



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

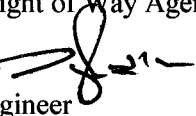
ROY COOPER  
GOVERNOR

JAMES H. TROGDON, III  
SECRETARY

DATE: March 6, 2018

COUNTY: Caldwell

TO: Daneil Miles  
Division Right of Way Agent

FROM: Doug Eller   
District Engineer

SUBJECT: Proposed Improvement SR 1958 - Lacey Road  
Project: 11C.014098  
Township: Lovelady  
Grade, Drain, Base and Pave

For your use in acquiring 45 feet of right of way, I am attaching two copies of the project plans. The project will consist of grading, drainage, applying base and paving the road. Please be advised that we will be able to utilize existing right of way along a portion of the project. The right of way will be reduced for the following:

- 2+93 to 3+19 (Lt.) - Garage

All fences and posts will be relocated off the right of way by the state. Paved and concrete drives may have to be cut during construction and tied back with the project pavement schedule, which has not been determined. The following items will require removal from the right of way.

- 3+68 (Rt.) – Brick Planter
- 4+14 to 4+51 (Lt.) – Concrete Pad

The existing turnaround located between 12+70 to 13+00 (Lt.) may be eliminated, if acquisition of the proposed cul-de-sac is successful.

If you need anything further, please advise.

DWE/jmg

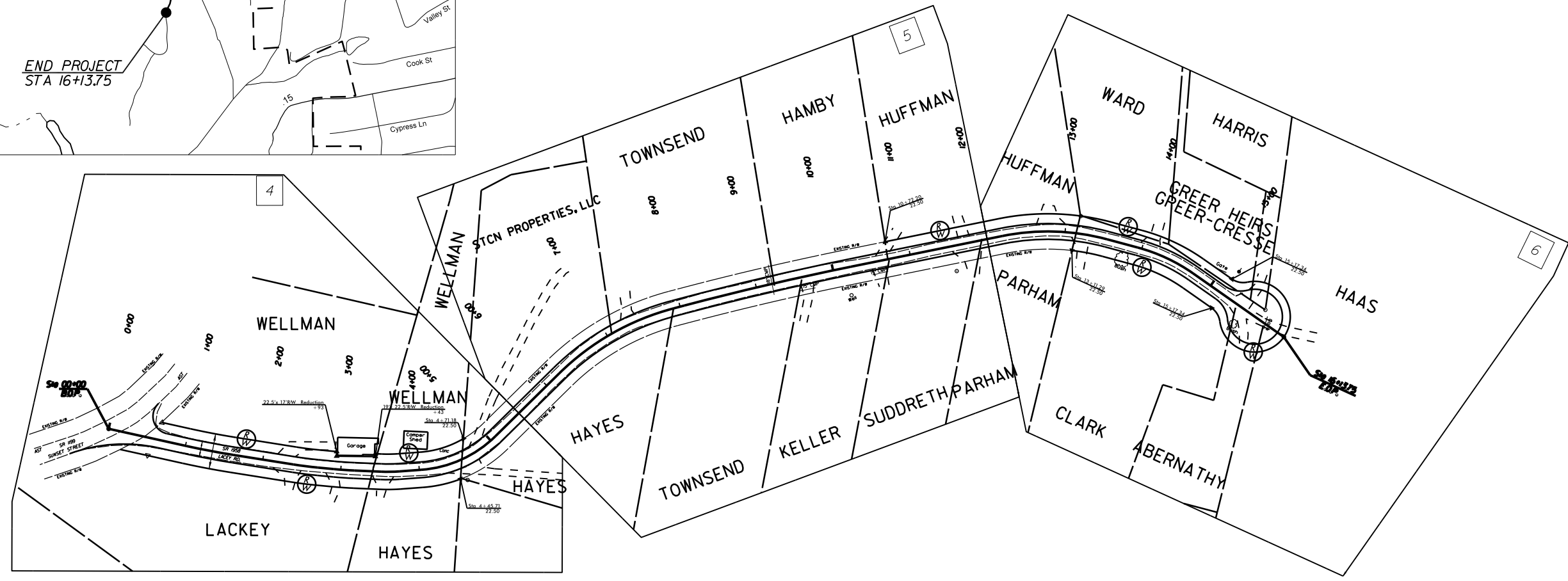
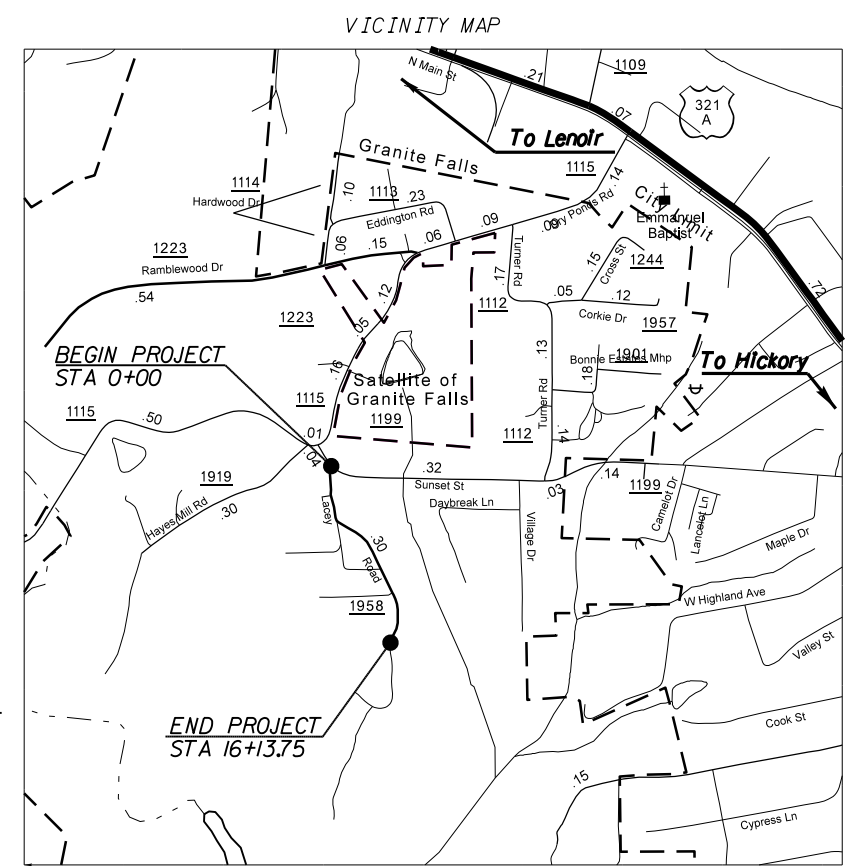
09/08/99

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	11C.014098	1	10
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

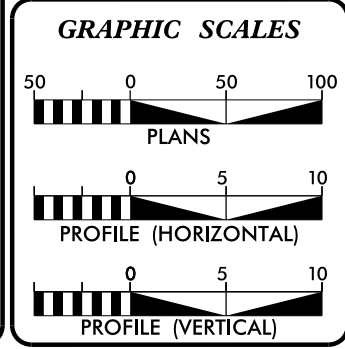
**CALDWELL COUNTY**

**LOCATION: SR 1958 LACEY RD FROM  
SR 1199 TO E.O.P.  
STA 0+00 TO E.O.P 16+13.75**  
**TYPE OF WORK: GRADING, DRAIN, BASE  
AND PAVING - 0.30 MILES**  
**BEGAN SURVEY: 01/24/18**  
**END SURVEY: 02/27/18**



06-MAR-2018 15:44  
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\$\$\$\$\$USERNAME\$\$\$\$\$

**REVISED: 03/01/18**



**DESIGN DATA**

ADT	=	
ADT	=	
DHV	=	%
D	=	%
T	=	% *
V	=	MPH
* TTST	DUAL	

**PROJECT LENGTH**  
0.30 Miles

Prepared in the Office of:  
**DIVISION OF HIGHWAYS**  
DIVISION 11, DISTRICT 2 BOONE  
P.O. BOX 1460, BOONE, N.C. 28607

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: \_\_\_\_\_

LETTING DATE: \_\_\_\_\_

M.A. PETTYJOHN P.E.  
DIVISION ENGINEER

D. ELLER  
DISTRICT ENGINEER

**DIVISION ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**DISTRICT ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA**

STATE HIGHWAY DESIGN ENGINEER

# GENERAL NOTES

PROJECT REFERENCE NO.	SHEET NO.
IIC.014098	1-A
ROADWAY DESIGN ENGINEER	

SHEET NUMBER	SHEET
	INDEX OF SHEETS
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1-C	
1-D	UTILITIES POLE DATA AND CENTER LINE SHIFT SHEET
1-E	
2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
3	SUMMARY OF QUANTITIES
	SUMMARY OF DRAINAGE QUANTITIES
	SUMMARY OF GUARDRAIL, EARTHWORK SUMMARY, AND ASPHALT PAVEMENT REMOVAL SUMMARY
3-B	RIGHT OF WAY DATA SHEET
3-C	DRAINAGE SUMMARY SHEET (48" AND UNDER)
4 THRU 6	PLAN SHEETS

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.

