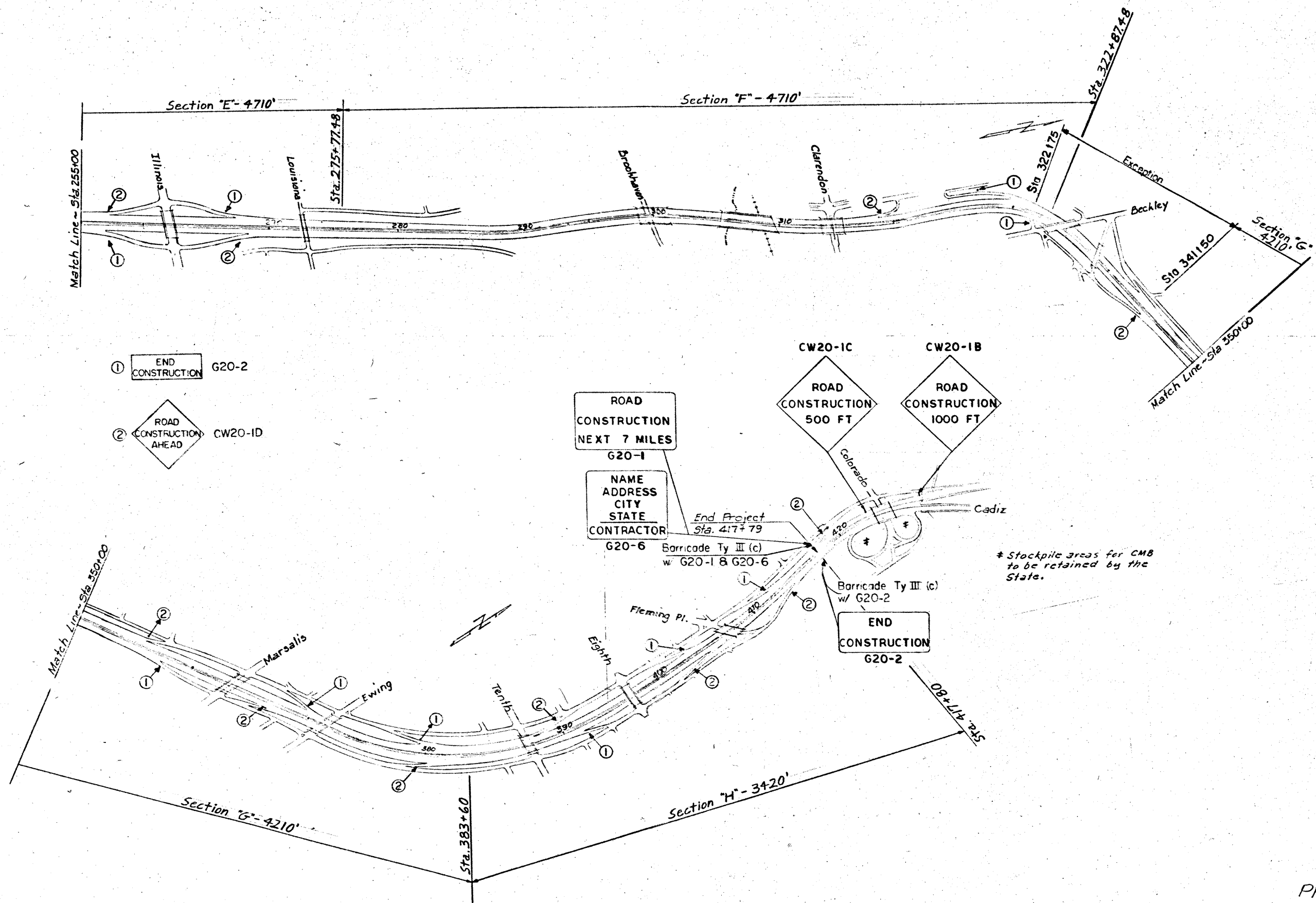


Note: For construction warning details not shown, see Standard Sheets BC (1 thru 7) 80.

Barricading shall be maintained on each section of work from the beginning of work until completion and acceptance for maintenance by the State.

PROJECT LAYOUT
Sheet 1 of 2

2



PROJECT LAYOUT
Sheet 2 of 2

3

135E-2(214) 416 3

18 Dallas 442 2 7/ 1H55E

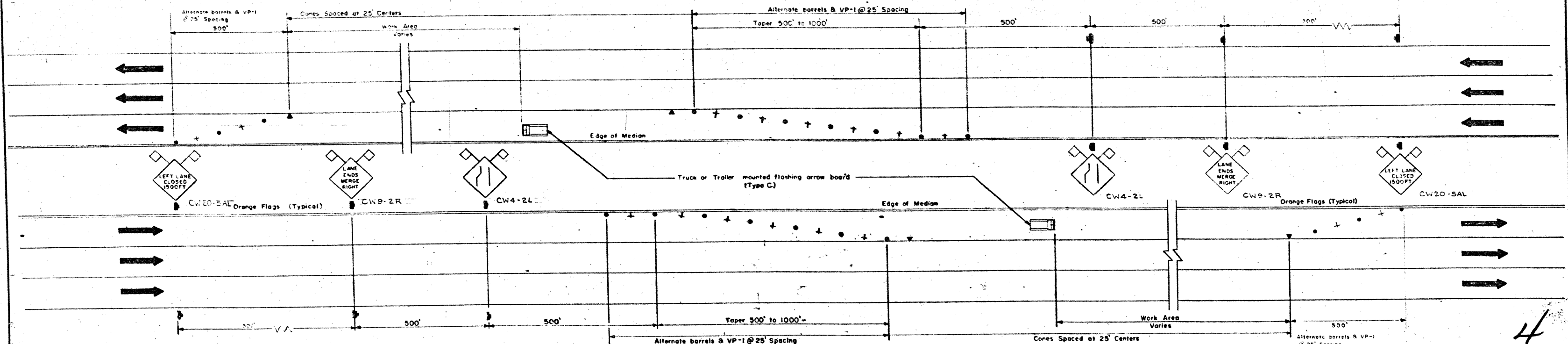
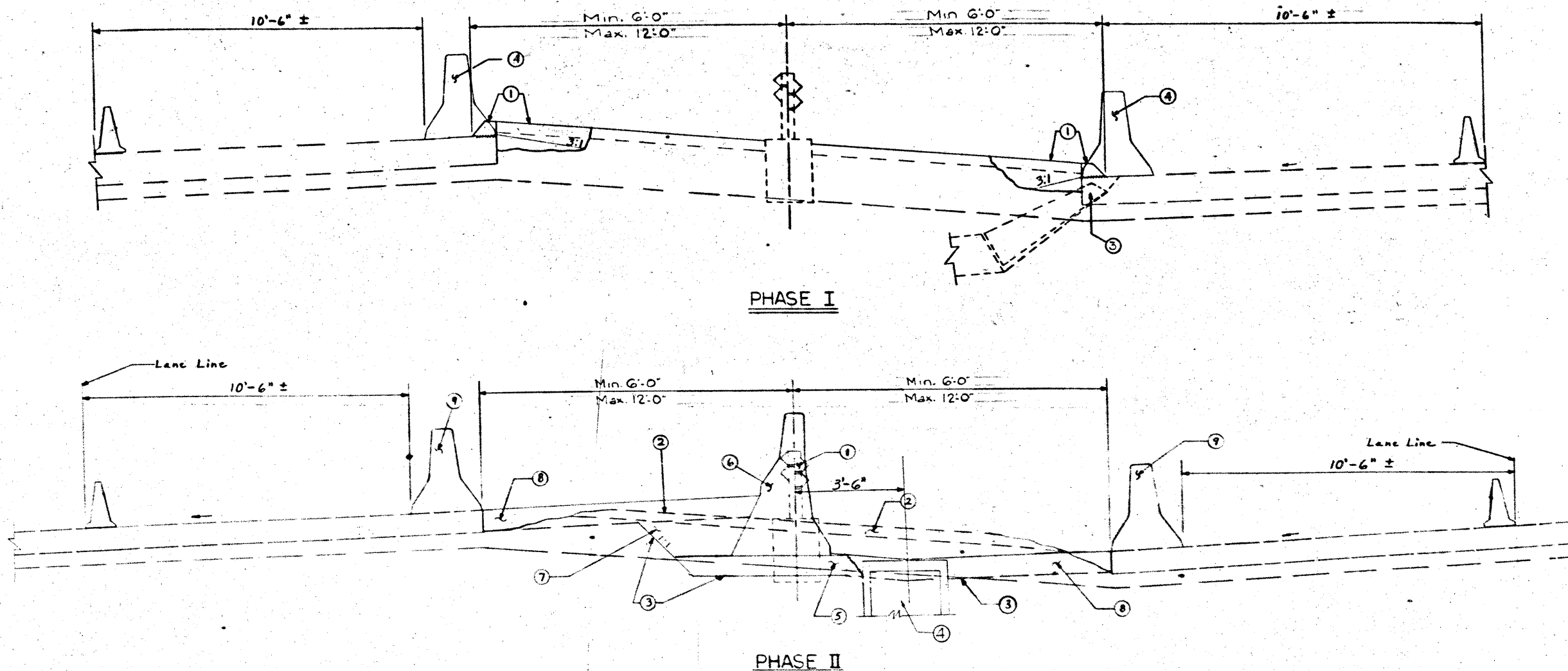
PHASE I

- 1 Remove Curb & 3' ± of Concrete Median
- 2 Place asphaltic concrete level-up and overlay on bridges.
- 3 Remove inlet castings and repair slab.
- 4 Erect temporary concrete median barrier on both edges of median.

PHASE II

- 1 Remove Existing MBGF (Bar)
- 2 Remove Remaining Concrete Median.
- 3 Excavate to Grade
- 4 Construct New Inlets, Connections & Modify Existing Manholes
- 5 Construct ASB under the CMB
- 6 Construct CMB at Center line or place the sections of CMB in the permanent location as shown in the summary table for the item.
- 7 Backfill at CMB
- 8 Construct remaining ASB
- 9 Remove CMB from temporary location

NOTE: Use Combination barrels, Vertical panels & Cones for Lane Closures during Working hours



LEGEND

- ▲ Cone (30 inches in height)
- ➔ Direction of Traffic
- Barrels
- † Vertical Panels

LANE CLOSURE for Multi-lane Highway

TRAFFIC CONTROL PLAN

FED. RD. DIST. NO.	STATE	FEDERAL PROJECT NO.	SHEET NO.
18	TEXAS	135E-6(214)43	4
COUNTY	CON.	SECT.	JOB
DALLAS	442	2	71

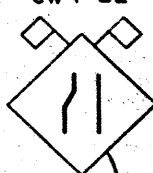
ORANGE FLAGS (TYP)

CW20-5L



RIO-15R
FORM
TWO
LINES
RIGHT

CW4-2L



ARROW PANEL (Ty. C)
Vertical Panels at 50' Spaces
Barrels at 50' Spaces

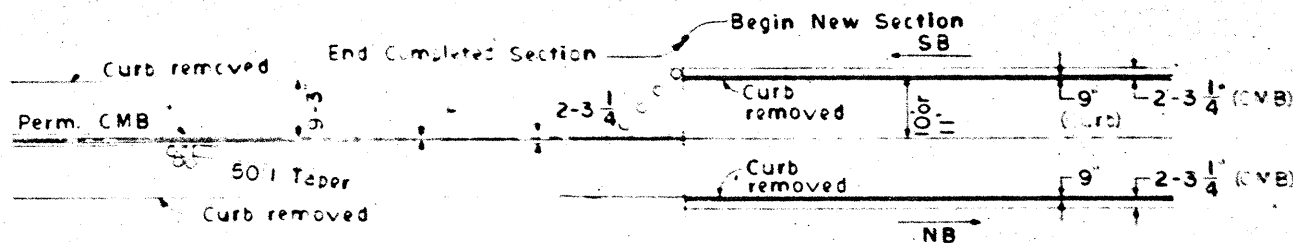
BEGIN BRIDGE

END BRIDGE

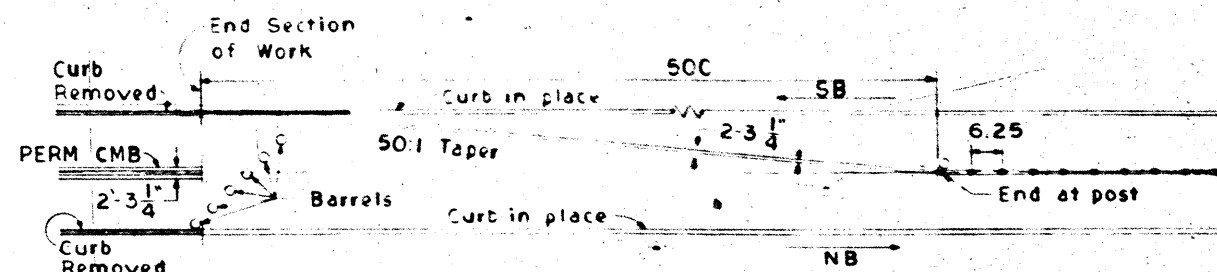
TWO LANE CLOSURE AT BRIDGE LOCATIONS

- GENERAL NOTES
- Details shown indicate closure of left lanes. Closure of right lanes will be accomplished in the same manner with signs changed to the appropriate wording and location.
 - The first 55 gallon drum in the taper approach shall carry a CW13-1 sign.
 - Any signs required that are not detailed in the standard sheets shall be in conformance with the "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" and "TEXAS TRAFFIC SIGN DESIGN STANDARDS."
 - All drums shall either be 18 gage or 20 gage steel barrels with a nominal diameter of 24 inches. Reconditioned steel barrels or empty paint barrels conforming to these requirements may be used. In addition the drums shall meet all the requirements specified in BC(3)-80.

