

TIP PROJECT: W-5108

CONTRACT: DD00116

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

NASH COUNTY

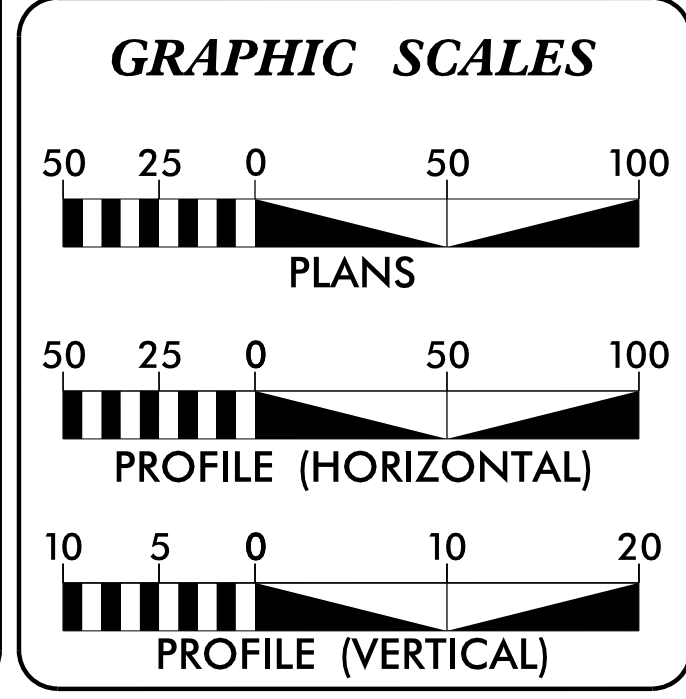
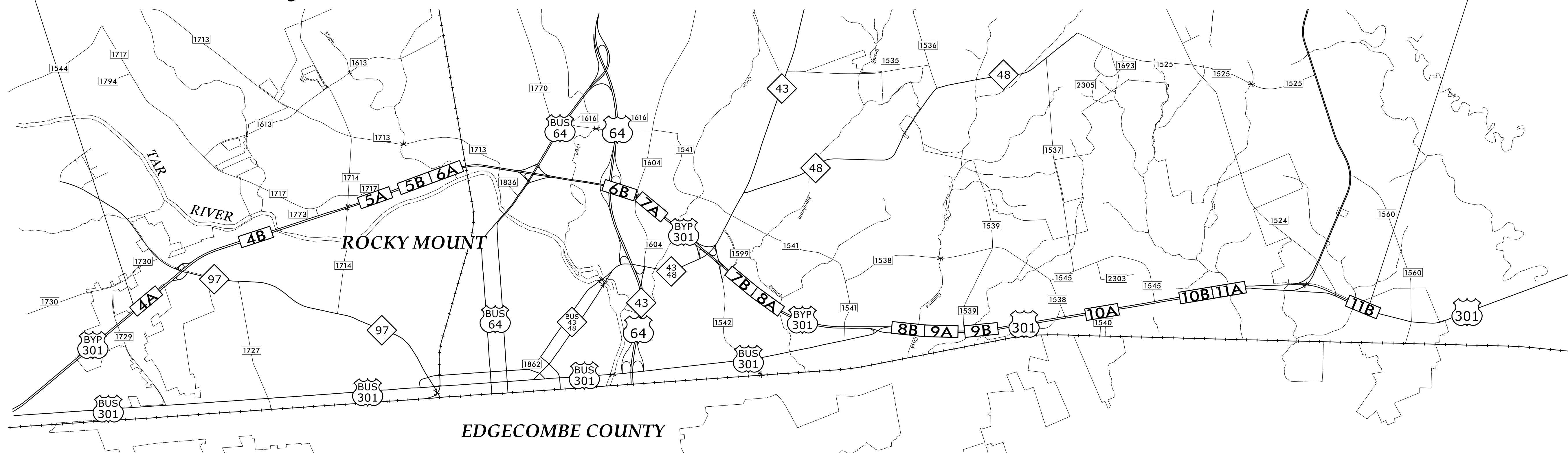
LOCATION: US-301 FROM NORTH OF PORTER RD. TO BURROWS ST.

TYPE OF WORK: GRADING, DRAINAGE AND PAVING

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5108	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
41872.1.1	STP-0301(24)	PE	
41872.3.FR1	STP-0301(24)	CONST	

-L- STA 15+00.00
BEGIN TIP PROJECT W-5108

-L- STA 610+00.00
END TIP PROJECT W-5108



DESIGN DATA

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT W-5108 = 11.269 MILES
TOTAL LENGTH TIP PROJECT W-5108 = 11.269 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
Division 4 DDC
509 Ward Blvd., Wilson NC, 27895

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
N/A

LETTING DATE:
JUNE 26, 2014

T.M. LITTLE, P.E.
PROJECT ENGINEER

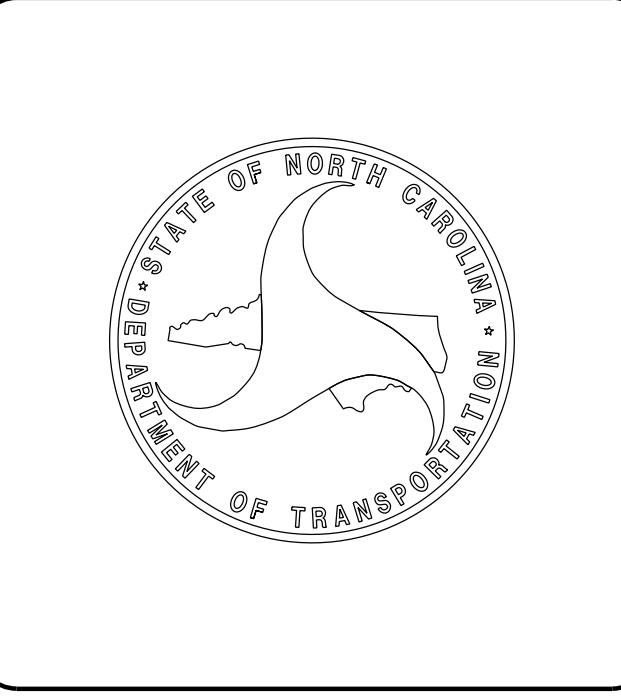
D.R. ETHRIDGE
PROJECT DESIGN ENGINEER

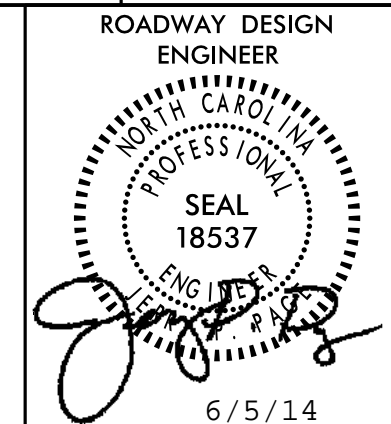
HYDRAULICS ENGINEER

Jerry P. Page 6/5/14 P.E.
SEAL 18537
ENGINEER JERRY P. PAGE

ROADWAY DESIGN ENGINEER

Jerry P. Page 6/5/14 P.E.
SEAL 18537
ENGINEER JERRY P. PAGE





STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARDS DRAWINGS
1-B	CONVENTIONAL SYMBOLS
2 THUR 2-A	TYPICAL SECTIONS AND PAVEMENT SCHEDULE
3-A THUR 3-C	SUMMARY OF DRAINAGE QUANTITIES
3-D	LIST OF EXISTING CONC DITCH TO BE REMOVED
4 THUR 11	PLAN SHEET
TMP-1 THUR TMP-9	TRANSPORTATION MANAGEMENT PLANS
PMP-1	PAVEMENT MARKING PLANS
EC-1 THUR EC-19	EROSION CONTROL PLANS
SIG-1 THUR SIG-5	SIGNAL PLANS

GENERAL NOTES

2012 SPECIFICATIONS
EFFECTIVE: 01-17-12
REVISED: 07/30/12

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01.

SIDE ROADS:

THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

STREET TURNOUT:

STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADII NOTED ON PLANS.

