

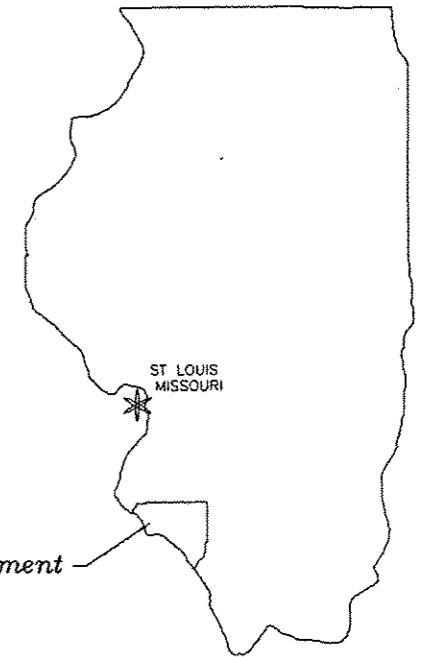
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR
PROPOSED LOCAL AGENCY IMPROVEMENT

ROUTE	COUNTY	SECTION	SHEET/OF
FAS 1857/858	RANDOLPH	11-00065-01-RS	1/13
CONTRACT NO. 97580			
FEDERAL AID PROJECT			

INDEX OF SHEETS

SHEET NO	CONTENT
1	Cover Sheet
2	Summary of Quantities, Typical Section, General Notes, and Quantities used for Estimating.
3	Crossroad Culvert Schedule, Hot-Mix Asphalt Surface Removal, 1 1/2", and Side Road Detail.
4	Guardrail Schedule, Paint Pavement Marking Schedule, Hot-Mix Asphalt Mixture Requirements and Earthwork Schedule.
5	Plan and Profile.
6	Traffic Control Detail.
7	Box Culvert Extension Detail.
8-9	Crossroad Culvert Cross-Sections.
10-13	Cross-Sections.

RANDOLPH COUNTY
FAS ROUTE 1857/858 (CH 7)
SECTION 11-00065-01-RS
PROJECT NO. RS-1857(125)
JOB NO. C-98-326-12



HIGHWAY STANDARDS

BLR 21-9, BLR 24-2, 442201-03, 602301-04, 604036-03, 630001-10, 630301-06, 701001-02, 701006-05, 701011-04, 701201-04, 701301-04, 701306-03, 701311-03, 701901-05, 725001, 780001-05, 781001-04,

UTILITIES

Egyptian Electric COOP
Village of Ellis Grove Water
Harrisonville Telephone
City of Chester Gas

J.U.L.I.E. 1-800-892-0123

Proposed Improvement Begins
Station 356+73

Station Equation
Sta. 446+81.5(Bk.) = 446+45.43(Ahd.)

Site of Proposed Improvement

These plans were prepared by me or a member of my staff working under my personal supervision.

Michael Riebeling 4/01/2016
COUNTY ENGINEER DATE



Proposed Improvement Ends
Station 610+36

Station Equation
Sta. 601+75.32(Bk.) = 602+21.59(Ahd.)

DESIGN INFORMATION

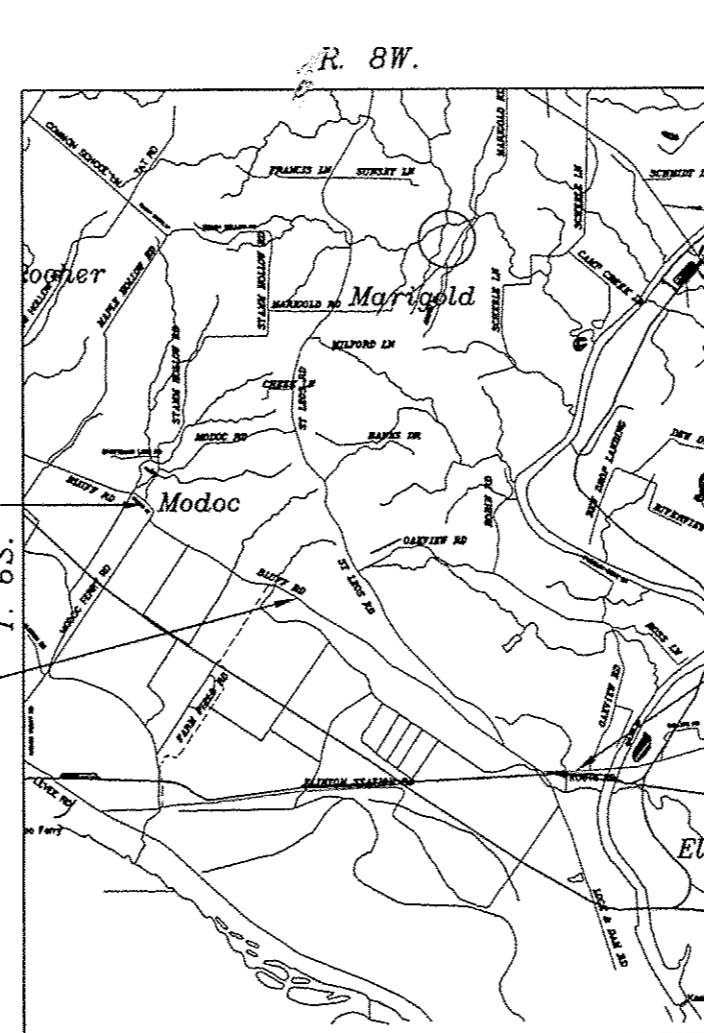
Rural Collector
Class III Roadway
Design Speed 50 Mph
Current Adt (2016) - 450
Design Year (2036) - 500

PAVEMENT DESIGN INFORMATION

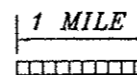
Structural Design Traffic: 475 (Year 2026)

PV 418
SU 33
MU 24

Minimum Soil Support IBR=3
Pavement Structural Materials: HMA Surface Course, Mix "C", N50
Aggregate Base Course, Type A



3RD P.M.



Net Length of Improvement
25,352.80 Feet = 4.802 Miles

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STATE OF ILLINOIS

ILLINOIS DEPARTMENT OF TRANSPORTATION		
Approved	April 1, 2016	
	<i>Michael Riebeling</i>	Randolph County, County Engineer
Passed	8/24, 2016	
	<i>James M. ...</i>	District 8 Engineer of Local Roads & Streets
	9/24, 2016	Releasing for Bid Based on Limited Review
	<i>Jeffrey ...</i>	Deputy Director of Highways, Region 5 Engineer

SUMMARY OF QUANTITIES

PAY ITEM	ITEM	UNIT	QUANTITY
20200100	Earth Excavation	Cu Yd	642
20400800	Furnished Excavation	Cu Yd	667
20800150	Trench Backfill	Cu Yd	402
25000200	Seeding, Class 2	Acre	0.3
25000400	Nitrogen Fertilizer Nutrient	Pound	27
25000500	Phosphorus Fertilizer Nutrient	Pound	27
25000600	Potassium Fertilizer Nutrient	Pound	27
25000700	Agricultural Ground Limestone	Ton	0.6
25100115	Mulch, Method 2	Acre	0.3
28100807	Stone Dumped Rip Rap, Class A4	Ton	186
35100100	Aggregate Base Course, Type A	Ton	610
40600275	Bituminous Materials (Prime Coat)	Pound	3,297
40600290	Bituminous Materials (Tack Coat)	Pound	41,832
40600625	Leveling Binder (Machine Method), N50	Ton	5,198
40603080	Hot-Mix Asphalt Binder Course, IL-19.0, N50	Ton	197
40603310	Hot-Mix Asphalt Surface Course, Mix "C", N50	Ton	5,323
44000100	Pavement Removal	Sq Yd	1343.2
44000155	Hot-Mix Asphalt Surface Removal, 1 1/2"	Sq Yd	60,886
44201713	Class D Patches, Type I, 6 Inch	Sq Yd	69
44201717	Class D Patches, Type II, 6 Inch	Sq Yd	81
44201721	Class D Patches, Type III, 6 Inch	Sq Yd	89
48102100	Aggregate Wedge Shoulder, Type B	Ton	1,282
50100100	Removal of Existing Structures	Each	2
50104400	Concrete Headwall Removal	Each	2
54010606	Precast Concrete Box Culverts 6' x 6'	Foot	10
54011206	Precast Concrete Box Culverts 12' x 6'	Foot	120
542A0229	Pipe Culverts, Class A, Type 1 24"	Foot	216
542A0241	Pipe Culverts, Class A, Type 1 36"	Foot	96
542A0253	Pipe Culverts, Class A, Type 1 48"	Foot	56
542A1069	Pipe Culverts, Class A, Type 2 24"	Foot	264
542A5473	Pipe Culverts, Class A, Type 1 Equivalent Round-Size 18"	Foot	40
542A5491	Pipe Culverts, Class A, Type 1 Equivalent Round-Size 36"	Foot	48
542D0223	Pipe Culverts, Class D, Type 1, 18"	Foot	45
60236200	Inlets, Type A, Type 8 Grate	Each	1
*63000003	Steel Plate Beam Guardrail, Type A, 9 Foot Posts	Foot	200
*63100167	Traffic Barrier Terminal, Type 1, (Special) Tangent	Each	2
63200310	Guardrail Removal	Foot	1,000
67100100	Mobilization	L Sum	1
70100450	Traffic Control and Protection, Standard 701201	L Sum	1
70100460	Traffic Control and Protection, Standard 701306	L Sum	1
70106800	Changeable Message Sign	Cal Mo	4
70300100	Short Term Pavement Marking	Foot	7,606
70300150	Short Term Pavement Marking Removal	Sq Ft	845
70300220	Temporary Pavement Marking - Line 4"	Foot	79,853
*72501000	Terminal Marker - Direct Applied	Each	2
*78001110	Paint Pavement Marking - Line 4"	Foot	79,853
*78100100	Raised Reflective Pavement Marker	Each	337
X7010216	Traffic Control and Protection, (Special)	L Sum	1

* Denotes Specialty Item.

