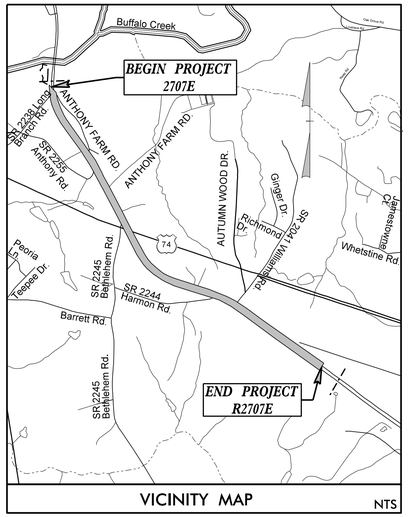
TIP PROJECT: R-2707E

CONTRACT:

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



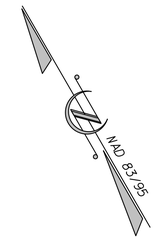
VICINITY MAP NTS

25% PLAN SUBMITTAL

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CLEVELAND COUNTY

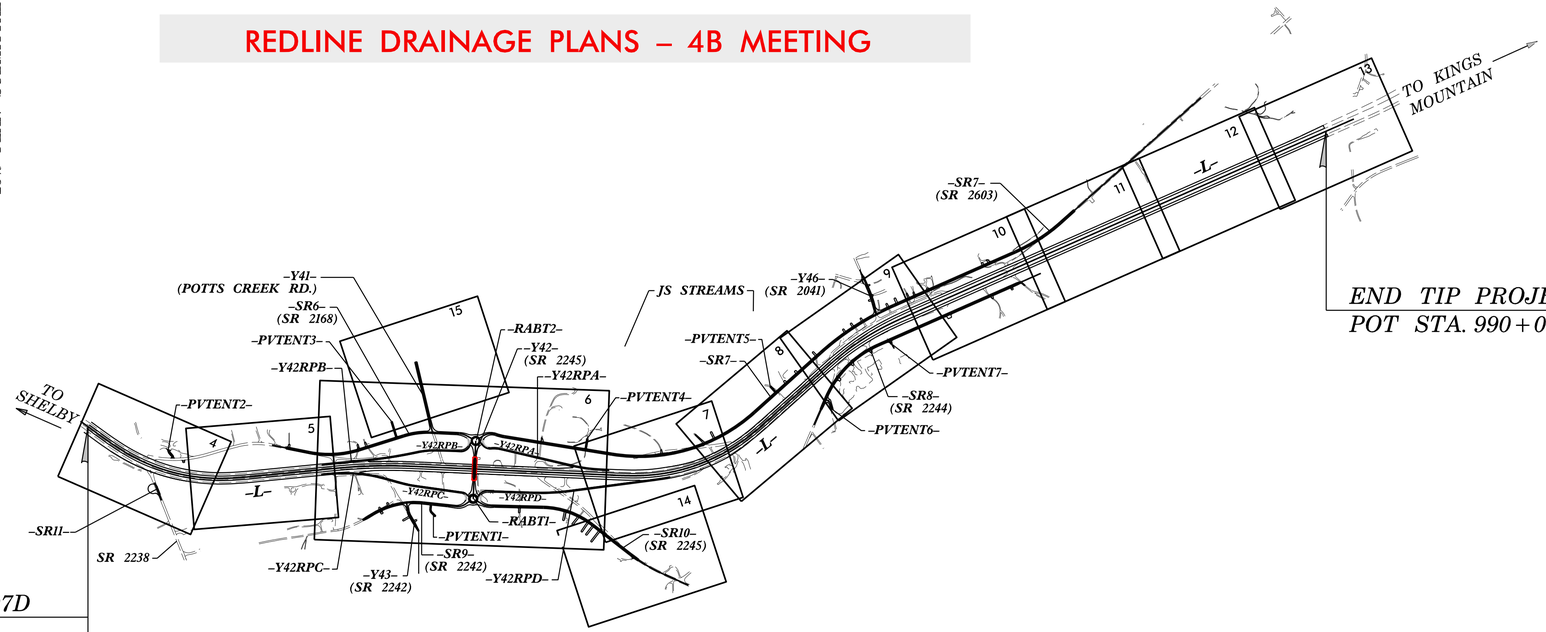
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2707E	1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
34497.1.F56	N/A	P.E.	



LOCATION: US 74 FROM EXISTING US 74 WEST OF SR 2238 (LONG BRANCH ROAD) TO WEST OF SR 1001

TYPE OF WORK: GRADING, DRAINAGE, PAVING, & STRUCTURE

REDLINE DRAINAGE PLANS – 4B MEETING



END TIP PROJECT R-2707E
POT STA. 990+00.00 -L-

END TIP PROJECT R-2707D
POT STA. 851+00.00 -L-

BEGIN TIP PROJECT R-2707E
POT STA. 851+00.00 -L-

THIS PROJECT IS NOT WITHIN ANY CITY LIMITS

THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES

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

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

50 25 0 50 100
PROFILE (VERTICAL)

DESIGN DATA

ADT 2019 = 41,600
ADT 2040 = 59,200
K = 11 %
D = 55 %
T = 15 % *
V = 70 MPH

* TTST =10% DUAL 5%

FUNC CLASS = FREEWAY

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT R-2707E = *2.63 MI.*
TOTAL LENGTH OF TIP PROJECT R-2707E = *2.63 MI.*

Stantec
PREPARED IN THE OFFICE OF:
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

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
FEBRUARY 2018

LETTING DATE:
FEBRUARY 19, 2019

JOSEPH T. KELVINGTON, P.E.
PROJECT ENGINEER

MICHAEL D. LINDGREN, P.E.
PROJECT DESIGN ENGINEER

J. B. MCSWAIN
NCDOT DIVISON 12

HYDRAULICS ENGINEER

P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

P.E.
SIGNATURE:

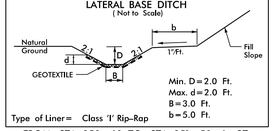
STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
R-2707E	2D-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DETAIL #1
LATERAL BASE DITCH
(Not to Scale)

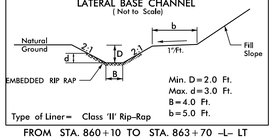


Min. D = 2.0 Ft.
Max. d = 2.0 Ft.
B = 3.0 Ft.
b = 5.0 Ft.

Type of Liner = Class 'I' Rip-Rap

FROM STA. 850 + 60 TO STA. 851 + 50 –L– RT

DETAIL #2
LATERAL BASE CHANNEL
(Not to Scale)

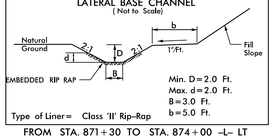


Min. D = 2.0 Ft.
Max. d = 3.0 Ft.
B = 4.0 Ft.
b = 5.0 Ft.

Type of Liner = Class 'II' Rip-Rap

FROM STA. 860 + 10 TO STA. 863 + 70 –L– LT

DETAIL #3
LATERAL BASE CHANNEL
(Not to Scale)

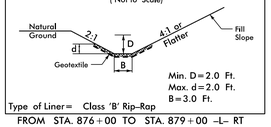


Min. D = 2.0 Ft.
Max. d = 2.0 Ft.
B = 3.0 Ft.
b = 5.0 Ft.

Type of Liner = Class 'II' Rip-Rap

FROM STA. 871 + 30 TO STA. 874 + 00 –L– LT

DETAIL #4
SPECIAL LATERAL BASE DITCH
(Not to Scale)

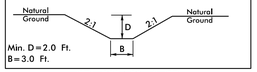


Min. D = 2.0 Ft.
Max. d = 2.0 Ft.
B = 3.0 Ft.

Type of Liner = Class 'B' Rip-Rap

FROM STA. 876 + 00 TO STA. 879 + 00 –L– RT

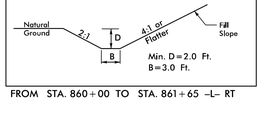
DETAIL #5
STANDARD BASE DITCH
(Not to Scale)



Min. D = 2.0 Ft.
B = 3.0 Ft.

STA. 859 + 50 –L– RT

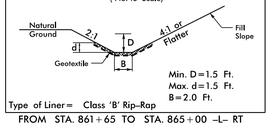
DETAIL #6
SPECIAL LATERAL BASE DITCH
(Not to Scale)



Min. D = 2.0 Ft.
B = 3.0 Ft.

FROM STA. 860 + 00 TO STA. 861 + 65 –L– RT

DETAIL #7
SPECIAL LATERAL BASE DITCH
(Not to Scale)

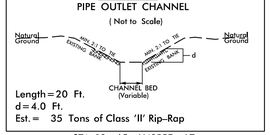


Min. D = 1.5 Ft.
Max. d = 1.5 Ft.
B = 2.0 Ft.

Type of Liner = Class 'B' Rip-Rap

FROM STA. 861 + 65 TO STA. 865 + 00 –L– RT

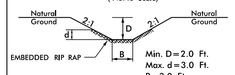
DETAIL #8
PIPE OUTLET CHANNEL
(Not to Scale)



Length = 20 Ft.
d = 4.0 Ft.
Est. = 35 Tons of Class 'II' Rip-Rap

STA. 18 + 65 –Y42RPD– LT
STA. 921 + 00 –L– RT

DETAIL #9
STANDARD BASE CHANNEL
(Not to Scale)



Min. D = 2.0 Ft.
Max. d = 3.0 Ft.
B = 3.0 Ft.

Type of Liner = Class 'II' Rip-Rap

STA. 25 + 80 –SR7– LT

DETAIL #10
STANDARD BASE CHANNEL
(Not to Scale)

Min. D = 3.0 Ft.
Max. d = 5.0 Ft.
B = 4.0 Ft.

