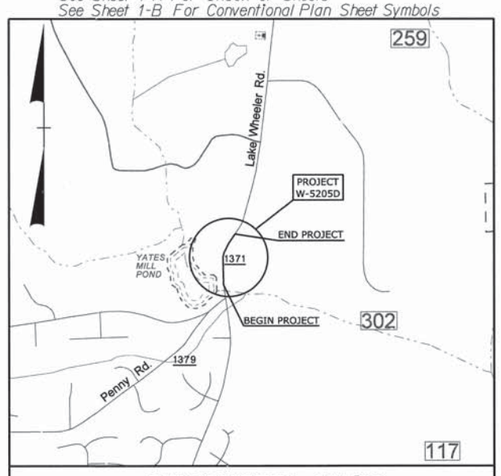
09/08/99

TIP PROJECT: W-5205D

CONTRACT: DE00101

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Plan Sheet Symbols



VICINITY MAP N.T.S.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WAKE COUNTY

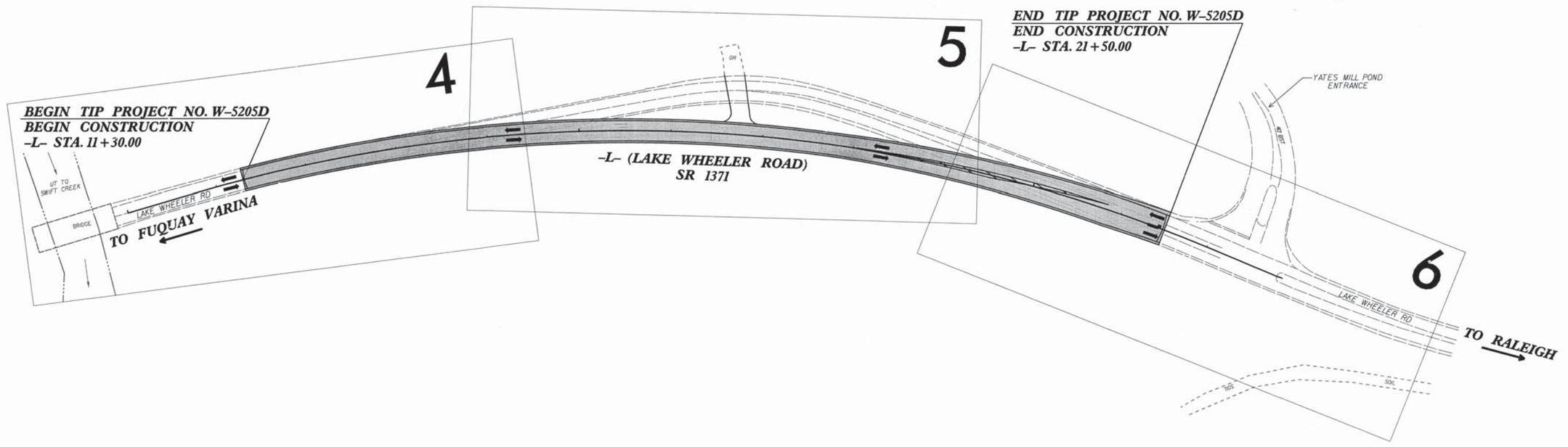
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5205D	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
WBS 45335.1.4	HSIP-1371(2)	PE
WBS 45335.2.FD4	HSIP-1371(2)	ROW/UTIL.
WBS 45335.3.FD4	HSIP-1371(2)	CONST.

LOCATION: SR 1371 (LAKE WHEELER ROAD) FROM NORTH OF SR 1379 (PENNY ROAD) TO SOUTH OF YATES MILL POND ENTRANCE

TYPE OF WORK: GRADING, DRAINAGE, AND PAVING

NAD 83/2011



GRAPHIC SCALES

PLANS: 20 10 0 20 40

PROFILE (HORIZONTAL): 20 10 0 20 40

PROFILE (VERTICAL): 4 2 0 4 8

DESIGN DATA

ADT 2012 = 13000
ADT 2014 = 15600
DHV = DHV %
V = 50 MPH

FUNC CLASS = MAJOR COLLECTOR

PROJECT LENGTH

LENGTH OF ROADWAY T.I.P. PROJECT W-5205D = 0.193 MI.
TOTAL LENGTH OF T.I.P. PROJECT W-5205D = 0.193 MI

PREPARED IN THE OFFICE OF:

Stantec
STANTEC CONSULTING
801 Jones Franklin Road, Suite 300 Raleigh NC 27606
Tel. (919) 851-6866 Fax. (919) 851-7024 www.Stantec.com
License No. F-0672

FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: JANUARY 2014

LETTING DATE:

JASON T. GADDY
PROJECT ENGINEER

BENJAMIN WHITE
PROJECT DESIGN ENGINEER

NCDOT CONTACT: BEN UPSHAW, PE
PROJECT ENGINEER

HYDRAULICS ENGINEER

7/29/2014

NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 025513 ENGINEER MICHAEL D. LINDGREN

SIGNATURE: P.E. 7-29-2014

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

7/25/2014
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benwhite

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
W-5205D	1-A

ROADWAY DESIGN ENGINEER

7-29-2014

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1-C	SURVEY CONTROL SHEET
2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
2-A	SHOULDER WEDGE DETAILS
3	SUMMARY OF QUANTITIES
3-A	SUMMARY OF EARTHWORK, PAVEMENT BREAK-UP AND REMOVAL, CABLE GUIDERAIL, AND ROW PARCEL INDEX
4-6	PLAN/PROFILE SHEET
TMP-1 THRU TMP-6	TRAFFIC MAINTENANCE PLANS
PMP-1 THRU PMP-3	PAVEMENT MARKING PLANS
EC-1 THRU EC-9	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-2	SIGNING PLANS
X-0 THRU X-9	CROSS-SECTIONS

GENERAL NOTES

GENERAL NOTES: 2012 SPECIFICATIONS
EFFECTIVE: 01-17-2012
REVISED: 07-30-2012

GRADING AND SURFACING OR RESURFACING AND WIDENING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

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

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:

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

SUBSURFACE DRAINS:

SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS DIRECTED BY THE ENGINEER.

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.02 USING 3' RADII OR RADII AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE Duke Energy Progress, Time

Warner Cable, Southern Bell

RIGHT-OF-WAY MARKERS:

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.

ROADWAY STANDARD DRAWINGS

EFF. 01-17-2012
REV. 10-30-2012

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	
200.03	Method of Clearing - Method III
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
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 8 - INCIDENTALS	
815.02	Subsurface Drain
840.19	Concrete Grated Drop Inlet Type 'D'
840.24	Frames and Narrow Slot Sag Grates
840.28	Brick Grated Drop Inlet Type 'D'
848.02	Driveway Turnout - Radius Type
876.02	Guide for Rip Rap at Pipe Outlets

7/29/2014
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jsmith2

12/05/11

PROJECT REFERENCE NO.	SHEET NO.
W-5205D	1-B

Note: Not to Scale

****S.U.E. = Subsurface Utility Engineering***

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB
- Known Soil Contamination: Area or Site
- Potential Soil Contamination: Area or Site

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- Buffer Zone 1 — BZ 1
- Buffer Zone 2 — BZ 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line — RW
- Proposed Right of Way Line with Iron Pin and Cap Marker — RW
- Proposed Right of Way Line with Concrete or Granite R/W Marker — RW
- Proposed Control of Access Line with Concrete C/A Marker — CA
- Existing Control of Access — CA
- Proposed Control of Access — CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Drainage / Utility Easement — DUE
- Proposed Permanent Utility Easement — PUE
- Proposed Temporary Utility Easement — TUE
- Proposed Aerial Utility Easement — AUE
- Proposed Permanent Easement with Iron Pin and Cap Marker

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H-Frame Pole
- Recorded U/G Power Line — P
- Designated U/G Power Line (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Booth
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- Recorded U/G Telephone Cable — T
- Designated U/G Telephone Cable (S.U.E.*) — T
- Recorded U/G Telephone Conduit — TC
- Designated U/G Telephone Conduit (S.U.E.*) — TC
- Recorded U/G Fiber Optics Cable — T FO
- Designated U/G Fiber Optics Cable (S.U.E.*) — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- Recorded U/G Water Line — W
- Designated U/G Water Line (S.U.E.*) — W
- Above Ground Water Line — A/G Water

TV:

- TV Satellite Dish
- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- Recorded U/G TV Cable — TV
- Designated U/G TV Cable (S.U.E.*) — TV
- Recorded U/G Fiber Optic Cable — TV FO
- Designated U/G Fiber Optic Cable (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- Recorded U/G Gas Line — G
- Designated U/G Gas Line (S.U.E.*) — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

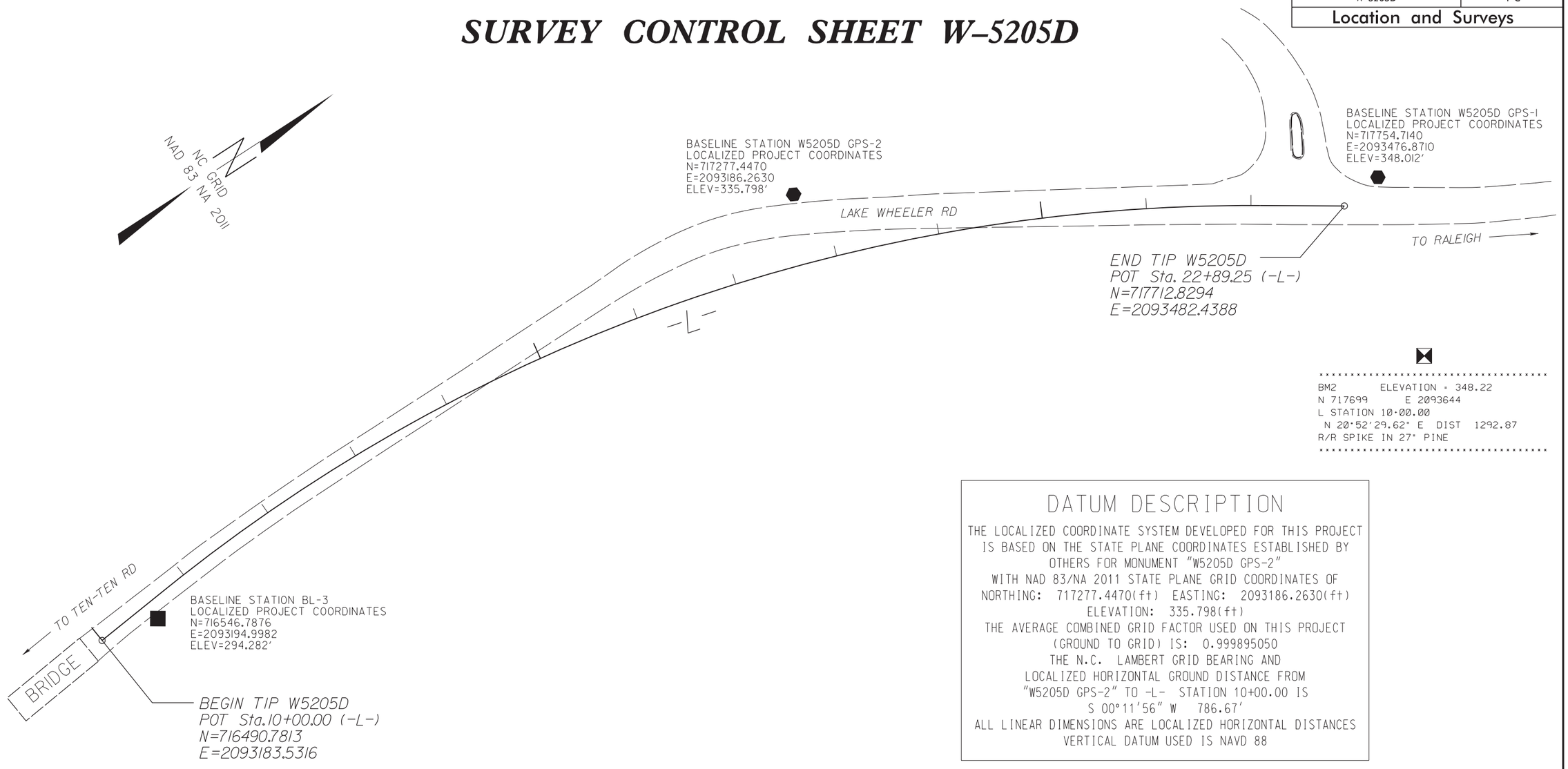
- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- Recorded SS Forced Main Line — FSS
- Designated SS Forced Main Line (S.U.E.*) — FSS

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line — ?UTL
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. — UST
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- U/G Test Hole (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

PROJECT REFERENCE NO.	SHEET NO.
W-5205D	1-C
Location and Surveys	

SURVEY CONTROL SHEET W-5205D




```
**************************************
BM1       ELEVATION = 281.60
N 716441      E 2093315
L STATION 10+00.00
 S 69°18'28.24" E  DIST  140.86
R/R SPIKE IN 24" GUM
**************************************
```

