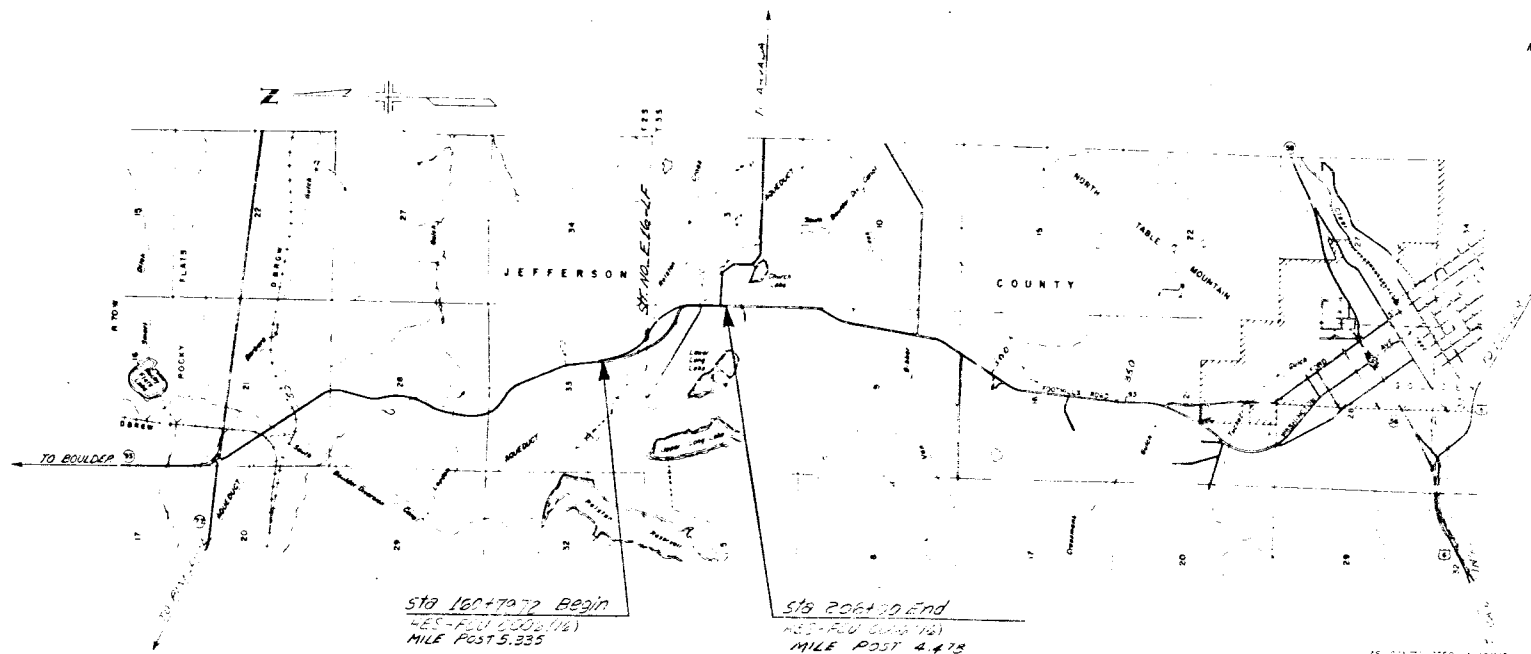


PLAN AND PROFILE OF ~~PROPOSED~~
FEDERAL AID PROJECT NO. HES-FCU 0006 (16)
STATE HIGHWAY NO. 93
JEFFERSON COUNTY

SCALES OF SPOTIAL GRADINGS
 ON PLAN 1" = 100 FT.
 ON PROFILE 1" = 100 FT. HORIZONTAL
 1" = 10 FT. VERTICAL
 GRADE LINE ON PROFILE IS SHOWN AS GRADE WHEN SHOWN AS
 GROSS LENGTH OF PROJECT 4,520.28 LIN. FT. = 0.856 MILES
 NET LENGTH OF PROJECT



Scale in Miles

NO REVISIONS REQUIRED

REVIS ONE

INDEX OF SHEETS

SHEET NO.

[illegible]

NEW 4 STANDARD
M-806-12 GUARD RAIL TYPE 4
CONCRETE BARRIER (9 SHEETS) FEB 18, 1964

NO REVISIONS

VOID BY CONSTRUCTION

ALIGNMENT PLAN AND PROFILE OF CANAL 16AX

Div. 5 OF HIGHWAYS

APPROVED:

Robert J. [Signature] 10-4-52
DATE

AS CONTRACTED NUMBER 1
CONTRACTOR - [redacted]
BUILDING NUMBER - [redacted]
PROJECT DESIGN - [redacted]
PROJECT STARTED - [redacted]
PROJECT COMPLETED - [redacted]
AS CONTRACTED, DURING [redacted]
[redacted]

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THE STANDARD PLAN SHEETS INDICATED HEREON BY A MARKED BOX ARE TO BE USED TO CONSTRUCT THIS PROJECT.

DEPARTMENT OF HIGHWAYS
STATE OF COLORADO
DIVISION OF HIGHWAYS

STANDARD PLANS LIST

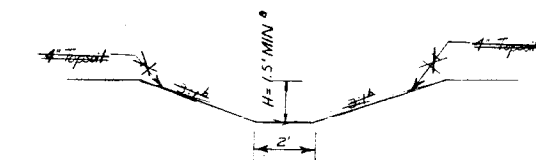
M & S STANDARDS - JANUARY, 1962

TYPICAL SECTIONS

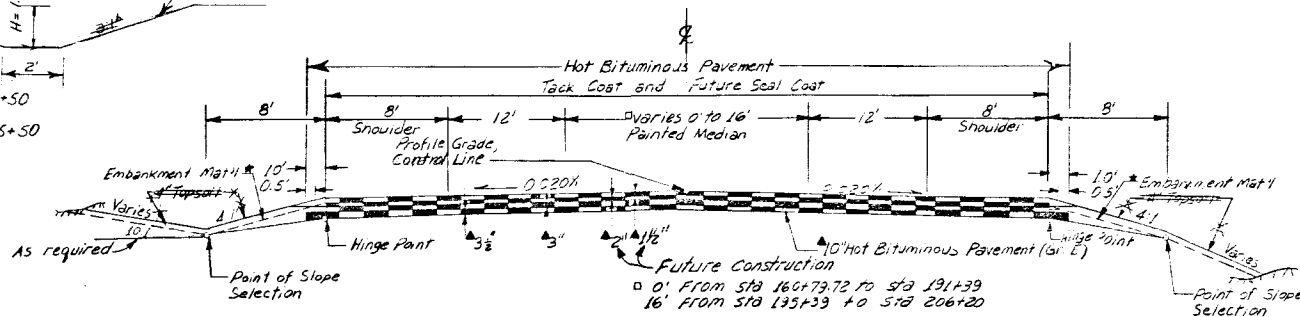
III	COLORADO	REVISED	DATE	BY
AS CONSTRUCTED				
NO REVISIONS		REVISED		VOID

TYPICAL SECTION FOR SIDE DRAIN NW OF PROJECT

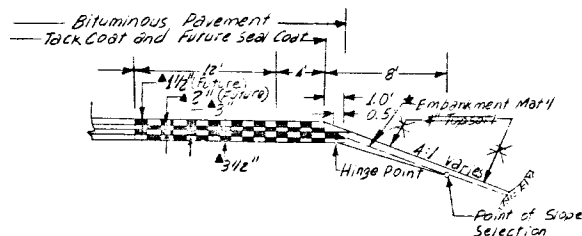
STA. 163+00 TO 170+00 RT.



- a. Hmin = 2', STA 164+50 TO 165+50
- b. 2:1 slopes, STA 164+50 TO 165+50

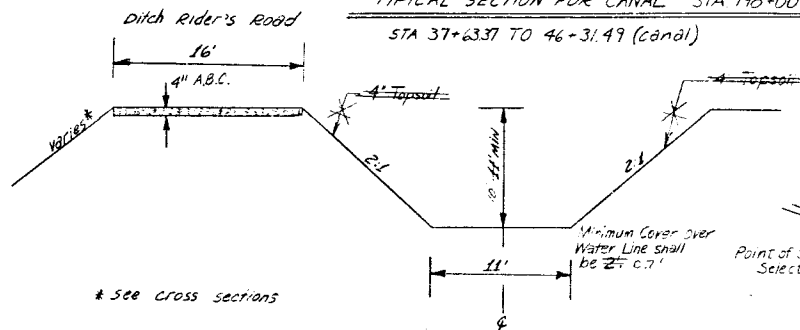


ACCEL- DECEL. OR CLIMBING LANES



TYPICAL SECTION FOR CANAL STA 198+00 (PROT.3)

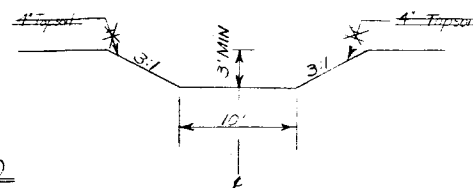
STA 37+63.37 TO 46+31.49 (canal)



* See cross sections

TYPICAL SECTION FOR DITCH STA. 178+00 (PROT.3)

STA 40+00 TO 54+05.37 (Ditch)



THE DEPTH AND WIDTH OF THE SIDE DITCH SHALL BE VARIED WHERE NECESSARY IN ORDER TO PROVIDE PROPER DRAINAGE.

MATERIAL SHALL BE PLACED IN SEPARATE COURSES AT THE FOLLOWING APPROXIMATE RATES PER 100 SQ. YD. OF ROADWAY:

THICKNESS (INCHES)	2"	4"	6"	8"	10"
TONS PER 100 SQ. YD.	4.5	9.0	13.5	18.0	22.5

FOR ALL GRADES, THE MINIMUM DEPTH OF THE DITCH SHALL BE 2 FEET. THE MINIMUM WIDTH OF THE DITCH SHALL BE 18 INCHES.

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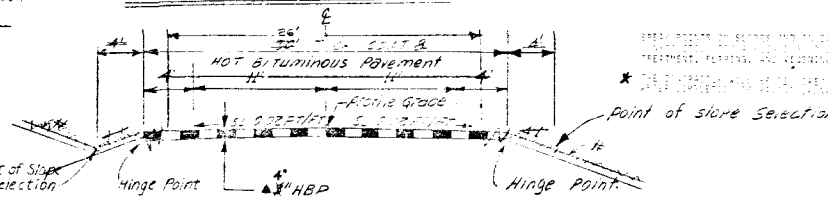
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TYPICAL SECTION OF DETOUR



▲ APPROXIMATE THICKNESS
FOR SLOPE SELECTION SEE CROSS SECTIONS

THE DEPTH AND WIDTH OF THE SIDE DITCH SHALL BE VARIED WHERE NECESSARY IN ORDER TO PROVIDE PROPER DRAINAGE.

MATERIAL SHALL BE PLACED IN SEPARATE COURSES AT THE FOLLOWING APPROXIMATE RATES PER 100 SQ. YD. OF ROADWAY:

THE DEPTH AND WIDTH OF THE SIDE DITCH SHALL BE VARIED WHERE NECESSARY IN ORDER TO PROVIDE PROPER DRAINAGE.

MATERIAL SHALL BE PLACED IN SEPARATE COURSES AT THE FOLLOWING APPROXIMATE RATES PER 100 SQ. YD. OF ROADWAY:

THE DEPTH AND WIDTH OF THE SIDE DITCH SHALL BE VARIED WHERE NECESSARY IN ORDER TO PROVIDE PROPER DRAINAGE.

MATERIAL SHALL BE PLACED IN SEPARATE COURSES AT THE FOLLOWING APPROXIMATE RATES PER 100 SQ. YD. OF ROADWAY:

THE DEPTH AND WIDTH OF THE SIDE DITCH SHALL BE VARIED WHERE NECESSARY IN ORDER TO PROVIDE PROPER DRAINAGE.

SUMMARY OF EARTHWORK QUANTITIES

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	445-PC-100464	4	37
AS INSTRUCTED				
NO REVISIONS ☐ REVISED ☐ VOID ☐				

INDEX			Project Totals	
BOOK	PAGE	SHEET		FINAL TOTAL
			Unclassified Excavation (ASUL)	CU. YD.
			Roadway (From Computer)	49,811
			Structure Quantities as Excavation	47,641
			Structure Quantities as Ditch	17
			Est. for Cut Slope Treatment	266
			Old Road (From Cross Sections)	13,983
			Detour (From Cross Sections)	15,713
			TOTAL	127,431
			COMPACTION (ASHTO T99)	101,488
			Embankment (Net)	210,995
			Base of Cuts and Fills (Detour)	1,953
			Base of Cuts and Fills (Roadway)	11,547
			Structure Quantities as Emb. (Net)	43,583
			To Replace Topsoil (Net)	3,768
			TOTAL	273,846
			252,771	
			* Borrow (ASUL)	
			Roadway Embankment as Borrow	115,493
			To Replace Topsoil Excavation	6,633
			Structure Quantities as Embankment	58,120
			TOTAL	172,246
			175,912	
			Wetting	M GAL
			Compaction	10,955
			Aggregate Base Course	20
			Dust Palliative	100
			TOTAL	11,075
			3368	
			For Information Only	
			Roadway Quantities Balance	CU. YD.
			Excavation	
			Unclassified	49,811
			Borrow	115,493
			Structure Quantities as Excavation	47,641
			Old Road (From Cross Sections)	13,983
			Detour (From Cross Sections)	15,713
			TOTAL	242,641
			Embankment (Net)	
			Roadway (From Computer)	210,995
			TOTAL	210,995
			Embankment x 1.15	
			Roadway (From Computer)	242,641
			TOTAL	242,641

* Minimum R value shall be 10 in the top 2' of the subgrade and minimum R value shall be 5 below 2' of the subgrade

PROJECT TOTALS	
SEEDING (NATIVE)	475,992 LBS.
MULCHING	25,9125 TONS
FERTILIZER (AVAILABLE N)	1,000,000 LBS.
FERTILIZER (AVAILABLE P)	1,476,000 LBS.
SOIL PREPARATION (NATIVE)	147,400 ACRES

SEEDING APPLICATION:

ALL SLOPES 3:1 OR FLATTER SHALL BE MECHANICALLY DRILL SEEDING.
ALL SLOPES STEEPER THAN 3:1 SHALL BE HANDBROADCAST SEEDING.

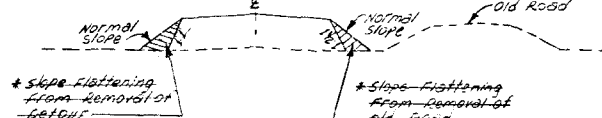
APPROXIMATELY 1.00 ACRES OF SOIL PREPARATION, SEED AND MULCH MAY WILL BE REQUIRED FOR THE SIDE SLOPES OF THE DITCH CROSSING STA 178+00 ON THE MAIN ROADWAY. NO FERTILIZER WILL BE REQUIRED ON THESE SLOPES.

SEEDING (NATIVE)	50 LBS.
MULCHING	4 TONS
SOIL PREPARATION (NATIVE)	1.00 ACRES

IT IS ESTIMATED THAT 11.50 IS 10 OF REMOVAL OF ASPHALT MAT WILL BE REQUIRED FOR THIS PROJECT.

DETAIL OF EARTHWORK QUANTITIES

Sta 172+00 to 176+00 East and Sta 173+00 to 175+00 West



* Quantities for Removal of old Road and Detour are

GENERAL NOTES

FOR PRELIMINARY PLANS QUANTITIES OF PAVEMENT STRUCTURE MATERIALS, THE FOLLOWING RATES OF APPLICATION WERE USED:

TACK COAT DILUTED EMUL. ASPH. (CSS-1419 0.1 PALS. 50.0% DILUTED)
BITUMINOUS PAVEMENT 1.10 TONS PER SQ. YD. EACH
DILUTED EMULSIFIED ASPHALT FOR TACK COAT SHALL CONSIST OF PART
EMULSIFIED ASPHALT AND PART WATER.
RATES OF APPLICATION SHALL BE AS DETERMINED BY THE ENGINEER AT THE TIME OF APPLICATION.

WATER SHALL BE USED AS A DUST PALLIATIVE WHERE REQUIRED. LOCATIONS SHALL BE AS ORDERED.

THE FOLLOWING SHALL BE FURNISHED WITH EACH BITUMINOUS PAYER.

1. A SKI TYPE DEVICE AT LEAST 30 FEET IN LENGTH.
 2. SHORT SKI OR SHOE.
 3. PAYER WILL BE FINISHED WITH A 6" TAPERED SHOE AND 1500 FEET OF CONTROL LINE AND STAPLES.
- ANY LAYER OF BITUMINOUS PAVEMENT THAT IS TO HAVE A SUCCEEDING LAYER PLACED THEREON SHALL BE COMPLETED FULL WIDTH BEFORE SUCCEEDING LAYER IS PLACED.

ROAD APPROACHES WHICH REQUIRE BITUMINOUS PAVEMENT SHALL BE PRIMED AND A 2" THICKNESS OF PAVEMENT PLACED AS FOLLOWS.

PUBLIC APPROACHES AND ENTRANCES TO BUILDINGS OR RESIDENCES SHALL BE PAVED 50 FEET OUT FROM EDGE OF SHOULDER OR 25 FEET FROM ANY DRIVE, WHICHEVER IS LESS. FIELD ENTRANCES SHALL BE PAVED 2 FEET 2" FROM EDGE OF SHOULDER.

DEPTH OF MOISTURE-DENSITY CONTROL FOR THIS PROJECT SHALL BE AS FOLLOWS:

FULL DEPTH OF ALL EMBANKMENTS.
BASES OF CUTS AND FILLS 1/2 FOOT.

FULL DEPTH OF EMBANKMENT SECTIONS USED FOR DITCHES AND CHANNEL CHANGES.

SEEDING, SOIL PREPARATION, FERTILIZING AND COMMERCIAL FERTILIZER, AND MULCHING WILL BE REQUIRED FOR THE SIDE SLOPES OF THE DITCH CROSSING STA 178+00 ON THE MAIN ROADWAY.

FLEXIBLE CONNECTIONS IN THIS PROJECT WITH LOCAL CIRCULATIONS JOINED BY UNPAVED CONNECTIONS SHALL USE A SEALING COMPOUND OR GARNET WITH THE CONNECTION BARS.

SEEDING, SOIL PREPARATION, FERTILIZING AND COMMERCIAL FERTILIZER, AND MULCHING WILL BE REQUIRED FOR THE SIDE SLOPES OF THE DITCH CROSSING STA 178+00 ON THE MAIN ROADWAY. NO FERTILIZER WILL BE REQUIRED ON THESE SLOPES.

THE FOLLOWING TYPES AND RATES SHALL BE USED:

COMMON NAME	BOTANICAL NAME	RATE PLS/ACRE POUNDS
SIDE-GATS GRAMA	BOUTELOA CURTIPENDULA	5
WESTERN WHEATGRASS	AGROPERON SMITHII	7
WHITE DUTCH CLOVER	TRIFOLIUM REPENS	4
BUFFALO (CRACKED) CLOVER	TRIFOLIUM CRACKED	4
SMOOTH BROME	BROMUS INERMIS	5
CRESTED WHEATGRASS (FAIRWAY STRAIN)	AGROPERON CRISTATUM	7
TOTAL PLS/ACRE SEEDING		32

MULCHING MATERIAL:

* NATIVE HAY 2 TONS PER ACRE

COMMERCIAL FERTILIZER DIAMMONIUM PHOSPHATE (18-46-0)	RATE
AVAILABLE N	115
AVAILABLE P	115

2 TONS PER ACRE NATIVE HAY SHALL BE MECHANICALLY INCORPORATED INTO SOIL.

SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED		DATE: 10/1/80	DIVISION: 25-FCD	PROJ. NO. 100-100	1ST	2ND
NO REVISIONS: 0	REVISED: 0	DATE: 10/1/80	COLORADO	5	17	

INDEX BOOK PAGE SHEET	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY		STR. NO. E-16-LF	UTILITIES		PROJECT TOTALS		DIFF +/-	% ADJN		
				PLAN	AS CONST.		PLAN	AS CONST.	PLAN	AS CONST.				
305		201 Clearing and grubbing	LS	1	1				1	1	0	100		
305		202 Removal of structure	Each	10	7				13	12	-1	92		
305		202 Removal of pipe	Lin Ft.					3 200	5 200	220 220	0	100		
305		202 Removal of Delineator	Each	15	15				15	15	0	100		
305		202 Removal of Asphalt Mat	Sq. Yd.	13,380	7,257				13,380	7,257	-6,123	54		
305		202 Removal of Pavement Marking	Sq. Ft.	400	1022				400	1022	+622	256		
305		202 Removal of ground sign	Each	30	31				30	31	+1	103		
305		202 Removal of Fence	Lin Ft.	11,740	11,148				11,740	11,148	-592	95		
305		202 Removal of Guard Rail Type 3	Lin Ft.	225	225				225	225	0	100		
305		202 Plug Culvert	Each					7	7	7	0	100		
305		203 Unclassified Excavation (HAUL)	CU Yds	127,431	100,171			1,317	1,317	128,748	101,488	-27,260	79	
305		203 BORROW (HAUL)	CU Yds	172,246	175,912					172,246	175,912	+3,666	102	
305		203 Compaction (AASHTO T 99)	CU Yds	273,846	252,771					273,846	252,771	-21,075	92	
305		206 Structure Excavation (Class 2)	CU Yds	538	1,300		602	602	3,247	3,247	4,387	5,149	+762	117
305		206 Structure Backfill (Special)	CU Yds						1,123	1,123	1,123	1,123	0	100
305		206 Structure Backfill (Class 1)	CU Yds	702	582		626	626	1,328	1,328	1,328	1,328	-120	91
305		206 Structure Backfill (Class 2)	CU Yds						255	255	255	255	0	100
105		207 TOPSOIL (HAUL) (DELETED)	CU Yds	5,768	0					5,768	0	-5,768	0	
7		209 Wetting	M Gal	11,075	3,368					11,075	3,368	-7,707	30	
305		210 Reset Manhole structure	Each	1	2				1	2	+1	200		
105		210 Reset Ground Sign (DELETED)	Each	1	0				1	0	-1	0		
305		210 Reset Fence	Lin Ft.	4,635	1,200				4,635	1,200	-3,435	26		
305		210 Seeding (Native)	Sq. Ft.	902	902				902	902	0	100		
305		210 Fertilizer (Available N)	lb	452	473				452	473	+21	105		
305		210 Fertilizer (Available P)	lb	563	578				563	578	+15	103		
305		210 Soil Preparation (Native)	Acres	14.38	14.76				14.38	14.76	+38	103		
305		210		14.4	14.7				14.4	14.7	+3	103		
305		213 Mulching	Ton	29	25.91				29	25.91	-3.09	89		

SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED		FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET	TOTAL SHEETS
NO REVISIONS	REVISED 7/21/54	VII	COLORADO	HES-FC-2006(16)	6	37

INDEX	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY		STR. NO. E-16-LF	UTILITIES		PROJECT TOTALS		DIFF +/-	% PLAN
				PLAN	AS CONST.		PLAN	AS CONST.	PLAN	AS CONST.		
305	304	Aggregate Base Course (class 6) (Haul)	Ton	1278	963.80				1278	963.80	-314.2	75
305	403	Hot Bituminous Pavement (Patching) (Haul & Asphalt)	Ton	50	49.83				50	49.83	-0.17	99
305	403	Hot Bituminous Pavement (Grading) (Haul & Asphalt)	Ton	12,714	12,478.81				12,714	12,478.81	-235.19	98
305	411	Emulsified Asphalt (GSS-LH)	Gal	1855	2,462				1855	2,462	+607	133
305	601	Concrete Class A (Box Culvert)	Cu Yds.	305	305	757	757		1,062	1,062	0	100
305	602	Reinforcing steel	Lb.	29,556	29,556	73,124	73,124		108,680	108,680	0	100
305	603	42 Inch Reinforced Concrete Pipe	Lin Ft.				165	165	165	165	0	100
305	603	48 Inch Reinforced Concrete Pipe	Lin Ft.				160	160	160	160	0	100
305	604	Manhole Box Base (10 Foot)	Each				1	1	1	1	0	100
105	604	Manhole Box Base (15 Foot) (DELETED)	Each	1	0				1	0	-1	0
305	604	Manhole Special (10 Foot)	Each				6	6	6	6	0	100
305	607	Line Post	Each	28	8				28	8	-20	29
305	607	End Post	Each	23	30				23	30	+7	130
305	607	Corner and Line Brace Post	Each	35	52				35	52	+17	149
305	607	Fence Barbed Wire with Metal Posts	Lin Ft.	11,422	11,250				11,422	11,250	-172	97
305	611	16 Foot cattle guard	Each	1	1				1	1	0	100

SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED		DIVISION		PROJ. NO.		SHEET NO.		TOTAL SHEETS	
NO REVISIONS	REVISED	VI	COLORADO	HES-ROJ 101616	7	7	37		

INDEX	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY		STR. NO. E-16-LF		UTILITIES		PROJECT	TOTALS	DIFF.	% P/GR
				PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.				
365	611	20 Foot Cattle Guard	Each	2	2					2	2	0	100
365	612	Delineator Type I	Each	44	47					44	47	+3	107
365	612	Delineator Type II	Each	14	18					14	18	+4	129
365	612	Delineator Type III	Each	4	4					4	4	0	100
7	614	Flagging	Hour	1,800	3,226					1,800	3,226	+1,426	179
7	614	Traffic Control Supervisor	Day	110	99					110	99	-11	90
365	614	Sign Panel (Class I)	59 Ft	17	17					17	17	0	100
365	614	Timber sign post 4x4 inch	Lin Ft	43	43					43	43	0	100
365	614	Barrier (Type 3M-C) (Temporary)	Each	2	2					2	2	0	100
365	614	Construction Traffic Sign (Panel size A)	Each	2	3					2	3	+1	150
365	614	Construction Traffic Sign (Panel size B)	Each	23	23					23	23	0	100
105	614	Vertical Panel (DELETED)	Each	30	0					30	0	-30	0
365	614	Vertical Panel (With Light) (Flashing)	Each	20	40					20	40	+20	200
365	614	Concrete barrier (Temporary)	Lin Ft	304	304					304	304	0	100
365	614	Traffic Cone	Each	60	60					60	60	0	100
365	617	18 inch Culvert Pipe	Lin Ft	92	214					92	214	+122	233
365	617	24 inch Culvert Pipe	Lin Ft	220	134					220	134	-86	61
365	617	36 inch Culvert Pipe	Lin Ft	182	182					182	182	0	100
105	617	42 inch Culvert Pipe (DELETED)	Lin Ft	92	0					92	0	-92	0
365	619	27 inch Water Transmission Line	Lin Ft			1170	1170	1170	1170	1170	1170	0	100
365	619	30 inch Water Transmission Line	Lin Ft			1192	1192	1192	1192	1192	1192	0	100
365	619	4 inch Air And Vacuum Valve	Each			2	2	2	2	2	2	0	100
365	619	6 inch Gate Valve	Each			2	2	2	2	2	2	0	100
365	619	18 inch Butterfly Valve	Each	1	1			1	1	1	1	0	100
365	620	Field Office (Class I)	Each	1	1			1	1	1	1	0	100
365	620	Field Laboratory (Class I)	Each	1	1			1	1	1	1	0	100
365	620	Sanitary Facility	Each	1	1			1	1	1	1	0	100
365	624	42 inch Culvert Pipe (CR1)	Lin Ft	352	352					352	352	0	100
105	624	30 inch Culvert Pipe (CR3) (DELETED)	Lin Ft	136	0					136	0	-136	0
365	626	Modulization	Lin Ft	1	1					1	1	0	100
365	627	Pavement Marking Paint	Gal	110	200					110	200	+90	82
FORCE ACCOUNT													
7	FA01	Minor Contract Revisions (NO.1)	FA	1 (1000)	1 (1000)					1	1	0	100
7	FA02	On-the-Job Trainee	Each	2 (1000)	2 (1000)					2	2	0	100
10	FA03	Hanging Cattle Guard, Sta 198+00	FA	1 (1000)	1 (1000)					1	1	0	100
365		1 INCH COPPER PIPE (CMO NO. 2)	Lin Ft.			1400	1382	1400	1382	-18	98		
365		1 INCH VALVE W VALVE BOX (CMO #2)	Each			2	2	2	2	0	100		
365		1 INCH TAP & REL METER (CMO NO. 2)	L.S.			1	1	1	1	0	100		
365		REM PIPE (MCR 1)	Lin Ft.	100	100					100	100	0	100
365		CONCRETE CL A (MISC.) (MCR 1)	Cu.Yd.			6.45	7.45	6.45	7.45	+1.0	115		
365		6 INCH PERFORATED PIPE UNDERDRAIN	Lin Ft. (CMO NO. 3)	1700	1700					1700	1700	0	100
365		FILTER MATERIAL (SPECIAL) (CMO #3)	Cu.Yd.	550	527					550	527	-23	96

FENCING REQUIREMENTS

Station to Station	Side	Remove Fence	Barbed Wire Fence with Metal Posts	Posts			Reset Barbed Wire Fence with Metal Posts
				Corner	End	Line	
166+00 to 206+00	Lt.	5,330					
163+00 to 206+00	Rt.	5,490					
190+00 to 199+00	Rt.	920					
150+50 to 165+00	Lt.					9	1,530
146+00 to 163+00	Rt.					10	1,640
166+00 to 212+22.23	Lt.		4,670	11	13		
163+00 to 212+22.23	Rt.		5,112	12	8		
190+00 to 203+00 (Detour)	Lt.		1,465	2		9	1,465
177+50 to 192+00 (Temporary Fence)	Lt.		375	2	2		
TOTALS		11,749	11,622	35	23	28	4,635
FINAL TOTALS		11,148	11,250	52	30	8	1,300

Use Wooden End Posts

* 177+50 to be reset to the R.O.W. Line inside of the detour and 190+00 for the temporary fence STA 177+50 to 192+00 RT

TABULATION OF LENGTH AND DESIGN DATA

STATION TO STATION	ROADWAY		MAJOR STR. NO. E-16-LF
	LIN. FT.		LIN. FT.
STA. 160+79.72 Begin HES-FCU (0006/16) Mile Post 5.335	1,703.60		
STA. 177+53.32 Major Structure No. E-16-LF STA. 178+16.69	2,783.31		33.37
STA. 206+00.00 End HES-FCU (0006/16) Mile Post 4.478			
TOTALS	4,486.91		33.37
SUMMARY	LIN. FT.	MILES	
Roadway (Net Length)	4,486.91	0.850	
Major Structure	33.37	0.006	
TOTAL Gross Length	4,520.28	0.856	
DESIGN DATA			
Maximum Grade	=	7.222%	
Maximum Degree Curve	=	3°30'	
Minimum SSD (Vertical)	=	618'	
Minimum SSD (Horizontal)	=	>1300'	
Maximum Design Speed	=	70 MPH	
2003 Design Traffic Volumes	=		
ADT	=	10,650	
DHV	=	4,278	

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	HES-FCU (0006/16)	6	37
AS CONSTRUCTED				
NO REVISIONS		REVISED	02/24	VOID

CONSTRUCTION TRAFFIC CONTROL DEVICES

Sign Code	Legend	Size	Panel Size Quantity			
			A	B	C	Other
ABW1-44	Reverse curve sign (LH)	48"X48"	2			
ABW2-1	Cross Road sign	48"X48"	2			
ABW20-1	Road/Const/ (Dist)	48"X48"	5			
ABW20-2	Detour (Dist)	48"X48"	2			
36R2-1(40)	Speed/Limit/40	36"X48"	2			
ABW20-70	Flagger symbol	48"X48"	2			
ABW20-50	Ball Prepared to stop	48"X48"	2			
24R2-1(60)	Speed/Limit/60	24"X36"	2			
ABW20-4	One Lane Road (Dist)	48"X48"	2			
60G20-2	End of Construction	60"X24"	2			
AB211-2	Road closed	48"X30"				
AB214-10(4)	Det Arrow Rt	48"X18"	1			
AB211-2	Road closed	48"X30"	1			
AB214-10(4)	Det Arrow Lt	48"X18"				
Vertical Panel						32.0
Vertical Panel (Light) (F)						40.0
Barriercade (M-0) (Temp)						2.0
Traffic Cone						60.0
Conc Barrier (Temp)						304.0
R-4-1	DO NOT PASS		1			
Total			23			

It is estimated that 44 Gals of Pavement Marking Paint will be required on this project for detour striping as follows:

White 3 Gal
Yellow 10.75 Gal

DELINEATOR TABULATION

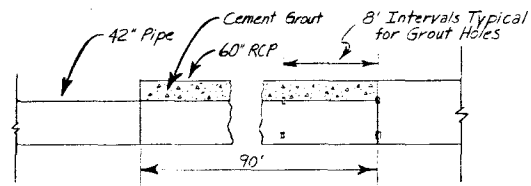
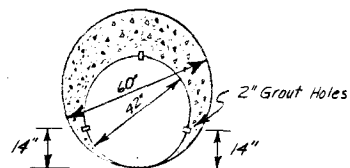
Location	Side	Spacing	Delineators							
			Removal		Type I	Type II	Type III	Type IV		
			Each	Final	Each	Final	Each	Each	Final	Each
157+79.72 to 160+79.72	Rt	100' (Tapered out)			3	6				
194+00 to 204+00	Lt		9	9			2			
161+90.72	Rt/Lt	233'								
195+00 to 198+00	Rt		6	6						
164+29.72 to 172+60.33	Lt	120'			7	8				
164+29.72 to 172+60.33	Rt	120'					7	7		
163+00 (Approach)	Lt				1	0				
178+53.32	Lt/Lt	233'								2
185+69.11 to 195+31.49	Lt	120'			2	2	7	8		
185+69.11 to 195+31.49	Rt	120'			7	1				
193+30.11	Lt/Rt	233'								
193+00 (Approach)	Lt				1	0				
197+60	Lt/Rt				2	1				
198+00	Lt/Rt									2
199+20 to 199+21.17	Rt				1	1				
199+20 to 204+50	Rt/Lt				12	13				
206+00 to 211+00 to 217+50	Rt/Lt	100' (Tapered in)			10					
224+50 to 232+40	Lt						3			
Total			15	5	44	47	14	9	4	4

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	401-500 (20074)	9	11
AS CONSTRUCTED				
NO REVISIONS	REVISOR	DATE	VOID	

SURFACING PLAN

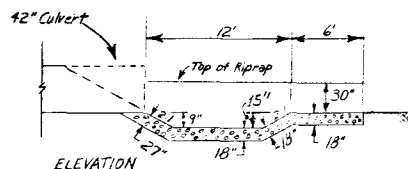
CEMENT GROUTING DETAIL

STA. 171+93



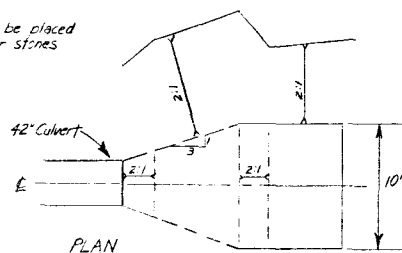
RIPRAP BASIN DETAIL

STA. 171+90



ELEVATION

Note:
Stone size - 9"
Smaller size stones to be placed along base and larger stones along bank.



PLAN

Station to Station	Source	Length in Stations	Quantity - Tons				
			Aggregate	Hot Bituminous Pavement			
			Base Course (Class 6)	3 1/2" Bottom Layer Grading E	3" Middle Layer Grading E	2" Middle Layer Grading E	1 1/2" Top Layer Grading E
157+79.72 to 160+79.72 (Approach to Project)	UNDESIGNATED	3.00		283			121
160+79.72 to 206+00 (Main Roadway)		45.2028		4,068	3,390	2,215	1,673
160+79.72 to 206+00 (Accel & Climbing Lane)		45.2028		774	663	442	332
195+39 to 206+20 (Median)		10.81		370	317	212	159
191+39 to 195+39 (Median Taper)		4.00		69	59	39	30
206+20 to 211+15.75 (Approach to Project)		4.00		428	367	245	184
182+19.11 to 206+28.49 (Detour)		24.0938			1,326		
For Irregularities in Subgrade (10%)				600			
From Structure Quantities Est. for Leveling Course			1278			120	200
Project Totals			1278	6,592	6,122	3,273	2,699
FINAL TOTALS			9,630	6,592	6,036	49.83	

Note: Stabilization Based on

- EDLA 18" (Present) - 54
- EDLA 18" (20 years) - 215
- Regional Factor - 1.5
- Serviceability Index - 2.50
- Subgrade R - 10 MIN
- Strength Coefficient
- Hot Bituminous Pavement - .44
- WSN - 4.25
- Borrow R Value - 10

It is estimated that 54 tons of Hot Bituminous Pavement (Patching) will be required in this Project.

* 2" Middle Layer and 1 1/2" Top Layer are Future Construction

STRUCTURE QUANTITIES

AS CONSTRUCTED		DIVISION		PROJ. NO.		SHEET	
NO. REVISIONS		COLORADO HIGHWAYS		10			

INDEX PAGE PAGE INDEX	LOCATION	SECTION OF STRUCTURE	UNCLASSIFIED EXCAVATION			STRUCTURE		AGGREGATE BASE COURSE	HOT BITUMINOUS PAVEMENT	CONCRETE (CY)	REINFORCING STEEL LB	2.29' DIA CULVERT PIPE		END SECTION	MISCELLANEOUS
			CUBIC YARD	EXCAV. DITCH	EMB.	EXCAVATION	BACKFILL					LINEAR	FEET		
	157+79.72 TO 160+79.72	*													
	163+00 TO 170+00 (SIDE DRAINAGE)	122	253												
	168+80 (deleted)	+													
	169+00 Lt.	174	1647			6	12	74	+			50		3	Each - Manhole Box Base (15 Foot) Boured Concrete cap, 1/2" m.s.c. concrete
	169+92	1	5-			60	93					132		38	
	171+93.70	2				66	116							352	902 cu ft of Cement Grout
	171+00 TO 172+00													47	
	178+00	710				602	626			757	77124				
	184+00	12-				13	26					164		6	
	190+ TO 192+ 193+00 Lt. 195+00- Lt. 193+00	1				4	8	190 210.6	+			12		2	225 Lin. Ft. of Removal of Guard Rail Type 3. 1 Each - 20 Foot Cattle Guard
	192+13.11 TO 206+23.49 (CATTLE GUARD)	2	515-			13	129					86	92	128	304 Lin. Ft. of Concrete Barrier (Temporary) From Sta 197+53 to Sta 200+92 (Detour)
	198+00	1				164	301			305	29556				
	199+20	1				147	26	118 182	27			110		166	Each - Reset Manhole Structure. 1 Each - 20 Foot Cattle Guard.
	205+18 Lt. 206+00 TO 195+50 Lt.		984			478		20 264	57						
	205+18 Rt.	1	890			4	11	20 241	25			92 50		1	1 Each - 16 Foot Cattle Guard
	206+00 TO 211+95.73 DITCH AT 178+00, 171+00 40+00 TO 54+05.37 CATCH BASIN AT 198+00 37+53.37 TO 46+23.63	*	35520	545				534	3						
	206+00 TO 211+95.73 DITCH AT 178+00, 171+00 40+00 TO 54+05.37 CATCH BASIN AT 198+00 37+53.37 TO 46+23.63	*	35520	545				534	3						
	ROADWAY TOTALS	15	4751	11	3553	114	1328	7278	400	1062	108680	92	232	82	32 1/2 332

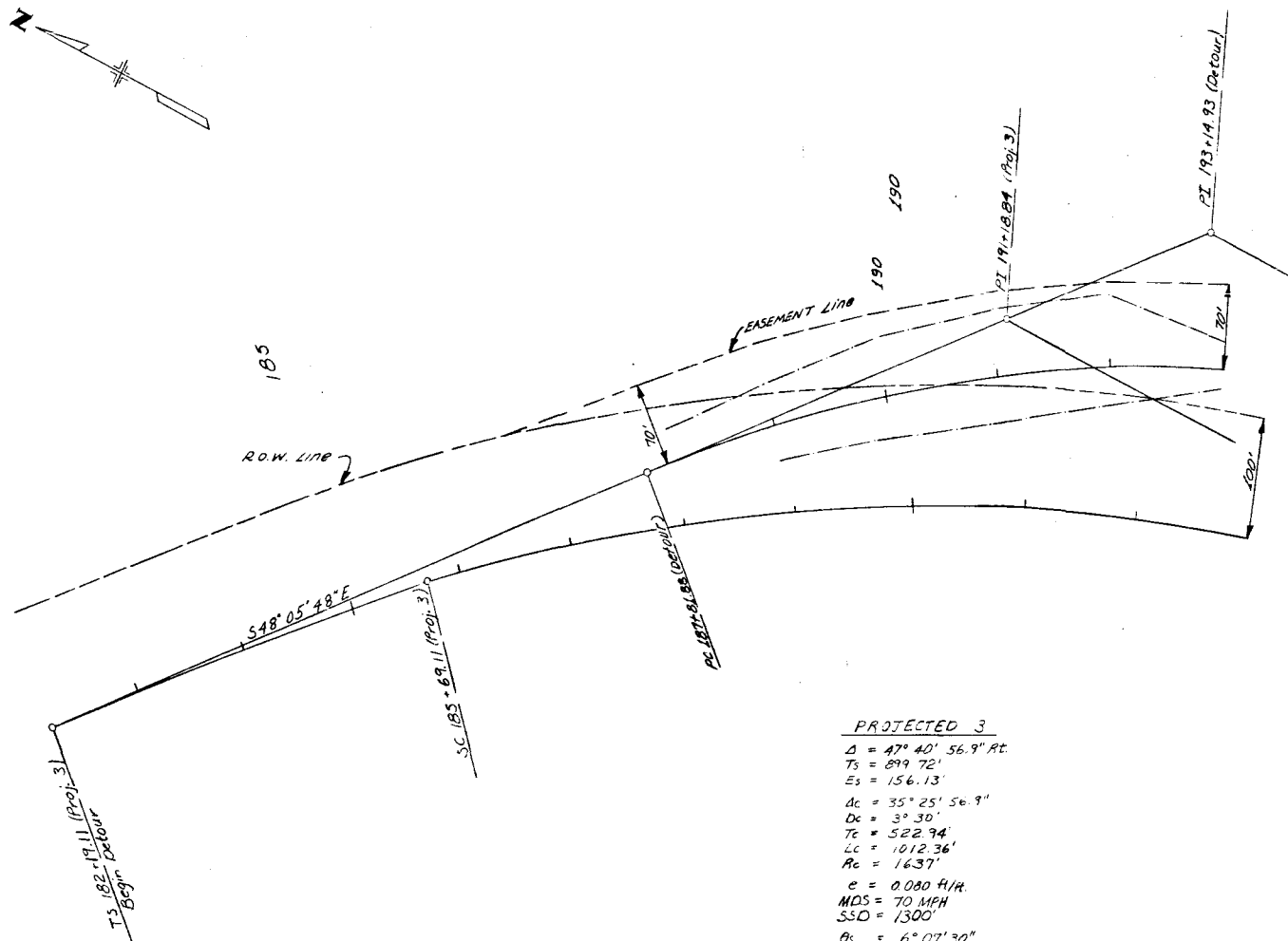
* Deleted - In Field with quantities.
+ Included - In Field with quantities.
For Information Only

* Carried to Summary of Estimated Quantities.
Carried to Summary of Estimated Quantities.