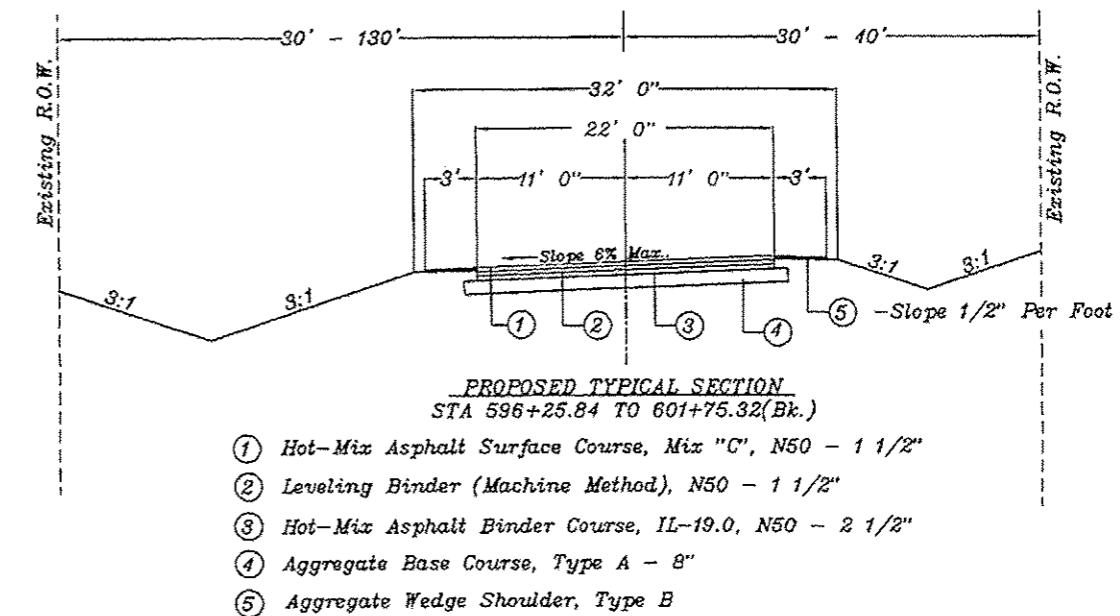
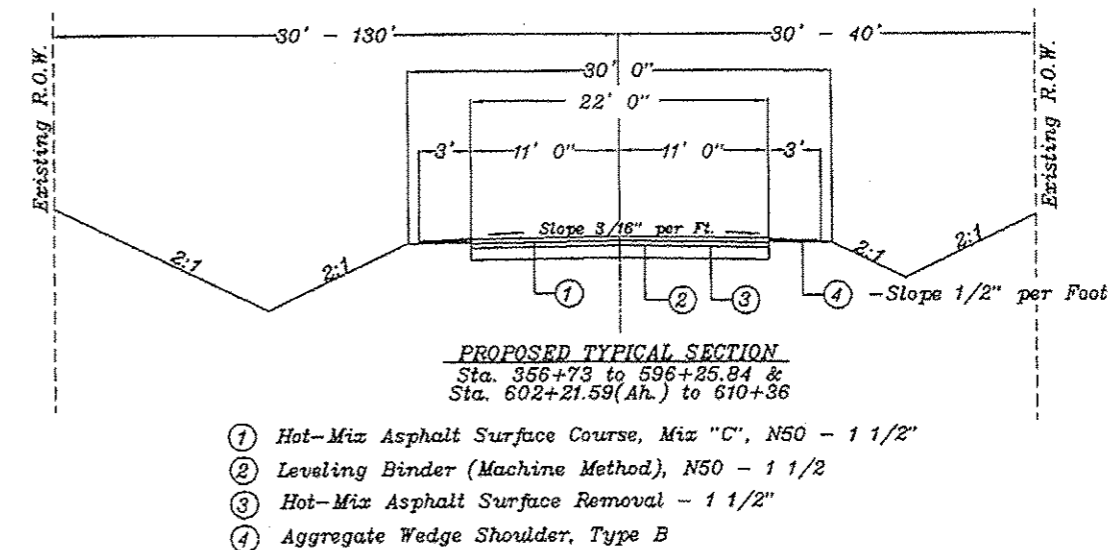
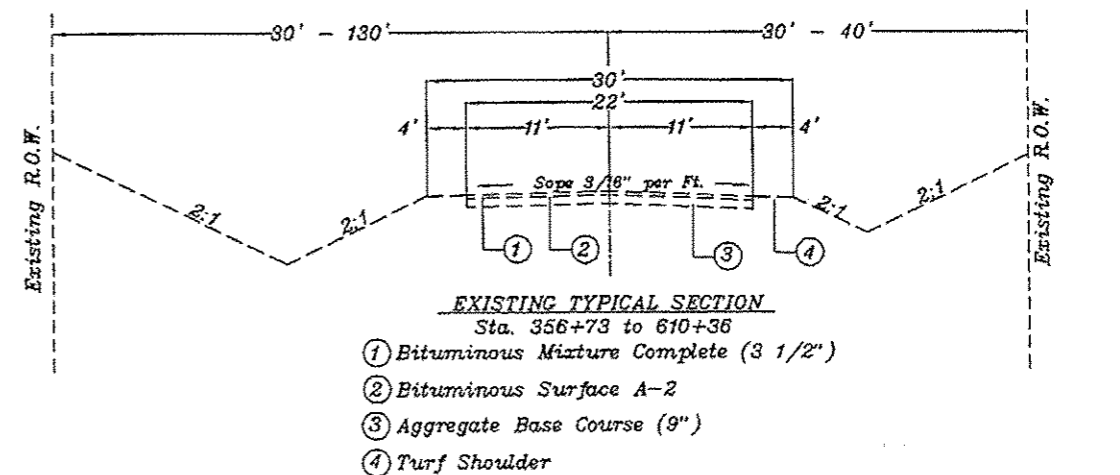
GENERAL NOTES:

1. Short-Term Pavement Marking shall be applied to the Milled Surface, Leveling Binder and Surface Course.
2. All Construction Signs shall be 48 inch Fluorescent Orange.

QUANTITIES USED FOR ESTIMATING

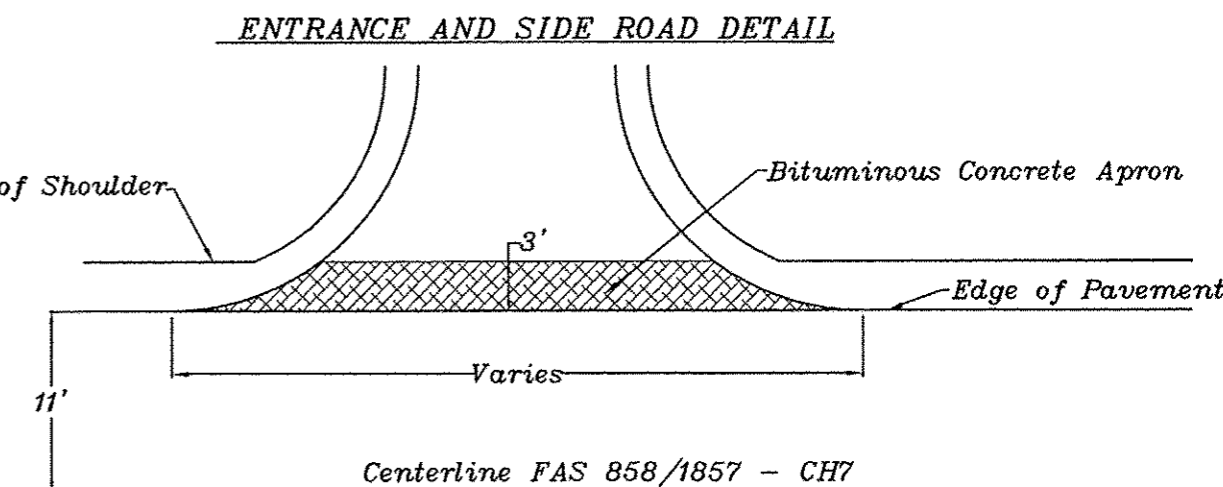
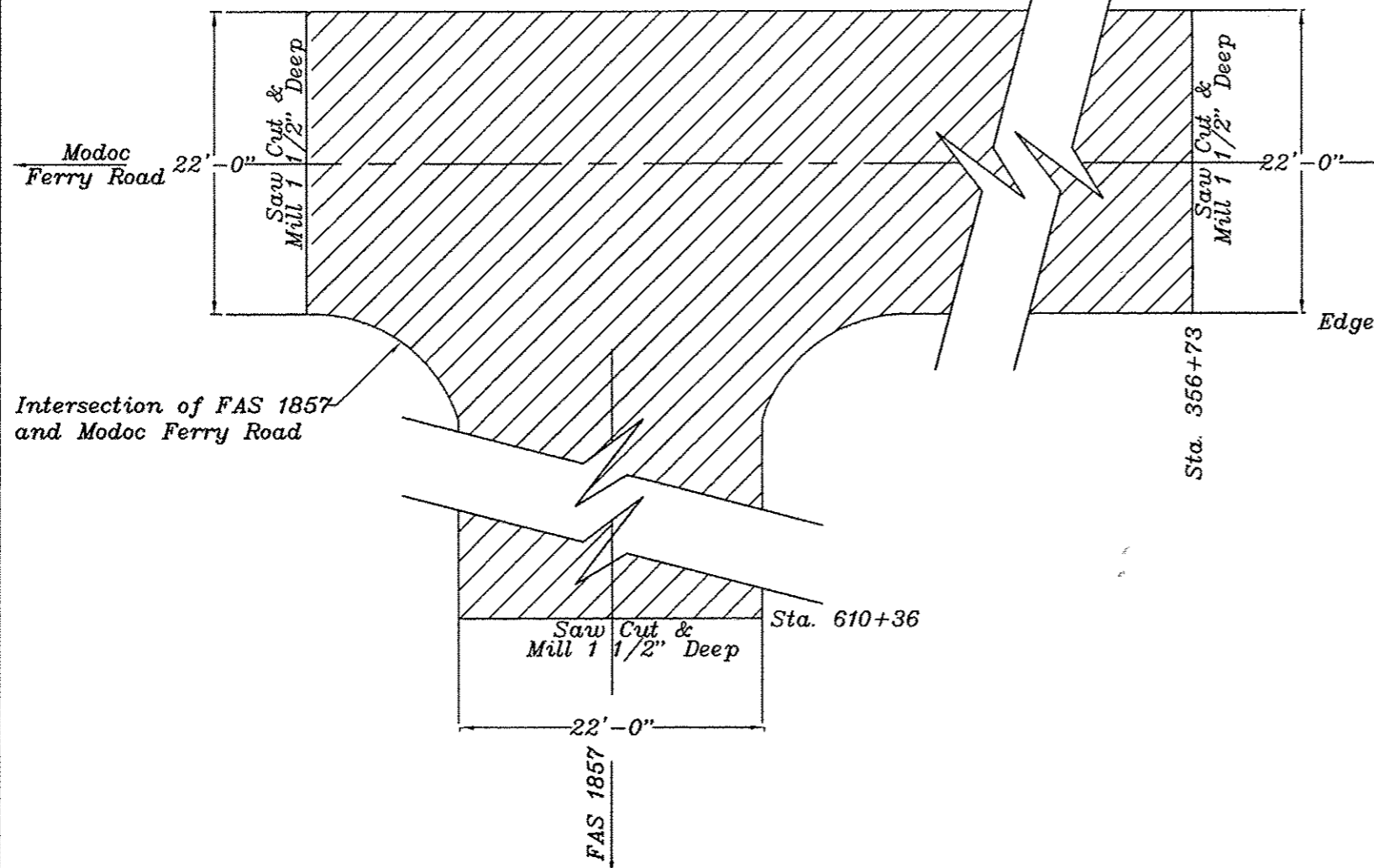
Mulch Method 2	2 Ton/Acre
Nitrogen Fertilizer Nutrients	90 Lbs/Acre
Potassium Fertilizer Nutrients	90 Lbs/Acre
Phosphorus Fertilizer Nutrients	90 Lbs/Acre
Agricultural Ground Limestone	2 Ton/Acre

ROUTE	COUNTY	SECTION	SHEET/OF
FAS 1857/85B	RANDOLPH	11-00065-01-RS	2/13
CONTRACT NO. 97580			



HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"

ROUTE	COUNTY	SECTION	SHEET/OF
FAS 1857/858	RANDOLPH	11-00065-01-RS	3/13
CONTRACT NO. 97580			



HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"