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**************************************
BM2       ELEVATION = 348.22
N 717699      E 2093644
L STATION 10+00.00
 N 20°52'29.62" E  DIST  1292.87
R/R SPIKE IN 27" PINE
**************************************
```

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY OTHERS FOR MONUMENT "W5205D GPS-2" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 717277.4470(ft) EASTING: 2093186.2630(ft) ELEVATION: 335.798(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999895050
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "W5205D GPS-2" TO -L- STATION 10+00.00 IS S 00°11'56" W 786.67'
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

-L-

POINT	DESC.	NORTH	EAST	ELEVATION	STATION	OFFSET
1	W5205D GPS-1	717754.7140	2093476.8710	348.012	OUTSIDE PROJECT LIMITS	
2	W5205D GPS-2	717277.4470	2093186.2630	335.798	17+75.21	67.13 LT
3	BL-3	716546.7876	2093194.9982	294.282	10+54.54	17.13 RT

NOTE: DRAWING NOT TO SCALE

NOTE:
PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM

6/2/99

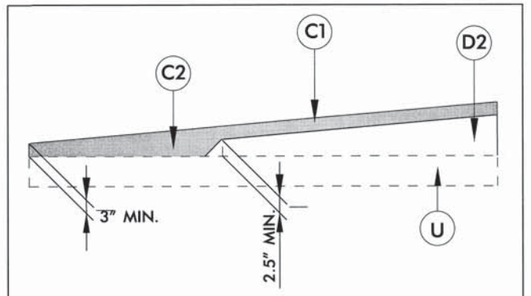
PROJECT REFERENCE NO.	SHEET NO.
W-5205D	2

ROADWAY DESIGN ENGINEER

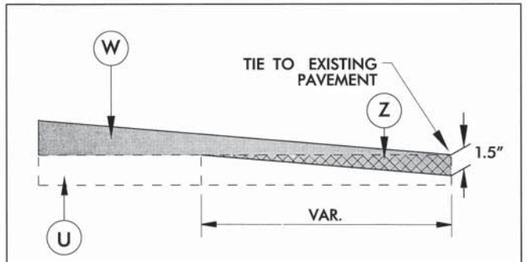
NORTH CAROLINA PROFESSIONAL SEAL 025513 ENGINEER MICHAEL D. LINDGREN 7-29-2014

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1.5" OR GREATER THAN 2".
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2.5" OR GREATER THAN 4".
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	WEDGING. SEE DETAIL THIS SHEET
Z	INCIDENTAL MILLING

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
SEE PLANS FOR VARIABLE PAVED SHOULDER WIDTHS.

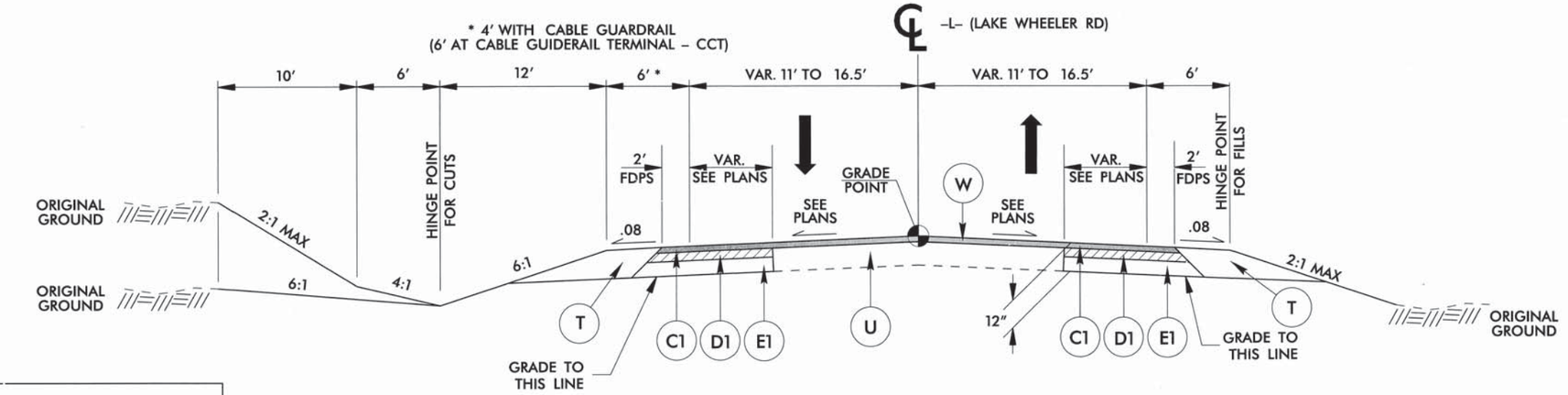


W: WEDGING DETAIL

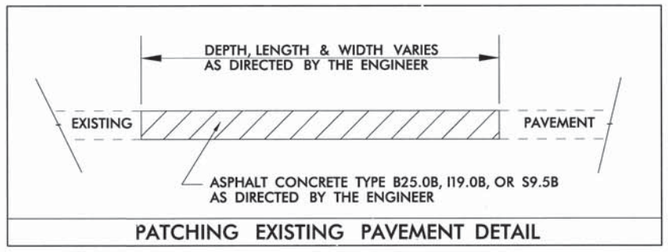


TIE-IN MILLING DETAIL
-L- STA. 11+30.00 TO STA. 12+25.00
-L- STA. 20+75.00 TO STA. 21+50.00

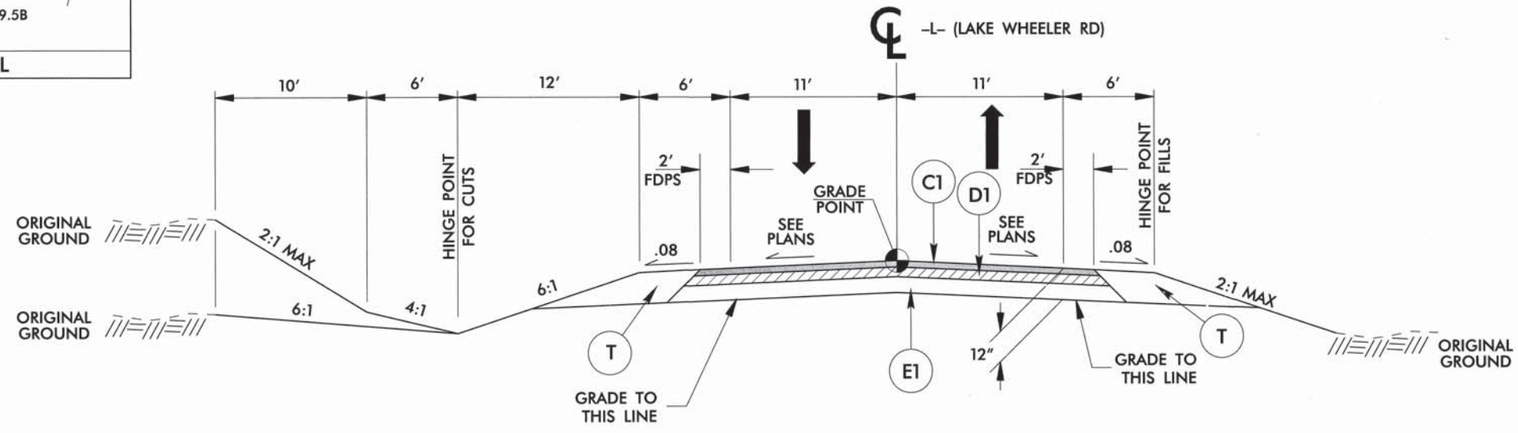
REFERENCE:
FOR ADDITIONAL MILLING DETAIL INFORMATION, SEE MILLING NOTES ON PROFILE SHEETS 4 AND 6 AT BEGINNING AND END OF GRADE



TYPICAL SECTION NO. 1
-L- STA. 11+30.00 TO STA. 15+34.59
-L- STA. 18+51.07 TO STA. 21+50.00



PATCHING EXISTING PAVEMENT DETAIL



TYPICAL SECTION NO. 2
-L- STA. 15+34.59 TO STA. 18+51.07

7/25/2014
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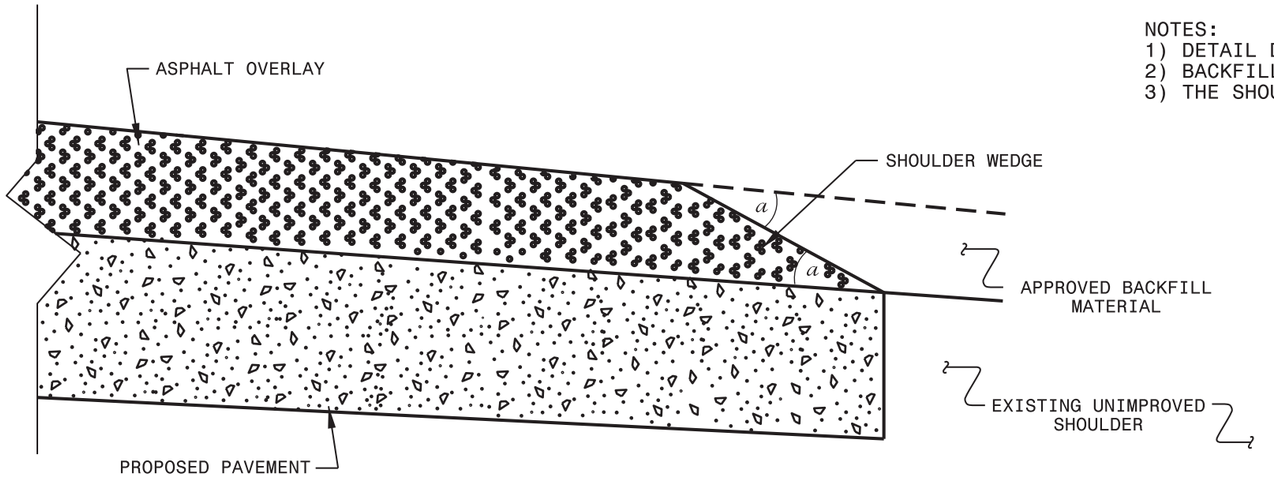
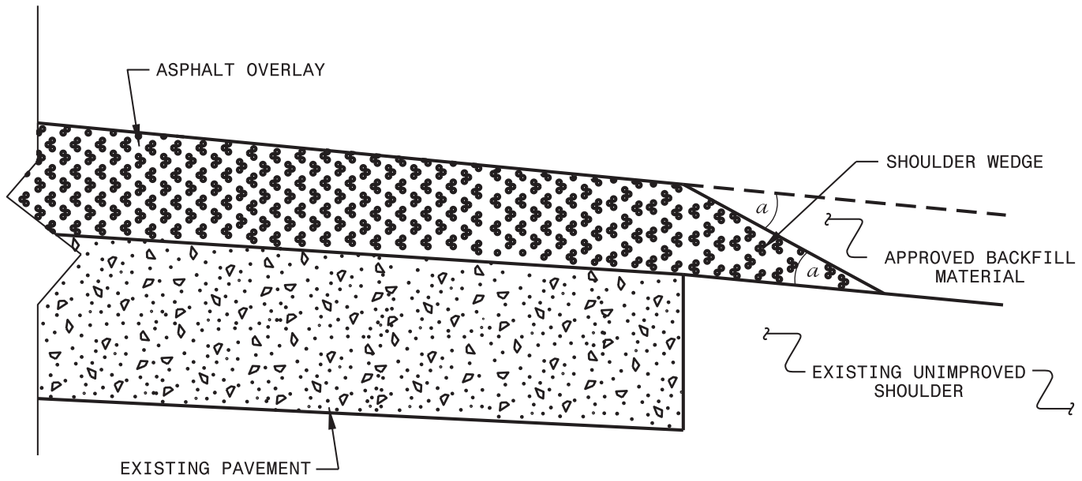
PROJECT REFERENCE NO.	SHEET NO.
W-5205D	2-A

NOTES:
1) DETAIL DOES NOT APPLY TO OGAFC AND ULTRA-THIN BONDED WEARING COURSE.
2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



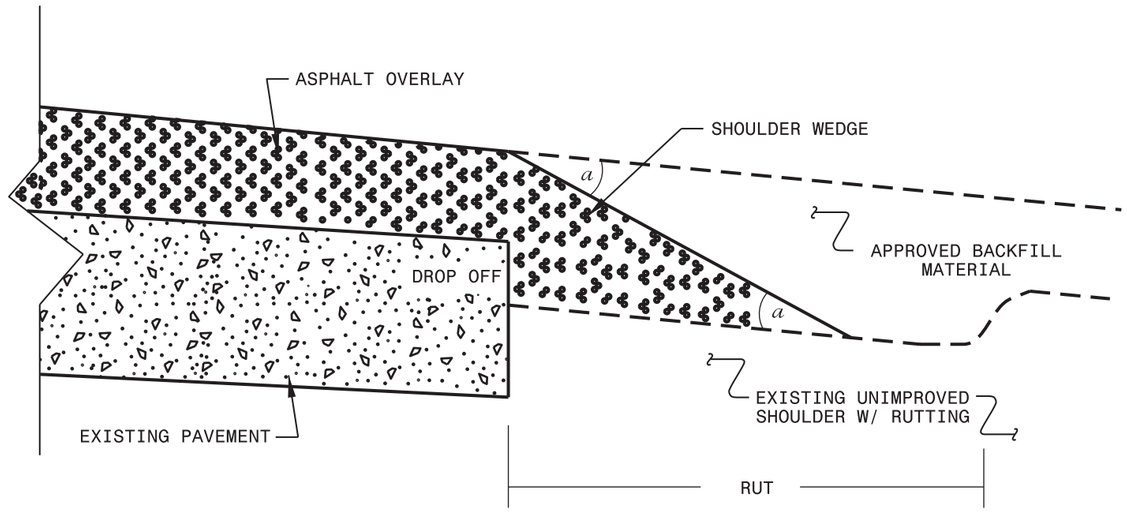
SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ Widening or with Existing Paved Shoulder having no dropoffs)



SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ NO Widening)



SHOULDER WEDGE DETAIL

(Resurfacing Adjacent to Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SHOULDER WEDGE DETAILS

ORIGINAL BY:	T.SPELL	DATE:	7-19-11
MODIFIED BY:		DATE:	10/16/12
CHECKED BY:		DATE:	
FILE SPEC.:	s:usr/details/stand/shoulderwedgedetail.dgn		

$$$$SYSTIME$$$$
$$$$SYSDATE$$$$
$$$$USERNAME$$$$

6/21/00

PROJECT REFERENCE NO.	SHEET NO.
W-5205D	3

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF QUANTITIES

7/25/2014
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kenwhite

COMPUTED BY: BAW DATE: 7-9-2014
CHECKED BY: JTG DATE: 7-9-2014

PROJECT NO.	SHEET NO.
W-5205D	3-A

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

IN CUBIC YARDS

LOCATION	STATION	STATION	UNCL. EXCAV.	UNDERCUT	EMBANK. +20%	BORROW	WASTE
-L-	11+30.00	21+50.00	4656		436		4220
SUBTOTALS:			**4656**		**436**		**4220**
SUBTOTALS:			**0**		**0**		**0**
SUBTOTALS:			**0**		**0**		**0**
SUBTOTALS:			**0**		**0**		**0**
PROJECT SUBTOTAL:			**4656**		**436**		**4220**
ADJUSTMENT DUE TO:							
WASTE IN LIEU OF BORROW							
PROJECT TOTAL:			**4656**		**436**		**4220**
PROJECT TOTAL:			**4656**		**436**		**4220**
EST. 5% TO REPLACE TOPSOIL ON BORROW PIT							
GRAND TOTAL:			4656		436		4220
SAY:			**4700**				

EST. SHOULDER MATERIAL: 320 CY

SUMMARY OF EXISTING ASPHALT PAVEMENT REMOVAL

LINE	Station	Station	LOC LT/RT/CL	YD^2
-L-	14+50	16+62	LT	551.63
-L-	16+76	19+50	LT	784.20
-L-	20+50	21+50	LT	25.95
			TOTAL:	1361.78
			SAY:	1370

SUMMARY OF BREAKING EXISTING ASPHALT PAVEMENT

LINE	Station	Station	LOC LT/RT/CL	YD^2
-L-	12+72	14+50	LT	83.63
-L-	19+00	20+50	LT	196.29
			TOTAL:	279.92
			SAY:	280

ROW PARCEL INDEX

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
1	4, 5, 6	STATE OF NORTH CAROLINA

CABLE GUIDERAIL SUMMARY

NO.	LOCATION	LENGTH (DOUBLE FACED)	LENGTH (SINGLE FACED)	END ANCHOR UNIT	INTERMEDIATE ANCHOR UNIT	COMMENTS
1	PLAN SHEET 4		200	2		SINGLE FACE
	SUBTOTAL:		200	2		
LESS TERMINAL ANCHOR UNITS			-102.5			
	GRAND TOTALS:		97.5	2		
	SAY:		97.5	2		

8/17/99

Stantec

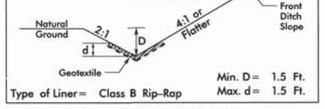
Stantec Consulting Services Inc.
801 Jones Franklin Road
Suite 300
Raleigh, NC 27606
Tel. (919) 851-6866
Fax. (919) 851-7024
www.stantec.com
License No. F-0672

PROJECT REFERENCE NO.	SHEET NO.
W-5205D	4
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 025513 ENGINEER MICHAEL D. LINDGREN — 10-6-2014

HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON — 10/6/2014

DETAIL 1
CUT DITCH
(Not to Scale)



Type of Liner = Class B Rip-Rap
Min. D = 1.5 Ft.
Max. d = 1.5 Ft.

FROM STA. 15+05 TO STA. 16+52 -L- LT
FROM STA. 16+88 TO STA. 18+75 -L- LT
FROM STA. 11+50 TO STA. 18+50 -L- RT

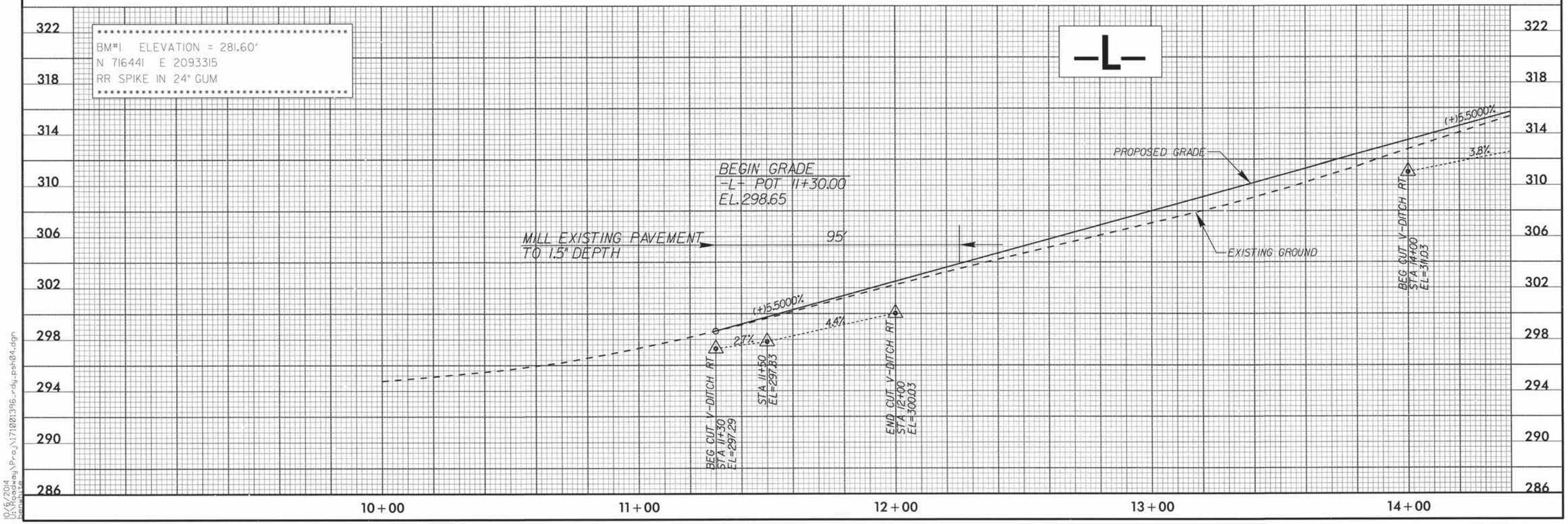
BEGIN TIP PROJECT NO. W-5205D
BEGIN CONSTRUCTION
-L- STA. 11+30.00
MATCH EXISTING

-L-
PI Sta 16+67.50
Δ = 39° 11' 55.0" (RT)
D = 3° 28' 20.9"
L = 1,128.84'
T = 587.52'
R = 1,650.00'
e = .05
RO = 120' (SEE PLANS)

NAD 83

NOTE: DO NOT IMPACT EXISTING 6' CHAIN LINK FENCE

NOTE: DO NOT DISTURB THREE GUM TREES



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brewton

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-L-
PI Sta 16+67.50
Δ = 39° 11' 55.0" (RT)
D = 3° 28' 20.9"
L = 1128.84'
T = 587.52'
R = 1,650.00'
e = .05
RO = 120' (SEE PLANS)

PROJECT REFERENCE NO.	SHEET NO.
W-5205D	5
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER — SEAL 025513 — ENGINEER MICHAEL D. LINDGREN — 10-6-2014

HYDRAULICS ENGINEER — SEAL 26971 — ENGINEER JOSHUA G. DALTON — 10/6/2014

PAVEMENT REMOVAL

NAD 83

STATE OF NORTH CAROLINA
DB 10780 PG 1516

MATCHLINE -L- STA. 14+40.00
SEE SHEET 4

MATCHLINE -L- STA. 20+00.00
SEE SHEET 6

6' CHL
WOODS
EXISTING R/W
GATE
GR
4.5' WD RAIL
REBAR
PAVEMENT REMOVAL
CL 'B' RIP RAP
180 TONS
500 SY FF
15+00
LAKE WHEELER RD
25' BST
15"
20'
R 10.00'
GRADE TO DRAIN
2GI-D
NS
FALSE SUMP
0501
2.0% EDPS
15" RCP-IV
0502
PDE
CL 'B' RIP RAP
265 TONS
741 SY FF
19" PINE
16" PINE
2% EDPS
4' WIRE W/ BARBWIRE
36" OAK
PSRM 160 SY
35" OAK
18" PINE
28" OAK
NOTE: DO NOT DISTURB 35" OAK
NOTE: DO NOT DISTURB 18" PINE
NOTE: DO NOT DISTURB 28" OAK
CL 'B' RIP RAP
229 TONS
636 SY FF
+84.00
300' TRANSITION LT & RT
TV FO
-L-
TV FO-EXISTING R/W
22.00'
24' (TYP.)
75.00'
30' R/W
+78 30'
+10 30'
+78 53'
+10 58'
+99 61'
+00 56'
+01 58'
+51 52'
+50 47'
+00 46'
+00 45'

-L-

STATION	LOCATION	STR. NO. FROM	STR. NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	15" CLASS IV R.C.PIPE	G.D.I. TYPE "D" STD. 840.19 OR 840.28	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24
15+00 -L-	LT	501		317.6				1	1
		501	502		315.7	314.9	60'		

PI = 16+40.00
EL = 326.70'
VC = 150'
K = 111
DS=50 mph

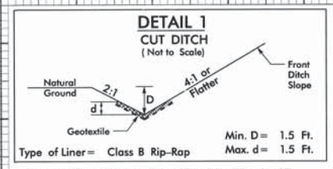
PI = 19+00.00
EL = 344.50'
VC = 350'
K = 61
DS=45 mph

EXISTING GROUND
PROPOSED GRADE
(+)5.5000%
(+)6.8462%
(+)11.1280%
END CUT V-DITCH RT
STA 16+00
EL=322.09
7.2%
3.8%
STA 15+00
EL=314.87

350 346 342 338 334 330 326 322 318 314

15+00 16+00 17+00 18+00 19+00 20+00

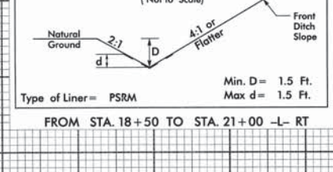
DETAIL 1
CUT DITCH
(Not to Scale)



Min. D = 1.5 Ft.
Max. d = 1.5 Ft.
Type of Liner = Class B Rip-Rap

FROM STA. 15+05 TO STA. 16+52 -L- LT
FROM STA. 16+88 TO STA. 18+75 -L- LT
FROM STA. 11+50 TO STA. 18+50 -L- RT

DETAIL 2
CUT DITCH
(Not to Scale)



Min. D = 1.5 Ft.
Max d = 1.5 Ft.
Type of Liner = PSRM

FROM STA. 18+50 TO STA. 21+00 -L- RT

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PROJECT REFERENCE NO.	SHEET NO.
W-5205D	6
RW SHEET NO.	

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 025513 ENGINEER MICHAEL D. LINDGREN — 10-6-2014

HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON — 10/6/2014

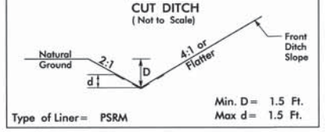
END TIP PROJECT NO. W-5205D
END CONSTRUCTION
-L- STA. 21+50.00
MATCH EXISTING

MATCHLINE -L- STA. 20+00.00
SEE SHEET 5

EXISTING R/W
300' TRANSITION LT & RT
4.5' WD RAIL
+84.00
1+18.00
24' (TYP.)
12" FDPS
20+00
R/W
30'
PSRM 107 SY
+47.49
30.00' RT
+00
45'
+50
46'
+02
46'
+32
34'
38" OAK
NOTE: DO NOT DISTURB 38" OAK
30" OAK
26" OAK
37" OAK
PT Sta. 22+08.82
38" OAK
POT Sta. 22+89.25
19" TWIN OAK
25" OAK
GATE
4' WIRE W/ BARBWIRE
TV FO
EXISTING R/W
STONE CLM W/ 4' WD RAIL FNC
GATE
GATE
STONE CLM W/ 4' WD RAIL FNC
DRIVEWAY TO YATES MILL POND
LS
LS
STATE OF NORTH CAROLINA
DB 10780 PG 1516
4' WIRE
-L- N 33° 20' 13.0" E
75.00'
LAKE WHEELER RD
34' BST
4' 8 WIRE ELECTRIC
GATE
SOIL
4' 3 WIRE ELECTRIC
STATE OF NORTH CAROLINA
DB 10780 PG 1516
NAD 83

-L-
PI Sta 16+67.50
Δ = 39° 11' 55.0" (RT)
D = 3° 28' 20.9"
L = 1,128.84'
T = 587.52'
R = 1,650.00'
e = .05
RO = 120' (SEE PLANS)

DETAIL 2
CUT DITCH
(Not to Scale)



Type of Liner = PSRM
Min. D = 1.5 Ft.
Max d = 1.5 Ft.

FROM STA. 18+50 TO STA. 21+00 -L- RT

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BM#2 ELEVATION = 348.21'
N 717699 E 2093644
RR SPIKE IN 27" PINE

-L-

END GRADE
-L- POT 21+50.00
EL. 347.32

MILL EXISTING PAVEMENT TO 1.5" DEPTH
75'
PROPOSED GRADE
(+)1.280%
EXISTING GROUND

350
346
342
338
334
330
326
20+00
21+00
22+00

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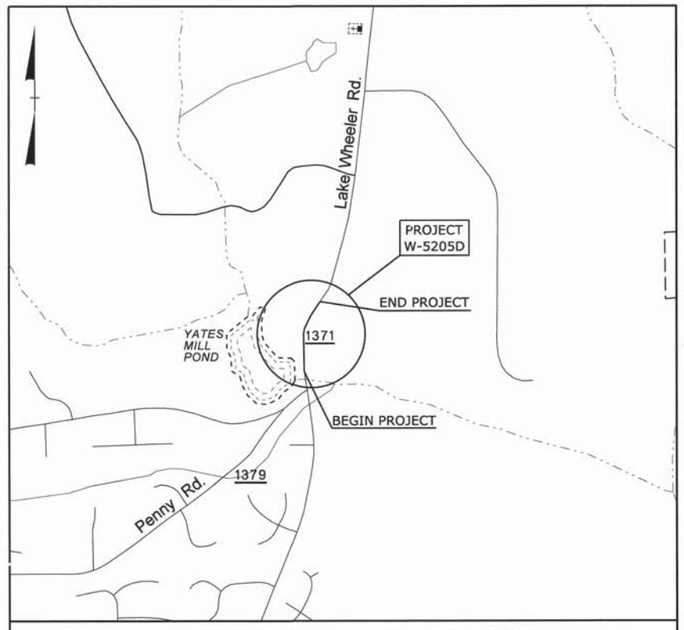
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

WAKE COUNTY



VICINITY MAP N.T.S.

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND TEMPORARY PAVEMENT MARKING SCHEDULE
TMP-2	GENERAL NOTES
TMP-3	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
TMP-5	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL
TMP-6	DETOUR ROUTE

SHEET NO.
TMP-1

TIP PROJECT: W-5205D

WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. — *STATE TRAFFIC MANAGEMENT ENGINEER*