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	ES-50-1106/161	11	17
AS CONSTRUCTED				
NO REVISIONS		REVISED	VOID	

DETOUR

Original Scale: 1" = 50'



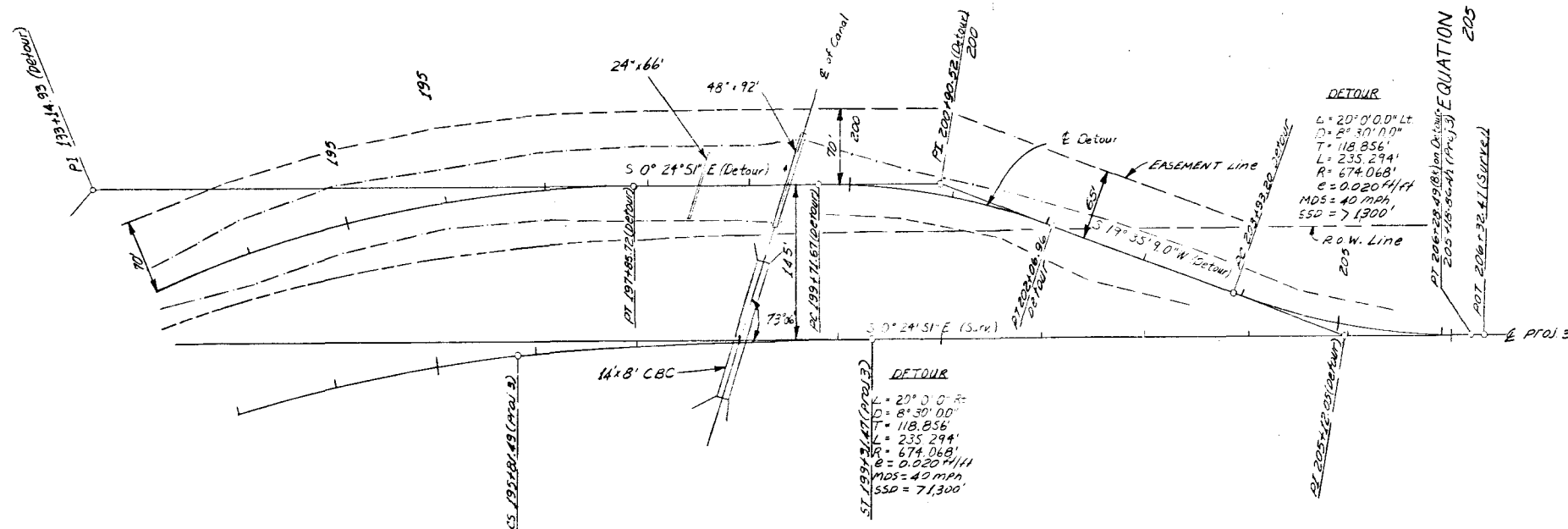
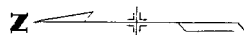
PROJECTED 3

$\Delta = 47^\circ 40' 56.9''$ Rt.
 $T_3 = 899.72'$
 $E_3 = 156.13'$
 $A_c = 35^\circ 25' 56.9''$
 $D_c = 3^\circ 30'$
 $T_c = 522.94'$
 $L_c = 1012.36'$
 $R_c = 1637'$
 $e = 0.080$ ft./ft.
 $MDS = 70$ MPH
 $SSD = 1300'$
 $O_s = 6^\circ 07' 30''$
 $L_s = 350'$
 $L_T = 233.47'$
 $S_T = 116.79'$

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	ES-FC-100-16	12	37
ES CONSTRUCTED				
NO REVISIONS		REVISED	VOID	
			10-2-84	

DETOUR

Original Scale: 1" = 50'



DETOUR

$\Delta = 47^\circ 40' 56.9''$ Rt.
 $D = 4^\circ 45' 00''$
 $T = 533.047$
 $L = 1003.842$
 $R = 1206.227$
 $e = 0.02071/ft$
 $MDS = 50$ mph
 $SSD = 71,300'$

PROTECTED 3

$\Delta = 47^\circ 40' 56.9''$ Rt.
 $TB = 899.72'$
 $ES = 156.13'$
 $\Delta C = 35^\circ 25' 56.9''$
 $DC = 3^\circ 30'$
 $TC = 522.94'$
 $LC = 1012.36'$
 $RC = 1637'$

$c = 0.080$ ft/ft.
 $MDS = 70$ MPH
 $SSD = 1300'$

$B_s = 4^\circ 07' 30''$
 $LS = 350'$
 $LT = 233.47'$
 $ST = 116.79'$

DETOUR

$\Delta = 20^\circ 0' 00''$ Lt.
 $D = 8^\circ 30' 00''$
 $T = 118.856'$
 $L = 235.294'$
 $R = 674.068'$
 $e = 0.02071/ft$
 $MDS = 40$ mph
 $SSD = 71,300'$

197+88 to 200+92 (Detour) - Reg'd.
 concrete Barrier (Temporary) Lt.

DETOUR

$\Delta = 20^\circ 0' 00''$ Lt.
 $D = 8^\circ 30' 00''$
 $T = 118.856'$
 $L = 235.294'$
 $R = 674.068'$
 $e = 0.02071/ft$
 $MDS = 40$ mph
 $SSD = 71,300'$

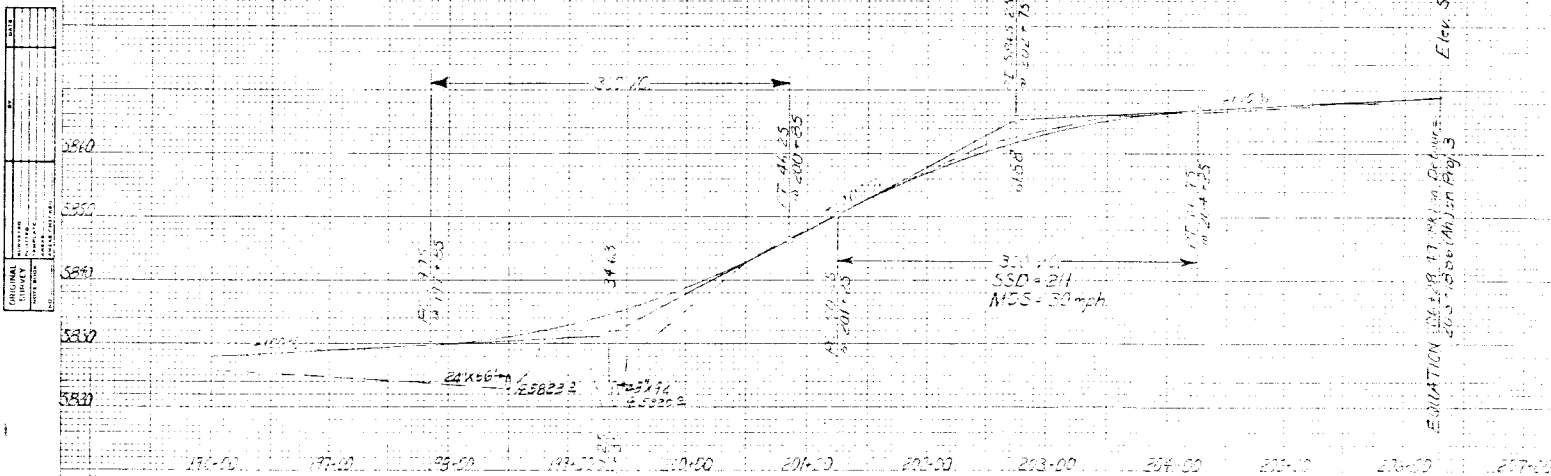
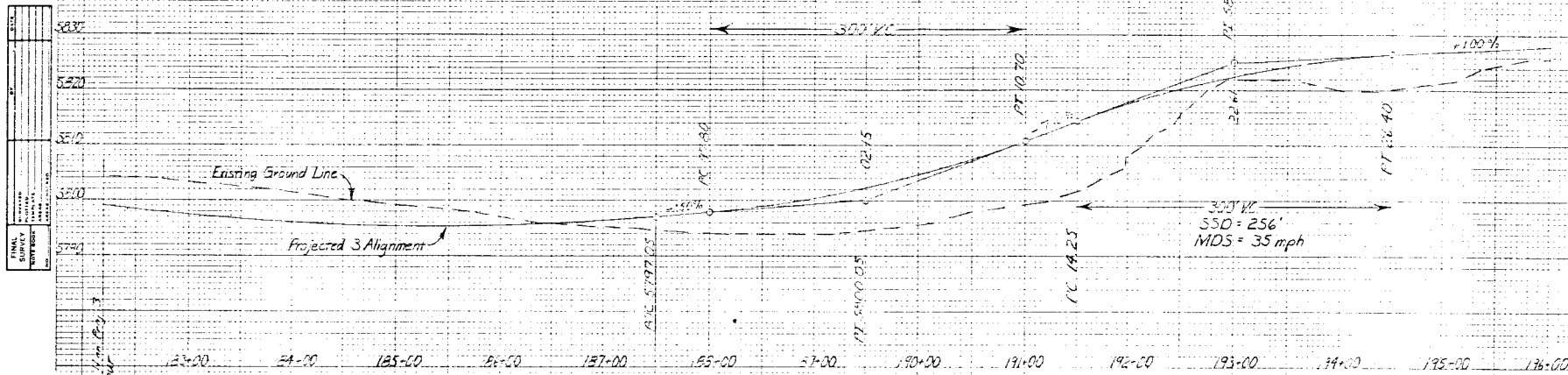
DETOUR
 $\Delta = 20^\circ 0' 00''$ Lt.
 $D = 8^\circ 30' 00''$
 $T = 118.856'$
 $L = 235.294'$
 $R = 674.068'$
 $e = 0.02071/ft$
 $MDS = 40$ mph
 $SSD = 71,300'$

AS CONSTRUCTED	
NO REVISIONS	REVISED

FEDERAL ROAD DISTRICT NO.	PROJECT NO.	SHEET NO.	TOTAL SHEETS
1425	FD-000416	13	27

DETOUR

Original Scale: 1" = 50' Horizontal
 1" = 10' Vertical



ELEV. SOLID 18 ENO
 DETOUR

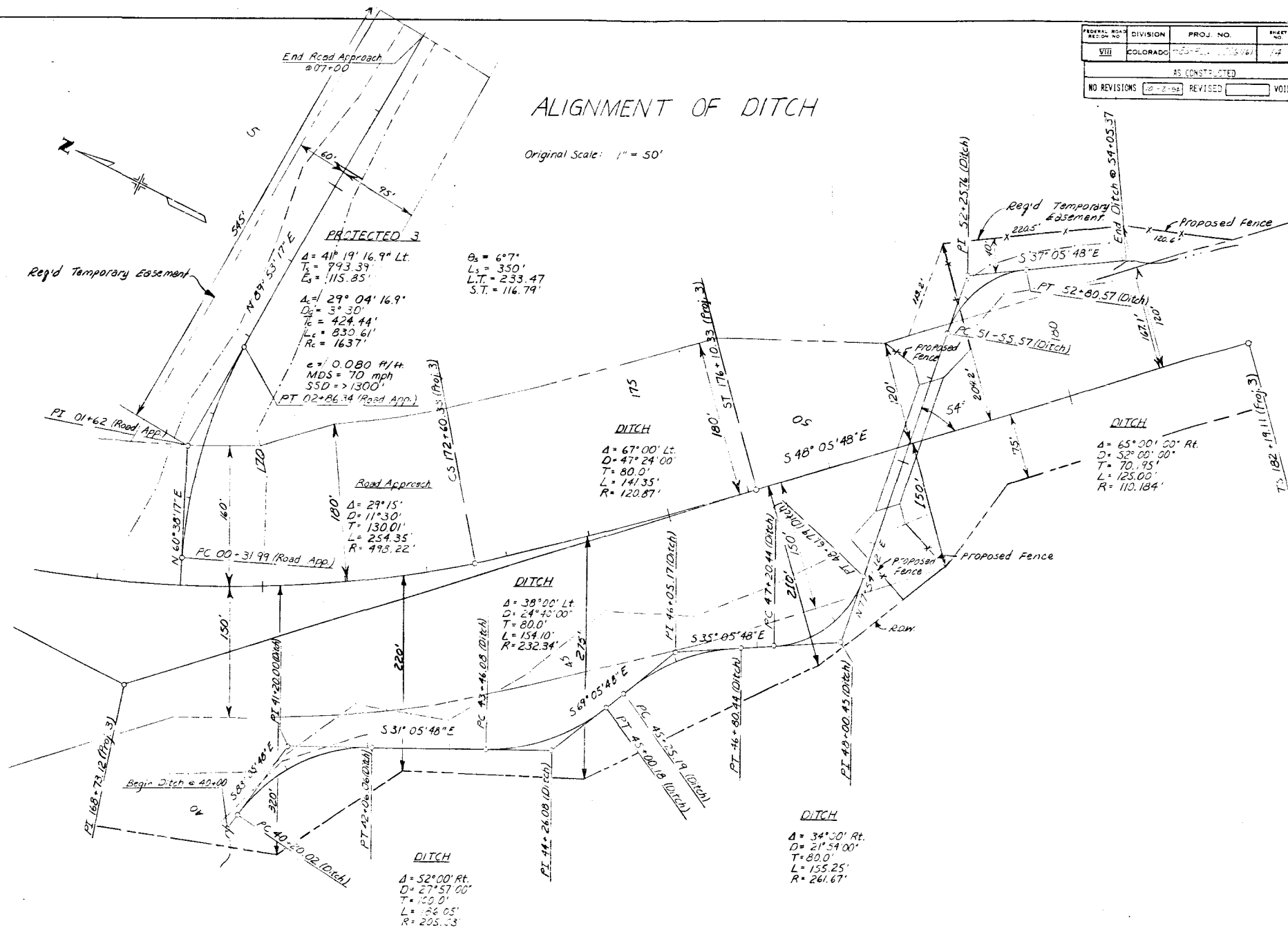
FEDERAL ROAD REC'D ON NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	10-2-62	14	37

AS CONSTRUCTED

NO REVISIONS	10-2-62	REVISED		VOID	
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ALIGNMENT OF DITCH

Original Scale: 1" = 50'



FINAL SURVEY DATE MARK	DATE
DESIGNED BY	DATE
CHECKED BY	DATE

DESIGNED BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE

Excavation		Embankment		Excavation		Embankment	
Cu. Yds.	Area	Cu. Yds.	Area	Cu. Yds.	Area	Cu. Yds.	Area

FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
III	COV	51100	15	37

AS CONSTRUCTED

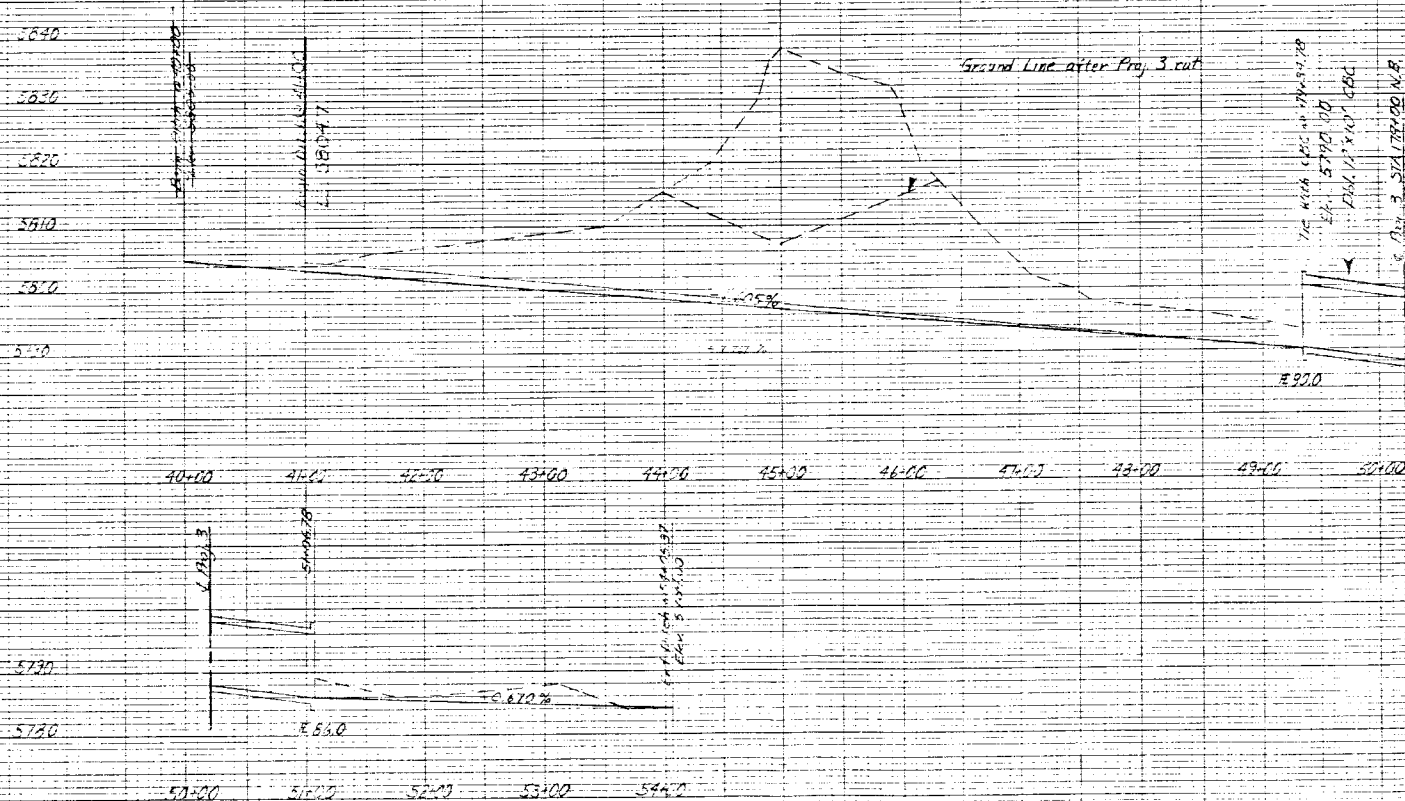
NO REVISIONS ☐ REVISED ☒ VOID ☐

PROFILE OF DITCH AT STA. 178+00 ON PROJ. 3

STA. 40+00 TO 54+05.37

Scale: 1" = 50' horizontal

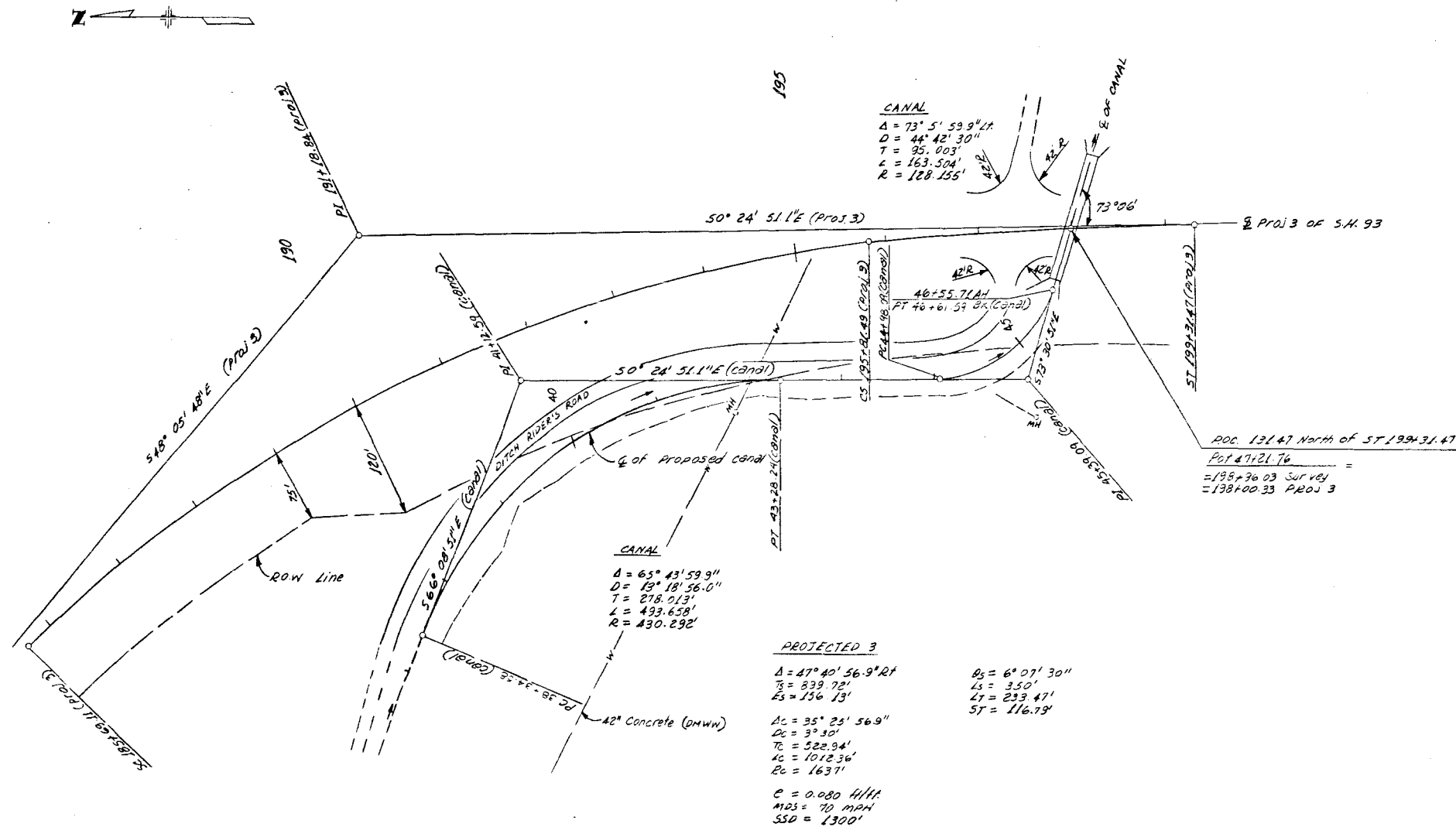
1" = 10' vertical



FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VII	COLORADO	115-PC-110616	16	37
AS CONSTRUCTED				
NO REVISIONS		REVISED	VOID	

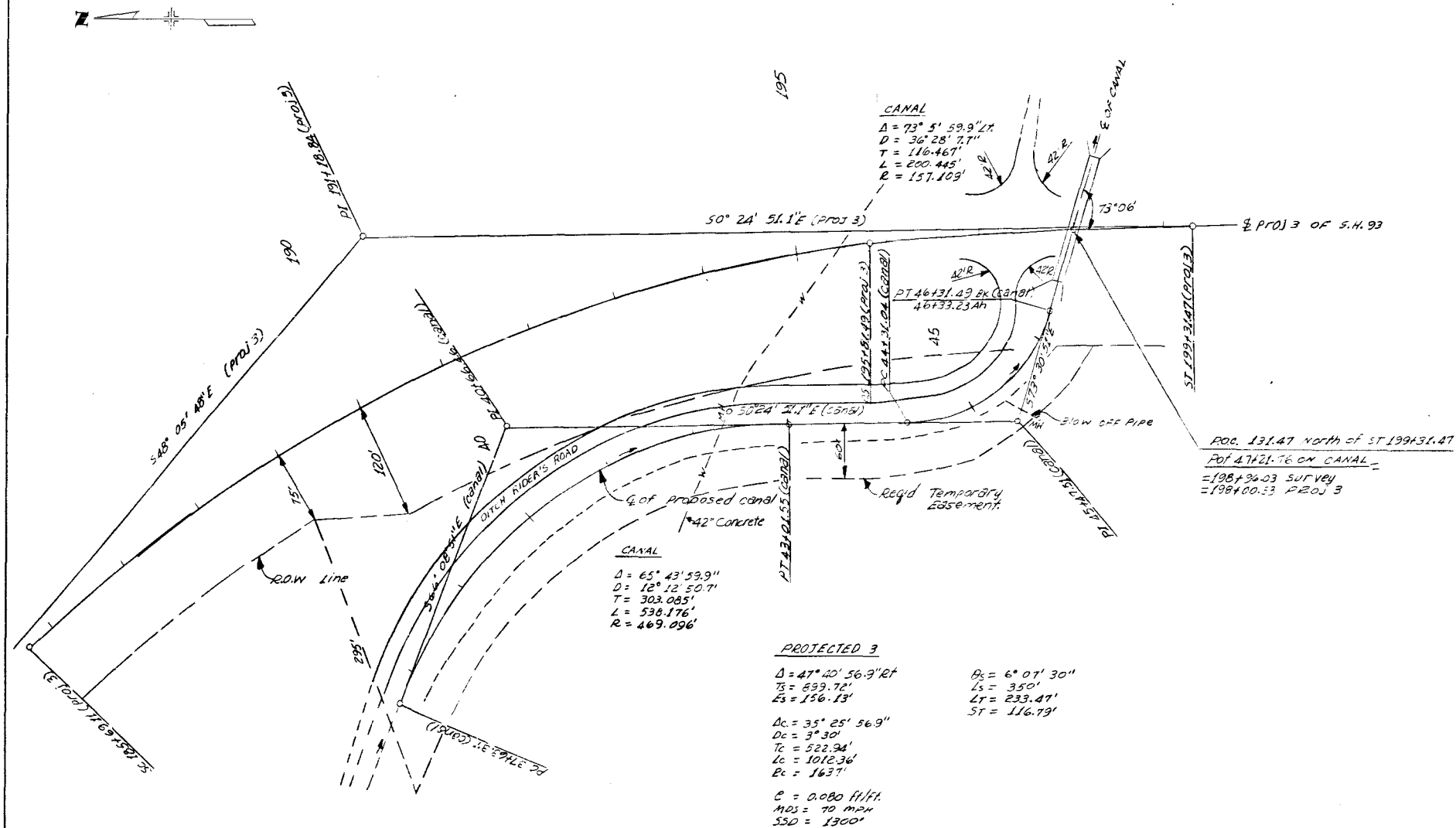
ALIGNMENT OF CANAL Original Drawing: 1"=50'

NOTE: Req'd 20"x13'-4" concrete side wings (w/1 1/2" styrofoam) over the water line.