CROSSROAD CULVERT SCHEDULE

STATION NO.	LENGTH LT OF Q	DIFF. IN ELEV. Q TO H _L LT.	LENGTH RT OF Q	DIFF. IN ELEV. Q TO H _R RT.	SKEW ANGLE	PROPOSED CULVERT SIZE	TYPE	TOTAL PIPE LENGTH	EXISTING STRUCTURE	CLASS D PATCH (SQ. YD.)				TRENCH WIDTH	TRENCH BACKFILL IN CU. YDS.
										AREA (LT.)	TYPE	AREA (RT.)	TYPE		
363+54	20'	2.64'	20'	3.19'	29° LA	18" Equiv. RCCP	1	40'	18" Equiv. CMP	5.6	II	5.6	II	4'	6.7 Cu. Yd.
394+11	26'	5.23'	30'	5.61'	0°	48" RCCP	1	56'	48" CMP	8.1	II	8.1	II	6.7'	13.1 Cu. Yd.
398+82	23'	2.22'	25'	3.63'	26° LA	24" RCCP	1	48'	24" CMP	5.4	II	5.4	II	4'	5.3 Cu. Yd.
412+00	30'	10.37'	30'	10.71'	20° RA	12'X6' PCBC		60'	90"X141" Plate Arch	22.5	III	22.5	III	17.3'	90.3 Cu. Yd.
434+45	30'	11.7'	30'	12.02'	0°	12'X6' PCBC		60'	16'X5.5' Concrete Box	22	III	22	III	18'	120.9 Cu. Yd.
459+86	21'	4.67'	35'	11.9'	0°	24" RCCP	2	56'	24" CMP	4.9	I	4.9	I	4'	21.6 Cu. Yd.
463+70	18'	3.88'	30'	9.98'	0°	24" RCCP	2	48'	24" CMP	4.9	I	4.9	I	4'	17.4 Cu. Yd.
482+65	20'	4.62'	28'	6.22'	0°	24" RCCP	1	48'	24" CMP	4.9	I	4.9	I	4'	13.4 Cu. Yd.
487+62			10'	11.01'	0°	6'X6' PCBC		10'	6'X6' PCBC	* Patch not Required				* Trench not Required	
545+70	25'	4.17'	31'	8.97'	0°	24" RCCP	2	56'	18" RCP	4.9	I	4.9	I	4'	17.6 Cu. Yd.
555+00	22'	4.53'	34'	8.18'	0°	24" RCCP	2	56'	18" CMP	4.9	I	4.9	I	4'	16.3 Cu. Yd.
571+60	24'	5.42'	24'	6.67'	0°	24" RCCP	2	48'	18" CMP	4.9	I	4.9	I	4'	18.1 Cu. Yd.
*575+27	24'	4.0'	24'	5.15'	0°	24" RCCP	1	48'	18" CMP	4.9	I	4.9	I	4'	10.9 Cu. Yd.
580+32	24'	5.57'	24'	5.83'	0°	36" RCCP	1	48'	36" CMP	6.7	II	6.7	II	5.5'	16.8 Cu. Yd.
587+36	25'	4.65'	23'	5.58'	0°	36" RCCP	1	48'	36" CMP	6.7	II	6.7	II	5.5'	13.8 Cu. Yd.
595+05	27'	3.34'	21'	4.07'	0°	36" Equiv. RCCP	1	48'	36" CMP	7.8	II	7.8	II	6.4'	10 Cu. Yd.
598+46	25'	3.61'	47'	4.89'	10° LA	24" RCCP	1	72'	24" CMP	* Patch not Required				4'	9.4 Cu. Yd.

* Inlets, Type A with Type 8 Grate included 26' left.

GUARDRAIL SCHEDULE

EXISTING GUARDRAIL TO BE REMOVED			PROPOSED GUARDRAIL		
STATION	DESCRIPTION	TOTAL FT.	STATION	DESCRIPTION	TOTAL FT.
Sta. 410+87 To 411+12 Right	TBT TY 1	25	* Not to be replaced		
Sta. 411+12 To 412+62 Right	SPBGR TY A	150			
Sta. 412+62 To 412+87 Right	TBT TY 1	25			
Sta. 411+12 To 411+37 Left	TBT TY 1	25	* Not to be replaced		
Sta. 411+37 To 412+87 Left	SPBGR TY A	150			
Sta. 412+87 To 413+12 Left	TBT TY 1	25			
Sta. 433+69 To 433+94 Right	TBT TY 1	25	* Not to be replaced		
Sta. 433+94 To 435+44 Right	SPBGR TY A	150			
Sta. 435+44 To 435+69 Right	TBT TY 1	25			
Sta. 434+15 To 434+40 Left	TBT TY 1	25	* Not to be replaced		
Sta. 434+40 To 435+00 Left	SPBGR TY A	60			
Sta. 435+00 To 435+25 Left	TBT TY 1	25			
Sta. 524+96 To 525+21 Right	TBT TY 1	25	Sta. 524+86 To 525+36 Right	TBT TY 1 (Sp) Tang.	1 Each
Sta. 525+21 To 527+61 Right	SPBGR TY A	240	Sta. 525+36 To 527+36 Right	SPBGR TY A	200
Sta. 527+61 To 527+86 Right	TBT TY 1	25	Sta. 527+36 To 527+86 Right	TBT TY 1 (Sp) Tang.	1 Each

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE USE	SURFACE & LEVELING BINDER	BINDER
PG	PG 64-22	PG 64-22
RAP %(MAX)	0 %	0 %
DESIGN AIR VOIDS	4.0% @ Ndes=50	4.0 % @ Ndes=50
MIX COMPOSITION (GRADATION MIXTURE)	IL 9.5	IL 19.0
FRICITION AGG	Mixture C	
MIXTURE WEIGHT	112 Lb/Sy/In	112 Lb/Sy/In

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION	TOTAL EXCAVATION ADJUSTED FOR 25% SHRINKAGE	EMBANKMENT	FURNISHED EXCAVATION	EARTHWORK BALANCE WASTE(+) OR SHORTAGE (-)
	CU. YD.	CU. YD.	CU. YD.		CU. YD.
Sta. 596+25.84 To Sta. 601+75.32	642	482	92		+390
Cross-Road Culverts and Box Culverts			500	667	-667
TOTALS	642	482	592		*

* The Cross-Road Pipe Culverts and Box Culverts will be Constructed prior to the Earthwork from Sta. 596+25.84 to Sta. 601+75.32. Therefore, 667 Cu. Yd. of Furnished Excavation is included in the Summary of Quantities for the Culvert Construction.

PAINT PAVEMENT MARKING SCHEDULE

LOCATION	LIMITS	LENGTH
NO PASSING ZONES		
Left	Sta. 356+73 To Sta. 363+03	630 Ft.
Right	Sta. 356+73 To Sta. 363+03	630 Ft.
Left	Sta. 363+53 To Sta. 377+00	1,347 Ft.
Right	Sta. 363+53 To Sta. 368+00	447 Ft.
Right	Sta. 392+00 To Sta. 446+00	5,400 Ft.
Left	Sta. 400+50 To Sta. 408+00	750 Ft.
Left	Sta. 418+00 To Sta. 446+81.50 (Bk.)	2,881.5 Ft.
Left	Sta. 446+45.43 (Ah.) To Sta. 452+00	554.57 Ft.
Right	Sta. 456+50 To Sta. 464+00	750 Ft.
Left	Sta. 463+00 To Sta. 479+00	1,600 Ft.
Right	Sta. 485+00 To Sta. 489+50	450 Ft.
Left	Sta. 489+50 To Sta. 495+05	555 Ft.
Right	Sta. 498+75 To Sta. 503+50	475 Ft.
Left	Sta. 504+00 To Sta. 512+50	850 Ft.
Right	Sta. 520+00 To Sta. 546+50	2,650 Ft.
Left	Sta. 530+00 To Sta. 555+50	2,550 Ft.
Right	Sta. 590+00 To Sta. 601+75.32 (Bk.)	1,175.32 Ft.
Right	Sta. 602+21.59 (Ah.) To Sta. 602+25	3.41 Ft.
Left	Sta. 596+26 To Sta. 601+75.32 (Bk.)	549.32 Ft.
Left	Sta. 602+21.59 (Ah.) To Sta. 610+36	814.41 Ft.
TOTAL NO PASSING ZONES		25,062.53 Ft.

SKIP DASH

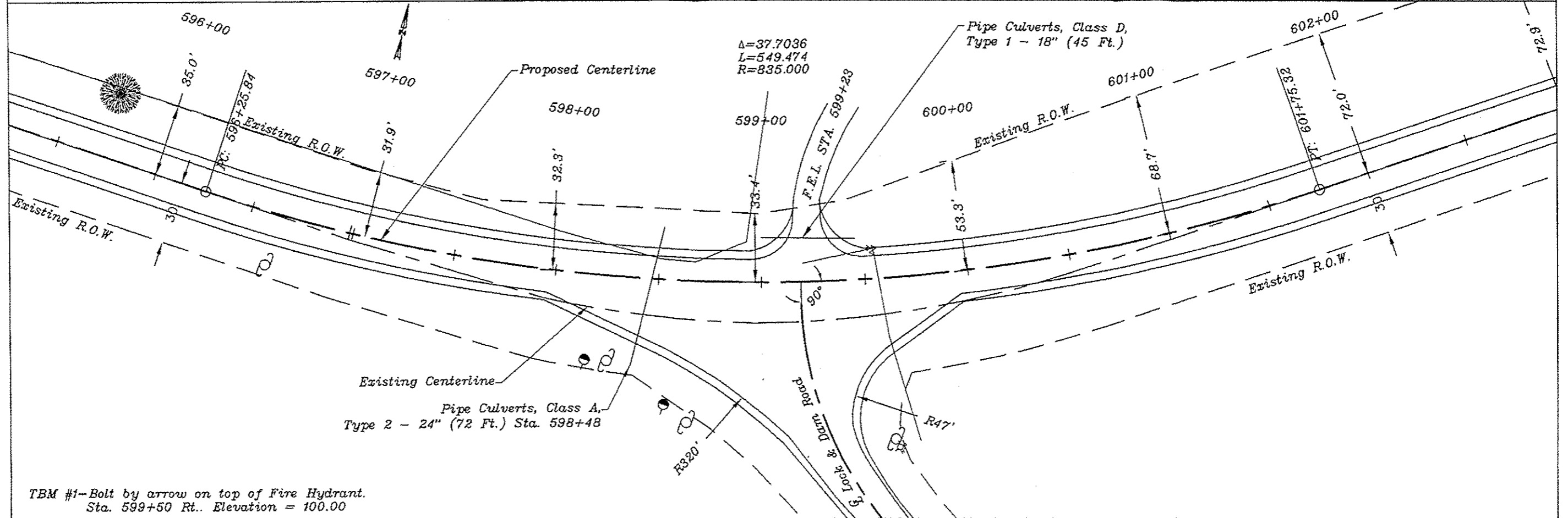
Sta. 368+00 To Sta. 400+50	3,250 Ft.
Sta. 408+00 To Sta. 418+00	1,000 Ft.
Sta. 452+00 To Sta. 463+00	1,100 Ft.
Sta. 464+00 To Sta. 530+00	6,600 Ft.
Sta. 546+50 To Sta. 596+26	4,976 Ft.
Sta. 602+25 To Sta. 610+36	811 Ft.
17,737 FT. @ 25%= 4,434.25 Ft.	
TOTAL YELLOW LINE 29,496.78 Ft.	

