TH 33

SP 0905-53

TRANSPORTATION MANAGEMENT PLAN

Minnesota Department of Transportation

District One Duluth Traffic Office

1123 Mesaba Avenue

Duluth, MN 55811

218 725 2700

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SP 0905-53

SP 0905-53 Project Overview

This project is a joint project with MnDOT, Carlton County and the City of Cloquet. The driving force for this project is the pavement condition from the middle of the city of Cloquet to Interstate 35. However there has been planning of geometric revisions on this corridor for over 20 years. This 4 lane arterial road is a major carrier of commerce and tourist traffic in northeastern Minnesota. Elements of this project include grading, concrete surfacing, bituminous mill and overlay, lighting, signals, retaining walls and ADA improvements.

The main features of this project is a new concrete pavement on TH 33 with improved geometrics at Doddridge Avenue intersection and other locations based on crash history.

Traffic Mobility and Safety features of this plan are as follows:

1. The intersection of TH 33 and Doddridge Avenue/ Big Lake Road: This intersection will be constructed one half at a time to accommodate traffic utilizing temporary signals. This temporary signal will have cameras for detection and temporary left turn lanes.
2. The Gillette/Gillette intersection will have a temporary signal system as well.
3. Reduced turning movements during construction by closing entrances during the time when traffic is in the two way head to head condition.
4. Staged construction when the mainline/entrances to the frontage roads can be paved to keep access to the frontage roads at all times.
5. Use of high early strength concrete in key intersections to expedite the intersection return to traffic.
6. Closed ramps at the junction of TH 33 and I-35 with a detour on adjacent state trunk highway 45 for traffic safety.
7. Special Provisions 1803 and 1806 have numerous staging requirements intended for traffic mobility through the project.

BASIC TRANSPORTATION MANAGEMENT PLAN
WORK ZONE IMPACT AND STRATEGY CONSIDERATIONS WORKSHEET

Prepared By: David A. Mavec P.E. Date: 3-13-14

Project Information:

SP: 0905-53	TH: 33	Let Date: 4-11-2014	Project Length: 1.632 miles
Project Description (work type, area type, anticipated duration):			

Work Zone Design, Safety and Impact Considerations:

Traffic Volume: ADT 18,200	Yes	No
1. Seasonal and temporal variations in demand (hourly, daily or weekly): Seasonal; summer tourists	☒	☐
2. Special events:	☐	☒
3. Type of Travel		
a. Commuter:	☒	☐
b. Tourist: Heavy in summer months	☒	☐
c. Freight:	☒	☐
d. Transit:	☐	☒
e. Pedestrian:	☐	☒
4. Impacts on parallel corridors, alternate routes, transportation Network or other modes of transportation: Detour ramps to TH 45	☒	☐
5. Impacts to/from other work zones:	☐	☒
6. Impacts on nearby transportation infrastructure		
a. Key intersections/interchanges: I-35/ TH33 Dodridge Avenue/ Big Lake Road	☒	☐
b. Railroad crossings:	☐	☒
c. Public transit junctions:	☐	☒
d. Other:	☐	☒
7. Impacts on other infrastructure		
a. Evacuation Routes:	☐	☒
b. Parks/Recreation Areas:	☐	☒
c. Fire Stations:	☐	☒
d. Police Stations:	☐	☒
e. Hospitals:	☐	☒
f. Other:	☐	☒
8. Impacts on pedestrian facilities:	☐	☒
9. Impacts on private and public property access: Access to properties adjacent to the project will be maintained at all times	☒	☐
10. Cross-sectional issues (lane width, shoulder availability and width, number of lanes):	☐	☒
11. Longitudinal issues (taper widths, taper lengths, stopping sight distance):	☐	☒
12. Horizontal and vertical sight distance issues:	☐	☐
13. Work area separation and delineation: Traffic will be head to head on NB or SB with crossovers	☒	☐
14. Work site access issues:	☐	☒
15. Visibility issues (night work, weather):	☐	☒
16. Speed issues:	☐	☒
17. Traffic incident management issues:	☐	☒
18. Other work zone considerations:	☐	☒

Work Zone Management Strategy Considerations:

Temporary Traffic Control (TTC)

Control Strategies

- ☒ IA1. Construction phasing/staging
- ☐ IA2. Full roadway closures
- ☐ IA3. Lane shifts or closures
  - ☐ Reduced lane widths to maintain number of lanes (constriction)
  - ☐ Lane closures to provide worker safety
  - ☐ Reduced shoulder width to maintain number of lanes
  - ☐ Shoulder closures to provide worker safety
  - ☐ Lane shift to shoulder/median to maintain number of lanes
- ☐ IA4. One-lane, two-way operation
- ☒ IA5. Two-way traffic on one side of divided facility (crossover)
- ☐ IA6. Reversible lanes
- ☒ IA7. Ramp closures/relocation
- ☐ IA8. Freeway-to-freeway interchange closures
- ☐ IA9. Night work
- ☒ IA10. Weekend work
- ☐ IA11. Work hour restrictions for peak travel
- ☐ IA12. Pedestrian/bicycle access improvements
- ☒ IA13. Business access improvements
- ☒ IA14. Off-site detours/use of alternate routes
- ☐ Other

TTC Devices

- ☒ IB1. Temporary signs
  - ☒ Warning
  - ☒ Regulatory
  - ☐ Guide/ information
- ☒ IB2. Changeable message signs (CMS)
- ☒ IB3. Arrow panels
- ☒ IB4. Channelizing devices
- ☒ IB5. Temporary pavement markings
- ☒ IB6. Flaggers and uniformed traffic control officers
- ☒ IB7. Temporary traffic signals
- ☐ IB8. Lighting devices
- ☐ Other

Project Coordination, Contracting, and Innovative Construction Strategies

- ☒ IC1. Project coordination
  - ☐ Coordination with other projects
  - ☒ Utilities coordination
  - ☒ Right-of-way coordination
  - ☐ Coordination with other transportation infrastructure
- ☒ IC2. Contracting strategies
  - ☐ Design-build
  - ☐ A+B bidding
  - ☒ Incentive/disincentive clauses
  - ☐ Lane rental
  - ☐ Other
- ☒ IC3. Innovative construction techniques (precast members, rapid cure materials)
- ☐ Other

Discussion of Temporary Traffic Control Strategies: One half of the ramps at any one time associated with the TH 33/ I-35 junction will be closed for the duration of the project. Traffic on TH 33 will be head to head on either NB or SB at all times during the project.

Public Information (PI)

Public Awareness Strategies

- ☐ IIA1. Brochures and mailers
- ☒ IIA2. Press releases/media alerts
- ☐ IIA3. Paid advertisements
- ☐ IIA4. Public information center
- ☐ IIA5. Telephone hotline
- ☐ IIA6. Planned lane closure web site

Motorist Information Strategies

- ☐ IIB1. Traffic radio
- ☒ IIB2. Changeable message signs (CMS)
- ☐ IIB3. Temporary motorist information signs
- ☐ IIB4. Dynamic speed message sign
- ☐ IIB5. Highway advisory radio (HAR)
- ☐ IIB6. Extinguishable signs

☒ IIA7. Project web site ☒ IIA8. Public meetings/hearings ☐ IIA9. Community task forces ☒ IIA10. Coordination with media/schools/businesses/ emergency services ☐ IIA11. Work zone education and safety campaigns ☐ IIA12. Work zone safety highway signs ☐ IIA13. Rideshare promotions ☒ IIA14. Visual information (videos, slides, presentations) for meetings and web ☐ Other website since 2012. announced with state wide construction program. TV/radio/newspaper interviews	☐ IIB7. Highway information network (web-based) ☐ IIB8. 511 traveler information systems (wireless, handhelds) ☐ IIB9. Freight travel information ☐ IIB10. Transportation management center (TMC) ☐ Other
Discussion of Public Information Strategies: This project has been well publicized for several years via TV, radio and newspaper articles. The main information source for this project will be the project website.	

Transportation Operations			
Demand Management Strategies	Corridor Network Management Strategies	Work Zone Safety Management Strategies	Traffic/Incident Management and Enforcement Strategies
☐ IIIA1. Transit service improvements ☐ IIIA2. Transit incentives ☐ IIIA3. Shuttle services ☐ IIIA4. Ridesharing/carpooling incentives ☐ IIIA5. Park-and-ride promotion ☐ IIIA6. High-occupancy vehicle (HOV) lanes ☐ IIIA7. Toll/congestion pricing ☐ IIIA8. Ramp metering ☐ IIIA9. Parking supply management ☐ IIIA10. Variable work hours ☐ IIIA11. Telecommuting ☐ Other	☒ IIIB1. Signal timing/coordination improvements ☒ IIIB2. Temporary traffic signals ☒ IIIB3. Street/intersection improvements ☐ IIIB4. Bus turnouts ☒ IIIB5. Turn restrictions ☐ IIIB6. Parking restrictions ☐ IIIB7. Truck/heavy vehicle restrictions ☐ IIIB8. Separate truck lanes ☐ IIIB9. Reversible lanes ☐ IIIB10. Dynamic lane closure system ☐ IIIB11. Ramp metering ☐ IIIB12. Temporary suspension of ramp metering ☒ IIIB13. Ramp closures ☐ IIIB14. Railroad crossings controls ☐ IIIB15. Coordination	☒ IIIC1. Speed limit reduction/variable speed limits ☒ IIIC2. Temporary traffic signals ☐ IIIC3. Temporary traffic barrier ☐ IIIC4. Movable traffic barrier systems ☐ IIIC5. Crash-cushions ☐ IIIC6. Temporary rumble strips ☐ IIIC7. Intrusion alarms ☐ IIIC8. Warning lights ☐ IIIC9. Automated Flagger Assistance Devices (AFADs) ☐ IIIC10. Project task force/ committee ☒ IIIC11. Construction safety supervisors/inspectors ☒ IIIC12. Road safety audits ☐ IIIC13. TMP monitor/inspection team ☐ IIIC14. Team meetings ☐ IIIC15. Project on-site safety training	☐ IIID1. ITS for traffic monitoring/management ☐ IIID2. Transportation mgmt center (TMC) ☒ IIID3. Surveillance [Closed-Circuit Television (CCTV), loop detectors, lasers, probe vehicles] ☐ IIID4. Helicopter for aerial surveillance ☐ IIID5. Traffic screens ☐ IIID6. Call boxes ☐ IIID7. Mile-post markers ☐ IIID8. Tow/freeway service patrol ☐ IIID9. Total station units ☐ IIID10. Photogrammetry ☒ IIID11. Coordination with media ☒ IIID12. Local detour routes ☐ IIID13. Contract support for incident mgmt ☐ IIID14. Incident/emergency management coordinator

	with adjacent construction site(s) ☐ Other	☐ IIIC16. Safety awards/ incentives ☒ IIIC17. Windshield surveys ☐ Other	☐ IIID15. Incident/emergency response plan ☐ IIID16. Dedicated (paid) police enforcement ☐ IIID17. Cooperative police enforcement ☐ IIID18. Automated enforcement ☒ IIID19. Increased penalties for work zone violations ☐ Other
Discussion of Traffic Operations Strategies:			

Attachments:
Traffic Control Plan
Special Provisions

Modifications to the TMP:

The purpose of the Project Scoping Report is to document and obtain approval for items that are included (and excluded) in the scope of the project.

PROJECT SCOPING REPORT
S.P. 0905-53 (T.H. 33)

() **Draft for Review** (X) **Final for Signature**

Performance Need for Project: Pavement Preservation, Safety, and Mobility

Purpose of Project: The purposes are to improve the pavement ride quality on TH 33; improve the functionality of the TH 33/Doddridge Ave./Big Lake Rd. intersection; and improve safety at the Armory Rd./Holmes Dr. uncontrolled crossover.

Project Termini: R.P. 0.000 – R.P. 1.802

Project Limits: From Jct I-35 to 0.08 mi N Jct Doddridge Ave. / Big Lake Rd.

Length of project: 2.11 miles

Brief Project Description: Pavement replacement on TH 33 including Federal, State, City, & County-funded intersection improvements and a new signal at Doddridge Ave. / Big Lake Rd. A concrete island (a.k.a. pork chop) will be constructed to reduce the turning movements at the Armory Rd. / Holmes Dr. crossover.

Environmental Document: CATEX

Construction Cost Estimate: $4,623,000

Cities: Cloquet

Counties: Carlton

Additional Control Sections: NA

Program: RS (Resurfacing)

Tentative Letting Date: 4/26/2013

RECOMMENDED BY:

Todd Campbell, Project Manager — Date: 5/15/12

APPROVED BY:

Michael L. Tardy, P.E.
Assistant District Engineer, Program Delivery, District 1 — Date: 5/15/12

ONLY TO BE COMPLETED IF SCOPE CHANGES AFTER ORIGINAL SCOPE HAS BEEN APPROVED

SCOPE CHANGES *(see attached documentation)*

NEED STATEMENT FOR PROJECT: Lack of preservation will result in premature failure of the pavement structure. The existing signal system at TH 33 / Big Lake Rd. / Doddridge Ave. was constructed in the 1970s and is in need of replacement. In addition to the signal system need, surrounding intersection geometrics lead to traffic backups that impact traffic flow on TH 33. Lastly, uncontrolled intersection geometrics at the Armory Rd./Holmes Dr. crossover contribute to crashes and/or "near misses."

PURPOSE STATEMENT OF PROJECT: The purposes are to improve the pavement ride quality on TH 33; improve the functionality of the TH 33/Doddridge Ave./Big Lake Rd. intersection; and improve safety at the Armory Rd./Holmes Dr. crossover.

PAVEMENT ALTERNATIVES CONSIDERED: Alternate bid criteria will be applied to this project.

PROPOSED PROJECT ELEMENTS:
Describe the work that will be included in this project under the appropriate heading...

Standards to follow in design:

(X) Preservation (for TH 33) (X) New Construction/Reconstruction (for intersection revisions)
( ) Bridge Rehabilitation ( ) Bridge Improvement ( ) Bridge Preservation

Driving Lanes

- Maintain inplace 12 ft lane widths on mainline TH 33.
- Maintain striped transition as-is (i.e. as constructed in 2011) from I-35 northbound off-ramp to northbound TH 33.

Shoulders, Turn Lanes, Ramps

- Maintain inplace 5 ft (3 ft paved) inside shoulder and 9.5 ft (8 ft paved) outside shoulder on mainline TH 33. Shoulder widths do not meet Road Design Manual Chapter 4 Standards.
- Coordinate with City and County to determine final geometrics for Doddridge Ave. and Big Lake Rd. intersection.
- If topography allows, add a northbound right turn lane at R.P. 0+01.050 S Jct Gillette Rd crossover (a.k.a. the Wells Fargo frontage road intersection). Maintain the locations of all other inplace turn lanes. Analyze the lengths of all turn lanes to determine if any should be extended.
- Ramps to/from I-35 southbound and to I-35 northbound are included for pavement preservation.

Roadside (including pedestrian accessibility)

- Pedestrian accommodations will not be added at Walmart signal due to lack of local sidewalk network to connect into.
- Informal pedestrian crossing between Doddridge Ave. / Big Lake Rd. and Armory entrance will not be enhanced. Pedestrians should use the new signal.

Roadside (including pedestrian accessibility) (continued)

- The new signal will include 4 striped crosswalks and APS accommodations at Doddridge Ave. / Big Lake Rd. PROWAG-compliant pedestrian ramps will be included at this intersection. Sidewalk on both sides of Doddridge Ave. will connect to the existing City sidewalk network.
- Carlton County will consider sidewalk needs west of TH 33, on Big Lake Rd.

Changes in Layout

- Design will eliminate split-phasing at Doddridge Ave. / Big Lake Rd. signal to improve traffic flow.
- A right-in/right-out will be provided to/from northbound TH 33 just north of Doddridge Ave. / Big Lake Rd. to serve the Little Store and adjacent property. The Doddridge Ave. entrance (nearest to TH 33) to the Little Store will be eliminated.
- Movements will be reduced at the crossover from the Armory to L&M due to crash history at this intersection. The revised crossover will permit access to/from southbound TH 33 to/from L&M.
- Access from northbound TH 33 to Super One, McDonald's and Pizza Hut (and nearby businesses) will be provided through a new crossover between Doddridge/Big Lake Rd. & the Armory/L&M crossover. This crossover will accommodate left turns from NB TH 33 only.
- The entrance to/from Super One, McDonald's and Pizza Hut (and nearby businesses) to/from Big Lake Rd. may be reconfigured as a right-in/right-out to reduce traffic backing up onto southbound TH 33. This will be further discussed during the design phase.
- Access to Super One, McDonald's and Pizza Hut (and nearby businesses) from southbound TH 33 will be provided adjacent to the new crossover between Doddridge Ave./Big Lake Rd. and the Armory/L&M entrances.

Bridge

NA

Hydraulics

- See attached preliminary recommendations.

Materials

- Intersection reconstruction structure at Doddridge Ave. / Big Lake Rd.
- Mill and overlay of I-35 ramps and adjacent intersection.
- The end of mill and overlay / beginning of pavement replacement typical section R.P. will be coordinated with southerly bypass location considering construction traffic staging.
- Northerly traffic bypass will be located north of Doddridge Ave. / Big Lake Rd.

R/W

- Project does not require the purchase of new MnDOT right-of-way.
- MnDOT will "take over" part of Doddridge Ave. by permanent Commissioner's Orders to facilitate intersection reconstruction. The Little Store convenience store entrance nearest TH 33 will be closed, and a right-in/right-out will be added off northbound TH 33 just north of the Little Store. The City of Cloquet is coordinating with the Little Store owners and future developers to provide preferred access to these properties. This exchange is expected to improve traffic flow through the reconstructed intersection by providing additional queuing space from westbound Doddridge Ave.
- The "frontage road" in front of the Armory is not on public right-of-way.
- A turnback near Carlton Ave. & Pinehurst Park is included in this project.

Traffic

- Conduit may be buried for a potential future signal at Washington Ave. intersection.

Local Interaction

- Municipal Consent needed due to access changes.

Cooperative agreements/Cost sharing

- City and County S.A.P. funding for Doddridge Ave. & Big Lake Rd. improvements, respectively, and new signal shares.
- City may replace/upgrade the sanitary sewer line under northbound TH 33 as part of this project or a separate project.

Other

- Full-Federal Oversight requirements

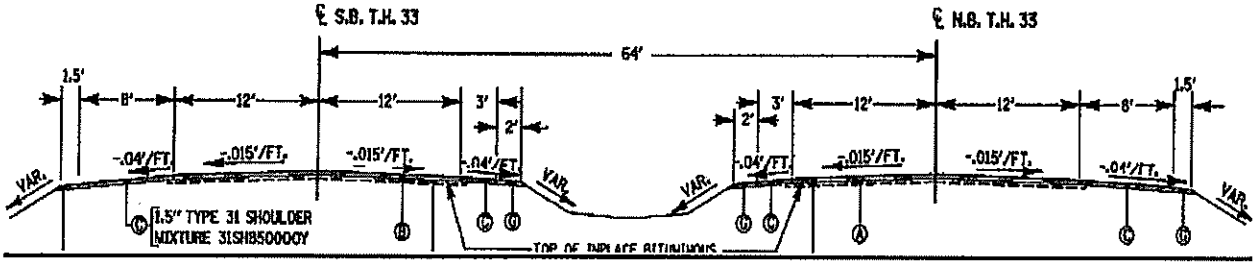
WORK ITEMS CONSIDERED BUT REJECTED:

- New signal at Washington Ave. due to cost and would require a study to determine if it meets warrants.
- Corridor frontage road upgrades should be studied as part of upcoming corridor study.
- Sidewalk and trail needs north of Doddridge Ave./Big Lake Rd. intersection will not be included. This is outside of the project limits.

ISSUES RELATING TO PROJECT DELIVERY:

☐ **Project is considered significant under FHWA *Final Rule on Work Zone Safety and Mobility***

INPLACE TYPICAL SECTION



Minnesota Department of Transportation
District One

MEMO

DATE: May 8, 2012

TO: Krysten Saatela
Project Manager

FROM: Cameron Gjovik
Hydraulics

SUBJECT: SP 0905-53 (TH 33) -- RP 0.000 to 1.802

Preliminary Hydraulic Recommendations

Based on conversations with maintenance supervisors, field investigations, review of drainage maps and computations, the following recommendations are made:

REF. PT.	LOCATION	RECOMMENDATION
0.010	NB (off-ramp)	Replace apron and install 4 pipe ties
0.166	SB Centerline	Clean out pipe, clean ditch channel out to R/W
0.180	NB Centerline	Clean ditch channel out to R/W
0.234	NB RT.	Install 3 guide posts and trash grates
0.248	NB RT.	Replace adj. rings and clean out pipe, install guide post
0.260	NB RT.	Clean out CB and pipe, install guide post
0.260	SB Centerline	Clean out pipe, clean ditch channel out to R/W
0.872	NB & SB	Replace 2 sections 24" RCP & apron, install pipes ties
1.315	NB & SB	Replace 2 sections 36" RCP & apron, install pipes ties
1.491	NB & SB	Replace 1 section 30" RCP & apron, install pipe ties, and install riprap at inlet and outlet

cc:
D. Mohar
ProjectWise File: ...\Projects\D1_DUL\033\0905\053\Hydraulics\Recommendations\Preliminary\0905-53_Prelim_HydRecs.xlsx

1123 Mesaba Avenue, Duluth, Minnesota 55811-2798 PH (218) 725-2700 FAX (218) 725-2800

Saatela, Krysten (DOT)

From: Fredrickson, Derek (DOT)
Sent: Thursday, May 10, 2012 10:11 AM
To: Saatela, Krysten (DOT)
Cc: Fredrickson, Derek (DOT)
Subject: TH 33 Ratings

Krysten,

Here are the road ratings for TH 33 that you requested. Extensive patching was done by maintenance during the summer and fall of 2011, so the RQI rated higher in some areas than it really should have. Last spring's freeze/thaw cycles really caused a lot of tenting and distress' to the pavement structure and surface.

R.P. 0.0 to 1.0 Decreasing

	RQI	SR	PQI
2011	2.2		
2010	2.7	1.4	1.9
2009	2.5		

R.P. 0.0 to 1.0 Increasing

	RQI	SR	PQI
2011	2.4		
2010	2.5	3.5	3.0
2009	2.7		

R.P. 1.0 to 1.72 Decreasing

	RQI	SR	PQI
2011	1.4		
2010	1.8	2.6	2.2
2009	2.0		

R.P. 1.0 to 1.72 Increasing

	RQI	SR	PQI
2011	2.4		
2010	2.6	2.4	2.5
2009	2.5		

Let me know if you need anything else.

Thanks,
Derek

MINNESOTA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLAN FOR GRADING, CONCRETE SURFACING, BITUMINOUS MILL & OVERLAY, LIGHTING, SIGNALS, RETAINING WALL & ADA IMPROVMENTS

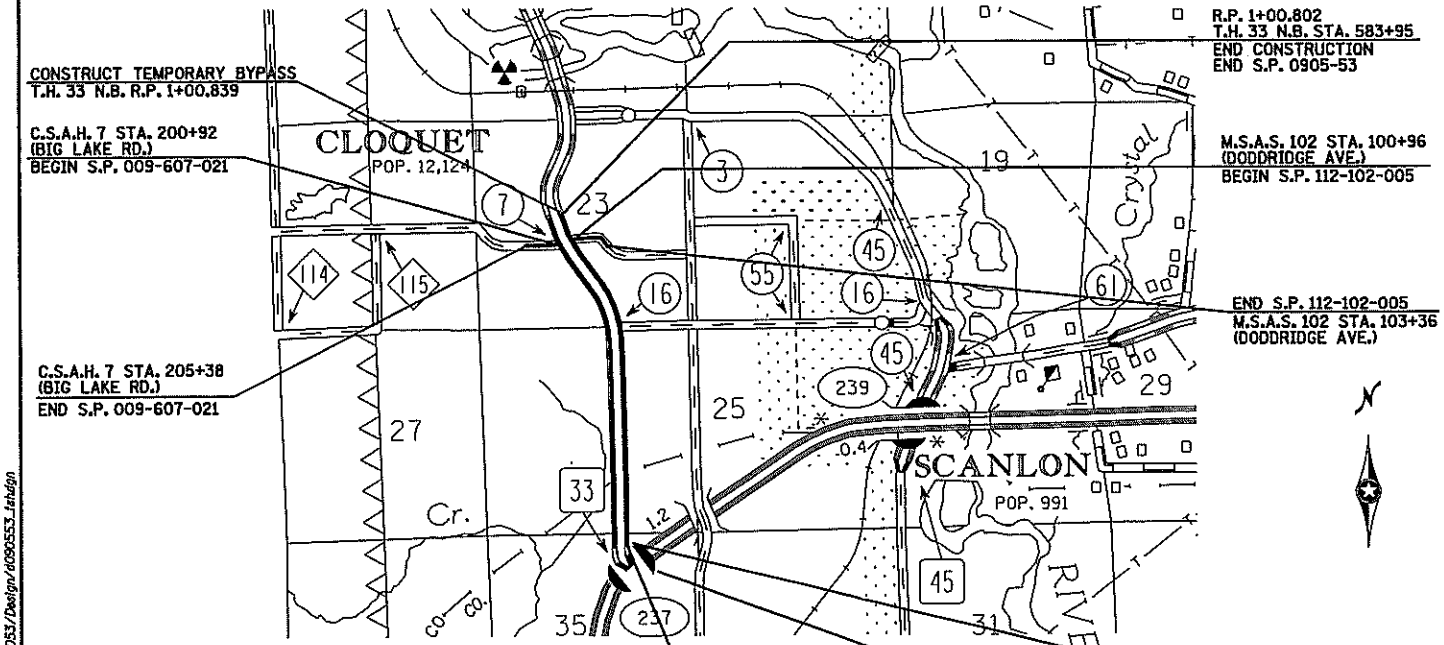
LOCATED ON T.H. 33 FROM T.H. 35 TO 0.08 MILES NORTH OF DODDRIDGE AVE./BIG LAKE RD. IN CLOQUET

STATE PROJ. NO. 0905-53			STATE PROJ. NO. 009-607-021			STATE PROJ. NO. 112-102-005		
GROSS LENGTH	8616 FEET	1.632 MILES	GROSS LENGTH	446 FEET	0.084 MILES	GROSS LENGTH	240 FEET	0.045 MILES
BRIDGES-LENGTH	0 FEET	0 MILES	BRIDGES-LENGTH	0 FEET	0 MILES	BRIDGES-LENGTH	0 FEET	0 MILES
EXCEPTIONS-LENGTH	0 FEET	0 MILES	EXCEPTIONS-LENGTH	0 FEET	0 MILES	EXCEPTIONS-LENGTH	0 FEET	0 MILES
NET LENGTH	8616 FEET	1.632 MILES	NET LENGTH	446 FEET	0.084 MILES	NET LENGTH	240 FEET	0.045 MILES

REF. POINT 00+00.535 TO REF. POINT 1+00.802

LENGTH & DESCRIPTION OF PROJECT BASED ON T.H. 33 N.B. ALIGNMENT

CARLTON CO.



SCALES

ALIGNMENT, TOPOGRAPHY, R/W, & REMOVALS	100'	
PLANNED CONSTRUCTION	100'	
EROSION CONTROL - DRAINAGE	100'	
PROFILE	100' HORIZ.	10' VERT.
INDEX MAP	5280'	

PLAN REVISIONS		
DATE	SHEET NO.	APPROVED

DESIGN DESIGNATION

Design CESALS	2034 = 5,938,000	Design Speed	55 MPH
ADT (Current Year)	2012 = 18,200	Based on STOPPING Sight Distance	495
ADT (Future Year)	2034 = 29,500	Height of eye 3.5 Height of object	2.0
DHV (Design Hr. Vol.)	= 3,835	Design Speed not achieved at:	
D (Directional Distr.)	= 55/45 %	STA. TO STA.	MPH
T (Heavy Commercial)	= 5.7 %	STA. TO STA.	MPH

PROJECT LOCATION
COUNTY : CARLTON
DISTRICT : 1 - DULUTH

FOR PLANS AND UTILITIES SYMBOLS SEE TECHNICAL MANUAL

STATE PROJ. NO.	CHARGE IDENTIFIER
0905-53	

FED. PROJ. NO. NHPP 0033(302)

GOVERNING SPECIFICATIONS

THE 2014 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AND THE 2014 EDITION OF THE "MATERIALS LAB SUPPLEMENTAL SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

INDEX

THIS PLAN CONTAINS 400 SHEETS

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.

PRINT NAME: DEREK FREDRICKSON LICENSE # 43080

DATE: SIGNATURE:

DESIGN SQUAD J. MADILL, L. MUSOLF, B. ZIOTEK, J. HOBAN, S. RONES & S. SMITH

APPROVED _____ 20____
CITY ENGINEER, CITY OF CLOQUET

APPROVED _____ 20____
COUNTY ENGINEER, CARLTON COUNTY

RECOMMENDED FOR APPROVAL _____ 20____
DISTRICT TRANSPORTATION ENGINEER

RECOMMENDED FOR APPROVAL _____ 20____
DISTRICT MATERIALS ENGINEER

RECOMMENDED FOR APPROVAL _____ 20____
DISTRICT WATER RESOURCES/HYDRAULICS ENGINEER

RECOMMENDED FOR APPROVAL _____ 20____
DISTRICT TRAFFIC ENGINEER

RECOMMENDED FOR APPROVAL _____ 20____
STATE PRE-LETTING ENGINEER

OFFICE OF LAND MANAGEMENT APPROVAL _____ 20____
DIRECTOR, LAND MANAGEMENT

APPROVED _____ 20 _____ 20____
STATE DESIGN ENGINEER

DISTRICT STATE AID ENGINEER REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY _____ 20____

APPROVED FOR STATE AID / FEDERAL AID FUNDING: STATE AID ENGINEER 20____

I HEREBY CERTIFY THAT THE FINAL FIELD REVISIONS, IF ANY, WERE 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.

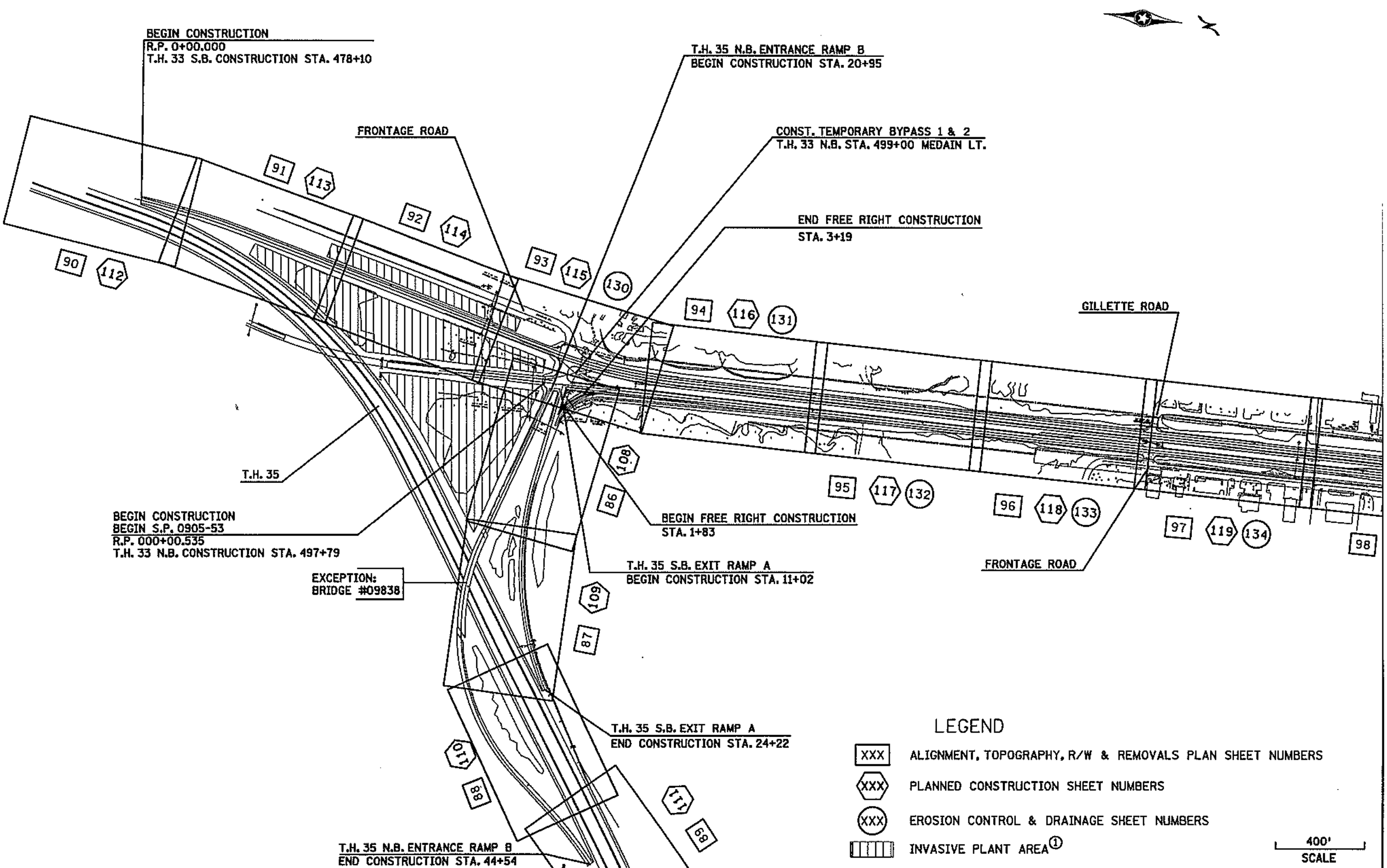
PRINT NAME: LICENSE #

DATE: SIGNATURE:

S.P. 112-102-005
S.P. 009-607-021
STATE PROJ. NO. 0905-53 (TH 33 = 164) SHEET NO. 1 OF 257 SHEETS

PLOTTED/REVISED: 13-MAR-2014

DISTRICT #: 1
PLOT NAME: d0905S3.tsh
PATH & FILENAME: Projects/01_DUL/033/0905/053/Design/d0905S3.tshdgn



LEGEND

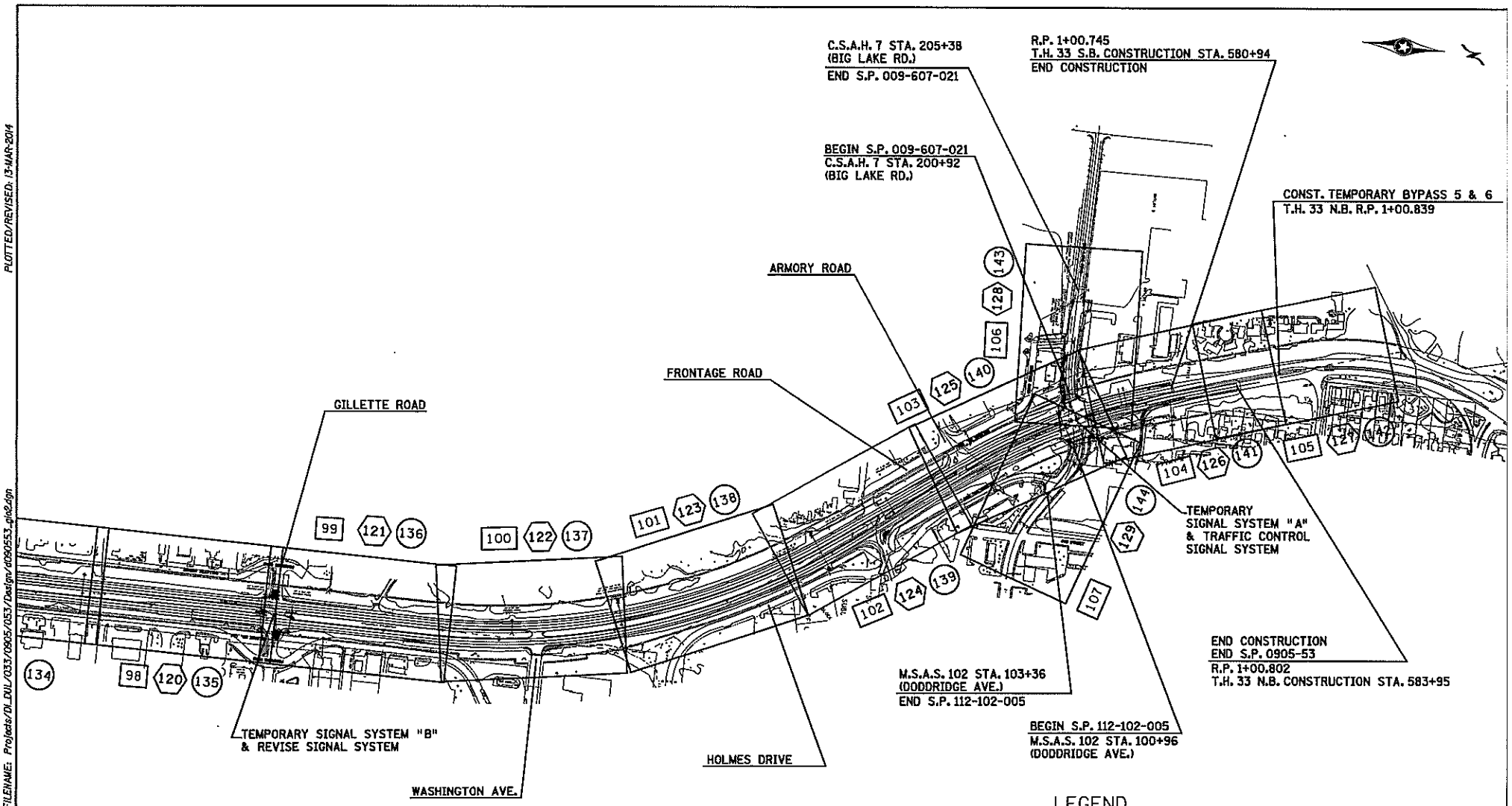
XXX (square)	ALIGNMENT, TOPOGRAPHY, R/W & REMOVALS PLAN SHEET NUMBERS
XXX (hexagon)	PLANNED CONSTRUCTION SHEET NUMBERS
XXX (circle)	EROSION CONTROL & DRAINAGE SHEET NUMBERS
(hatched box)	INVASIVE PLANT AREA①

400'
SCALE

① AVOID INVASIVE WEED AREAS. SEE SOILS & CONSTRUCTION NOTES AND SPECIAL PROVISIONS FOR ADDITIONAL DETAILS.

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

GENERAL LAYOUT



I HEREBY CERTIFY THAT THIS PLAN 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.

DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

GENERAL LAYOUT

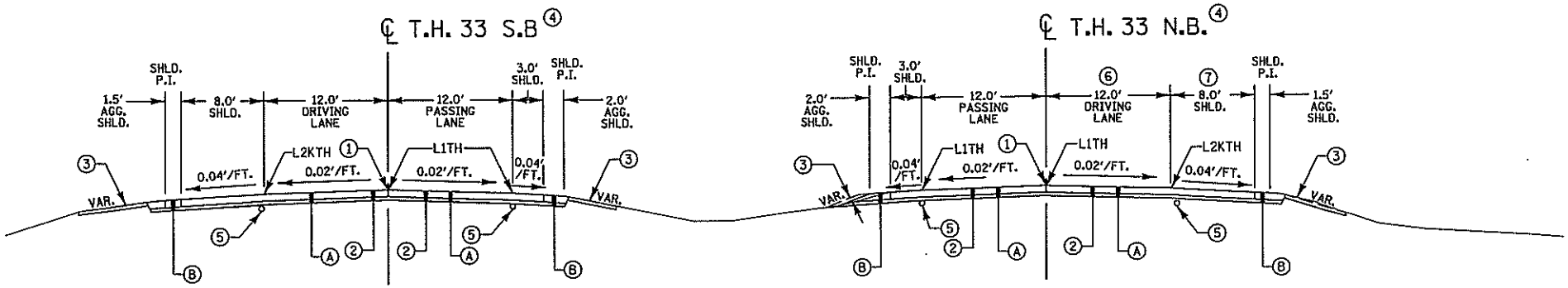
STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 3 OF 257 SHEETS

DISTRICT *: /
PLOT NAME: d0805S3_gla2-2
PATH & FILENAME: Projects/DL_DIL/033/0905/053/Design/d0905S3_gla2.dgn

PLOTTED/REVISED: 13-MAR-2014

TYPICAL SECTION - MAINLINE

APPLIES : T.H. 33 STA. N.B. 497+79 - 567+12 S.B. 498+24 - 511+00
S.B. 539+50 - 566+69



Ⓐ PLACE CONCRETE PAVEMENT 8.0" (DOWELED)
VAR. DEPTH (4.0" MIN) AGGREGATE BASE (CV) CLASS 6

Ⓑ 8.0" AGGREGATE SURFACING (CV) CLASS 6
VAR. DEPTH (4.0" MIN) AGGREGATE BASE (CV) CLASS 6

① PROFILE GRADE TOP OF FINISHED CONCRETE SURFACE.
② REMOVE INPLACE BITUMINOUS PAVEMENT AND AGGREGATE BASE TO A DEPTH OF 12" BELOW FINISHED CONCRETE SURFACE. PAID FOR AS - COMMON EXCAVATION.
③ SALVAGE INPLACE TOPSOIL (4.0" AVG.) AND PLACE 4.0" OF SLOPE DRESSING.
④ FOR ALIGNMENT DATA - SEE ALIGNMENT TABULATION CHARTS.
⑤ FOR SUBSURFACE DRAIN CONSTRUCTION DETAIL - SEE CONST. DETAIL, STANDARD PLAN SHEET, AND CROSS SECTIONS.
⑥ FROM N.B. STA. 497+79 TO N.B. 499+79 RT. DRIVING LANE SHALL BE CONSTRUCTED AT 8' WIDE. FROM N.B. STA. 499+79 TO N.B. 502+58 RT. DRIVING LANE SHALL BE CONSTRUCTED AT VARIABLE WIDTH AS IT TAPERS INTO MAIN LINE.
⑦ RT. SHOULDER TAPERS FROM 6' AT N.B. STA. 499+79 TO 8' AT N.B. STA. 502+58.

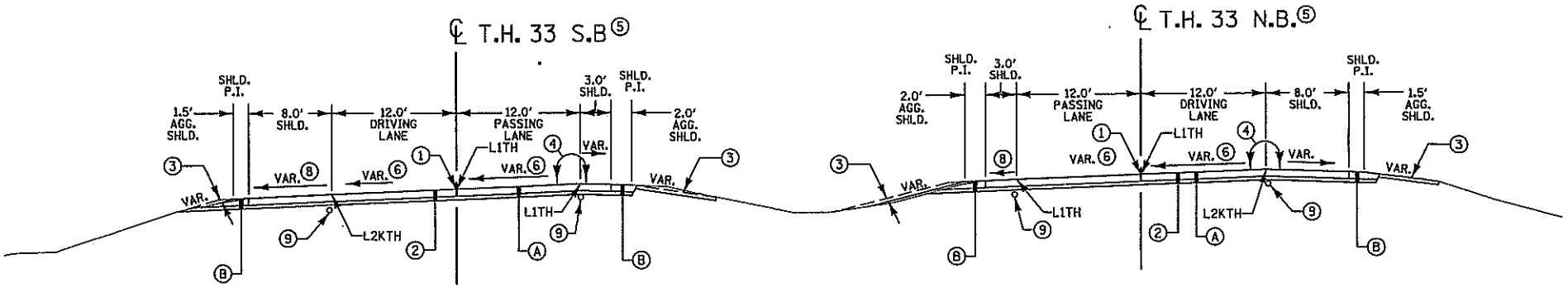
I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

TYPICAL SECTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 29 OF 257 SHEETS

TYPICAL SECTION - MAINLINE SUPERELEVATION

APPLIES : T.H. 33 STA. N.B. 497+79 - 567+12 S.B. 498+24 - 566+69 (7)



(A) PLACE CONCRETE PAVEMENT 8.0" (DOWELED)
VAR. DEPTH (4.0" MIN) AGGREGATE BASE (CV) CLASS 6

(B) 8.0" AGGREGATE SURFACING (CV) CLASS 6
VAR. DEPTH (4.0" MIN) AGGREGATE BASE (CV) CLASS 6

(1) PROFILE GRADE TOP OF FINISHED CONCRETE SURFACE.
(2) REMOVE INPLACE BITUMINOUS PAVEMENT AND AGGREGATE BASE TO A DEPTH OF 12" BELOW FINISHED CONCRETE SURFACE. PAID FOR AS - COMMON EXCAVATION.
(3) SALVAGE INPLACE TOPSOIL (4.0" AVG.) AND PLACE 4.0" OF SLOPE DRESSING.
(4) 0.07'/FT. MAXIMUM ROLLOVER.
(5) FOR ALIGNMENT DATA - SEE ALIGNMENT TABULATION CHARTS.
(6) FOR CROSS SLOPES - SEE SUPERELEVATION SHEETS.
(7) SEE SUPERELEVATION SHEETS FOR DETAILS AND LOCATIONS.
(8) CONSTRUCT -0.04'/FT. CROSS SLOPE EXCEPT WHERE CROSS SLOPE OF ADJACENT LANE EXCEEDS -0.04'/FT, THEN SLOPE SHALL MATCH ADJACENT LANE.
(9) FOR SUBSURFACE DRAIN CONSTRUCTION DETAILS - SEE CONST. DETAIL, STANDARD PLAN SHEET, AND CROSS SECTIONS.

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

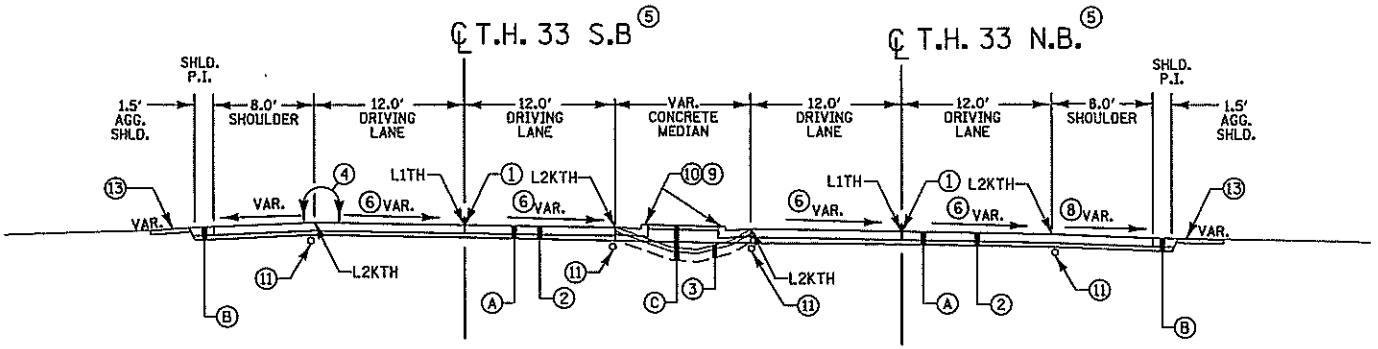
TYPICAL SECTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 30 OF 257 SHEETS

DISTRICT *: 1
PLOT NAME: Mainline Superelevation
PATH & FILENAME: Projects/01_DUL/033/0905/053/Design/d0905053_TYPICALS.dgn
PLOTTED/REVISED: 13-MAR-2014

TYPICAL SECTION - SUPERELEVATION MAINLINE CONCRETE MEDIAN

APPLIES : T.H. 33 STA. N.B. 567+12 - 583+95 S.B. 566+69 - 580+94 (7)(12)(14)



(A) PLACE CONCRETE PAVEMENT 8.0" (DOWELED)
VAR. DEPTH (4.0" MIN) AGGREGATE BASE (CV) CLASS 6

(B) 8.0" AGGREGATE SURFACING (CV) CLASS 6
VAR. DEPTH (4.0" MIN) AGGREGATE BASE (CV) CLASS 6 (4.0" MIN.)

(C) PLACE 4.0" CONCRETE WALK
VAR. DEPTH AGGREGATE BASE (CV) CLASS 6 (9)
VAR. DEPTH SELECT GRANULAR BORROW MOD. 7% (CV)

(1) PROFILE GRADE TOP OF FINISHED CONCRETE SURFACE.
(2) REMOVE INPLACE BITUMINOUS PAVEMENT AND AGGREGATE BASE TO A DEPTH OF 12" BELOW FINISHED CONCRETE SURFACE. PAID FOR AS - COMMON EXCAVATION.
(3) EXCAVATE INPLACE MEDIAN TO A DEPTH OF 12" BELOW EXISTING SURFACE. PAID FOR AS - COMMON EXCAVATION. TOP 4.0" OF TOPSOIL SHALL BE SALVAGED.
(4) 0.07'/FT. MAXIMUM ROLLOVER.
(5) FOR ALIGNMENT DATA - SEE ALIGNMENT TABULATION CHARTS.
(6) FOR CROSS SLOPES - SEE SUPERELEVATION SHEETS.
(7) SEE SUPERELEVATION SHEETS FOR DETAILS AND LOCATIONS.
(8) CONSTRUCT -0.04'/FT. CROSS SLOPE EXCEPT WHERE CROSS SLOPE OF ADJACENT LANE EXCEEDS -0.04'/FT, THEN SLOPE SHALL MATCH ADJACENT LANE.
(9) MAINTAIN A MIN. OF 4.0" AGGREGATE BASE (CV) CLASS 6 UNDER CURB AND GUTTER AND CONCRETE WALK.
(10) CONSTRUCT CONCRETE CURB AND GUTTER DESIGN B624.
(11) FOR SUBSURFACE DRAIN CONSTRUCTION DETAILS - SEE CONST. DETAILS, STANDARD PLAN SHEET, AND CROSS SECTIONS.
(12) ROAD IS IN TANGENT FROM STA. 567+12 TO 569+56 N.B. AND 566+69 TO 569+75 S.B., SEE SUPERELEVATION SHEETS FOR CROSS SLOPES.
(13) SALVAGE INPLACE TOPSOIL (4.0" AVG.) AND PLACE 4.0" OF SLOPE DRESSING.
(14) SEE TURN LANE TYPICALS AND PLANNED CONST. SHEETS FOR AREAS OF TURN LANE CONSTRUCTION.

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

TYPICAL SECTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 31 OF 257 SHEETS

PLOTTED/REVISED: 13-MAR-2014
DISTRICT *: 1
PLOT NAME: Concrete Median Median
PATH & FILENAME: Projects/01_DIL/033/0905/053/Design/d0905s3_TYPICALS.dgn

TYPICAL SECTION - MAINLINE PROFILE CORRECTION④

PROFILE CORRECTION MAINLINE

APPLIES : T.H. 33 CONST. STA. S.B. 511+00 - 539+50

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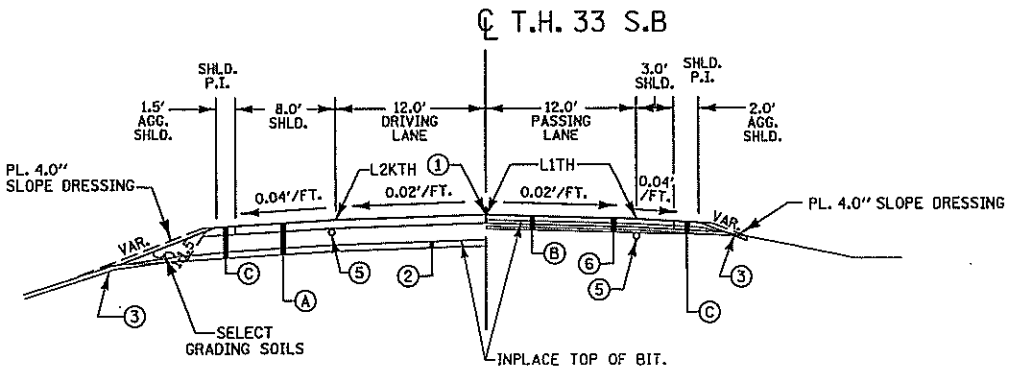
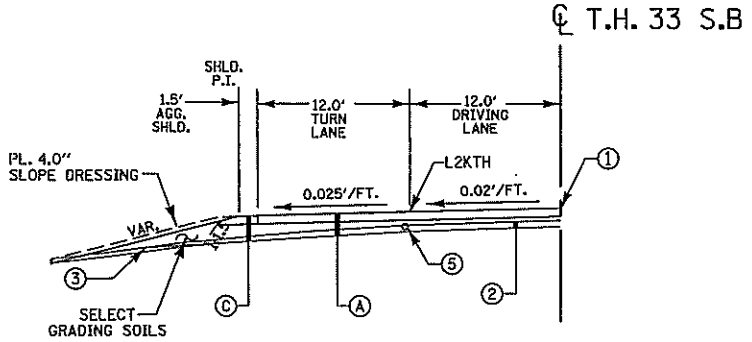


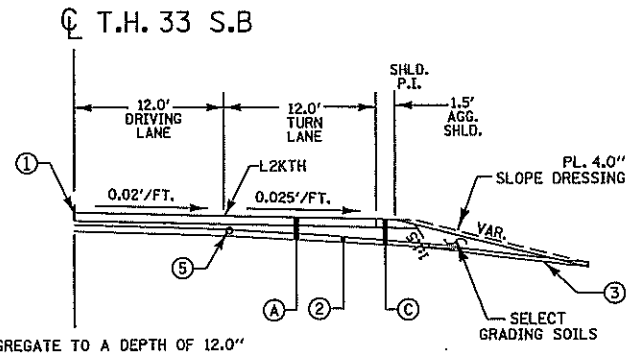
PROFILE CORRECTION LEFT TURN LANES

APPLIES : T.H. 33 CONST. STA. S.B. 525+21 - 530+40⑦



PROFILE CORRECTION RIGHT TURN LANES

APPLIES : T.H. 33 CONST. STA. S.B. 524+59 - 530+36



Ⓐ PLACE CONCRETE PAVEMENT 8.0" (DOWELED)
VAR. DEPTH (4.0" MIN) AGGREGATE BASE (CV) CLASS 6

Ⓑ PLACE CONCRETE PAVEMENT 8.0" (DOWELED)
4.0" AGGREGATE BASE (CV) CLASS 6

Ⓒ 8.0" AGGREGATE SURFACING (CV) CLASS 6
VAR. DEPTH (4.0" MIN) AGGREGATE BASE (CV) CLASS 6

① PROFILE GRADE TOP OF FINISHED CONCRETE SURFACE.
② REMOVE INPLACE BITUMINOUS PAVEMENT AND INPLACE SHOULDER AGGREGATE TO A DEPTH OF 12.0" BELOW FINISHED CONCRETE SURFACE. PAID FOR AS - COMMON EXCAVATION.
③ SALVAGE INPLACE TOPSOIL (4.0" AVG.).
④ FOR ALIGNMENT DATA - SEE ALIGNMENT TABULATION CHARTS.
⑤ FOR SUBSURFACE DRAIN CONSTRUCTION DETAIL - SEE CONST. DETAIL, STANDARD PLAN SHEET, AND CROSS SECTIONS.
⑥ REMOVE INPLACE BITUMINOUS PAVEMENT AND AGGREGATE BASE TO A DEPTH OF 12" (MIN.) BELOW TOP OF FINISHED CONCRETE SURFACE. PAID FOR AS - COMMON EXCAVATION.
⑦ ADJACENT CROSS OVER SHALL BE CONCRETE PAVEMENT 8.0" (DOWELED) ON VAR. DEPTH (4.0" MIN.) AGGREGATE BASE (CV) CLASS 6.