Type of Liner = Class 'II' Rip-Rap

STA. 22 + 00 –SR7– LT
STA. 37 + 90 –SR7– LT

1/23/2018
R2707E_Detail_Drainage_2D1.dgn
kpilam

PROJECT REFERENCE NO.	SHEET NO.
R-2707E	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Stantec

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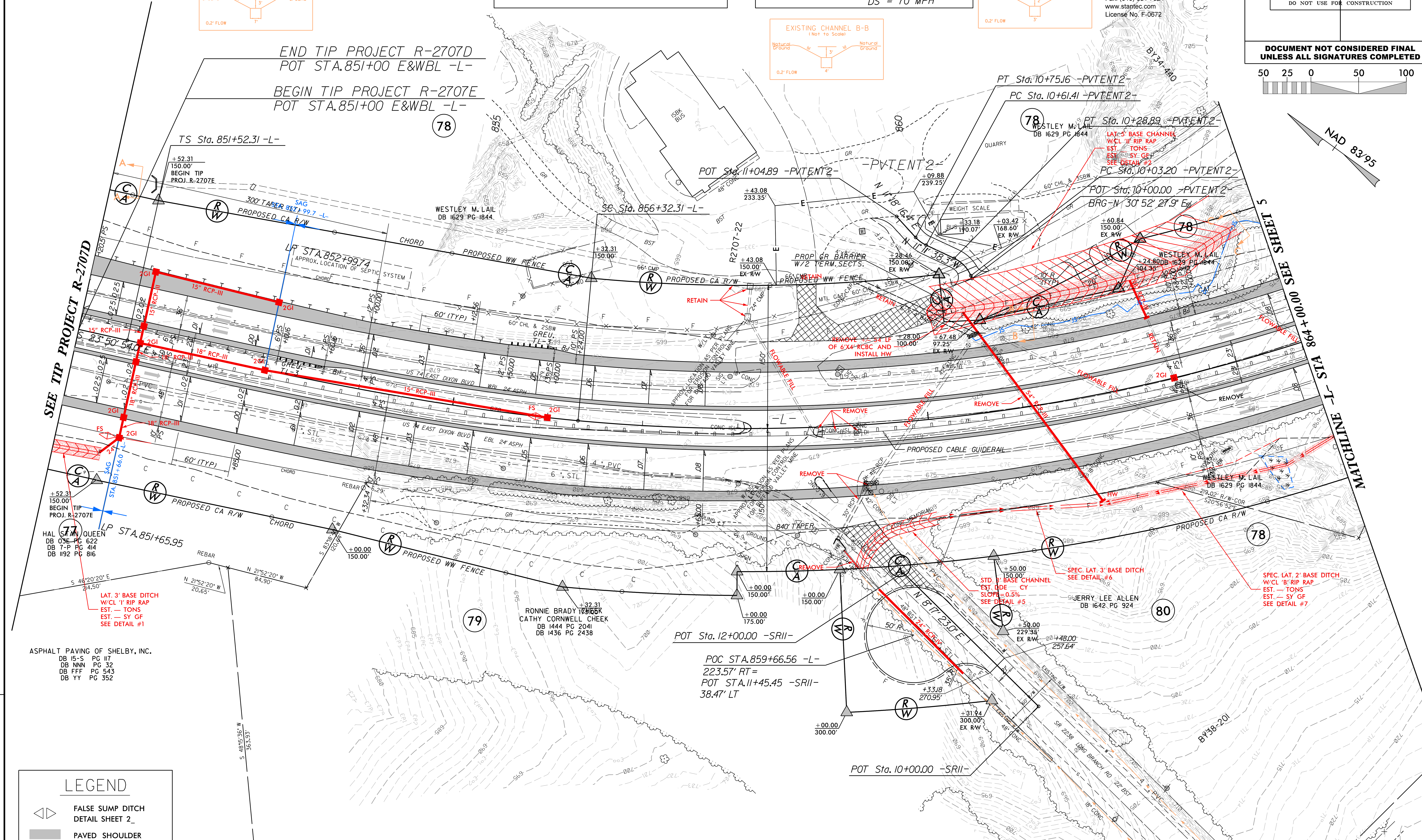
REVISIONS

-PVTENT2-

PI Sta 10+68.37	PI Sta 10+16.65
Δ = 22° 29' 54.7" (RT)	Δ = 42° 04' 06.2" (LT)
D = 163° 42' 08.0"	D = 163° 42' 08.0"
L = 13.74'	L = 25.70'
T = 6.96'	T = 13.46'
R = 35.00'	R = 35.00'

-L-

PIs Sta 854+72.58	PI Sta 860+97.91
θs = 7° 11' 58.1"	Δ = 27° 23' 57.3" (LT)
Ls = 480.00'	D = 2° 59' 59.2"
LT = 320.27'	L = 913.38'
ST = 160.24'	T = 465.59'
	R = 1,910.00'
	SE = .08
	DS = 70 MPH



EXISTING CHANNEL A-A (Not to Scale)
EXISTING CHANNEL B-B (Not to Scale)
EXISTING CHANNEL C-C (Not to Scale)
END TIP PROJECT R-2707D
POT STA.851+00 E&WBL -L-
BEGIN TIP PROJECT R-2707E
POT STA.851+00 E&WBL -L-
TS Sta. 851+52.31 -L-
SC Sta. 856+32.31 -L-
POT Sta. 11+04.89 -PVTENT2-
PT Sta. 10+75.16 -PVTENT2-
PC Sta. 10+61.41 -PVTENT2-
PT Sta. 10+28.89 -PVTENT2-
PC Sta. 10+03.20 -PVTENT2-
POT Sta. 10+00.00 -PVTENT2-
BRG-N 30° 52' 27.9" E
LP STA.852+99.74
LP STA.851+65.95
SEE TIP PROJECT R-2707D
MATCHLINE -L- STA 864+00.00 SEE SHEET 5
POT Sta. 12+00.00 -SR11-
POC STA.859+66.56 -L-
223.57' RT =
POT STA.11+45.45 -SR11-
38.47' LT
POT Sta. 10+00.00 -SR11-
WESTLEY M. LAIL
DB 1629 PG 1844
HAL STAN QUEEN
RONNIE BRADY CHEEK
CATHY CORNWELL CHEEK
DB 1444 PG 2041
DB 1436 PG 2438
JERRY LEE ALLEN
DB 1642 PG 924
ASPHALT PAVING OF SHELBY, INC.
PROPOSED CA R/W
PROPOSED WW FENCE
PROPOSED CABLE GUIDERAIL
US 74 EAST DIXON BLVD
LAT. 3' BASE DITCH W/CL 'I' RIP RAP EST. — TONS EST. — SY GF SEE DETAIL #1
SPEC. LAT. 3' BASE DITCH SEE DETAIL #6
STD. 3' BASE CHANNEL EST. DDE — CY SLOPE = 0.5% SEE DETAIL #5
SPEC. LAT. 2' BASE DITCH W/CL 'B' RIP RAP EST. — TONS EST. — SY GF SEE DETAIL #7
LAT. 5' BASE CHANNEL W/CL 'II' RIP RAP EST. — TONS EST. — SY GF SEE DETAIL #2
REMOVE 54" LP OF 6'X4' RCBC AND INSTALL HW
FLOWABLE FILL
NAD 83/95

50 25 0 50 100

LEGEND

- FALSE SUMP DITCH DETAIL SHEET 2_
- PAVED SHOULDER
- OBLITERATE, REMOVE AND GRADE TO DRAIN
- CONCRETE

REFERENCES:
FOR -L- PROFILE, SEE SHEET NO. 16
FOR -SR11- PROFILE, SEE SHEET NO. 41
FOR -PVTENT2- PROFILE, SEE SHEET NO. 42

8/17/99
1/24/2018
R2707E_Hyd_PSH_04.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2707E	5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

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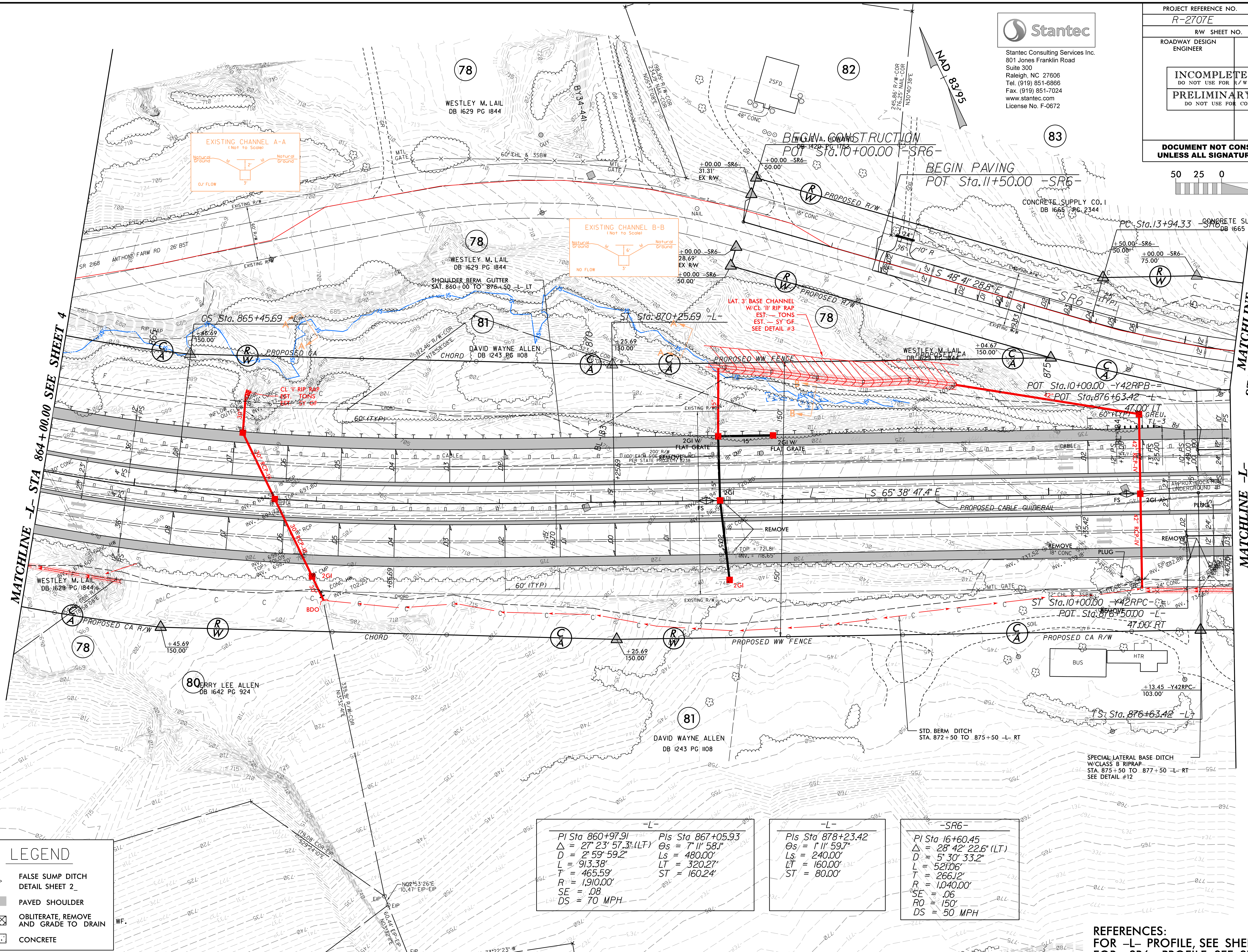
8/17/99

