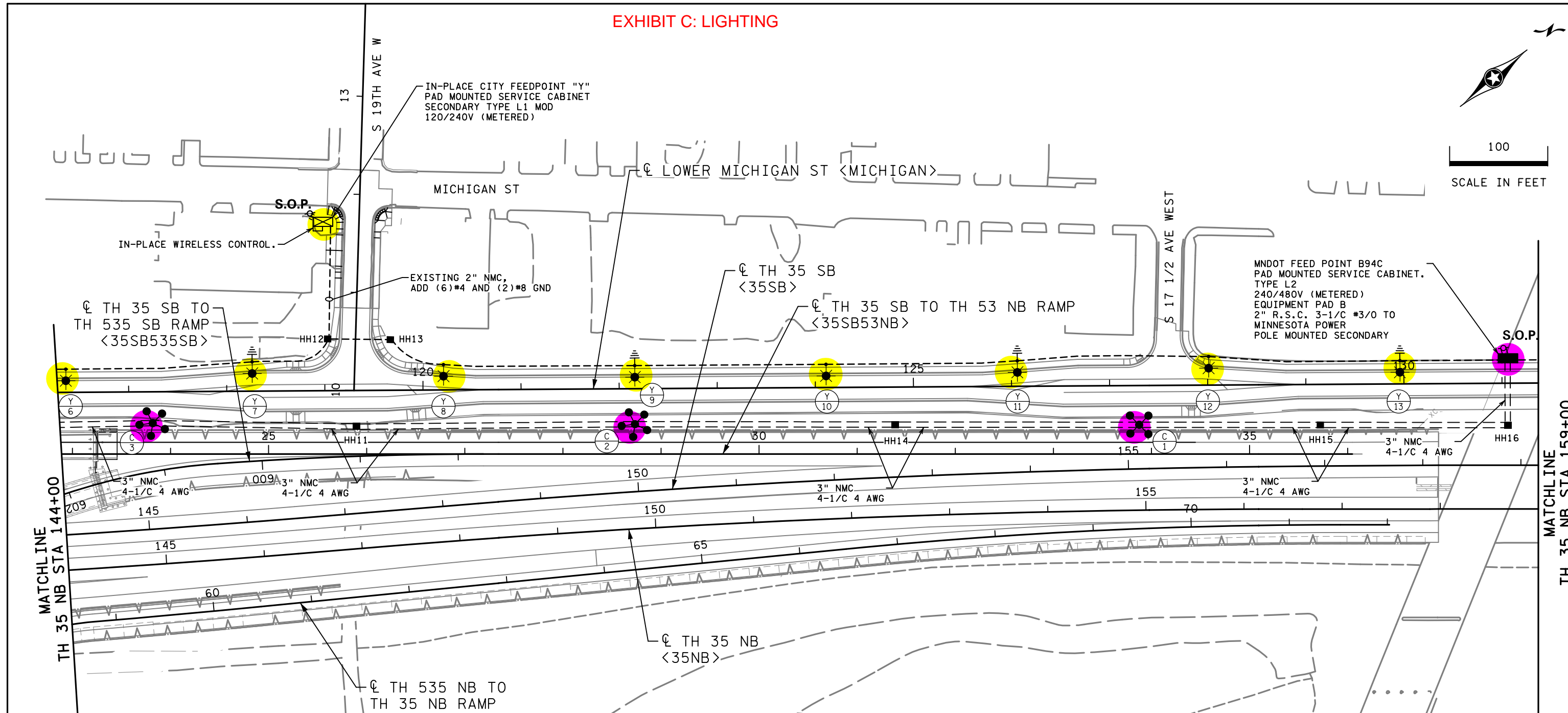
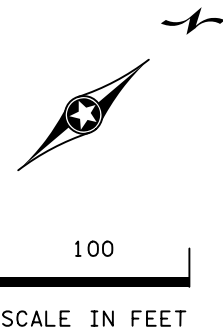