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 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 Utility Easement.

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 Wheel Chair Ramp, Proposed Wheel Chair Ramp Curb Cut, Curb Cut for Future Wheel Chair 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, 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, A/G Tank; Water, Gas, Oil, U/G Test Hole (S.U.E.\*), Abandoned According to Utility Records, End of Information.

7/2/09

ENTERED BY: JC	DATE: 03/01/18
CHECKED BY: MG	DATE: 03/01/18
REVISIONS	
DATE:	

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
**POLE DATA SHEET**

PROJECT REFERENCE NO. 11C.014098	SHEET NO. 1-D
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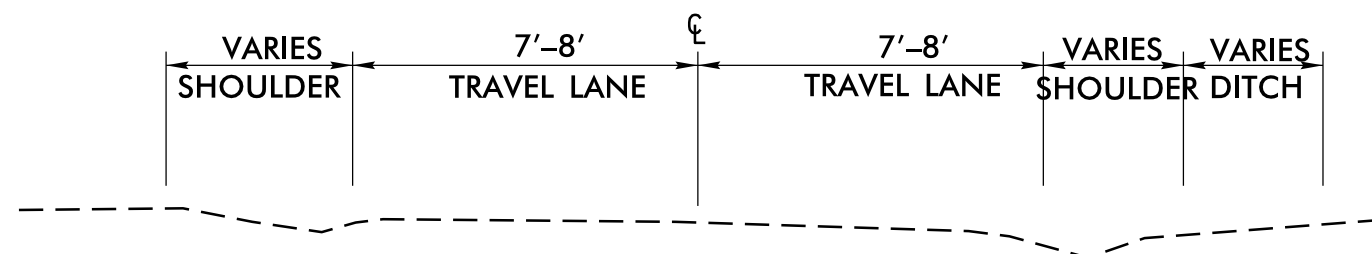
CENTERLINE  
SHIFT STA'S

OWNER OF THE POLE LINE: Caldwell County Water								OWNER OF THE POLE LINE: BREMCO								STATION		STATION			
STATION	POLE NUMBER	DIST. FROM CENTER PRESENT ROAD		DIST. FROM CENTER PROJECT		DIST. FROM PROJECT AFTER MOVING		REMARKS	STATION	POLE NUMBER	DIST. FROM CENTER PRESENT ROAD		DIST. FROM CENTER PROJECT		DIST. FROM PROJECT AFTER MOVING		REMARKS	LEFT	RIGHT	LEFT	RIGHT
		LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT				LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT					
2+09			24.9		23.5		23.5	WM	2+88		13.9		15.7		22.5			1+00			37+00
3+38			16.3		14.5		16.0	FH	11+82		21.5		21.5		22.5			2+00	1.0		38+00
4+22			28.6		28.6		28.6	WM										3+00	2.0		39+00
4+66			32.2		32.2		32.2	WM										4+00	0.5		40+00
7+03		23.7		23.7		23.7		WM										5+00			41+00
7+66		15.7		15.7		22.5		WM										6+00			42+00
10+74			19.3		19.3		22.5	WM										7+00			43+00
10+76			19.3		19.3		22.5	WM										8+00			44+00
11+23		24.7		24.7		24.7		WM										9+00			45+00
11+59			22.8		22.8		22.8	FH										10+00			46+00
13+16		23.1		23.1		23.1		WM										11+00			47+00
14+40			19.3		19.3		22.5	WM										12+00			48+00
15+43		29.8		29.8		33.7		WM										13+00			49+00
15+78			19.3		19.3		45.0	WM										14+00			50+00
																		15+00			51+00
																		16+00			52+00
																		E.O.P. 16+13.75			53+00
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																		36+00			72+00

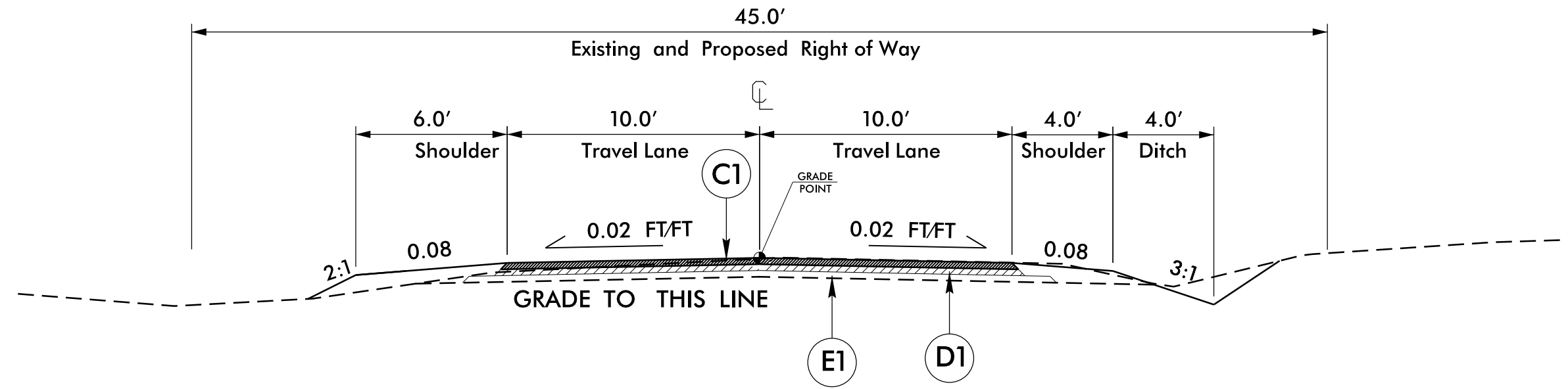
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PROJECT REFERENCE NO.	SHEET NO.
11C.014098	2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

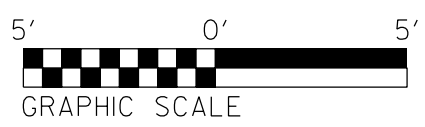


**14'-16' EXISTING TYPICAL SECTION**



**TYPICAL SECTION NO. 1**

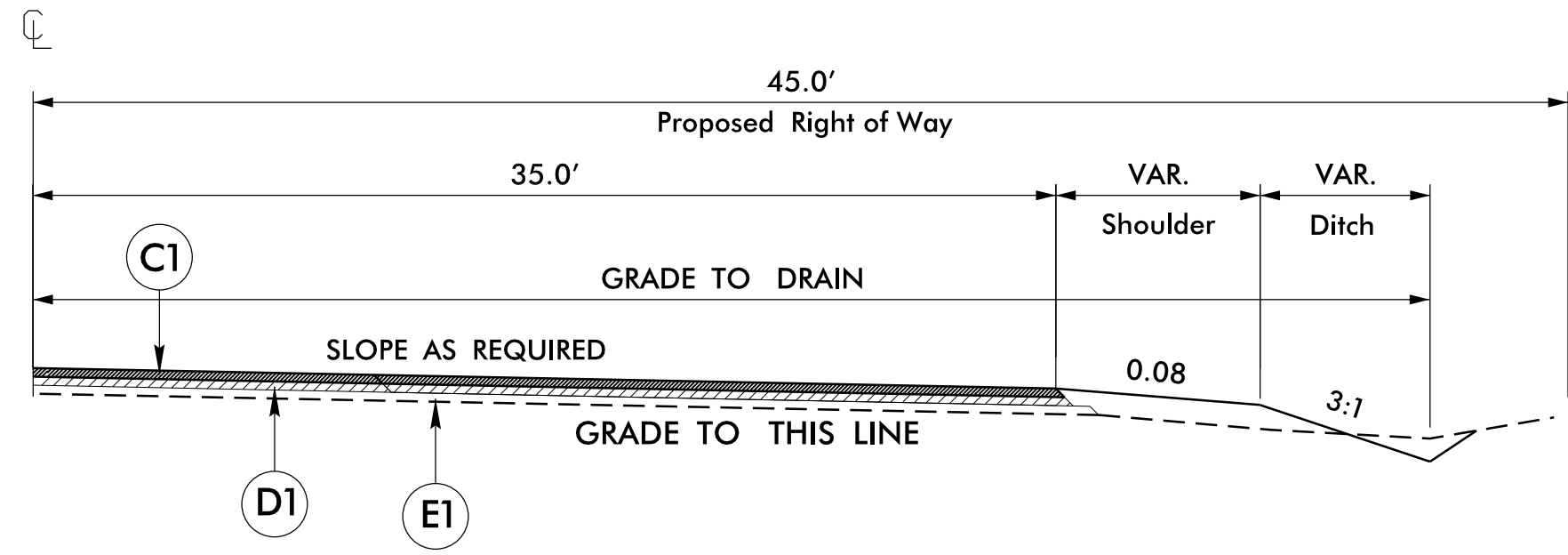
\*Sta. 0+00 to 15+17.34



<b>C1</b>	PROP. ASPHALT SURFACE TREATMENT (TRIPLE SEAL).
<b>D1</b>	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
<b>E1</b>	PROP. APPROX. 6" AGGREGATE BASE COURSE.