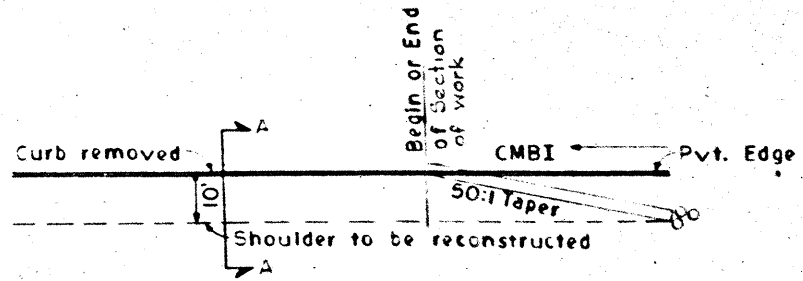
CW-20-5L



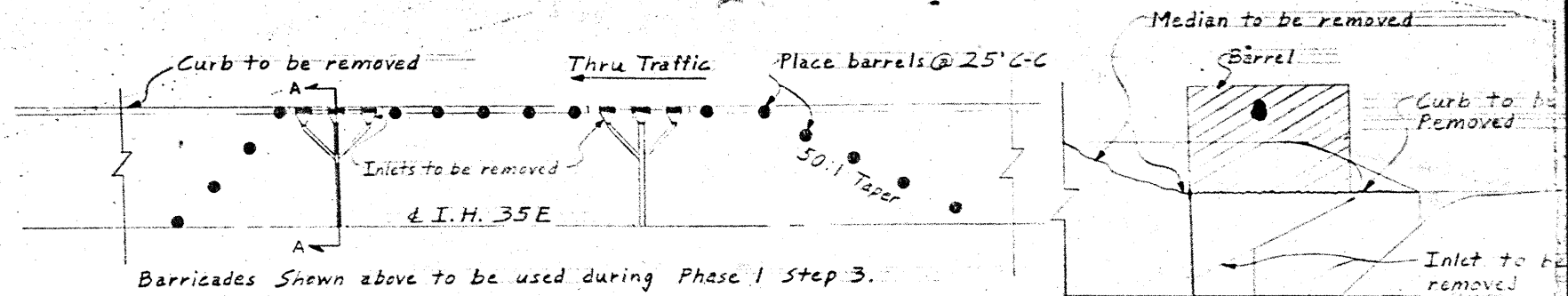
IB TRANSITION



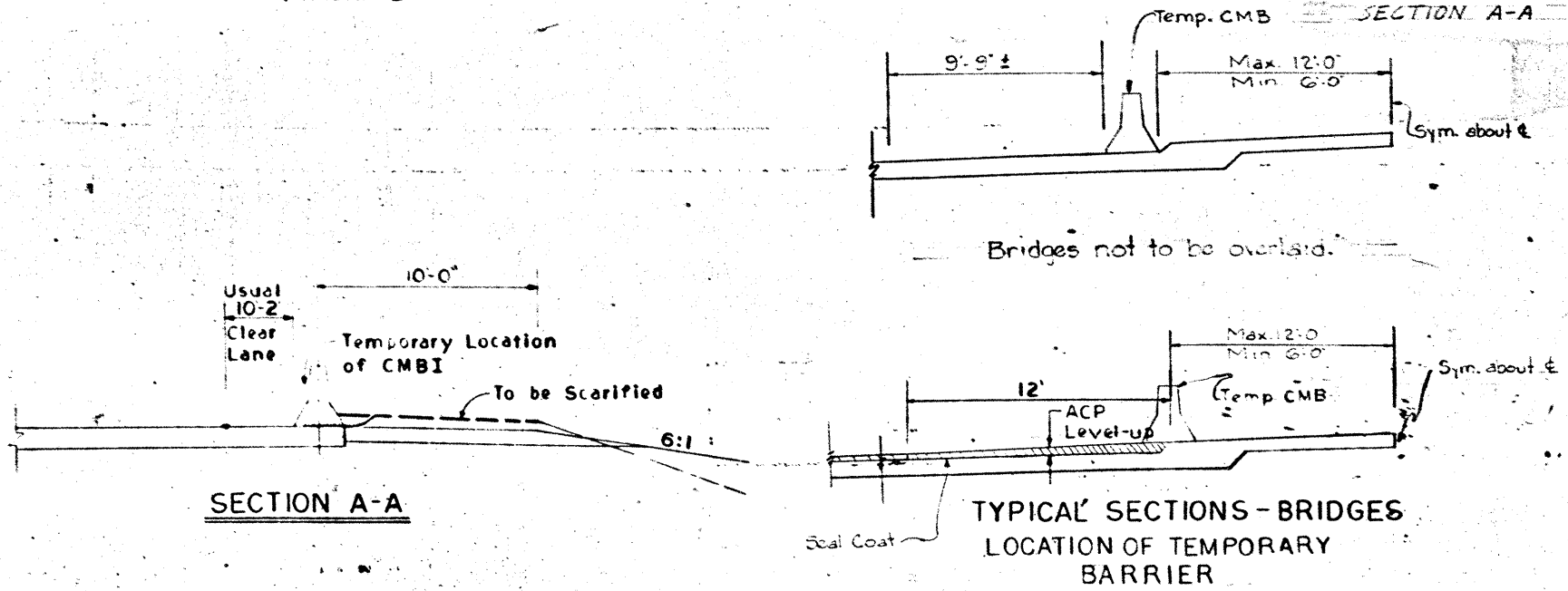
CMB TRANSITION



CMB TRANSITION IN SHOULDER RECONSTRUCTION AREAS



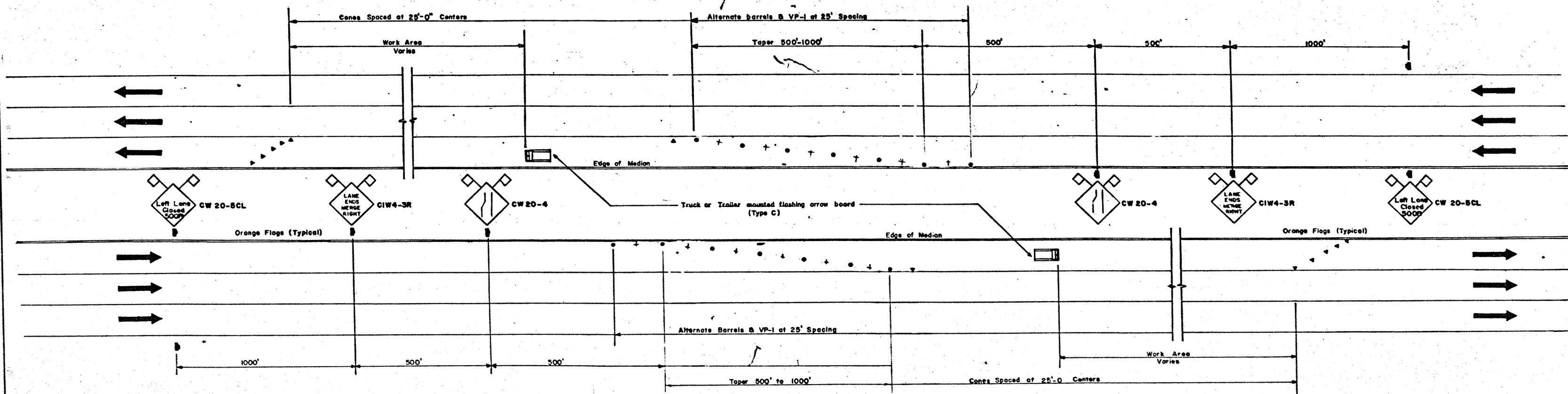
TYPICAL CONSTRUCTION WARNING DETAILS AT INLET REMOVAL



TYPICAL SECTIONS - BRIDGES LOCATION OF TEMPORARY BARRIER

TRAFFIC CONTROL PLAN

PER. NO.	STATE	FEDERAL PROJECT NO.	SHEET
18	TEXAS	35E-24-8	5
STATE	COUNTY	CON. SECT.	JOB
18	Dallas	2-2	1144



GENERAL NOTES

Any signs required that are not detailed in the standard sheets shall be in conformance with the "TEXAS MANUAL on UNIFORM TRAFFIC CONTROL DEVICES for STREETS and HIGHWAYS" and "TEXAS TRAFFIC SIGN DESIGN STANDARDS".

All drums shall be either 18 gage or 20 gage steel barrels with a nominal diameter of 24 inches. Reconditioned steel barrels or empty paint barrels conforming to these requirements may be used. In addition the drums shall meet all the requirements specified in BC(3)-80.

SINGLE LANE CLOSURE

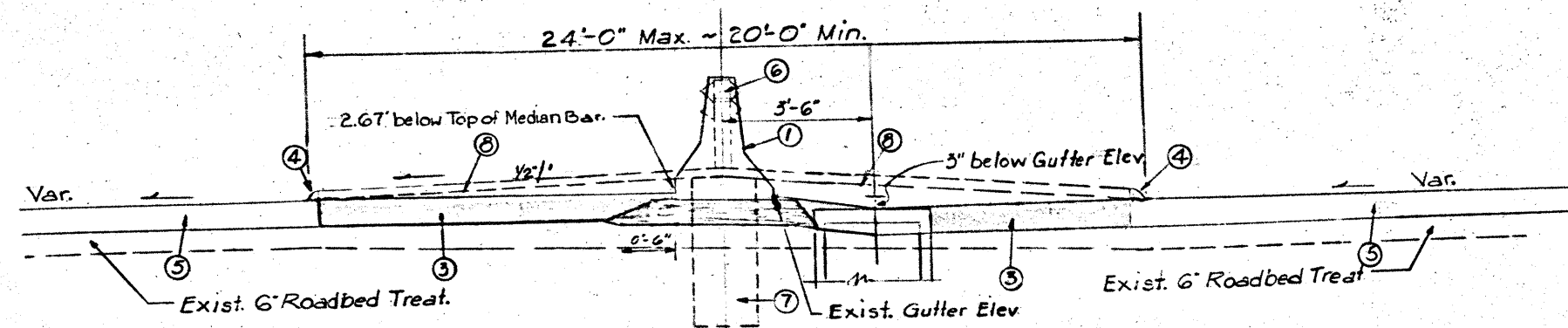
LEGEND

- ▲ Cone (30 inches in height)
- 55 Gallon Drum
- + Vertical Panels
- ➡ Direction of Traffic

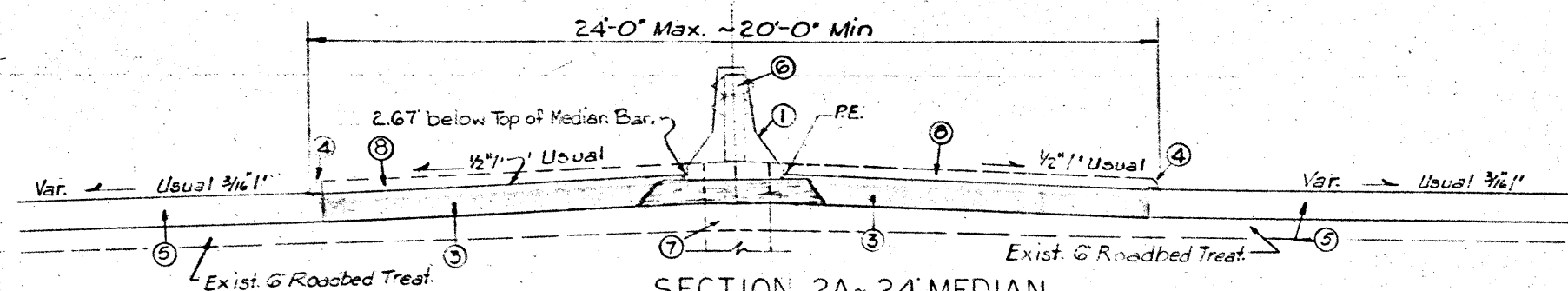
BARRICADE AND WARNING SIGN DETAILS

6

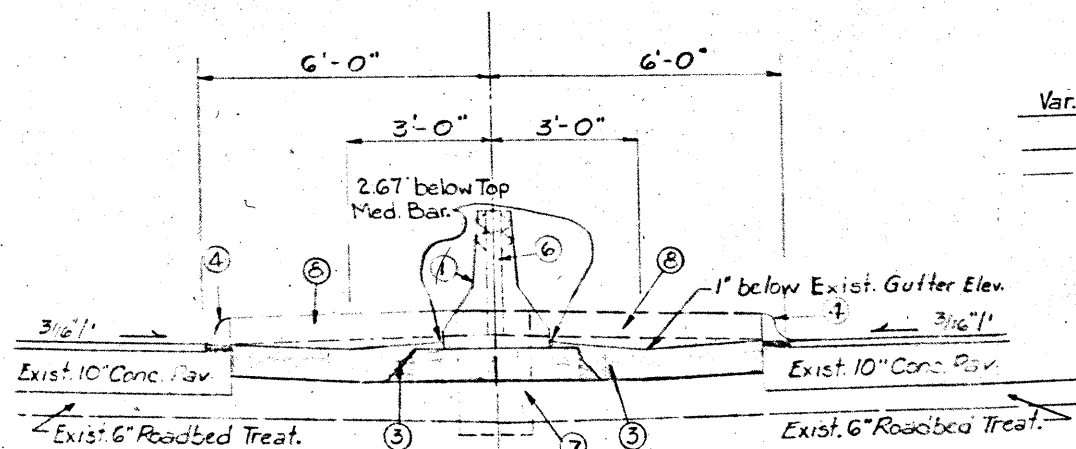
FED. RD. DIST. NO.	STATE	FEDERAL PROJECT NO.	SHEET NO.
18	TEXAS	135E-6(214) 418	6
COUNTY	CONTRACT NO.	SECTION	DATE
Dallas	4421	3	7/1/80



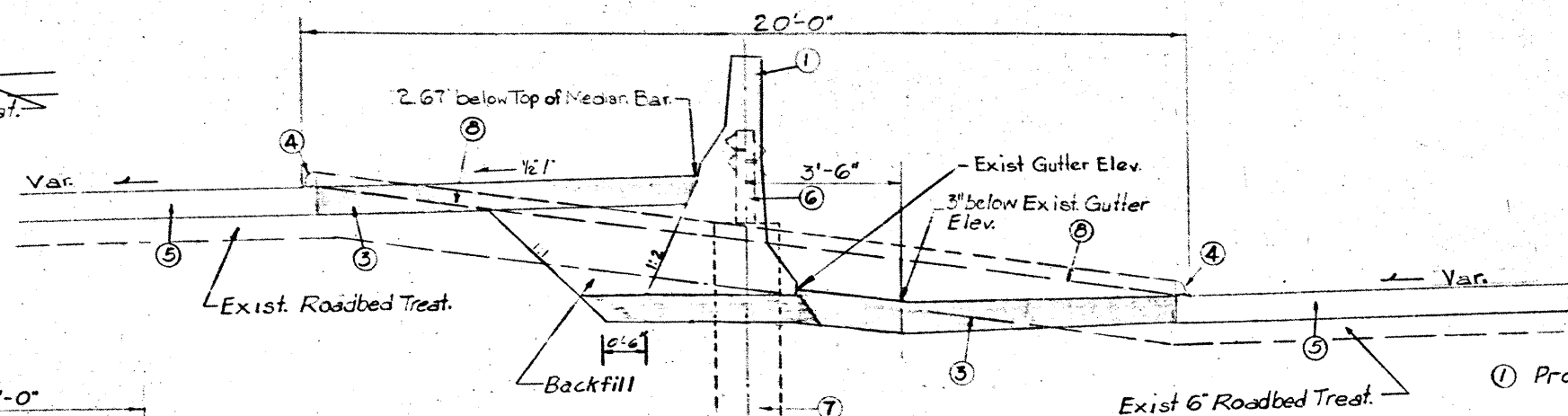
SECTION 1A ~ 24' MEDIAN
SECTION 1B ~ 20' MEDIAN



SECTION 2A ~ 24' MEDIAN
SECTION 2B ~ 20' MEDIAN



SECTION 4

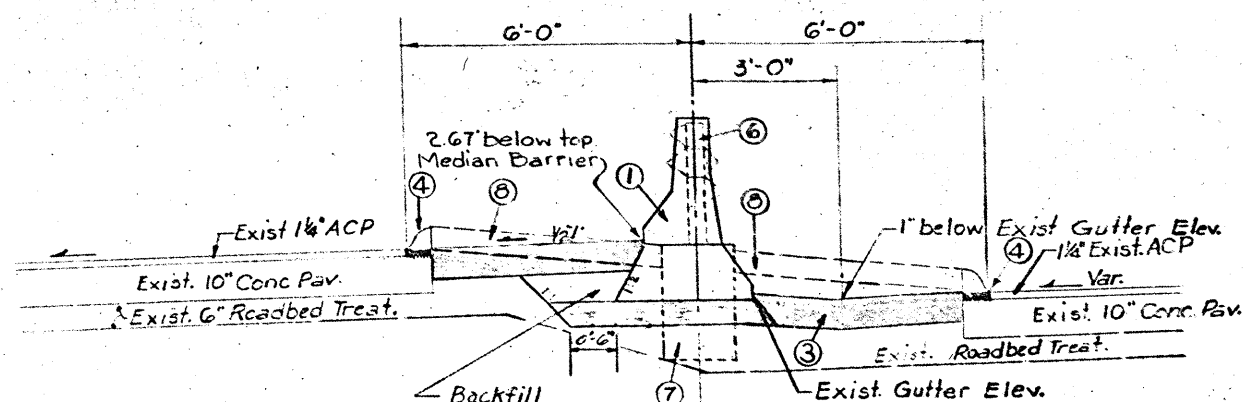


SECTION 3A

LEGEND

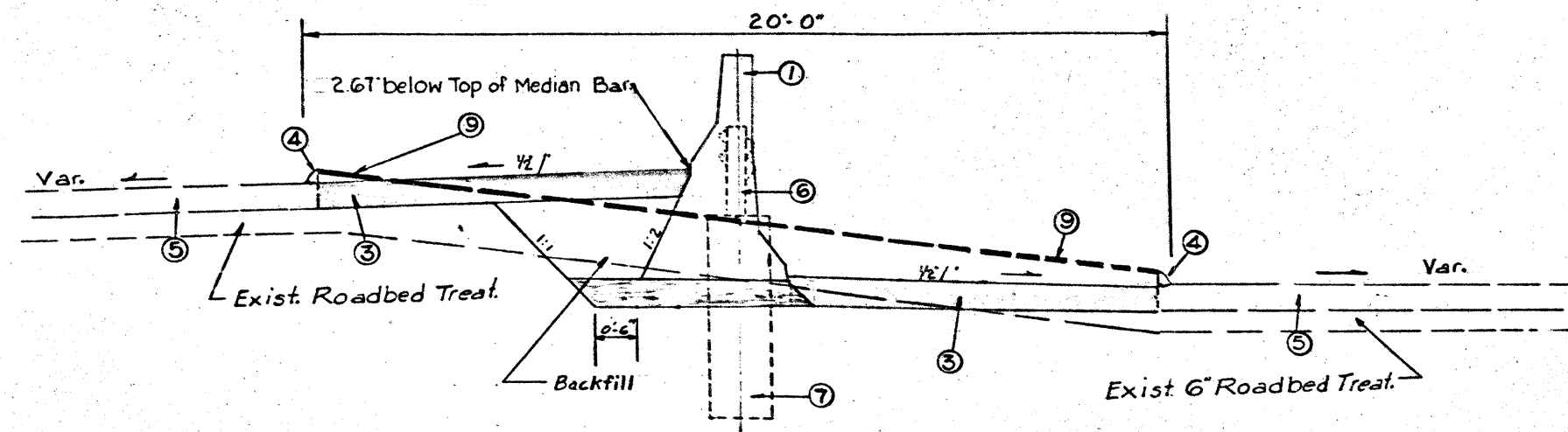
- ① Prop. Conc. Median Barrier
- ② Prop. Asphalt Stabilized Base (Usual 8")
- ③ Exist. Curb to be removed
- ④ Exist. C.P.C.R.
- ⑤ Exist. Median Gd Fence to be removed
- ⑥ Exist. 18" Drilled Shaft to be removed
- ⑦ Exist. Conc. Median to be removed
- ⑧ Exist. ACP Median to be scarified

Note: See sheet No. 18 for section limits.

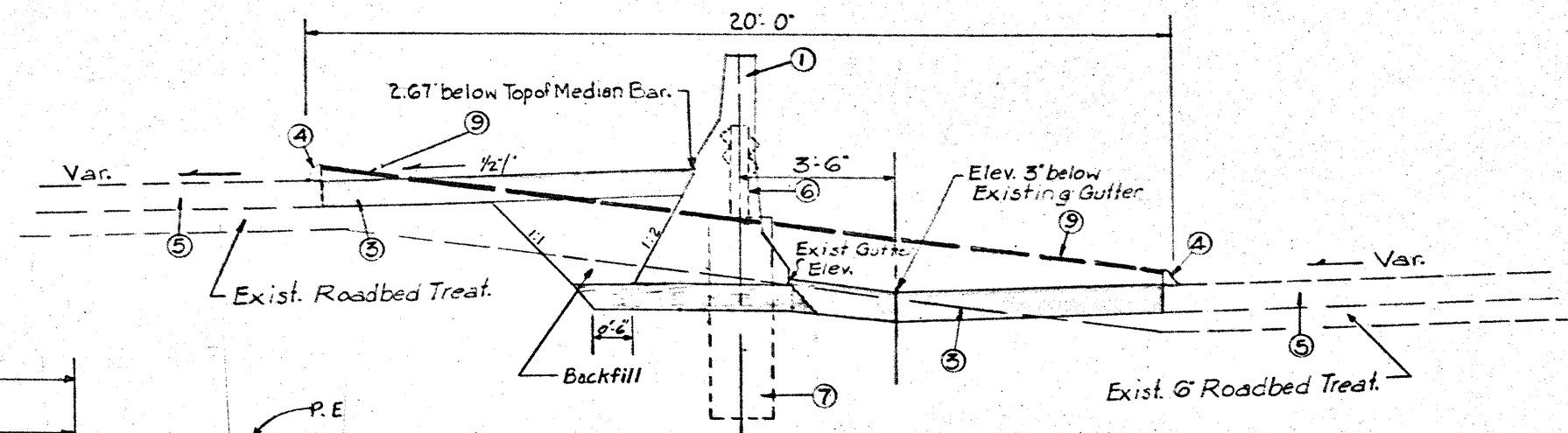


SECTION 5

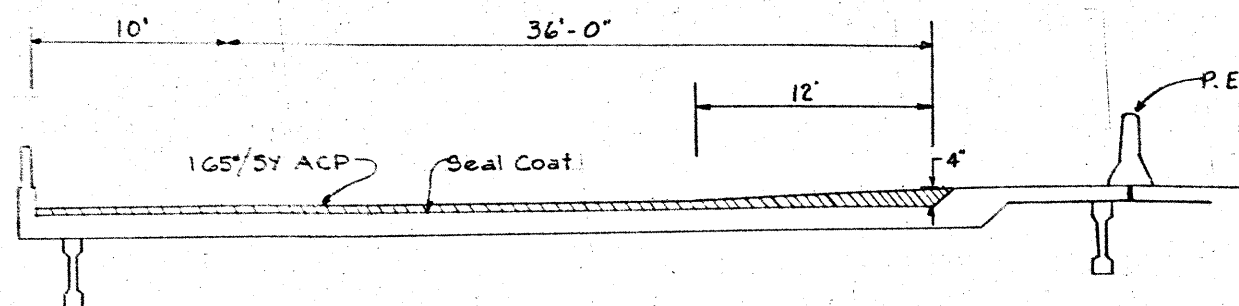
TYPICAL SECTIONS 7



SECTION 3B

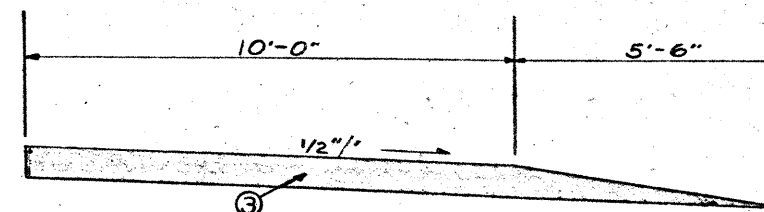


SECTION 3C



TYPICAL BRIDGE SECTION

Sta. 364+71 - 366+97 (Dunconville - Wheatland)
 Sta. 493+31 - 496+64 (South Prong)
 Sta. 507+81 - 513+03 (Loop 12)
 Sta. 234+80 - 236+10 (Soner Ave.)