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

LIST OF STANDARDS DRAWINGS

2012 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin - 12" thru 54" Pipe
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates and Hood - for Use on Standard Catch Basin
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.22	Frames and Wide Slot Sag Grates
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.31	Concrete Junction Box - 12" thru 66" Pipe
840.32	Brick Junction Box - 12" thru 66" Pipe
840.34	Traffic Bearing Junction Box - for Use with Pipes 42" and Under
840.36	Traffic Bearing Grated Drop Inlet - for Steel (840.37) Double Frame and Grates
840.37	Steel Grate and Frame
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
840.71	Concrete and Brick Pipe Plug
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
848.04	Street Turnout
852.01	Concrete Islands
876.02	Guide for Rip Rap at Pipe Outlets

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

Table listing symbols for boundaries and property: State Line, County Line, Township Line, City Line, Reservation Line, Property Line, Existing Iron Pin, Property Corner, Property Monument, Parcel/Sequence Number, Existing Fence Line, Proposed Woven Wire Fence, Proposed Chain Link Fence, Proposed Barbed Wire Fence, Existing Wetland Boundary, Proposed Wetland Boundary, Existing Endangered Animal Boundary, Existing Endangered Plant Boundary, Known Soil Contamination: Area or Site, Potential Soil Contamination: Area or Site.

BUILDINGS AND OTHER CULTURE:

Table listing symbols for buildings and other culture: Gas Pump Vent or U/G Tank Cap, Sign, Well, Small Mine, Foundation, Area Outline, Cemetery, Building, School, Church, Dam.

HYDROLOGY:

Table listing symbols for hydrology: Stream or Body of Water, Hydro, Pool or Reservoir, Jurisdictional Stream, Buffer Zone 1, Buffer Zone 2, Flow Arrow, Disappearing Stream, Spring, Wetland, Proposed Lateral, Tail, Head Ditch, False Sump.

RAILROADS:

Table listing symbols for railroads: Standard Gauge, RR Signal Milepost, Switch, RR Abandoned, RR Dismantled.

RIGHT OF WAY:

Table listing symbols for right of way: Baseline Control Point, Existing Right of Way Marker, Existing Right of Way Line, Proposed Right of Way Line, Proposed Right of Way Line with Iron Pin and Cap Marker, Proposed Right of Way Line with Concrete or Granite RW Marker, Proposed Control of Access Line with Concrete CA Marker, Existing Control of Access, Proposed Control of Access, Existing Easement Line, Proposed Temporary Construction Easement, Proposed Temporary Drainage Easement, Proposed Permanent Drainage Easement, Proposed Permanent Drainage / Utility Easement, Proposed Permanent Utility Easement, Proposed Temporary Utility Easement, Proposed Aerial Utility Easement, Proposed Permanent Easement with Iron Pin and Cap Marker.

ROADS AND RELATED FEATURES:

Table listing symbols for roads and related features: Existing Edge of Pavement, Existing Curb, Proposed Slope Stakes Cut, Proposed Slope Stakes Fill, Proposed Curb Ramp, Existing Metal Guardrail, Proposed Guardrail, Existing Cable Guiderail, Proposed Cable Guiderail, Equality Symbol, Pavement Removal.

VEGETATION:

Table listing symbols for vegetation: Single Tree, Single Shrub, Hedge, Woods Line.

Orchard

Table listing symbols for Orchard and Vineyard.

EXISTING STRUCTURES:

Table listing symbols for existing structures: MAJOR: Bridge, Tunnel or Box Culvert, Bridge Wing Wall, Head Wall and End Wall; MINOR: Head and End Wall, Pipe Culvert, Footbridge, Drainage Box: Catch Basin, DI or JB, Paved Ditch Gutter, Storm Sewer Manhole, Storm Sewer.

UTILITIES:

Table listing symbols for utilities: POWER: Existing Power Pole, Proposed Power Pole, Existing Joint Use Pole, Proposed Joint Use Pole, Power Manhole, Power Line Tower, Power Transformer, U/G Power Cable Hand Hole, H-Frame Pole, Recorded U/G Power Line, Designated U/G Power Line (S.U.E.*); TELEPHONE: Existing Telephone Pole, Proposed Telephone Pole, Telephone Manhole, Telephone Booth, Telephone Pedestal, Telephone Cell Tower, U/G Telephone Cable Hand Hole, Recorded U/G Telephone Cable, Designated U/G Telephone Cable (S.U.E.*), Recorded U/G Telephone Conduit, Designated U/G Telephone Conduit (S.U.E.*), Recorded U/G Fiber Optics Cable, Designated U/G Fiber Optics Cable (S.U.E.*).

WATER:

Table listing symbols for water: Water Manhole, Water Meter, Water Valve, Water Hydrant, Recorded U/G Water Line, Designated U/G Water Line (S.U.E.*), Above Ground Water Line.

TV:

Table listing symbols for TV: TV Satellite Dish, TV Pedestal, TV Tower, U/G TV Cable Hand Hole, Recorded U/G TV Cable, Designated U/G TV Cable (S.U.E.*), Recorded U/G Fiber Optic Cable, Designated U/G Fiber Optic Cable (S.U.E.*).

GAS:

Table listing symbols for gas: Gas Valve, Gas Meter, Recorded U/G Gas Line, Designated U/G Gas Line (S.U.E.*), Above Ground Gas Line.

SANITARY SEWER:

Table listing symbols for sanitary sewer: Sanitary Sewer Manhole, Sanitary Sewer Cleanout, U/G Sanitary Sewer Line, Above Ground Sanitary Sewer, Recorded SS Forced Main Line, Designated SS Forced Main Line (S.U.E.*).

MISCELLANEOUS:

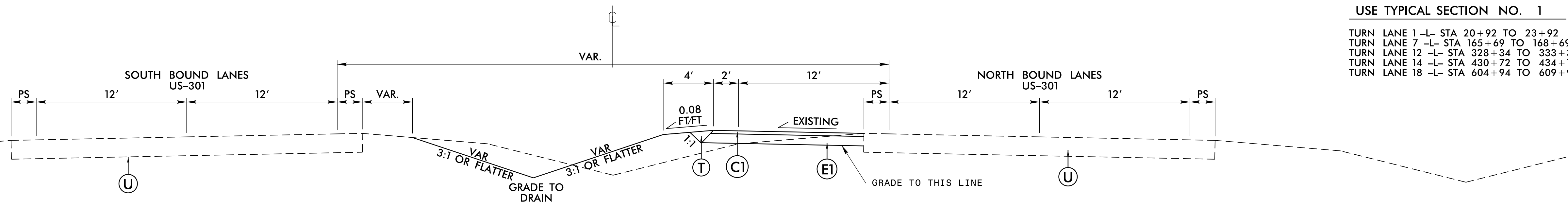
Table listing symbols for miscellaneous: Utility Pole, Utility Pole with Base, Utility Located Object, Utility Traffic Signal Box, Utility Unknown U/G Line, U/G Tank; Water, Gas, Oil, Underground Storage Tank, Approx. Loc., A/G Tank; Water, Gas, Oil, Geoenvironmental Boring, U/G Test Hole (S.U.E.*), Abandoned According to Utility Records, End of Information.

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD.	R1	5" MONOLITHIC CONCRETE ISLAND	T	EARTH MATERIAL.
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YARD.	R2	2'-6" CONCRETE CURB AND GUTTER.	U	EXISTING PAVEMENT.
		R3	CONCRETE EXPRESSWAY GUTTER		

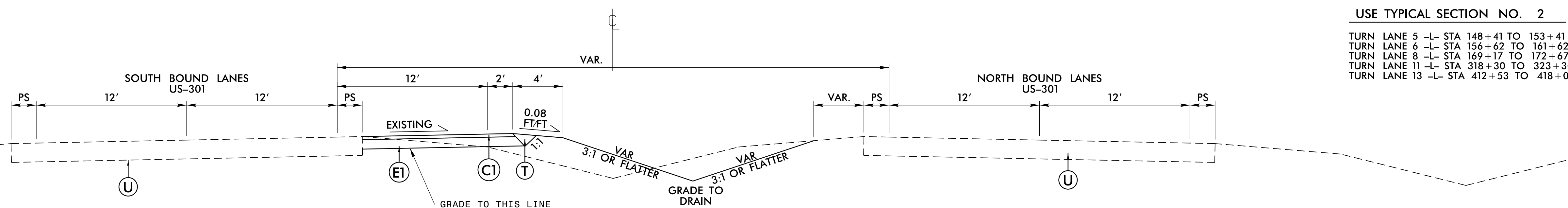
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

PROJECT REFERENCE NO. W-5108	SHEET NO. 2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
 SEAL 18537 6/5/14	 SEAL 18537 6/5/14



