

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
<b>ND</b>	<b>NHU-1-806(052)071</b>	<b>100</b>	<b>1</b>

SIGN NUMBER	SIGN SIZE	DESCRIPTION	AMOUNT REQUIRED					TOTAL AMOUNT REQUIRED	UNITS PER AMOUNT	UNITS SUB TOTAL
			BY PHASE NO.							
			1	2	3	4	5			
E5-1-48	48"x48"	EXIT GORE							35	
G20-1-60	60"x24"	ROAD WORK NEXT ____ MILES							28	
G20-1b-60	60"x24"	NO WORK IN PROGRESS (Sign and installation only)							28	
G20-2-48	48"x24"	END ROAD WORK	4	4	4	4	4	4	16	104
G20-4-36	36"x18"	PILOT CAR FOLLOW ME (Mounted to back of pilot car)	1			1		1	18	18
G20-10-108	108"x48"	CONTRACTOR SIGN	2	2	2	2	2	2	70	140
G20-50a-72	72"x36"	ROAD WORK NEXT ____ MILES RT & LT ARROWS							43	
G20-52a-72	72"x24"	ROAD WORK NEXT ____ MILES RT or LT ARROW							36	
G20-55-96	96"x48"	SPEED LIMIT ENFORCED - MINIMUM FEE \$80 WHEN WORKERS PRESENT	2	2	2	2	2	2	59	118
M1-1-36	36"x36"	INTERSTATE ROUTE MARKER (Post and installation only)							10	
M1-4-24	24"x24"	U.S. ROUTE MARKER (Post and installation only)							10	
M1-5-24	24"x24"	STATE ROUTE MARKER (Post and installation only)							10	
M3-1-24	24"x12"	NORTH (Mounted on route marker post)							7	
M3-2-24	24"x12"	EAST (Mounted on route marker post)							7	
M3-3-24	24"x12"	SOUTH (Mounted on route marker post)							7	
M3-4-24	24"x12"	WEST (Mounted on route marker post)							7	
M4-8-24	24"x12"	DETOUR (Mounted on route marker post)							7	
M4-9-30	30"x24"	DETOUR ARROW RIGHT or LEFT/AHD AND RT or LT							15	
M4-10-48	48"x18"	DETOUR (INSIDE ARROW) RIGHT or LEFT (Mounted on barricade)							7	
M5-1-21	21"x15"	ADVANCE TURN ARROW RT or LT(Mounted on route marker post)							9	
M5-1-30	30"x21"	ADVANCE TURN ARROW RT or LT(Mounted on route marker post)							9	
M6-1-21	21"x15"	DIRECTIONAL ARROW RT or LT (Mounted on route marker post)							7	
M6-1-30	30"x21"	DIRECTIONAL ARROW RT or LT (Mounted on route marker post)							9	
M6-3-21	21"x15"	DIRECTIONAL ARROW UP (Mounted on route marker post)							7	
R1-1-48	48"x48"	STOP	15	10	5	5	5	15	32	480
R1-2-60	60"x60"	YIELD			4	4	4	4	29	116
R1-3P-30	30"x12"	ALL WAY	4	3				4	3	12
R2-1-36	36"x48"	SPEED LIMIT ____ (Portable only)	2	2	2	2	2	2	30	60
R2-1-48	48"x60"	SPEED LIMIT ____	9	9	9	9	9	9	39	351
R2-1aP-24	24"x18"	MINIMUM FEE \$80 (Mounted on Speed Limit post)	7	7	7	7	7	7	10	70
R3-2-48	48"x48"	NO LEFT TURN							35	
R4-1-48	48"x60"	DO NOT PASS				2		2	39	78
R4-7-48	48"x60"	KEEP RIGHT							39	
R5-1-48	48"x48"	DO NOT ENTER							35	
R6-1-54	54"x18"	ONE WAY RIGHT or LEFT (Mounted on STOP or DO NOT ENTER post)							14	
R6-4-30	30"x24"	ROUNDABOUT DIRECTIONAL (2 CHEVRONS)			4	4	4	4	15	60
R7-1-12	12"x18"	NO PARKING ANY TIME							11	
R10-6-24	24"x36"	STOP HERE ON RED							16	
R11-2-48	48"x30"	ROAD CLOSED (Mounted on barricade)							12	
R11-2a-48	48"x30"	STREET CLOSED (Mounted on barricade)							12	
R11-3a-60	60"x30"	ROAD CLOSED ____ MILES AHEAD LOCAL TRAFFIC ONLY (Mtd on barricade)							15	
R11-3c-60	60"x30"	STREET CLOSED ____ MILES AHEAD LOCAL TRAFFIC ONLY (Mtd on barricade)							15	
R11-4a-60	60"x30"	STREET CLOSED TO THRU TRAFFIC (Mounted on barricade)							15	
W1-3-48	48"x48"	REVERSE TURN RIGHT or LEFT		2				2	35	70
W1-4-48	48"x48"	REVERSE CURVE RIGHT or LEFT	8	9	10	6		10	35	350
W1-4b-48	48"x48"	TWO LANE REVERSE CURVE RIGHT or LEFT							35	
W1-6-48	48"x24"	ONE DIRECTION LARGE ARROW	2	4	2			4	26	104
W2-6-30	30"x30"	ROUNDABOUT			4	4	4	4	17	68
W3-1-48	48"x48"	STOP AHEAD							35	
W3-3-48	48"x48"	SIGNAL AHEAD							35	
W3-4-48	48"x48"	BE PREPARED TO STOP	4	4	4	4	4	4	35	140
W3-5-48	48"x48"	SPEED REDUCTION AHEAD	3	3	2	2		3	35	105
W4-2-48	48"x48"	LANE ENDS RIGHT or LEFT					2	2	35	70
W5-1-48	48"x48"	ROAD NARROWS							35	
W5-8-48	48"x48"	THRU TRAFFIC RIGHT LANE							35	
W5-9-48	48"x48"	ROAD WORK TRAFFIC ONLY DOWN & LT or RT ARROW							35	
W6-3-48	48"x48"	TWO WAY TRAFFIC							35	
W8-1-48	48"x48"	BUMP	6	6	6	10	6	10	35	350
W8-3-48	48"x48"	PAVEMENT ENDS							35	
W8-7-48	48"x48"	LOOSE GRAVEL	6	6	6	6	6	6	35	210
W8-11-48	48"x48"	UNEVEN LANES	2			3		3	35	105
W8-12-48	48"x48"	NO CENTER LINE							35	
W8-17-48	48"x48"	SHOULDER DROP-OFF SYMBOL							35	
W8-53-48	48"x48"	TRUCKS ENTERING HIGHWAY							35	
W8-54-48	48"x48"	TRUCKS ENTERING AHEAD or ____ FT or ____ MILE	2					2	35	70
W8-55-48	48"x48"	TRUCKS CROSSING AHEAD or ____ FT or ____ MILE	2					2	35	70
W8-56-48	48"x48"	TRUCKS EXITING HIGHWAY							35	
W9-3a-48	48"x48"	CENTER LANE CLOSED SYMBOL							35	
W11-2-36	36"x36"	PEDESTRIAN CROSSING (Fluorescent yellow-green)		2	6	6	6	6	27	162
W12-2-48	48"x48"	LOW CLEARANCE							35	
W13-1P-30	30"x30"	____ MPH ADVISORY SPEED PLAQUE (Mounted on warning sign post)		2				2	14	28
W13-4p-36	36"x36"	ON RAMP (Mounted on other sign post)	2	2				2	17	34
W14-3-64	64"x48"	NO PASSING ZONE							28	
W16-2P-30	30"x24"	____ FEET PLAQUE (Mounted on warning sign post)							10	
W16-7P-24	24"x12"	DIAGONAL ARROW		6	6	6	6	6	3	18
W20-1-48	48"x48"	ROAD WORK AHEAD or ____ FT or ____ MILE	8	8	8	8	8	8	35	280
W20-2-48	48"x48"	DETOUR AHEAD or ____ FT or ____ MILE							35	
W20-3-48	48"x48"	ROAD or STREET CLOSED AHEAD or ____ FT or ____ MILE							35	
W20-4-48	48"x48"	ONE LANE ROAD AHEAD or ____ FT or ____ MILE							35	
W20-5-48	48"x48"	RIGHT or CENTER or LEFT LANE CLOSED AHEAD or ____ FT or ____ MILE							35	
W20-7-48	48"x48"	FLAGGER	4	4	4	4	4	4	35	140
W20-8-18	18"x18"	STOP - SLOW PADDLE Back to Back	4	4	4	4	4	4	5	20

[illegible]

## SPECIAL SIGNS

[illegible]

**SPEC & CODE**

704-1000	TRAFFIC CONTROL SIGNS	TOTAL UNITS	4165
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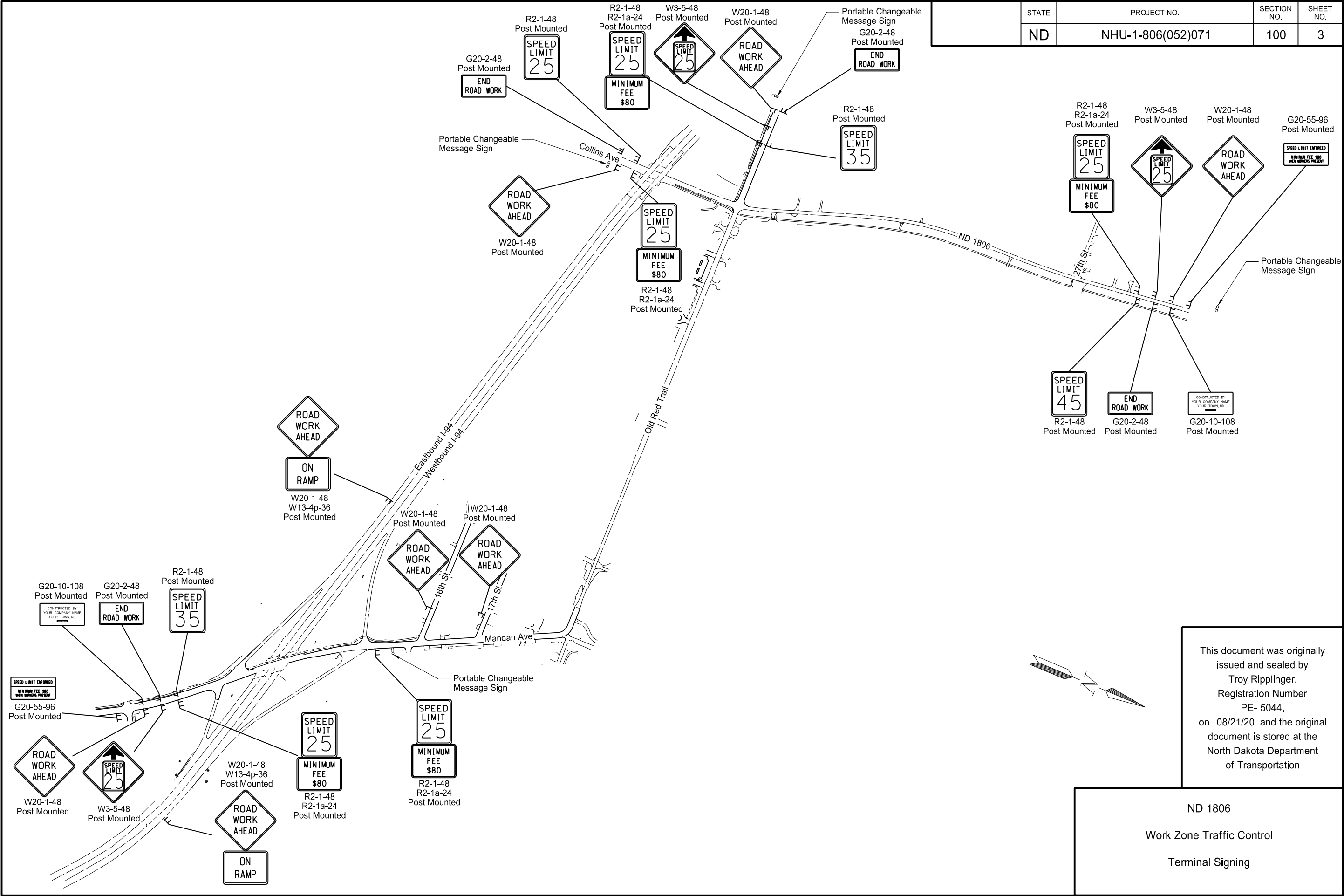
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**NOTE:**  
If additional signs are required, units will be calculated using the formula from Section III-18.06 of the Design Manual.  
<http://www.dot.nd.gov/>

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Traffic Control Devices List  
ND 1806



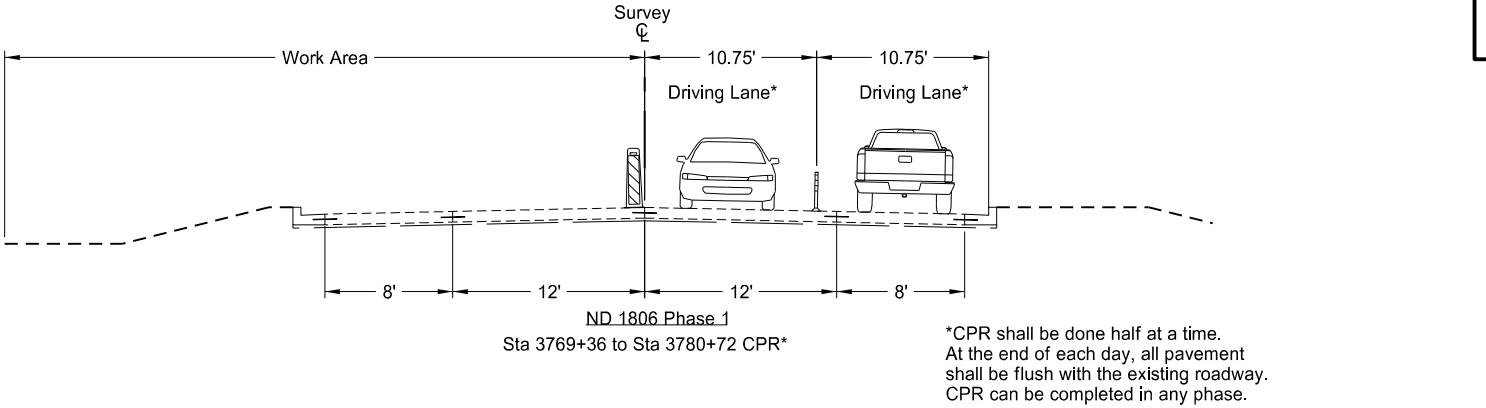


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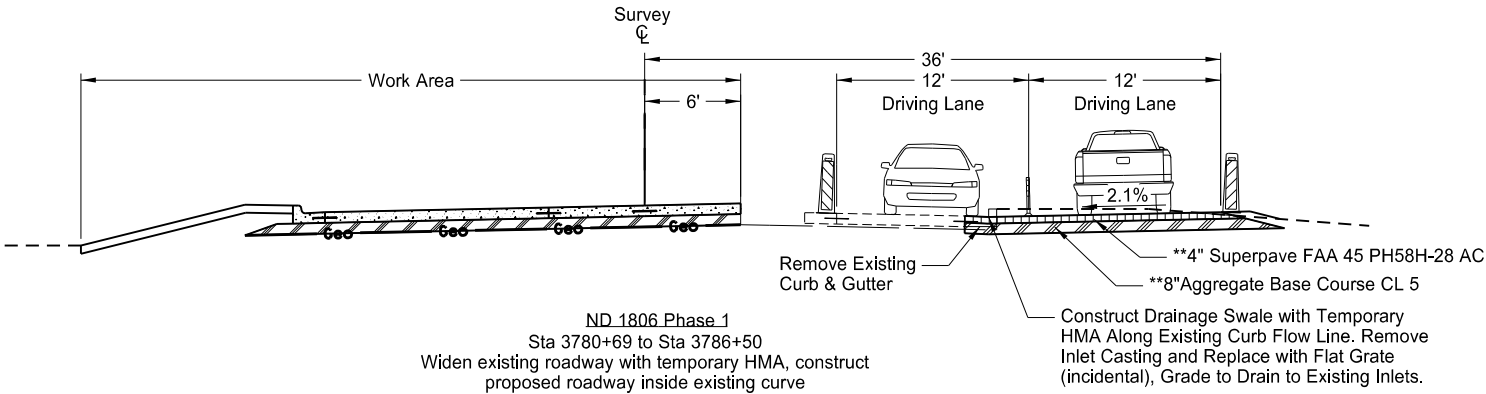
ND 1806  
Work Zone Traffic Control  
Terminal Signing

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ND	NHU-1-806(052)071	100	4
IM-1-094(200)153			

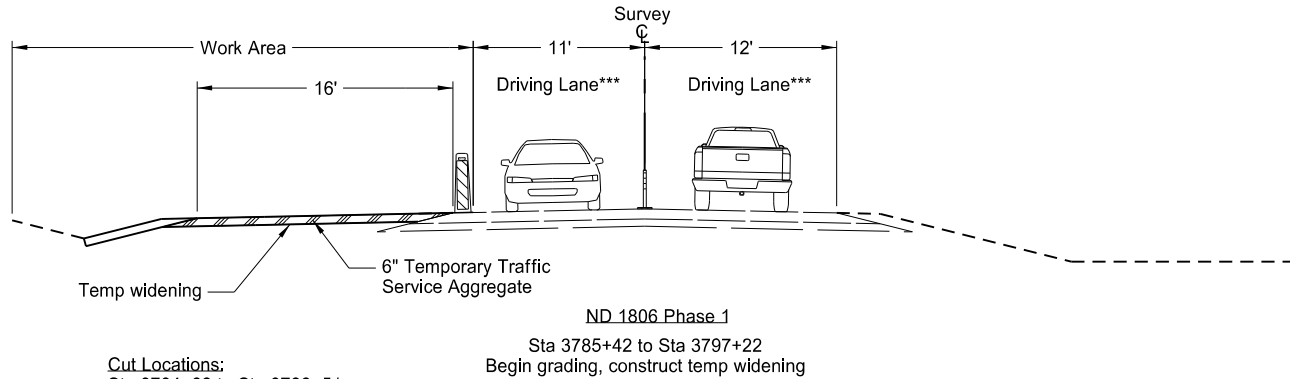
SPEC CODE	BID ITEM	QTY	UNIT
302 0050	TRAFFIC SERVICE AGGREGATE		
	Phase 1	3,167	TON
	Phase 2	1,483	TON
	Phase 3	115	TON
	Phase 4	124	TON
	SW Ramp Bypass (IM-1-094(200)153)	299	TON
302 0120	AGGREGATE BASE COURSE CL 5		
	Phase 1	239	TON
	Phase 2	226	TON
401 0060	PRIME COAT		
	Phase 1	2,994	GAL
	Phase 2	1,224	GAL
	Phase 3	138	GAL
	Phase 4	149	GAL
	SW Ramp Bypass (IM-1-094(200)153)	208	GAL
401 0160	BLOTTER MATERIAL CL 44		
	Phase 1	90	TON
	Phase 2	37	TON
	Phase 3	5	TON
	Phase 4	5	TON
	SW Ramp Bypass (IM-1-094(200)153)	7	TON
430 0045	SUPERPAVE FAA 45		
	Phase 1	120	TON
430 5806	PG 58H-28 ASPHALT CEMENT		
	Phase 1	8	TON



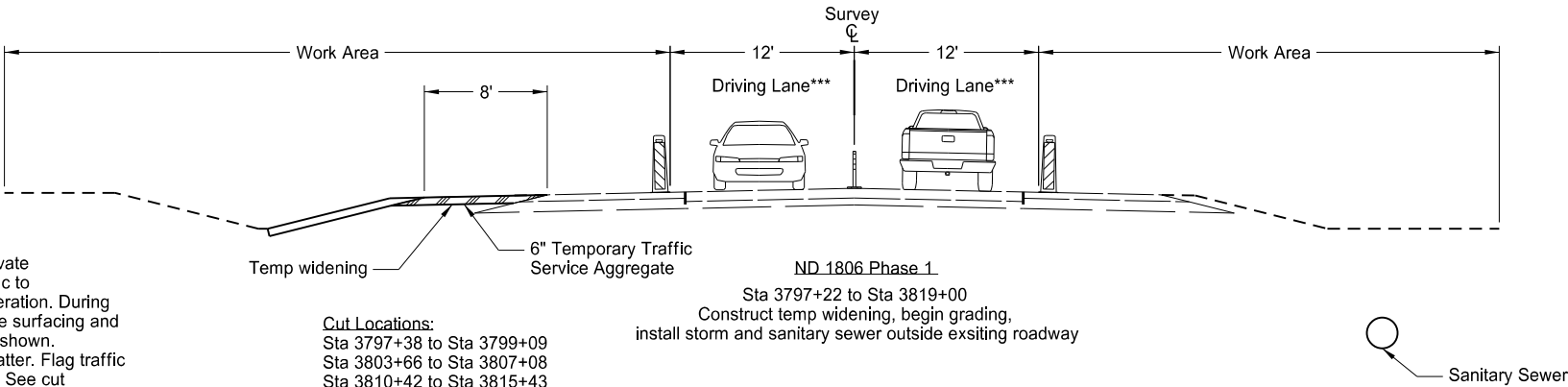
\*\*From Sta 3780+69 to Sta 3783+07 widen existing roadway with 2.5" of temporary HMA on 7" of aggregate base course. From Sta 3783+93 to Sta 3786+50 widen existing roadway with 6" of temporary traffic service aggregate.



\*\*\*In cut locations, excavate roadway and move traffic to accomodate grading operation. During non-working hours, place surfacing and allow two-way traffic as shown. Slopes shall be 4:1 or flatter. Flag traffic for storm sewer laterals. See cut phasing typical section.



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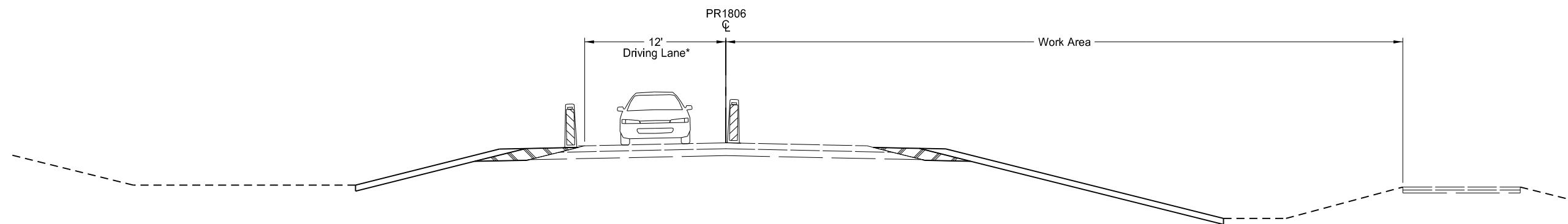


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ND 1806  
Work Zone Traffic Control  
Phasing Typical Section

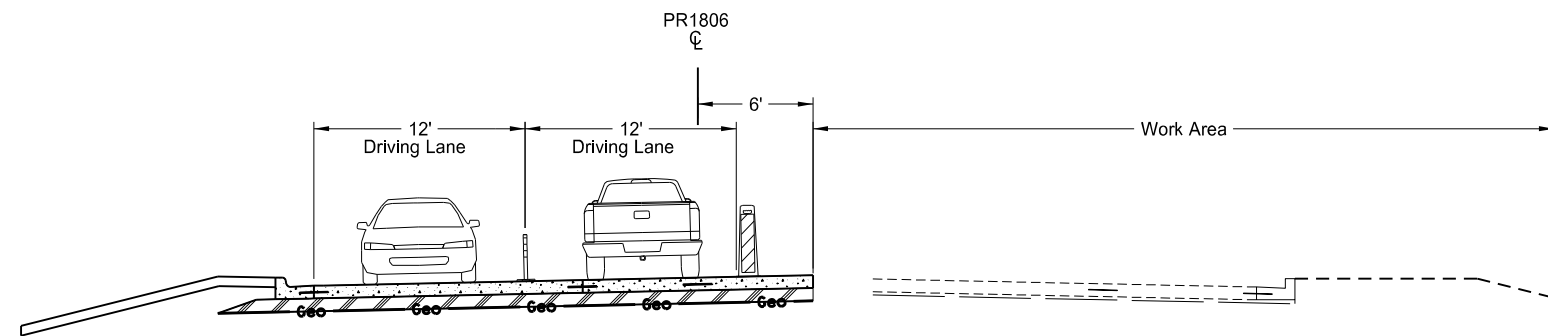


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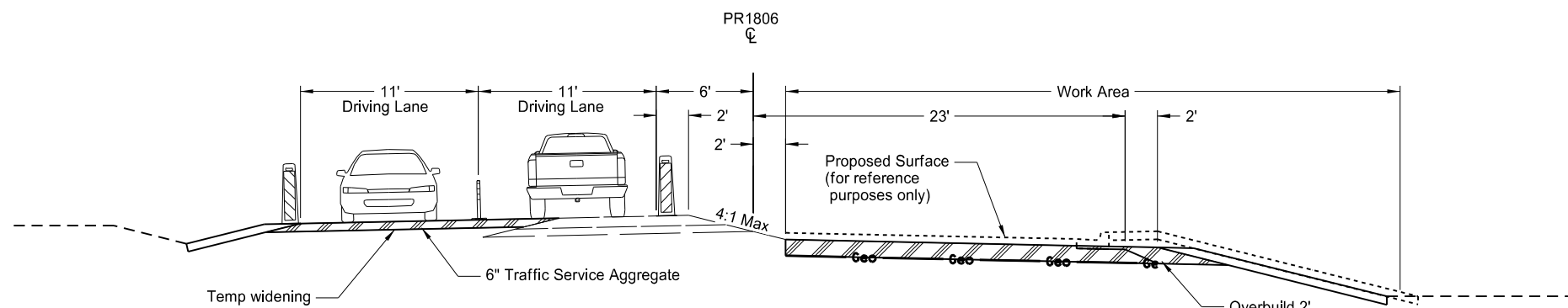


ND 1806 Phase 1  
Sta 3822+55 to Sta 3850+91  
Grading, place aggregate

\*Traffic will be flagged during working hours.  
During non-working hours roadway should be  
open to two-way traffic and have 4:1 inslopes.



ND 1806 Phase 2  
Sta 3780+69 to Sta 3785+00  
Grading, place aggregate, construct  
remaining concrete roadway



ND 1806 Phase 2  
Sta 3786+51 to Sta 3797+22  
Install storm sewer, sanitary sewer,  
grading, place aggregate, construct temp widening

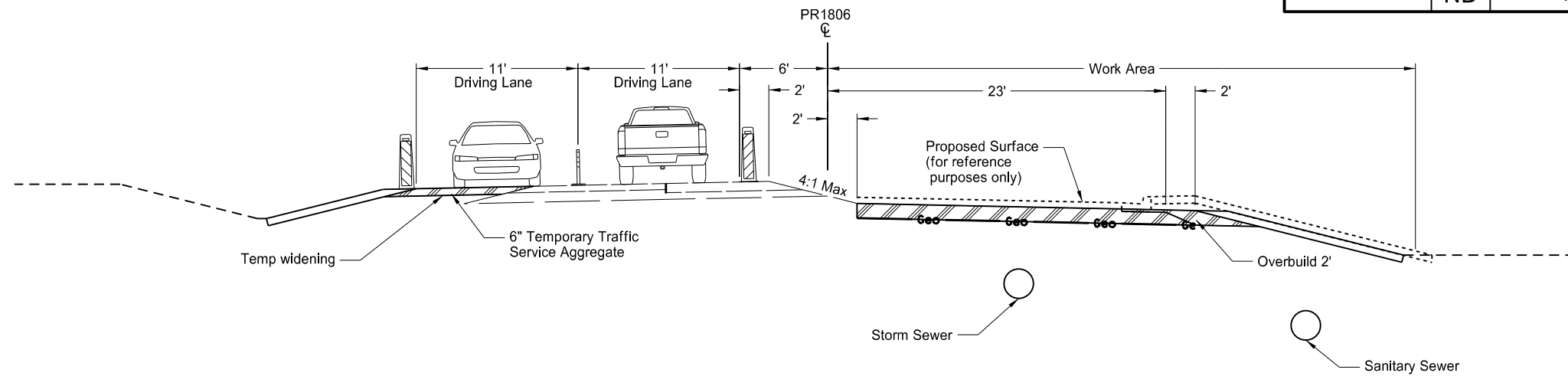
Storm Sewer

Sanitary Sewer

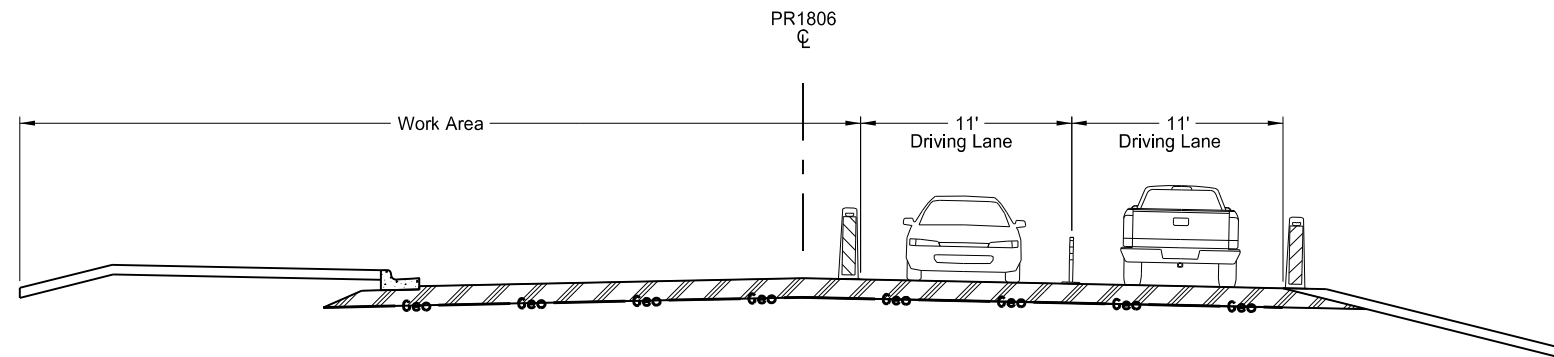
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Work Zone Traffic Control  
Phasing Typical Section

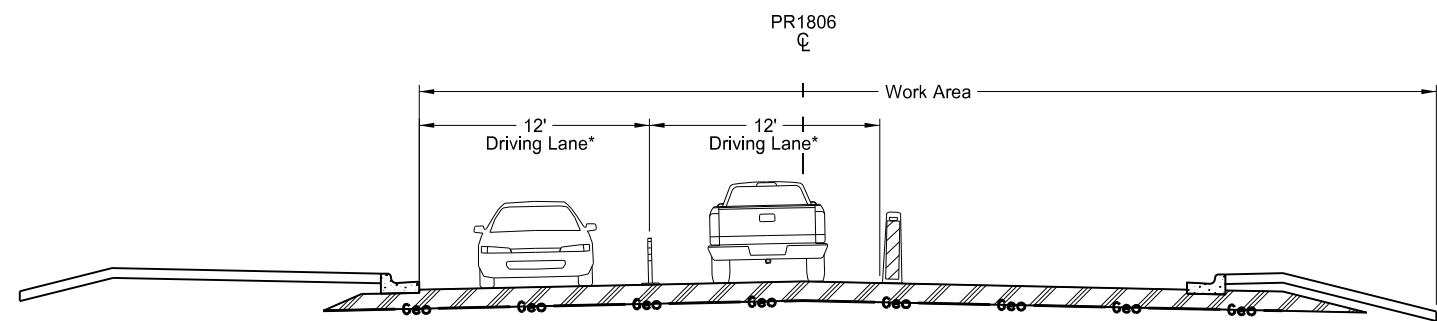
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ND	NHU-1-806(052)071	100	6



ND 1806 Phase 2  
Sta 3797+22 to Sta 3819+00  
Install storm sewer, sanitary sewer,  
grading, place aggregate, construct temp widening



ND 1806 Phase 3  
Sta 3786+51 to Sta 3819+00  
Grading, remove temp widening,  
place aggregate, install curb and gutter



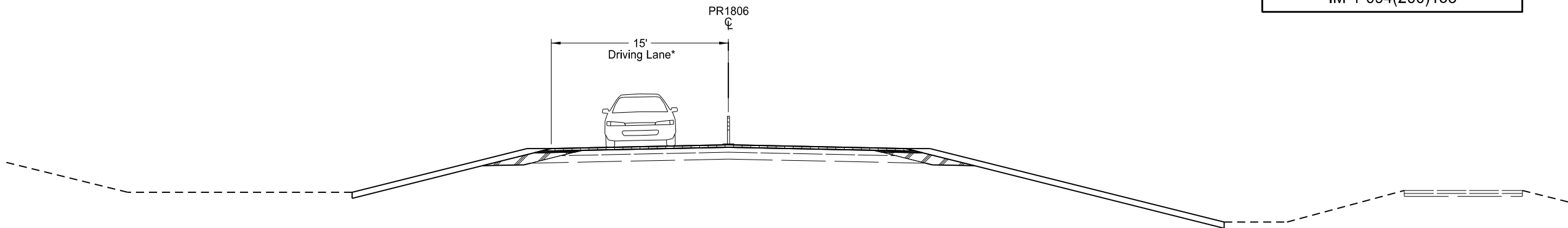
ND 1806 Phase 4  
Sta 3786+51 to Sta 3819+00  
Grading, install curb and gutter,  
complete paving-all lifts

\*Traffic may be flagged and shifted to  
accommodate paving operations. During  
non-working hours roadway must be  
open to two-way traffic.

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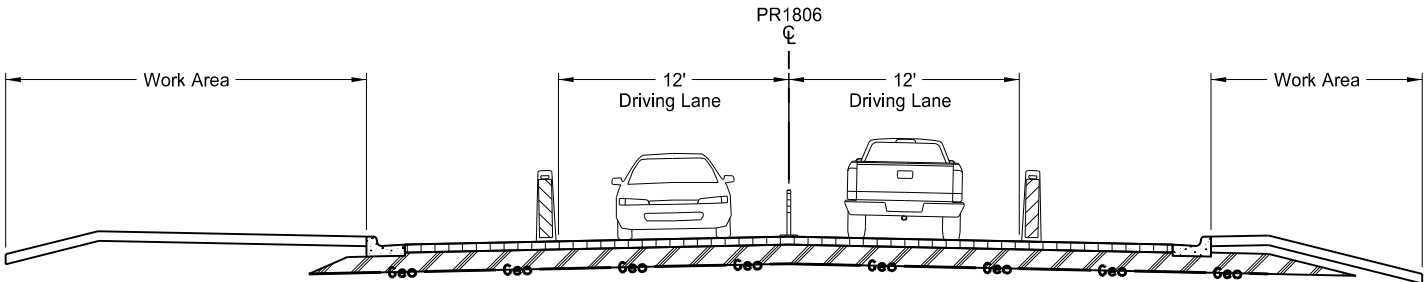
ND 1806  
Work Zone Traffic Control  
Phasing Typical Section

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ND	NHU-1-806(052)071	100	7
IM-1-094(200)153			

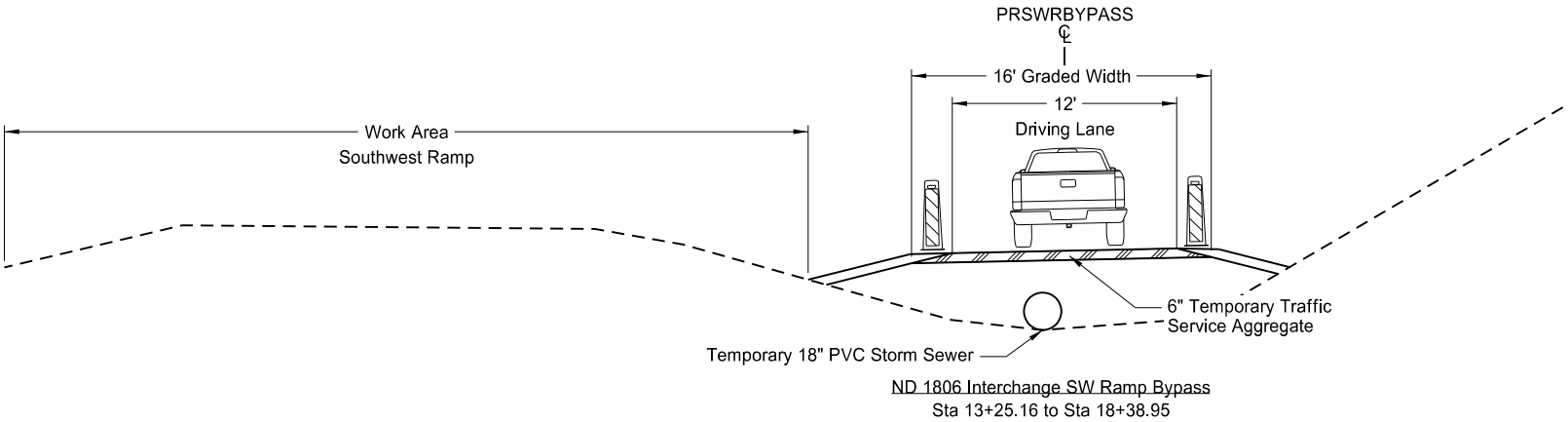


ND 1806 Phase 4  
Sta 3822+55 to Sta 3850+91  
Mill and overlay, topsoil, seeding

\*Shift traffic with paving operation. Roadway  
to be open to two-way traffic during non-working  
hours.



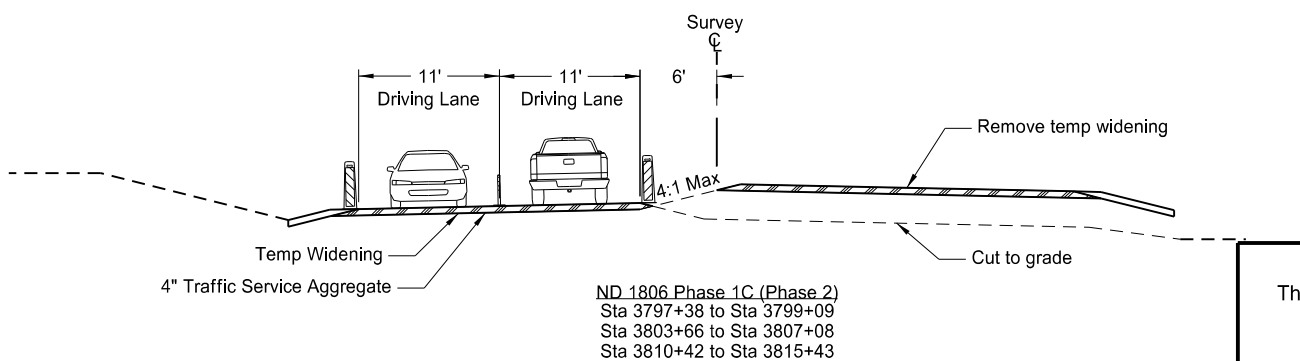
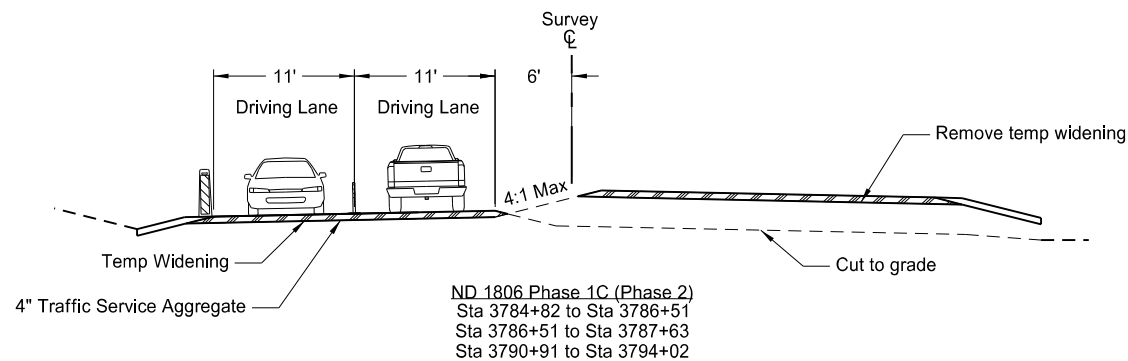
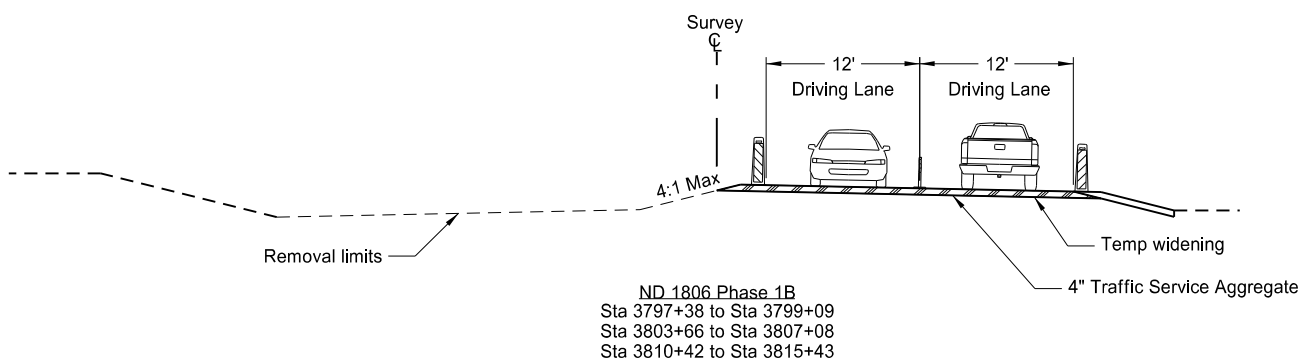
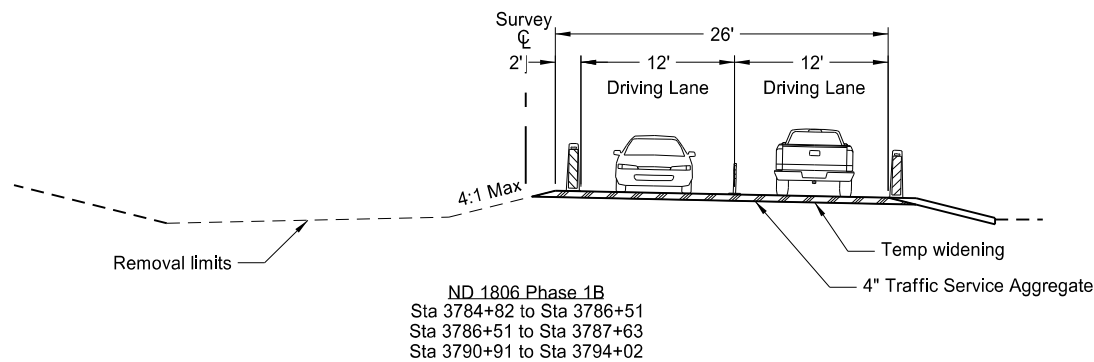
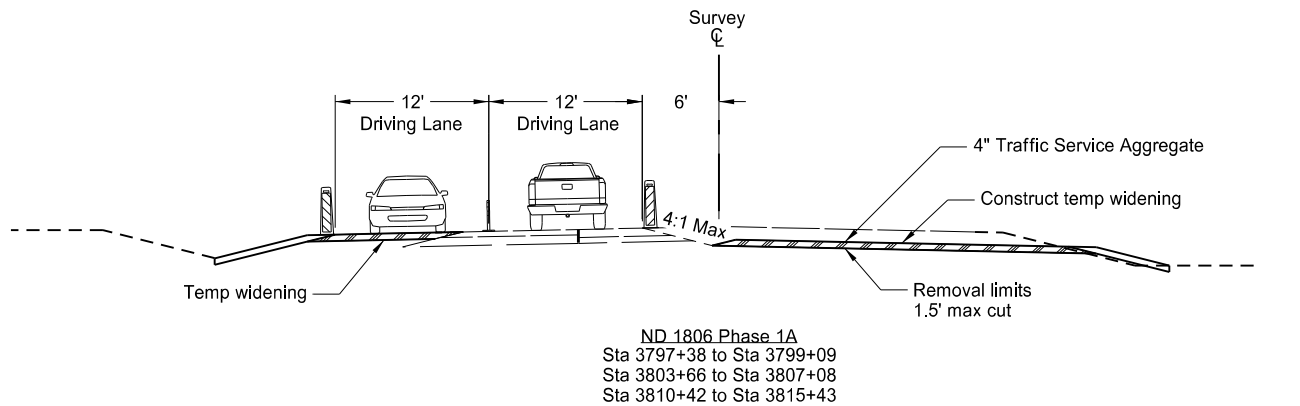
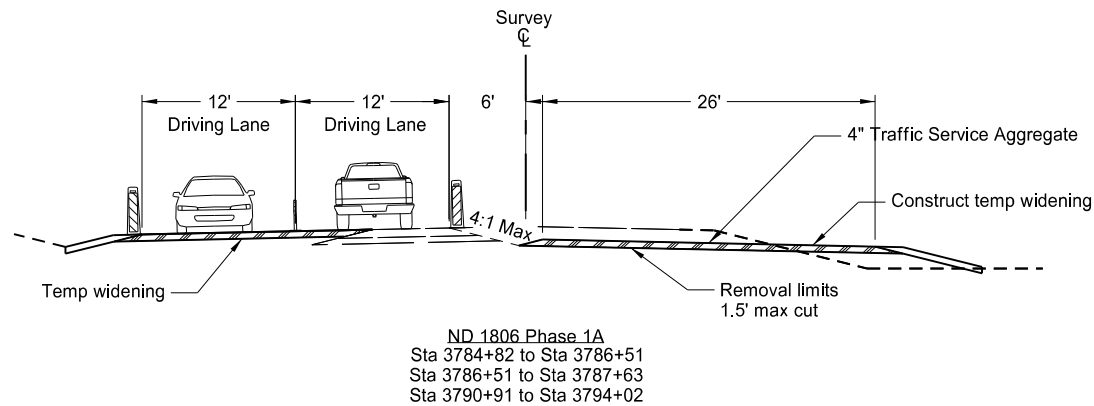
ND 1806 Phase 5 A/B  
Sta Sta 3785+42 to Sta 3819+00  
Place topsoil, seeding, lighting, sidewalk



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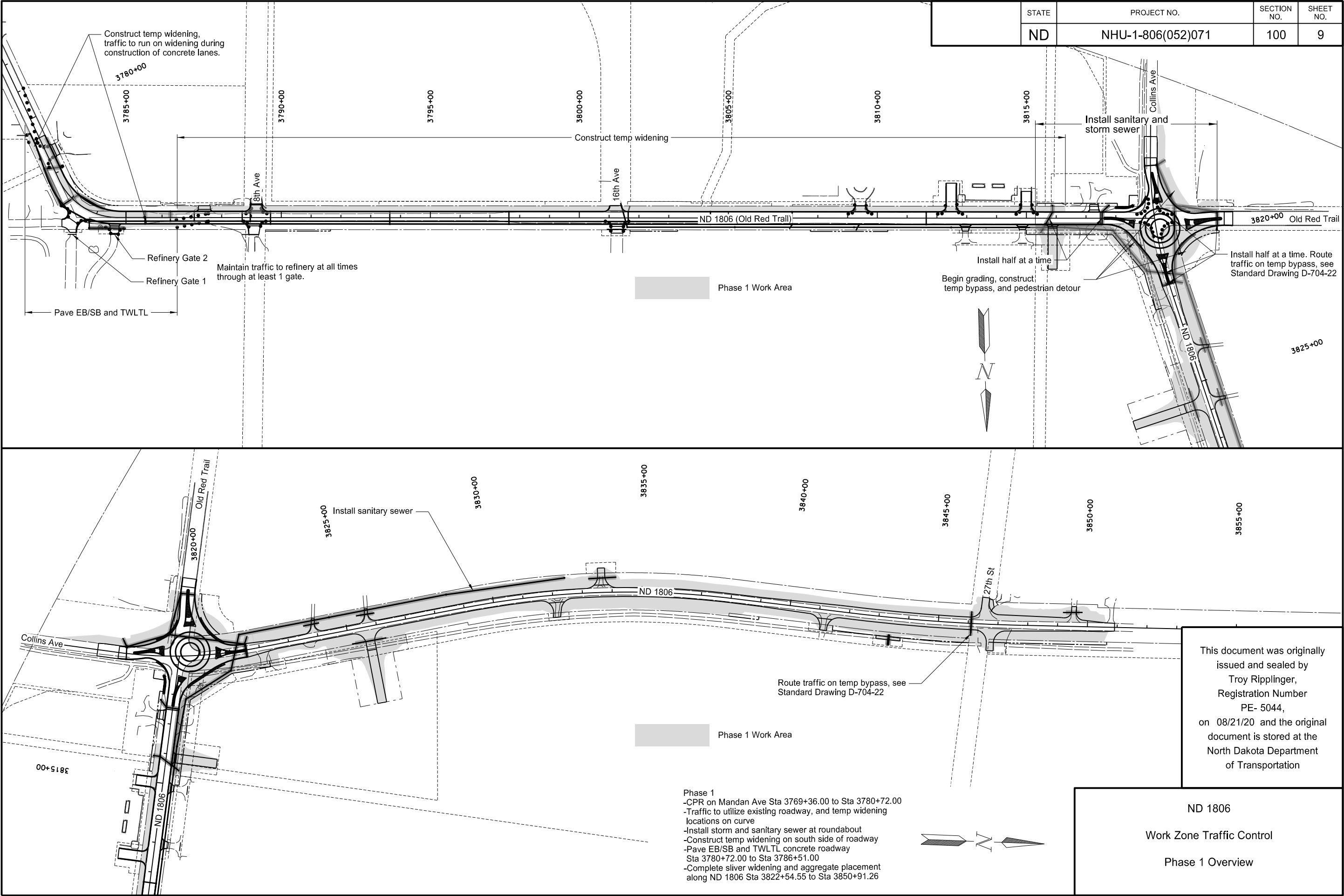
ND 1806  
Work Zone Traffic Control  
Phasing Typical Section