EDGE LINE

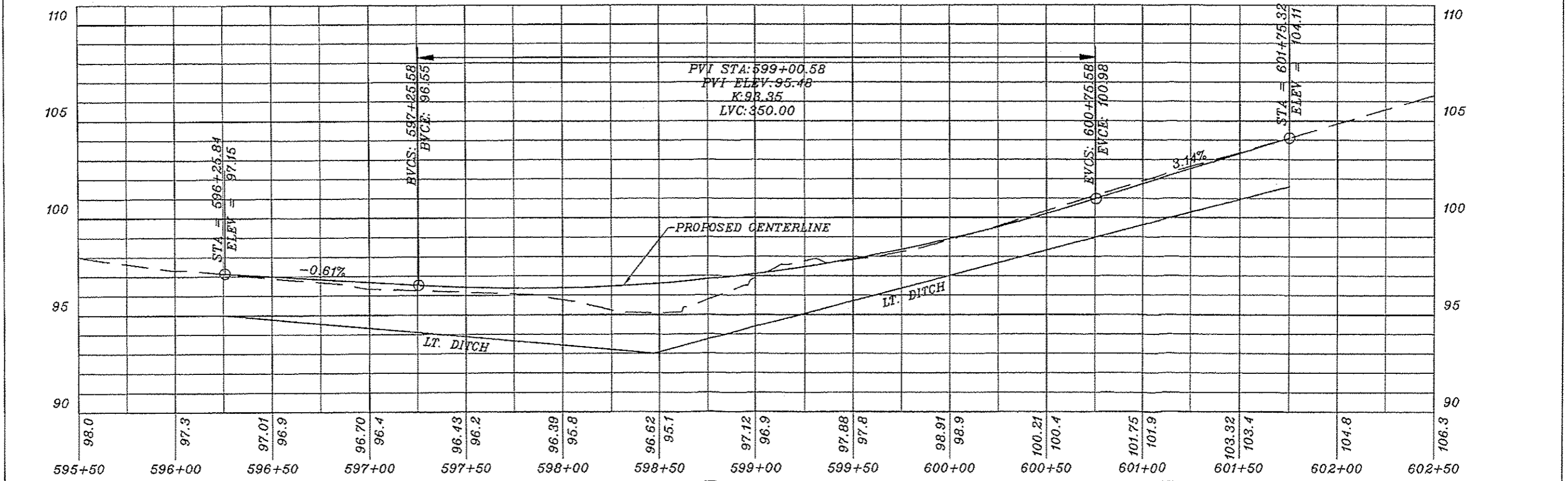
Lt. & Rt. Sta. 356+73 To Sta. 363+03	1,260 Ft.
Lt. & Rt. Sta. 363+53 To Sta. 446+81.50 (Bk.)	16,657 Ft.
Lt. & Rt. Sta. 446+45.43 (Ah.) To Sta. 601+75.32 (Bk.)	31,059.78 Ft.
Lt. & Rt. Sta. 602+21.59 (Ah.) To Sta. 610+36	1,628.82 Ft.
(Includes 2 gaps @ Sideroads) -250 Ft.	
TOTAL WHITE LINE 50,355.60 Ft.	
TOTAL PAINT PAVEMENT MARKING LINE 4" 79,852.38 Ft.	

BLUFF ROAD RELOCATED CURVE

ROUTE	COUNTY	SECTION	SHEET/OF
FAS 1857/858	RANDOLPH	11-00065-01-RS	5/13

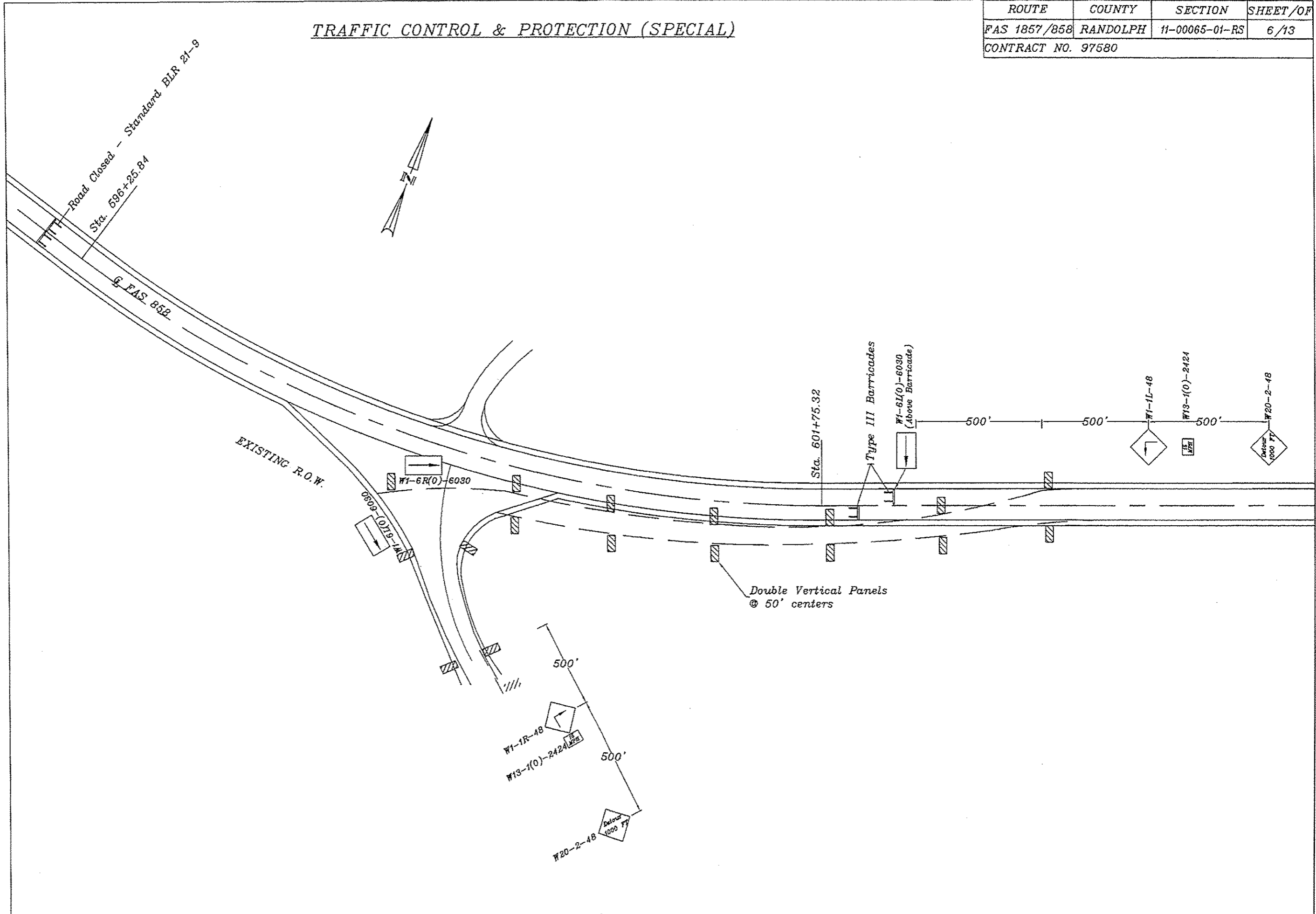


TBM #1-Bolt by arrow on top of Fire Hydrant.
 Sta. 599+50 Rt. Elevation = 100.00



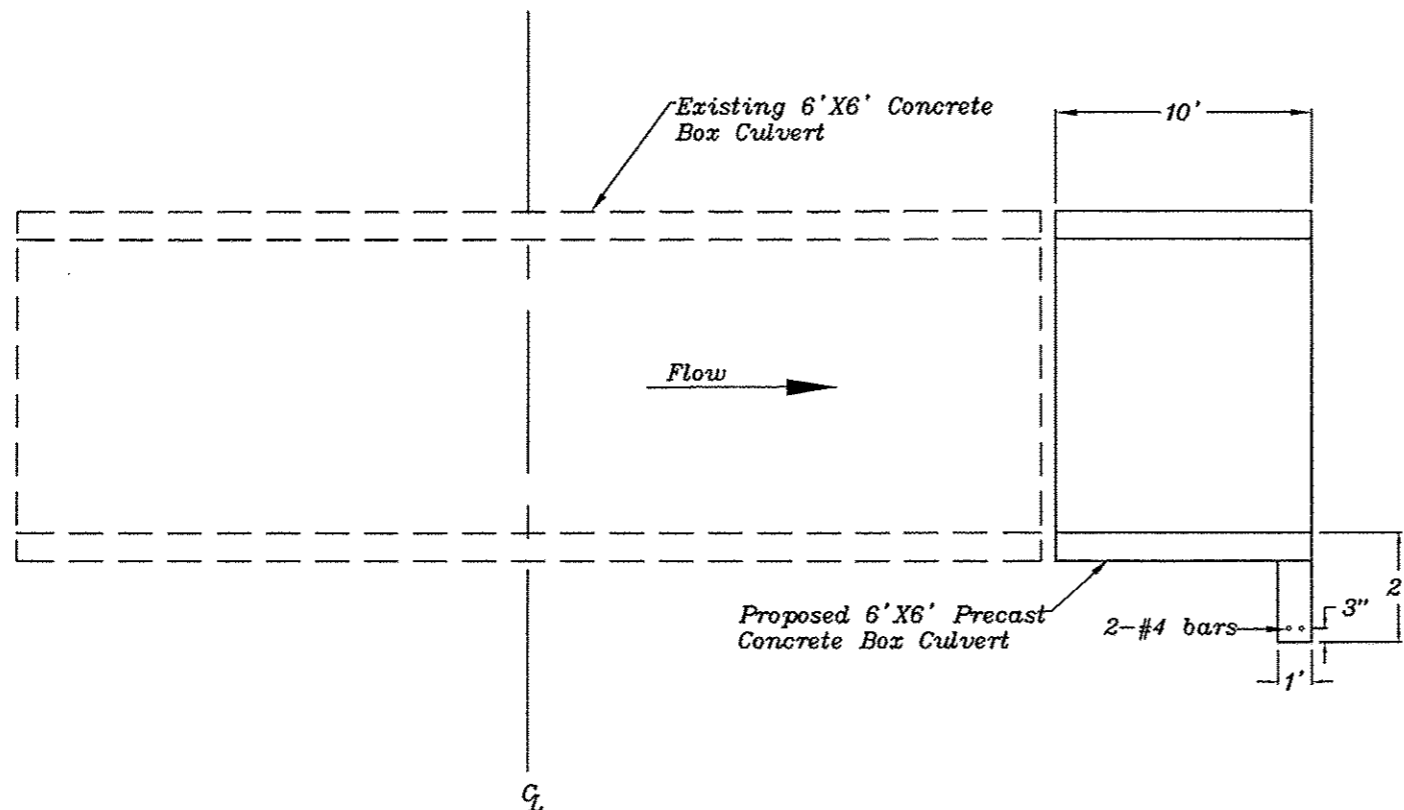
TRAFFIC CONTROL & PROTECTION (SPECIAL)

ROUTE	COUNTY	SECTION	SHEET/OF
FAS 1857/858	RANDOLPH	11-00065-01-RS	6/13
CONTRACT NO. 97580			



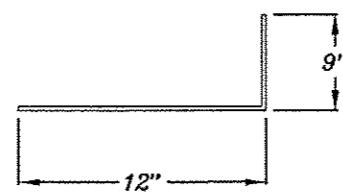
ROUTE	COUNTY	SECTION	SHEET/OF
FAS 1857/858	RANDOLPH	11-00065-01-RS	7/13
CONTRACT NO. 97580			

CONCRETE BOX CULVERT EXTENSION DETAIL
STA. 487+62 RT.