JOSEPH ISHAK, P.E. — *CENTRAL WORK ZONE TRAFFIC CONTROL ENGINEER*
MICHAEL STEELMAN — *TRAFFIC CONTROL PROJECT DESIGN ENGINEER*

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BETSY L. WATSON, P.E. — *TRAFFIC ENGINEER*
GEORGE KARAGEORGE — *WORK ZONE TRANSPORTATION DESIGN MANAGER*
REGINA CULLEN, E.I. — *TRANSPORTATION DESIGNER*

APPROVED Betsy L Watson
DATE: 7/24/14

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 29449 ENGINEER BETSY L. WATSON

7/24/2014
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rcullen

PROJ. REFERENCE NO.	SHEET NO.
W-5205D	TMP-1A

LEGEND

DIRECTION OF TRAFFIC FLOW

DIRECTION OF PEDESTRIAN TRAFFIC FLOW

WORK AREA PAVEMENT REMOVAL

NORTH ARROW

TYPE III BARRICADE

CONE

DRUM SKINNY DRUM TUBULAR MARKER

CHANGEABLE MESSAGE SIGN (CMS)

FLAGGER

FLASHING ARROW BOARD(TYPE C)

LAW ENFORCEMENT

TRUCK MOUNTED ATTENUATOR (TMA)

PORTABLE CONCRETE BARRIER (PCB)

TEMPORARY CRASH CUSHION

TEMPORARY SHORING (XX)

WORK ZONE SIGN-PORTABLE

WORK ZONE SIGN-STATIONARY

WORK ZONE SIGN-STATIONARY OR PORTABLE

SIGNALS

EXISTING PROPOSED TEMP TEMPORARY

PAVEMENT MARKINGS

EXISTING PAVEMENT MARKING (GRAY)

SKIP LINES

MINI-SKIP LINES

SOLID LINES

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

EXISTING PAVEMENT MARKING SYMBOLS (HOLLOW)

ONLY PAVEMENT MARKING ALPHANUMERIC CHARACTERS

PAVEMENT MARKERS

CRYSTAL/CRYSTAL

CRYSTAL/RED

YELLOW/YELLOW

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - 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
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.06	WARNING SIGNS FOR BLASTING ZONES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY - DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXITS AND ENTRANCE RAMPS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS
1205.11	PAVEMENT MARKINGS - RAILROAD CROSSINGS
1205.12	PAVEMENT MARKINGS - BRIDGES
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

TEMPORARY PAVEMENT MARKING SCHEDULE

TEMPORARY PAVEMENT MARKING SCHEDULE	
SYMBOL	DESCRIPTION
PAINT PAVEMENT MARKING LINES (4")	
PA	WHITE EDGELINE
PD	2'-6' WHITE MINISKIP
PE	WHITE SOLID LANE LINE
PI	YELLOW DOUBLE CENTER
PAINT PAVEMENT MARKING LINES (8")	
PP	YELLOW DIAGONAL

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APPROVED betsy watson DATE: 7/24/14

SEAL — NORTH CAROLINA PROFESSIONAL SEAL 29449 ENGINEER BETSY L. WATSON

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

LEGEND

ROADWAY STANDARD DRAWINGS

TEMPORARY PAVEMENT MARKING SCHEDULE

7/24/2014
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PROJ. REFERENCE NO.	SHEET NO.
W-5205D	TMP-2

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
ALL ROADS	6:00 A.M.-9:00 A.M. MONDAY THRU FRIDAY 4:00 P.M.-7:00 P.M. MONDAY THRU FRIDAY

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME
ALL ROADS

HOLIDAY

1) FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.

2) FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31ST TO 7:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 P.M. THE FOLLOWING TUESDAY.

3) FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 7:00 P.M. MONDAY.

4) FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 7:00 P.M. TUESDAY.

5) FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE DAY AFTER INDEPENDENCE DAY. IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY; THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.

6) FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 7:00 P.M. TUESDAY.

7) FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 7:00 P.M. MONDAY.

8) FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

LANE AND SHOULDER CLOSURE REQUIREMENTS

C) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.

D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRANSPORTATION MANAGEMENT PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

G) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT EDGE DROP OFF REQUIREMENTS

H) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPEN TRAVEL LANE THAT HAS A DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

I) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT IN ADVANCE AND A MINIMUM OF ONCE EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

J) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

TRAFFIC CONTROL DEVICES

K) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

PAVEMENT MARKINGS AND MARKERS

L) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
LAKE WHEELER ROAD	PAINT	TEMPORARY RAISED

M) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

N) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

MISCELLANEOUS

O) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) (XXX FT) AND (XXXX FT) RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

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License No. F-0672

APPROVED:_____ DATE:_____

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER BETSY L. WATSON 9/22/14

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

GENERAL NOTES

9/22/2014
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PROJ. REFERENCE NO.	SHEET NO.
W-5205D	TMP-3

PHASING