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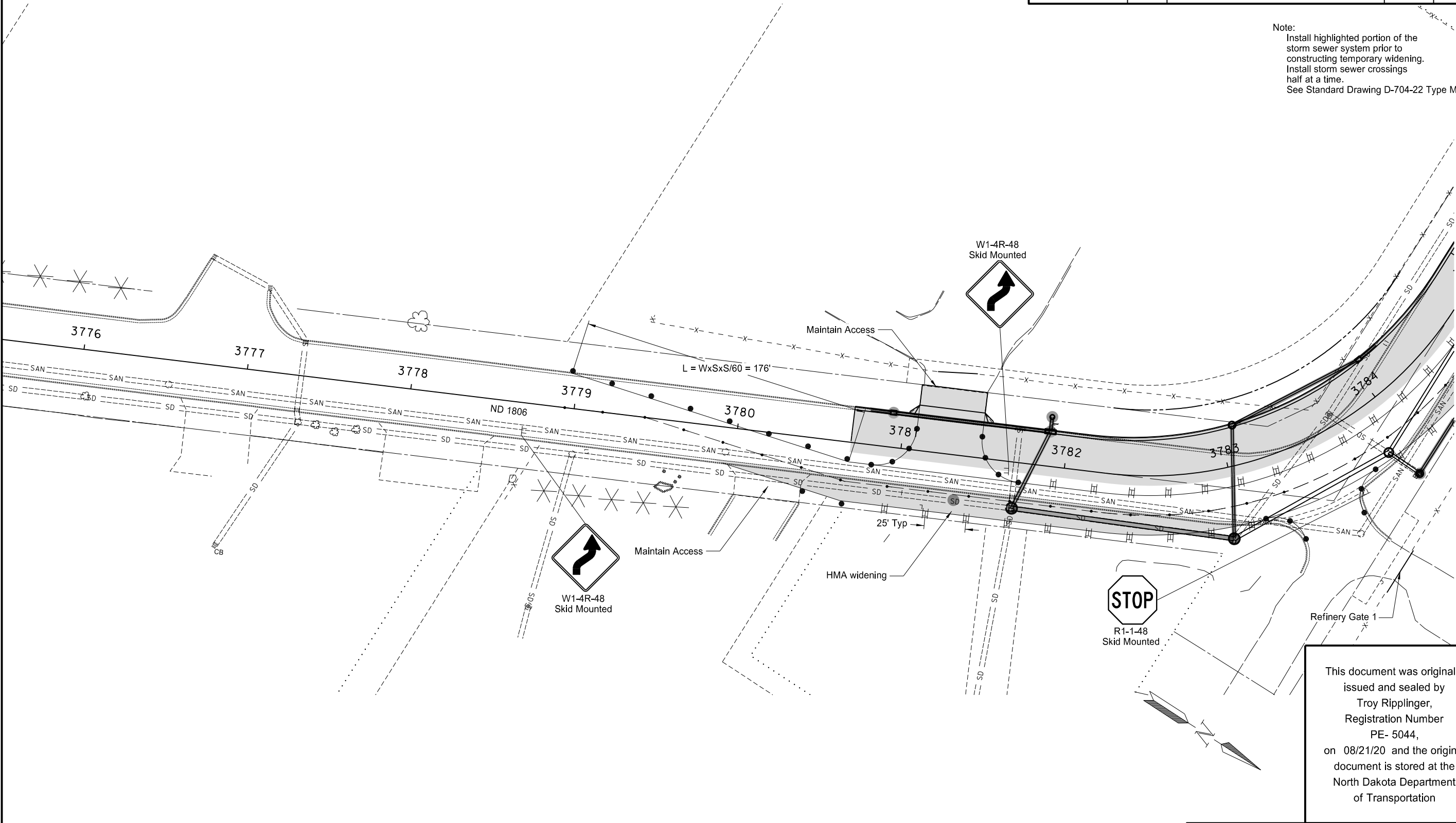
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ND 1806  
Work Zone Traffic Control  
Cut Phasing Typical



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Note:  
Install highlighted portion of the storm sewer system prior to constructing temporary widening.  
Install storm sewer crossings half at a time.  
See Standard Drawing D-704-22 Type M

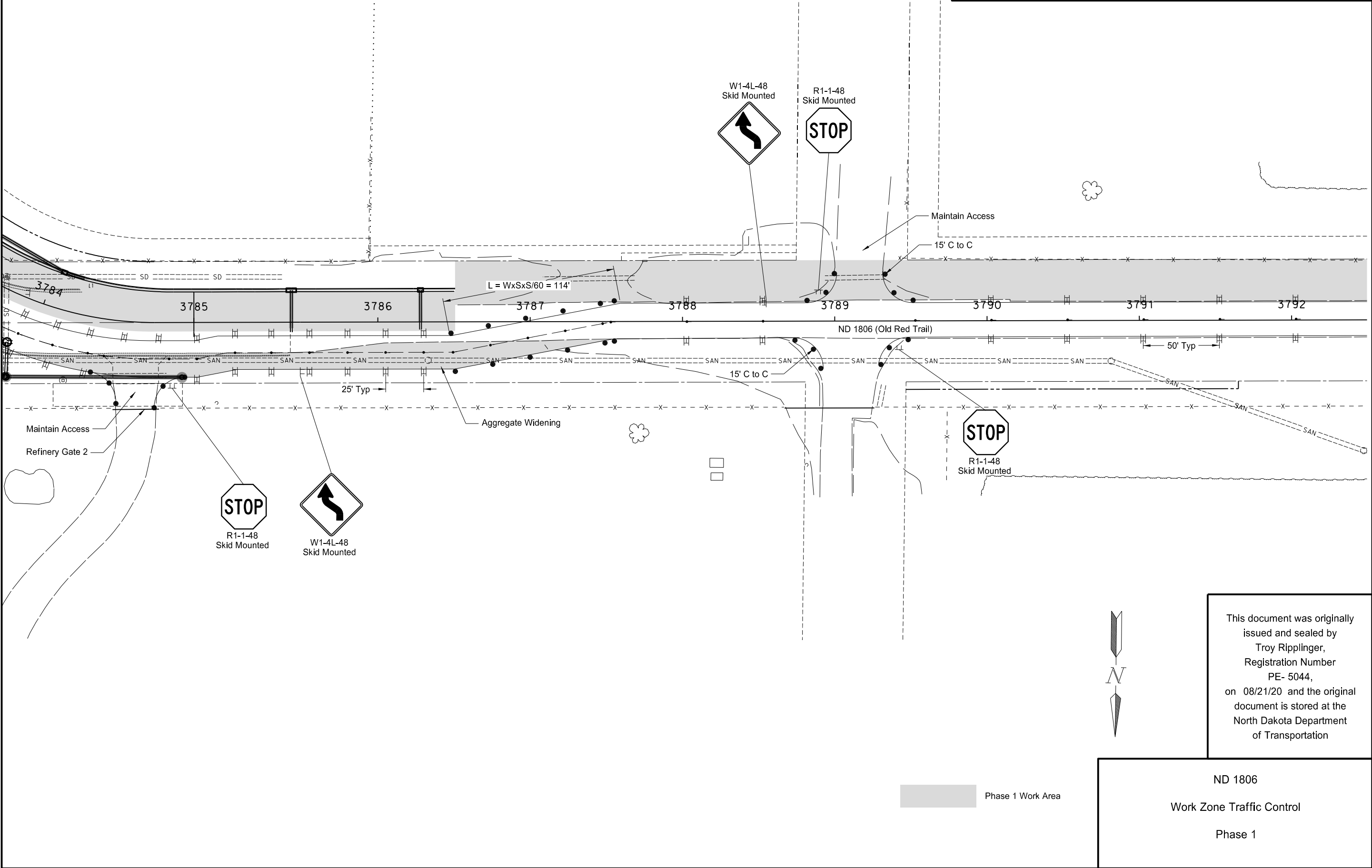


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Phase 1 Work Area

ND 1806  
Work Zone Traffic Control  
Phase 1

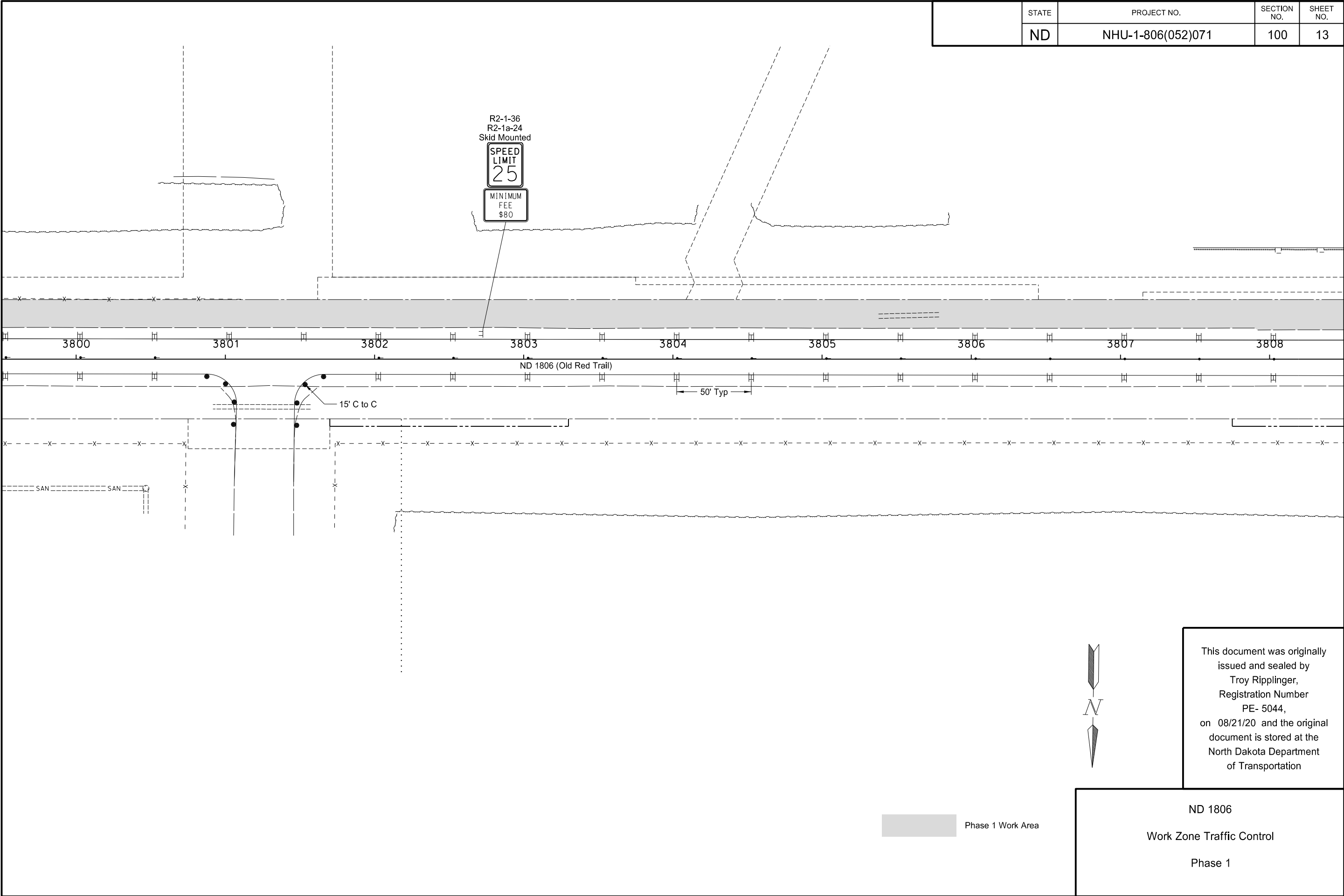
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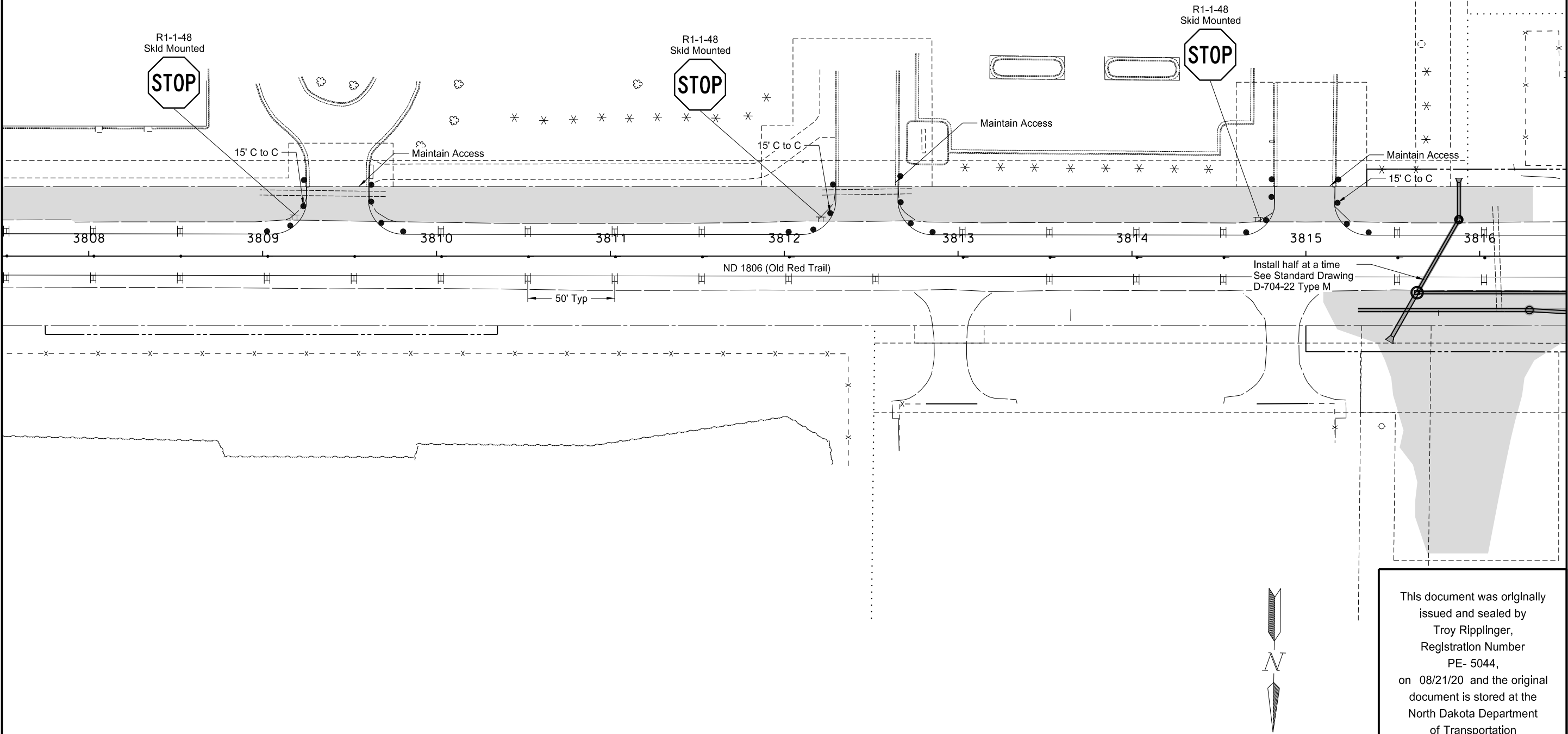




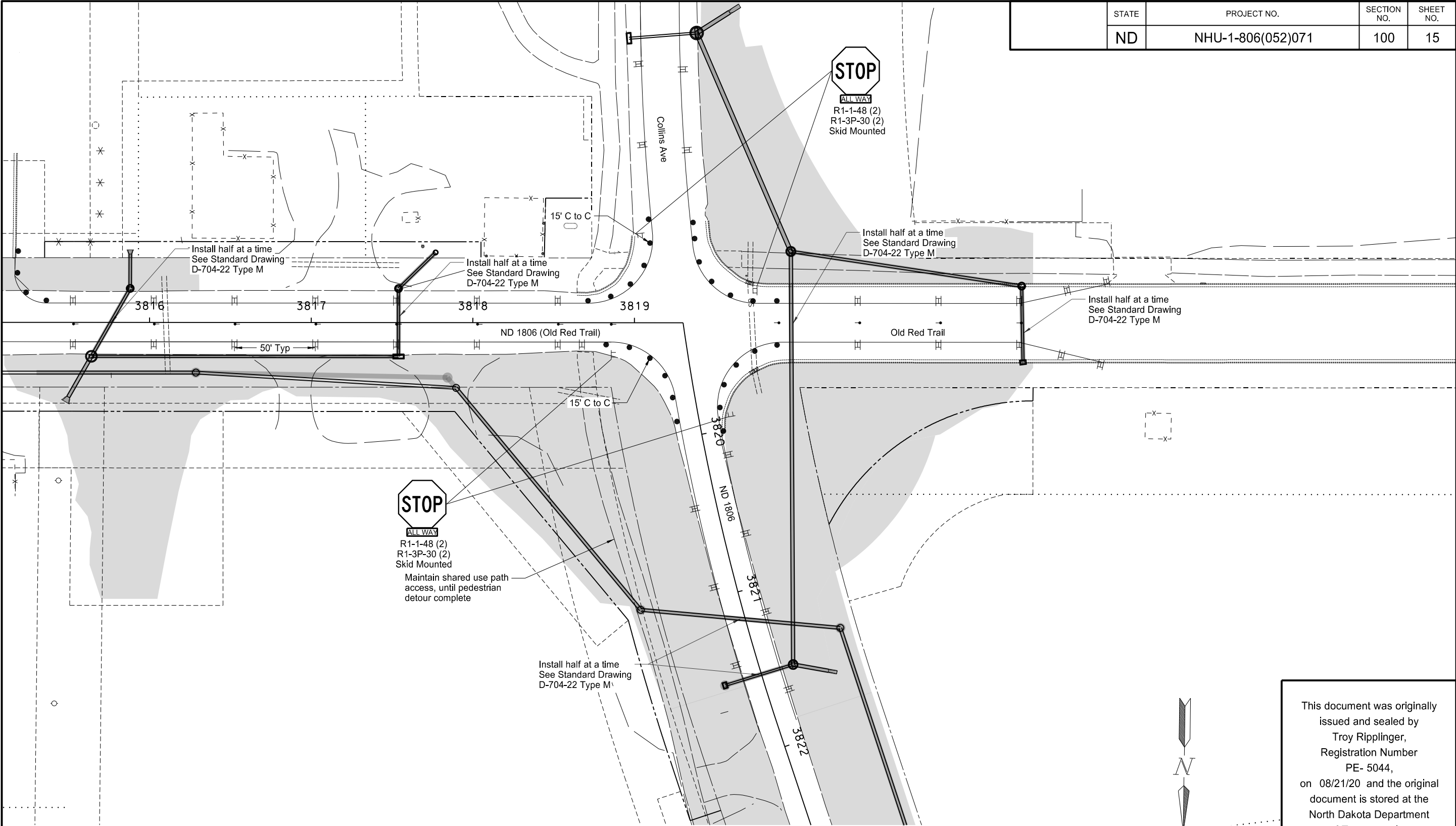
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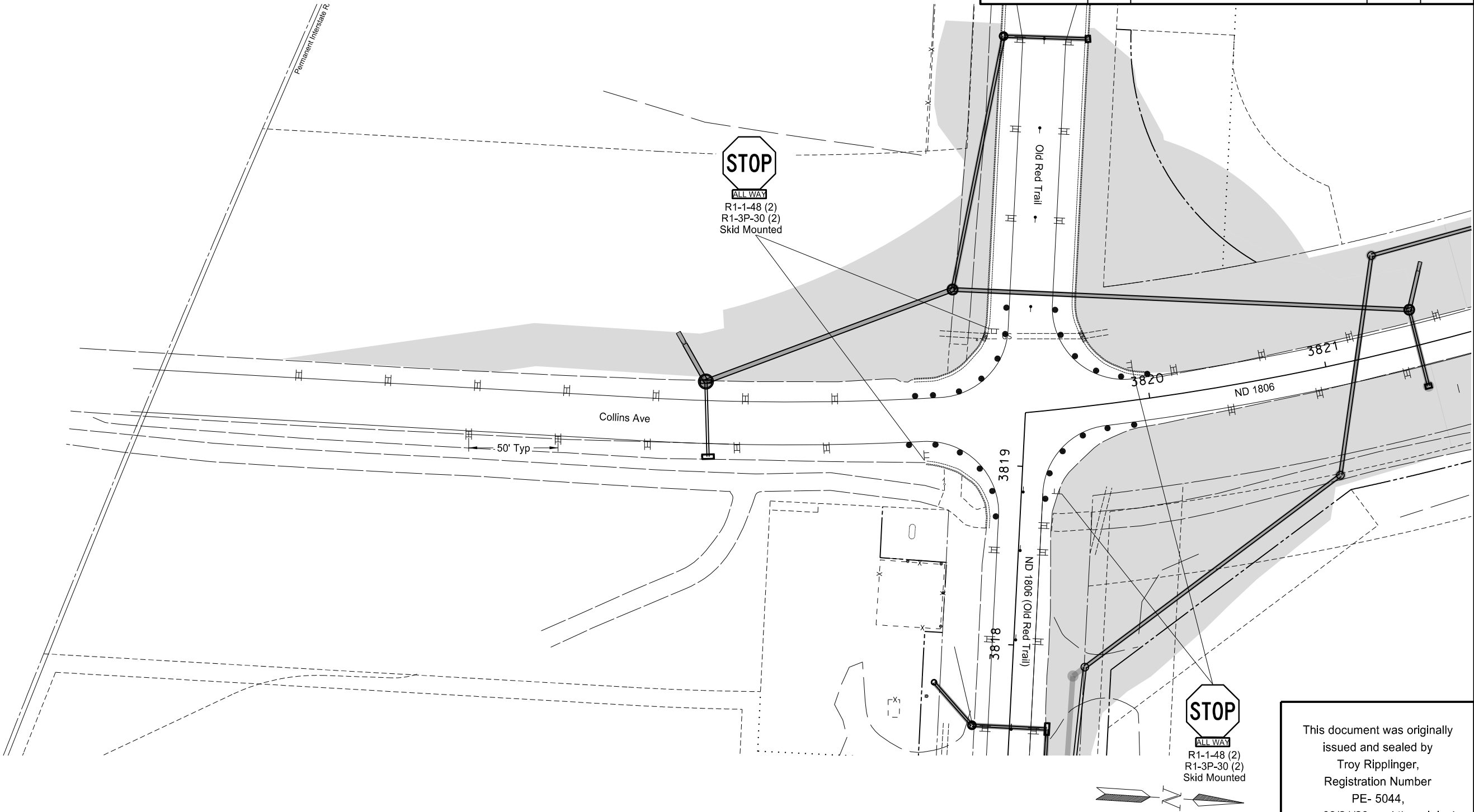


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Phase 1 Work Area

ND 1806  
Work Zone Traffic Control  
Phase 1

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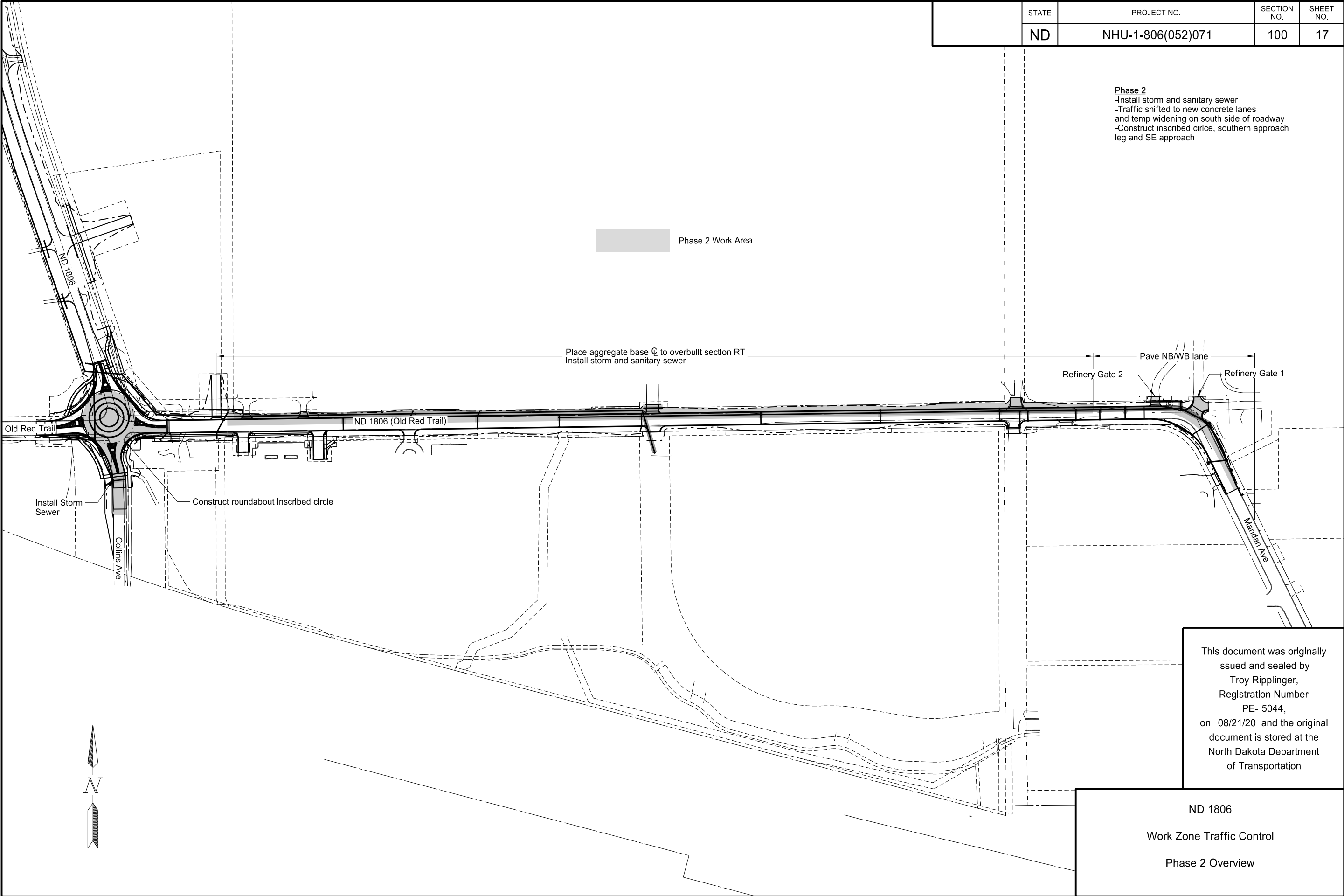
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ND 1806  
Work Zone Traffic Control  
Phase 1

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
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**Phase 2**  
-Install storm and sanitary sewer  
-Traffic shifted to new concrete lanes  
and temp widening on south side of roadway  
-Construct inscribed circle, southern approach  
leg and SE approach

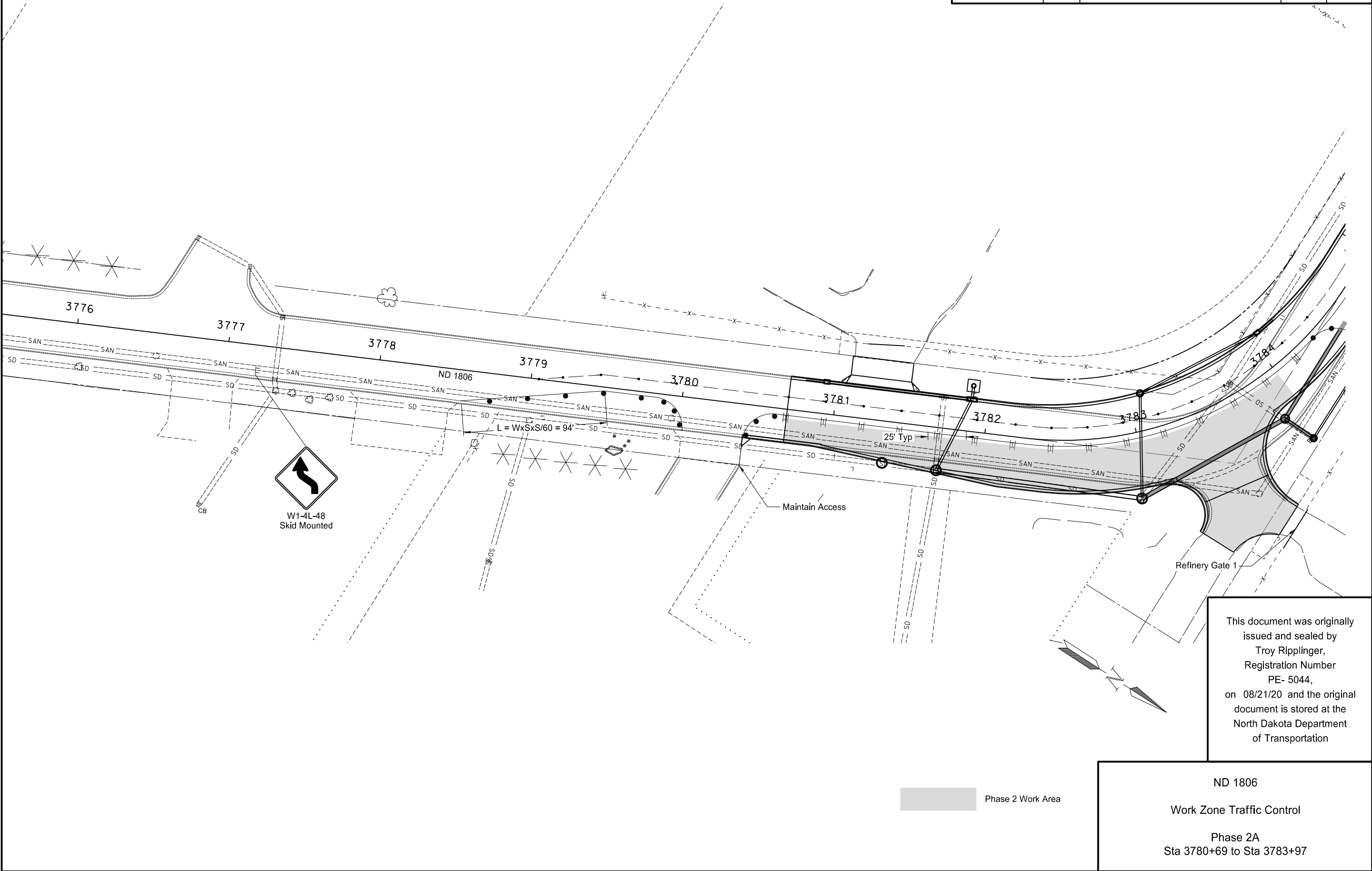
Phase 2 Work Area



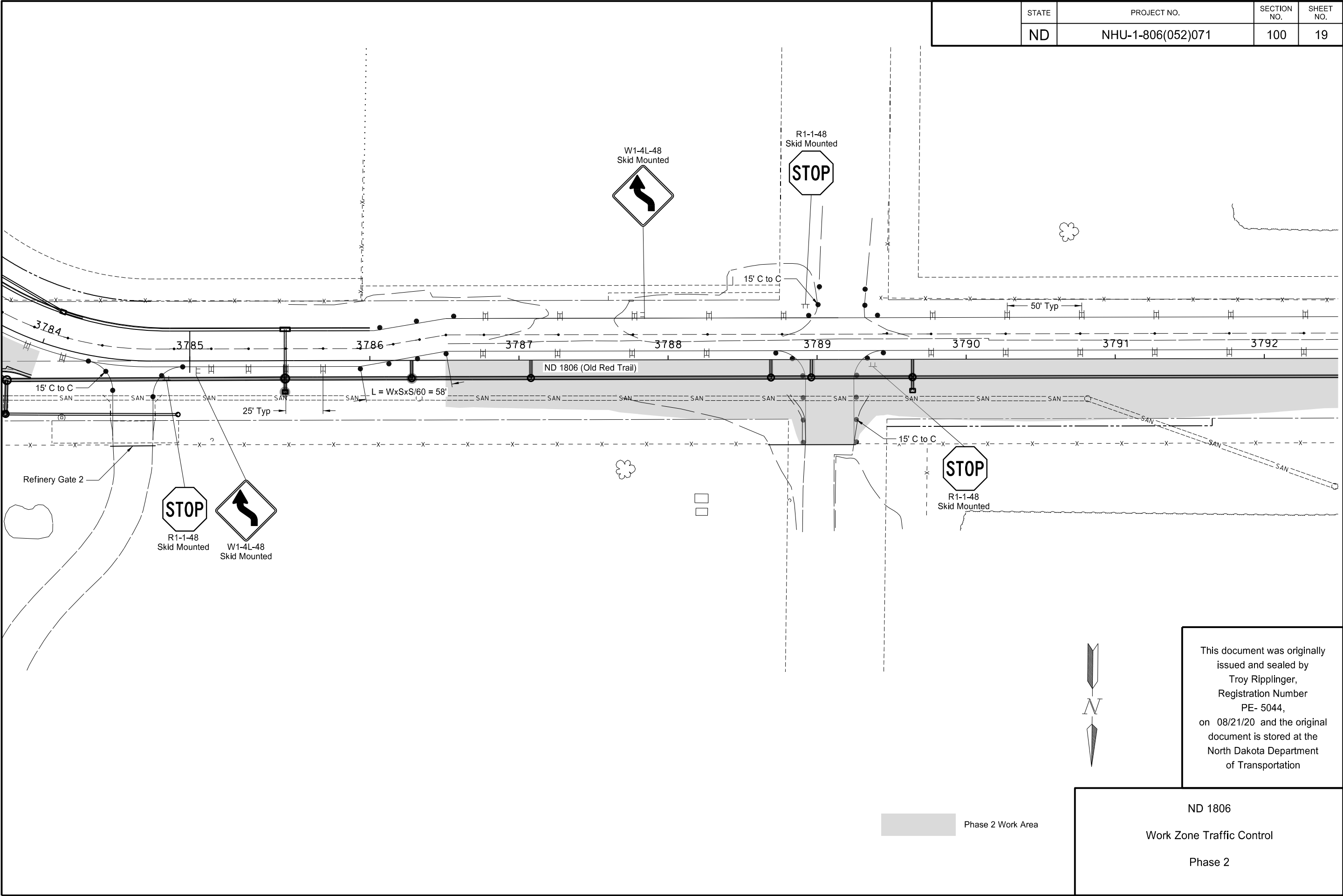
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ND 1806  
Work Zone Traffic Control  
Phase 2 Overview

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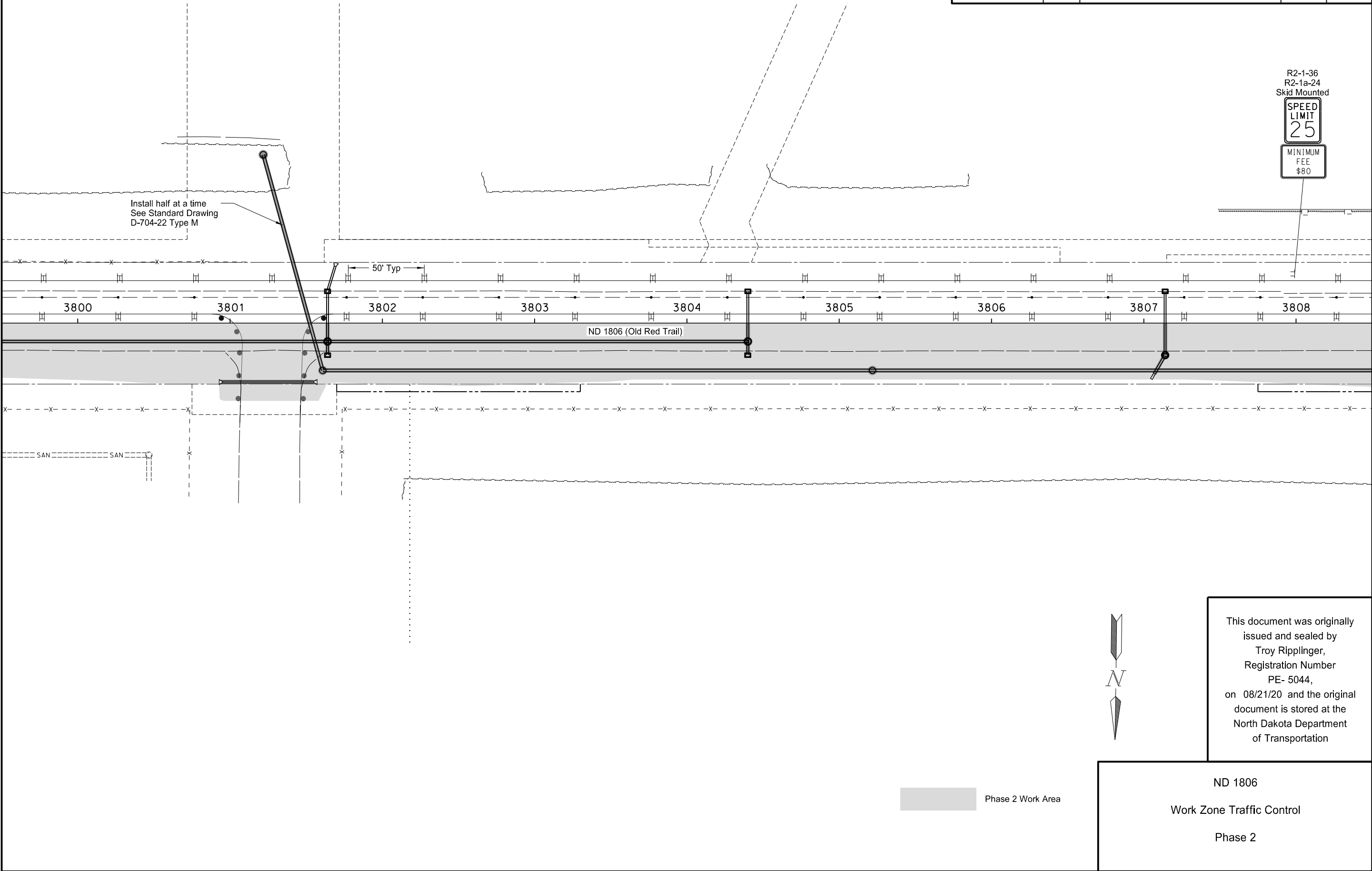
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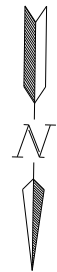




	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	100	21



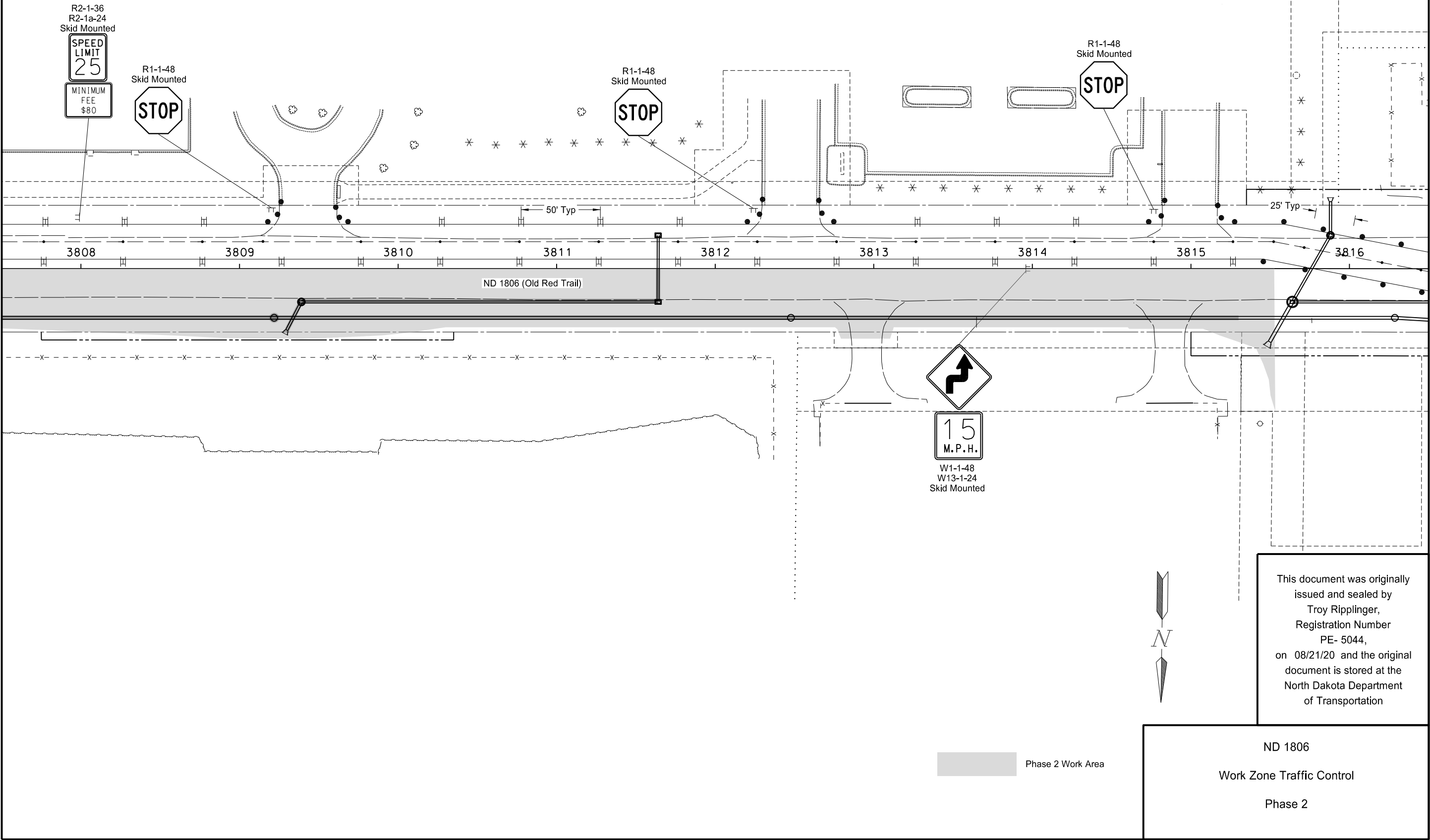
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Phase 2 Work Area

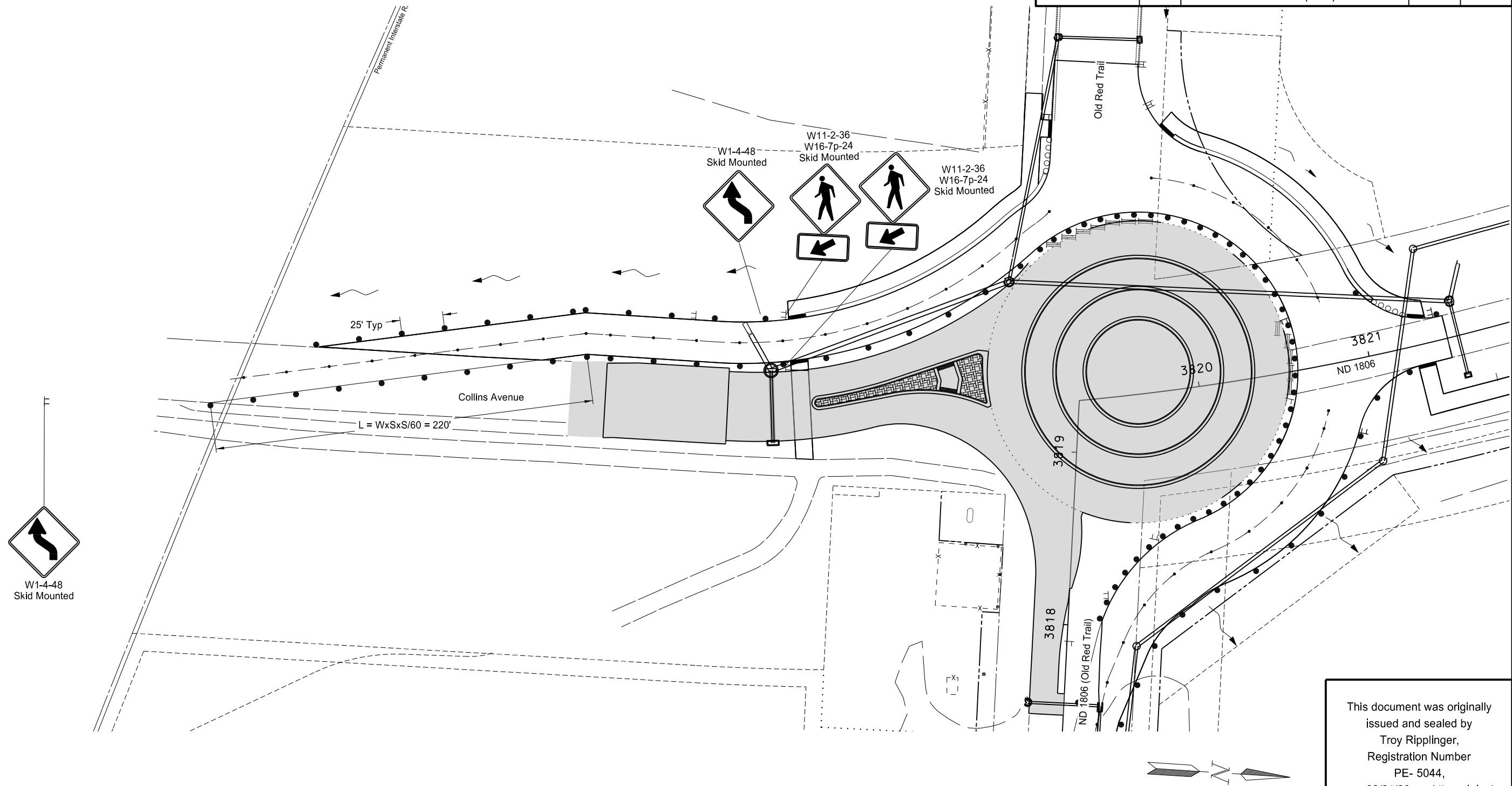
ND 1806  
Work Zone Traffic Control  
Phase 2