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LIGHTING PLAN
 TH 35 NB STA 130+00 TO STA 144+00

EXHIBIT C: LIGHTING



LEGEND

- HIGHMAST LIGHTING UNIT
- LIGHTING UNIT
- CIRCUITRY IN CONDUIT (MNDOT)
- CIRCUITRY IN CONDUIT (CITY)
- HANDHOLE
- GROUND ROD
- SERVICE CABINET
- EXISTING SERVICE CABINET
- SOURCE OF POWER
- LIGHTING UNIT NUMBER

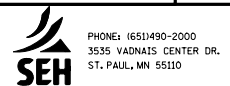
FEED POINT "C"							
UNIT NO.	LOCATION	STATION	LEFT	RIGHT	TYPE	DISTRIBUTION	FOUNDATION
1	TH 35 SB TO TH 53 NB RAMP	33+87	X		4-120	ASYMMETRICAL	T-120 (MAT)
2	TH 35 SB TO TH 53 NB RAMP	28+73	X		5-140	ASYMMETRICAL	T-140 (MAT)
3	TH 35 SB TO TH 53 NB RAMP	23+82	X		5-140	ASYMMETRICAL	T-140 (MAT)

EXISTING FEED POINT "Y"						
UNIT NO.	LOCATION	STATION	LEFT	RIGHT	TYPE	FOUNDATION
6	LOWER MICHIGAN ST	116+36	X		SALVAGE	DESIGN E
7	LOWER MICHIGAN ST	118+26	X		SALVAGE	DESIGN E
8	LOWER MICHIGAN ST	120+21	X		SALVAGE	DESIGN E
9	LOWER MICHIGAN ST	122+16	X		SALVAGE	DESIGN E
10	LOWER MICHIGAN ST	124+11	X		SALVAGE	DESIGN E
11	LOWER MICHIGAN ST	126+06	X		SALVAGE	DESIGN E
12	LOWER MICHIGAN ST	128+01	X		SALVAGE	DESIGN E
13	LOWER MICHIGAN ST	129+96	X		9-40	DESIGN E

- GENERAL NOTES
- ALL CITY CONDUIT SHALL BE 2" NMC, SCHEDULE 40. UNLESS NOTED OTHERWISE
 - ALL MNDOT CONDUIT SHALL BE 3" NMC, SCHEDULE 80 UNLESS NOTED OTHERWISE
 - ALL CITY CONDUCTORS IN CONDUIT SHALL BE 3-1/C 4 AWG AND 1-1/C 8 AWG GND, TYPE USE-2. UNLESS NOTED OTHERWISE
 - ALL DIRECT BURIED LIGHTING CABLE SHALL BE 4/C 4 AWG. UNLESS OTHERWISE NOTED
 - ALL LIGHTING AND ELECTRICAL EQUIPMENT SHALL BE STAKED AND VERIFIED BY FIELD ENGINEER PRIOR TO INSTALLATION