REVISIONS


50 25 0 50 100
NAD 83/95
BEGIN CONSTRUCTION
POT Sta.10+00.00 -SR6-
BEGIN PAVING
POT Sta.11+50.00 -SR6-
WESTLEY M. LAIL
DB 1629 PG 1844
CONCRETE SUPPLY CO. I
DB 1665 PG 2344
DAVID WAYNE ALLEN
DB 1243 PG 1108
JERRY LEE ALLEN
DB 1642 PG 924
EXISTING CHANNEL A-A
EXISTING CHANNEL B-B
SHOULDER BERM GUTTER
SAT. 860+00 TO 876+50 -L- LT
CS Sta. 865+45.69 -L-
ST Sta. 870+25.69 -L-
LAT. 3' BASE CHANNEL
W/CL 'II' RIP RAP
SEE DETAIL #3
PROPOSED WW FENCE
PROPOSED CA R/W
PROPOSED R/W
PROPOSED CABLE GUIDERAIL
S 65° 38' 47.4" E
S 48° 41' 28.8" E
PC Sta.13+94.33 -SR6-
POT Sta.10+00.00 -Y42RPB-=
POT Sta.876+63.42 -L-
47.00' LT
ST Sta.10+00.00 -Y42RPC-=
POT Sta.876+50.00 -L-
47.00' RT
TS Sta. 876+63.42 -L-
STD. BERM DITCH
STA. 872+50 TO 875+50 -L- RT
SPECIAL LATERAL BASE DITCH
W/CLASS B RIPRAP
STA. 875+50 TO 877+50 -L- RT
SEE DETAIL #12
MATCHLINE -L- STA 864+00.00 SEE SHEET 4
MATCHLINE -SR6- STA. 15+55.00 SEE SHEET 6
MATCHLINE -L- STA 877+00.00 SEE SHEET 6

-L-	
PI Sta 860+97.91	PIs Sta 867+05.93
Δ = 27° 23' 57.3" (LT)	Θs = 7° 11' 58.1"
D = 2° 59' 59.2"	Ls = 480.00'
L = 913.38'	LT = 320.27'
T = 465.59'	ST = 160.24'
R = 1,910.00'	
SE = .08	
DS = 70 MPH	

-L-
PIs Sta 878+23.42
Θs = 1° 11' 59.7"
Ls = 240.00'
LT = 160.00'
ST = 80.00'

-SR6-
PI Sta 16+60.45
Δ = 28° 42' 22.6" (LT)
D = 5° 30' 33.2"
L = 521.06'
T = 266.12'
R = 1,040.00'
SE = .06
RO = 150'
DS = 50 MPH

LEGEND

- FALSE SUMP DITCH DETAIL SHEET 2
- PAVED SHOULDER
- OBLITERATE, REMOVE AND GRADE TO DRAIN
- CONCRETE

REFERENCES:
FOR -L- PROFILE, SEE SHEET NO. 17
FOR -SR6- PROFILE, SEE SHEET NO. 34

R2707E_Hyd_PSH_05.dgn

REVISIONS

-L-

PIs Sta 878+23.42	PI Sta 881+92.35	PIs Sta 885+60.79
Θs = 1° 11′ 59.7″	Δ = 5° 46′ 23.6″ (RT)	Θs = 1° 11′ 59.7″
Ls = 240.00′	D = 0° 59′ 59.7″	Ls = 240.00′
LT = 160.00′	L = 577.37′	LT = 160.00′
ST = 80.00′	T = 288.93′	ST = 80.00′
	R = 5,730.00′	
	SE = .04	
	DS = 70 MPH	

-SR6-

PI Sta 16+60.45	PI Sta 25+48.94	PI Sta 30+24.33
Δ = 28° 42′ 22.6″ (LT)	Δ = 20° 11′ 49.7″ (RT)	Δ = 27° 09′ 52.8″ (RT)
D = 5° 30′ 33.2″	D = 6° 52′ 41.7″	D = 31° 49′ 51.6″
L = 521.06′	L = 293.64′	L = 85.34′
T = 266.12′	T = 148.36′	T = 43.49′
R = 1,040.00′	R = 833.00′	R = 180.00′
SE = .06	SE = .06	SE = .02
RO = 150′	RO = 150′	RO = 40′
DS = 50 MPH	DS = 50 MPH	DS = 15 MPH

-Y42RPB-

PIs Sta 15+00.00	PI Sta 17+03.65	PIs Sta 19+07.18	PI Sta 21+02.70	PI Sta 25+14.82
Θs = 0° 58′ 35.9″	Δ = 4° 00′ 00.0″ (LT)	Θs = 0° 58′ 35.9″	Δ = 12° 40′ 32.9″ (RT)	Δ = 66° 04′ 33.7″ (LT)
Ls = 150.00′	D = 1° 18′ 07.8″	Ls = 150.00′	D = 6° 39′ 44.3″	D = 57° 17′ 44.8″
LT = 100.00′	L = 307.18′	LT = 100.00′	L = 190.26′	L = 115.32′
ST = 50.00′	T = 153.65′	ST = 50.00′	T = 95.52′	T = 65.04′
	R = 4,400.00′		R = 860.00′	R = 100.00′
			SE = .05	SE = .02
			RO = 150′	RO = 70′
			DS = 30 MPH	DS = 15 MPH

-SR7-

PI Sta 11+17.71	PI Sta 12+29.39
Δ = 54° 38′ 43.3″ (RT)	Δ = 10° 32′ 21.7″ (LT)
D = 38° 11′ 49.9″	D = 11° 27′ 33.0″
L = 143.06′	L = 91.97′
T = 77.50′	T = 46.12′
R = 150.00′	R = 500.00′
SE = .02	SE = .02
RO = 50′	RO = 50′
DS = 15 MPH	DS = 15 MPH

-RABT2-

PI Sta 10+00.00
Δ = 359° 59′ 42.1″ (LT)
D = 124° 33′ 21.8″
L = 289.02′
T = 0.00′
R = 46.00′
SE = .02
DS = 20 MPH

-Y42RPA-

PI Sta 23+00.60	PI Sta 22+01.17	PIs Sta 13+45.23	PI Sta 12+39.28	PIs Sta 11+33.36
Δ = 55° 03′ 34.6″ (RT)	Δ = 18° 13′ 32.1″ (LT)	Θs = 3° 49′ 11.0″	Δ = 3° 00′ 00.0″ (RT)	Θs = 3° 49′ 11.0″
D = 57° 17′ 44.8″	D = 19° 05′ 54.9″	Ls = 200.00′	D = 3° 49′ 11.0″	Ls = 200.00′
L = 96.10′	L = 95.43′	LT = 133.36′	L = 78.54′	LT = 133.36′
T = 52.12′	T = 48.12′	ST = 66.69′	T = 39.28′	ST = 66.69′
R = 100.00′	R = 300.00′		R = 1,500.00′	
SE = .02	SE = .02		SE = .07	
RO = 40′	RO = 35′		DS = 50 MPH	
DS = 15 MPH	DS = 15 MPH			

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PROJECT REFERENCE NO.	SHEET NO.
R-2707E	6

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REFERENCES:
FOR -L- PROFILE, SEE SHEET NO. 18 & 19
FOR -Y42RPA- PROFILE, SEE SHEET NO. 27
FOR -Y42RPB- PROFILE, SEE SHEET NO. 28
FOR -Y42RPC- PROFILE, SEE SHEET NO. 29
FOR -Y42RPD- PROFILE, SEE SHEET NO. 30
FOR -RABT1- & -RABT2- PROFILE, SEE SHEET NO. 31
FOR -SR6- PROFILE, SEE SHEET NO. 34
FOR -SR7- PROFILE, SEE SHEET NO. 35
FOR -SR9- PROFILE, SEE SHEET NO. 39
FOR -SR10- PROFILE, SEE SHEET NO. 40
FOR -Y41- & -Y_42- PROFILE, SEE SHEET NO. 32
FOR -Y43- PROFILE, SEE SHEET NO. 33
FOR -PVTENT1- PROFILE, SEE SHEET NO. 42
FOR -PVTENT3- PROFILE, SEE SHEET NO. 43
FOR -PVTENT4- PROFILE, SEE SHEET NO. 43

-PVTENT1-

PI Sta 10+76.73
Δ = 51° 55′ 01.1″ (LT)
D = 114° 35′ 29.6″
L = 45.31′
T = 24.34′
R = 50.00′

LEGEND

- FALSE SUMP DITCH DETAIL SHEET 2
- PAVED SHOULDER
- OBLITERATE, REMOVE AND GRADE TO DRAIN
- CONCRETE

-SR9-

PI Sta 14+01.58	PI Sta 20+59.83
Δ = 36° 43′ 23.2″ (RT)	Δ = 40° 52′ 39.2″ (LT)
D = 6° 52′ 41.7″	D = 38° 11′ 49.9″
L = 533.90′	L = 107.02′
T = 276.48′	T = 55.90′
R = 833.00′	R = 150.00′
SE = .06	SE = .02
RO = 150′	RO = 40′
DS = 50 MPH	DS = 15 MPH

-Y42RPC-

PIs Sta 11+33.36	PI Sta 13+80.77	PIs Sta 16+26.51	PIs Sta 18+59.83	PI Sta 19+53.35	PI Sta 25+06.30
Θs = 3° 49′ 11.0″	Δ = 13° 44′ 37.7″ (RT)	Θs = 3° 49′ 11.0″	Θs = 3° 34′ 51.6″	Δ = 4° 09′ 20.7″ (LT)	Δ = 36° 00′ 00.0″ (RT)
Ls = 200.00′	D = 3° 49′ 11.0″	Ls = 200.00′	Ls = 150.00′	D = 4° 46′ 28.7″	D = 76° 23′ 39.7″
LT = 133.36′	L = 359.81′	LT = 133.36′	LT = 100.02′	L = 87.04′	L = 47.12′
ST = 66.69′	T = 180.77′	ST = 66.69′	ST = 50.02′	T = 43.54′	T = 24.37′
	R = 1,500.00′			R = 1,200.00′	R = 75.00′
	SE = .07			SE = .06	SE = .02
	DS = 50 MPH			DS = 40 MPH	RO = 35′
					DS = 15 MPH

-Y43-

PI Sta 11+11.78
Δ = 19° 20′ 43.9″ (LT)
D = 38° 58′ 36.2″
L = 49.63′
T = 25.06′
R = 147.00′
SE = .04
RO = 68′
DS = 20 MPH

-RABT1-

PI Sta 10+00.00
Δ = 359° 59′ 42.1″ (LT)
D = 124° 33′ 21.8″
L = 289.02′
T = 0.00′
R = 46.00′
SE = .02
RO = 50′
DS = 20 MPH

-SR10-

PI Sta 11+02.38	PI Sta 19+82.63
Δ = 28° 34′ 02.6″ (LT)	Δ = 36° 23′ 06.6″ (RT)
D = 31° 49′ 51.6″	D = 6° 39′ 44.3″
L = 89.75′	L = 546.14′
T = 45.83′	T = 282.63′
R = 180.00′	R = 860.00′
SE = .02	SE = .06
RO = 50′	RO = 150′
DS = 15 MPH	DS = 50 MPH

-Y42RPD-

PI Sta 29+51.80	PIs Sta 24+07.61	PI Sta 22+36.90	PIs Sta 20+66.01
Δ = 50° 49′ 49.4″ (LT)	Θs = 1° 47′ 25.8″	Δ = 5° 46′ 04.1″ (RT)	Θs = 1° 47′ 25.8″
D = 57° 17′ 44.8″	Ls = 150.00′	D = 2° 23′ 14.4″	Ls = 150.00′
L = 88.72′	LT = 100.01′	L = 241.60′	LT = 100.01′
T = 47.52′	ST = 50.00′	T = 120.90′	ST = 50.00′
R = 100.00′		R = 2,400.00′	
SE = .02		SE = .05	
RO = 35′		DS = 50 MPH	
DS = 15 MPH			