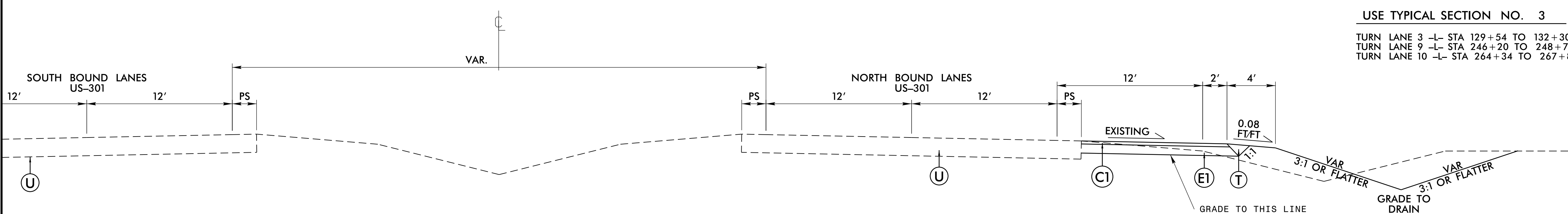
USE TYPICAL SECTION NO. 1
 TURN LANE 1 -L- STA 20+92 TO 23+92
 TURN LANE 7 -L- STA 165+69 TO 168+69
 TURN LANE 12 -L- STA 328+34 TO 333+34
 TURN LANE 14 -L- STA 430+72 TO 434+72
 TURN LANE 18 -L- STA 604+94 TO 609+94

TYPICAL SECTION NO. 1



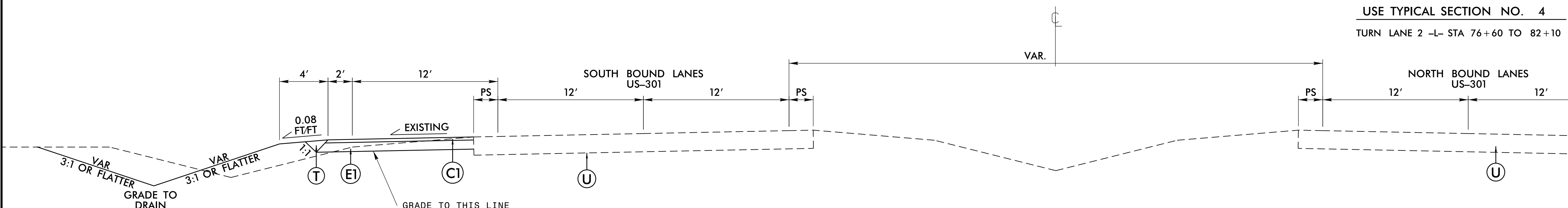
USE TYPICAL SECTION NO. 2
 TURN LANE 5 -L- STA 148+41 TO 153+41
 TURN LANE 6 -L- STA 156+62 TO 161+62
 TURN LANE 8 -L- STA 169+17 TO 172+67
 TURN LANE 11 -L- STA 318+30 TO 323+30
 TURN LANE 13 -L- STA 412+53 TO 418+03

TYPICAL SECTION NO. 2



USE TYPICAL SECTION NO. 3
 TURN LANE 3 -L- STA 129+54 TO 132+30
 TURN LANE 9 -L- STA 246+20 TO 248+70
 TURN LANE 10 -L- STA 264+34 TO 267+87

TYPICAL SECTION NO. 3

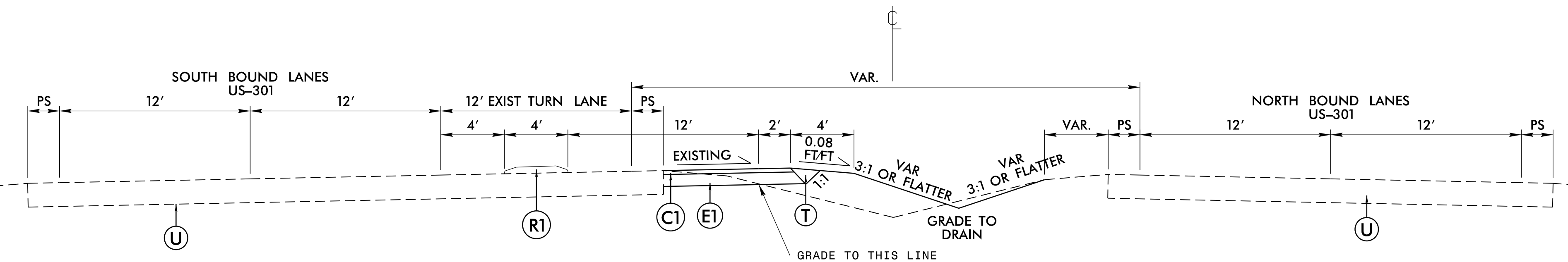


USE TYPICAL SECTION NO. 4
 TURN LANE 2 -L- STA 76+60 TO 82+10

TYPICAL SECTION NO. 4

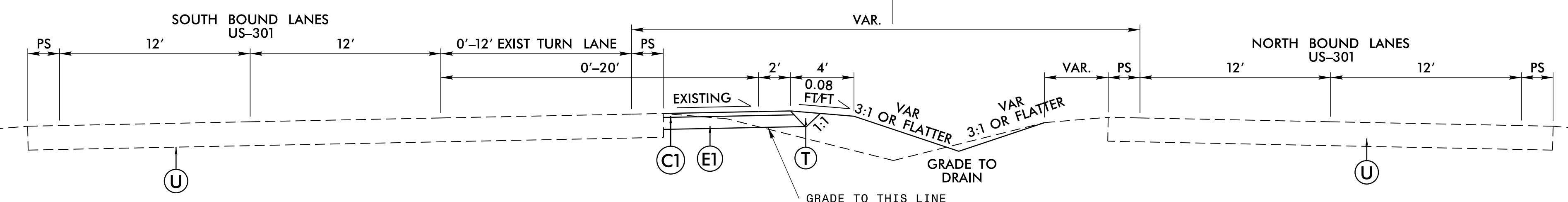
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USE TYPICAL SECTION NO. 5
 TURN LANE 15 -L- STA 486+20 TO 487+52
 TURN LANE 16 -L- STA 527+96 TO 529+28



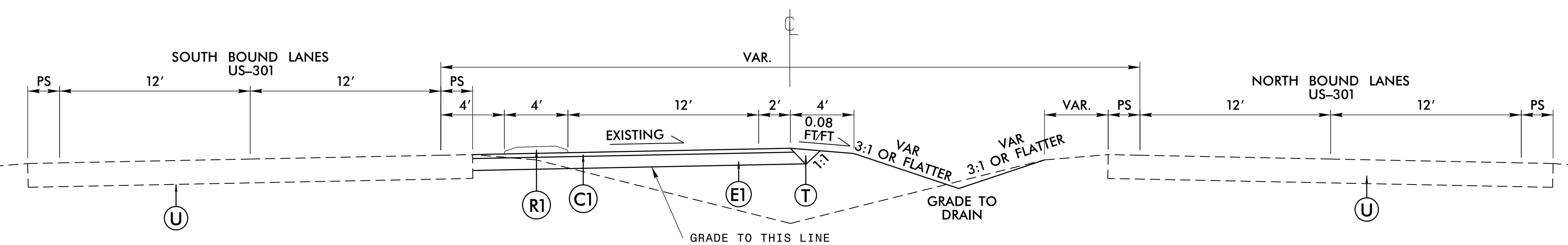
TYPICAL SECTION NO. 5

USE TYPICAL SECTION NO. 6
 TURN LANE 15 -L- STA 487+52 TO 492+52
 TURN LANE 16 -L- STA 529+28 TO 534+28
 TURN LANE 17 -L- STA 542+68 TO 547+68