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	100	22





STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-1-806(052)071	100	24



W1-4-48  
Skid Mounted

W1-4-48  
Skid Mounted

W11-2-36  
W16-7p-24  
Skid Mounted

W11-2-36  
W16-7p-24  
Skid Mounted

25' Typ

Collins Avenue

$L = W \times S \times S / 60 = 220'$

3818  
ND 1806 (Old Red Trail)

3820

3821

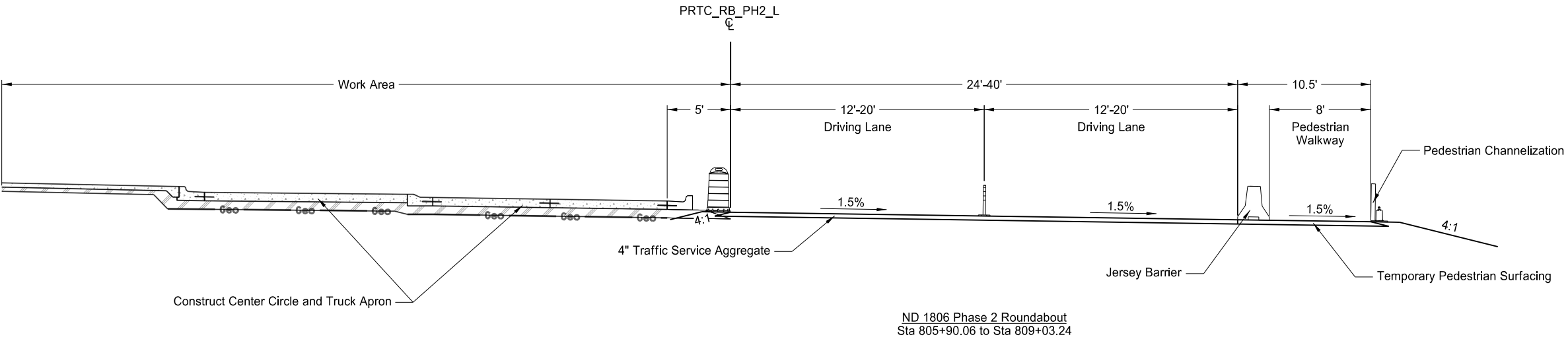
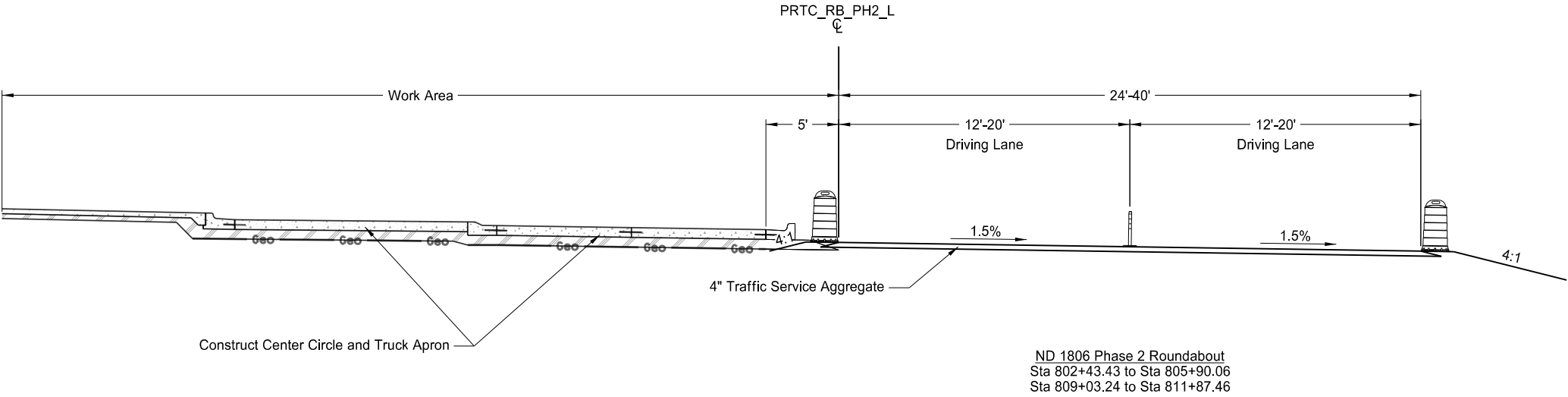
ND 1806

Phase 2 Work Area

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ND 1806  
Work Zone Traffic Control  
Phase 2

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-1-806(052)071	100	25



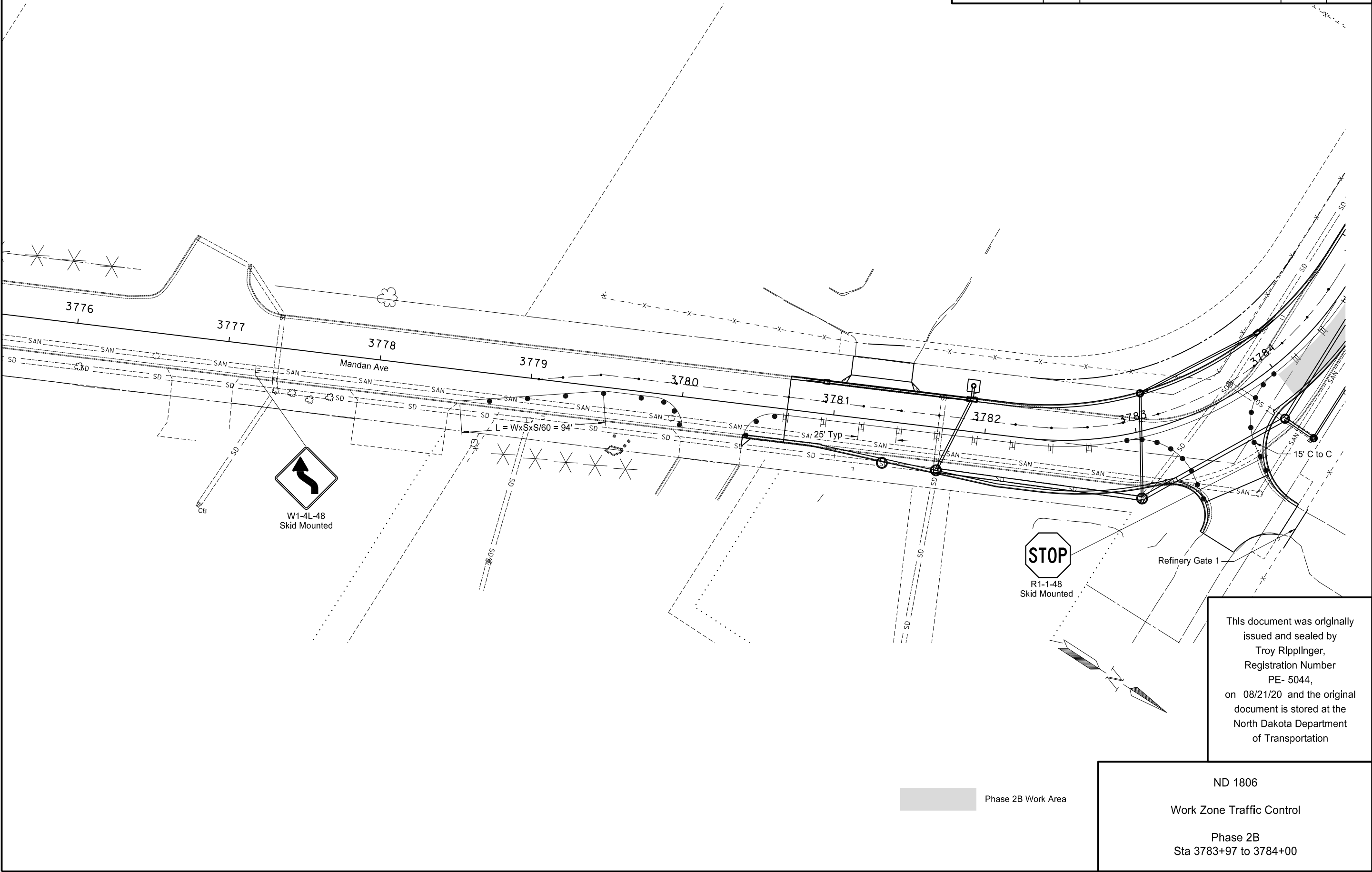
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ND 1806  
Work Zone Traffic Control  
Phase 2 Roundabout Typical Sections



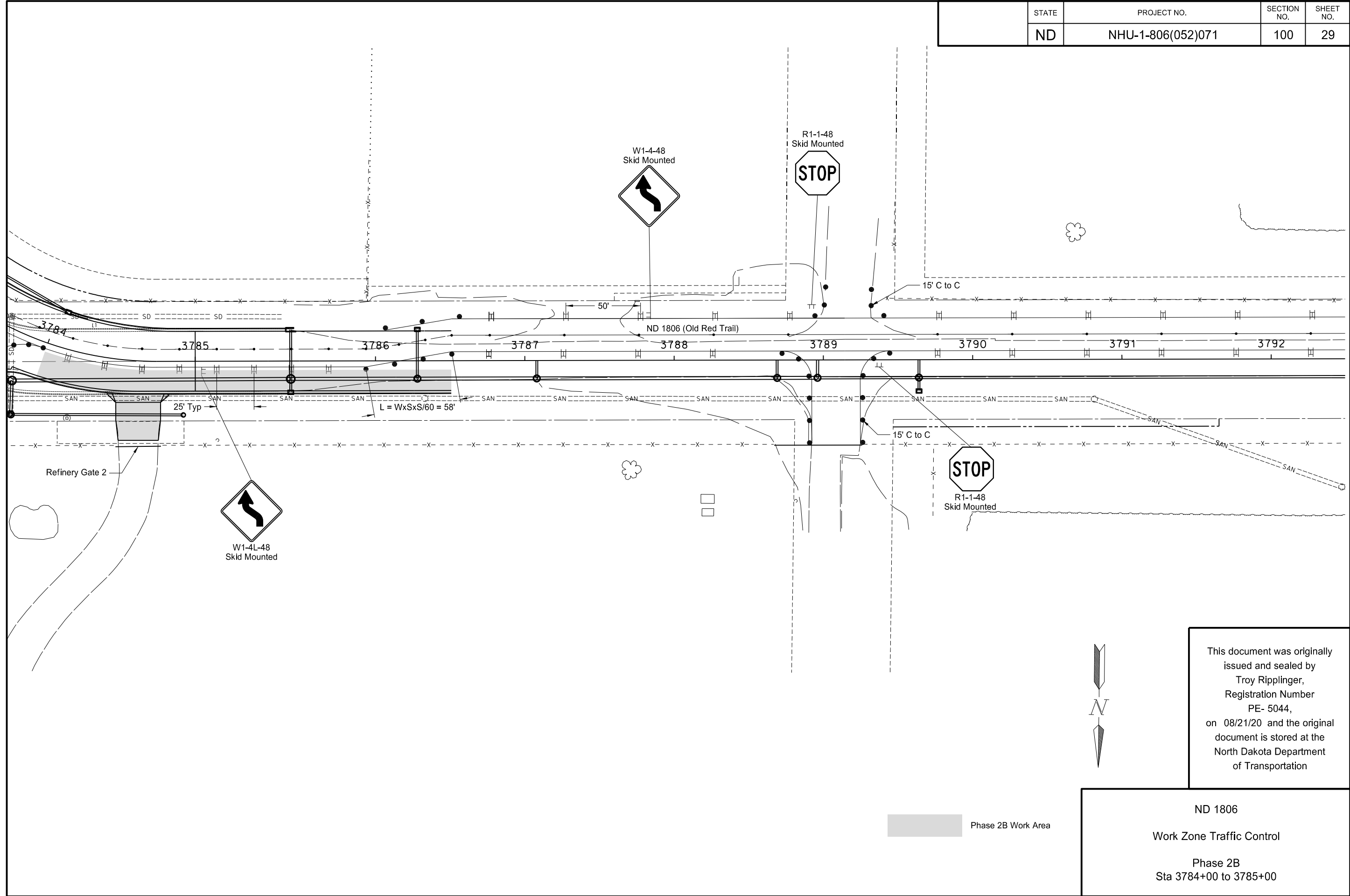


	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	100	28





	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	100	29



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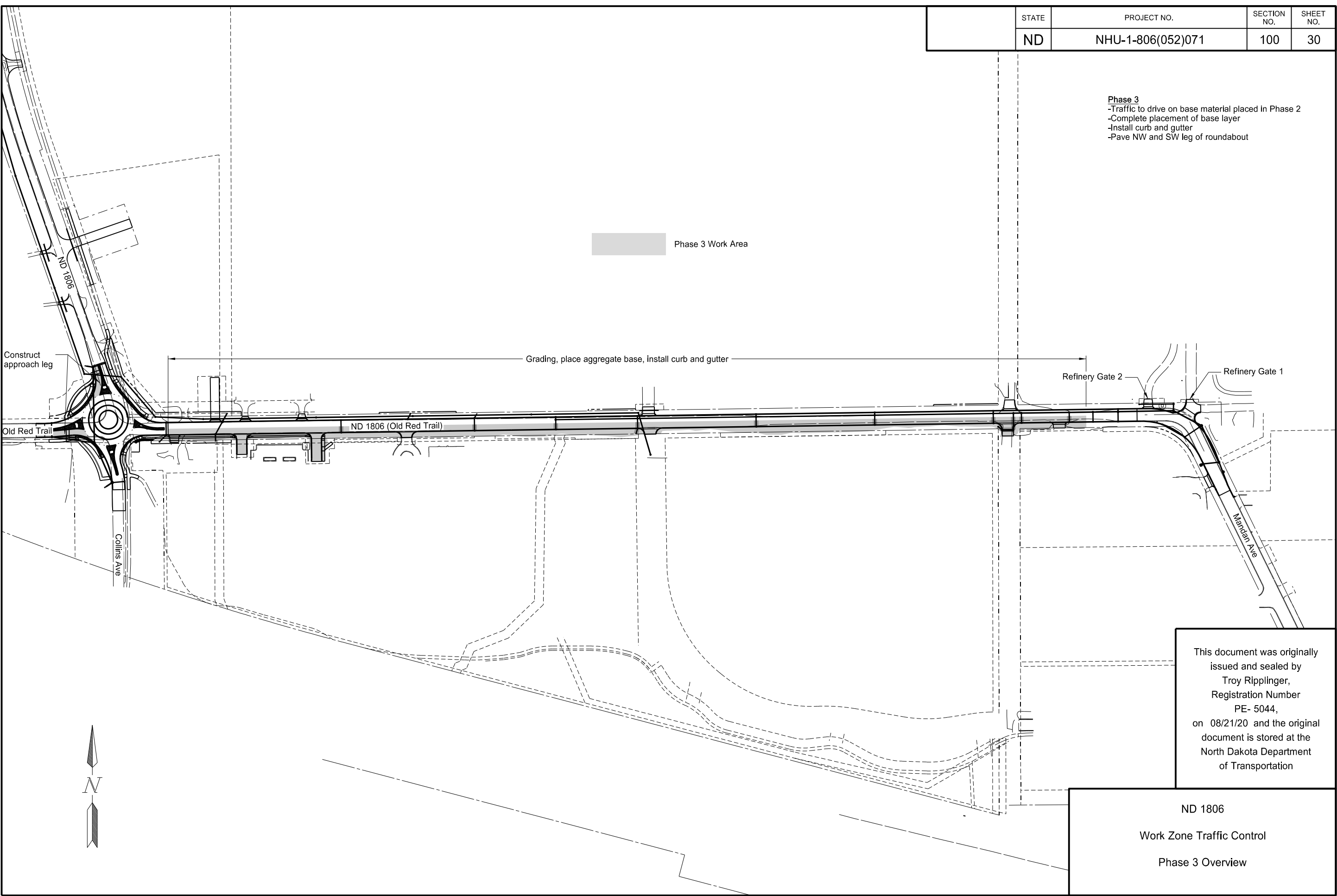


ND 1806  
Work Zone Traffic Control  
Phase 2B  
Sta 3784+00 to 3785+00

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-1-806(052)071	100	30

- Phase 3
- Traffic to drive on base material placed in Phase 2
  - Complete placement of base layer
  - Install curb and gutter
  - Pave NW and SW leg of roundabout

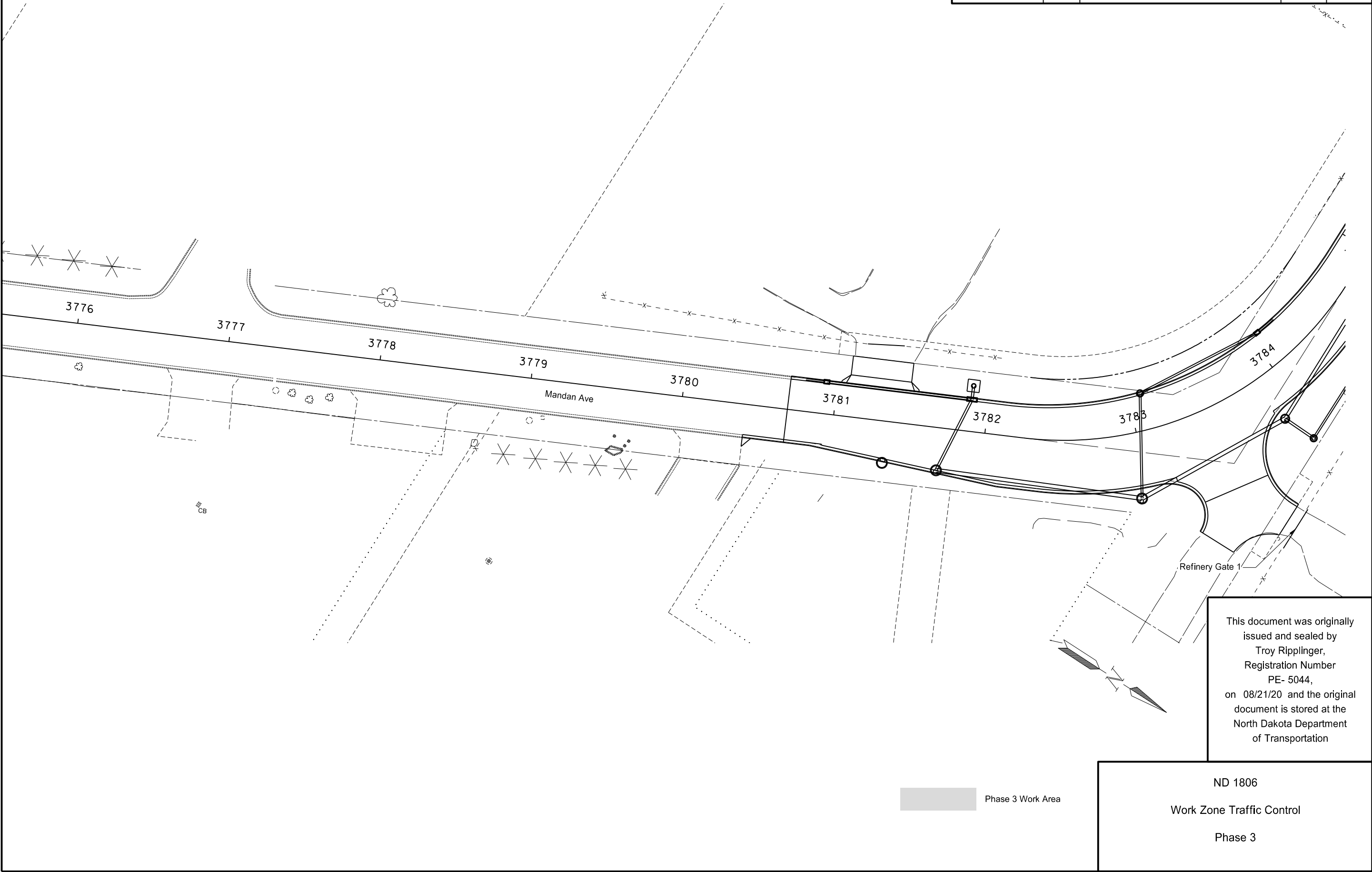
Phase 3 Work Area



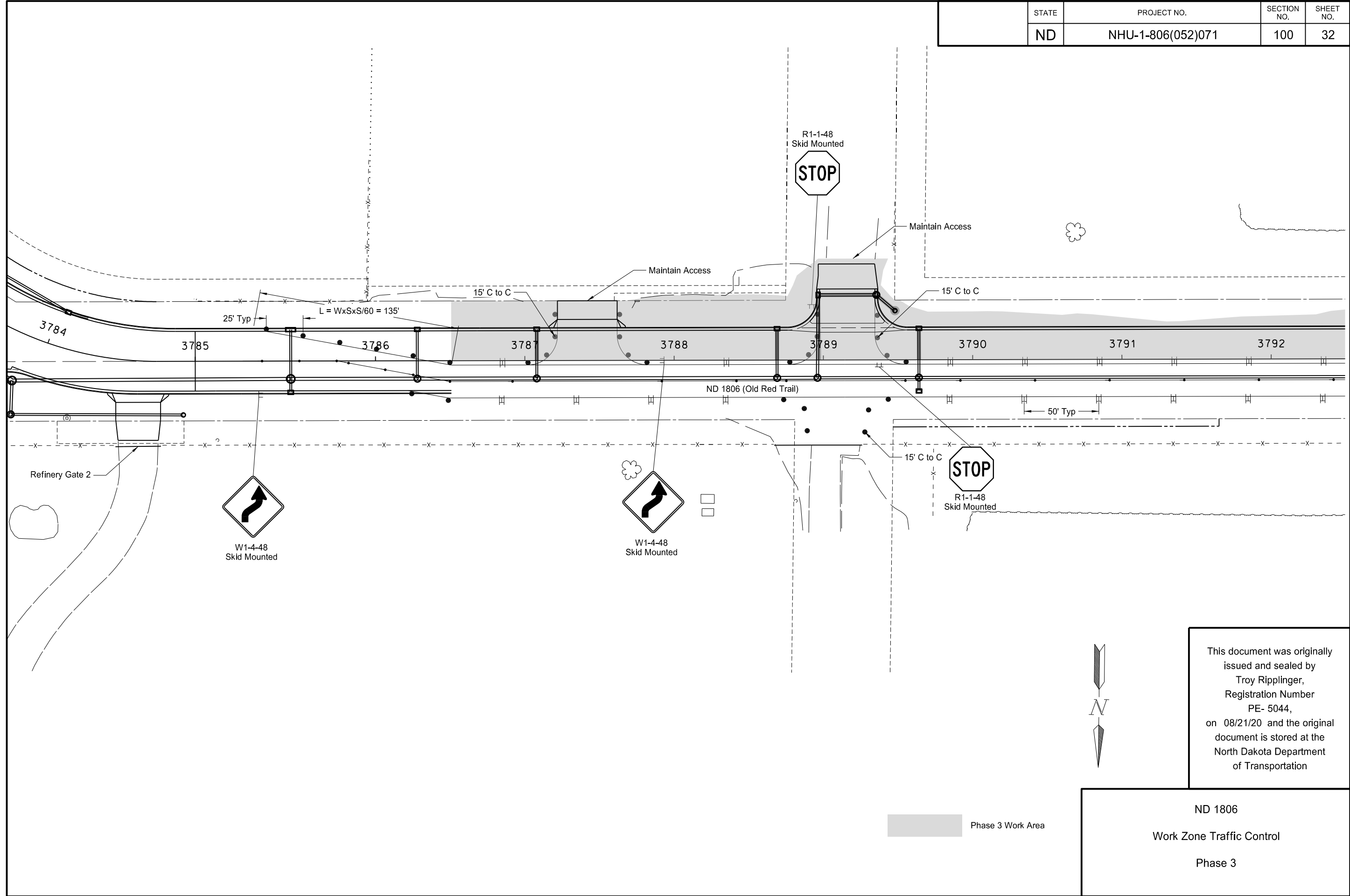
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ND 1806  
Work Zone Traffic Control  
Phase 3 Overview

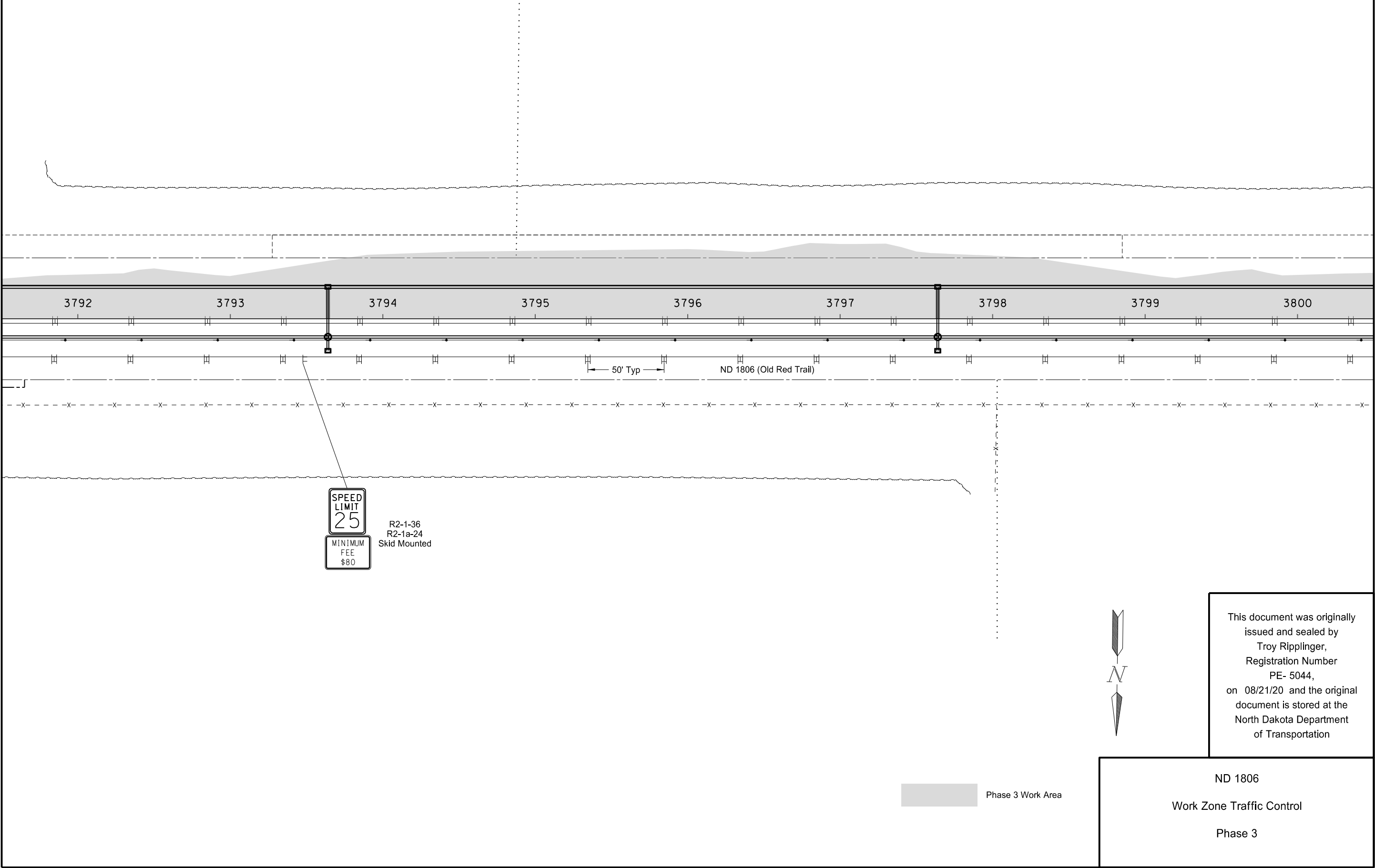
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	100	31



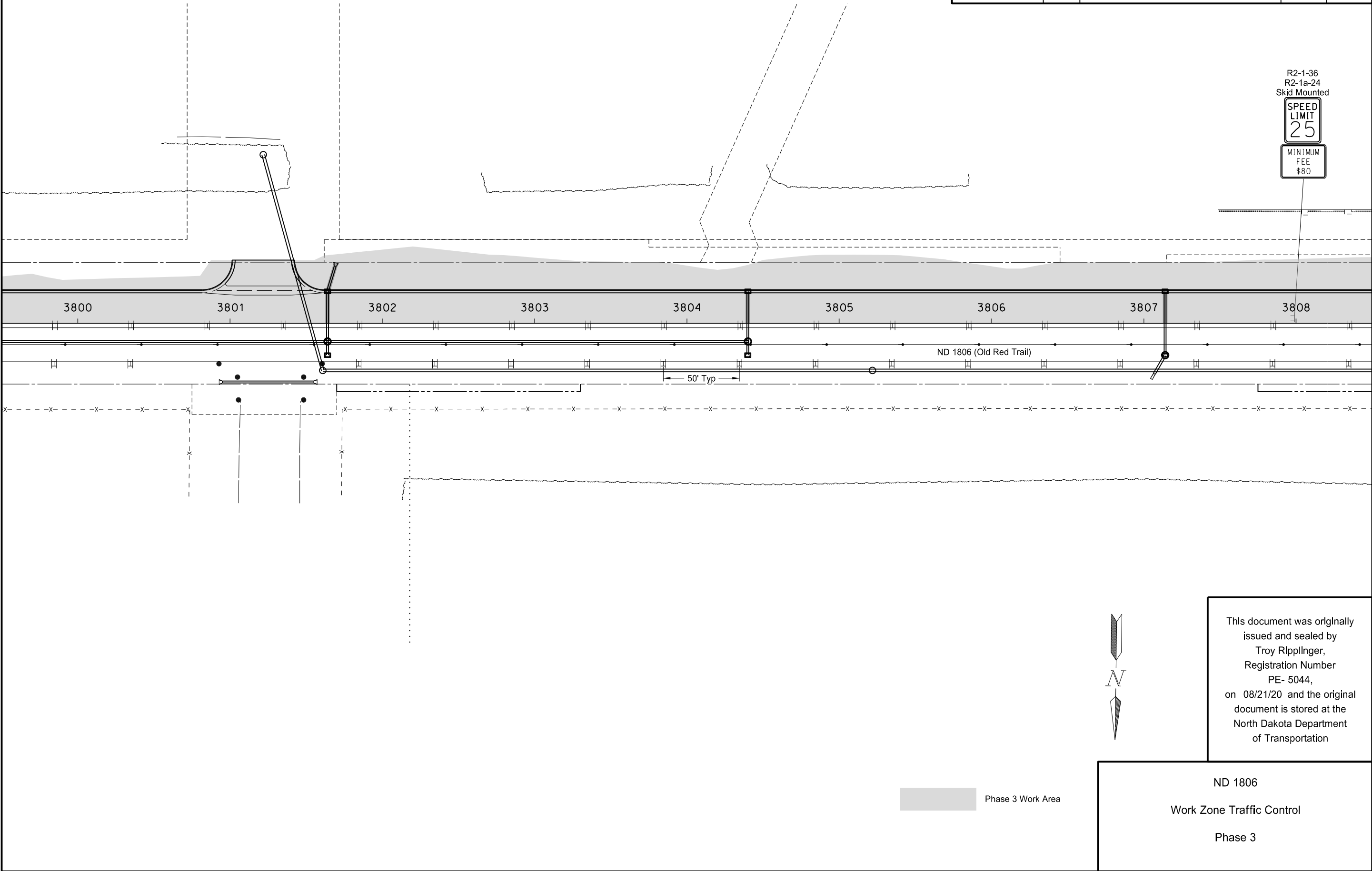
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	100	32



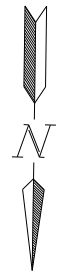
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	100	33



	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	100	34



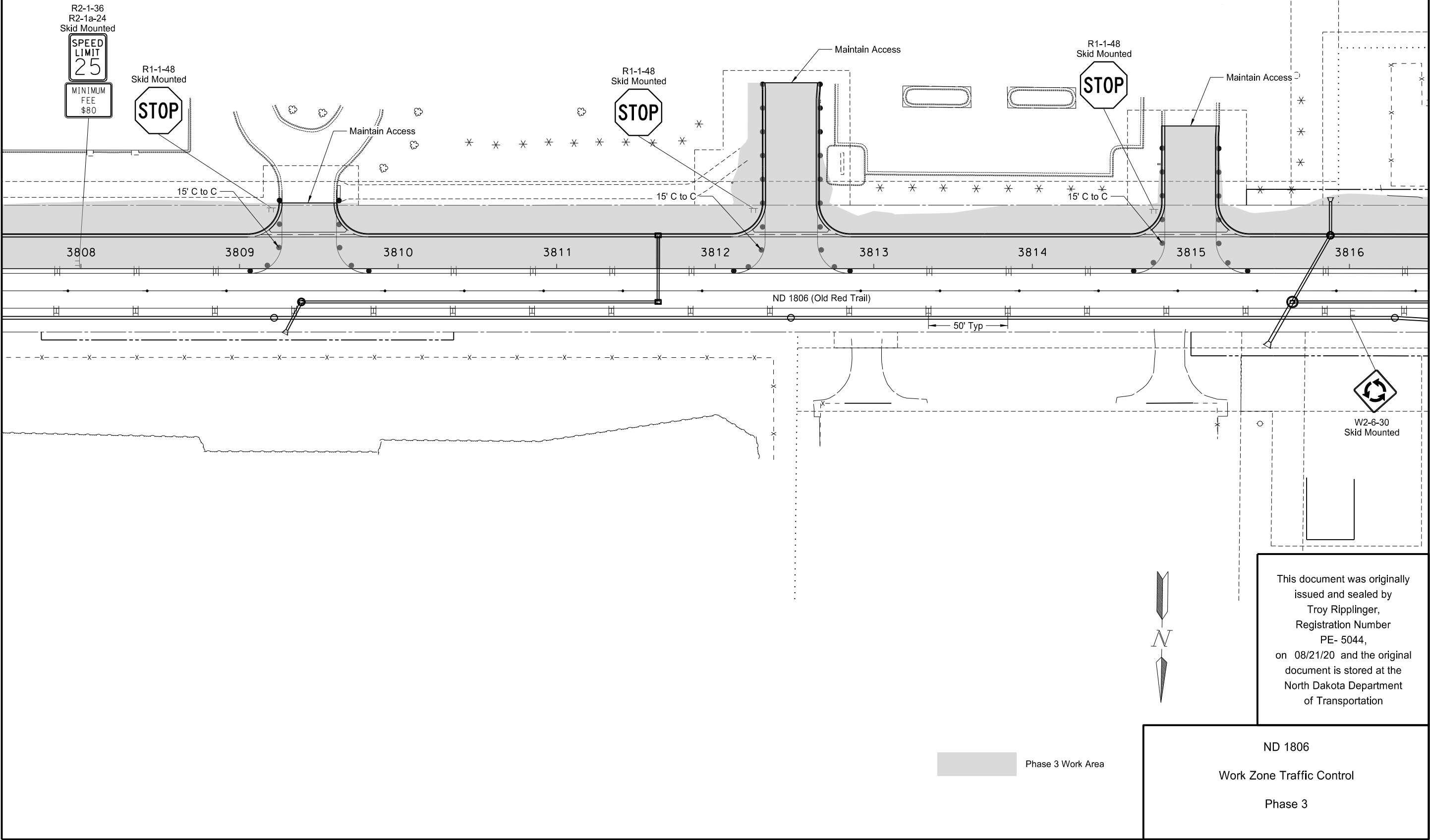
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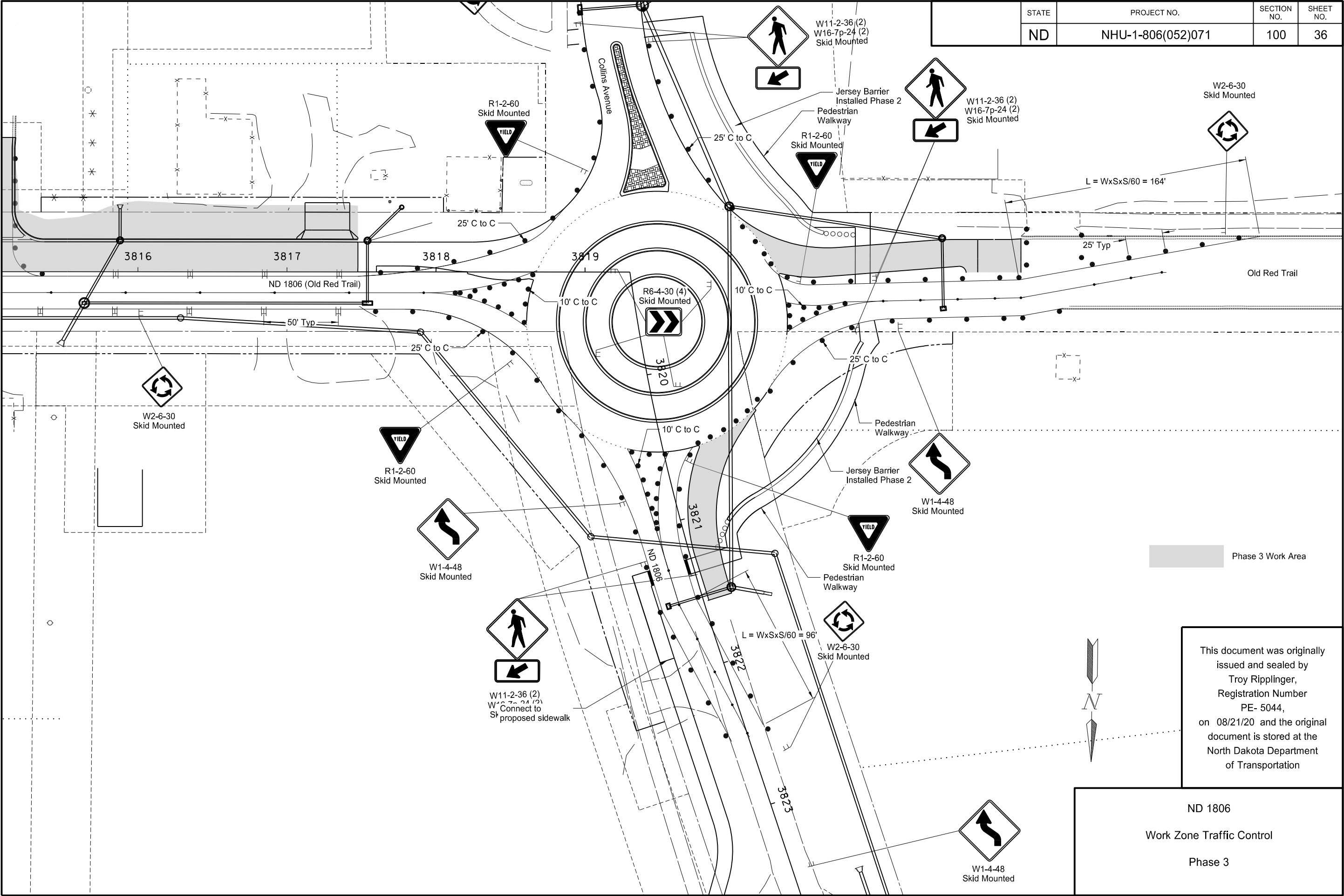


Phase 3 Work Area

ND 1806  
Work Zone Traffic Control  
Phase 3

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	100	35

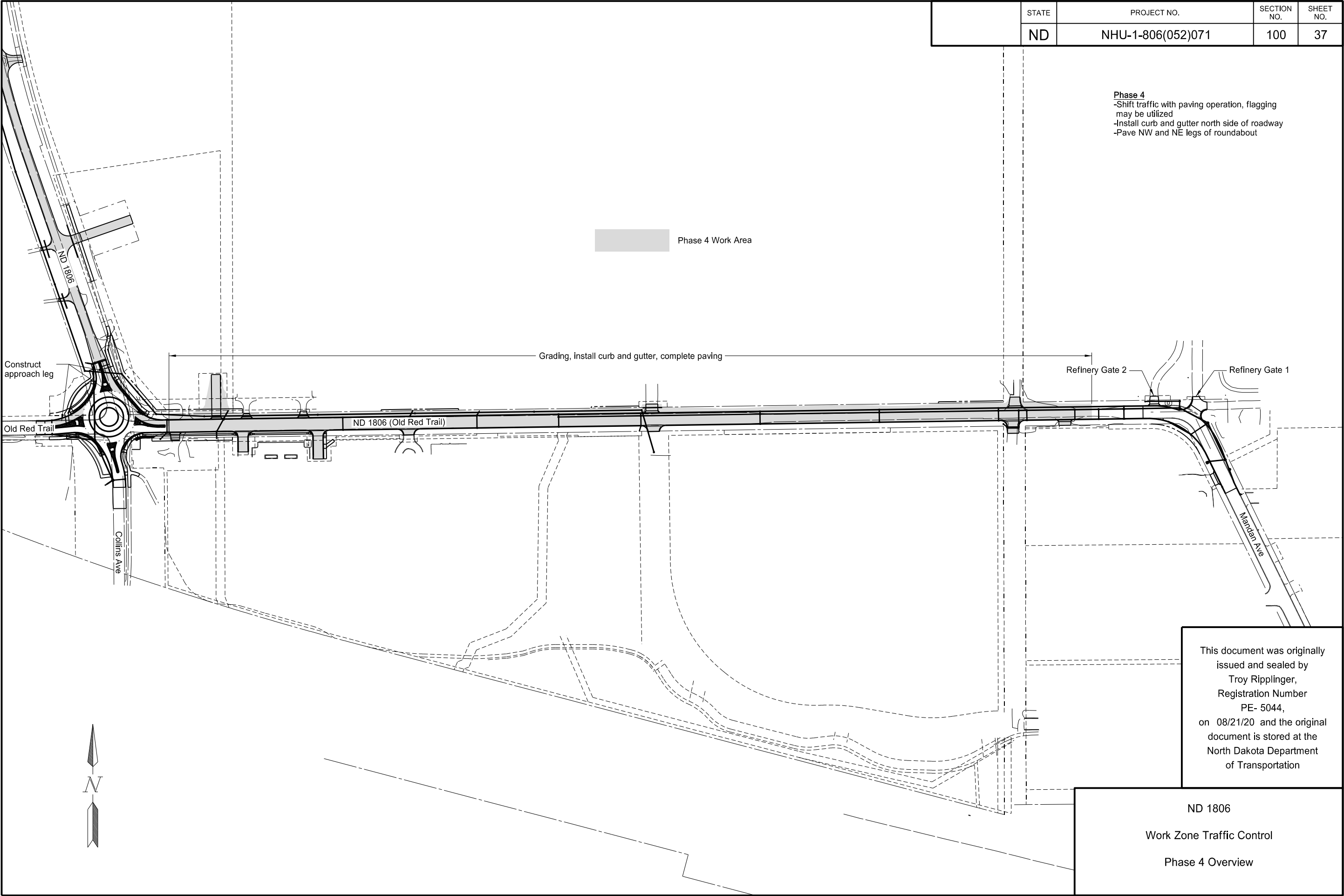






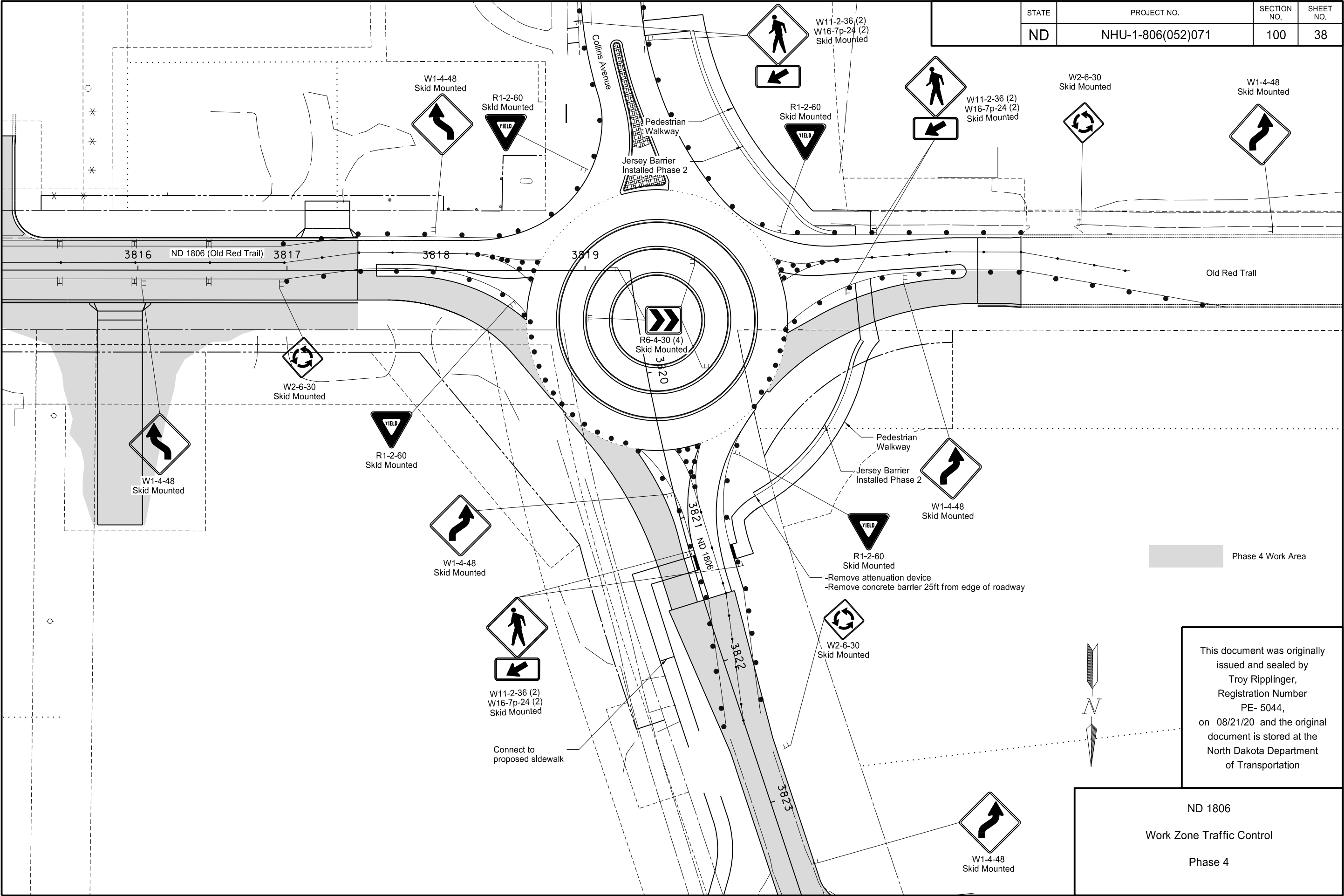
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	100	37

Phase 4  
-Shift traffic with paving operation, flagging may be utilized  
-Install curb and gutter north side of roadway  
-Pave NW and NE legs of roundabout



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ND 1806  
Work Zone Traffic Control  
Phase 4 Overview

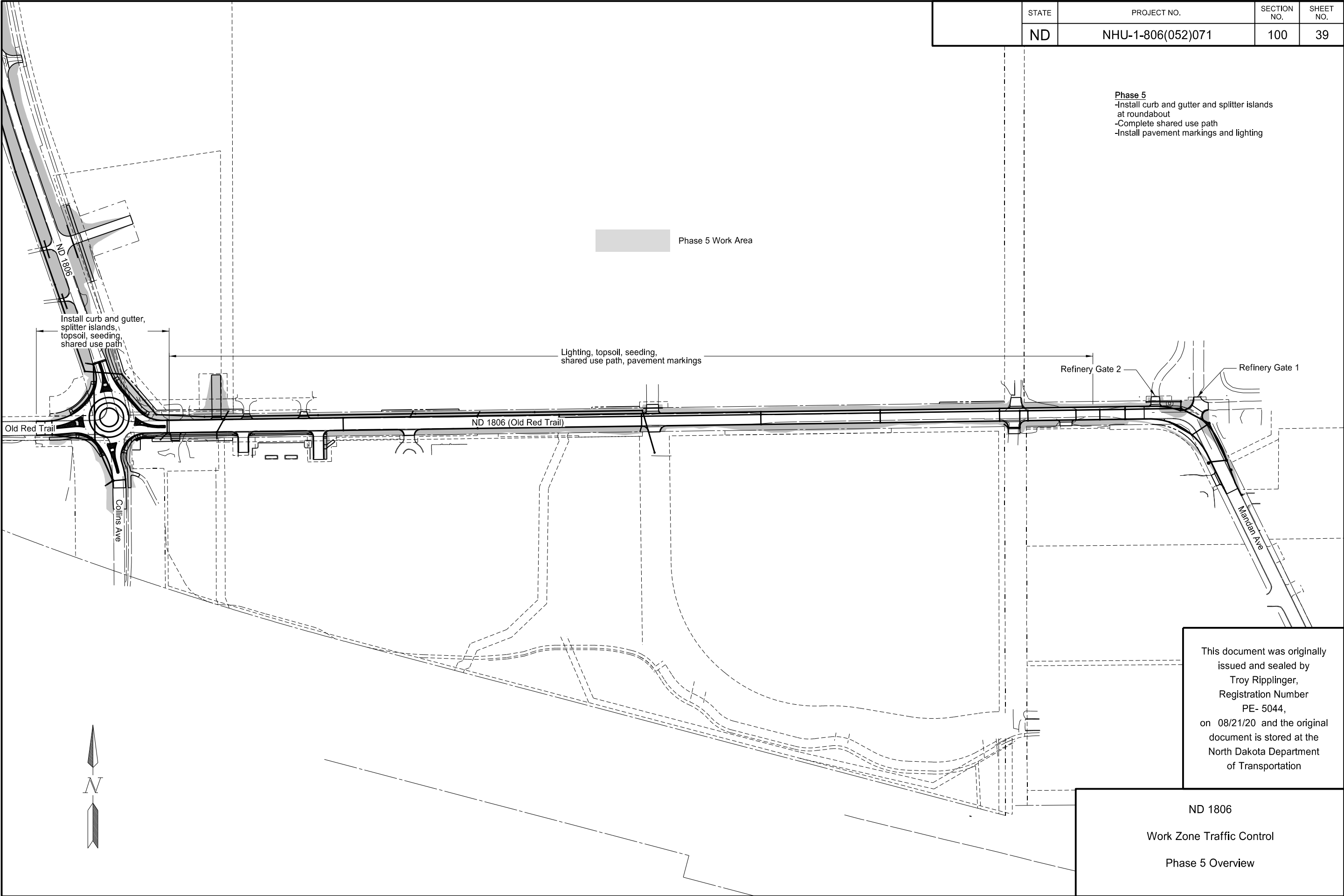


STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-1-806(052)071	100	38

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-1-806(052)071	100	39

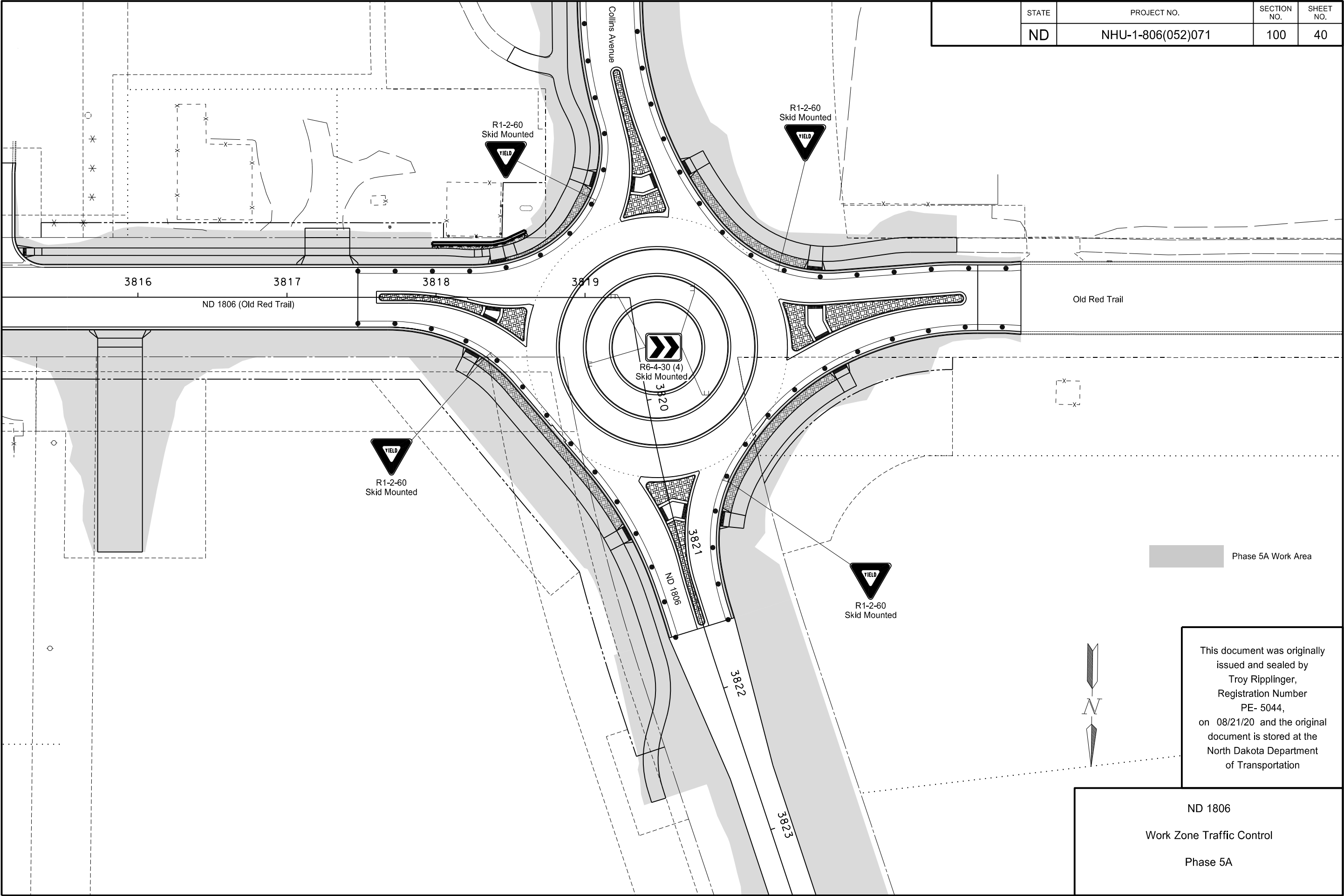
- Phase 5
- Install curb and gutter and splitter islands at roundabout
  - Complete shared use path
  - Install pavement markings and lighting