GRAPHIC SCALE
50 0 50 100
PLANS

LOCATION:
US 74 (SHELBY BYPASS) FROM EXISTING US 74 WEST OF SR 2238 (LONG BRANCH ROAD) TO WEST OF SR 1001

TIP NO.: R-2707E COUNTY: CLEVELAND

DESIGNED BY: RES

CHECKED BY: DLW DATE:

PROJECT REFERENCE NO.	SHEET NO.
R-2707E	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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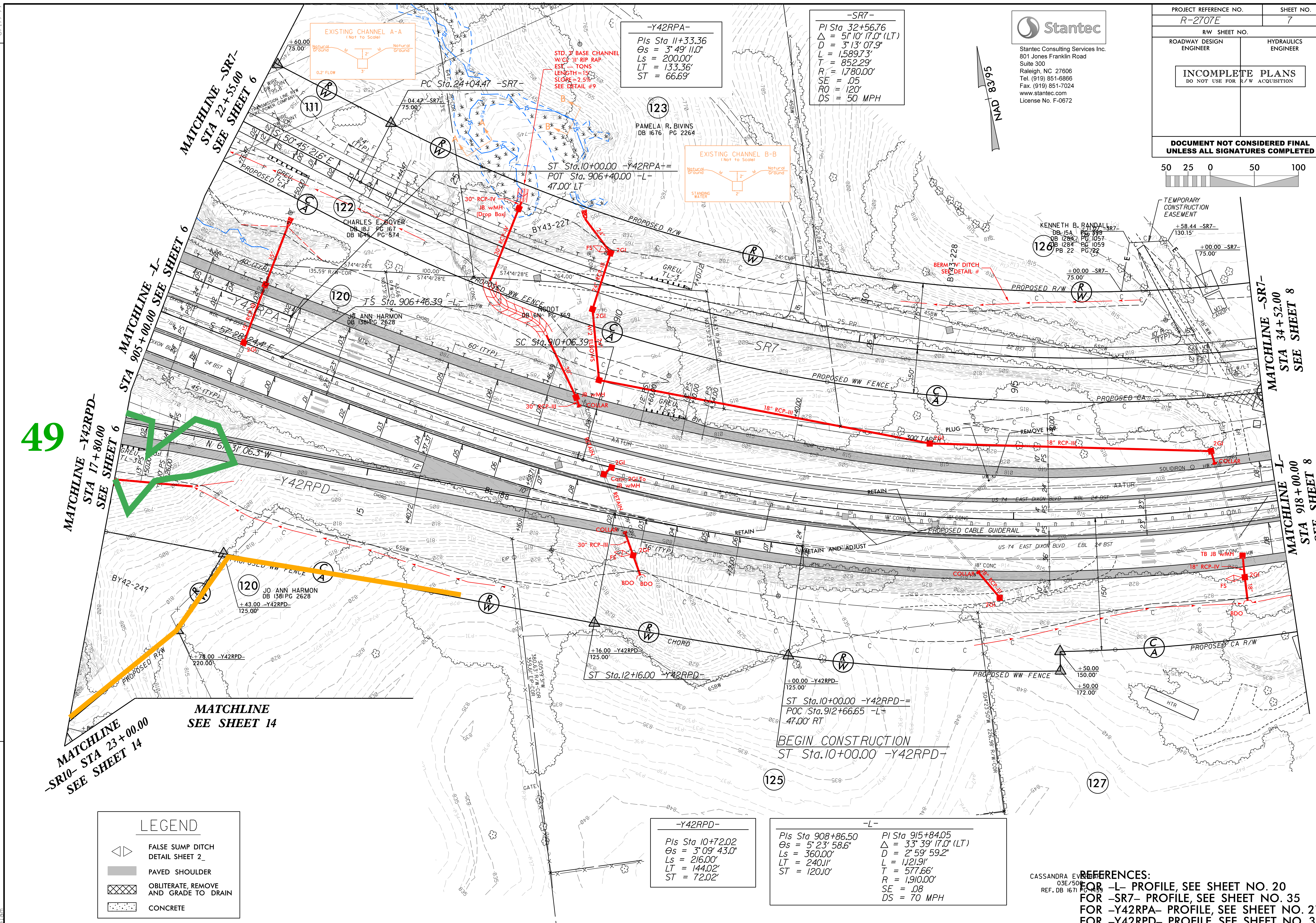

-Y42RPA-
PIs Sta 11+33.36
Θs = 3° 49' 11.0"
Ls = 200.00'
LT = 133.36'
ST = 66.69'

-SR7-
PI Sta 32+56.76
Δ = 51° 10' 17.0" (LT)
D = 3° 13' 07.9"
L = 1,589.73'
T = 852.29'
R = 1,780.00'
SE = .05
RO = 120'
DS = 50 MPH

-Y42RPD-
PIs Sta 10+72.02
Θs = 3° 09' 43.0"
Ls = 216.00'
LT = 144.02'
ST = 72.02'

-L-	
PIs Sta 908+86.50	PI Sta 915+84.05
Θs = 5° 23' 58.6"	Δ = 33° 39' 17.0" (LT)
Ls = 360.00'	D = 2° 59' 59.2"
LT = 240.11'	L = 1,121.91'
ST = 120.10'	T = 577.66'
	R = 1,910.00'
	SE = .08
	DS = 70 MPH

LEGEND

- FALSE SUMP DITCH DETAIL SHEET 2_
- PAVED SHOULDER
- OBLITERATE, REMOVE AND GRADE TO DRAIN
- CONCRETE

REFERENCES:

FOR -L- PROFILE, SEE SHEET NO. 20
FOR -SR7- PROFILE, SEE SHEET NO. 35
FOR -Y42RPA- PROFILE, SEE SHEET NO. 27
FOR -Y42RPD- PROFILE, SEE SHEET NO. 30

REVISIONS

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-2707E	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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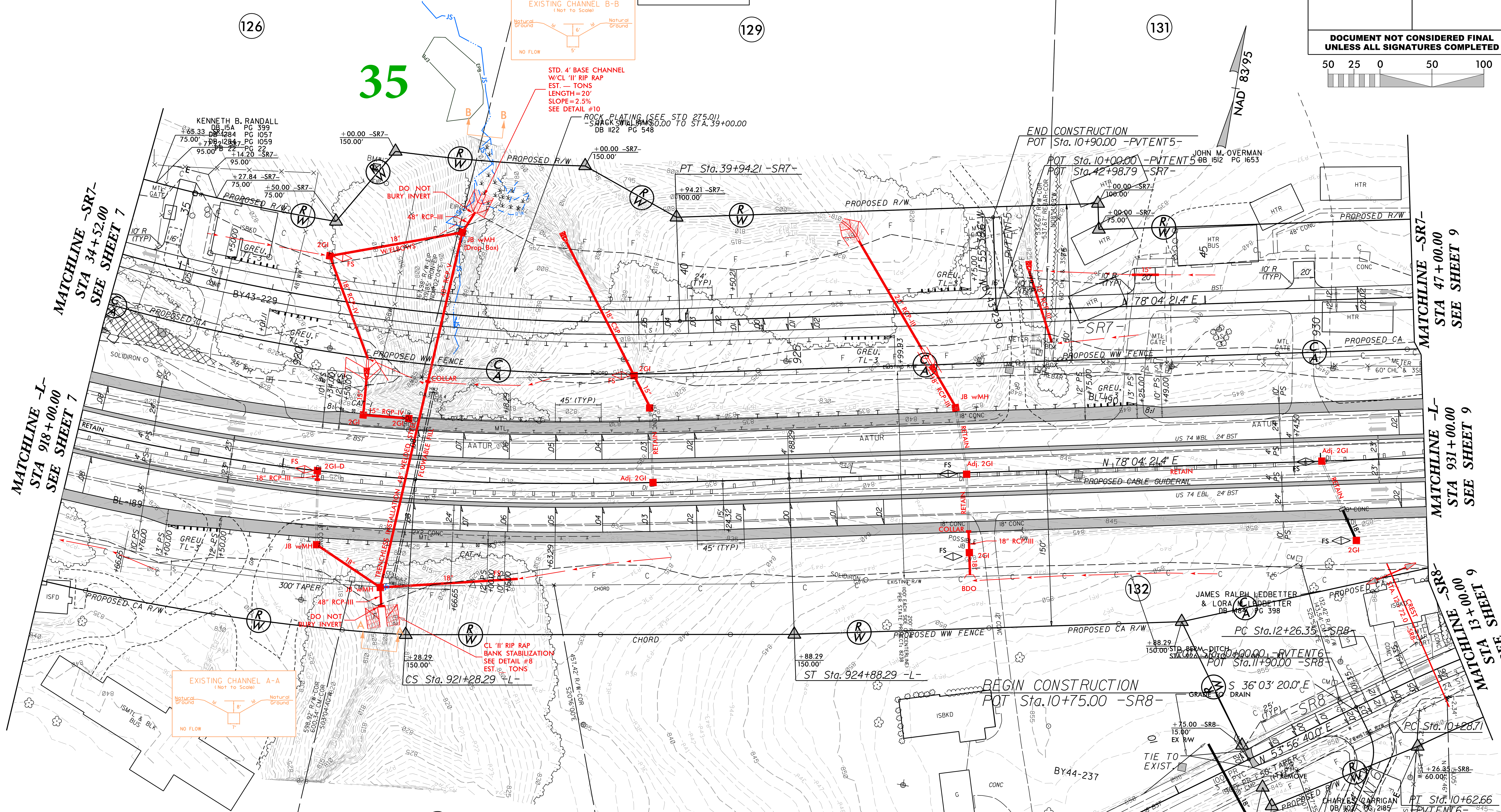
-SR7-
PI Sta 32+56.76
Δ = 51° 10′ 17.0″ (LT)
D = 3° 13′ 07.9″
L = 1,589.73′
T = 852.29′
R = 1,780.00′
SE = .05
RO = 1250′
DS = 50 MPH

-L-	
PI Sta 915+84.05	PIs Sta 922+48.40
Δ = 33° 39′ 17.0″ (LT)	Θs = 5° 23′ 58.6″
D = 2° 59′ 59.2″	Ls = 360.00′
L = 1,121.91′	LT = 240.11′
T = 577.66′	ST = 120.10′
R = 1,910.00′	
SE = .08	
DS = 70 MPH	



LEGEND

◁▷ FALSE SUMP DITCH DETAIL SHEET 2_

PAVED SHOULDER

OBLITERATE, REMOVE AND GRADE TO DRAIN

CONCRETE

127

CASSANDRA EVERHART
03E/500
REF. DB 1671 PG 1439

128

WILLIAM PRESTON HARMON, JR.
DB 1232 PG 1503
DB 1596 PG 2139

REFERENCES:
FOR –L– PROFILE, SEE SHEET NO. 21
FOR –SR7– PROFILE, SEE SHEET NO. 35 & 36
FOR –SR8– PROFILE, SEE SHEET NO. 38
FOR –PVTENT5– PROFILE, SEE SHEET NO. 44
FOR –PVTENT6– PROFILE, SEE SHEET NO. 44