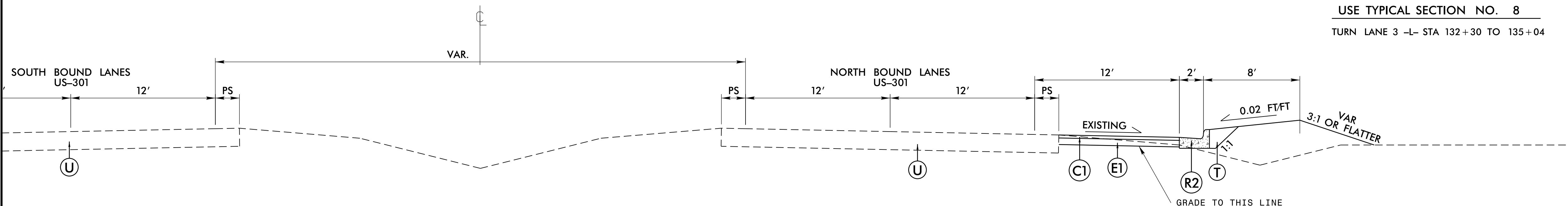
TYPICAL SECTION NO. 6

USE TYPICAL SECTION NO. 7
 TURN LANE 17 -L- STA 541+36 TO 542+68



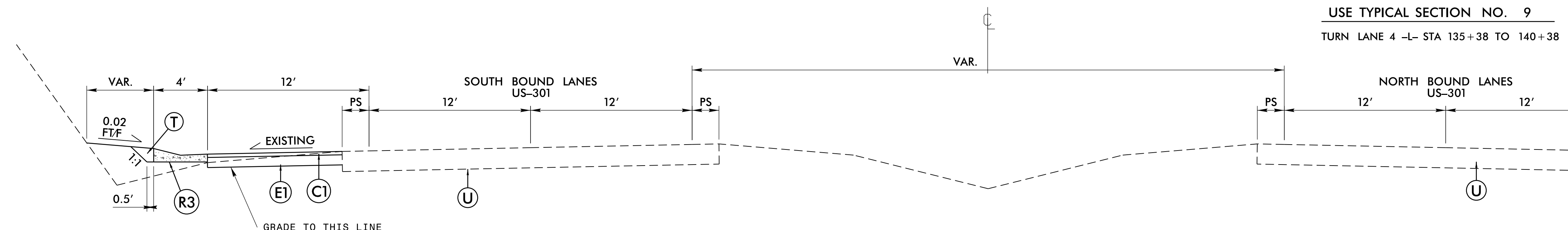
TYPICAL SECTION NO. 7

USE TYPICAL SECTION NO. 8
 TURN LANE 3 -L- STA 132+30 TO 135+04



TYPICAL SECTION NO. 8

USE TYPICAL SECTION NO. 9
 TURN LANE 4 -L- STA 135+38 TO 140+38



TYPICAL SECTION NO. 9

PAVEMENT SCHEDULE

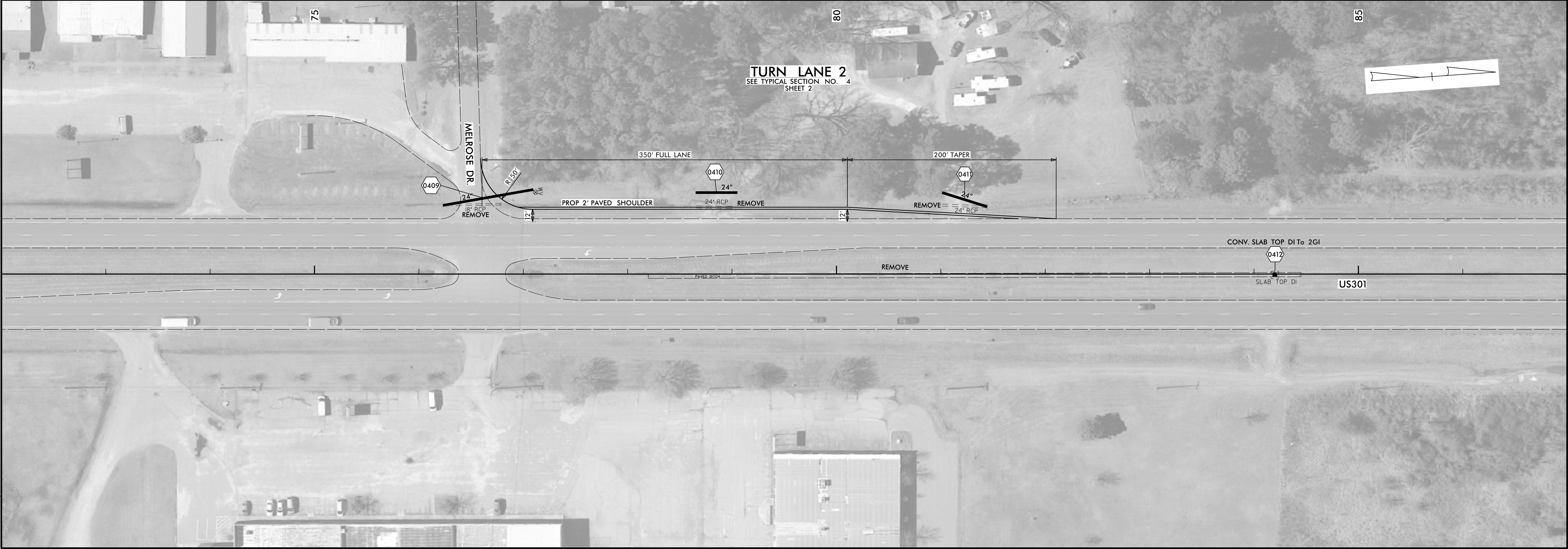
C1	1 1/2" S9.5B
E1	5" B25.0B
R1	CONC ISLAND
R2	2'-6" C & G
R3	EXPRESSWAY GUTTER
T_	EARTH MATERIAL
U_	EXIST. PAVEMENT

**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS**

LIST OF EXISTING CONC DITCH TO BE REMOVED

STATION TO STATION	LOC	N	E	N	E	LENGTH
15+37 TO 15+72		786615	2347072	TO 786649	2347062	35
24+64 TO 28+34		787497	2346786	TO 787849	2346673	370
31+02 TO 36+24		788104	2346590	TO 788601	2346430	522
45+60 TO 50+67		789491	2346141	TO 789980	2346007	507
55+29 TO 55+47		790436	2345939	TO 790454	2345938	18
64+48 TO 64+84		791354	2345956	TO 791389	2345958	36
78+20 TO 84+45		792722	2346053	TO 793346	2346095	625
88+16 TO 88+63		793716	2346122	TO 793763	2346124	47
91+37 TO 91+91		794036	2346145	TO 794091	2346146	55
96+05 TO 96+44		794503	2346175	TO 794542	2346178	39
106+97 TO 107+43		795592	2346251	TO 795638	2346254	46
131+82 TO 132+16	RT	798071	2346429	TO 798105	2346430	34
146+37 TO 146+79		799526	2346476	TO 799567	2346477	42
151+39 TO 151+81		800027	2346493	TO 800069	2346495	43
160+49 TO 160+92		800936	2346520	TO 800980	2346522	43
167+01 TO 167+44		801589	2346540	TO 801631	2346541	42
174+01 TO 174+96		802287	2346579	TO 802381	2346592	95
213+36 TO 213+56		805787	2348285	TO 805805	2348295	20
216+54 TO 216+76		806060	2348450	TO 806078	2348461	22
244+00 TO 244+26		808411	2349866	TO 808434	2349881	27
288+20 TO 288+41		810925	2353429	TO 810936	2353448	22
295+64 TO 295+89	RT	811270	2354088	TO 811282	2354110	25
319+40 TO 319+62		812404	2356176	TO 812415	2356195	22
325+35 TO 325+55		812686	2356700	TO 812696	2356717	20
329+58 TO 329+79		812888	2357072	TO 812898	2357091	21
337+98 TO 338+41		813331	2357785	TO 813355	2357820	42
344+09 TO 349+45		813716	2358258	TO 814094	2358638	537
350+37 TO 355+46		814160	2358701	TO 814555	2359022	509
359+61 TO 363+14		814898	2359256	TO 815201	2359436	353
364+05 TO 369+77		815282	2359480	TO 815799	2359723	572
371+57 TO 372+09		815966	2359790	TO 816015	2359807	52
385+78 TO 387+08	RT	817256	2360392	TO 817400	2360381	148
386+28 TO 386+62	RT	817321	2360364	TO 817353	2360374	34
391+68 TO 392+37	RT	817814	2360582	TO 817881	2360601	69
402+06 TO 402+48		818768	2360983	TO 818803	2361006	41
404+75 TO 405+19		818990	2361134	TO 819027	2361159	44
409+12 TO 409+34		819364	2361359	TO 819384	2361370	22
414+71 TO 415+06		819879	2361577	TO 819911	2361592	35
425+27 TO 429+42		820857	2361975	TO 821250	2362109	414
429+87 TO 430+43		821293	2362124	TO 821346	2362139	55
432+72 TO 433+25		821565	2362210	TO 821614	2362226	52
435+55 TO 436+12	RT	821836	2362288	TO 821891	2362303	57
440+74 TO 441+22		822343	2362402	TO 822389	2362415	48
444+21 TO 444+73		822680	2362482	TO 822732	2362490	52
451+16 TO 452+17		823360	2362628	TO 823459	2362650	101
497+98 TO 499+03		827929	2363648	TO 828032	2363671	105
505+46 TO 506+49	LT	828661	2363806	TO 828761	2363830	103
514+71 TO 515+23		829563	2364010	TO 829614	2364020	52
521+63 TO 522+13		830239	2364159	TO 830288	2364170	50
525+75 TO 527+82		830640	2364253	TO 830843	2364295	207
528+55 TO 529+62		830914	2364311	TO 831018	2364336	107
534+18 TO 536+20		831463	2364436	TO 831660	2364480	202
538+20 TO 538+68		831855	2364522	TO 831902	2364533	48
540+17 TO 541+23		832048	2364566	TO 832151	2364587	106
556+20 TO 557+21	RT	833597	2364965	TO 833691	2365001	100
588+24 TO 589+99	LT	836518	2366282	TO 836633	2366419	181
588+62 TO 589+21	RT	836515	2366347	TO 836575	2366367	63
598+55 TO 599+53		837235	2367026	TO 837302	2367098	98
603+95 TO 604+98		837605	2367420	TO 837676	2367495	103
605+54 TO 609+34		837714	2367535	TO 837976	2367810	380
TOTAL						7920