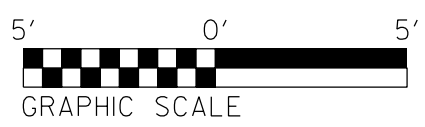
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 \$\$\$USFENB\$\$\$

PROJECT REFERENCE NO.	SHEET NO.
11C.014098	2A
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER



## TYPICAL SECTION NO. 2

CUL-DE-SAC TYPICAL  
 \*Sta. 15+17.34 to 16+13.75



<b>C1</b>	PROP. ASPHALT SURFACE TREATMENT (TRIPLE SEAL).
<b>D1</b>	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
<b>E1</b>	PROP. APPROX. 6" AGGREGATE BASE COURSE.

ENTERED BY: JMG	DATE: 03/01/18
CHECKED BY: JMG	DATE: 03/01/18
DATE: _____	
REVISIONS	

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

## RIGHT OF WAY DATA SHEET

PARCEL NO.	PROPERTY OWNERS NAME	ADDRESS	CITY	STATE	ZIP	DEED BOOK / PAGE	NCPIN	PHONE	PARCEL NO.	PROPERTY OWNERS NAME	ADDRESS	CITY	STATE	ZIP	DEED BOOK / PAGE	NCPIN	PHONE
1	HORACE & DORTHY LAKEY	5187 LACEY ROAD	GRANITE FALLS	NC	28630	678/475	2775158149										
2	JERRY E. WELLMAN	470 SUNSET ST	GRANITE FALLS	NC	28630	1014/861	2775250199										
3	JERRY & SANDRA WELLMAN	470 SUNSET ST	GRANITE FALLS	NC	28630	1159/1939	2775251094										
4	DOUGLAS K. HAYES	5197 LACEY ROAD	GRANITE FALLS	NC	28630	705/1646	2775157083										
5	STCN PROPERTIES LLC	2637 BLACKBURN COURT	GRANITE FALLS	NC	28630	1515/1061	2775242993										
6	WILLIAM J. HAYES	5201 LACEY ROAD	GRANITE FALLS	NC	28630	1909/1602	2775241802										
7	CURTIS TOWNSEND	5208 LACEY ROAD	GRANITE FALLS	NC	28630	1663/1278	2775244718										
8	WILLIAM & ANN TOWNSEND	5201 LACEY ROAD	GRANITE FALLS	NC	28630	1909/1602	2775149616										
9	JAMES & KYONG HAMBY	457 SUNSET ST	GRANITE FALLS	NC	28630	1852/1336	2775246618										
10	PAUL & SHENA KELLER	5205 LACEY ROAD	GRANITE FALLS	NC	28630	1811/629	2775241564										
11	ROBERT L. HUFFMAN	5232 LACEY ROAD	GRANITE FALLS	NC	28630	965/569	2775246468										
12	MARY C. SUDDRETH	5229 LACEY ROAD	GRANITE FALLS	NC	28630	676/025	2775148427										
13	WILLIAM & PATRICIA PARHAM	5235 LACEY ROAD	GRANITE FALLS	NC	28630	606/398	2775149210										
14	KELLY WARD	5242 LACEY ROAD	GRANITE FALLS	NC	28630	1185/380	2775247238										
15	ANGELA B. CLARK	5239 LACEY ROAD	GRANITE FALLS	NC	28630	1901/435	2775243125										

12/06/05  
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D11CAD-224780

# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

PROJECT NO. SHEET NO.

11C.014098 3-C

revised: 03/01/18

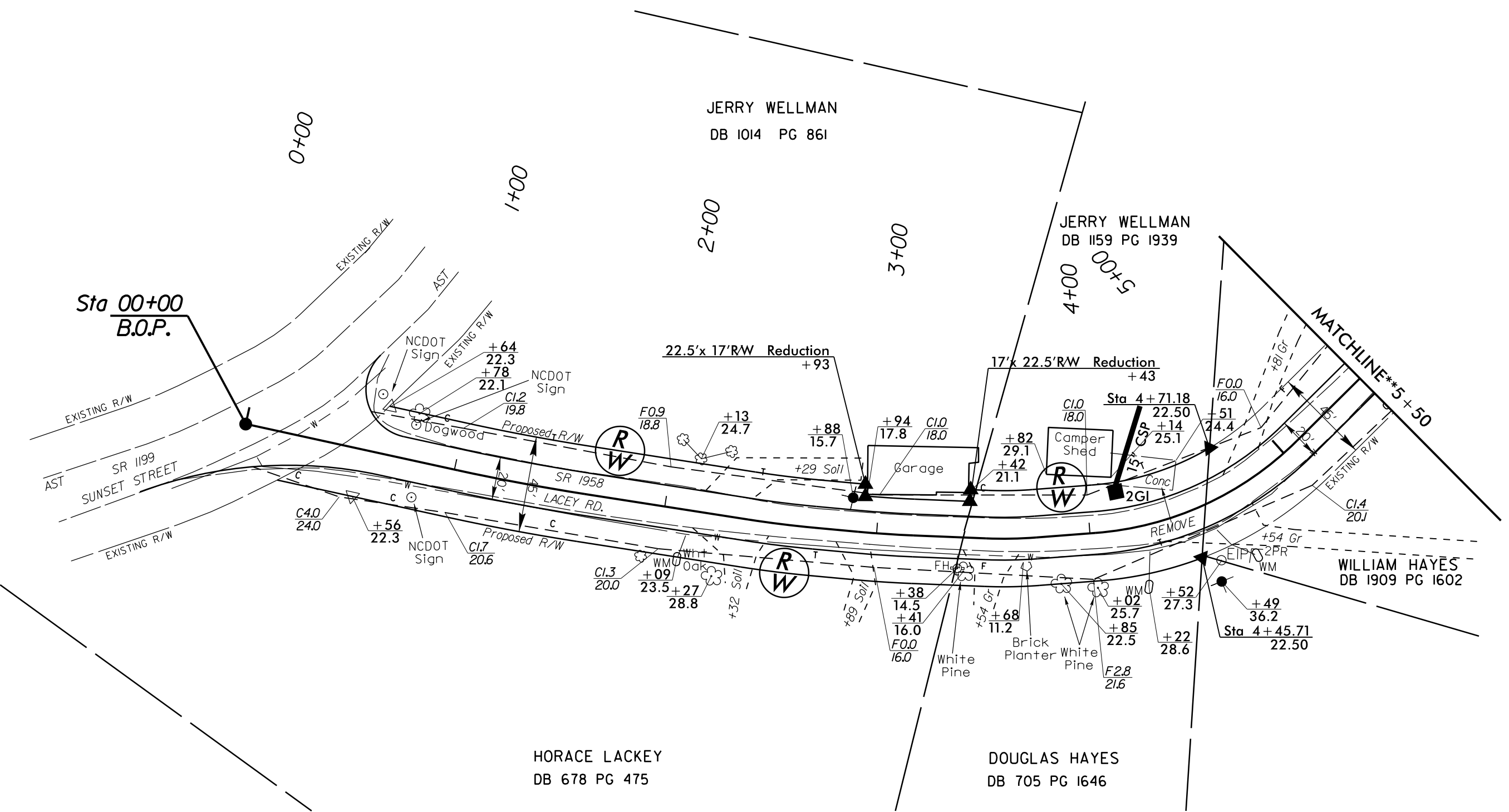
## *LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48" & UNDER)*

NEW PIPES										EXISTING PIPES								PIPE REMOVAL	DROP INLET STD. 840.19 OR STD. 840.28	D.I. FRAME AND GRATE STD. 840.22	J.B. STD. 840.31 OR 840.32	ENDWALL STD. 838.05 (CUBIC YARDS)	REMARKS				
SIZE	LOCATION (L, T, RT, OR CL)	DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, OR PVC)																									
		12"	15"	18"	24"	30"	36"	42"	48"	12"	15"	18"	24"	30"	36"	42"	48"										
TYPE STATION																											
4+27	LT		40'																	0'	1	1			ADD		
9+21	CL			43'								39'								0'					REPLACE		
9+63	RT		20'									20'								0'					REPLACE		
10+58	RT		20'									20'								0'					REPLACE		
13+25	RT		20'																	0'					ADD		
15+72	CL			88'																0'					ADD		
16+08	CL		20'																	0'					ADD		
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PROJECT REFERENCE NO.	SHEET NO.
11C.014098	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS

8/17/99  
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 \$\$\$\$USE ENVELOPE\$\$\$\$



Sta 00+00  
 B.O.P.