-SR8-
PI Sta 16+28.32
Δ = 42° 15′ 48.9″ (RT)
D = 5° 30′ 33.2″
L = 767.14′
T = 401.97′
R = 1,040.00′
SE = .06
RO = 150′
DS = 50 MPH

130

JULIE J. HARMON
DB 19P PG 558
DB 13J PG 212
DB 11G PG 558

REVISIONS

8/17/99

1/23/2018
R2707E_Hyd_PSH_08.dgn
belam

PROJECT REFERENCE NO.	SHEET NO.
R-2707E	9

RW SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

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-L-

PIs Sta 933+76.53
Θs = 3° 24' 42.3"
Ls = 315.00'
LT = 210.04'
ST = 105.04'

PI Sta 937+43.44
Δ = 11° 18' 42.8" (RT)
D = 2° 09' 58.3"
L = 522.20'
T = 261.95'
R = 2,645.00'
SE = .07
DS = 70 MPH

PIs Sta 941+08.72
Θs = 3° 24' 42.3"
Ls = 315.00'
LT = 210.04'
ST = 105.04'

-SR7-

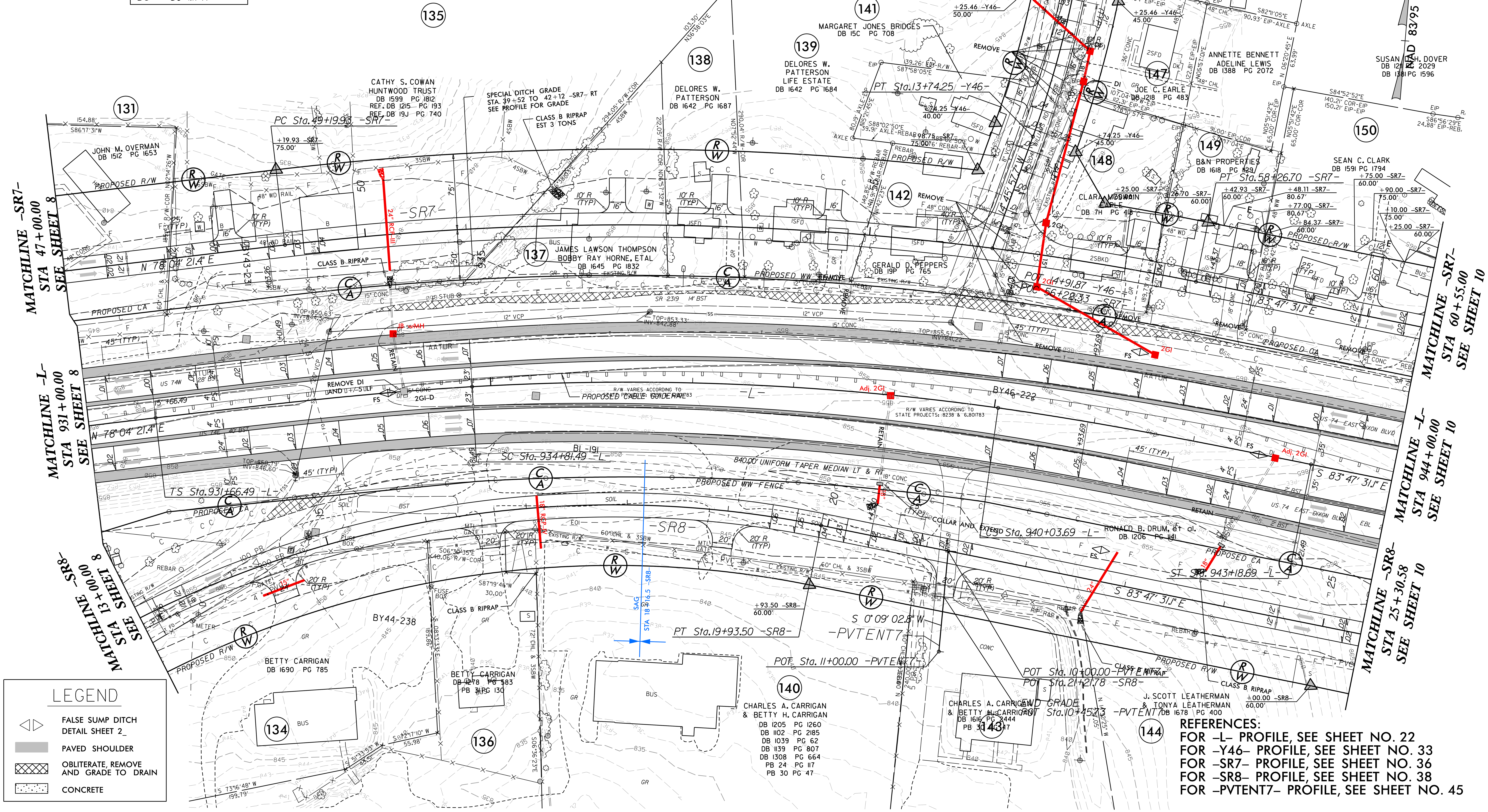
PI Sta 53+77.14
Δ = 18° 08' 07.4" (RT)
D = 2° 00' 00.0"
L = 906.77'
T = 457.21'
R = 2,864.79'
SE = .04
RO = 100'
DS = 50 MPH

-Y46-

PI Sta 12+99.99
Δ = 8° 26' 26.5" (RT)
D = 5° 40' 22.3"
L = 148.79'
T = 74.53'
R = 1,010.00'
SE = .04
RO = 84'
DS = 40 MPH

-SR8-

PI Sta 16+28.32
Δ = 42° 15' 48.9" (RT)
D = 5° 30' 33.2"
L = 767.14'
T = 401.97'
R = 1,040.00'
SE = .06
RO = 150'
DS = 50 MPH


MATCHLINE -SR7- STA 47+00.00 SEE SHEET 8
MATCHLINE -L- STA 931+00.00 SEE SHEET 8
MATCHLINE -SR8- STA 13+00.00 SEE SHEET 8
MATCHLINE -SR7- STA 60+55.00 SEE SHEET 10
MATCHLINE -L- STA 944+00.00 SEE SHEET 10
MATCHLINE -SR8- STA 25+30.58 SEE SHEET 10
BEGIN CONSTRUCTION
POT Sta.10+75.00 -Y46-
POT Sta.10+00.00 -Y46-
PC Sta.12+25.46 -Y46-
PT Sta.13+74.25 -Y46-
PC Sta.49+19.93 -SR7-
PT Sta.58+26.70 -SR7-
TS Sta.931+66.49 -L-
SC Sta.934+81.49 -L-
CS Sta.940+03.69 -L-
ST Sta.943+18.69 -L-
PT Sta.19+93.50 -SR8-
POT Sta.11+00.00 -PVTENT7-
POT Sta.10+00.00 -PVTENT7-
POT Sta.21+21.78 -SR8-
CATHY S. COWAN HUNTWOOD TRUST DB 1599 PG 1812
JOHN M. OVERMAN DB 1512 PG 1653
JAMES LAWSON THOMPSON BOBBY RAY HORNE, ETAL DB 1645 PG 1832
DELORES W. PATTERSON DB 1642 PG 1687
DELORES W. PATTERSON LIFE ESTATE DB 1642 PG 1684
MARGARET JONES BRIDGES DB 15C PG 708
DELORES W. PATTERSON DB 1173 PG 2309
ROSANN L. FITZGERALD DB 1498 PG 1308
ANNETTE BENNETT ADELINE LEWIS DB 1388 PG 2072
JOE C. EARLE DB 1218 PG 483
GERALD D. PEPPERS DB 19P PG 765
B&N PROPERTIES DB 1618 PG 629
SEAN C. CLARK DB 1591 PG 1794
SUSAN H. DOVER DB 1211 PG 2029 DB 1381 PG 1596
RONALD B. DRUM, et al. DB 1206 PG 181
BETTY CARRIGAN DB 1690 PG 785
BETTY CARRIGAN DB 1278 PG 583 PB 31 PG 130
CHARLES A. CARRIGAN & BETTY H. CARRIGAN DB 1205 PG 1260 DB 1102 PG 2185 DB 1039 PG 62 DB 1139 PG 807 DB 1308 PG 664 PB 24 PG 117 PB 30 PG 47
J. SCOTT LEATHERMAN & TONYA LEATHERMAN DB 1678 PG 400
SPECIAL DITCH GRADE STA. 39+52 TO 42+12 -SR7- RT SEE PROFILE FOR GRADE
CLASS B RIPRAP EST 3 TONS
840.00' UNIFORM TAPER MEDIAN LT & RT
PROPOSED CABLE GUIDERAIL
US 74 EAST DIXON BLVD

LEGEND

◁▷	FALSE SUMP DITCH DETAIL SHEET 2
(shaded)	PAVED SHOULDER
(crosshatch)	OBLITERATE, REMOVE AND GRADE TO DRAIN
(dotted)	CONCRETE

REFERENCES:
FOR -L- PROFILE, SEE SHEET NO. 22
FOR -Y46- PROFILE, SEE SHEET NO. 33
FOR -SR7- PROFILE, SEE SHEET NO. 36
FOR -SR8- PROFILE, SEE SHEET NO. 38
FOR -PVTENT7- PROFILE, SEE SHEET NO. 45