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

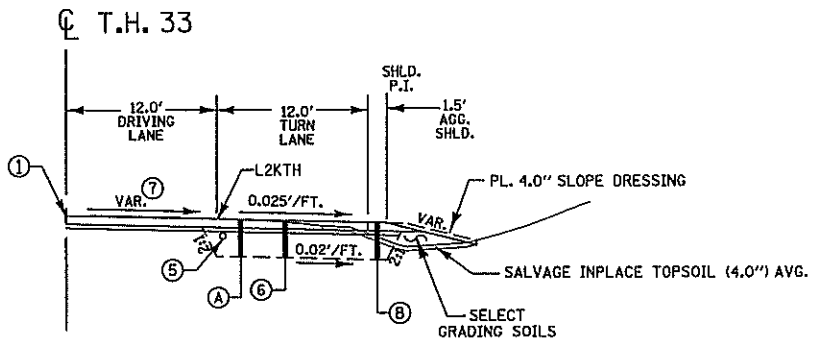
TYPICAL SECTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 32 OF 257 SHEETS

TYPICAL SECTION - RIGHT TURN LANE④

PROPOSED NEW RIGHT TURN LANES AND EXTENSIONS

APPLIES : T.H. 33 STA. N.B. 520+32 - 526+02 S.B. 502+00 - 503+75
N.B. 545+92 - 550+00
N.B. 552+00 - 553+32

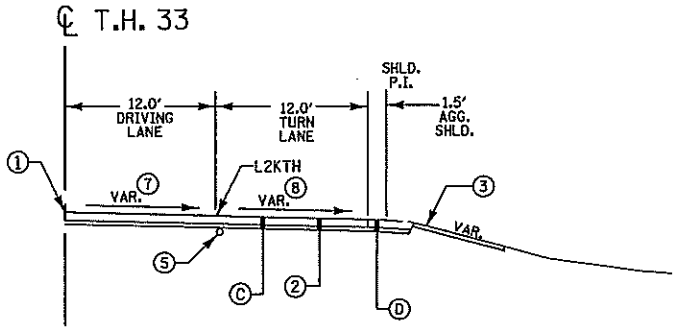


Ⓐ PLACE CONCRETE PAVEMENT 8.0" (DOWELED)
4.0" AGGREGATE BASE (CV) CLASS 6
24.0" SELECT GRANULAR BORROW MOD. 7% (CV)

Ⓑ 8.0" AGGREGATE SURFACING (CV) CLASS 6
4.0" AGGREGATE BASE (CV) CLASS 6
24.0" SELECT GRANULAR BORROW MOD. 7% (CV)

RIGHT TURN LANES

APPLIES : T.H. 33 STA. N.B. 535+31 - 541+12 S.B. 499+44 - 502+00
N.B. 550+00 - 552+00 S.B. 539+55 - 545+31
N.B. 561+93 - 568+38 S.B. 566+21 - 570+42
N.B. 572+11 - 575+91 S.B. 571+24 - 574+65
N.B. 577+30 - 579+34 S.B. 577+24 - 580+94



Ⓒ PLACE CONCRETE PAVEMENT 8.0" (DOWELED)
VAR. DEPTH (4.0" MIN) AGGREGATE BASE (CV) CLASS 6

Ⓓ 8.0" AGGREGATE SURFACING (CV) CLASS 6
VAR. DEPTH (4.0" MIN) AGGREGATE BASE (CV) CLASS 6

① PROFILE GRADE TOP OF FINISHED CONCRETE SURFACE.
② REMOVE INPLACE BITUMINOUS PAVEMENT AND AGGREGATE BASE TO A DEPTH OF 12" BELOW FINISHED CONCRETE SURFACE. PAID FOR AS - COMMON EXCAVATION.
③ SALVAGE INPLACE TOPSOIL (4.0" AVG.) AND PLACE 4.0" OF SLOPE DRESSING.
④ FOR ALIGNMENT DATA - SEE ALIGNMENT TABULATION CHARTS.
⑤ FOR SUBSURFACE DRAIN CONSTRUCTION DETAILS - SEE CONST. DETAILS, STANDARD PLAN SHEET, AND CROSS SECTIONS.
⑥ REMOVE INPLACE BITUMINOUS PAVEMENT AND AGGREGATE BASE TO A DEPTH OF 36" BELOW FINISHED CONCRETE SURFACE PAID FOR AS - COMMON EXCAVATION.
⑦ ORIVING LANE CROSS SLOPE VARIES BETWEEN TANGENT AND SUPERELEVATION - SEE SUPERELEVATION SHEETS FOR LOCATIONS AND SLOPES.
⑧ TURNLANE CROSS SLOPE VARIES BETWEEN TANGENT AND SUPERELEVATION - SEE SUPERELEVATION SHEETS FOR LOCATIONS AND SLOPES.

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

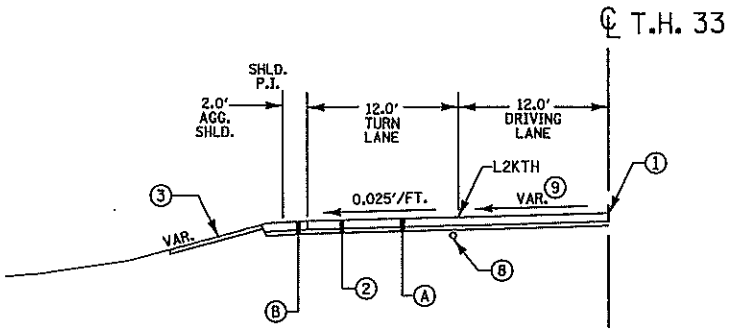
TYPICAL SECTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 33 OF 257 SHEETS

TYPICAL SECTION - LEFT TURN LANE④

LEFT TURN LANES⑪

APPLIES : T.H. 33 STA. N.B. 522+16 - 525+59 S.B. 499+13 - 501+77
N.B. 535+15 - 540+71 S.B. 539+95 - 547+52
S.B. 551+33 - 554+55

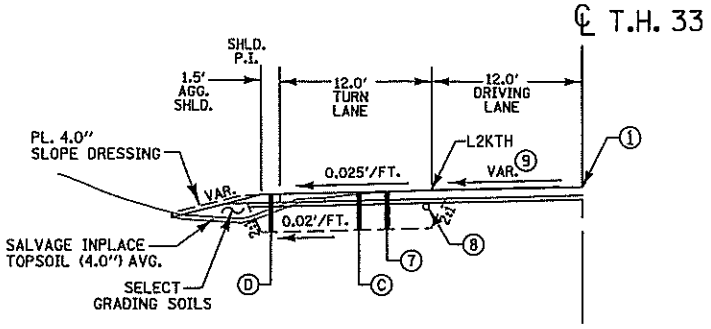


Ⓐ PLACE CONCRETE PAVEMENT 8.0" (DOWELED)
VAR. DEPTH (4.0" MIN) AGGREGATE BASE (CV) CLASS 6

Ⓑ 8.0" AGGREGATE SURFACING (CV) CLASS 6
VAR. DEPTH (4.0" MIN) AGGREGATE BASE (CV) CLASS 6

PROPOSED NEW LEFT TURN LANES AND EXTENSIONS⑪

APPLIES : T.H. 33 STA. N.B. 520+40 - 522+16 S.B. 501+77 - 503+65
S.B. 554+55 - 556+55

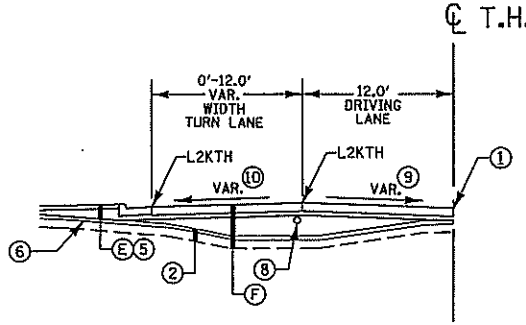


Ⓒ PLACE CONCRETE PAVEMENT 8.0" (DOWELED)
4.0" AGGREGATE BASE (CV) CLASS 6
24.0" SELECT GRANULAR BORROW MOD. 7% (CV)

Ⓓ 8.0" AGGREGATE SURFACING (CV) CLASS 6
4.0" AGGREGATE BASE (CV) CLASS 6
24.0" SELECT GRANULAR BORROW MOD. 7% (CV)

PROPOSED NEW LEFT TURN LANE - CONCRETE MEDIAN⑪

APPLIES : T.H. 33 STA. N.B. 567+96 - 571+86 S.B. 566+82 - 570+53
N.B. 571+91 - 576+35 S.B. 577+01 - 580+94



Ⓕ PLACE CONCRETE PAVEMENT 8.0" (DOWELED)
4.0" AGGREGATE BASE (CV) CLASS 6
VAR. DEPTH SELECT GRANULAR BORROW MOD. 7% (CV)

Ⓔ PLACE 4.0" CONCRETE WALK
VAR. DEPTH AGGREGATE BASE (CV) CLASS 6⑤

① PROFILE GRADE TOP OF FINISHED CONCRETE SURFACE.
② REMOVE INPLACE BITUMINOUS PAVEMENT AND AGGREGATE BASE TO A DEPTH OF 12" BELOW FINISHED CONCRETE SURFACE. PAID FOR AS - COMMON EXCAVATION.
③ SALVAGE INPLACE TOPSOIL (4.0" AVG.) AND PLACE 4.0" OF SLOPE DRESSING.
④ FOR ALIGNMENT DATA - SEE ALIGNMENT TABULATION CHARTS.
⑤ MAINTAIN A MIN. OF 4.0" OF AGGREGATE BASE (CV) CLASS 6.
⑥ SALVAGE INPLACE TOPSOIL (4.0" AVG.).
⑦ REMOVE INPLACE BITUMINOUS PAVEMENT AND AGGREGATE BASE TO A DEPTH OF 36" BELOW FINISHED CONCRETE SURFACE PAID FOR AS - COMMON EXCAVATION.
⑧ FOR SUBSURFACE DRAIN CONSTRUCTION DETAIL - SEE CONST. DETAIL, STANDARD PLAN SHEET, AND CROSS SECTIONS.
⑨ DRIVING LANE CROSS SLOPE VARIES BETWEEN TANGENT AND SUPERELEVATION - SEE SUPERELEVATION SHEETS FOR LOCATIONS AND SLOPES.
⑩ TURNLANE CROSS SLOPE VARIES BETWEEN TANGENT AND SUPERELEVATION - SEE SUPERELEVATION SHEETS FOR LOCATIONS AND SLOPES.
⑪ ADJACENT CROSS OVER SHALL BE CONCRETE PAVEMENT 8.0" (DOWELED) ON VAR. DEPTH (4.0" MIN.) AGGREGATE BASE (CV) CLASS 6.

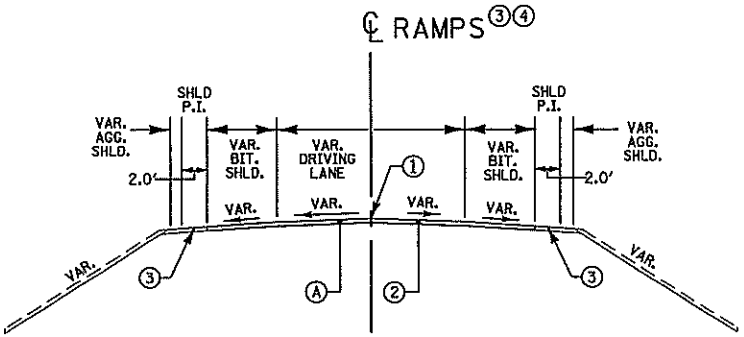
I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

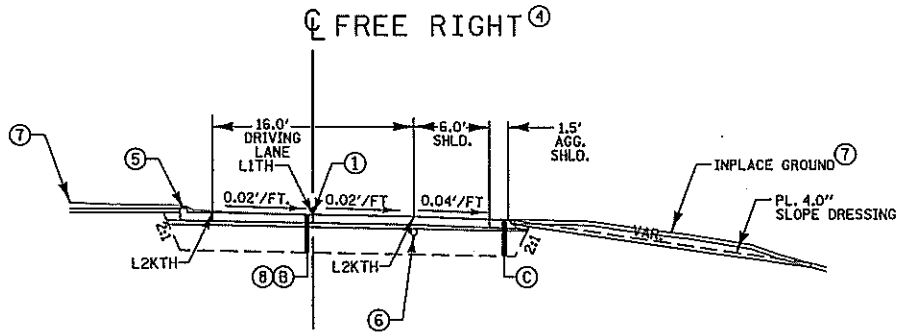
TYPICAL SECTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 34 OF 257 SHEETS

TYPICAL SECTION - RAMP CONSTRUCTION/ FREE RIGHT

APPLIES : S.B. T.H. 35 EXIT RAMP A STA. 11+02 - 24+22
N.B. T.H. 35 ENTRANCE RAMP B STA. 20+95 - 44+54
T.H. 33 STA. S.B. 478+10 - 498+24
FREE RIGHT STA. 1+83 - 3+19





① PROFILE GRADE.
② 3.0" BITUMINOUS MILLING.
③ PLACE VAR. DEPTH AGGREGATE SURFACING (LV) CLASS 6.
④ FOR ALIGNMENT DATA - SEE ALIGNMENT TABULATION CHARTS.
⑤ CONSTRUCT CONCRETE CURB AND GUTTER DESIGN B424.
⑥ FOR SUBSURFACE DRAIN CONSTRUCTION DETAIL - SEE CONST. DETAIL, AND STANDARD PLAN SHEET.
⑦ SALVAGE INPLACE TOPSOIL (4.0" AVG.).
⑧ EXCAVATE TO 36.0" BELOW TOP OF FINISHED CONCRETE SURFACE.

Ⓐ TYPE SP 12.5 WEARING COURSE MIX (SPWEB440B) 1.5" THICK
TYPE SP 12.5 WEARING COURSE MIX (SPWEB440B) 1.5" THICK
PLACE TACK COAT BETWEEN COURSES AND ON MILLING SURFACE (INCIDENTAL)

Ⓑ PLACE CONCRETE PAVEMENT 8.0" (DOWELED)
4.0" AGGREGATE BASE (CV) CLASS 6
24.0" SELECT GRANULAR BORROW MOD. 7% (CV)

Ⓒ 8.0" AGGREGATE SURFACING (CV) CLASS 6
4.0" AGGREGATE BASE (CV) CLASS 6
24.0" SELECT GRANULAR BORROW MOD. 7% (CV)

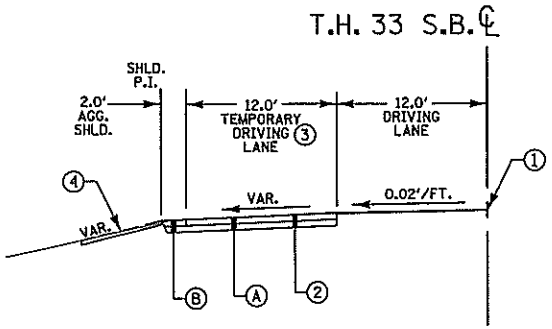
PLOTTED/REVISED: 13-MAR-2014
DISTRICT #, I
IPLOT NAME: RAMPS
PATH & FILENAME: Projects/01_DIL/033/0905/053/Design/d090553_TYPICALS.dgn

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

TYPICAL SECTION

TYPICAL SECTION - TEMPORARY DRIVING LANE

APPLIES : T.H. 33 CONST. STA. S.B. 536+58 - 539+88
S.B. 574+41 - 576+08



(A)
- TYPE SP 12.5 WEARING COURSE MIX (SPWEB340C) 2.0" THICK
- TYPE SP 12.5 WEARING COURSE MIX (SPWEB340C) 2.0" THICK
- TYPE SP 12.5 WEARING COURSE MIX (SPWEB340C) 2.0" THICK
- PLACE TACK COAT BETWEEN COURSES (INCIDENTAL)
- 6.0" AGGREGATE BASE (CV) CLASS 6

(B)
- 6.0" AGGREGATE SURFACING (CV) CLASS 6
- 6.0" AGGREGATE BASE (CV) CLASS 6

(1) PROFILE GRADE TOP OF FINISHED BITUMINOUS SURFACE.

(2) REMOVE INPLACE BITUMINOUS PAVEMENT AND AGGREGATE BASE TO A DEPTH OF 12" PAID FOR AS - COMMON EXCAVATION.

(3) WIDENING THE INPLACE SHOULDER WIDTH FROM 8.0' TO 12.0' FOR A TEMPORARY DRIVING LANE DURING TRAFFIC STAGING.

(4) SALVAGE INPLACE TOPSOIL (4.0" AVG.) AND PLACE 4.0" OF SLOPE DRESSING.

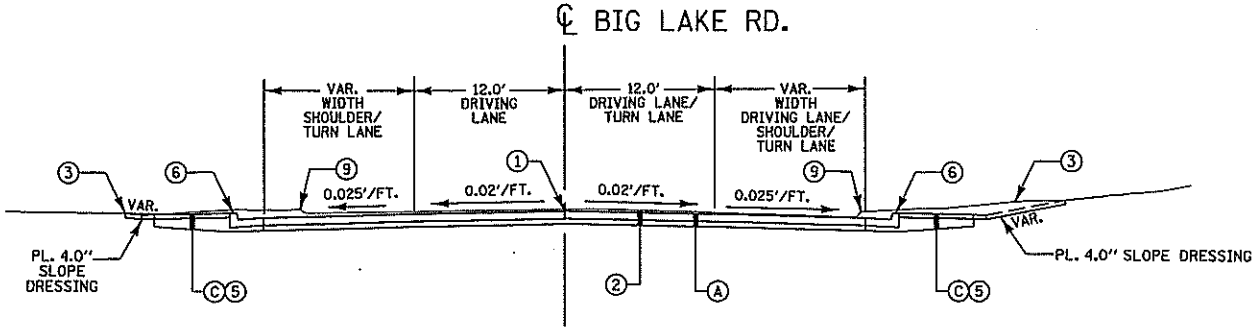
I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

TYPICAL SECTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 36 OF 257 SHEETS

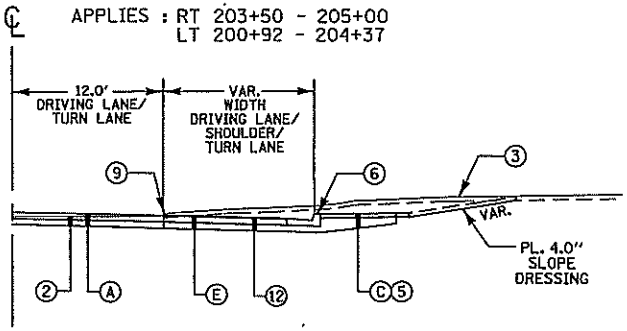
TYPICAL SECTION - BIG LAKE ROAD (10)

APPLIES : BIG LAKE RD. STA. 200+92 - 205+38



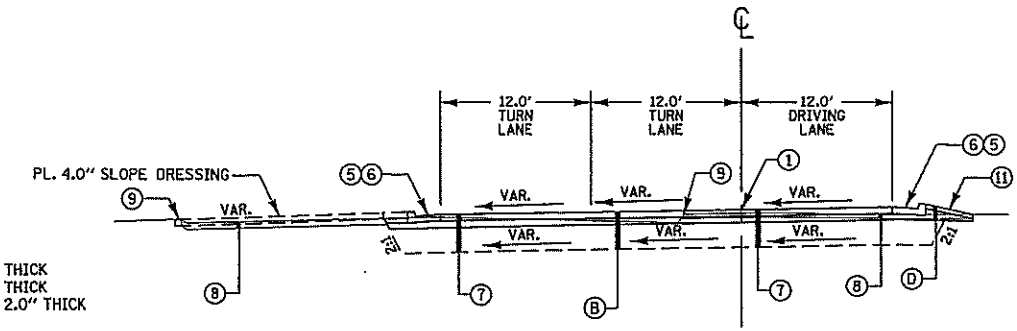
BIG LAKE RD. (4) WIDENING AREAS

APPLIES : RT 203+50 - 205+00
LT 200+92 - 204+37



SUPER ONE RD. CONN. (4)

APPLIES : SUPER ONE RD. CONN. STA. 30+32 - 31+48



(A) TYPE SP 12.5 WEARING COURSE MIX (SPWEB340C) 2.0" THICK
TYPE SP 12.5 WEARING COURSE MIX (SPWEB340C) 2.0" THICK
TYPE SP 12.5 NON WEARING COURSE MIX (SPNWB330C) 2.0" THICK
PLACE TACK COAT BETWEEN COURSES (INCIDENTAL)
VAR. DEPTH (4.0" MIN) AGGREGATE BASE (CV) CLASS 6

(B) TYPE SP 12.5 WEARING COURSE MIX (SPWEB340C) 2.0" THICK
TYPE SP 12.5 WEARING COURSE MIX (SPWEB340C) 2.0" THICK
TYPE SP 12.5 NON WEARING COURSE MIX (SPNWB330C) 2.0" THICK
PLACE TACK COAT BETWEEN COURSES (INCIDENTAL)
6.0" AGGREGATE BASE (CV) CLASS 6
24.0" SELECT GRANULAR BORROW MOD. 7% (CV)

(C) PLACE 4.0" CONCRETE WALK
VAR. DEPTH AGGREGATE BASE (CV) CLASS 6 (5)

(D) TYPE SP 12.5 WEARING COURSE MIX (SPWEB340C) 2.0" THICK
TYPE SP 12.5 NON WEARING COURSE MIX (SPNWB330C) 2.0" THICK
PLACE TACK COAT BETWEEN COURSES (INCIDENTAL)
VAR. DEPTH AGGREGATE BASE (CV) CLASS 6

(E) TYPE SP 12.5 WEARING COURSE MIX (SPWEB340C) 2.0" THICK
TYPE SP 12.5 WEARING COURSE MIX (SPWEB340C) 2.0" THICK
TYPE SP 12.5 NON WEARING COURSE MIX (SPNWB330C) 2.0" THICK
PLACE TACK COAT BETWEEN COURSES (INCIDENTAL)
6.0" AGGREGATE BASE (CV) CLASS 6

(1) PROFILE GRADE TOP OF FINISHED BITUMINOUS SURFACE.
(2) REMOVE BITUMINOUS AND AGGREGATE BASE TO A DEPTH OF 6.0" FROM THE TOP OF INPLACE BITUMINOUS SURFACE. PAID FOR AS - COMMON EXCAVATION. (AVG. BIT DEPTH 4.5").
(3) SALVAGE INPLACE TOPSOIL (4.0" AVG.).
(4) FOR ALIGNMENT DATA - SEE ALIGNMENT TABULATION CHARTS.
(5) MAINTAIN A 4.0" MIN. OF AGGREGATE BASE CLASS 6 UNDER CURB & GUTTER AND SIDEWALK.
(6) CONSTRUCT CONCRETE CURB AND GUTTER DESIGN B624.
(7) REMOVE INPLACE BITUMINOUS PAVEMENT AND AGGREGATE BASE TO A DEPTH OF 36" BELOW FINISHED CONCRETE SURFACE PAID FOR AS - COMMON EXCAVATION.
(8) REMOVE INPLACE BITUMINOUS PAVEMENT PAID FOR AS - COMMON EXCAVATION.
(9) REMOVE INPLACE CURB AND GUTTER.
(10) FOR TURN LANE DIRECTIONS AND LANE CONFIGURATIONS - SEE PLANNED CONSTRUCTION SHEETS.
(11) MATCH INTO EXISTING PARKING AREA - SEE PLANNED CONSTRUCTION SHEETS.
(12) EXCAVATE 12.0" MIN. BELOW PROPOSED DRIVING SURFACE IN WIDENING AREAS.

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

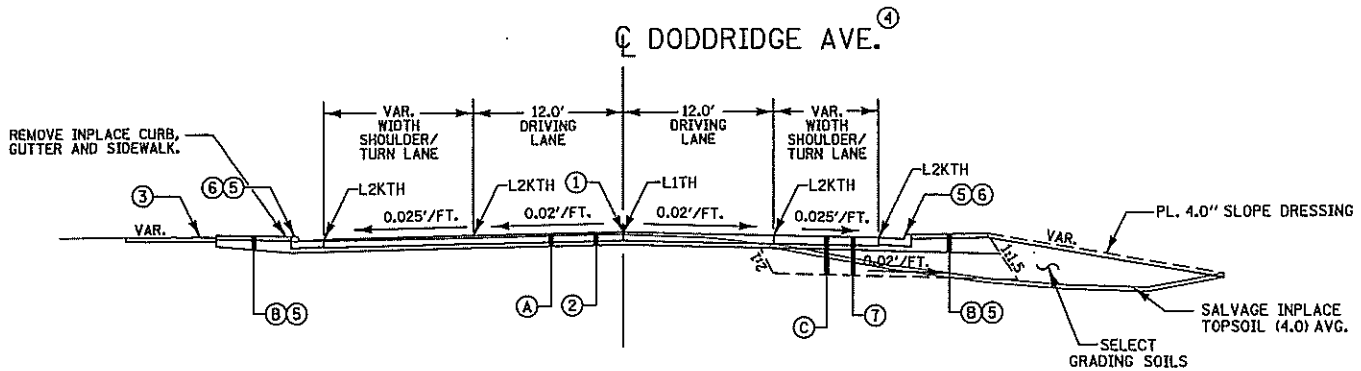
TYPICAL SECTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 37 OF 257 SHEETS

PLOTTED/REVISED: 13-MAR-2014
DISTRICT *; /
PLOT NAME: BIGLAKE_TYP
PATH & FILENAME: Projects/01_DUL/033/0905/053/Design/d090553_TYPICALS.dgn

TYPICAL SECTION - DODDRIDGE AVENUE⑧

APPLIES : DODDRIDGE AVE. STA. 100+96- 103+36



Ⓐ PLACE CONCRETE PAVEMENT 8.0" (DOWELED)
4.0" AGGREGATE BASE (CV) CLASS 6

Ⓑ PLACE 4.0" CONCRETE WALK
VAR. DEPTH AGGREGATE BASE (CV) CLASS 6⑤

Ⓒ PLACE CONCRETE PAVEMENT 8.0" (DOWELED)
4.0" AGGREGATE BASE (CV) CLASS 6
24.0" MIN. SELECT GRANULAR BORROW MOD. 7% (CV)

① PROFILE GRADE TOP OF FINISHED CONCRETE SURFACE.
② REMOVE INPLACE BITUMINOUS PAVEMENT AND AGGREGATE BASE TO A DEPTH OF 12" BELOW FINISHED CONCRETE SURFACE. PAID FOR AS - COMMON EXCAVATION.
③ SALVAGE INPLACE TOPSOIL (4.0" AVG.) AND PLACE 4.0" OF SLOPE DRESSING.
④ FOR ALIGNMENT DATA - SEE ALIGNMENT TABULATION CHARTS.
⑤ MAINTAIN A 4.0" MIN. OF AGGREGATE BASE CLASS 6.
⑥ CONSTRUCT CONCRETE CURB AND GUTTER DESIGN B624.
⑦ REMOVE INPLACE BITUMINOUS PAVEMENT AND AGGREGATE BASE TO A DEPTH OF 36" BELOW FINISHED CONCRETE SURFACE. PAID FOR AS - COMMON EXCAVATION.
⑧ FOR TURN LANE DIRECTIONS AND LANE CONFIGURATIONS - SEE PLANNED CONSTRUCTION SHEETS.

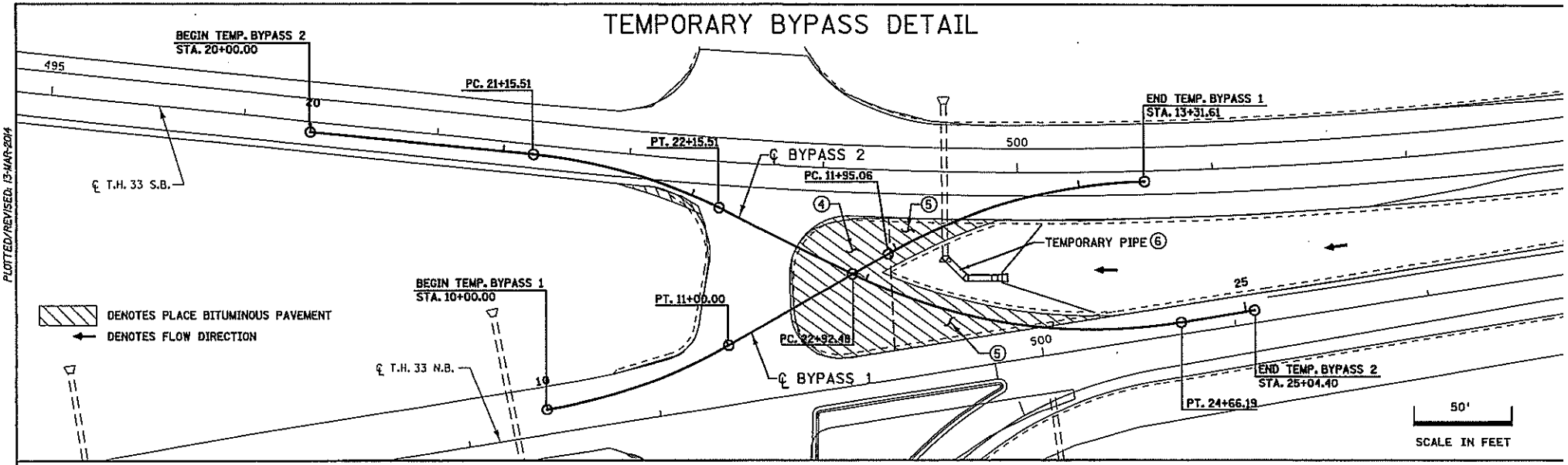
I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

TYPICAL SECTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 38 OF 257 SHEETS

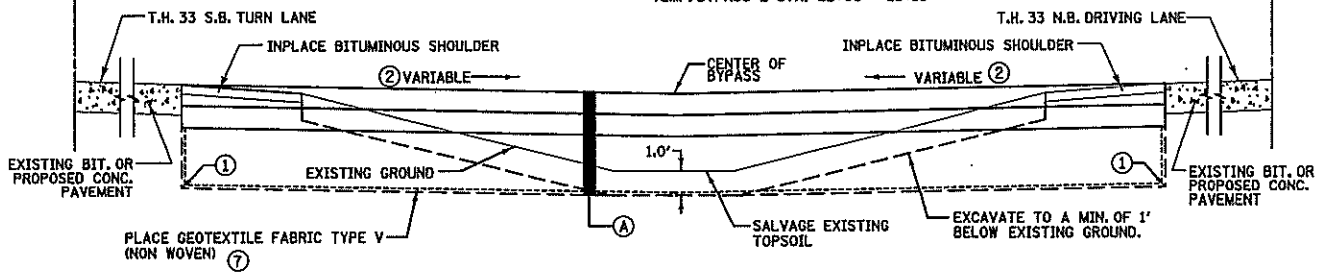
DISTRICT 1
PLOT NAME: DODDRIDGE_TYP
PATH & FILENAME: Projects/DI_DNL/033/0905/053/Design/40905S3_TYPICALS.dgn
PLOTTED/REVISED: 13-MAR-2014

TEMPORARY BYPASS DETAIL



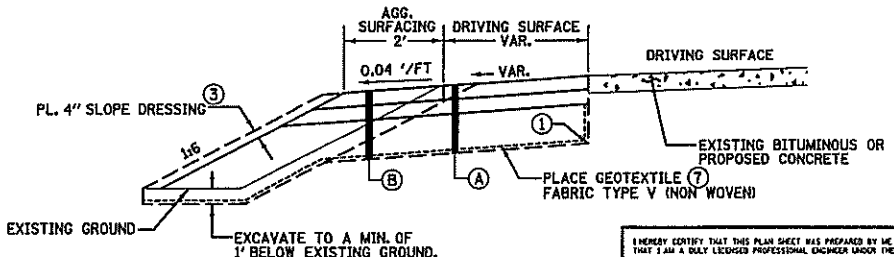
FULL WIDTH TEMP. BYPASS TYPICAL

APPLIES: TEMP. BYPASS 1 STA. 11+37 - 11+95
TEMP. BYPASS 2 STA. 22+60 - 23+16



VARIABLE WIDTH TEMP. BYPASS TYPICAL

APPLIES: TEMP. BYPASS 1 STA. 11+95 - 12+37
TEMP. BYPASS 2 STA. 21+60 - 22+09
23+16 - 24+40



Ⓐ
- TYPE SP 12.5 WEARING COURSE MIXTURE (SPWEB340C) 2.0" THICK
- TYPE SP 12.5 WEARING COURSE MIXTURE (SPWEB340C) 2.0" THICK
- TYPE SP 12.5 WEARING COURSE MIXTURE (SPWEB340C) 2.0" THICK
- PLACE TACK COAT BETWEEN BIT COURSES (INCIDENTAL)
- 6.0" AGGREGATE BASE (CV) CLASS 6
- VAR. DEPTH SELECT GRANULAR BORROW MOD 7% (CV)

Ⓑ
- 6.0" AGGREGATE SURFACING (CV) CLASS 6
- 6.0" AGGREGATE BASE (CV) CLASS 6
- VAR. DEPTH SELECT GRANULAR BORROW MOD 7% (CV)

① REMOVE EXISTING BITUMINOUS SHOULDER, PAID FOR AS COMMON EXCAVATION. EXCAVATE 36" (MIN.) BELOW THE TOP OF THE INPLACE PAVEMENT, AND PLACE TYPE V NON-WOVEN GEOTEXTILE FABRIC UNDER 24" SELECT GRANULAR BORROW MOD 7% (CV).

② VAR. SLOPE TO BE DETERMINED IN THE FIELD. ADJUST AS NECESSARY TO KEEP THE INVERTED CROWN IN THE CENTER OF THE BYPASS.

③ RAPID STABILIZATION METHOD 4.

④ FULL WIDTH BYPASS AREA.

⑤ VARIABLE WIDTH BYPASS AREA.

⑥ SALVAGE 36" RC APRON, PL. 36" X 20' CP PIPE CULVERT (SMOOTH) INCLUDES 2 - 45° BENDS + 1 CAS SAFTEY APRON & GRATE DES. 3128. TEMPORARY PIPE AND APRON TO BE REMOVED, AND SALVAGED APRON TO BE INSTALLED WHEN TEMPORARY BYPASS IS REMOVED.

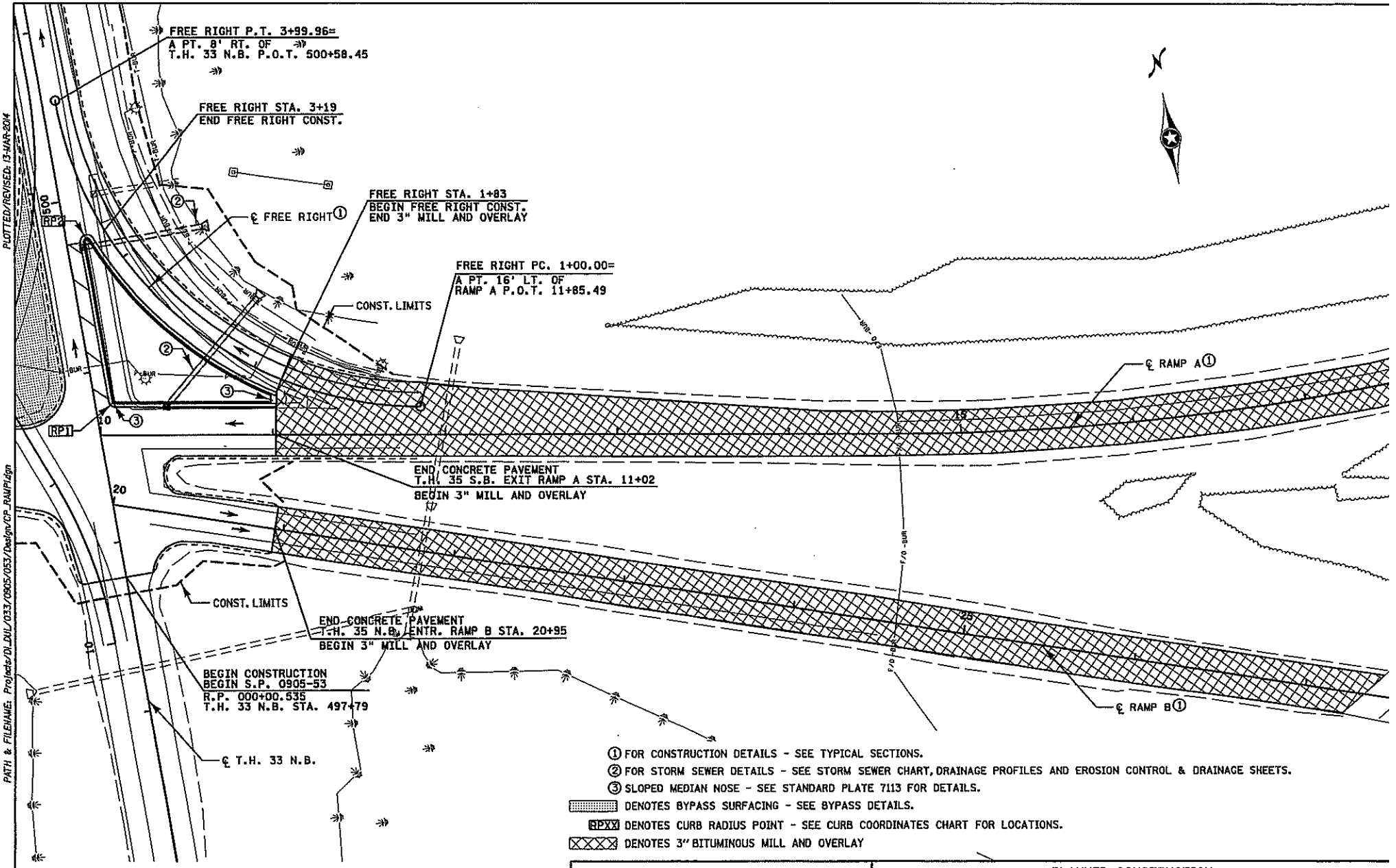
⑦ GEOTEXTILE FABRIC TYPE V (NON WOVEN) QUANTITY FOR TEMP. BYPASS WAS COMPUTED AT 700 SQ YDS.

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

CONSTRUCTION DETAILS

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 39 OF 257 SHEETS

PLOTTED/REVISED: 13-MAR-2014
DISTRICT *, I
IPLOT NAME: BYPASS_DET.AIL
PATH & FILENAME: Projects/DL_DNL/033/0905/053/Design/BYPASS_DETAIL.dgn



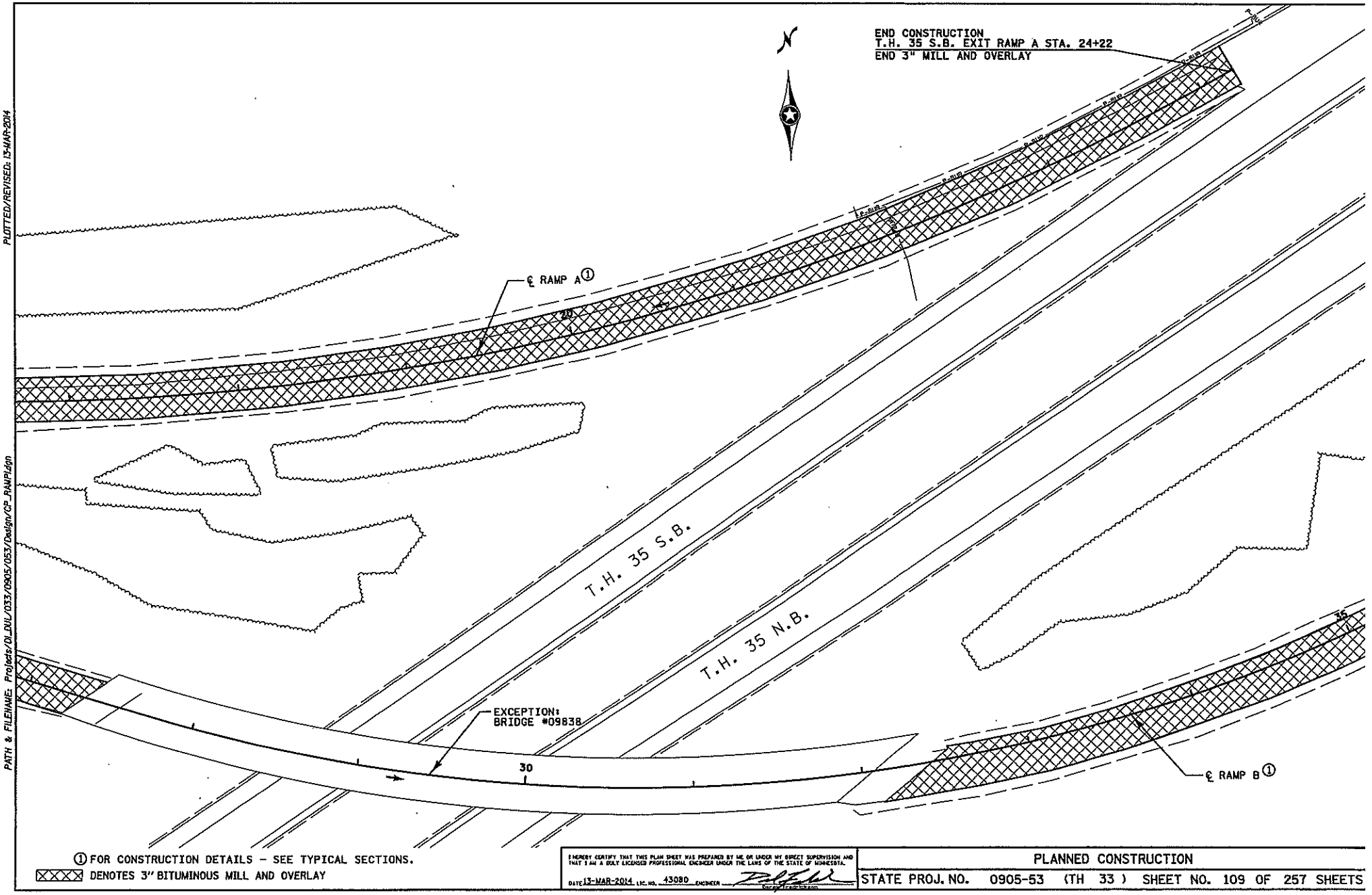
PLOTTED/REVISED: 13-MAR-2014

DISTRICT : 1
PLOT NAME: CP_RAMP1
PATH & FILENAME: Projects/01_DIL/033/0905/053/Design/CP_RAMP1.dgn

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

PLANNED CONSTRUCTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 108 OF 257 SHEETS



① FOR CONSTRUCTION DETAILS – SEE TYPICAL SECTIONS.

▨ DENOTES 3" BITUMINOUS MILL AND OVERLAY

I HEREBY CERTIFY THAT THIS PLAN 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.

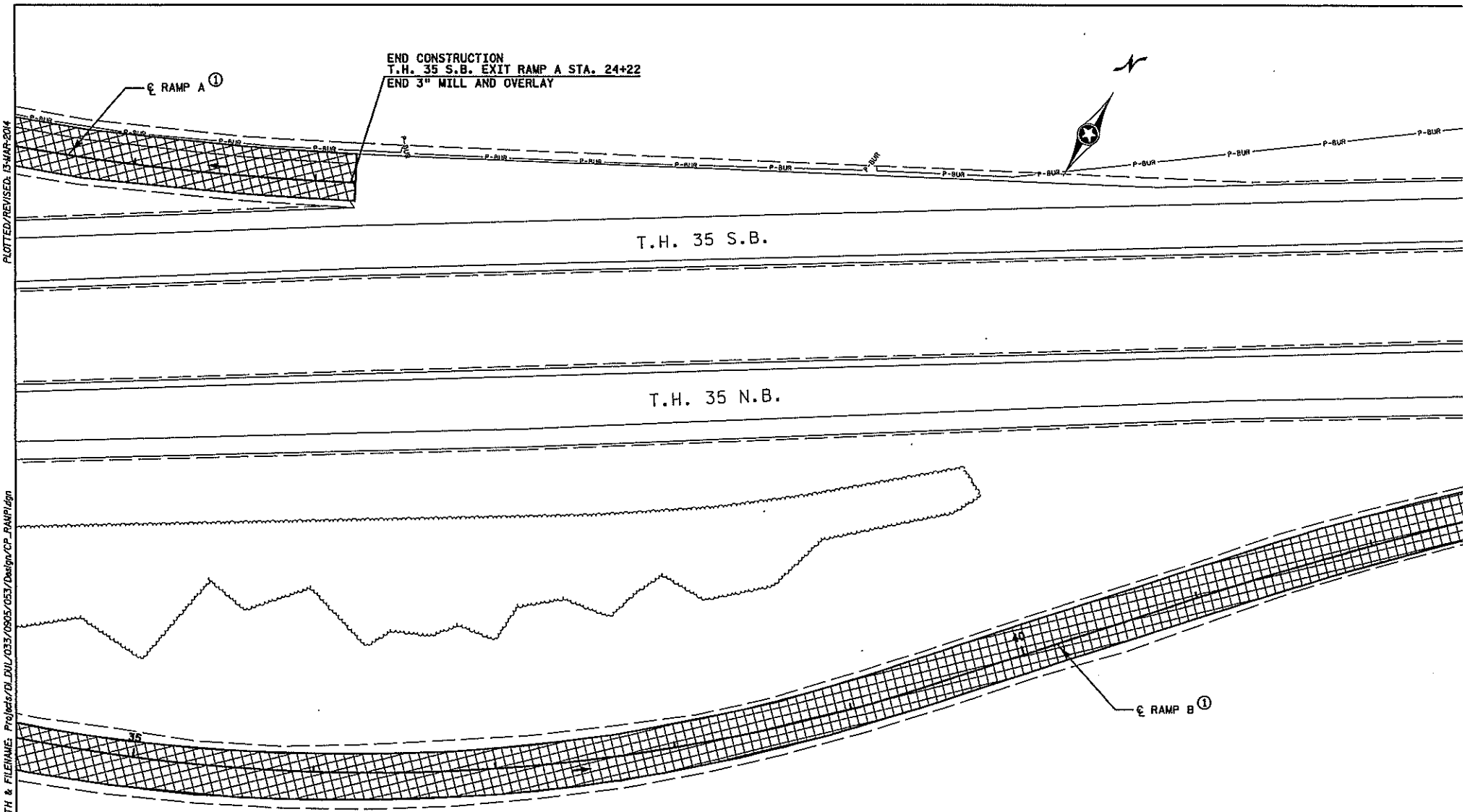
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER _____

PLANNED CONSTRUCTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 109 OF 257 SHEETS

PLOTTED/REVISED: 13-MAR-2014

DISTRICT *: 1
IPLOT NAME: CP_RAMP2
PATH & FILENAME: Projects/01_DIL/033/0905/053/Design/CP_RAMP1.dgn



① FOR CONSTRUCTION DETAILS - SEE TYPICAL SECTIONS.

▨ DENOTES 3" BITUMINOUS MILL AND OVERLAY

I HEREBY CERTIFY THAT THIS PLAN 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.

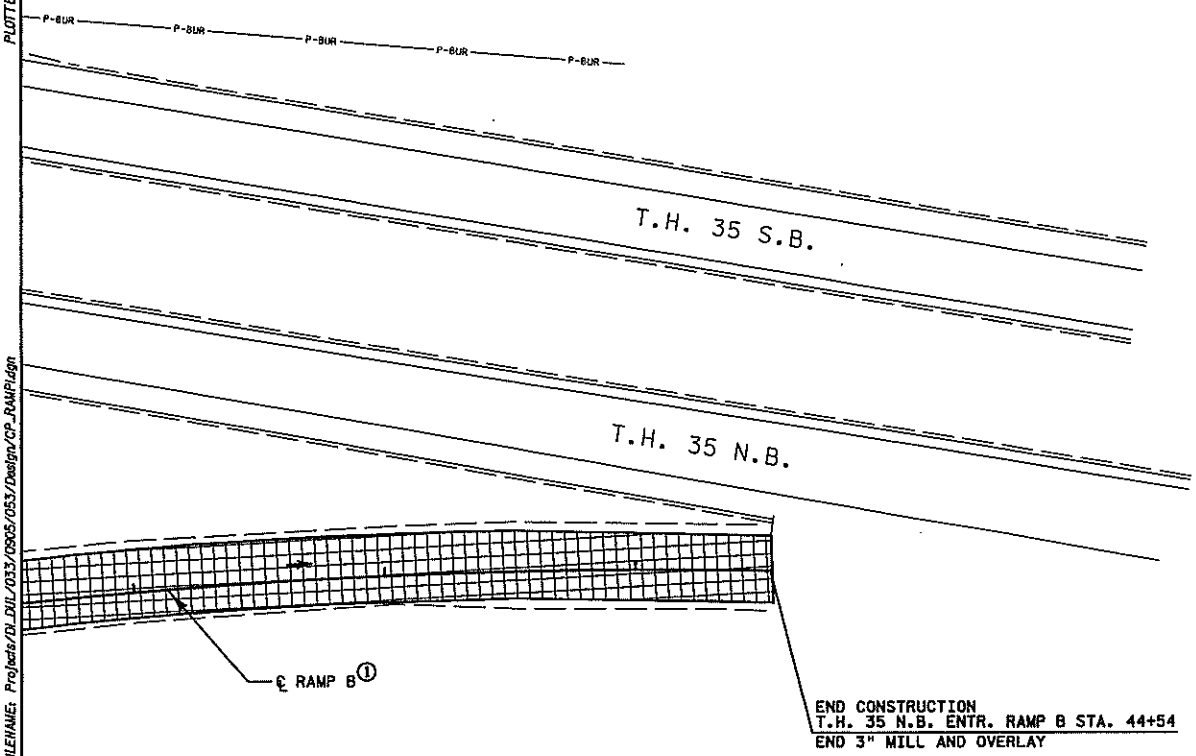
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER Daryl Erickson

PLANNED CONSTRUCTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 110 OF 257 SHEETS

PLOTTED/REVISED: 13-MAR-2014

DISTRICT *: I
IPLOT NAME: CP_RAMP3
PATH & FILENAME: Projects/01_DIL/033/0905/053/Design/CP_RAMP.dgn



① FOR CONSTRUCTION DETAILS - SEE TYPICAL SECTIONS.

XXXX DENOTES 3" BITUMINOUS MILL AND OVERLAY

I HEREBY CERTIFY THAT THIS PLAN 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.

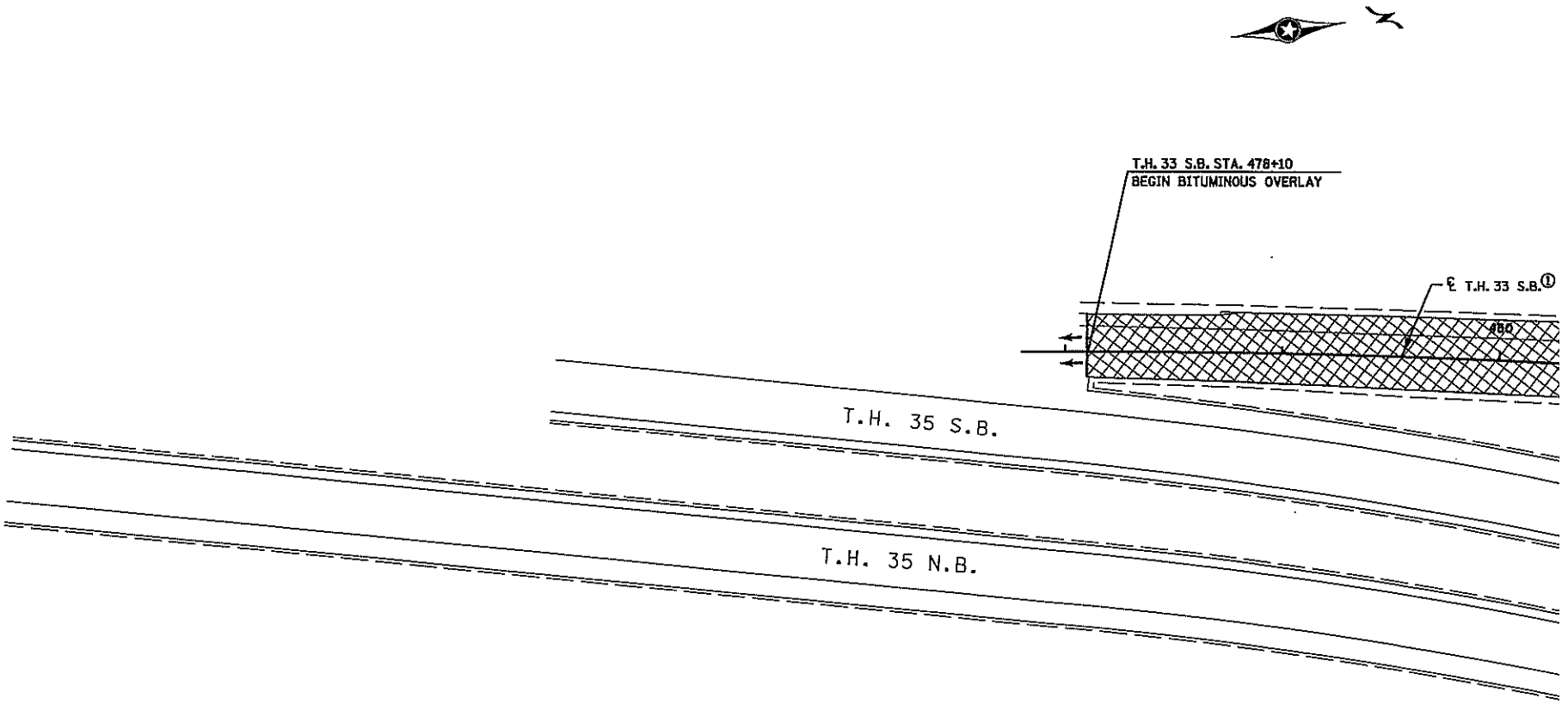
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

PLANNED CONSTRUCTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 111 OF 257 SHEETS

PLOTTED/REVISED: 13-MAR-2014

DISTRICT *: 1
IPLOT NAME: CP_RAMP4
PATH & FILENAME: Projects/01_DIL/033/0905/053/Design/CP_RAMP1.dgn



① FOR CONSTRUCTION DETAILS - SEE TYPICAL SECTIONS (RAMP CONSTRUCTION).

⊠ DENOTES 3" BITUMINOUS OVERLAY

I HEREBY CERTIFY THAT THIS PLAN 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.

DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

PLANNED CONSTRUCTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 112 OF 257 SHEETS

DISTRICT *, 1
IPLOT NAME: CPI
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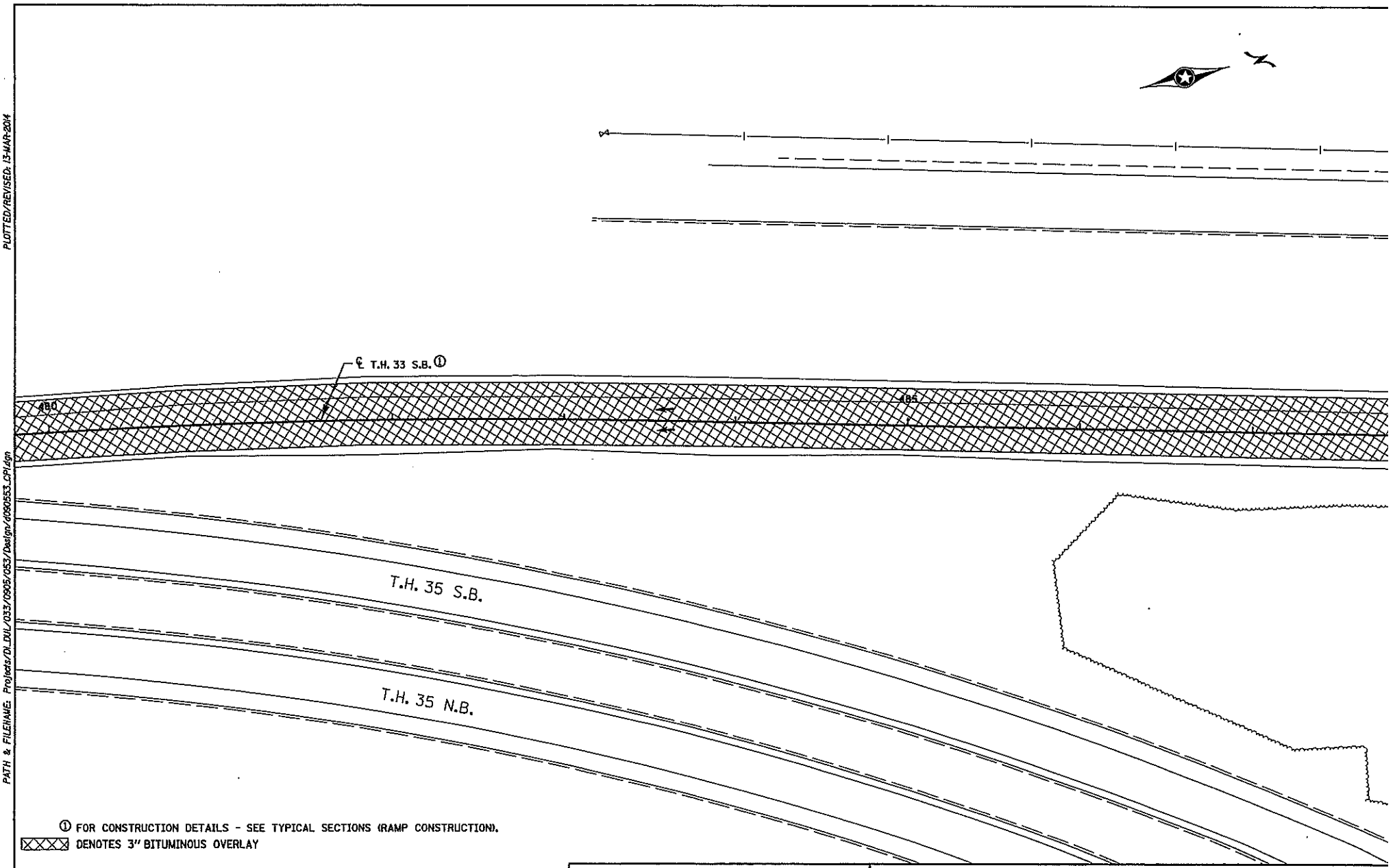
PLOTTED/REVISED: 13-MAR-2014



① FOR CONSTRUCTION DETAILS - SEE TYPICAL SECTIONS (RAMP CONSTRUCTION).

DENOTES 3" BITUMINOUS OVERLAY

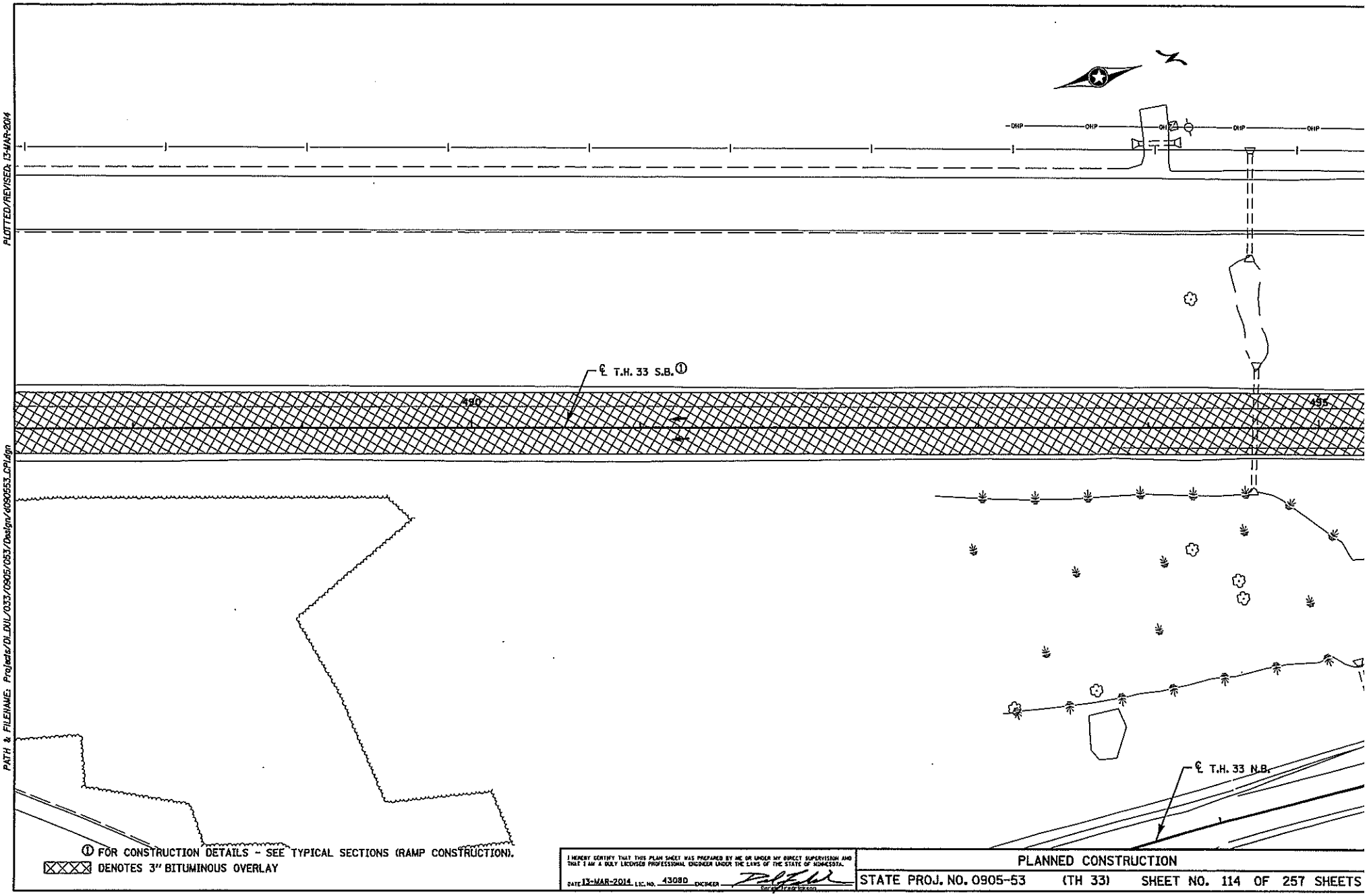
I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

PLANNED CONSTRUCTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 113 OF 257 SHEETS

DISTRICT *, 1
IPLOT NAME: CP2
PATH & FILENAME: Projects/01_DUL/033/0905/053/Design/d090553_CP1.dgn
PLOTTED/REVISED: 13-MAR-2014



① FOR CONSTRUCTION DETAILS - SEE TYPICAL SECTIONS (RAMP CONSTRUCTION).

DENOTES 3" BITUMINOUS OVERLAY

I HEREBY CERTIFY THAT THIS PLAN 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.

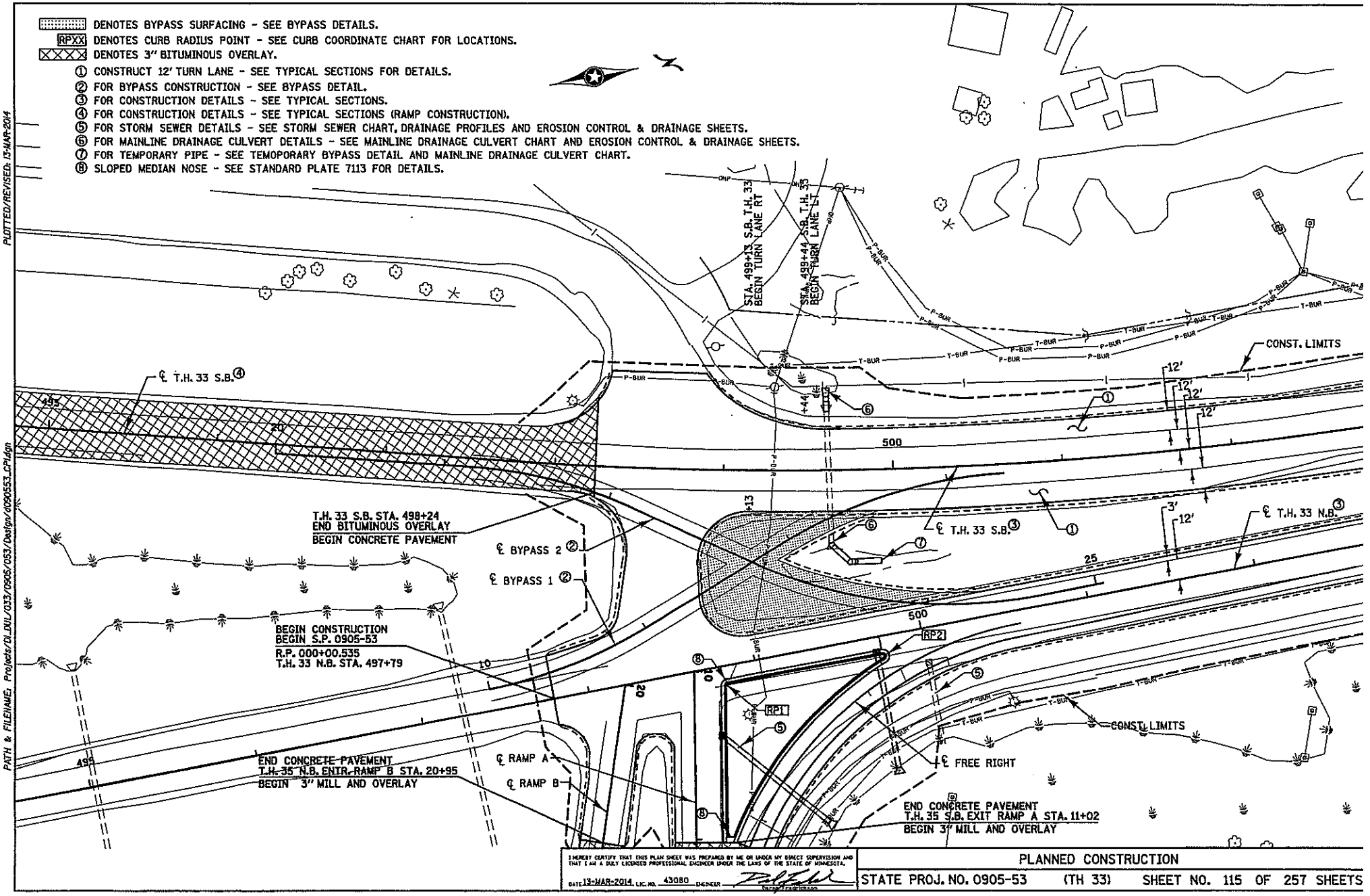
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

PLANNED CONSTRUCTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 114 OF 257 SHEETS

PLOTTED/REVISED: 13-MAR-2014

DISTRICT *: 1
IPLOT NAME: CP3
PATH & FILENAME: Projects/01_DUL/033/0905/053/Design/d090553_CPAlgn

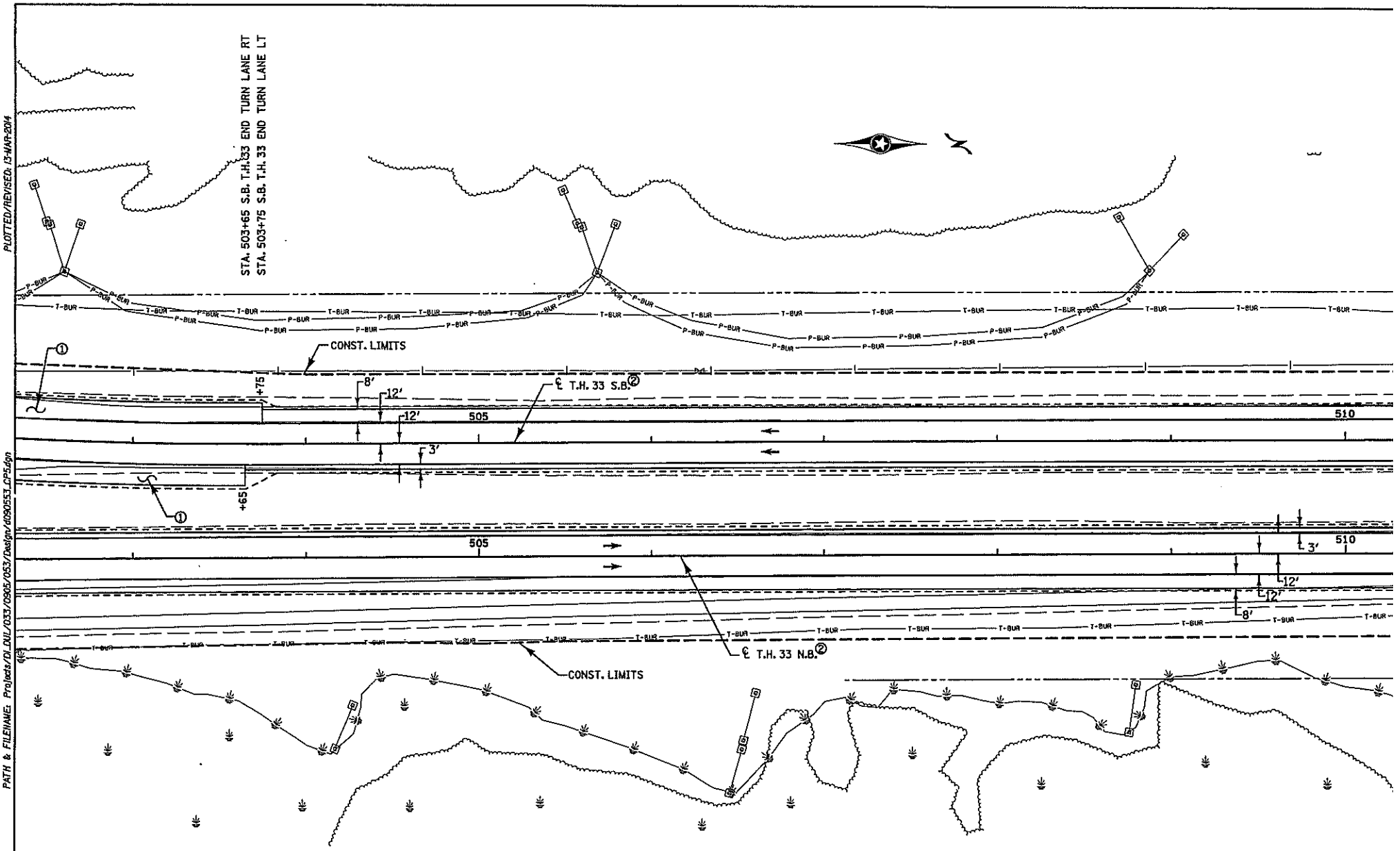


I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

PLANNED CONSTRUCTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 115 OF 257 SHEETS

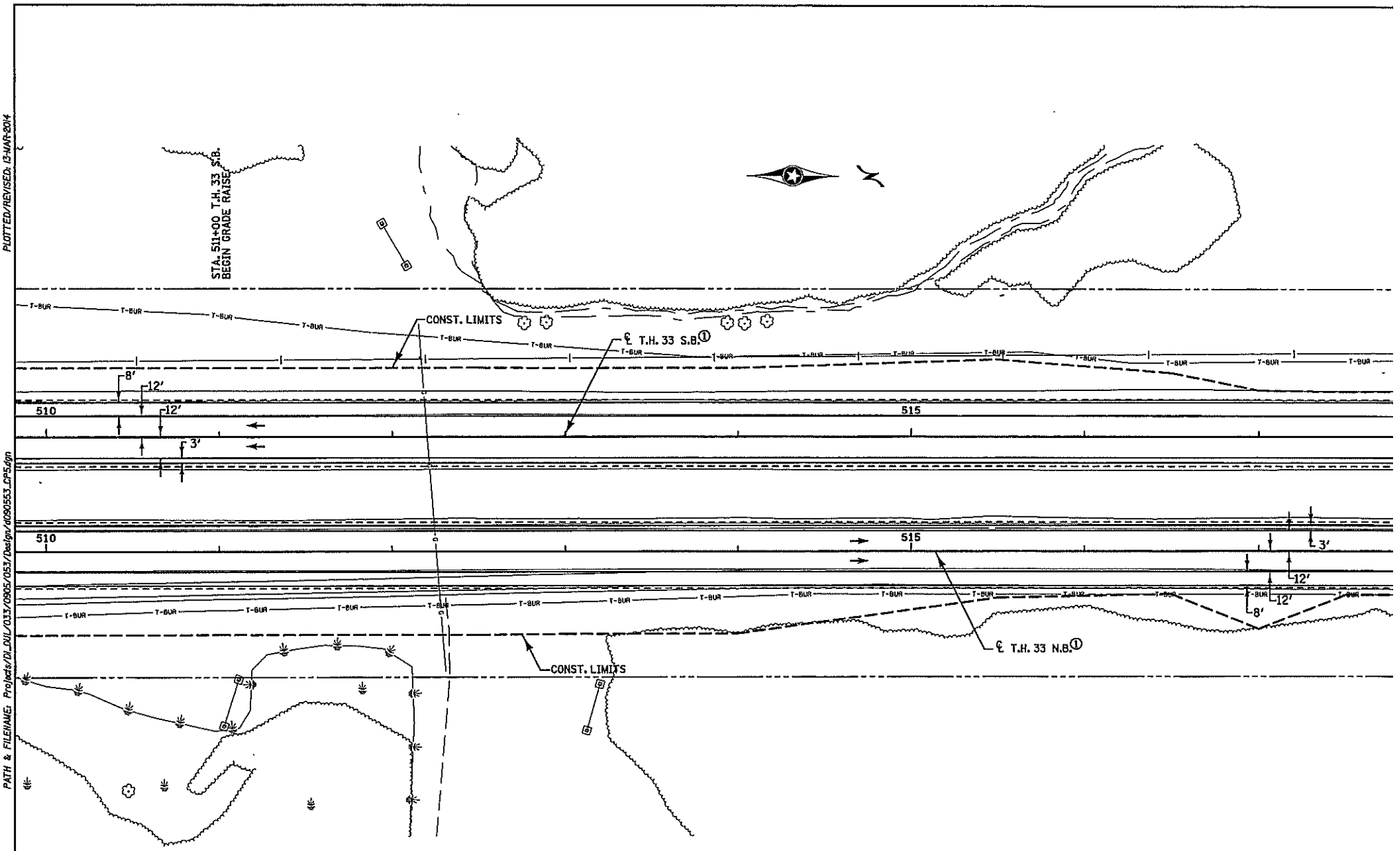


① CONSTRUCT 12' TURN LANE - SEE TYPICAL SECTIONS FOR DETAILS.
② FOR CONSTRUCT DETAILS - SEE TYPICAL SECTIONS.

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

PLANNED CONSTRUCTION
STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 116 OF 257 SHEETS

PLOTTED/REVISED: 13-MAR-2014
DISTRICT: 1
IPLOT NAME: CPS
PATH & FILENAME: Projects/01_DUL/033/0905/053/Design/d0905053_CP5.dgn



① FOR CONSTRUCTION DETAILS - SEE TYPICAL SECTIONS.

I HEREBY CERTIFY THAT THIS PLAN 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.

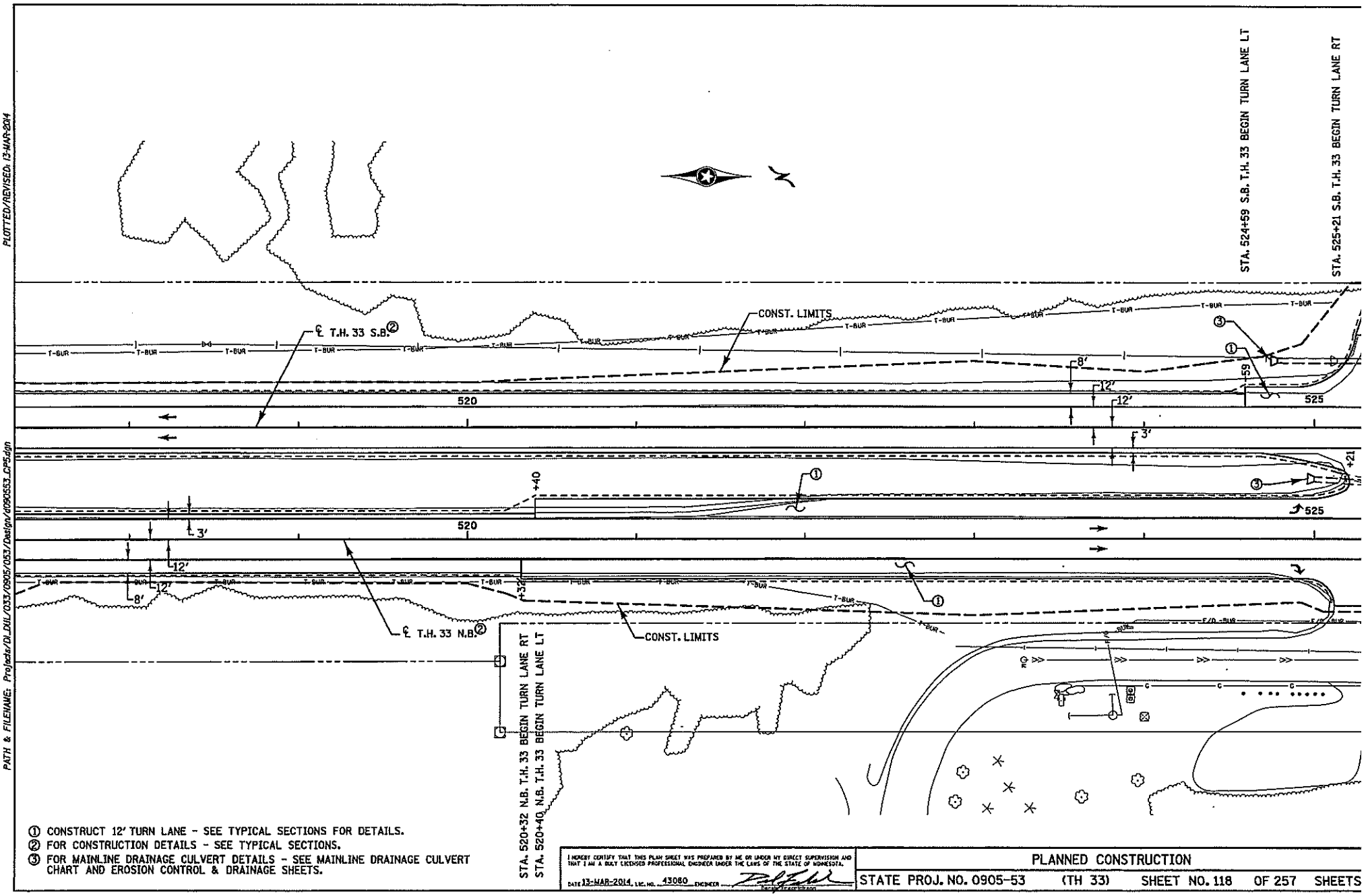
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

PLANNED CONSTRUCTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 117 OF 257 SHEETS

PLOTTED/REVISED: 13-MAR-2014

DISTRICT: 1
PLOT NAME: CP6
PATH & FILENAME: Projects/01_DUL/033/0905/053/Design/d0905S3_CP5.dgn



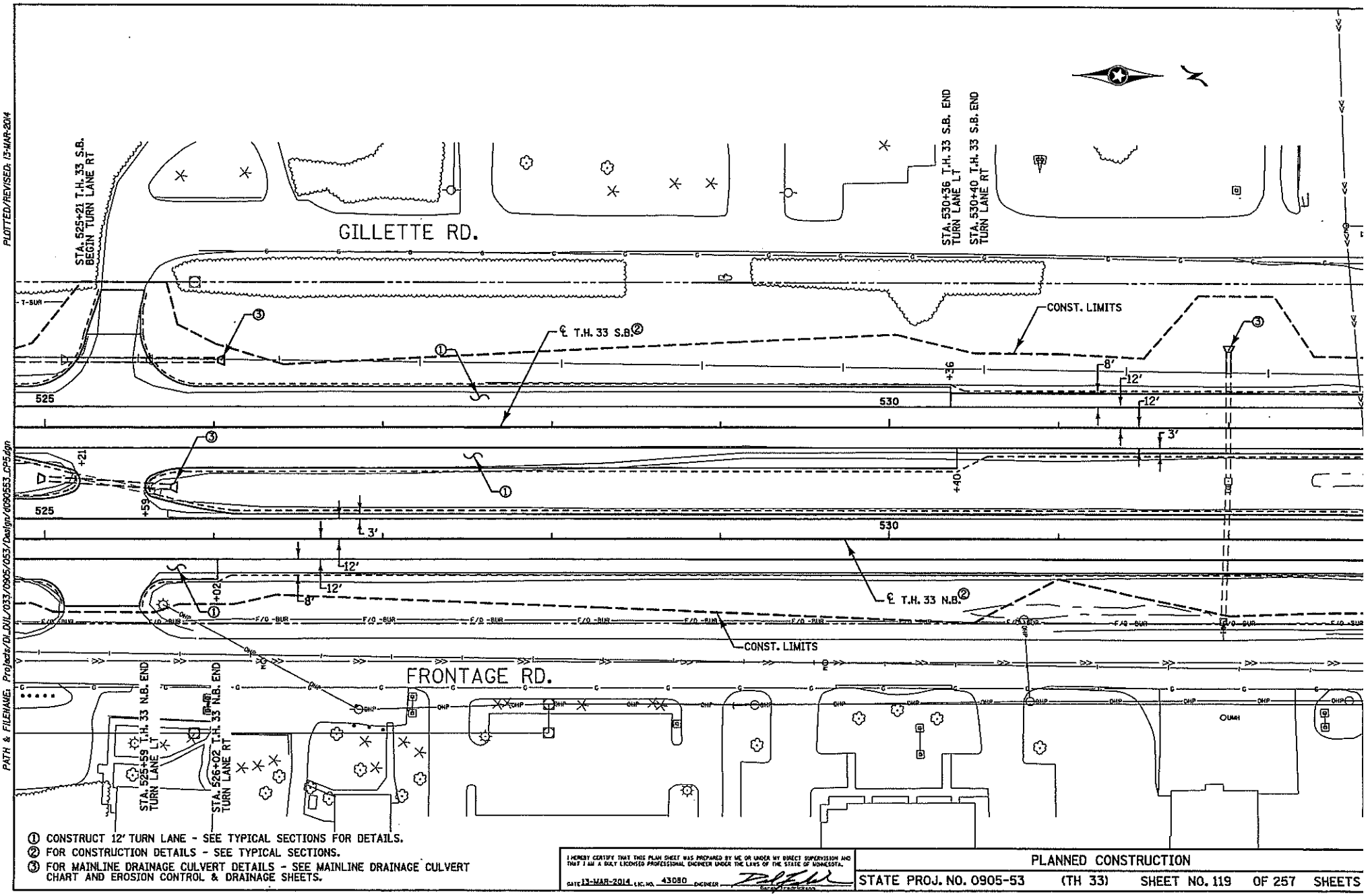
PLOTTED/REVISED: 13-MAR-2014

DISTRICT *: 1
IPLOT NAME: CP7
PATH & FILENAME: Projects/01_DIL/033/0905/053/design/d0905053_cp5.dgn

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

PLANNED CONSTRUCTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 118 OF 257 SHEETS



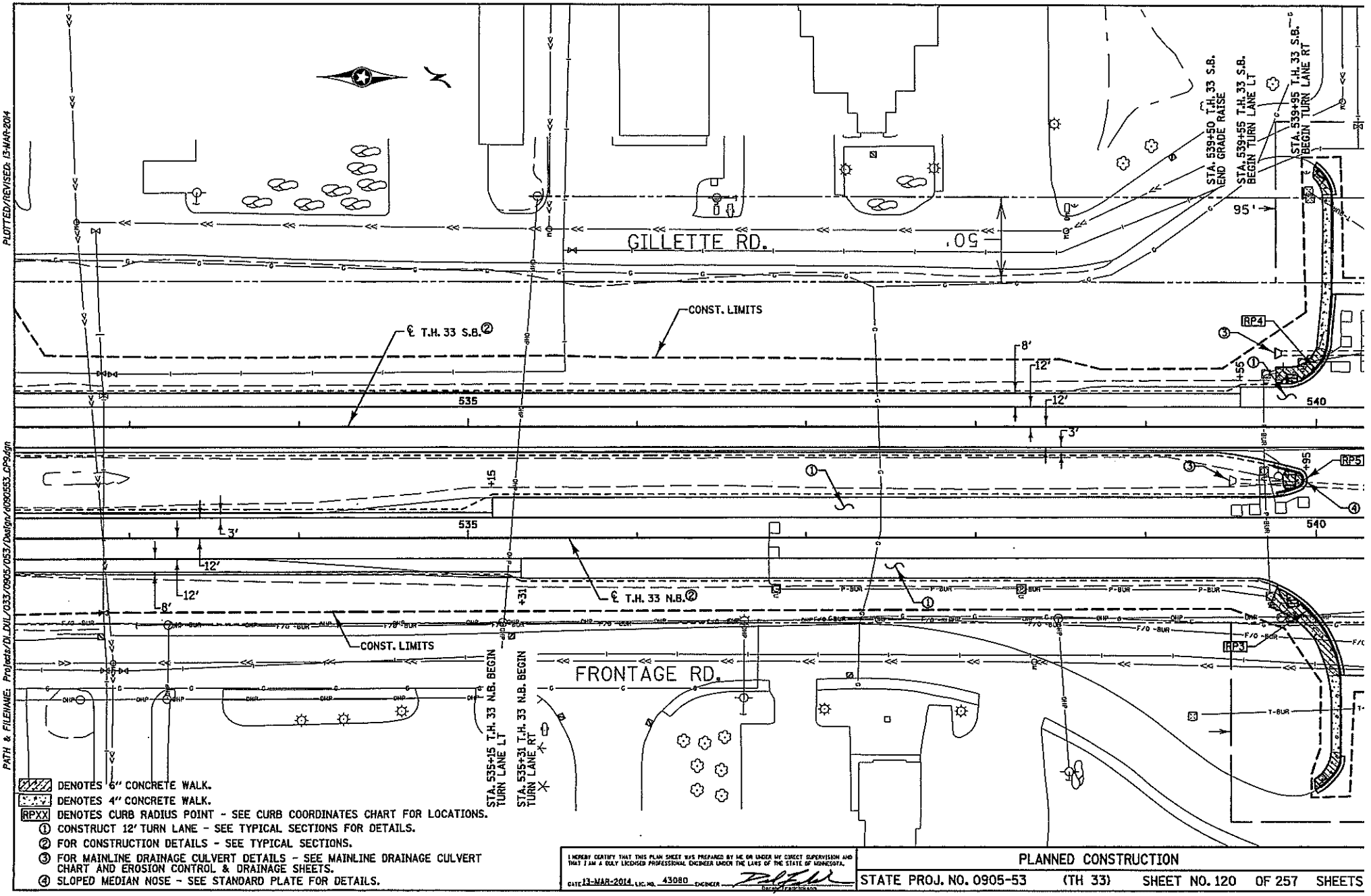
① CONSTRUCT 12' TURN LANE - SEE TYPICAL SECTIONS FOR DETAILS.
② FOR CONSTRUCTION DETAILS - SEE TYPICAL SECTIONS.
③ FOR MAINLINE DRAINAGE CULVERT DETAILS - SEE MAINLINE DRAINAGE CULVERT CHART AND EROSION CONTROL & DRAINAGE SHEETS.

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

PLANNED CONSTRUCTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 119 OF 257 SHEETS

PLOTTED/REVISED: 13-MAR-2014
DISTRICT 1
PLOT NAME: CPB
PATH & FILENAME: Projects/01_DUL/033/0905/053/Design/d090553_CP5.dgn



PLOTTED/REVISED: 13-MAR-2014

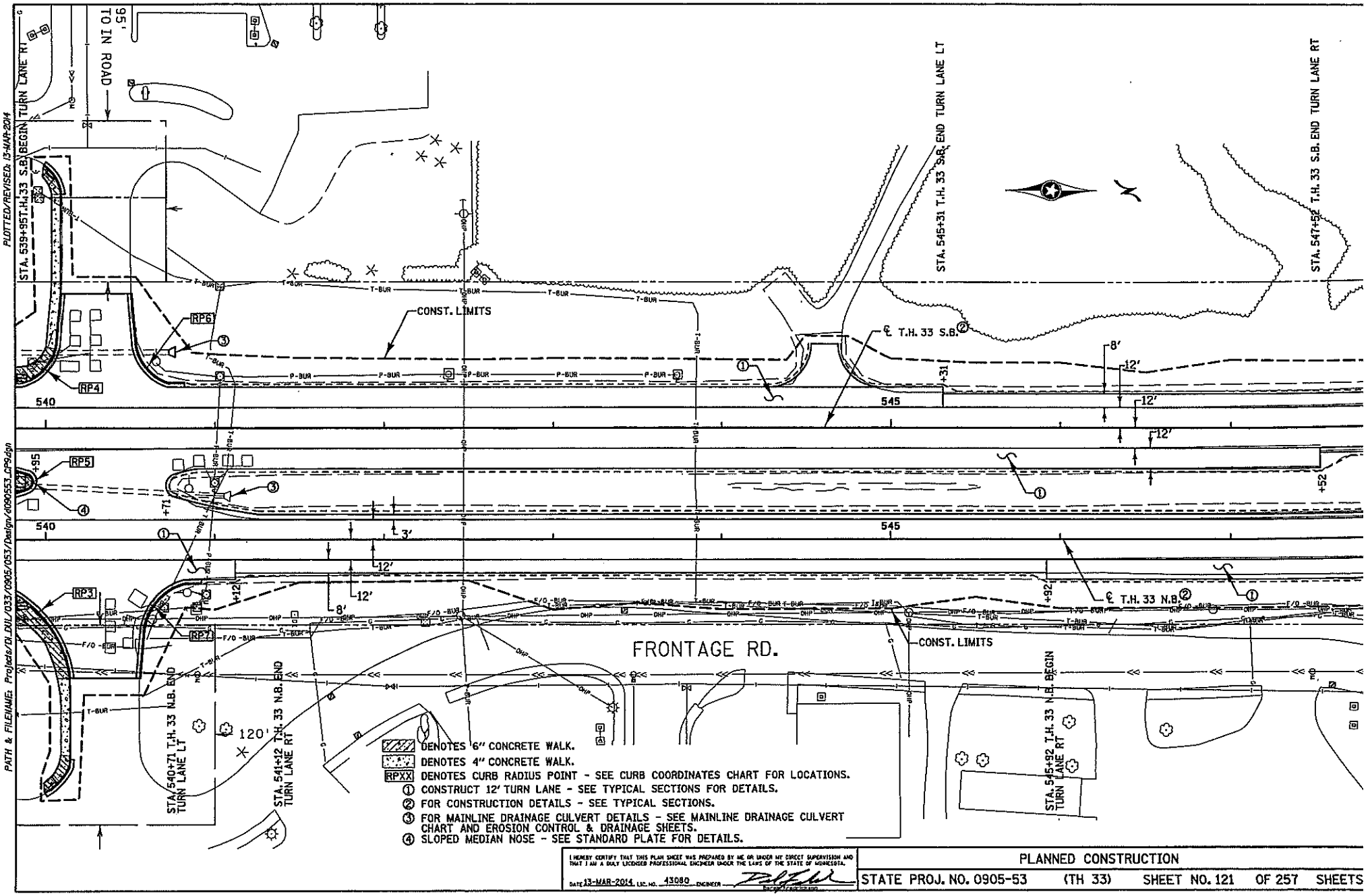
DISTRICT *: 1
IPLOT NAME: CP9
PATH & FILENAME: Projects/DI_DIL/033/0905/053/Design/d0905053_CP9.dgn

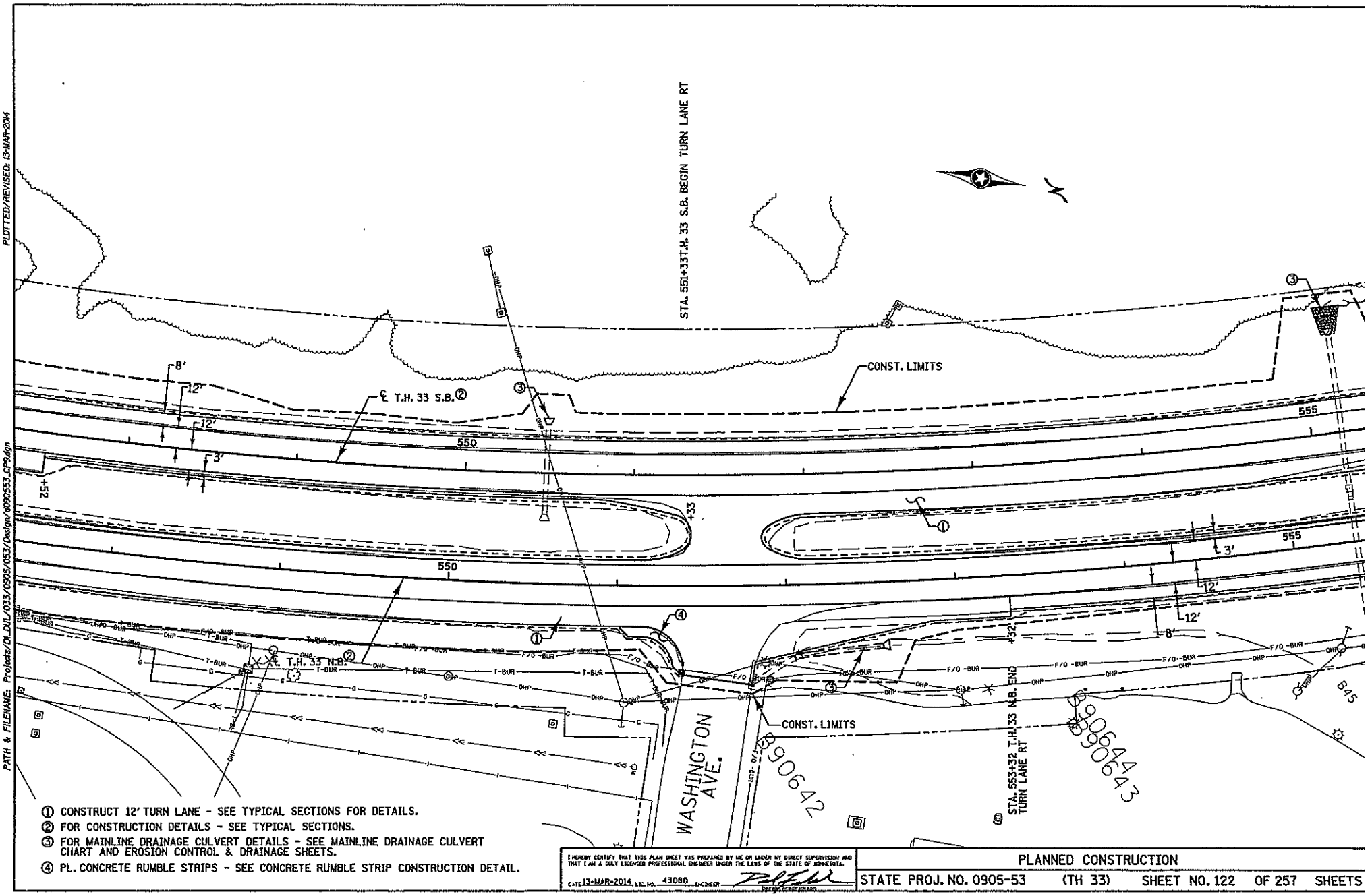
DENOTES 6" CONCRETE WALK.
DENOTES 4" CONCRETE WALK.
RPXX DENOTES CURB RADIUS POINT - SEE CURB COORDINATES CHART FOR LOCATIONS.
① CONSTRUCT 12' TURN LANE - SEE TYPICAL SECTIONS FOR DETAILS.
② FOR CONSTRUCTION DETAILS - SEE TYPICAL SECTIONS.
③ FOR MAINLINE DRAINAGE CULVERT DETAILS - SEE MAINLINE DRAINAGE CULVERT CHART AND EROSION CONTROL & DRAINAGE SHEETS.
④ SLOPED MEDIAN NOSE - SEE STANDARD PLATE FOR DETAILS.

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

PLANNED CONSTRUCTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 120 OF 257 SHEETS


STA. 539+95 T.H. 33 S.B. BEGIN TURN LANE RT
95' TO IN ROAD
STA. 545+31 T.H. 33 S.B. END TURN LANE LT
STA. 547+52 T.H. 33 S.B. END TURN LANE RT
CONST. LIMITS
℄ T.H. 33 S.B.
RP6
RP4
RP5
RP3
RP7
540
545
FRONTAGE RD.
℄ T.H. 33 N.B.
STA. 540+71 T.H. 33 N.B. END TURN LANE LT
STA. 541+12 T.H. 33 N.B. END TURN LANE RT
STA. 545+82 T.H. 33 N.B. BEGIN TURN LANE RT
120'
DENOTES 6" CONCRETE WALK.
DENOTES 4" CONCRETE WALK.
RPXX DENOTES CURB RADIUS POINT - SEE CURB COORDINATES CHART FOR LOCATIONS.
① CONSTRUCT 12' TURN LANE - SEE TYPICAL SECTIONS FOR DETAILS.
② FOR CONSTRUCTION DETAILS - SEE TYPICAL SECTIONS.
③ FOR MAINLINE DRAINAGE CULVERT DETAILS - SEE MAINLINE DRAINAGE CULVERT CHART AND EROSION CONTROL & DRAINAGE SHEETS.
④ SLOPED MEDIAN NOSE - SEE STANDARD PLATE FOR DETAILS.
I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER
PLANNED CONSTRUCTION
STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 121 OF 257 SHEETS
PLOTTED/REVISED: 13-MAR-2014
DISTRICT: 1
IPLOT NAME: CP10
PATH & FILENAME: Projects/01_DIL/033/0905/053/Design/d0905S3_CP9.dgn



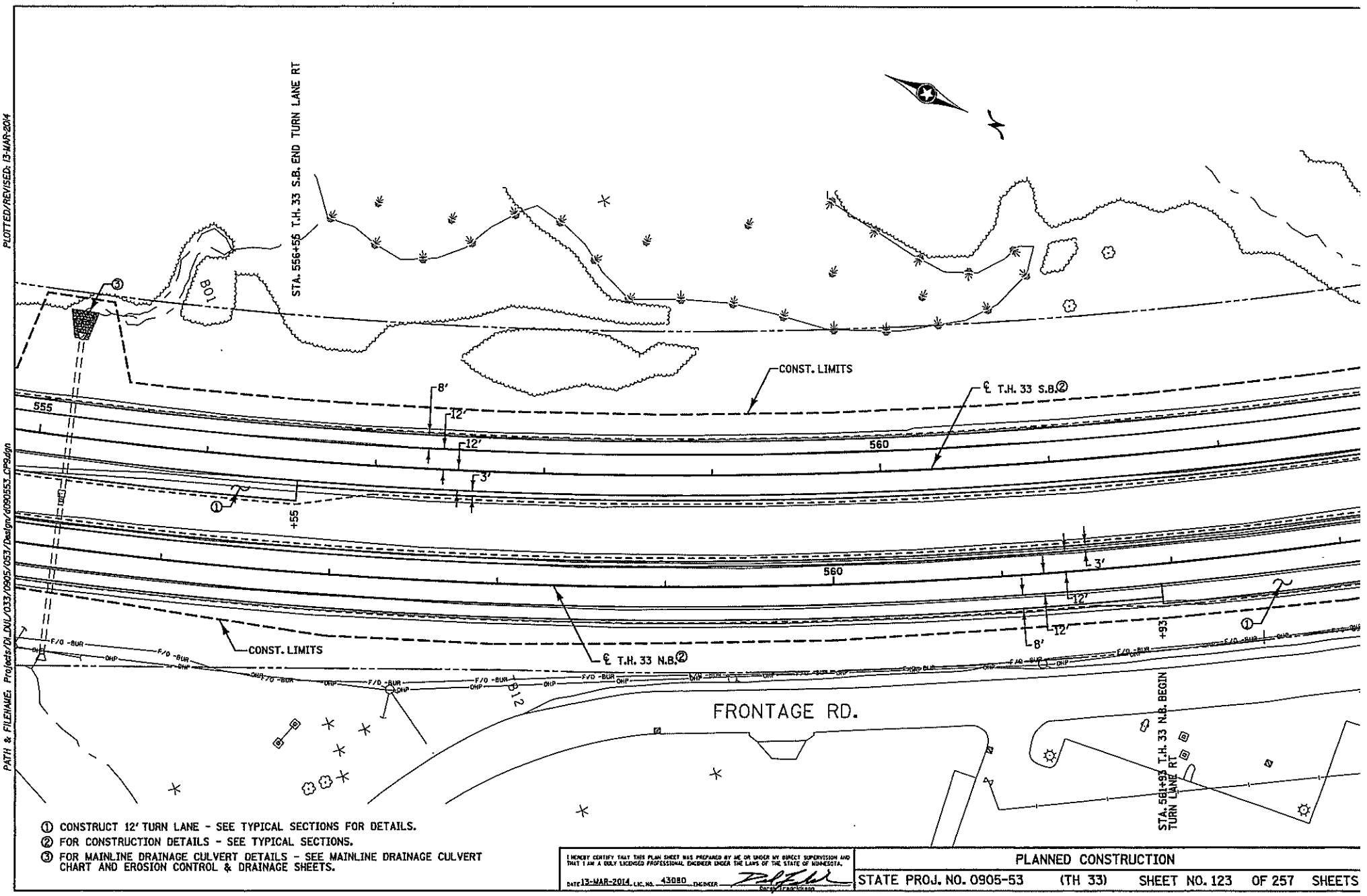
① CONSTRUCT 12' TURN LANE - SEE TYPICAL SECTIONS FOR DETAILS.
② FOR CONSTRUCTION DETAILS - SEE TYPICAL SECTIONS.
③ FOR MAINLINE DRAINAGE CULVERT DETAILS - SEE MAINLINE DRAINAGE CULVERT CHART AND EROSION CONTROL & DRAINAGE SHEETS.
④ PL. CONCRETE RUMBLE STRIPS - SEE CONCRETE RUMBLE STRIP CONSTRUCTION DETAIL.

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

PLANNED CONSTRUCTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 122 OF 257 SHEETS

PLOTTED/REVISED: 13-MAR-2014
DISTRICT *: 1
PLOT NAME: CPII
PATH & FILENAME: Projects/DLDVL/033/0905/053/Design/d090553_CP9.dgn

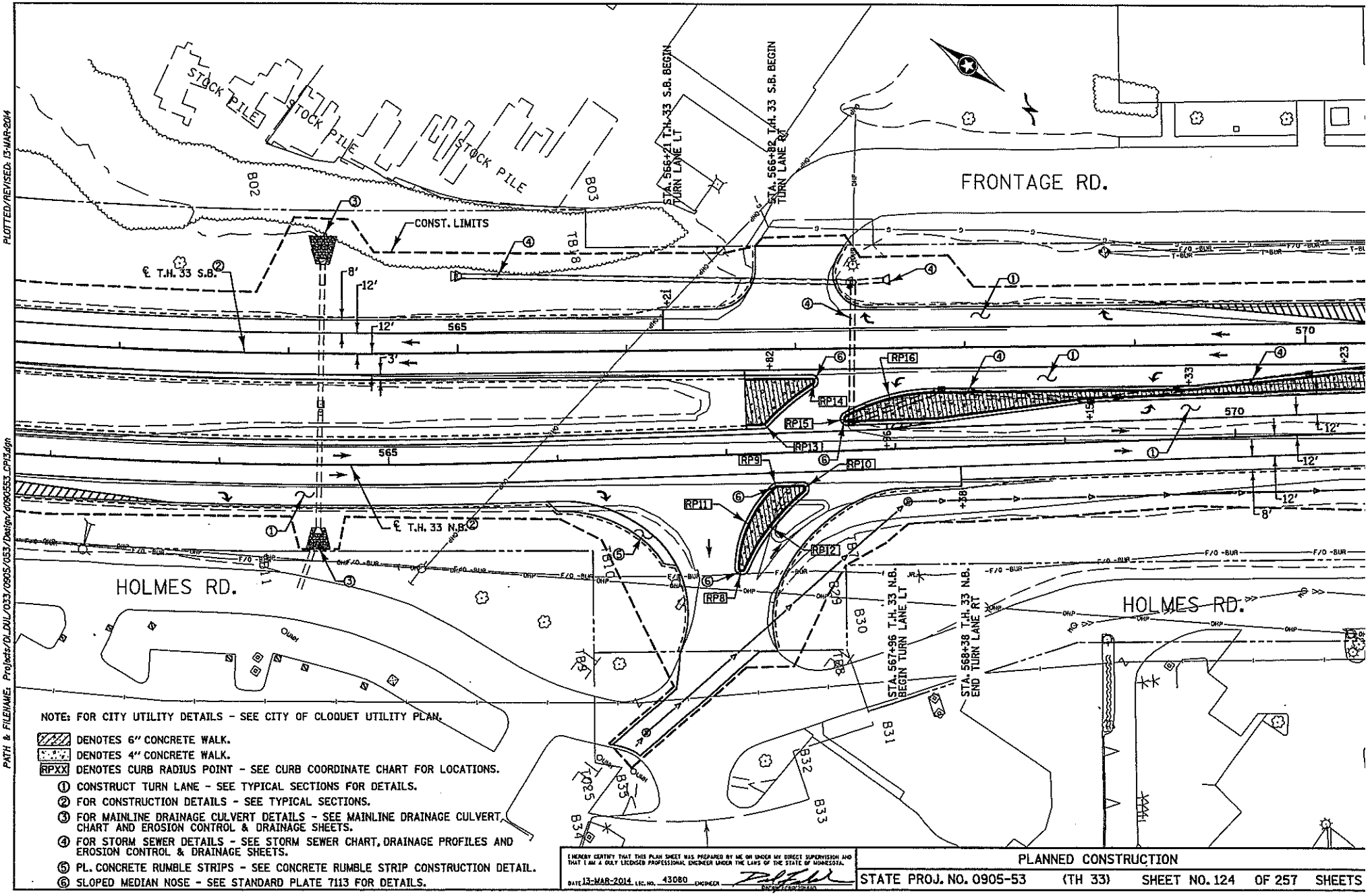


① CONSTRUCT 12' TURN LANE - SEE TYPICAL SECTIONS FOR DETAILS.
② FOR CONSTRUCTION DETAILS - SEE TYPICAL SECTIONS.
③ FOR MAINLINE DRAINAGE CULVERT DETAILS - SEE MAINLINE DRAINAGE CULVERT CHART AND EROSION CONTROL & DRAINAGE SHEETS.

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

PLANNED CONSTRUCTION
STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 123 OF 257 SHEETS

DISTRICT 1
PLOT NAME: CP12
PATH & FILENAME: Projects/DI_DUL/033/0905/053/Design/d0905053_CP9.dgn
PLOTTED/REVISED: 13-MAR-2014



NOTE: FOR CITY UTILITY DETAILS - SEE CITY OF CLOQUET UTILITY PLAN.