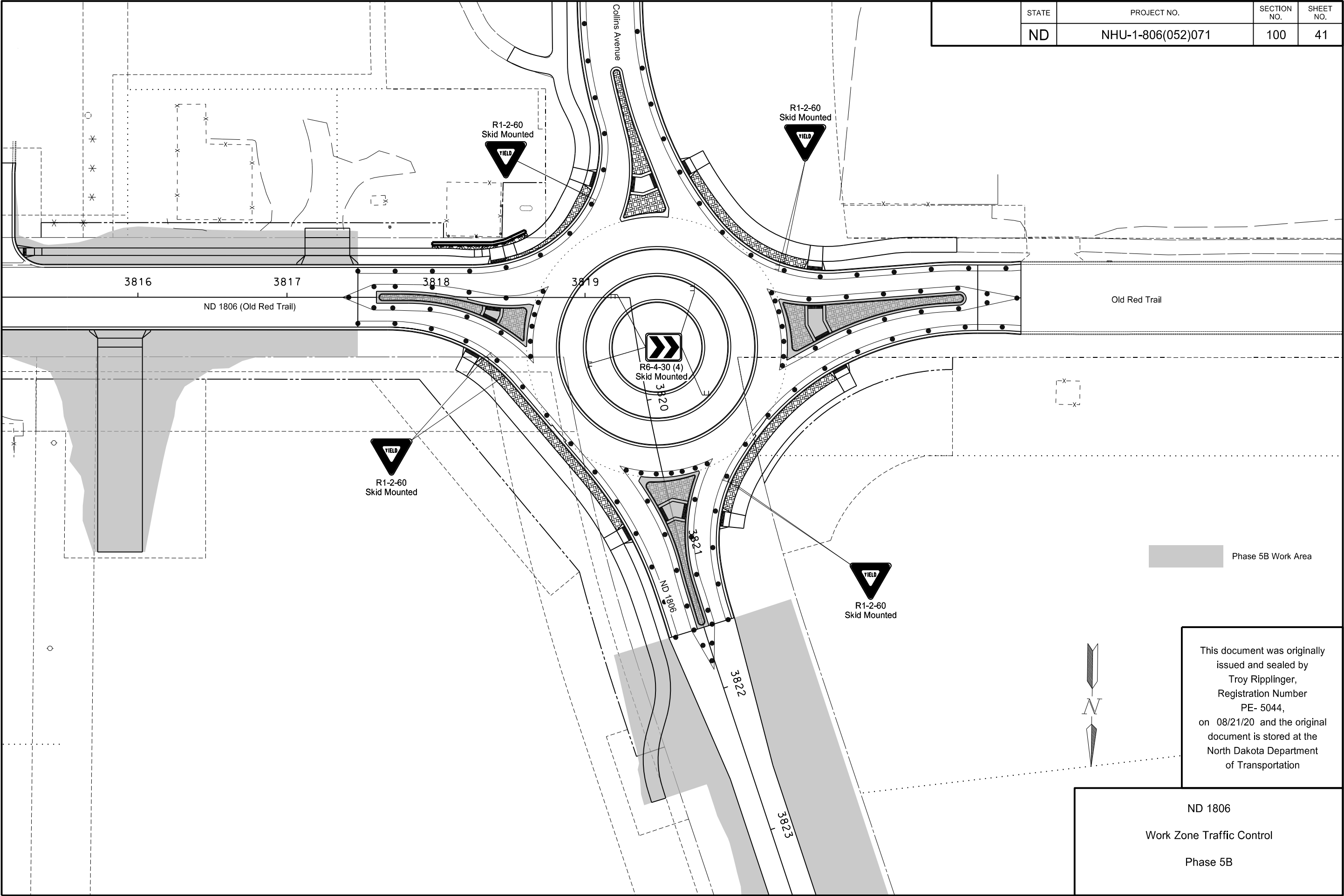
Phase 5 Work Area



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ND 1806  
Work Zone Traffic Control  
Phase 5 Overview

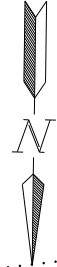




	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	100	41

Phase 5B Work Area

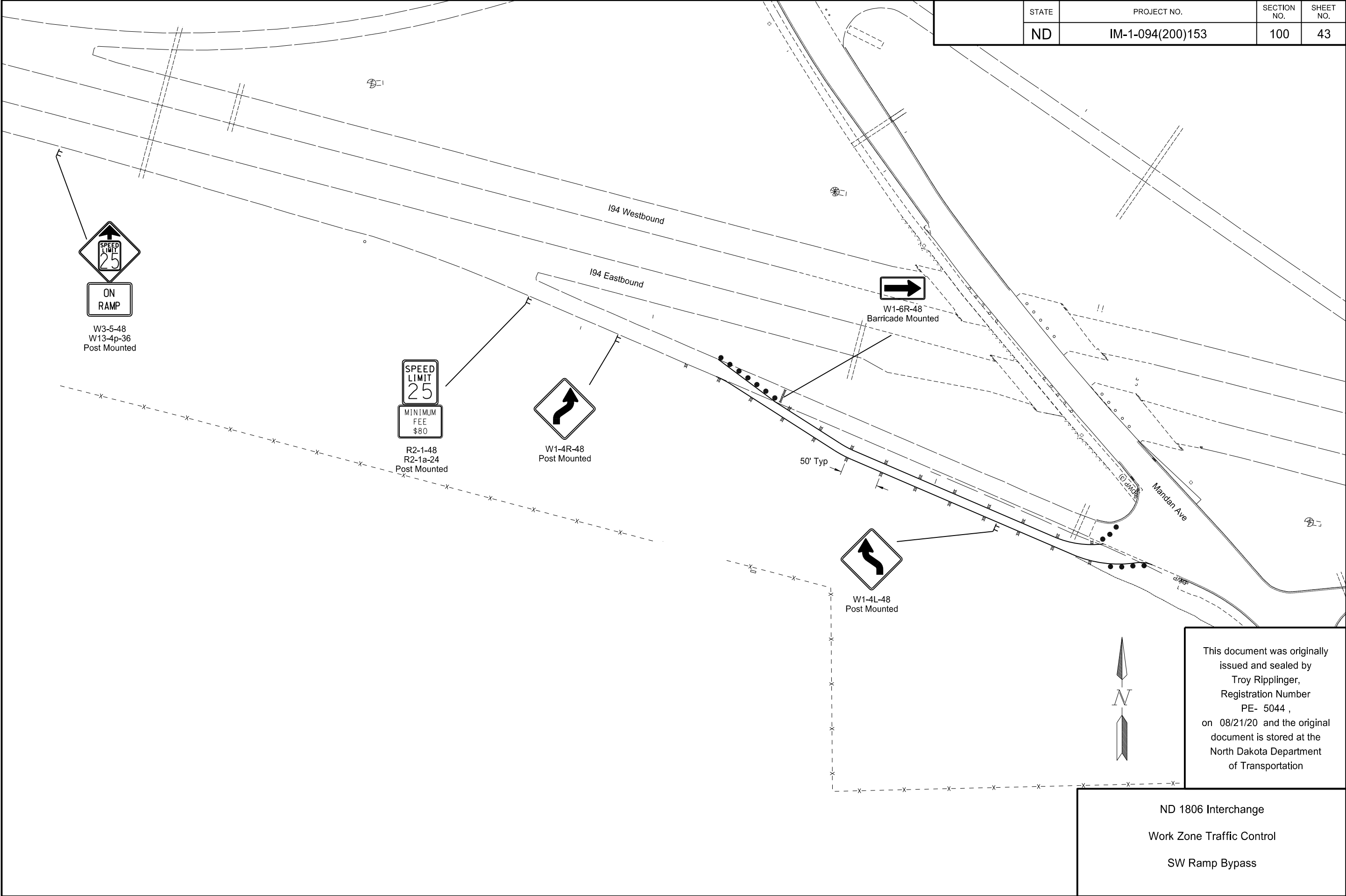
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ND 1806  
Work Zone Traffic Control  
Phase 5B



	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	IM-1-094(200)153	100	43







																				STATE	PROJECT NO.			SECTION NO.	SHEET NO.
																				N.D.	NHU-1-806(052)071			110	1
Station / RP	Sign No.	Assembly No.	Flat Sheet For Signs		Sign Support Length				Vert Clear- ance FT	Support Size	Max Post Len LF	Sleeve Length				Sleeve Size	Anchor EA	Anchor LF	Anchor Size	Reset Sign Panel EA	Reset Sign Support EA	Break-Away EA	Comments		
			IV SF	XI SF	1st LF	2nd LF	3rd LF	4th LF				1st LF	2nd LF	3rd LF	4th LF										
ND 1806 (PR 1806)																									
3769+55 Lt	M1-5	32	5.0					7.0														Mount on Existing Supports			
3769+72 Rt	M1-5	32	5.0					7.0														Mount on Existing Supports			
3772+03 Lt	R1-1	1			10.9			7.0	2.25 x 2.25 12 ga	13.7						1	4	2.5 x 2.5 12 ga	1						
3775+69 Rt	Keep							7.0											1			Mount on Light Standard			
3777+53 Lt	R3-9b	22		6.0				7.0														Mount on Light Standard			
3779+37 Rt	W1-1L			2.3				7.0											1			Mount on Light Standard			
3780+60 Rt	W8-54	20		9.0	11.6			7.0	2.5 x 2.5 10 ga	12.9						1	4	3 x 3 7 ga			1				
3780+98 Lt	Adopt							7.0											1			Mount on Light Standard			
3783+79 Rt	R1-1/D-754-87 SA 2D		17.0	5.2	10.4			7.0	2.5 x 2.5 12 ga	12.8	2.9				2.25 x 2.25 12 ga	1	4	3 x 3 7 ga			1				
3784+71 Rt	R1-1	1		5.2	10.9			7.0	2.25 x 2.25 12 ga	13.7						1	4	2.5 x 2.5 12 ga							
3786+50 Lt	R3-9b	22		6.0	11.4			7.0	2.25 x 2.25 12 ga	12.9						1	4	2.5 x 2.5 12 ga							
3787+15 Lt	W8-54	20		9.0				7.0														Mount on Light Standard			
3788+00 Lt	W1-1R	53		8.5	12.5			7.0	2.5 x 2.5 10 ga	14.7						1	4	3 x 3 7 ga			1				
3788+76 Rt	R8-3a	9		5.0				7.0														Mount on Light Standard			
3788+92 Lt	R1-1/D-754-87 SA 2E		19.0	5.2	10.4			7.0	2.5 x 2.5 10 ga	11.7						1	4	3 x 3 7 ga			1				
3789+43 Rt	R1-1	1		5.2	10.9			7.0	2.25 x 2.25 12 ga	13.7						1	4	2.5 x 2.5 12 ga							
3790+60 Lt	R8-3a	9		5.0				7.0														Mount on Light Standard			
3792+44 Rt	R2-1							7.0											1			Mount on Light Standard			
3794+28 Lt	R3-9b	22		6.0				7.0														Mount on Light Standard			
3796+12 Rt	R8-3a	9						7.0											1			Mount on Light Standard			
3797+96 Lt	R8-3a	9		5.0				7.0														Mount on Light Standard			
3801+72 Lt	R2-1	9		5.0				7.0														Mount on Light Standard			
3803+48 Rt	R8-3a	9		5.0				7.0														Mount on Light Standard			
3805+32 Lt	R8-3a	9						7.0											1			Mount on Light Standard			
3807+18 Rt	R3-9b	22						7.0											1			Mount on Light Standard			
3809+00 Lt	R3-9b	22		6.0				7.0														Mount on Light Standard			
3809+20 Lt	R1-1/SA-C				10.9			7.0	2.25 x 2.25 12 ga	13.7						1	4	2.5 x 2.5 12 ga	1						
3809+66 Lt	Service	7			9.9			7.0	2 x 2 12 ga	25.5						1	4	2.25 x 2.25 12 ga	1						
3810+84 Rt	R8-3a	9						7.0											1			Mount on Light Standard			
3811+00 Lt	R8-3a	9			10.9			7.0	2 x 2 12 ga	11.5						1	4	2.25 x 2.25 12 ga	1						
3812+24 Lt	R1-1	1			10.9			7.0	2.25 x 2.25 12 ga	13.7						1	4	2.5 x 2.5 12 ga	1						
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8/21/20 9:54:55AM Page 1 of 3																									

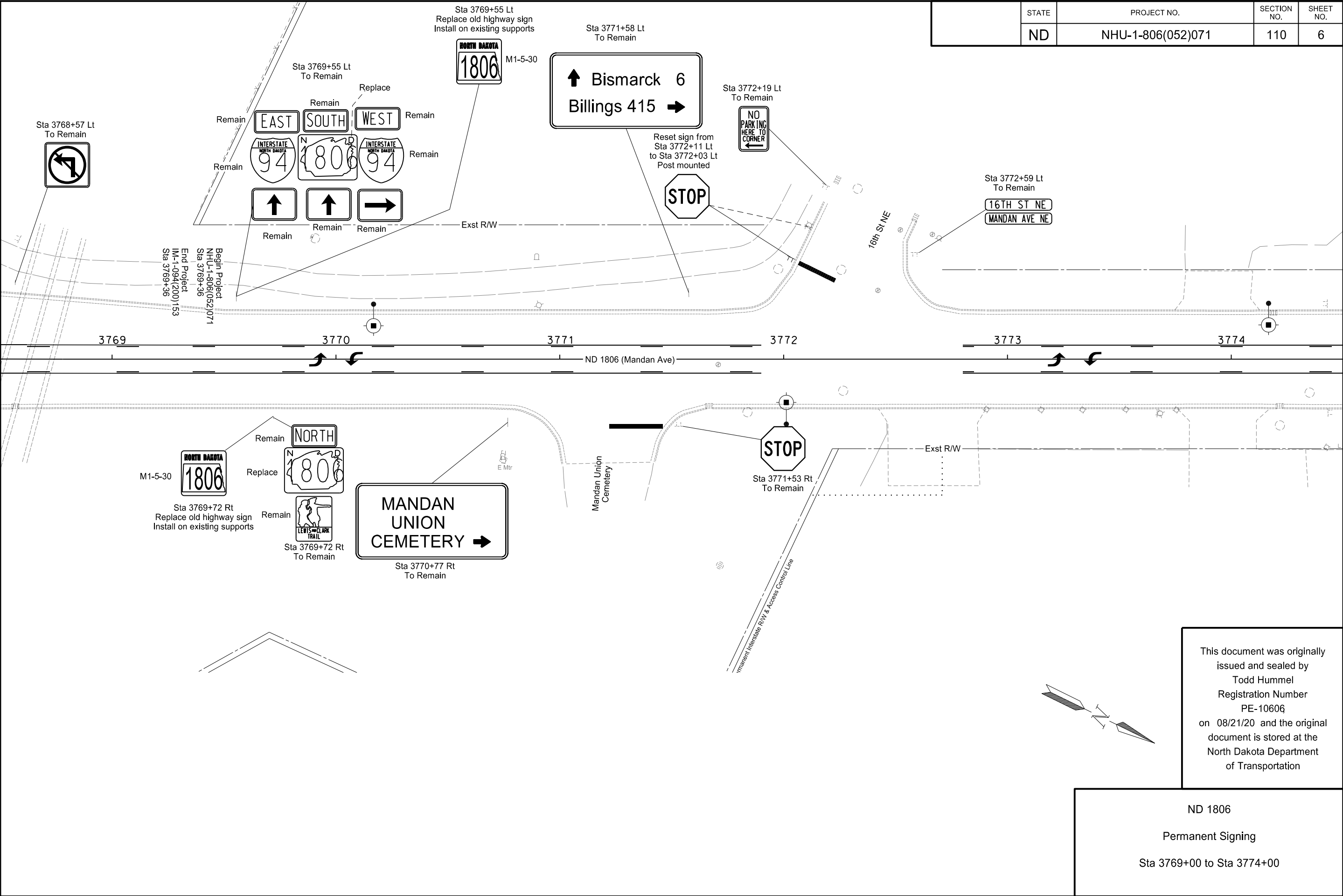
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Station / RP	Sign No.	Assembly No.	Flat Sheet For Signs		Sign Support Length				Vert Clear- ance	Support	Max Post Len	Sleeve Length		3rd	4th	Sleeve	Anchor	Anchor	Anchor	Reset Sign Panel	Reset Sign Support	Break-Away	Comments		
			IV SF	XI SF	1st LF	2nd LF	3rd LF	4th LF	FT	Size	LF	LF	LF	LF	Size	EA	LF	Size	EA	EA	EA				
3812+89 Lt	R3-9b	22							7.0										1			Mount on Light Standard			
3813+65 Rt	Mandan									2 x 2 12 ga									1	1					
3814+62 Rt	W2-6	53		8.5					7.0													Mount on Light Standard			
3814+77 Lt	R1-1	1			10.9				7.0	2.25 x 2.25 12 ga	13.7					1	4	2.5 x 2.5 12 ga	1						
3815+37 Rt	M1-5		2.2		11.7				7.0	2.5 x 2.5 12 ga	12.4					1	4	3 x 3 7 ga	1						
3816+50 Rt	SS7		23.8		10.1	10.1	10.1		7.0	2.5 x 2.5 12 ga	11.4					3	4	3 x 3 7 ga			3				
3816+66 Lt	R2-1								7.0										1			Mount on Light Standard			
3817+50 Lt	R3-9b/ SA-B			8.5	11.2				7.0	2.5 x 2.5 12 ga	12.4					1	4	3 x 3 7 ga							
3817+66 Rt mdn	R4-7/ SA-E			7.3	13.0				7.0	2.5 x 2.5 12 ga	14.4					1	4	3 x 3 7 ga							
3818+09 Rt	W11-2/ SA-D			8.3	12.4				7.0	2.5 x 2.5 10 ga	15.2					1	4	3 x 3 7 ga			1				
3818+45 Rt	R1-2	4		3.9	11.0				7.0	2 x 2 12 ga	13.6					1	4	2.25 x 2.25 12 ga							
3818+53 Lt	W11-2/ SA-D			8.3	12.4				7.0	2.5 x 2.5 10 ga	15.2					1	4	3 x 3 7 ga			1				
3818+53 Rt mdn	SS9		10.5						7.0													Mount on Light Standard			
3819+00 Rt	R6-4	32		5.0	10.4				7.0	2 x 2 12 ga	10.6					1	4	2.25 x 2.25 12 ga							
3820+06 Lt	R6-4	32		5.0	10.4				7.0	2 x 2 12 ga	10.6					1	4	2.25 x 2.25 12 ga							
3820+08 Rt	M1-5	400	7.2		11.7				7.0	2.5 x 2.5 12 ga	13.9					1	4	3 x 3 7 ga							
3820+62 Lt mdn	SS10		11.3						7.0													Mount on Light Standard			
3820+68 Lt	R1-2	4		3.9	11.0				7.0	2 x 2 12 ga	13.6					1	4	2.25 x 2.25 12 ga							
3820+74 Rt	W11-2/ SA-D			8.3	12.4				7.0	2.5 x 2.5 10 ga	15.2					1	4	3 x 3 7 ga			1				
3821+05 Lt	W11-2/ SA-D			8.3	12.4				7.0	2.5 x 2.5 10 ga	15.2					1	4	3 x 3 7 ga			1				
3821+50 Rt mdn	R4-7/ SA-E			7.3	13.0				7.0	2.5 x 2.5 12 ga	14.4					1	4	3 x 3 7 ga							
3821+70 Rt	M1-5/ SA-F				12.4				7.0	2.5 x 2.5 10 ga	13.0					1	4	3 x 3 7 ga	1		1				
3822+16 Rt	SS6/ D-754-48		17.5		14.7	15.2	15.7		7.0	2.5 x 2.5 10 ga	18.3					3	4	3 x 3 7 ga			3				
3822+59 Lt	M5-3		2.2		15.7				7.0	2.25 x 2.25 12 ga	16.2	5.7			2 x 2 12 ga	1	4	3 x 3 7 ga	1		1				
3823+33 Rt	W1-2	19		6.3	15.5				7.0	2.25 x 2.25 12 ga	19.3	4.0			2 x 2 12 ga	1	4	3 x 3 7 ga			1				
3823+60 Lt	W2-6	53		8.5					7.0													Mount on Light Standard			
3825+03 Lt	R2-1	9							7.0										1			Mount on Light Standard			
3825+20 Rt	R2-1	9			14.8				7.0	2.5 x 2.5 10 ga	18.5					1	4	3 x 3 7 ga	1		1				
3826+50 Lt	M1-5	400	7.2		15.7				7.0	2.5 x 2.5 10 ga	16.6					1	4	3 x 3 7 ga			1				
3829+00 Lt	W3-5	20		9.0	16.3				7.0	2.5 x 2.5 10 ga	17.4	5.7			2.19 x 2.19 10 ga	1	4	3 x 3 7 ga			1				
																This document was originally issued and sealed by Todd Hummel, Registration Number 10606, on 8/21/20 and is stored at the North Dakota Department of Transportation.			Sign Summary Perforated Tube  ND 1806						
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																			STATE	PROJECT NO.			SECTION NO.	SHEET NO.						
																			N.D.	NHU-1-806(052)071			110	3						
Station / RP	Sign No.	Assembly No.	Flat Sheet For Signs IV SF      XI SF		Sign Support Length 1st LF   2nd LF   3rd LF   4th LF				Vert Clearance FT	Support Size	Max Post Len LF	Sleeve Length 1st LF   2nd LF   3rd LF   4th LF				Sleeve Size	Anchor EA	Anchor LF	Anchor Size	Reset Sign Panel EA	Reset Sign Support EA	Break-Away EA	Comments							
3840+00 Lt	Keep / SA-A				10.9				7.0	2 x 2 12 ga	14.6						1	4	2.25 x 2.25 12 ga	1										
3843+00 Rt	W11-2/ SA-D			8.3	17.0				7.0	2.5 x 2.5 12 ga	17.4	6.2				2.25 x 2.25 12 ga	1	4	3 x 3 7 ga			1								
3843+00 Lt	W1-2L	19		6.3	15.5				7.0	2.25 x 2.25 12 ga	19.3	4.0				2 x 2 12 ga	1	4	3 x 3 7 ga			1								
3846+25 Lt	R1-1/ D-754-87 SA-2E		20.0	5.2	15.0   15.5				7.0	2.5 x 2.5 10 ga	15.9						2	4	3 x 3 7 ga			2								
3846+25 Rt	W11-2/ SA-G			8.3	17.0				7.0	2.5 x 2.5 12 ga	17.4	6.2				2.25 x 2.25 12 ga	1	4	3 x 3 7 ga	1		1								
3846+27 Lt	W11-2/ SA-G			8.3	17.0				7.0	2.5 x 2.5 12 ga	17.4	6.2				2.25 x 2.25 12 ga	1	4	3 x 3 7 ga	1		1								
3849+00 Lt	W11-2/ SA-D			8.3	17.0				7.0	2.5 x 2.5 12 ga	17.4	6.2				2.25 x 2.25 12 ga	1	4	3 x 3 7 ga			1								
Sub Total			147.9	249.7	Total 586.7														Total	184.0				25	1	27				
Collins Ave (EXCOL)																														
11+00 Rt	W2-6	53		8.5					7.0																Mount on Light Standard					
13+50 Lt mdn	R4-7/ SA-E			7.3	13.0				7.0	2.5 x 2.5 12 ga	14.4						1	4	3 x 3 7 ga											
14+07 Rt	W11-2/ SA-D			8.3	12.4				7.0	2.5 x 2.5 10 ga	15.2						1	4	3 x 3 7 ga						1					
14+29 Lt	W11-2/ SA-D			8.3	12.4				7.0	2.5 x 2.5 10 ga	15.2						1	4	3 x 3 7 ga						1					
14+36 Rt	R1-2	4		3.9	11.0				7.0	2 x 2 12 ga	13.6						1	4	2.25 x 2.25 12 ga							Mount on Light Standard				
14+38 Lt mdn	SS8		9.8					7.0																						
14+95 Lt	R6-4	32		5.0	10.4				7.0	2 x 2 12 ga	10.6						1	4	2.25 x 2.25 12 ga											
Sub Total			9.8	41.3	Total 59.2														Total	20.0				0	0	2				
Old Red Trail (EXORT)																														
101+00 Rt	W2-6	53		8.5	17.1				7.0	2.5 x 2.5 10 ga	19.8	4.9				2.19 x 2.19 10 ga	1	4	3 x 3 7 ga						1					
102+80 Lt mdn	R4-7/ SA-E			7.3	13.0				7.0	2.5 x 2.5 12 ga	14.4						1	4	3 x 3 7 ga											
103+62 Rt	W11-2/ SA-D			8.3	12.4				7.0	2.5 x 2.5 10 ga	15.2						1	4	3 x 3 7 ga						1					
103+68 Lt	W11-2			8.3	12.4				7.0	2.5 x 2.5 10 ga	15.2						1	4	3 x 3 7 ga						1					
103+88 Lt mdn	SS9		10.5					7.0																Mount on Light Standard						
104+02 Rt	R1-2	4		3.9	11.0				7.0	2 x 2 12 ga	13.6						1	4	2.25 x 2.25 12 ga											
104+52 Rt	R6-4	32		5.0	10.4				7.0	2 x 2 12 ga	10.6						1	4	2.25 x 2.25 12 ga											
Sub Total			10.5	41.3	Total 76.3														Total	24.0				0	0	3				
Grand Total			168.2	332.3	Total 722.2														Total	228	0	25			1	32				
																		This document was originally issued and sealed by Todd Hummel, Registration Number 10606, on 8/21/20 and is stored at the North Dakota Department of Transportation.			Sign Summary Perforated Tube ND 1806									
8/21/20 9:54:55AM Page 3 of 3																														

																								STATE	PROJECT NO.			SECTION NO.	SHEET NO.
																								N.D.	IM-1-094(200)153			110	4
Station / RP	Sign / Assembly No.	Flat Sheet For Signs		Panel For Signs		Overlay Panel		Vert Clear-ance	Galv Steel Sheet Standard Pipe			Galv Steel Post W-Shape Posts			Max Post Len	Post Space	Revise Fuse Joint	Std Pipe Fdn			W-Shape Pile	Remove Sign Fdns	Reset Sign Panel	Reset Sign Support	Stub Post	Multi Dir Base	Comments		
		IV SF	XI SF	IV SF	XI SF	IV SF	XI SF		1st LF	2nd LF	Size	1st LF	2nd LF	3rd LF				Dia FT	Dep FT	Vol CY		Conc Fdn EA						W-Shape Pile EA	
SouthWest Ramp (EXSWR)																													
1014+50 Lt	R5-1a							7.0	11.5		3.5				27.7				1.3	4.5	0.2		1		1				
1014+70 Lt	Dest							7.0			W4x13	13.8	14.8		21.9	6.0						28	2		1				
1016+54 Rt	M1-5-30		5.0					7.0	12.5		3.5				33.1			1.3	4.5	0.2		1		1					
1018+94 Lt	SA-A		14.4					7.0	10.7	10.7	3.5				25.0	2.0		1.3	4.5	0.5		2				1			
Sub Total			19.4					Total	45.4			Total	28.6								0.9	28	6	0	3	0	0	1	
NorthEast Ramp (EXNER)																													
3020+18 Lt	M1-5-30		5.0					7.0																			Mount on Existing Supports		
3022+12 Lt	SA-A		14.4					7.0	14.4	14.4	3.5				25.0	2.0		1.3	4.5	0.5		1		1					
Sub Total			19.4					Total	28.8			Total	0.0								0.5	0	1	0	1	0	0	0	
Grand Total			38.8					Total	74.2			Total	28.6								1.4	28	7	0	4	0	0	1	
																							This document was originally issued and sealed by Todd Hummel, Registration Number 10606, on 8/21/20 and is stored at the North Dakota Department of Transportation.		Sign Summary Round Steel Pipe & W-Shape  ND 1806 Interchange				
8/21/20 10:02:10AM Page 1 of 1																													



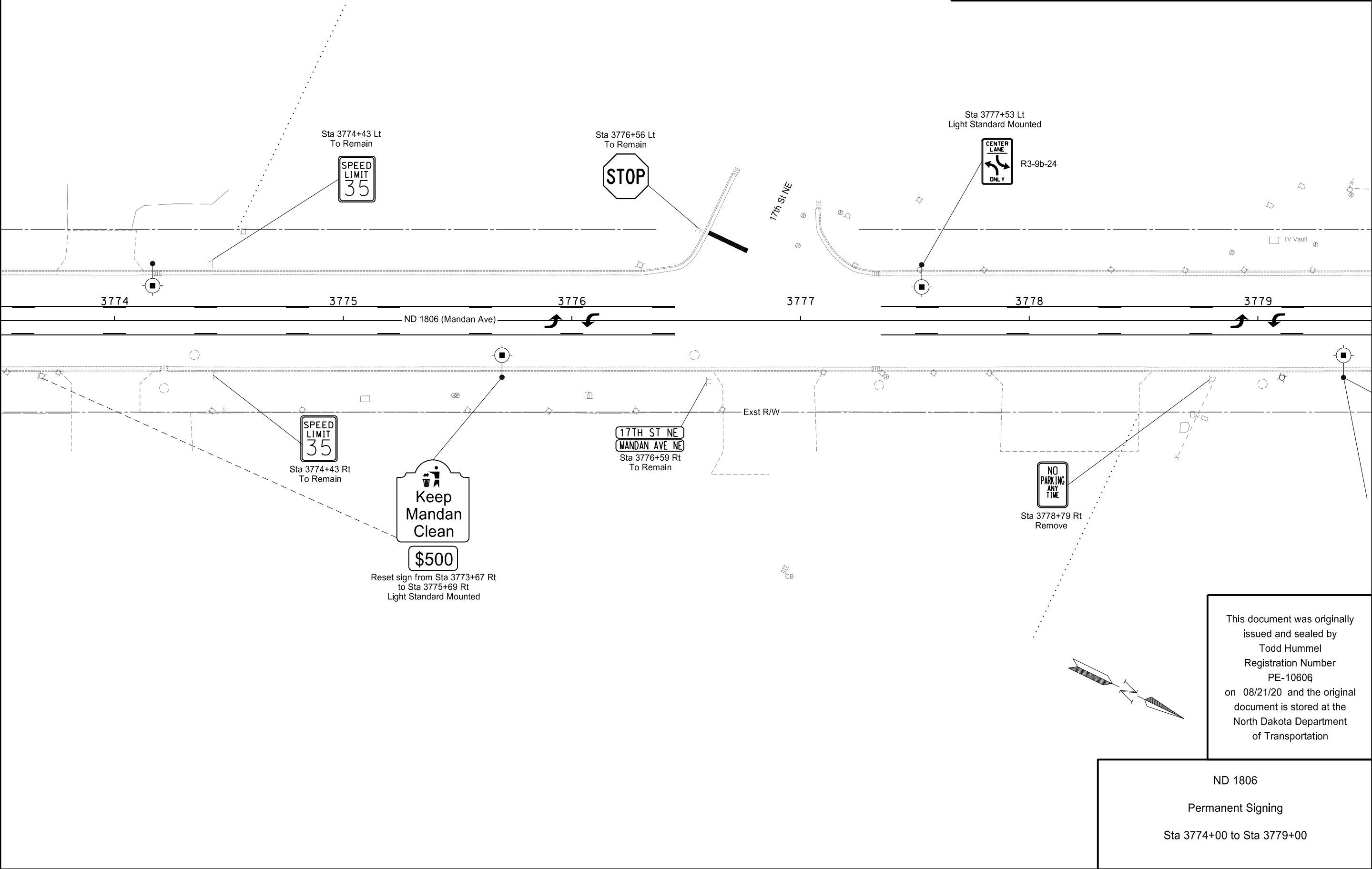
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-1-806(052)071	110	6



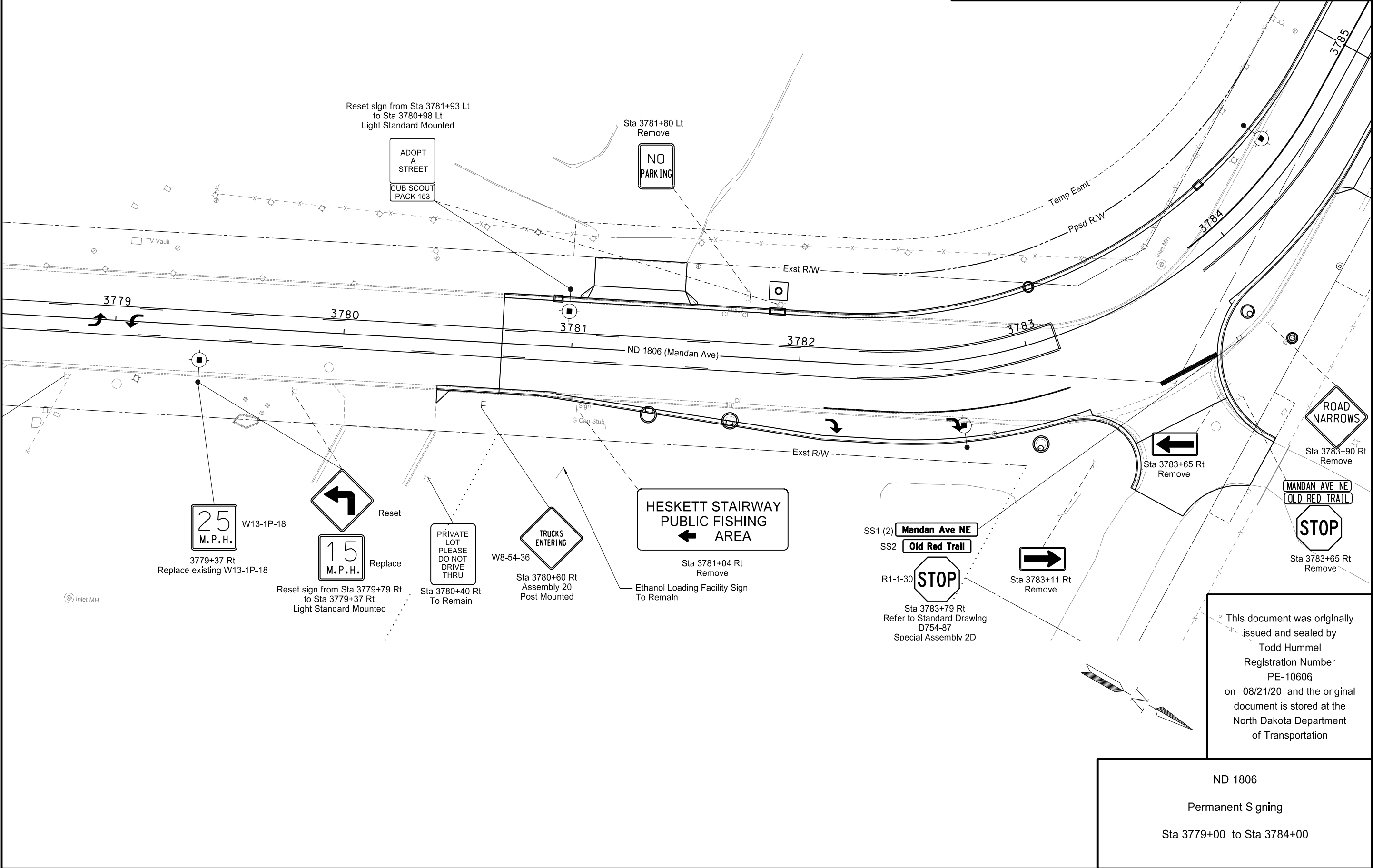
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ND 1806  
Permanent Signing  
Sta 3769+00 to Sta 3774+00

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-1-806(052)071	110	7

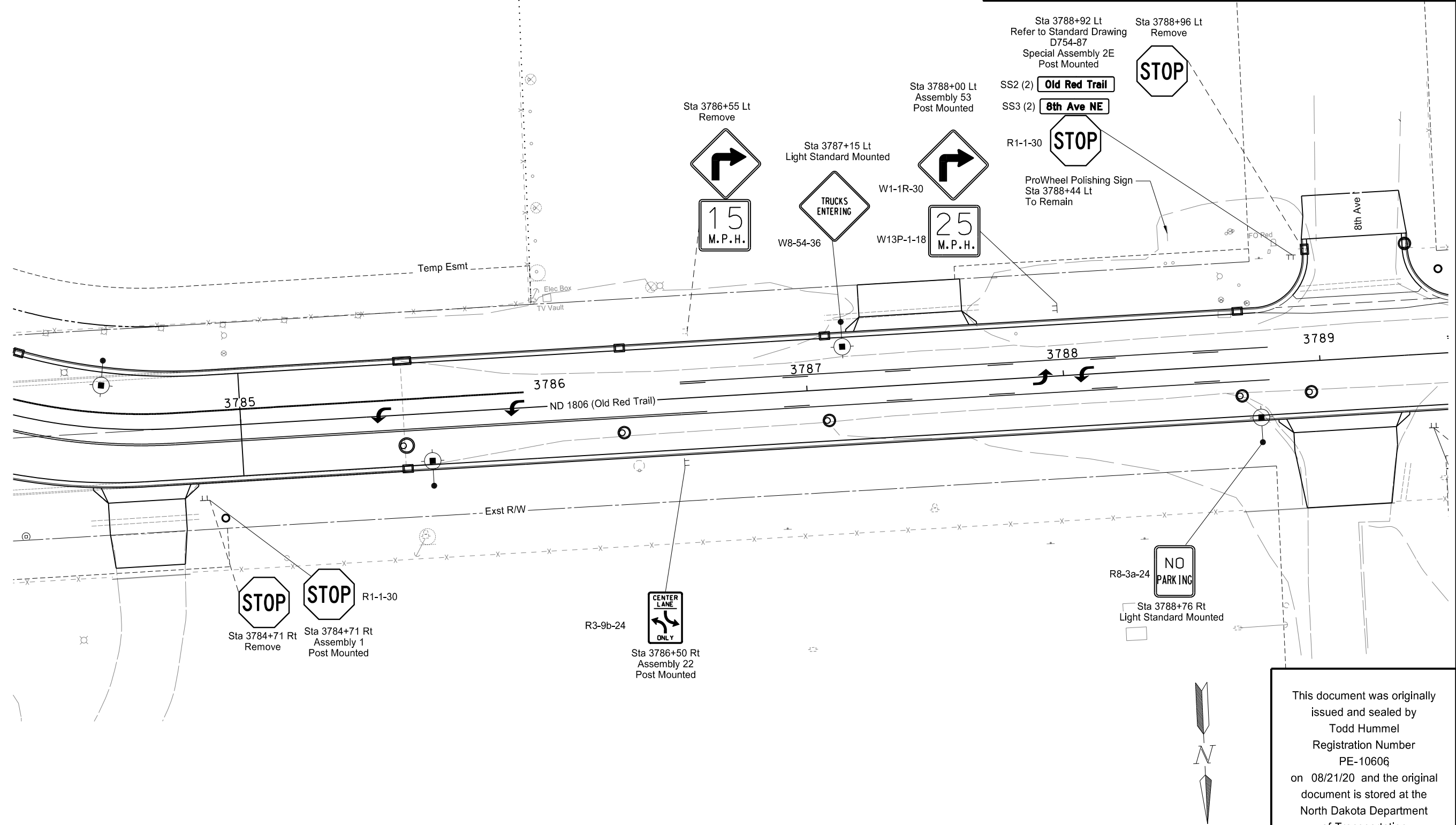


STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-1-806(052)071	110	8





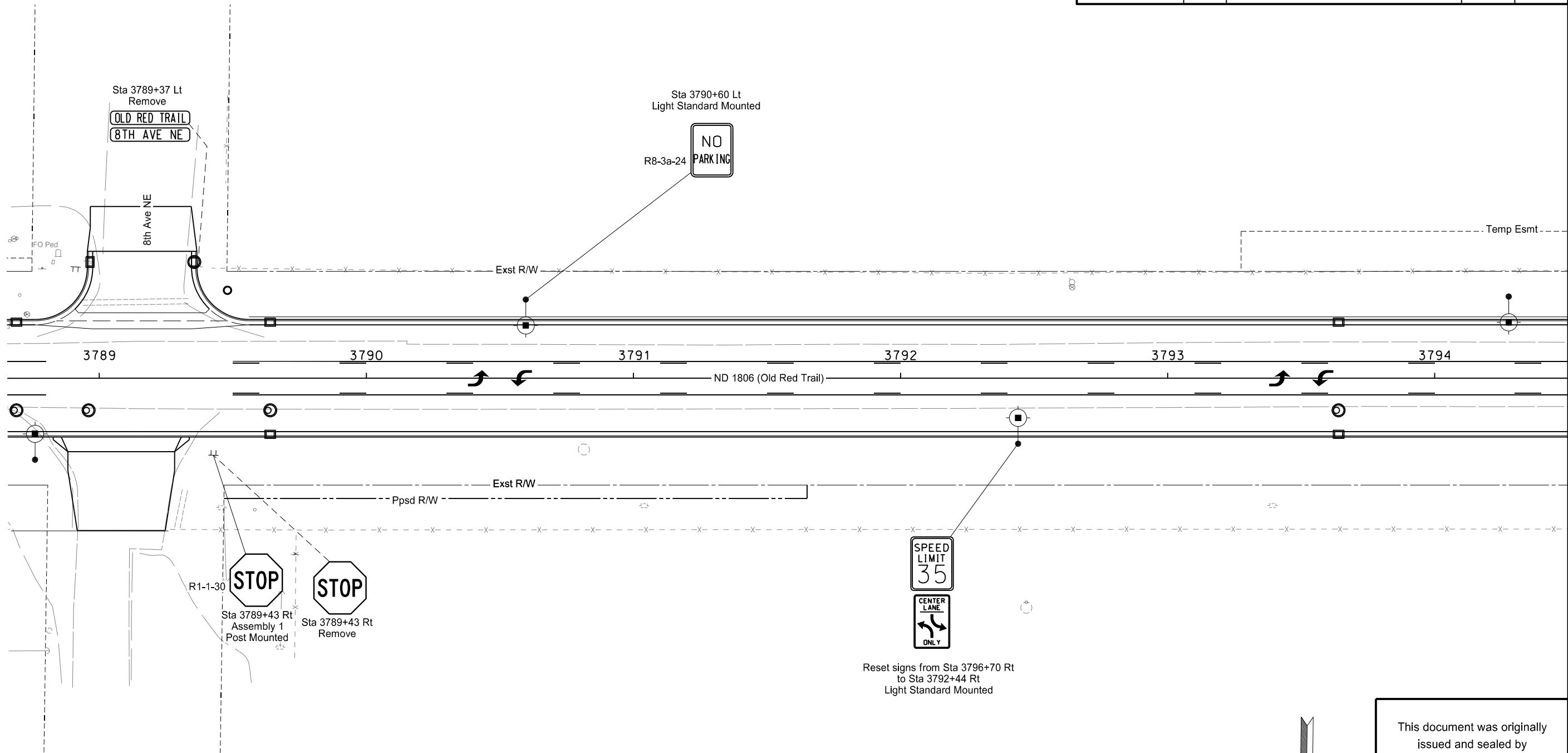
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	110	9



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ND 1806  
Permanent Signing  
Sta 3784+00 to Sta 3789+00

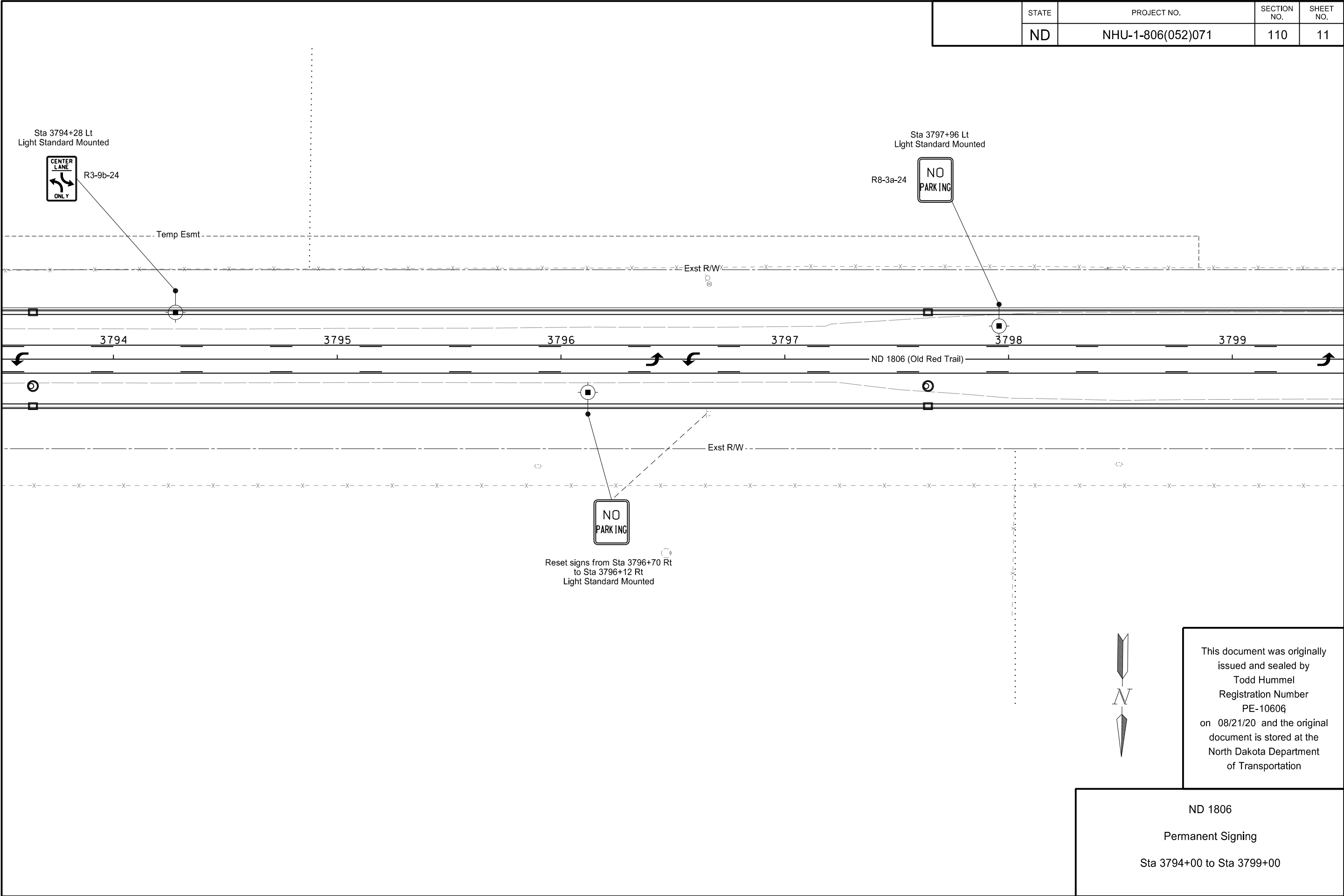
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	110	10