REVISIONS

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-2707E	10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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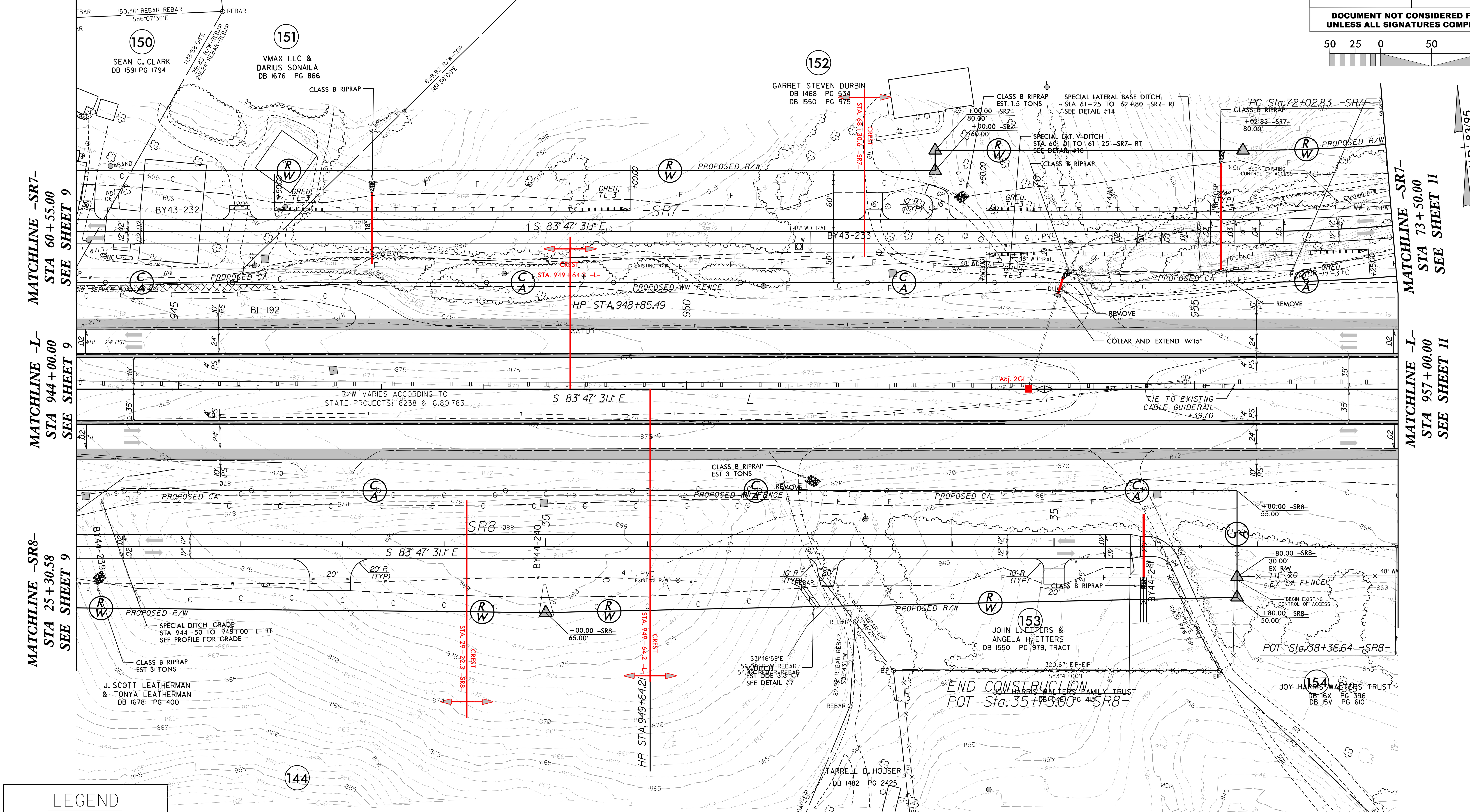
-SR7-
PI Sta 74+83.67
Δ = 17° 55′ 53.6″ (LT)
D = 3° 13′ 07.9″
L = 557.08′
T = 280.83′
R = 1,780.00′
SE = .05
RO = 120′
DS = 50 MPH

REVISIONS



50 25 0 50 100
NAD 83/95
MATCHLINE -SR7- STA 60+55.00 SEE SHEET 9
MATCHLINE -L- STA 944+00.00 SEE SHEET 9
MATCHLINE -SR8- STA 25+30.58 SEE SHEET 9
MATCHLINE -SR7- STA 73+50.00 SEE SHEET 11
MATCHLINE -L- STA 957+00.00 SEE SHEET 11
150
SEAN C. CLARK
DB 1591 PG 1794
151
VMAX LLC &
DARIUS SONAILA
DB 1676 PG 866
152
GARRET STEVEN DURBIN
DB 1468 PG 534
DB 1550 PG 975
153
JOHN L. LETTERS &
ANGELA H. LETTERS
DB 1550 PG 979, TRACT I
154
JOY HARRIS WALTERS TRUST
DB 16X PG 396
DB 15V PG 610
144
J. SCOTT LEATHERMAN
& TONYA LEATHERMAN
DB 1678 PG 400
TARRELL D. HOUSER
DB 1482 PG 2425
CLASS B RIPRAP
PROPOSED R/W
PROPOSED CA
PROPOSED WW FENCE
S 83° 47′ 31.1″ E
-SR7-
-L-
-SR8-
BY43-232
BY43-233
BL-192
BY44-240
BY44-239
HP STA 948+85.49
HP STA 949+64.21
STA. 949+64.2 -L- CREST
STA. 29+22.3 -SR8- CREST
PC Sta.72+02.83 -SR7-
POT Sta.38+36.64 -SR8-
END CONSTRUCTION
POT Sta.35+73.00 -SR8-
R/W VARIES ACCORDING TO STATE PROJECTS: 8238 & 6.801783
SPECIAL LATERAL BASE DITCH STA. 61+25 TO 62+80 -SR7- RT SEE DETAIL #14
SPECIAL LAT. V-DITCH STA 60+01 TO 61+25 -SR7- RT SEE DETAIL #10
SPECIAL DITCH GRADE STA 944+50 TO 945+00 -L- RT SEE PROFILE FOR GRADE
CLASS B RIPRAP EST 3 TONS
CLASS B RIPRAP EST. 1.5 TONS
TIE TO EXISTING CABLE GUIDERAIL +39.70
COLLAR AND EXTEND W/15"
REMOVE
Adj. 2GI
BEGIN EXISTING CONTROL OF ACCESS
TIE TO EX CA FENCE

LEGEND

◁▷	FALSE SUMP DITCH DETAIL SHEET 2_
(grey band)	PAVED SHOULDER
(crosshatch)	OBLITERATE, REMOVE AND GRADE TO DRAIN
(stipple)	CONCRETE

REFERENCES:
FOR -L- PROFILE, SEE SHEET NO. 23
FOR -SR7- PROFILE, SEE SHEET NO. 36 & 37
FOR -SR8- PROFILE, SEE SHEET NO. 38

8/17/99
R2707E_Hyd_PSH_10.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2707E	11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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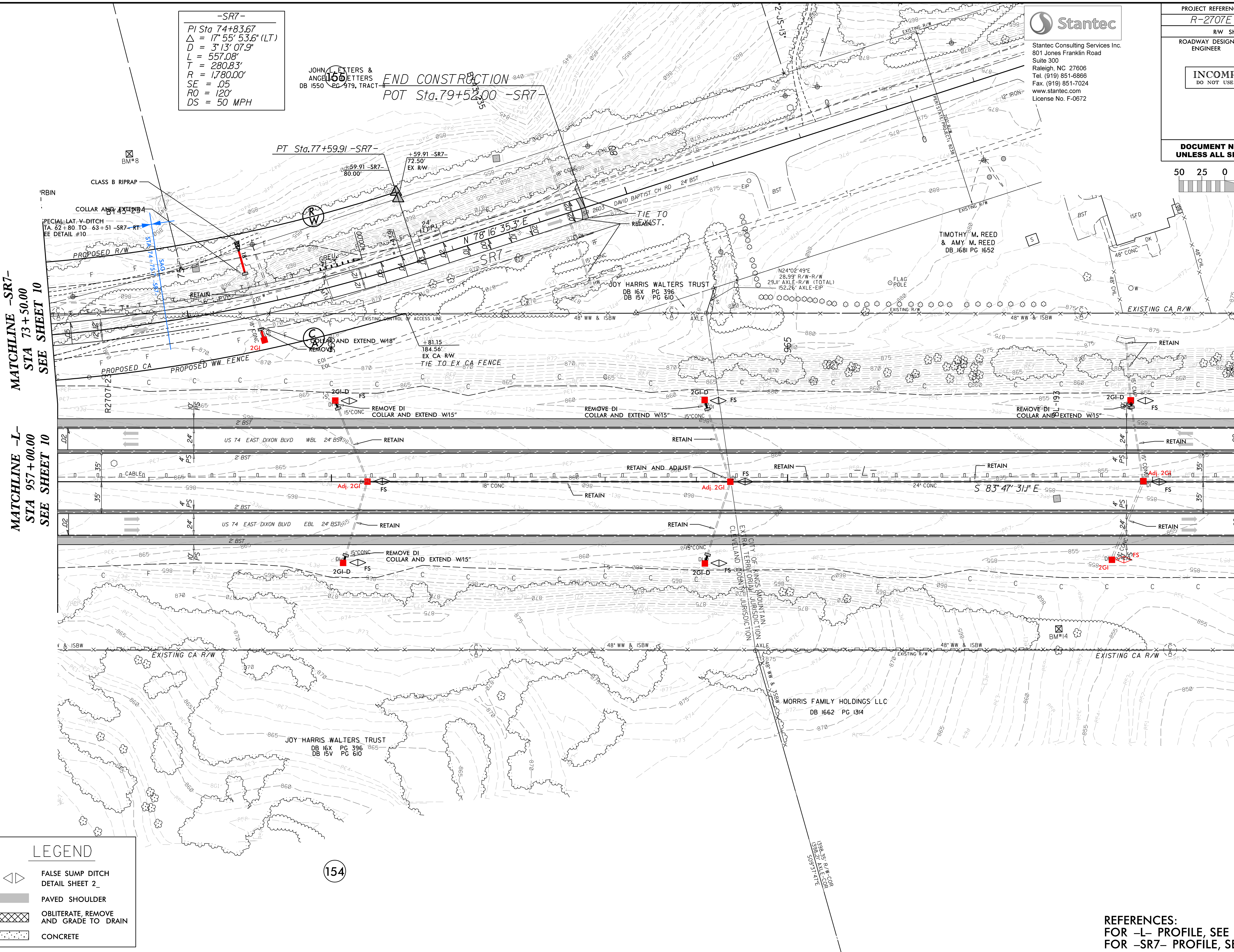
REVISIONS

-SR7-	
PI Sta	74+83.67
Δ =	17° 55′ 53.6″ (LT)
D =	3° 13′ 07.9″
L =	557.08′
T =	280.83′
R =	1,780.00′
SE =	.05
RO =	120′
DS =	50 MPH


END CONSTRUCTION
POT Sta.79+52.00 -SR7-
PT Sta.77+59.91 -SR7-
MATCHLINE -SR7- STA 73+50.00 SEE SHEET 10
MATCHLINE -L- STA 957+00.00 SEE SHEET 10
MATCHLINE -L- STA 970+00.00 SEE SHEET 12
US 74 EAST DIXON BLVD WBL 24′ BST
US 74 EAST DIXON BLVD EBL 24′ BST
S 83° 47′ 31.1″ E
N 78° 16′ 35.3″ E
JOY HARRIS WALTERS TRUST DB 16X PG 396 DB 15V PG 610
TIMOTHY M. REED & AMY M. REED DB 1681 PG 1652
MORRIS FAMILY HOLDINGS LLC DB 1662 PG 1314
CITY OF KINGS MOUNTAIN EXTRA TERRITORIAL JURISDICTION CLEVELAND COUNTY JURISDICTION
EXISTING CA R/W
PROPOSED R/W
PROPOSED CA
PROPOSED WW FENCE
TIE TO EX CA FENCE
REMOVE DI COLLAR AND EXTEND W/15″
RETAIN AND ADJUST
RETAIN
Adj. 2GI
2GI-D
CLASS B RIPRAP
DAVID BAPTIST CH RD
NAD 83/95
154
155