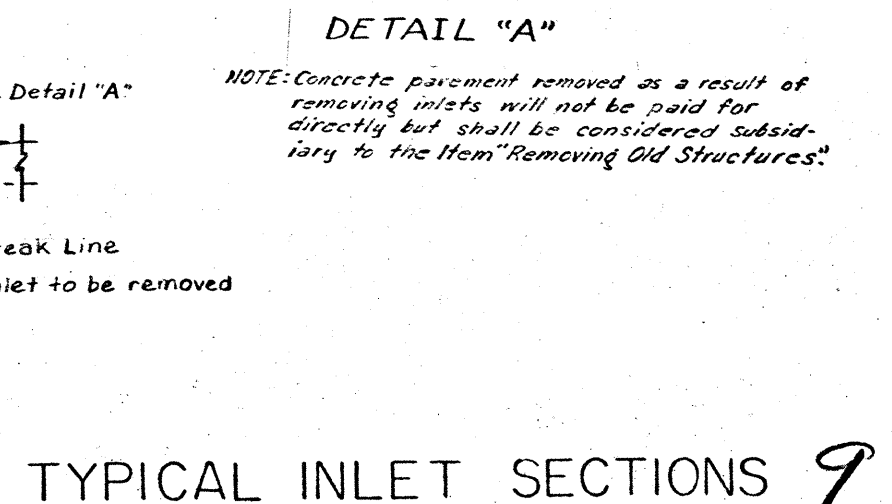
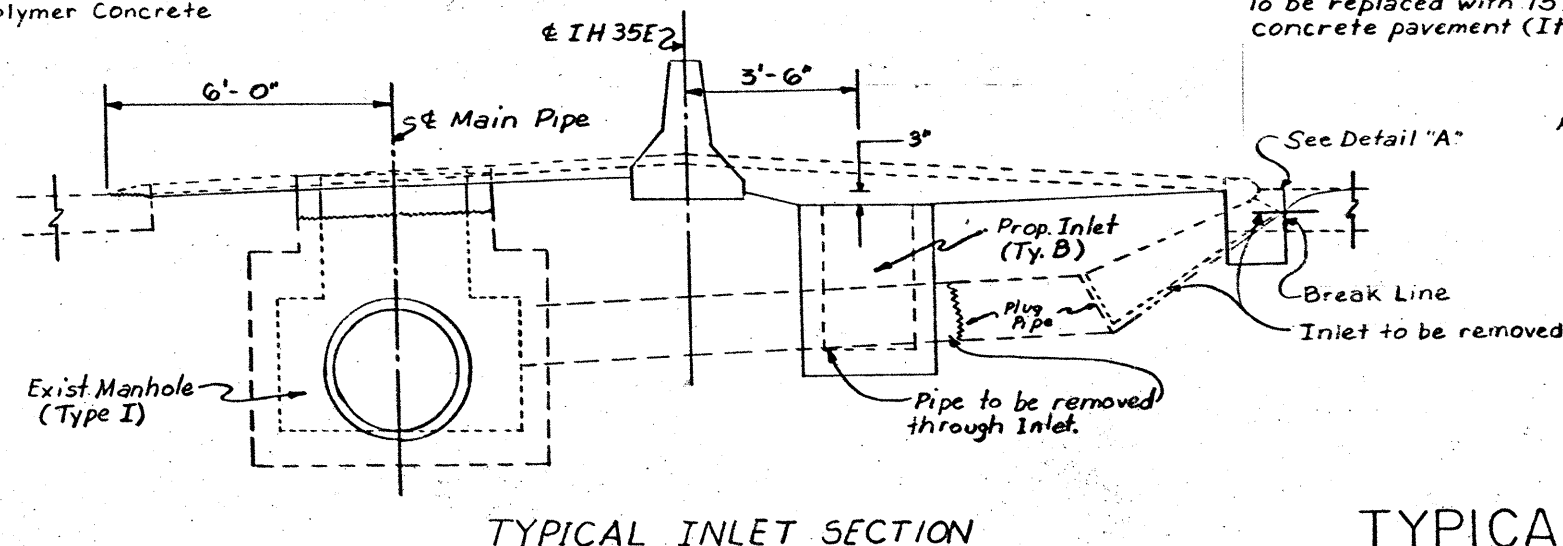
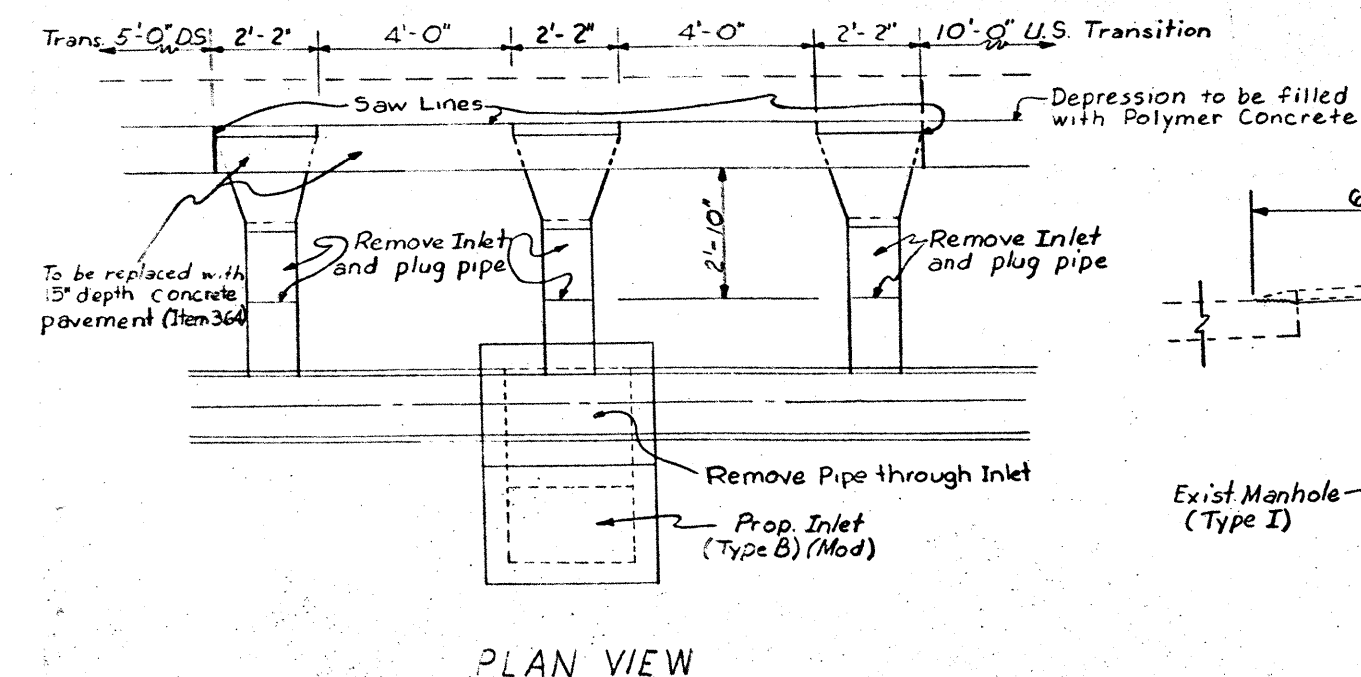
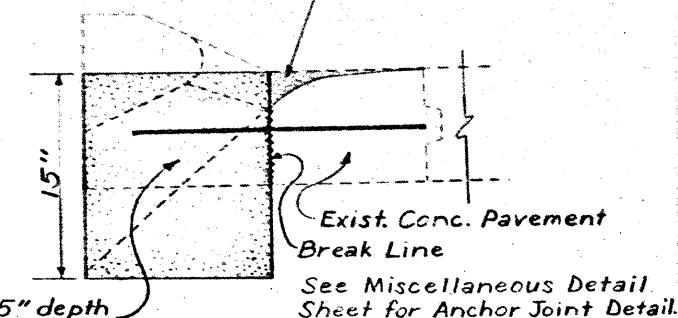
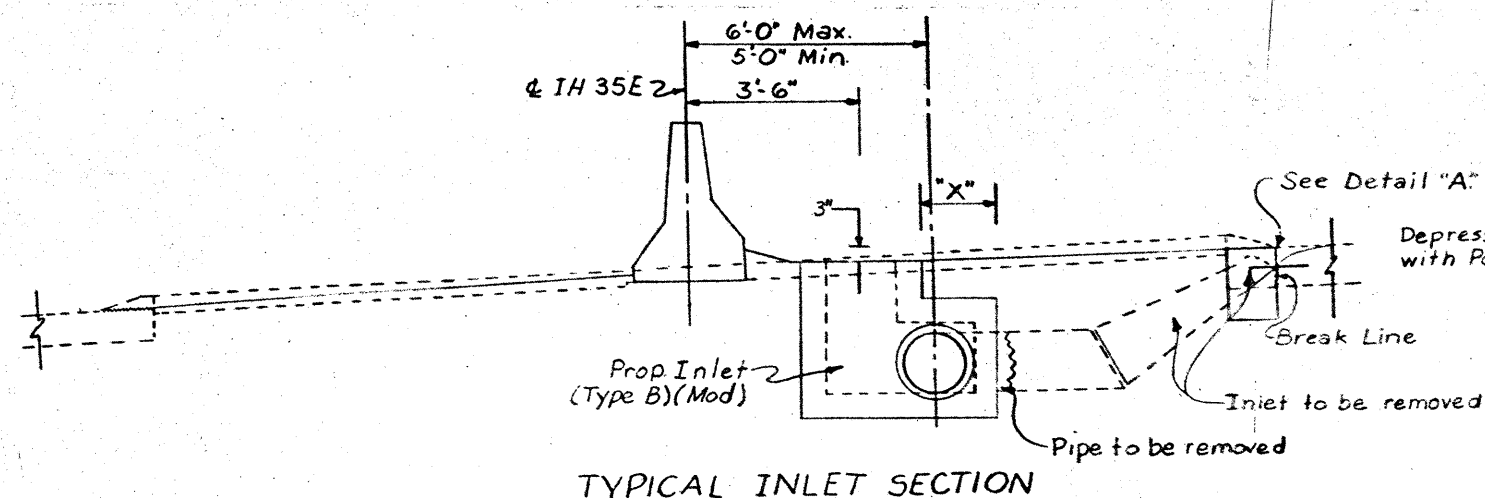
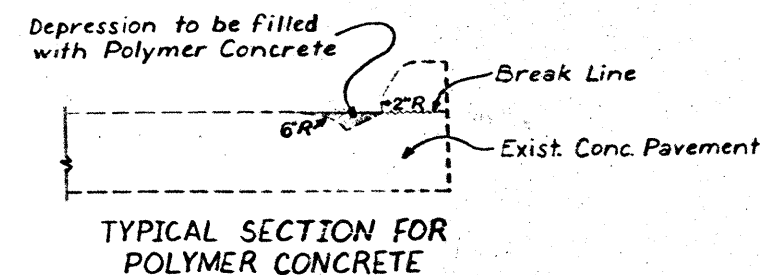
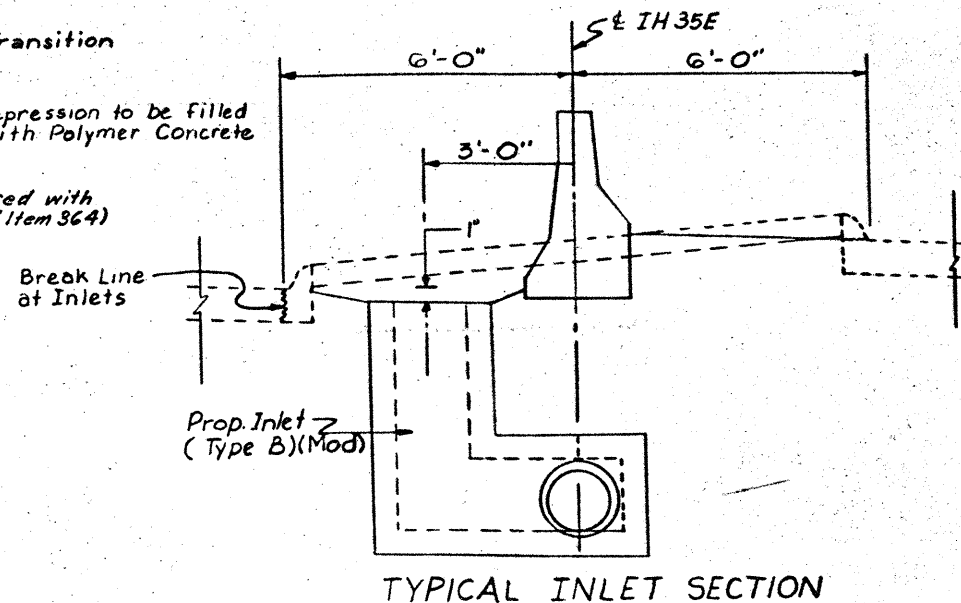
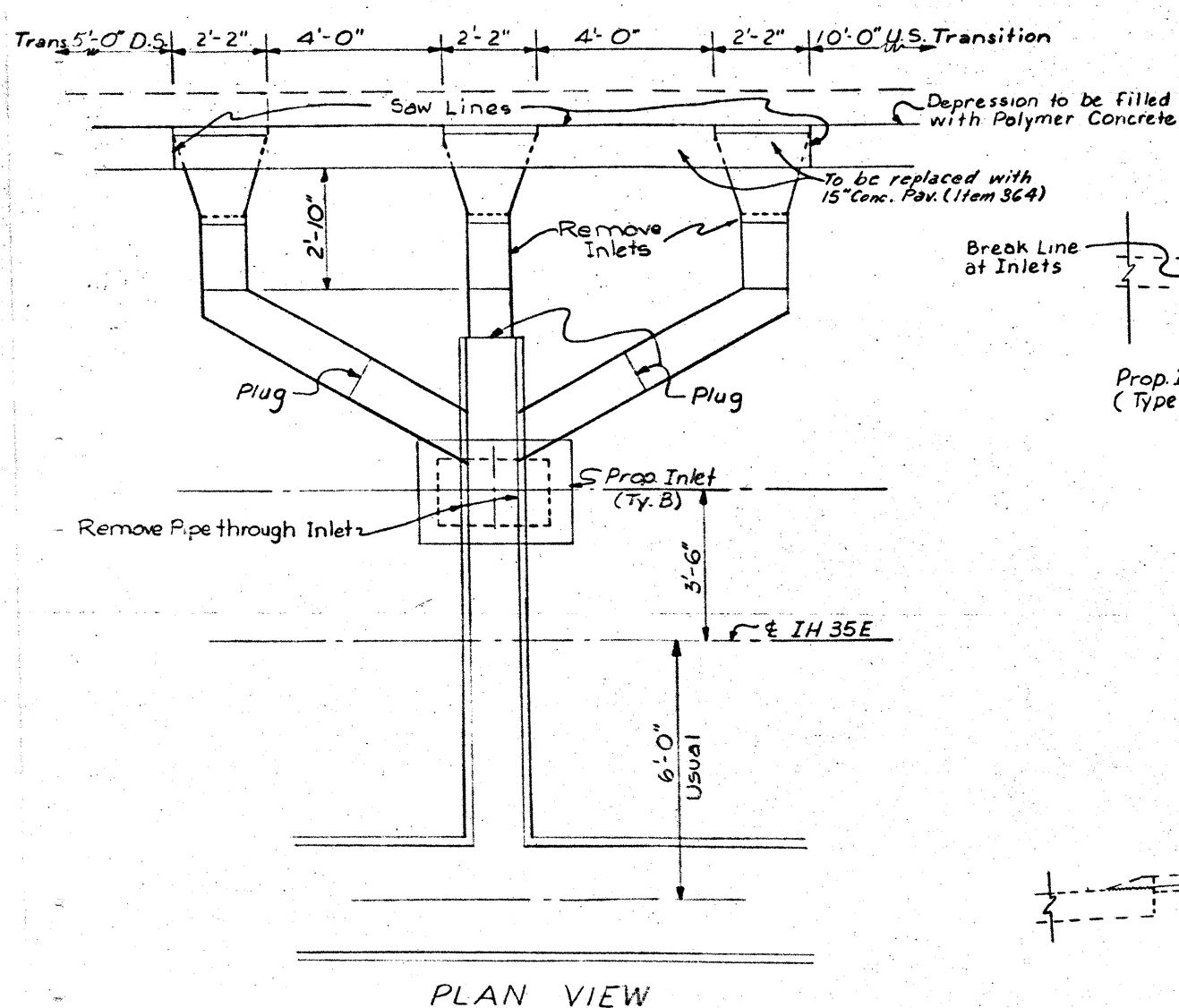


TYPICAL SHOULDER SECTION

Limits: Sta. 602+60 to Sta. 603+20

Note: See sheet No. 18 for Section limits.