ALIGNMENT OF CANAL
Original Drawing: 1"=50'

AS CONSTRUCTED		FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
NO REVISIONS	REVISED	VIII	COLD.	425-FCU 0006(W)	6A	37



AS CONSTRUCTED	
NO REVISIONS	REVISED

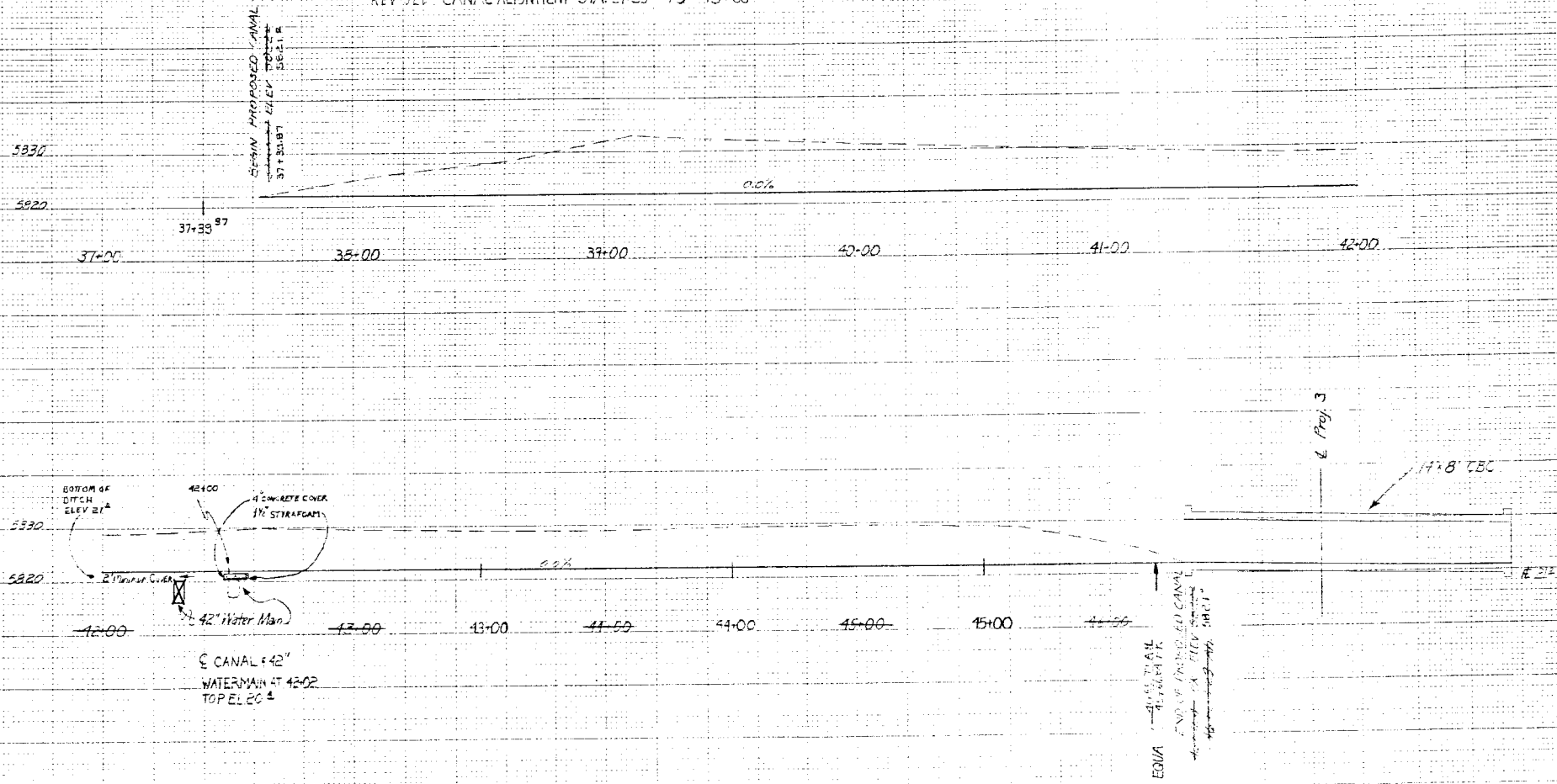
PROJECT	NO.	DATE	BY
RES-FC	000616	17	T

PROFILE OF CANAL AT 198+00
STA 37+63.37 TO 46+31.49
REVISED CANAL ALIGNMENT STA 37+39⁸⁷ TO 45+66⁸⁰

Original Scale 1" = 20' Horizontal
1" = 10' Vertical

NO.	DATE	BY	REVISION
1			FINAL SURVEY

NO.	DATE	BY	REVISION
1			ORIGINAL SURVEY



SE 1/4, Section 33, T2S, R 70W

UTILITIES

Public Service of Colorado
Mountain Bell Telephone Co.
City of Arvado (water)
North Table Mountain water
Denver Metro Water

48 HOURS BEFORE YOU DIG
CALL FOR THE BLUE STAKES

534-6700

Denver International Group
Gas Electric & Telephone

146+00 to 160+79.72
Req'd Approach to Project.

PROJECTED 1

$\Delta = 18^{\circ}06'45''$ LT
 $TS = 521.76'$
 $DS = 37.03'$
 $SS = 225.74'$
 $MS = 70$ MPH
 $LS = 20.30'$
 $ES = 250'$
 $LC = 166.68'$
 $RC = 233.47'$
 $ST = 116.79'$

SURVEY

$\Delta = 18^{\circ}06'45''$ LT
 $TS = 521.76'$
 $DS = 37.03'$
 $SS = 225.74'$
 $MS = 70$ MPH
 $LS = 20.30'$
 $ES = 250'$
 $LC = 166.68'$
 $RC = 233.47'$
 $ST = 116.79'$

PROJECTED 3

$\Delta = 41^{\circ}13'16.9''$ LT
 $TS = 793.33'$
 $DS = 115.35'$
 $SS = 23.04'16.9''$
 $MS = 70$ MPH
 $LS = 20.30'$
 $ES = 830.61'$
 $LC = 163.7'$
 $RC = 233.47'$
 $ST = 116.79'$

165
169+92 - Remove 48" x 30" x 36 CSOA, Remove
Horizontal & Extend 36" x 36" CSOA Collect
182' LT. with END Section.

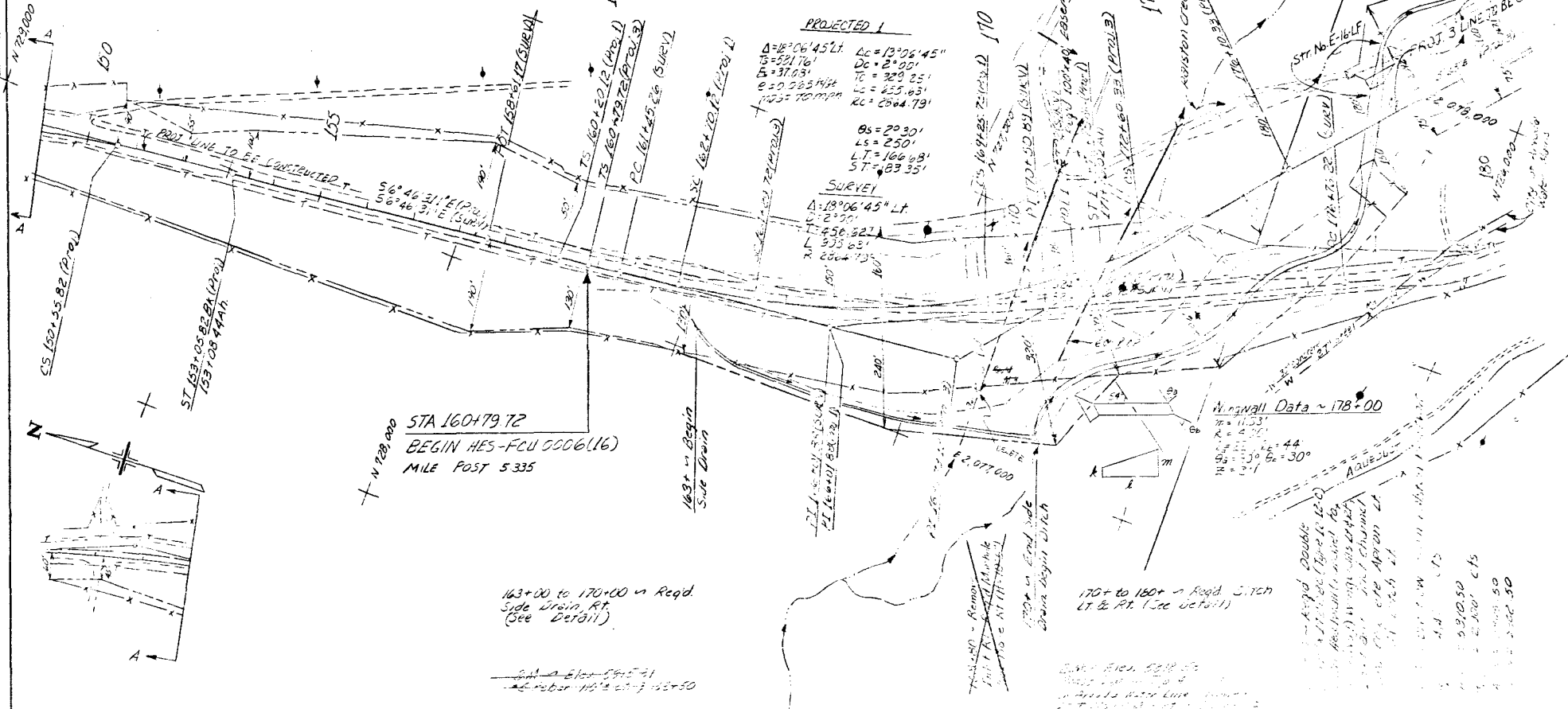
Water Rights = 40 CFS, DWN = 538.35
Reg'd Outlet Ditch

169+00 - Reg'd 24" x 50' Side drain
and Road Approach LT.
171+ TO 172+ in Reg'd present Road
Approach LT.

171+93 TO - Remove 60" End Section 60"
60" x 48" x 72" CSOA, Extend 60"
Cross, collect 182' LT. (30' of which is
water right) with 48" x 72" CSOA.
Grout (See Details)
for Hydraulic Cuts See (S) 178+00

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJECT NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	HES-FCU 0006(16)	13	17
IS CONSTRUCTED				
NO REVISIONS		REVISED	VOID	

PLAN	SECTION	DATE	BY	CHKD
12/1/77	12/1/77	12/1/77	12/1/77	12/1/77



Note: Soil Samples taken from
Report No. 2527, dated 3/2/53

PROFILE OF PROJ. 3

NO. REVISED	AS CONSTRUCTED
	10-2-54

HES-FCU 0006(16)	19	37
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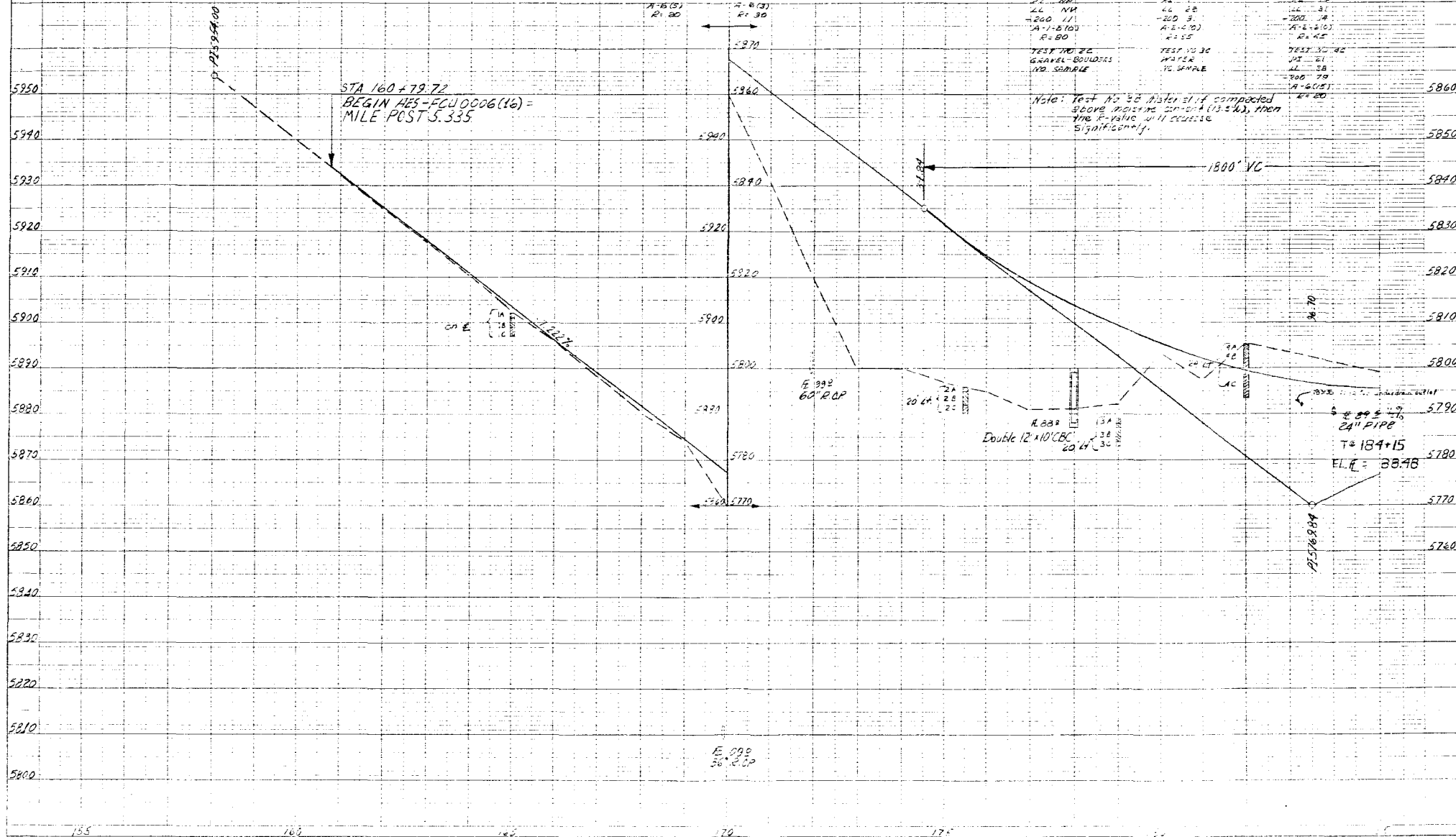
TEST NO. 1A	TEST NO. 1B	TEST NO. 1C
GRAVEL	PT 15	PT 18
NO SAMPLE	LL 34	LL 34
	-200 46	-200 39
	PT 15(3)	PT 18(3)
	PT 20	PT 20

TEST NO. 2A
TOP SOIL
NO SAMPLE
TEST NO. 2B
PT 11
LL 34
-200 39
PT 11(3)
PT 20
GRAVEL BOULDERS
NO SAMPLE

TEST NO. 3A
TOP SOIL
NO SAMPLE
TEST NO. 3B
PT 21
LL 34
-200 39
PT 21(3)
PT 25
TEST NO. 3C
WATER
NO SAMPLE

TEST NO. 4A
TOP SOIL
NO SAMPLE
TEST NO. 4B
PT 26
LL 34
-200 39
PT 26(3)
PT 30
TEST NO. 4C
PT 31
LL 34
-200 39
PT 31(3)
PT 35

Note: Test No 3B Water 1st compacted
3000 lbs. 20" x 14" (13.5%), then
7000 lbs. 20" x 14" (13.5%)
Significantly

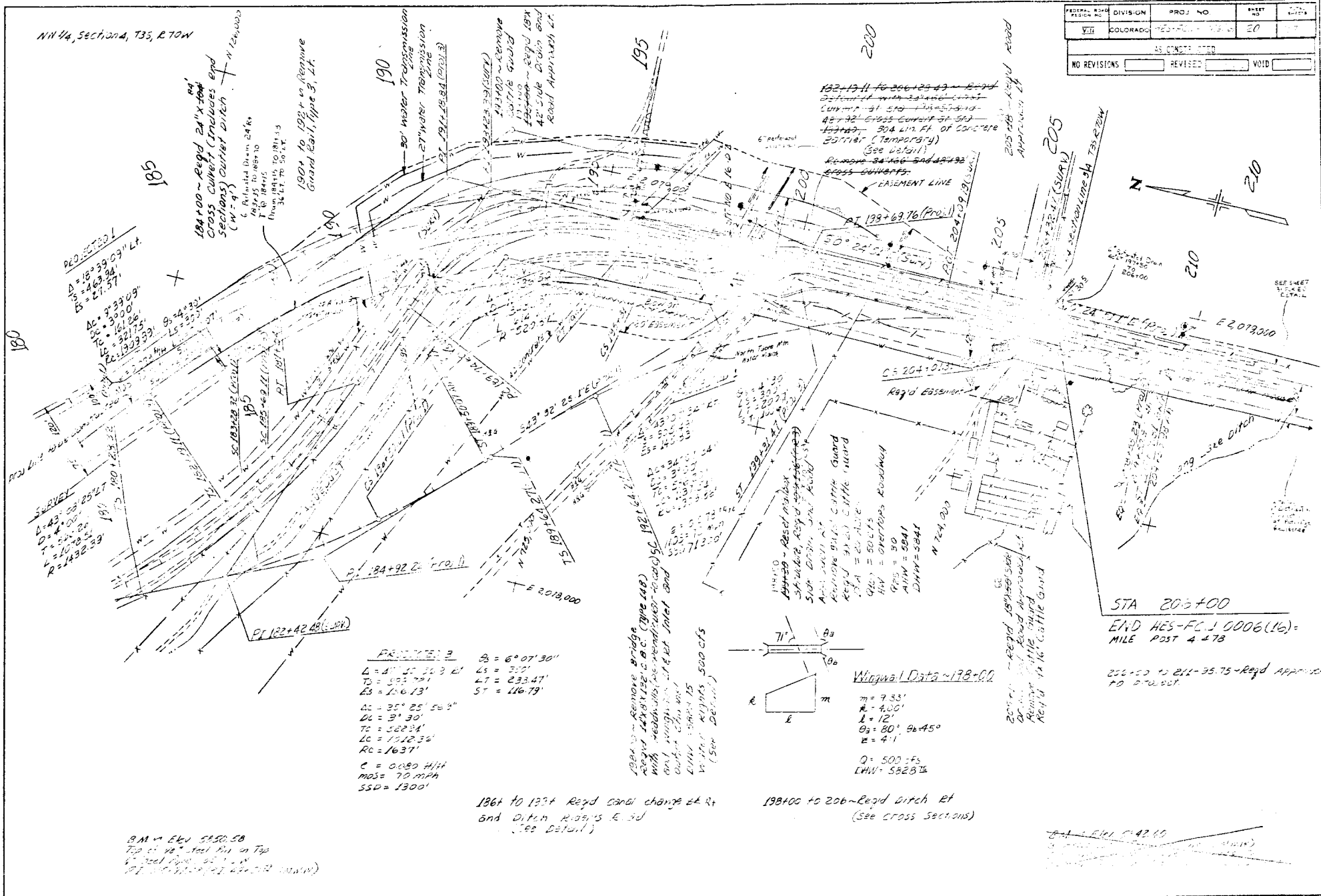


PROFILE
ELEVATION
STATIONING
DATE
BY

PLAN	SECTION	DATE
1977	1977	1977
1977	1977	1977
1977	1977	1977

N 1/4, Section 24, T35, R70W

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJECT NO.	SHEET NO.
VII	COLORADO	1977-1978-1979	20
AS CORRECTED			
NO REVISIONS ☐ REVISED ☐ VOID ☐			