SR 1199  
 SUNSET STREET

HORACE LACKEY  
 DB 678 PG 475

DOUGLAS HAYES  
 DB 705 PG 1646

WILLIAM HAYES  
 DB 1909 PG 1602

JERRY WELLMAN  
 DB 1014 PG 861

JERRY WELLMAN  
 DB 1159 PG 1939

MATCHLINE\*\*5+50

22.5'x 17' RW Reduction  
 +93

17'x 22.5' RW Reduction  
 +43

Sta 4+71.18

22.50  
 +14  
 25.1

15' CSP  
 2GI

Conc

REMOVE

Sta 4+45.71

+52  
 27.3

+49  
 36.2

+22  
 28.6

+85  
 22.5

+02  
 25.7

F2.8  
 21.6

+94  
 17.8

C1.0  
 18.0

+82  
 29.1

+42  
 21.1

+38  
 14.5

+41  
 16.0

F.O.0  
 16.0

+54 Gr  
 11.2

+68  
 11.2

+89 Soil

+13  
 24.7

+88  
 15.7

F.O.9  
 18.8

+56  
 22.3

+78  
 22.1

+64  
 22.3

+19  
 19.8

+09  
 23.5

+27  
 28.8

+32 Soil

+54 Gr

+89 Soil

+13  
 24.7

+88  
 15.7

NCDOT Sign

NCDOT Sign

NCDOT Sign

NCDOT Sign

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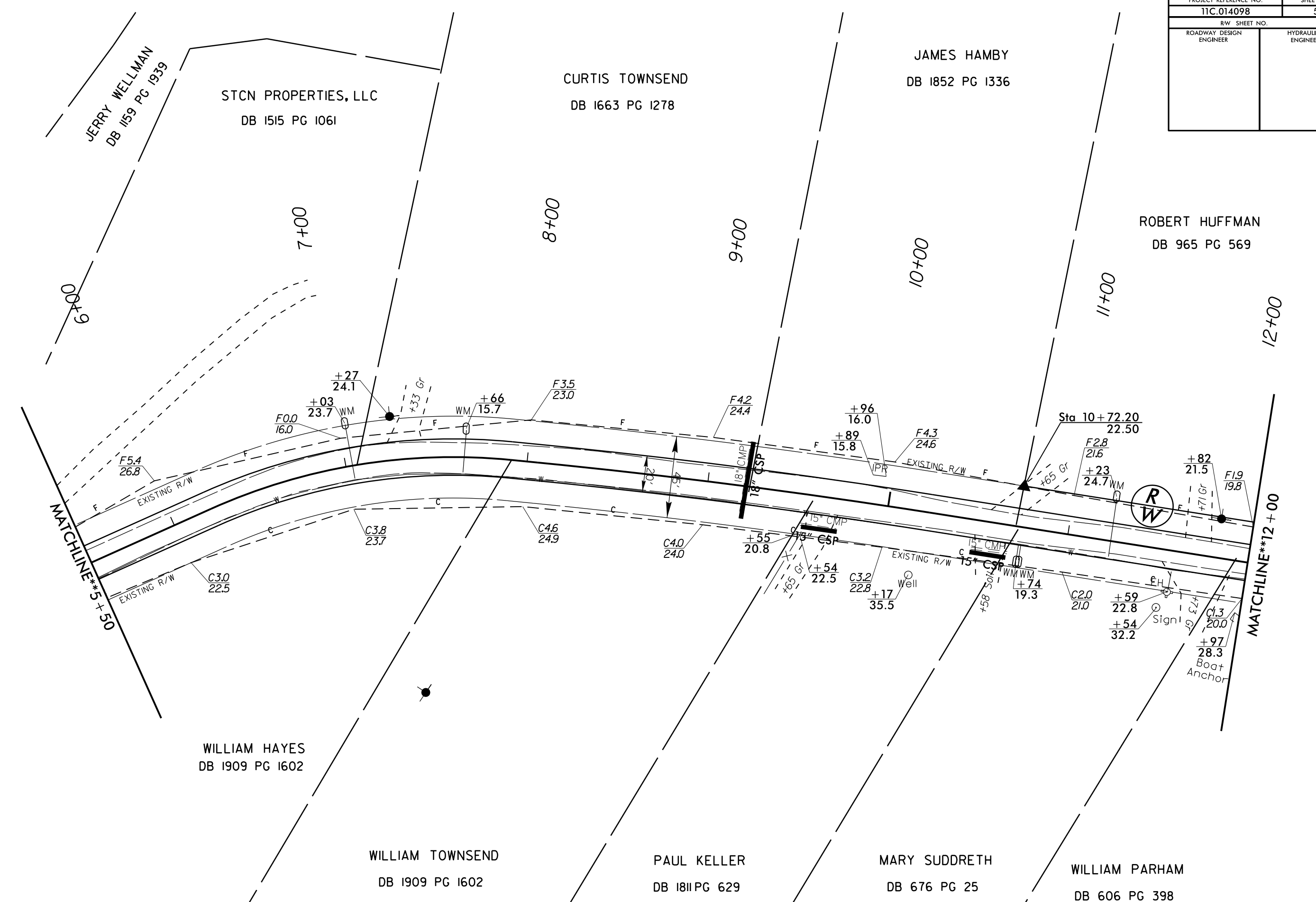
NCDOT Sign

NCDOT Sign

PROJECT REFERENCE NO.	SHEET NO.
11C.014098	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

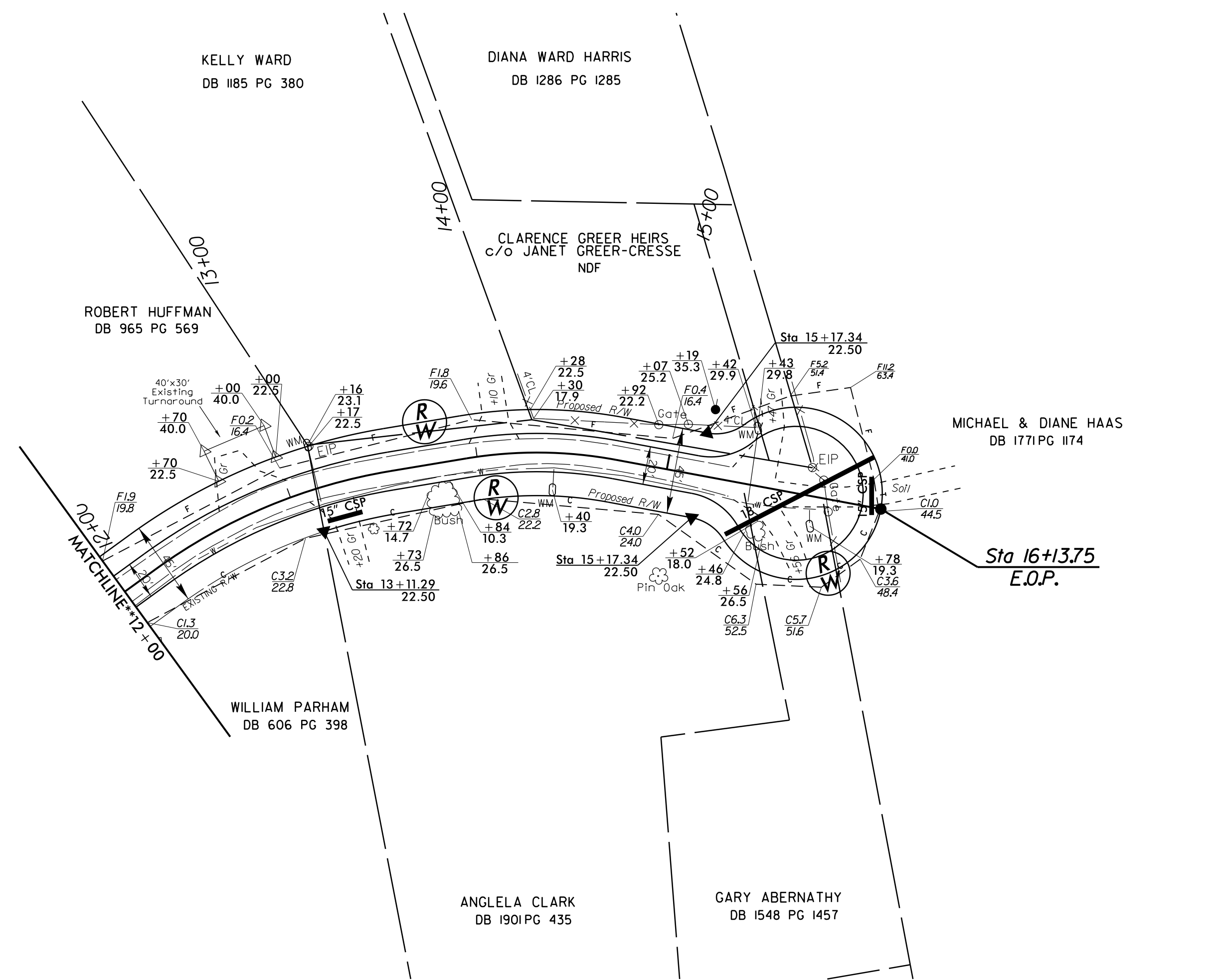
8/17/99  
 Q7-MAR-2018 08:40  
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 \*\*\*\*\*USE ENVELOPE\*\*\*\*\*