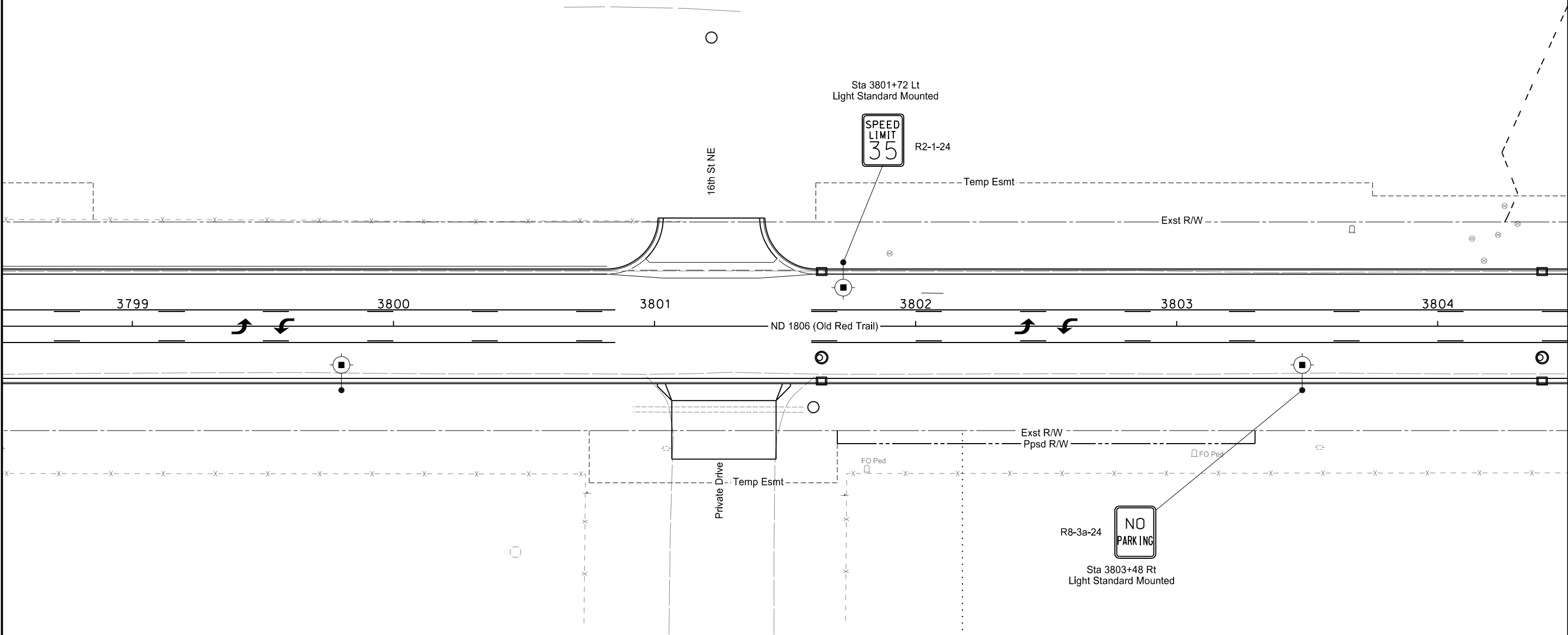
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ND 1806  
Permanent Signing  
Sta 3789+00 to Sta 3794+00

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	110	11



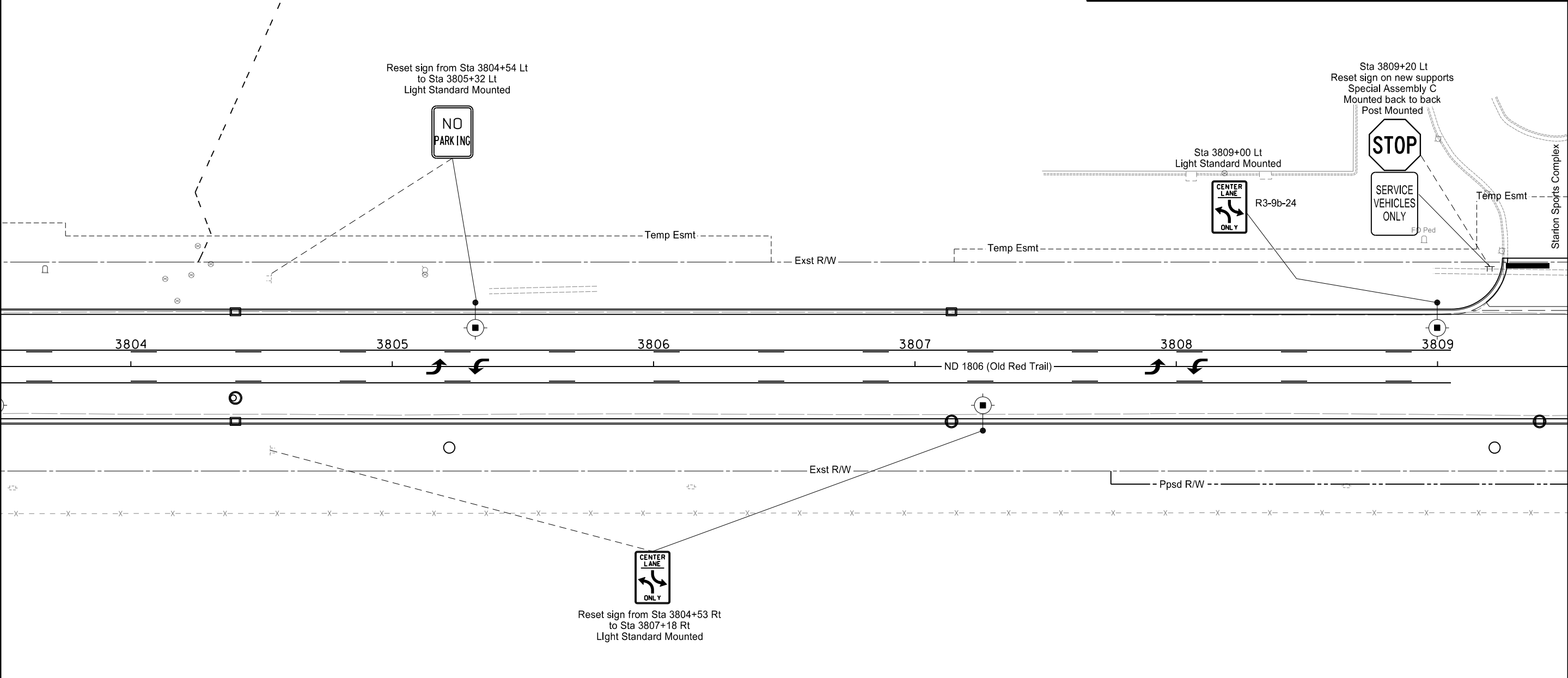
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-1-806(052)071	110	12



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ND 1806  
Permanent Signing  
Sta 3799+00 to 3804+00

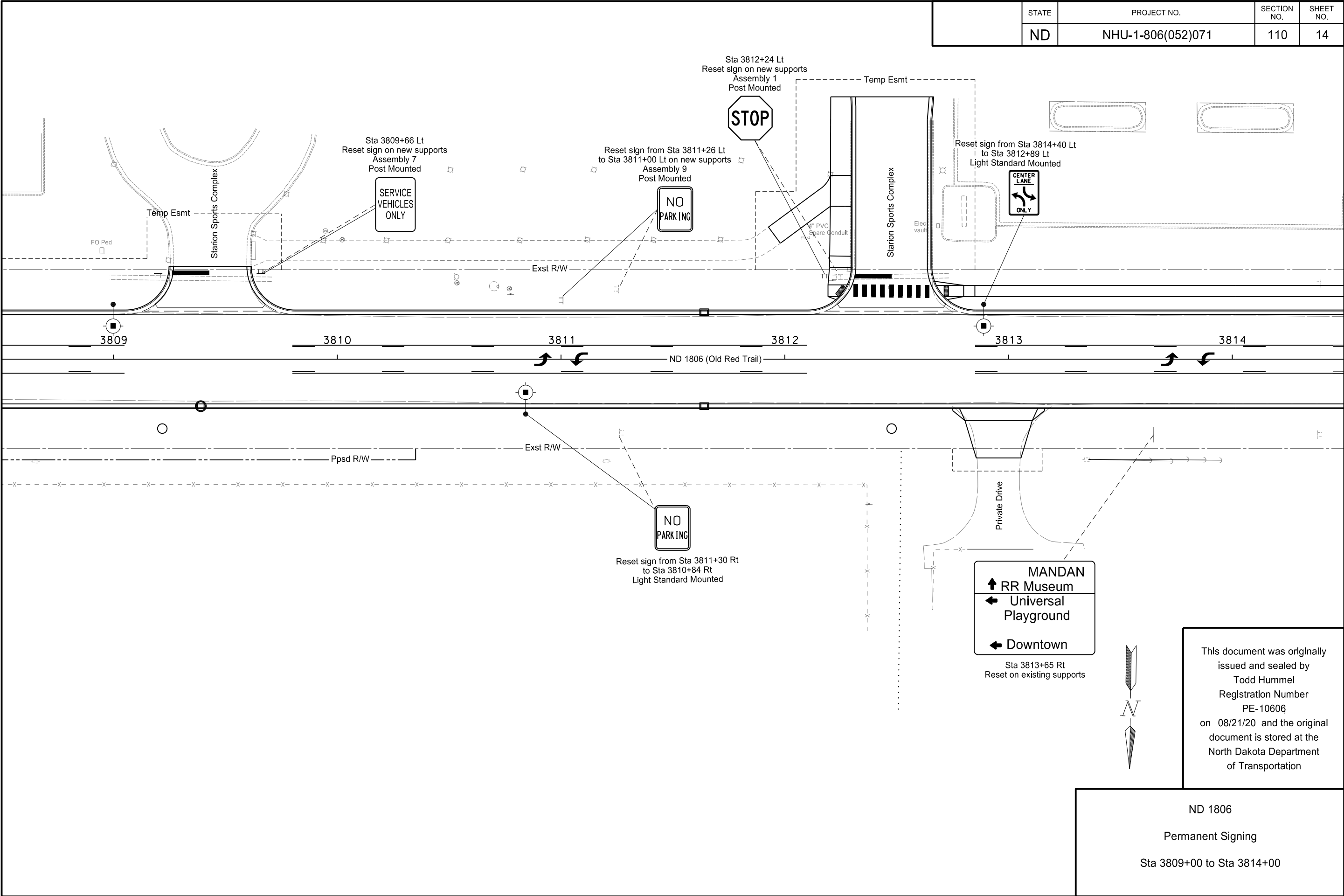
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	110	13

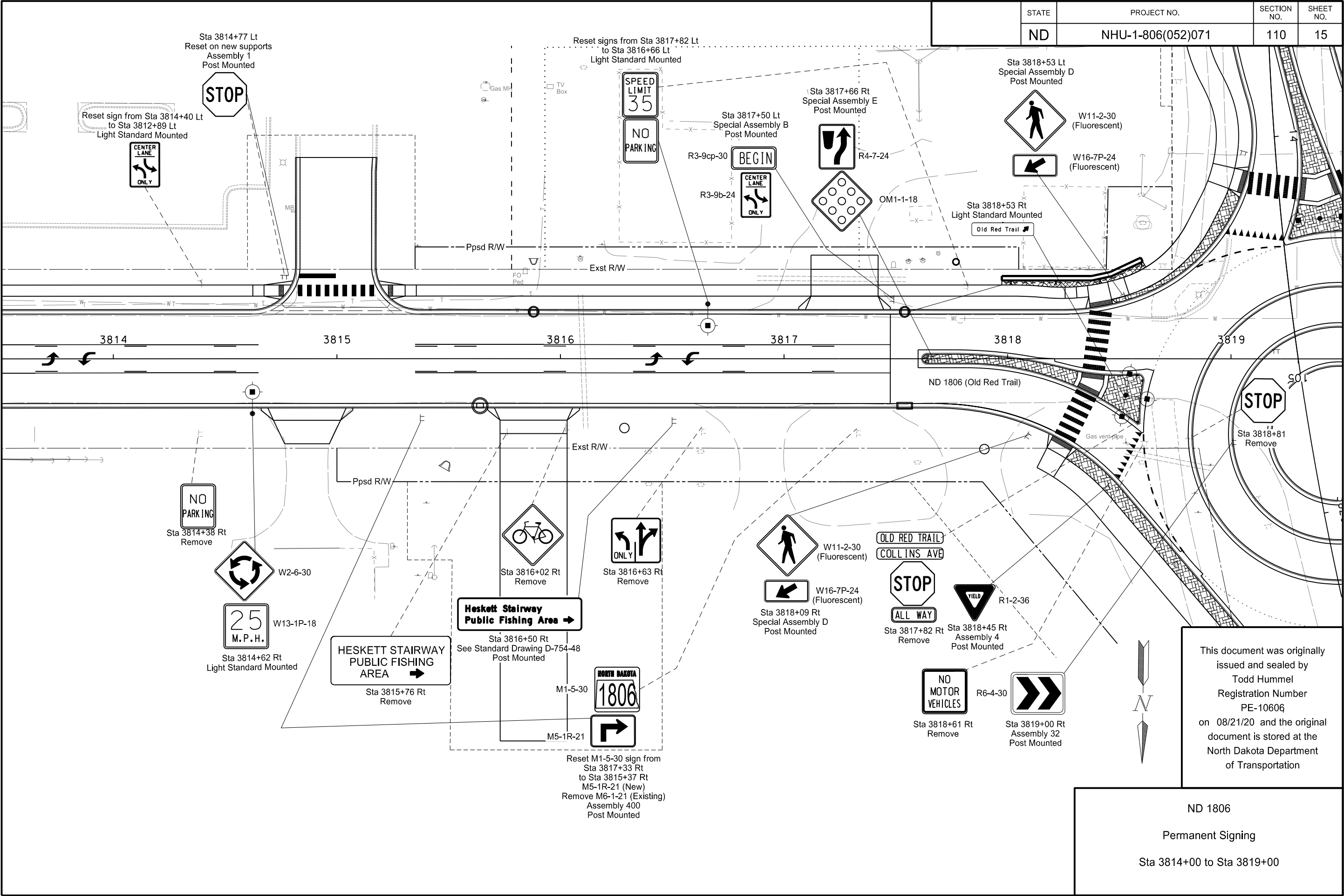


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Permanent Signing  
Sta 3804+00 to Sta 3809+00

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-1-806(052)071	110	14

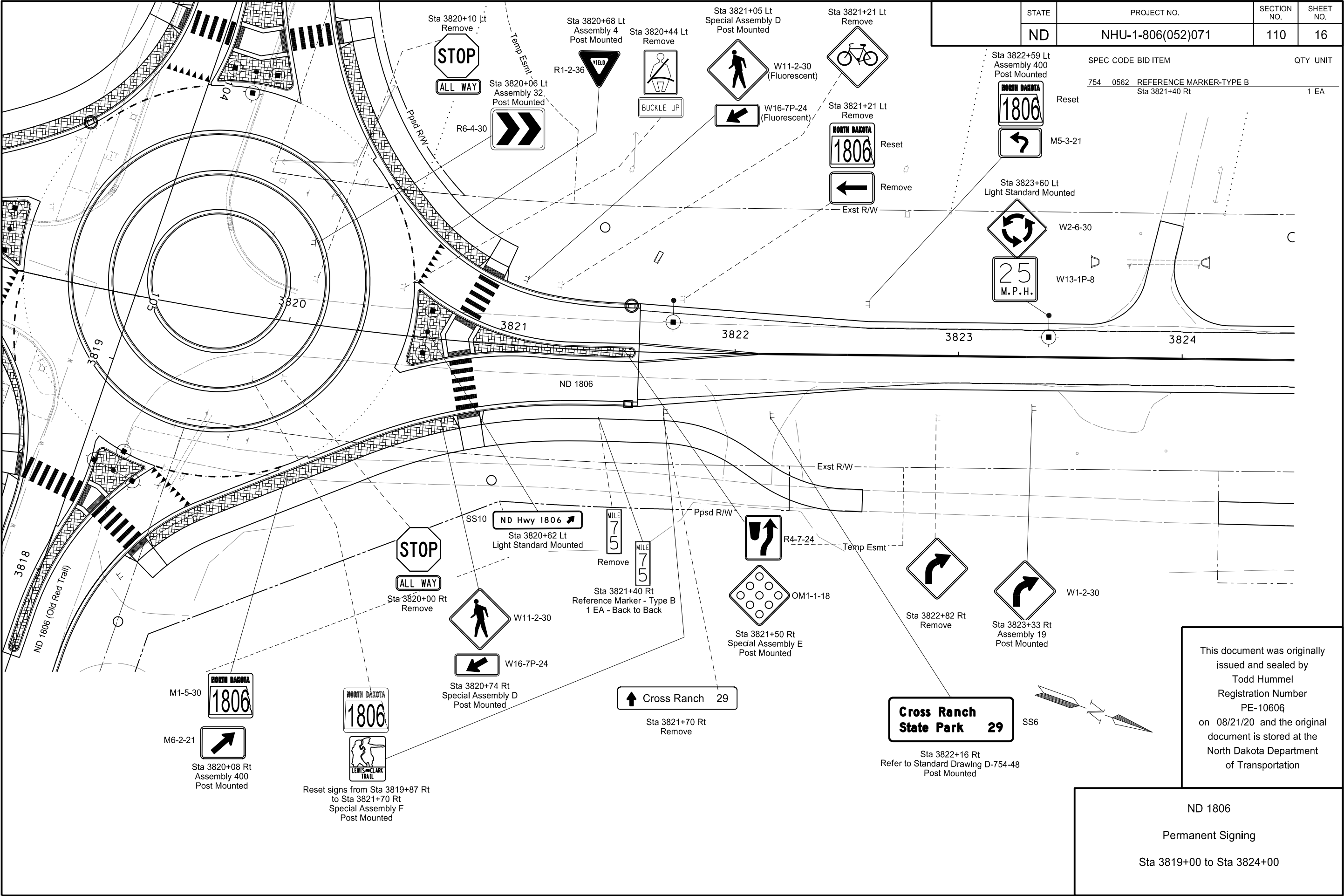




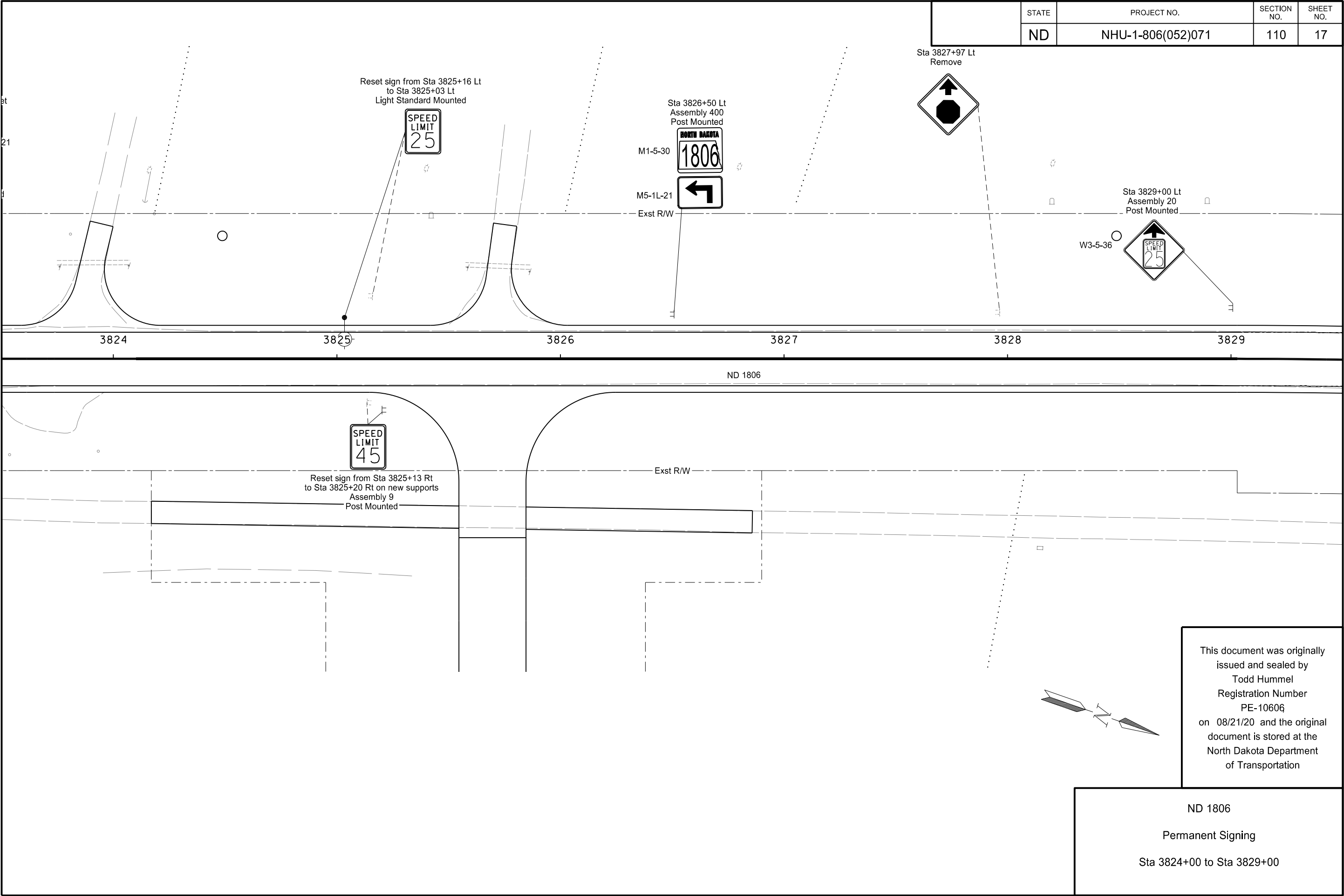
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-1-806(052)071	110	15

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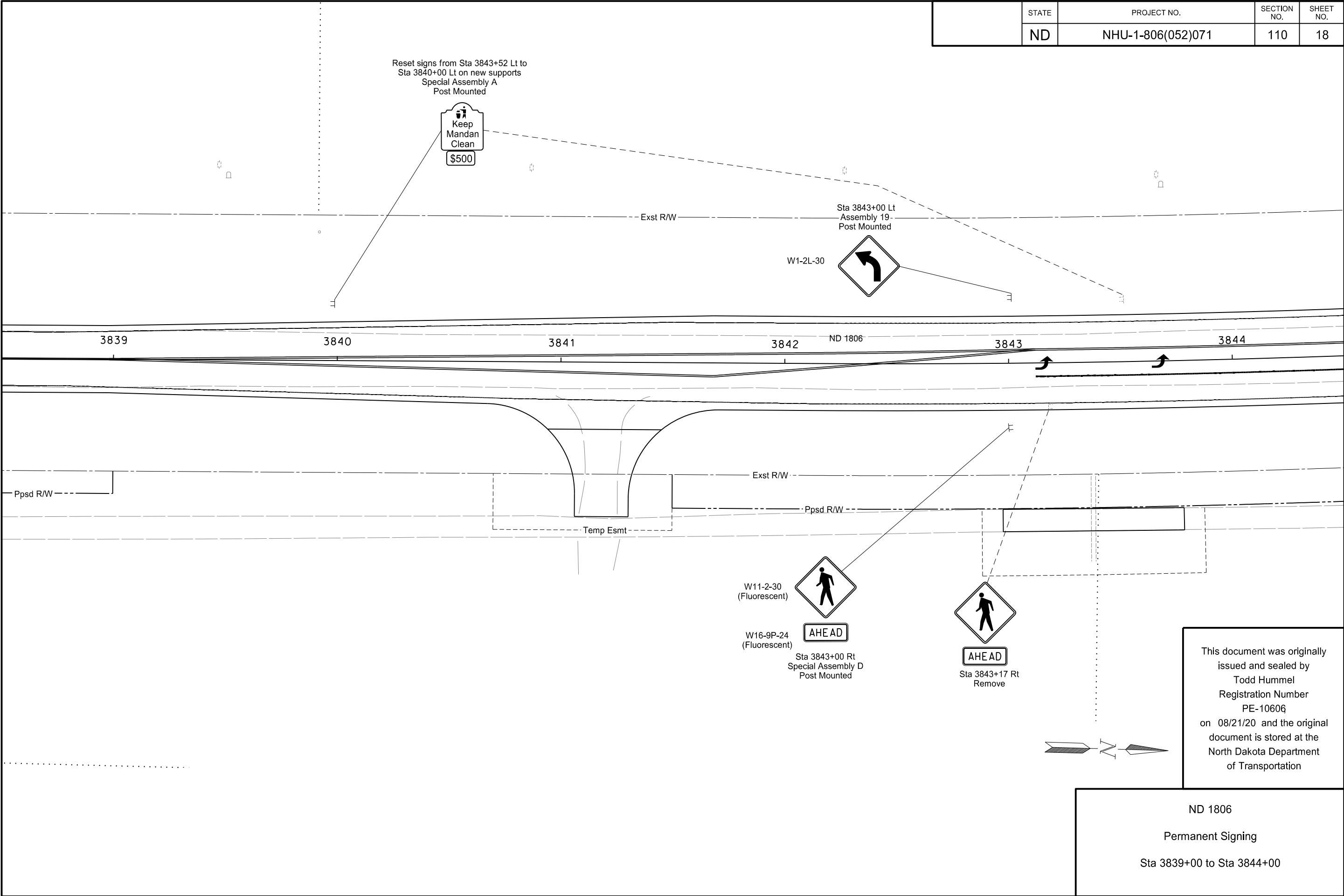
ND 1806  
Permanent Signing  
Sta 3814+00 to Sta 3819+00



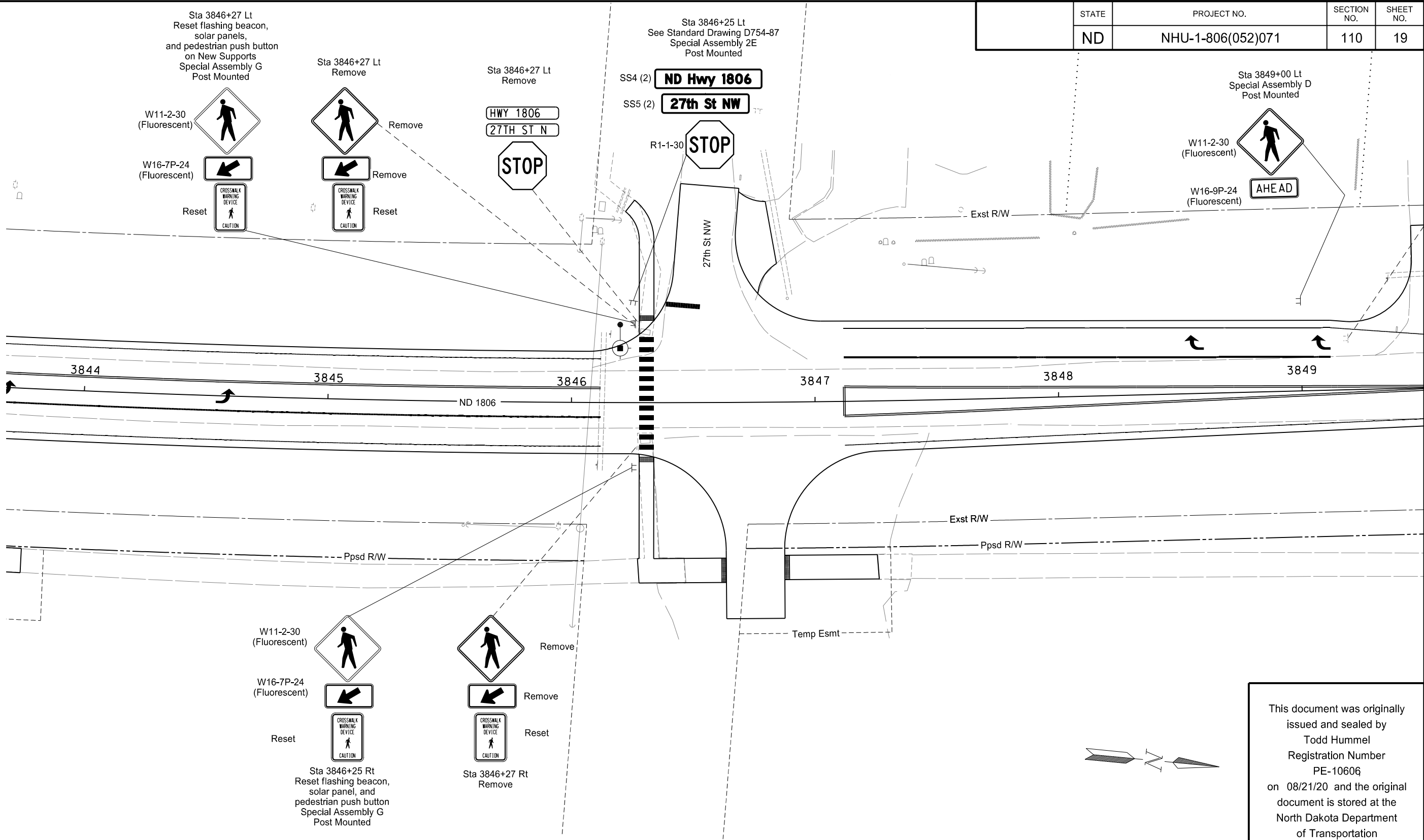




STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-1-806(052)071	110	18



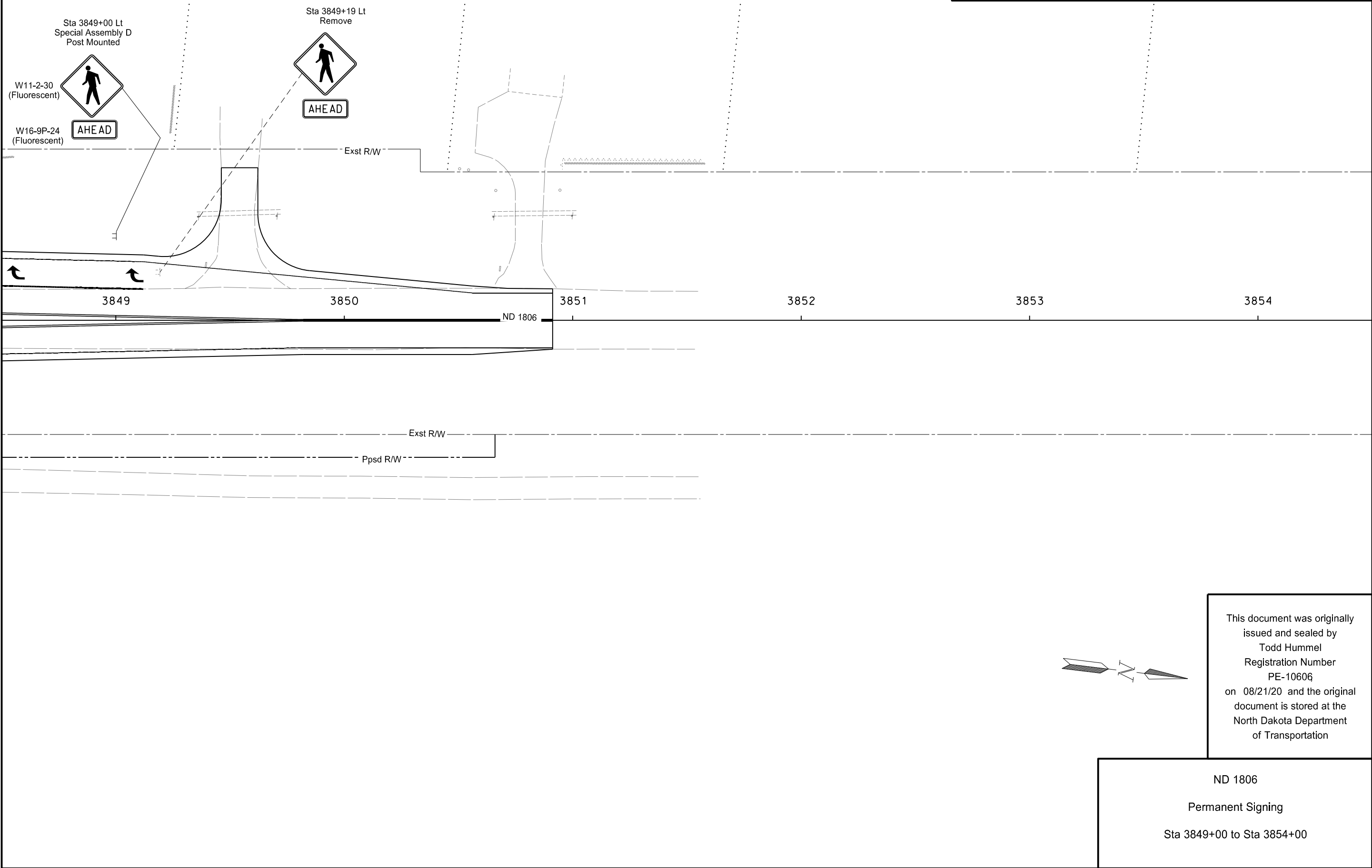
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	110	19



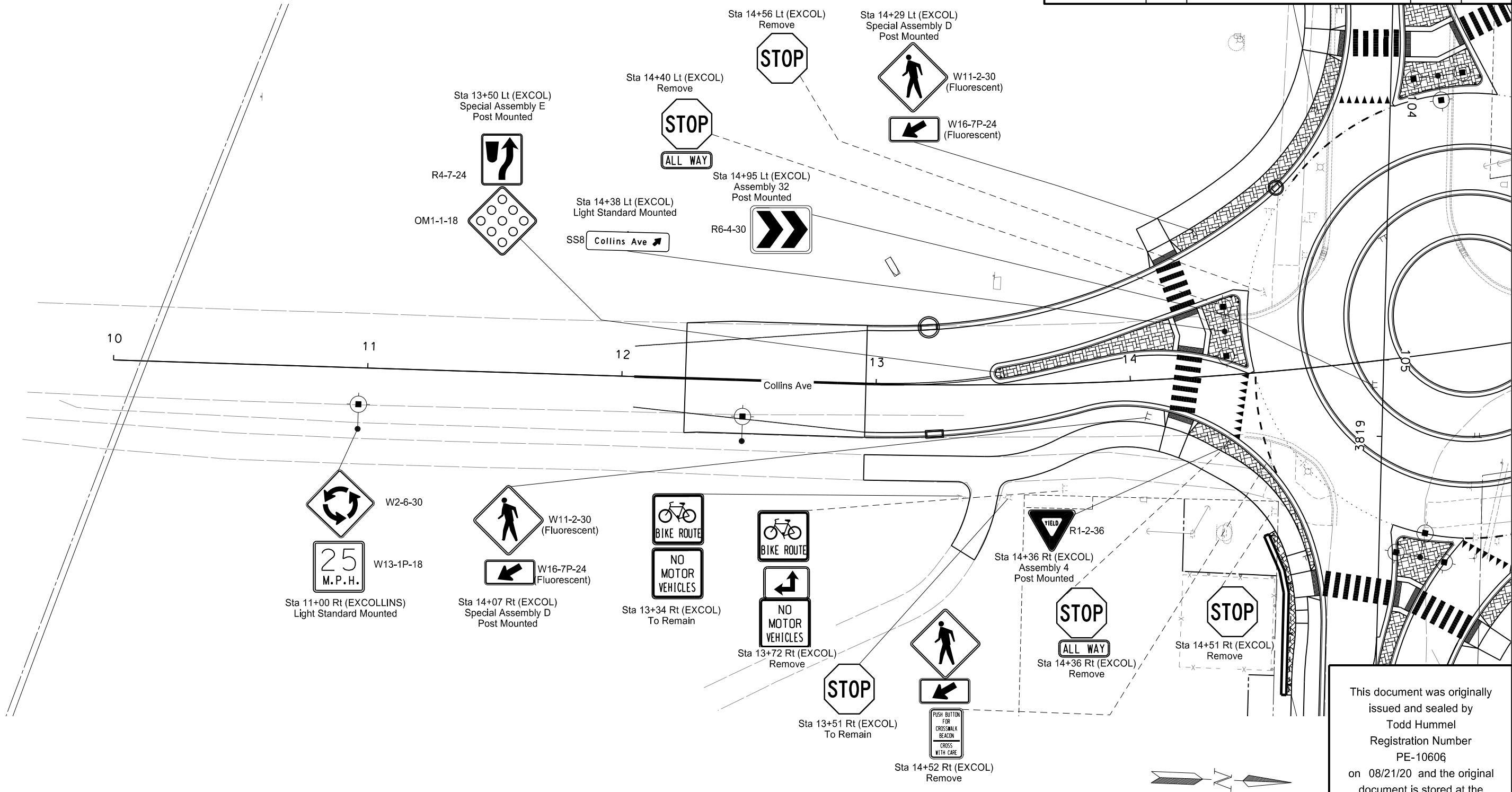
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ND 1806  
Permanent Signing  
Sta 3844+00 to Sta 3849+00

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	110	20

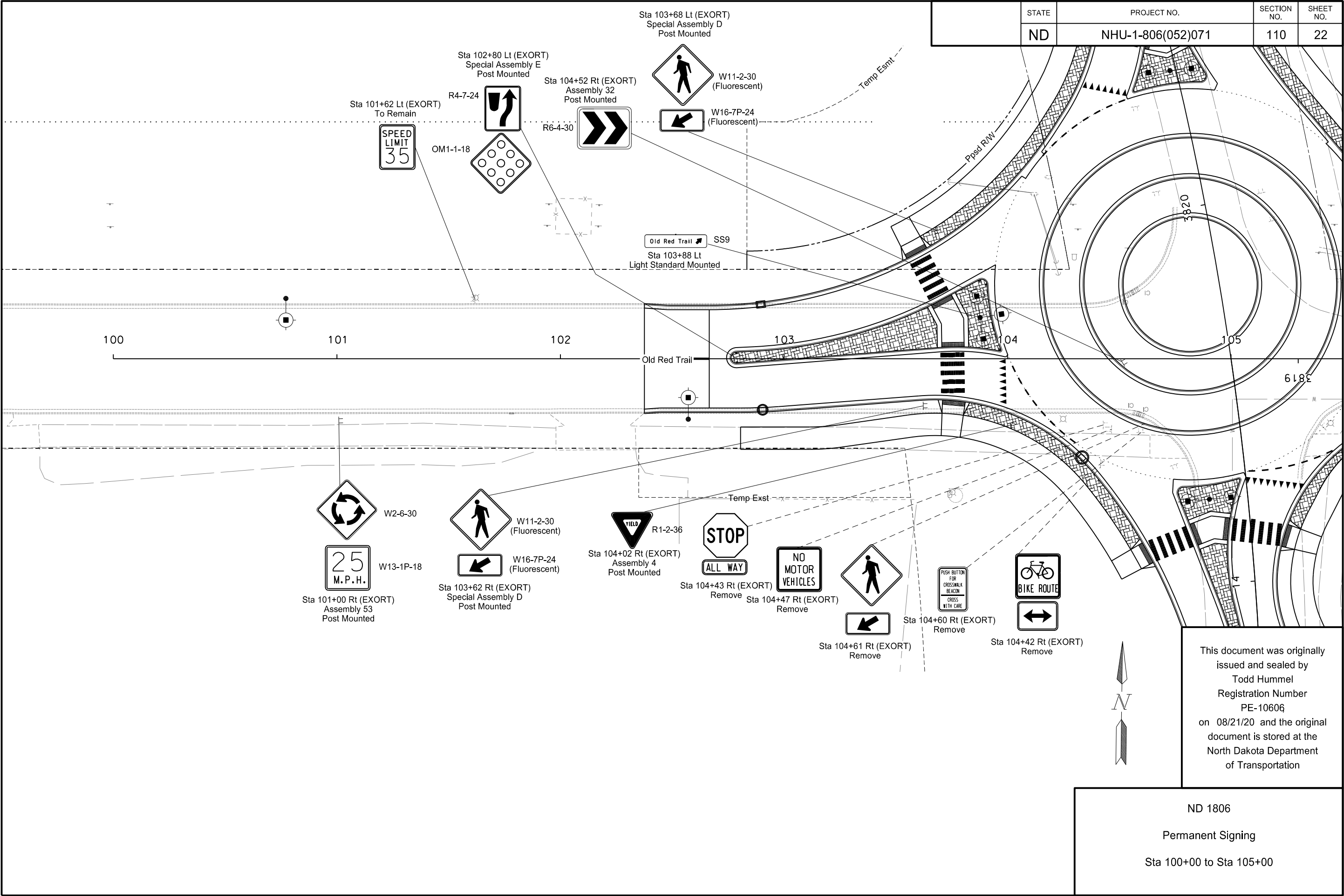


STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-1-806(052)071	110	21



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ND 1806  
Permanent Signing  
Sta 10+00 to Sta 15+00



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	IM-1-094(200)153	110	23



BUCKLE UP  
3762+27 Rt  
To Remain



Sta 8125+31 Rt (SCL94)  
To Remain



1009+50 Rt  
To Remain



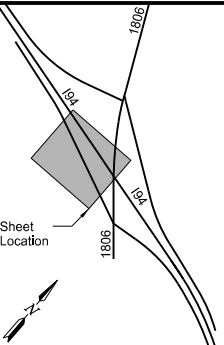
Sta 1014+50 Lt  
Reset from Sta 1014+45 Lt  
New Supports



Sta 1014+70 Lt  
Reset from Sta 1014+68 Lt  
New Supports



Sta 1016+54 Rt  
Remove M1-5-30 Exst  
M1-5-30 (New)  
Reset on New Supports

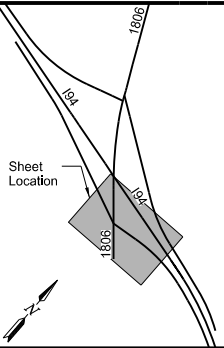
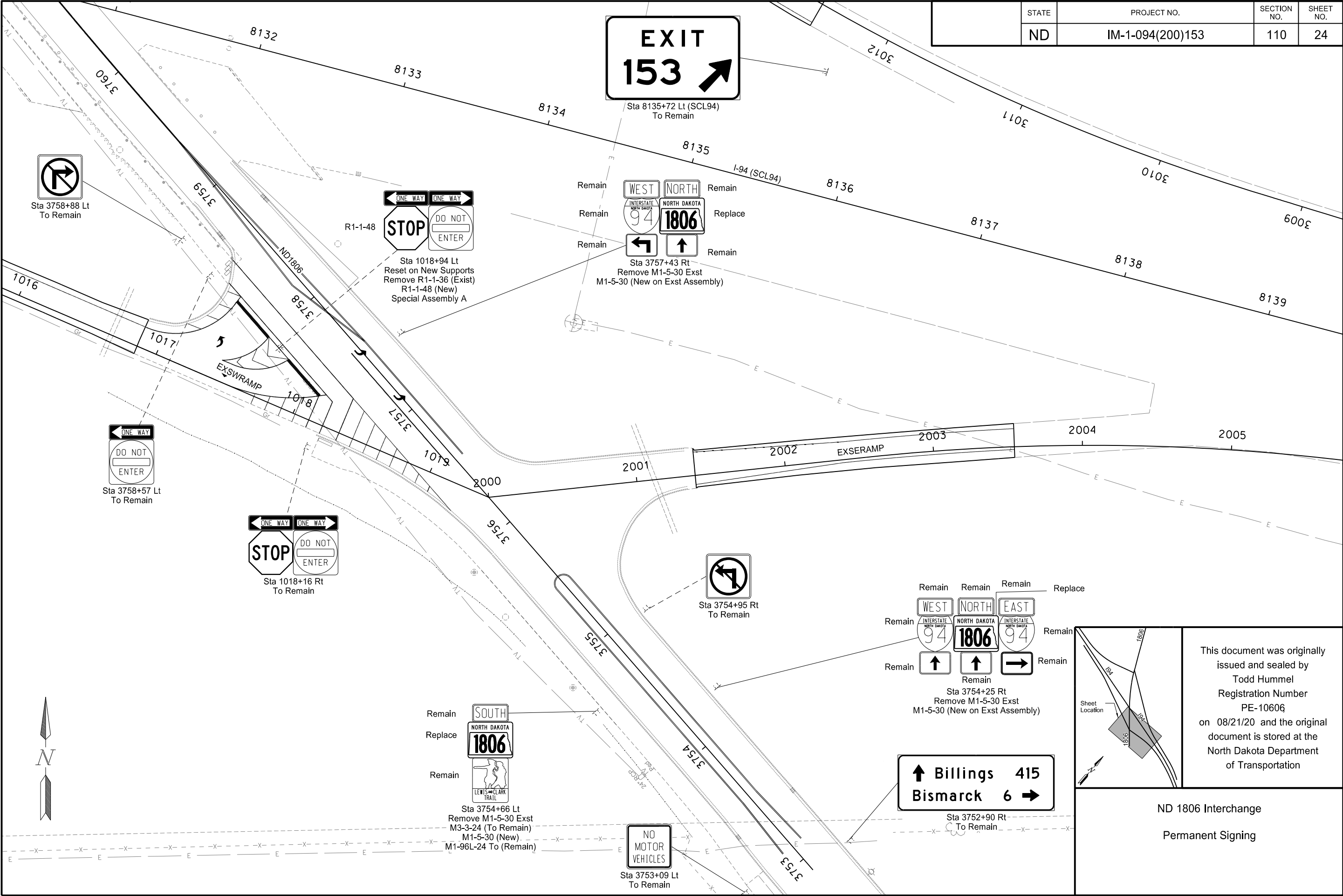