PROJECT REFERENCE NO.	SHEET NO.
W-5108	04
RW SHEET NO.	04
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
6/5/14	6/5/14

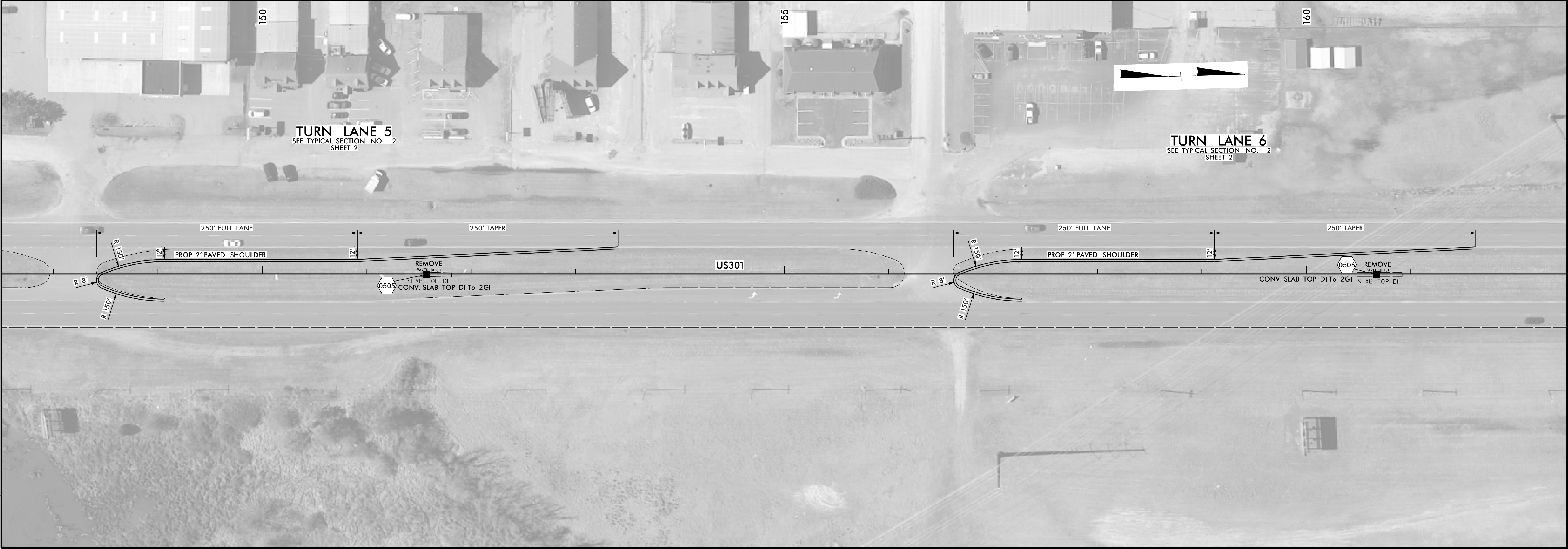
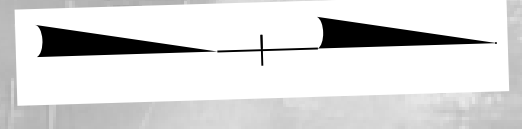
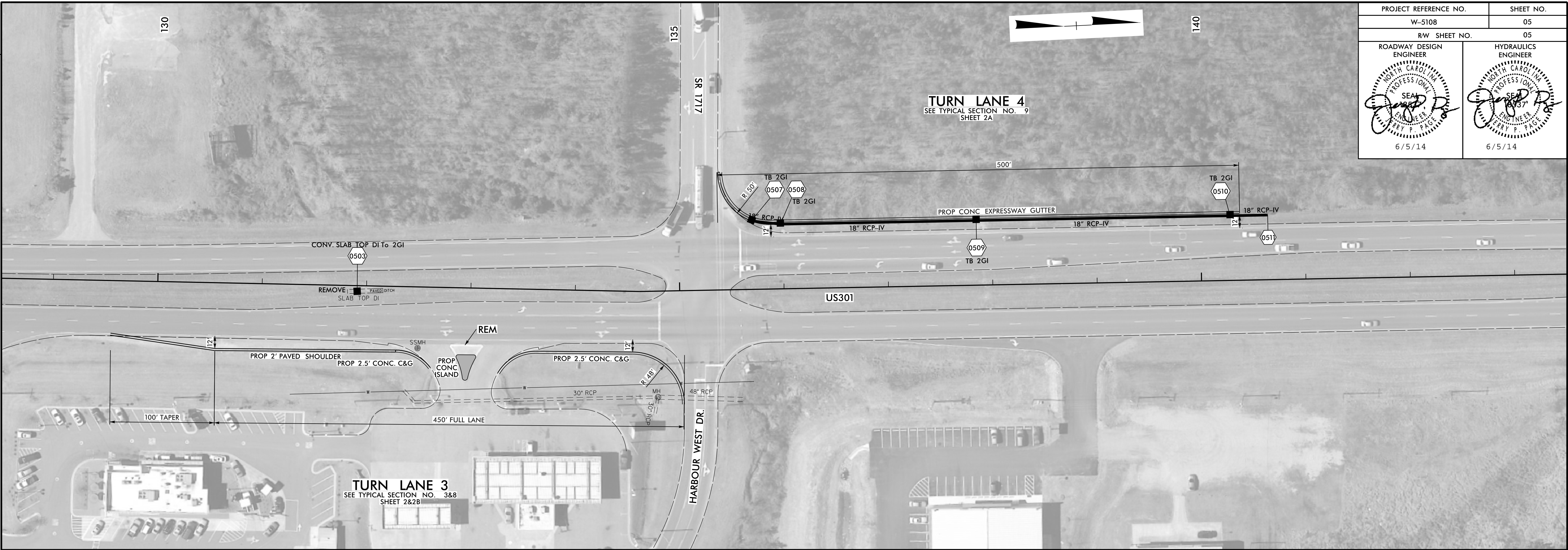
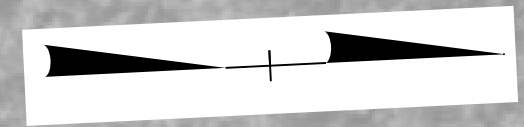


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PROJECT REFERENCE NO.	SHEET NO.
W-5108	05
RW SHEET NO.	05
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
6/5/14	6/5/14