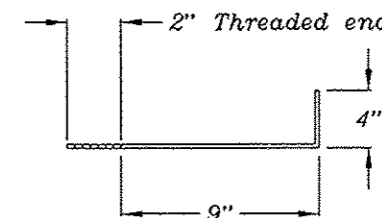


NOTES:

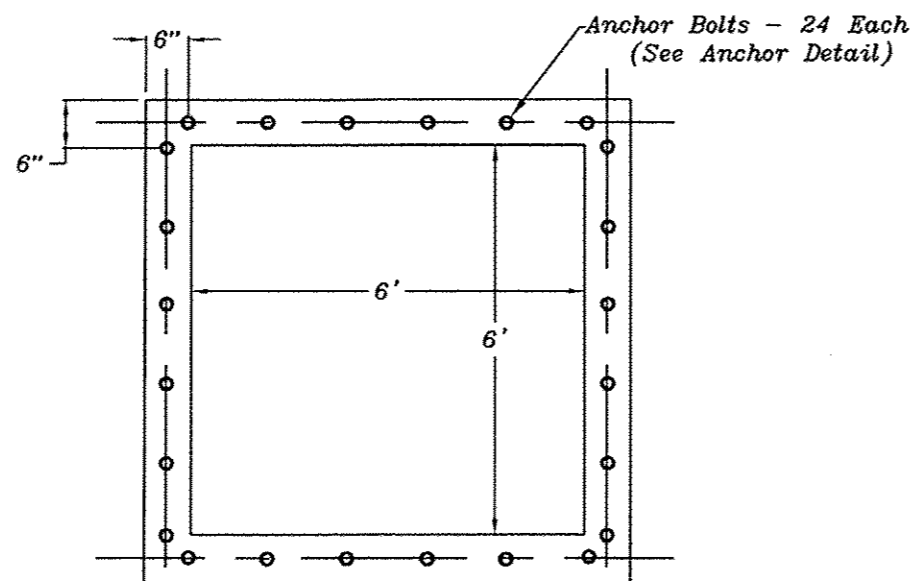
1. Proposed Precast Concrete Box Culvert Sections shall be cast to match the 0° skew of the Existing Box Culvert.
2. All Labor, Material, and Equipment cost associated with connecting the Proposed Precast Concrete Box Culvert extensions to the Existing Box Culvert including the Anchor Bolts, S-Bars, Toe Walls and Cast in place Collar shall be considered Incidental to the Pay Item Precast Concrete Box Culverts 6'X6'.



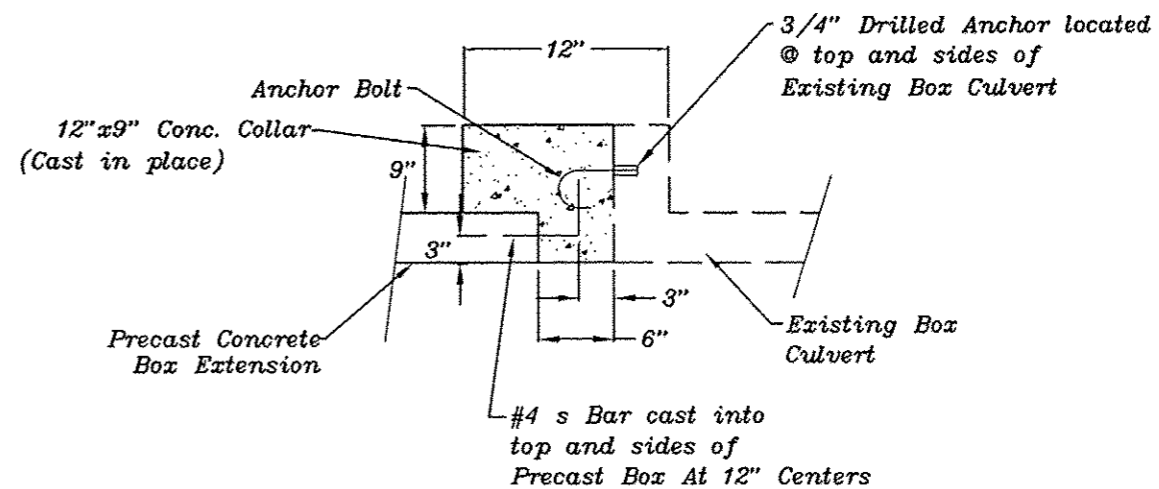
S BAR



ANCHOR BOLT - 3/4 DIA.

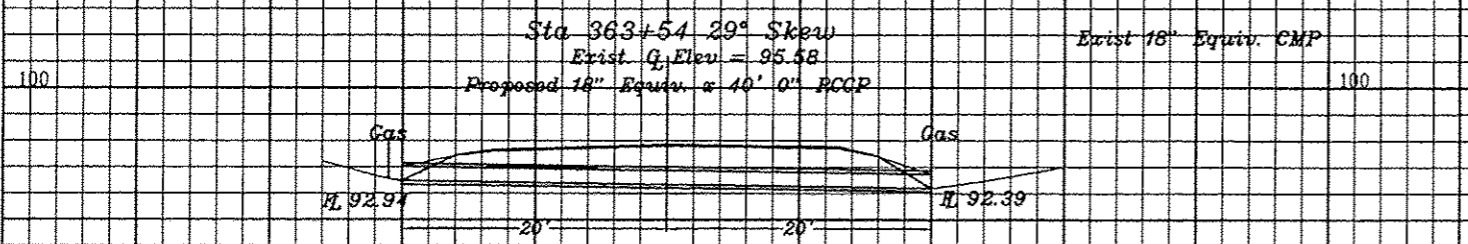
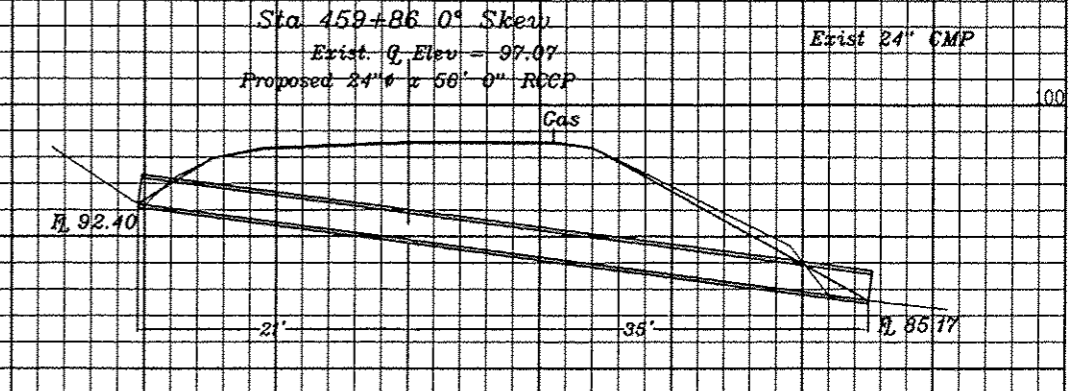
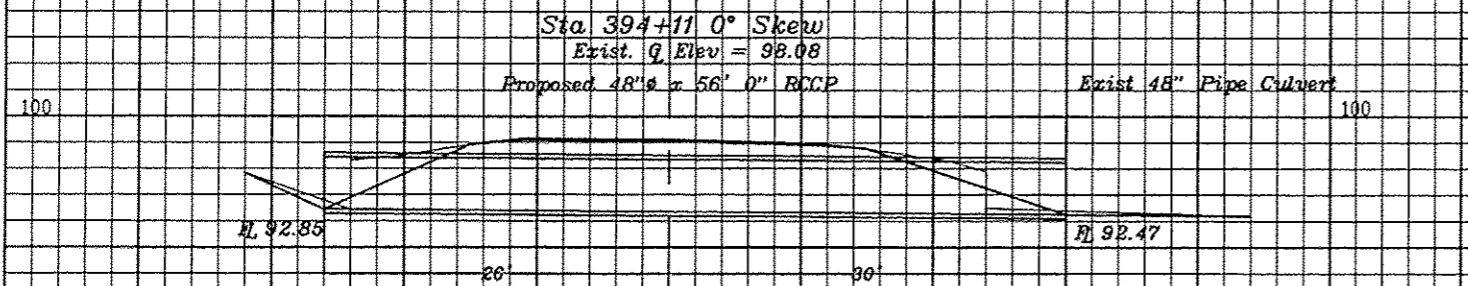
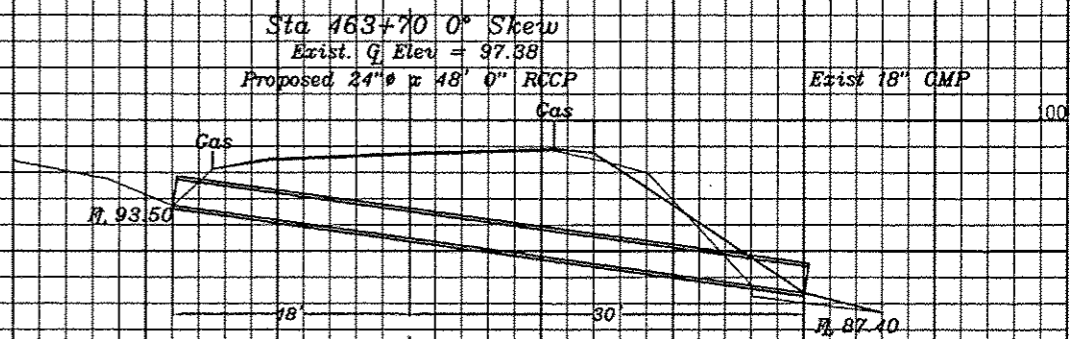
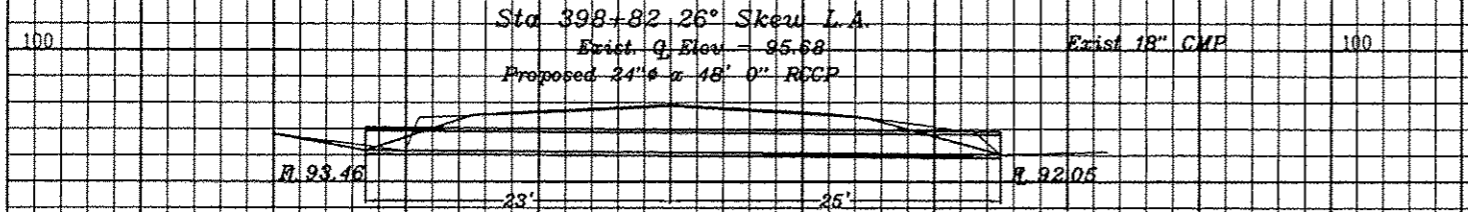
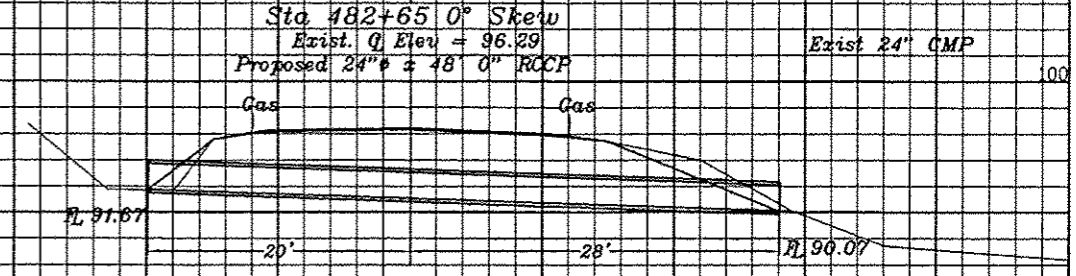
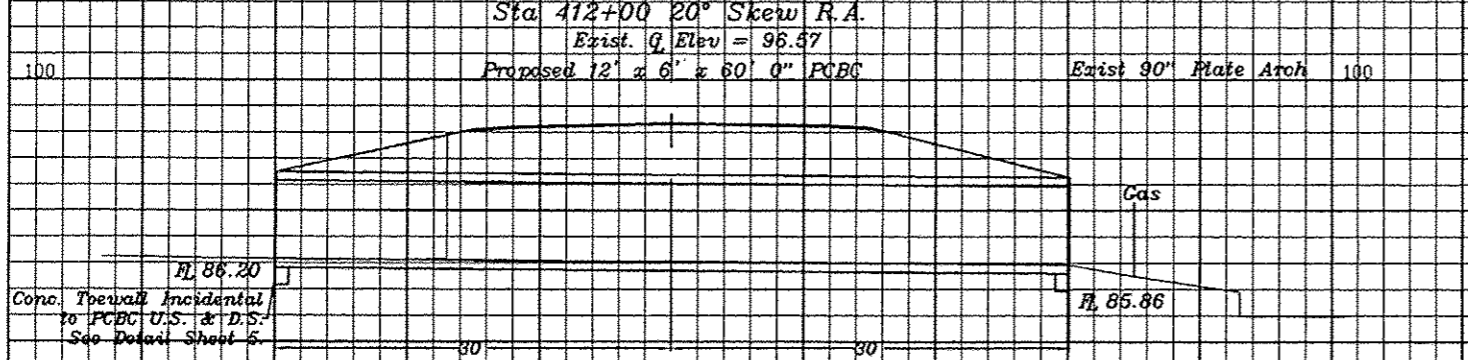
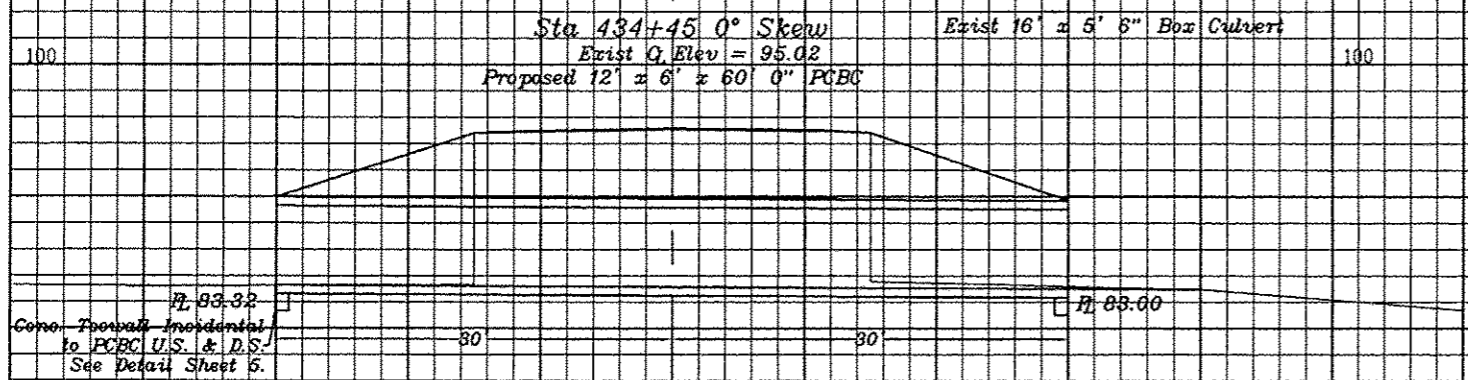