LEGEND

- ◁▷ FALSE SUMP DITCH DETAIL SHEET 2_
- PAVED SHOULDER
- OBLITERATE, REMOVE AND GRADE TO DRAIN
- CONCRETE

REFERENCES:
FOR -L- PROFILE, SEE SHEET NO. 24
FOR -SR7- PROFILE, SEE SHEET NO. 37

8/17/99
R2707E_Hyd_PSH_11.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2707E	12

RW SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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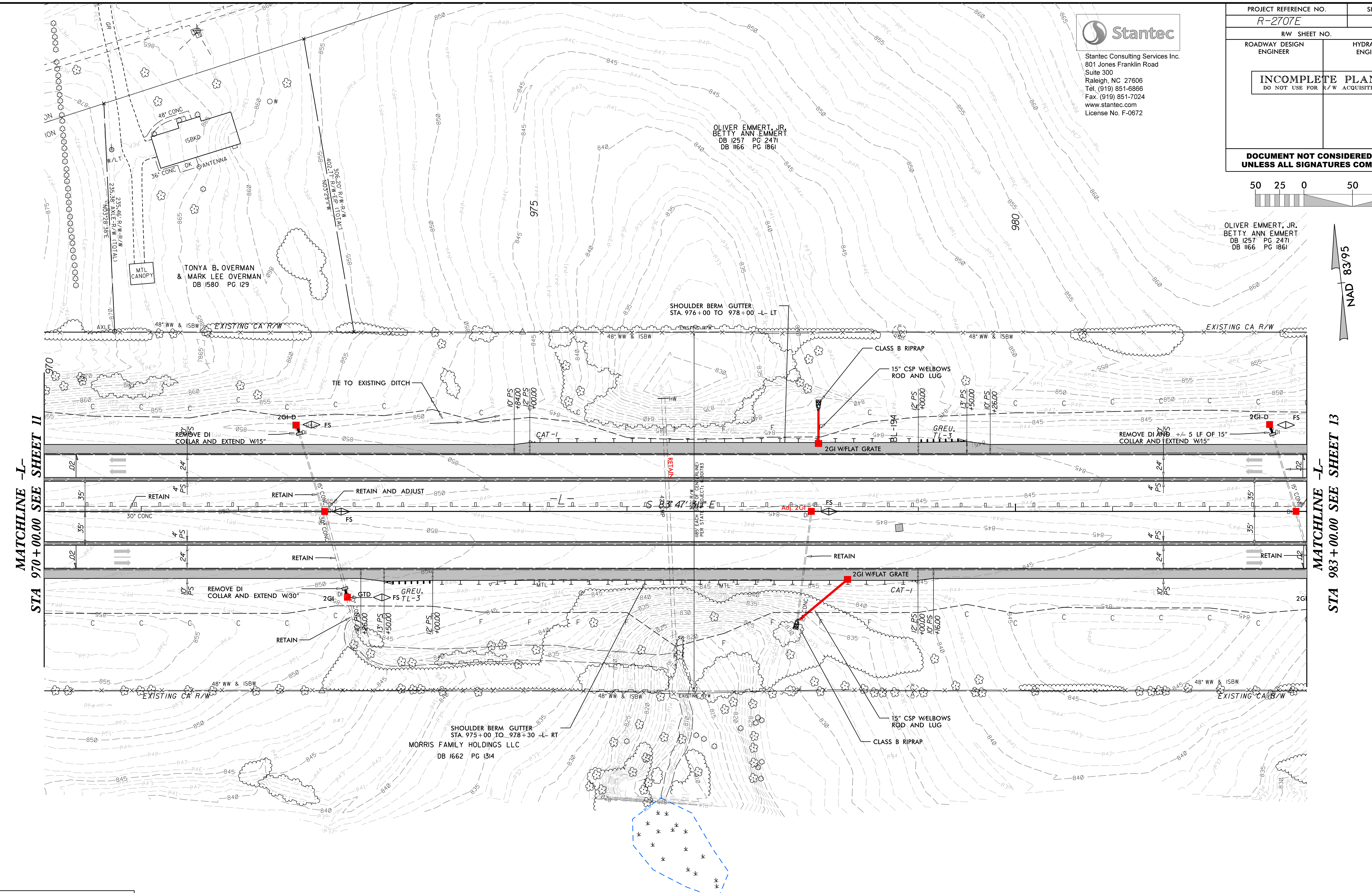
50 25 0 50 100
NAD 83/95
MATCHLINE -L- SEE SHEET 11
STA 970+00.00
MATCHLINE -L- SEE SHEET 13
STA 983+00.00
TONYA B. OVERMAN
& MARK LEE OVERMAN
DB 1580 PG 129
OLIVER EMMERT, JR.
BETTY ANN EMMERT
DB 1257 PG 2471
DB 1166 PG 1861
MORRIS FAMILY HOLDINGS LLC
DB 1662 PG 1314
EXISTING CA R/W
48" WW & ISBW
SHOULDER BERM GUTTER
STA. 976+00 TO 978+00 -L- LT
SHOULDER BERM GUTTER
STA. 975+00 TO 978+30 -L- RT
TIE TO EXISTING DITCH
CLASS B RIPRAP
15" CSP W/ELBOWS
ROD AND LUG
2GI W/FLAT GRATE
REMOVE DI
COLLAR AND EXTEND W/15"
REMOVE DI
COLLAR AND EXTEND W/30"
REMOVE DI AND +/- 5 LF OF 15"
COLLAR AND EXTEND W/15"
RETAIN
RETAIN AND ADJUST
30" CONC
-L-
S 83° 47' 51" E
CAT-I
GREU.
TL-3
2GI-D
FS
MTL CANOPY
ISBKD
48" CONC
36" CONC
ANTENNA

LEGEND

◁▷	FALSE SUMP DITCH DETAIL SHEET 2_
(grey)	PAVED SHOULDER
(crosshatch)	OBLITERATE, REMOVE AND GRADE TO DRAIN
(stipple)	CONCRETE

REFERENCES:
FOR -L- PROFILE, SEE SHEET NO. 25

REVISIONS

8/17/99

R2707E_Hyd_PSH_12.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2707E	13

RW SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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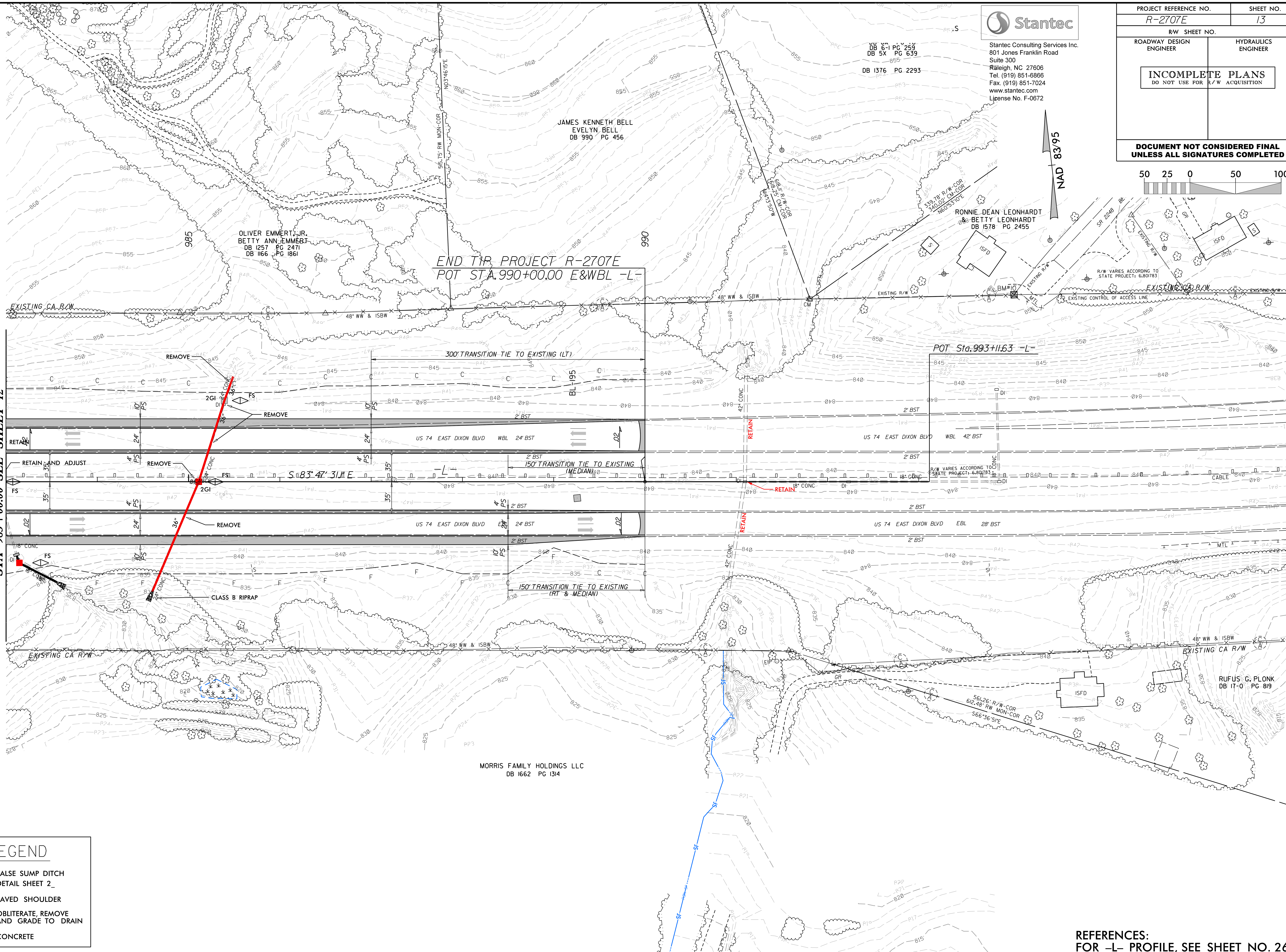
END TIP PROJECT R-2707E
POT STA.990+00.00 E&WBL -L-
POT Sta.993+11.63 -L-
MATCHLINE -L- STA 983+00.00 SEE SHEET 12
NAD 83/95
50 25 0 50 100
JAMES KENNETH BELL
EVELYN BELL
DB 990 PG 456
OLIVER EMMERT, JR.
BETTY ANN EMMERT
DB 1257 PG 2471
DB 1166 PG 1861
RONNIE DEAN LEONHARDT
& BETTY LEONHARDT
DB 1578 PG 2455
MORRIS FAMILY HOLDINGS LLC
DB 1662 PG 1314
RUFUS G. PLONK
DB 17-0 PG 819
DB 1376 PG 2293
EXISTING CA R/W
48" WW & ISBW
300' TRANSITION TIE TO EXISTING (LT)
150' TRANSITION TIE TO EXISTING (MEDIAN)
150' TRANSITION TIE TO EXISTING (RT & MEDIAN)
US 74 EAST DIXON BLVD WBL 24' BST
US 74 EAST DIXON BLVD EBL 24' BST
US 74 EAST DIXON BLVD WBL 42' BST
US 74 EAST DIXON BLVD EBL 28' BST
S 83° 47' 31.1" E
REMOVE
RETAIN AND ADJUST
RETAIN
CLASS B RIPRAP
2GI
R/W VARIES ACCORDING TO STATE PROJECT: 6.801783
EXISTING CONTROL OF ACCESS LINE
BL-195