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ND 1806 Interchange

Permanent Signing

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	IM-1-094(200)153	110	24

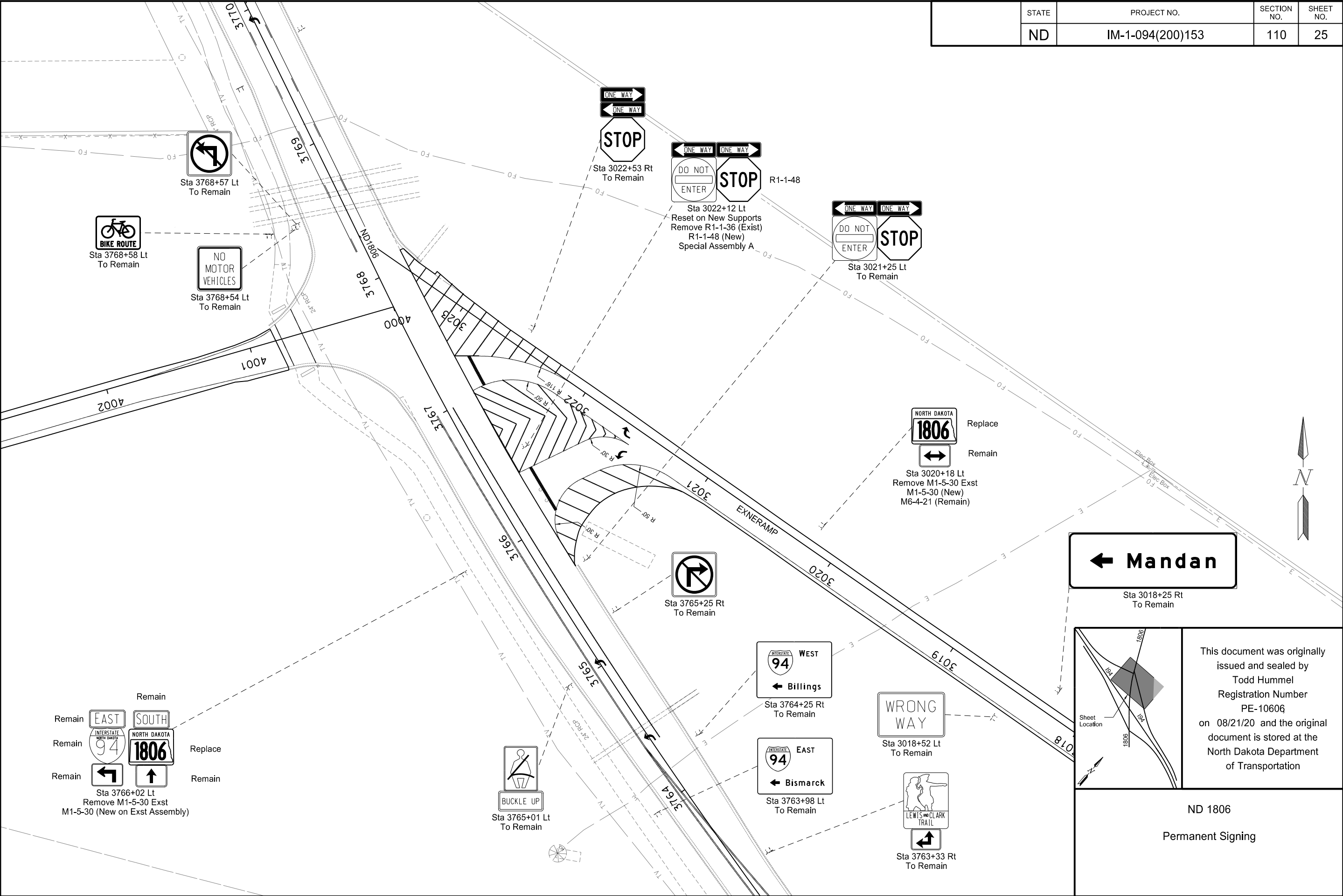


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ND 1806 Interchange  
Permanent Signing

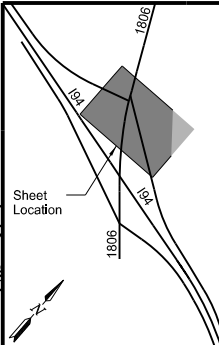


STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	IM-1-094(200)153	110	25



← **Mandan**

Sta 3018+25 Rt  
To Remain



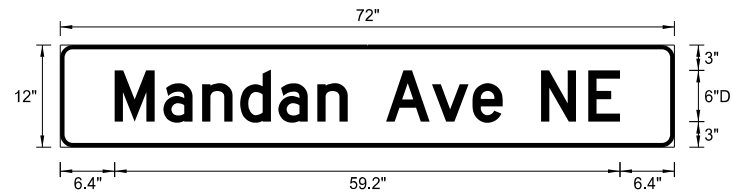
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ND 1806  
Permanent Signing

<b>SIGN NUMBER</b>	SS1
<b>WIDTH X HEIGHT</b>	6'-0" x 1'-0"
<b>BORDER WIDTH</b>	0.5" (inset 0")
<b>CORNER RADIUS</b>	1.5"
<b>MOUNTING</b>	Ground
<b>BACKGROUND</b>	<b>TYPE:</b> IV Reflective
	<b>COLOR:</b> Green
<b>LEGEND/BORDER</b>	<b>TYPE:</b> IV Reflective
	<b>COLOR:</b> White

[illegible]

STATION(S): 3783+79 Rt	AREA: 6.0 Sq.Ft.
---------------------------	------------------



Dimensions are in inches.tenths Letter locations are panel edge to lower left corner  
 PANEL STYLE: ND\_Conv\_Street Name.ssi

[illegible]

SIGN NUMBER	SS3
WIDTH X HEIGHT	4'-6" x 1'-0"
BORDER WIDTH	0.5" (inset 0")
CORNER RADIUS	1.5"
MOUNTING	Ground
BACKGROUND	TYPE: IV Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: IV Reflective
	COLOR: White

[illegible]

STATION(S): 3788+92 Lt	AREA: 4.5 Sq.Ft.
---------------------------	------------------



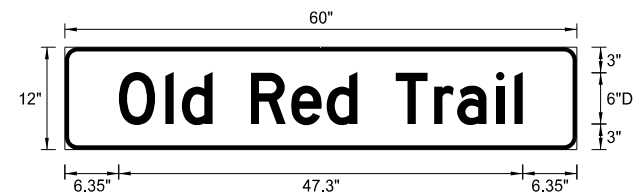
Dimensions are in inches.tenths      Letter locations are panel edge to lower left corner

<div>PANEL STYLE: No Conv Street Name,jsl</div>																				<div>LENGTH</div>	<div>SIZE</div>	<div>SERIES</div>
8	t	h		A	v	e		N	E													
5.4	10.1	13.2	16.7	21.2	26.6	31.4	34.9	39.4	44.9											43.3	6/4.5	D 2000

SIGN NUMBER	SS2
WIDTH X HEIGHT	5'-0" x 1'-0"
BORDER WIDTH	0.5" (inset 0")
CORNER RADIUS	1.5"
MOUNTING	Ground
BACKGROUND	TYPE: IV Reflective COLOR: Green
LEGEND/BORDER	TYPE: IV Reflective COLOR: White

[illegible]

STATION(S): 3783+79 Rt 3788+92 Lt	AREA: 5.0 Sq.Ft.
---	------------------



Dimensions are in inches.tenths Letter locations are panel edge to lower left corner

LETTER POSITION (X)																		LENGTH	SIZE	SERIES
O	I	d		R	e	d		T	r	a	i	l						47.3	6/4.5	D 2000
6.3	11.8	13.7	17.3	21.8	26.6	30.7	34.3	38.8	43.3	46	50.6	52.7								

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ND 1806

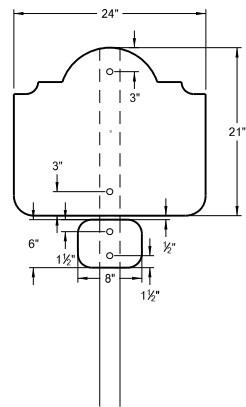
### Sign Details



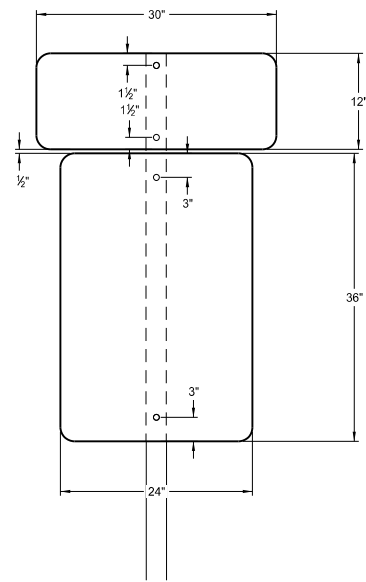




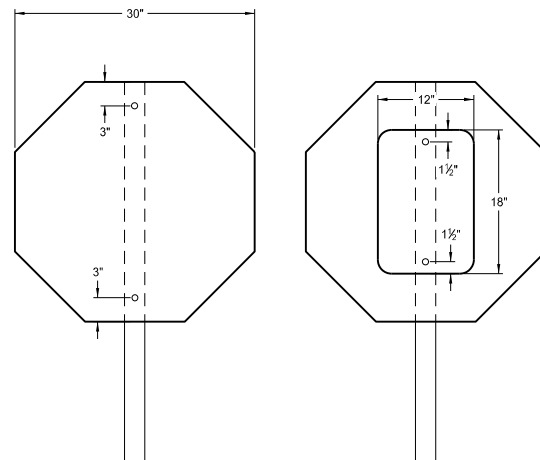
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	110	30



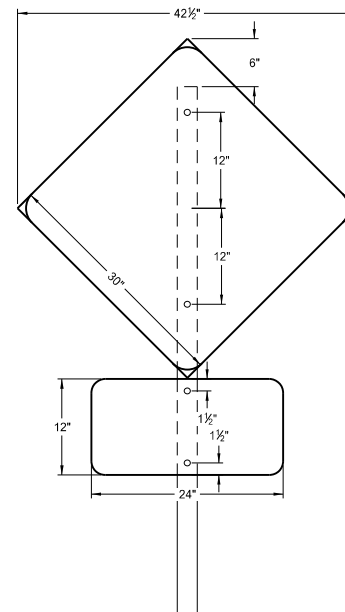
SPECIAL ASSEMBLY A  
DESIGN AREA = 3.8 SF  
(PERFORATED TUBE)  
Sta 3840+00 Lt (PR1806)



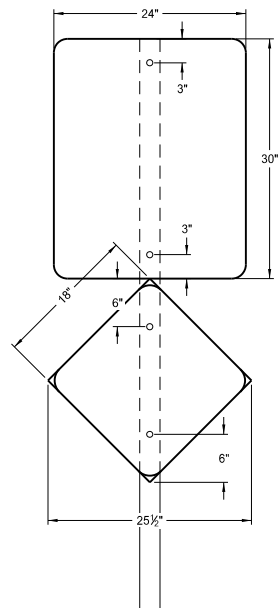
SPECIAL ASSEMBLY B  
DESIGN AREA = 8.5 SF  
(PERFORATED TUBE)  
Sta 3817+50 Lt (PR1806)



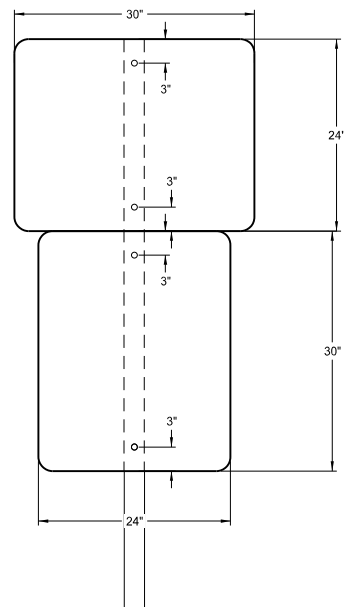
SPECIAL ASSEMBLY C  
DESIGN AREA = 5.2 SF  
(PERFORATED TUBE)  
Sta 3809+20 Lt (PR1806)



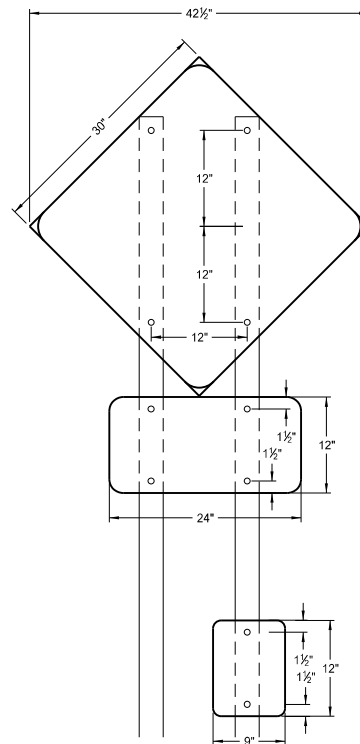
SPECIAL ASSEMBLY D  
DESIGN AREA = 8.3 SF  
(PERFORATED TUBE)  
Sta 3818+09 Rt (PR1806)  
Sta 3818+53 Lt (PR1806)  
Sta 3820+74 Rt (PR1806)  
Sta 3821+05 Lt (PR1806)  
Sta 3843+00 Rt (PR1806)  
Sta 3849+00 Lt (PR1806)  
Sta 103+62 Rt (EXORT)  
Sta 103+68 Lt (EXORT)  
Sta 14+07 Rt (EXCOL)  
Sta 14+29 Lt (EXCOL)



SPECIAL ASSEMBLY E  
DESIGN AREA = 7.3 SF  
(PERFORATED TUBE)  
Sta 3817+66 Rt (PR1806)  
Sta 3821+50 Rt (PR1806)  
Sta 13+50 Lt (EXCOL)  
Sta 102+80 Lt (EXORT)



SPECIAL ASSEMBLY F  
DESIGN AREA = 10.0 SF  
(PERFORATED TUBE)  
Sta 3821+70 Rt (PR1806)

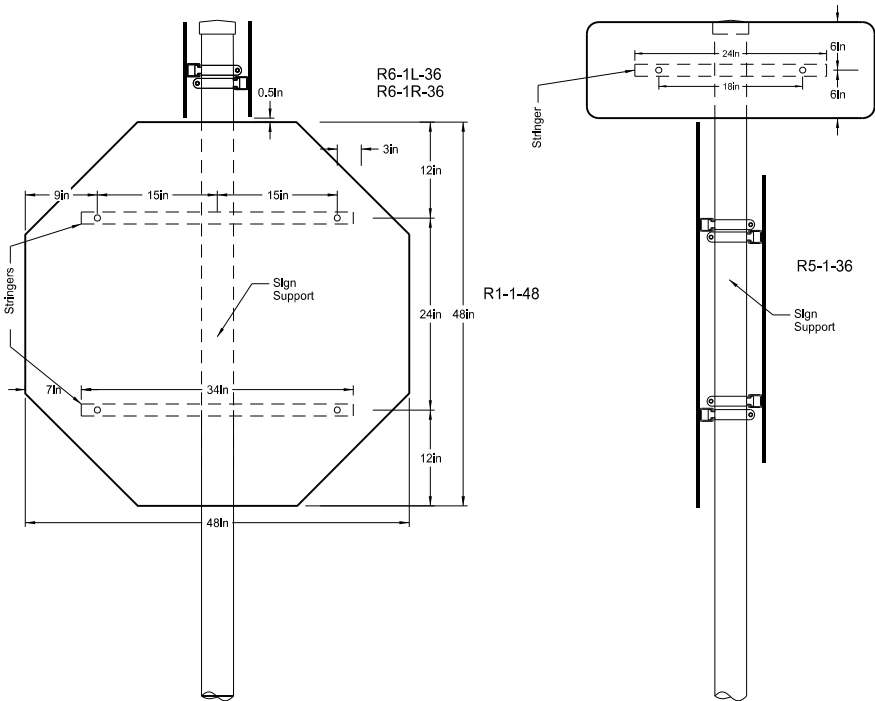


SPECIAL ASSEMBLY G  
DESIGN AREA = 8.3 SF  
(PERFORATED TUBE)  
Sta 3846+25 Rt (PR1806)  
Sta 3846+27 Lt (PR 1806)

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ND 1806  
Special Assemblies

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	IM-1-094(200)153	110	31



SPECIAL ASSEMBLY A  
 DESIGN AREA = 14.4 SF  
 (ROUND STEEL PIPE)  
 Sta 3022+12 Lt  
 Sta 1018+94 Lt

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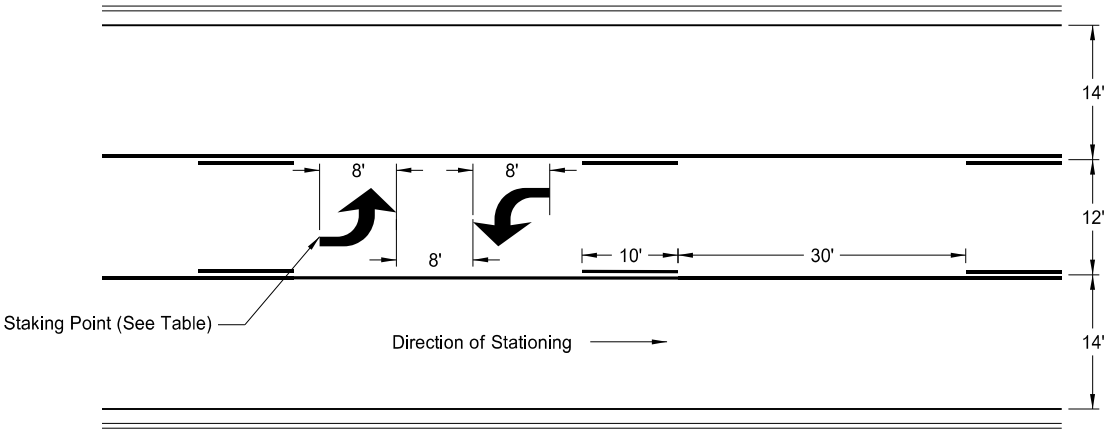
ND 1806 Interchange  
 Special Assemblies

- Notes:
1. See Standard D-754-25 for mounting details.
  2. The minimum sign backing material thickness should be 0.100 inch.
  3. Perforated square tube stringer shall be 1 1/2" x 1 1/2"
  4. All holes shall be punched round for 3/8" bolt

	PERMANENT PAVEMENT MARKING SUMMARY: NHU-1-806(052)071																
Layout Sheet Number	Begin Station	End Station	762 0113 EPOXY PVMT MK 4IN LINE				762 0115 EPOXY PVMT MK 8IN LINE	762 0117 EPOXY PVMT MK 24IN LINE	762 0112 EPOXY PVMT MK MESSAGE	762 1305 PREFORMED PATTERNED PVMT MK 4IN LINE-GROOVED		762 1309 PREFORMED PATTERNED PVMT MK 8IN LINE-GROOVED		762 1325 PREFORMED PATTERNED PVMT MK 24IN LINE-GROOVED		762 0122 PREFORMED PATTERNED PVMT MK-MESSAGE(GROOVED)	
			4IN White		4IN Yellow					4IN Yellow		8IN White		24IN White		White	
			Lt Edge Line	Rt Edge Line	Dbl Barrier Line	Two-Way Left Turn Lane Line				Dbl Barrier Line	Two-Way Left Turn Lane Line	Channel Line	Dotted Line	Crosswalk	Stop Bar	Arrows	Yield Line
			(LF)	(LF)	(LF)	(LF)				(LF)	(LF)	(SF)	(LF)	(LF)		(LF)	
ND 1806																	
-	3769+36	3771+90	-	-	-	-	-	-	-	635	-	-	-	24	32	-	
-	3772+80	3776+45	-	-	-	-	-	-	-	913	-	-	-	18	64	-	
-	3777+35	3781+33	-	-	-	-	-	-	-	995	-	-	-	18	32	-	
Sheet 8	3781+33	3786+50	-	-	344	-	111	-	32	1,752	230	224	-	28	32	-	
-	3786+50	3788+80	-	-	-	575	-	-	32	-	-	-	-	-	-	-	
-	3789+50	3800+85	-	-	-	2,838	-	-	128	-	-	-	-	-	-	-	
-	3801+60	3809+05	-	-	-	1,863	-	16	96	-	-	-	-	-	-	-	
-	3809+80	3812+10	-	-	-	575	-	61	32	-	-	-	-	-	-	-	
-	3812+85	3814+65	-	-	-	450	-	61	32	-	-	-	-	-	-	-	
-	3815+35	3817+48	-	-	-	533	-	-	32	-	-	-	-	-	-	-	
Sheet 9	3788+80	3822+10	145	145	454	-	-	-	-	98	-	-	96	450	-	93	
-	3822+10	3838+98	1,688	1,688	3,376	-	-	-	-	-	-	-	-	-	-	-	
Sheet 10	3838+98	3850+91	1,092	1,095	3,580	-	500	86	80	-	-	-	-	-	-	-	
	GRAND TOTAL =		2,925	2,928	7,754	6,833	611	224	464	1,850	2,773	224	96	450	88	160	93
			20,440							4,623		320		538		253	

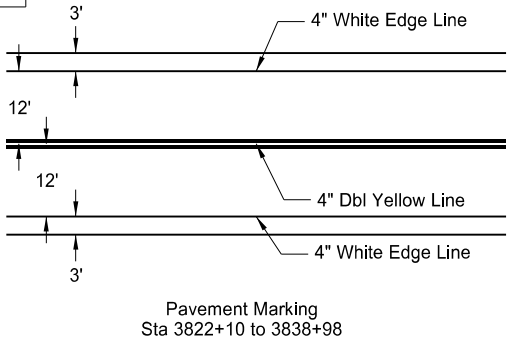
Note: Install Preformed Patterned-Grooved markings on all PCC Pavement. Install Epoxy markings on all Hot Mix Asphalt Pavement.

Stop Bar Locations (Not on Plan View Sheets)					
Street	Station (PR1806)	Offset	Skewed (Y/N)	Material	Length (LF)
Mandan Untion Cemetery	Sta 3771+46	30.0' Rt	N	Preformed Patterned Pvmt Mk - Grooved	24
16th Street NE	Sta 3772+07	43.0' Lt	Y	Preformed Patterned Pvmt Mk - Grooved	18
17th Street NE	Sta 3776+60	38.5' Lt	Y	Preformed Patterned Pvmt Mk - Grooved	18
Starion Sports Complex	Sta 3809+27	38.6' Lt	N	Epoxy	16
Starion Sports Complex	Sta 3812+31	37.2' Lt	N	Epoxy	16
Starion Sports Complex	Sta 3814+83	37.0' Lt	N	Epoxy	16



Left Turn Arrow Staking Points (PR1806)	
Sta 3769+88	
Sta 3773+18	
Sta 3775+88	
Sta 3778+88	
Sta 3788+24	
Sta 3790+74	
Sta 3793+74	
Sta 3796+74	
Sta 3799+74	
Sta 3802+74	
Sta 3805+49	
Sta 3808+24	
Sta 3811+24	
Sta 3814+04	
Sta 3816+74	

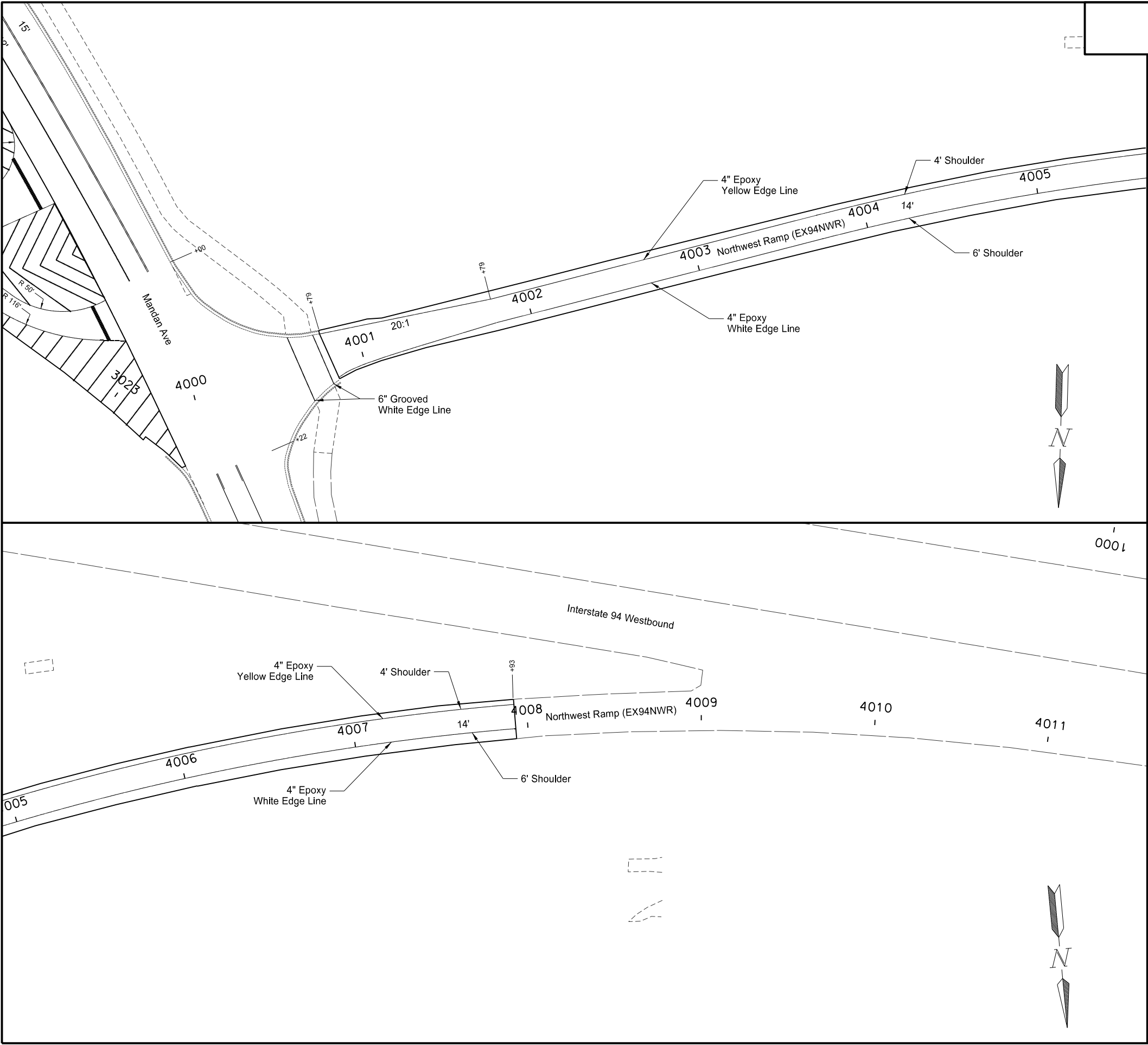
SPEC CODE	BID ITEM	QTY	UNIT
762 0112	EPOXY PVTM MK MESSAGE NHU-1-806(052)071	464	SF
762 0113	EPOXY PVTM MK 4IN LINE NHU-1-806(052)071	20,440	LF
762 0115	EPOXY PVTM MK 8IN LINE NHU-1-806(052)071	611	LF
762 0117	EPOXY PVTM MK 24IN LINE NHU-1-806(052)071	224	LF
762 0122	PREFORMED PATTERNED PVTM MK-MESSAGE(GROOVED) NHU-1-806(052)071	253	SF
762 1305	PREFORMED PATTERNED PVTM MK 4IN LINE-GROOVED NHU-1-806(052)071	4,623	LF
762 1309	PREFORMED PATTERNED PVTM MK 8IN LINE-GROOVED NHU-1-806(052)071	320	LF
762 1325	PREFORMED PATTERNED PVTM MK 24IN LINE-GROOVED NHU-1-806(052)071	538	LF



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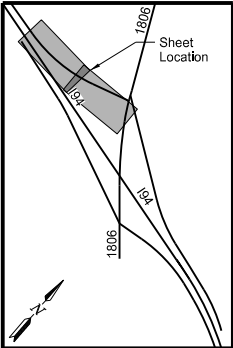
ND 1806  
Pavement Marking Summary & Details





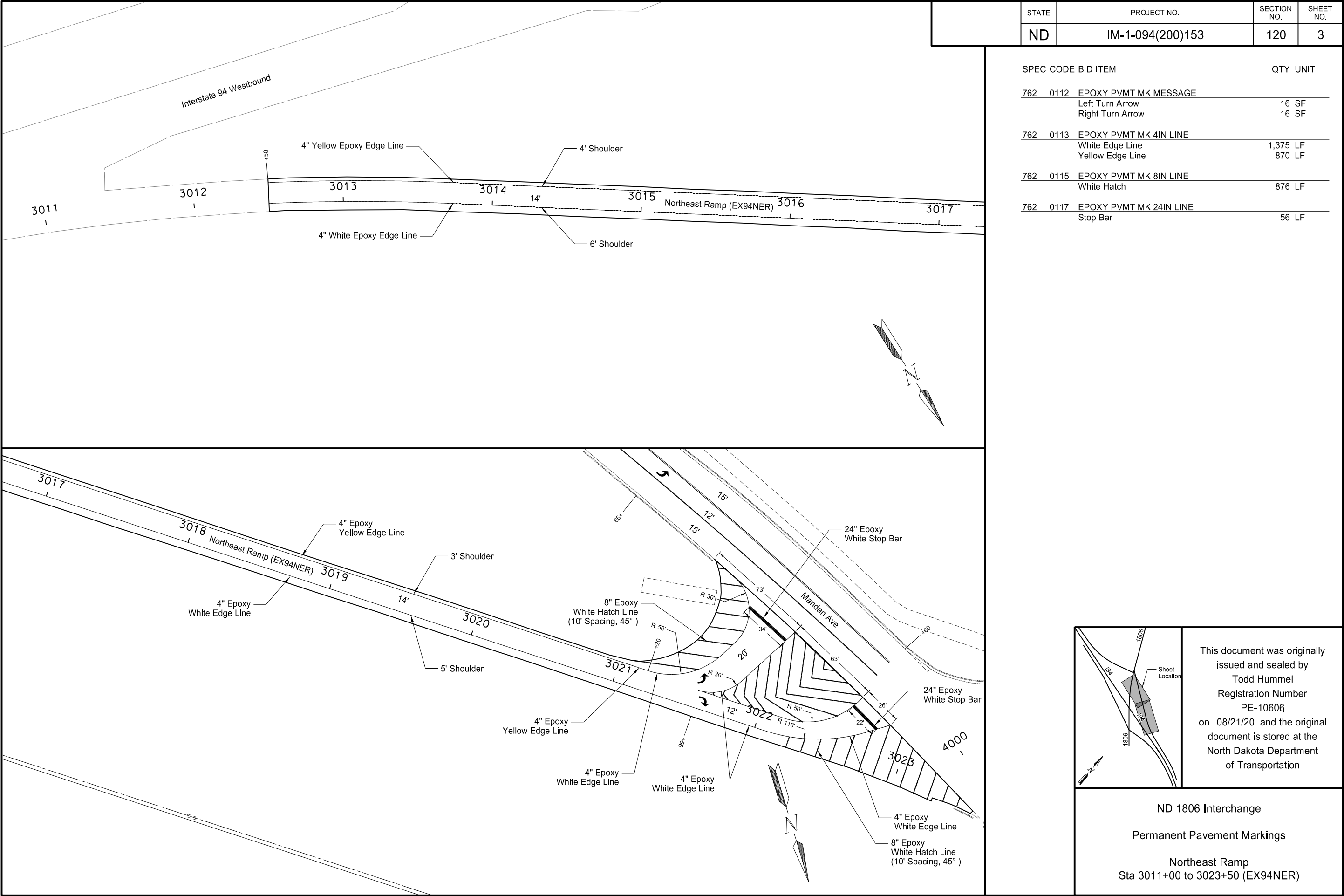
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	IM-1-094(200)153	120	2

SPEC CODE	BID ITEM	QTY	UNIT
762 0113	EPOXY PVMT MK 4IN LINE		
	White Edge Line	714	LF
	Yellow Edge Line	714	LF
762 1307	PREFORMED PATTERNED PVMT MK 6IN LINE-GROOVED Crosswalk	71	LF

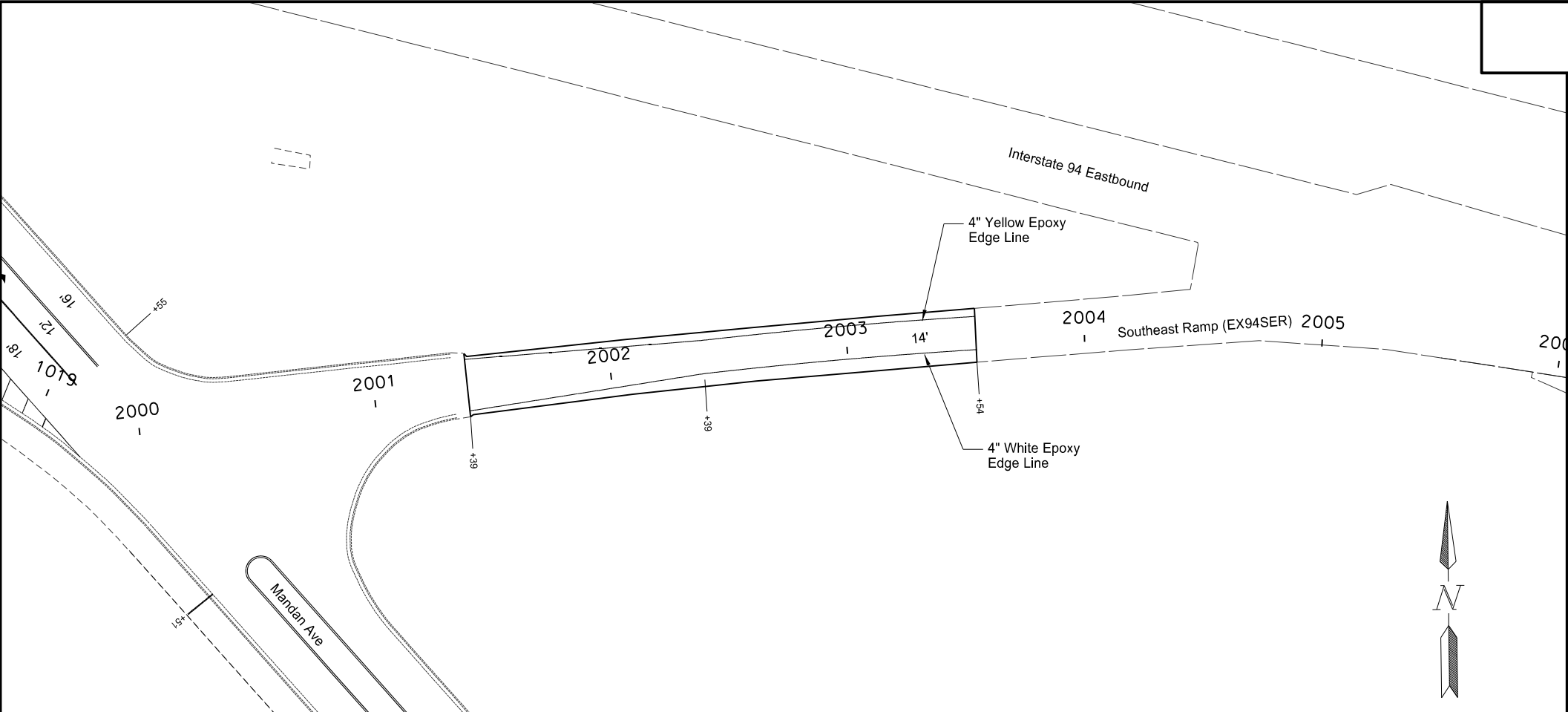


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ND 1806 Interchange  
Permanent Pavement Markings  
Northwest Ramp  
Sta 4000+00 to 4011+00 (EX94NWR)

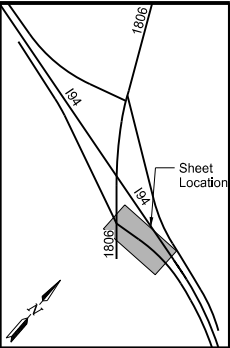






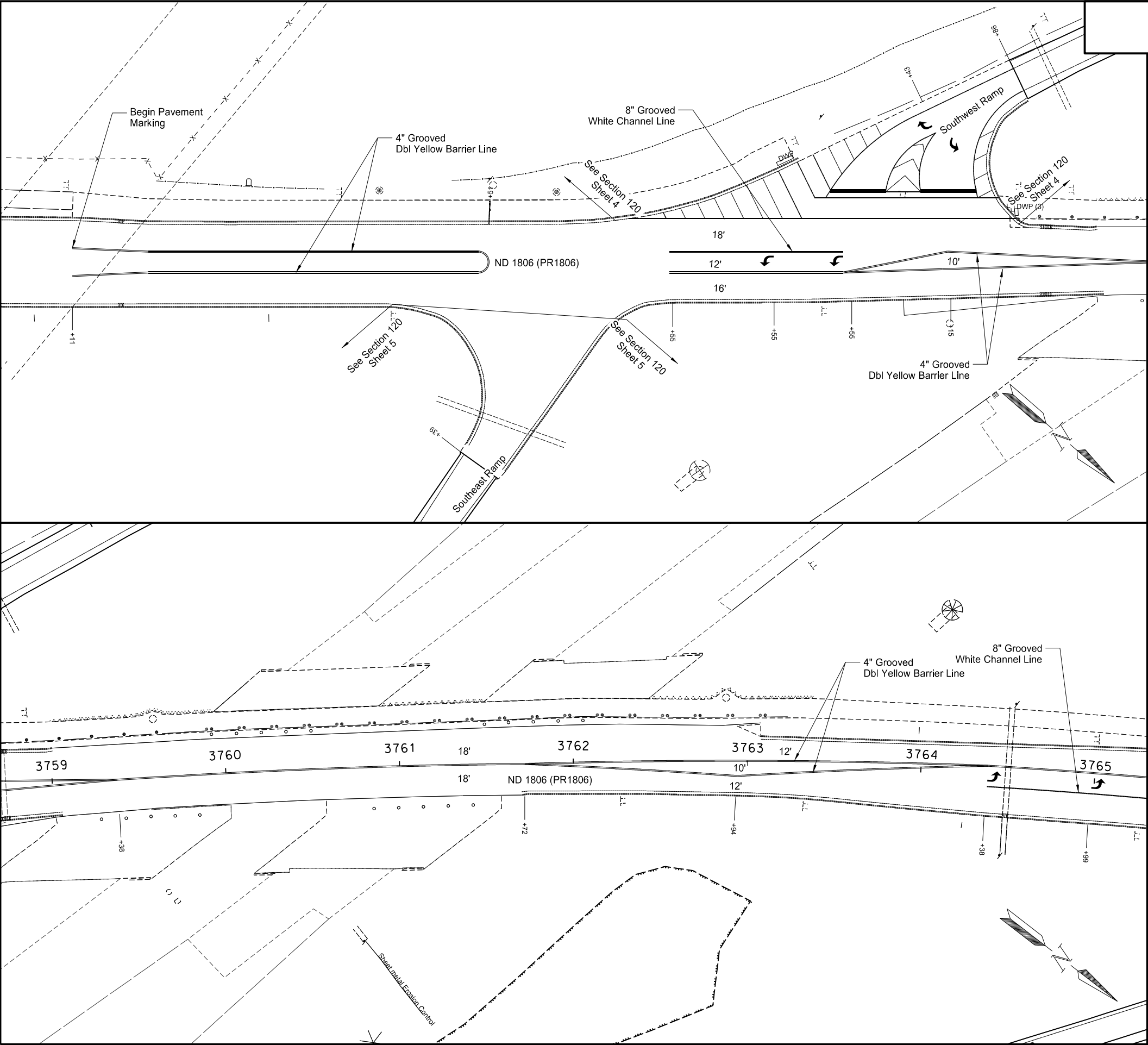
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	IM-1-094(200)153	120	5

SPEC CODE	BID ITEM	QTY	UNIT
762 0113	EPOXY PVMT MK 4IN LINE		
	White Edge Line	215	LF
	Yellow Edge Line	215	LF



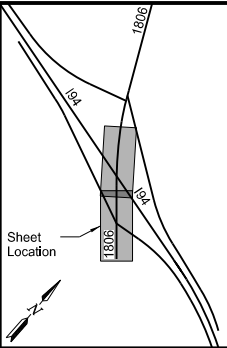
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ND 1806 Interchange  
  
Permanent Pavement Markings  
  
Southeast Ramp  
Sta 2000+00 to 2005+00 (EX94SER)



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	IM-1-094(200)153	120	6

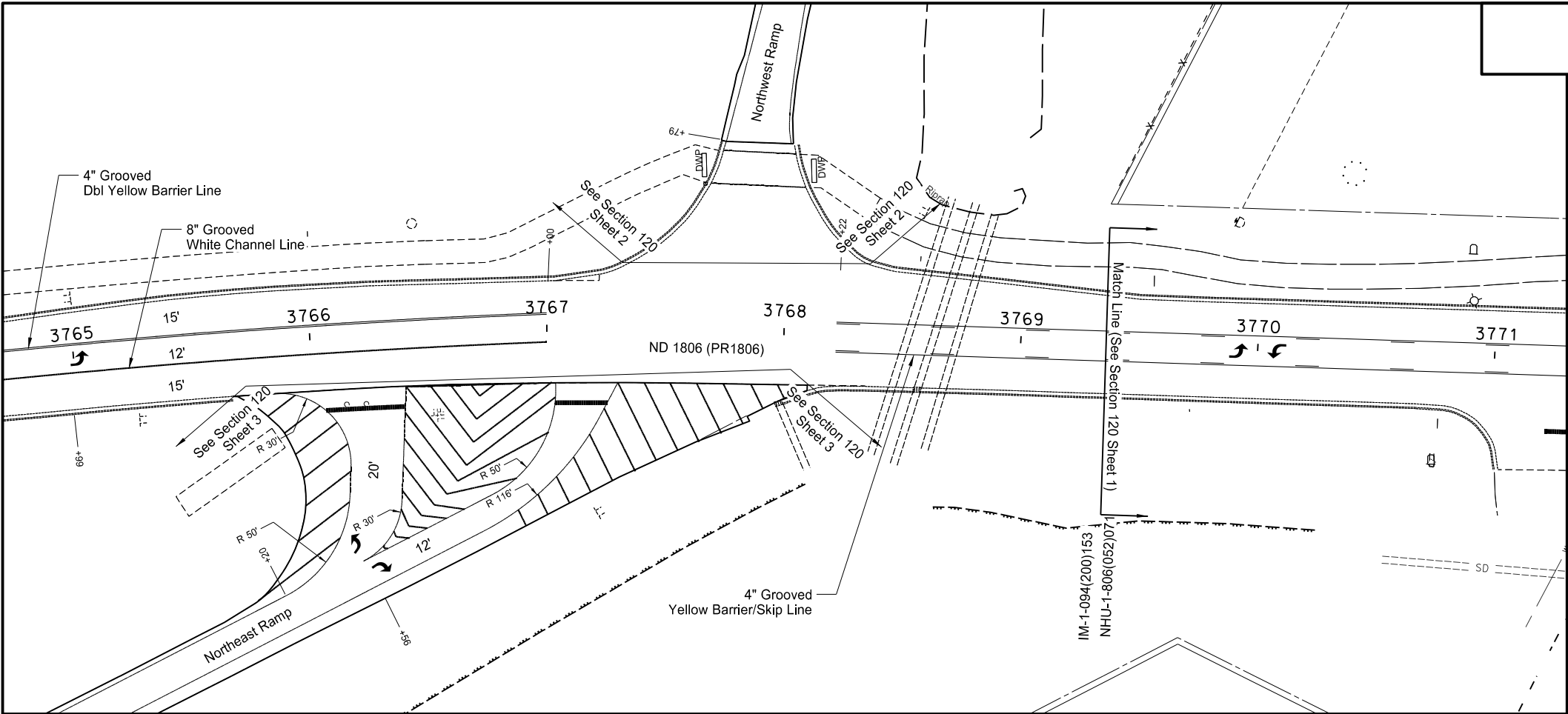
SPEC CODE	BID ITEM	QTY	UNIT
762 0122	PREFORMED PATTERNED PVMT MK-MESSAGE(GROOVED) Left Turn Arrow (4)	64	SF
762 1305	PREFORMED PATTERNED PVMT MK 4IN LINE-GROOVED Yellow Dbl Barrier Line	3,548	LF
762 1309	PREFORMED PATTERNED PVMT MK 8IN LINE-GROOVED White Channel Line	100	LF



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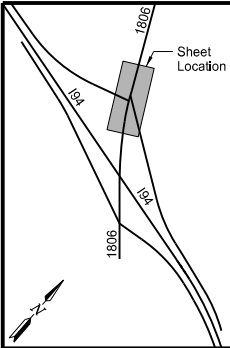
ND 1806 Interchange  
Permanent Pavement Markings

ND 1806  
Sta 3753+00 to 3765+00 (PR1806)



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	IM-1-094(200)153	120	7

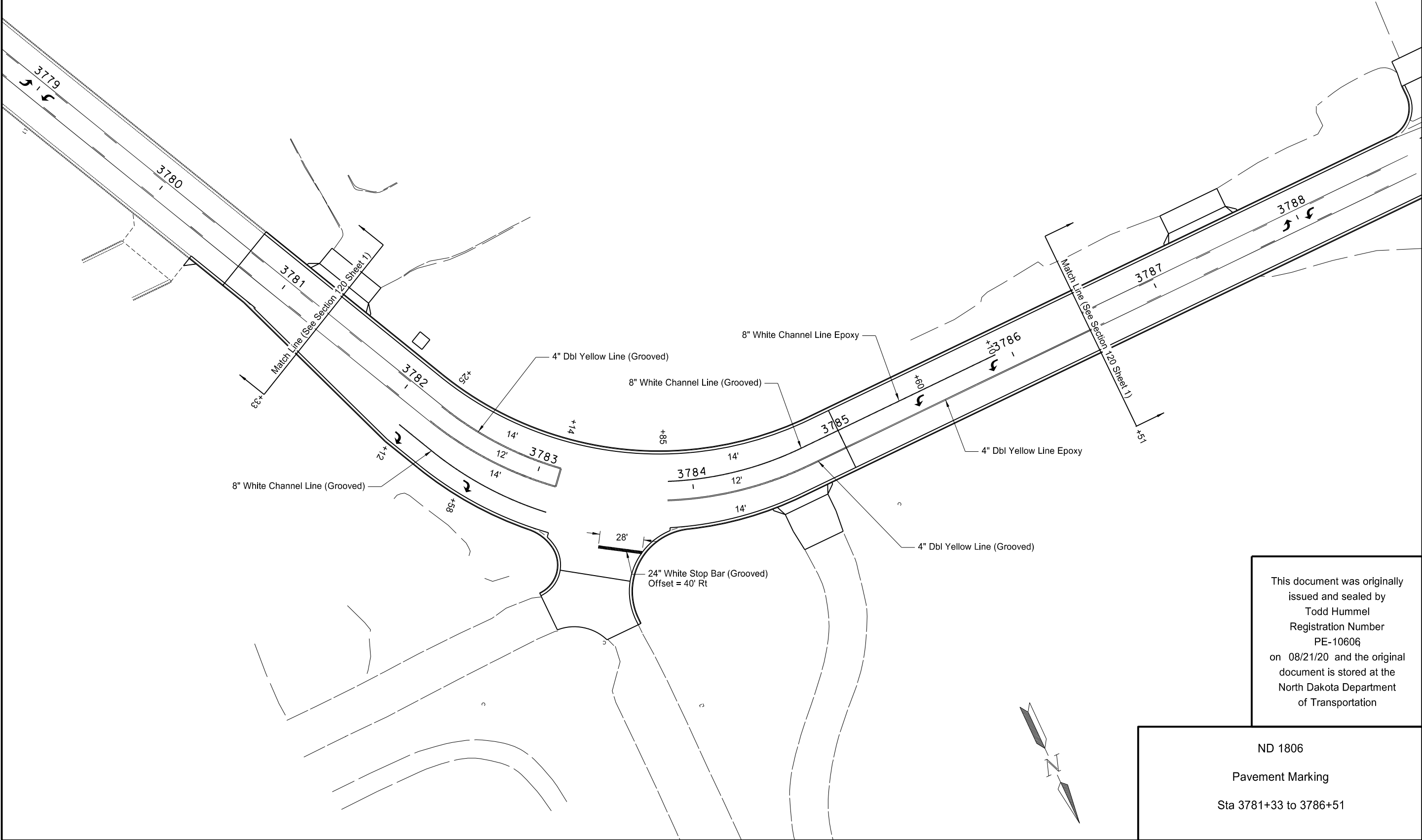
SPEC CODE	BID ITEM	QTY	UNIT
762 1305	PREFORMED PATTERNED PVMT MK 4IN LINE-GROOVED Yellow Dbl Barrier Line TWLTL	400	LF
762 1309	PREFORMED PATTERNED PVMT MK 8IN LINE-GROOVED White Channel Line	285	LF



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ND 1806 Interchange  
Permanent Pavement Markings  
ND 1806  
Sta 3765+00 to 3771+00 (PR1806)