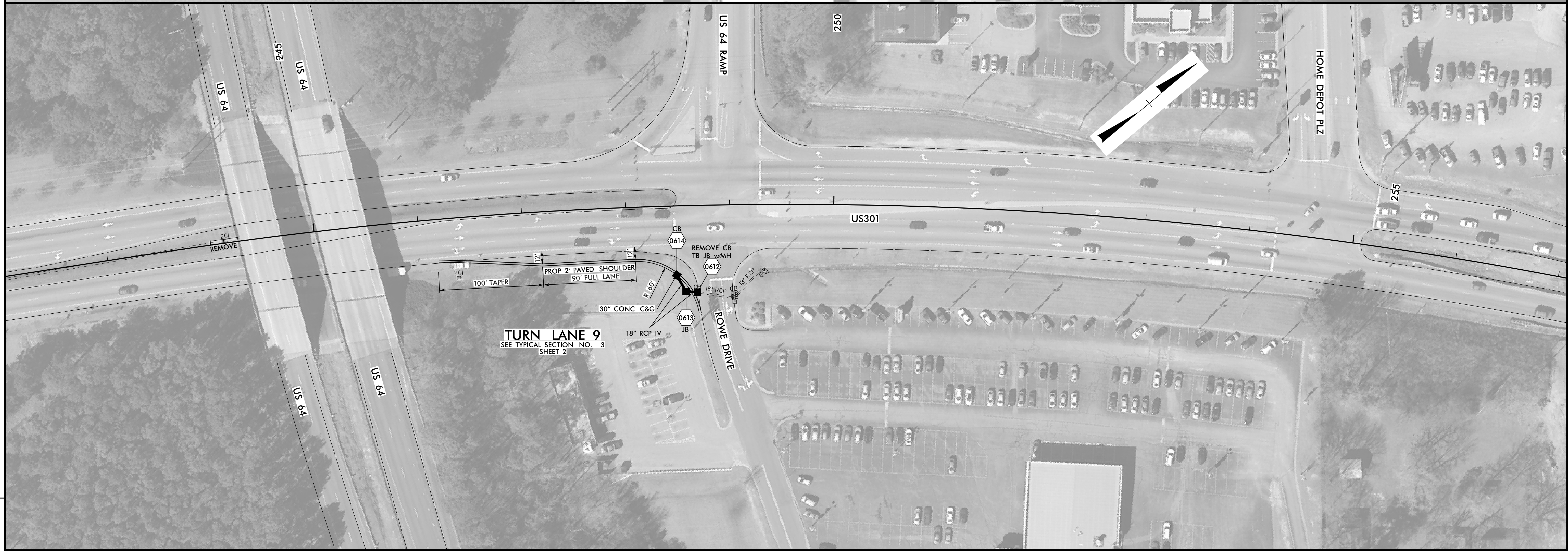
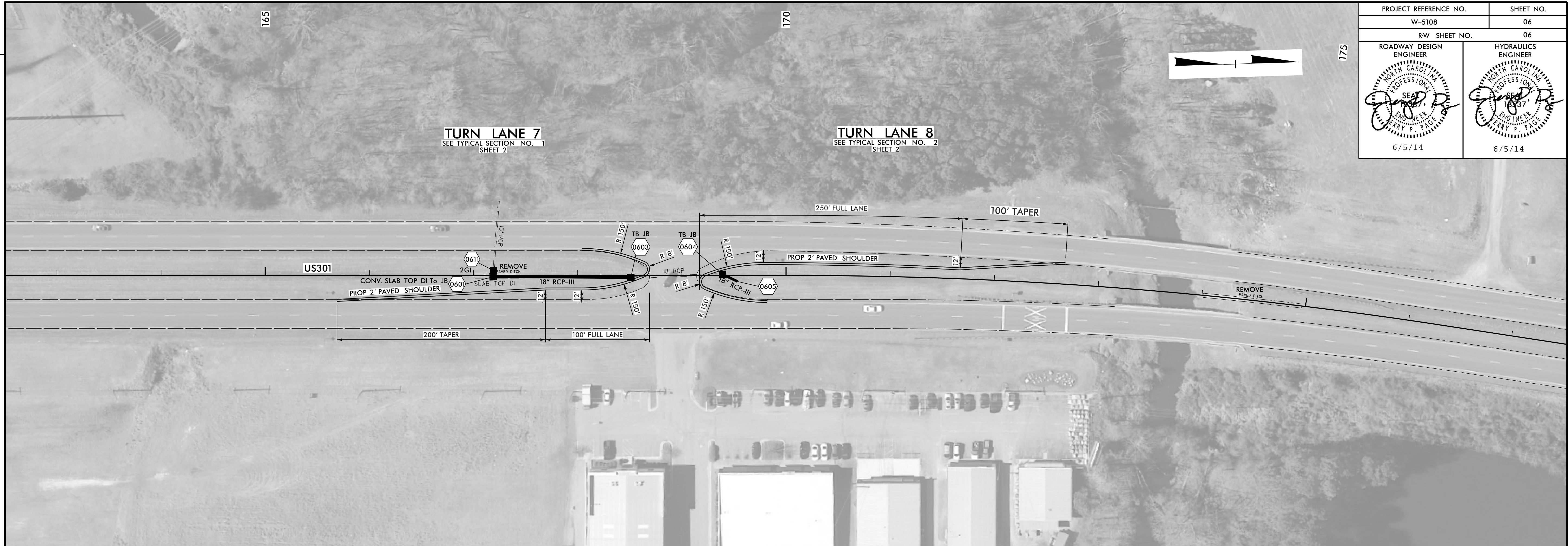
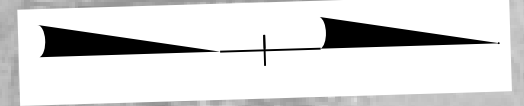


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PROJECT REFERENCE NO.	SHEET NO.
W-5108	06
RW SHEET NO.	06
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
6/5/14	6/5/14



REVISIONS

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PROJECT REFERENCE NO.	SHEET NO.
W-5108	07
RW SHEET NO.	07
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
6/5/14	6/5/14



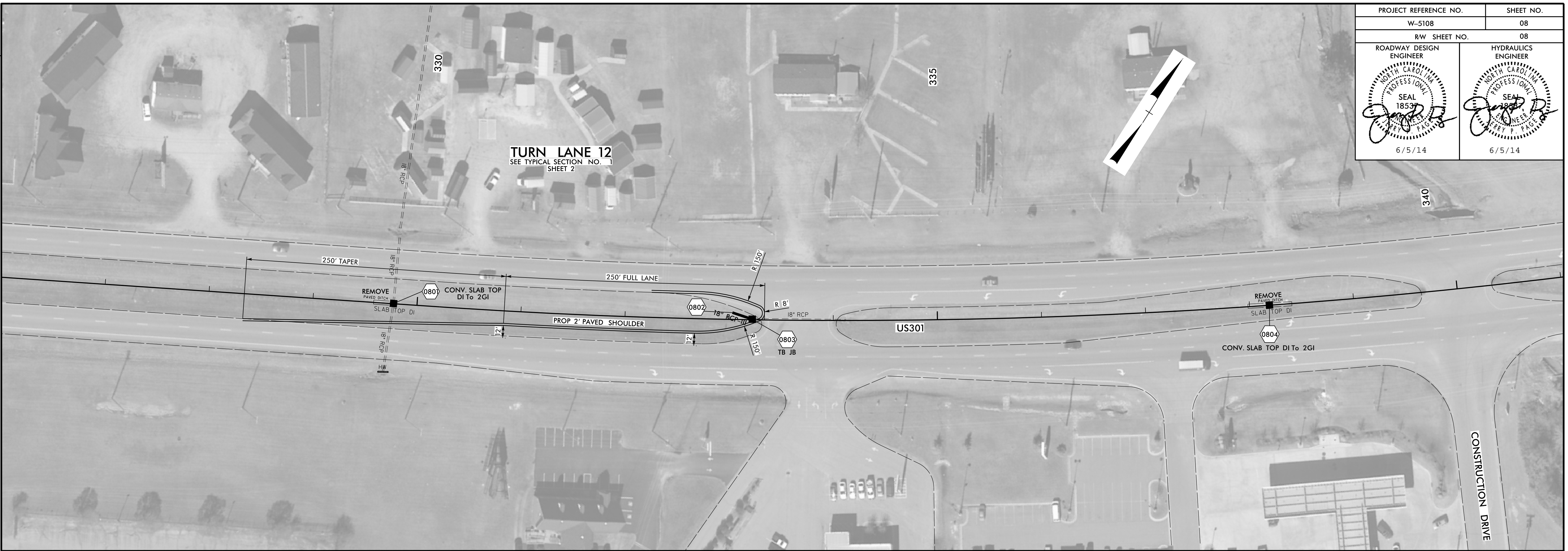
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DDC4

PROJECT REFERENCE NO.	SHEET NO.
W-5108	08
RW SHEET NO.	08
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
6/5/14	6/5/14