PHASE I

STEP 1:
PRIOR TO ANY WORK OPERATIONS, INSTALL WORK ZONE ADVANCE WARNING SIGNS ON SR 1371 (LAKE WHEELER ROAD) PER ROADWAY STANDARD DRAWING 1101.01, SHEET 3 OF 3.

STEP 2:
USING LANE CLOSURES AS NEEDED PER RSD 1101.02 SHEET 1 OF 15, CONSTRUCT PROPOSED ROADWAY AS MUCH AS POSSIBLE, UP TO BUT NOT INCLUDING THE FINAL LAYER OF PAVEMENT. (TMP-4).

PHASE II

STEP 1:
USING OPTIONS 1 AND/OR 2 CONSTRUCT TIE-INS AND OPEN PROPOSED REALIGNMENT OF SR 1371 (LAKE WHEELER RD.) TO TRAFFIC.

OPTION 1:

CONSTRUCT TIE-INS USING LANE CLOSURES PER ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 15 AND AS FOLLOWS:

STEP 1A:
PLACE TRAFFIC IN A ONE-LANE, TWO-WAY PATTERN ON THE WEST SIDE (SOUTHBOUND LANE) OF EXISTING LAKE WHEELER ROAD TO CONSTRUCT WEDGING FOR EAST SIDE TIE-IN. RAMP ASPHALT DOWN ON EXISTING NORTHBOUND LANE OF LAKE WHEELER ROAD EACH DAY IN ORDER TO RETURN TRAFFIC TO A TWO-LANE, TWO-WAY PATTERN ON THE EXISTING ALIGNMENT AT THE END OF EACH DAY'S OPERATION.

STEP 1B:
PLACE TRAFFIC IN A ONE-LANE, TWO-WAY PATTERN ON THE EAST SIDE (NORTHBOUND LANE) OF THE NEW ALIGNMENT OF LAKE WHEELER ROAD TO CONSTRUCT REMAINING WEDGING AND COMPLETE TIE-INS. RETURN TRAFFIC TO A TWO-LANE, TWO-WAY PATTERN ON THE NEW ALIGNMENT AT THE END OF EACH DAY'S OPERATION.

OPTION 2:

STEP 1A:
INSTALL ROAD CLOSURE SIGNING ACCORDING TO TMP-6 AND RSD. 1101.03 SHEET 1 OF 9 AND COVER AS APPROPRIATE.

INTERMEDIATE CONTRACT TIME:
COMPLETE WORK REQUIRED OF OPTION 2, STEPS 1B-1D WITHIN ONE WEEKEND (FRIDAY 7:00PM TO MONDAY 6:00AM).

STEP 1B:
IN ONE CONTINUOUS WORK PERIOD, UNCOVER ROAD CLOSURE SIGNING, AND INSTALL DEVICES TO CLOSE SR 1371 (LAKE WHEELER RD.) PER SHEET TMP-6 AND RSD 1101.03 SHEET 1 OF 9.

STEP 1C:
WITH SR 1371 (LAKE WHEELER RD.) CLOSED TO TRAFFIC, CONSTRUCT PROPOSED TIE-INS, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE. PLACE TEMPORARY MARKINGS AND MARKERS IN FINAL TRAFFIC PATTERN AND SHIFT TRAFFIC TO FINAL TRAFFIC PATTERN. (TMP-5)

STEP 1D:
REMOVE DEVICES AND SIGNS CLOSING SR 1371 (LAKE WHEELER RD.) AND OPEN ROAD TO TRAFFIC.

STEP 2:
UPON COMPLETION OF ALL OTHER CONSTRUCTION OPERATIONS, PLACE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS. USE LANE CLOSURES PER ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 15 AS NECESSARY.

STEP 3:
REMOVE ALL WORK ZONE TRAFFIC CONTROL SIGNING AND DEVICES.

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801 Jones Franklin Road-Suite 300
Raleigh, NC 27606
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Fax. (919) 851-7024
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License No. F-0672

APPROVED:_____ DATE:_____

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 029449 ENGINEER BETSY L. WATSON 9/22/14

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

PHASING

9/22/2014
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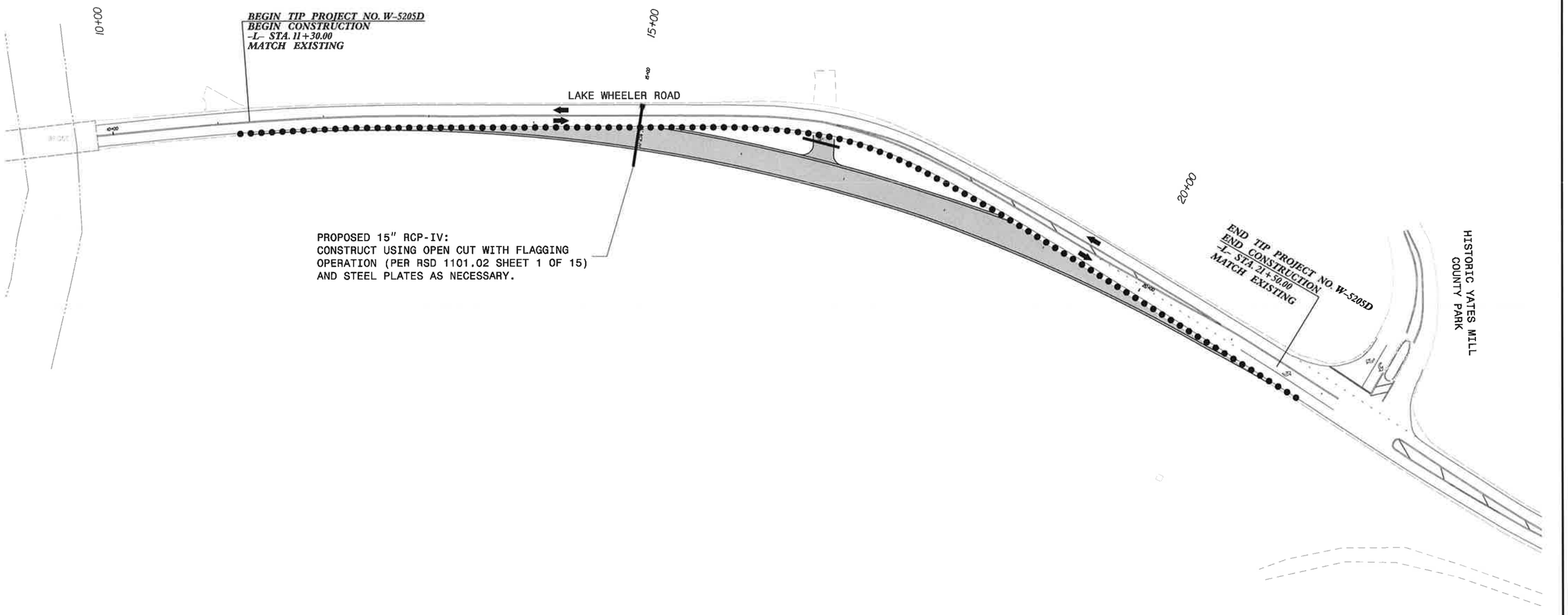
rcullen

PROJ. REFERENCE NO.	SHEET NO.
W-5205D	TMP-4



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SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 26249 BETSY L. WATSON

10/13/14

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

PHASE I

10/3/2014
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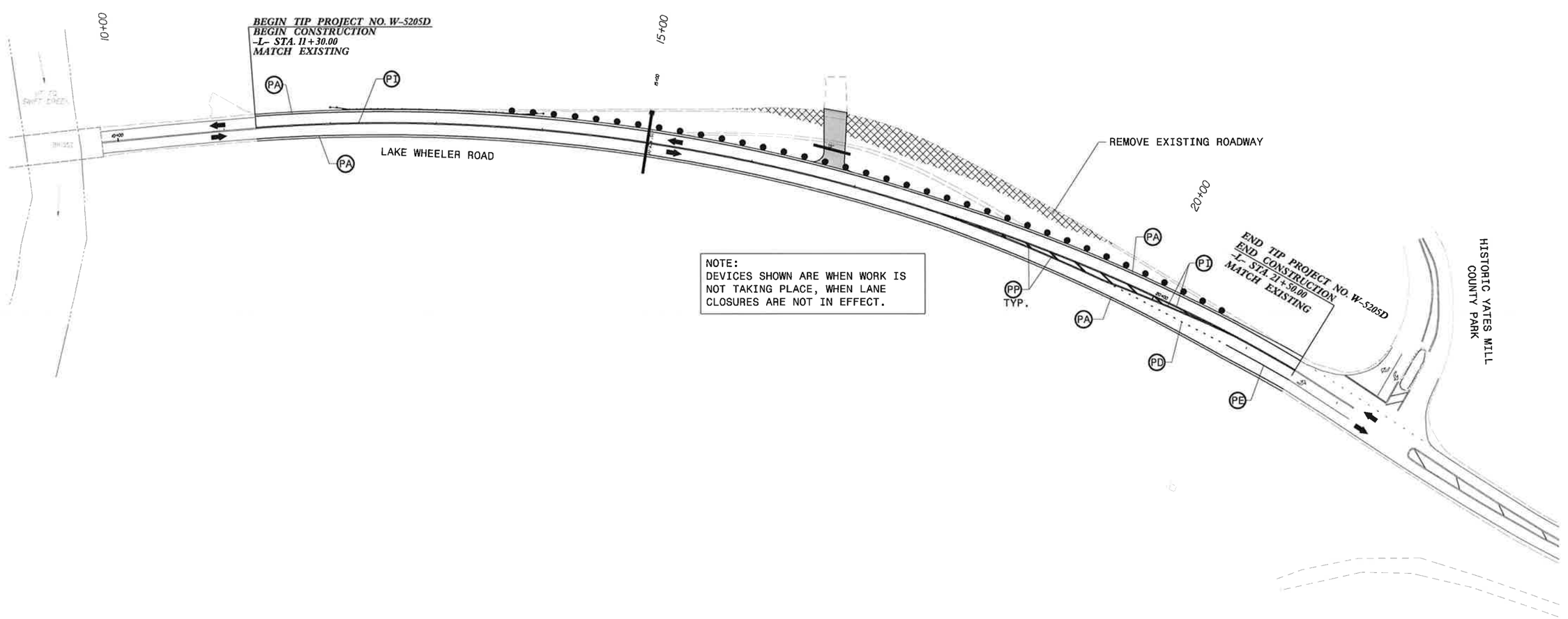
rcullen

PROJ. REFERENCE NO.	SHEET NO.
W-5205D	TMP-5



NOTE:
DEVICES SHOWN ARE WHEN WORK IS NOT TAKING PLACE, WHEN LANE CLOSURES ARE NOT IN EFFECT.

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SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 36449 BETSY L. WATSON

10/13/14

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

PHASE II

10/13/2014
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rculler

PROJ. REFERENCE NO.	SHEET NO.
W-5205D	TMP-6

Ⓐ DETOUR M4-8 24"x12"
M6-1 L 21" X 15"

Ⓑ DETOUR M4-8 24"x12"
M6-1 21" X 15"

Ⓒ DETOUR M4-8 24"x12"
M6-3 21" X 15"

Ⓓ DETOUR M4-8 24"x12"
M5-1 21" X 15"

Ⓔ END DETOUR M4-8 A 24" X 18"

Ⓕ R11-2 (60"X30")
ROAD CLOSED
TYPE III BARRICADE

Ⓖ R11-4 (60"X30")
ROAD CLOSED TO THRU TRAFFIC
DETOUR
M4-10L(48"X18")
TYPE III BARRICADE

Ⓗ R11-3 (60"X30")
ROAD CLOSED
XX MILES AHEAD
LOCAL TRAFFIC ONLY
DETOUR
M4-10L(48"X18")
TYPE III BARRICADE

Ⓘ R11-4 (60"X30")
ROAD CLOSED TO THRU TRAFFIC
TYPE III BARRICADE

Jones Franklin Rd. 1319
Dillard Dr. 1349
Tryon Rd. 1009
Campbell Rd. 1383
Yates Mill Pond Rd. 1382
Olde South Rd. 1382
Yates Mill Pond Rd. 1381
Penny Rd. 1380
Penny Rd. 1379
Mid Pines Rd. 1372
Trailwood Dr. 1348
Tryon Rd. 1009
64 INTERSTATE 440 INTERSTATE 40
DETOUR POINT
Lake Wheeler Rd. 1009
Tryon Rd. 1370
Lake Wheeler Rd. 1371
POINT OF ROAD CLOSURE
Historic Yates Mill County Park
DETOUR POINT
POINT OF ROAD CLOSURE
DETOUR POINT

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APPROVED: [signature] DATE: 7/24/14

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 29449 ENGINEER BETSY L. WATSON

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

DETOUR ROUTE

7/24/2014
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rcullen

CONTRACT: DE0101 T.I.P.: W-5205D

TIP NO.	SHEET NO.
W-5205D	PMP-1

APPROVED: [signature]

DATE: 7/24/14

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 29449 ENGINEER BETSY L. WATSON