LEGEND

- FALSE SUMP DITCH DETAIL SHEET 2_
- PAVED SHOULDER
- OBLITERATE, REMOVE AND GRADE TO DRAIN
- CONCRETE

REFERENCES:
FOR -L- PROFILE, SEE SHEET NO. 26

REVISIONS

8/17/99

R2707E_Hyd_PSH_13.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2707E	14
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

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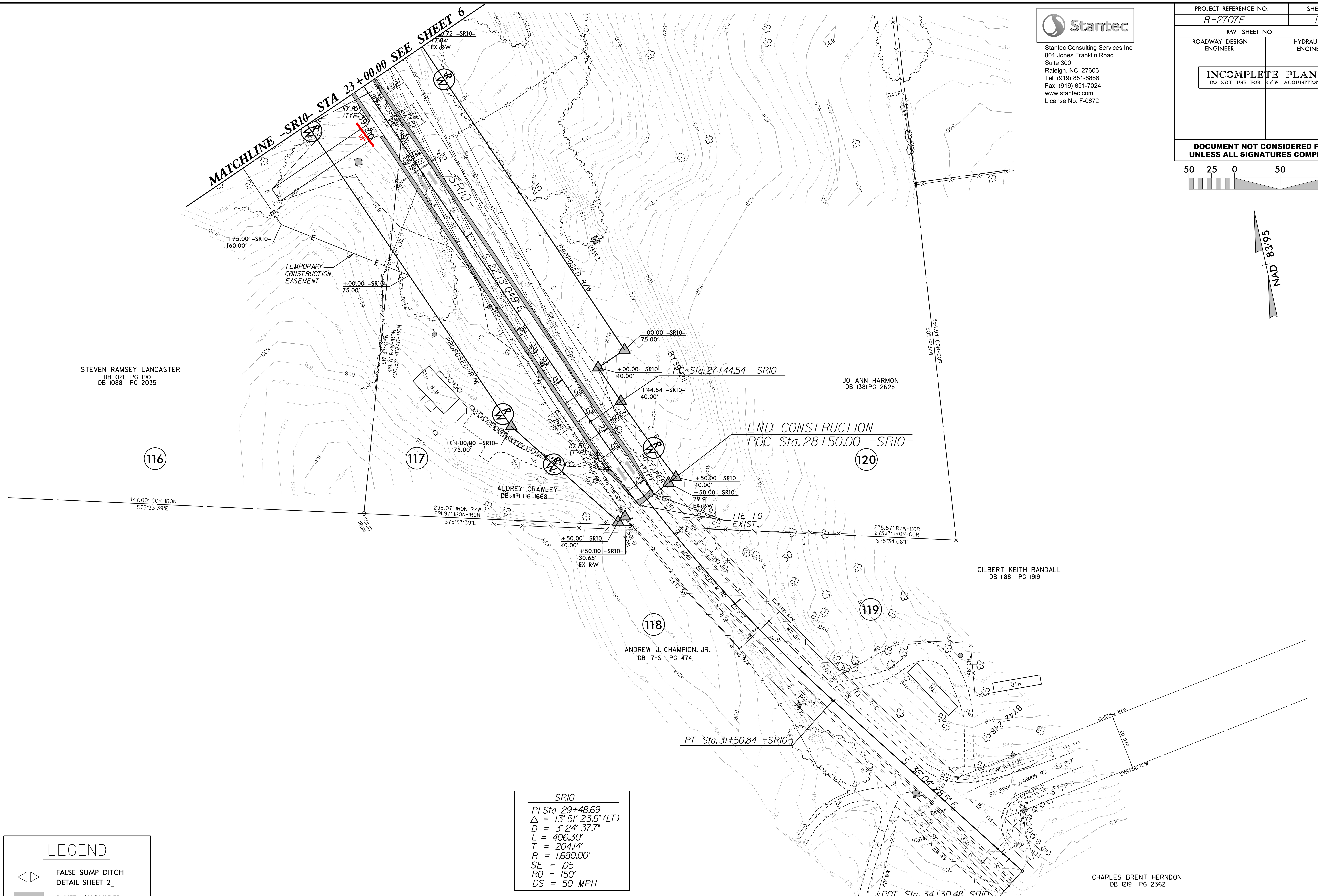
REVISIONS

8/17/99



MATCHLINE -SR10- STA 23+00.00 SEE SHEET 6
-SR10-
S 22°13'04.9" E
PROPOSED R/W
TEMPORARY CONSTRUCTION EASEMENT
STEVEN RAMSEY LANCASTER
DB 02E PG 190
DB 1088 PG 2035
AUDREY CRAWLEY
DB 1171 PG 1668
JO ANN HARMON
DB 1381 PG 2628
GILBERT KEITH RANDALL
DB 1188 PG 1919
ANDREW J. CHAMPION, JR.
DB 17-S PG 474
CHARLES BRENT HERNDON
DB 1219 PG 2362
116
117
118
119
120
Sta. 27+44.54 -SR10-
END CONSTRUCTION
POC Sta. 28+50.00 -SR10-
TIE TO EXIST.
PT Sta. 31+50.84 -SR10-
POT Sta. 34+30.48 -SR10-
S 36°04'28.5" E
SR 2245 BETHLEHEM RD
SR 2244 HARMON RD
447.00' COR-IRON
S75°33'39"E
295.07' IRON-R/W
291.97' IRON-IRON
S75°33'39"E
275.57' R/W-COR
275.17' IRON-COR
S75°34'06"E
394.94' COR-COR
+00.00 -SR10-
75.00'
+75.00 -SR10-
160.00'
+00.00 -SR10-
40.00'
+44.54 -SR10-
40.00'
+50.00 -SR10-
40.00'
+50.00 -SR10-
29.91'
EX R/W
+50.00 -SR10-
30.65'
EX R/W
10' RC (TYP)
50' TAPER (TYP)
HTR
NAD 83/95
50 25 0 50 100

-SR10-
PI Sta 29+48.69
Δ = 13° 51' 23.6" (LT)
D = 3° 24' 37.7"
L = 406.30'
T = 204.14'
R = 1,680.00'
SE = .05
RO = 150'
DS = 50 MPH

LEGEND

- ◁▷ FALSE SUMP DITCH DETAIL SHEET 2_
- PAVED SHOULDER
- OBLITERATE, REMOVE AND GRADE TO DRAIN
- CONCRETE

REFERENCES:
FOR -SR10- PROFILE, SEE SHEET NO. 40

1/23/2018
R2707E_Hyd_PSH_14.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2707E	15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

50 25 0 50 100

Stantec

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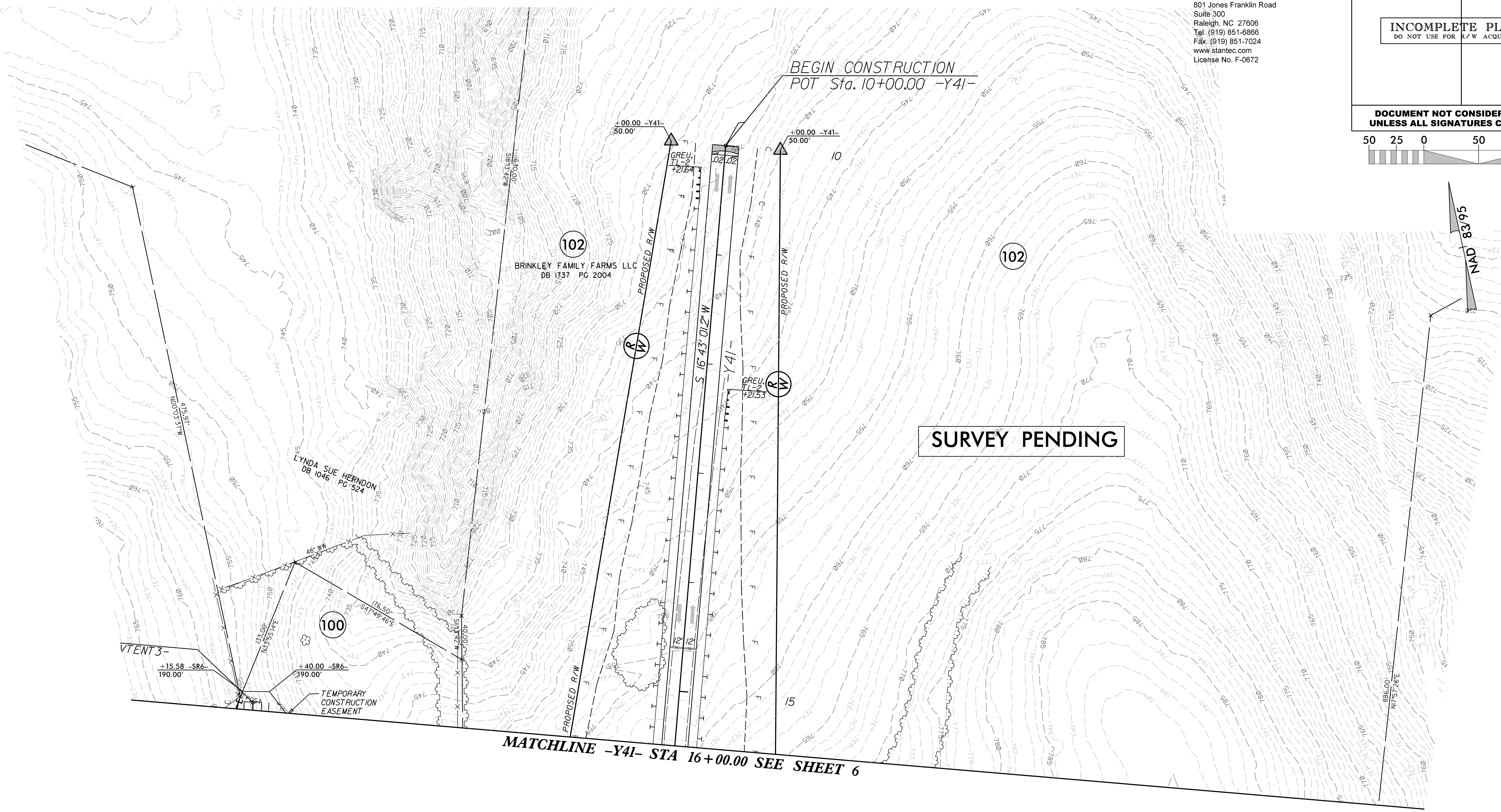

LEGEND

- FALSE SUMP DITCH DETAIL SHEET 2_
- PAVED SHOULDER
- OBLITERATE, REMOVE AND GRADE TO DRAIN
- CONCRETE

REFERENCES:
FOR -Y41- PROFILE, SEE SHEET NO. 32

REVISIONS

8/17/99