CROSS SECTION THRU BARREL



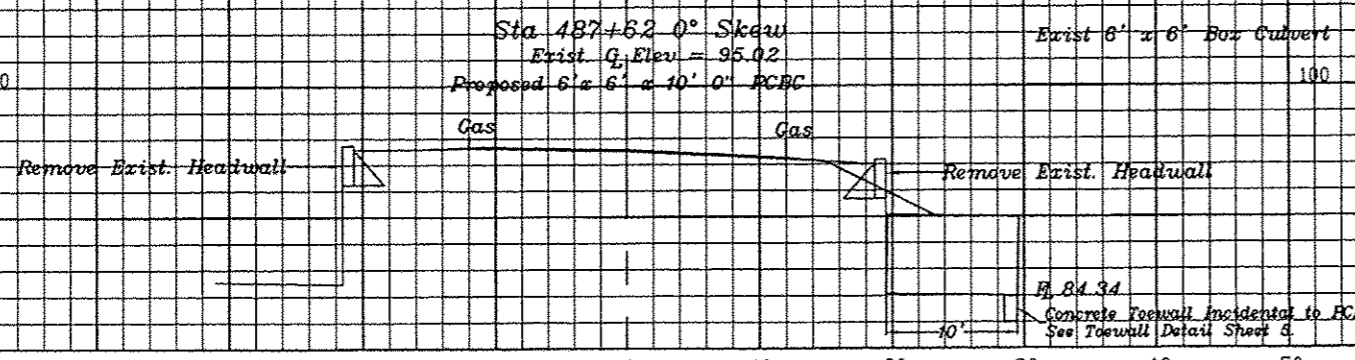
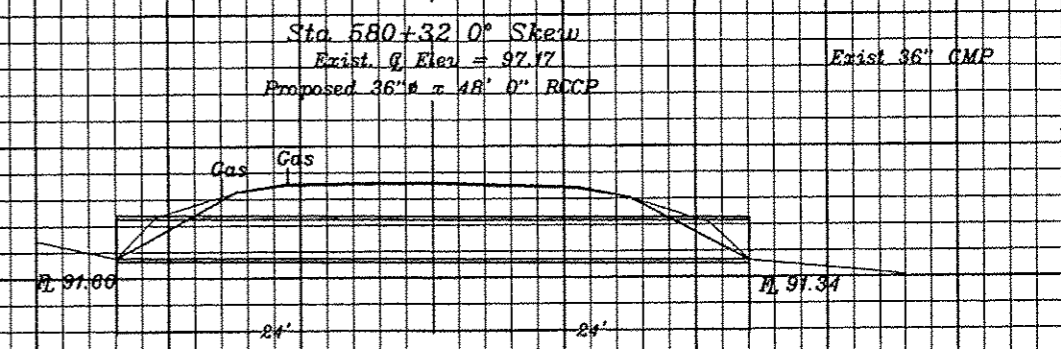
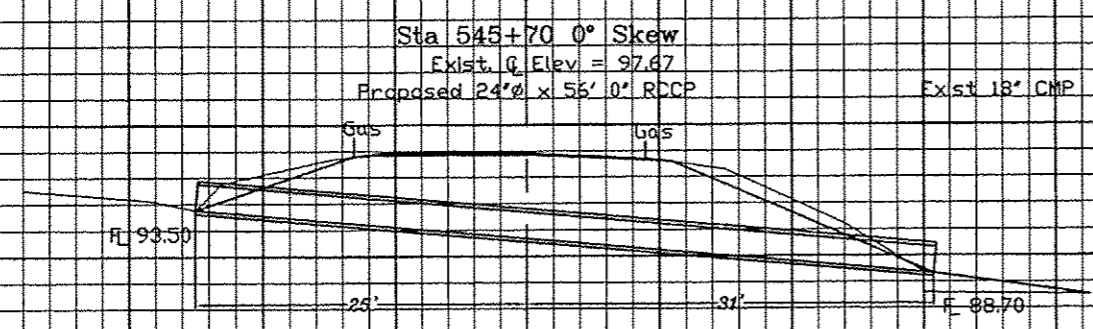
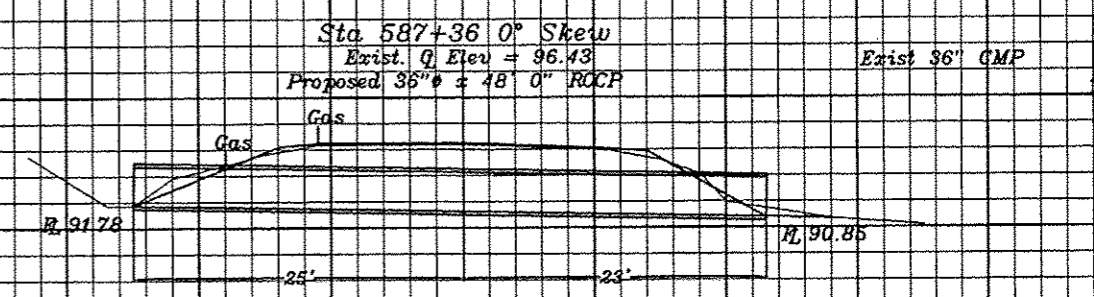
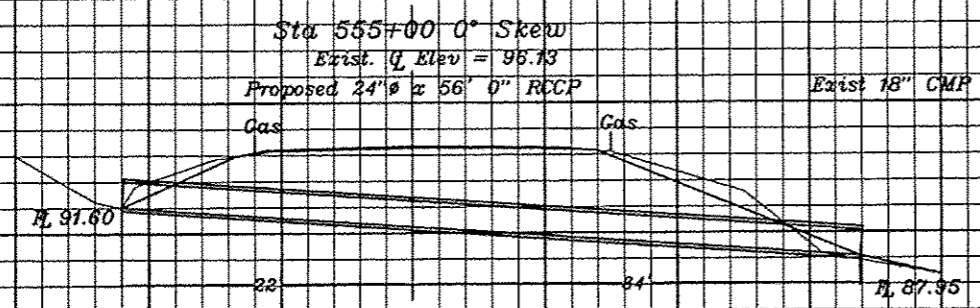
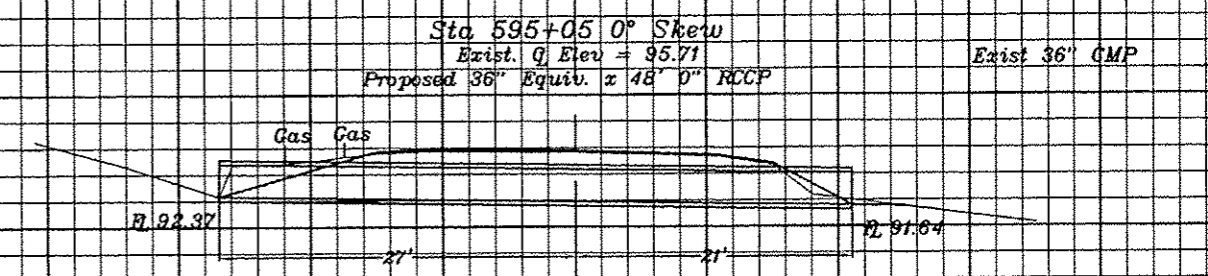
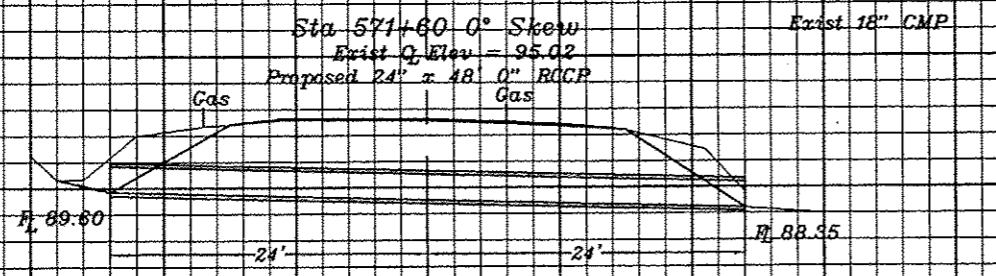
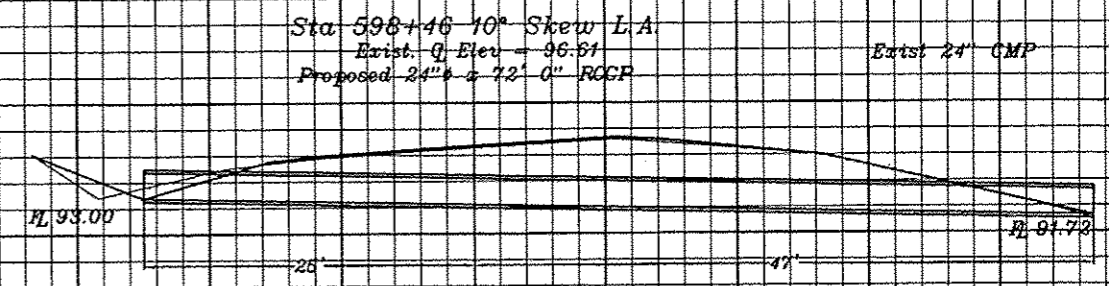
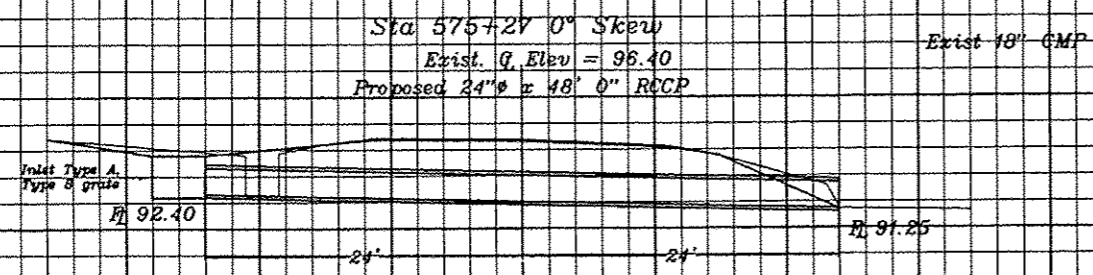
ANCHOR DETAIL