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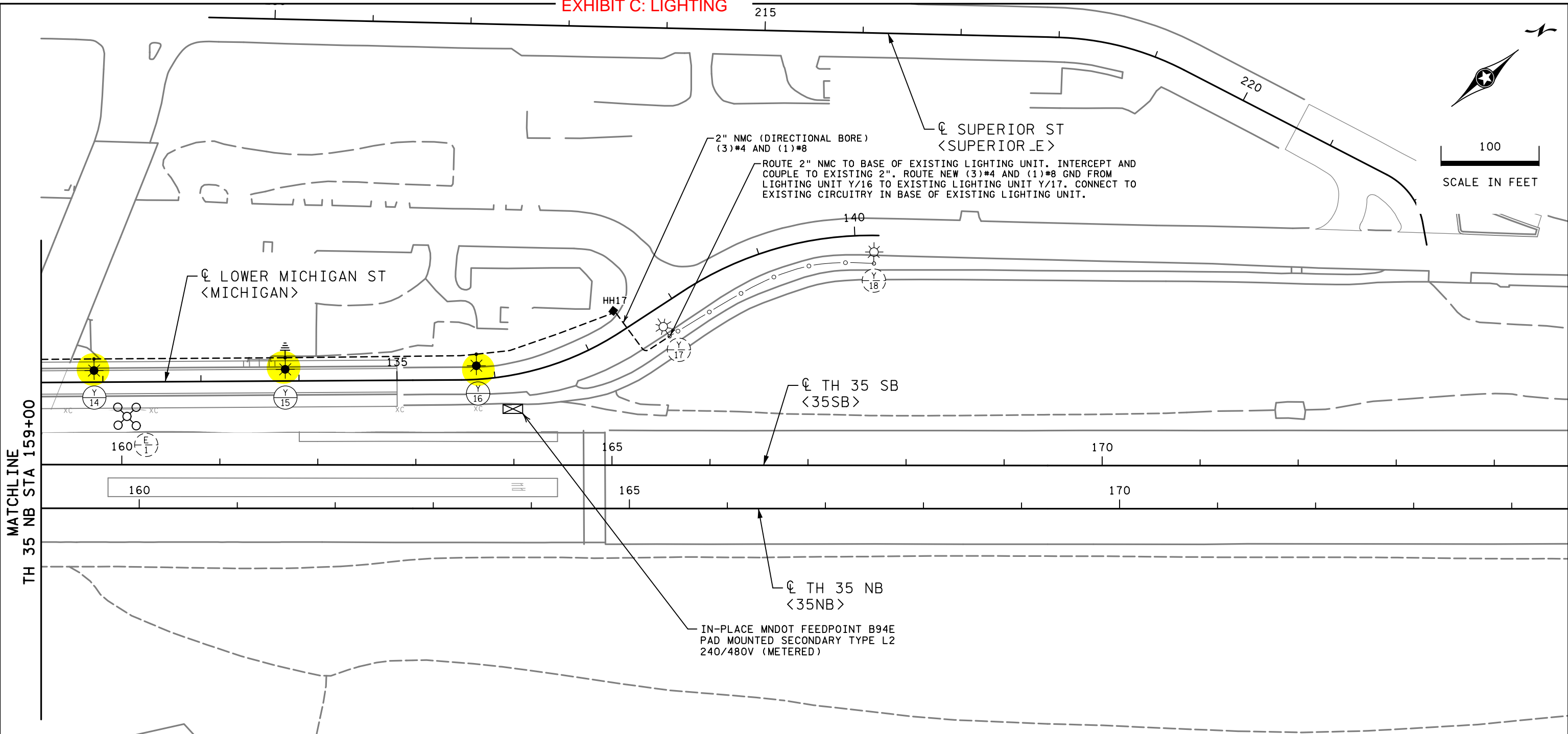
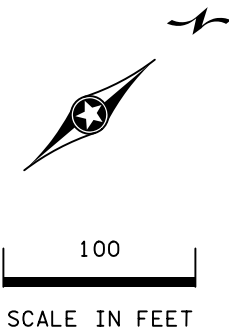


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








LIGHTING PLAN
 TH 35 NB STA 144+00 TO STA 159+00

SP 6982-322WP2 (TH 35)
 SHEET NO. 1022 OF 1314 SHEETS



MATCHLINE
TH 35 NB STA 159+00

LEGEND

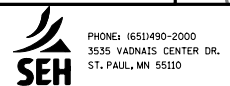
-  EXISTING HIGHMAST LIGHTING UNIT
-  LIGHTING UNIT
-  EXISTING LIGHTING UNIT
-  EXISTING CIRCUITRY
-  CIRCUITRY IN CONDUIT (CITY)
-  HANDHOLE
-  GROUND ROD
-  EXISTING SERVICE CABINET
-  LIGHTING UNIT NUMBER