TYPICAL SECTIONS



TYPICAL INLET SECTIONS 9

ESTIMATE SUMMARY

PROJECT I 35E-6(214)418
CONTROL 442-02-071

PROJECT I 35E-6(214)418										ALT.	ITEM-CODE			DESCRIPTION	UNIT	TOTAL	
CONTROL 442-02-071											ITEM NO	DESC CODE	QS			EST.	FINAL
						ROADWAY (NON-PART)		ROADWAY									
EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL								
								73478.000			104	502	001	REMOV OLD CONC (CURB OR C AND G)	LF	73478.000	
								77161.000			104	503	001	REMOV OLD CONC (MED)	SY	77161.000	
								20299.000			110	502	001	UNCL RD EXCAV (DENS CONT)	CY	20299.000	
								196.000			204	505		SPRINK (EROSN CONT)	MO	196.000	
								14.000			213	503		ROLL (MEDM PNEUM TIRE)(TY B)	HR	14.000	
								6967.000			254	502	002	SCAR EXIST PAV	SY	6967.000	
								36179.000			292	504	018	AGGR (OR 4)	TON	36179.000	
								1904.000			292	505	018	ASPH (AC)	TON	1904.000	
								63.000		1	340	501	109	ASPH (AC)	TON	63.000	
								1198.000		1	340	503	109	AGGR (TY C)	TON	1198.000	
								69.200			364	550	002	CONC PAV (CL A CONC) (15 IN)	CY	69.200	
								614.360			401	501		SEWER EXCAV	CY	614.360	
								65.000			470	014	003	INLET (COMPL)(TY B MOD 1 GRATE)	EA	65.000	
								20.000			470	015	003	INLET (COMPL)(TY B MOD 2 GRATE)	EA	20.000	
								9.000			470	543	003	INLET (COMPL) (TY B 1 GRATE)	EA	9.000	
								5.000			470	544	003	INLET (COMPL) (TY B 2 GRATE)	EA	5.000	
								124.000			471	527		FRAME AND GRATE (TY B)	EA	124.000	
								4.000			479	516		ADJ MANH (TY A)	EA	4.000	
								33.000			479	517		ADJ MANH (TY B)	EA	33.000	
								51.000			496	567	004	REMOV OLD STR (INLET-SINGLE)	EA	51.000	
								93.000			496	568	004	REMOV OLD STR (INLET-DOUBLE)	EA	93.000	
								42.000			496	569	004	REMOV OLD STR (INLET-TRIPLE)	EA	42.000	
								320.000			522	502		CONC C AND G (TY 1)	LF	320.000	
								40621.000			561	503	001	REMOV METAL BEAM GD FENCE (BAR)	LF	40621.000	
								6.000			610	674	006	RDWY ILL ASSEM (TY SP 48S-8-8)(.4KW)S	EA	6.000	
								130.000			650	501		ELEC CONDR (NO. 8 BAR)	LF	130.000	
								130.000			650	506		ELEC CONDR (NO. 8 THW)	LF	130.000	
								1452.000			651	507		DUCT CABLE (1 1/4 IN)(4-2)(2 INSU)	LF	1452.000	
						19852.000					2087	501		STKPL BASE	CY	19852.000	
								207.890			3215	501		POLYMER CONCRETE	CF	207.890	
								189.000			3225	501		AGGR (CL B TY PB GR 3)	CY	189.000	
								40.000			3225	502		HOT ASPHALT-RUBBER	TON	40.000	
								1446.000			5034	501		REMOV HDLT-BAR FENCE	LF	1446.000	
								20181.970			5275	501		CONC MED BAR (TY 2)	LF	20181.970	
								4010.640			5275	502		CONC MED BAR (TY 3)	LF	4010.640	
								910.380			5275	504		CONC MED BAR (TY 1)	LF	910.380	
								5266.700			5275	538		CONC MED BAR (TY 10)	LF	5266.700	
								502.600			5275	539		CONC MED BAR (TY 12)	LF	502.600	
								22.000			5301	501		BARCD,SIGNS AND TRAF HANDLING	MO	22.000	
								1.000			5344	501		MOBILIZATION	LS	1.000	
								13140.000			5361	501		CONC BAR RAIL (P & P)	LF	13140.000	
								80580.000			5361	502		CONC BAR RAIL (MOV AND RESET)	LF	80580.000	
								6450.000			5361	503		CONC BAR RAIL (REMOV)	LF	6450.000	
								6.000			6001	501		REMOV RDWY ILLUM ASSEM	EA	6.000	
						1.000					6080	501		TRANSP SALV RDWY ILLUM ASSEM	LS	1.000	
								4141.000			7301	501	001	THERM PAV MARK (4 IN)(WHITE)	LF	4141.000	
								78158.000			7301	502	001	THERM PAV MARK (4 IN)(YELLOW)	LF	78158.000	
								67825.000			7303	501		BLAST CLEANING (4 IN)	LF	67825.000	

ESTIMATE & QUANTITY SHEET

STATE DIST. NO.	COUNTY	PROJECT NO.	SHEET NO.
18	DALLAS	I 35E-6(214)418	10

ESTIMATE SUMMARY

PROJECT 1 35E-6(214)418

CONTROL 442-02-071

EST.		FINAL		EST.		FINAL		EST.		FINAL		ALT	ITEM-CODE			DESCRIPTION	UNIT	TOTAL	
EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL		ITEM NO	DESC CODE	QS			EST.	FINAL
								73478.000	73430.000				104	502	001	REMOV OLD CONC (CURB OR C AND G)	LF	73478.000	73430.000
								77161.000	78548.336				104	503	001	REMOV OLD CONC (MED)	SY	77161.000	78548.336
								20299.000	20299.000				110	502	001	UNCL RD EXCAV (DENS CONT)	CY	20299.000	20299.000
								196.000	0.000				204	505		SPRINK (EROSN CONT)	MG	196.000	0.000
								14.000	14.500				213	503		ROLL (MEDM PNEUM TIRE)(TY B)	HR	14.000	14.500
								6967.000	6399.920				254	502	002	SCAR EXIST PAV	SY	6967.000	6399.920
								36179.000	36145.923				292	504	018	AGGR (GR 4)	TON	36179.000	36145.923
								1904.000	1889.817				292	505	018	ASPH (AC)	TON	1904.000	1889.817
								63.000	65.239	1			340	501	109	ASPH (AC)	TON	63.000	65.239
								1198.000	1239.521	1			340	503	109	AGGR (TY C)	TON	1198.000	1239.521
								69.200	69.211				364	550	002	CONC PAV (CL A CONC) (15 IN)	CY	69.200	69.211
								614.360	614.360				401	501		SEWER EXCAV	CY	614.360	614.360
								65.000	64.000				470	014	003	INLET (COMPL)(TY B MOD 1 GRATE)	EA	65.000	64.000
								20.000	19.000				470	015	003	INLET (COMPL)(TY B MOD 2 GRATE)	EA	20.000	19.000
								9.000	10.000				470	543	003	INLET (COMPL) (TY B 1 GRATE)	EA	9.000	10.000
								5.000	6.000				470	544	003	INLET (COMPL) (TY B 2 GRATE)	EA	5.000	6.000
								124.000	124.000				471	527		FRAME AND GRATE (TY B)	EA	124.000	124.000
								4.000	4.000				479	516		ADJ MANH (TY A)	EA	4.000	4.000
								33.000	33.000				479	517		ADJ MANH (TY B)	EA	33.000	33.000
								51.000	51.000				496	567	004	REMOV OLD STR (INLET-SINGLE)	EA	51.000	51.000
								93.000	93.000				496	568	004	REMOV OLD STR (INLET-DOUBLE)	EA	93.000	93.000
								42.000	42.000				496	569	004	REMOV OLD STR (INLET-TRIPLE)	EA	42.000	42.000
								320.000	350.900				522	502		CONC C AND G (TY 1)	LF	320.000	350.900
								40621.000	36774.120				561	503	001	REMOV METAL BEAM GD FENCE (BAR)	LF	40621.000	36774.120
								6.000	6.000				610	674	006	RDWY ILL ASSEM (TY SP 48S-8-8)(.4KWIS)	EA	6.000	6.000
								130.000	130.000				650	501		ELEC CONDR (NO. 8 BAR)	LF	130.000	130.000
								130.000	130.000				650	506		ELEC CONDR (NO. 8 THW)	LF	130.000	130.000
								1452.000	1456.400				651	501		DUCT CABLE (1 IN)(8-2)(1 Bar - 1 Insul)	LF	1452.000	1456.400
						19852.000	8672.000						2087	501		STKPL BASE	CY	19852.000	8672.000
								207.890	147.515				3215	501		POLYMER CONCRETE	CF	207.890	147.515
								189.000	251.000				3225	501		AGGR (CL B TY PB GR 3)	CY	189.000	251.000
								40.000	38.684				3225	502		HOT ASPHALT-RUBBER	TON	40.000	38.684
								1446.000	1256.500				5034	501		REMOV HOLT-BAR FENCE	LF	1446.000	1256.500
								20181.970	20178.940				5275	501		CONC MED BAR (TY 2)	LF	20181.970	20178.940
								4010.640	4010.640				5275	502		CONC MED BAR (TY 3)	LF	4010.640	4010.640
								910.380	906.200				5275	504		CONC MED BAR (TY 1)	LF	910.380	906.200
								5266.700	5369.600				5275	538		CONC MED BAR (TY 10)	LF	5266.700	5369.600
								502.600	502.600				5275	539		CONC MED BAR (TY 12)	LF	502.600	502.600
								22.000	22.000				5301	501		BARCO.SIGNS AND TRAF HANDLING	MO	22.000	22.000
								1.000	1.000				5344	501		MOBILIZATION	LS	1.000	1.000
								13140.000	13140.000				5361	501		CONC BAR RAIL (P & P)	LF	13140.000	13140.000
								80580.000	80010.000				5361	502		CONC BAR RAIL (MOV AND RESET)	LF	80580.000	80010.000
								6450.000	6510.000				5361	503		CONC BAR RAIL (REMOV)	LF	6450.000	6510.000
								6.000	6.000				6001	501		REMOV RDWY ILLUM ASSEM	EA	6.000	6.000
						1.000	1.000						6080	501		TRANSP SALV RDWY ILLUM ASSEM	LS	1.000	1.000
								4141.000	5832.000				7301	501	001	THERM PAV MARK (4 IN)(WHITE)	LF	4141.000	5832.000
								78158.000	78142.000				7301	502	001	THERM PAV MARK (4 IN)(YELLOW)	LF	78158.000	78142.000
								67825.000	79643.400				7303	501		BLAST CLEANING (4 IN)	LF	67825.000	79643.400
								0.000	6606.000							STKPL BASE (X-SECTION)	CY	0.000	6606.000

ESTIMATE & QUANTITY SHEET

Revise Duct Cable
Rev. March, 1971

STATE DIST. NO.	COUNTY	PROJECT NO.	SHEET NO.
18	DALLAS	1 35E-6(214)418	10A

10-A Field Change No. 1

ESTIMATE SUMMARY

PROJECT I 35E-6(214)418										ALT	ITEM-CODE			DESCRIPTION	UNIT	TOTAL	
CONTROL 442-02-071											ITEM NO	QTY	PRICE			EST.	FINAL
						ROADWAY (NON-PART)		ROADWAY									
EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL								
								1261.000			330	505	024	ALTERNATE NO. 1A COLD MIX LRA PAV (TY CC)	TON	1261.000	N/B
								1261.000			350	502	067	ALTERNATE NO. 1B HOT MIX-COLD LAID ACP (TY C)	TON	1261.000	N/B
														RETAINED SALVAGE MATERIAL			
														SALVAGED BASE MATERIAL 20299 CY @40.20	LS	1.000	
														FORCE ACCOUNT BY CONTRACTOR (JOB TRAIN)			
														JOB TRAINING (5 TRAINEES)	LS	1.000	1.000
														STATE FORCE ACCOUNT WORK (PART)			
														01 HAUL PCBR TO STORAGE	LS	1.000	
														CONTR FORCE ACT OR AOR UNIT PRICE (PART)			
														TEMP EROSN. SEDMT & WTR-POL CONT	LS	1.000	0.000

ESTIMATE & QUANTITY SHEET

STATE DIST. NO.	COUNTY	PROJECT NO.	SHEET NO.
18	DALLAS	I 35E-6(214)418	//

SPECIFICATION DATA													
TEST TO BE IN ACCORDANCE WITH TEXAS HIGHWAY DEPARTMENT STANDARD TEST METHODS													
ITEM	DESCRIPTION	GRADING REQUIREMENTS PERCENT RETAINED - SIEVES							SOIL CONSTANTS			WET BALL MILL	SEE NOTE
		2 1/2"	2"	1 3/4"	7/8"	3/8"	# 4	# 40	LL	P.I.			
									MAX	MAX	MIN	MAX	

ITEM 292

Rate	Quantity
Variable Depth	38,083 Ton

ITEM 340

Variable Depth	15,185 SY
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BASIS OF ESTIMATE:

ITEM	DESCRIPTION	RATE	UNIT	QUANTITY
213	Rolling(Med. Pneum. Tire)(Ty B) Item 3225	1 Hr/1100 SY	15,185 SY	14 Hr
292	Aggr (Gr 4)(Ty B)	95% by Wt.	38,083 Ton	36,179 Ton
292	Asph (AC)	5% by Wt.	38,083 Ton	1,904 Ton
340	Aggr (Ty C)	95% by Wt.	1,261 Ton	1,198 Ton
340	Asph (AC)	5% by Wt.	1,261 Ton	63 Ton
3225	Hot Asphalt-Rubber	0.6 Gal/SY	15,185 SY	9,111 Gal
		8.76 Lb/Gal.	9,111 Gal	40 Ton
3225	Aggr (C1 B, Ty PB, Gr. 3)	1 CY/80 SY	15,185 SY	189 Cy

BASIS OF ESTIMATE FOR EROSION CONTROL ITEMS

204	Sprinkling (Erosion Control)	500 Gal/Sta	391 STA	196 MG
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SPECIFICATION DATA
Sheet A

P. R. DIV. 6	TEXAS	I 35E-6(214)418	SHEET 12
Dallas	COUNTY	I HWY. 35E	COUNT. 442-2-71

P. R. DIV. 6	TEXAS	I 35E-6(214)418	SHEET 12
DALLAS	COUNTY	I HWY. 35E	COUNT. 442-2-71

GENERAL NOTES AND SPECIFICATION DATA--

THE CONSTRUCTION, OPERATION AND MAINTENANCE OF THIS PROPOSED PROJECT WILL BE CONSISTENT WITH THE STATE IMPLEMENTATION PLAN AS PREPARED BY THE TEXAS AIR CONTROL BOARD.

BENCH MARKS WILL BE SET BY THE STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION FORCES PRIOR TO BEGINNING OF CONSTRUCTION.

SPECIAL PROVISION TO ITEM 7:

THE INDIVIDUAL SECTION FOR PARTIAL ACCEPTANCE SHALL BE THE SECTIONS AS LISTED UNDER SEQUENCE OF WORK IN SPECIAL PROVISION (DETOURS, BARRICADES, WARNING SIGNS, SEQUENCE OF WORK, ETC.)

ITEM 104:

EXISTING CONCRETE TO BE REMOVED SHALL BE SAWED ALONG NEAT LINES WHERE PORTIONS ARE TO BE LEFT IN PLACE TEMPORARILY OR PERMANENTLY. SAWING WILL BE CONSIDERED SUBSIDIARY TO THIS ITEM AND NO DIRECT PAYMENT WILL BE MADE.

ALL OF THE EXISTING OLD CONCRETE TO BE REMOVED ON THIS PROJECT WILL BECOME THE PROPERTY OF THE CONTRACTOR AND BE DISPOSED OF BY HIM OUTSIDE THE LIMIT OF THE RIGHT-OF-WAY, AT HIS OWN EXPENSE.

REMOVAL OF MONOLITHIC CONCRETE CURB SHALL BE ACCOMPLISHED BY ANY METHOD APPROVED BY THE ENGINEER. IN THOSE AREAS WHERE THE PAVEMENT IS NOT TO BE OVERLAID, A SMOOTH SURFACE WILL BE REQUIRED AFTER THE CURB REMOVAL OPERATION HAS BEEN COMPLETED. MILLING OR GRINDING WILL BE CONSIDERED AS AN ACCEPTABLE METHOD AT THESE LOCATIONS. MEASUREMENT AND PAYMENT SHALL BE IN ACCORDANCE WITH THIS ITEM.

ITEM 110:

OVERHAUL WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED AS SUBSIDIARY TO THIS ITEM.

EXCESS EXCAVATION WILL BE STOCKPILED IN ACCORDANCE WITH THE ITEM "STOCKPILING BASE MATERIAL".

SPECIFICATION DATA

SHEET 8

GENERAL NOTES AND SPECIFICATION DATA--

ITEM 204:

SPRINKLING, AS ORDERED BY THE ENGINEER TO CONTROL DUST ON THIS PROJECT, SHALL BE PAID FOR UNDER THIS ITEM.

ITEM 292:

THIS ITEM SHALL MEET THE FOLLOWING REQUIREMENTS:

COMPLETED MIX

DENSITY - 94% MINIMUM (TEST METHOD TEX-207F)
 STABILITY - 30% MINIMUM (TEST METHOD TEX-208F)

MINERAL AGGREGATES

MATERIALS	TEST	SPECIFICATIONS	SAMPLING POINT
+10 MESH	ABRASION	40% MAX	TEX-410A
+10 MESH	DECANTATION	3% MAX	TEX-217F, PART II
TOTAL SAMPLE	PI	10% MAX	TEX-106E
TOTAL SAMPLE	GRADATION	SEE BELOW	TEX-200F
			COMPLETED MIX

THE GRADING OF THE ASPHALT STABILIZED BASE ON THIS PROJECT WILL BE AS FOLLOWS:

SIEVE SIZE	PERCENT BY WEIGHT
RETAINED ON 1 1/2" SIEVE	0
RETAINED ON NO. 7/8" SIEVE	0-10
RETAINED ON NO. 3/8" SIEVE	15-45
RETAINED ON NO. 10 SIEVE	50-70
RETAINED ON NO. 40 SIEVE	60-80
PASSING NO. 200 SIEVE	0-8
ASPHALT CONTENT	3.5-6.0

FUR THE BATCH TYPE MIXER, THE MINERAL AGGREGATES SHALL BE SCREENED AND SEPARATED INTO AT LEAST TWO HOT BINS OF THE SIZES SPECIFIED BY THE ENGINEER. ADDITIONAL HOT BINS WILL BE REQUIRED, IF NECESSARY, TO PROVIDE UNIFORM MIX.