ROUTE	COUNTY	SECTION	SHEET/OF
FAS 1857/858	RANDOLPH	11-00065-01-RS	8/13
CONTRACT NO. 97580			



Stone Dumped Rip Rap to be placed at both Upstream and Downstream ends of all Culverts. Location and placement will be determined by the Engineer.

ROUTE	COUNTY	SECTION	SHEET/OF
FAS 1857/858	RANDOLPH	11-00065-01-RS	9/13
CONTRACT NO. 97580			

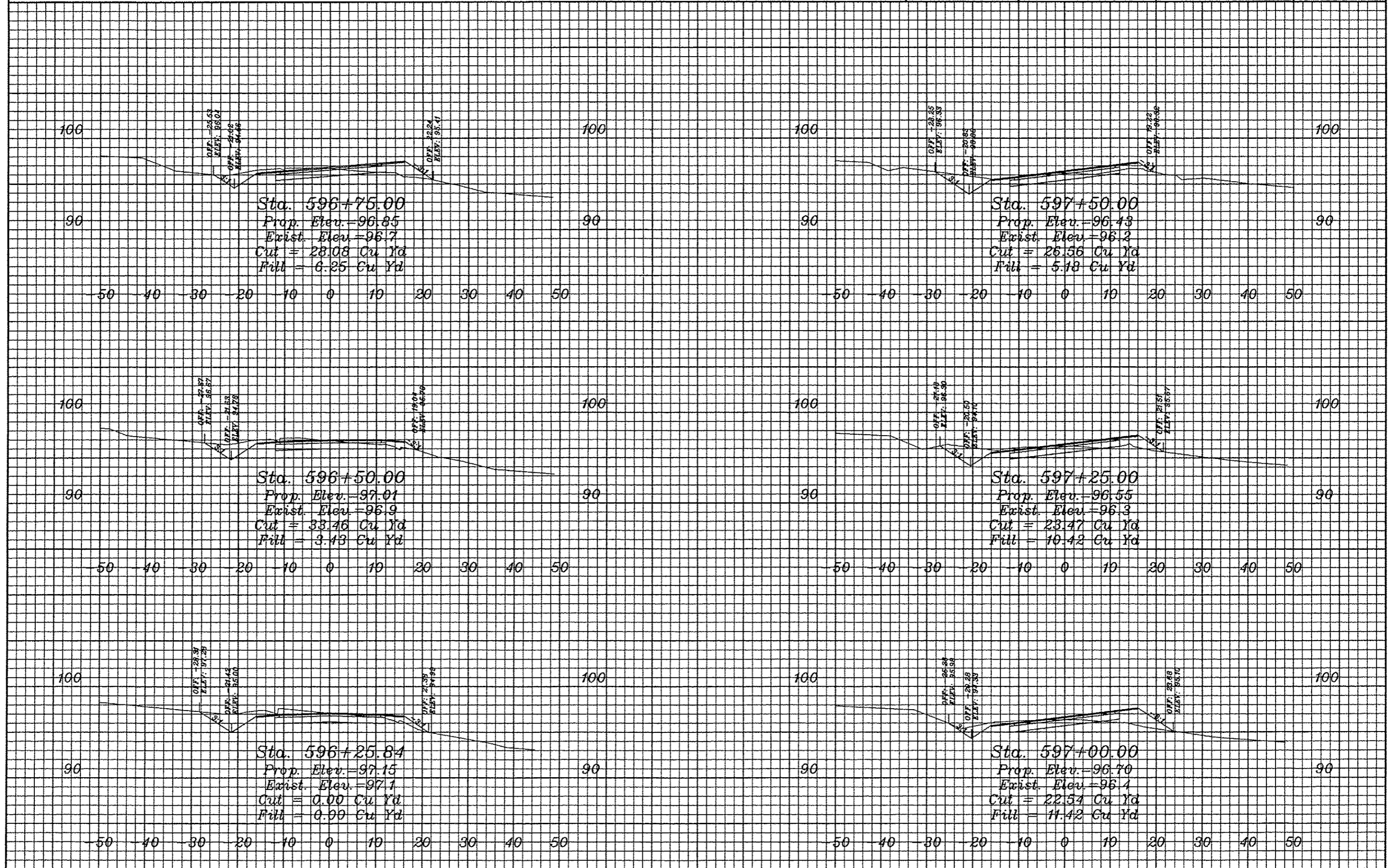


Stone Dumped Rip Rap to be placed at both Upstream and Downstream ends of all Culverts. Location and placement will be determined by the Engineer.