EXISTING FEED POINT "Y"						
UNIT NO.	LOCATION	STATION	LEFT	RIGHT	TYPE	FOUNDATION
14	LOWER MICHIGAN ST	131+91	X		9-40	DESIGN E
15	LOWER MICHIGAN ST	133+86	X		9-40	DESIGN E
16	LOWER MICHIGAN ST	135+82	X		9-40	DESIGN E

- GENERAL NOTES**
1. ALL CITY CONDUIT SHALL BE 2" NMC, SCHEDULE 40. UNLESS NOTED OTHERWISE
 2. ALL MNDOT CONDUIT SHALL BE 3" NMC, SCHEDULE 80 UNLESS NOTED OTHERWISE
 3. ALL CITY CONDUCTORS IN CONDUIT SHALL BE 3-1/C 4 AWG AND 1-1/C 8 AWG GND, TYPE USE-2. UNLESS NOTED OTHERWISE
 4. ALL DIRECT BURIED LIGHTING CABLE SHALL BE 4/C 4 AWG. UNLESS OTHERWISE NOTED
 5. ALL LIGHTING AND ELECTRICAL EQUIPMENT SHALL BE STAKED AND VERIFIED BY FIELD ENGINEER PRIOR TO INSTALLATION

Page: 35 of 38

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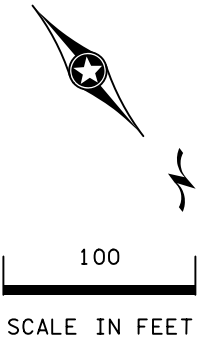
LIGHTING PLAN
TH 35 NB STA 159+00 TO STA 174+57.78