SPECIFICATION DATA

SHEET C

GENERAL NOTES AND SPECIFICATION DATA--

ITEM 292: CONT'D

FUR THE CONTINUOUS TYPE MIXER, HOT AGGREGATE PROPORTIONING WILL NOT BE REQUIRED, THE STOCKPILED AGGREGATES WILL BE PROPORTIONED FROM SEPARATE COMPARTMENTS UNTO INDIVIDUAL FEED BELTS WITH SEPARATE VARIABLE SPEED CONTROLS.

A SURGE STORAGE SYSTEM WILL BE REQUIRED FOR THE CONTINUOUS TYPE MIXER.

THE ASPHALT STABILIZED BASE MAY BE COMPACTED IN ONE COURSE PROVIDED A COMPACTION PROCEDURE ACCEPTABLE TO THE ENGINEER CAN BE ESTABLISHED. OTHERWISE, THE ASPHALT STABILIZED BASE IN THE EXCESS OF TWO INCHES, SHALL BE PLACED IN MULTIPLE COURSES WITH THE THICKNESS OF EACH COURSE AND THE RATE OF TACK COAT APPLIED BETWEEN SUCCESSIVE COURSES SUBJECT TO THE APPROVAL OF THE ENGINEER.

ITEMS 292, 330, 340, AND 350:

NO ASPHALTIC CONCRETE PAVEMENT, EXCEPT ON DETOURS, SHALL BE PLACED BETWEEN NOVEMBER 1 AND MAY 1, EXCEPT BY PERMISSION OF THE ENGINEER.

JOINTS SHALL BE STAGGERED SO THEY FALL AT LEAST 12" FROM THE PREVIOUS JOINT.

LAYDOWN OPERATIONS SHALL BE CONDUCTED IN SUCH SEQUENCE THAT VEHICLES TRANSPORTING ASPHALTIC CONCRETE MATERIAL TO THIS PROJECT WILL NOT TRAVEL OVER THE COMPLETED MATERIAL UNTIL SAID PAVEMENT SHALL HAVE BEEN IN PLACE FOR A MINIMUM OF TWENTY-FOUR HOURS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STORAGE OF THE COMPLETED MIX UPON THE GROUND WILL NOT BE PERMITTED AT THE MIXING PLANT OR THE JOB SITE. ANY MIX THAT COMES INTO CONTACT WITH EARTH OR OTHER OBJECTIONABLE FOREIGN MATTER SHALL BE REJECTED.

LAYDOWN OPERATIONS SHALL BE PERFORMED IN SUCH SEQUENCE THAT THE CENTER JOINT WILL BE CARRIED ALONG WITHOUT EXCESS DISTANCE OF LAPBACK, NOT TO EXCEED ONE DAY'S OPERATION.

ASPHALTIC MATERIALS SHALL BE LAID IN ACCORDANCE WITH ITEM 501, "AUTOMATIC SCREED CONTROLS FOR ASPHALT CONCRETE SPREADING AND FINISHING MACHINES", UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

SPECIFICATION DATA

SHEET D

GENERAL NOTES AND SPECIFICATION DATA--

ITEMS 292 AND 340:

THE MOISTURE CONTENT IN THE COMPLETED MIX WILL NOT EXCEED 3/4 OF ONE PERCENT WHEN TESTED BY TEX-212-F, PART II, IMMEDIATELY AFTER DISCHARGING FROM THE MIXER.

ITEMS 330, 340, AND 350:

THE CONTRACTOR SHALL BE REQUIRED TO FURNISH ADEQUATE FACILITIES TO PRODUCE, TO PLACE, AND TO COMPACT A MINIMUM OF 1,000 TONS OF ASPHALTIC CONCRETE PAVEMENT PER DAY. ALL MIXING, PLACING, AND COMPACTING WILL BE COMPLETED DURING DAYLIGHT HOURS.

THE COARSE AGGREGATE USED IN THE SURFACE COURSE WITH THE EXCEPTION OF MIXES PLACED ON THE SHOULDERS SHALL HAVE A POLISH VALUE OF NOT LESS THAN 35.

MATERIAL WILL BE PLACED IN MULTIPLE COURSES. THE THICKNESS OF EACH COURSE SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.

THE POLISH VALUE REQUIREMENT SHALL BE WAIVED FOR THAT PORTION OF THE COARSE AGGREGATE PRODUCED FROM THE FINE AGGREGATE STOCKPILE.

ITEMS 340 AND 350:

THE COARSE AGGREGATE (AGGREGATES RETAINED ON THE NUMBER 10 SIEVE) SHALL BE SO CRUSHED THAT A MINIMUM OF FIFTY PERCENT SHALL HAVE MORE THAN ONE CRUSHED FACE WHEN TESTED IN ACCORDANCE WITH TEST METHOD TEX-413-A.

THE COARSE AGGREGATES FROM EACH SOURCE USED IN THE SURFACE COARSE SHALL HAVE A LOSS OF NOT MORE THAN THIRTY PERCENT WHEN SUBJECTED TO FOUR CYCLES OF MAGNESIUM SULFATE SOLUTION.

BLENDING OF AGGREGATES FROM TWO OR MORE SOURCES TO COMPLY WITH POLISH VALUE SHALL BE PERMITTED.

SPECIFICATION DATA

SHEET E

GENERAL NOTES AND SPECIFICATION DATA--

ITEM 364:

JOINTS 5/8" AND LESS IN WIDTH SHALL BE FILLED WITH RUBBER JOINT SEALING COMPOUND OR PREFORMED NEOPRENE COMPRESSION SEAL. JOINTS WIDER THAN 3/8" SHALL BE FILLED WITH TWO COMPONENT CLASS 1-A OR 1-B, SYNTHETIC POLYMER JOINT MATERIAL OR PREFORMED NEOPRENE COMPRESSION SEAL (CLASS 4).

THESE PLANS REQUIRE SAWED JOINTS. JOINT LOCATIONS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

CONCRETE SHALL BE FURNISHED FROM A STATIONARY MIXER (CENTRAL MIX) OR PAVING MIX (TRUCK MOUNTED) MEETING THE REQUIREMENTS OF ARTICLE 360.3(4) OR SHALL BE READY-MIX CONCRETE (ITEM 502, SECTION 4) FROM A CLASS 4 PLANT. CONCRETE AGGREGATES SHALL BE STOCKPILED AT THE PLANT SITE.

ADJUSTMENT FOR DEFICIENT PAVEMENT THICKNESS IS WAIVED FOR THIS PROJECT.

SPECIAL PROVISION TO ITEM 437 (437---005) WILL NOT APPLY TO THIS ITEM.

ANCHOR JOINTS AS DETAILED IN PLANS ARE TO BE USED AT LOCATIONS WHERE JOINTED CONCRETE PAVEMENT IS TO BE PLACED ADJACENT TO EXISTING CONCRETE PAVEMENT. PAYMENT FOR INSTALLATION OF PAVEMENT WIDENING DOWELS WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO THIS ITEM.

14
SPECIFICATION DATA

SHEET F

GENERAL NOTES AND SPECIFICATION DATA--

ITEM 470:

LABOR AND MATERIALS REQUIRED TO REMOVE SEWER PIPE WITHIN THE LIMITS OF THE INLET WILL NOT BE PAID DIRECTLY BUT SHALL BE CONSIDERED SUBSIDIARY TO ITEM 470, "MANHOLES AND INLETS."

ITEM 471:

ALL INLET GRATES AND MANHOLE COVERS SHALL BE TACKWELDED TO THE FRAME WITH TWO 1-INCH WELDS. PAYMENT SHALL BE SUBSIDIARY TO THIS ITEM. NO PAINTING WILL BE REQUIRED FOR THE CAST IRON INLET GRATE AND FRAME OR FOR THE CAST IRON MANHOLE FRAME AND COVER.

ITEM 496:

EXISTING INLETS TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DESPOSED BY HIM OUTSIDE THE LIMITS OF THE RIGHT OF WAY AT HIS OWN EXPENSE.

ALL PIPE TO BE REMOVED AND NOT REPLACED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

ANY ABANDONED UTILITIES OR DRAINAGE STRUCTURES THAT ARE ENCOUNTERED BY THE CONTRACTOR SHALL BE REMOVED TO A MINIMUM OF ONE FOOT BELOW SUBGRADE AND PLUGGED WITH A CONCRETE PLUG OF A THICKNESS EQUAL TO 1 1/2 INCHES PER FOOT OF DIAMETER OF PIPE WITH A MINIMUM THICKNESS OF 3 INCHES. COST OF PLUG SHALL BE CONSIDERED SUBSIDIARY TO VARIOUS BID ITEMS.

SPECIFICATION DATA

SHEET 6

GENERAL NOTES AND SPECIFICATION DATA--

ITEM 500:

THE ASPHALT MIXING PLANT SHALL BE EQUIPPED WITH AN APPROVED FULLY AUTOMATIC DEVICE FOR THE BATCHING AND CYCLING OPERATIONS. THE OVER AND UNDER ASPHALT AND AGGREGATE CHECK SENSORS WILL NOT BE REQUIRED.

ITEM 522:

CURB FLARES AS SHOWN IN PLANS SHALL BE PAID FOR AS TYPE I CURB AND GUTTER. ALL EXTRA LABOR AND MATERIALS NECESSARY TO COMPLETE THESE TRANSITIONS WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED SUBSIDIARY TO THIS ITEM.

PAYMENT FOR ALL MATERIALS AND INCIDENTALS NECESSARY FOR THE INSTALLATION OF DOWELS FOR ATTACHING CURB FLARES TO EXISTING APPROACH SLAB AS DETAILED IN THE PLANS WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED SUBSIDIARY TO THESE ITEMS.

ITEMS 560 AND 5275:

THE CONTRACTOR WILL BE REQUIRED TO CONNECT THE EXISTING METAL BEAM GUARD FENCE (BAR) ON BRIDGES TO THE CONCRETE MEDIAN BARRIER AT BOTH ENDS OF BRIDGES AS DETAILED IN THE PLANS. THE LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THIS WORK WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED SUBSIDIARY TO THE ITEM "CONCRETE MEDIAN BARRIER".

ITEM 561:

ALL METAL BEAM GUARD FENCE AND METAL BEAM GUARD FENCE (BAR) REMOVED FROM THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR TO BE DISPOSED OF BY HIM OUTSIDE THE LIMITS OF THE RIGHT-OF-WAY AT HIS OWN EXPENSE.

THE EXISTING SPECIAL MILEPOST SIGNS MOUNTED ON THE METAL BEAM GUARD FENCE (BAR) WILL BE CAREFULLY REMOVED, PROPERLY STORED, AND PLACED ON THE CONCRETE MEDIAN BARRIER IN THE SAME LOCATION BY THE CONTRACTOR IN

SPECIFICATION DATA

SHEET 15

F.R. DIV.6 * TEXAS * I 35E-6(214)418 * SHEET 16 *
DALLAS COUNTY * HWY IH 35E *CONT 442-2-71

GENERAL NOTES AND SPECIFICATION DATA--

ITEM 561: CONT'D
ACCORDANCE WITH DETAILS SHOWN IN THE PLANS. IF MARKERS ARE DAMAGED IN REMOVAL OR STORAGE THE CONTRACTOR WILL REPLACE THEM AT HIS OWN EXPENSE. MATERIALS AND LABOR FOR THIS WORK WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY TO THIS ITEM.

ITEM 580:

THE CONTRACTOR WILL FURNISH ONE FIELD OFFICE AND LABORATORY (TYPE D) FOR THIS PROJECT.

ITEM 110 AND 5275

PRIOR TO ANY EXCAVATION OR DRILLING IN THE CLOSE VICINITY OF UTILITIES OR SEWERS TO REMAIN IN PLACE, THE CONTRACTOR SHALL BE REQUIRED TO PROBE OR EXPOSE THESE FACILITIES TO DETERMINE THEIR EXACT LOCATION. ALL COSTS INVOLVED WILL BE SUBSIDIARY TO THE RELATED BID ITEMS. THE CONTRACTOR SHALL BE PAID FOR DRILLING SHAFES ONCE ONLY REGARDLESS OF ANY EXTRA WORK CAUSED BY THE OCCURRENCE OF THE OBSTRUCTIONS.

ITEM 2087:

THE MATERIAL SALVAGED UNDER THIS ITEM SHALL BE STOCKPILED IN AN AREA LOCATED AT I.H. 35E BECKLEY AVE. NEAR STATION 545+00.

ITEM 3225:

ASPHALT MATERIAL USED IN THE ASPHALT RUBBER MIX SHALL BE AC-5. UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

SPECIFICATION DATA

SHEET 1

F.R. DIV.6 * TEXAS * I 35E-6(214)418 * SHEET 16 *
DALLAS COUNTY * HWY IH 35E *CONT 442-2-71

GENERAL NOTES AND SPECIFICATION DATA--

ITEM 5034:

NONE OF THE HEAD-LIGHT BARRIER FENCE TO BE REMOVED IS CONSIDERED SALVABLE AND SHALL BECOME THE PROPERTY OF THE CONTRACTOR TO BE DISPOSED OF BY HIM OUTSIDE THE LIMITS OF THE RIGHT OF WAY.

ITEM 5154:

DURING THE COURSE OF THIS PROJECT THE CONTRACTOR WILL BE REQUIRED TO USE THE ITEM OF SPRINKLING TO CONTROL DUST ON THIS PROJECT.

PRIOR TO STARTING EACH PHASE OF THE CONSTRUCTION THE ENGINEER WILL REVIEW THE CONTRACTOR'S PLAN AND PROPOSED METHODS TO BE USED FOR EROSION CONTROL AS OUTLINED IN THIS ITEM. ADDITIONAL ITEMS AND METHODS REQUIRED SHALL BE DONE ON A FORCE-ACCOUNT BASIS OR ON AGREED UNIT PRICES.

THE SURFACE AREA REQUIREMENT OF THIS SPECIAL SPECIFICATION IS NOT APPLICABLE TO THIS PROJECT.

ITEM 5361:

WHEN TEMPURARY RAIL IS TO BE MOVED FROM ONE LOCATION TO ANOTHER LOCATION (TEMPORARY OR PERMANENT), BUT BECAUSE OF SEQUENCE WILL BE TEMPURARILY STOCKPILED BEFORE PLACING, NO ADDITIONAL PAY WILL BE ALLOWED FOR MOVING IT FROM THE STOCKPILE TO ITS DESIGNATED LOCATION. ALL EXTRA LABOR AND MATERIALS NECESSARY FOR COMPLETING THIS WORK WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED SUBSIDIARY TO THIS ITEM.

TEMPORARY RAIL TO BE RETAINED BY THE STATE SHALL BE STOCKPILED IN THE AREAS LOCATED AT THE COLORADO STREET OVERPASS FOR REMOVAL BY OTHERS.

SPECIFICATION DATA

SHEET J 16

* GENERAL NOTES AND SPECIFICATION DATA--

* ILLUMINATION

* SCOPE OF WORK:

* THESE PLANS PROVIDE FOR REVISION OF AN EXISTING ILLUMINATION SYSTEM.
* ALL WORK, MATERIAL AND SERVICES NOT EXPRESSLY CALLED FOR IN THE
* SPECIFICATIONS OR NOT SHOWN IN THE PLANS, WHICH MAY BE NECESSARY FOR
* COMPLETE AND PROPER CONSTRUCTION, SHALL BE PERFORMED, FURNISHED AND
* INSTALLED.

* NO EXTRA COMPENSATION WILL BE ALLOWED FOR FULFILLING THE REQUIREMENTS
* STATED ABOVE.

* ITEM 610:

* AFTER COMPLETION OF ALL WIRING ON THIS PROJECT, POWER SHALL BE APPLIED
* TO ALL CIRCUITS AND SUCCESSFUL OPERATION SHALL BE DEMONSTRATED FOR
* FOURTEEN (14) CALENDAR DAYS. THE ENGINEER, WITH THE CONTRACTOR'S
* ASSISTANCE SHALL TEST ALL CIRCUITS FOR PROPER APPLIED VOLTAGE AND FOR
* ACCEPTABLE VOLTAGE DROP IN EACH CIRCUIT. ALL FAULTY CIRCUITS SHALL BE
* CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE. THE CONTRACTOR WILL NOT
* BE REQUIRED TO PAY FOR ELECTRICAL ENERGY CONSUMED DURING THIS PERIOD.

* ITEM 651:

* MORTAR (GROUT) (ITEM 421.2(6)) FOR DUCT-CABLE TRENCH WILL NOT BE
* PAID FOR DIRECTLY, BUT SHALL BE SUBSIDIARY TO THE VARIOUS BID ITEMS.

* ITEM 6001:

* ALL ROADWAY ILLUMINATION ASSEMBLIES SHALL BE CAREFULLY REMOVED AND THE
* SALVAGED ASSEMBLIES WILL BE HAULED TO THE STATE DEPARTMENT OF HIGHWAYS
* AND PUBLIC TRANSPORTATION WAREHOUSE LOCATED AT 4202 CORNVALLEY ROAD,
* GRAND PRAIRIE, TEXAS.

* SPECIFICATION DATA

* SHEET K

* GENERAL NOTES AND SPECIFICATION DATA--

* ITEM 6001:, CONT'D

* STOCKPILING SALVAGED MATERIAL WITHIN THE LIMITS OF THE PROJECT WILL NOT
* BE REQUIRED.

* SPECIAL PROVISION (000--3986):

* THE NUMBER OF JOB TRAINEES FOR THIS PROJECT IS 5.

* SPECIAL PROVISION (000--4560):

* THE FOLLOWING GOALS ARE ESTABLISHED: MBE 2.00%, WBE 0.00%, TOTAL .00%.

* ITEM 5275:

* ALL CONDUIT INSTALLED IN THE CONCRETE MEDIAN BARRIER FOR FUTURE USE SHALL BE CAPPED
* AT BOTH ENDS USING STANDARD GALVANIZED METAL CAPS. THIS WORK WILL NOT BE PAID FOR
* DIRECTLY BUT SHALL BE CONSIDERED SUBSIDIARY TO THIS ITEM.