BLUFF ROAD

CONTRACT NO. 97580

ROUTE	COUNTY	SECTION	SHEET/OF
FAS 1857/858	RANDOLPH	11-00065-01-00-RS	10/13

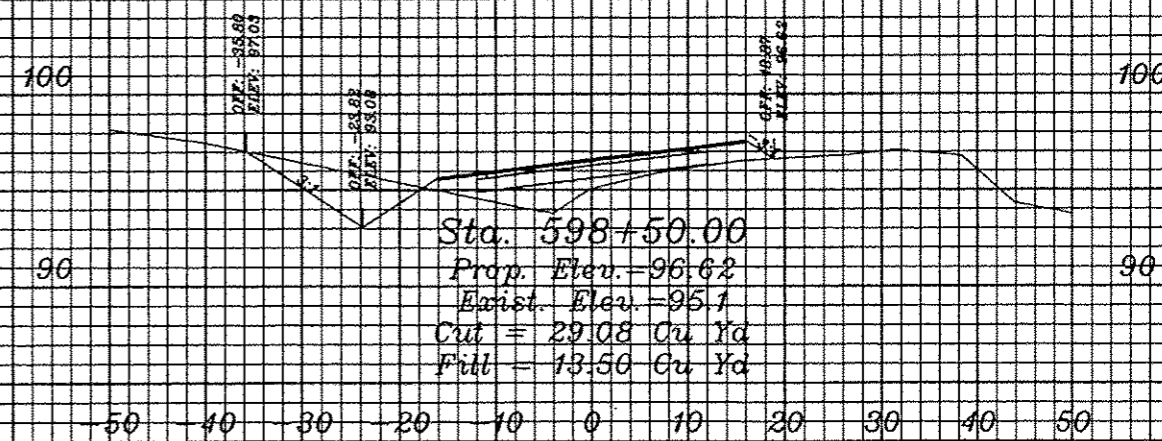
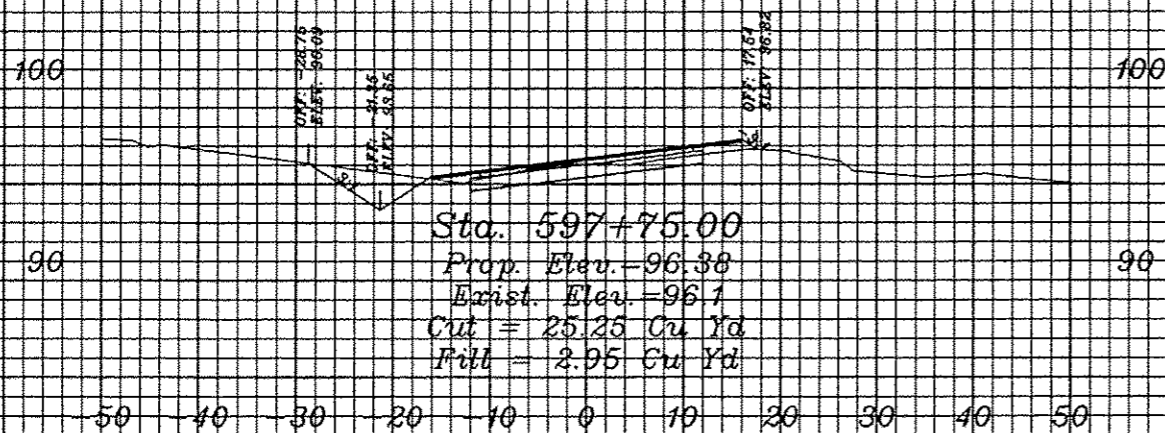
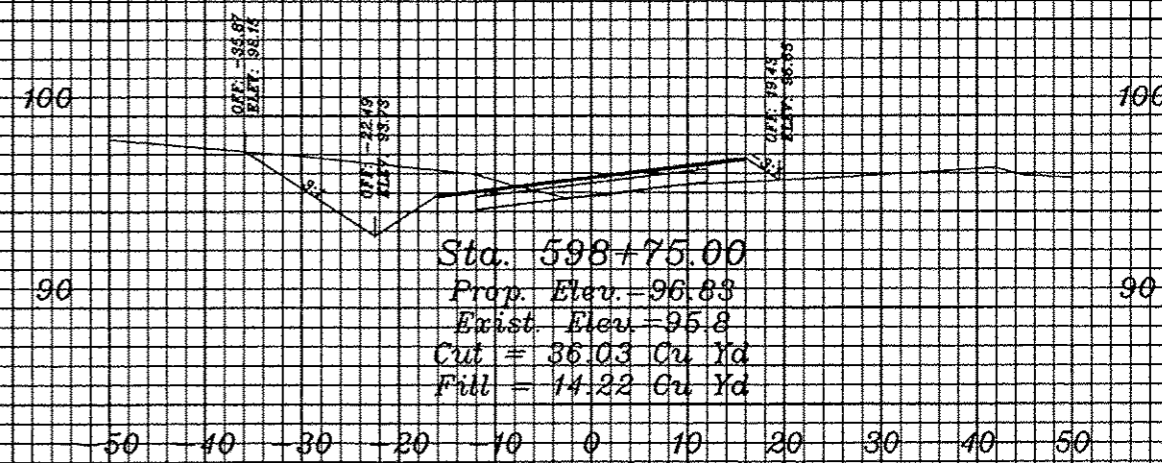
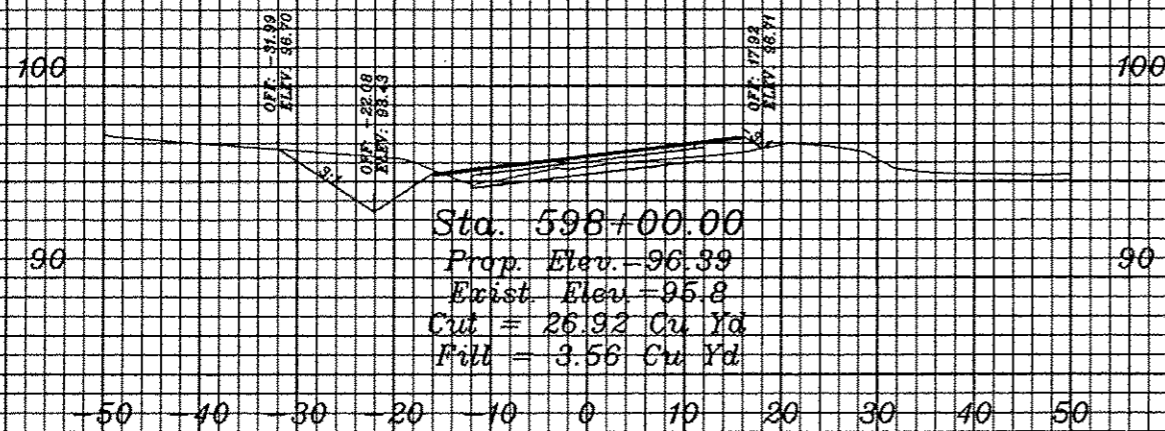
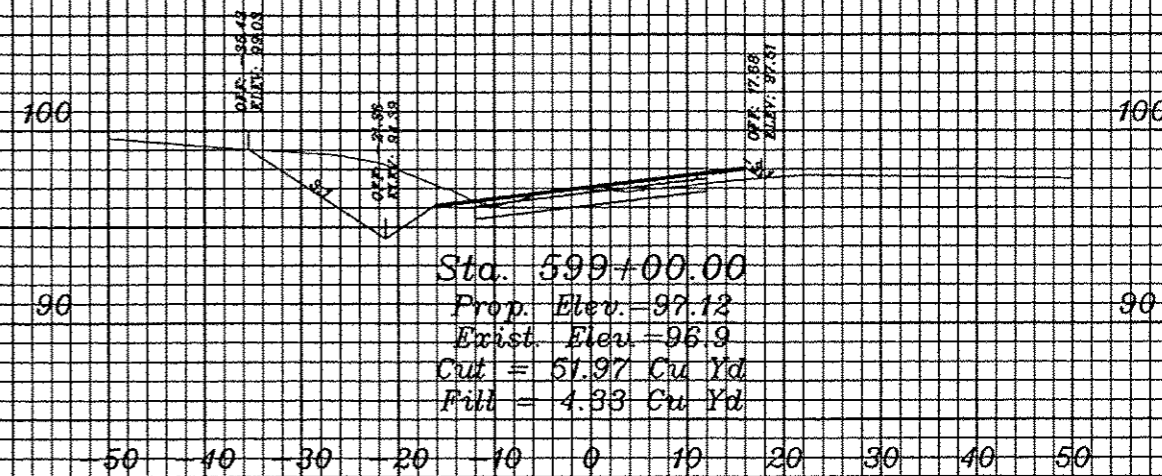
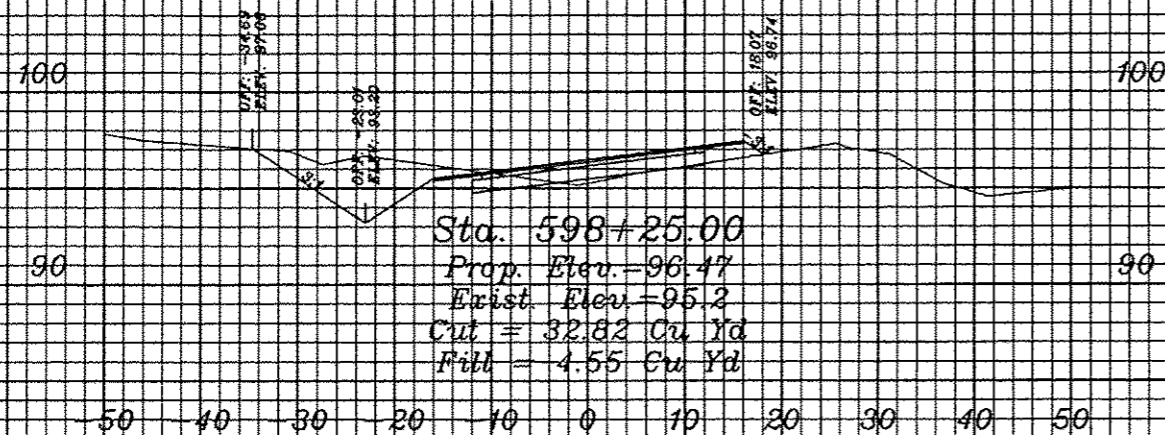


CROSS SECTIONS STA. 596+25.84 TO STA. 597+50

BLUFF ROAD

CONTRACT NO. 97580

ROUTE	COUNTY	SECTION	SHEET/OF
FAS 1857/858	RANDOLPH	11-00065-01-RS	11/13



BLUFF ROAD

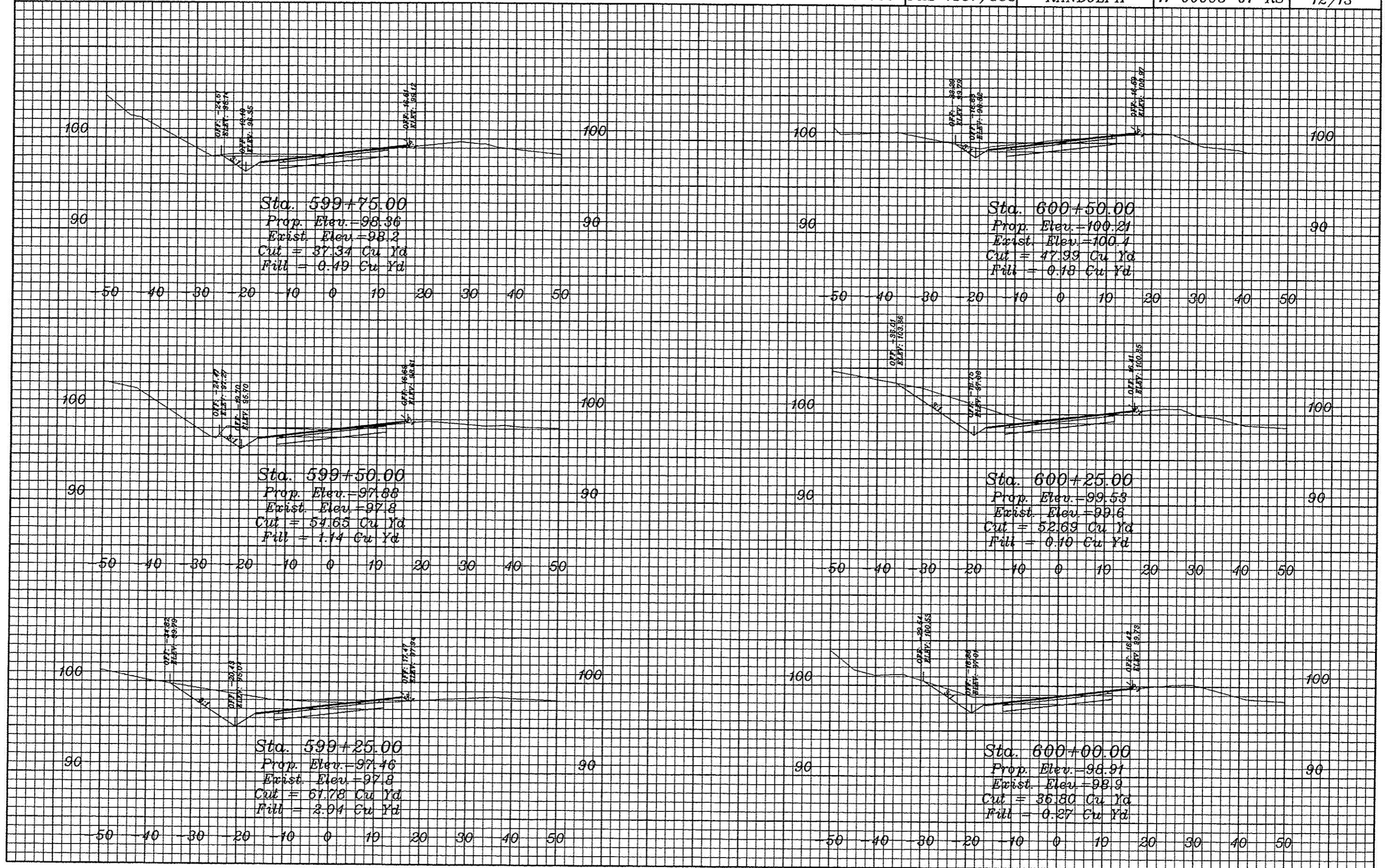
CONTRACT NO. 97580

ROUTE
FAS 1857/858

COUNTY
RANDOLPH

SECTION
11-00065-01-RS

SHEET / OF
12 / 13



CROSS SECTIONS STA. 599+25 TO STA. 600+50

BLUFF ROAD

CONTRACT NO. 97580

ROUTE
FAS 1857/858

COUNTY
RANDOLPH

SECTION
11-00065-01-RS

SHEET / OF
13 / 13