SP 6982-322WP2 (TH 35)
SHEET NO. 1023 OF 1314 SHEETS

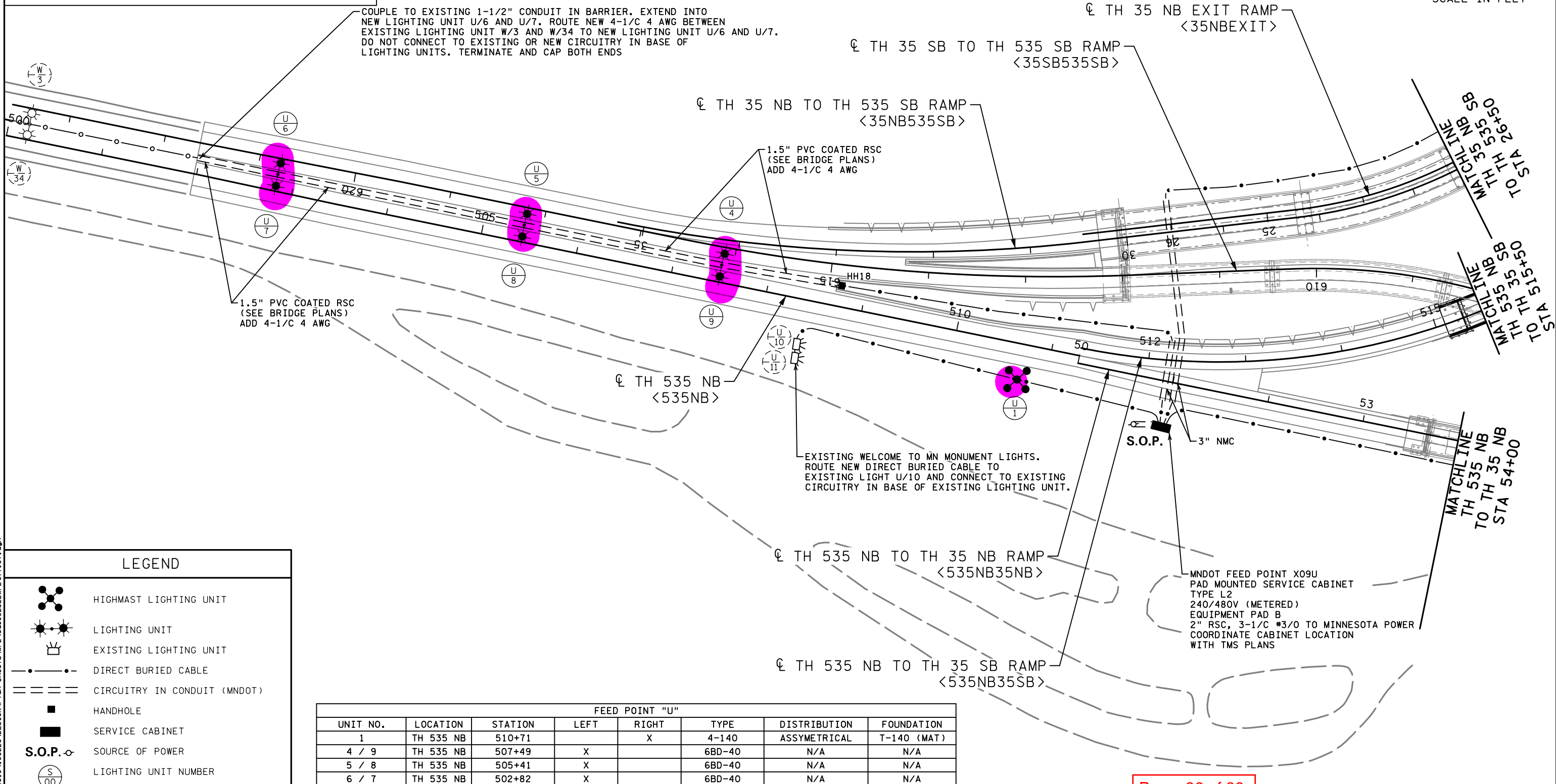
GENERAL NOTES

1. ALL CITY CONDUIT SHALL BE 2" NMC, SCHEDULE 40. UNLESS NOTED OTHERWISE
2. ALL MNDOT CONDUIT SHALL BE 3" NMC, SCHEDULE 80 UNLESS NOTED OTHERWISE
3. ALL CITY CONDUCTORS IN CONDUIT SHALL BE 3-1/4 4 AWG AND 1-1/4 8 AWG GND, TYPE USE-2. UNLESS NOTED OTHERWISE
4. ALL DIRECT BURIED LIGHTING CABLE SHALL BE 4/C 4 AWG. UNLESS OTHERWISE NOTED
5. ALL LIGHTING AND ELECTRICAL EQUIPMENT SHALL BE STAKED AND VERIFIED BY FIELD ENGINEER PRIOR TO INSTALLATION

EXHIBIT C: LIGHTING



COUPLE TO EXISTING 1-1/2" CONDUIT IN BARRIER. EXTEND INTO NEW LIGHTING UNIT U/6 AND U/7. ROUTE NEW 4-1/4 4 AWG BETWEEN EXISTING LIGHTING UNIT W/3 AND W/34 TO NEW LIGHTING UNIT U/6 AND U/7. DO NOT CONNECT TO EXISTING OR NEW CIRCUITRY IN BASE OF LIGHTING UNITS. TERMINATE AND CAP BOTH ENDS



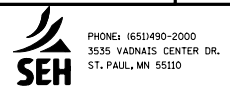
LEGEND

- HIGHMAST LIGHTING UNIT
- LIGHTING UNIT
- EXISTING LIGHTING UNIT
- DIRECT BURIED CABLE
- CIRCUITRY IN CONDUIT (MNDOT)
- HANDHOLE
- SERVICE CABINET
- SOURCE OF POWER
- LIGHTING UNIT NUMBER

FEED POINT "U"							
UNIT NO.	LOCATION	STATION	LEFT	RIGHT	TYPE	DISTRIBUTION	FOUNDATION
1	TH 535 NB	510+71		X	4-140	ASSYMETRICAL	T-140 (MAT)
4 / 9	TH 535 NB	507+49	X		6BD-40	N/A	N/A
5 / 8	TH 535 NB	505+41	X		6BD-40	N/A	N/A
6 / 7	TH 535 NB	502+82	X		6BD-40	N/A	N/A