FRONTIER 2
 $L = 4' 25' 26.3''$
 $TS = 503.721$
 $ES = 1-6.13'$
 $AC = 35' 25' 56.5''$
 $LC = 3' 30'$
 $TC = 528.34'$
 $EC = 1512.36'$
 $RC = 1637'$
 $C = 0.080$ H/H
 $MSS = 70$ MPH
 $SSD = 1300'$

Wingwall Data - 178+00
 $m = 7.33'$
 $R = 4.00'$
 $L = 12'$
 $\theta_1 = 80^\circ$
 $\theta_2 = 45^\circ$
 $R = 4'$
 $Q = 500$ lbs
 $LHW = 5528$ lbs

STA 205+00
 END HES-FC-1 0006(16)
 MILE POST 4.78

256+50 TO 271+35.75 - Reg'd APPROACH TO 271+00

BM - ELEV 5150.50
 Top of 10" steel pin on top
 6" steel pipe, 20' x 10"
 1977-1978-1979 (SURV)

1986 to 1987 Reg'd canal change & R+ and ditch R-35'S E-30' (See Detail)

1988+00 to 206 - Reg'd ditch R+ (See Cross Sections)

8-1 - ELEV 5150.50
 1977-1978-1979 (SURV)

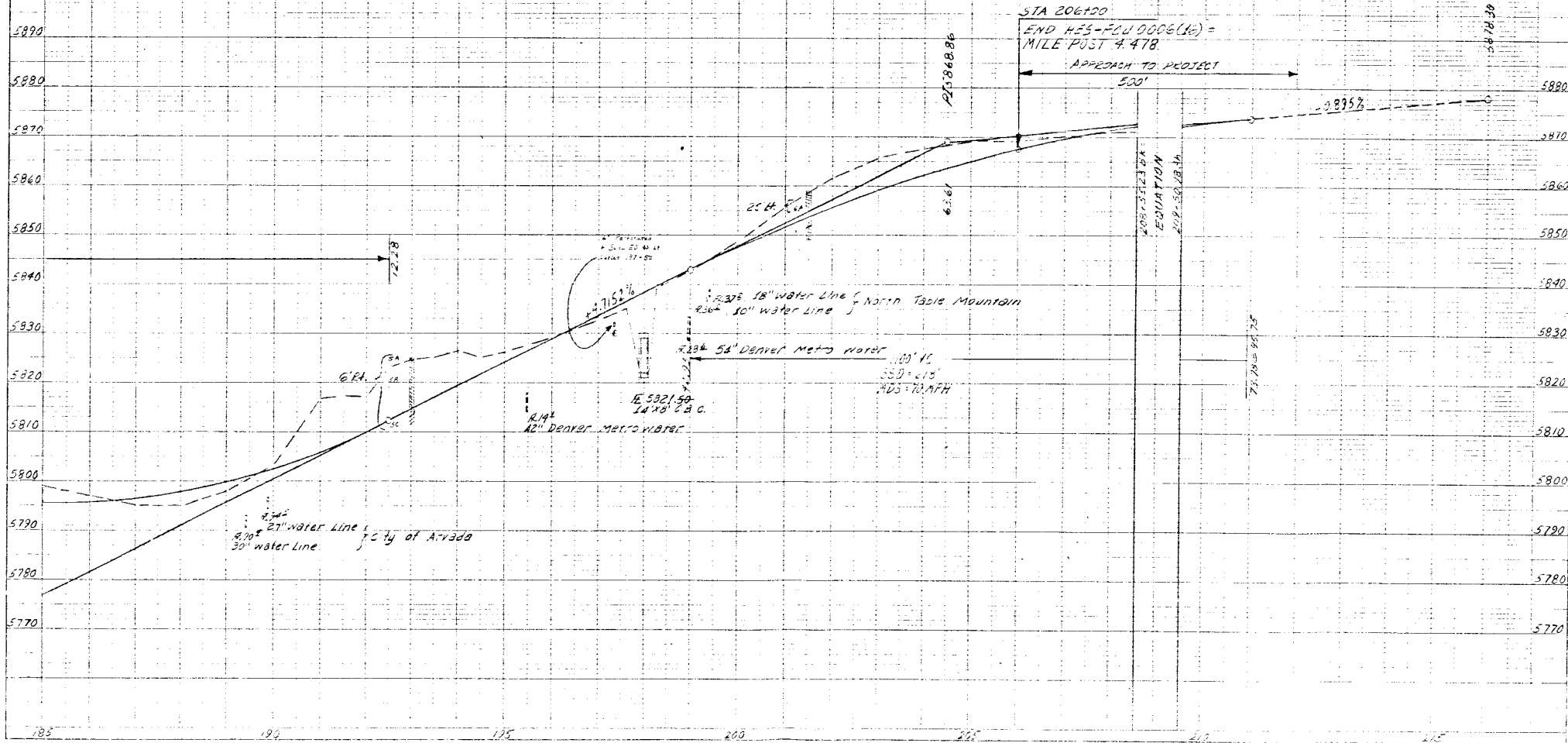
PROFILE OF PROJ. 3

AS OF: 10-2-81	
NO REVISIONS	REVISIONS

HES-FCU 0006(16) 21 37	
------------------------	--

TEST NO 5A
TOP 50%
NO SAMPLE
TEST NO 5B
P1 5
LL 25
200 78
A1 14.50
P1 58
TEST NO 5C
ROCKS - Boulders
NO SAMPLE

TEST NO 6A
P1 35
LL 56
200 97
A1 7.673B
P1 10



FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VI	COLO.	A-22-701 (0.00 4)	22	27

NO REVISIONS ☐ REVISED ☒ 12-2-84 JOD ☐NO REVISIONS ☐ REVISED ☒ 12-2-84 JOD ☐

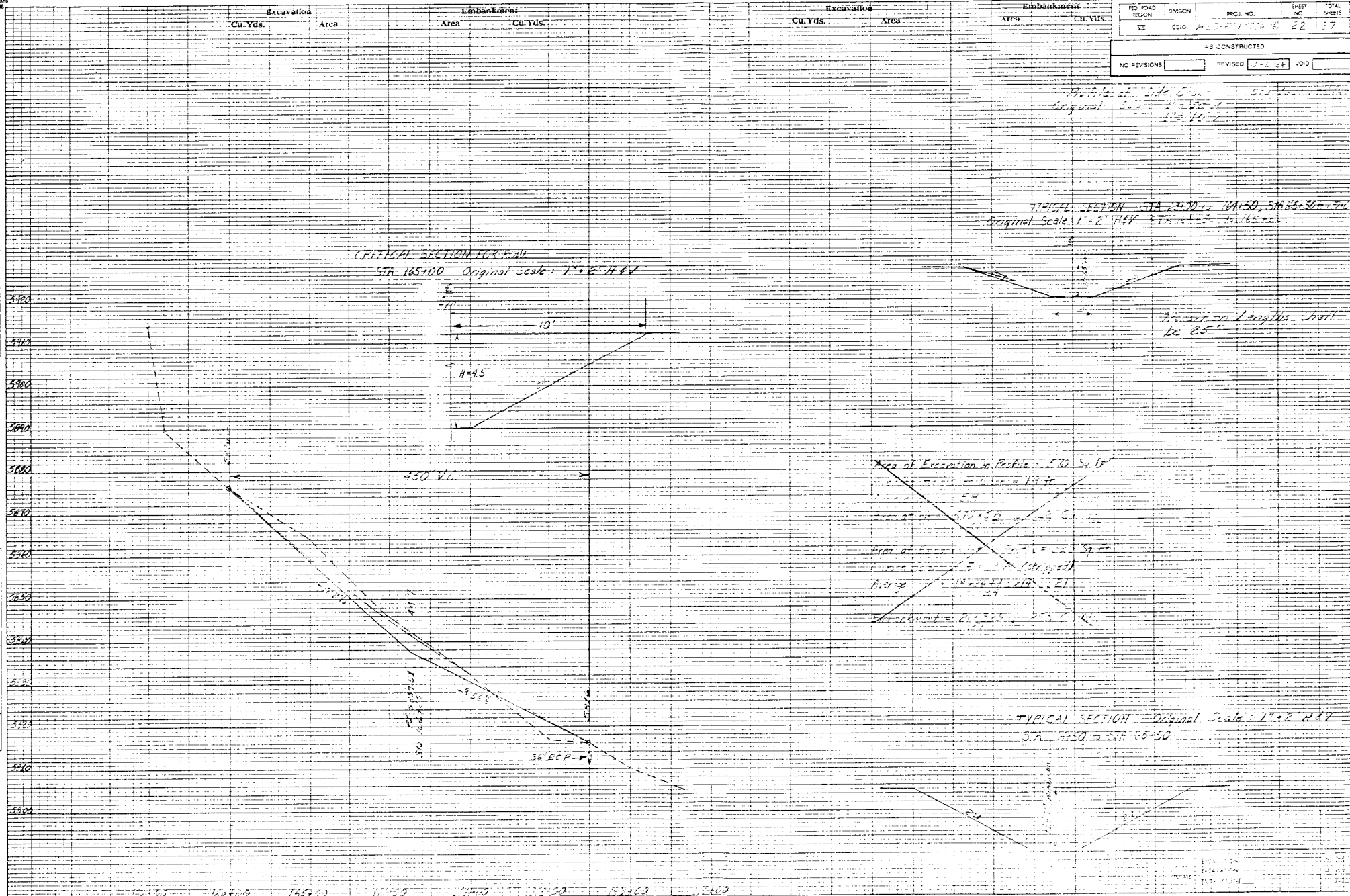
TYPICAL SECTION STA 2500 TO 16450, 516.65' SLT 7.0'

Original Scale 1" = 2' H&V ETC 1" = 165' ±

A right triangle is shown on a grid. The vertical side is labeled $H=45$. The horizontal side is labeled B' . The hypotenuse is labeled 6.1 . A right angle symbol is at the vertex where the height and base meet.

[illegible]

TYPICAL SECTION Original Scale 1" = 2' H&V
Sta 1620 to Sta 1640



DATE	
BY	
FOR	
PROJECT	
SECTION	
NO.	

DATE	
BY	
FOR	
PROJECT	
SECTION	
NO.	

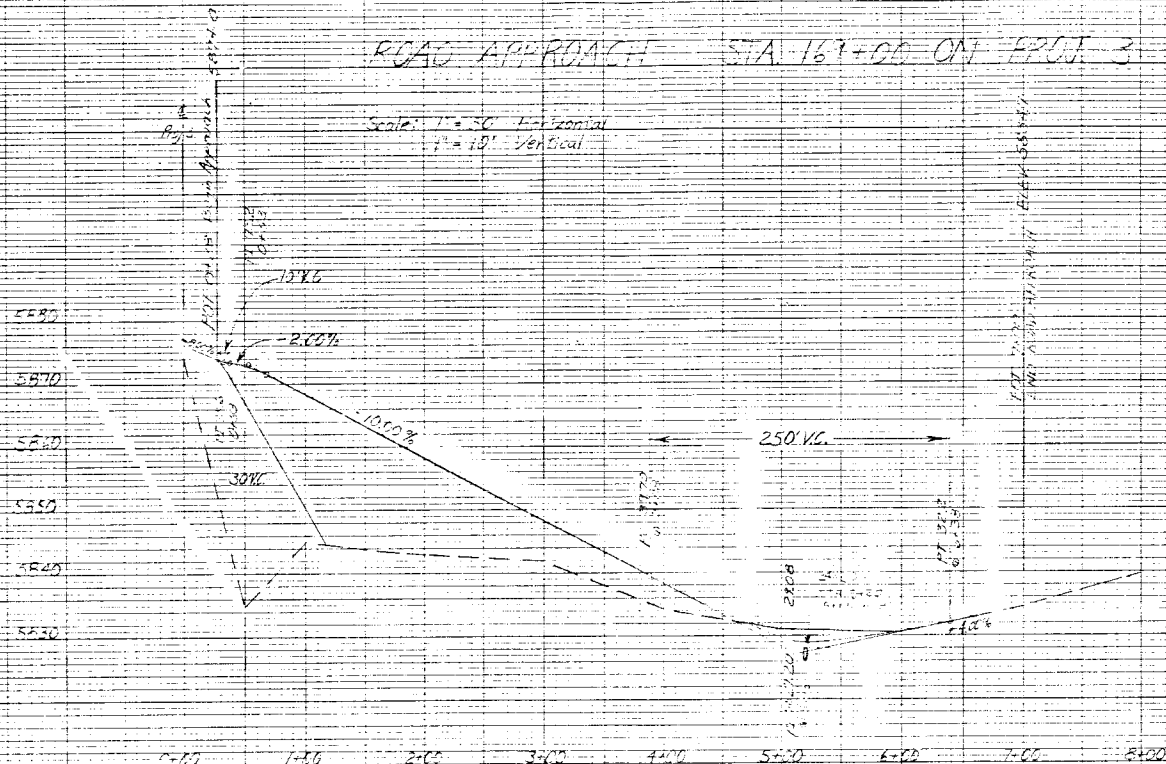
Excavation Area Cu. Yds. Embankment Area Cu. Yds. Excavation Area Cu. Yds. Embankment Area Cu. Yds.

FED. ROAD DISTRICT	DIVISION	PROJECT NO.	SHEET NO.	TOTAL SHEETS
VII	CCG	1457-70000	23	27

AS CONSTRUCTED		
NO REVISIONS	REVISED	VOID

ROAD APPROACH STA 169+00 ON PROJ. 3

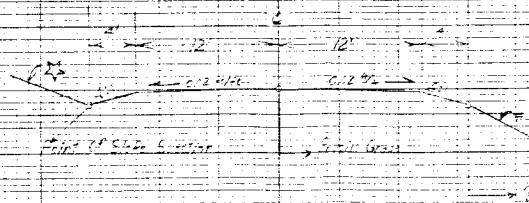
Scale: 1" = 50' Horizontal
 1" = 10' Vertical



Side Slope STA 169+00
 3:1 to 4:1
 2:1 over 10'

TYPICAL SECTION

CUT
 4:1 from 0' to 4'
 3:1 from 4' to 10'
 2:1 over 10'

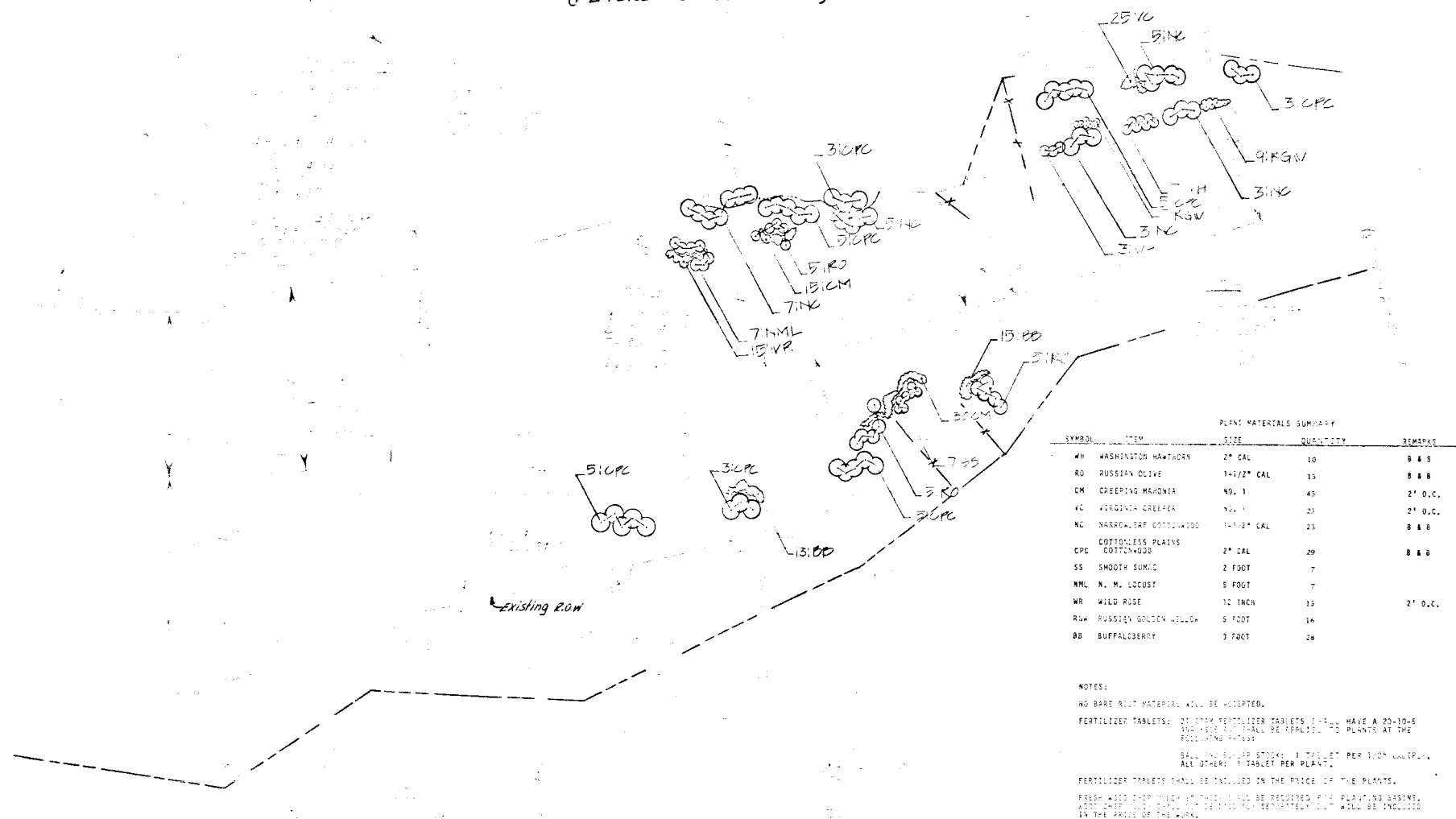


FILL
 4:1 from 0' to 4'
 3:1 from 4' to 10'
 2:1 over 10'

10-2-84

LANDSCAPE PLAN

(FUTURE CONSTRUCTION)



TABULATION OF SIGNING QUANTITIES

ITEM NO.	ITEM	UNIT	PROJECT TOTALS	FINAL TOTALS
202	REM GROUND SIGN	EA.	30	31
210	RES GROUND SIGN DELETED	EA.	1	0
614	SIGN PANEL (CL I)	SQ. FT.	17	17
614	TIMBER SIGN POST (4 x 4)	LIN. FT.	43	43
627	PVMT MKG PAINT	GAL.	93	2.00

AS CONSTRUCTED

NOREVISIONS

REVISÉ

VOID

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	HES-FCUOCC6(16)	25	37

~~SCHEDULE OF
CONSTRUCTION TRAFFIC SIGNS~~

[illegible]

TABULATION OF SIGNS

AS CONSTRUCTED
NO REVISIONS ☐ REVISED ☐ VOID ☐

FEDERAL ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	HES-FCUCDC6 (16)	26	37

SIGN NO.	SIGN CODE	STATION	SIGN PANEL SIZE	BACK- GROUND COLOR	REMOVE SIGN		RESET GROUND SIGN		MODIFY		NO. OF POSTS	LENGTH OF POST	POST TYPE (LIN. FT.)										CONC. FOOTING TYPE (EACH)								SIGN PANEL (SQ. FT.)		
					GROUND SIGN (EACH)	STRUCTURE (EACH)	GROUND SIGN (EACH)	GROUND SIGN (EACH)	TIMBER SIGN (EACH)	STEEL SIGN (EACH)			4x4 TIMBER	6x6 TIMBER	BEAM	BEAM	BEAM	BEAM	BEAM	BEAM	BEAM	BEAM	1	2	3	4	5	6	7	8	CLASS I	CLASS II	CLASS III
1		161 + 50			I																												
2		162 + 75			I																												
3		164 + 25			I																												
4		168 + 00			I																												
5		168 + 00			I																												
6		OPP171+60			I																												
7		OPP177+25			I																												
8		OPP178+25			I																												
9		OPP178+75			I																												
10	24R4-50	188+35	24" x 30"	WHITE							I	14'-6"	14.5																			5.00	
11		FROM OPP190+50 TO 193+85																															
* 12		OPP 183+00			I																												
13		OPP 189+40			I																												
14		OPP 191+40			I																												
15		OPP 192+75			I																												
* 16		202 + 00			I																												
17		202 + 75			I																												
18		203 + 50			I																												
19	30R1-I	204 + 70	OCTAGON, 30" x 30"	RED							I	14'-0"	14.0																			6.25	
20		205 + 02			I																												
21		210 + 00			I																												
22		200 + 65			I																												
23	24R2-1(50)	202 + 40	24" x 30"	WHITE							I	14'-6"	14.5																			5.00	
24		205 + 55			I																												
25	DELETED	206 + 85																															
26	24R2-1(50)	202 + 40			I																												
PROJECT TOTALS					30		+					43.0																				16.25	
FINAL TOTALS					31		0					43.0																				17.0	

* FLASHING YELLOW BEACON, PANEL, POST, & STUB POST TO BE REMOVED AND STOCKPILED AT THE JOB SITE FOR PICK-UP BY JEFFERSON COUNTY FORCES.

NOTES:

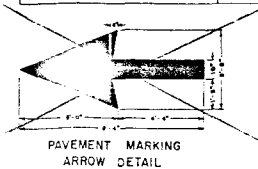
- SEE PLANS FOR FABRICATION DETAILS OF REGULATORY SIGNS AND WARNING SIGNS, STANDARD S-614-30 AND S-614-31 FOR ROUTE MARKERS, AND STANDARD S-614-32 FOR AUXILIARY MARKERS.
- PANELS FOR CLASS I SIGNS SHALL BE REFLECTORIZED AS INDICATED. SEE STANDARD S-614-2.
- PANELS FOR CLASS II SIGNS SHALL HAVE BACKING ZEES AND SHALL BE REFLECTORIZED AS INDICATED. SEE STANDARDS S-614-3 AND S-614-10.
- PANELS FOR CLASS III SIGNS SHALL BE EITHER LAMINATED ALUMINUM OR SHEET ALUMINUM. SEE STANDARD S-614-4 AND PLANS.
- CLASS III SIGNS WITH A GREEN OR BLUE BACKGROUND SHALL BE FABRICATED FROM EITHER LAMINATED ALUMINUM OR SHEET ALUMINUM AND SHALL HAVE A REFLECTORIZED BACKGROUND. CLASS III SIGNS WITH A BLACK BACKGROUND SHALL BE FABRICATED FROM EITHER SHEET ALUMINUM OR LAMINATED ALUMINUM AND SHALL HAVE A NONREFLECTORIZED BACKGROUND.
- LEGEND AND BORDER ON ALL CLASS III SIGNS SHALL BE WHITE CUTOUT ALUMINUM WITH REFLEX REFLECTORS OR APPROVED ALTERNATE.
- FOR TYPICAL GROUND SIGN PLACEMENT SEE STANDARD S-614-1.
- FOR DETAILS OF SIGN SUPPORTS FOR GROUND SIGNS SEE STANDARD S-614-5.
- FOR DETAILS OF FOOTINGS, PEDESTALS, AND SIGN ISLANDS SEE STANDARD S-614-6.
- POST LENGTHS ARE APPROXIMATE ONLY. EXACT LENGTHS TO BE DETERMINED BY THE ENGINEER.