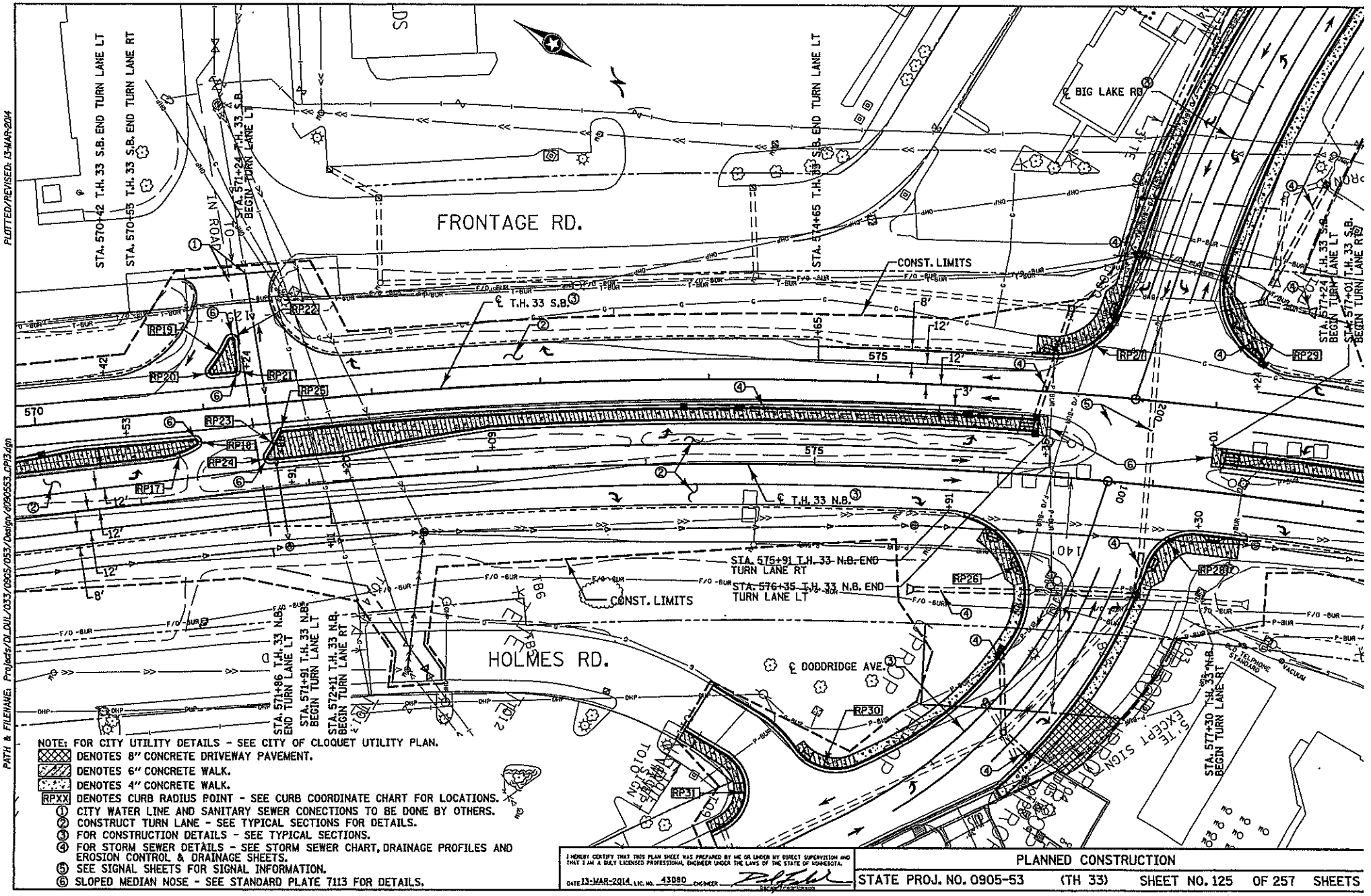
- DENOTES 6" CONCRETE WALK.
- DENOTES 4" CONCRETE WALK.
- RPXX DENOTES CURB RADIUS POINT - SEE CURB COORDINATE CHART FOR LOCATIONS.
- ① CONSTRUCT TURN LANE - SEE TYPICAL SECTIONS FOR DETAILS.
- ② FOR CONSTRUCTION DETAILS - SEE TYPICAL SECTIONS.
- ③ FOR MAINLINE DRAINAGE CULVERT DETAILS - SEE MAINLINE DRAINAGE CULVERT CHART AND EROSION CONTROL & DRAINAGE SHEETS.
- ④ FOR STORM SEWER DETAILS - SEE STORM SEWER CHART, DRAINAGE PROFILES AND EROSION CONTROL & DRAINAGE SHEETS.
- ⑤ PL. CONCRETE RUMBLE STRIPS - SEE CONCRETE RUMBLE STRIP CONSTRUCTION DETAIL.
- ⑥ SLOPED MEDIAN NOSE - SEE STANDARD PLATE 7113 FOR DETAILS.

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

PLANNED CONSTRUCTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 124 OF 257 SHEETS

DISTRICT *: 1
IPLOT NAME: CP13
PATH & FILENAME: Projects/01_DUL/033/0905/053/Design/d0905053_CP13.dgn
PLOTTED/REVISED: 13-MAR-2014



NOTE: FOR CITY UTILITY DETAILS - SEE CITY OF CLOQUET UTILITY PLAN.

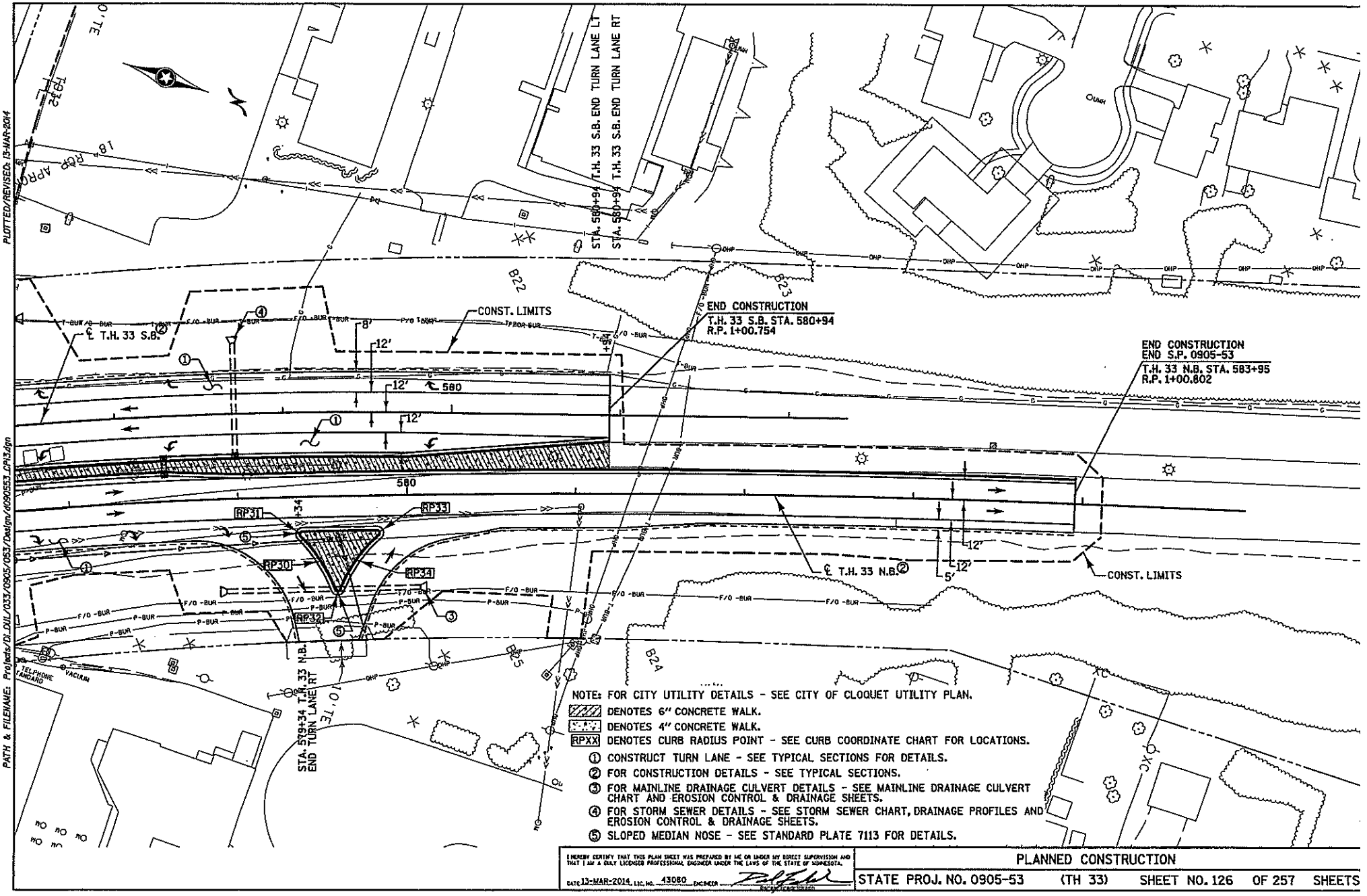
- DENOTES 8" CONCRETE DRIVEWAY PAVEMENT.
- DENOTES 6" CONCRETE WALK.
- DENOTES 4" CONCRETE WALK.
- RPXX DENOTES CURB RADIUS POINT - SEE CURB COORDINATE CHART FOR LOCATIONS.
- ① CITY WATER LINE AND SANITARY SEWER CONECTIONS TO BE DONE BY OTHERS.
- ② CONSTRUCT TURN LANE - SEE TYPICAL SECTIONS FOR DETAILS.
- ③ FOR CONSTRUCTION DETAILS - SEE TYPICAL SECTIONS.
- ④ FOR STORM SEWER DETAILS - SEE STORM SEWER CHART, DRAINAGE PROFILES AND EROSION CONTROL & DRAINAGE SHEETS.
- ⑤ SEE SIGNAL SHEETS FOR SIGNAL INFORMATION.
- ⑥ SLOPED MEDIAN NOSE - SEE STANDARD PLATE 7113 FOR DETAILS.

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

PLANNED CONSTRUCTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 125 OF 257 SHEETS

PLOTTED/REVISED: 13-MAR-2014
DISTRICT = 1
IPLOT NAME: CP4
PATH & FILENAME: Projects/01_DUL/033/0905/053/Design/d0905S3_CP13.dgn



NOTE: FOR CITY UTILITY DETAILS - SEE CITY OF CLOQUET UTILITY PLAN.

DENOTES 6" CONCRETE WALK.

DENOTES 4" CONCRETE WALK.

RPXX DENOTES CURB RADIUS POINT - SEE CURB COORDINATE CHART FOR LOCATIONS.

① CONSTRUCT TURN LANE - SEE TYPICAL SECTIONS FOR DETAILS.

② FOR CONSTRUCTION DETAILS - SEE TYPICAL SECTIONS.

③ FOR MAINLINE DRAINAGE CULVERT DETAILS - SEE MAINLINE DRAINAGE CULVERT CHART AND EROSION CONTROL & DRAINAGE SHEETS.

④ FOR STORM SEWER DETAILS - SEE STORM SEWER CHART, DRAINAGE PROFILES AND EROSION CONTROL & DRAINAGE SHEETS.

⑤ SLOPED MEDIAN NOSE - SEE STANDARD PLATE 7113 FOR DETAILS.

I HEREBY CERTIFY THAT THIS PLAN 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.

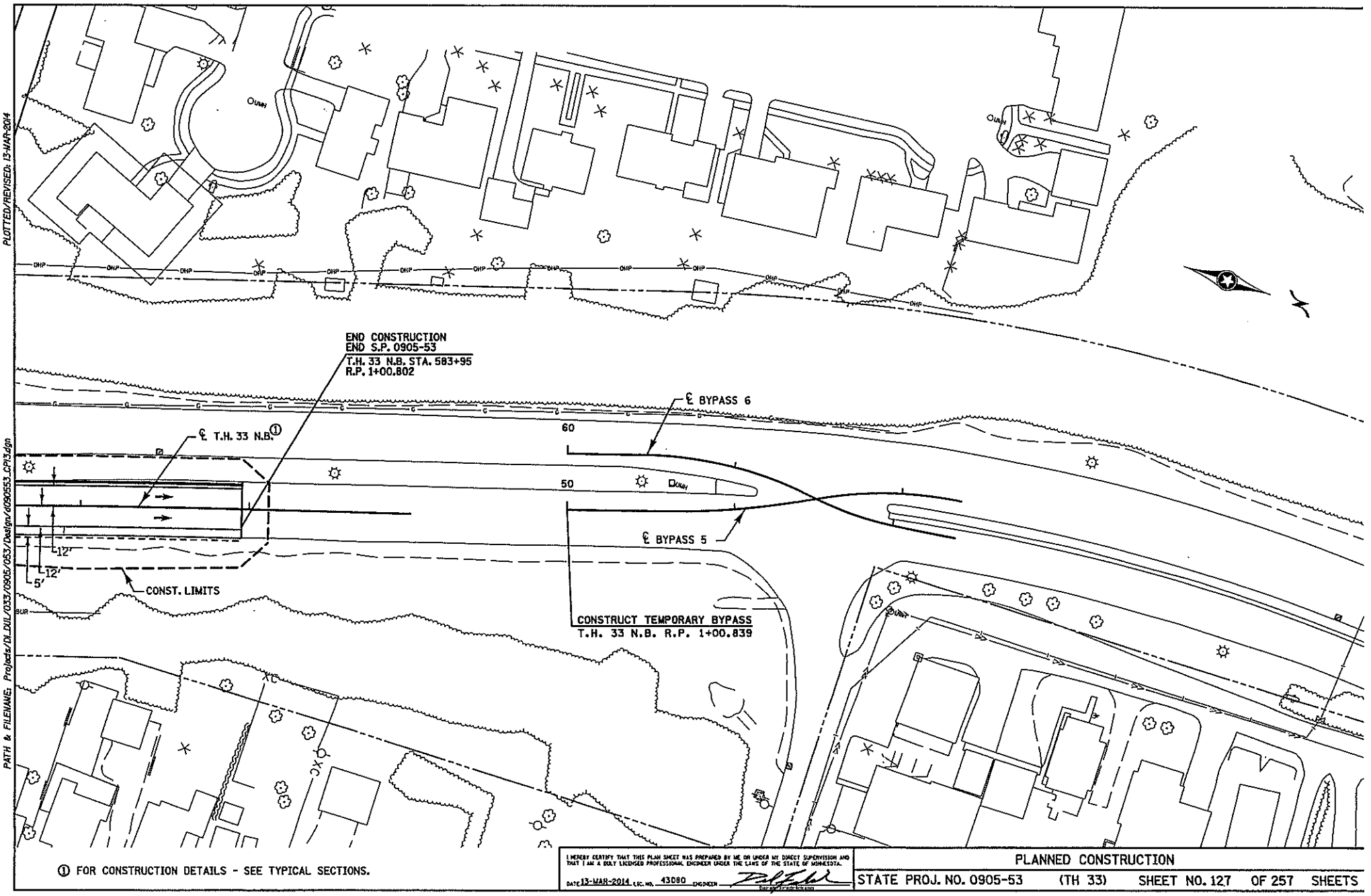
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER Richard Erickson

PLANNED CONSTRUCTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 126 OF 257 SHEETS

PLOTTED/REVISED: 13-MAR-2014

DISTRICT: 1
PLOT NAME: CP15
PATH & FILENAME: P:\projects\DI_DIL\033\0905\053\Design\d090553_CP13.dgn



① FOR CONSTRUCTION DETAILS - SEE TYPICAL SECTIONS.

I HEREBY CERTIFY THAT THIS PLAN 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.

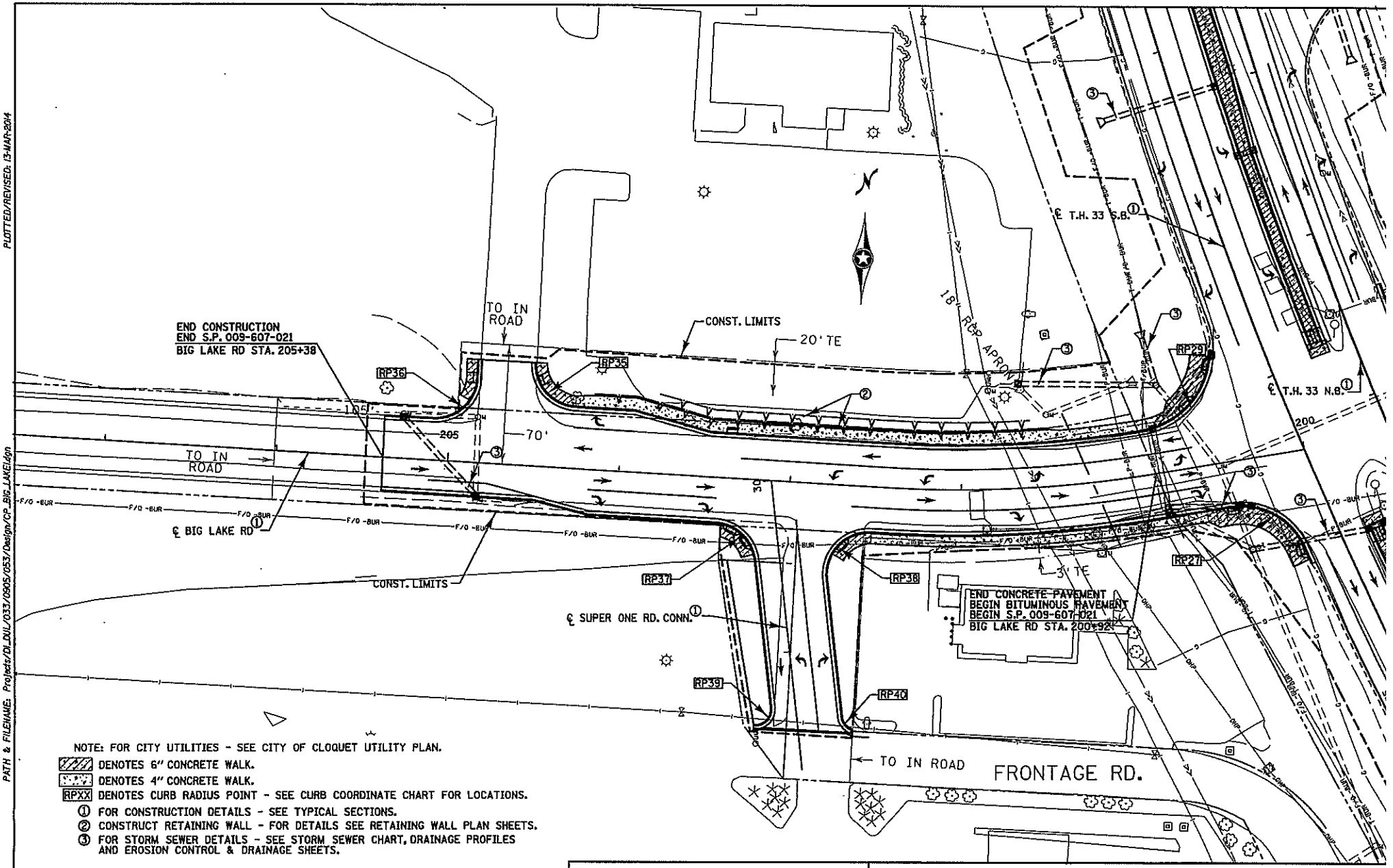
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

PLANNED CONSTRUCTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 127 OF 257 SHEETS

PLOTTED/REVISED: 13-MAR-2014

DISTRICT *: 1
PILOT NAME: CP16
PATH & FILENAME: Projects/01_DUL/033/0905/053/Design/d0905053_CP13.dgn



NOTE: FOR CITY UTILITIES - SEE CITY OF CLOQUET UTILITY PLAN.

DENOTES 6" CONCRETE WALK.

DENOTES 4" CONCRETE WALK.

RPXX DENOTES CURB RADIUS POINT - SEE CURB COORDINATE CHART FOR LOCATIONS.

① FOR CONSTRUCTION DETAILS - SEE TYPICAL SECTIONS.

② CONSTRUCT RETAINING WALL - FOR DETAILS SEE RETAINING WALL PLAN SHEETS.

③ FOR STORM SEWER DETAILS - SEE STORM SEWER CHART, DRAINAGE PROFILES AND EROSION CONTROL & DRAINAGE SHEETS.

I HEREBY CERTIFY THAT THIS PLAN 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.

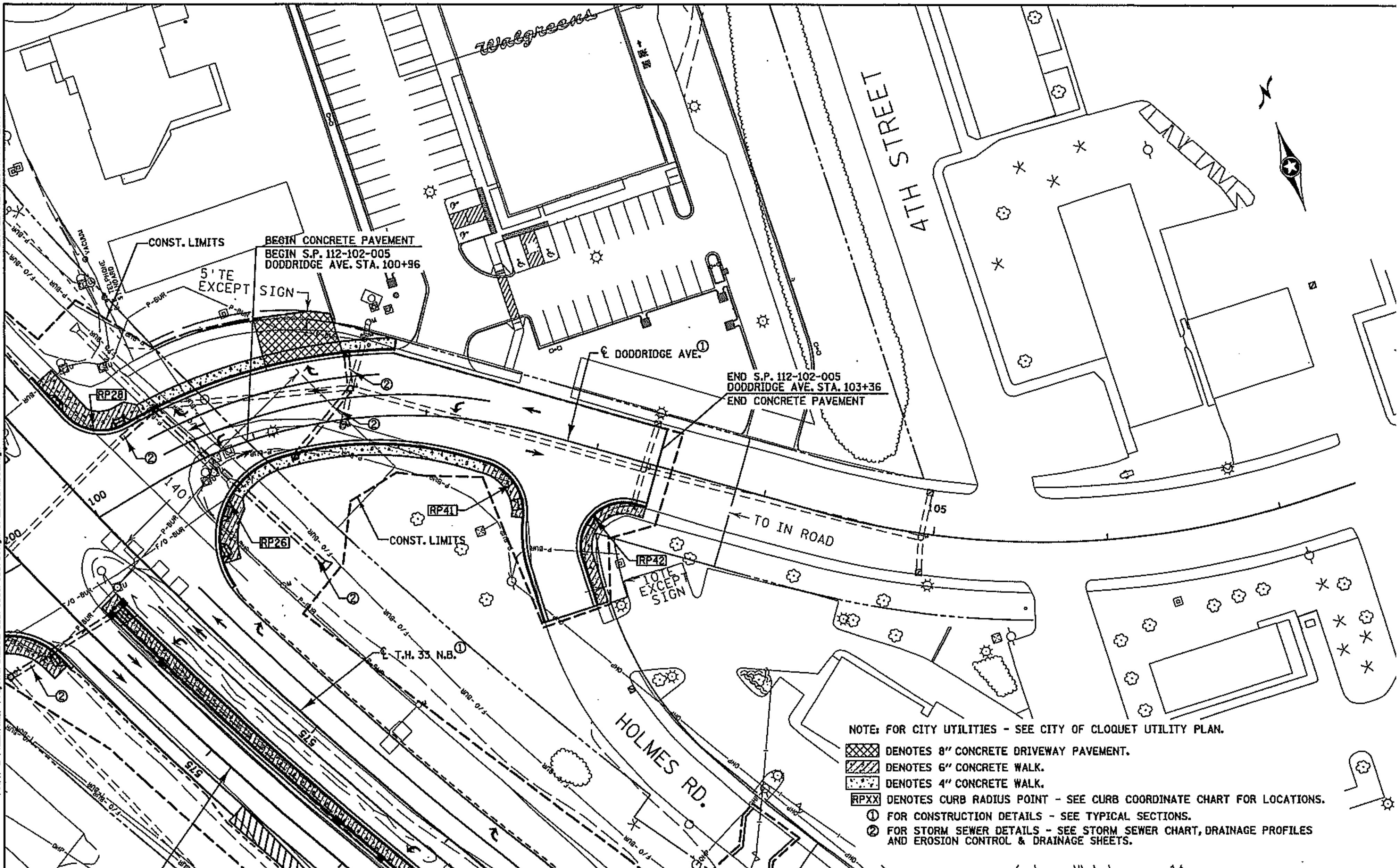
DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

PLANNED CONSTRUCTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 128 OF 257 SHEETS

PLOTTED/REVISED: 13-MAR-2014

DISTRICT: 1
PLOT NAME: CP_BIG_LAKE12
PATH & FILENAME: Projects/01_DUL/033/0905/053/Design/CP_BIG_LAKE1.dgn



NOTE: FOR CITY UTILITIES - SEE CITY OF CLOQUET UTILITY PLAN.

- DENOTES 8" CONCRETE DRIVEWAY PAVEMENT.
- DENOTES 6" CONCRETE WALK.
- DENOTES 4" CONCRETE WALK.
- RPXX DENOTES CURB RADIUS POINT - SEE CURB COORDINATE CHART FOR LOCATIONS.
- ① FOR CONSTRUCTION DETAILS - SEE TYPICAL SECTIONS.
- ② FOR STORM SEWER DETAILS - SEE STORM SEWER CHART, DRAINAGE PROFILES AND EROSION CONTROL & DRAINAGE SHEETS.

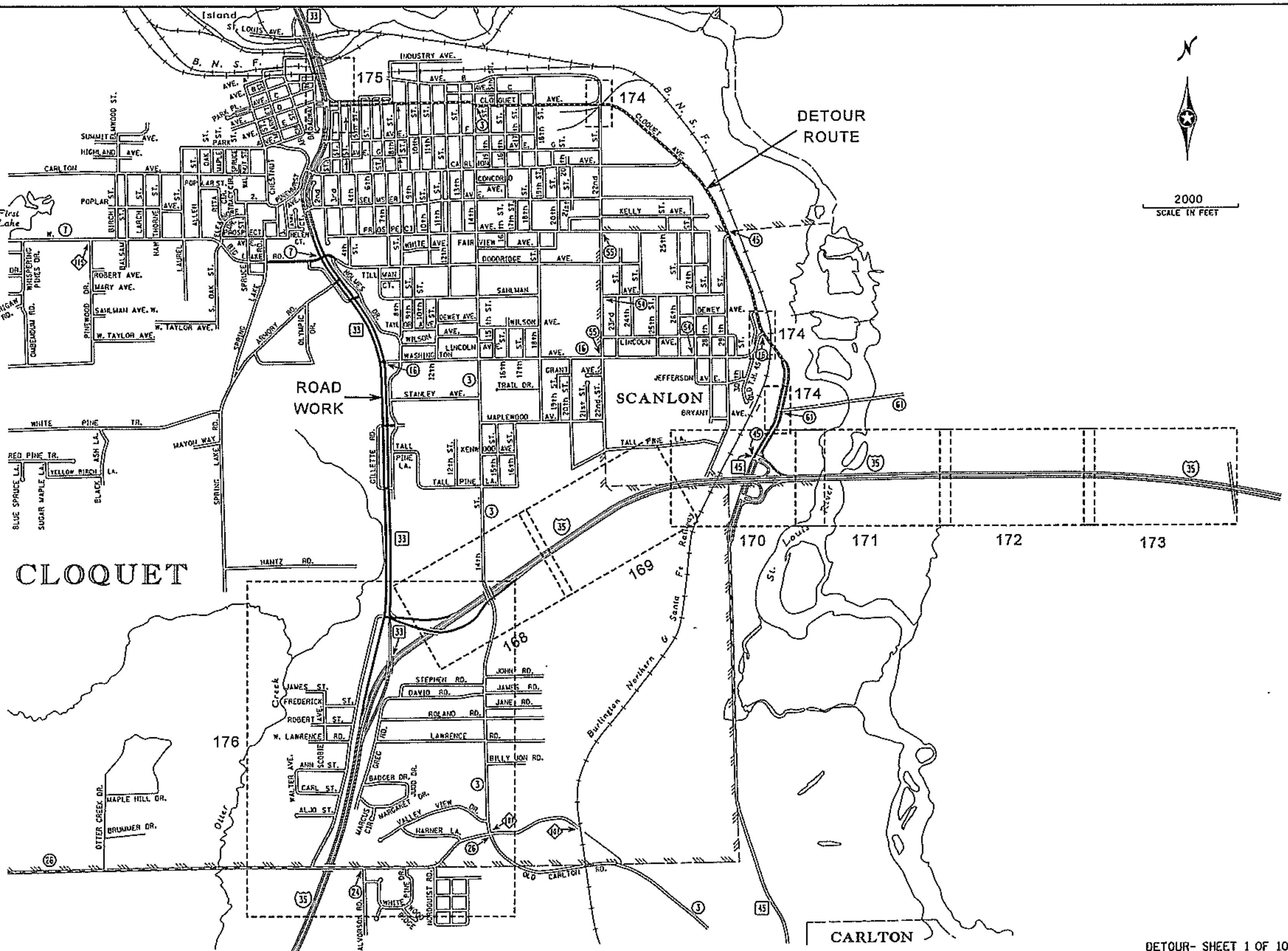
I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 13-MAR-2014 LIC. NO. 43080 ENGINEER

PLANNED CONSTRUCTION

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 129 OF 257 SHEETS

DISTRICT #: 1
IPLOT NAME: CP_DODDRIDGE1
PATH & FILENAME: Projects/DL_DUL/033/0905/053/Design/CP_DODDRIDGE1.dgn
PLOTTED/REVISED: 13-MAR-2014



DETOUR- SHEET 1 OF 10

I HEREBY CERTIFY THAT THIS PLAN 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.

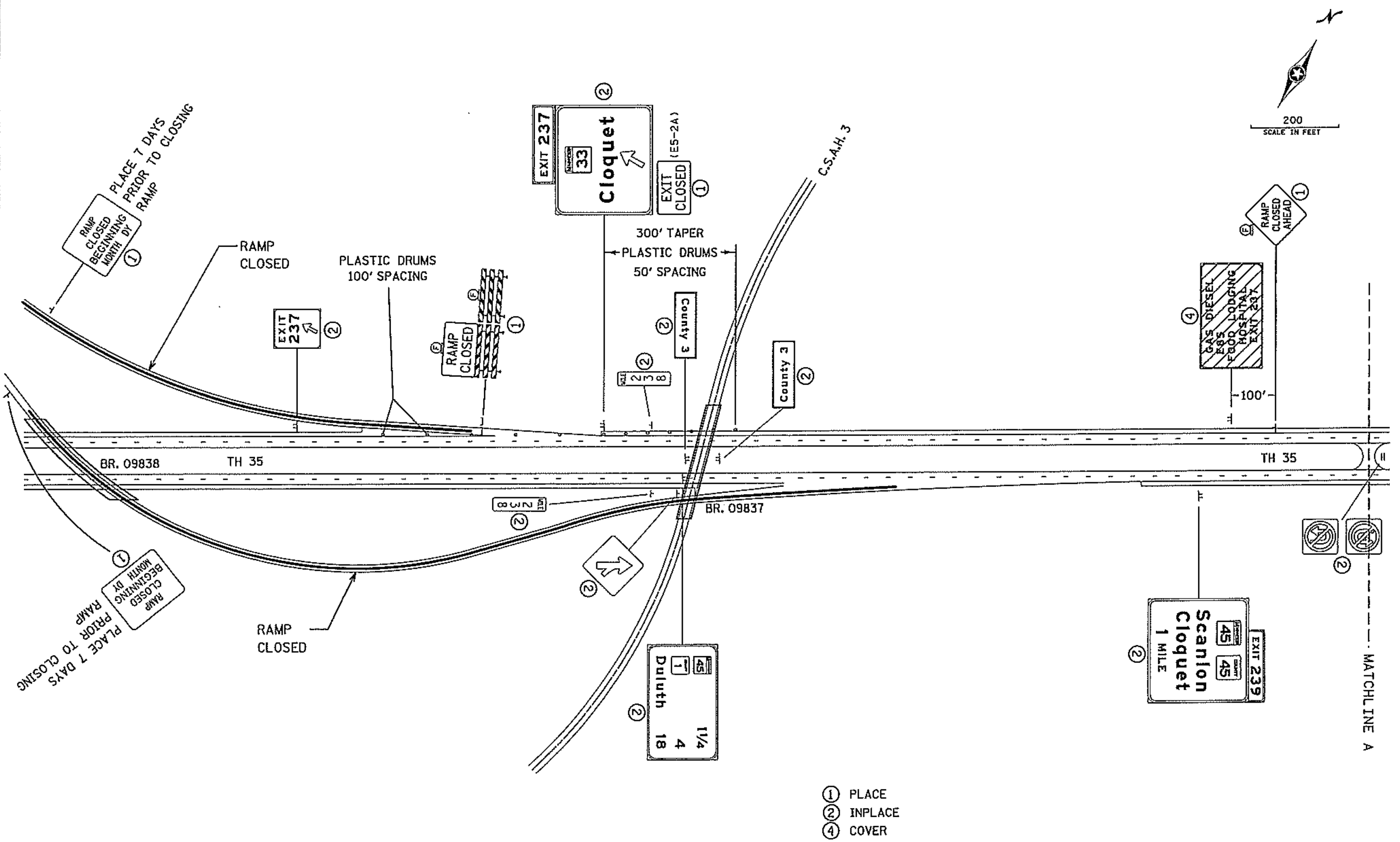
DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER JAMES A. MILES

TRAFFIC CONTROL- DETOUR GENERAL LAYOUT - STAGE 1 & 2

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 167 OF 257 SHEETS

PLOTTED/REVISED: 14-JAN-2014

PATH & FILENAME: Projects/DL.DUL/033/0905/053/Traffic/TrafficControl/t0905053_tc1.dgn



DETOUR- SHEET 2 OF 10

I HEREBY CERTIFY THAT THIS PLAN 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.

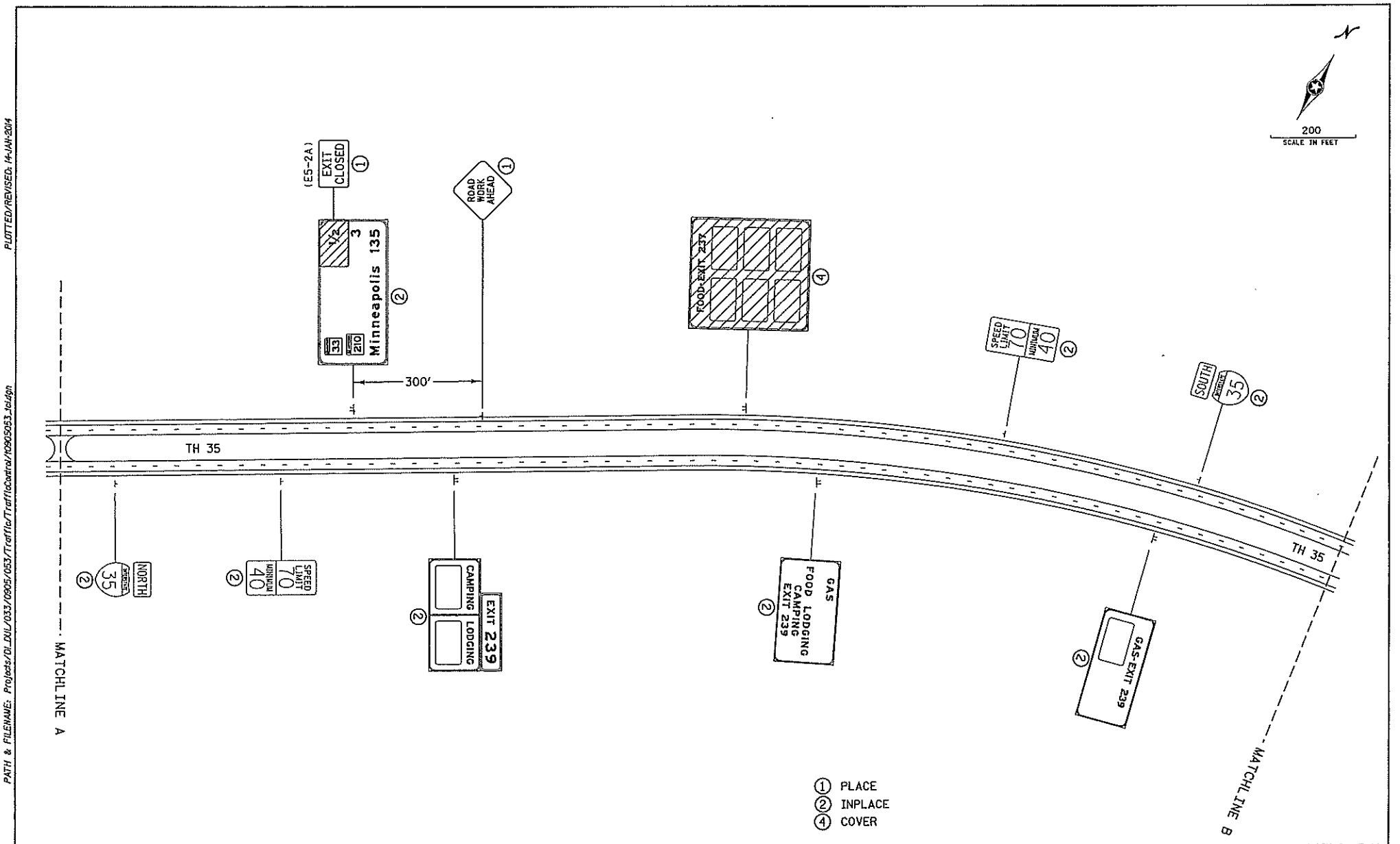
DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER JAMES A. MIKES

TRAFFIC CONTROL - DETOUR SIGNING - STAGE 1 & 2

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 168 OF 257 SHEETS

PLOTTED/REVISED: 14-JAN-2014

PATH & FILENAME: Projects/DL/DUL/033/0905/053/Traffic/TrafficControl/t0905053_tcl.dgn



PLOTTED/REVISED: 14-JAN-2014

PATH & FILENAME: Projects/DL_DU/033/0905/053/Traffic/TrafficControl/t0905053_tsldgn

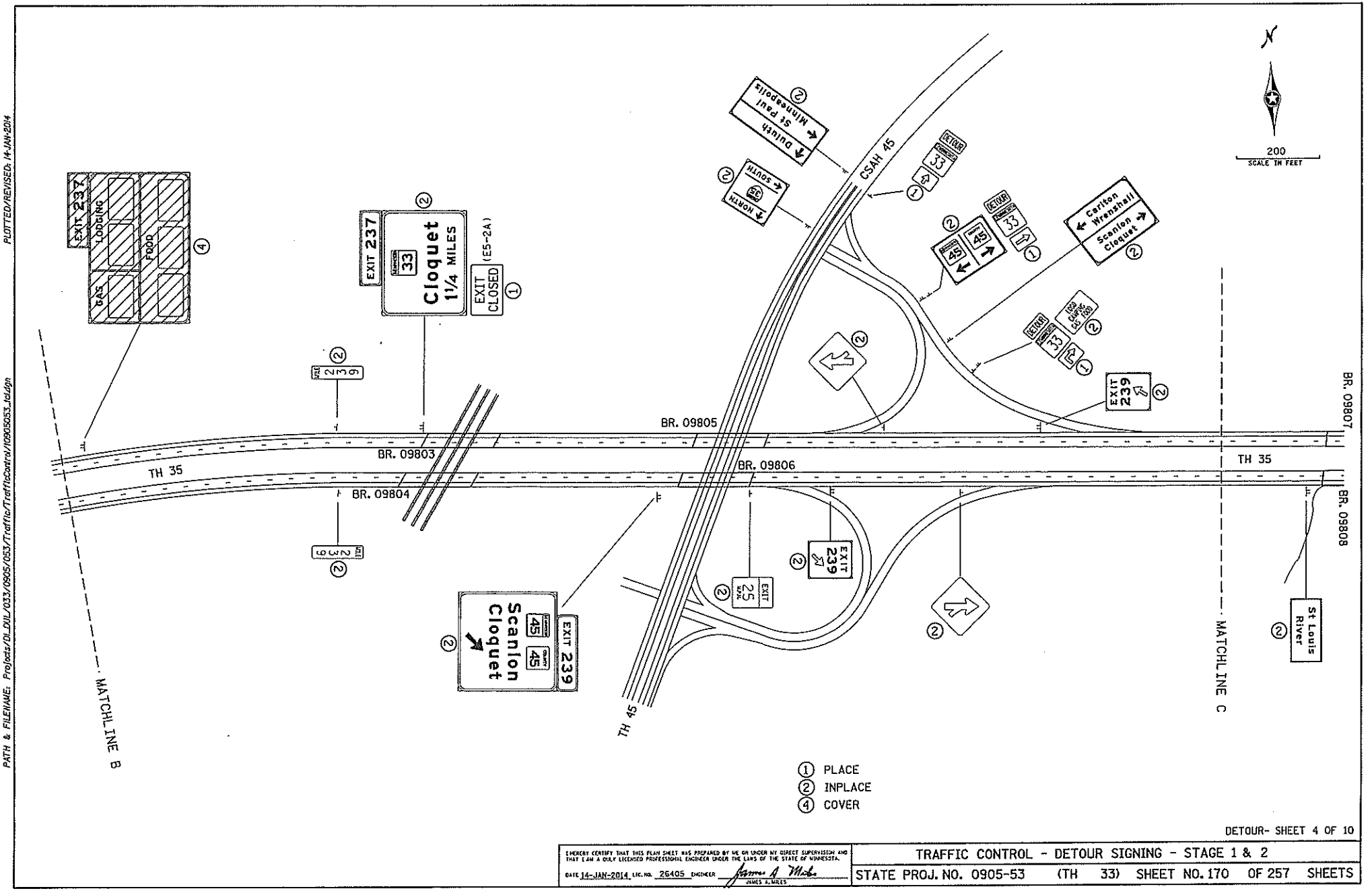
DETOUR- SHEET 3 OF 10

I HEREBY CERTIFY THAT THIS PLAN 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.

DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER James A. Mikes
JAMES A. MIKES

TRAFFIC CONTROL - DETOUR SIGNING - STAGE 1 & 2

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 169 OF 257 SHEETS



DETOUR- SHEET 4 OF 10

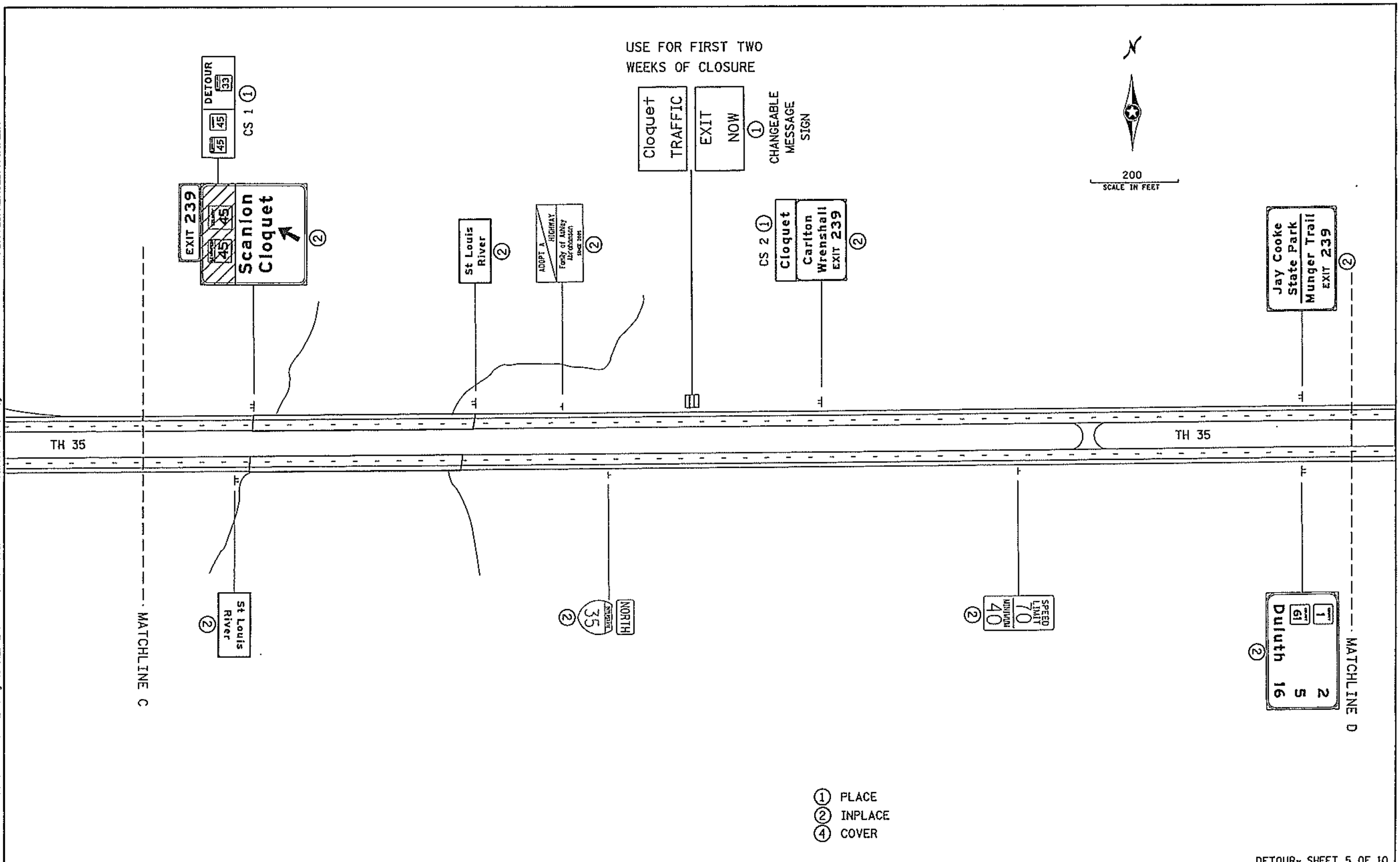
I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER James A. Mires
JAMES A. MIRES

TRAFFIC CONTROL - DETOUR SIGNING - STAGE 1 & 2

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 170 OF 257 SHEETS

PLOTTED/REVISED: 14-JAN-2014

PATH & FILENAME: Projects/DLDIL/033/0905/053/Traffic/TrafficControl/t0905053_tc1.dgn



① PLACE
② INPLACE
④ COVER

DETOUR- SHEET 5 OF 10

I HEREBY CERTIFY THAT THIS PLAN 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.

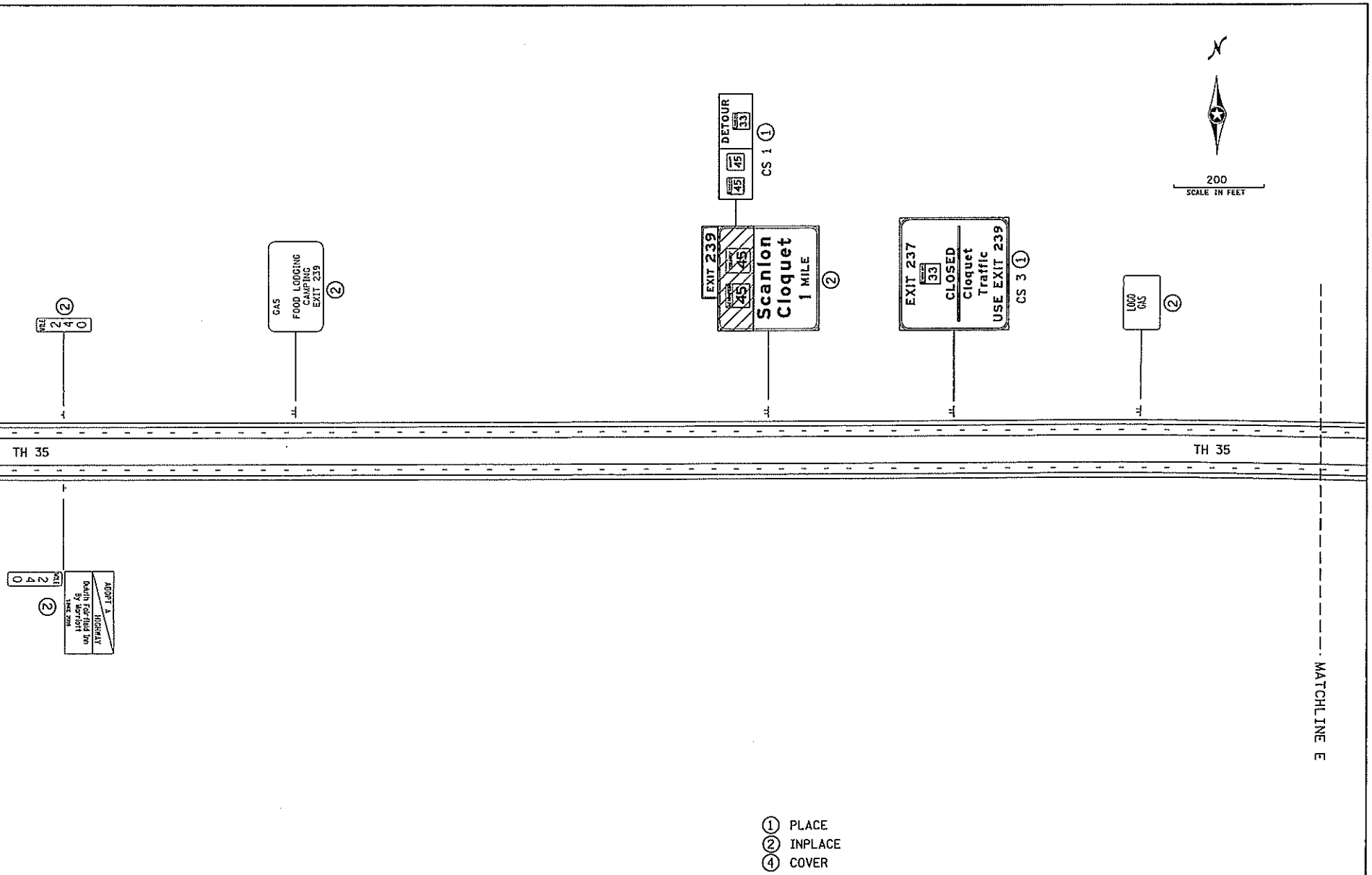
DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER JAMES A. MILES

TRAFFIC CONTROL - DETOUR SIGNING - STAGE 1 & 2

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 171 OF 257 SHEETS

PATH & FILENAME: Projects/DL_DUL/033/0905/053/Traffic/TrafficControl/I0905053_tcl.dgn

PLOTTED/REVISED: 14-JAN-2014



PLOTTED/REVISED: 14-JAN-2014

PATH & FILENAME: Projects/DL_DNL/033/0905/053/Traffic/TrafficControl/0905053_tcdgn

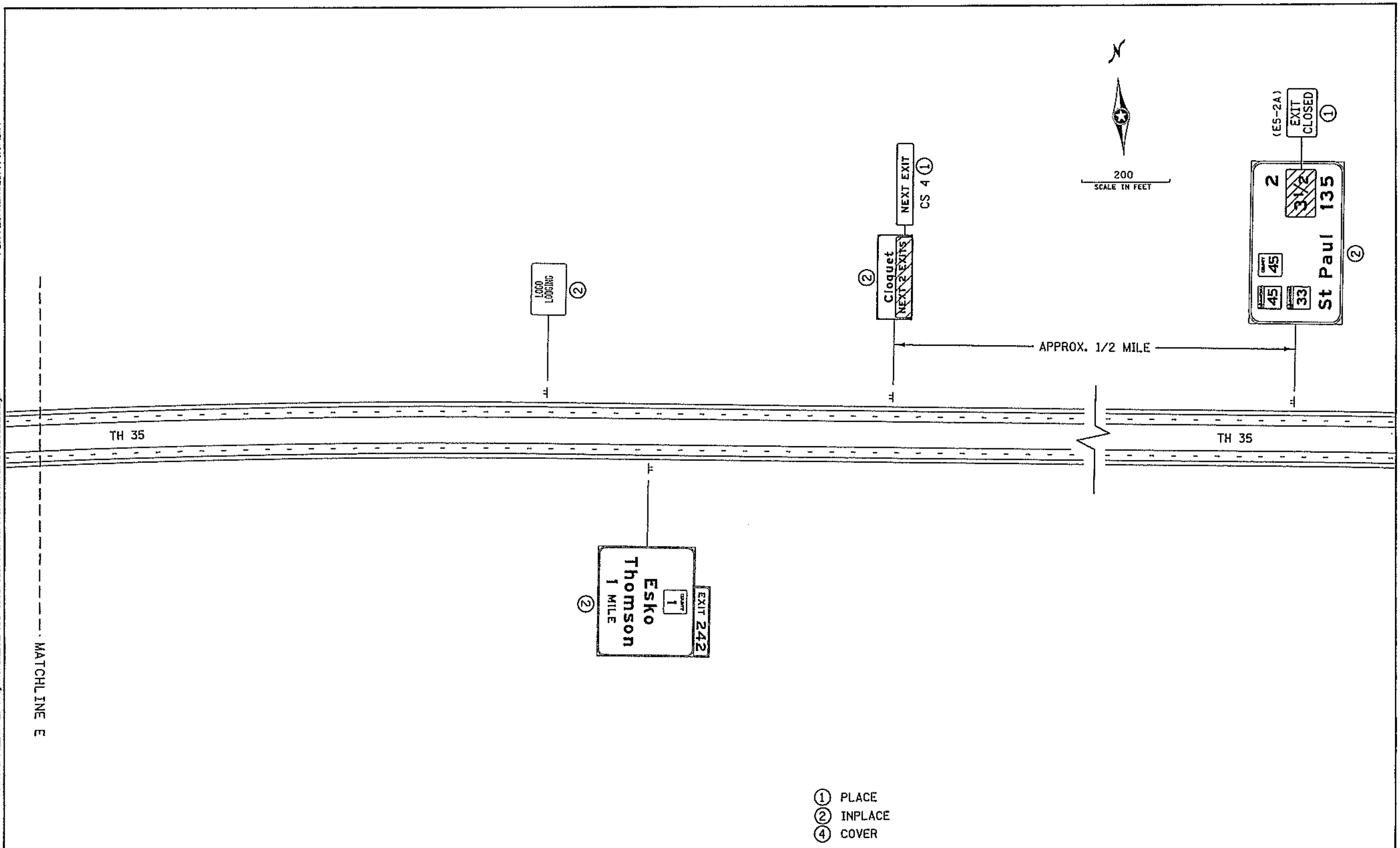
DETOUR- SHEET 6 OF 10

I HEREBY CERTIFY THAT THIS PLAN 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.

DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER James A. Mikes
JAMES A. MIKES

TRAFFIC CONTROL - DETOUR SIGNING - STAGE 1 & 2

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 172 OF 257 SHEETS



① PLACE
② INPLACE
④ COVER

DETOUR- SHEET 7 OF 10

I HEREBY CERTIFY THAT THIS PLAN 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.

DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER JAMES A. MILES

TRAFFIC CONTROL - DETOUR SIGNING - STAGE 1 & 2

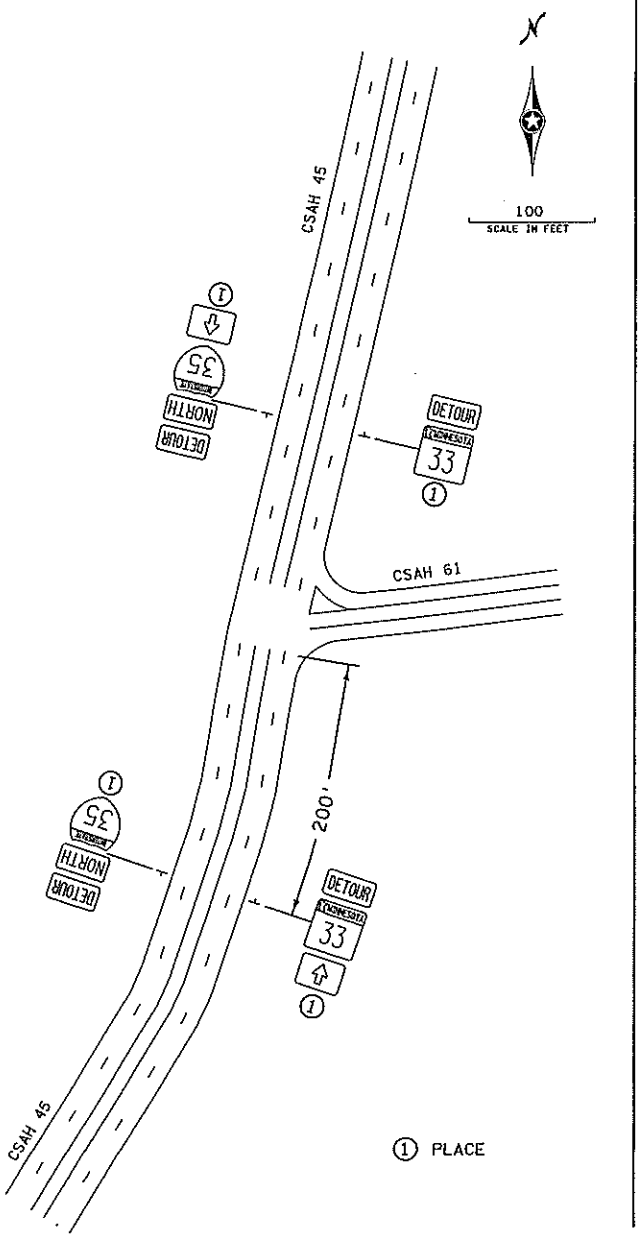
STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 173 OF 257 SHEETS

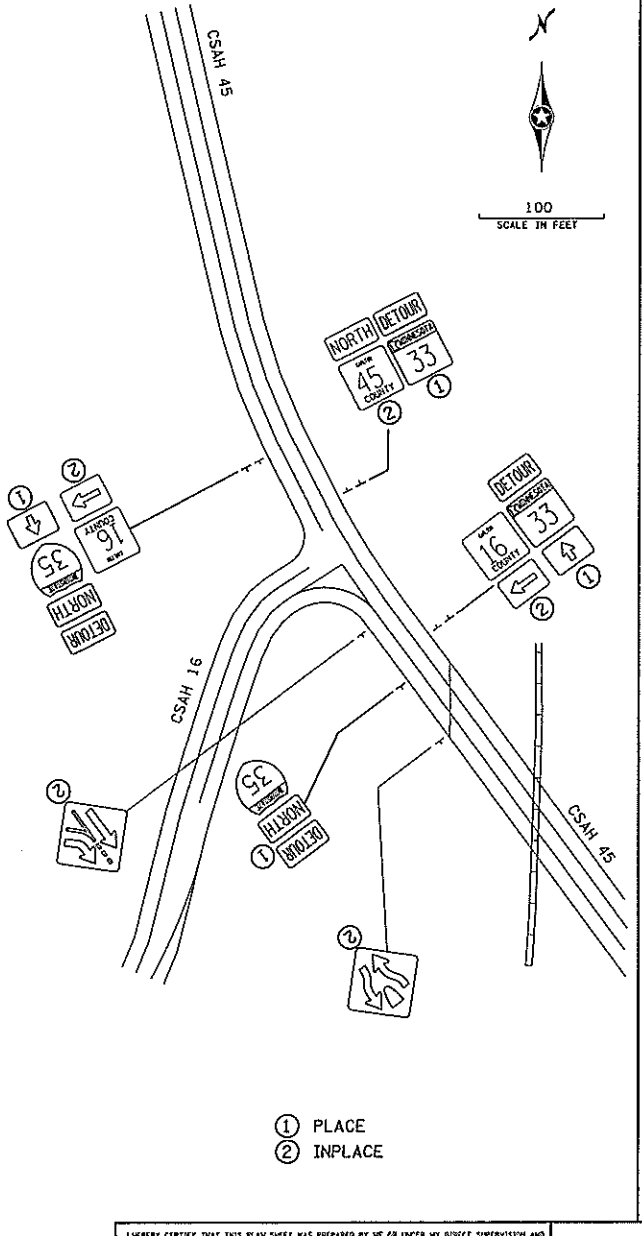
PATH & FILENAME: Projects/DI_DUL/033/0905/053/Traffic/TrafficControl/t0905053_tc.dgn

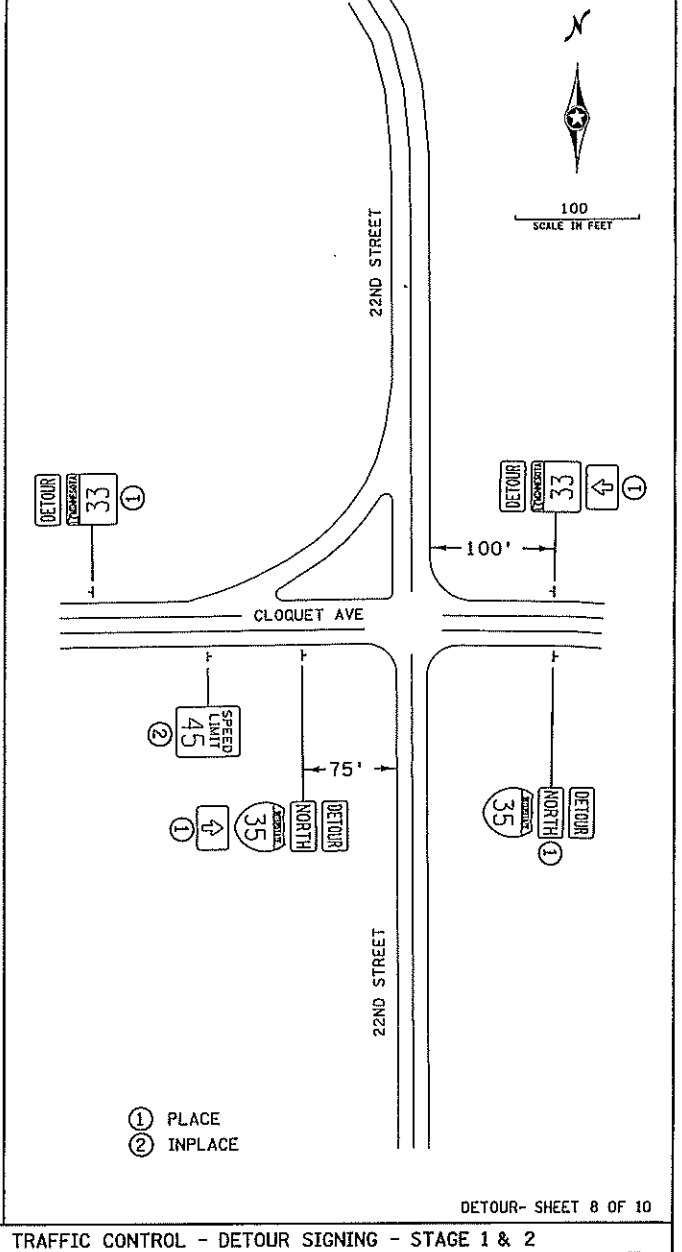
PLOTTED/REVISED: 14-JAN-2014

PATH & FILENAME: Projects/01_DU/033/0905/053/Traffic/TrafficControl/0905053_tc1.dgn

PLOTTED/REVISED: 14-JAN-2014







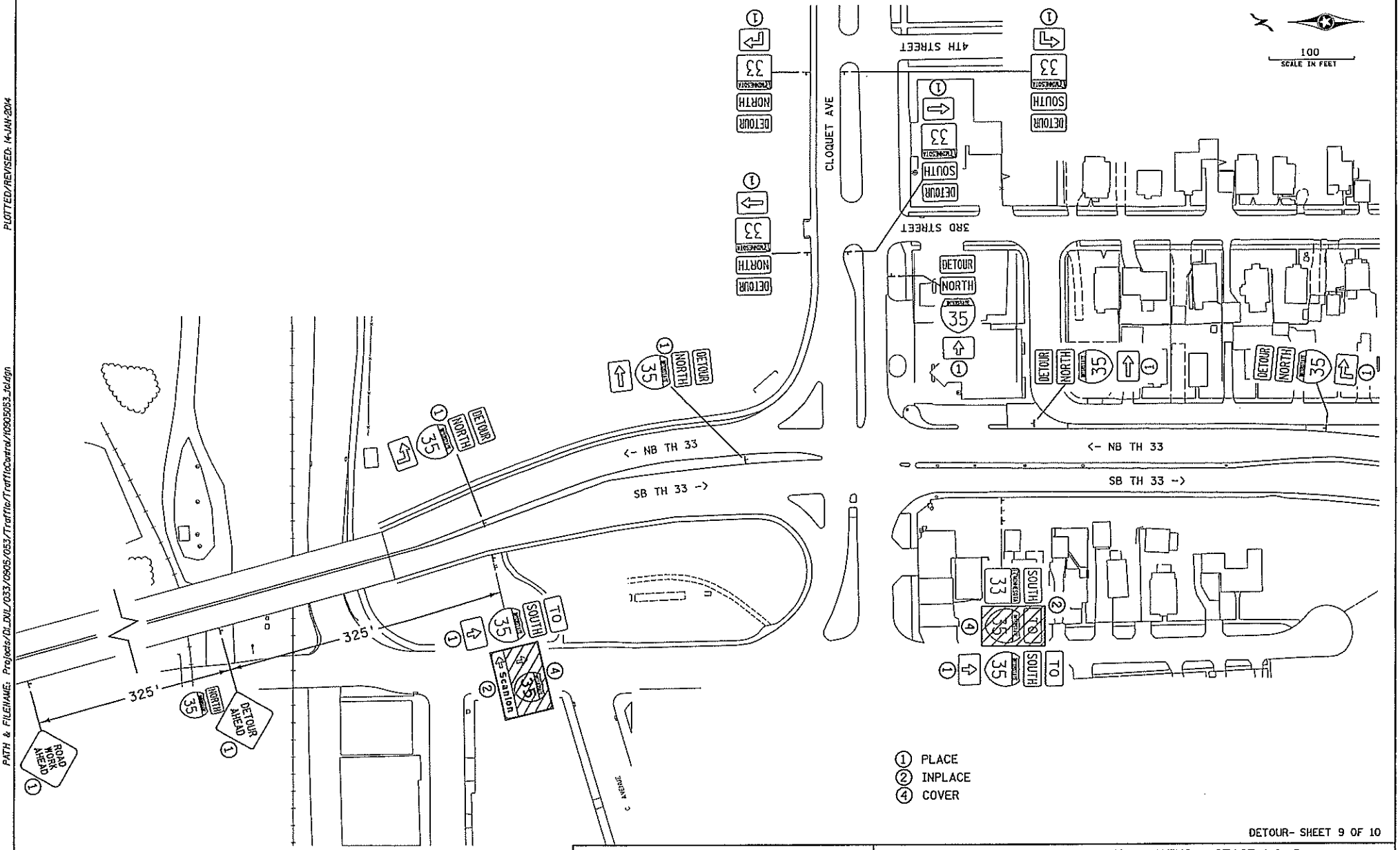
DETOUR- SHEET 8 OF 10

I HEREBY CERTIFY THAT THIS PLAN 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.

DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER James A. Myles
JAMES A. MYLES

TRAFFIC CONTROL - DETOUR SIGNING - STAGE 1 & 2

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 174 OF 257 SHEETS



PLOTTED/REVISED: 14-JAN-2014

PATH & FILENAME: Projects/DL_DUL/033/0905/053/Traffic/TrafficControl/0905053_tel.dgn

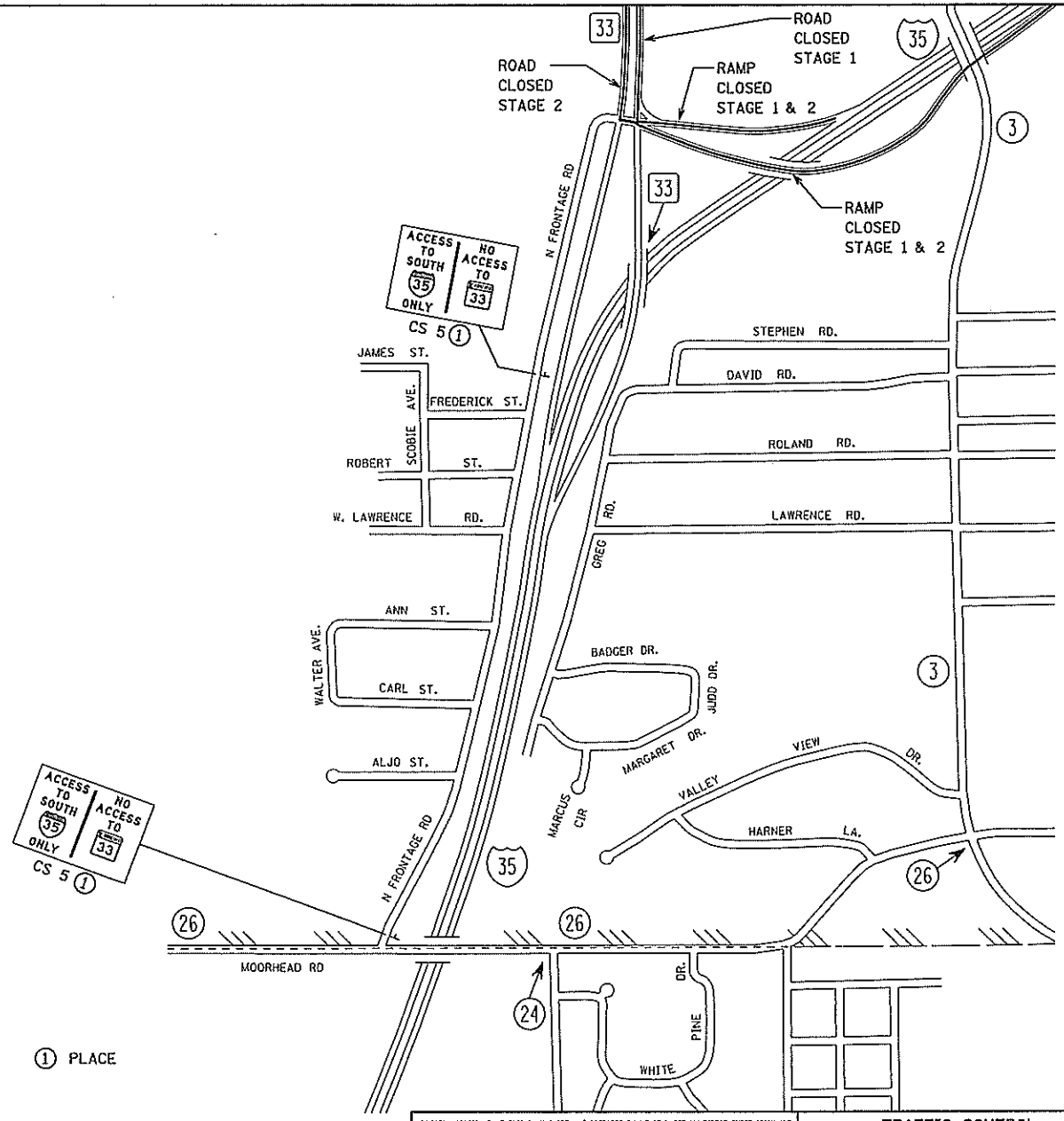
DETOUR- SHEET 9 OF 10

I HEREBY CERTIFY THAT THIS PLAN 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.

DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER James A. Mikes
JAMES A. MIKES

TRAFFIC CONTROL - DETOUR SIGNING - STAGE 1 & 2

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 175 OF 257 SHEETS



DETOUR- SHEET 10 OF 10

I HEREBY CERTIFY THAT THIS PLAN 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.

DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER James A. Mikes
JAMES A. MIKES

TRAFFIC CONTROL - DETOUR SIGNING - STAGE 1 & 2

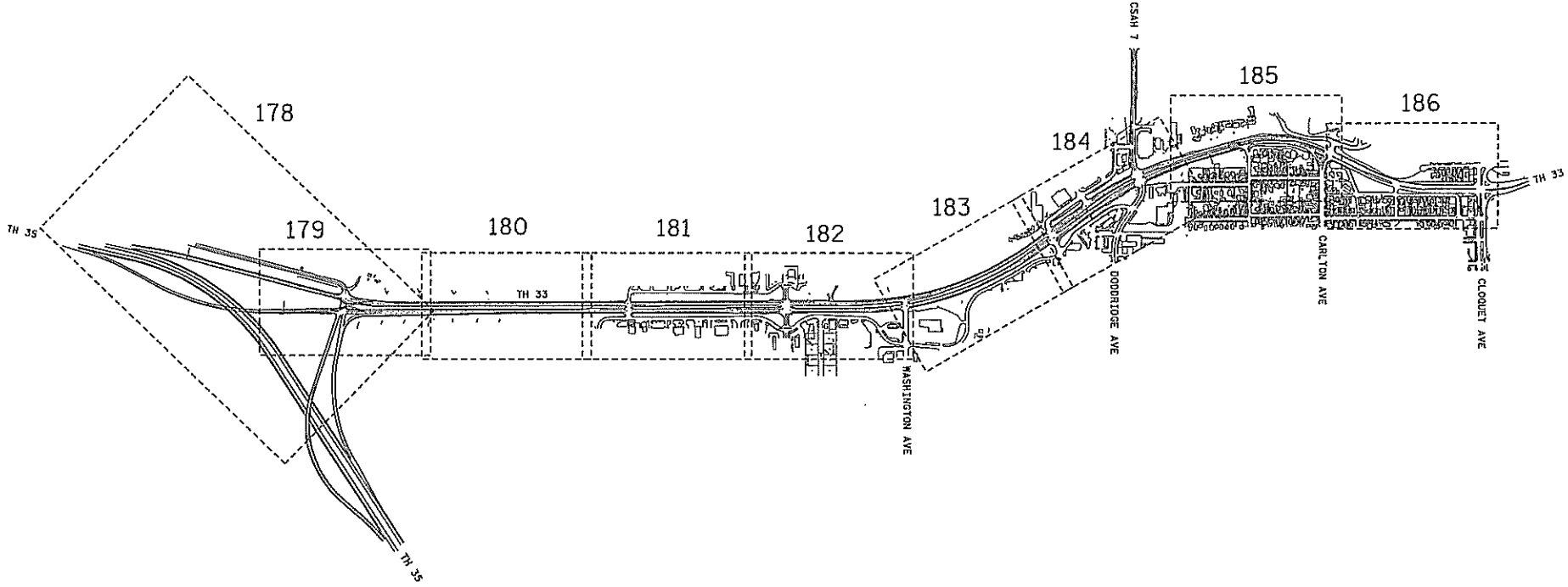
STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 176 OF 257 SHEETS

PLOTTED/REVISED: 14-JAN-2014

PATH & FILENAME: Projects/01.DIL/033/0905/053/Traffic/TrafficControl/t0905053_tc1.dgn

PLOTTED/REVISED: 14-JAN-2014

PATH & FILENAME: Projects/01_DU/033/0905/053/Traffic/TrafficControl/0905053_tc1.dgn



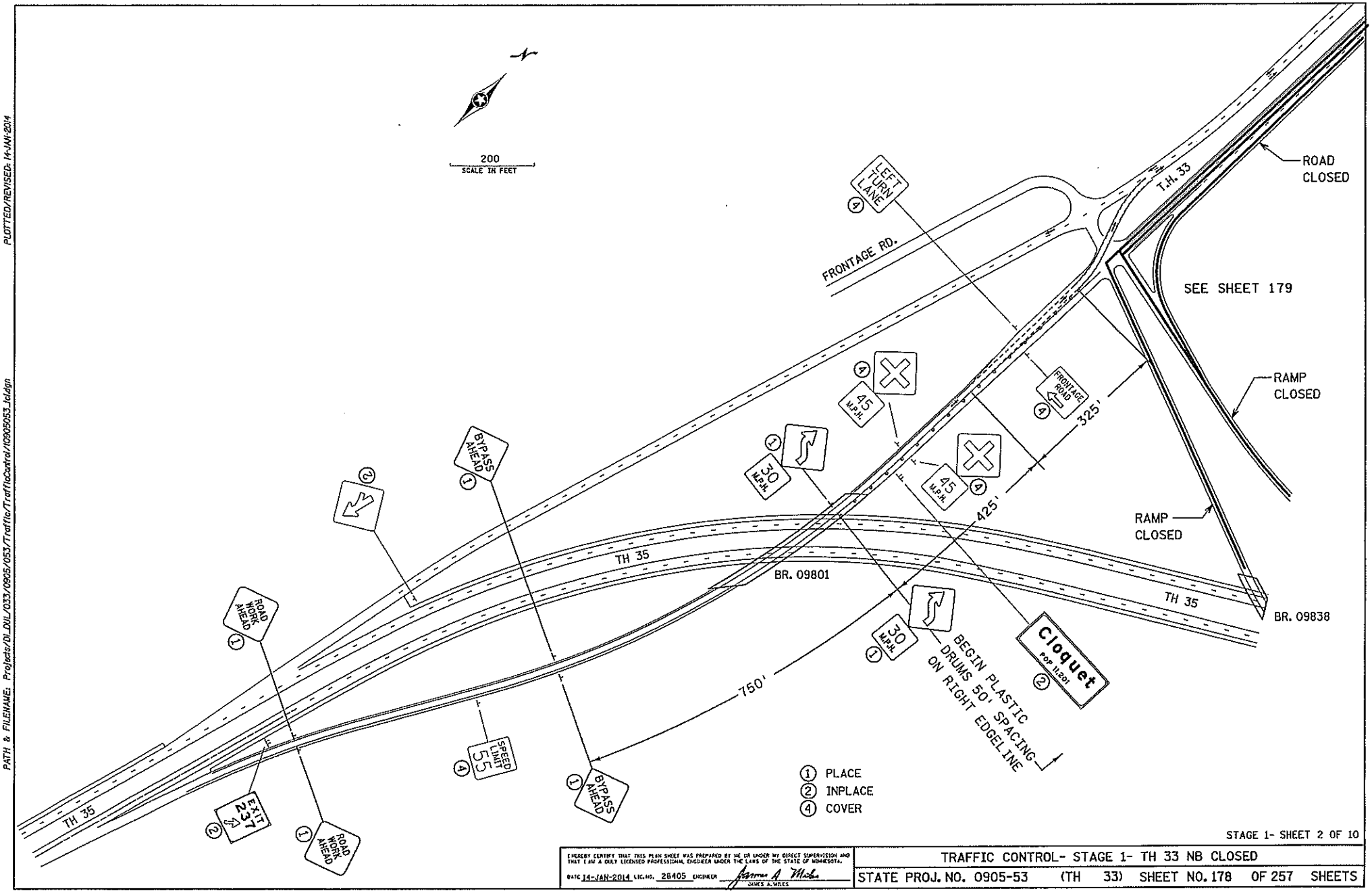
STAGE 1- SHEET 1 OF 10

I HEREBY CERTIFY THAT THIS PLAN 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.

DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER James A. Miles
JAMES A. MILES

TRAFFIC CONTROL- STAGE 1 TH 33 NB CLOSED - GENERAL LAYOUT

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 177 OF 257 SHEETS



PATH & FILENAME: Projects/01_DUL/033/0905/053/Traffic/Traffic control/10905053_1d.dgn

PLOTTED/REVISED: 14-JAN-2014

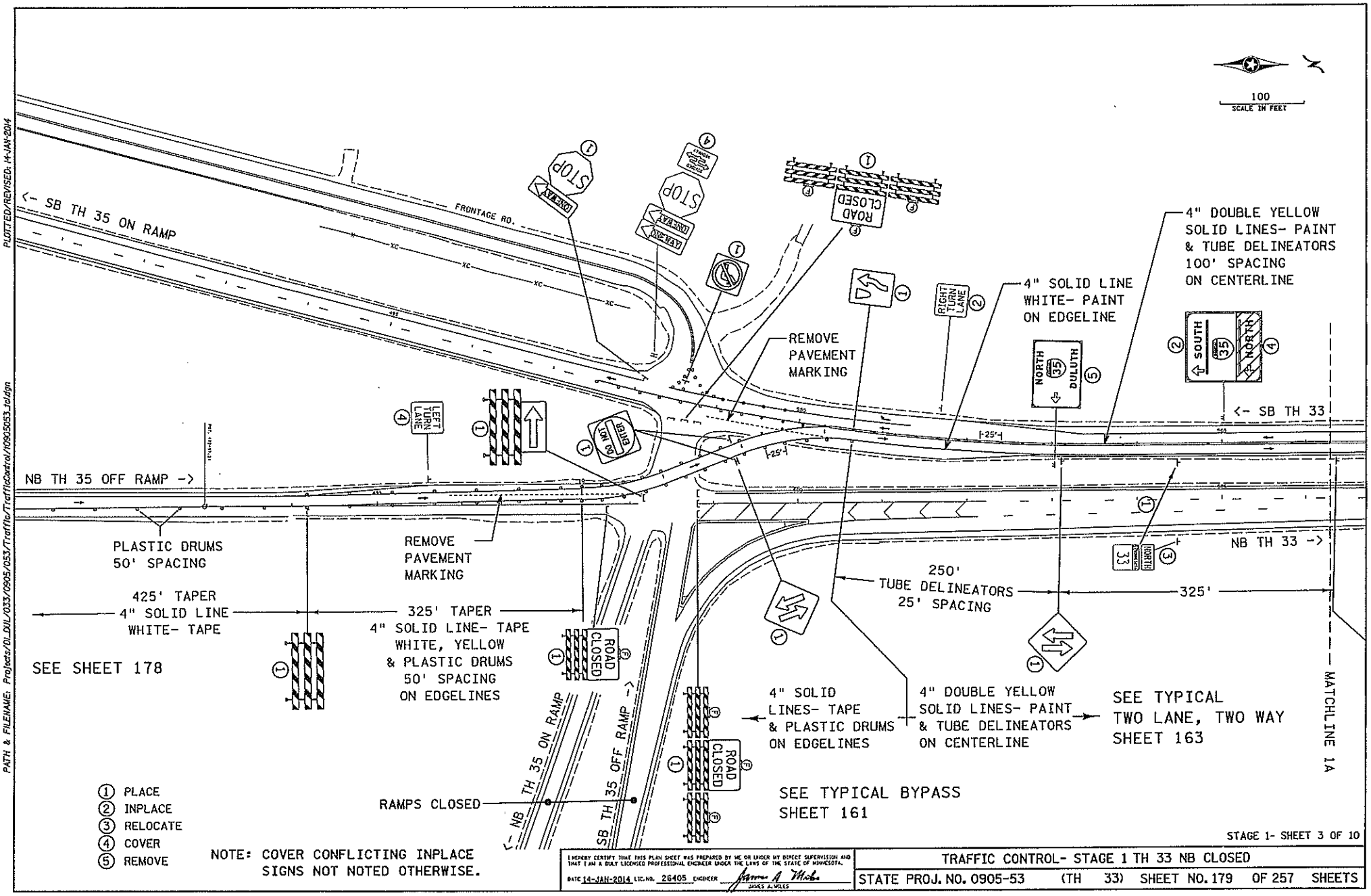
STAGE 1- SHEET 2 OF 10

I HEREBY CERTIFY THAT THIS PLAN 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.

DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER James A. Miles
JAMES A. MILES

TRAFFIC CONTROL- STAGE 1- TH 33 NB CLOSED

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 178 OF 257 SHEETS



PLOTTED/REVISED: 14-JAN-2014

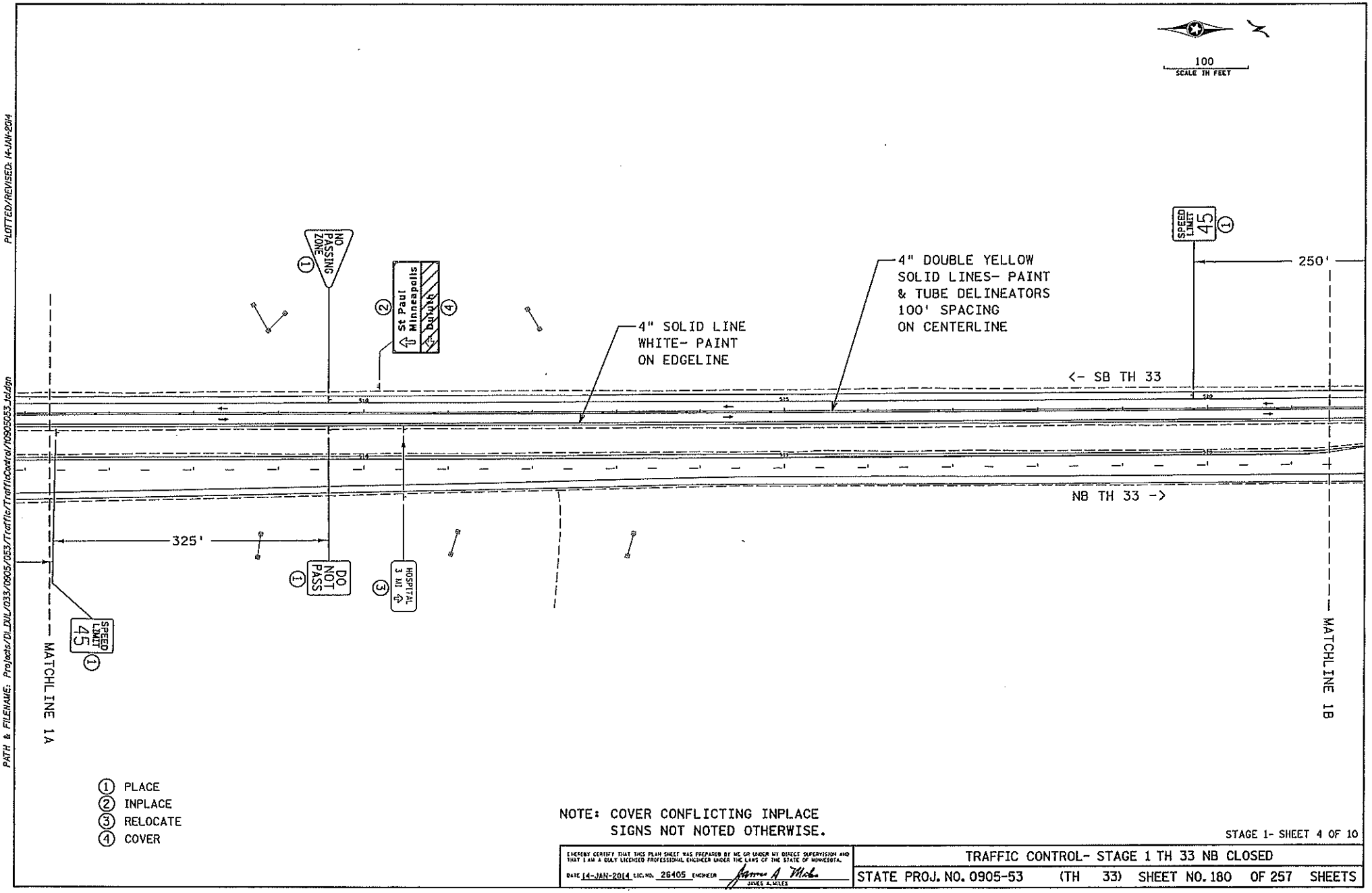
PATH & FILENAME: Projects/01_DUL/033/0905/053/Traffic/TrafficControl/109505353_1st.dgn

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER James A. Miles
JAMES A. MILES

STAGE 1- SHEET 3 OF 10

TRAFFIC CONTROL- STAGE 1 TH 33 NB CLOSED

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 179 OF 257 SHEETS



NOTE: COVER CONFLICTING INPLACE SIGNS NOT NOTED OTHERWISE.

STAGE 1- SHEET 4 OF 10

I HEREBY CERTIFY THAT THIS PLAN 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.

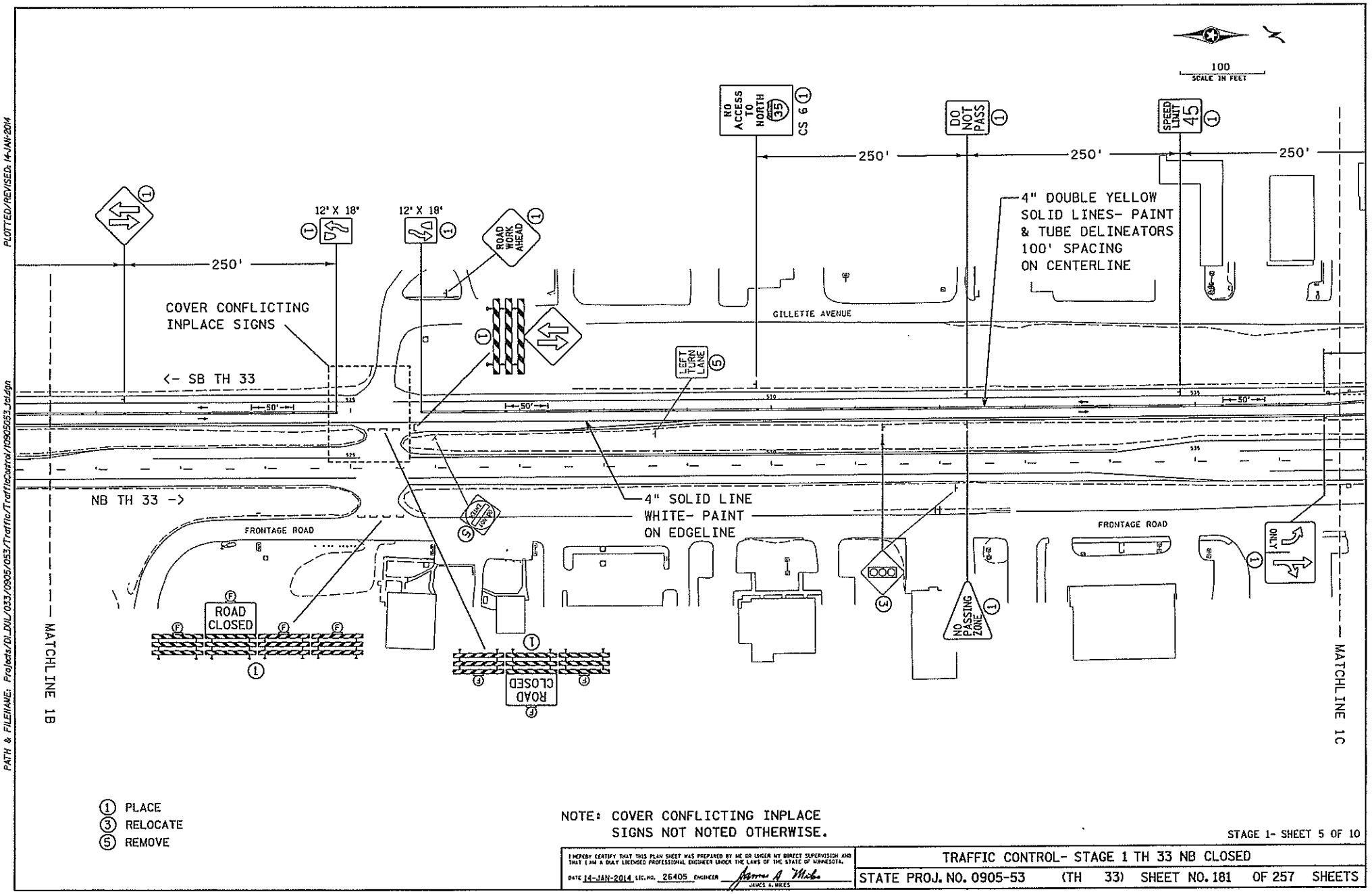
DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER James A. Miles
JAMES A. MILES

TRAFFIC CONTROL- STAGE 1 TH 33 NB CLOSED

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 180 OF 257 SHEETS

PLOTTED/REVISED: 14-JAN-2014

PATH & FILENAME: Projects/01_DIL/033/0905/053/Traffic/TrafficControl/t0905053_1stdgn



① PLACE
③ RELOCATE
⑤ REMOVE

NOTE: COVER CONFLICTING INPLACE SIGNS NOT NOTED OTHERWISE.

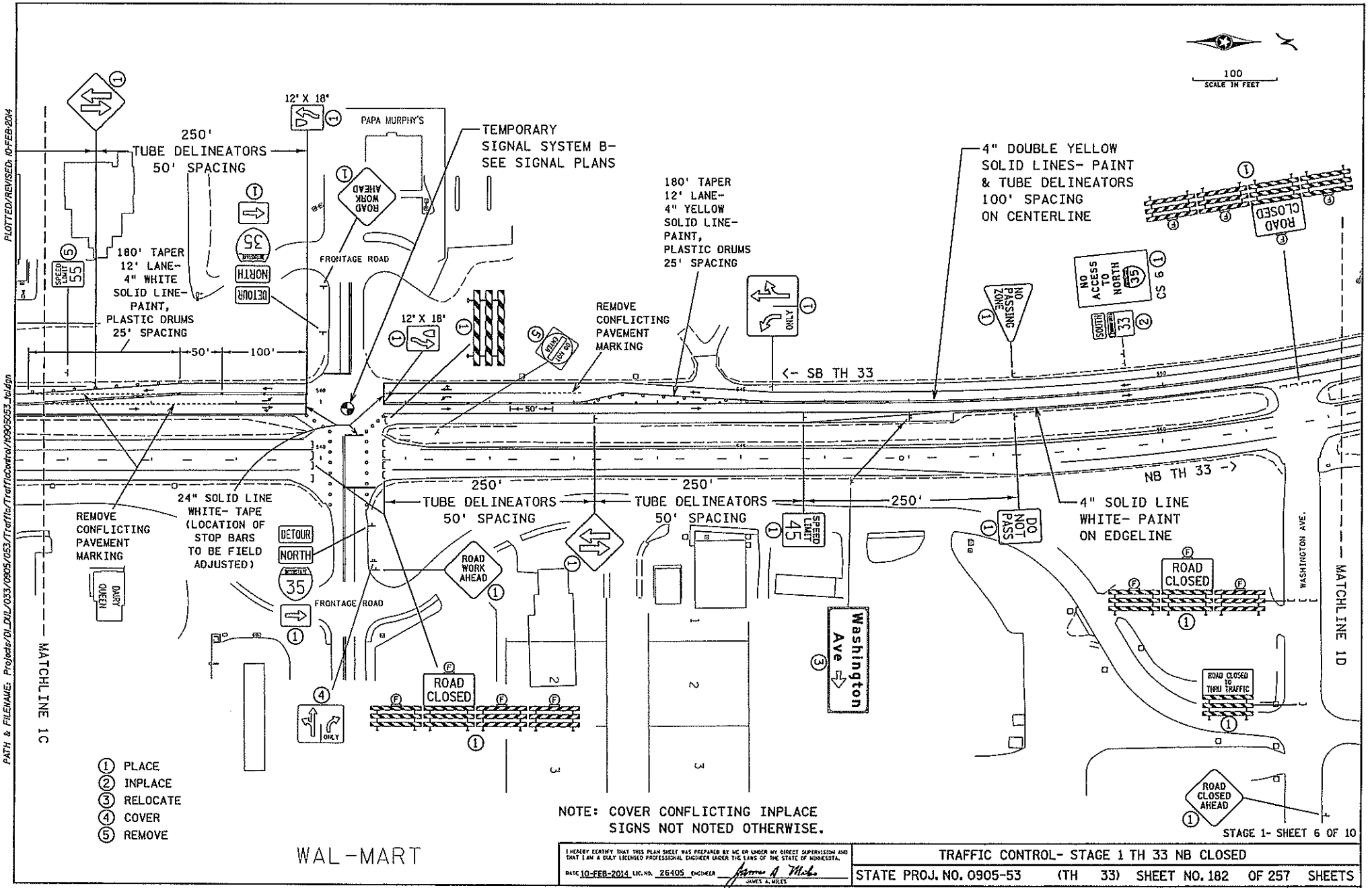
STAGE 1- SHEET 5 OF 10

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER James A. Mikes
JAMES A. MIKES

TRAFFIC CONTROL- STAGE 1 TH 33 NB CLOSED

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 181 OF 257 SHEETS

PLOTTED/REVISED: 14-JAN-2014
PATH & FILENAME: Projects/01_DIL/033/0905/053/Traffic/TrafficControl/10905053_tc1.dgn



NOTE: COVER CONFLICTING INPLACE SIGNS NOT NOTED OTHERWISE.

WAL-MART

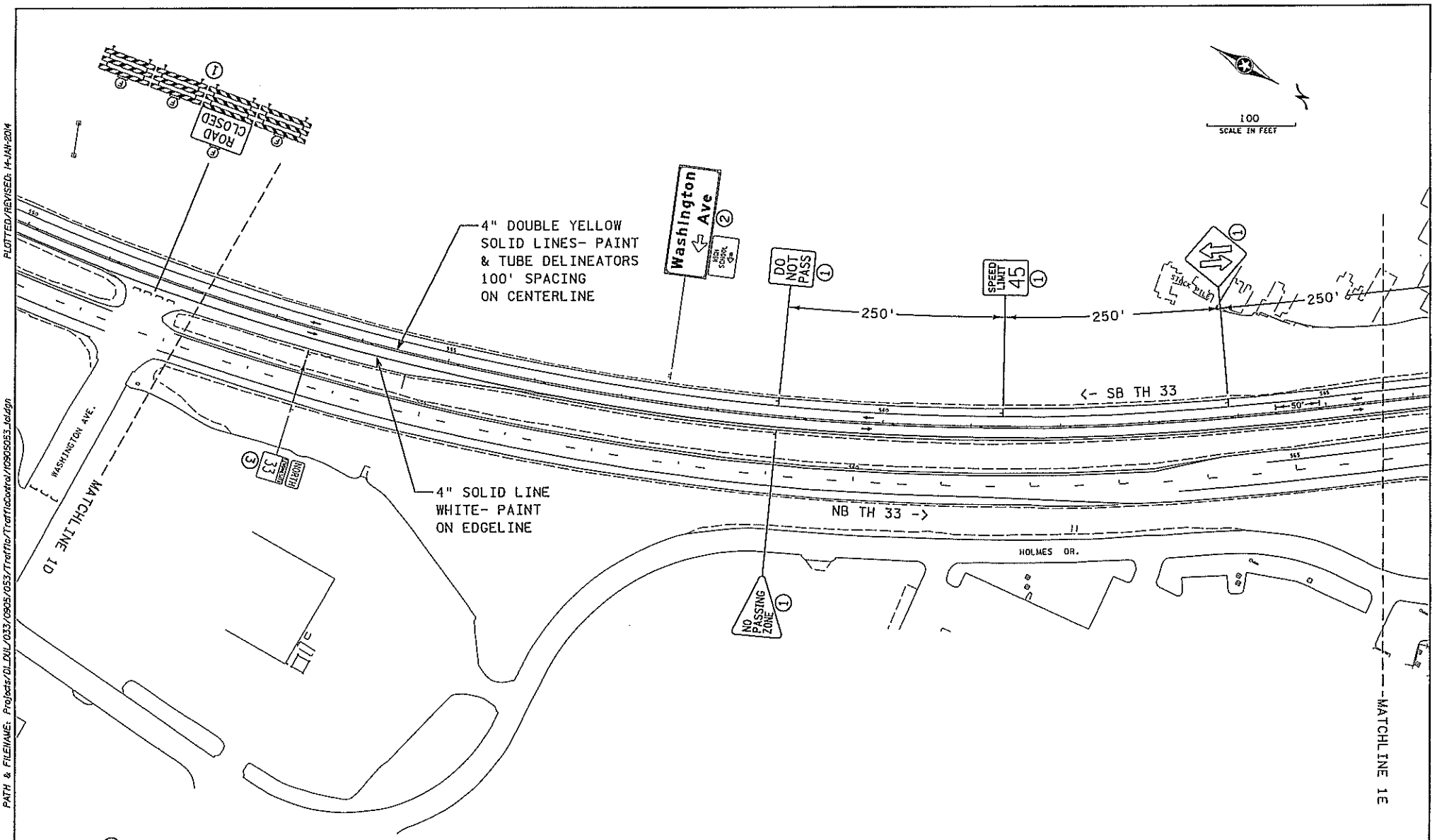
I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
DATE 10-FEB-2014 LIC. NO. 26405 ENGINEER James A. Miles
JAMES A. MILES

TRAFFIC CONTROL- STAGE 1 TH 33 NB CLOSED

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 182 OF 257 SHEETS

STAGE 1- SHEET 6 OF 10

PLOTTED/REVISED: 10-FEB-2014
PATH & FILENAME: Projects/01_DIL/033/0905/053/Traffic/TrafficControl/t0905053_tc1.dgn



① PLACE
② INPLACE
③ RELOCATE

NOTE: COVER CONFLICTING INPLACE SIGNS NOT NOTED OTHERWISE.

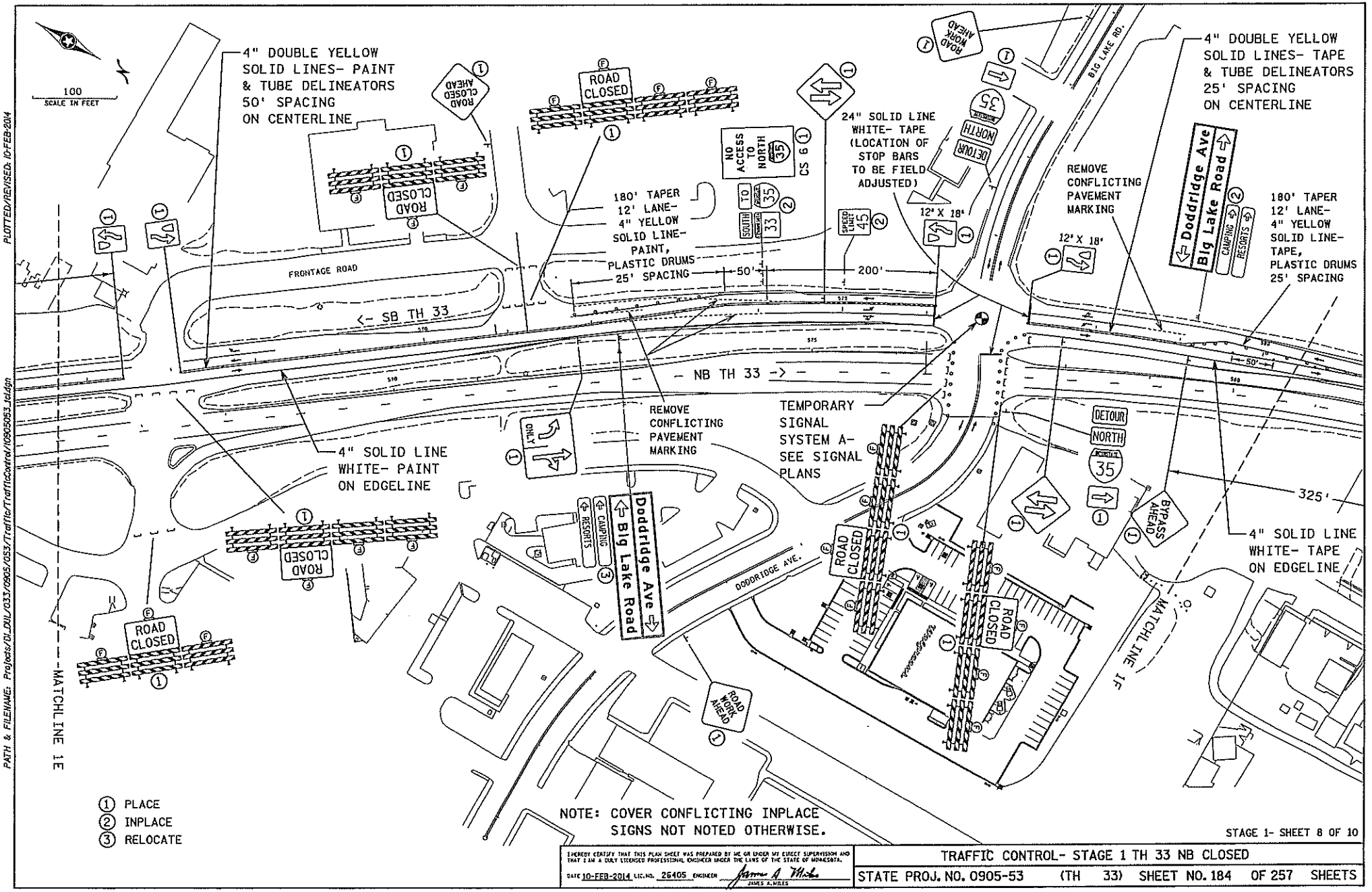
STAGE 1- SHEET 7 OF 10

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER James A. Nikes JAMES A. NIKES

TRAFFIC CONTROL- STAGE 1 TH 33 NB CLOSED

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 183 OF 257 SHEETS

PLOTTED/REVISED: 14-JAN-2014
PLOT NAME: t0905053_tsl183
PATH & FILENAME: Projects/DL_DUL/033/0905/053/Traffic/TrafficControl/t0905053_tsl.dgn



STAGE 1- SHEET 8 OF 10

I HEREBY CERTIFY THAT THIS PLAN 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.

DATE 10-FEB-2014 LIC. NO. 25405 ENGINEER JAMES A. MILES

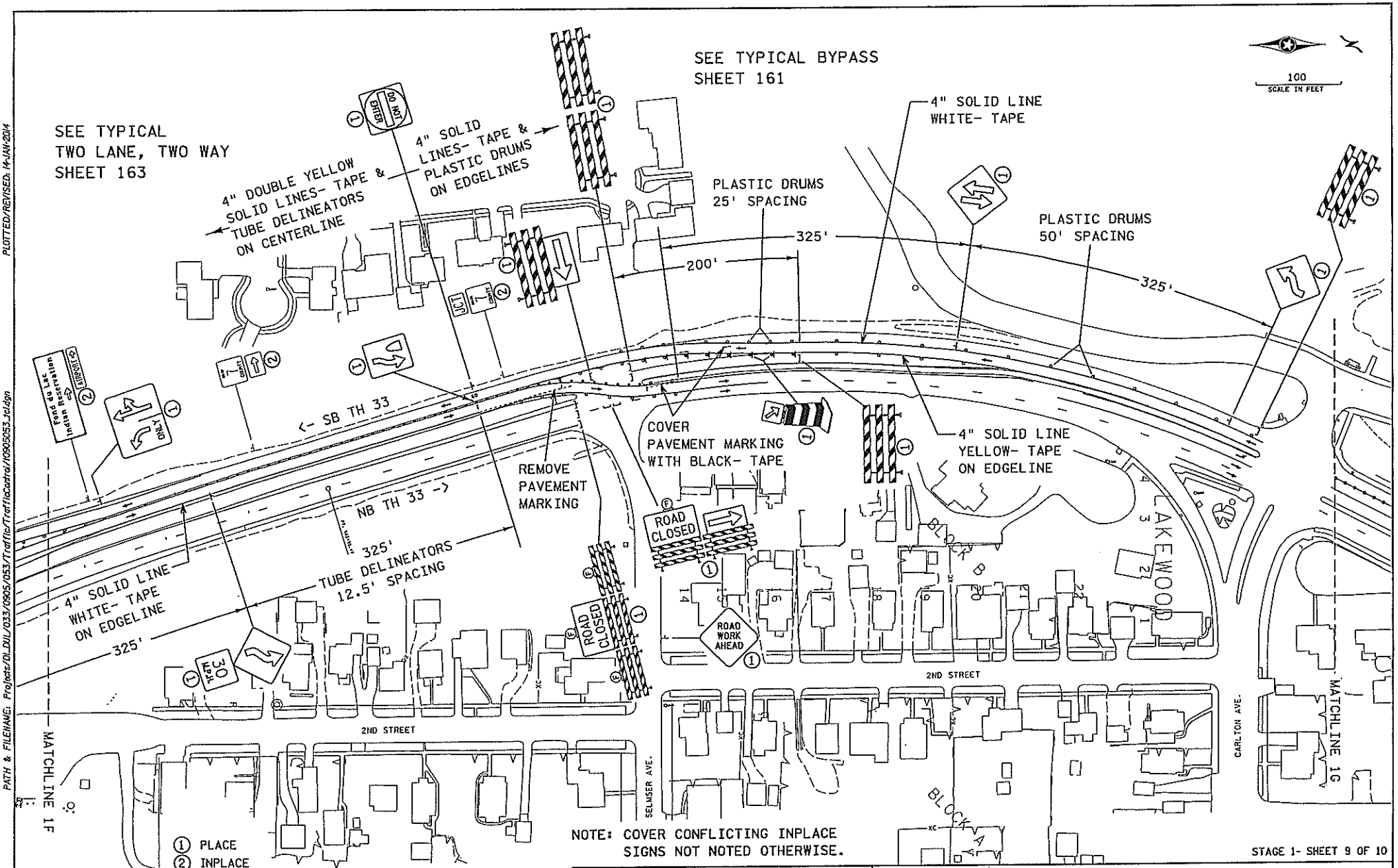
TRAFFIC CONTROL- STAGE 1 TH 33 NB CLOSED

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 184 OF 257 SHEETS

PLOTTED/REVISED: 10-FEB-2014

PATH & FILENAME: Projects/DL_DIU/033/0905/053/Traffic/Traffic Control/10905053_tc1.dgn

FILE NAME: tc1.dgn



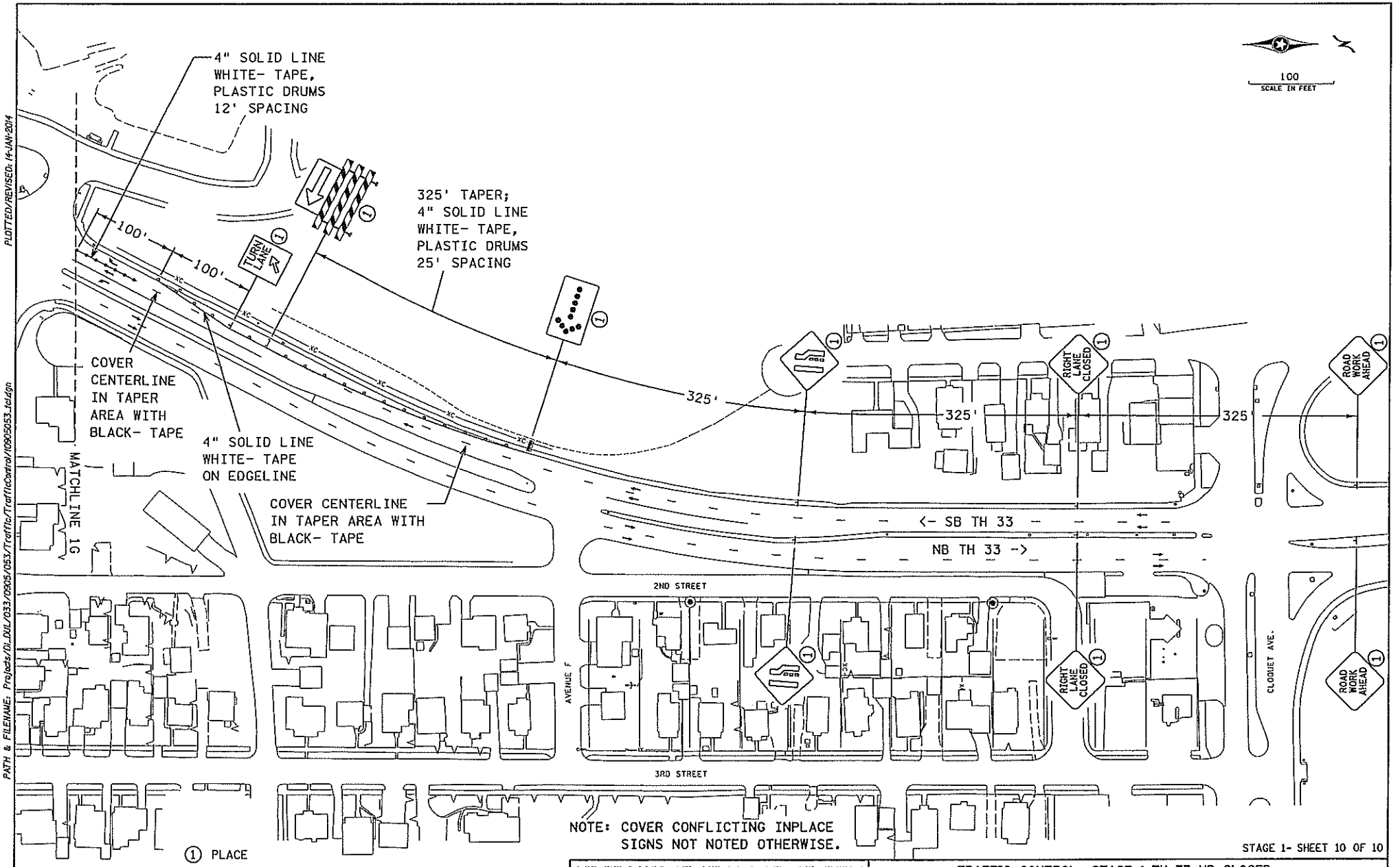
STAGE 1- SHEET 9 OF 10

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER James A. Miles JAMES A. MILES

TRAFFIC CONTROL- STAGE 1 TH 33 NB CLOSED

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 185 OF 257 SHEETS

PATH & FILENAME: Projects/DL_DUL/033/0905/053/Traffic/Traffic Control/0905053_tc1.dgn
PLOTTED/REVISED: 14-JAN-2014



PLOTTED/REVISED: 14-JAN-2014

PATH & FILENAME: Projects/01_DUL/033/0905/053/Traffic/Traffic Control/1090503_1c1.dgn

I HEREBY CERTIFY THAT THIS PLAN 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.

DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER James A. Nikes
JAMES A. NIKES

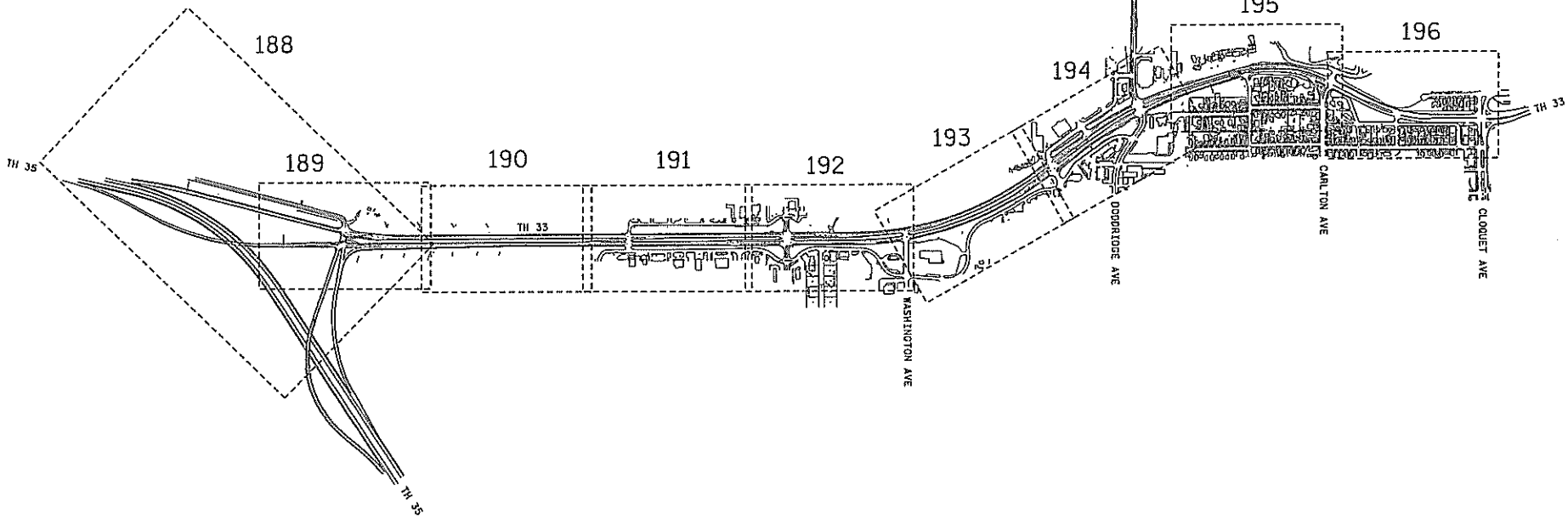
TRAFFIC CONTROL- STAGE 1 TH 33 NB CLOSED

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 186 OF 257 SHEETS

STAGE 1- SHEET 10 OF 10

PLOTTED/REVISED: 14-JAN-2014

PATH & FILENAME: Projects/DL_DIL/033/0905/053/Traffic/TrafficControl/10905053_1st.dgn



STAGE 2- SHEET 1 OF 10

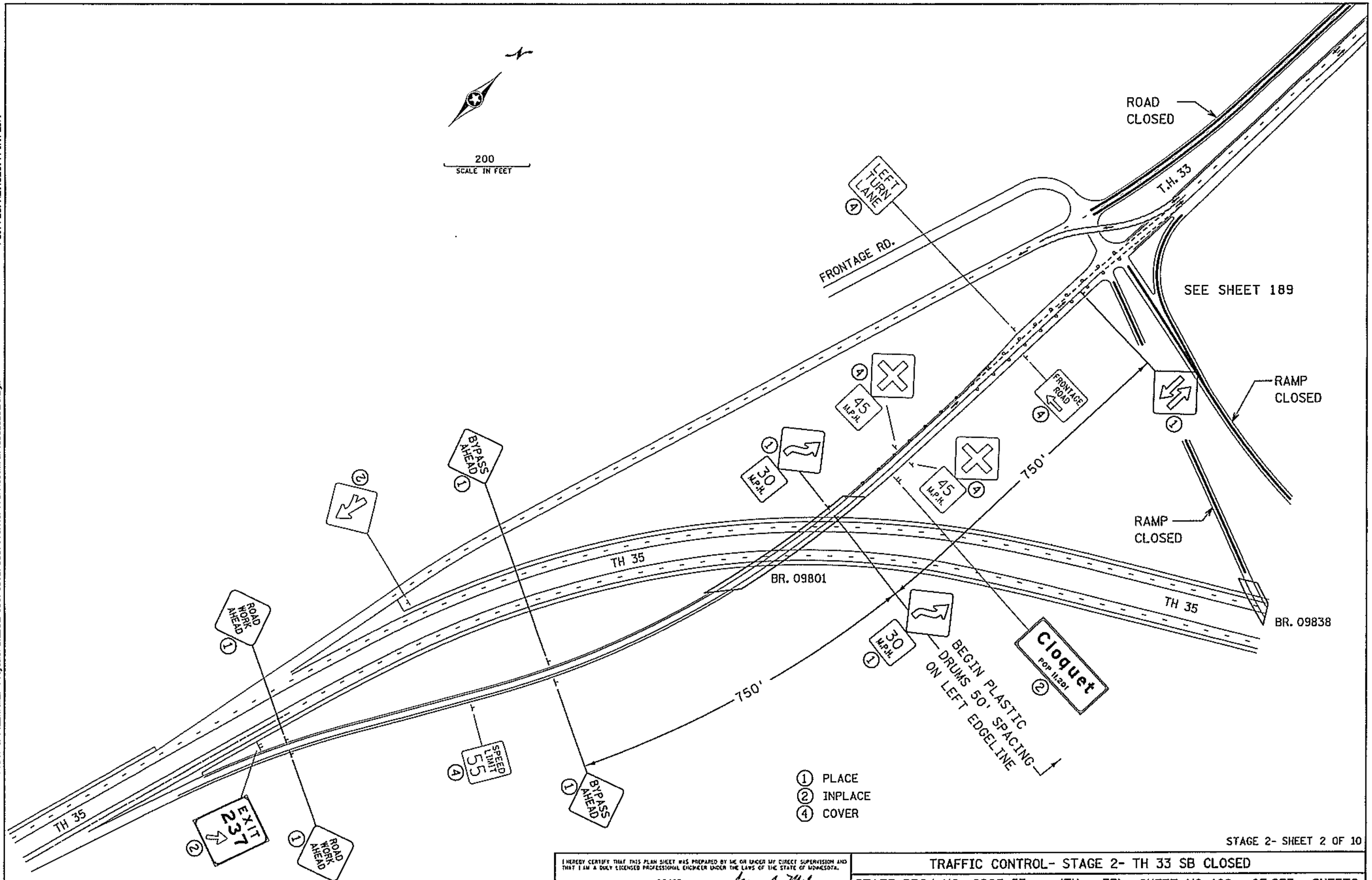
I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER James A. Miles

JAMES A. MILES

TRAFFIC CONTROL- STAGE 2 TH 33 SB CLOSED - GENERAL LAYOUT

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 187 OF 257 SHEETS



① PLACE
② INPLACE
④ COVER

STAGE 2- SHEET 2 OF 10

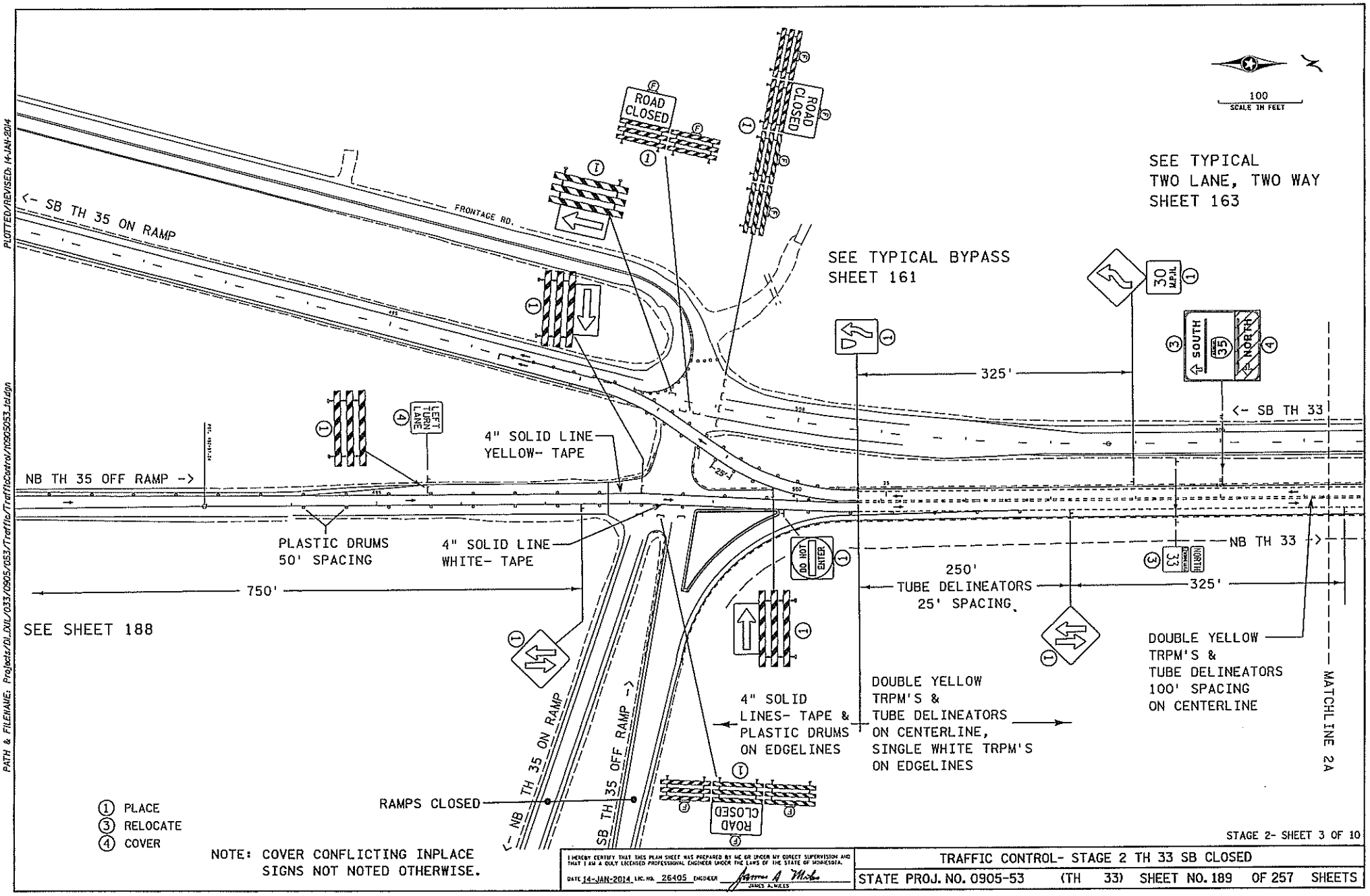
I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER JAMES A. MILES

TRAFFIC CONTROL- STAGE 2- TH 33 SB CLOSED

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 188 OF 257 SHEETS

PATH & FILENAME: Projects/DI_DUL/033/0905/053/Traffic/TrafficControl/t0905053_tcl.dgn

PLOTTED/REVISED: 14-JAN-2014



PLOTTED/REVISED: 14-JAN-2014

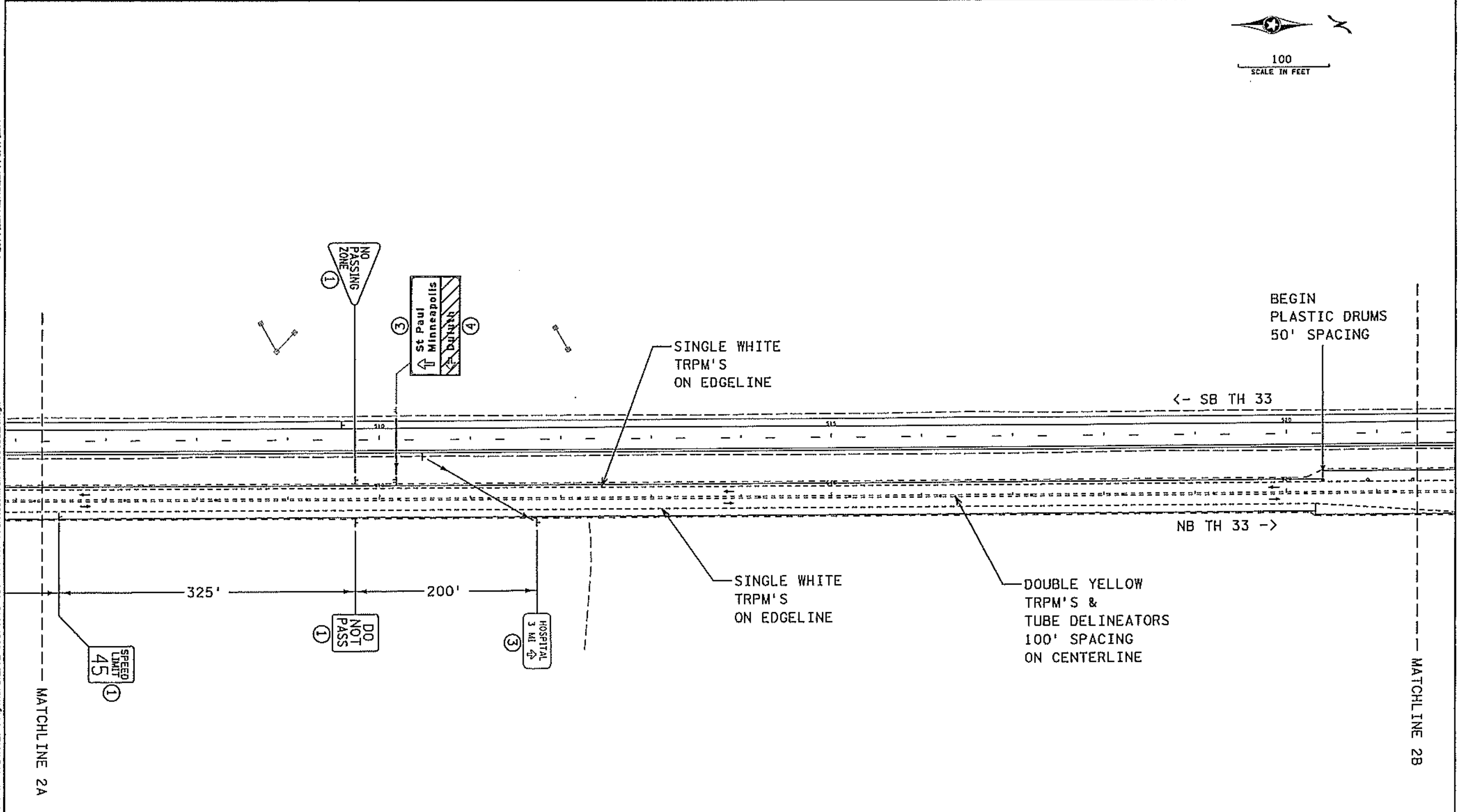
PATH & FILENAME: Projects/01_DIL/033/0905/053/Traffic/TrafficControl/0905053_tc1.dgn

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER James A. Miles
JAMES A. MILES

STAGE 2- SHEET 3 OF 10

TRAFFIC CONTROL- STAGE 2 TH 33 SB CLOSED

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 189 OF 257 SHEETS



① PLACE
③ RELOCATE
④ COVER

NOTE: COVER CONFLICTING INPLACE
SIGNS NOT NOTED OTHERWISE.

STAGE 2- SHEET 4 OF 10

I HEREBY CERTIFY THAT THIS PLAN 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.

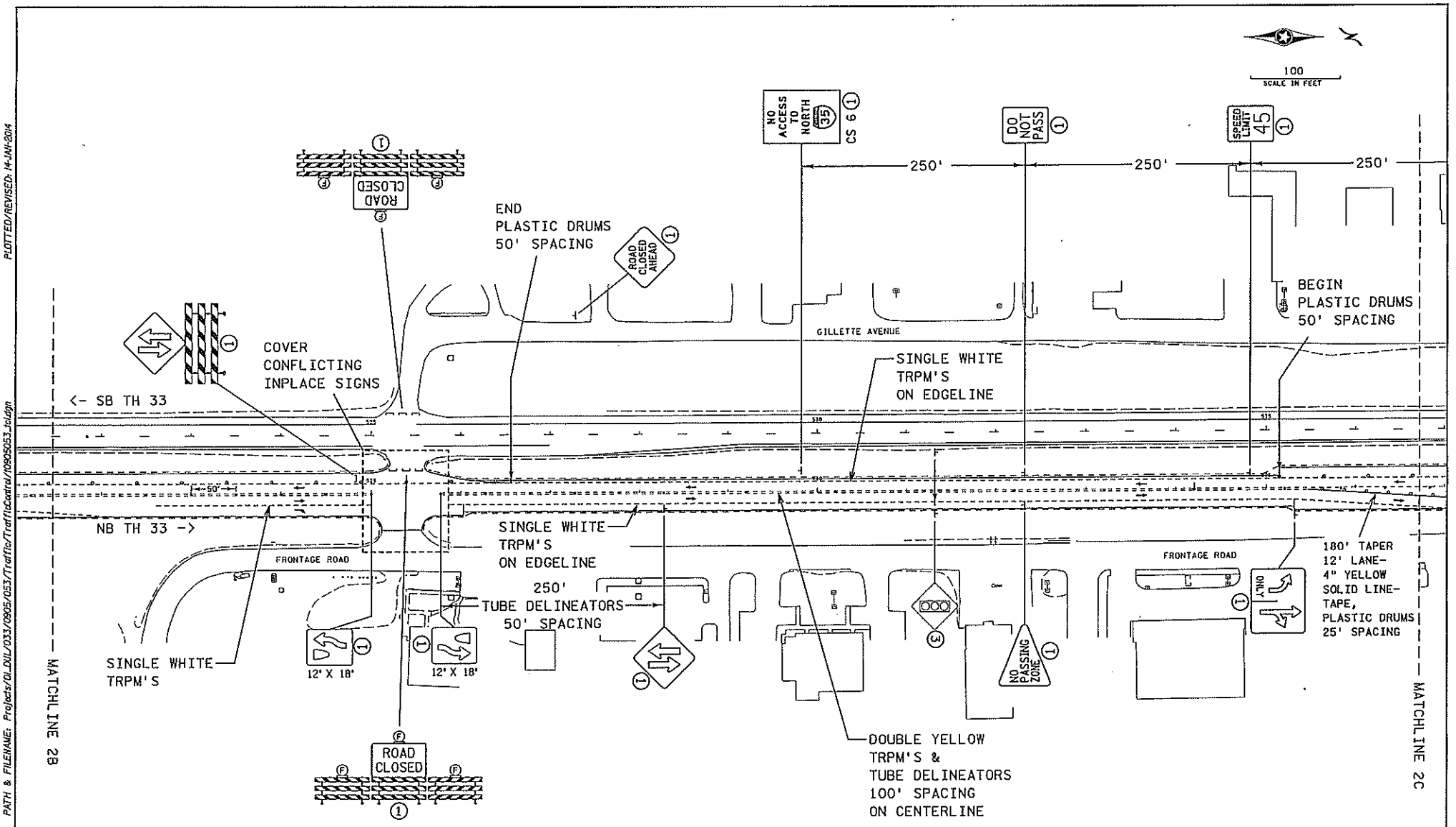
DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER JAMES A. MILES

TRAFFIC CONTROL- STAGE 2 TH 33 SB CLOSED

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 190 OF 257 SHEETS

PATH & FILENAME: Projects/D1_DUL/033/0905/053/Traffic/TrafficControl/t0905053_tcl.dgn

PLOTTED/REVISED: 14-JAN-2014



PLOTTED/REVISED: 14-JAN-2014

PATH & FILENAME: Projects/01_DNL/033/0905/053/Traffic/Traffic control/0905053_tc1.dgn

① PLACE
③ RELOCATE

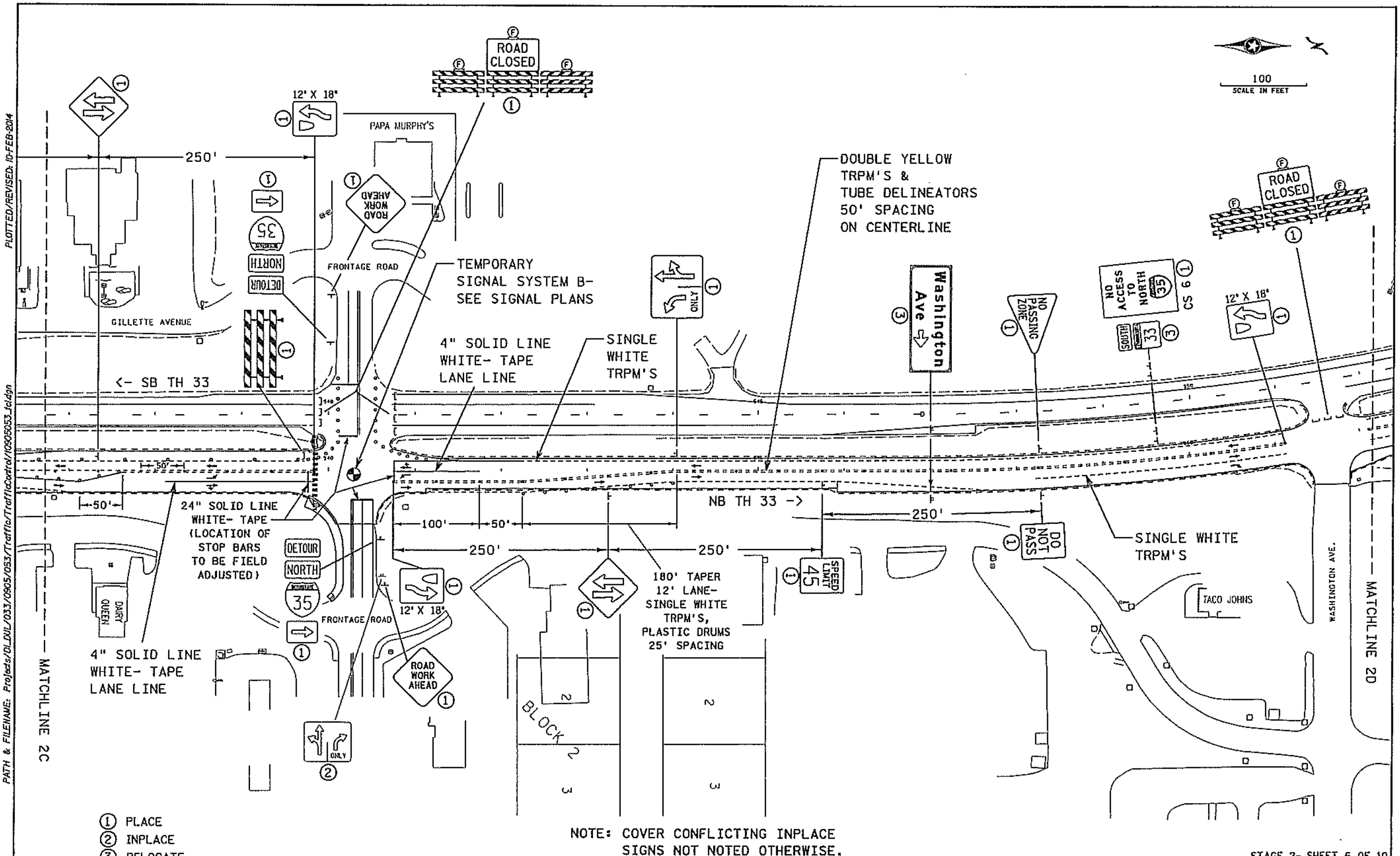
NOTE: COVER CONFLICTING INPLACE SIGNS NOT NOTED OTHERWISE.

STAGE 2- SHEET 5 OF 10

I HEREBY CERTIFY THAT THIS PLAN 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.
DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER James A. Niles
JAMES A. NILES

TRAFFIC CONTROL- STAGE 2 TH 33 SB CLOSED

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 191 OF 257 SHEETS



STAGE 2- SHEET 6 OF 10

I HEREBY CERTIFY THAT THIS PLAN 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.

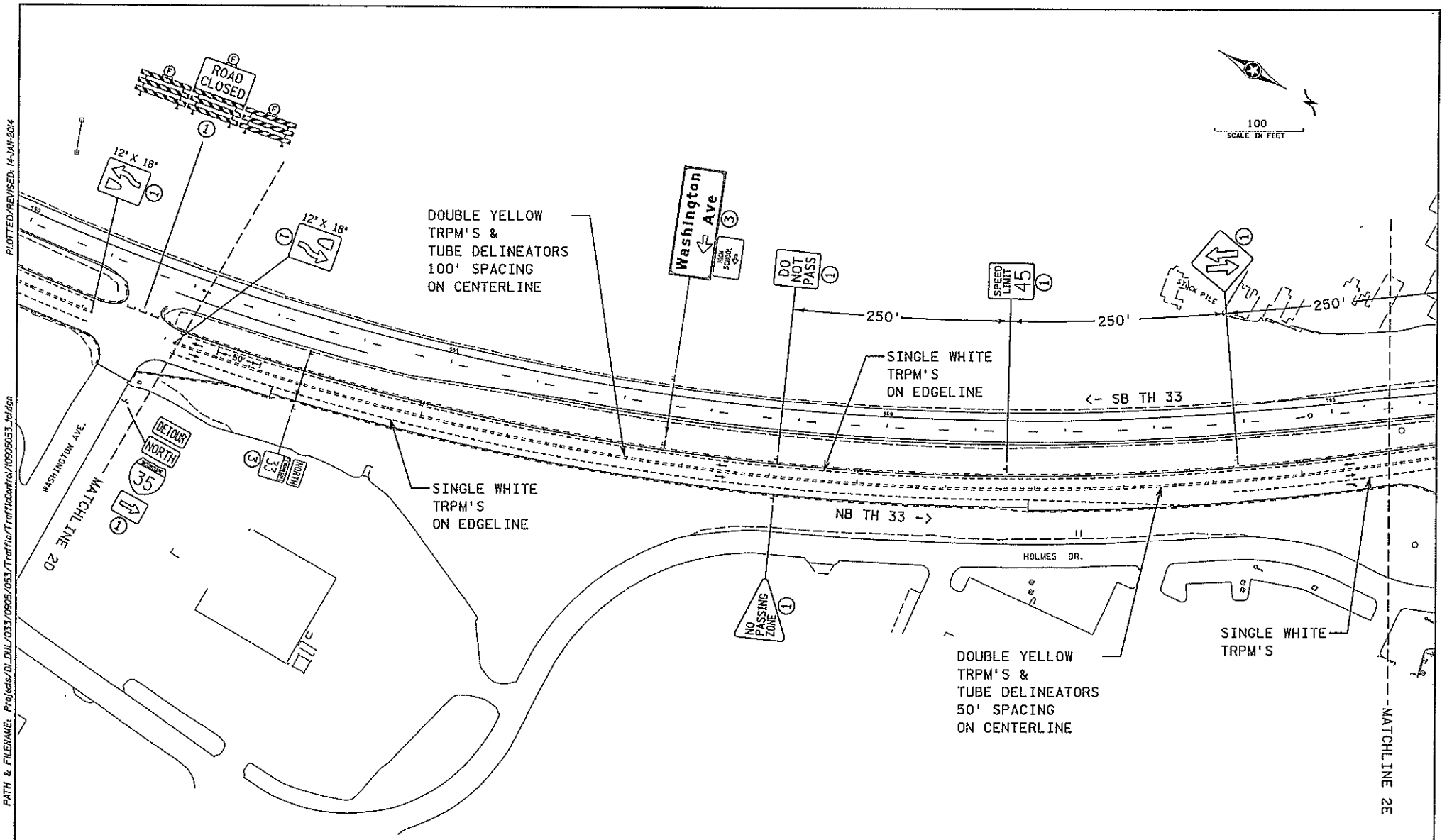
DATE 10-FEB-2014 LIC. NO. 26405 ENGINEER JAMES A. MILES

TRAFFIC CONTROL- STAGE 2 TH 33 SB CLOSED

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 192 OF 257 SHEETS

PLOTTED/REVISED: 10-FEB-2014

PLOT NAME: 1090505 3.tcl 192
PATH & FILENAME: Projects/DLDL/033/0905/053/Traffic/TrafficControl/1090505 3.tcl.dgn



PLOTTED/REVISED: 14-JAN-2014

PATH & FILENAME: Projects/DL_DIL/033/0905/053/Traffic/TrafficControl/0905053_tc1.dgn

① PLACE
③ RELOCATE

NOTE: COVER CONFLICTING INPLACE SIGNS NOT NOTED OTHERWISE.

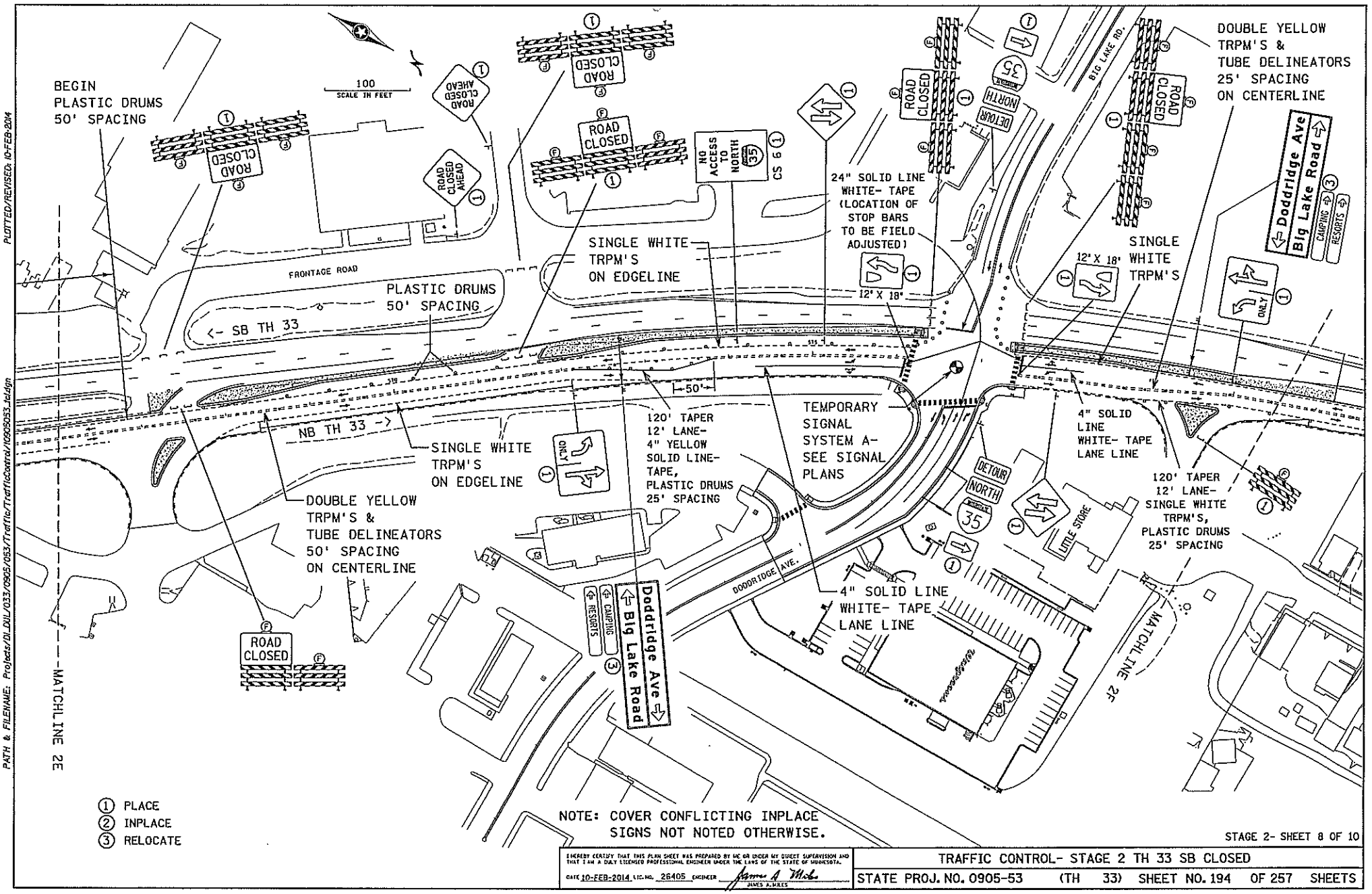
STAGE 2- SHEET 7 OF 10

I HEREBY CERTIFY THAT THIS PLAN 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.

DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER James A. Miles
JAMES A. MILES

TRAFFIC CONTROL- STAGE 2 TH 33 SB CLOSED

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 193 OF 257 SHEETS



PLOTTED/REVISED: 10-FEB-2014

PATH & FILENAME: Projects/01_DIL/033/0905/053/Traffic/Traffic Control/16905053_tc1.dgn

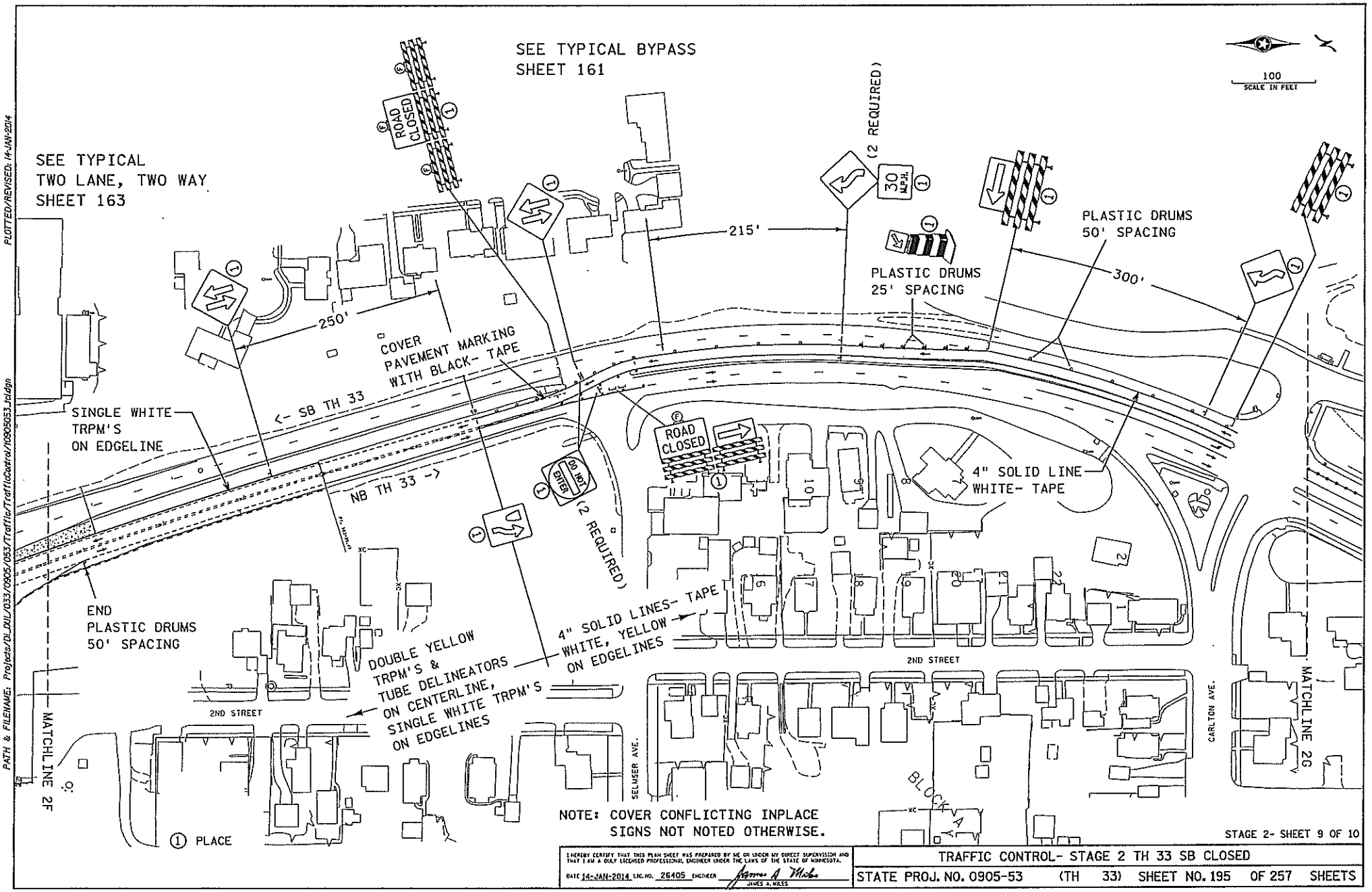
I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 10-FEB-2014 LIC. NO. 26405 ENGINEER James A. Mikes
JAMES A. MIKES

TRAFFIC CONTROL- STAGE 2 TH 33 SB CLOSED

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 194 OF 257 SHEETS

STAGE 2- SHEET 8 OF 10



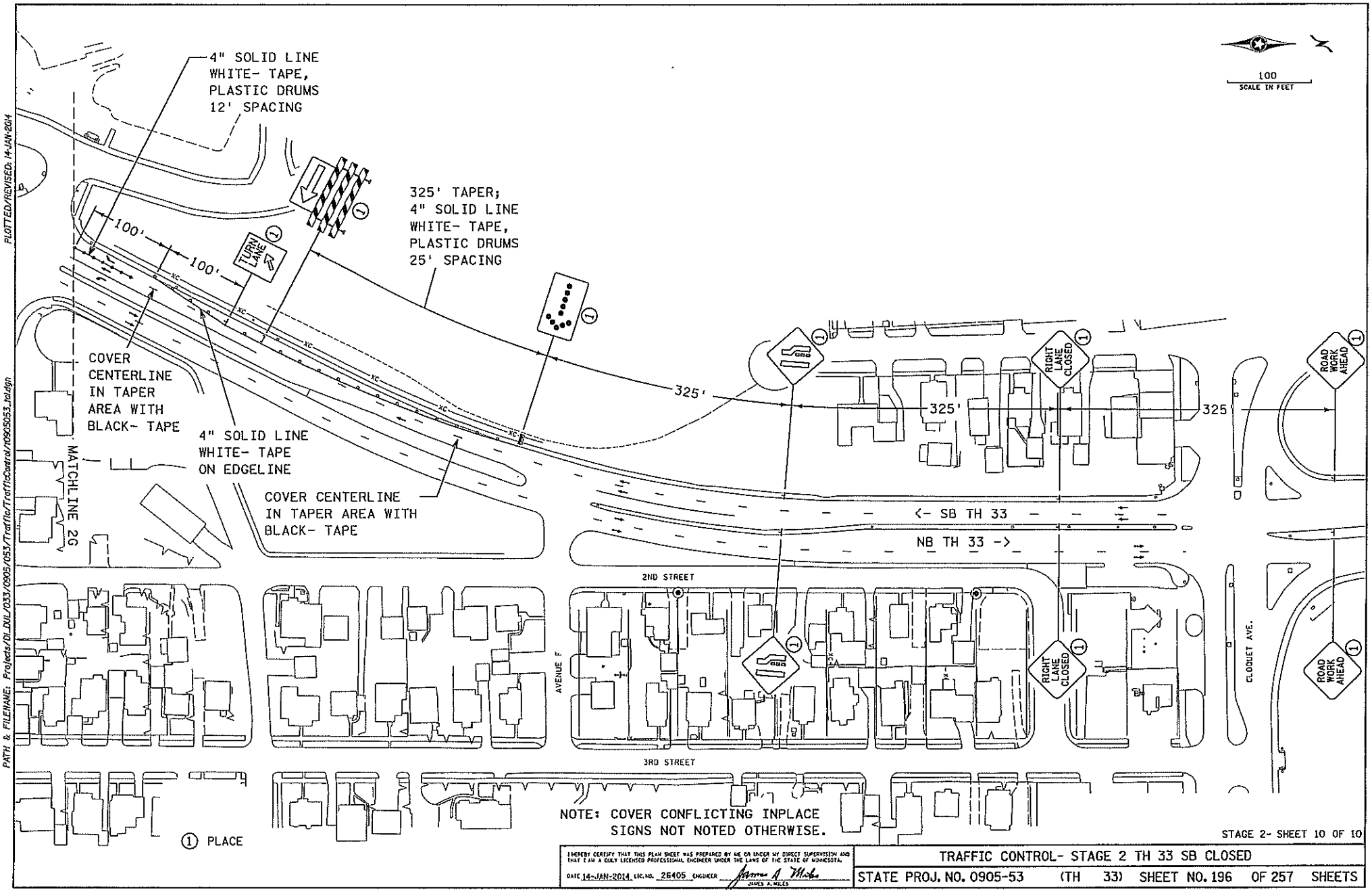
STAGE 2- SHEET 9 OF 10

I HEREBY CERTIFY THAT THIS PLAN 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.

DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER James A. Mikes
JAMES A. MIKES

TRAFFIC CONTROL- STAGE 2 TH 33 SB CLOSED

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 195 OF 257 SHEETS



PLOTTED/REVISED: 14-JAN-2014

PATH & FILENAME: Projects/DI_DIL/033/0905/053/Traffic/TrafficControl/t0905053_tc1.dgn

I HEREBY CERTIFY THAT THIS PLAN 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.

DATE 14-JAN-2014 LIC. NO. 26405 ENGINEER James A. Miles
JAMES A. MILES

TRAFFIC CONTROL- STAGE 2 TH 33 SB CLOSED

STATE PROJ. NO. 0905-53 (TH 33) SHEET NO. 196 OF 257 SHEETS

S-1 (1404) MAINTENANCE OF TRAFFIC AND (2563) TRAFFIC CONTROL

REVISED 12/13/13 ◄DO NOT REMOVE THIS. IT NEEDS TO STAY IN FOR THE CONTRACTORS.

All traffic control devices shall conform and be installed in accordance to:

- the "Minnesota Manual on Uniform Traffic Control Devices" (MN MUTCD);
- Part 6, "Field Manual for Temporary Traffic Control Zone Layouts" (Field Manual);
- the "Guide to Establishing Speed Limits in Highway Work Zones";
- the Minnesota Flagging Handbook;
- the Minnesota Standard Signs Manual;
- the Traffic Engineering Manual;

And the provisions of MnDOT 1404 and 1710, the Plan, and these Special Provisions.

The Contractor shall furnish, install, maintain, and remove all traffic control devices required to provide safe movement of vehicular traffic through the Project during the life of the Contract from the start of Contract operations to the completion thereof. The Engineer will have the right to modify the requirements for traffic control as deemed necessary due to existing field conditions. The highways shall be kept open to traffic at all times, except as modified below.

Traffic control devices include, but are not limited to, barricades, warning signs, trailers, flashers, cones, and drums, as required and sufficient barricade weights to maintain barricade stability.

The Contractor is advised of the changes to the Prevailing Wage Coverage as noted in the Notice to Bidders – Traffic Control Prevailing Wage Coverage contained in the front of this Proposal.

S-1.1 TRAFFIC CONTROL

(A) If traffic control layouts are not present in the Plan, or if the Contractor modifies the layout or sequence from the Plan, the Contractor shall submit the proposed traffic control layout to the Engineer, for approval, at least seven (7) days prior to the start of construction. The Contractor does not need to submit layouts that can be found in the Field Manual. All other layouts that are not found in the plan shall be submitted. At least 24 hours prior to placement, all traffic control devices shall be available on the Project for inspection by the Engineer. The Contractor shall modify his/her proposed traffic control layout and/or devices as deemed necessary by the Engineer.

(B) The Contractor shall be responsible for the immediate repair or replacement of all traffic control devices that become damaged, moved or destroyed, of all lights that cease to function properly, and of all barricade weights that are damaged, destroyed, or otherwise fail to stabilize the barricades. The Contractor shall further provide sufficient surveillance of all traffic control devices at least once every 24 hours.

The Contractor shall furnish names, addresses, and phone numbers of at least three (3) individuals responsible for the placement and maintenance of traffic control devices. These individuals shall be "on call" 24 hours per day, seven days per week during the times any traffic control devices, furnished and installed by the Contractor, are in place. The required information shall be submitted to the Engineer at the Pre-construction Conference.

(C) The Contractor shall inspect, on a daily basis, all traffic control devices, which the Contractor has furnished and installed, and verify that the devices are placed in accordance with **the Traffic Control Layouts,** these Special Provisions, and/or the MN MUTCD. Any discrepancy between the placement and the required placement shall be immediately corrected.

The Contractor shall be required to respond immediately to any call from the Engineer or his designated representative concerning any request for improving or correcting traffic control devices. **If the Contractor is negligent in correcting the deficiency within one hour of notification the Contractor shall be**

subject to an hourly charge assessed at a rate of $250.00 per hour for each hour or any portion thereof with which the Engineer determines that the Contractor has not complied.

The Contractor is required to meet the traffic control device quality standards as determined in the Field Manual. The Contractor shall immediately replace traffic control devices that are deemed unacceptable. Signs that are dirty and result in a noticeable loss of reflectivity at night are also considered unacceptable and shall be cleaned or replaced. The Contractor shall be required to respond immediately to any call from the Engineer or his designated representative concerning the notification of unacceptable traffic control devices. **If the Contractor is negligent in correcting the deficiency within one day of notification the Contractor shall be subject to a daily charge assessed at a rate of $500 for each day or any portion thereof with which the Engineer determines that the Contractor has not complied.**

(D) The person performing the inspection in paragraph (C) above shall be required to make a daily log. This log shall also include the date and time any changes in the stages, phases, or portions thereof go into effect. The log shall identify the location and verify that the devices are placed as directed or corrected in accordance with the Plan. All entries in the log shall include the date and time of the entry and be signed by the person making the inspection. The Engineer reserves the right to request copies of the inspection logs, as he deems necessary.

The Contractor shall provide copies of the inspection logs on a weekly basis on a day of the week determined by the Engineer. Additionally the Engineer may request copies of the logs at any time he deems necessary. **If the Contractor is negligent in providing the inspection logs on the predetermined weekly date or at the Engineer's request, the Contractor shall be subject to an hourly charge assessed at a rate of $250.00 per hour for each hour or any portion thereof with which the Engineer determines that the Contractor has not complied.**

(E) The third sentence of paragraph 2 in MnDOT 1404.7 (Winter Suspension) is hereby revised as follows:

> "In the event that any Contractor-owned traffic control devices are damaged or destroyed making them ineffective for their intended use, the Contractor will receive payment in the amount of the value of the traffic control device as determined by the Engineer."

(F) If, at any time, the Contractor fails to, in a timely manner, properly furnish, install, maintain or remove any of the required traffic control devices, the Department reserves the right to correct the deficiency. **Each time the Department takes such corrective action, the costs thereof, including mobilization, plus $5,000 will be deducted from monies due or coming due the Contractor.**

S-1.2 GENERAL REQUIREMENTS

(A) All portable sign assemblies shall be perpendicular to the ground. No traffic control device (signs, channelizing devices, arrowboards, etc.) shall be weighted so they become hazardous to motorists and workers. The approved ballast system for devices mounted on temporary portable supports is sandbags, unless it is designed, crash tested, and approved for the specific device. During freezing conditions, the sand for bags shall be mixed with a de-icer to prevent the sand from freezing. The sandbags shall be placed and maintained at the base of the traffic control device to the satisfaction of the Engineer.

When signs will remain in the same location for more than 30 consecutive days the signs shall be post mounted. This would not include portable signs, which are set up and taken down at the beginning and end of each work shift. The signs must be post mounted according to the Typical Temporary Sign Framing and Installation Detail Sheet found in the Plan or in these Special Provisions.

(B) When signs are installed, they shall be mounted on posts driven into the ground at the proper height and lateral offset as detailed in the MN MUTCD. **When signs are removed, the sign posts and stub posts**

shall also be removed from the Right of Way within two (2) weeks or the Contractor shall be subject to a daily charge assessed at a rate of $100.00 per day for each day or portion thereof with which the Engineer determines that the Contractor has not complied.

(C) All temporary rigid signs shall be fabricated with an approved retroreflective sheeting material of the appropriate color, and be listed on the Qualified Product Listing (QPL) for either "Sheeting for Rigid Temporary Work Zone Signs, Delineators, and Markers (Type IX and XI) " or "Sheeting for Rigid Permanent Signs, Delineators, and Markers (Type IX and XI)". Signs remaining inplace that still apply during temporary operations need no change in sign sheeting.

Signs shall have an easily identifiable marking on the face to make the identification of approved retroreflective sign sheeting on temporary rigid signs in the field easier. This marking verifies that the sign sheeting has been approved for Rigid Sign. Temporary rigid signs 4 sq. feet and under in size and all barricades and route markers will be exempt from this marking. The appropriate marking shall be used for each type of the approved sheeting types. Refer to the instructions for the marking of temporary signs that are on the APL or directly at the following link: http://www.dot.state.mn.us/products/signing/pdf/typelabel.pdf

The retroreflective sheeting types and qualified products used for temporary signs and barricades are shown at http://www.dot.state.mn.us/products/signing/sheeting.html.

(D) At the beginning of the Project, the Contractor shall store at least 10 extra Type III barricades and 10 extra retroreflective drums, at a convenient location within the Project limits, to be used at the discretion of the Engineer. Furnishing and erecting these traffic control devices shall be incidental.

If additional devices, beyond the quantity specified above, are ordered by the Engineer the Contractor will be compensated according to Section S-1404.10 (ADDITIONAL TRAFFIC CONTROL DEVICES) of this Special Provision.

(E) **In Place Signing – SIGNS DURING CONSTRUCTION**

The in place signs will be removed and/or salvaged and new signs and/or salvaged signs will be installed as part of this contract. This work is paid for separately. The Contractor is required to maintain the in place regulatory, warning, and guide signs until the new signing is installed at the completion of the project.

All in place signs and delineators that interfere with the Contractor's normal operation shall be relocated outside of the work area or removed by the Contractor at the direction of the Engineer. If approved by the Engineer the Contractor may provide temporary construction signing in lieu of relocating the in place signing.

All costs incurred to relocate, salvage, and reinstall in place signing until the new signs are installed shall be incidental work and no direct compensation will be made therefore.

(F) Open excavation adjacent to the existing pavement will not be permitted on opposite sides of the roadway at the same time.

(G) **The Contractor shall provide protective devices necessary to protect traffic from excavations, drop-offs, falling objects, splatter or other hazards that may exist during construction. This work shall be incidental.** The Contractor will not be allowed to suspend material ,equipment, tools and personnel over traffic unless a lane closure is established below. All costs associated with the lane closure will be considered incidental.

(H) The Contractor will not be permitted to park vehicles or construction equipment in a location that obstructs any traffic control device. The parking of workers' private vehicles will not be allowed within the Project limits unless so approved by the Engineer.

Note 1 of Layout 2 of the Field Manual is hereby deleted. The Contractor will not be allowed to load or unload material or equipment on the shoulders of the roadway without a full shoulder closure using appropriate signs, barricades and channelizing devices as directed by the Engineer.

(I) The Contractor will not be allowed to store materials or equipment within 30 feet [10 m] of through traffic unless approved by the Engineer. If materials or equipment must be stored within 30 feet [10 m] of through traffic, the Contractor shall provide Type B channelizers, barricades or barriers, placed near the object to warn and protect traffic.

(J) **High Visibility Apparel**

All workers within the road Right-of-Way who are exposed to either traffic or to construction equipment shall wear reflectorized high-visibility safety apparel.

High-visibility safety apparel means personal protective safety clothing that is intended to provide conspicuity during both daytime and nighttime usage, and meets the minimum performance Class 2 requirements of the ANSI/ISEA 107 – 2004 publication entitled "American National Standard for High-Visibility Safety Apparel and Headwear".

Additional Requirements: ANSI/ISEA 107-2004 Class 3 Requirements (Class 2 Vest with Class E Long Pants)

- Flag Persons – In addition to an ANSI Class 2 hat, vest, shirt, or jacket, flaggers shall wear high visibility Class E long pants.
- Nighttime and Low Light Conditions – All workers working at night or in low light conditions shall wear high visibility Class E long pants in addition to an ANSI Class 2 vest, shirt, or jacket.

All high visibility apparel must be worn in the manner for which it was designed. All apparel worn on the torso must be closed in the front to provide contiguous 360 degree visibility. If a worker's high-visibility apparel becomes faded, worn, torn, dirty, or defaced, reducing the conspicuity of the apparel, the apparel shall be removed from service and replaced with new apparel.

The Contractor will be subject to a non-compliant charge for failure to adhere to the clothing requirements as listed above. Non-compliance charges, for each incident, will **assessed at a rate of $500.00 per incident** that the Engineer determines that the Contractor has not complied.

(K) **Night Work**

When work will be performed between the official hours of sunset and sunrise, all appropriate practices for night work will apply.

The Contractor shall provide sufficient numbers of light plants to illuminate the work area as determined by the Engineer. All costs incurred to provide such light plants shall be incidental.

All Contractor's personnel, except operators who will remain in their vehicles at all times, shall wear reflectively striped (approximately 33 feet [10 m] of striping), highly visible, short sleeved one or two piece coveralls (color and striping pattern to be determined by the District Traffic Engineer), at all times while working on the Project. These coveralls shall be considered an incidental. Any Contractor's employee found on the Project not wearing the prescribed reflective coveralls will be immediately ordered off the Project by the Engineer.

The Contractor shall provide a sufficient amount of 2 inch [50 mm] wide highly reflective vehicle marking tape to be applied to Contractor vehicles and equipment, as directed by the Engineer, and as provided by the manufacturer's instructions. This tape shall be considered incidental and shall be on the Approved Products List for "Conspicuity Vehicle Sheeting (Type VII)" as found at:

http://www.dot.state.mn.us/products/signing/sheeting.html. Vehicle examples to be marked with tape are Contractor rollers, paver, millers and other equipment normally found in the lane closure.