TURN LANE 12
SEE TYPICAL SECTION NO. 1
SHEET 2

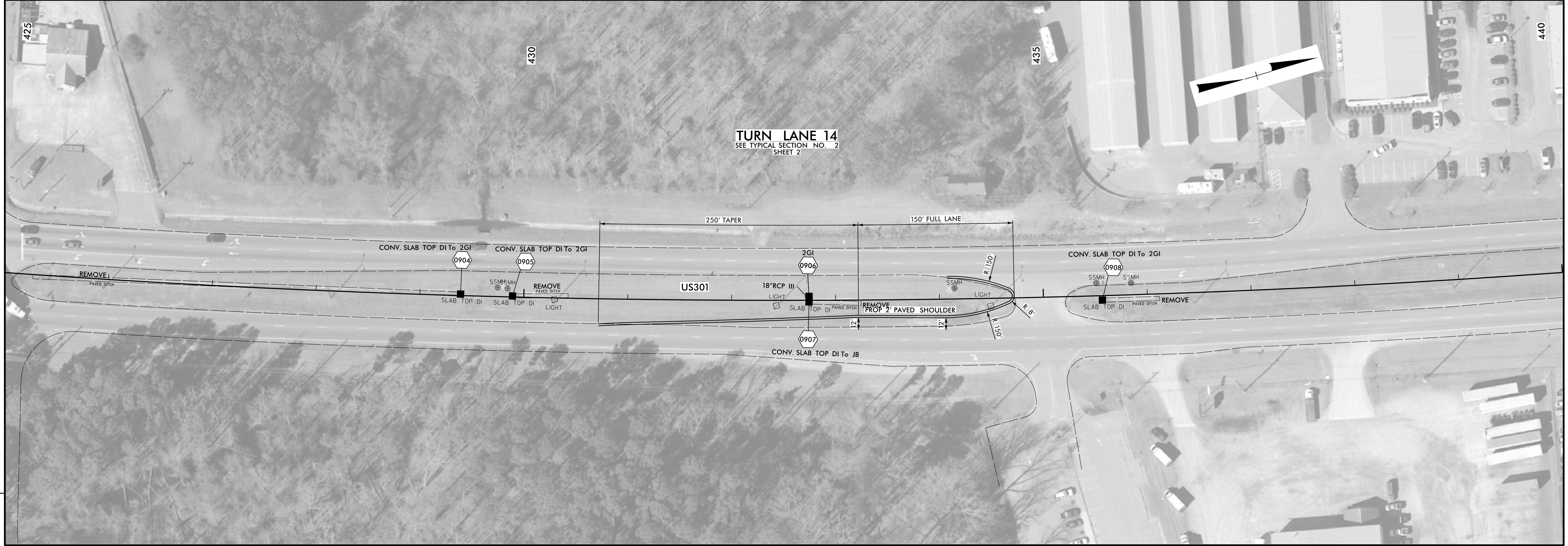
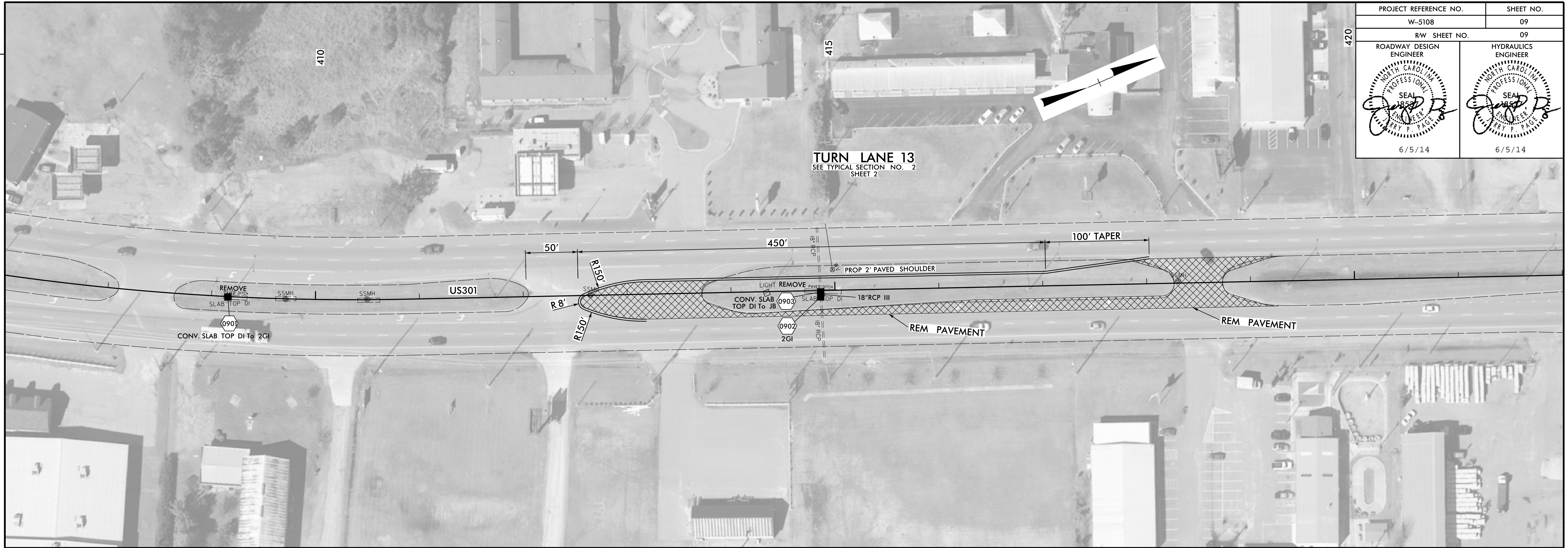


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PROJECT REFERENCE NO.	SHEET NO.
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
6/5/14	6/5/14