Page: 36 of 38

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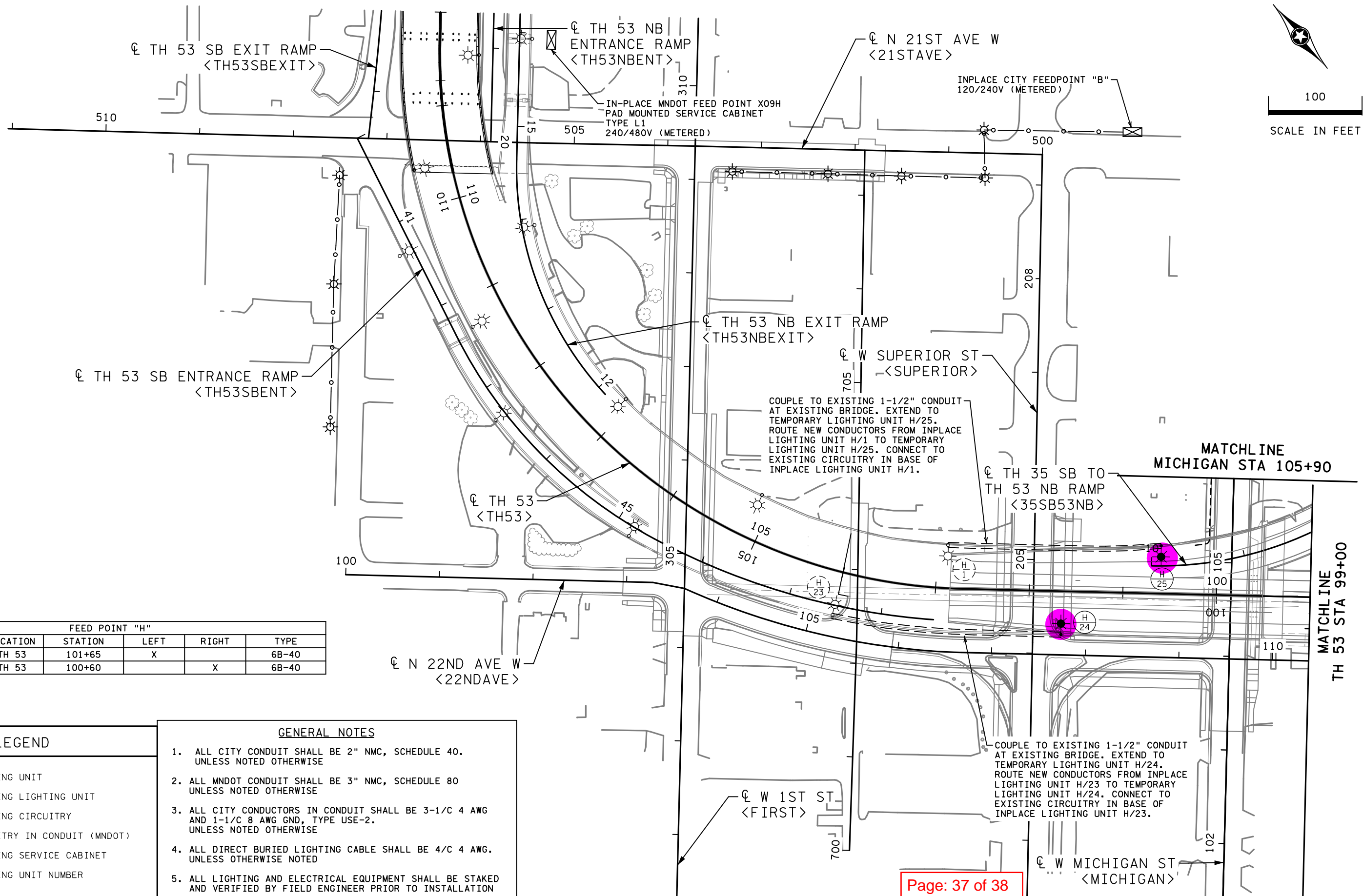
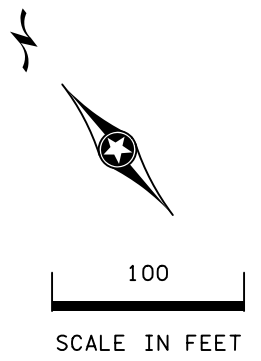
I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