REVISIONS



PROJECT REFERENCE NO.	SHEET NO.
11C.014098	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99  
 REVISIONS  
 06-MAR-2018 15:45  
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 \*\*\*\*\*USE ENVELOPE\*\*\*\*\*

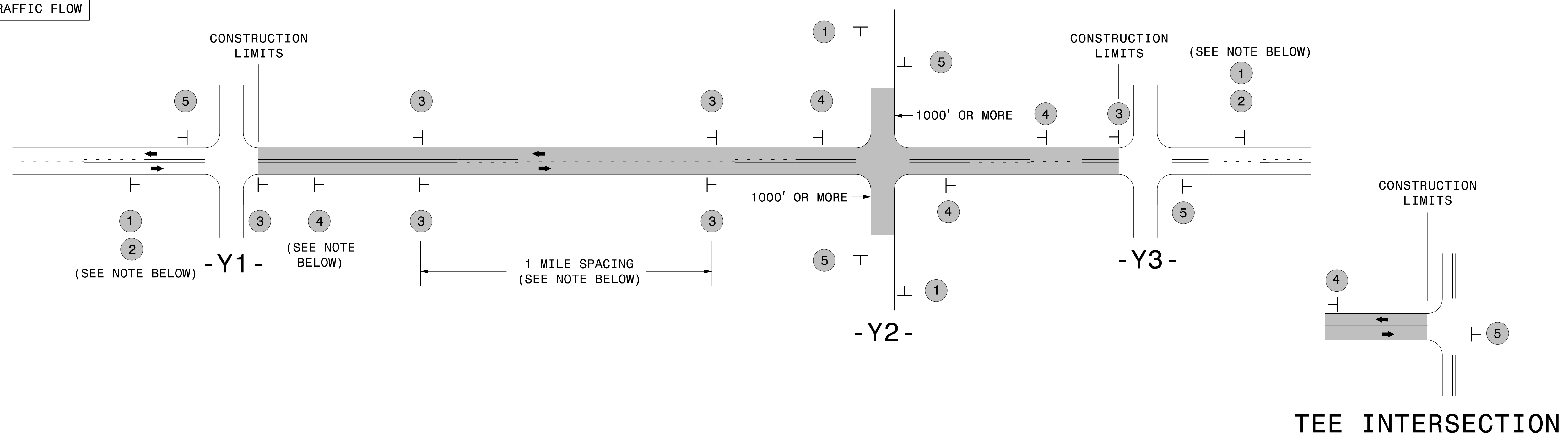


# SIGNING FOR RESURFACING PROJECTS

**LEGEND**

┆ STATIONARY SIGN

← DIRECTION OF TRAFFIC FLOW



## MAINLINE (-L-) SIGNING

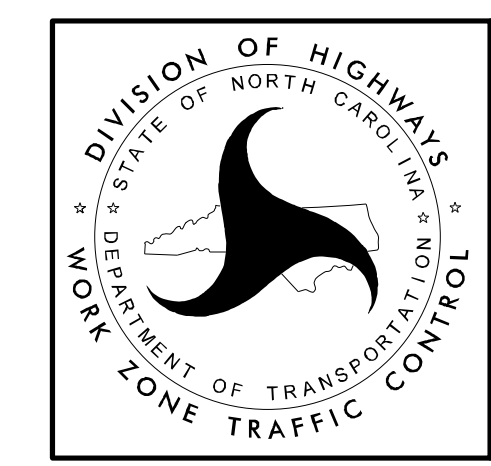
## -Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1		PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.	<p><b>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</b></p> <ol style="list-style-type: none"> <li>1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE</li> <li>2) SUBDIVISION ROADS</li> <li>3) DEAD END ROADS</li> </ol> <p>WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, PORTABLE ADVANCE WARNING SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">               PLACED 500' IN ADVANCE OF FLAGGER.         </div> <div style="text-align: center;">               PLACED 250' IN ADVANCE OF FLAGGER.         </div> </div>
	2		#2 SIGN ONLY USED WHEN CONSTRUCTION LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS)	
	3		- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY 1/2 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.	
	4		- THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. - DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. - INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. - FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500' OF EACH APPROACH. - A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN. - FOR TEE INTERSECTIONS, INSTALL WITHIN 500' +/- OF THE INTERSECTION ALONG -L- LINE.	
	5		PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.	

THE ABOVE SIGNS ARE ALL THAT ARE REQUIRED FOR A CONTRACTOR TO BEGIN A RESURFACING CONTRACT. ANY ADDITIONAL SIGNS REQUESTED BY NCDOT DIVISIONS SHALL BE INSTALLED WITHIN 7 BUSINESS DAYS OF THE START OF CONTRACT WORK.

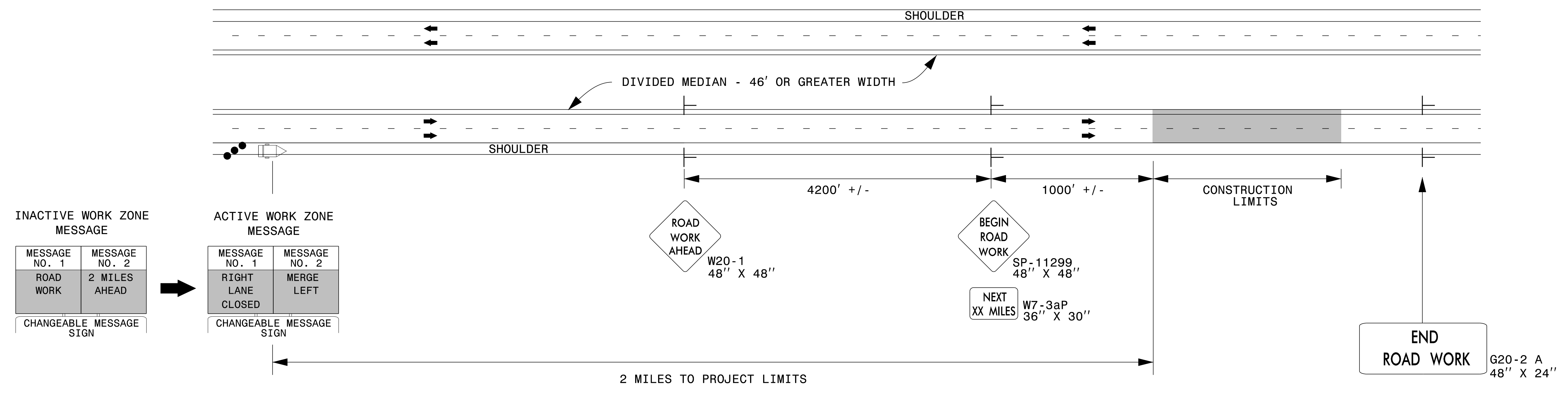
**MAPS LESS THAN 2 MILES**

FOR RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, NO STATIONARY SIGNS ARE REQUIRED. USE PORTABLE "ROAD UNDER CONSTRUCTION" OR "ROAD WORK AHEAD" SIGNS IN LIEU OF STATIONARY ADVANCE WARNINGS SIGNS.