TABULATION OF PAVEMENT MARKINGS

AS CONSTRUCTED		FEDERAL ROAD DIST. NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
NO REVISIONS	REVISED	VOID	VIII	COLORADO	HES-FOU 000S(16)	27 37

STATION	LOCATION	PAVEMENT MARKING LINES (Linear Feet)												STOP
		EDGE		LANE	CENTER		CHANNELIZING		CROSSHATCH		CROSS WALK		WHITE SOLID	
		WHITE SOLID 4 INCH	YELLOW SOLID 4 INCH	WHITE BROKEN 5 INCH	YELLOW SOLID 5 INCH	YELLOW BROKEN 5 INCH	WHITE SOLID 10 INCH	YELLOW SOLID 10 INCH	WHITE SOLID 10 INCH	YELLOW SOLID 10 INCH	WHITE SOLID 12 INCH	YELLOW SOLID 12 INCH	WHITE SOLID 24 INCH	
152+00 TO 186+00	S.H. 93 NB & SB	5800		2900	2900	2900								
186+00 TO 191+40	S.H. 93 NB & SB	1080		540	1080									
191+40 TO 199+00	S.H. 93 NB & SB	1520		760	3040									
199+00 TO 204+50	S.H. 93 NB & SB	1100		550	2200			550						
204+50 TO 204+90	S.H. 93 NB & SB	80						40						
205+65 TO 206+00	S.H. 93 NB & SB	70						35						
206+00 TO 207+00	S.H. 93 NB & SB	200			400	100								
207+00 TO 210+00	S.H. 93 NB & SB	600			1200									
210+00 TO 212+00	S.H. 93 NB & SB	400			400									
	68th AVE													50
PROJECT TOTALS		10850		4750	11,220	2,900	725							50

PAVEMENT MARKING LINES (Linear Feet)													
STATION	LOCATION	EDGE		LANE	CENTER		CHANNELIZING		CROSSHATCH		CROSS-WALK	STOP	
		WHITE SOLID 4 INCH	YELLOW SOLID 4 INCH	WHITE BROKEN 5 INCH	YELLOW SOLID 5 INCH	YELLOW BROKEN 5 INCH	WHITE SOLID 5 INCH	YELLOW SOLID 5 INCH	WHITE SOLID 5 INCH	YELLOW SOLID 5 INCH	WHITE SOLID 16 INCH	WHITE SOLID 24 INCH	
152+00 TO 160+73.72	S.H. 93 SB			800									
160+00 TO 205+00 LT.	S.H. 93 NB	1800											
161+34 TO 212+00 Rt.	S.H. 93 SB	1800											
160+73 TO 221+43.8	S.H. 93 NB & SB			4360									
205+20 LT. 69th AVE	S.H. 93	100											
205+50 TO 212+00 LT.	S.H. 93 NB	600											
206+00 TO 211+00	S.H. 93 NB			320									
158+00 TO 160+73.72	S.H. 93 NB & SB			800									
186+00 TO 192+00	S.H. 93 NB & SB			800									
192+00 TO 199+31.47	S.H. 93 MEDIAN			2714									
199+31.47 TO 204+49	S.H. 93 NB & SB			2070									
204+20 TO 211+15.72	S.H. 93 NB & SB			1640									
211+15.72 TO 212+71	S.H. 93 NB & SB			312									
155+92.72 TO 160+73.72	S.H. 93 SB			486									
160+73.72 TO 192+00	S.H. 93 SB			2520									
155+92.72 TO 160+73.72	S.H. 93 NB & SB			486									
160+73.72 TO 192+00	S.H. 93 NB & SB			2520									
199+00 TO 205+00	S.H. 93 SB			586									
205+50 TO 209+00	S.H. 93 NB			160									
205+50 LT.	S.H. 93 NB											15	
TOTAL		3983		5440	11,220	2,900	725					15	
DETAILS													
161+20 TO 205+50	S.H. 93 NB & SB	3983											
192+40 TO 212+00	S.H. 93 NB & SB			4360									
192+40 TO 212+00	S.H. 93 NB & SB			4360									
TOTAL		3983		20955									

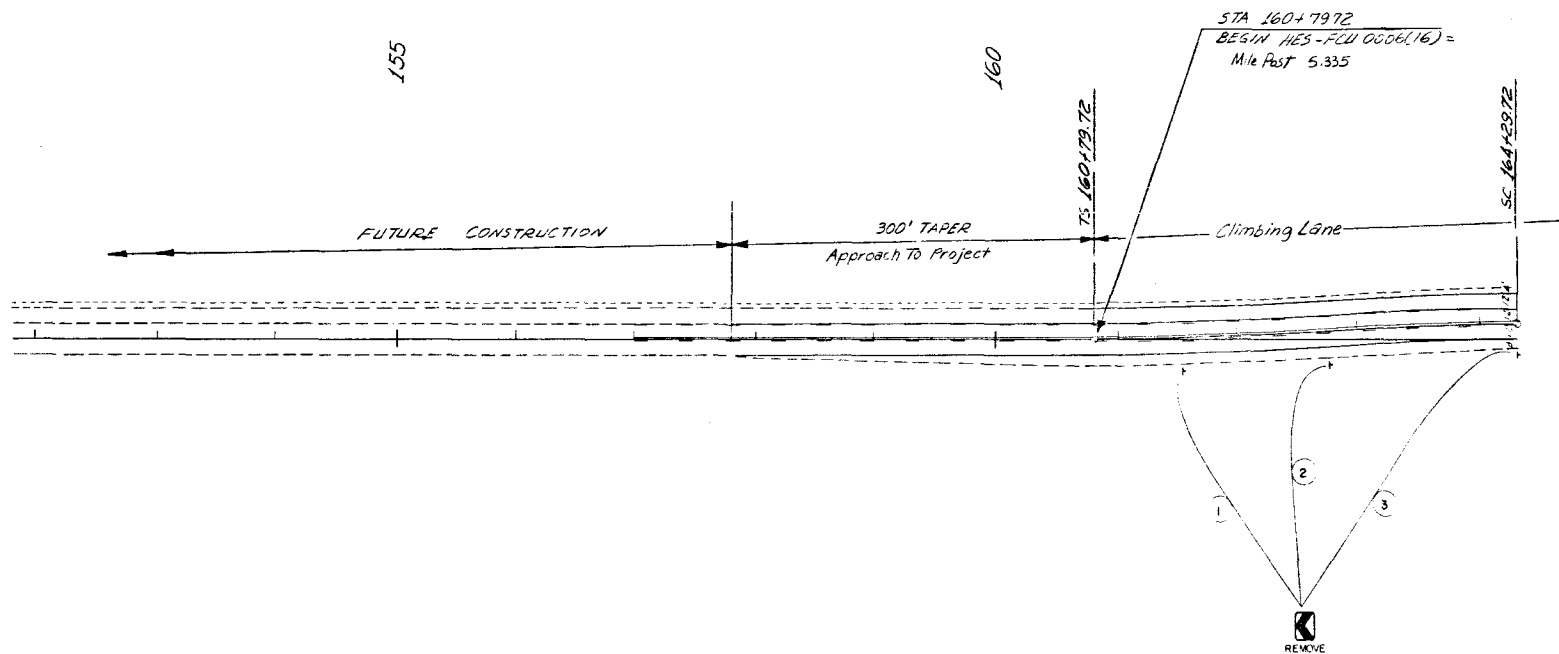


NOTE:
FOR DETAILS OF PAVEMENT MARKING
LINES AND LINE PLACEMENT, SEE
STANDARD S-627-1

SUMMARY OF PAVEMENT MARKING QUANTITIES				SHEET NO.
COLOR	POINT (GAL)	LINE (GAL)	TOTAL (GAL)	
YELLOW	48		150.17	150.17
WHITE	45		61.00	61.00
TOTAL	93		211.17	211.17

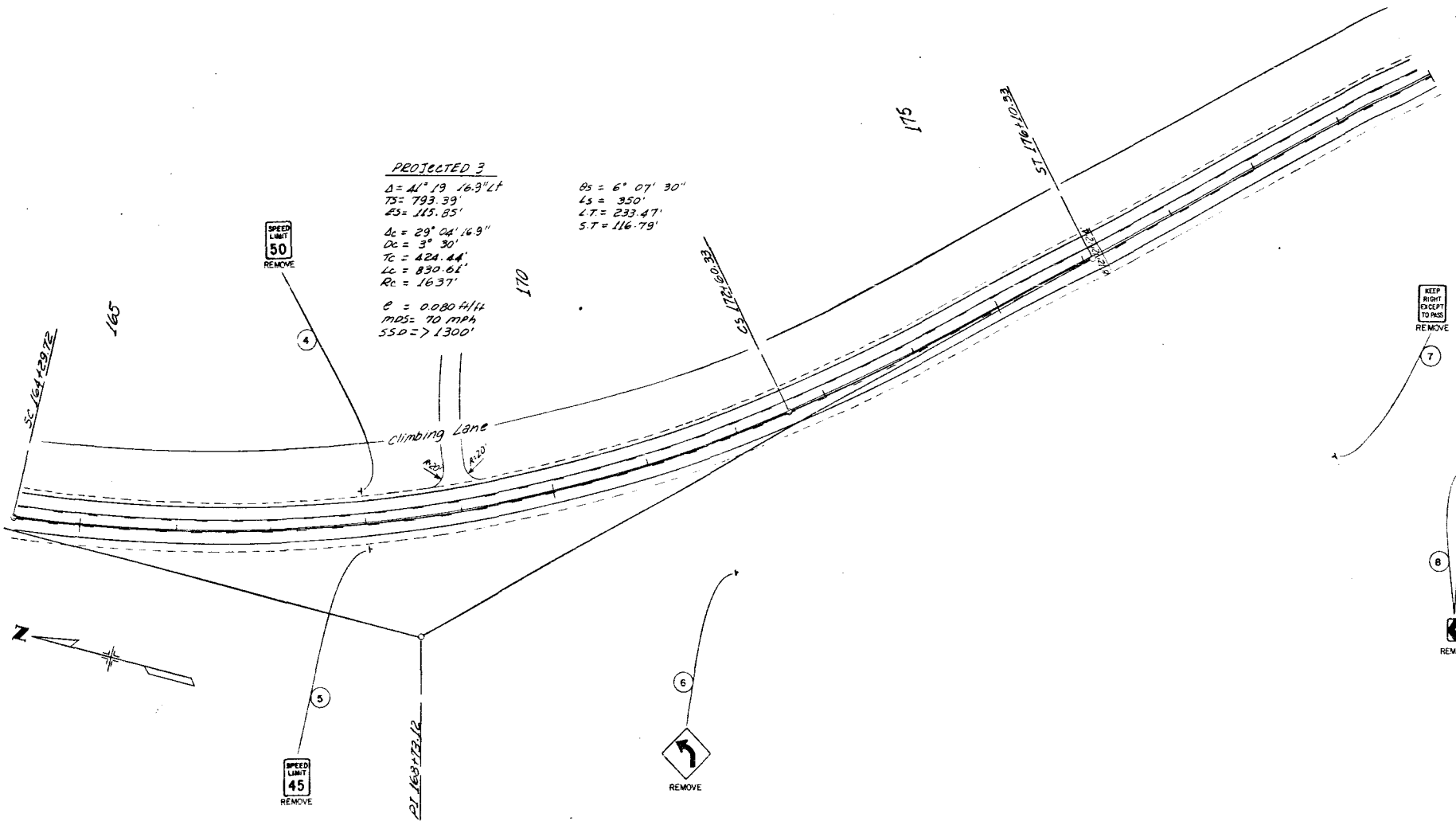
FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	PC-FC-000616	23	27
AS CONSTRUCTED				
NO REVISIONS		5-2-83	REVISED	VOID

original scale: 1"=50'



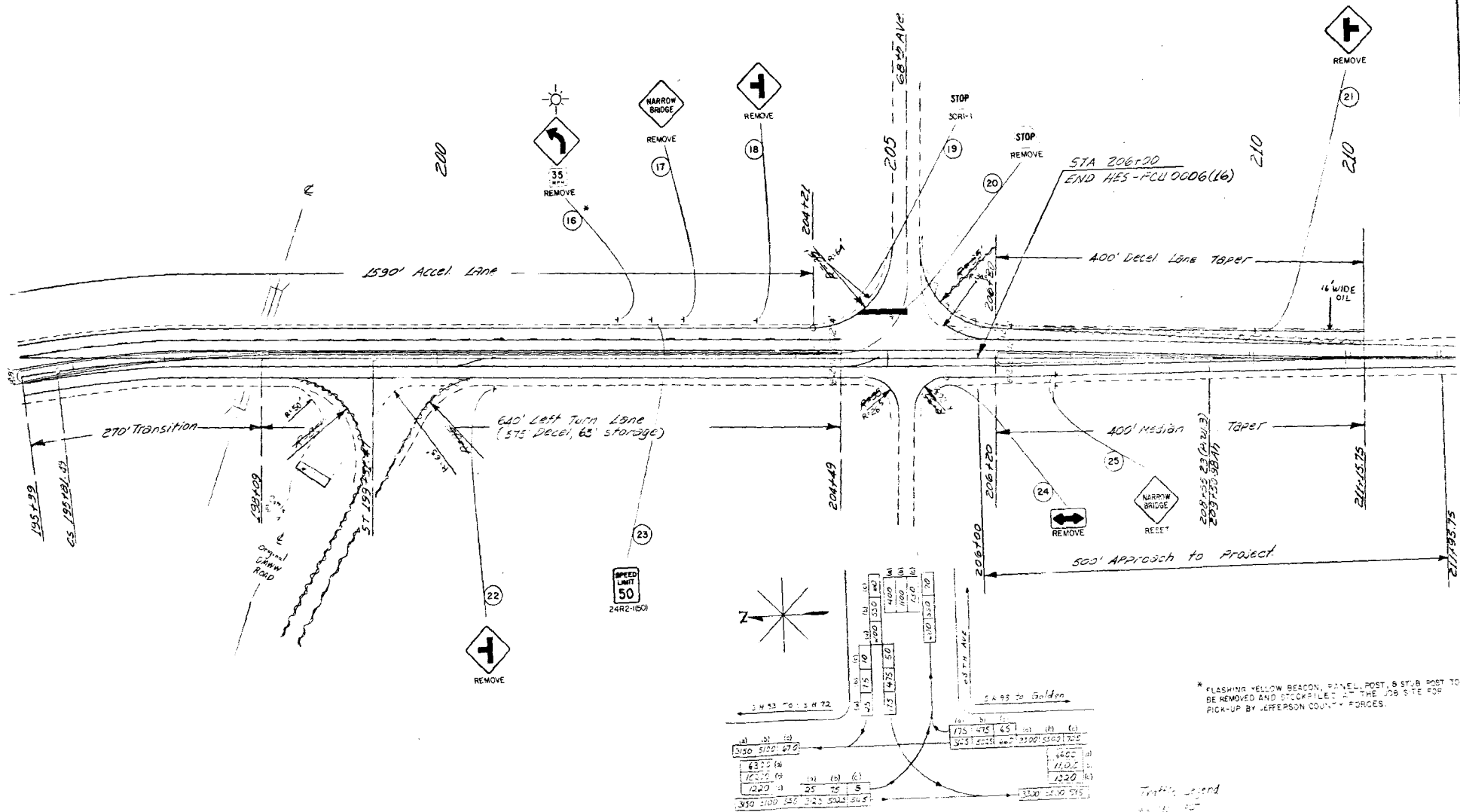
FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	481-51-2066	29	17
AS CONSTRUCTED				
NO REVISIONS		10-2-81	REVISED	VOID

original scale: 1"=50'



FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	53-07-1006-41	31	37
AS CONSTRUCTED				
NO REVISIONS		REVISED 02-2-81 VOID		

Original Scale: 1" = 50'



* FLASHING YELLOW BEACON, PANEL, POST, & STUB POST TO BE REMOVED AND STOCKPILED AT THE JOB SITE FOR PICK-UP BY JEFFERSON COUNTY FORCES.

TRAFFIC LEGEND
1" = 100' F.T.
1" = 100' G.M.

30"

EASEMENTS BY COLORADO
DEPARTMENT OF HIGHWAYS

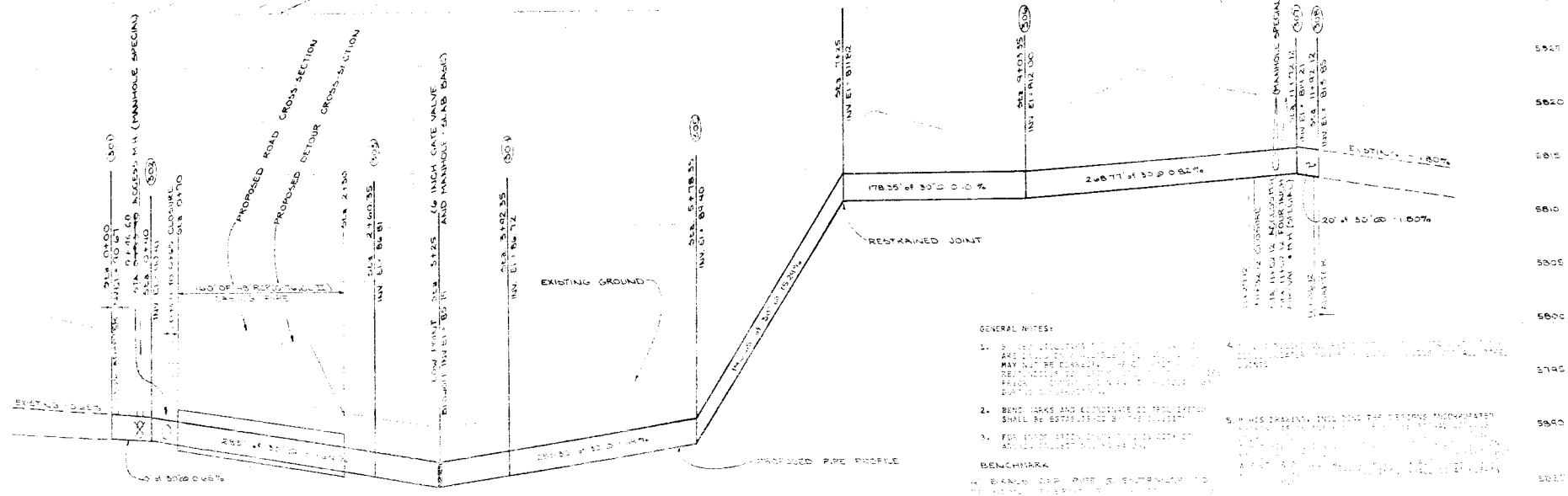
USE OF MULTIPLE BEVELED
JOINTS IS ALLOWED IN
LIEU OF SPECIAL BEND FIT-
TINGS FOR ANGLES LESS
THAN 20°

LAST PIPE BEFORE BULKHEAD
SHALL HAVE A W TEE OUTLET
11+27.2 TEMPORARY
TEST BULKHEAD

11+42.12 REMOVE 50' OF EXIST PIPE
CONNECT WITH ADAPTER PIPE &
CONCRETE RESTRAINT WALL
11+62.2 AIR LAG T.M.
11+12.2 ACCESS W -
ROTATION 2.03° FROM HORIZ.
INSTALL ARVADA STANDARD
DOWN CALYOMAC 32" 52.125
ANODE AT 0+00 31.2' 11.27
ON NEW 30" PIPE FOR STEEL
PIPE ONLY.

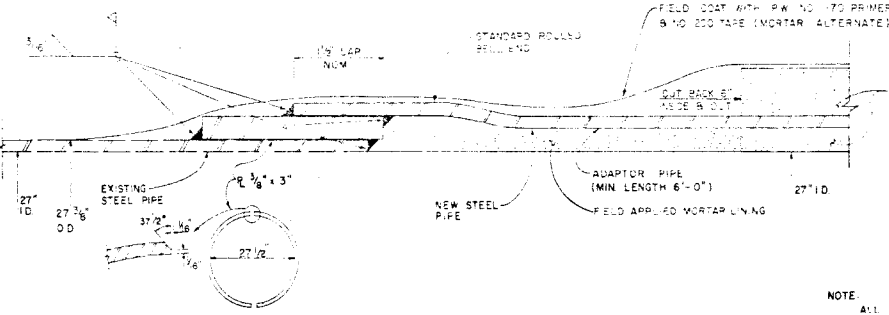
COORDINATE LIST

STA	NORTHING	EASTING
301	725,517.950	2,078,593.130
302	725,503.420	2,078,570.400
303	725,596.648	2,078,770.334
304	725,507.296	2,078,868.042
305	725,355.400	2,078,979.102
306	725,042.784	2,079,067.696
307	724,778.300	2,079,103.192
308	724,766.520	2,079,125.800



GENERAL NOTES:

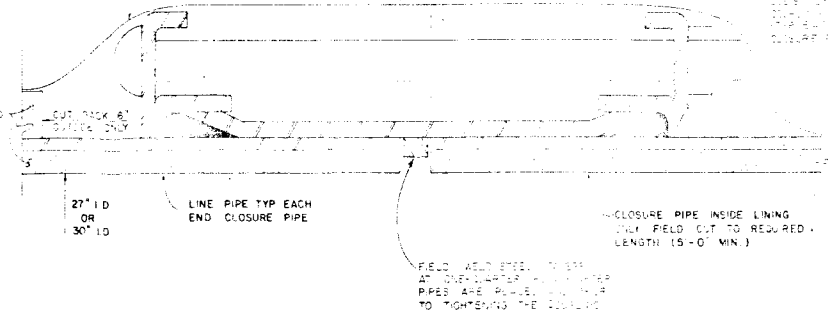
1. ALL JOINTS SHALL BE MADE IN ACCORDANCE WITH THE DESIGN SPECIFICATIONS. JOINTS SHALL BE MADE IN THE MIDDLE OF THE PIPE SPAN.
 2. BEND MARKS AND COORDINATES OF THE CENTER OF THE BEND SHALL BE ESTABLISHED BY THE FIELD.
 3. FOR EXISTING GROUND, THE FIELD SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE DATA.
- BENCHMARK
W. BENCHMARK: 32" PIPE AT STATION 0+00 TO THE CENTER OF THE PIPE.