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN
WAKE COUNTY

LOCATION: SR 1371 (LAKE WHEELER RD) FROM NORTH OF SR 1379 (PENNY RD) TO SOUTH OF YATES MILL POND ENTRANCE

FINAL PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION		PAY ITEM
TA	WHITE EDGELINE	(4", 90 MIL)	THERMOPLASTIC
TD	3 FT-9 FT/SP WHITE MINISKIP	(4", 120 MIL)	THERMOPLASTIC
TE	WHITE SOLID LANE LINE	(4", 120 MIL)	THERMOPLASTIC
TI	YELLOW DOUBLE CENTER	(4", 120 MIL)	THERMOPLASTIC
TV	YELLOW DIAGONAL	(12", 90 MIL)	THERMOPLASTIC
UA	LEFT TURN ARROW	(90 MIL)	THERMOPLASTIC

GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
ALL ROADS	THERMOPLASTIC	RAISED

B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.

D) PASSING ZONES WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGINEER.

E) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED IN LIEU OF EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING THE EXTRUDED THERMOPLASTIC PAY ITEM.

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - 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
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT & TEMPORARY

PLAN PREPARED BY:

BETSY L. WATSON, P.E. TRAFFIC ENGINEER

ROSI R. HENNEIN TRANSPORTATION TECHNICIAN

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INDEX

SHEET NO.	DESCRIPTION
PMP-1	PAVEMENT MARKING PLAN TITLE AND SCHEDULE SHEET
PMP-2-3	PAVEMENT MARKING DETAIL

TIP NO.	SHEET NO.
W-5205D	PMP-2

APPROVED: Blwatson

DATE: 7/24/14

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NORTH CAROLINA PROFESSIONAL SEAL 29449 ENGINEER BETSY L. WATSON

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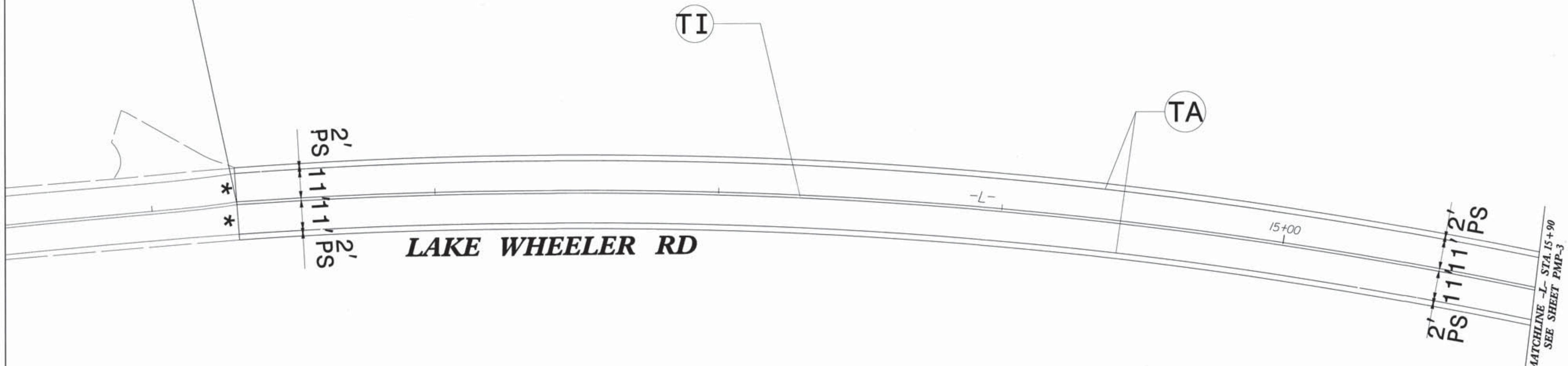
NAD 83 NC GRID

BEGIN PAVEMENT MARKING PLAN

W-5205D -L- STA. 11+30



* TIE TO EXISTING

THERMOPLASTIC PAVEMENT MARKING LEGEND
(TA) WHITE EDGELINE (4")
(TI) YELLOW DOUBLE CENTER (4")

7/24/2014
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PAVEMENT MARKING DETAIL

TIP NO.	SHEET NO.
W-5205D	PMP-3

APPROVED: AGWatson

DATE: 7/24/14

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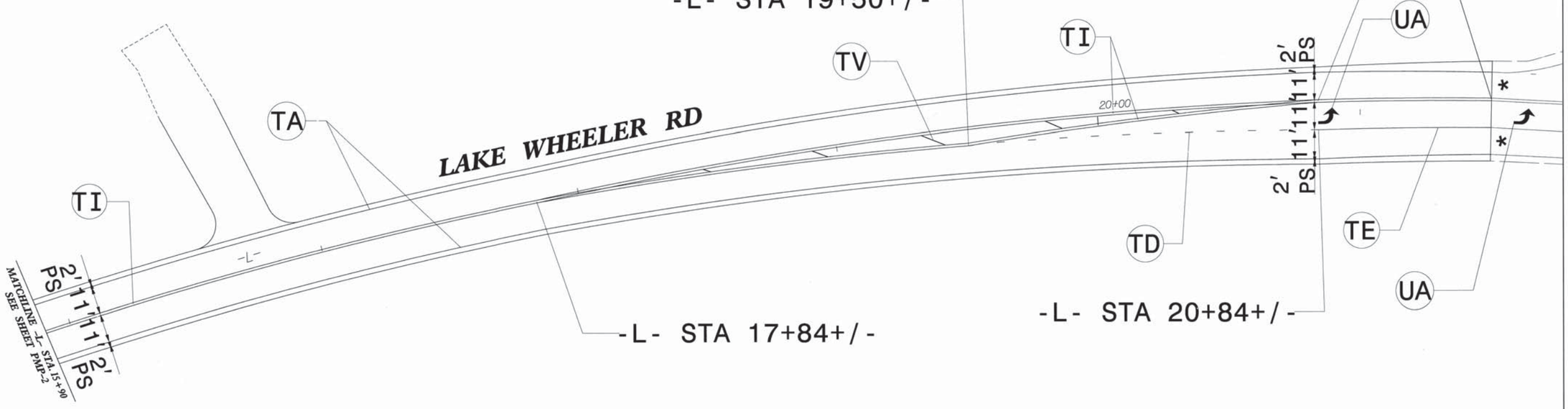
NAD 83 | NC GRID

END PAVEMENT MARKING PLAN

W-5205D -L- STA. 21+50



THERMOPLASTIC PAVEMENT MARKING LEGEND	
(UA) LEFT TURN ARROW	(TA) WHITE EDGELINE (4")
	(TD) 3 FT - 9 FT/SP WHITE MINISKIP (4")
	(TE) WHITE SOLID LANE LINE (4")
	(TI) YELLOW DOUBLE CENTER (4")
	(TV) YELLOW DIAGONAL (12")

* TIE TO EXISTING

PAVEMENT MARKING DETAIL

7/24/2014
User:mrafle
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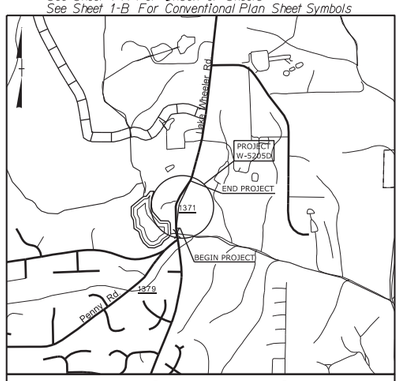
TIP PROJECT: W-5205D

WBS#: 45335.1.4

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5205D	EC-1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Plan Sheet Symbols



VICINITY MAP N.T.S.

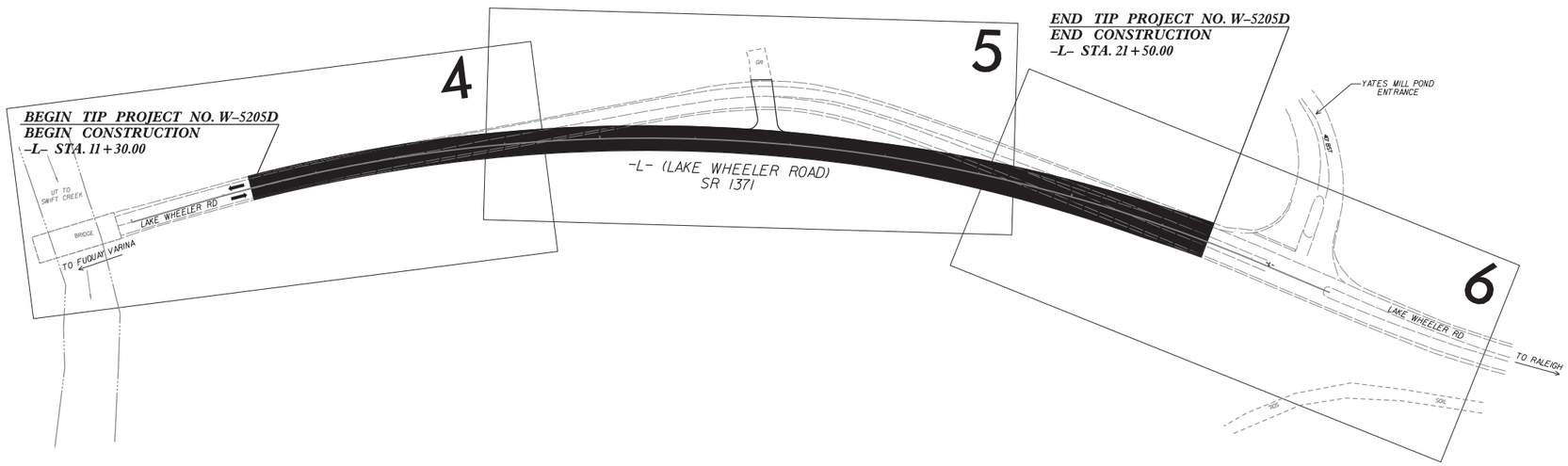
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

WAKE COUNTY

LOCATION: SR 1371 (LAKE WHEELER ROAD) FROM NORTH OF SR 1379 (PENNY ROAD) TO SOUTH OF YATES MILL POND ENTRANCE

TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNING, TRAFFIC CONTROL, PAVEMENT MARKINGS, AND EROSION CONTROL



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

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle / Coir Fiber Wattle	EW CW
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
1630.04	Stilling Basin	
1630.06	Special Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

JOSHUA M. CLEMMONS, EI
LEVEL III NAME

3473
LEVEL III CERTIFICATION NO.

GRAPHIC SCALES

20 10 0 20 40
PLANS

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared in the Office of:

SUNGATE DESIGN GROUP, P.A.
915 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 859-2243 FAX (919) 859-6258
ENG FIRM LICENSE NO. C-890

2012 STANDARD SPECIFICATIONS

Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"– Roadway Design Unit – N. C. Department of Transportation – Raleigh, N. C., dated January 2012 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type A
1622.01	Temporary Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type B
1630.01	Riser Basin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type B	1634.02	Temporary Rock Sediment Dam Type B
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling Basin	1635.02	Rock Pipe Inlet Sediment Trap Type B
1630.05	Temporary Diversion	1640.01	Coir Fiber Baffle
1630.06	Special Stilling Basin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		

10/8/2014
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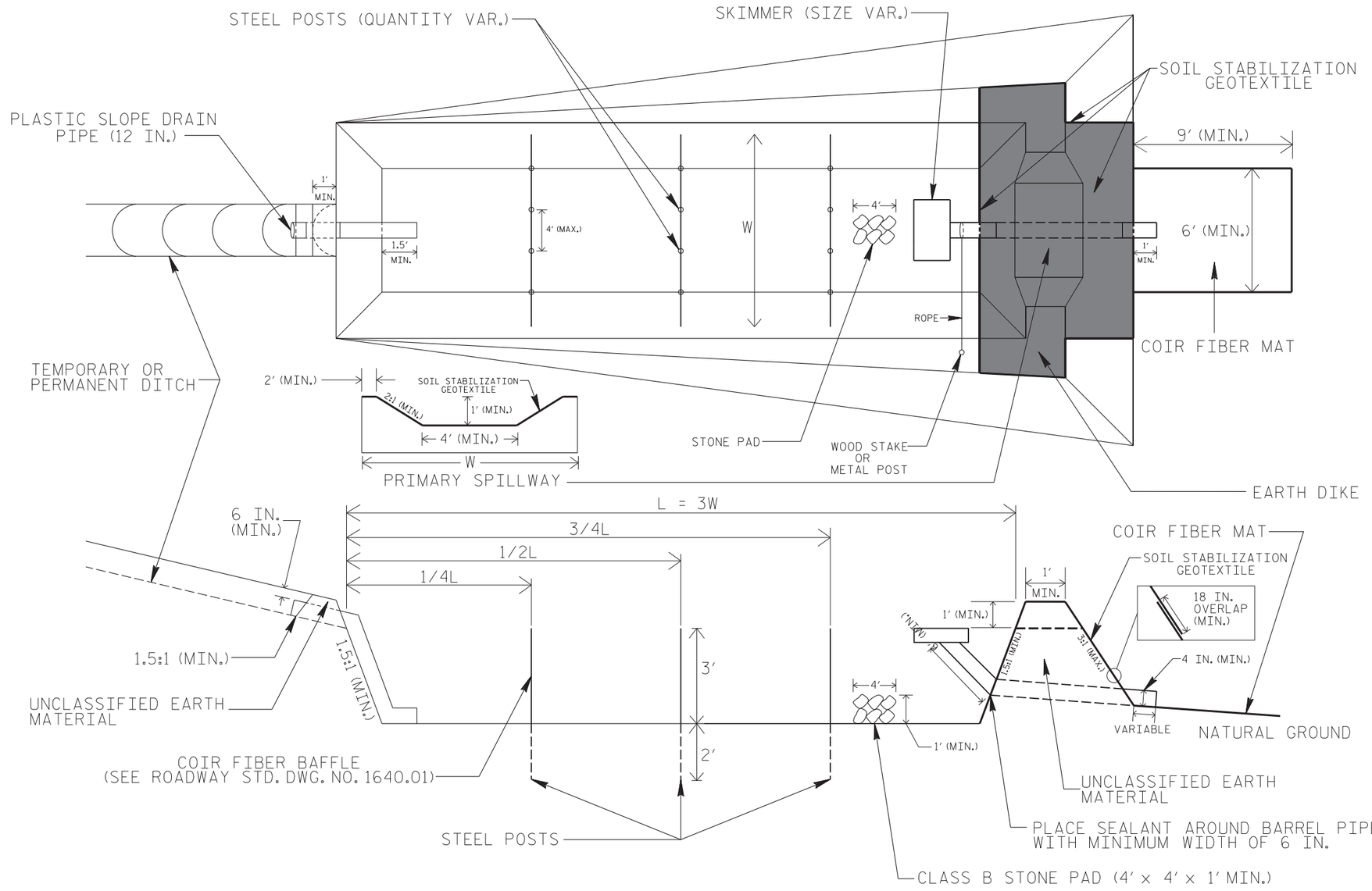
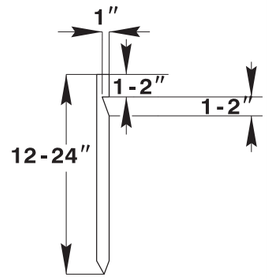
jclemmons

PROJECT REFERENCE NO.	SHEET NO.
W-5205D	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

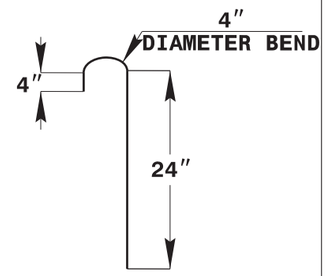
SKIMMER BASIN WITH BAFFLES DETAIL



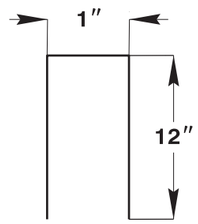
2" x 2" (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



1" (nominal) STAPLE



COIR FIBER MAT ANCHOR OPTIONS

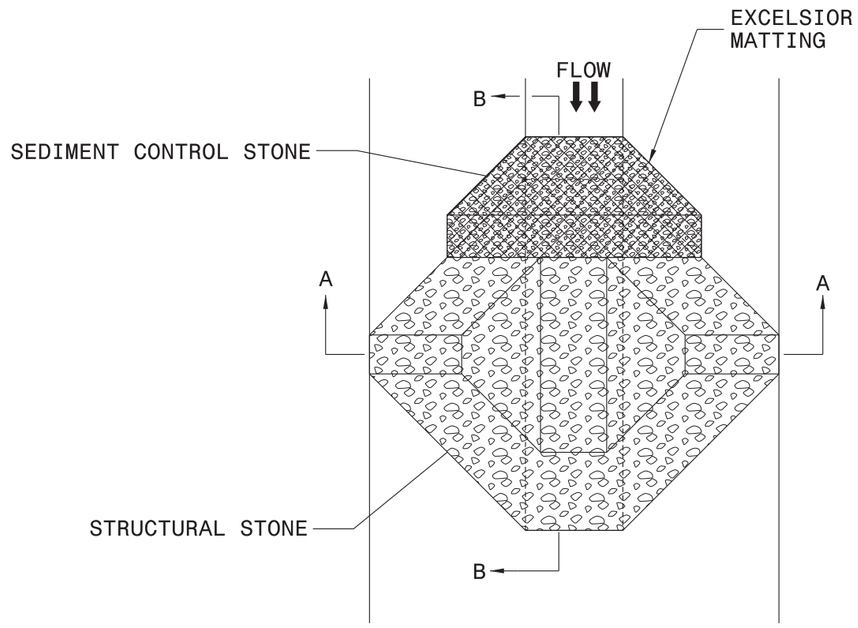
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE PRIMARY SPILLWAY WEIR LENGTH (FT.) USING Q/0.4, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE OR TARP AS DIRECTED.