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	120	8



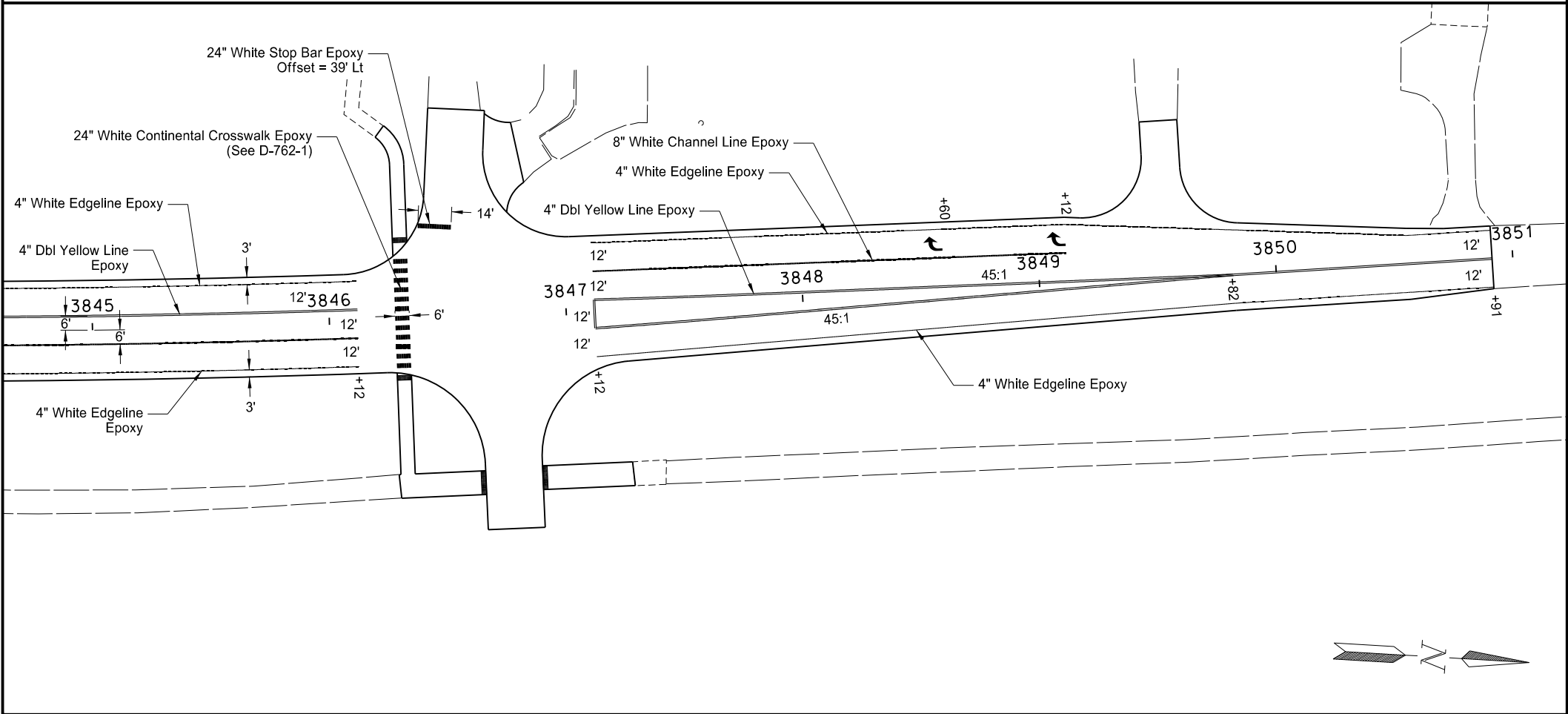
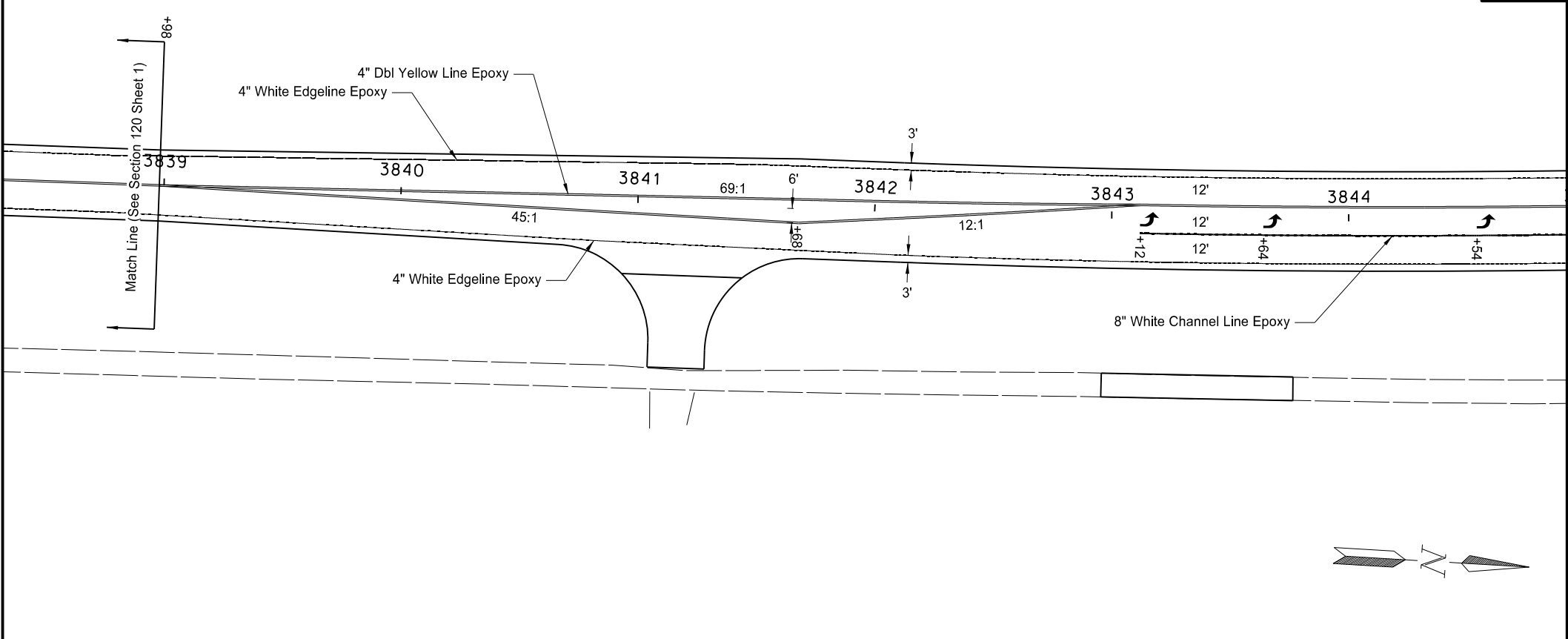
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ND 1806  
Pavement Marking  
Sta 3781+33 to 3786+51





STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-1-806(052)071	120	10



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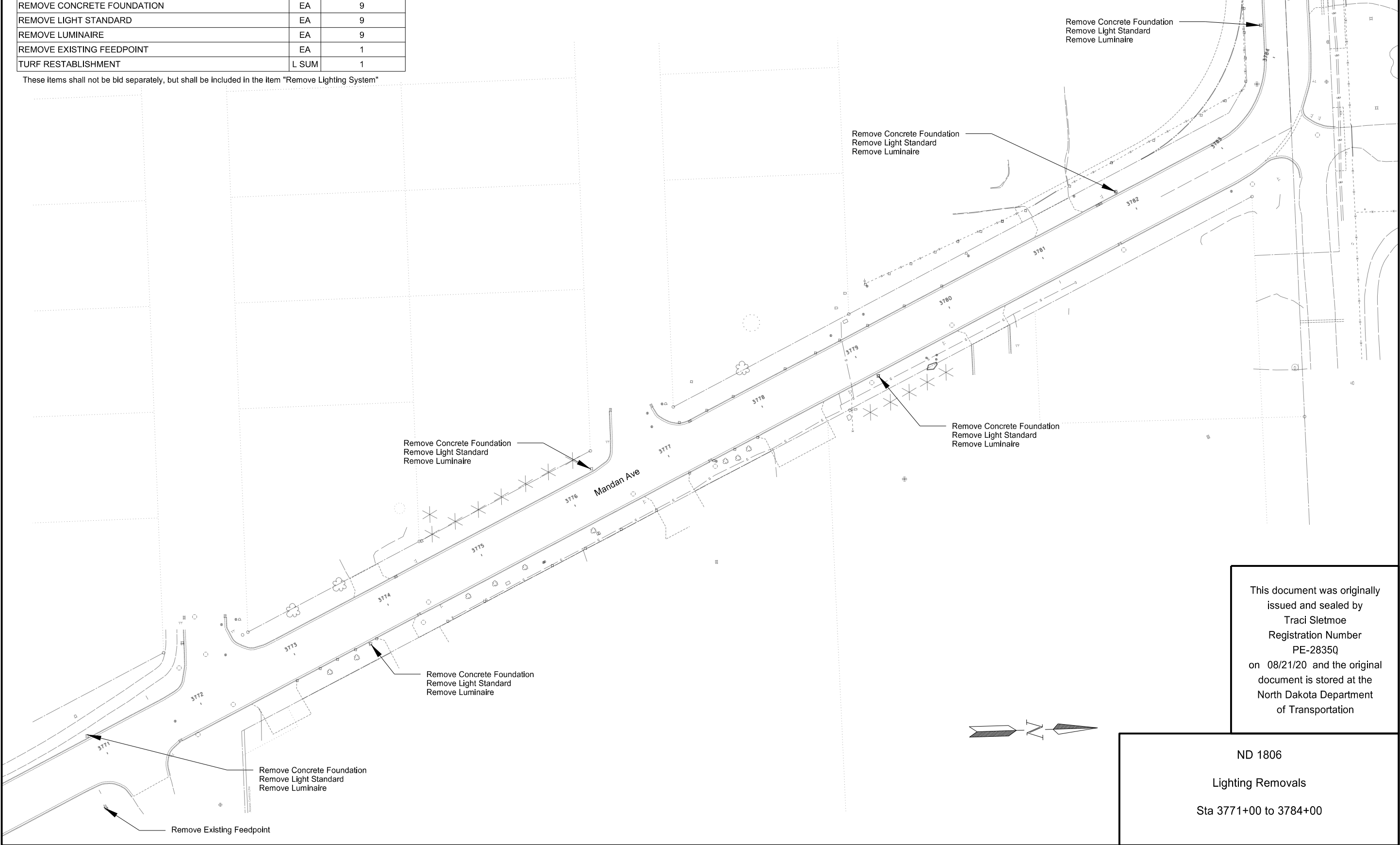
ND 1806  
Pavement Marking  
Sta 3838+98 to 3850+91

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	140	1

ITEM DESCRIPTION	UNIT	NHU-1-806(052)071
		REMOVE LIGHTING SYSTEM
REMOVE CONCRETE FOUNDATION	EA	9
REMOVE LIGHT STANDARD	EA	9
REMOVE LUMINAIRE	EA	9
REMOVE EXISTING FEEDPOINT	EA	1
TURF RESTABLISHMENT	L SUM	1

These items shall not be bid separately, but shall be included in the item "Remove Lighting System"

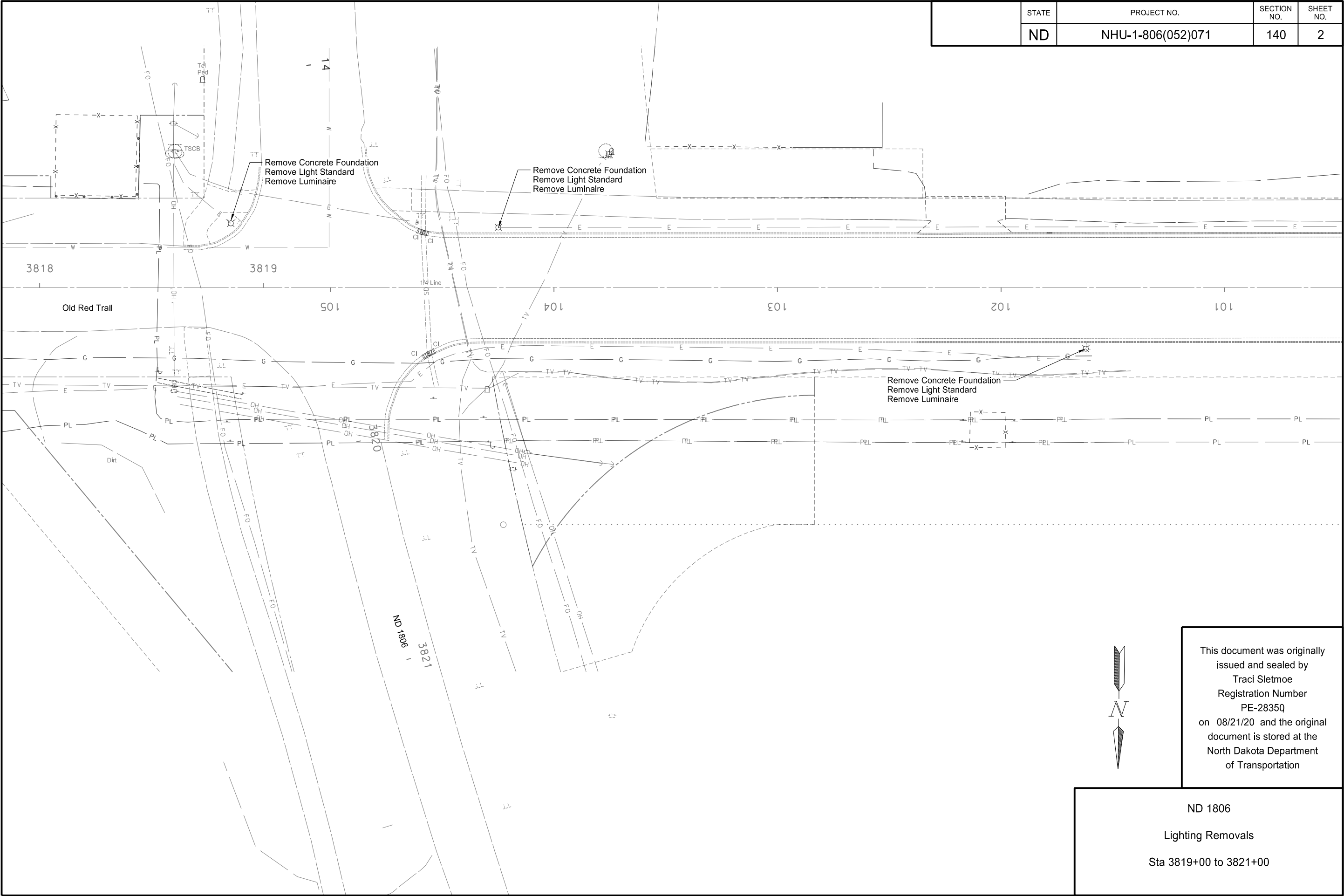
770 4567 REMOVE LIGHTING SYSTEM  
1 EA



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ND 1806  
Lighting Removals  
Sta 3771+00 to 3784+00

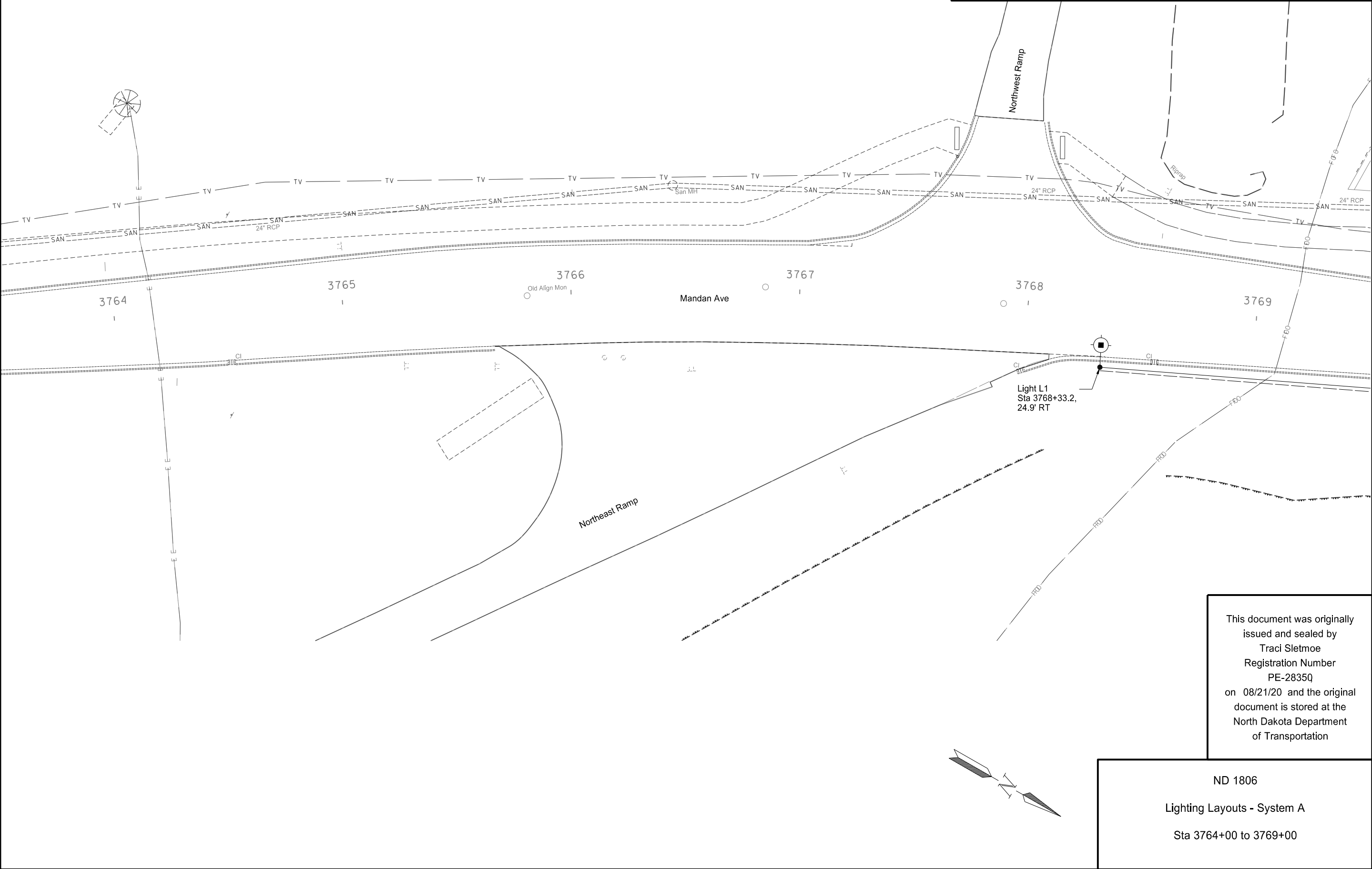
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	140	2



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ND 1806  
Lighting Removals  
Sta 3819+00 to 3821+00

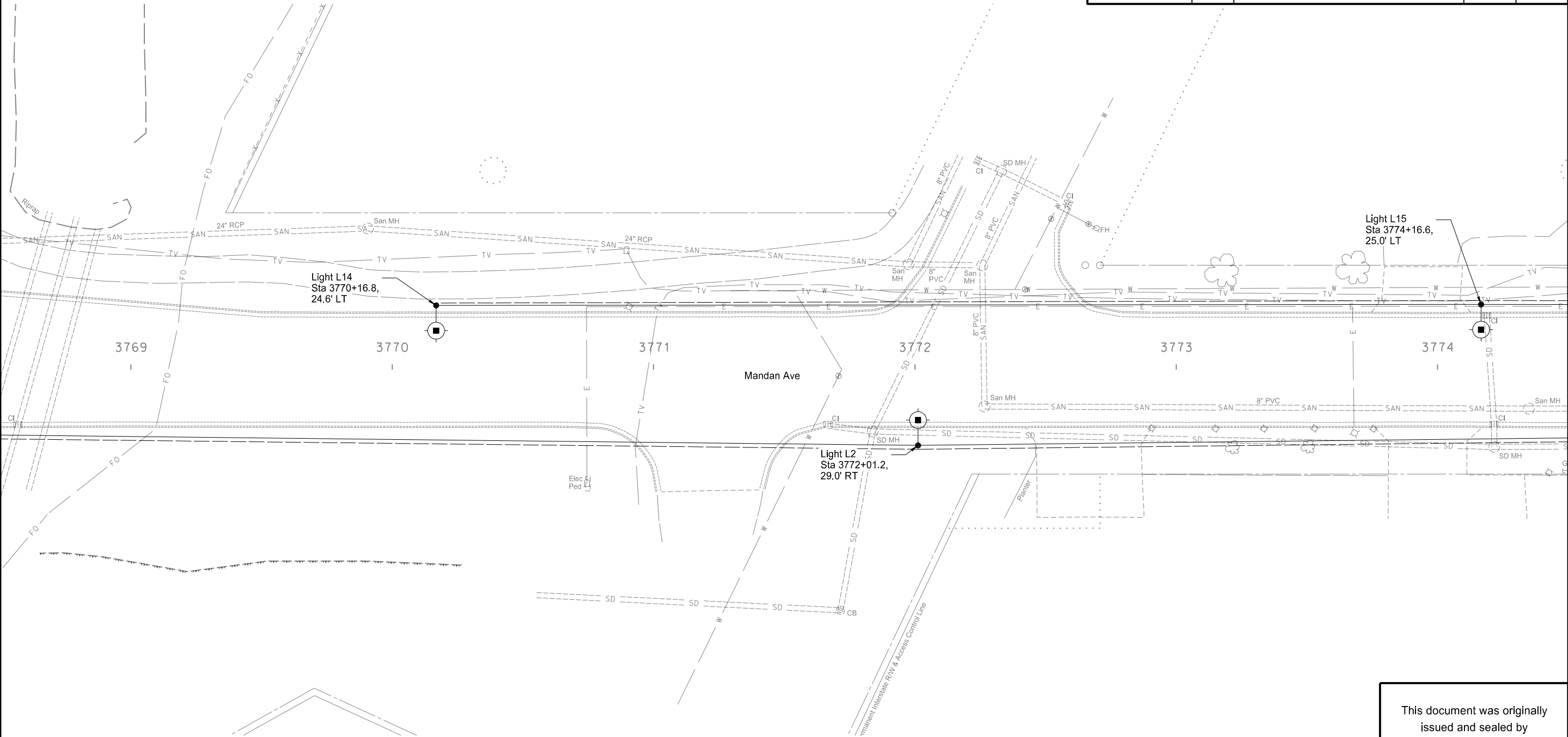
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	140	3



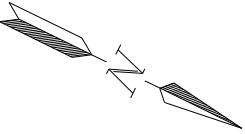
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ND 1806  
Lighting Layouts - System A  
Sta 3764+00 to 3769+00

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	140	4

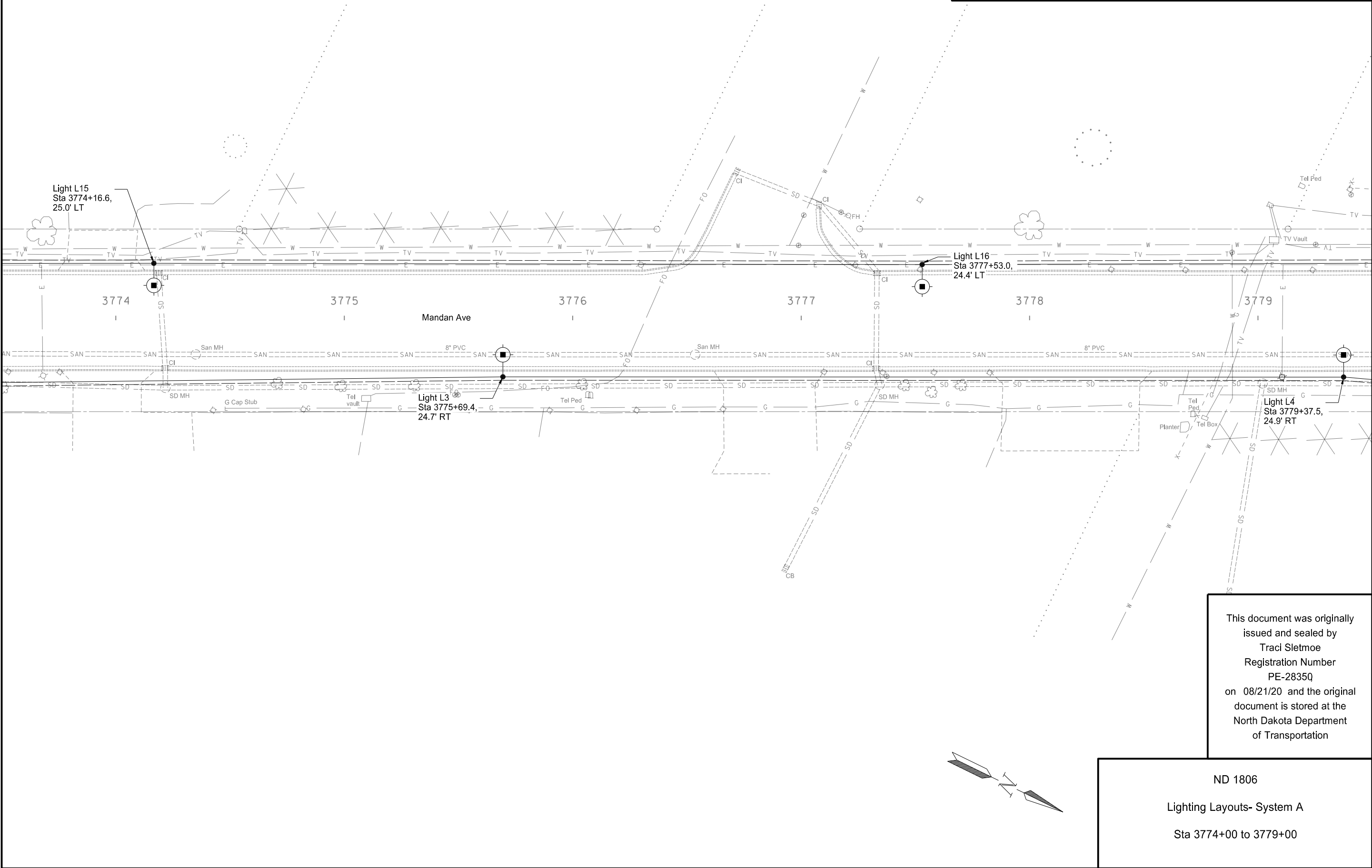


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ND 1806  
Lighting Layouts- System A  
Sta 3769+00 to 3774+00

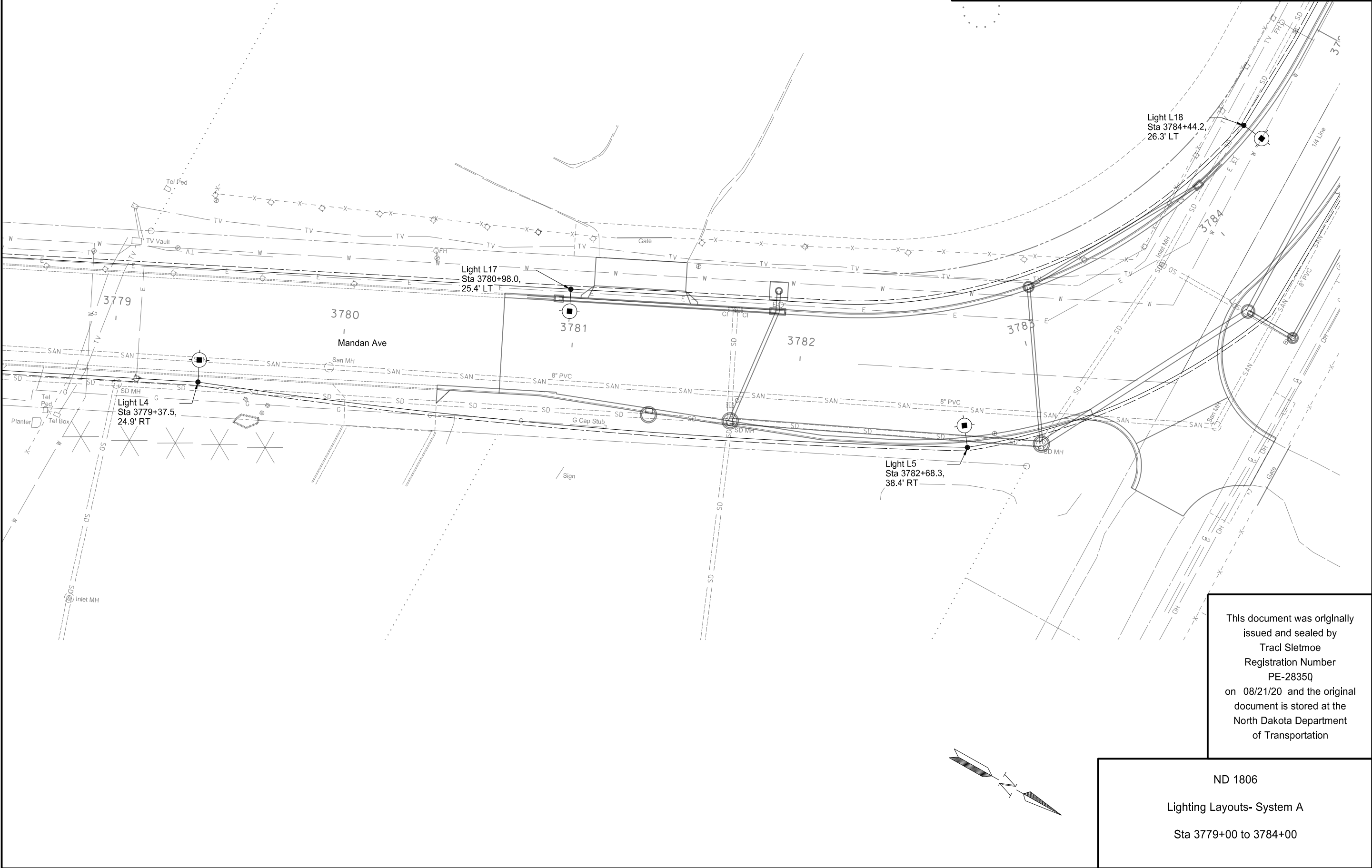
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	140	5



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ND 1806  
Lighting Layouts- System A  
Sta 3774+00 to 3779+00

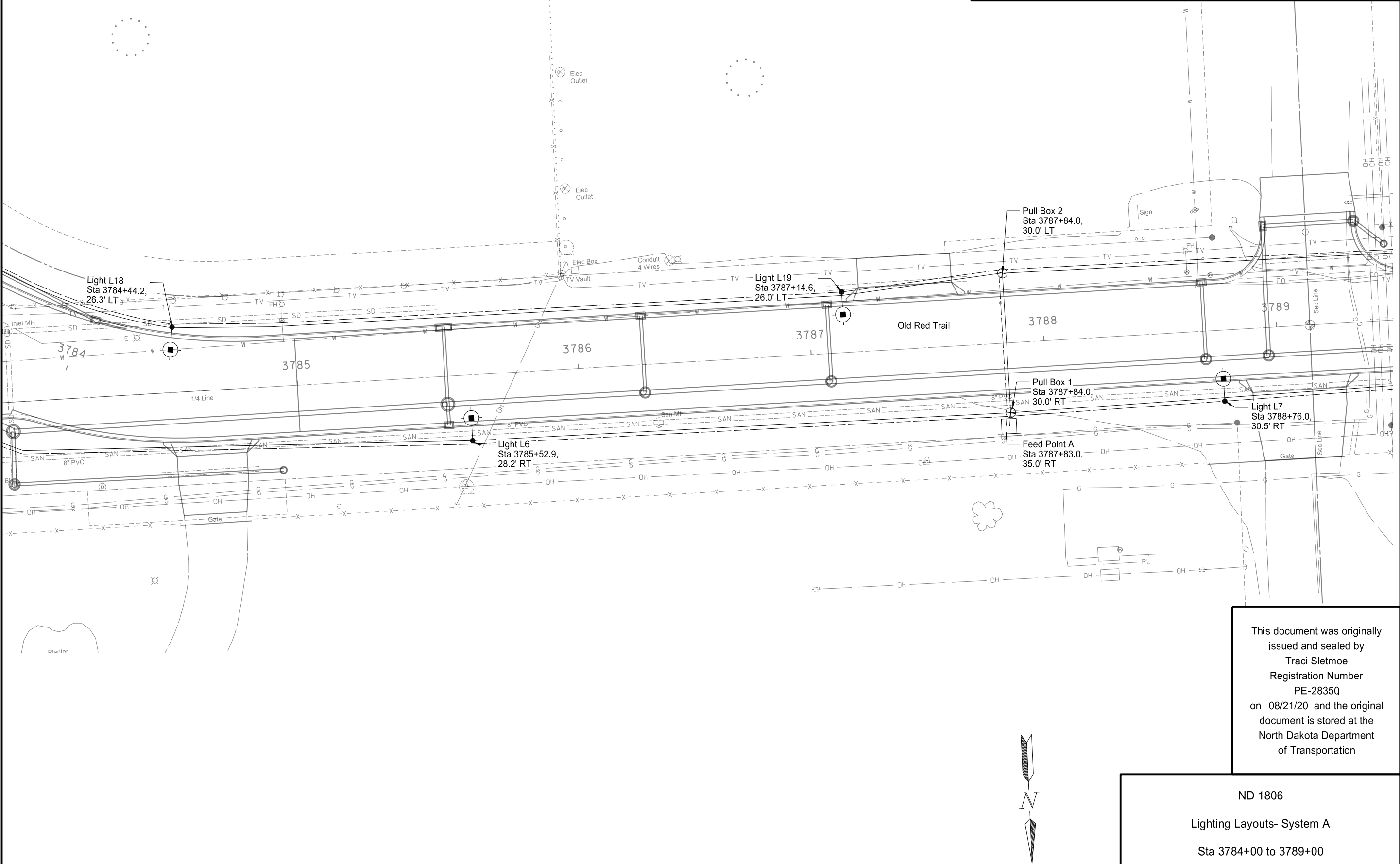
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-1-806(052)071	140	6



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ND 1806  
Lighting Layouts- System A  
Sta 3779+00 to 3784+00

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	140	7

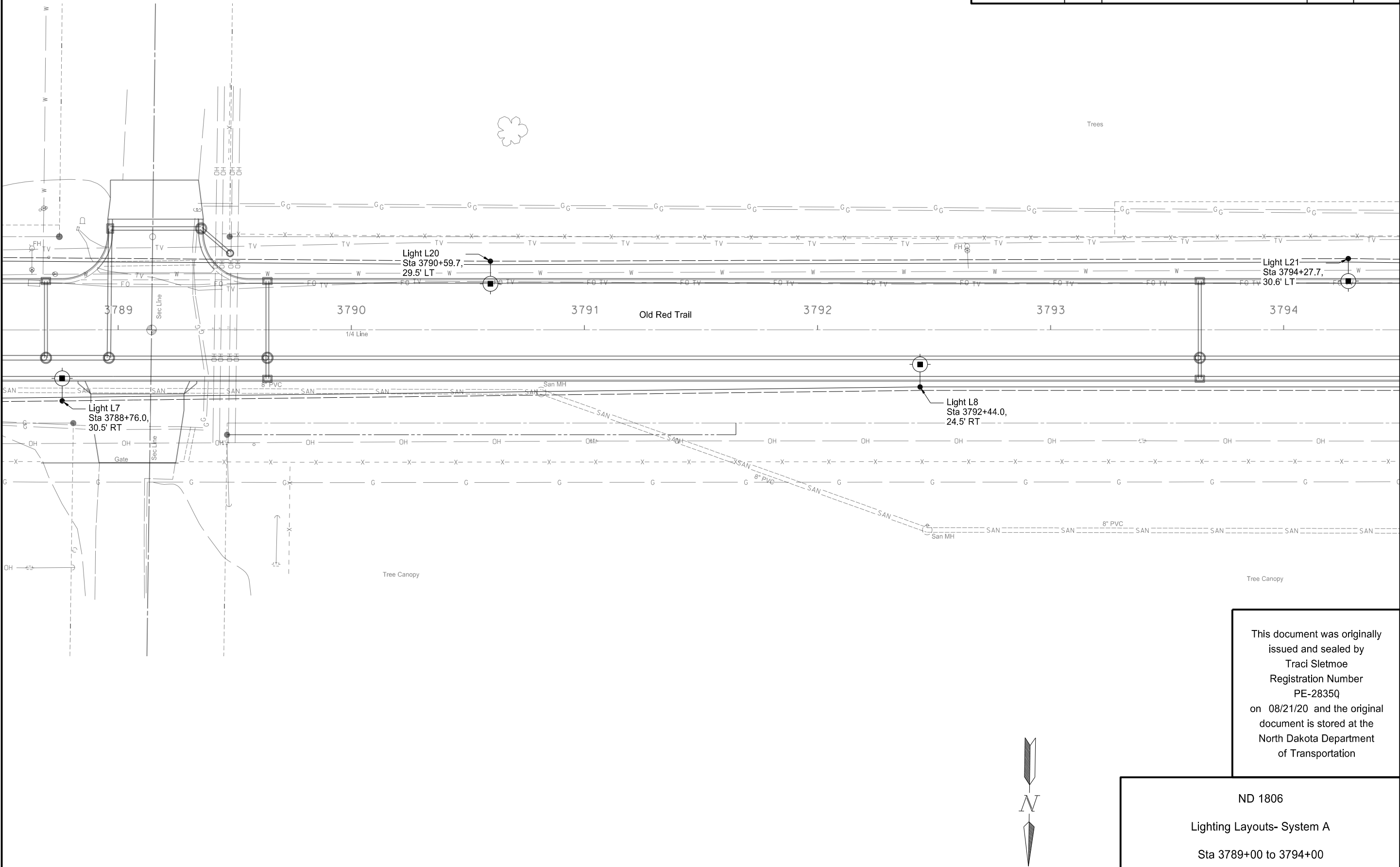


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ND 1806  
 Lighting Layouts- System A  
 Sta 3784+00 to 3789+00



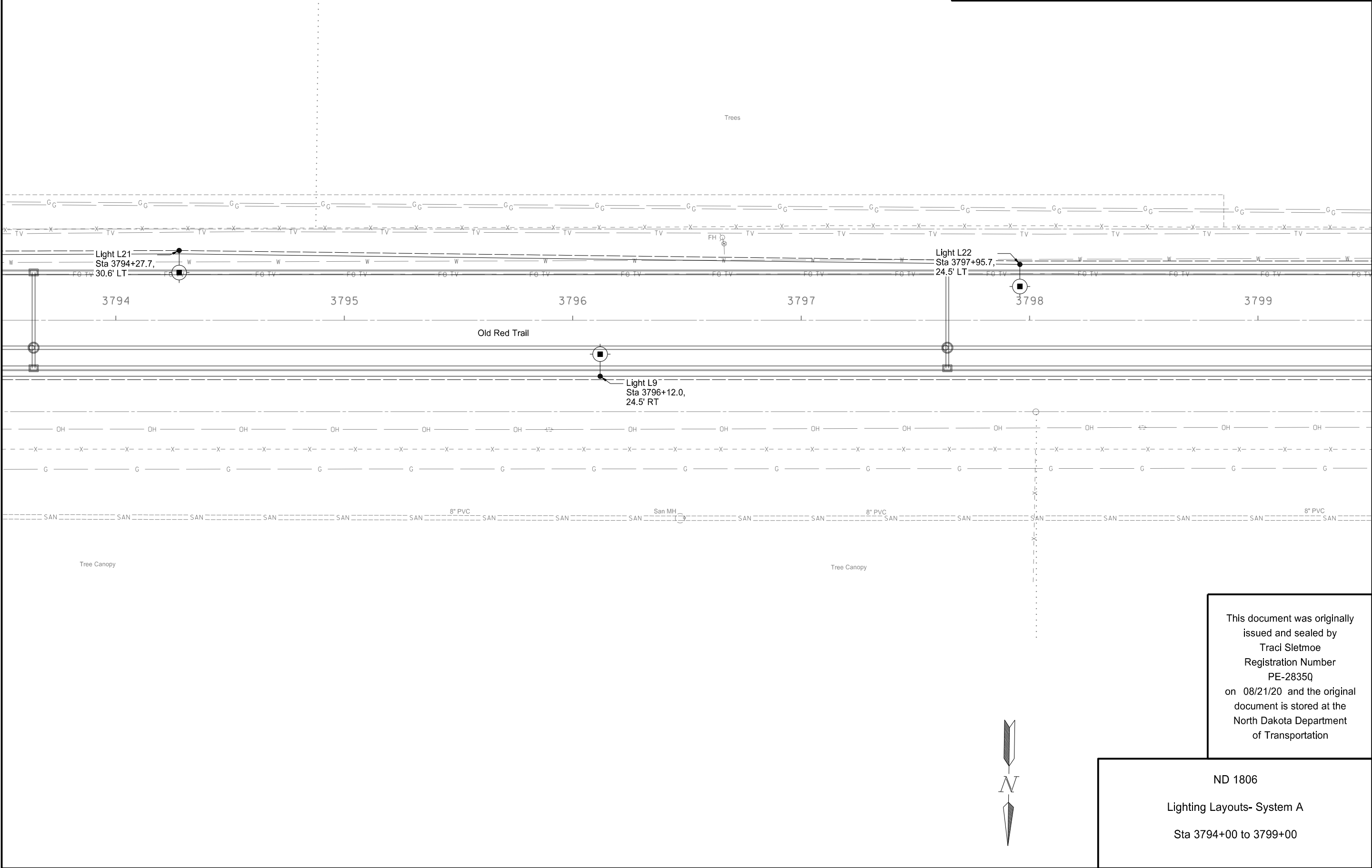
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	140	8



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ND 1806  
Lighting Layouts- System A  
Sta 3789+00 to 3794+00

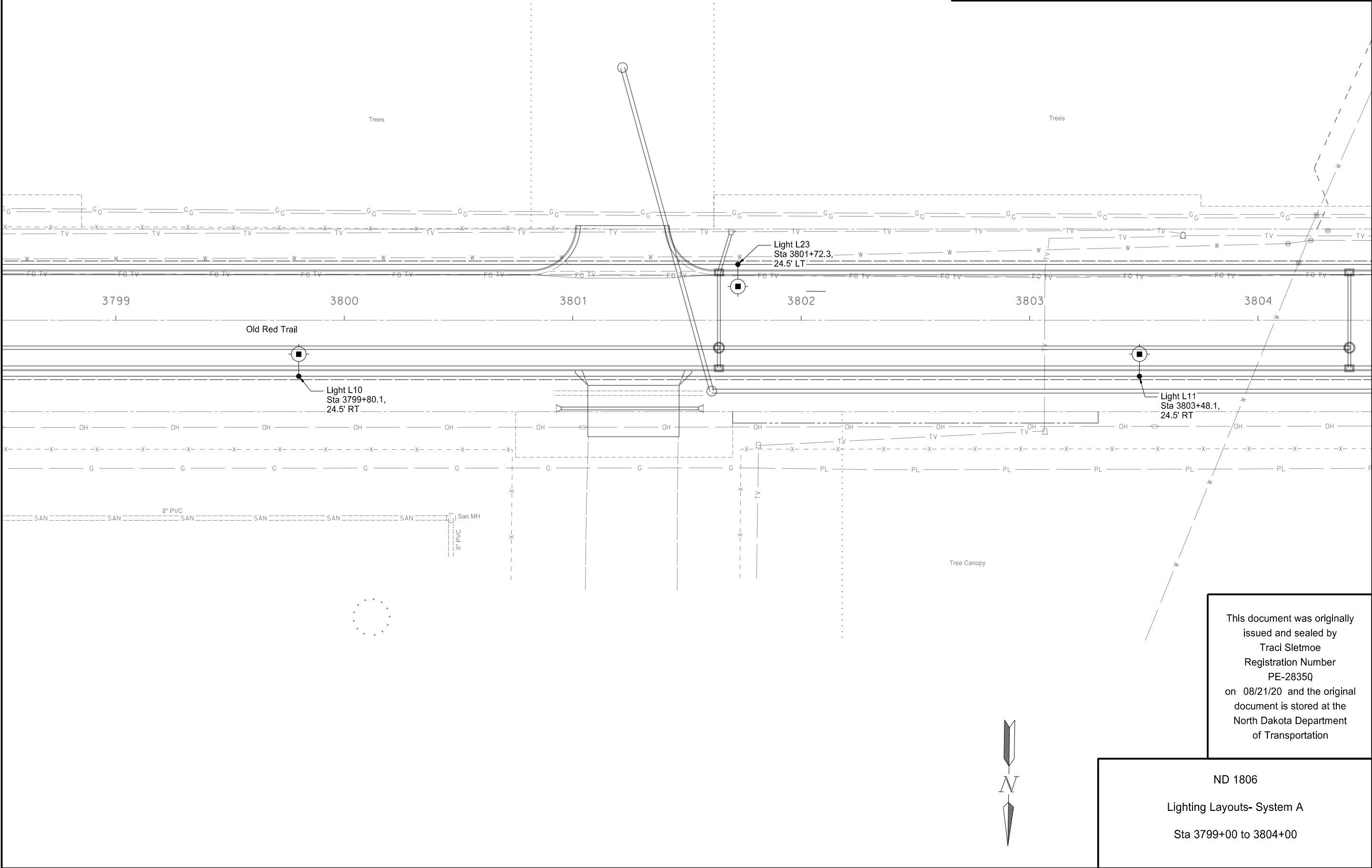
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	ND	NHU-1-806(052)071	140	9



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ND 1806  
Lighting Layouts- System A  
Sta 3794+00 to 3799+00

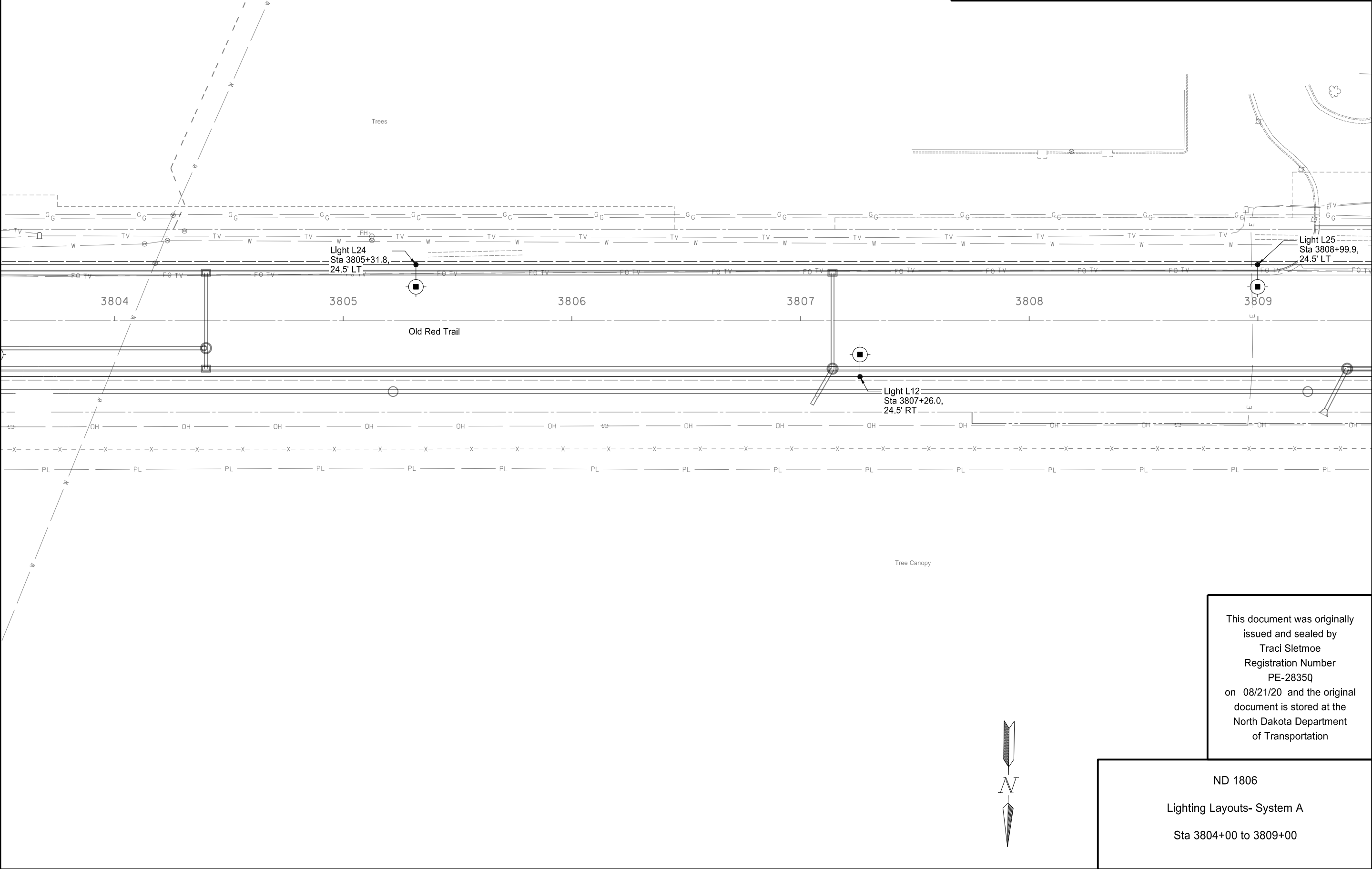
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	ND	NHU-1-806(052)071	140	10