The State will **assess monetary deductions in the amount of $1000.00 for each Calendar Day** or portion thereof, that the Contractor fails to provide sufficient numbers of light plants as described in this Section S-__. As light plants may be dedicated or otherwise made available to the Project, this assessment will be chargeable even if reasons beyond the control of the Contractor such as breakdowns, late delivery of materials, weather delays, or other unanticipated problems cause the work to be accomplished in non-daylight hours.

(L) A "Work Zone Speed Limit" will be required on this Project at all times that daily lane closures are in use and workers are present, as directed by the Engineer. The speed limit may be reduced up to 10 miles per hour however the minimum speed limit that may be established is 30 miles per hour. Work zone speed limits shall be provided in accordance with the "Work Zone Speed Limit Guidelines", dated December 2010. This publication may be obtained from the Office of Traffic, Safety and Technology, the District Traffic Engineer, or at the following website: http://www.dot.state.mn.us/speed/pdf/WZSpeedLimitGuideline.pdf.

All costs incurred to provide work zone speed limits shall be incidental.

(M) The Contractor shall provide a Traffic Control Supervisor. Payment and measurement will be made as provided in Section S-2563 (TRAFFIC CONTROL SUPERVISOR) of these Special Provisions.

(N) In temporary traffic control zones only, a 12" x 18" black on white "Keep Right" sign, may be used in lieu of the sizes stated in the Standard Signs Manual.

S-1.3 VEHICLE WARNING LIGHT SPECIFICATION

All Contractors, subcontractors' and suppliers' mobile equipment, operating within the limits of the Project with potential exposure to passing traffic, shall be equipped with operable warning lights that meet the appropriate requirements of the SAE specifications. This would include closed roads that are open to local traffic only. This also includes any vehicle that enters the traveled roadway at any time. The SAE specification requirements are as follows:

360 Degree Rotating Lights - SAE Specification J845

Flashing Lights - SAE Specification J595

Flashing Strobe Lights - SAE Specification J1318

Lights shall be mounted so that at least one light is visible at all times from a height of 3.5 feet and from a 100 foot radius about the equipment. In order to meet the 360 degree at 60 foot [18 m] radius requirements supplemental lighting may be used in addition to the lights on the Approved Products List. All supplemental lights must be SAE Class 1 certified. This specification is to be used for both day and night time operations. All costs incurred to provide warning lights shall be at no cost to the Department. These warning lights shall also be operating and visible when a vehicle decelerates to enter a construction work zone and again when a vehicle leaves the work zone and enters the traveled traffic lane.

Any warning lights shall be on the Approved Products List for Vehicle Lighting which is found at the following weblink: http://www.dot.state.mn.us/products/vehiclelighting/vehiclesafetylights.html. The list may also be obtained by contacting:

Vehicle Warning Lights
Office of Construction MS650
Transportation Bldg. OR by calling: (651)366-4216
395 John Ireland Blvd.
St. Paul, MN 55155

This list is updated periodically. Warning light suppliers and manufacturers may contact the above for information on adding new products to the list.

A **$100 penalty (per incident) will be assessed** against the Contractor each time failure to comply with the above requirements is observed on the Project site.

S-1.4 LANE CLOSURE REQUIREMENTS

(A) Temporary lane closures or other traffic restrictions by the Contractor, during work hours and consistent with the time restrictions, will be permitted only during those hours and at those locations approved by the Engineer. Requests for temporary lane closures shall be made at least 24 hours prior to such closures. When a temporary lane closure is used by the Contractor, the closure shall be incidental work.

(B) The Contractor shall notify the Engineer in writing at least 72 hours prior to the start of any construction operation that will necessitate lane closure or internal traffic control signing.

(C) Unless otherwise approved by the Engineer, any temporary lane closure that is adjacent to traffic, and is extending to or beyond 1000 feet [300 m] shall have a minimum of one Type III barricade, or three drums, placed in the closed lane for every 1000 feet [300 m] of extension. Any lane closure that is adjacent to traffic and inplace 3 days or more, shall use the Type III barricade only.

(D) All temporary lane closures shall have Type B Channelizers (drums, Type I or Type II barricades, vertical panel or Direction Indicator Barricades) in the lane closure taper and in any shifts in traffic alignment.

(E) Short Term Duration lane closures will not be permitted during inclement weather, nor any other time when, in the opinion of the Engineer, the lane closure will be a greater than normal hazard to traffic.

(F) When working on the shoulder or median the Contractor shall install the traffic control according to Layout 2 (Work on Shoulder) of the Field Manual. Notes 1 and 2 are deleted on Layout 2.

(G) The Contractor shall maintain a minimum of 1.25 miles [two km] between temporary lane closures, except if allowed by the Engineer,.

(H) **Flashing Arrow Panels**

The Contractor shall provide one vehicle or trailer mounted flashing arrow panel for each lane of each work area where traffic is restricted. The arrow panel shall meet the requirements of the MN MUTCD, and be on the Approved Products List for "Flashing Arrow Panels" found at: http://www.dot.state.mn.us/products/temporarytrafficcontrol/tcelectronicequipment.html, and shall be equipped with a light that is visible to personnel in the work area to indicate that the unit is in operation. The flashing arrow panel shall be incidental.

It is imperative that the Contractor continually operate each Flashing Arrow Panel at maximum legibility. Many factors, such as mechanical problems, insufficient charging, incorrect intensity settings, or other factors can degrade performance.

The Flashing Arrow Panel shall be stored off the shoulder when not in use, except if allowed by the Engineer. In the event the Engineer allows the arrow panel to remain on the shoulder, the arrow panel shall be delineated according to Layout 4 (Partial Shoulder Closure) in the Field Manual, as determined by the Engineer.

When not being actively used as a traffic control device, the Flashing Arrow Panel shall be stored beyond the clear zone distance. **Non-compliant charges, for each incident, will be assessed at a rate of $500.00 per incident that the Engineer determines that the Contractor has not complied.**

(I) **Portable Changeable Message Signs**

A Portable Changeable Message sign will be provided as shown in the traffic control plan.

(PCMS) Type C Trailer Mounted Message Signs will be permitted and shall be on the Approved Products List for "Changeable Message Signs: Type C - Three Lines, Trailer Mounted" as found at: http://www.dot.state.mn.us/products/temporarytrafficcontrol/tccelectronicequipment.html. It is imperative that the Contractor continually operate each PCMS at maximum legibility. Many factors, such as mechanical problems, insufficient charging, incorrect intensity settings, or other factors can degrade performance. If at any time the Contractor fails to operate a Portable Changeable Message Sign at maximum legibility, as determined by the Engineer, no payment will be made for each day that the Message Sign is deemed inadequate.

Except as approved by the Engineer, the message sign shall be stored off the shoulder when not in use. In the event the Engineer allows the message board to remain on the shoulder the message sign shall be delineated according to Layout 4 (Partial Shoulder Closure) in the Field Manual, as determined by the Engineer.

When not being actively used as a traffic control device, the Portable Changeable Message Sign shall be stored beyond the clear zone distance. **Non-compliant charges, for each incident, will be assessed at a rate of $500.00 per incident that the Engineer determines that the Contractor has not complied.**

Payment for Portable Changeable Message Signs furnished and installed, as directed by the Engineer, will be made by the Unit Day as specified in Section S-2563 (PORTABLE CHANGEABLE MESSAGE SIGN) of these Special Provisions.

(J) **Truck Mounted Attenuators (TMAs)**

If the Contractor establishes any temporary traffic control zone defined as "Moving" and/or "Mobile" by the Field Manual; Truck Mounted Attenuators (TMA) **SHALL** be used on all work vehicles or equipment operating totally or partially in the traffic lane. All references to "should" in the Field Manual in regards TMA use for Moving and/or Mobile layouts are hereby changed to "shall". The truck mounted attenuator shall meet the requirements of NCHRP 350 or AASHTO's Manual for Assessing Safety Hardware (MASH).

If any work vehicle, equipment or manual work zone is not equipped with a TMA, a shadow vehicle equipped with a TMA shall be utilized in lieu thereof. The TMA mounted shadow vehicle shall maintain a minimum distance of 200 and maximum distance of 300 feet from any operation that is otherwise unprotected by a TMA.

This requirement shall apply to all operations utilizing a Mobile and/or Moving work zone; including, but not limited to interim and permanent traffic striping and marking, stripe removal, rumble strip grinding, bituminous core cutting, running of the profilograph, and any other operations meeting the criteria for Mobile and for Moving operations, as shown in the Field Manual.

S-1.5 FLAGGER TRAINING AND REQUIREMENTS

(A) Any person acting as a flagger on this Project shall have attended a training session taught by a Contractor's qualified trainer. The Contractor's qualified trainer shall have completed a "MnDOT Flagger Train the Trainer Session" in the five years before the start date of this Contract and shall be on file as a qualified flagger trainer with the Department. The Flagger Trainer's name and Qualification Number shall be furnished by the Contractor at the pre-construction meeting. The Contractor shall provide all flaggers with the MnDOT Flagger Handbook and shall observe the rules and regulations contained therein. This handbook shall be in the possession of all flaggers while flagging on the Project. The Contractor shall obtain handbooks from the Department. Flaggers shall not be assigned other duties while working as authorized flaggers. The "Checklist for Flagger training" form shall be furnished to the Engineer any time a new flagger reports to work on the Project. The "Checklist for Flagger Training" form is found at: http://www.dot.state.mn.us/const/wzs/documents/flaggertrainingchecklist.pdf.

The Engineer will have the right to waive the above requirements.

(B) The Contractor shall furnish flag persons as required to adequately control traffic. Flag persons shall conform to the requirements set forth in the MN MUTCD. All costs incurred to provide such flag persons shall be incidental.

(C) The Contractor shall provide two-way radios for flag persons.

Flag persons shall wear high visibility retroreflective safety vests, pants and hats at all times while actively flagging on the Project. High visibility apparel shall also comply with current Minnesota OSHA Rules 5207.0100 and 5207.1000. The flag persons clothing shall be considered incidental.

The Contractor shall keep the separation distance between the last sign in the "flagger ahead" signing sequence and the actual flagger to the amount shown in the Field Manual, whenever it is practical. The maximum separation distance allowed from the signs to the flagger shall be ½ mile [0.8 km]. The Contractor shall use multiple flagger signing set-ups or continuously move the signing for moving flagging operations to keep within the distance limit. The "flagger ahead" signing sequence shall not be in place when flagging operations are not in effect.

The maximum distance between flaggers shall be ½ mile [0.8 km] unless otherwise authorized by the Engineer. In the event a distance longer than one mile is authorized, the Engineer may order the Contractor to provide two pilot cars at no additional cost to MnDOT.

All signs associated with the flagging operation must be removed or covered when flagging operations are not present.

The Contractor will be subject to a non-compliant charge for failure to adhere to the requirements listed in this Section S-__. These requirements include: providing two-way radios for flaggers, properly attired flaggers, flagging operation length requirements, and distance limit between the flagger and the last sign in the flagger sequence, and removing or covering flagger signs when flagging operations are not present. **Non-compliance charges, for each incident will be assessed at a rate of $500 per incident that the Engineer determines that the Contractor has not complied.** The charges may be assessed equally, separately, and may be assessed concurrently.

The Contractor shall coordinate the flagging operations in a manner that causes as little delay to the traveling public as possible, and at no time shall the delay exceed 10 minutes. In the event that the Contractor is unable to meet the maximum delay requirements, operations shall shut down until such time a new traffic control plan is developed which does meet the maximum delay requirement.

If hauling operations create hazards for the traveling public, the Contractor will be required to provide additional flaggers, as directed by the Engineer. All costs incurred to provide the additional flaggers shall be incidental.

(D) The Contractor shall furnish off-duty police officers in uniform with cars and a reflectorized high-visibility safety vest to direct traffic if deemed necessary and so ordered by the Engineer. "Police Officer" means every officer authorized to direct or regulate traffic or to make arrests for violations of traffic rules. Payment for police officers will be made by the unit hour as provided elsewhere in these Special Provisions.

S-1.6 MILLING AND PAVING OPERATIONS

(A) Milling and paving operations shall be completed over the full width of all traffic carrying lanes, including turn lanes, bypass, etc., under construction on each day's run. Traffic will not be allowed on a milled surface overnight.

(B) When traffic is allowed to drive on the milled surface, the Contractor shall furnish and install "GROOVED PAVEMENT" and "BUMP" signs with "Advisory Speed" plates at locations determined by the Engineer. Payment for these signs shall be included in the lump sum payment for traffic control.

(C) **Ramp Delineation**

After milling and paving, the Contractor shall provide retroflective barrels on each side of the ramp at 50 feet spacing to provide delineation. The spacing may increase to 100 feet spacing on tangent sections of the ramps at the discretion of the Engineer. The barrels shall remain in place until the final striping on the ramps is completed.

Providing the barrels for delineation is incidental to the traffic control item. No additional payment will be made.

(D) Any drop-off where traffic will cross from or to the in place surface, or from or to the milled surface, shall be tapered and/or chamfered so as to provide for the safe passage of traffic.

(E) The Contractor shall schedule construction operations to minimize traffic exposure to uneven lanes, milled edges, and edge drop-offs. Only after every attempt has been made to avoid these conditions and one or more of them are deemed necessary, the Contractor shall provide and maintain the appropriate traffic control in accordance with the "DROP OFF GUIDELINES" in the Field Manual.

(F) The Contractor shall not mill any notches for surfacing tapers until immediately prior to paving, except that with the Engineer's permission, the Contractor may mill the notches, and install and maintain temporary bituminous tapers to provide for the safe passage of traffic until the surfacing taper is installed.

(G) Constructing and milling tapers and/or chamfers shall be incidental.

S-1.7 SIGNAL SYSTEMS

The Contractor shall not interfere with the operation of any traffic signal system, except as required by the Contract. The Contractor shall notify the Engineer at least 24 hours prior to beginning any work that will interfere with any traffic signal system or its detectors.

The in place signal system(s) and/or temporary signal system(s) shall remain in operation until the new signal system(s) become operational.

If requested by the Engineer, the Contractor shall furnish off-duty police officers with cars for directing and controlling traffic during such times as the existing or temporary signal system at each location is out of operation. "Police officer" means every officer authorized to direct or regulate traffic or to make arrests for violations of traffic rules. Off-duty police officers shall be furnished in such numbers as deemed necessary by the Engineer to direct traffic. Payment for police officers will be made by the unit hour as provided elsewhere in these Special Provisions.

During the period when the existing signal system or temporary signal system is de-energized and the new signal system is energized, the Contractor shall furnish, erect, and maintain "Stop Ahead" signs and "Stop" signs. The quantity and size of the temporary signs as well as their placement in the field shall be as directed by the Engineer. The Contractor shall furnish and install materials to keep these signs upright and stationary. The signs shall remain the property of the Contractor.

S-1.8 MAINTENANCE AND STAGING OF TRAFFIC CONTROL

(A) The project is set up in 4 distinct stages:

- Preliminary Stage at CSAH 7 (Big Lake Road)/Doddridge Avenue
- Preliminary Stage on TH 33

- Stage 1 Northbound TH 33 Construction
- Stage 2 Southbound TH 33 Construction

(1803) PROSECUTION OF WORK addresses the construction requirements for each stage.

The plan includes traffic control layouts for Stage 1 and Stage 2 construction. The plan also includes a detour traffic control plan to provide access from southbound I-35 to TH 33 and from southbound TH 33 to northbound I-35. The detour traffic control plan will be used during Stage 1 and Stage 2 construction only.

Additional traffic control will be required in each stage to complete the work required in the plan. **The Contractor shall provide his proposed layouts to the Engineer for approval at least 7 days prior to construction as required by S_.1(A).** The Engineer may require field modifications to the approved layouts based on the effectiveness of the traffic layouts. Field modifications shall be at no additional cost to MnDOT. All traffic control shall comply with the most recent Minnesota Manual on Uniform Traffic Control Devices. This traffic control is included in the lump sum traffic control item.

Work that will require Contractor provided traffic control layouts includes but is not limited to:

Preliminary Stage – CSAH 7 (Big Lake Road)/Doddridge Road staged construction – traffic control layouts for staged construction of Big Lake Road and Doddridge Road. This includes road closure and detour signing during the 4 nights that Big Lake Road/Doddridge Avenue is allowed to be closed as described in (1803) PROSECUTION OF WORK.

Preliminary State – TH 33 – traffic control layouts for widening, turn lane construction, temporary signal construction, utility, and drainage construction.

Stage 1 Northbound TH 33 – traffic control layout for the 7 day closure of the east leg of the Gillette Avenue Signalized Intersection described in (1803) PROSECUTION OF WORK. The traffic control layout shall include directional signing on TH 33 to the business area accessed from the closed road. Businesses shall not be specifically named on the directional signing. The traffic control layout shall also provide directional signing from the business area to TH 33.

Stage 2 Southbound TH 33 – traffic control layout for the 7 day closure of the west leg of the Gillette Avenue signalized intersection described in (1803) PROSECUTION OF WORK. The traffic control layout shall include directional signing on TH 33 to the frontage road businesses accessed from the closed road. Businesses shall not be specifically named on the directional signing. The traffic control layout shall also provide directional signing from the frontage road to TH 33.

For long term (greater than 3 days) traffic control and detour signing, the Contractor is required to address conflicting guide signing. This includes covering conflicting signs and trailblazing along the detour route. Additionally the MnMUTCD requires pavement marking modifications at lane closure tapers and lane shifts for long term traffic control.

For all closures the Contractor shall provide signing that provides a 7 day advance notice of the closure. Night-time closures shall include the hours of closure.

(B) When traffic is allowed to drive on a gravel surface, the Contractor shall furnish and install "LOOSE GRAVEL" and "BUMP" signs with "Advisory Speed" plates at locations determined by the Engineer. Payment for these signs shall be included in the lump sum payment for traffic control.

(C) The Contractor shall cover all signs are not consistent with traffic operations. The cover should be a plate of solid material covering the entire legend or all of that part of the legend that is inappropriate. The cover shall be bolted to the sign and shall have a minimum of 1/8 inch [3 mm] plastic washers between the sign face and

the cover. See Figures 8.2A, 8.2B and 8.3C of the Traffic Engineering Manual for details. This work will be done as required by the Engineer.

(D) Street identification signage shall be maintained at all times. Where the only existing signs are small city or county signs located at the intersection, street names and address numbers shall be maintained by temporary installations as required by the Engineer. This is necessary to maintain the 911 emergency system.

(E) The Contractor may ban parking within the construction limits. All necessary signing is the responsibility of the Contractor and shall be installed, as directed by the Engineer, 24 hours prior to the parking ban. The Contractor shall remove that signing as soon as the work in the area has been completed.

The Contractor shall notify the city of Cloquet at least 24 hours prior to posting any parking ban within the city.

(F) No access to or from any public road will be permitted for the Contractor's equipment, material deliveries, the hauling of excavated materials of any kind, or employees' private vehicles, except at in place public road intersections, or at locations and in such manner as approved by the Engineer.

(G) The Contractor shall be required to supply manpower to assist MnDOT personnel in pavement marking related projects such as, but not inclusive to, collecting data from in place lane lines and marking final pavement marking alignments. This shall also include any lane closures or traffic control necessary to complete these projects safely. Payment for said pavement marking related projects shall be incidental.

S-1.9 MEASUREMENT AND PAYMENT

Traffic Control will be measured and paid for as follows:

Payment for all traffic control required to complete the Project as shown in the Plans and specified in these Special Provisions shall be made as a lump sum payment under Item 2563.601 (Traffic Control). Payment includes all costs associated with furnishing, installing, maintaining, relocating and subsequently removing traffic control devices (including flagpersons) as required. No additional measurement for payment will be made for individual activities and devices that constitute Traffic Control, except for other traffic control Bid Items specifically provided in the Contract.

Traffic Control layouts or devices not shown in the plan or stated in these Special Provisions that are a necessary part of the Contractor's operations to complete the project as shown in the plan are included in the lump sum traffic control item. There will be no increase or decrease in the lump sum payment or additional payment for other traffic control Contract Items, except as provided in the following paragraph.

If the Engineer orders a change in traffic control because of a Plan error, omission, changed condition or change of project scope, payment for such changes will be made as Extra Work.

The Traffic Control Payment Schedule will be as follows:

(1) When 5 percent of the Contract amount is earned, 50 percent of the amount bid for traffic control will be paid.
(2) When 10 percent, or more, of the Contract amount is earned, an additional 25 percent of the amount bid for traffic control will be paid.
(3) When 50 percent, or more, of the Contract amount is earned, an additional 20 percent of the amount bid for traffic control will be paid.
(4) The remaining 5 percent bid for traffic control will be paid when all work has been completed and accepted.

(5) In all items above, the original Contract amount shall be the total value of all Contract Items including the traffic control item, but the percentage earned in each case shall be exclusive of the traffic control item.

S-1.10 ADDITIONAL TRAFFIC CONTROL DEVICES

In addition to the traffic control devices shown on the Traffic Control Layouts, and/or Field Manual, the Engineer may require more traffic control as traffic conditions may warrant. These items are not intended for temporary lane closures.

NOTE: These provisions will apply ONLY when the Plan contains Item(s) for 2563.601 (Traffic Control) and/or if "Traffic Control Layouts" are included in the Plan or attached to this Proposal.

(A) General Requirements:

The Contractor shall furnish the additional traffic control devices as ordered by the Engineer.

The devices shall be installed and maintained in a functional and/or legible condition, at all times, to the satisfaction of the Engineer.

(B) Measurement:

Flashers, barricades, reflectorized drums, portable changeable message signs, 48 x 48 inch [1220 x 1220 mm] signs, and flashing arrow boards will be measured by the number of individual units of each type multiplied by the number of Calendar Days each unit is in service.

Standard signs of each type; other than 48 x 48 inch [1220 x 1220 mm] signs will be measured by the face area of signs furnished multiplied by the number of Calendar Days each square foot [square meter] of sign is in service.

Special construction signs will be measured by the face area thereof furnished and installed as specified.

Flag Persons and Police Officers will be measured by the length of time each is in service on the job. Police Officers shall be equipped with a car at all times on the job and the car shall be incidental.

(C) Payment:

Payment for additional traffic control devices of each type, at the appropriate pre-determined Unit Day price set forth below, shall be compensation in full for all costs of furnishing, installing, maintaining, and subsequently removing and disposing of the device.

Payment for standard signs of each type, other than 48 x 48 inch [1220 x 1220 mm] signs, will be made at the appropriate pre-determined Square Foot/Day [Square Meter/Day] price, which shall be payment in full for all costs of furnishing, installing, maintaining and subsequently removing and disposing of the signs.

The pre-determined Square Foot [Square Meter] price for "Construction Signs - Special" shall be payment in full to furnish, install, maintain and remove such signs. All materials required to furnish and install these signs will remain the property of the Contractor.

Payment for Flag Persons and Police Officers will be by the Unit Hour for each hour or portion thereof that each is in service on the Project.

Payment for all additional traffic control devices, as ordered by the Engineer, will be made in accordance with the following schedule:

ADDITIONAL TRAFFIC CONTROL DEVICES

Item No.	Item	Unit	Predetermined Price
2563.610	Flag Person	Hour	*
2563.610	Police Officer	Hour	**
2563.613	Type I Barricade w/Steady Burn Light	Unit Day	$1.05
2563.613	Type III Barricade	Unit Day	2.75
2563.613	Direction Indicator Barricade	Unit Day	1.25
2563.613	Reflectorized Plastic Safety Drum	Unit Day	0.85
2563.613	Reflectorized Plastic Safety Drum w/Down Arrow	Unit Day	0.95
2563.613	Weighted Traffic Channelizer	Unit Day	0.40
2563.613	Flasher Type A (Low Intensity)	Unit Day	0.50
2563.613	Flasher Type B (High Intensity)	Unit Day	1.75
2563.613	Flasher Type C (Steady Burn)	Unit Day	0.90
2563.613	48 x 48 inch [1220 x 1220 mm] Standard Sign	Unit Day	1.75
2563.613	48 x 48 inch [1220 x 1220 mm]Standard Sign w/Support	Unit Day	2.20
2563.613***	Portable Changeable Message Sign	Unit Day	225.00
2563.613****	Flashing Arrow Board (one shift)	Unit Day	33.00
2563.613****	Flashing Arrow Board (24 hour day)	Unit Day	45.00
2563.617*****	Standard Signs	m^2/Day	1.08
2563.617*****	Standard Signs	SQ.FT./Day	0.10
2563.617*****	Standard Signs w/support	m^2/Day	1.72
2563.617*****	Standard Signs w/support	SQ.FT./Day	0.16
2563.604	Construction Signs - Special	m^2	270.00
2563.618	Construction Signs - Special	SQ.FT.	25.00

* Shall be paid at the Contract Flagger Classification Total Rate, which is the Basic Rate plus the Fringe Rate.

** Shall be paid at the invoice price plus 10%

*** (PCMS) Type C Trailer Mounted Message Signs will be permitted. It is imperative that the Contractor continually operate each PCMS at maximum legibility. Many factors, such as mechanical problems, insufficient charging, incorrect intensity settings, or other factors can degrade performance. If at any time the Contractor fails to operate a Portable Changeable Message Sign at maximum legibility, as determined by the Engineer, no payment will be made for each day that the Message Sign is deemed inadequate.

**** It is imperative that the Contractor continually operate each Flashing Arrow Board at maximum legibility. Many factors, such as mechanical problems, insufficient charging, incorrect intensity settings, or other factors can degrade performance. If at any time the Contractor fails to operate the Flashing Arrow Board at maximum legibility, as determined by the Engineer, no payment will be made for each day that the Flashing Arrow Board is deemed inadequate.

***** Other than 48 X 48 inch [1220 X 1220 mm] Signs, with or without support.

NOTE: These predetermined unit prices apply only if not listed as separate bid items.

Barricades, drums and signs by the Unit Day shall be paid for up to 90 days per device. After 90 days, payment per Unit Day will continue at a reduced price of 40% of the Unit price.

S-2 (2102) PAVEMENT MARKING REMOVAL

REVISED 12/13/13 ◄DO NOT REMOVE THIS. IT NEEDS TO STAY IN FOR THE CONTRACTORS.
SP2014-61 - modified

The provisions of MnDOT 2102 are modified and/or supplemented with the following:

~~***Use S-.1 only when requested by District.***~~
~~S-2.1 In addition to the requirements above, the Contractor is responsible for determining what work areas have lead concentration above OSHA's Permissible Exposure Limit. Provide the information to the Project Engineer and MnDOT's Inspectors.~~

~~(A) Site access~~
~~To ensure that no one is accidentally exposed to lead, people are not permitted into areas of high lead concentration without protection. Signs are used to indicate where unprotected people must not go. The signs shall say:~~

~~**Warning. Lead Work Area. Poison. No Smoking or Eating.**~~

~~(B) Protective Clothing~~
~~Provide protective clothing for MnDOT inspectors in any area with lead exposure above 30 $\mu g/m^3$ or where the lead concentration is unknown. The clothing can be disposable or reusable. It must include coveralls or equivalent, shoe covers, and head covers. Launder the clothing and provide clean clothing at least weekly or for daily disposal of the clothing. If the contaminated clothing can be reused, the Contractor is responsible for storing it.~~

~~(C) Wash facilities~~
~~Provide soap, water, and towels to enable MnDOT's inspectors to wash at the site. If showers are provided for the Contractor's employees, they must be available for MnDOT's inspectors, also.~~

~~Provide a means to remove surface contamination from the inspector's clothing. That may be a HEPA vacuum, a downdraft booth (with the exhaust captured and cleaned), or other effective means that do not increase the concentration of airborne lead.~~

~~(D) Inspection Delay~~
~~MnDOT's inspectors will not enter a blasting containment area until at least fifteen minutes after blasting and other lead dust-producing activities have stopped, to permit the dust to settle. There will be no extra payment or penalty against MnDOT for this delay.~~

~~***S-.2 can be used when requested by District, or in cases where pavement scarring is a potential concern. Construction needs to choose which option in S-.2 is to be used.***~~
S-2.2 The following is hereby added to the end of MnDOT 2102.3:

All pavement marking removal **on final paving surfaces or surfaces that will remain in place** shall be done utilizing either waterblasting or sandblasting equipment. GRINDER-TYPE CUTTING HEADS SHALL NOT BE USED for pavement marking removal.

On all other surfaces the Contractor may utilize grinding, water blasting, or sandblasting equipment.

~~***OR***~~

~~All Pavement marking removal shall be done utilizing either grinding, water blasting, or sandblasting equipment.~~

~~***OR***~~

~~All Pavement marking removal shall be done utilizing water blasting equipment.~~

~~***OR***~~

~~All Pavement marking removal shall be done utilizing sandblasting equipment.~~

~~***OR***~~

~~All Pavement marking removal shall be done utilizing grinding equipment.~~

S-3 (2563) RAISED PAVEMENT MARKERS TEMPORARY (TRPMS)

SP2014-207

This work shall consist of constructing temporary raised pavement markers and the selected mounting system, placing the marker on the roadway, and removing the marker in accordance with the specification TEMPORARY RAISED PAVEMENT MARKERS (TRPM) and the following:

S-3.1 The specification TEMPORARY RAISED PAVEMENT MARKERS (TRPM) can be accessed on the MnDOT Office of Traffic, Safety, and Technology website.

S-3.2 TRPMs will be measured by the number of markers installed. Payment will be made under Item 2563.602 (Raised Pavement Marker Temporary) at the Contract bid price per each.

S-4 (2563) TUBE DELINEATORS

SP2014-208- modified

This work shall consist of furnishing, installing, and replacing tube delineators in accordance with the Traffic Engineering Manual and the following:

S-4.1 The delineators shall be located as shown in the Plans.

S-4.2 Removal of the post and surface mount assembly shall be done as directed by the Engineer.

Delineators that are fastened to the concrete or bituminous pavement with epoxy cement shall not be placed without the prior approval of the Engineer.

S-4.3 Used materials may be furnished in accordance with the following:

In the event the Contractor elects to utilize used materials, the tubes, bases and reflectorization shall conform to the foregoing requirements and shall be in near new condition at the time of installation. During the progress of work, the Engineer may require the replacement of reflectorized material whose effectiveness has been substantially reduced by traffic damage or other causes.

~~***If there is no pay item for REPLACE TUBE DELINEATORS use the following highlighted paragraphs instead of the following non-bolded paragraphs***~~

~~S-4.4 The Contractor shall replace damaged or missing tubes and bases on a daily basis with new or used materials (approved by the Engineer), including, but not limited to the high impact plastic tubing, the polyethylene support tubing and the reflective sheeting.~~

S-4.5 The Contractor shall replace damaged or missing tubes and bases on a daily basis.

The work under Item 2563.602 (Replace Tube Delineator) shall consist of replacing a portion of the Delineator with new or used materials (approved by the Engineer), including, but not limited to the high impact plastic tubing, the polyethylene support tubing and the reflective sheeting, in accordance with the following:

The Contractor is cautioned not to order the entire planned quantity of replacement delineators from the supplier at the beginning of the Project. Experience gained as the Project proceeds will indicate the number of replacement delineators required.

~~S-4.6 MEASUREMENT AND PAYMENT~~

~~Tube Delineators will be measured by the number of delineators furnished and installed complete in place as specified. Payment therefore will be made under Item 2563.602 (Tube Delineator) at the Contract bid price per each, which shall be compensation in full for furnishing, installing, replacing the portion or portions of any damaged delineators, removing the delineators, and for the filling of the holes in the old concrete pavement as specified.~~

S-4.7 MEASUREMENT AND PAYMENT

(A) Tube Delineators will be measured by the number of delineators furnished and installed complete in place as specified. Payment therefore will be made under Item 2563.602 (Tube Delineator) at the Contract price per each which shall be compensation in full for furnishing, installing, and removing the delineators and for the filling of the holes in the old concrete pavement as specified.

(B) Measurement and payment will be made only for the actual quantity of Delineators replaced as specified. No adjustment of any Contract bid prices will be made for any increased or decreased quantities thereof. Delineators will be measured separately by the number of units furnished and installed as replacements. Payment therefore will be made under Item 2563.602 (Replace Tube Delineator) at the Contract bid price per each, which shall be compensation in full for replacing the portion, or portions, of the delineator as described above.

S-5 (2563) TRAFFIC CONTROL SUPERVISOR

REVISED 12/13/13 ◄DO NOT REMOVE THIS. IT NEEDS TO STAY IN FOR THE CONTRACTORS.
SP2014-211 - modified

The Contractor shall provide a Traffic Control Supervisor for all major traffic control operations on the project, in accordance with Contract provisions and as directed by the Engineer.

S-5.1 The Traffic Control Supervisor shall be certified as a worksite supervisor by MnDOT. A copy of the traffic control supervisor's certification shall be provided to the Engineer at the Project pre-construction conference.

MnDOT certification as a Traffic Control Supervisor can be obtained by attending a 3 day MnDOT Traffic Control Supervisor Course within the last 5 years. Additional information on MnDOT's certification can be obtained by contacting Leigh Kriewall at 651/ 366-4217 or website: www.dot.state.mn.us/const/wzs/training.

(A) The Contractor shall, at the pre-construction conference, designate a Traffic Control Supervisor who shall be responsible for and perform the traffic control management. The Traffic Control Supervisor shall be either an employee of the Contractor other than the superintendent, or an employee of a firm which has a subcontract for overall traffic control management for the Project. The Traffic Control Supervisor shall be responsible for the management of the traffic control operations of the Project, including those of the Contractor, subcontractors and suppliers. The primary responsibility of the Traffic Control Supervisor shall be the Traffic Control Management of this Project.

(B) The Traffic Control Supervisor shall have the authority needed to effectively require modifications and maintenance of traffic controls. This includes having the authority necessary to obtain and use all labor, equipment, and materials needed to provide and maintain traffic control in routine and in emergency situations.

(C) The Traffic Control Supervisor shall have an up-to-date copy of the Part VI of the MN MUTCD (Minnesota Manual on Uniform Traffic Control Devices), including the "Field Manual for Temporary Traffic Control Zone Layouts," and "A Guide to Establishing Speed Limits in Highway Work Zones".

S-5.2 Traffic control management by the Traffic Control Supervisor includes, but is not limited to:

(1) Ensuring that traffic control devices are functioning as required. This includes the repair or replacement of all signs, barricades, and other traffic devices that become damaged, moved, or destroyed, or lights that cease to function properly, and barricade weights that are damaged or otherwise fail to stabilize barricades.

(2) Providing sufficient surveillance of signs, barricades, and other traffic control devices. This includes inspecting traffic control devices on every calendar day that traffic control devices are in use (by the Traffic Control Supervisor or his approved representative). Routine surveillance reports shall be submitted to the Project Engineer weekly.

(3) The Traffic Control Supervisor will be on the Project for all major traffic control operations as described below, "on call" at all times, and available within 45 minutes of notification, at other than normal working hours. The Contractor shall give to the Engineer, the names, addresses and phone numbers of at least three individuals (one of which is the Traffic Control Supervisor) responsible to provide and ensure immediate attention to the traffic control management.

Major traffic control operations include:
1. Initial startup of project
2. The first 3 days of each of the 4 project stages described in (1803) PROSECUTION OF WORK.
3. Completion of the project
4. Any other significant changes to the Traffic Control as determined by the Engineer

(4) Preparing, revising, and submitting the traffic control plan as required.

(5) Directing supervision of Project flag persons.

(6) Coordinating all traffic control operations, including those of subcontractors and suppliers.

(7) Coordinating Project activities with appropriate police and fire control agencies.

(8) Maintaining a Project traffic control diary which shall become a part of the department's Project records.

(9) Overseeing all requirements covered by the Plans and specifications which contribute to the convenience, safety and orderly movement of traffic.

(10) Establishing contact with local and state law enforcement agencies affected by construction before work begins. Establish communications so that any accidents will be reviewed daily by the Traffic Control Supervisor to determine if changes in traffic control is necessary. These accidents will also be reported daily to the Engineer. A written

weekly and final report will be required. The report shall include, but not be limited to: type of accident, time, weather, and possible cause if known.

(11) Providing sufficient surveillance of all Portable Changeable Message (PCM) signs to ensure the following:

(a) correct and current information is always provided.
(b) proper placement of PCM signs.
(c) PCM signs are turned off when messages are no longer necessary.

(12) Ensuring that work zone speed limits are properly installed. As part of this responsibility, the Traffic Control Supervisor shall complete the "Work Zone Speed Limit Application" form daily when these speed limits are in use. These forms shall be turned in to the Engineer each week.

(13) Maintaining constant communications with Project personnel and law enforcement agencies. As part of this requirement, the Traffic Control Supervisor will be required to have a cellular phone.

S-5.3 Traffic control management shall be provided by the Contractor as described in these provisions. **For any period of time the Traffic Control Supervisor is not available to provide traffic control management the Contractor will be subject to an hourly charge assessed at a rate of $250.00 per hour for each hour or any portion thereof which the Engineer determines that the Contractor has not complied.**

S-5.4 No measurement will be made of the various duties of the Traffic Control Supervisor, but all such work shall be construed to be included in the lump sum payment under Item 2563.601 (Traffic Control Supervisor). The lump sum payment shall be compensation for all costs incidental thereto.

S-6 (2563) PORTABLE CHANGEABLE MESSAGE SIGN

REVISED 12/13/13 ◄DO NOT REMOVE THIS. IT NEEDS TO STAY IN FOR THE CONTRACTORS.
SP2014-213

The Contractor shall furnish, install, maintain and remove Portable Changeable Message Signs in accordance with Contract provisions, as directed by the Engineer and the following:

S-6.1 The Portable Changeable Message Signs shall be trailer mounted three line, DOT signs with eight characters per line with a character height of 18 inches [450 mm] as approved by the Engineer.

S-6.2 (PCMS) Type C Trailer Mounted Message Signs will be permitted and shall be on the Approved Products List for "Changeable Message Signs: Type C - Three Lines, Trailer Mounted" as found at: http://www.dot.state.mn.us/products/temporarytrafficcontrol/tccelectronicequipment.html. It is imperative that the Contractor continually operate each PCMS at maximum legibility. Many factors, such as mechanical problems, insufficient charging, incorrect intensity settings, or other factors can degrade performance. If at any time the Contractor fails to operate a Portable Changeable Message Sign at maximum legibility, as determined by the Engineer, no payment will be made for each day that the Message Sign is deemed inadequate.

S-6.3 The changeable message signs shall be in operation within 24 hours of notification by the Engineer. Remove the changeable message signs within 24 hours after notification by the Engineer. Multiple mobilizations of the changeable message signs will be required and shall be incidental.. The changeable message signs shall be subject to approval of the Engineer. All maintenance and repair as required will be incidental.

S-6.4 Except as approved by the Engineer, the message sign shall be stored off the shoulder when not in use. Delineate the changeable message sign according to Layout 4 (Partial Shoulder Closure) in the Field Manual if the Engineer permits the sign to remain on the shoulder.

S-6.5 When not being actively used as a traffic control device, the Portable Changeable Message Sign shall be stored beyond the clear zone distance. **Non-compliant charges, for each incident, will be assessed at a rate of $500.00 per incident that the Engineer determines that the Contractor has not complied.**

S-6.6 Measurement will be made by the number of Portable Changeable Message Signs furnished and installed per day of service (Unit Day) as specified.

S-6.7 Payment for Portable Changeable Message Signs furnished and installed, as directed by the Engineer, will be made under Item 2563.613 (Portable Changeable Message Sign) at the Contract bid price per Unit Day. This payment shall be compensation in full for all costs incidental thereto, including but not limited to furnishing and installing the signs with appropriate message, maintaining the signs, revising the messages as directed by the Engineer, and removing the signs at the direction of the Engineer. The Portable Changeable Message Signs shall remain the property of the Contractor.

Please add this spec.

S-7 (2581) REMOVABLE PREFORMED PLASTIC MASK

The provisions of Mn/DOT 2581 are modified and/or supplemented with the following:

S-7.1 Mn/DOT 2581.2 MATERIALS is changed to read as follows:

"The removable preformed plastic marking material shall be a wet reflective pavement marking. The marking shall be classified on the MnDOT qualified products list as: Tape System – Temporary (Removable) – Recoverable tape. This product shall be on the Mn/DOT qualified products list. The qualified products list can be found on the Mn/DOT website at http://www.dot.state.mn.us/products/index.html."

S-8 (2581) REMOVABLE PREFORMED PLASTIC MASK (BLACK)

SP2014-219

This work shall consist of furnishing, placing and removing temporary pavement marking material over inplace pavement markings when traffic control must be temporarily changed. This work shall be in accordance with the provisions of MnDOT 2581, as modified below. The removable preformed plastic pavement marking material shall conform to the requirements of MnDOT 3355.

S-8.1 The 2nd paragraph of MnDOT 2581.4 is changed to read as follows:

The Engineer will base the measurement of removable preformed plastic mask (black) tape on equivalent lengths of 6 in [150 mm] wide marking tape. Broken line marking will be measured by the actual length of material used and will not include the gap between the broken lines.

S-8.2 Measurement will be made by the length in linear feet [meters].

S-8.3 Payment for pavement markings of each type will be made in accordance with the schedule set forth below at the appropriate Contract bid price for the specified unit of measure. Such payment, in each instance, shall be compensation for all costs of furnishing, placing, maintaining, replacing, and removing the Marking.

ITEM NO.	DESCRIPTION	UNIT
2581.603	Removable Preformed Plastic Mask (Black)	linear foot [meter]

S-9 (2582) PERMANENT PAVEMENT MARKINGS (POLY PREFORMED GROUND IN)

~~*Use for polymer preformed tape markings to be installed in a continuous groove that are NOT wet-reflective/recoverable. Use S-.7 when MRM is to be used on the project. If the job is a signal only, then check to*~~

~~***see if new pavement markings are shown on the plan or are in the Division SS. If there are new pavement markings on the signal job but there are no pay items on the plan for them then only use S .1 thru S .6 and S .8.***~~
REVISED 10/22/13 ◄DO NOT REMOVE THIS. IT NEEDS TO STAY IN FOR THE CONTRACTORS.
SP2014-222 - modified

The provisions of MnDOT 2582 are hereby modified and/or supplemented with the following:

S-9.1 The language below applies to permanent pavement markings for this Project that are to be recessed pavement markings, utilizing Poly Pref (GR IN).

S-9.2 The pavement marking material utilized for this Project must be listed within **Tape System-Permanent** category on the MnDOT Approved/Qualified Products Lists.

S-9.3 The provisions of MnDOT 2582.3B are hereby deleted and replaced with the following:

Training of a striping Contractor – To assure the proper installation of pavement markings, the Contractor's crew shall obtain manufacturer certification. Certification is typically achieved by attending an application training seminar. The training shall address surface preparation and all application requirements and techniques necessary for successful marking tape applications. Upon completion of the seminar for these personnel, the manufacturer of the marking tape shall provide written certification of approval to each person approved. Present a valid training certification card upon request of the Engineer or other state Project personnel.

S-9.4 GROOVING BITUMINOUS *and/or* CONCRETE PAVEMENT SURFACES FOR POLYMER PREFORMED TAPE PAVEMENT MARKINGS

The polymer preformed tape pavement markings are to be grooved into the pavement surfaces. **GRINDER-TYPE CUTTING HEADS CANNOT BE USED.** Grooving operations are incidental.

S-9.5 The following is hereby added to MnDOT 2582.3B, Application:

Dry or wet groove the pavement while the roadway is open or closed to traffic. Clean the groove completely prior to pavement marking application, using an air compressor with at least 185 CFM air flow and 120 PSI air pressure. The compressor must be equipped with a moisture and oil trap, and cannot have more than 50 feet of 3/4 inch ID hose between the compressor and the air nozzle. The air nozzle must have an inside diameter of 1/2 inch or greater.

(A) Grooving Equipment

The grooving shall be performed by a self-propelled machine equipped with gang stacked diamond cutting blades mounted on a floating head with controls capable of providing uniform depth and alignment.

The cutting heads shall consist of stacked 3 mm to 9 mm [**1/8 inch to 3/8 inch**] wide diamond tipped cutting blades. The spacers between each blade must be such that the raise in the bottom of the finished groove between the blades is less than 25% of the groove depth. The resulting bottom of the groove shall have a fine corduroy finish. If a coarse tooth pattern is present, increase the number of blades and/or decrease the thickness of the spacers on the cutting head.

The equipment shall be capable of grooving the total width of the groove in one pass or be capable of grooving uniform depths with multiple passes. The maximum number of passes is detailed below. If multiple passes are used, the ridge between passes shall be mechanically removed prior to groove cleaning and pavement marking application.

The equipment shall be capable of grooving double lines simultaneously or parallel lines to a uniform depth with two passes.

The equipment shall be self-vacuuming and leave the cut groove ready for pavement marking installation. Dry cut grooving without a vacuum will only be allowed if markings run perpendicular to the roadway, such as Stop Bars. Use the equipment and method approved by the pavement marking manufacturer.

(B) Grooves

The grooving shall be performed within the following tolerances. Failure to meet these tolerances will result in the suspension of work until the Contractor can demonstrate that these tolerances can be met to the satisfaction of the Engineer. **The pavement marking system shall be applied so that it is centered within the groove.**

GROOVE WIDTH AND MAXIMUM NUMBER OF PASSES		
MARKING WIDTH	GROOVE WIDTH	MAX NUMBER OF PASSES
100 mm **[4 inches]**	130 mm ± 3 mm **[5" ± 1/8"]**	1
150 mm **[6 inches]**	180 mm ± 3 mm **[7" ± 1/8"]**	1
200 mm **[8 inches]**	230 mm ± 3 mm **[9" ± 1/8"]**	1
300 mm **[12 inches]**	330 mm ± 3 mm **[13" ± 1/8"]**	2
600 mm **[24 inches]**	635 mm ± 3 mm **[25" ± 1/8"]**	3

Provide a groove depth of110 mil ± 10 mil.

Since pavements are irregular, the depth of groove across the width may vary. To compensate for this, the depth of the groove shall be measured from the bottom of the groove to a straight edge extended over the groove from the pavement surface opposite the pavement joint.

FULL DEPTH GROOVE LENGTHS	
Full Depth Groove Length (Broken Line)	3 m ± 75 mm **[10 feet ± 3 inches]**
Tapers At End of Each Line	150 mm ± 230 mm **[6 inches to 9 inches]**
Space Between Double lines	100 mm ± 6 mm **[4 inches ± 1/4 inch]**

Place the groove 2 in ± 1 in [50 mm ± 25 mm] from the edge of joints or seams along edge or centerline, unless otherwise indicated in the Plan.

Grooving alignment deviations from the control guide or existing lines specified by the Engineer shall not exceed 50 mm **[2 inches]**.

Place all pavement markings to be grooved in in accordance with pavement marking or element manufacturer's instructions. Do not construct a groove in new bituminous pavement within a minimum 10 days of the placement of the final course of pavement, unless otherwise directed by the Engineer.

If the Poly Pref (GR IN) markings are to be installed in the same location where there are existing pavement markings, including interim or temporary, the removal of the existing pavement markings shall be incidental. The Contractor may cut the groove and remove the existing marking in a simultaneous operation.

S-9.6 The first paragraph of MnDOT 2582.3C.3 is supplemented with:

Initial pavement marking retroreflectivity is defined as the pavement marking retroreflectivity as measured between 14 days and 44 days after pavement marking installation.

~~***Use S .7 when MRM is to be used on the project.***~~

~~**S 9.7 Mobile Retroreflectometer Measurements (MRM)**~~

~~Provide retroreflectivity measurements of longitudinal markings utilizing an independent Contractor using a vehicle-mounted mobile retroreflectometer utilizing 30-meter CEN geometry in accordance with ASTM E 1710-95 (Standard Test Method for Measurement of Retroreflective Pavement Markings Materials with CEN Prescribed Geometry Reflectometers). The retroreflectometer shall be calibrated no less than twice a day in accordance with the operating manual and calibration guide for the particular machine and vehicle. Measurement shall consist of the average retroreflective readings and standard deviations over 1 mile intervals (or over the length of the line if shorter than 1 mile) for each type of pavement marking placed under this Contract.~~

~~Provide a measurement report that includes:~~

1. ~~State Project Number,~~
2. ~~Date and time of data collection,~~
3. ~~The highway number with the beginning and ending reference points of data collection rounded to the nearest thousandths of a mile and the beginning and ending coordinates determined by a Global Positioning System receiver with 3-meter accuracy, including the direction of travel in terms of increasing or decreasing reference points,~~
4. ~~Which line is being read (LEL – Left Edgeline, REL – Right Edgeline, CL, Centerline, LL – Lane Line Skip, 1LL – left most LL in multilane, 2LL – second to left most LL in multilane, etc),~~
5. ~~The 0.1 mile station averages and standard deviations,~~
6. ~~A summary of the average retroreflective readings in one mile increments. Base the summary on the minimum initial pavement marking limits and a 20% retroreflectivity deficiency for the appropriate product listed in Table 2582-1. For example, if the product is white tape, the summary will at least include the ranges of less than 480, 480 – 599, and 600 or greater.~~

~~Provide the measurement report in the form of an electronic database file, or delimited text file, containing all raw data collected. The electronic file must also contain a summary that is capable of being directly uploaded to the Department's Pavement Marking Management Tool (PMMT) database. Submit the data to the email address: PMdata.dot@state.mn.us . The format of the required data file can be found at the following website: http://www.dot.state.mn.us/trafficeng/pavement/manual.html under the Heading Pavement Marking Management Tool. Provide a printed record of the summary to the Engineer at the Engineer's discretion.~~

~~Conduct the evaluation of retroreflectivity at least 14 days after pavment marking installation.~~

~~Collect the data when pavement and markings are dry, clean and no visible moisture is on the road surface. . Measure centerline markings in both directions. Measure other longitudinal markings in the direction of intended vehicular travel.~~

~~Evaluate any replaced or repaired markings at no additional cost per this Special Provision.~~

~~The Mobile Retroreflectometer Measurements, including but not limited to materials, equipment, labor and time, will be measured based on the Linear Foot. The Linear Foot will be measured for the distance travelled by the mobile retroreflectometer as it measures the retroreflectivity of the pavement marking. This assumes one laser instrument on one van that will read one line with each pass. For a one mile section of two-lane, two-way roadway this would need four (4) passes – First Direction: REL and CL, Second Direction: REL and CL – equating to 21120 linear feet.~~

~~No payment for pavement markings will be made until the evaluation of retroreflectivity is complete and the work accepted by the Engineer.~~

S-9.8 MnDOT 2582.3F is hereby deleted and replaced with the following:

Construction Striper Operations Daily Log

After applying pavement markings, complete the "Construction Striper Operations Daily Log" form which can be found on the Office of Traffic, Safety and Technology website and as approved by the Engineer. The Department will not pay for pavement markings until the Contractor submits the completed "Construction Striper Operations Daily Log" to the Engineer.

S-9.9 The provisions of MnDOT 2582.5 are hereby deleted and replaced with the following:

2582.5 BASIS OF PAYMENT

The contract unit price for permanent pavement markings includes the costs of materials, installation, traffic control, surface preparation, and primers as required by the contract.

~~***Use the following paragraph when MRM is to be used on the project.***~~

~~The Contract unit price for the retroreflectivity evaluation includes all costs incurred in materials, equipment, labor, traffic control and time as required by the contract.~~

The Department will pay for permanent pavement markings on the basis of the following schedule:

ITEM NO.	ITEM	UNIT
2582.501	Pavement Message *Poly Preform (GR IN)	Each
2582.502	__ mm (__inch) width †‡ Poly Preform (GR IN)	linear foot (meter)
2582.503	Crosswalk Marking - Poly Preform (GR IN)	square foot (square meter)

~~***Use the following pay item when MRM is to be used on the project.***~~

~~2582.603 Mobile Retroreflectometer Measurements linear foot (meter)~~

* Specify Message
† Specified Type of Line (SOLID LINE, BROKEN LINE, or DOTTED LINE)
‡ Specify Color

S-10 (2582) PERMANENT PAVEMENT MARKINGS (EPOXY GROUND IN)

~~***Use for epoxy markings to be installed in a continuous groove that are NOT wet reflective/recoverable. Refer to SP2014-226 (PERMANENT PAVEMENT MARKINGS (EPOXY WR)) for wet reflective/recoverable epoxy. Use S-.6 when MRM is to be used on the project. In S-.7, use the section after the AND/OR when the project includes liquid markings and is at least 1 centerline mile in length.***~~

REVISED 10/22/13 ◄DO NOT REMOVE THIS. IT NEEDS TO STAY IN FOR THE CONTRACTORS.
SP2014-223 - modified

The provisions of MnDOT 2582 are hereby modified and/or supplemented with the following:

S-10.1 The language below applies to the permanent pavement markings for this Project that are to be recessed pavement markings, utilizing Epoxy Paint (GR IN).

S-10.2 The pavement marking material utilized for this Project must be listed within **Epoxy Paint** category on the MnDOT Approved/Qualified Products Lists.

S-10.3 **GROOVING BITUMINOUS *and/or* CONCRETE PAVEMENT SURFACES FOR EPOXY PAVEMENT MARKINGS**

The epoxy pavement markings are to be grooved into the pavement surfaces. **GRINDER-TYPE CUTTING HEADS CANNOT BE USED.** Grooving operations are incidental.

S-10.4 The following is hereby added to MnDOT 2582.3B, Application:

Dry or wet groove the pavement while the roadway is open or closed to traffic. Clean the groove completely prior to pavement marking application, using an air compressor with at least 185 CFM air flow and 120 PSI air pressure. The compressor must be equipped with a moisture and oil trap, and cannot have more than 50 feet of 3/4 inch ID hose between the compressor and the air nozzle. The air nozzle must have an inside diameter of 1/2 inch or greater.

(A) Grooving Equipment

The grooving shall be performed by a self-propelled machine equipped with gang stacked diamond cutting blades mounted on a floating head with controls capable of providing uniform depth and alignment.

The cutting heads shall consist of stacked 3 mm to 9 mm [**1/8 inch to 3/8 inch**] wide diamond tipped cutting blades. The spacers between each blade must be such that the raise in the bottom of the finished groove between the blades is less than 25% of the groove depth. The resulting bottom of the groove shall have a fine corduroy finish. If a coarse tooth pattern is present, increase the number of blades and/or decrease the thickness of the spacers on the cutting head.

The equipment shall be capable of grooving the total width of the groove in one pass or be capable of grooving uniform depths with multiple passes. The maximum number of passes is detailed below. If multiple passes are used, the ridge between passes shall be mechanically removed prior to groove cleaning and pavement marking application.

The equipment shall be capable of grooving double lines simultaneously or parallel lines to a uniform depth with two passes.

The equipment shall be self-vacuuming and leave the cut groove ready for pavement marking installation. Dry cut grooving without a vacuum will only be allowed if markings run perpendicular to the roadway, such as Stop Bars. Use the equipment and method approved by the pavement marking manufacturer.