* ITEMS 420, 5275 & 5361:

* CONCRETE MEDIAN BARRIER SHALL RECEIVE A GRADE I FINISH.
* TEMPORARY CONCRETE BARRIER RAIL SHALL RECEIVE A GRADE I FINISH
* WHEN PLACED IN THE PERMANENT LOCATION.

* SPECIFICATION DATA

* SHEET L

* Rev. 12-3-80

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EARTHWORK

STATION	UNCL. RD. EXCAV. C.Y.	EMB.+ SHR. C.Y.	SECT. NO.
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STATION	UNCL. RD. EXCAV. C.Y.	EMB.+ SHR. C.Y.	SECT. NO.
578+00	50		1A
579+00	50		"
580+00	50		"
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582+00	50		"
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699+00	50		"
700+00	50		"

STATION	UNCL. RD. EXCAV. C.Y.	EMB.+ SHR. C.Y.	SECT. NO.
295+00	—	—	1A
295+00	—	—	1B
Begin Br 301+00	—	—	—
End Br 301+00	—	—	—
302+00	27	—	2B
303+00	27	—	2B-1B
304+00	41	—	1B
305+00	41	—	1B-2B
306+00	29	—	2B
Begin Br 309+00	—	—	—
End Br 309+00	—	—	—
310+00	—	—	3A
311+00	—	—	"
312+00	—	—	"
313+00	—	—	"
314+00	41	—	3A
Begin Br 315+00	—	—	—
End Br 315+00	—	—	—
316+00	—	—	3A
317+00	35	—	"
318+00	35	—	"
319+00	35	—	"
320+00	35	—	"
321+00	35	—	"
322+00	35	—	"
323+00	35	—	"
324+00	—	—	3A
325+00	—	—	—
326+00	—	—	2B
327+00	41	—	"
328+00	41	—	"
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365+00	41	—	2B
366+00	41	—	2B-3B
367+00	41	—	3B
368+00	41	—	"
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EARTHWORK cont.

STATION	UNCL. RD. EXCAV. C.Y.	EMB. + SHR. C.Y.	SECTION NO.
385+00	68	21	3C
386+00	3	10	3C
Begin Br. 387+83.02	1	3	3C
388+00	9	17	"
389+00	70	18	"
390+00	69	17	"
391+00	68	15	"
392+00	71	12	"
393+00	71	10	"
394+00	69	5	3C
395+00	37		3C-4
396+00	37		4
397+00	37		"
398+00	37		"
399+00	37		"
400+00	37		"
401+00	37		"
402+00	37		"
403+00	37		"
404+00	37		"
405+00	37		4
406+00	26		4-5
407+00	26		5
407+72	2		"
Begin Br. 407+83.24	10		"
408+00	26		"
409+00	26		"
410+00	23	3	"
411+00	25	5	"
412+00	24	7	"
413+00	21	5	"
414+00	23	3	"
415+00	17		"
416+00	37		"
417+00	24		5
417+79			

SUMMARY OF MANHOLES TO BE ADJUSTED

M.H. NO.	LOCATION	ADJ. MH. TY 'A' EA.	ADJ. MH. TY 'B' EA.	T.E.	EXIST. T.E.	STL. LB.	CONC. C.Y.
1	Sta. 390+00 6' Rt. E		1	581.48	581.70	16	0.14
2	Sta. 396+47 7' Rt. E		1	577.17	577.44	16	0.14
3	Sta. 401+99 6' Lt. E		1	562.74	563.03	16	0.14
4	Sta. 414+51 5' Lt. E		1	555.86	556.01	16	0.14
5	Sta. 420+51 6' Lt. E		1	564.36	564.43	16	0.14
6	Sta. 425+52 6' Lt. E		1	584.34	584.56	16	0.14
7	Sta. 428+51 4' Lt. E		1	592.55	593.27	16	0.14
8	Sta. 434+12 6' Lt. E		1	593.04	593.68	16	0.14
9	Sta. 438+64 6' Lt. E		1	587.65	588.27	16	0.14
10	Sta. 451+09 6' Rt. E		1	596.08	596.66	16	0.14
11	Sta. 463+99 6' Lt. E		1	576.67	576.85	16	0.14
12	Sta. 468+01 5' Lt. E		1	568.82	569.02	16	0.14
13	Sta. 472+79 5' Lt. E		1	559.36	559.46	16	0.14
14	Sta. 477+02 7' Lt. E		1	546.52	546.78	16	0.14
15	Sta. 483+03 6' Lt. E		1	522.34	522.63	16	0.14
16	Sta. 487+16 6' Rt. E		1	505.84	506.05	16	0.14
17	Sta. 516+99 5' Rt. E		1	504.57	505.26	16	0.14
18	Sta. 519+97 5' Rt. E		1	512.60	513.24	16	0.14
19	Sta. 540+21 5' Rt. E		1	556.46	557.15	16	0.14
20	Sta. 550+26 5' Lt. E		1	562.96	563.16	16	0.14
21	Sta. 554+02 7' Lt. E		1	558.34	558.60	16	0.14
22	Sta. 559+64 3' Rt. E		1	543.74	544.26	16	0.14
23	Sta. 563+03 4' Rt. E		1	550.23	550.92	16	0.14
24	Sta. 575+26 4' Rt. E		1	574.23	574.71	16	0.14
25	Sta. 604+45 6' Lt. E		1	565.62	565.98	16	0.14
26	Sta. 262+13 6' Lt. E		1	529.34	529.50	16	0.14
27	Sta. 293+02 4' Rt. E		1	509.67	510.36	16	0.14
28	Sta. 298+36 3' Lt. E		1	501.01	501.51	16	0.14
29	Sta. 302+01 5.5' Lt. E		1	499.07	499.63	16	0.14
30	Sta. 310+36 5.5' Rt. E		1	517.62	518.18	16	0.14
31	Sta. 320+52 5' Rt. E		1	506.34	506.93	16	0.14
32	Sta. 351+65 5' Lt. E		1	494.70	495.03	16	0.14
33	Sta. 372+98 3.5' Rt. E	1		467.42	469.98	131	1.95
34	Sta. 376+97 3.5' Rt. E	1		479.15	480.64	126	1.67
35	Sta. 386+30 3.5' Rt. E	1		471.71	473.39	131	1.95
36	Sta. 389+35 5' Rt. E		1	466.62	467.42	16	0.14
37	Sta. 392+85 3' Rt. E	1		466.27	467.50	131	1.91
Totals		4	33			1047	12.30

★ FOR BIDDERS INFORMATION ONLY.

SUMMARY OF ASPH. STAB. BASE

LIMITS STATION to STATION	SECTION NO.	A.S.B. TON
358+00 to 365+20.75	2A	793
366+47.23 to 389+00	2A	2,478
389+00 to 402+71.08	1A	1,508
404+61.06 to 428+00	2A	2,573
428+00 to 438+00	1A	1,100
438+00 to 445+00	2A	770
445+00 to 454+00	1A	995
454+00 to 468+00	2A	1,540
468+00 to 480+00	1A	1,323
480+00 to 485+00	2A	550
485+00 to 493+80.99	1A	969
496+14.01 to 508+51.80	2A	1,340
512+52.75 to 515+00	2A	272
515+00 to 524+11.55	1A	1,003
525+39.66 to 527+00	1A	176
527+00 to 539+00	2A	1,324
539+00 to 571+00	1A	3,520
571+00 to 574+00	2A	330
574+00 to 578+78.69	1A	527
602+60 to 606+62.70	1A	443
232+70.18 to 234+29.72	2A	175
235+59.63 to 285+00	2A	5,434
285+00 to 292+00	1A	770
292+00 to 293+00	2A	110
293+00 to 299+00	1A	660
299+00 to 299+03.43	1B	3
301+34.47 to 302+00	2B	59
302+00 to 304+00	1B	181
304+00 to 305+45.47	2B	132
309+71.21 to 313+25.53	3A	366
315+30.21 to 322+75	3A	700
341+50 to 364+00	2B	2,035
364+00 to 370+00	3B	557
370+00 to 386+52.53	3C	1,533
387+83.02 to 395+00	3C	665
395+00 to 405+00	4	513
405+00 to 407+06.22	5	111
407+03.24 to 417+79	5	545
Total		38,083

CONCRETE CURB & GUTTER

LIMITS		CURB AND GUTTER LF.
STATION	to STATION	
402+76	to 402+59	29.2
404+73	to 404+87	29.2
523+99	to 524+11.04	29.2
525+39.04	to 525+52	29.2
296+90	to 299+00	22.8
301+38	to 301+48	22.8
305+32	to 305+45	22.8
309+78	to 309+91	22.8
313+52	to 313+63	22.8
315+22	to 315+33	22.8
386+38	to 386+50	22.8
387+85	to 387+97	22.8
406+86	to 406+98	10.4
407+72	to 407+84	10.4

EARTHWORK SUMMARY

UNCL. RD. EXCAV. C.Y.	EMB. + SHR. C.Y.	STOCKPILE BASE C.Y.
20,299	447	19,852

SUMMARY SHEET

Sheet 2 of 9 Sheets

135E-6(214)418

19

18 Dallas 442 2 71 IH35E

PRECAST AND PORTABLE CONCRETE BARRIER RAIL

LOCATION		LENGTH	CBR. PREC. PORT.	CBR. REMOVE RESET	CBR. REMOVE	SEQ. NO.	REMARKS
FROM (STATION)	TO (STATION)						
Section "A" Sta. 358+50 to 418+17.69		5970				1	Build & Sta 377+57.80 to 418+17.69 first
SB Sta. 358+50 to 424+17.69			6570				
NB Sta. 352+50 to 418+17.69			6570				
NB Sta. 411+57.69 to 418+17.69	E Sta. 359+50.75 to 365+20.75			570			
NB Sta. 408+57.69 to 411+57.69	E Sta. 377+57.80 to 381+47.80			390			
Section "B" Sta. 418+17.69 to 473+03.08		5490				2	Build & Sta 418+17.69 to 473+03.08 first
SB Sta. 358+50 to 419+37.69	SB Sta. 418+17.69 to 479+03.08			6090			
NB Sta. 352+50 to 408+57.69	NB Sta. 412+17.69 to 468+23.08			5610			
SB Sta. 419+37.69 to 424+17.69	NB Sta. 468+23.08 to 473+03.08			480			
SB Sta. 418+17.69 to 420+57.69	E Sta. 465+33 to 467+73			240			
Section "C" Sta. 473+03.08 to 526+70.66		5370				3	Build & Sta 473+03.08 to 500+03.08 first
SB Sta 420+57.69 to 479+03.08	SB Sta 473+03.08 to 531+50.66			5850			
NB Sta. 471+03.08 to 473+03.08	SB Sta. 531+50.66 to 532+70.66			120			
NB Sta 472+17.69 to 471+03.08	NB Sta 467+03.08 to 526+70.66			5970			
SB Sta. 473+03.08 to 476+03.08	E Sta 503+11.40 to 506+11.40			300			
Section "D" Sta. 526+70.66 to 578+86.73		5220				4	Build & Sta 526+70.66 to 561+00 first
SB Sta. 476+03.08 to 532+70.66	SB Sta 526+70.66 to 583+36.73			5670			
NB Sta 525+20.66 to 526+70.66	SB Sta 583+36.73 to 584+86.73			150			
NB Sta 467+03.08 to 525+20.66	NB Sta 520+70.66 to 578+86.73			5820			
SB Sta 526+70.66 to 535+06.73	E Sta. 561+18.40 to 569+58.40			840			
SB Sta 535+06.73 to 536+86.73	E Sta 570+90.80 to 572+70.80			180			
Section "E" Sta. 602+60 to 275+77.48		4710				5	Build & Sta 603+20 to 606+62.70 first
SB Sta 536+86.73 to 584+86.73	SB Sta 602+60 to 276+67.48			4800			
NB Sta 573+76.73 to 578+86.73	SB Sta 276+67.48 to 281+77.48			510			
NB Sta 520+70.66 to 573+76.73	NB Sta 597+60 to 275+77.48			5310			
SB Sta 602+60 to 603+50	E Sta 263+28.50 to 263+98.90			90			
Section "F" Sta. 275+77.48 to 322+87.48		4710				6	Build & Sta 301+00 to 322+75 first
SB Sta 605+20 to 281+77.48	SB Sta 275+77.48 to 327+07.55			5130			
NB Sta 274+87.48 to 275+77.48	SB Sta 327+07.55 to 327+97.55			90			
NB Sta 596+60 to 274+87.48	NB Sta 269+77.48 to 325+07.55			5220			
NB Sta 311+77.55 to 322+87.55	E Sta. 275+77.48 to 286+57.48			1110			
Section "G" Sta. 341+50 to 383+60		4210				7	Build & Sta 360+00 to 383+00 first
SB Sta 275+77.48 to 322+87.55	SB Sta 341+50 to 388+60			4710			
NB Sta 269+77.48 to 311+77.55	NB Sta 336+50 to 378+50			4200			
SB Sta 322+87.55 to 327+97.55	NB Sta 378+50 to 383+60			510			
NB Sta 366+20 to 369+50	E Sta. 341+50 to 388+60			330			
NB Sta 369+50 to 377+00	E Sta. 346+38.25 to 353+88.25			750			
NB Sta. 377+00 to 382+10	E Sta 355+21.30 to 360+31.30			510			
NB Sta. 382+10 to 383+60	E Sta. 362+33.66 to 363+83.66			150			
Section "H" Sta. 383+60 to 417+80		3420				8	Build & Sta 383+60 to 397+84 first
SB Sta 341+50 to 378+70	SB Sta 383+60 to 420+80			3720			
NB Sta. 336+50 to 366+20	NB Sta 378+60 to 408+30			2970			
SB Sta 378+70 to 388+30	NB Sta. 408+30 to 417+90			960			
SB Sta 383+60 to 389+20	E Sta. 397+84.30 to 403+24.30			540			
SB Sta 389+20 to 391+10	E Sta 404+62 to 406+62			180			
SB Sta 391+10 to 394+40	E Sta 408+60 to 411+00			300			
SB Sta 394+40 to 396+50	E Sta 415+59 to 417+69			210	6450		
TOTALS		39100	13140	80580	6450		

REMOVE METAL BEAM GUARD FENCE (BAR)

LOCATION		QUANTITY
STATION	STATION	L.F.
361+00	402+48	4148
404+85	524+01	11923
525+50	578+68	5321
232+75	298+92	6617
321+46	305+34	388
309+89	313+54	365
315+31	322+25	744
341+50	370+93	2943
373+13	386+40	1327
387+55	392+57.50	4675
392+82.50	395+83	300
398+13	406+86	873
407+82	417+79	997
Total		40621

REMOVE OLD CONCRETE

LOCATION		CURB OR CURB AND GUTTER	MEDIAN
STATION	STATION	L.F.	S.Y.
361+00.00	365+20.75	842	1029
368+47.25	402+59	7224	8828
404+73	493+80.99	17630	21792
493+4.01	508+31.80	2436	2977
512+58.75	524+11.04	2316	2831
525+40.16	578+78.00	10695	13162
602+60.00 (NB)	606+62.70 (NB)	403	
632+70.18 (NB)	234+23.72 (NB)	160	195.0
634+30.00 (SB)	607+35.45 (SB)	355	
632+75.00 (SB)	234+29.72 (SB)	155	189.0
235+59.83	299+00	12630	15436
301+38	305+45	814	794
309+78	313+63	770	770
315+22	322+75	1506	1590
341+50	386+50	9000	5027
387+65	406+98	1283	1475
407+72	417+79	2014	1026
Total		75478	77161

* Includes Double curb between Sta. 395+83 to Sta. 398+14

PAVEMENT TO BE SCARIFIED

LOCATION		QUANTITY
STATION	STATION	S.Y.
602+60	606+62.70	1685
368+50	383+52.63	4322
387+83.02	392+50	960
Total		6967

CONCRETE MEDIAN BARRIER

LOCATION		TYPE 2	TYPE 10	TYPE 3	TYPE 12	TYPE 1
STATION	STATION	L.F.	L.F.	L.F.	L.F.	L.F.
358+50	359+50.75	100.75				126.50
355+20.75	366+47.25			92.15		
366+47.25	367+39.40					
367+39.40	376+26.90	887.50				
376+26.90	377+57.80			130.90		
381+47.80	388+27.50	679.70				
385+27.50	389+72.50			145.00		
389+72.50	402+48		1275.50			
404+85	411+68.50	683.50				
411+68.50	412+99.25			130.75		
412+99.25	418+13.00	516.75				
418+13.00	419+82.00			166.00		
419+82.00	429+73.50	991.50				
429+73.50	431+04.40			130.90		
431+04.40	449+75.50	1871.10				
449+75.50	451+06.35			130.65		
451+06.35	463+67.00	1265.26				
463+67.00	465+33.00			166.00		
467+73	473+10.80	537.80				
473+10.80	474+41.65			130.85		
474+41.65	484+61.10	1021.87				
484+61.10	485+91.40			130.30		
485+91.40	493+80.99	789.59				
493+80.99	496+14.01					233.02
496+14.01	501+81.10	567.09				
501+81.10	503+11.40			130.30		
503+11.40	508+31.80	220.40				
508+31.80	512+52.75					420.95
512+52.75	516+84.50	431.75				
516+84.50	518+14.80			130.30		
518+14.80	524+01	586.20				
524+01	546+90.00	2143.93				
546+90.00	548+20.85			130.85		
548+20.85	549+83.90	163.05				
549+83.90	551+4.20			130.30		
551+4.20	559+45.40	831.20				
559+45.40	561+12.30			173.00		
561+12.30	569+58.40	180				
569+58.40	570+90.80			130.80		
570+90.80	576+60.00	329.20				
576+60.00	578+24.60	124.92				
578+24.60	606+62.70	342.70				
606+62.70	234+29.72	159.54				
234+29.72	235+59.63					129.91
235+59.63	236+04.50	44.87				
236+04.50	237+35.40			130.90		
237+35.40	242+45.50	510.10				
242+45.50	243+78.40			130.90		
243+78.40	256+26.50	1250.10				
256+26.50	257+57.40			130.90		
257+57.40	261+01.90	344.50				
261+01.90	263+58.90			207.00		
263+58.90	272+02.63	803.73				
272+02.63	273+60.97			158.34		
273+60.97	275+77.48	216.51				
275+77.48	299+03.43	1215.88				
299+03.43	305+32	397.33				
305+32	313+54			365.00		
313+54	319+05.50			374.50		
319+05.50	320+36.30					130.80
320+36.30	322+75.00			238.70		
322+75.00	345+07.50	27.50				
345+07.50	346+38.25			130.75		
346+38.25	353+90.50	2.25				
353+90.50	355+21.30			130.80		
355+21.30	360+56.66	25.36				
360+56.66	362+33.66			177.00		
362+33.66	364+00.00	16.34				
364+00.00	371+28.93			728.93		
371+28.93	372+78.93					150.00
372+78.93	379+96.50			717.57		
379+96.50	381+28.50					132.00
381+28.50	386+40			511.5		
386+40	388+51.80					89.80
388+51.80	389+12.30			727.50		
389+12.30	397+84.90					172.00
397+84.90	403+50.50	26.20				
403+50.50	404+82.00			131.50		
404+82.00	406+62	26.00				
406+62	408+00	18.00				

CONCRETE MEDIAN BARRIER (cont.)