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LIGHTING PLAN
 TH 535 NB STA 502+00 TO TH 535 NB/TH 35 SB RAMP STA 515+50

SP 6982-322WP2 (TH 35)
 SHEET NO. 1024 OF 1314 SHEETS

EXHIBIT C: LIGHTING



FEED POINT "H"					
UNIT NO.	LOCATION	STATION	LEFT	RIGHT	TYPE
24	TH 53	101+65	X		6B-40
25	TH 53	100+60		X	6B-40

LEGEND	
	LIGHTING UNIT
	EXISTING LIGHTING UNIT
	EXISTING CIRCUITRY
	CIRCUITRY IN CONDUIT (MNDOT)
	EXISTING SERVICE CABINET
	LIGHTING UNIT NUMBER

- GENERAL NOTES**
1. ALL CITY CONDUIT SHALL BE 2" NMC, SCHEDULE 40. UNLESS NOTED OTHERWISE
 2. ALL MNDOT CONDUIT SHALL BE 3" NMC, SCHEDULE 80 UNLESS NOTED OTHERWISE
 3. ALL CITY CONDUCTORS IN CONDUIT SHALL BE 3-1/C 4 AWG AND 1-1/C 8 AWG GND, TYPE USE-2. UNLESS NOTED OTHERWISE
 4. ALL DIRECT BURIED LIGHTING CABLE SHALL BE 4/C 4 AWG. UNLESS OTHERWISE NOTED
 5. ALL LIGHTING AND ELECTRICAL EQUIPMENT SHALL BE STAKED AND VERIFIED BY FIELD ENGINEER PRIOR TO INSTALLATION