CONNECTION TO EXISTING STEEL PIPE

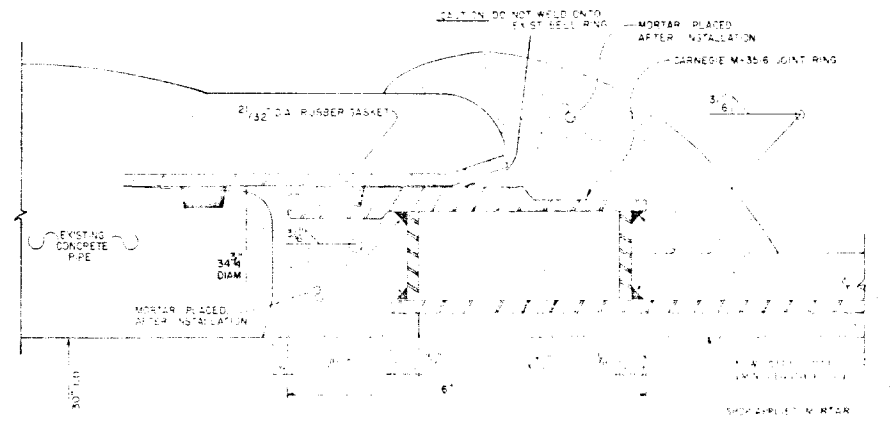
FULL SCALE

NOTE:
ALL METALLIC BELL AND SPIGOT JOINTS EXCEPT TO EXISTING TO CONCRETE PIPE SHALL BE DOUBLE BONDED. SEE SPECIFICATION SECTION ARVADA 06-04-05 C-4.
ALL SPECIAL AND CLOSURE PIECES ARE INCLUDED IN COST OF TRANSMISSION PIPE.



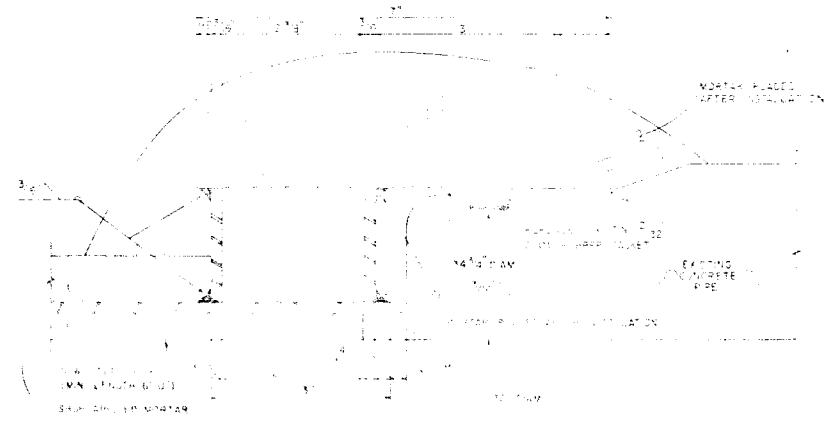
STEEL PIPE CLOSURE

FULL SCALE



STEEL PIPE CONNECTION TO EXISTING CONCRETE PIPE

CONCRETE FULL END
FULL SCALE



STEEL PIPE CONNECTION TO EXISTING CONCRETE PIPE

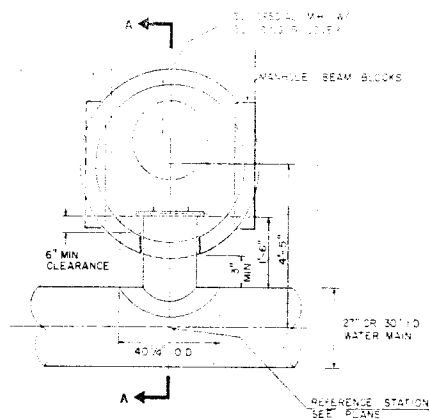
CONCRETE FULL END

CITY OF ARVADA
WATERLINE RELOCATION

HIGHWAY 93

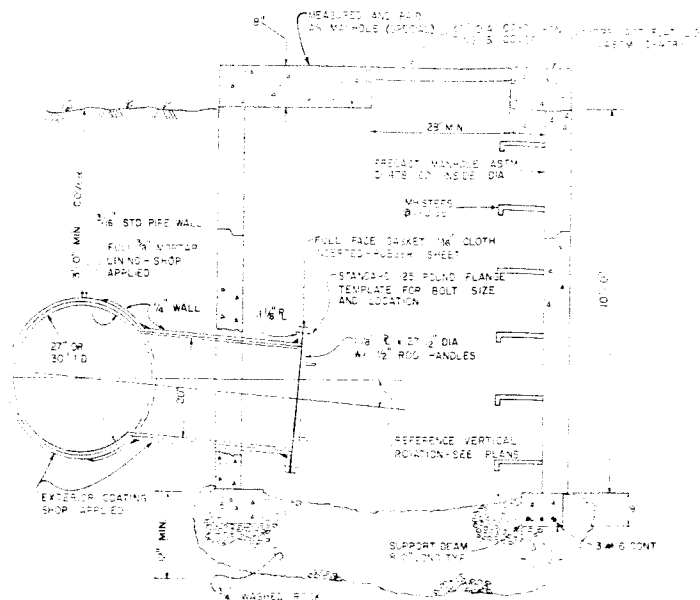
Continental Engineering & Construction, Inc.
Consulting Engineers

2700 West 10th Avenue, Suite 101, Colorado
Boulder, CO 80504
(303) 440-7110



ACCESS MANHOLE (4 REQUIRED)

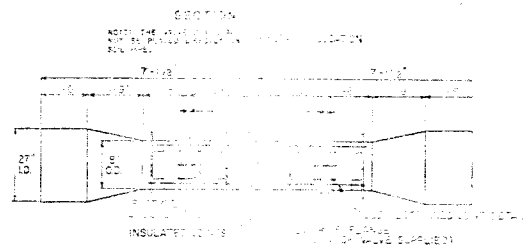
PLAN VIEW
NTS



ACCESS MANHOLE

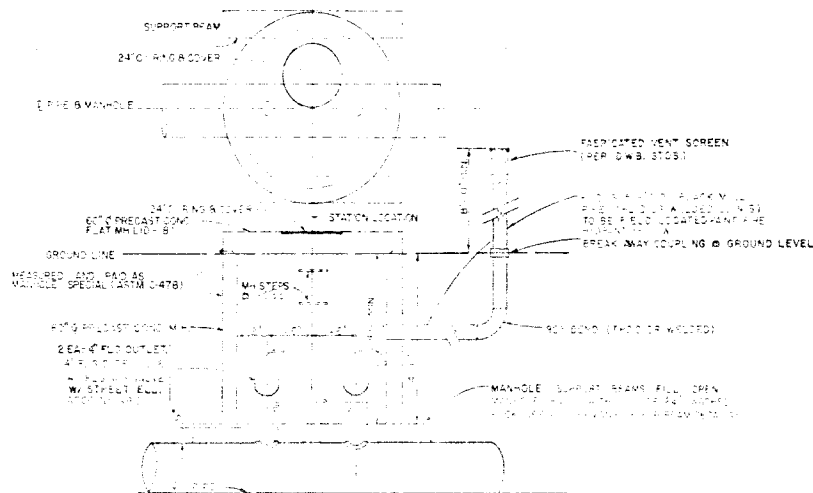
SECTION A-A
NTS

STEEL TEE AND FLANGED COVER PLATE ARE INCLUDED IN COST OF TRANSMISSION PIPE, CONCRETE MANHOLE, BEAM BLOCKS, STEPS, LID, RING AND COVER, AND GRAVEL ARE MEASURED AND PAID AS MANHOLE (SPECIAL)



BUTTERFLY VALVE AND VALVE BOX (1 REQUIRED)

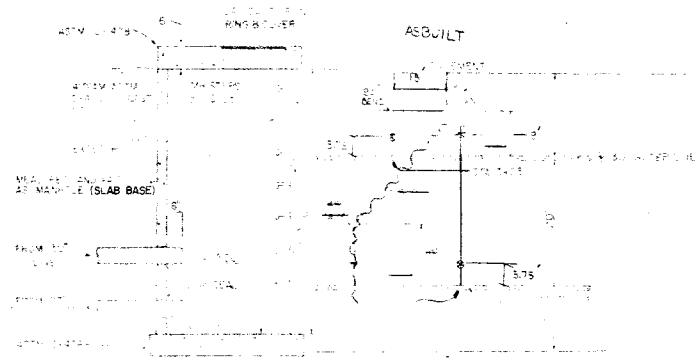
ELEVATION



AIR VALVE ASSEMBLY (2 REQUIRED)

ALL PIPING AND FITTINGS ARE PAID AS 4 INCH AIR AND VACUUM VALVE, CONCRETE MANHOLE, BEAM BLOCK, RING AND COVER, AND GRAVEL ARE MEASURED AND PAID AS MANHOLE (SPECIAL)

(2 REQUIRED)



(1 REQUIRED)

ALL PIPING AND FITTINGS ARE PAID AS 6 INCH SIZE VALVE, CONCRETE MANHOLE, BASE, STEPS, LID, RING AND COVER ARE MEASURED AND PAID AS MANHOLE (SLAB BASE)

CITY OF ARVADA
WATER RELOCATION
HIGHWAY

Inc.

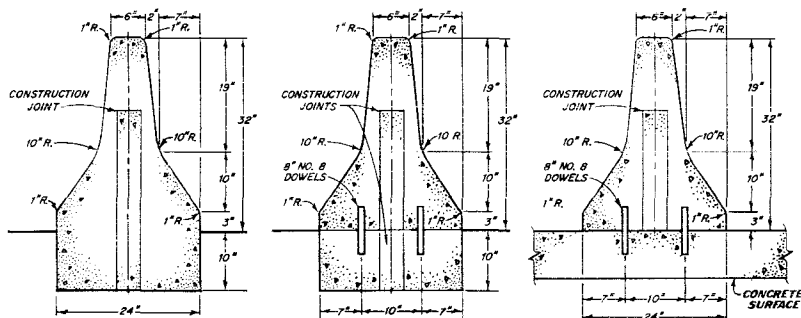
Consulting Engineers
7100 West 12th Avenue, Suite 100
Arvada, CO 80002-3000
Tel: 303.440.8000

DETAILS FOR CAST IN PLACE CONCRETE BARRIER

STANDARD M-606-12

(SHEET 1 OF 9)

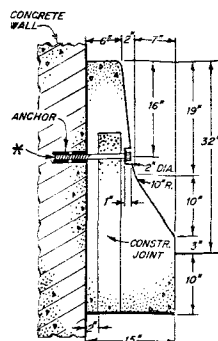
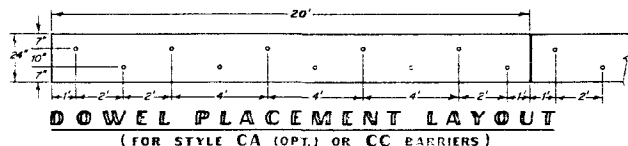
FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO			
REVISIONS				



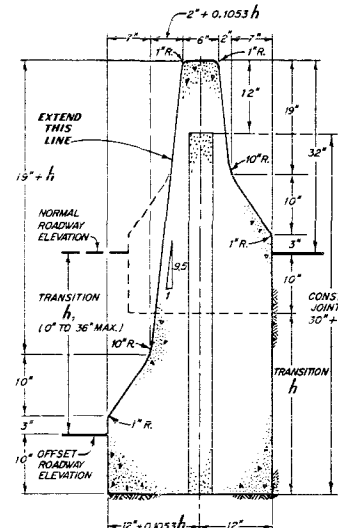
STYLE CA
MONOLITHIC
BARRIER

STYLE CA (OPT.)
TWO PIECE DOWELLED
BARRIER
(OPTIONAL)

STYLE CC
BARRIER DOWELLED TO
CONCRETE SURFACE



STYLE CD
BARRIER
AGAINST WALL
* 3/4" DIA. x 12" LONG GALVANIZED ANCHOR BOLT AND WASHER. MECHANICALLY FASTENED AT 2'-6" CTRS.; USE ONLY WHEN CALLED FOR ON PLANS.



STYLE CE
BARRIER FOR
OFFSET ROADWAYS

GENERAL NOTES

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS APPLICABLE TO THE PROJECT.

CONCRETE SHALL BE CLASS A, B OR D.

PAVEMENT SHALL BE PATCHED ALONG THE BARRIER FOUNDATION TO MATCH EXISTING ASPHALT SURFACE.

TYPE 4 BARRIER MAY BE CAST IN PLACE OR PRECAST UNLESS A SPECIFIC STYLE OF BARRIER IS SPECIFIED ON THE PLAN.

DOWEL BARS MAY BE PLACED IN WET CONCRETE OR GROUTED IN HOLES DRILLED IN EXISTING CONCRETE.

ALL INCIDENTAL WORK AND MATERIALS SUCH AS DOWELS, GROUT, ANCHORS, BOLTS, PINS, JOINT MATERIAL, EXCAVATION FOR BASE, ETC. SHALL BE INCLUDED IN THE COST OF BARRIER.

PRECAST BARRIER:

ALL EXPOSED LOOPS SHALL BE THOROUGHLY CLEANED AND PAINTED IN ACCORDANCE WITH SECTION 509.

NUTS, WASHERS, LIFTING HARDWARE, CONNECTING PINS, DRIFT PINS AND ANCHOR BOLTS SHALL BE GALVANIZED.

TRIANGULAR SHAPE IN BASE OF BARRIER IS TYPICAL. CIRCULAR ARC OR RECTANGULAR SHAPE WILL BE PERMITTED.

DRAINAGE SLOTS MAY BE OMITTED ON:

1. MEDIAN INSTALLATION WITH INLET DRAINAGE.
2. SHOULDER BARRIER ON HIGH EDGE OF SUPERELEVATED SHOULDER.
3. MEDIAN BARRIER ON CREST VERTICAL CURVE.
4. PERMANENT BARRIER.

STYLE CE BARRIER SHALL BE CAST IN PLACE UNLESS OTHERWISE PERMITTED.

THE JOINT BETWEEN CAST IN PLACE AND PERMANENT PRECAST BARRIER SHALL INCLUDE ALL RECESSES, LOOP REBARS AND PINS TO MAKE A PROPER MATCHING JOINT.

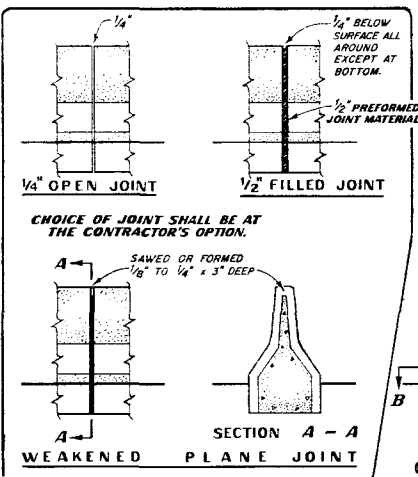
MIXING GUARD RAIL TYPES:

THIS STANDARD SHOWS THE DETAILS FOR VARIOUS USAGES OF GUARD RAIL, TYPE 4, CONCRETE BARRIER.

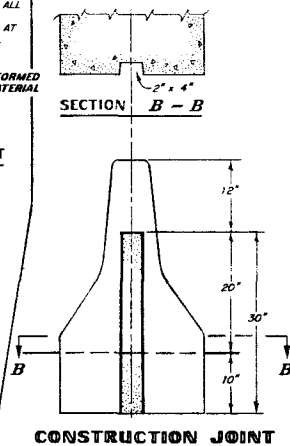
THE PLANS WILL INDICATE THE LOCATIONS ON THE PROJECT WHERE GUARD RAIL TYPES 3 OR 4 ARE REQUIRED.

WHEN GUARD RAIL, TYPE 3, W-BEAM IS TO BE USED AS AN END TREATMENT TO CONCRETE BARRIER OR AT A LOCATION SHOWN ON THE PLAN, REFER TO THE W-BEAM GUARD RAIL STANDARD FOR DETAILS.

WHEN BRIDGE RAIL IS DIFFERENT FROM ROADWAY RAIL, THE BRIDGE PLANS WILL SHOW THE CONNECTION DETAILS.



TYPICAL TRANSVERSE JOINTS
REQUIRED AT 20 FT. INTERVALS FOR ALL STYLES OF CAST IN PLACE BARRIER



CONSTRUCTION JOINT

SHALL BE USED AT THE END OF A DAYS POUR OR AFTER 30 MIN. INTERRUPTION.

STATE DEPARTMENT OF HIGHWAYS
DIVISION OF HIGHWAYS
STATE OF COLORADO

GUARD RAIL-TYPE 4
CONCRETE BARRIER

APPROVED BY:
STAFF DESIGN ENGINEER
DATE: FEBRUARY 18, 1983

STANDARD PLAN NO.
M-606-12
SHEET 1 OF 9

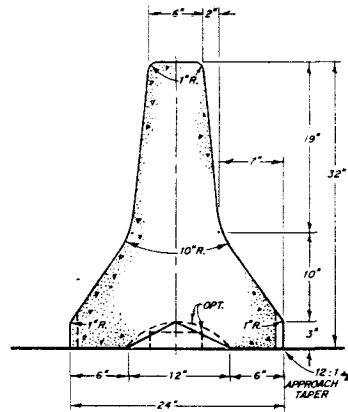
DETAILS FOR PRECAST CONCRETE BARRIER

STANDARD M-606-12

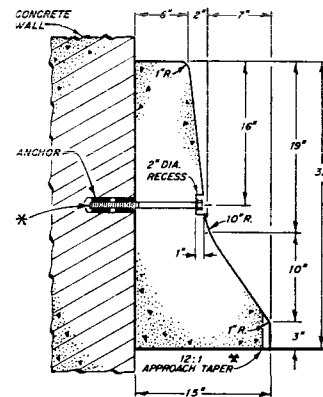
(SHEET 3)

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO			

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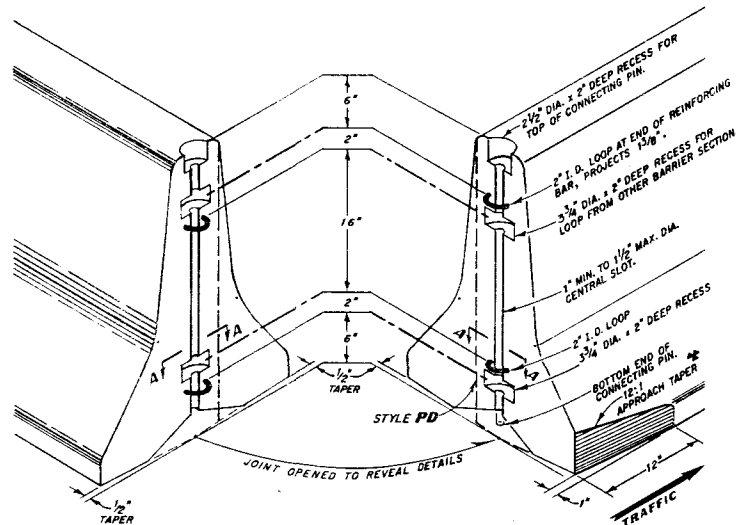


STYLE PA
PRECAST BARRIER

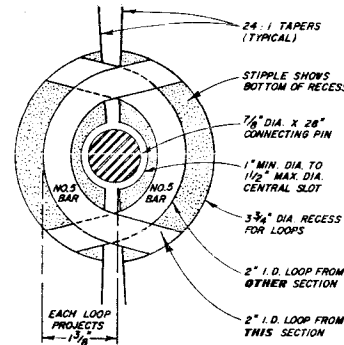
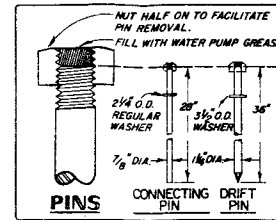


* 3/4" DIA. X 12" LONG GALVANIZED ANCHOR BOLT AND WASHER, MECHANICALLY FASTENED AT 2'-6" CTRS.; USE ONLY WHEN CALLED FOR ON PLANS.

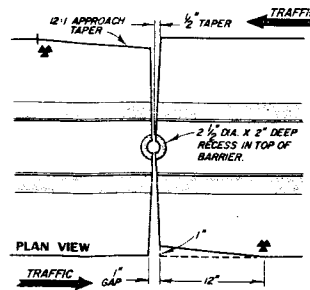
STYLE PD
PRECAST BARRIER
AGAINST WALL



JOINT IN STYLES PA AND PD

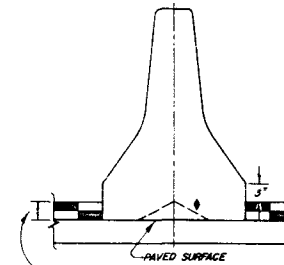


VIEW 4-4
BARRIER CONNECTION
(FOR STYLE PA OR PD)

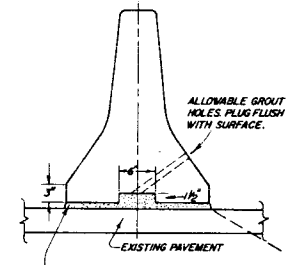


* A 1" IN 12" TAPER WILL BE REQUIRED AT ALL TRAFFIC APPROACH CORNERS OF PRECAST BARRIER SECTIONS TO ELIMINATE SHAGGING OF SNOW FLOW BLADE (BOTH STYLE PA AND PD BARRIERS.)