6. SOIL STABILIZATION GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

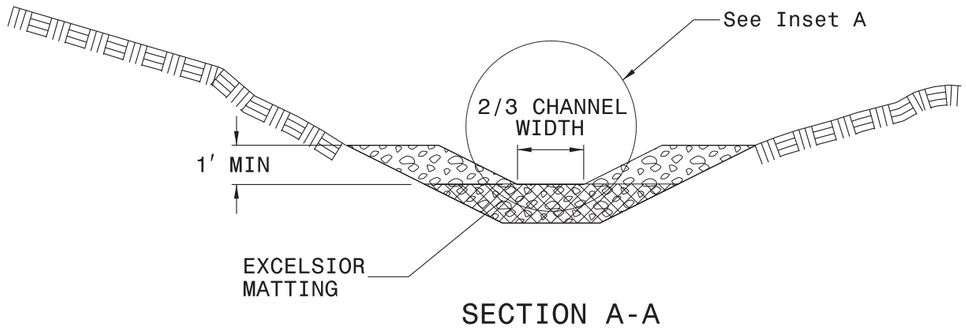
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
W-5205D	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)



PLAN



SECTION A-A

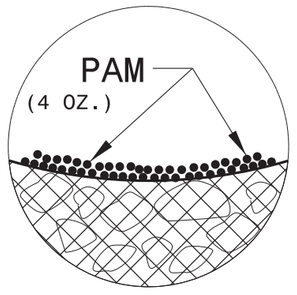
NOTES:

INSTALL TEMPORARY ROCK SILT CHECK TYPE A IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1633.01.

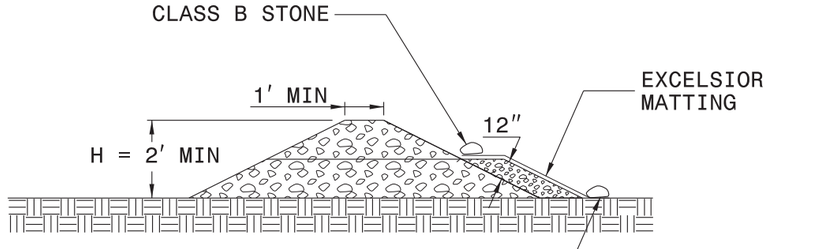
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION B-B

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
W-5205D	EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

EROSION CONTROL PLAN

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 04

PROJECT REFERENCE NO.	SHEET NO.
W-5205D	EC-04/CONST.04
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL 1
CUT DITCH
(Not to Scale)

Type of Liner = Class B Rip–Rap
Min. D = 1.5 Ft.
Max. d = 1.5 Ft.

FROM STA. 15+05 TO STA. 16+52 –L– LT
FROM STA. 16+88 TO STA. 18+75 –L– LT
FROM STA. 11+50 TO STA. 18+50 –L– RT

BEGIN TIP PROJECT NO. W-5205D
BEGIN CONSTRUCTION
–L– STA. 11+30.00
MATCH EXISTING

NAD 83

NOTE: DO NOT IMPACT EXISTING 6' CHAIN LINK FENCE

STATE OF NORTH CAROLINA
DB 10780 PG 1516

UT TO SWIFT CREEK

BRIDGE

10+00

PC Sta. 10+79.99

BZ 1
BZ 2

TDE

60 x 20 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
12 ft. weir
ID 4.1

NOTE: DO NOT DISTURB THREE GUM TREES

25' BST

LAKE WHEELER RD

-L-

CL 'B' RIP RAP
188 TONS
524 SY FF

STATE OF NORTH CAROLINA
DB 10780 PG 1516

MATCHLINE -L- STA.14+40.00
SEE SHEET 5

EROSION CONTROL PLAN

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

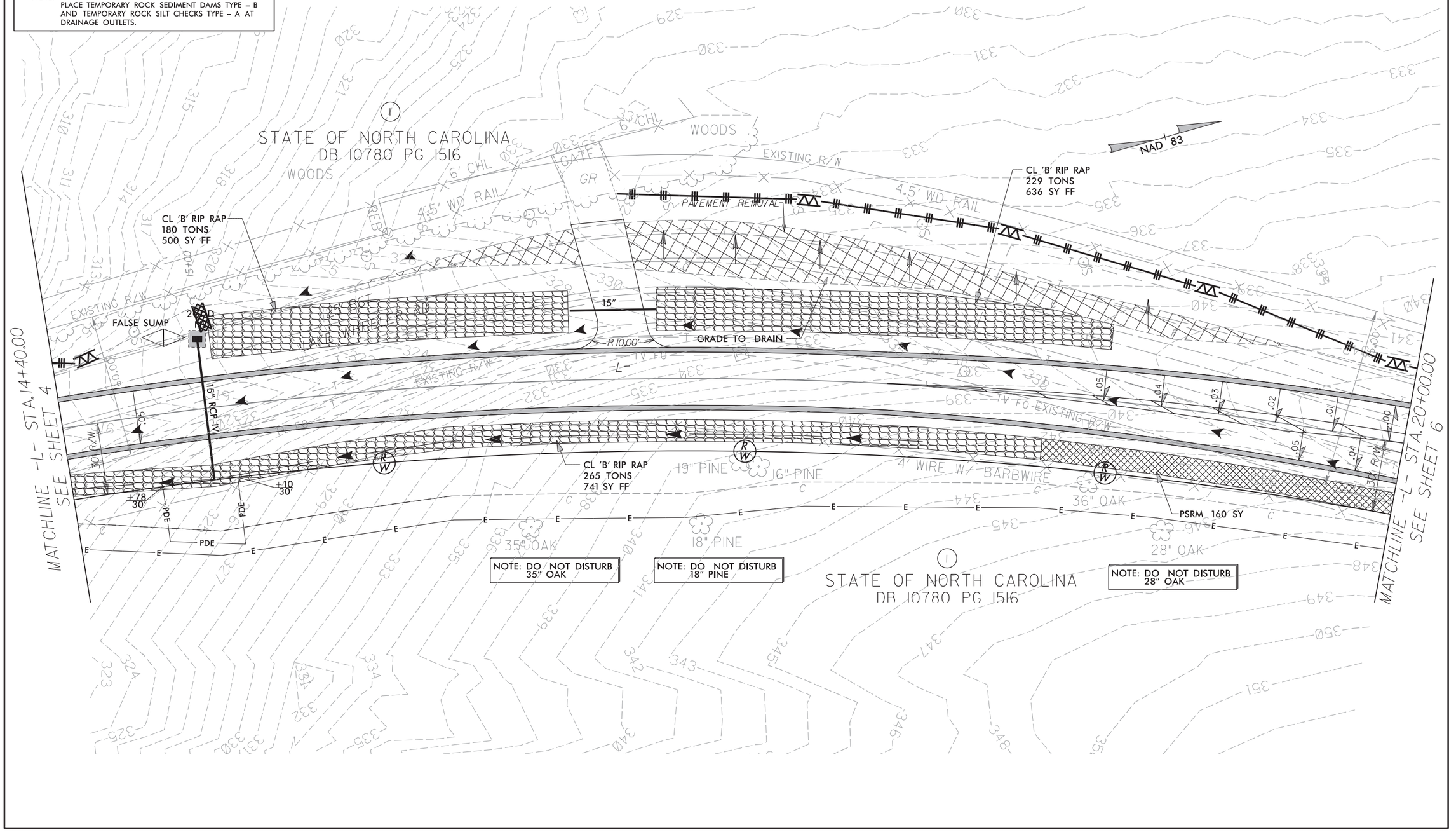
ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 05

PROJECT REFERENCE NO.	SHEET NO.
W-5205D	EC-05/CONST.05
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



EROSION CONTROL PLAN

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 06

PROJECT REFERENCE NO.	SHEET NO.
W-5205D	EC-06/CONST.06
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

END TIP PROJECT NO. W-5205D
END CONSTRUCTION
–L– STA. 21+50.00
MATCH EXISTING

MATCHLINE –L– STA. 20+00.00
SEE SHEET 5

EXISTING R/W
4.5' WD RAIL
20+00
.01 .02 .03 .04 .05 .06 .065
.03 .02 .01 .00 .01 .02 .03
R/W
30'
PSRM 107 SY
TV FO
EXISTING R/W
E E E E E
38" OAK
37" OAK
30" OAK
26" OAK
NOTE: DO NOT DISTURB 38" OAK

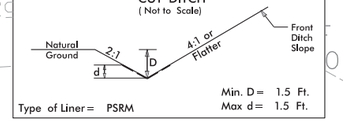
STONE CLM W/ 4' WD RAIL FNC
GATE
GATE
STONE CLM W/ 4' WD RAIL FNC
DRIVEWAY TO YATES MILL POND
7.50
–L– N 33° 20' 13.0" E
PT Sta. 22+08.82
GATE
4' WIRE W/ BARBWIRE
TV FO
25" OAK
19" TWIN OAK
38" OAK
POT Sta. 22+89.25

STATE OF NORTH CAROLINA
DB 10780 PG 1516

4' WIRE
LAKE WHEELER RD
34' BST
4'-8 WIRE ELECTRIC
4' 3 WIRE ELECTRIC
GATE
SOIL

NAD 83

DETAIL 2
CUT DITCH
(Not to Scale)



Min. D = 1.5 Ft.
Max d = 1.5 Ft.
Type of Liner = PSRM

FROM STA. 18+50 TO STA. 21+00 –L– RT

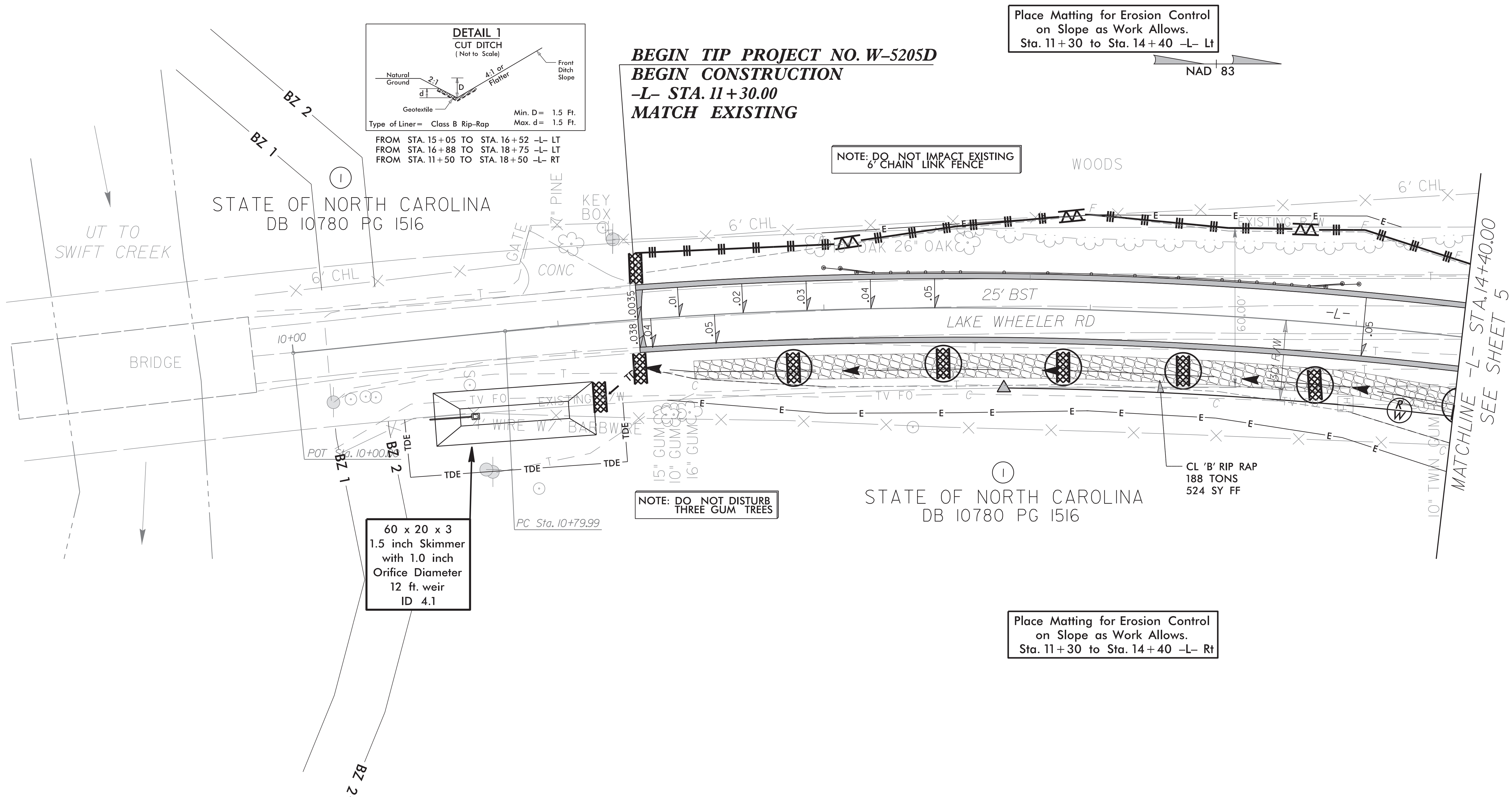
EROSION CONTROL PLAN

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

FINAL GRADE
EROSION CONTROL FOR
CONSTRUCTION SHEET 04

PROJECT REFERENCE NO.	SHEET NO.
W-5205D	EC-07/CONST.04
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

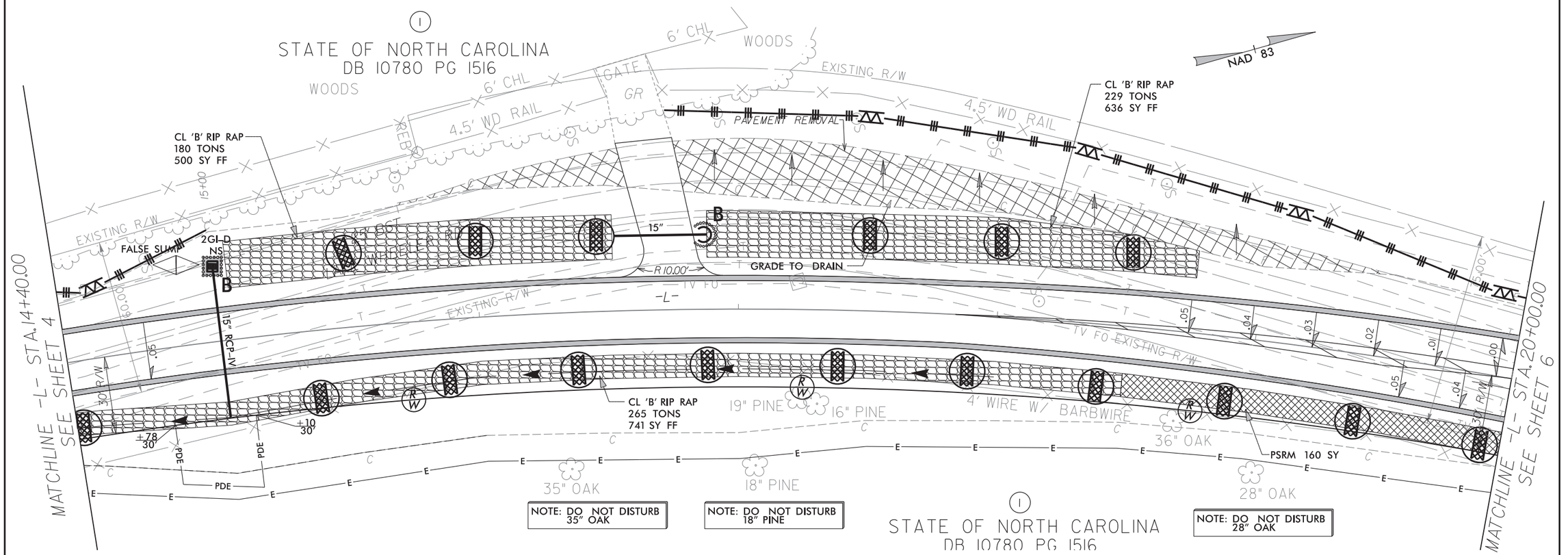
EROSION CONTROL PLAN

FINAL GRADE
EROSION CONTROL FOR
CONSTRUCTION SHEET 05

PROJECT REFERENCE NO.	SHEET NO.
W-5205D	EC-08/CONST.05
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Place Matting for Erosion Control on Slope as Work Allows. Sta. 14+40 to Sta. 16+65 –L– Lt

Place Matting for Erosion Control on Slope as Work Allows. Sta. 16+85 to Sta. 20+00 –L– Lt



Place Matting for Erosion Control on Slope as Work Allows. Sta. 14+40 to Sta. 20+00 –L– Rt

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

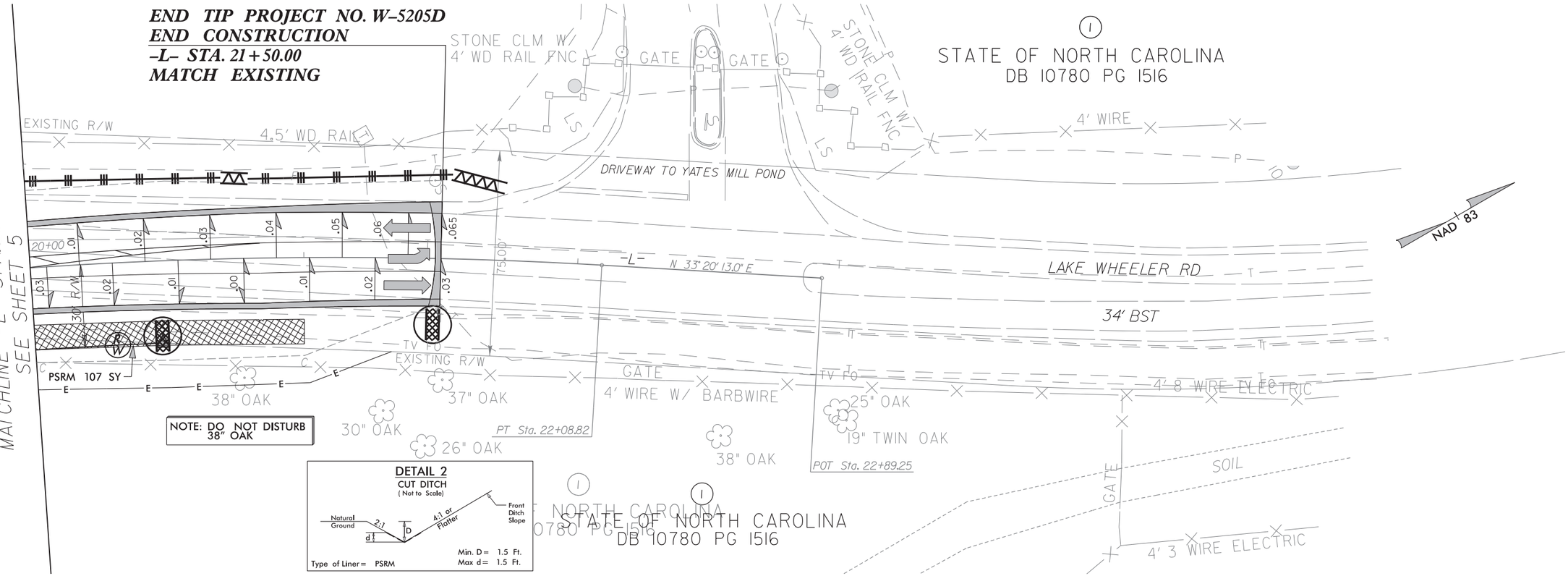
ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

EROSION CONTROL PLAN

FINAL GRADE
EROSION CONTROL FOR
CONSTRUCTION SHEET 06

PROJECT REFERENCE NO.	SHEET NO.
W-5205D	EC-09/CONST.06
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Place Matting for Erosion Control on Slope as Work Allows. Sta. 20+00 to Sta. 21+50 –L– Lt



DETAIL 2
CUT DITCH
(Not to Scale)

FROM STA. 18+50 TO STA. 21+00 –L– RT

Place Matting for Erosion Control on Slope as Work Allows. Sta. 20+00 to Sta. 21+50 –L– Rt

CONTRACT: DE0010101 T.I.P.: W-5205D

TIP NO.	SHEET NO.
W-5205D	SIGN-1

APPROVED: Betsy L Watson

DATE: 7/24/14

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 29449 ENGINEER BETSY L. WATSON

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

SIGNING PLAN
WAKE COUNTY

LOCATION: SR 1371 (LAKE WHEELER RD) FROM NORTH OF SR 1379 (PENNY RD) TO SOUTH OF YATES MILL POND ENTRANCE

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - 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
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS

GENERAL NOTES

. SIGNS FURNISHED BY STATE.

. IF REMOVAL OR RELOCATION OF SIGNS ON PRIVATE STREET (NON-STATE MAINTAINED) IS REQUIRED DUE TO CONSTRUCTION, THE CONTRACTOR SHALL INFORM THE ENGINEER. THE WORK WILL BE COMPLETED BY OTHERS.

. WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER.

. WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL.

. THE BACKGROUND FOR TYPE E SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.

. SEE ROADWAY PLANS FOR GUARD/GUIDE RAIL DETAILS.

(401) QUANTITY REQ'D 2	(402) QUANTITY REQ'D 1	(403) QUANTITY REQ'D 1
 24 X 30 R2-1	 36 X 36 R1-1	 36 X 36 W3-3
ONE "U" POST PER SIGN	ONE "U" POST PER SIGN	ONE "U" POST PER SIGN

SUMMARY OF QUANTITIES

ITEM NO. DESC. NO.	ITEM NO. SECT. NO.	ITEM DESCRIPTION	QUANTITY	UNIT
4072000000	903	SUPPORTS, 3-LB STEEL U-CHANNEL.....	55	L.F.
4102000000	904	SIGN ERECTION, TYPE E.....	4	EA.
4155000000	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL.....	10	EA.

PLAN PREPARED BY:

BETSY L. WATSON, P.E. TRAFFIC ENGINEER

ROSI R. HENNEIN TRANSPORTATION TECHNICIAN

Stantec

Stantec Consulting Services Inc.
801 Jones Franklin Road
Suite 300
Raleigh, NC 27606
Tel. (919) 851-6866
Fax. (919) 851-7024
www.stantec.com
License No. F-0672

INDEX

SHEET NO.	DESCRIPTION
SIGN-1	TITLE SHEET AND E SIGNS
SIGN-2	SIGN DETAIL SHEET

7/24/2014
U:\Traffic\Signing\CADD\Signing Layout Plans\7100396_sign_01.dgn
rhennein

TIP NO.	SHEET NO.
W-5205D	SIGN-2

APPROVED: DWatts

DATE: 7/28/14

SEAL

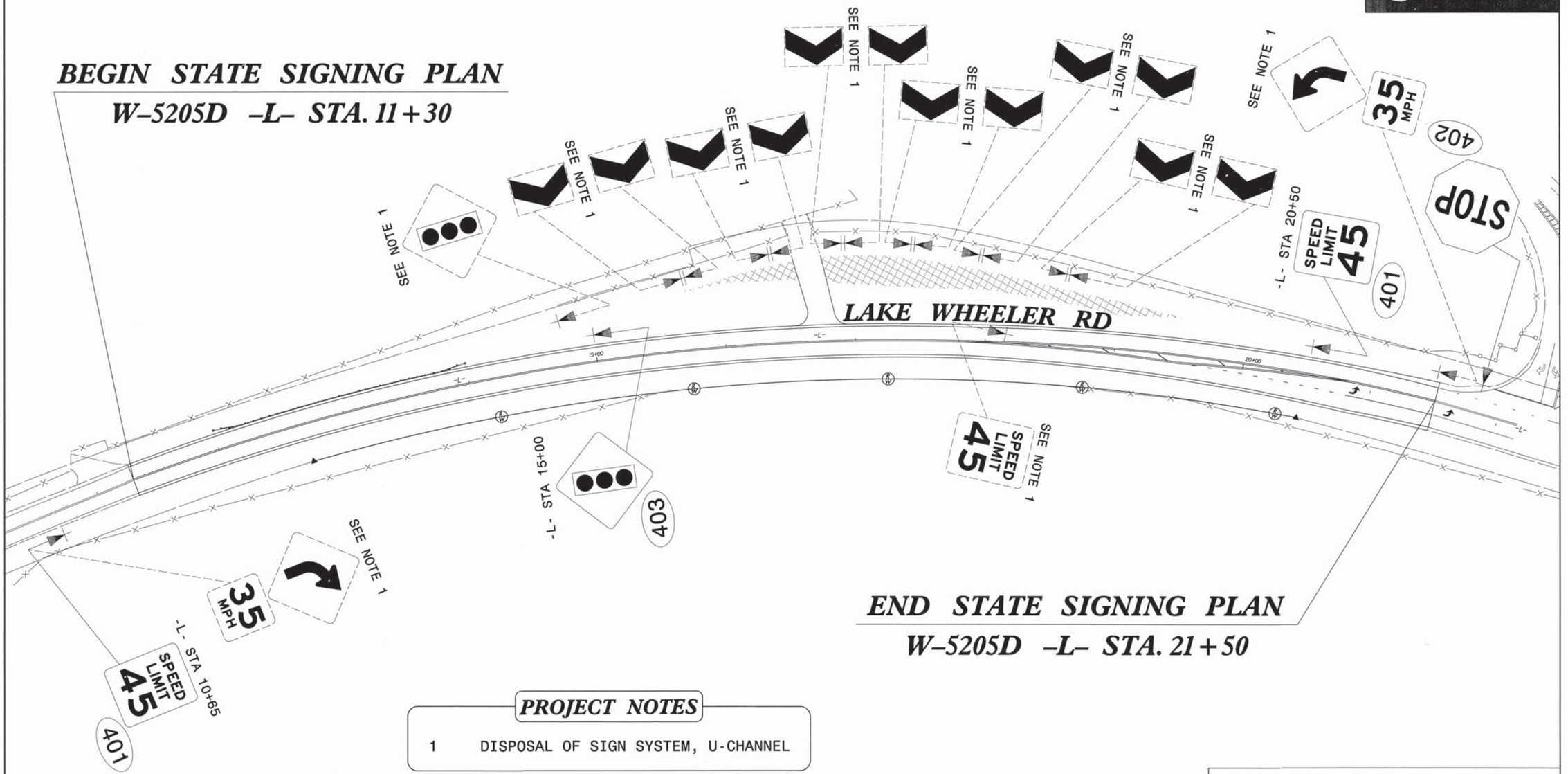
NORTH CAROLINA PROFESSIONAL SEAL 29449 ENGINEER BETSY L. WATSON

Stantec

NAD 83 NC GRID

BEGIN STATE SIGNING PLAN

W-5205D -L- STA. 11+30



END STATE SIGNING PLAN

W-5205D -L- STA. 21+50

PROJECT NOTES

1 DISPOSAL OF SIGN SYSTEM, U-CHANNEL

EXISTING AND PROPOSED SIGNS

7/28/2014
U:\Traffic\Signing\CADD\Signing Layout Plans\7100\396_sign_02.dgn
rhennein

PROJ. REFERENCE NO.	SHEET NO.
W-5205D	X-0

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

NOTE: EMBANKMENT COLUMN INCLUDES BACKFILL FOR UNDERCUT

CROSS-SECTION SUMMARY

Station L	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
11+30.00	0	0
11+50.00	4	0
12+00.00	18	5
12+50.00	24	29
13+00.00	20	59
13+50.00	15	56
14+00.00	30	36
14+50.00	114	19
15+00.00	323	4
15+50.00	508	0
16+00.00	598	0
16+50.00	672	1
17+00.00	687	5
17+50.00	560	15
18+00.00	387	17
18+50.00	262	18
19+00.00	159	25
19+50.00	106	26
20+00.00	69	20
20+50.00	45	15
21+00.00	38	9
21+50.00	17	4
TOTAL:	4656	363

Quantities are approximate only. The Resident Engineer will recross-section the work accurately when the project is staked out. These cross-section notes will be used in computing the final quantities for which the contractor will be paid.

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5205D	X-1

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

310 305 300 295 290

GP=298.65

0.004 0.038 2:1

298.65 297.30

11+30.00

BEGIN CONSTRUCTION

305 300 295 290

297.33 296.24

11+00.00

300 295 290

295.69

10+50.00

295 290 285

294.77

10+00.00

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

7/25/2014
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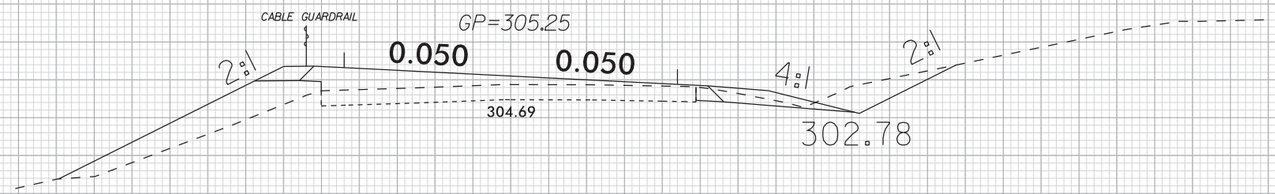
benwhite

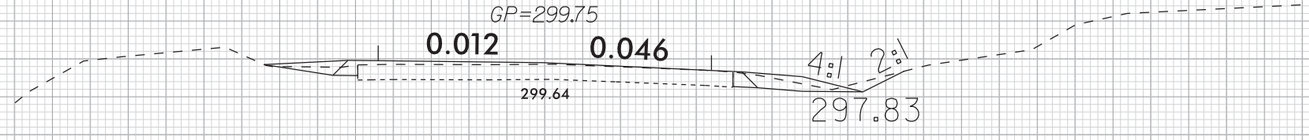
8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5205D	X-2



12+50.00

12+00.00



11+50.00

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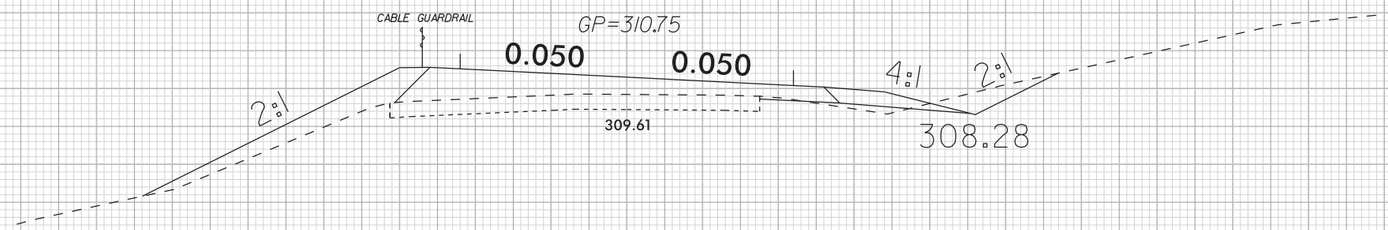
benwhite

8/23/99

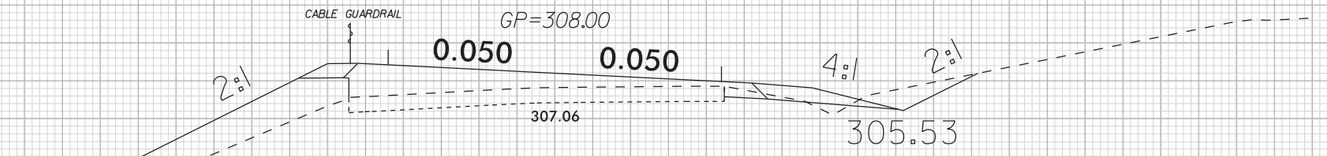
0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5205D	X-3

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

320 315 310 305 300 295 290



13+50.00



13+00.00

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320 315 310 305 300 295 290 285

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

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benwhite

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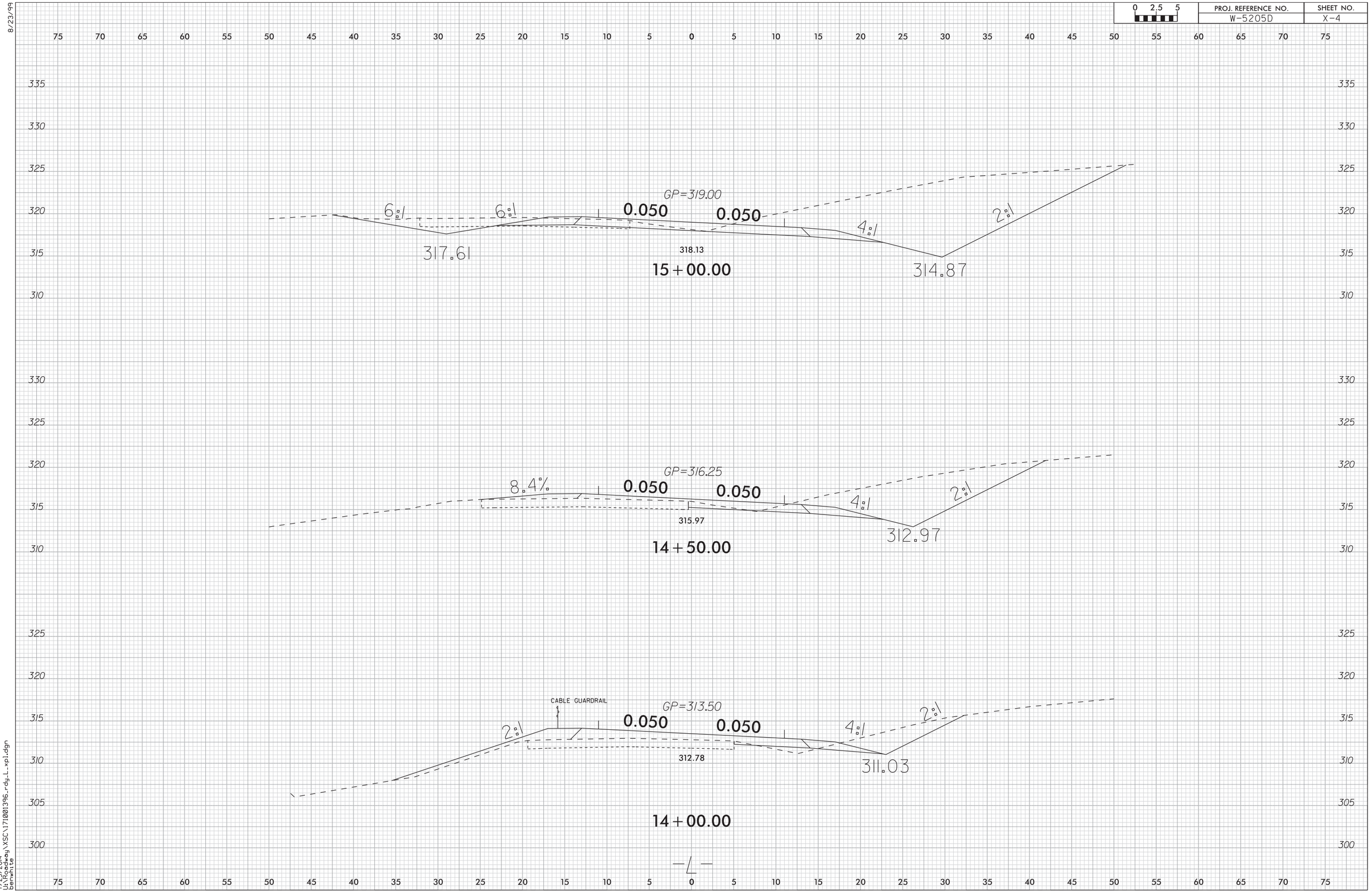
0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5205D	X-4



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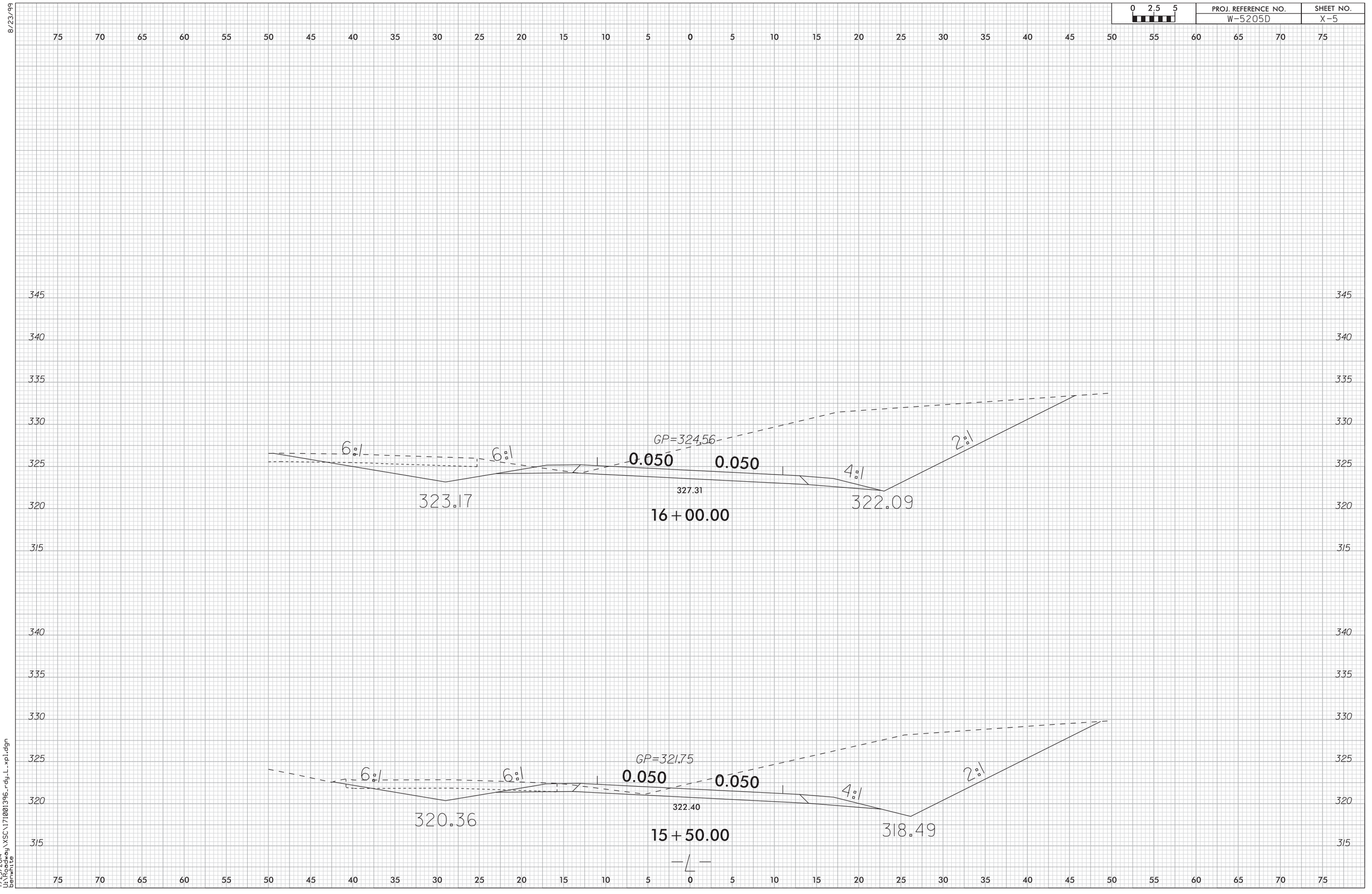
0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5205D	X-5



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benwhite

8/23/99

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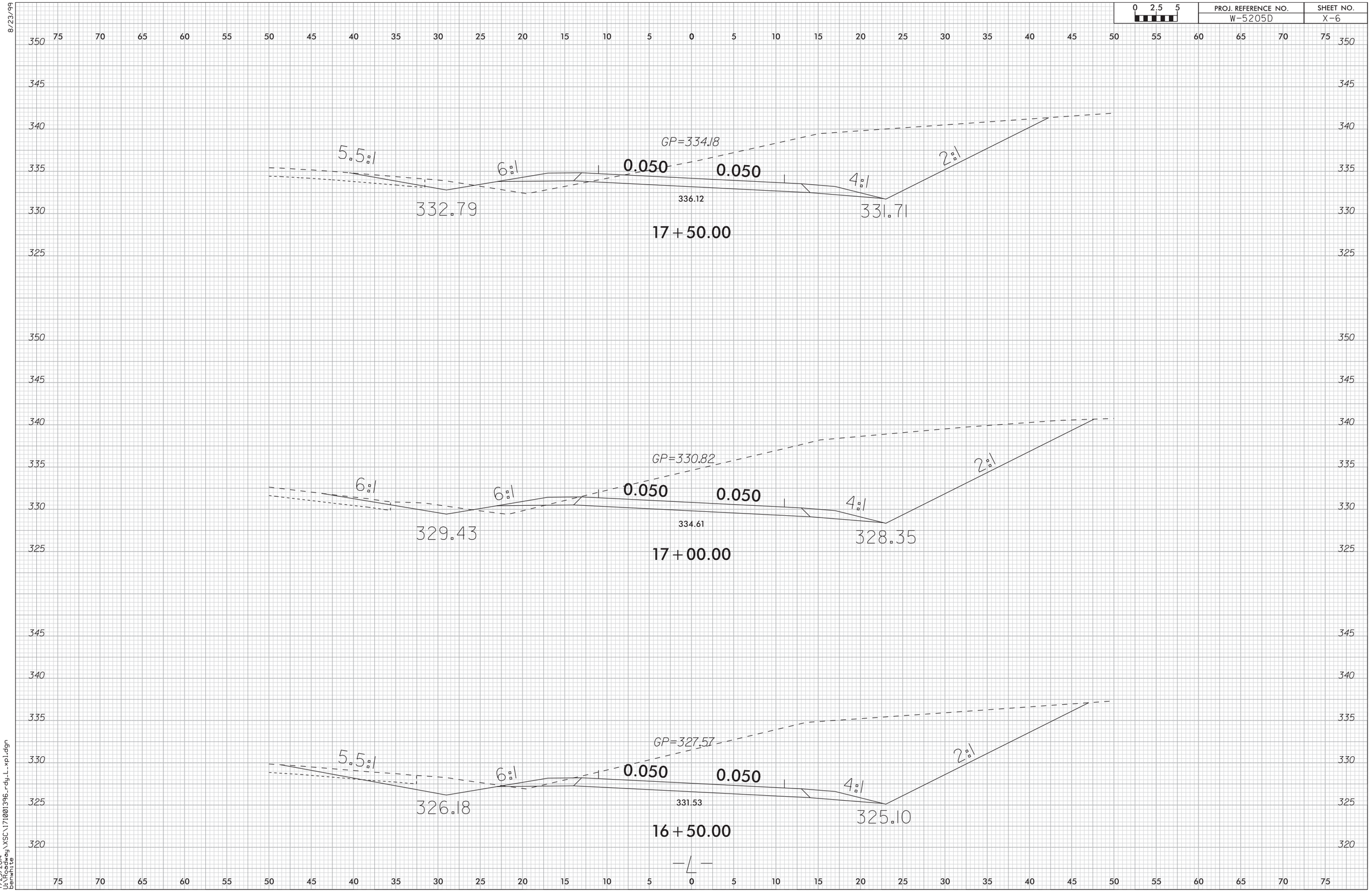

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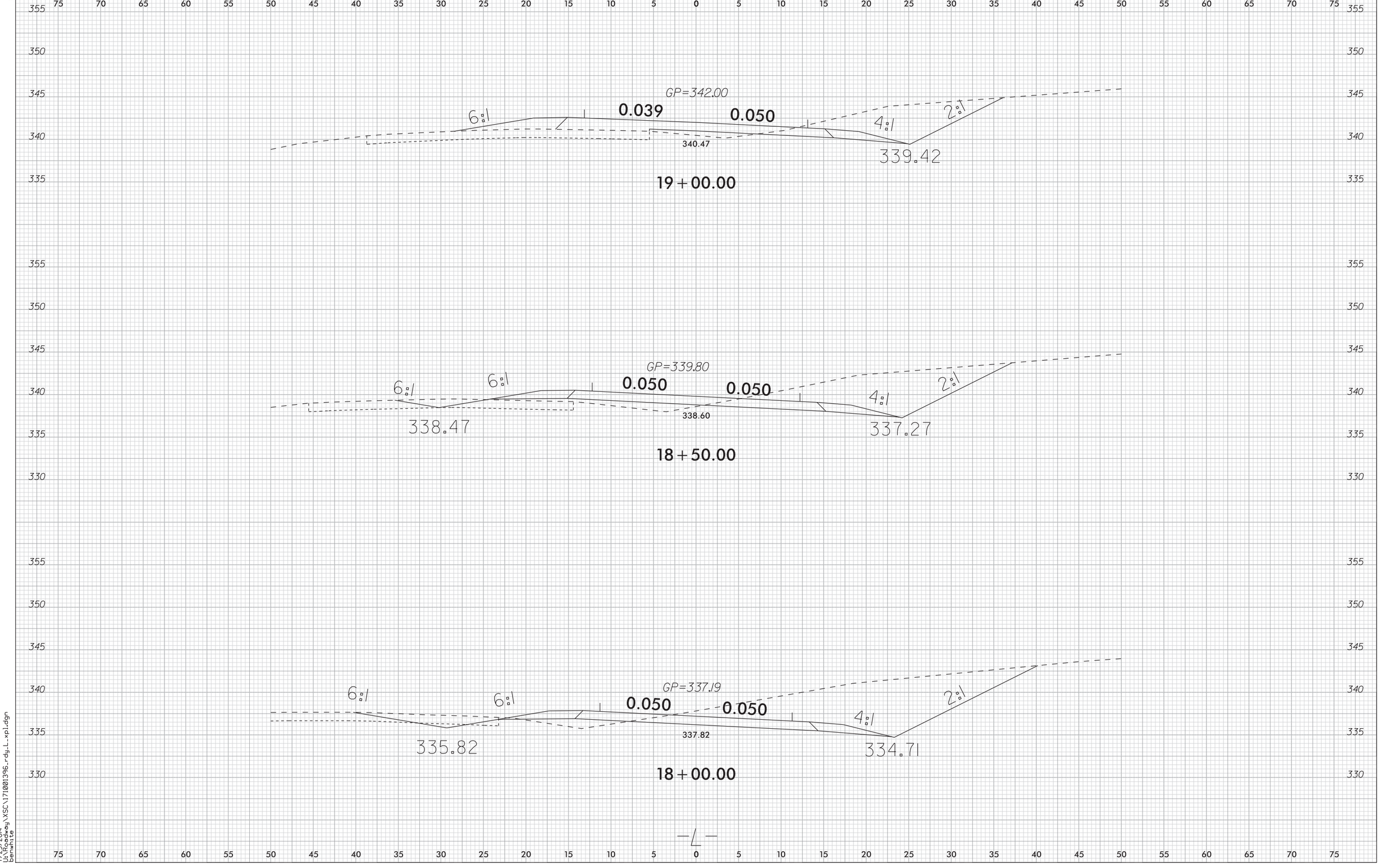
benwhite

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5205D	X-7



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benwhite

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5205D	X-8

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

355
350
345
340

GP=346.14

4:1 0.023 0.012 4:1 2:1

345.59

344.15

20+50.00

355
350
345
340

GP=345.17

4:1 0.002 0.033 4:1 2:1

344.25

342.80

20+00.00

335

355
350
345
340

GP=343.79

6:1 0.018 0.050 4:1 2:1

342.71

341.17

19+50.00

—℄—

335

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

7/25/2014
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benwhite

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5205D	X-9

348.11

22+00.00

348.00

GP=347.32

6:1

0.065

0.030

347.32

347.70

21+50.00

END CONSTRUCTION

GP=346.76

4:1

0.044

0.009

4:1

2:1

346.53

345.22

21+00.00

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7/29/2014
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benwhite