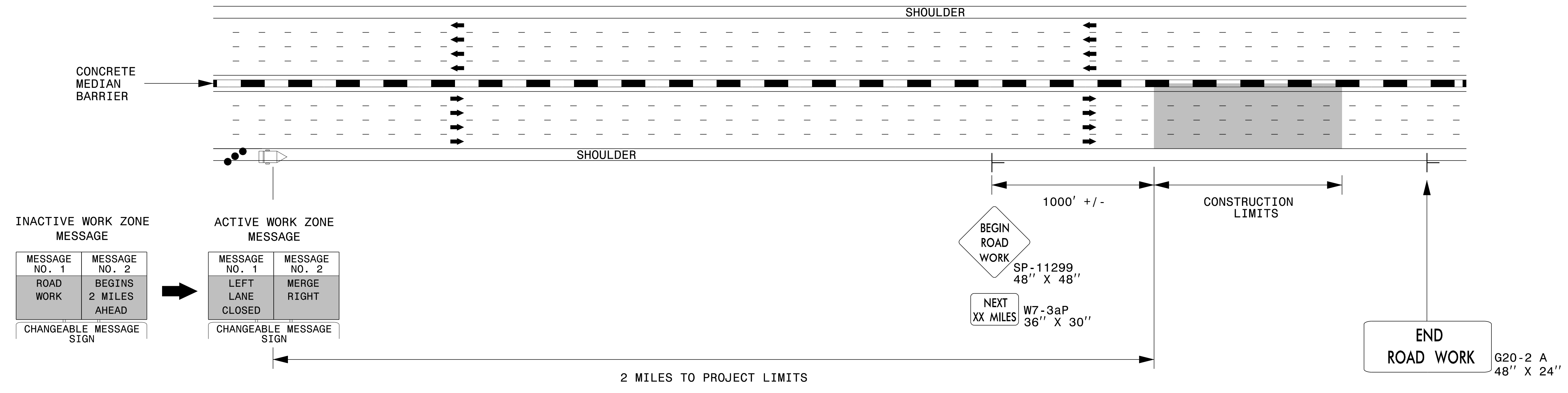


**ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN 2-LANE ROADWAY RESURFACING**

## DIVIDED MEDIANS WITH WIDTHS 46' OR GREATER



## DIVIDED MEDIANS WITH WIDTHS LESS THAN 46' OR WITH PERMANENT MEDIUM BARRIER

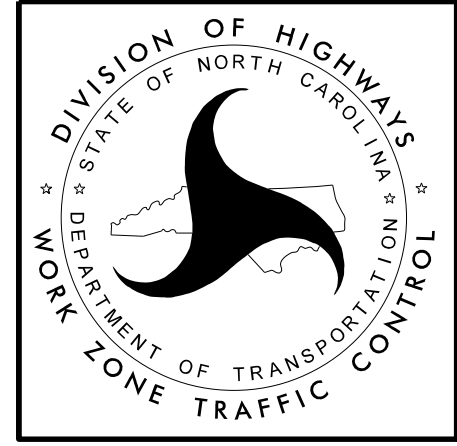


**NOTES:**

- 1) LATERAL CLEARANCE AT ALL SIGN LOCATIONS SHALL BE 6' AS MEASURED FROM THE EDGE OF PAVEMENT.
- 2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. FOLLOW MANUFACTURER'S RECOMMENDATIONS. THESE SYSTEMS SHALL BE NCHRP 350 COMPLIANT AND NCDOT APPROVED.
- 3) FOR MEDIUM WIDTHS LESS THAN 46' (MEASURED EDGELINE TO EDGELINE) USE THE BOTTOM DRAWING.
- 4) IF STATIONARY GENERAL WARNING SIGNS ARE USED, THEY WILL BE PAID FOR PER SECTION 104 OF THE NCDOT STANDARD SPECIFICATIONS AS EXTRA WORK.
- 5) INSTALL "ROAD WORK AHEAD" (W20-1) ALONG ENTRANCE RAMP 500' PRIOR TO RAMP TERMINAL, AND "END ROAD WORK" (G20-2a) AT THE END OF EXIT RAMP WITHIN THE WORK ZONE.
- 6) IF MILLED AREAS ARE NOT PAVED BACK BY THE END OF THE WORK DAY, PORTABLE SIGNS SHALL BE USED TO WARN DRIVERS OF THE PRESENT CONDITIONS. THESE ARE TO INCLUDE, BUT NOT LIMITED TO "ROUGH ROAD" W8-8, "UNEVEN LANES" W8-11, "GROOVED PAVEMENT" W8-15 w/MOTORCYCLE PLAQUE MOUNTED BELOW. THESE ARE TO BE DOUBLE INDICATED ON MULTI-LANE ROADWAYS WITH SPEED LIMITS 45 MPH AND GREATER AND WITH DIVIDED MEDIANS OF 46' OR GREATER. THESE PORTABLE SIGNS ARE INCIDENTAL TO THE OTHER ITEMS OF WORK INCLUDED IN THE TEMPORARY TRAFFIC CONTROL (LUMP SUM) PAY ITEM.

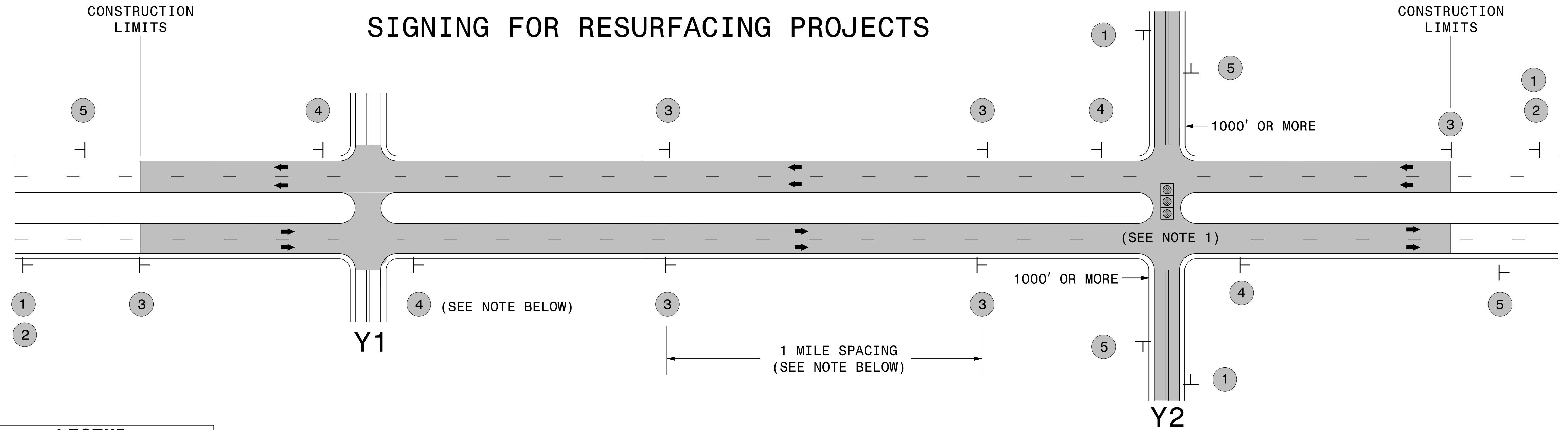
**LEGEND**

- CHANGEABLE MESSAGE SIGN (CMS)
- STATIONARY SIGN
- DIRECTION OF TRAFFIC FLOW
- TRAFFIC DRUM



**RESURFACING ADVANCE WARNING SIGNS FOR HIGH SPEED FACILITIES ≥ 60 MPH**

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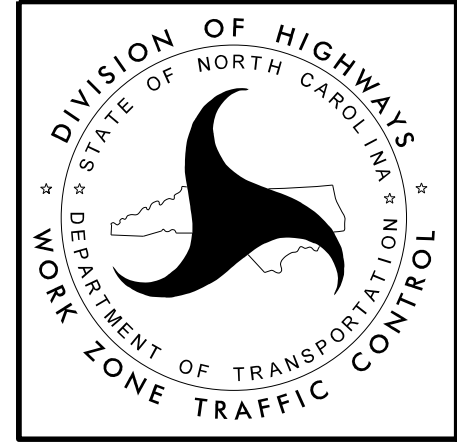
**LEGEND**  
 ┆ STATIONARY SIGN  
 ← DIRECTION OF TRAFFIC FLOW