LOCATION		TYPE 2	TYPE 10	TYPE 3	TYPE 12	TYPE 1
STATION	STATION	L.F.	L.F.	L.F.	L.F.	L.F.
411+00.00	414+27.50		327.50			
414+27.50	415+59.00			131.50		
417+69.00	417+79.00	10.00				
TOTALS		20184.97	5266.70	4010.64	502.6	910.38

PAV. MARKINGS SUMMARY

LOCATION		THERMOPLASTIC MARKINGS 4 in. YELLOW L.F.	THERMOPLASTIC MARKINGS 4 in. WHITE L.F.
STATION	STATION		
358+50	578+78.69	44,084	
602+60	322+75	18,616	
341+50	417+79	15,258	
364+70.75	366+97.25		733
493+30.99	496+64.01		1026
507+81.80	513+02.75		1602
233+79.72	236+09.63		780
Total		78,158	4141

BLAST CLEANING SUMMARY

LOCATION		QUANTITY (4 in.) L.F.
STATION	STATION	
358+50	578+78.69	22042
602+60	322+75	9408
341+50	365+35	2385
358+50	578+78.69	22042
602+60	322+75	9408
341+50	365+35	2540
TOTAL		67825

REMOVE HDLT BAR FENCE

LOCATION		QUANTITY
STATION	STATION	L.F.
310+03	322+75	872
341+50	349+24	774
TOTAL		1246

SUMMARY OF CONCRETE (PAV.) SUMMARY OF POLYMER CONC.

INLETS TO BE REMOVED	NO.	CONCRETE PAV. 15" C.Y.	POLYMER CONCRETE C.F.
Single Inlets	51	5.12	45.6
Double Inlets	93	35.36	105.04
Triple Inlets	42	28.20	57.69
Totals	186	69.20	207.91

SUMMARY SHEET 21

Sheet 4 of 9 Sheets

135E-C(214)418 21

18 DALLAS 442 2 77 IN 31E

SUMMARY OF INLETS

INLET NO	LOCATION	DRAINAGE AREA NO	DRAINAGE AREA ACRES	I	Q10 (CFS)	Q50 (CFS)	h GRATE (FT)	Qcop GRATE (CFS)	INLET (COMPL)				FRAME S GRATE (TYPE B) EA	TOP ELEV.	F.L. ELEV.	H INLET FT	* CONC C.Y.	* REINF. STEEL LBS.	INLET DIMENSIONS		SEWER EXCAV. C.Y.
									TY B EA	TY B MOD EA	GR 1 GR	GR 2 GR							"X"	"Y"	
1	3.5' Lt. Sta. 391+71	37 & 38	0.29	8.01	2.09		0.25	2.62	1				1	580.03	576.00	3.97	0.88	80	—	—	3.51
2	3.5' Lt. Sta. 394+08	39 & 41	0.32	8.01	2.31		0.25	2.62	1				1	578.75	574.74	4.01	0.88	80	—	—	3.55
3	3.5' Lt. Sta. 396+22	42 & 44	0.28	8.01	2.02		0.25	2.62	1				1	577.08	572.48	4.60	0.99	86	—	—	4.10
4	3.5' Rt. Sta. 398+12	47, 48 & 49	0.33	8.01	2.38		0.25	2.62	1				1	573.52	569.06	4.46	0.96	80	—	—	3.97
5	3.5' Rt. Sta. 400+09	50 & 51	0.28	8.01	2.02		0.25	2.62	1				1	567.89	563.84	4.05	0.88	80	—	—	3.59
6	3.5' Rt. Sta. 402+28	53 & 55	0.30	8.01	2.16		0.25	2.62	1				1	561.57	558.82	2.75	0.62	61	—	—	2.38
7	3.5' Lt. Sta. 428+38	85, 87, 86 & 90 thru 98	0.51	8.01	3.68		0.25	5.25				1	2	592.25	587.00	5.25	2.44	334	0'-9"	1'-9"	8.44
8	3.5' Lt. Sta. 436+02	99 thru 106	0.63	8.01	4.54		0.25	5.25				1	2	589.41	585.72	3.69	2.50	356	2'-3"	1'-6"	7.45
9	3.5' Lt. Sta. 438+54	109 thru 118	0.33	8.01	2.38		0.25	2.62				1	1	587.58	583.80	3.78	1.52	104	2'-6"	1'-6"	5.31
10	3.5' Rt. Sta. 444+68	119 & 120	0.16	8.01	1.15		0.25	2.62				1	1	585.24	582.27	2.97	1.87	138	5'-0"	1'-6"	5.63
11	3.5' Rt. Sta. 445+42	121, 122 & 124	0.26	8.01	1.87		0.25	2.62				1	1	585.54	581.24	4.30	2.36	161	5'-0"	1'-6"	8.21
12	3.5' Rt. Sta. 447+38	125 thru 128	0.33	8.01	2.38		0.25	2.62				1	1	588.60	584.70	3.90	2.28	155	5'-3"	1'-9"	7.63
13	3.5' Rt. Sta. 449+68	129, 130, 131 & 133	0.34	8.01	2.45		0.25	2.62				1	1	593.19	589.30	3.89	2.28	155	5'-3"	1'-9"	7.61
14	3.5' Rt. Sta. 451+86	135, 136, 138 & 139	0.32	8.01	2.31		0.25	2.62				1	1	597.43	593.79	3.64	1.48	109	2'-6"	1'-6"	5.11
15	3.5' Rt. Sta. 472+20	15, 16 & 18	0.71	8.01	5.12		0.25	5.25	1			2	2	560.00	556.57	3.43	1.30	113	—	—	4.65
16	3.5' Rt. Sta. 475+75	22, 23 & 27	0.62	8.01	4.47		0.25	5.25	1			2	2	551.09	547.46	3.63	1.38	119	—	—	4.94
17	3.5' Rt. Sta. 479+48	28, 30, & 32	0.50	8.01	3.60		0.25	5.25	1			2	2	536.28	532.81	3.47	1.32	114	—	—	4.71
18	3.5' Lt. Sta. 489+54	42, 43 & 44	0.71	8.01	5.12		0.25	5.25	1			2	2	496.18	492.35	3.83	1.41	126	—	—	5.22
19	3.5' Lt. Sta. 492+04	47 & 49	0.42	8.01	3.03		0.25	5.25				1	2	491.72	488.74	2.98	1.81	264	1'-3"	1'-6"	5.10
20	3.5' Lt. Sta. 492+52	52	0.20	8.01	1.44		0.25	2.62				1	1	491.50	489.07	2.43	0.93	79	1'-6"	1'-6"	2.89
21	3.5' Lt. Sta. 493+20	53	0.18	8.01	1.30		0.25	2.62				1	1	491.76	489.46	2.30	0.93	79	1'-6"	1'-6"	2.73
22	3.5' Rt. Sta. 516+46	98	0.17	8.01	1.23		0.25	2.62				1	1	504.25	500.55	3.70	1.29	105	1'-6"	1'-6"	4.46
23	3.5' Rt. Sta. 517+48	99 & 100	0.50	8.01	3.60		0.25	5.25				1	2	505.05	501.20	3.85	2.24	315	1'-6"	1'-9"	3.44
24	3.5' Rt. Sta. 519+46	101 & 102	0.50	8.01	3.60		0.25	5.25				1	2	510.52	506.50	4.02	2.21	312	1'-3"	1'-6"	3.30
25	3.5' Lt. Sta. 522+28	103 & 104	0.48	8.01	3.46		0.25	5.25				1	2	521.77	517.90	3.87	2.15	300	1'-3"	1'-6"	3.21
26	3.5' Lt. Sta. 527+40	108	0.11	8.01	0.79		0.25	2.62				1	1	530.77	527.00	3.77	1.32	97	1'-9"	1'-9"	4.73
27	3.5' Rt. Sta. 540+05	111 & 112	0.34	8.01	2.45		0.25	2.62				1	1	556.05	552.38	3.67	1.27	104	1'-6"	1'-6"	4.42
28	3.5' Rt. Sta. 541+70	113 & 114	0.36	8.01	2.60		0.25	2.62				1	1	561.37	557.39	3.98	1.32	112	1'-6"	1'-6"	4.80
29	3.5' Rt. Sta. 547+27	117	0.23	10.56		2.19	0.25	2.62				1	1	564.13	560.38	3.75	1.24	106	1'-6"	1'-6"	4.52
30	3.5' Rt. Sta. 549+01	120	0.23	10.56		2.19	0.25	2.62				1	1	563.03	559.33	3.75	1.29	106	1'-6"	1'-6"	4.52
31	3.5' Rt. Sta. 550+46	122	0.23	10.56		2.19	0.25	2.62	1			1	1	562.29	558.51	3.78	0.83	76	—	—	3.34
32	3.5' Rt. Sta. 551+76	123	0.23	10.56		2.19	0.25	2.62	1			1	1	561.60	557.73	3.81	0.84	76	—	—	3.36
33	3.5' Rt. Sta. 553+62	125	0.25	10.56		2.38	0.25	2.62	1			1	1	558.96	555.52	3.44	0.77	68	—	—	3.02
34	3.5' Rt. Sta. 555+45	129	0.25	10.56		2.38	0.25	2.62				1	1	553.51	549.50	3.71	1.27	104	1'-6"	1'-6"	4.47
35	3.5' Rt. Sta. 557+31	131	0.25	10.56		2.38	0.25	2.62				1	1	547.92	544.25	3.74	1.29	106	1'-6"	1'-6"	4.51
36	3.5' Rt. Sta. 559+15	135	0.25	10.56		2.38	0.25	2.62				1	1	543.63	539.65	4.15	1.38	117	1'-6"	1'-6"	5.05
37	3.5' Rt. Sta. 559+89	138	0.22	10.56		2.09	0.25	2.62				1	1	543.44	538.48	4.96	1.70	132	2'-0"	2'-3"	6.51
38	3.5' Rt. Sta. 560+42	139	0.25	10.56		2.38	0.25	2.62				1	1	543.65	539.50	4.15	1.48	119	2'-0"	2'-3"	5.43
39	3.5' Rt. Sta. 562+26	145	0.25	10.56		2.38	0.25	2.62				1	1	547.35	543.50	3.65	1.29	96	1'-9"	1'-9"	4.83
40	3.5' Rt. Sta. 564+10	150	0.25	10.56		2.38	0.25	2.62				1	1	554.58	551.60	2.95	1.02	88	1'-6"	1'-6"	3.57
41	3.5' Rt. Sta. 567+96	153	0.25	10.56		2.38	0.25	2.62				1	1	561.99	559.00	2.99	1.02	88	1'-6"	1'-6"	3.58
42	3.5' Rt. Sta. 567+83	156	0.25	10.56		2.38	0.25	2.62				1	1	569.36	565.29	4.07	1.20	102	1'-6"	1'-6"	4.91
43	3.5' Rt. Sta. 569+28	158	0.25	10.56		2.38	0.25	2.62				1	1	573.44	569.64	3.80	1.14	97	1'-6"	1'-6"	4.58
44	3.5' Rt. Sta. 574+98	162	0.21	8.01	1.51		0.25	2.62				1	1	573.64	568.95	4.69	1.29	110	1'-6"	1'-6"	5.67
45	3.5' Rt. Sta. 576+65	164 & 170	0.42	8.01	3.03		0.25	5.25				1	2	577.53	573.73	3.80	2.54	356	2'-3"	1'-6"	7.68
46	3.5' Lt. Sta. 604+14	9 & 10	0.42	8.01	3.03		0.25	5.25				1	2	564.80	561.01	3.79	2.12	295	1'-3"	1'-6"	6.56
46-A	3.5' Lt. Sta. 606+33	11 & 12	0.33	8.01	2.38		0.25	2.62				1	1	571.10	566.67	4.43	1.78	121	2'-6"	1'-6"	6.24
47	3.5' Rt. Sta. 253+76	59, 60 & 63	0.55	8.01	3.96		0.25	5.25				1	2	514.95	511.17	3.78	2.12	295	1'-3"	1'-6"	6.55
48	3.5' Rt. Sta. 292+64	64, 65 & 66	0.62	8.01	4.47		0.25	5.25				1	2	510.11	506.28	3.83	2.13	295	1'-3"	1'-6"	6.64
49	3.5' Lt. Sta. 295+75	67, 68 & 69	0.47	8.01	3.39		0.25	5.25				1	2	505.02	501.00	4.02	2.31	327	1'-6"	1'-9"	7.27
50	3.5' Lt. Sta. 295+16	70 & 71	0.45	8.01	3.24		0.25	5.25				1	2	501.06	496.84	4.22	1.96	286	0'-6"	1'-6"	6.42
51	3.5' Lt. Sta. 301+85	74	0.30	8.01	2.16		0.25	2.62				1	1	498.94	495.10	3.84	1.15	97	1'-6"	1'-6"	4.63
52	3.5' Lt. Sta. 302+58	75 & 76	0.34	8.01	2.45		0.25	2.62				1	1	499.23	495.69	3.54	1.11	91	1'-6"	1'-6"	4.26
53	3.5' Rt. Sta. 310+45	77, 78 & 79	0.60	8.01	4.33		0.25	5.25				1	2	517.54	513.53	4.01	2.21	311	1'-3"	1'-6"	6.96
54	3.5' Rt. Sta. 317+53	4 & 5	0.60	8.01	4.33		0.25	5.25				1	2	515.04	512.18	2.86	1.76	260	1'-3"	1'-6"	4.88
55	3.5' Rt. Sta. 320+03	9 & 11	0.38	8.01	2.74		0.25	5.25				1	2	508.43	505.85	2.58	1.65	249	1'-3"	1'-6"	4.37
56	3.5' Rt. Sta. 320+79	18	0.24	8.01	1.73		0.25	2.62				1	1	506.05	504.50	3.55	1.23	95	1'-9"	1'-9"	4.45