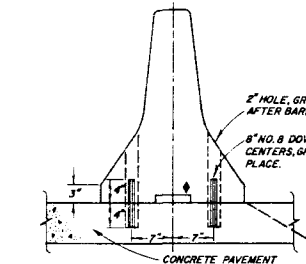
JOINT IN PRECAST BARRIER



ADJACENT OVERLAY

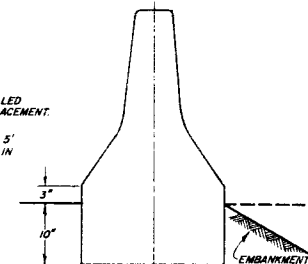


GROUT BED



SHAPE OF LONGITUDINAL SPACE IS OPTIONAL OR MAY BE OMITTED.

DOWELLED TO PAVEMENT



EXCAVATION FOR BASE WILL BE INCLUDED IN THE COST OF BARRIER.

BARRIER WITH BASE

ANCHOR DETAILS FOR PERMANENT BARRIERS

NOTES:

- ONE OF THE FOUR ALTERNATE ANCHOR DETAILS SHALL BE USED WHEN PRECAST BARRIER IS INSTALLED AS A PERMANENT BARRIER. STYLE PA DIMENSIONS APPLY AND THE BARRIER SHALL BE CAST WITH EXTRA FEATURES OF DOWEL HOLES, EXTRA BASE DEPTH, MODIFIED OR NO LONGITUDINAL SPACE IN BASE, ETC. AS NEEDED TO PROVIDE THE ANCHOR DETAIL TO BE CONSTRUCTED.
- THESE ANCHOR DETAILS MAY BE USED FOR SHOULDER OR MEDIAN LOCATIONS EXCEPT THE ADJACENT OVERLAY ALTERNATE WHICH IS FOR MEDIANS ONLY.
- THE 12:1 APPROACH TAPER ON BARRIER BOTTOM IS NOT REQUIRED ON PERMANENT BARRIERS.

STATE DEPARTMENT OF HIGHWAYS
DIVISION OF HIGHWAYS
STATE OF COLORADO

GUARD RAIL-TYPE 4 CONCRETE BARRIER

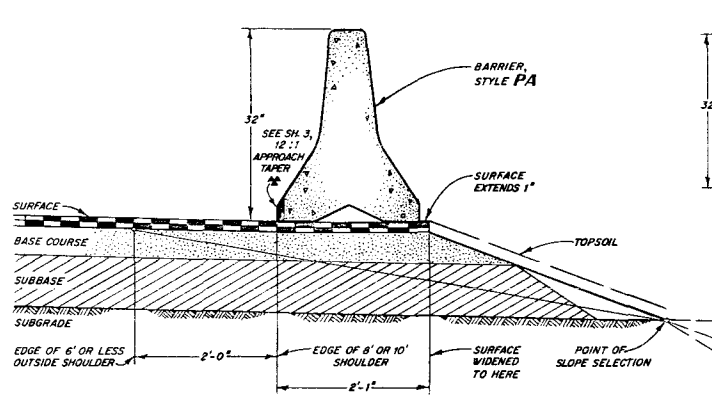
APPROVED BY: *X. G. Moore*
STAFF DESIGN ENGINEER
DATE: FEBRUARY 18, 1983
STANDARD PLAN NO. M-606-12
SHEET 3 OF 9

DETAILS FOR PRECAST CONCRETE BARRIER (CONT'D.)

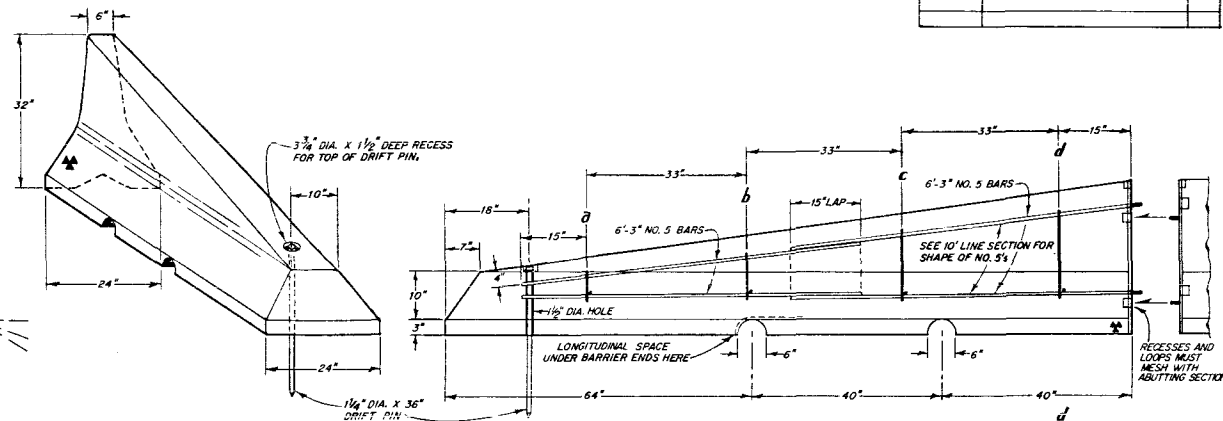
STANDARD M - 606 - 12
(SHEET 4)

FEDERAL ROAD SECTION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO			

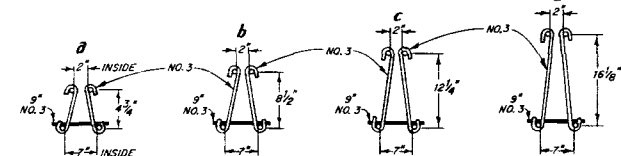
REVISIONS	



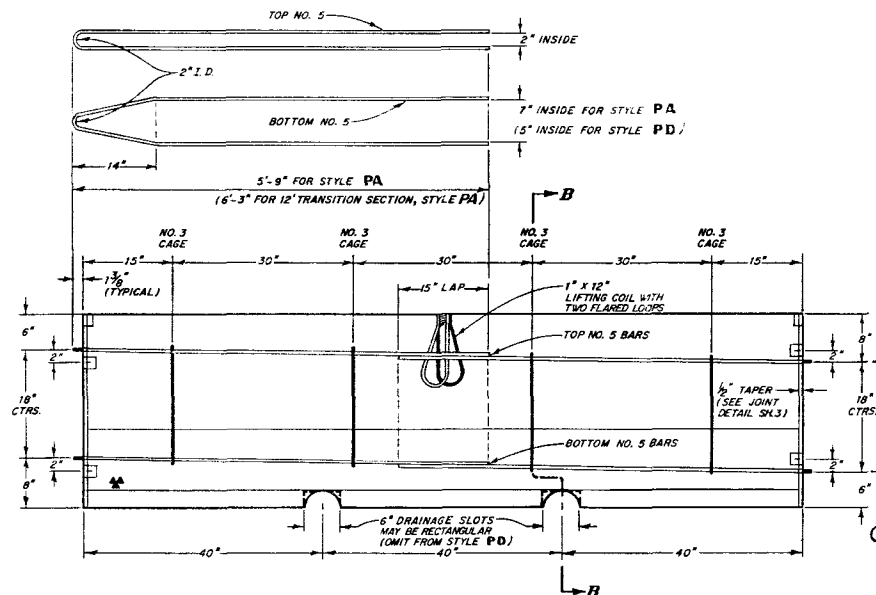
PRECAST CONCRETE BARRIER ON WIDENED SHOULDER



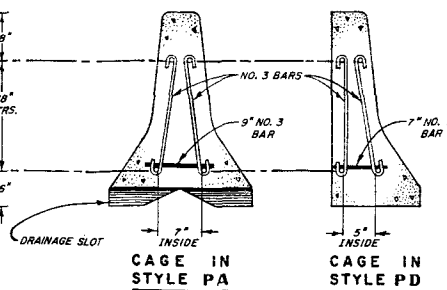
NOTES ON SHEET 2 DESCRIBING THE
USES OF CAST IN PLACE 12' TRANSITION
SECTION APPLY FOR PRECAST ALSO.



12' TRANSITION SECTION FOR STYLE PA BARRIER



10' LINE SECTION — FOR STYLE PA OR PD



SECTIONS *B - B*

STATE DEPARTMENT OF HIGHWAYS
DIVISION OF HIGHWAYS
STATE OF COLORADO

GUARD RAIL-TYPE 4 CONCRETE BARRIER

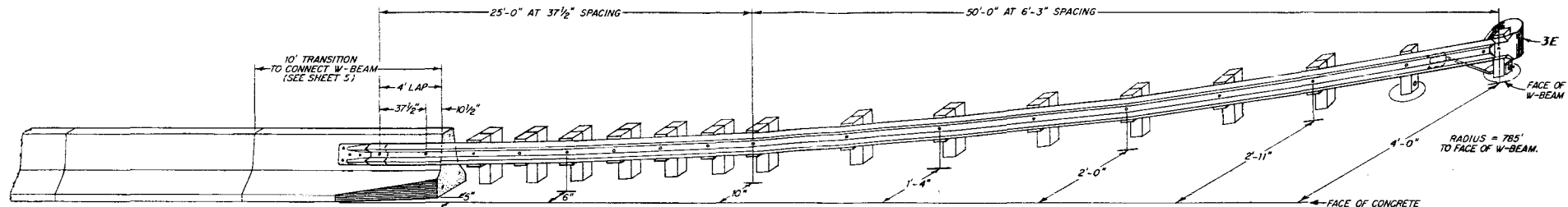
APPROVED BY: E. J. Manno
STAFF DESIGN ENGINEER
DATE: FEBRUARY 18, 1988

STANDARD PLAN NO
M-606-12
SHEET 4 OF 9

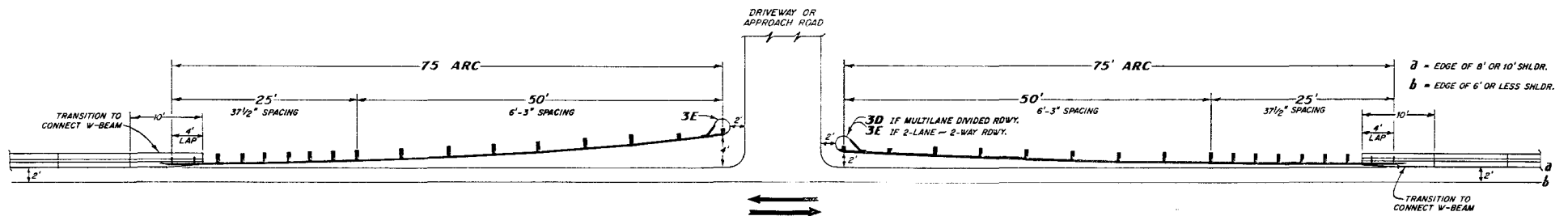
STANDARD M-606-12

(SHEET 6)

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO			
REVISIONS				



**CONCRETE BARRIER
WITH TYPE 3 FLARE**



LAYOUT FOR INTERRUPTED SHOULDER BARRIER

STATE DEPARTMENT OF HIGHWAYS
DIVISION OF HIGHWAYS
STATE OF COLORADO

**GUARD RAIL-TYPE 4
CONCRETE BARRIER**

APPROVED BY: *K. J. YOUNG*
STAFF DESIGN ENGINEER
DATE: FEBRUARY 18, 1983

STANDARD PLAN NO.
M-606-12
SHEET 6 OF 9

MULTILANE DIVIDED HIGHWAYS (DEPRESSED MEDIAN)

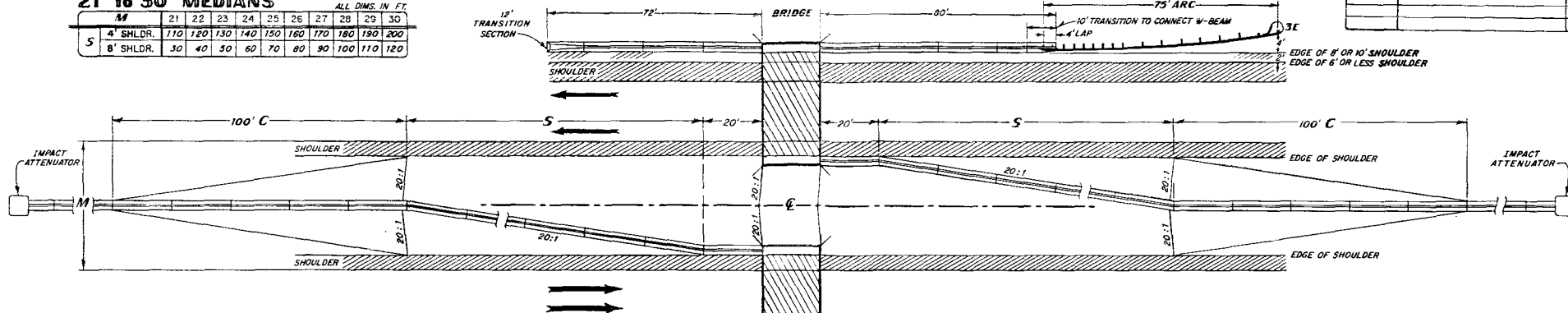
STANDARD M - 606 - 12 (SHEET 7)

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO			

REVISIONS

21' to 30' MEDIANS

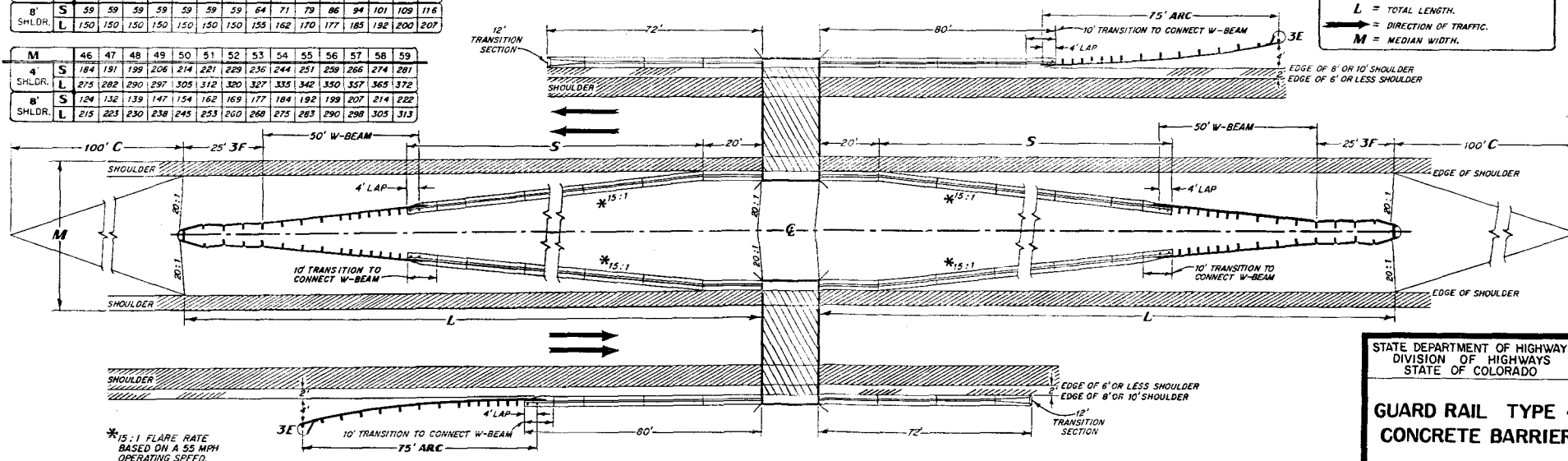
M	21	22	23	24	25	26	27	28	29	30
4' SHLDR.	170	120	130	140	150	160	170	180	190	200
8' SHLDR.	30	40	50	60	70	80	90	100	110	120



31' to 59' MEDIANS

M	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
4' SHLDR.	71	79	86	94	101	109	116	124	131	139	146	154	161	169	176
8' SHLDR.	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59

M	46	47	48	49	50	51	52	53	54	55	56	57	58	59
4' SHLDR.	184	191	199	206	214	221	229	236	244	251	259	266	274	281
8' SHLDR.	124	132	139	147	154	162	169	177	184	192	199	207	214	222



- LEGEND**
- S = STRAIGHT TRANSITION OF CONCRETE BARRIER.
 - C = CHANGE: 100' TRANSITION TO NORMAL SLOPE.
 - 3E & 3F = STANDARD END TREATMENTS FOR W-BEAM RAIL.
 - L = TOTAL LENGTH.
 - = DIRECTION OF TRAFFIC.
 - M = MEDIAN WIDTH.

* 5:1 FLARE RATE
 BASED ON A 55 MPH
 OPERATING SPEED.

STATE DEPARTMENT OF HIGHWAYS
 DIVISION OF HIGHWAYS
 STATE OF COLORADO

GUARD RAIL TYPE 4 CONCRETE BARRIER

APPROVED BY: [Signature]
 STAFF DESIGN ENGINEER
 DATE: FEBRUARY 18, 1983

STANDARD PLAN NO.
 M-606-12
 SHEET 7 OF 9

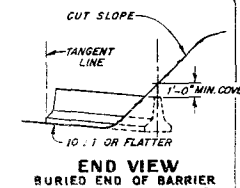
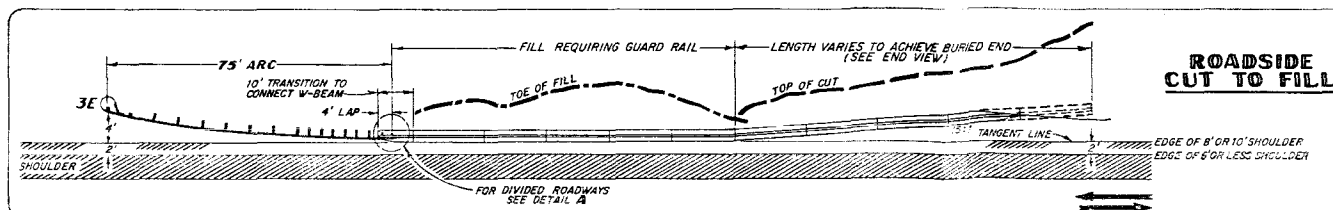
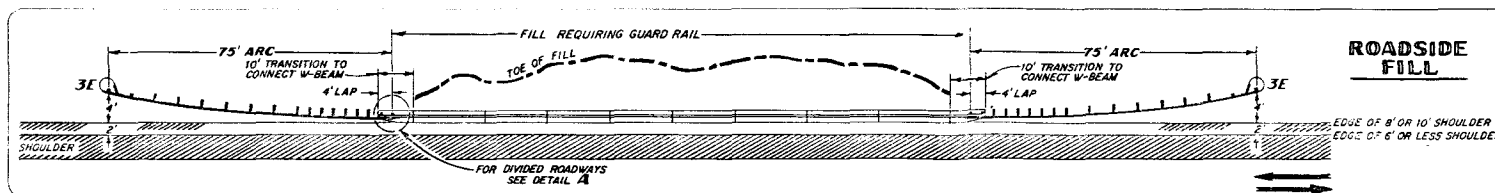
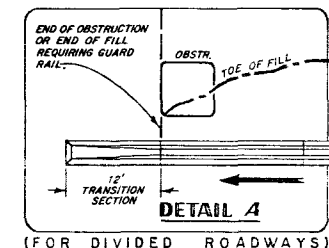
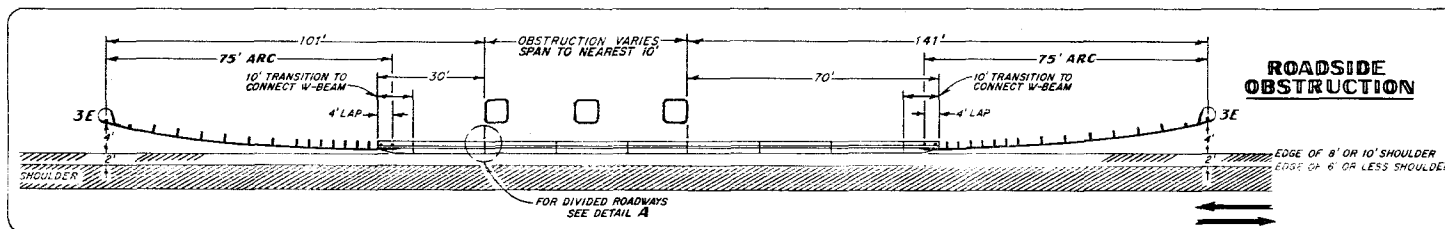
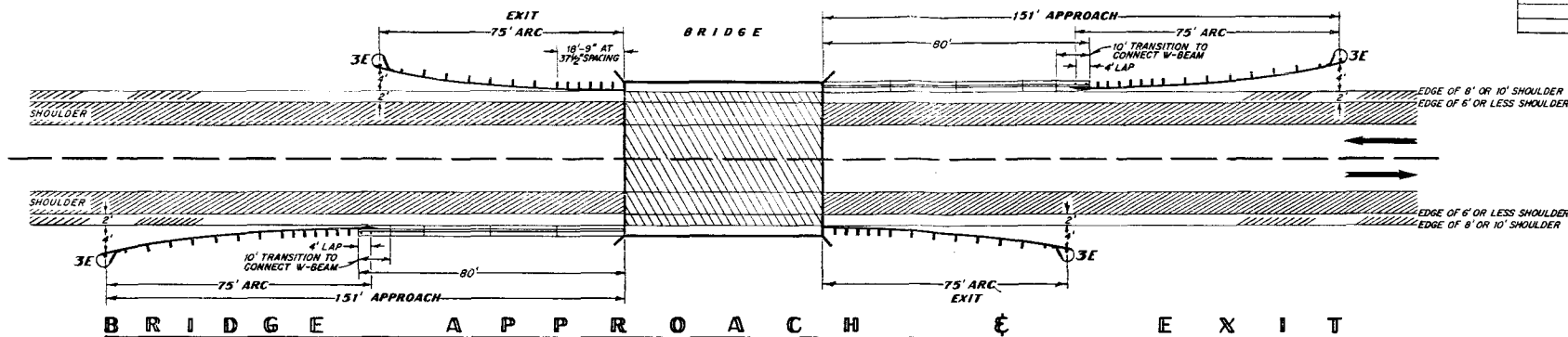
2 LANE ~ 2 WAY HIGHWAYS

STANDARD M-606-12

(SHEET 9 OF 9)

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO			

REVISIONS	



STATE DEPARTMENT OF HIGHWAYS
DIVISION OF HIGHWAYS
STATE OF COLORADO

**GUARD RAIL ~ TYPE 4
CONCRETE BARRIER**

APPROVED BY: [Signature]
STAFF DESIGN ENGINEER
DATE: FEBRUARY 18, 1983

STANDARD PLAN NO.
M-606-12
SHEET 9 OF 9