**MAINLINE (-L-) SIGNING**

**-Y- LINE SIGNING**

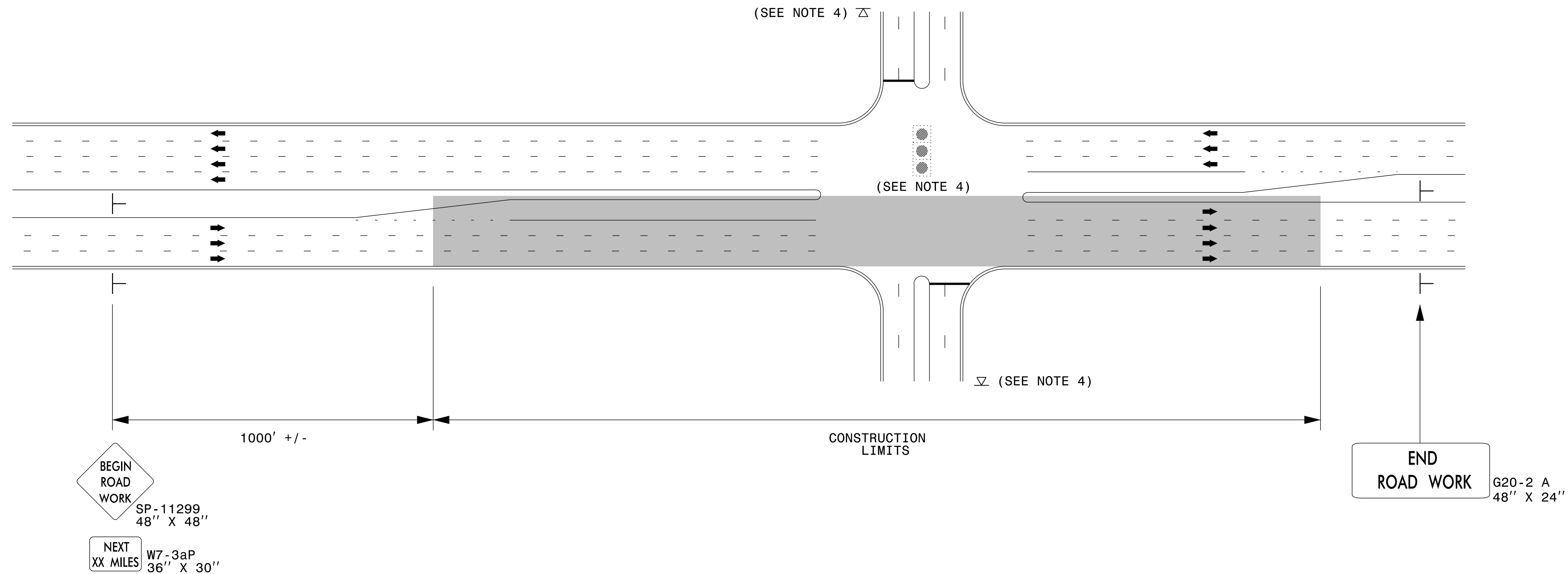
SIGNING NOTES AND PLACEMENT PER DIRECTION	 	<p>PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.</p> <p>#2 SIGN ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS)</p>	<p><b>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</b></p> <ol style="list-style-type: none"> <li>1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE</li> <li>2) SUBDIVISION ROADS</li> <li>3) DEAD END ROADS</li> </ol> <p>WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, ADVANCE WARNING PORTABLE SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">   <small>W20-1 48" X 48"</small> </div> <div style="text-align: center;">   <small>W20-7 A 48" X 48"</small> </div> </div> <p>PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.</p> <p><b>NOTES:</b></p> <ol style="list-style-type: none"> <li>1) MAY USE LAW ENFORCEMENT TO CONTROL TRAFFIC AT SIGNALIZED INTERSECTIONS AS DIRECTED BY THE ENGINEER. PROVIDE PORTABLE "ROAD WORK AHEAD" (W20-1) SIGNS 500' IN ADVANCE ALONG BOTH APPROACHES FROM THE SIDE STREETS WHEN PAVING PROCEEDS THROUGH THE INTERSECTION.</li> </ol>
		<p>PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER. IF NO -Y- LINES EXIST, PLACE 2ND SET 1/2 MILE FROM THE CONSTRUCTION LIMITS AND THEN SPACE 1 MILE THEREAFTER.</p>	
		<p>THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500' OF EACH APPROACH. A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN.</p>	
		<p>PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.</p>	

3/23/2015  
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 User:rmgarrrett



**RESURFACING  
 ADVANCE WARNING SIGNS  
 FOR RURAL AND SUBURBAN  
 MULTI-LANE ROADWAYS  
 W/ SHOULDER SECTIONS**

## URBAN / SUBURBAN WORKZONES

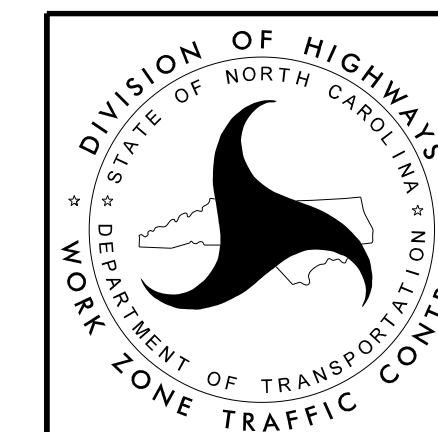


### NOTES:

- 1) 48" x 48" SIZED SIGNS (SP- 11299) MAY BE REDUCED TO 36" X 36" ON ROADWAYS WITH SPEED LIMITS OF 40 MPH OR LESS.
- 2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. FOLLOW MANUFACTURER'S RECOMMENDATIONS. THESE SYSTEMS SHALL BE NCHRP 350 COMPLIANT AND NCDOT APPROVED.
- 3) ADVANCE WARNING SIGNS NOT REQUIRED ON NON-SIGNALIZED SIDE STREETS.
- 4) MAY USE LAW ENFORCEMENT TO CONTROL TRAFFIC AT SIGNALIZED INTERSECTIONS AS DIRECTED BY THE ENGINEER. PROVIDE PORTABLE "ROAD WORK AHEAD" (W20-1) SIGNS 500' IN ADVANCE ALONG BOTH APPROACHES FROM THE SIDE STREETS WHEN PAVING PROCEEDS THROUGH THE INTERSECTION.
- 5) LATERAL CLEARANCE AT ALL SIGN LOCATIONS SHALL BE 2' AS MEASURED FROM THE EDGE OF PAVEMENT OR THE FACE OF THE CURB. WHEN UNABLE TO OBTAIN THE LATERAL CLEARANCE WITHIN THE MEDIAN AREA USE SHOULDER MOUNTS ONLY.
- 6) SIGN MOUNT LOCATIONS SHALL NOT BLOCK SIDEWALKS OR DRIVEWAYS.
- 7) IF STATIONARY GENERAL WARNING SIGNS ARE USED, THEY WILL BE PAID FOR PER SECTION 104 OF THE NCDOT STANDARD SPECIFICATIONS AS EXTRA WORK.
- 8) IF MILLED AREAS ARE NOT PAVED BACK BY THE END OF THE WORK DAY, PORTABLE SIGNS SHALL BE USED TO WARN DRIVERS OF THE PRESENT CONDITIONS. THESE ARE TO INCLUDE, BUT NOT LIMITED TO "ROUGH ROAD" W8-8, "UNEVEN LANES" W8-11, "GROOVED PAVEMENT" W8-15 w/MOTORCYCLE PLAQUE MOUNTED BELOW. THESE ARE TO BE DOUBLE INDICATED ON MULTI-LANE ROADWAYS WITH SPEED LIMITS 45 MPH AND GREATER WHERE LATERAL CLEARANCE CAN BE OBTAINED WITHIN THE MEDIAN AREAS. THESE PORTABLE SIGNS ARE INCIDENTAL TO THE OTHER ITEMS OF WORK INCLUDED IN THE TEMPORARY TRAFFIC CONTROL (LUMP SUM) PAY ITEM.