Page: 37 of 38

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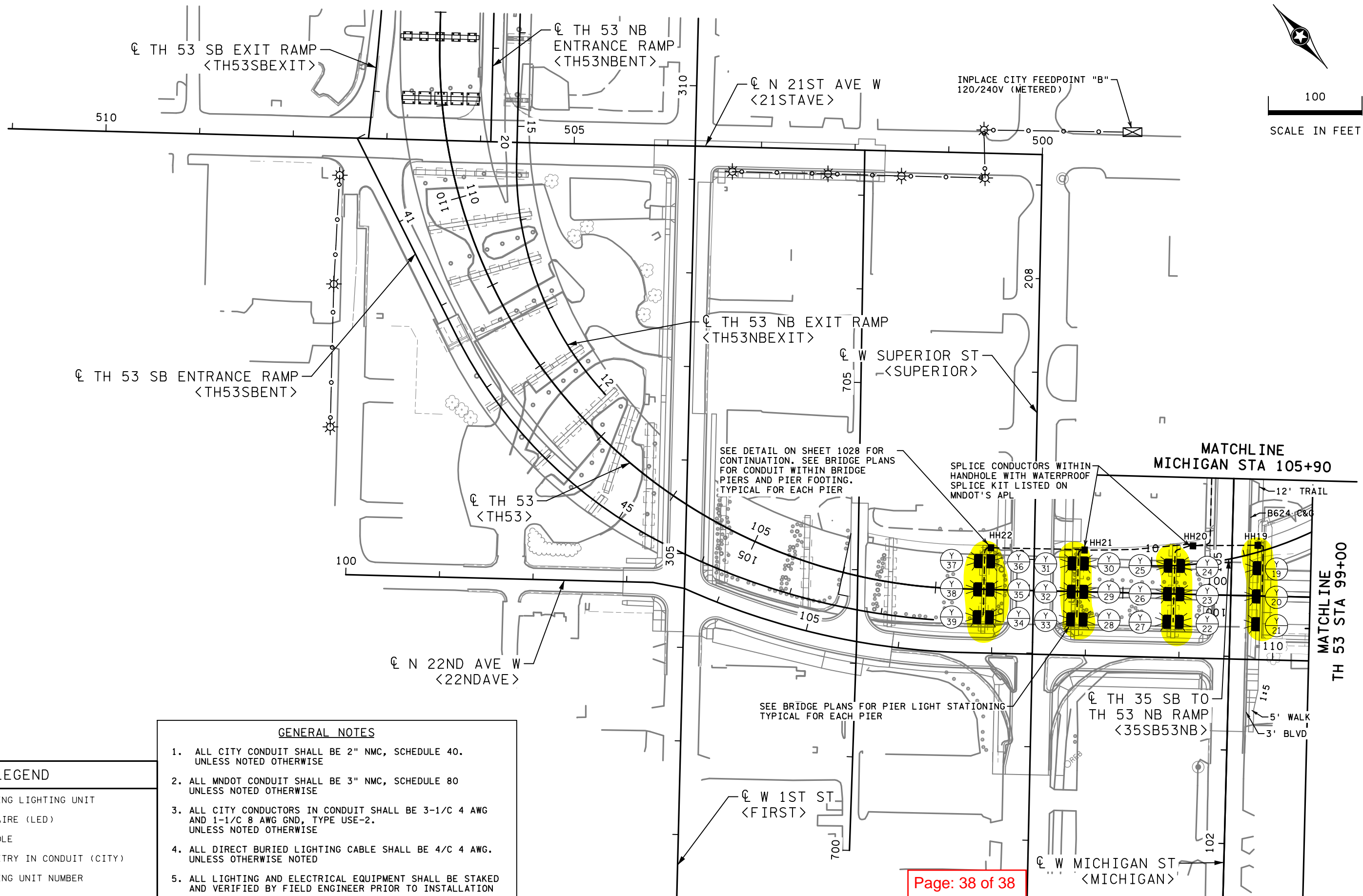
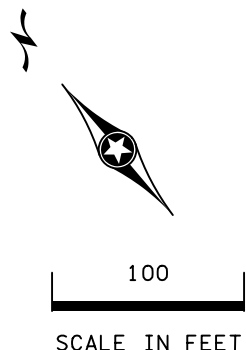
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LIGHTING PLAN
 TH 53 STA 99+00 TO STA 112+00

SP 6915-136WP2 (TH 53)
 SHEET NO. 1025 OF 1314 SHEETS

EXHIBIT C: LIGHTING



- GENERAL NOTES**
1. ALL CITY CONDUIT SHALL BE 2" NMC, SCHEDULE 40. UNLESS NOTED OTHERWISE
 2. ALL MNDOT CONDUIT SHALL BE 3" NMC, SCHEDULE 80 UNLESS NOTED OTHERWISE
 3. ALL CITY CONDUCTORS IN CONDUIT SHALL BE 3-1/C 4 AWG AND 1-1/C 8 AWG GND, TYPE USE-2. UNLESS NOTED OTHERWISE
 4. ALL DIRECT BURIED LIGHTING CABLE SHALL BE 4/C 4 AWG. UNLESS OTHERWISE NOTED
 5. ALL LIGHTING AND ELECTRICAL EQUIPMENT SHALL BE STAKED AND VERIFIED BY FIELD ENGINEER PRIOR TO INSTALLATION

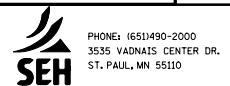
LEGEND

	EXISTING LIGHTING UNIT
	LUMINAIRE (LED)
	HANDHOLE
	CIRCUITRY IN CONDUIT (CITY)
	LIGHTING UNIT NUMBER

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LIGHTING PLAN
 TH 53 STA 99+00 TO STA 112+00

SP 6915-136WP2 (TH 53)
 SHEET NO. 1026 OF 1314 SHEETS