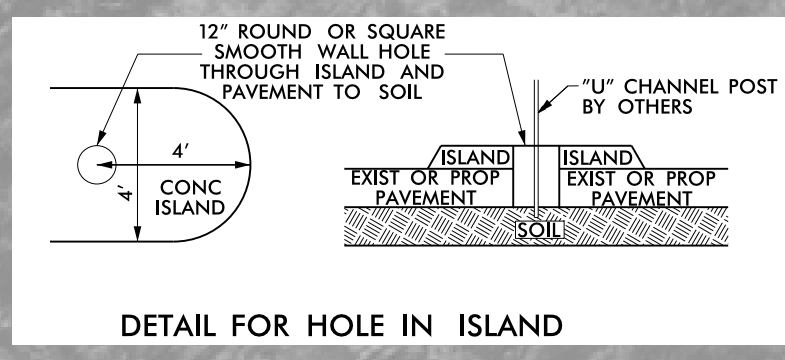
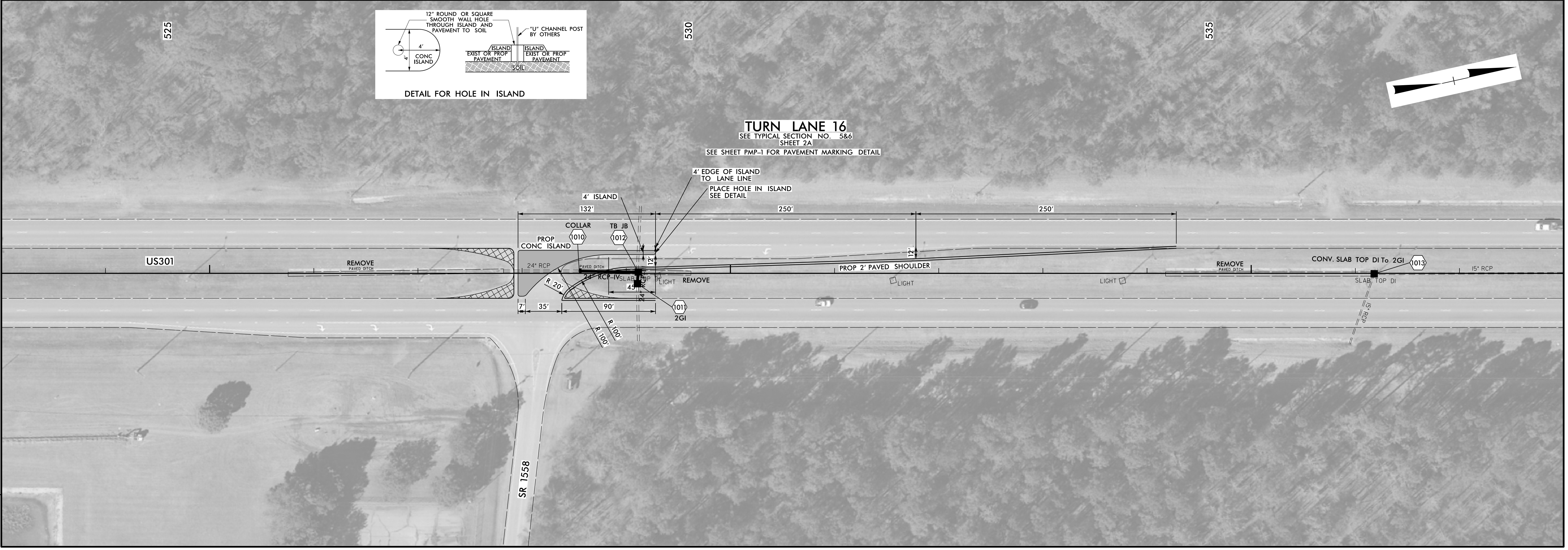
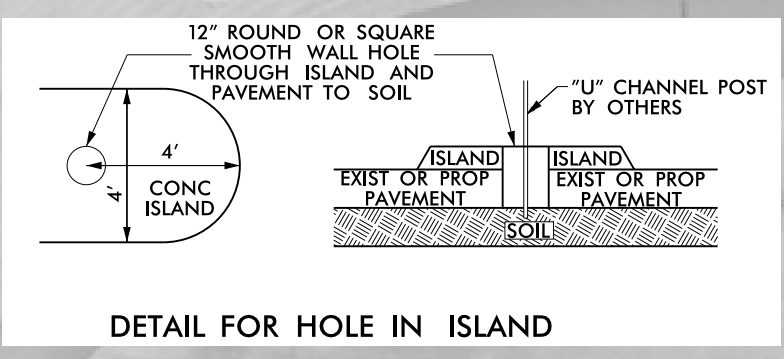
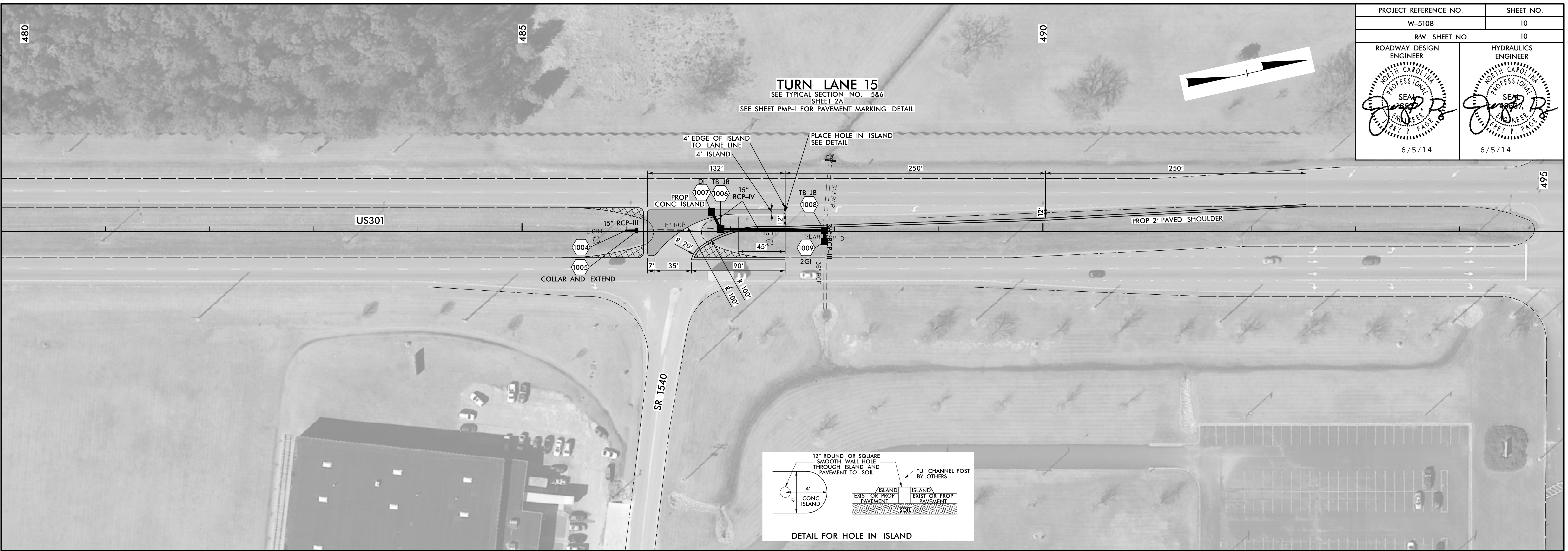


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DDC4

PROJECT REFERENCE NO.	SHEET NO.
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RW SHEET NO.	10
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
6/5/14	6/5/14

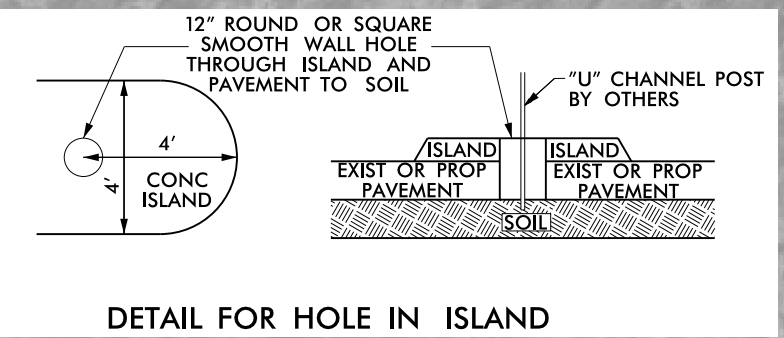


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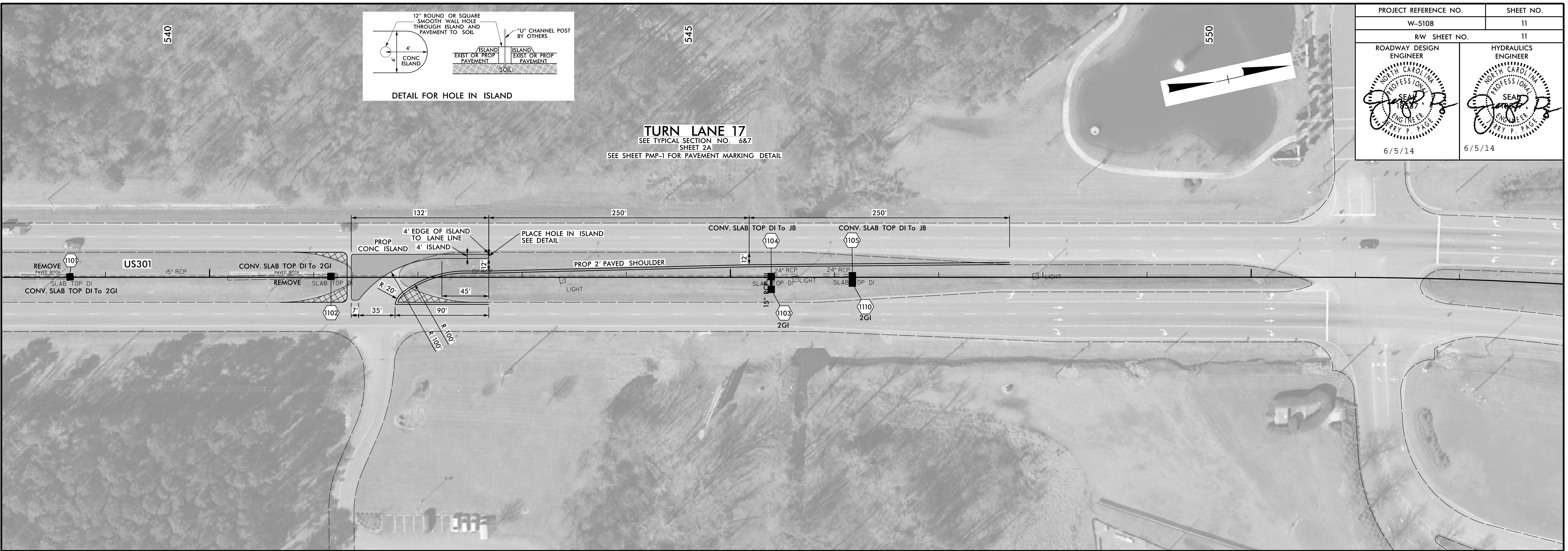
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DDC4

PROJECT REFERENCE NO.	SHEET NO.
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RW SHEET NO.	11
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
6/5/14	6/5/14



TURN LANE 17
 SEE TYPICAL SECTION NO. 6&7 SHEET 2A
 SEE SHEET PMP-1 FOR PAVEMENT MARKING DETAIL



TURN LANE 18
 SEE TYPICAL SECTION NO. 1 SHEET 2



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