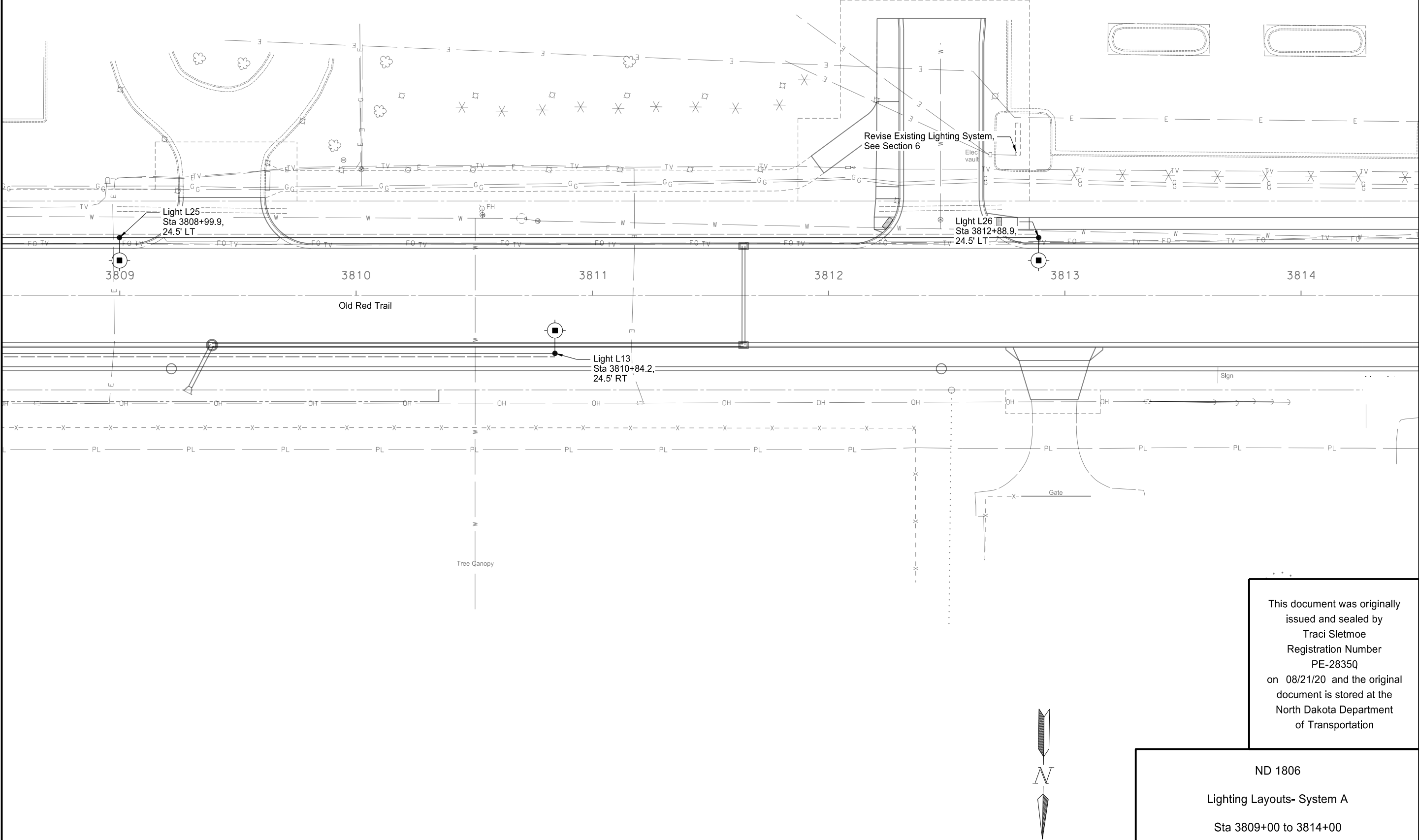
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ND 1806  
Lighting Layouts- System A  
Sta 3799+00 to 3804+00

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	140	11



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-1-806(052)071	140	12



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ND 1806  
Lighting Layouts- System A  
Sta 3809+00 to 3814+00

LIGHTING SYSTEM A: CABLE & CONDUIT SCHEDULE								
RUN			CONDUIT					
#	ITEM		STATION, OFFSET	SIZE (IN)	LF	# of Cables	SIZE/TYPE	Total LF
1	<i>Origin</i> <i>Destination</i>	Feed Point A Pull Box 1	Sta 3787+83.0, 35' RT Sta 3787+84.0, 30.0' RT	2	6	8 4	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	176 88
2	<i>Origin</i> <i>Destination</i>	Pull Box 1 Light Standard - L6	Sta 3787+84.0, 30.0' RT Sta 3785+52.9, 28.2' RT	2	231	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	482 241
3	<i>Origin</i> <i>Destination</i>	Light Standard - L6 Light Standard - L5	Sta 3785+52.9, 28.2' RT Sta 3782+68.3, 38.4' RT	2	340	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	696 348
4	<i>Origin</i> <i>Destination</i>	Light Standard - L5 Light Standard - L4	Sta 3782+68.3, 38.4' RT Sta 3779+37.5, 24.9' RT	2	339	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	694 347
5	<i>Origin</i> <i>Destination</i>	Light Standard - L4 Light Standard - L3	Sta 3779+37.5, 24.9' RT Sta 3775+69.4, 24.7' RT	2	368	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	752 376
6	<i>Origin</i> <i>Destination</i>	Light Standard - L3 Light Standard - L2	Sta 3775+69.4, 24.7' RT Sta 3772+01.2, 29.0' RT	2	368	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	752 376
7	<i>Origin</i> <i>Destination</i>	Light Standard - L2 Light Standard - L1	Sta 3772+01.2, 29.0' RT Sta 3768+33.2, 24.9' RT	2	368	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	752 376
8	<i>Origin</i> <i>Destination</i>	Pull Box 1 Light Standard - L7	Sta 3787+84.0, 30.0' RT Sta 3788+76.0, 30.5' RT	2	92	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	204 102
9	<i>Origin</i> <i>Destination</i>	Light Standard - L7 Light Standard - L8	Sta 3788+76.0, 30.5' RT Sta 3792+44.0, 24.5' RT	2	368	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	752 376
10	<i>Origin</i> <i>Destination</i>	Light Standard - L8 Light Standard - L9	Sta 3792+44.0, 24.5' RT Sta 3796+12.0, 24.5' RT	2	368	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	752 376
11	<i>Origin</i> <i>Destination</i>	Light Standard - L9 Light Standard - L10	Sta 3796+12.0, 24.5' RT Sta 3799+80.1, 24.5' RT	2	368	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	752 376
12	<i>Origin</i> <i>Destination</i>	Light Standard - L10 Light Standard - L11	Sta 3799+80.1, 24.5' RT Sta 3803+48.1, 24.5' RT	2	368	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	752 376
13	<i>Origin</i> <i>Destination</i>	Light Standard - L11 Light Standard - L12	Sta 3803+48.1, 24.5' RT Sta 3807+26.0, 24.5' RT	2	378	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	772 386
14	<i>Origin</i> <i>Destination</i>	Light Standard - L12 Light Standard - L13	Sta 3807+26.0, 24.5' RT Sta 3810+84.2, 24.5' RT	2	358	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	732 366
15	<i>Origin</i> <i>Destination</i>	Pull Box 1 Pull Box 2	Sta 3787+84.0, 30.0' RT Sta 3787+84.0, 30.0' LT	2	60	4 2	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	288 144
16	<i>Origin</i> <i>Destination</i>	Pull Box 2 Light Standard - L19	Sta 3787+84.0, 30.0' LT Sta 3787+14.6, 26.0' LT	2	70	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	160 80
17	<i>Origin</i> <i>Destination</i>	Light Standard - L19 Light Standard - L18	Sta 3787+14.6, 26.0' LT Sta 3784+44.2, 26.3' LT	2	288	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	592 296
18	<i>Origin</i> <i>Destination</i>	Light Standard - L18 Light Standard - L17	Sta 3784+44.2, 26.3' LT Sta 3780+98.0, 25.4' LT	2	318	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	652 326
19	<i>Origin</i> <i>Destination</i>	Light Standard - L17 Light Standard - L16	Sta 3780+98.0, 25.4' LT Sta 3777+53.0, 24.4' LT	2	345	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	706 353
20	<i>Origin</i> <i>Destination</i>	Light Standard - L16 Light Standard - L15	Sta 3777+53.0, 24.4' LT Sta 3774+16.6, 25.0' LT	2	336	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	688 344
21	<i>Origin</i> <i>Destination</i>	Light Standard - L15 Light Standard - L14	Sta 3774+16.6, 25.0' LT Sta 3770+16.8, 24.6' LT	2	400	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	816 408
22	<i>Origin</i> <i>Destination</i>	Pull Box 2 Light Standard - L20	Sta 3787+84.0, 30.0' LT Sta 3790+59.7, 29.5' LT	2	276	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	572 286
23	<i>Origin</i> <i>Destination</i>	Light Standard - L20 Light Standard - L21	Sta 3790+59.7, 29.5' LT Sta 3794+27.7, 30.6' LT	2	368	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	752 376
24	<i>Origin</i> <i>Destination</i>	Light Standard - L21 Light Standard - L22	Sta 3794+27.7, 30.6' LT Sta 3797+95.7, 24.5' LT	2	368	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	752 376
25	<i>Origin</i> <i>Destination</i>	Light Standard - L22 Light Standard - L23	Sta 3797+95.7, 24.5' LT Sta 3801+72.3, 24.5' LT	2	376	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	768 384
26	<i>Origin</i> <i>Destination</i>	Light Standard - L23 Light Standard - L24	Sta 3801+72.3, 24.5' LT Sta 3805+31.8, 24.5' LT	2	360	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	736 368
27	<i>Origin</i> <i>Destination</i>	Light Standard - L24 Light Standard - L25	Sta 3805+31.8, 24.5' LT Sta 3808+99.9, 24.5' LT	2	368	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	752 376
28	<i>Origin</i> <i>Destination</i>	Light Standard - L25 Light Standard - L26	Sta 3808+99.9, 24.5' LT Sta 3812+88.9, 24.5' LT	2	389	2 1	UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	794 397

ITEM DESCRIPTION	UNIT	SYSTEM A
CONCRETE FOUNDATION-LIGHTING	EA	26
PULLBOX	EA	2
2IN DIAMETER RIGID CONDUIT	LF	8,642
UNDERGROUND CONDUCTOR NO6-TYPE THW	LF	9,024
UNDERGROUND CONDUCTOR NO6-TYPE RHW	LF	18,048
FEED POINT-TYPE IV-PAD MOUNTED	LF	1
LIGHT STANDARD	EA	26
LED LUMINAIRE	EA	26
CONCRETE FOUNDATION-FEED POINT-TYPE B	EA	1

These items shall not be bid separately, but shall be included in the item "Lighting System A"

LIGHT STANDARD SCHEDULE						
LIGHT NUMBER	Circuit	Optics IES-Type	Wattage	Pole Ht.	Mast Arm	Breakaway
L1	1	II	279	40'	6'	YES
L2	1	II	279	40'	6'	YES
L3	1	II	279	40'	6'	YES
L4	1	II	279	40'	6'	YES
L5	1	II	279	40'	6'	YES
L6	1	II	279	40'	6'	YES
L7	2	II	279	40'	6'	YES
L8	2	II	279	40'	6'	YES
L9	2	II	279	40'	6'	YES
L10	2	II	279	40'	6'	YES
L11	2	II	279	40'	6'	YES
L12	2	II	279	40'	6'	YES
L13	2	II	279	40'	6'	YES
L14	3	II	279	40'	6'	YES
L15	3	II	279	40'	6'	YES
L16	3	II	279	40'	6'	YES
L17	3	II	279	40'	6'	YES
L18	3	II	279	40'	6'	YES
L19	3	II	279	40'	6'	YES
L20	4	II	279	40'	6'	YES
L21	4	II	279	40'	6'	YES
L22	4	II	279	40'	6'	YES
L23	4	II	279	40'	6'	YES
L24	4	II	279	40'	6'	YES
L25	4	II	279	40'	6'	YES
L26	4	II	279	40'	6'	YES

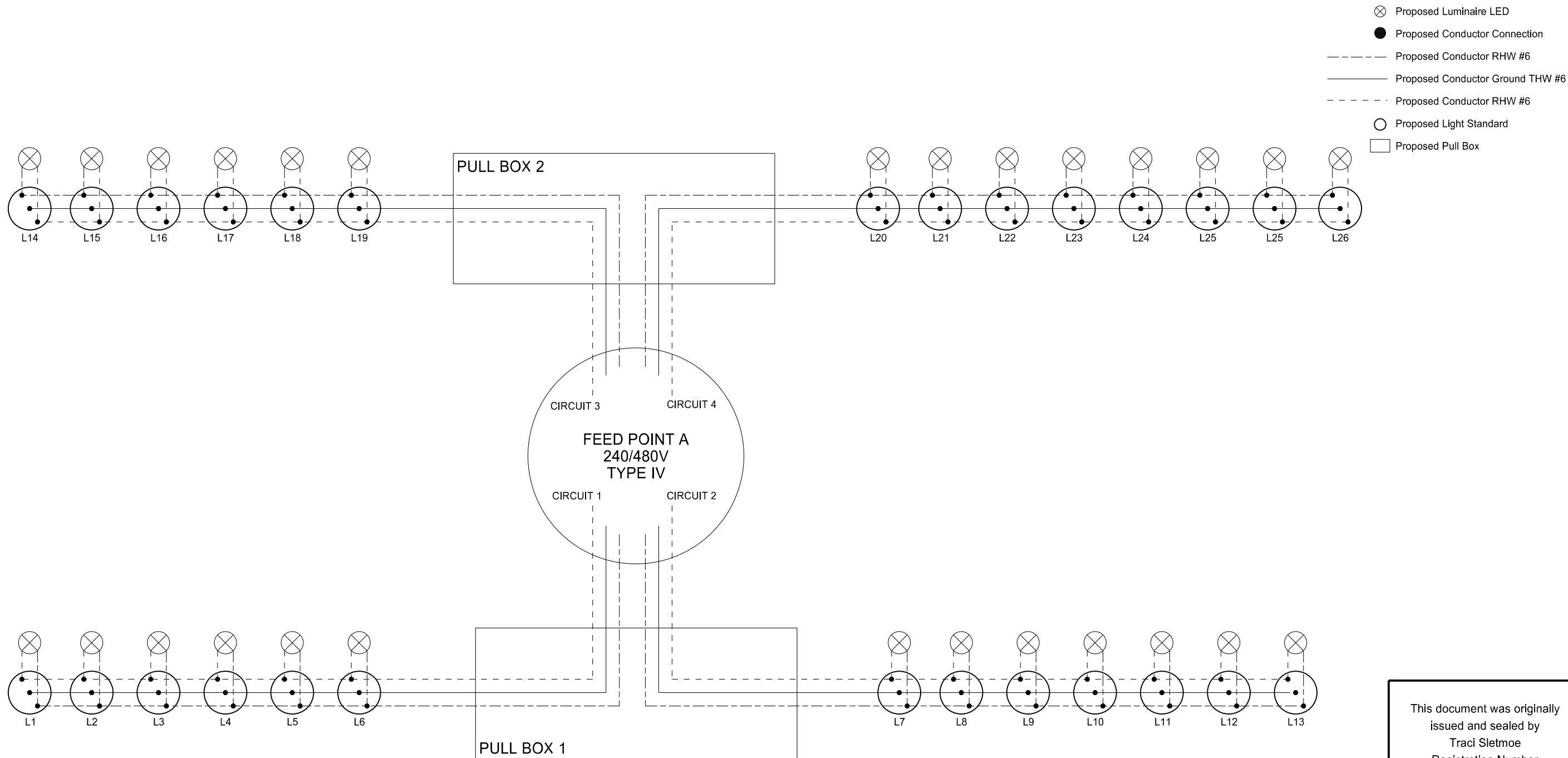
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ND 1806

Lighting System A

Cable Runs, Lighting Standards, and Quantities

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	140	14



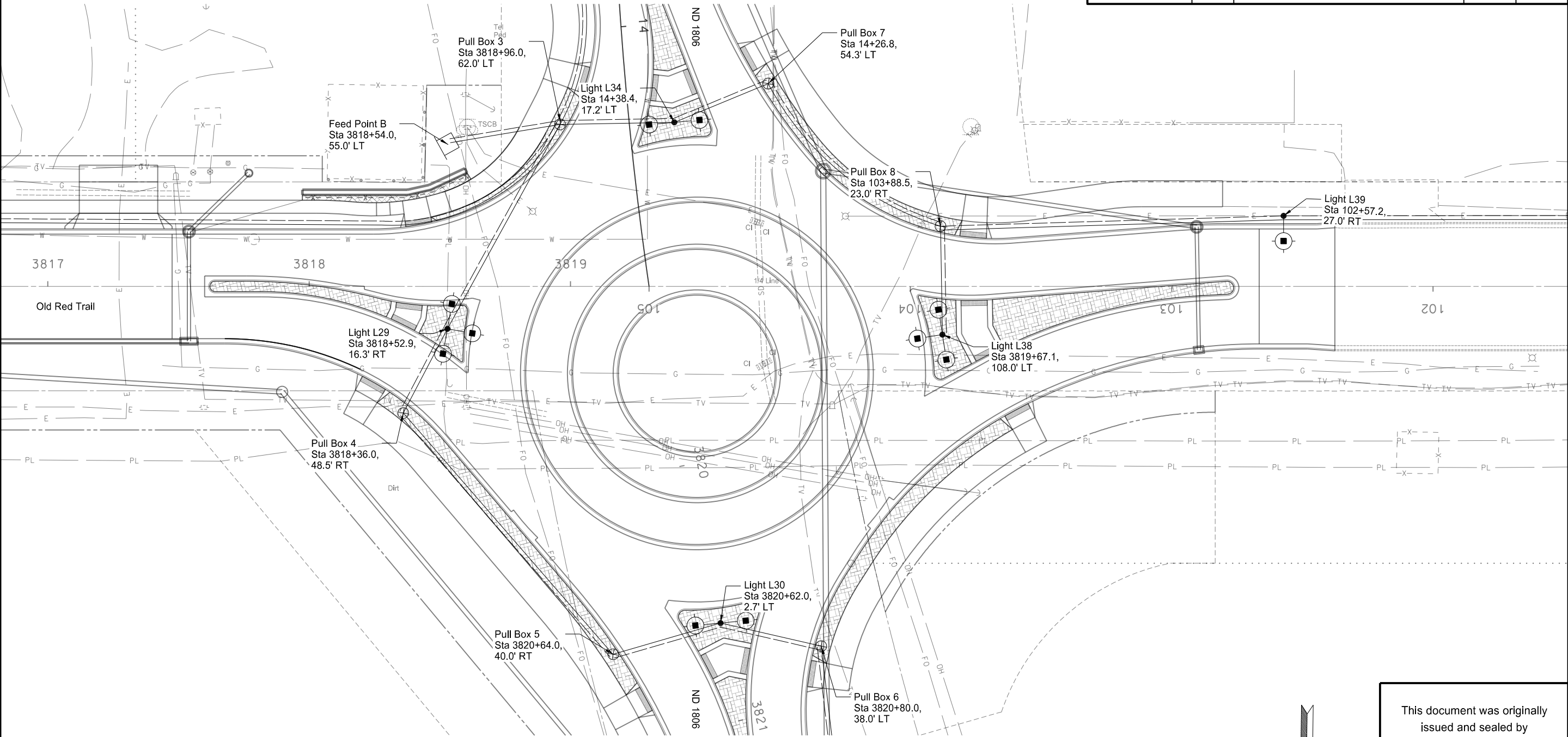
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ND 1806  
Lighting System A  
Feed Point A





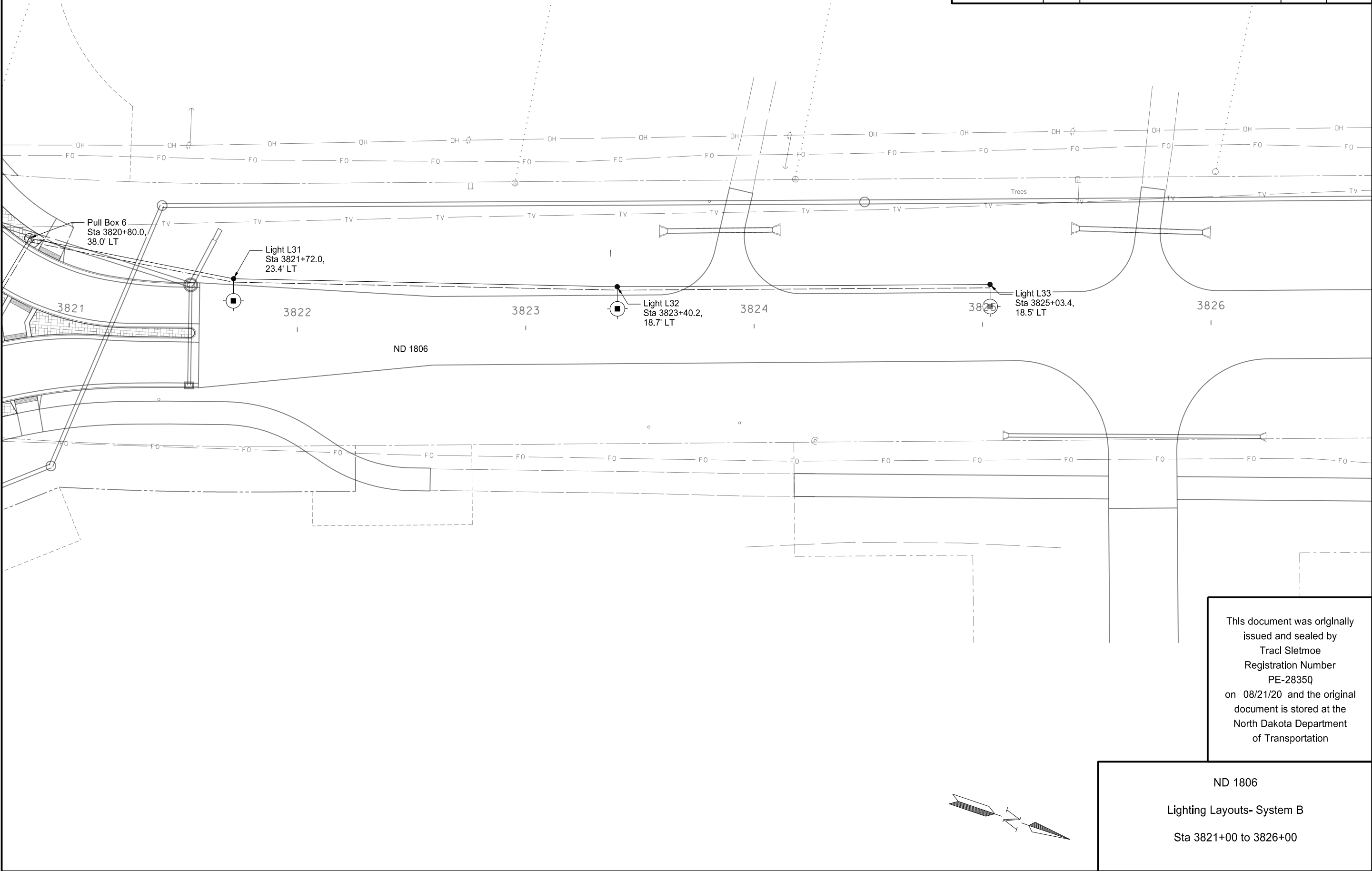
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ND	NHU-1-806(052)071	140	16



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ND 1806  
Lighting Layouts- System B  
Sta 3819+00 to 3821+00

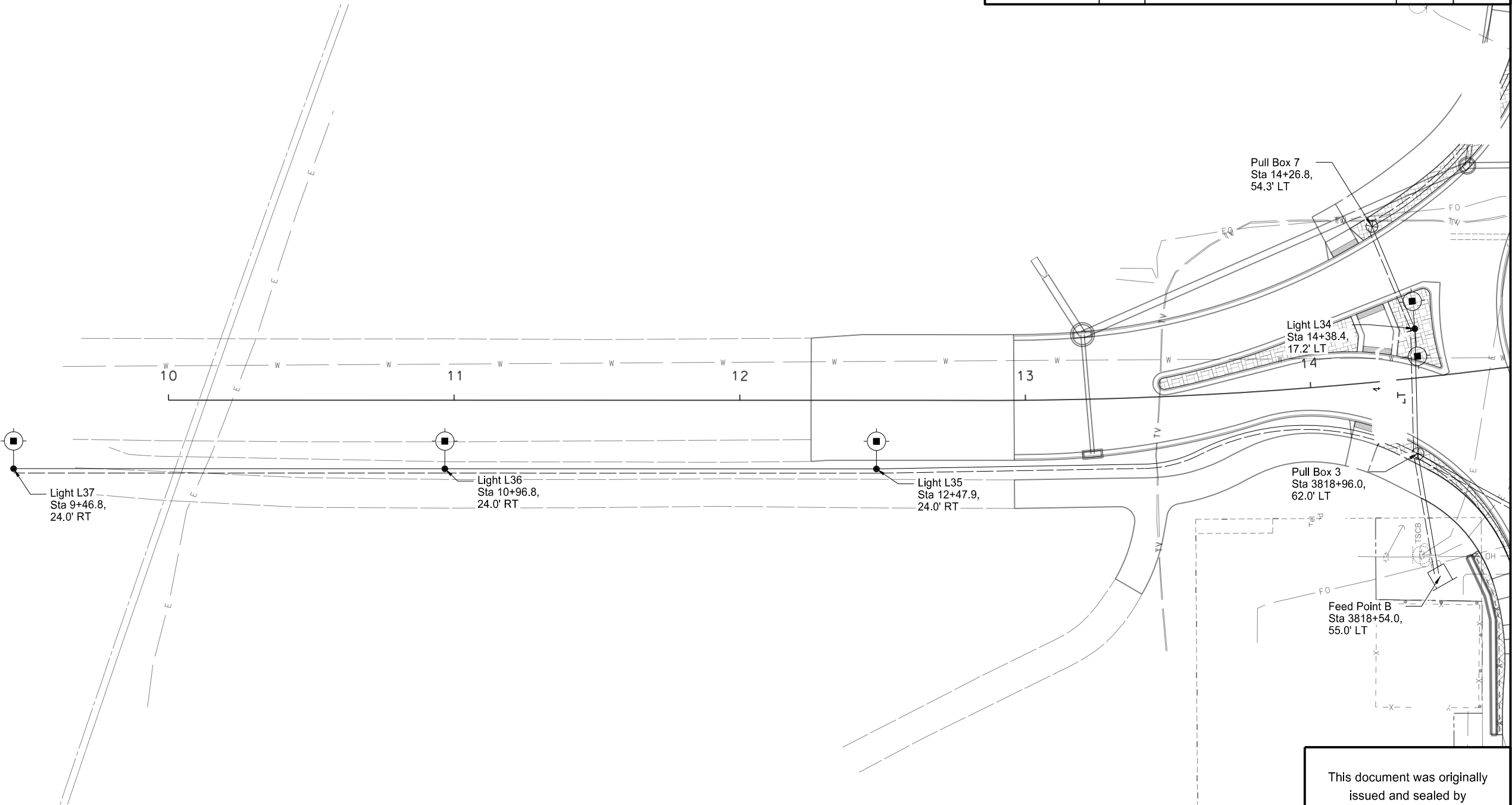
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	ND	NHU-1-806(052)071	140	17



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ND 1806  
Lighting Layouts- System B  
Sta 3821+00 to 3826+00

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	140	18



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ND 1806  
Lighting Layouts- System B  
Sta 10+00 to 13+00 (EXCOL)



LIGHTING SYSTEM B: CABLE & CONDUIT SCHEDULE							
RUN			CONDUIT		CABLE		
#	ITEM	STATION, OFFSET	SIZE (IN)	LF	# of Cables	SIZE/TYPE	Total LF
1	<i>Origin</i> <i>Destination</i>	Feed Point B Pull Box 3	Sta 3818+54.0, 55.0' LT Sta 3818+96.0, 62.0' LT	2	43	4 2 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	236 118
2	<i>Origin</i> <i>Destination</i>	Pull Box 3 Light Standard - L28	Sta 3818+96.0, 62.0' LT Sta 3816+65.9, 24.5' LT	2	245	2 1 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	510 255
3	<i>Origin</i> <i>Destination</i>	Light Standard - L28 Pull Box 10	Sta 3816+65.9, 24.5' LT Sta 3814+64.0, 26.0' LT	2	202	2 1 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	424 212
4	<i>Origin</i> <i>Destination</i>	Pull Box 10 Light Standard - L27	Sta 3814+64.0, 26.0' LT Sta 3814+62.2, 24.5' RT	2	51	2 1 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	122 61
5	<i>Origin</i> <i>Destination</i>	Pull Box 3 Light Standard - L29	Sta 3818+96.0, 62.0' LT Sta 3818+52.9, 16.3' RT	2	90	2 1 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	200 100
6	<i>Origin</i> <i>Destination</i>	Light Standard - L29 Pull Box 4	Sta 3818+52.9, 16.3' RT Sta 3818+36.0, 48.5' RT	2	37	2 1 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	94 47
7	<i>Origin</i> <i>Destination</i>	Pull Box 4 Pull Box 5	Sta 3818+36.0, 48.5' RT Sta 3820+64.0, 40.0' RT	2	123	2 1 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	206 135
8	<i>Origin</i> <i>Destination</i>	Pull Box 5 Light Standard - L30	Sta 3820+64.0, 40.0' RT Sta 3820+62.0, 2.7' LT	2	43	2 1 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	106 53
9	<i>Origin</i> <i>Destination</i>	Light Standard - L30 Pull Box 6	Sta 3820+62.0, 2.7' LT Sta 3820+80.0, 38.0' LT	2	40	2 1 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	100 50
10	<i>Origin</i> <i>Destination</i>	Pull Box 6 Light Standard - L31	Sta 3820+80.0, 38.0' LT Sta 3821+72.0, 23.4' LT	2	91	2 1 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	202 101
11	<i>Origin</i> <i>Destination</i>	Light Standard - L31 Light Standard - L32	Sta 3821+72.0, 23.4' LT Sta 3823+40.2, 18.7' LT	2	168	2 1 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	352 176
12	<i>Origin</i> <i>Destination</i>	Light Standard - L32 Light Standard - L33	Sta 3823+40.2, 18.7' LT Sta 3825+03.4, 18.5' LT	2	163	2 1 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	342 171
13	<i>Origin</i> <i>Destination</i>	Pull Box 3 Light Standard - L34	Sta 3818+96.0, 62.0' LT Sta 14+38.4, 17.2' LT	2	44	2 1 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	108 54
14	<i>Origin</i> <i>Destination</i>	Light Standard - L34 Pull Box 7	Sta 14+38.4, 17.2' LT Sta 14+26.8, 54.3' LT	2	39	2 1 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	98 49
15	<i>Origin</i> <i>Destination</i>	Pull Box 7 Pull Box 8	Sta 14+26.8, 54.3' LT Sta 103+88.5, 23.0' RT	2	88	4 2 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	400 200
16	<i>Origin</i> <i>Destination</i>	Pull Box 8 Light Standard - L38	Sta 103+88.5, 23.0' RT Sta 3819+67.1, 108.0' LT	2	42	2 1 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	104 52
17	<i>Origin</i> <i>Destination</i>	Pull Box 8 Light Standard - L39	Sta 103+88.5, 23.0' RT Sta 102+57.2, 27.0' RT	2	132	2 1 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	284 142
18	<i>Origin</i> <i>Destination</i>	Light Standard - L39 Pull Box 9	Sta 102+57.2, 27.0' RT Sta 100+80.0, 27.2' RT	2	178	2 1 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	376 188
19	<i>Origin</i> <i>Destination</i>	Pull Box 9 Light Standard - L40	Sta 100+80.0, 27.2' RT Sta 100+77.2, 27.0' LT	2	55	2 1 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	130 65
20	<i>Origin</i> <i>Destination</i>	Pull Box 3 Light Standard - L35	Sta 3818+96.0, 62.0' LT Sta 12+47.9, 24.0' RT	2	194	2 1 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	408 204
21	<i>Origin</i> <i>Destination</i>	Light Standard - L35 Light Standard - L36	Sta 12+47.9, 24.0' RT Sta 10+96.8, 24.0' RT	2	151	2 1 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	318 159
22	<i>Origin</i> <i>Destination</i>	Light Standard - L36 Light Standard - L37	Sta 10+96.8, 24.0' RT Sta 9+46.8, 24.0' RT	2	151	2 1 UNDERGROUND CONDUCTOR NO6-TYPE RHW UNDERGROUND CONDUCTOR NO6-TYPE THW	318 159

ITEM DESCRIPTION	UNIT	SYSTEM B
CONCRETE FOUNDATION-LIGHTING	EA	15
PULLBOX	EA	8
2IN DIAMETER RIGID CONDUIT	LF	2,370
UNDERGROUND CONDUCTOR NO6-TYPE THW	LF	2,751
UNDERGROUND CONDUCTOR NO6-TYPE RHW	LF	5,438
FEED POINT-TYPE II-PAD MOUNTED	EA	1
LIGHT STANDARD	EA	15
LED LUMINAIRE	EA	21
CONCRETE FOUNDATION-FEED POINT-TYPE B	EA	1

These items shall not be bid separately, but shall be included in the item "Lighting System B"

LIGHT STANDARD SCHEDULE						
LIGHT NUMBER	Circuit	Optics IES-Type	Wattage	Pole Ht.	Mast Arm	Breakaway
L27	1	II	279	40'	6'	YES
L28	1	II	279	40'	6'	YES
L29	1	III	279	40'	6' x 3	YES
L30	1	III	279	40'	6' x 2	YES
L31	1	II	279	40'	6'	YES
L32	1	II	279	40'	6'	YES
L33	1	II	279	40'	6'	YES
L34	2	III	279	40'	6' x 2	YES
L35	2	II	279	40'	6'	YES
L36	2	II	279	40'	6'	YES
L37	2	II	279	40'	6'	YES
L38	2	III	279	40'	6' x 3	YES
L39	2	II	279	40'	6'	YES
L40	2	II	279	40'	6'	YES

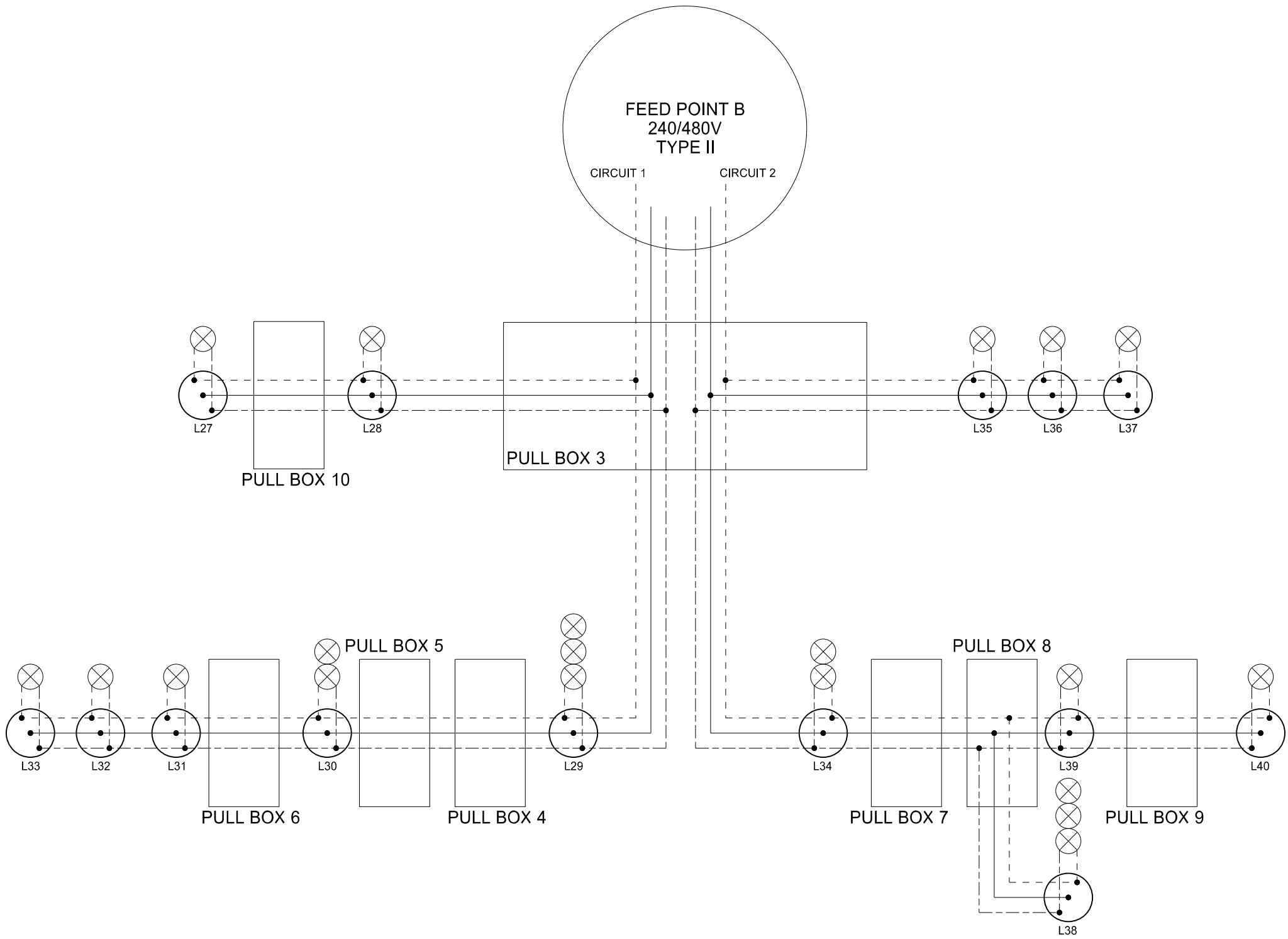
770 4 LIGHTING SYSTEM B 1 EA

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ND 1806  
Lighting System B  
Cable Runs, Lighting Standards, and Quantities

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	140	21

- ⊗ Proposed Luminaire LED
- Proposed Conductor Connection
- Proposed Conductor RHW #6
- Proposed Conductor Ground THW #6
- - - - - Proposed Conductor RHW #6
- Proposed Light Standard
- Proposed Pull Box



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ND 1806  
Lighting System B  
Feed Point B



LIGHT STANDARD FOUNDATION TABLE		
Description	Footing Depth "D" 24" & 30" Diameter	Footing Depth "D" 36" & 42" Diameter
<u>Light Standard</u> 40' Pole (Single Mast Arm)	6', 6'	5', 5'
<u>Light Standard</u> 40' Pole (Multiple Mast Arm)	8', 8'	8', 8'

NOTES FOR LIGHT STANDARD FOUNDATIONS:

1.

For Light Standard foundations, choose a diameter that is at a minimum the largest of the following scenarios:

- Anchor bolt cage circle diameter plus 12"

- Base plus 6"

- 24"

It is the Contractor's responsibility to determine the foundation diameter and include the corresponding costs for the actual diameter in the corresponding unit price bid "LIGHTING SYSTEM A", or "LIGHTING SYSTEM B", or "LIGHTING SYSTEM C" which ever each is used.
2.

Include all costs associated with the construction of the foundation in the corresponding unit price bid "LIGHTING SYSTEM A", or "LIGHTING SYSTEM B", or "LIGHTING SYSTEM C" which ever each is used. This includes but is not limited to excavation, concrete, reinforcing steel, anchor bolts and ground rod.
3.

See Standard Drawing D-770-1 for additional foundation information.
4.

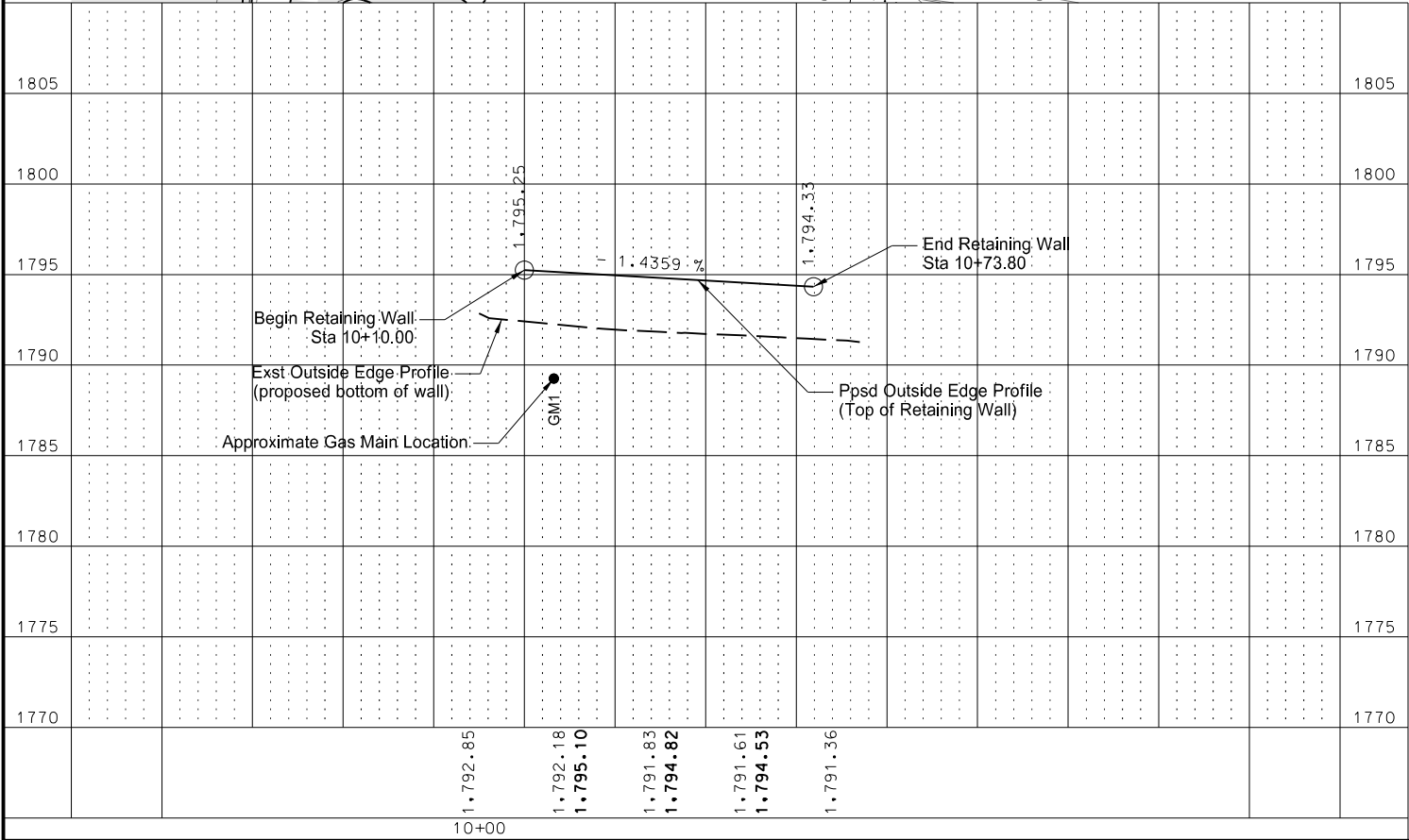
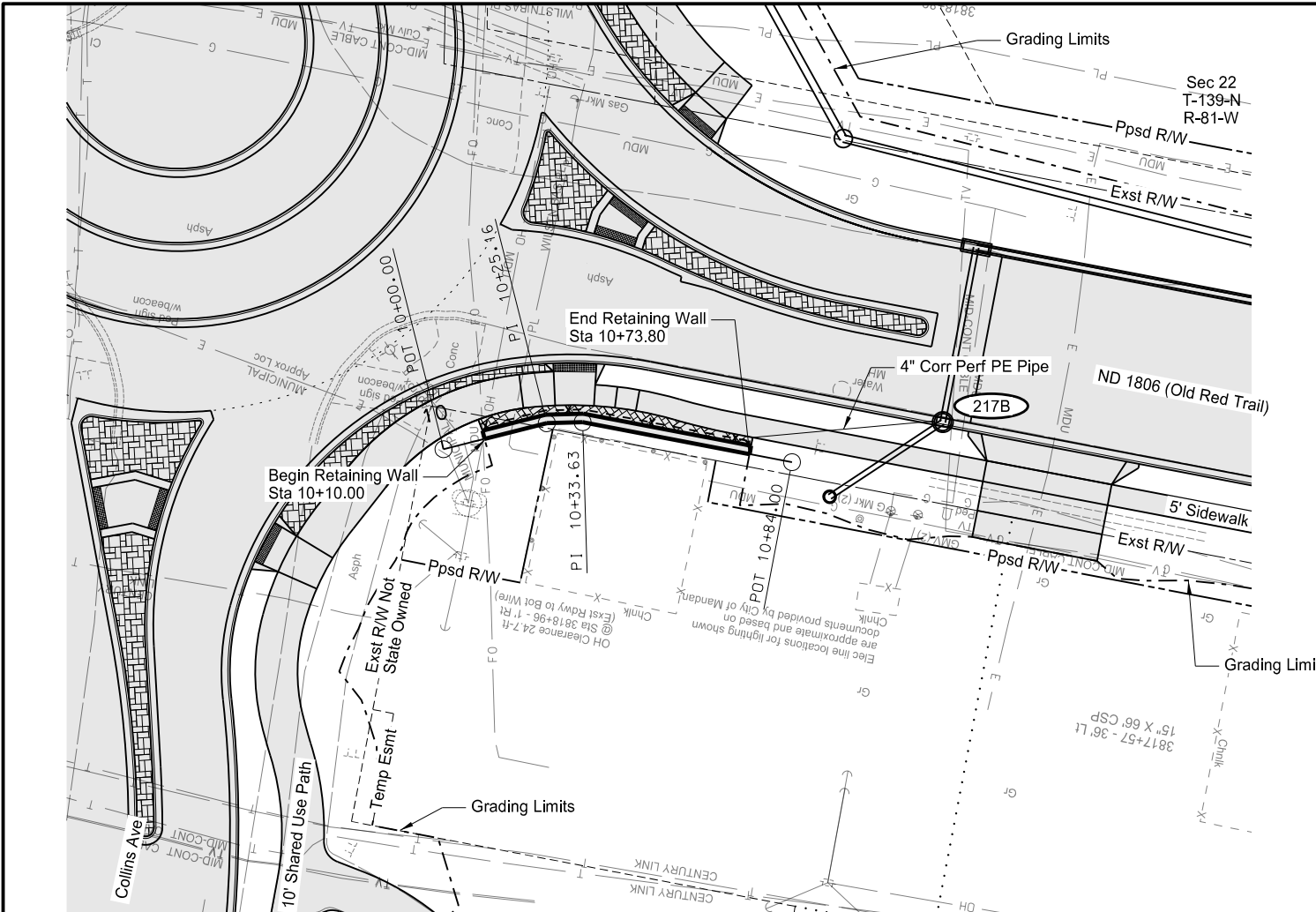
Light Standards will have a minimum of 4 anchor bolts.

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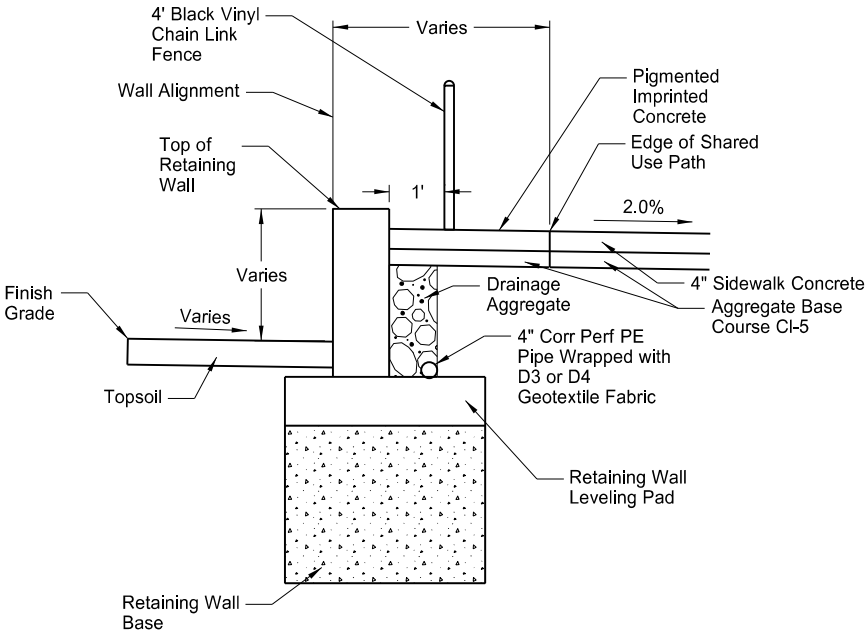
LIGHT STANDARD FOUNDATIONS





	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NHU-1-806(052)071	170	1

SPEC CODE	BID ITEM	QTY	UNIT
752 0610	FENCE CHAIN LINK-TYPE I Sta 10+10.00 to Sta 10+73.80	65	LF
930 9551	CONCRETE MODULAR BLOCK RETAINING WALL Sta 10+10.00 to Sta 10+73.80	128	SF



Concrete Modular Block Retaining Wall  
Cross Section View  
Sta 10+10.00 to Sta 10+73.80  
(Not to Scale)

- Notes:
1. Refer to special provision for design, construction and payment specifications for the bid item "Concrete Modular Block Retaining Wall".
  2. Alignment is to front face of top block.
  3. Step top of wall as necessary where top of wall profile slopes.
  4. Install drainage pipe to drain and discharge into Inlet 217B.
  5. Detail shown for informational purposes only.

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ND 1806  
Plan & Profile  
Retaining Wall