(B) Grooves

The grooving shall be performed within the following tolerances. Failure to meet these tolerances will result in the suspension of work until the Contractor can demonstrate that these tolerances can be met to the satisfaction of the Engineer. **The pavement marking system shall be applied so that it is centered within the groove.**

GROOVE WIDTH AND MAXIMUM NUMBER OF PASSES		
MARKING WIDTH	GROOVE WIDTH	MAX NUMBER OF PASSES
100 mm **[4 inches]**	130 mm ± 3 mm **[5" ± 1/8"]**	1
150 mm **[6 inches]**	180 mm ± 3 mm **[7" ± 1/8"]**	1
200 mm **[8 inches]**	230 mm ± 3 mm **[9" ± 1/8"]**	1
300 mm **[12 inches]**	330 mm ± 3 mm **[13" ± 1/8"]**	2
600 mm **[24 inches]**	635 mm ± 3 mm **[25" ± 1/8"]**	3

Provide a groove depth of30 mil ± 10 mil.

Since pavements are irregular, the depth of groove across the width may vary. To compensate for this, the depth of the groove shall be measured from the bottom of the groove to a straight edge extended over the groove from the pavement surface opposite the pavement joint.

FULL DEPTH GROOVE LENGTHS	
Full Depth Groove Length (Broken Line)	3 m ± 75 mm **[10 feet ± 3 inches]**
Tapers At End of Each Line	150 mm ± 230 mm **[6 inches to 9 inches]**
Space Between Double lines	100 mm ± 6 mm **[4 inches ± 1/4 inch]**

Place the groove 2 in ± 1 in [50 mm ± 25 mm] from the edge of joints or seams along edge or centerline, unless otherwise indicated in the Plan.

Grooving alignment deviations from the control guide or existing lines specified by the Engineer shall not exceed 50 mm **[2 inches]**.

Place all pavement markings to be grooved in in accordance with pavement marking or element manufacturer's instructions. Do not construct a groove in new bituminous pavement within a minimum 10 days of the placement of the final course of pavement, unless otherwise directed by the Engineer.

If the Epoxy (GR IN) markings are to be installed in the same location where there are existing pavement markings, including interim or temporary, the removal of the existing pavement markings shall be incidental. The Contractor may cut the groove and remove the existing marking in a simultaneous operation.

S-10.5 The first paragraph of MnDOT 2582.3C.3 is supplemented with:

Initial pavement marking retroreflectivity is defined as the pavement marking retroreflectivity as measured between 14 days and 44 days after pavement marking installation.

~~***Use S-.6 when MRM is to be used on the project.***~~

~~S-10.6 **Mobile Retroreflectometer Measurements (MRM)**~~

~~Provide retroreflectivity measurements of longitudinal markings utilizing an independent Contractor using a vehicle-mounted mobile retroreflectometer utilizing 30 meter CEN geometry in accordance with ASTM E 1710-95 (Standard Test Method for Measurement of Retroreflective Pavement Markings Materials with CEN Prescribed Geometry Reflectometers). The retroreflectometer shall be calibrated no less than twice a day in accordance with the operating manual and calibration guide for the particular machine and vehicle. Measurement shall consist of the average retroreflective readings and standard deviations over 1 mile intervals (or over the length of the line if shorter than 1 mile) for each type of pavement marking placed under this Contract.~~

~~Provide a measurement report that includes:~~

~~1. State Project Number,~~
~~2. Date and time of data collection,~~
~~3. The highway number with the beginning and ending reference points of data collection rounded to the nearest thousandths of a mile and the beginning and ending coordinates determined by a Global Positioning System receiver with 3 meter accuracy, including the direction of travel in terms of increasing or decreasing reference points,~~
~~4. Which line is being read (LEL – Left Edgeline, REL – Right Edgeline, CL, Centerline, LL – Lane Line Skip, 1LL – left most LL in multilane, 2LL – second to left most LL in multilane, etc),~~
~~5. The 0.1 mile station averages and standard deviations,~~

~~6. A summary of the average retroreflective readings in one mile increments. Base the summary on the minimum initial pavement marking limits and a 20% retroreflectivity deficiency for the appropriate product listed in Table 2582-1. For example, if the product is white epoxy, the summary will at least include the ranges of less than 240, 240 – 299, and 300 or greater.~~

~~Provide the measurement report in the form of an electronic database file, or delimited text file, containing all raw data collected. The electronic file must also contain a summary that is capable of being directly uploaded to the Department's Pavement Marking Management Tool (PMMT) database. Submit the data to the email address: PMdata.dot@state.mn.us . The format of the required data file can be found at the following website: http://www.dot.state.mn.us/trafficeng/pavement/manual.html under the Heading Pavement Marking Management Tool. Provide a printed record of the summary to the Engineer at the Engineer's discretion.~~

~~Conduct the evaluation of retroreflectivity at least 14 days after pavement marking installation. Excess beads or reflective elements must not be visible before the retroreflectivity testing is conducted.~~

~~Collect the data when pavement and markings are dry, clean and no visible moisture is on the road surface. . Measure centerline markings in both directions. Measure other longitudinal markings in the direction of intended vehicular travel.~~

~~Evaluate any replaced markings at no additional cost per this Special Provision.~~

~~The Mobile Retroreflectometer Measurements, including but not limited to materials, equipment, labor and time, will be measured based on the Linear Foot. The Linear Foot will be measured for the distance travelled by the mobile retroreflectometer as it measures the retroreflectivity of the pavement marking. This assumes one laser instrument on one van that will read one line with each pass. For a one mile section of two-lane, two-way roadway this would need four (4) passes – First Direction: REL and CL, Second Direction: REL and CL – equating to 21120 linear feet.~~

~~No payment for pavement markings will be made until the evaluation of retroreflectivity is complete and the work accepted by the Engineer.~~

~~***In S-.7, use the section after the AND/OR when the project includes liquid markings and is at least 1 centerline mile in length.***~~

S-10.7 MnDOT 2582.3F is hereby deleted and replaced with the following:

Construction Striper Operations Daily Log

After applying pavement markings, complete the "Construction Striper Operations Daily Log" form which can be found on the Office of Traffic, Safety and Technology website and as approved by the Engineer. The Department will not pay for pavement markings until the Contractor submits the completed "Construction Striper Operations Daily Log" to the Engineer.

AND/~~OR~~

~~***Use when project includes liquid markings and is at least 1 centerline mile in length.***~~

Striper Computerized Data Logging System for Liquid Markings (DLS)

The pavement marking device shall have an onboard monitoring system for the purpose of managing the amount of striping materials being applied to a surface. Collect data for any pavement marking application of 300 feet (drive length) or greater.

The following data shall be included in the documentation from the DLS:

1. State Project Number,

2. For every highway marked, the highway number with the beginning and ending reference points rounded to the nearest thousandths of a mile and the beginning and ending coordinates determined by a Global Positioning System receiver with 3 meter accuracy, including the direction of travel in terms of increasing or decreasing reference points,
3. Date, and beginning and ending time of application,
4. Vendor and product (binder and reflective material),
5. Lot number(s) of product used,
6. Striping contractor (striper code),
7. Designation of the marking being applied (LEL – Left Edgeline, REL – Right Edgeline, CL - Centerline, LL – Lane Line Broken or Dotted, 1LL – left most LL in multilane, 2LL – second to left most LL in multilane, etc),
8. Width of marking being applied,
9. Presence of groove or rumble strip (if pavement marking is being installed on top of, begin and end points of groove or rumble will be recorded by GPS),

The following data shall be reported as an average for each drive mile installed:

1. Application vehicle speed to the nearest 0.1 MPH,
2. Weight (LBS) and/or volume (GAL as measured through a positive displacement pump mechanism or flow meter) of liquid material(s) used by color,
3. Weight (LBS) of reflective material used,
4. Ratio of reflective material used (weight) per liquid material used (volume) reported as LBS/GAL,
5. Ambient air temperature (in degrees Fahrenheit),
6. Road surface temperature (in degrees Fahrenheit),
7. Humidity (%),
8. The system shall record the average material application rates and film thickness calculated over the section striped, and

This system shall be capable of storing data and exporting to the Department's Pavement Marking Management Tool (PMMT). Submit the data to the email address: PMdata.dot@state.mn.us. The format of the required data file can be found at the following website: http://www.dot.state.mn.us/trafficeng/pavement/manual.html under the Heading Pavement Marking Management Tool. Provide a printed record of the data to the Engineer at the Engineer's discretion. The printed and electronic records shall be produced in their final form prior to the records being removed from the pavement marking equipment.

Provide to the Engineer the above records for all longitudinal non-handwork lines installed.

The Contractor shall have equipment with functional DLS equipment that is operational, calibrated and in use during pavement marking operations. Pavement marking installation without the use of a DLS shall constitute unauthorized work under 1512.

Provide to the Engineer the DLS manufacturer's recommendations for equipment calibration frequency and provide certification that the equipment meets manufacturer's recommended calibration.

A 100 foot distance shall be travelled prior to the start of pavement marking operations to verify the physical and electronic measurement of distance travelled is consistent.

The Striper Computerized Data Logging System shall be incidental.

S-10.8 The provisions of MnDOT 2582.5 are hereby deleted and replaced with the following:

2582.5 BASIS OF PAYMENT

The contract unit price for permanent pavement markings includes the costs of materials, installation, traffic control, surface preparation, and primers as required by the contract.

~~***Use the following paragraph when MRM is to be used on the project.***~~

~~The Contract unit price for the retroreflectivity evaluation includes all costs incurred in materials, equipment, labor, traffic control and time as required by the contract.~~

The Department will pay for permanent pavement markings on the basis of the following schedule:

ITEM NO.	ITEM	UNIT
2582.501	Pavement Message *Epoxy (GR IN)	Each
2582.502	__ mm (__inch) width †‡ Epoxy (GR IN)	linear foot (meter)
2582.503	Crosswalk Marking – Epoxy (GR IN)	square foot (square meter)

~~***Use the following pay item when MRM is to be used on the project.***~~

~~2582.603 Mobile Retroreflectometer Measurements linear foot (meter)~~

* Specify Message
† Specified Type of Line (SOLID LINE, BROKEN LINE, or DOTTED LINE)
‡ Specify Color

(1803) PROSECUTION OF WORK

Use on all jobs with curb ramps/ADA Improvements in them. Absolutely no changes can be made to this language!!

SP2014-46

The provisions of MnDOT 1803 are supplemented and/or modified with the following:

a. Project Staging and Operational Requirements

The following Project Staging and Operational Requirements are required by the contract. The Contractor may suggest alternate staging scenarios to the Engineer for consideration. No deviation from contract staging will be allowed without written approval from the Engineer.

The use of high early strength concrete may be required to meet the contract times No additional payment will be made for the use of high early strength concrete.

Steel tracked equipment including rollers, pavers, trimmers, or other equipment shall not operate on any concrete pavement or bridge decks without protecting the concrete surface with dunnage, rubber mats or other means approved by the Engineer.

No construction traffic including hauling of material and moving of equipment on and off the project is allowed on any of the frontage road systems on this project.

The Permanent and Temporary Construction Easements on the Perkins property shall be used to construct the retaining wall only, but shall include the right to access the easements prior to construction to conduct all studies, tests, examinations and surveys necessary to complete the design and construction of the retaining wall and the right to temporarily locate materials and equipment solely to be used in such construction. No other use of this Permanent and Temporary Construction Easement by the Contractor, subcontractors, or suppliers is allowed.

A weekly construction public information meeting will be held at a time to be determined by the Engineer for the purpose of keeping the public, business and local government officials informed as to traffic impacts and anticipated construction activities. The Contractors will be required to make a presentation and answer questions at the weekly public information meeting.

A weekly progress meeting will be held at a time determined by the Engineer. The Contractor will submit a two week look ahead schedule at each weekly progress meeting.

A Monetary Deduction of $750 per hour for a maximum daily amount of $5,000 per day will be assessed if the Project Staging and Operational requirements described in S-X.X (currently 1.2) Preliminary Stage, S-X.X.X (currently 1.3.1) Stage 1 and S-X.X.X (currently 1.3.2) Stage 2 are not adhered to. These Monetary Deductions will be assessed independent of any other assessments for Intermediate Completion Dates and Times shown in1806 and 1807.

b. Preliminary Stage: Work to be completed prior to start of Stage 1 as provided in Intermediate Completion Date A.

1. CSAH 7 (Big Lake Road) / Doddridge Ave

CSAH 7 / Doddridge Ave must be constructed with at least one lane open to traffic in each direction. Flagging operations will only be allowed for equipment and material delivery during hours approved by the Engineer.

Work includes, but is not limited to, the construction of traffic control, widening and turn lane construction, installation of temporary signal systems, work on the permanent signal system, all reconstruction of

CSAH 7 / Doddridge Ave including retaining walls, all utility work, grading, drainage, curb and gutter, and surfacing except a small tie in connection at TH 33 to be completed in Stage 1 and Stage 2 construction.

Traffic may be temporarily placed on a gravel surface for a maximum of 3.0 calendar days. The gravel surface must be at least 6 inches thick of aggregate base over a stable subgrade and shall be considered incidental work. Horizontal safety tapers shall be constructed to a maximum 100:1 ratio (**horizontal** to vertical ratio). Maintenance of the surface open to public traffic shall be as described elsewhere. A bituminous surface at least 4 inches thick shall be constructed in areas requiring a temporary driving surface longer than 3 calendar days in duration. The construction of temporary driving surfaces will be considered bituminous patching work and compensated for under 2360.501 TYPE SP 12.5 WEARING COURSE MIX (3, B).

For the installation of underground utilities only, CSAH 7 / Doddridge Ave may be totally closed with public traffic routed on the adjacent frontage road system westerly of TH 33 and immediately southerly of CSAH 7. The closure of CSAH 7 / Doddridge Ave. will only be allowed from 8:00 p.m. to 6:00 a.m., Monday evening through **Friday** morning, except for the Memorial Day holiday weekend when the closures is not allowed from Thursday night, May 22, 2014 through Monday night May 26, 2014. This closure will be limited to a total of 4 nights for the entire project. The contractor will need to provide a traffic control plan for any road closures that may be used to the Engineer for approval. No traffic control layouts are provided in the plan for this closure. Any traffic control including signs and flaggers needed for these closures will be incidental.

2. TH 33 Preliminary Stage Construction

Work includes, but is not limited to, the construction of: traffic control, temporary widening and temporary left turn lane construction and installation of temporary signal systems.

Traffic must remain in its normal configuration with no two-lane, two-way, head-to-head traffic conditions allowed. Temporary daytime lane closures will be allowed on TH 33 during the **Preliminary Stage** with written approval from the Engineer. No detouring of TH 33 will be allowed during this stage.

Traffic may be placed on a temporary gravel surface for a maximum of 1 calendar day. The temporary gravel surface will be a minimum of 8 inches thick aggregate base over a stable subgrade and will be considered incidental work. Horizontal safety tapers shall be constructed to a maximum 100:1 ratio, (vertical rise to horizontal run). Maintenance of the surface shall be as described elsewhere. A bituminous surface at least 5 inches thick shall be constructed for areas requiring a temporary driving surface longer than 1 calendar day and will be considered incidental work.

The Contractor shall provide traffic control plans for all work required in this stage to the Engineer for approval.

c. TH 33 Reconstruction as provided in INTERMEDIATE COMPLETION DATE B and INTERMEDIATE COMPLETION TIME C and D

1. Stage 1 Northbound TH 33 Reconstruction:

Stage 1 traffic will be as shown in the Plan while the northbound lanes of TH 33 are reconstructed and paved. This stage places traffic in a two-lane, two-way, head to head traffic configuration on the southbound lanes of TH 33 with temporary signal system control.

CSAH 7 / Doddridge Ave. Must be open with at least one lane of traffic in each direction at all times.

In addition to the work required to reconstruct and pave northbound TH 33, all intersection tie-ins must be completed that connect to the new concrete pavement prior to switching traffic onto the newly paved northbound TH 33.

Traffic must be able to use the signalized intersection at CSAH 7 / Doddridge Ave and at the Wal-Mart Entrance during construction of this stage except as allowed in INTERMEDIATE COMPLETION TIME C. Cross traffic will be allowed only at the signalized intersections during this stage. All other connections will be closed to traffic during this stage.

The Contractor will continuously pave the northbound lanes of TH 33 with no paving gaps except at the CSAH 7 / Doddridge Ave Intersection, which shall be constructed in segments to accommodate traffic.

The Walmart Entrance may be closed for a total of **7 Calendar Days**, for concrete curing of the mainline concrete paving and paving of the approaches and crossovers at this location as provided in **Intermediate Completion Time C**.

The milling and bituminous paving of I-35 interchange ramps A and B will be done as part of the Stage 1 work.

2. Stage 2, Southbound Reconstruction on TH 33:

Stage 2 traffic will be as shown in the Plan while the southbound lanes of TH 33 are reconstructed and paved. This stage places traffic in a two-lane, two-way, head to head traffic configuration on the northbound lanes of TH 33 with temporary signal system control

In addition to the work needed to reconstruct and pave southbound TH 33, all intersection tie-ins must be completed that connect to the new concrete pavement prior to switching traffic to the opposite lanes.

Traffic must be able to use the signalized intersection at CSAH 7 / Doddridge Ave and at the Wal-Mart Entrance during construction of this stage except during **Intermediate Completion Time D.** Cross traffic will only be allowed at the signalized intersections during this stage. All other connections will be closed to traffic during this stage.

The Contractor will continuously pave the southbound lanes of TH 33 with no gaps except at the CSAH 7 / Doddridge Ave Intersection, and at Station 525+50, the south entrance to the Gillette Frontage Road. Access to the Gillette Frontage Road will be through the pavement gap at Station 525+50. When the crossover and entrance pavement is paved and cured at the north access to the Gillette Frontage Road the road shall be opened. This work shall be completed as provided in **Intermediate Completion Time D.**

All seeding, pavement markings and bypass removal will be completed in this stage.

d. Requirements for Public Traffic

S-1.4.1 The Contractor shall accomplish all work necessary to provide for the safe and convenient use by the public for through and local traffic on all highways, streets and roads affected by the Project, and shall provide reasonable and adequate access to businesses and residences for the duration of the Project. Work necessary to accommodate public traffic may include, but is not limited to, staging of construction activities in ways not necessarily shown in the Contract, completion of all traffic control measures, the construction of temporary driving lanes or bypasses, temporary entrances, and maintenance of temporary driving surfaces.

S-1.4.2 Temporary Driving Surfaces (Gravel)

It is anticipated this Project may require the use of temporary gravel driving surfaces for public traffic to businesses during construction prior to and after placement of permanent surfacing (concrete or bituminous). If public traffic is placed on gravel surfaces, it must be maintained in a condition such that the surface is ~~a~~ reasonably smooth and not rutted or potholed and which will provide for the safe and convenient use by the traveling public as approved by the Engineer. The use of temporary gravel surfaces will be limited to 3 calendar days~~,~~ after which the connection needs to be made permanent or have a temporary bituminous surface installed.

S-1.4.3 Temporary Driving Surfaces (Bituminous)

This Project will require the use of temporary bituminous connections at various locations during the staged construction of this project. Temporary bituminous connections will be installed as directed by the Engineer. Payment for the bituminous mixture will be by the ton **under 2360** and will be compensation in full for all cost to prepare and install the temporary bituminous driving surface .

S-1.4.4 The Contractor shall designate at least two (2) individuals that will available for road repair or any lane maintenance within 45 minutes of notification from the State. The designated individuals shall be able to be contacted 24 hours a day, 7 days a week. These may be the same individuals as shown in Section S-12.1A (MAINTENANCE OF TRAFFIC AND TRAFFIC CONTROL) of these Special Provisions. The Engineer shall be kept informed as to the names and phone numbers of these individuals.

S-1.4.5 Traffic and weather conditions may cause driving surfaces to degrade to an unacceptable condition while in use. The Contractor shall be responsible for monitoring the condition of any driving surfaces for the duration of the Project, including nights, weekends, holidays and other non-work times, except for authorized suspensions. If deficiencies are encountered that must be repaired, the Contractor shall begin appropriate repairs and maintenance to the driving surfaces as necessary, and as directed by the Engineer, in order to maintain a safe driving surface for the traveling public. During work days (times when the Contractor is actively pursuing the completion of the Project), the Contractor shall begin repairs directed by the Engineer along with needed maintenance within 1 hour of notification from the Engineer. The State will assess monetary deductions in the amount of $1000 for each incident that the Contractor fails to substantially comply with these requirements for repairs and maintenance.

S-1.4.6 During times when the Contractor is not actively pursuing the completion of the Project (nights, weekends and Holidays) the Contractor shall designate at least three (3) individuals that will be available for road repair or any lane maintenance within 1 hour of notification from the State. These may be the same individuals as shown in Section S-__.1A (MAINTENANCE OF TRAFFIC AND TRAFFIC CONTROL) of these Special Provisions. The Engineer shall be kept informed as to the names and phone numbers of these individuals. The State will assess monetary deductions in the amount of $1000.00 for each incident at each location for each hour or portion thereof that the Contractor fails to substantially comply with these requirements for repairs and maintenance.

S-1.4.7 The Contractor shall be responsible for the settlement of any damage claims from the traveling public that are the result of improper and untimely maintenance of the driving surface.

S-1.4.8 All costs associated with monitoring for defects, maintaining driving surfaces and staging construction operations to accommodate public traffic shall be considered incidental unless otherwise specifically provided for in the Contract.

e. Reasonable and Adequate Access

Reasonable and adequate access to businesses and residences shall be maintained at all times as defined below:

The State will assess monetary deductions in the amount of $1000 for each incident that the Contractor fails to substantially comply with the requirements for Business and Residential Entrances.

A) Residential Entrances: Access to residential properties must be maintained to the maximum extent possible. Permissible short-term closures will be allowed for activities such as sub-cuts, utility trenches and curb and gutter construction. **72 hours** prior to closing any driveway access, the Contractor will be required to notify the affected homeowners and make arrangements for the delivery or pick-up of goods and services. At the pre-construction conference, the Contractor shall submit a plan to the Engineer that:

I. Outlines a notification plan to property owners when access to their properties will be temporarily restricted. A copy of all notices to property owners shall be sent to the Engineer for approval at least 24 hours prior to public distribution.

II. Addresses how the Contractor shall provide for the delivery of goods and services to property owners whose access has been temporarily restricted.

B) Business Entrances: Access to all business must be maintained at all times with a minimum width driveway of at least 24 feet. This access may be at a temporary location if needed during construction.

At the pre-construction conference, the Contractor shall submit a plan to the Engineer that outlines a notification plan to business owners when access to their properties will be changed or temporarily restricted. **One week** prior to any changes in access the Contractor will be required to notify the affected businesses and make arrangements for the delivery or pick-up of goods and services if needed. A copy of all notices to business owners shall be sent to the Engineer for approval at least 24 hours prior to public distribution.

f. Public Road Maintenance – Sweeping and Dust Control

Sweeping and removal of debris resulting from spillage or tracking on any road used by public traffic that is caused by the Contractor's operations shall be accomplished immediately without special order of the Engineer. The Contractor shall sufficiently water the areas being swept to eliminate air born dust from sweeping operations and therefore keeping the project in compliance with the Minnesota State Rule 7011.0150 (Preventing Particulate Matter from Becoming Airborne). **Sweeping will only be allowed using a pickup broom and adequate water must be used during sweeping operations to eliminate dust. Sidewinder type brooms will not be allowed on this project.**

In addition, the Contractor shall keep all non-paved construction areas watered to prevent air born dust at all times to keep the project in compliance with the Minnesota State Rule 7011.0150 (Preventing Particulate Matter from Becoming Airborne) and in no way provide an unsafe condition to the traveling public. Payment for water used for dust control will be paid for as shown in (1717) AIR, LAND AND WATER POLLUTION of these Special Provisions.

The Contractor shall be subject to a monetary deduction of **$500** per hour when it has been determined by the Engineer that the Contractor has failed to provide required sweeping or failed to apply an adequate amount of water to prevent airborne particulate matter from occurring on the project.

g. Maintenance of Utilities

Utilities on this project must be maintained during construction to allow them to function. Storm sewer, water and sanitary sewers will need to be kept functioning during construction. Temporary connections to existing pipes or structures will be needed to keep utilities functioning. All work to maintain utilities during staged construction will be incidental.

h. Emergency Road Maintenance

The Contractor may be required to complete temporary repair work to pavements on TH 33 during the project. If ordered the Contractor shall be required to commence repairs within 2 hours. Repairs may need to be made under traffic. This work if required will be paid for as force account in accordance with Mn/DOT 1904. The State will assess monetary deductions in the amount of $1000 for failure to complete work as directed

i. SPECIAL PROJECT ADA REQUIREMENTS

All pedestrian facilities and shared trails on this Project must be constructed according to Public Rights-of-Way Accessibility Guidelines (PROWAG) which can be found at: http://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/background/revised-draft-guidelines and the 2010 ADA Standards for Accessible Design, which can be found at: http://www.ada.gov/2010ADAstandards_index.htm. The appropriate pedestrian ramp details for each quadrant are included in the Plan. The Engineer may provide additional details to those provided in the Plan that meet the guidelines as the need arises and field conditions dictate.

(A) The Contractor must designate a responsible person familiar with PROWAG to assess proposed sidewalk layouts at each site before work begins. Any time the Contractor is performing work that concerns pedestrian facilities; the Contractor's representative shall be on site.

(B) Construct Pedestrian facilities to meet the following criteria:

(1) Pedestrian Access Routes (PAR) must be constructed to meet the following:

- Minimum 4 feet width.
- A maximum cross slope of 2.0%.
- Vertical discontinuities must be less than 0.25 inches.
- Must provide positive drainage without allowing any ponding.
- All grade breaks shall be constructed perpendicular to the path of travel.

(2) Landings are part of the PAR and must be constructed to meet the following:

- 4 feet by 4 feet minimum width.
- Maximum slope of 2.0% in all directions.
- Required at all locations where the PAR changes directions.
- Must be connected to the PAR.
- All grade breaks shall be constructed perpendicular to the path of travel.

(3) Ramps are part of the PAR and must be constructed to meet either of the following criteria:

- Longitudinal slopes less than 5% in the direction of travel requires no landing at the top of the ramp (unless the PAR changes direction).
- Longitudinal slopes between 5 - 8.3% in the direction of travel require a landing at the top of the ramp.

(C) If the Contractor constructs any pedestrian or shared-use trail facilities that are not per Plan, do not meet the above requirements, or do not follow the agreed upon resolution, the Contractor shall be responsible for correcting the deficient facilities with no compensation paid for the corrective work. To ensure that the pedestrian facilities are constructed in compliance with PROWAG, the Contractor shall follow the following three steps:

(1) The Contractor shall use the appropriate ramp details in the Plan and identify the removal limits for the sidewalk and curb and gutter. If Contractor determines the removal limits are not adequate to meet PROWAG, the Contractor shall stop work immediately and consult the Engineer to determine the best solution. Once the Engineer and the Contractor reach agreement on how to proceed, the Contractor may finish the removals.

(2) The Contractor shall not alter any existing drainage patterns unless called for in the plans or approved by the Engineer.

Prior to pouring each curb and gutter segment, the Contractor must verify the zero height curb and curb transitions will be located as shown in the Plans and will provide an adequate detectable edge as shown on Standard Plan Sheet No. 5-297.250 (Sheet 5 of 5). The Contractor shall also verify the proposed curb flow lines will provide positive drainage as well as maintain existing gutter inflows/outflows. The curb and gutter shall be constructed as detailed in the Plan with a defined flowline and no vertical discontinuities. The Contractor shall consult with the Engineer to determine a resolution if any of these conditions cannot be met. Once the Engineer and the Contractor reach agreement on how to proceed, the Contractor may proceed with pouring the curb and gutter.

(3) After the curb has been correctly poured, the Contractor has set the sidewalk forms, and prior to placing the concrete curb ramps/sidewalks, the Contractor shall verify the requirements in Section S-__.1B will be achieved. If any of these requirements cannot be

met the Contractor shall meet with the Engineer to determine the best solution. Once the Engineer and the Contractor reach agreement on how to proceed, the Contractor may proceed with the curb ramp/sidewalk pour.

(D) It shall be the responsibility of the Contractor, or Contractor's Surveyor if applicable, to layout all proposed work at each intersection in accordance with the Plan and requirements listed in this Special Provision. The Contractor may confer with the Engineer for guidance in laying out the proposed work, but it will be the Contractor's responsibility to ensure the proposed work meets all the requirements of this Special Provision. This layout includes, but is not limited to placement of grade breaks, curb transitions, gutter flow lines, truncated dome placement, crosswalk marking placement, flares, landing limits, and ramp limits. It is important that the Contractor layout this work properly to achieve the construction of a compliant pedestrian facility. This layout work shall be incidental.

If contractor surveying is not called for in the Contract, the owner's surveyor will only stake points and elevations provided in the Plan. For detail (i.e. custom) designs, other than specific dimensions provided in the Plan, the Contractor shall be expected to scale dimensions from the Plan as needed to construct the facility. If scaled dimensions do not allow for a facility to be constructed to meet the requirements of this Special Provisions, the Contractor shall follow the process listed in S-__.1B.

(E) The Contractor shall utilize measures and methods when working near existing buildings and/or private landscaping that will avoid damaging the building's face or structure or other private property. The Contractor will be responsible for any damage to the building's face or structure, or other private property. Any damage resulting from Contractor operations will be repaired at the Contractor's expense to the satisfaction of the Engineer.

(F) The Contractor shall round all joints and edges of the walk with a ¼ inch radius edging tool, contraction joints shall extend to at least 30 percent of walk thickness and shall be approximately 1/8 inch wide as per MnDOT 2521. The Contractor shall also have the option of providing saw cuts to construct the sidewalk joints. This work shall be considered incidental.

(G) In areas where the sidewalk is to be constructed around fixed structures and the grade has been changed, the sidewalk shall be finished around these structures to the satisfaction of the Engineer at no additional cost.

Use on all jobs that have pedestrian signal system work.

(H) All pedestrian signal systems should be installed as shown in the Plan and must be constructed to meet the following criteria. The Contractor shall verify that the proposed push button locations will meet all of the following criteria before proceeding with the installation of the pedestrian push button system. If the push button location will not be constructed as per Plan, the Engineer will verify and approve the Contractor's proposed revised location.

- Pedestrian push buttons shall be oriented with the button facing towards the intersection and the button face placed parallel to the outside edge of the crosswalk.
- Pedestrian push buttons shall be a minimum of 4 feet and a maximum of 10 feet from the back of curb/edge of roadway, but may be placed 1.5 feet to 4 feet from the back of curb/edge of roadway if mounted on a signal pole as indicated in the Plan or as approved by the Engineer.
- Pedestrian push buttons shall be located at the outside crosswalk edge and shall be no more than 5 feet offset from the projected outside edge of the crosswalk/outside edge of detectable warnings.
- Pedestrian push buttons shall be a minimum of 10 feet apart, except in islands and medians, where the minimum separation is 5 feet.
- Each pedestrian push button shall have a landing immediately adjacent to the push button face with minimum dimensions of 4 feet by 4 feet and a maximum slope of 2.0% in all directions. Center the push button on the landing if possible to do so without violating

any of the requirements listed in this Special Provision. The landing must be connected to the Pedestrian Access Route.

- A 6-foot wide clear distance between obstructions shall be maintained wherever it is possible to do so for snow removal purposes.
- The push buttons shall be mounted at a height of 42 inches as indicated in the Plan.
- If it is possible to mount a push button on a signal pole and meet all the criteria listed in this Special Provision, then the push button shall be mounted on signal pole and the unused push button station components shall be considered surplus materials and delivered to MnDOT Electrical Services.
- Crosswalks shall be striped in a straight alignment between the outside edges of the detectable warnings with no kinks unless the crosswalks are shown as kinked in the Plan.
- The Contractor shall maintain all working points marked by the surveyor and use the working points to layout push button locations in accordance with the Plans and Special Provisions.

If any of these conditions cannot be met, the Contractor shall consult with the Engineer to determine a resolution. Once the Engineer and the Contractor reach an agreement on how to proceed, the Contractor may proceed. If the Contractor constructs any pedestrian push button systems or pedestrian facilities which do not meet the criteria or the agreed upon resolution, the Contractor will be responsible for correcting the deficiencies with no compensation paid for the corrective work.

To help ensure signal systems are properly constructed the Contractor must adhere to the following practices:

- All push button station bases and pedestal bases shall be poured either concurrently with or after the adjacent sidewalk pour. These bases shall be poured flush with all adjacent sidewalk within 1/4 inch maximum vertical deflection as shown in the plans and MnDOT Standard Plate 8112 and MnDOT pedestrian push button detail.
- Signal pole foundations which are being constructed in or adjacent to sidewalk shall be constructed in accordance with the applicable MnDOT Standard Plate 8120 or 8126. If a push button is proposed to be mounted on a signal pole, the Contractor shall determine the finished grade of the top of proposed sidewalk prior to pouring the signal pole foundation. The signal pole foundation shall not be more than 8 inches above the finish grade of the sidewalk and must still meet the vertical clearance requirements of the applicable MnDOT Standard Plates 8120 or 8126. If this is not possible, the Contractor shall consult with the Engineer to determine the appropriate solution.

(1803) CRITICAL PATH METHOD (CPM) SCHEDULES

Always use either S-.1 or S-.2. The blank in S-.4 needs to be filled in by Construction. The value should be from 7 to 30 calendar days. If no value is inserted, CO Special Provisions will use 7 as the value. Always use S-.3 thru S-.5.

REVISED 12/6/13 ◄DO NOT REMOVE THIS. IT NEEDS TO STAY IN FOR THE CONTRACTORS.
SP2014-46.1

The provisions of MnDOT 1803 are modified as follows:

j. This Contract requires the use of a Critical Path Method (CPM) Schedule as the Progress Schedule for the Project.

k. The provisions of MnDOT 1803.3 A are hereby deleted and the following is substituted therefor:

A General Requirements

If the Contractor intends to use Critical Path Method (CPM) schedules, or when the Department specifies the Work under this Contract shall be scheduled using CPM, the Work shall be planned, accomplished, and reported using CPM for the Contractor's Progress Schedules.

The Contractor will access the Department's Enterprise Project Management System (EPMS) Primavera P6 software to plan and schedule all work shown in the contract documents.

A.1 MnDOT Enterprise Project Management System (EPMS)

MnDOT has installed Primavera P6 software on internet accessible servers for use by appropriate Department personnel, Consultants, and Contractors. The State will provide access to MnDOT's Primavera P6 software and the MnDOT Enterprise Project Management System (EPMS), for use by the Contractor for preparing, maintaining, and submitting all schedules.

A.2 MnDOT Enterprise Project Management System (EPMS) Configuration

The Department will determine the storage location for the project schedule files on the Department's Enterprise Project Management System and will provide the Contractor with the naming convention for all progress schedule submissions. As this software is an enterprise application, the Department will be the sole entity to modify the EPMS structure, the Organizational Breakdown Structure (OBS), Global Activity Codes, Global Calendars, User Defined Fields, Security Profiles, Administrative Categories, and Administrative Preferences.

A.3 Minimum Network Requirements for EPMS

The latest Citrix On-line plug-in must be downloaded to the computer being used to access the MnDOT EPMS system. The latest MnDOT approved Citrix Client can be downloaded at: http://webportal.dot.state.mn.us.

A.4 Contractor Access to MnDOT Enterprise Project Management System (EPMS)

The Contractor shall submit a P6 Request for Access Form for each proposed Primavera user to obtain the required User ID's and Passwords for access to the MnDOT Citrix Webportal and Primavera P6 Software on the Department's network servers. The form, in PDF format, can be downloaded from http://www.dot.state.mn.us/const/tools/contracttime.html under the heading *Primavera P6* and shall be submitted to CPMSchedule.DOT@state.mn.us.

The P6 Request for Access Form may be submitted any time following the announcement by the Department that the Contractor has been awarded the contract. The Department will process these requests and should generally provide the User ID's and Passwords within one week of receipt of the P6 Request for Access Form. The User ID's and passwords will be provided to the Contractor (for the Project Scheduler plus one other person) to obtain secure Internet access to the Primavera P6 software and project schedule data.

Instructions on how the Contractor will access the MnDOT Citrix Webportal & Primavera P6 Software can be downloaded at:
http://www.dot.state.mn.us/const/tools/docs/MnDOTCitrixWebporta_P6Software.pdf..

A.5 Importing/Exporting Schedule Files

The Department will not "Import" or accept Schedule files from any other computer system.

A.6 Project Scheduler

1. The Contractor shall designate an individual, entitled the Project Scheduler, who will develop and maintain the construction progress schedule.
2. The Project Scheduler is recommended to have at least three (3) days of training in Primavera P6 from a certified instructor, and at least one (1) year of Critical Path Method scheduling experience using Primavera or Microsoft Project scheduling software. Acceptable training can be accomplished by successfully completing MnDOT's CPM 101, 102, 201, and 202 courses. For an instructor to be deemed "Certified" outside of the MnDOT CPM courses, they must be certified by Oracle to train personnel in the use of Primavera P6.
3. The Project Scheduler may be a full or part time position or may be filled by a consultant. Scheduling certifications from AACE and PMI will meet the minimum requirements.
4. The Contractor may fill the Project Scheduler position using a person employed by the Contractor who is not on the project, except for meetings and other times when the Project Scheduler's presence is required on the project to satisfactorily fulfill Progress Schedule requirements of the contract documents.
5. The Contractor is not required to submit documentation to the Department to verify the Project Scheduler meets the recommended qualifications above. However, if the Engineer determines the Project Scheduler does not have sufficient skill or experience in Critical Path Method scheduling as a result of Progress Schedule submissions being substantially deficient for several submissions, or that Progress Schedule submissions are repeatedly not submitted within the required contract timeframes, the Engineer may require that the person be removed from the project in accordance with 1802 "Qualification of Workers".

A.7 File-Naming Convention

The Contractor shall use a file-naming convention as modeled in Table 1803-3. If the schedule is not accepted, the Contractor shall resubmit under the file name as modeled for the 2nd version, etc. The ####-### indicates a placeholder for the State Project Number.

Table 1803-3
Progress Schedule Filename convention

Schedules	1st Version	2nd Version	3rd Version
1st Baseline Schedule (All Schedules until it is Accepted as Baseline)	####-###-BS-1	####-###-BS -2	####-###-BS -3
1st Update to Progress Schedule	####-###-1BSU-1	####-###-1BSU-2	####-###-1BSU-3
2nd Update to Progress Schedule, etc.	####-###-2BSU-1	####-###-2BSU-2	####-###-2BSU-3
1st Revised Schedule	####-###-1RE-1	####-###-1RE-2	####-###-1RE-3
1st Update to Revised Schedule	####-###-1REU-1	####-###-1REU-2	####-###-1REU-3
2nd Revised Schedule, etc.	####-###-2RE-1	####-###-2RE-2	####-###-2RE-3
1st Impact Schedule	####-###-1IS-1	####-###-1IS-2	####-###-1RE-3
2nd Impact Schedule, etc.	####-###-2IS-1	####-###-2IS-2	####-###-2IS-3

A.8 Float Suppression / Sequestered Float

The Contractor shall not suppress or sequester float. Examples of prohibited float suppression or sequestration include, but are not limited to:

(1) Logic relationships that provide no tangible or sequential value between unrelated activities.

(2) Logic relationships that demand completion of an activity that could otherwise continue beyond a Successor's start or finish dates.
(3) Excessively long durations.

The Contractor shall obtain the Engineer's approval before using lags or leads. The Contractor shall remove any lags or leads and replace with an activity identifying the lag or lead upon the request of the Engineer, regardless of whether the Department allowed the lag or lead in a previous Progress Schedule.

The Contractor shall not be entitled to compensation or a time extension for delays that could have been avoided by revising activity durations or logic used to sequester float.

A.9 Use of Float

The Contractor acknowledges that all float (including Total Float, Free Float, and Sequestered Float) is a shared commodity available to the Project and is not for the exclusive benefit of any party. Float is an expiring resource available to accommodate changes in the Work, however originated, or to mitigate the effect of events that may delay performance or completion of all or part of the Work.

It is understood that identified contingencies, as described in 1803.3.D, "Weather and Duration Contingency", become available Float as time elapses and the contingency is not used.

The blank in S-.4 needs to be filled in by construction. The value should be from 7 to 30 calendar days. If no value is inserted, CO Special Provisions will use 7 as the value.

l. The first sentence of the first paragraph of 1803.3.B.2 is hereby changed to read:

Baseline Schedule acceptance is a condition of NTP2 and shall not exceed ___ Calendar Days from NTP1.

m. The following is hereby added at the end of 1803.3.B2:

(6) Work Break Down Structure:

Level 1 is the project level;
Level 2 shall have four nodes; MILESTONES, SUBMITTAL, CONSTRUCTION, and POST CONSTRUCTION;
Level 3 the node for SUBMITTAL activities shall have at least two sub nodes; SHOP DRAWINGS, and PROCUREMENT/FABRICATION;
The node for CONSTRUCTION activities shall be broken into nodes for various PHASES of construction work;
The node for POST CONSTRUCTION activities requires no sub nodes.
Level 4 The nodes for PHASES of Construction activities should include sub nodes for the various STAGES of work;
Level 5 The nodes for STAGES of work should include sub nodes for the various highway features: bridges, highway segments, interchanges, intersections/roundabouts, etc.;
Level 6 The nodes for highway features should be broken into their components (a bridge into components such as Piles, Substructure, Superstructure), and a highway segment into components such as pavement, drainage, earthwork, lighting, traffic signals, etc.

(7) Standard Schedule Activities to be Included:

M1060	Contractor Start Contract Work	Start Milestone
M1070	Substantial Completion	Finish Milestone

M1090	Contract Completion Date	Finish Milestone

(1806) DETERMINATION AND EXTENSION OF CONTRACT TIME

Use on all jobs.

NOTE: All Special Provisions relating to Contract Time should either be in 1806 or 1807 – NOT 1803 -1404 or any other spec.

REVISED 10/29/13 ◄DO NOT REMOVE THIS. IT NEEDS TO STAY IN FOR THE CONTRACTORS.

SP2014-48

The Contract Time will be determined in accordance with the provisions of MnDOT 1806 and the following:

n. Construction operations shall be started on **May 12th, 2014** or within eight (8) Calendar Days after the date of Notice of Contract Approval, whichever is later. Construction operations shall not commence prior to Contract Approval.

~~All work required under this Contract, except maintenance work and Final Clean Up shall be completed within _____ Working Days.~~

OR

o. All work required under this Contract, except maintenance work and Final Clean Up shall be completed on or before **October 17th, 2014**

p. INTERMEDIATE COMPLETION DATE A

Intermediate Completion Date A shall start on May 12, 2014. The work required during this intermediate completion shall be all work shown in **Preliminary Stage** as outlined in S- XX (1803) PROSECUTION OF WORK. The Completion Date for this Intermediate Date is July 2, 2014.

q. INTERMEDIATE COMPLETION DATE B

Intermediate Completion Date B shall start on Tuesday July 8, 2014. The work required during this intermediate completion shall be the reconstruction of the mainline of TH 33 when traffic is placed in a head to head configuration and using the Temporary signal systems at Doddridge Ave. and Gillette Road. During this time all reconstruction work on **northbound (NB) and southbound (SB) TH 33 Stage 1 and Stage 2** as shown in S-XX 1803 PROSECUTION OF WORK must be completed. All traffic on TH 33 must be in its final configuration by the Intimidate Completion Date of September 12, 2014

r. INTERMEDIATE COMPLETION TIME C

Intermediate Completion Time C shall start when the access to TH 33 from the east is closed at Gillette Road. This intermediate is for the closure of Walmart access to TH 33 at Gillette Ave during Stage 1 NB mainline paving. The intersection will be allowed to be closed for Seven (7) Calendar days. During this closure the mainline pavement will be placed, turn lanes and crossovers paved and the connection pavement placed on the east side of the intersection. Traffic will be allowed complete access to TH 33 at the completion of the (7) Calendar Days.

s. INTERMEDIATE COMPLETION TIME D

Intermediate Completion Time D shall start when the access to TH 33 from the Gillette Road frontage road west of TH 33 is closed at Station 540+25. This intermediate is for the closure of the west frontage road at Station 540+25, the access to TH 33 at Gillette Ave during Stage 2 southbound (SB) mainline paving. This intersection will be allowed to be closed for Seven (7) Calendar Days. During this closure the mainline pavement will be placed, turn lanes and crossovers paved and the connection pavement placed on the west side of the

intersection. Access to Gillette Road during this intermediate completion time will be by use of a paving gap at Station 525+50, the south Gillette Road access point. Traffic will be allowed complete access to TH 33 at Station 540+25 at the completion of the (7) Calendar Days.

~~***Use the following for Intermediates***~~
~~In addition to the requirements indicated above all work required to _____ shall be completed within _____ (working days, calendar days or completion date).~~

Use S-.5 on all jobs.

t. Construction operations involving construction field work or work that impacts, restricts, or interferes with traffic as determined by the Engineer shall not commence prior to NTP2 without written permission from the Engineer.

Do not use if DIST. has section like this in their (1404).

u. No work which will restrict or interfere with traffic shall be performed between 12:00 noon on the day preceding and 9:00 A.M. on the day following any consecutive combination of a Saturday, Sunday, and legal holiday without written permission from the Engineer.

(A) If the Contractor chooses not to work at all on the day preceding the holiday period, no working day charges will be assessed.

(B) If the Contractor chooses to work prior to 12:00 noon on the day preceding the holiday period or if the Contractor obtains written permission to work after 12:00 noon on the day preceding the holiday period, working day charges will be assessed only for the actual hours worked.

Use the following on all multiyear projects whether they are completion day contracts or working day contracts (per Contract Admin) or late in year.
~~The provisions of MnDOT 1806.3(1)(3) are modified to the extent that "(3) During the inclusive period from November 15 through April 15, except as specified in 1806.1, "Determination and Extension of Contract Time, General.""; is deleted.~~

Use the following when needed on the project. <u>Use only on working day contracts.</u>
~~The provisions of MnDOT 1806.3 (1) (2) are modified to the extent that the term "(2) On Saturdays, Sundays, and legal holidays" is changed to read "(2) On Sundays and legal holidays". Working Day charges will be assessed six (6) days per week, Monday through Saturday.~~

Use the following when needed on the project. <u>Use only on working day contracts.</u>
~~Working day charges will be based on a ten (10) hour working day.~~

Use the following when needed on the project. <u>Use only on completion day contracts.</u> Revise accordingly.

v. **The Contractor is advised that the Contract Time (Completion Date) is based on an anticipated six (6) day work week, Monday through Saturday. Using multiple crews and working on multiple operations simultaneously for greater than 8 hours per day.**

Do not use S-.11 for DIST. 1 jobs

w. When, in the opinion of the Engineer, work on the Project cannot be performed due to failure of material delivery beyond the control of the Contractor, the Engineer will agree to a Suspension of Work in conformance with MnDOT 1803.6 and/or will cease the charging of working days, whichever the Engineer deems applicable.

A Resumption of Work Order will be issued by the Engineer after the Contractor has received delivery of the required material, and/or the Engineer will resume the charging of working days.

Always use S-.12 when using SP2014-112 (HIGH PERFORMANCE DOWEL BAR - 38 mm (1.5 inch)) or when using SP2014-113 (HIGH PERFORMANCE DOWEL BAR – 32 mm (1.25 inch)).

x. MnDOT 1806.2.C is hereby modified to the extent that no extension of time will be granted for any delays experienced by the Contractor in furnishing and installing Stainless Steel Type Dowels for this Project.

(1807) FAILURE TO COMPLETE THE WORK ON TIME

The District needs to choose the appropriate paragraphs which apply to their project. Use on all jobs.
REVISED 12/13/13 ◄DO NOT REMOVE THIS. IT NEEDS TO STAY IN FOR THE CONTRACTORS.
SP2014-49

The provisions of MnDOT 1807 are supplemented as follows:

y. The Department will assess the Contractor a monetary deduction in an amount equal to $5,000 for each Calendar Day that any of the work specified in Section S- XX 1806 INTERMEDIATE COMPLETION DATE A (DETERMINATION AND EXTENSION OF CONTRACT TIME) of these Special Provisions remains incomplete after the expiration of the working period provided therefore.

z. The Department will assess the Contractor a monetary deduction in an amount equal to $7,000 for each Calendar Day that any of the work specified in Section S- XX 1806 INTERMEDIATE COMPLETION DATE B (DETERMINATION AND EXTENSION OF CONTRACT TIME) of these Special Provisions remains incomplete after the expiration of the working period provided therefore.

aa. The Department will assess the Contractor a monetary deduction in an amount equal to $ 7,500 for each Calendar Day that any of the work specified in Section S- XX 1806 INTERMEDIATE COMPLETION TIME C (DETERMINATION AND EXTENSION OF CONTRACT TIME) of these Special Provisions remains incomplete after the expiration of the working period provided therefore.

bb. The Department will assess the Contractor a monetary deduction in an amount equal to $5,000 for each Calendar Day that any of the work specified in Section S- XX 1806 INTERMEDIATE COMPLETION TIME D (DETERMINATION AND EXTENSION OF CONTRACT TIME) of these Special Provisions remains incomplete after the expiration of the working period provided therefore.

Use S-.2 to reduce damages for final cleanup
The Department may reduce the daily liquidated damages to $500 when the only remaining items are maintenance or Final Cleanup.

Choose the applicable rows in the table shown below and modify (if needed).
For informational purposes only, bidders are advised that in addition to the requirements of MnDOT 1807, other Sections of these Special Provisions, as shown below, contain requirements for assessment of monetary deductions to this Contract:

1404	MAINTENANCE OF TRAFFIC AND (2563) TRAFFIC CONTROL
1506	SUPERVISION BY CONTRACTOR
1507	UTILITY PROPERTY AND SERVICE
1706	EMPLOYEE HEALTH AND WELFARE
2331	BITUMINOUS PAVEMENT CRACK TREATMENT CLEAN AND SEAL
2533	PORTABLE PRECAST CONCRETE BARRIER DESIGN 8337
2563	TEMPORARY PEDESTRIAN ACCESS CONTROL
2563	PORTABLE CHANGEABLE MESSAGE SIGN
2563	TRAFFIC CONTROL SUPERVISOR
2580	INTERIM PAVEMENT MARKING

The liquidated damages set forth in MnDOT 1807 and any monetary deductions as set forth above may apply equally, separately, and may be assessed concurrently.

Please publish as a **LEGAL AD** in the **CLOQUET JOURNAL** on **December 13, 2012 and December 20, 2012.**

NOTICE OF OPEN HOUSE AND PUBLIC HEARING ON PROPOSED IMPROVEMENT

Highway 33 from Interstate Hwy 35 to Doddridge Avenue/Big Lake Road
Cloquet, Minnesota

TO WHOM IT MAY CONCERN:

Notice is hereby given that an Open House and Public Hearing on the above proposed improvement has been scheduled to be held between **5:00 and 7:00 pm, January 15, 2013** at the Cloquet City Hall. The purpose of this Open House and Hearing is to inform the public about the project and encourage the public to comment and ask questions. Maps, drawings and other pertinent information will be available for inspection. The tentative schedule for right-of-way acquisition and construction will be discussed. During the Open House, the public will be able to discuss the project in an informal manner with Mn/DOT, Cloquet and Carlton County officials. Comments will be received either written or verbally and will become part of the official public hearing record. The comments will be considered when making future project-related decisions.

The proposed scope of the project includes pavement replacement on Highway 33 from Interstate Highway 35 (I-35) north to a point approximately 700 feet north of the intersection of Doddridge Avenue/Big Lake Road. This project will include revisions to existing access points along the highway together with replacement of the existing traffic signal and widening the roadway connections at the intersection of Highway 33 and Doddridge Avenue/Big Lake Road to improve traffic flow and pedestrian accommodations. The City of Cloquet will be replacing and upgrading certain sanitary sewer and water utilities as well.

An informal Open House will be held between 5:00 and 6:30 pm. The formal Public Hearing before the Cloquet City Council will begin at 7:00 pm.

A copy of the proposed layout can be viewed at the City of Cloquet Engineer's Office, 1307 Cloquet Avenue; Cloquet, MN 55720. Comments can be mailed, prior to the Hearing, to Mr. Todd Campbell, Mn/DOT Project Manager, 1123 Mesaba Ave.; Duluth, MN 55811.

To request an ASL interpreter, send a meeting notice to Inte1ASL.DOT@state.mn.us. To request another reasonable accommodation, call 1-651-366-4718 or 1-800-657-3774 (Greater Minnesota); for Minnesota Relay Service dial 711 or 1-800-627-3529 (TTY, Voice or ASCII). Adequate notice is required.

Brian Fritsinger
City Administrator

December 2012 Cloquet Area Chamber of Commerce Newsletter Article

Highway 33 Project Open House

The Minnesota Department of Transportation, Carlton County, and City of Cloquet invite local business owners and managers to hear about plans to improve Highway 33 between I-35 and Doddridge Ave. / Big Lake Rd.

The pavement condition necessitates replacing the pavement, and the stoplight and road connections at the Doddridge Ave. / Big Lake Rd. intersection will be upgraded to improve traffic flow and pedestrian accommodations. Safety improvements are proposed at Armory Rd. considering the crash history at this location. Construction is currently scheduled to start and finish in 2014.

The project team will be available to explain the project and address questions on Tuesday, December 18th, 2012 between 1:00-3:00 p.m. in the City Council Chambers at Cloquet City Hall (1307 Cloquet Avenue). Alternatively, people may contact Todd Campbell, MnDOT Project Manager, at (218)-725-2744; Jim Prusak, City Engineer, at (218)-879-6758; or Wayne Olson, County Engineer, at (218)-384-9150.

Mavec, Dave (DOT)

From: Campbell, Todd (DOT)
Sent: Thursday, March 13, 2014 10:55 AM
To: Mavec, Dave (DOT)
Subject: FW: Business Meetings

Todd R Campbell, P.E.
Assistant District Engineer
Program Delivery
MnDOT Duluth
218-725-2706

From: Saatela, Krysten (DOT)
Sent: Tuesday, November 13, 2012 10:10 AM
To: jprusak@ci.cloquet.mn.us; cpeterson@ci.cloquet.mn.us
Cc: Campbell, Todd (DOT)
Subject: Business Meetings

Jim/Caleb-

Prior to our open house, we've been able to arrange the following one-on-one meetings:

1. Tuesday, November 20th – Meet at L&M at 2 p.m. with store and company management; Provide overview of project scope, benefits, and answer any questions.
2. Wednesday, November 21st – Meet at City Hall at 8:45 a.m. then stop by Brenny Dahl (Doug or Jason) to introduce intersection reconstruction and proposed turning movement changes.
3. Thursday, November 29th – Meet at Perkins at 2:00 p.m. with Sean Flaherty and HB.

I'm working on arranging times to sit down with the Little Store and Super One. All other business owners, so far, are just interested in receiving an invitation to our open houses.

Let us know if one of you will be able to join us for these meetings.

Thanks,

Krysten Saatela, P.E.
MnDOT ADA Operations
Office: 651-366-4631
Cell: 651-373-4319
krysten.saatela@state.mn.us