### LEGEND

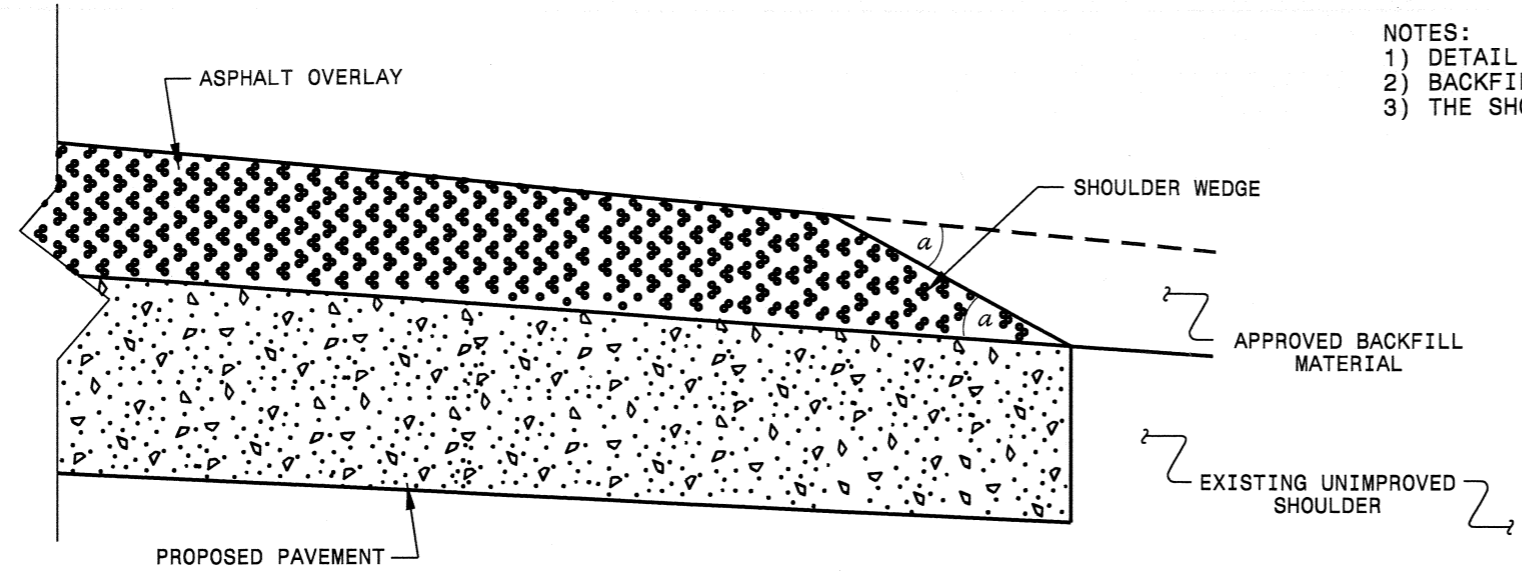
- ├ STATIONARY SIGN
- ➔ DIRECTION OF TRAFFIC FLOW



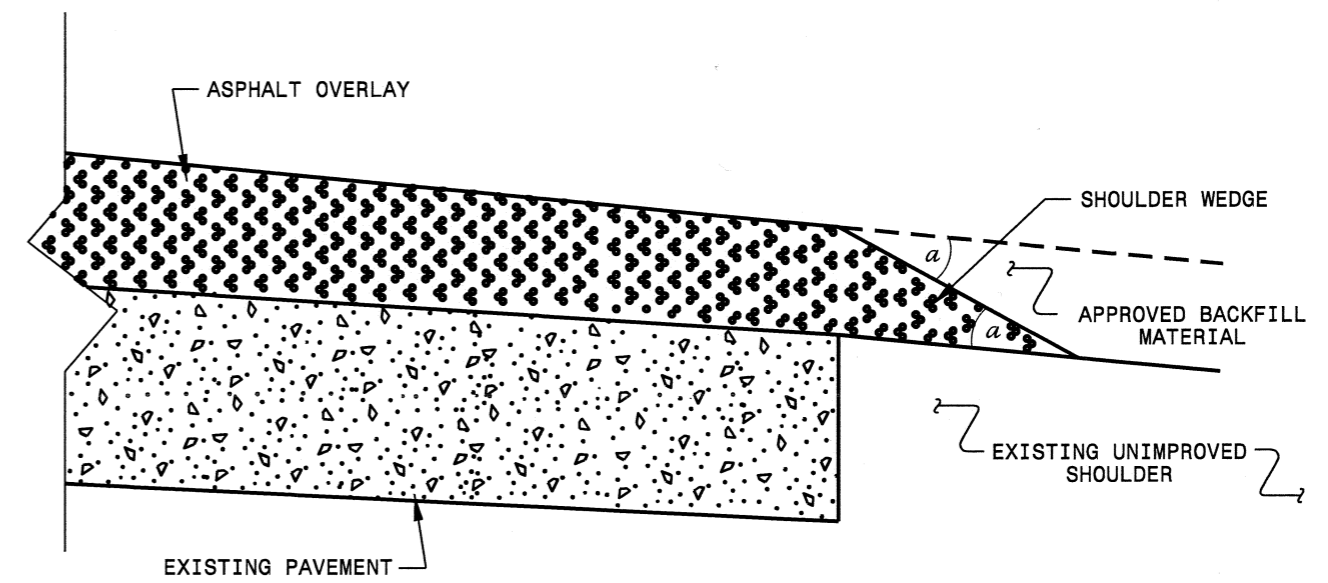
**RESURFACING ADVANCE  
WARNING SIGNS FOR  
URBAN / SUBURBAN  
FACILITIES**



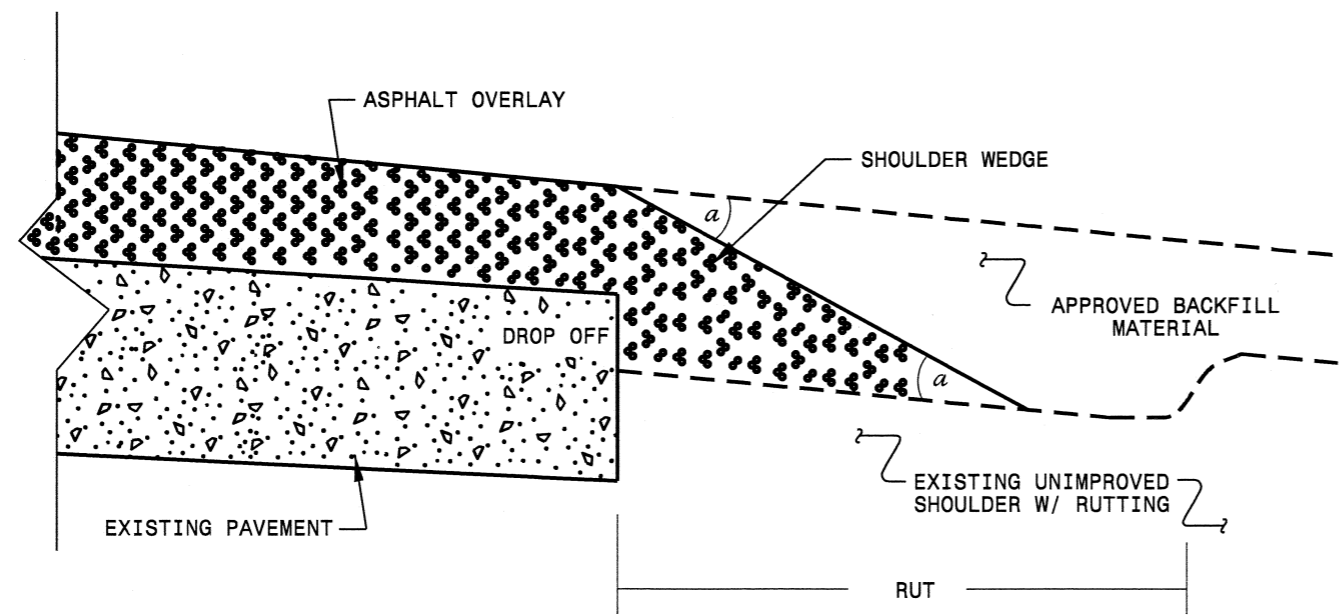
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
  - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
  - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



**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°

<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950	FAX 919-250-4119
<b>SHOULDER WEDGE DETAILS</b>	
ORIGINAL BY: T.SPELL	DATE: 7-19-11
MODIFIED BY:	DATE: 10/18/12
CHECKED BY:	DATE:
FILE SPEC.: s:\user\details\stand\shoulderwedgedetail.dgn	

SYSTEMS CONSULTANTS  
 11/15/12 10:58 AM