* Contractor's Information Only.
 ** See Sheet No. 41 for details

22
 SUMMARY SHEET

Sheet 5 of 9 Sheets

135E-6(214)418 22

16 Dallas 442 2 71 IN 55E

SUMMARY OF INLETS

INLET NO	LOCATION	DRAINAGE AREA NO	DRAINAGE AREA ACRES	I	Q10 (CFS)	Q50 (CFS)	h GRATE (FT)	Qcop GRATE (CFS)	INLET (COMPL)				FRAME & GRATE (TYPE B) EA	TOP ELEV.	F.L. ELEV.	H INLET FT	CONC CY	REINF. STEEL LBS	INLET DIMENSIONS		SEWER EXCAV. CY
									TY B	TY B MOD	EA	EA							"X"	"Y"	
51	3.5 R+ Sta 321+48	19 & 20	0.48	8.01	3.46		0.25	5.25				1	2	508.63	505.50	3.13	1.95	295	1'-6"	1'-2"	5.59
52	3.5 R+ Sta 370+77	21	0.46	10.56		4.37	0.25	5.25				1	2	467.86	464.00	3.86	2.23	315	1'-6"	2'-0"	6.97
53	3.5 R+ Sta 371+00	22	0.13	10.56		1.24	0.25	2.62				1	1	467.38	463.67	3.71	1.30	108	1'-9"	2'-0"	4.65
54	3.5 R+ Sta 371+25	23	0.16	10.56		1.52	0.25	2.62				1	1	467.52	463.00	4.52	1.58	121	2'-0"	2'-3"	5.92
55	3.5 R+ Sta 371+50	24	0.27	10.56		2.57	0.25	2.62				1	1	466.71	462.50	4.21	1.50	120	2'-0"	2'-6"	5.51
56	3.5 R+ Sta 371+75	25	0.30	10.56		2.85	0.25	5.25				1	2	466.90	462.25	4.65	2.63	359	1'-9"	2'-6"	8.80
57	3.0 R+ Sta 373+00	26	0.30	10.56		2.85	0.25	5.25				1	2	463.16	460.50	7.66	5.20	625	4'-3"	4'-0"	20.40
58	3.0 R+ Sta 373+25	27	0.28	10.56		2.66	0.25	5.25				1	2	470.87	460.00	10.87	6.80	750	4'-3"	4'-0"	29.14
59	3.5 R+ Sta 373+50	45	0.26	10.56		2.47	0.25	2.62				1	1	474.60	471.75	2.85	0.95	80	1'-6"	1'-6"	3.41
60	3.5 R+ Sta 373+75	46	0.25	10.56		2.38	0.25	2.62				1	1	477.63	470.75	7.08	2.83	180	3'-6"	1'-6"	11.48
61	3.5 R+ Sta 374+00	47	0.25	10.56		2.38	0.25	2.62				1	1	480.26	477.75	2.51	0.89	77	1'-6"	1'-6"	2.99
62	3.5 R+ Sta 374+25	49	0.29	8.01	2.09		0.25	2.62				1	1	480.86	478.14	2.72	0.93	79	1'-6"	1'-6"	3.25
63	3.5 R+ Sta 374+50	50	0.36	8.01	2.60		0.25	2.62				1	1	479.11	476.35	2.73	0.89	79	1'-6"	1'-6"	3.26
64	3.5 R+ Sta 374+75	51	0.33	8.01	2.38		0.25	2.62				1	1	477.55	474.77	2.78	0.90	79	1'-6"	1'-6"	3.32
65	3.5 R+ Sta 375+00	52	0.30	8.01	2.16		0.25	2.62				1	1	475.67	472.54	3.13	1.15	86	1'-9"	1'-9"	3.91
66	4.5 R+ Sta 375+10	74 & 75	0.35	8.01	2.52		0.25	2.62				1	1	472.08	467.50	4.05	1.86	135	3'-6"	1'-6"	6.56
67	3.5 R+ Sta 375+15	76 & 77	0.45	8.01	3.24		0.25	5.25				1	2	467.45	464.53	2.95	1.19	108			3.97
68	3.5 R+ Sta 375+30	78	0.17	8.01	1.23		0.25	2.62				1	1	466.06	461.85	4.21	1.16	103	1'-6"	1'-6"	5.08
69	3.5 R+ Sta 375+45	79	0.23	8.01	1.66		0.25	2.62				1	1	465.38	462.58	2.80	0.90	80	1'-6"	1'-6"	3.35
70	3.5 R+ Sta 375+60	80	0.22	8.01	1.59		0.25	2.62				1	1	465.71	462.95	2.76	0.94	79	1'-6"	1'-6"	3.30
71	3.5 R+ Sta 375+75	4	0.18	8.01	1.30		0.23	2.52				1	1	466.37	461.21	5.16	2.14	140	3'-3"	1'-9"	8.07
72	3.5 R+ Sta 376+00	10	0.20	8.01	1.44		0.20	2.35				1	1	467.05	461.87	5.18	2.14	140	3'-3"	1'-9"	8.10
73	3.5 R+ Sta 376+15	15	0.08	8.01	0.58		0.18	2.22				1	1	467.77	462.60	5.17	2.07	144	3'-0"	1'-6"	7.82
74	3.5 R+ Sta 376+30	16	0.08	8.01	0.58		0.17	2.16				1	1	468.34	462.90	5.44	2.15	147	3'-0"	1'-6"	8.24
75	3.5 R+ Sta 376+45	17 & 21	0.12	8.01	0.87		0.17	2.16				1	1	467.55	462.95	4.90	1.94	134	3'-0"	1'-6"	7.41
76	3.5 R+ Sta 376+60	22 & 31	0.14	8.01	1.01		0.17	2.16				1	1	468.24	463.30	4.94	1.95	134	3'-0"	1'-6"	7.47
77	3.5 R+ Sta 376+75	30	0.08	8.01	0.58		0.17	2.16				1	1	468.40	464.37	5.03	1.99	142	3'-0"	1'-6"	7.61
78	3.5 R+ Sta 377+00	34 & 43	0.16	8.01	1.15		0.17	2.16				1	1	470.48	463.85	6.69	2.60	163	3'-0"	1'-6"	10.01
79	3.5 R+ Sta 377+15	35 & 42	0.16	8.01	1.15		0.17	2.16				1	1	471.55	463.84	7.71	3.05	179	3'-0"	1'-6"	11.73
80	3.5 R+ Sta 377+30	49	0.09	8.01	0.65		0.17	2.16				1	1	471.24	466.44	4.80	1.90	134	3'-0"	1'-6"	7.26
81	3.5 R+ Sta 377+45	50 & 57	0.16	8.01	1.15		0.17	2.16				1	1	470.15	466.30	4.85	1.92	134	3'-0"	1'-6"	7.33
82	3.5 R+ Sta 377+60	63	0.05	8.01	0.58		0.17	2.16				1	1	468.74	458.00	10.74	3.74	224	3'-0"	1'-6"	16.39
83	3.5 R+ Sta 377+75	58 & 62	0.19	8.01	1.37		0.17	2.16				1	1	467.65	455.40	9.48	3.36	208	3'-0"	1'-6"	14.45
84	3.5 R+ Sta 378+00	69	0.19	8.01	1.37		0.17	2.16				1	1	467.05	458.60	8.25	3.00	190	3'-0"	1'-6"	12.56
85	3.5 R+ Sta 378+15	70	0.19	8.01	1.37		0.17	2.16				1	1	464.92	459.42	5.50	2.16	147	3'-0"	1'-6"	8.33
86	3.5 R+ Sta 378+30	78	0.19	8.01	1.37		0.17	2.16				1	1	459.32	454.80	4.52	1.87	131	3'-0"	1'-6"	6.83
87	3.5 R+ Sta 378+45	83	0.20	8.01	1.44		0.17	2.16				1	1	454.54	449.80	4.74	1.93	133	3'-0"	1'-6"	7.17
88	3.5 R+ Sta 378+60	85	0.20	8.01	1.44		0.17	2.16				1	1	449.05	444.15	4.90	2.00	134	3'-0"	1'-6"	7.41
89	3.5 R+ Sta 378+75	89	0.20	8.01	1.44		0.17	2.16				1	1	443.99	439.25	4.74	1.93	133	3'-0"	1'-6"	7.17
90	3.5 R+ Sta 379+00	90	0.12	8.01	0.87		0.17	2.16				1	1	441.14	436.45	4.69	1.91	133	3'-0"	1'-6"	7.09
91	3.5 R+ Sta 379+15	98	0.13	8.01	0.94		0.17	2.16				1	1	435.59	432.85	2.74	1.80	106	3'-0"	1'-6"	4.09
92	3.5 R+ Sta 379+30	97 & 101	0.23	8.01	1.66		0.17	2.16				1	1	431.69	427.00	4.69	1.91	133	3'-0"	1'-6"	7.09
Totals									9	5	65	120	124								614.36

* Contractor's Information Only
 ** See Sheet No. 47+48 for details.

SUMMARY SHEET 23

Sheet 6 of 9 Sheets

FED. RD. DIST. NO.	STATE	FEDERAL PROJECT NO.	SHEET NO.
15	TEXAS	1355-6(216)4-5	23
COUNTY	CON.	SECT.	JOB
Dallas	442	2	7

SUMMARY OF INLETS

INLET NO	LOCATION	DRAINAGE AREA NO	DRAINAGE AREA ACRES	I	Q10 (CFS)	Q50 (CFS)	h GRATE (FT)	Q cop GRATE (CFS)	INLET (COMPL)				FRAME & GRATE (TYPE B) EA	TOP ELEV.	F.L. ELEV.	H INLET FT	CONC CY	REINF. STEEL LBS	INLET DIMENSIONS		SEWER EXCAV. CY
									TY B EA	TY EMO EA	GR2 GR	GR2 GR							"X"	"Y"	
51	3.5' R+ S+ 321+48	19 & 20	0.48	8.01	3.46		0.25	5.25				2	508.63	505.50	3.13	1.95	295		1'-6"	1'-9"	5.59
52	3.5' R+ S+ 370+77	21	0.46	10.56		4.37	0.25	5.25			1	2	467.86	464.00	3.86	2.23	315		1'-6"	2'-0"	6.97
53	3.5' R+ S+ 371+21	22	0.13	10.56		1.24	0.25	2.62			1	1	467.35	463.67	3.71	1.30	108		1'-9"	2'-0"	4.65
54	3.5' R+ S+ 371+41	23	0.16	10.56		1.52	0.25	2.62			1	1	467.52	463.00	4.52	1.58	121		2'-0"	2'-3"	5.92
55	3.5' R+ S+ 371+57	24	0.27	10.56		2.57	0.25	2.62			1	1	466.71	462.50	4.21	1.50	120		2'-0"	2'-6"	5.51
56	3.5' R+ S+ 371+68	25	0.30	10.56		2.85	0.25	5.25			1	2	466.90	462.25	4.65	2.63	359		1'-9"	2'-6"	8.80
57	3.0' R+ S+ 371+85	26	0.30	10.56		2.85	0.25	5.25			1	2	468.16	460.50	7.66	5.20	625		4'-3"	4'-0"	20.40
58	3.0' R+ S+ 371+85	27	0.28	10.56		2.66	0.25	5.25			1	2	470.87	460.00	10.87	6.80	750		4'-3"	4'-0"	29.14
59	3.5' R+ S+ 371+76	45	0.26	10.56		2.47	0.25	2.62			1	1	474.60	471.75	2.85	0.95	80		1'-6"	1'-6"	3.41
60	3.5' R+ S+ 371+51	46	0.25	10.56		2.38	0.25	2.62			1	1	477.83	470.75	7.08	2.83	180		3'-6"	1'-6"	11.48
61	3.5' R+ S+ 371+35	47	0.25	10.56		2.38	0.25	2.62			1	1	480.26	477.75	2.51	0.89	77		1'-6"	1'-6"	2.99
62	3.5' R+ S+ 371+12	49	0.29	8.01	2.09		0.25	2.62			1	1	480.86	478.14	2.72	0.93	79		1'-6"	1'-6"	3.25
63	3.5' R+ S+ 371+37	50	0.36	8.01	2.60		0.25	2.62			1	1	479.11	476.35	2.73	0.89	79		1'-6"	1'-6"	3.26
64	3.5' R+ S+ 371+01	51	0.33	8.01	2.38		0.25	2.62			1	1	477.55	474.77	2.78	0.90	79		1'-6"	1'-6"	3.32
65	3.5' R+ S+ 371+70	52	0.30	8.01	2.16		0.25	2.62			1	1	475.67	472.54	3.13	1.15	86		1'-9"	1'-9"	3.91
72	4.5' R+ S+ 371-10	74 & 75	0.35	8.01	2.52		0.25	2.62			1	1	472.08	467.50	4.05	1.86	135		3'-6"	1'-6"	6.56
73	3.5' R+ S+ 371+13	76 & 77	0.45	8.01	3.24		0.25	5.25			1	2	467.43	464.53	2.95	1.19	108		---	---	3.97
74	3.5' R+ S+ 371+13	78	0.17	8.01	1.23		0.25	2.62			1	1	466.06	461.85	4.21	1.16	103		1'-6"	1'-6"	5.03
75	3.5' R+ S+ 371+13	79	0.23	8.01	1.66		0.25	2.62			1	1	465.38	462.55	2.80	0.90	80		1'-6"	1'-6"	3.35
76	3.5' R+ S+ 371+13	80	0.22	8.01	1.59		0.25	2.62			1	1	465.71	462.95	2.76	0.94	79		1'-6"	1'-6"	3.30
77	3' R+ S+ 371+13	4	0.13	8.01	1.30		0.23	2.52			1	1	466.37	461.21	5.16	2.14	140		3'-3"	1'-9"	8.07
78	3' R+ S+ 371+13	10	0.20	8.01	1.44		0.20	2.35			1	1	467.05	461.87	5.18	2.14	140		3'-3"	1'-9"	8.10
79	3' R+ S+ 371+13	15	0.08	8.01	0.58		0.18	2.22			1	1	467.77	462.63	5.17	2.07	144		3'-0"	1'-6"	7.82
80	3' R+ S+ 371+13	16	0.08	8.01	0.58		0.17	2.16			1	1	468.34	462.90	5.44	2.15	147		3'-0"	1'-6"	8.24
81	3' R+ S+ 371+13	17 & 21	0.12	8.01	0.87		0.17	2.16			1	1	467.57	462.95	4.90	1.94	134		3'-0"	1'-6"	7.41
82	3' R+ S+ 371+13	22 & 31	0.14	8.01	1.01		0.17	2.16			1	1	468.24	463.30	4.94	1.95	134		3'-0"	1'-6"	7.47
83	3' R+ S+ 371+13	30	0.06	8.01	0.58		0.17	2.16			1	1	468.40	462.37	5.03	1.99	142		3'-0"	1'-6"	7.61
84	3' R+ S+ 371+13	34 & 43	0.16	8.01	1.15		0.17	2.16			1	1	470.45	465.59	6.59	2.60	163		3'-0"	1'-6"	10.01
85	3' R+ S+ 371+13	35 & 42	0.16	8.01	1.15		0.17	2.16			1	1	471.55	463.54	7.71	3.05	179		3'-0"	1'-6"	11.73
86	3' R+ S+ 371+13	49	0.09	8.01	0.65		0.17	2.16			1	1	471.24	465.44	4.80	1.90	134		3'-0"	1'-6"	7.26
87	3' R+ S+ 371+13	50 & 57	0.16	8.01	1.15		0.17	2.16			1	1	470.15	465.30	4.85	1.92	134		3'-0"	1'-6"	7.33
88	3' R+ S+ 371+13	63	0.05	8.01	0.58		0.17	2.16			1	1	468.74	465.07	10.74	3.74	224		3'-0"	1'-6"	16.39
89	3' R+ S+ 371+13	55 & 62	0.18	8.01	1.37		0.17	2.16			1	1	467.63	465.43	9.45	3.36	208		3'-0"	1'-6"	14.45
90	3' R+ S+ 371+13	69	0.19	8.01	1.37		0.17	2.16			1	1	467.05	465.80	8.25	3.00	190		3'-0"	1'-6"	12.56
91	3' R+ S+ 371+13	70	0.19	8.01	1.37		0.17	2.16			1	1	464.92	459.42	5.50	2.16	147		3'-0"	1'-6"	8.33
92	3' R+ S+ 371+13	78	0.19	8.01	1.37		0.17	2.16			1	1	459.32	454.80	4.52	1.87	131		3'-0"	1'-6"	6.83
93	3' R+ S+ 371+13	83	0.20	8.01	1.44		0.17	2.16			1	1	454.54	449.80	4.74	1.93	133		3'-0"	1'-6"	7.17
94	3' R+ S+ 371+13	85	0.20	8.01	1.44		0.17	2.16			1	1	449.05	444.15	4.90	2.00	134		3'-0"	1'-6"	7.41
95	3' R+ S+ 371+13	89	0.20	8.01	1.44		0.17	2.16			1	1	443.99	439.25	4.74	1.93	133		3'-0"	1'-6"	7.17
96	3' R+ S+ 371+13	90	0.12	8.01	0.57		0.17	2.16			1	1	441.14	436.45	4.69	1.91	133		3'-0"	1'-6"	7.09
97	3' R+ S+ 371+13	98	0.13	8.01	0.94		0.17	2.16			1	1	435.59	432.55	2.74	1.80	106		3'-0"	1'-6"	4.09
98	3' R+ S+ 371+13	97 & 101	0.23	8.01	1.66		0.17	2.16			1	1	431.69	427.00	4.69	1.91	133		3'-0"	1'-6"	7.09

* Contractor's Information Only
** See Sheet No. 47+48 for details.

SUMMARY SHEET 23

Sheet 6 of 9 Sheets

FED. RD. DIV. NO.	STATE	FEDERAL PROJECT NO.	SHEET NO.
0	TEXAS	135F-6(214)418	23
STATE DIST. NO.	COUNTY	CERT.	SECT.
10	DALLAS	420	2

INLETS TO BE REMOVED

INLET NO	LOCATION	TYPE	REMOV OLD STRS (INLETS) EA.	
1	12' Lt & Sta. 390+47	Double	1	
2	12' Lt & Sta. 391+66	Double	1	
3	12' Lt & Sta. 392+84	Double	1	
4	12' Lt & Sta. 394+05	Double	1	
5	12' Lt & Sta. 395+29	Double	1	
6	12' Lt & Sta. 396+19	Double	1	
7	12' Rt & Sta. 397+44	Single	1	
8	12' Rt & Sta. 397+69	Single	1	
9	12' Rt & Sta. 398+09	Double	1	
10	12' Rt & Sta. 398+98	Double	1	
11	12' Rt & Sta. 400+06	Double	1	
12	12' Rt & Sta. 401+16	Double	1	
13	12' Rt & Sta. 402+31	Double	1	
14	12' Lt & Sta. 428+38	Single	1	
15	12' Lt & Sta. 428+63	Single	1	
16	12' Lt & Sta. 428+89	Single	1	
17	12' Lt & Sta. 429+14	Single	1	
18	12' Lt & Sta. 429+38	Single	1	
19	12' Lt & Sta. 429+66	Single	1	
20	12' Lt & Sta. 429+90	Single	1	
21	12' Lt & Sta. 430+15	Single	1	
22	12' Lt & Sta. 430+39	Single	1	
23	12' Lt & Sta. 430+63	Single	1	
24	12' Lt & Sta. 430+89	Single	1	
25	12' Lt & Sta. 431+15	Single	1	
26	12' Lt & Sta. 431+70	Single	1	
27	12' Lt & Sta. 432+11	Single	1	
28	12' Lt & Sta. 432+65	Single	1	
29	12' Lt & Sta. 433+14	Single	1	
30	12' Lt & Sta. 433+62	Single	1	
31	12' Lt & Sta. 434+12	Single	1	
32	12' Lt & Sta. 434+62	Single	1	
33	12' Lt & Sta. 435+12	Single	1	
34	12' Lt & Sta. 435+60	Single	1	
35	12' Lt & Sta. 436+02	Single	1	
36	12' Lt & Sta. 436+30	Single	1	
37	12' Lt & Sta. 436+55	Single	1	
38	12' Lt & Sta. 436+76	Single	1	
39	12' Lt & Sta. 437+02	Single	1	
40	12' Lt & Sta. 437+26	Single	1	
41	12' Lt & Sta. 437+50	Single	1	
42	12' Lt & Sta. 437+75	Single	1	
43	12' Lt & Sta. 438+05	Single	1	
44	12' Lt & Sta. 438+29	Single	1	
45	12' Lt & Sta. 438+54	Single	1	
46	12' Rt & Sta. 444+14	Single	1	
47	12' Rt & Sta. 444+65	Single	1	
48	12' Rt & Sta. 445+42	Single	1	
49	12' Rt & Sta. 446+07	Single	1	
50	12' Rt & Sta. 446+71	Single	1	
51	12' Rt & Sta. 447+38	Single	1	
52	12' Rt & Sta. 447+98	Single	1	
53	12' Rt & Sta. 448+59	Single	1	
54	12' Rt & Sta. 449+13	Single	1	
55	12' Rt & Sta. 449+68	Single	1	
56	12' Rt & Sta. 450+17	Single	1	
57	12' Rt & Sta. 450+65	Single	1	
58	12' Rt & Sta. 451+26	Single	1	

INLET NO.	LOCATION	TYPE	REMOV OLD STRS (INLETS) EA	
59	12' R+ & Sta. 451+66	Single	1	
60	12' R+ & Sta. 452+47	Single	1	
61	12' R+ & Sta. 453+07	Single	1	
62	12' R+ & Sta. 453+62	Single	1	
63	12' R+ & Sta. 470+14	Triple	1	
64	12' R+ & Sta. 471+03	Double	1	
65	12' R+ & Sta. 472+17	Double	1	
66	12' R+ & Sta. 473+33	Double	1	
67	12' R+ & Sta. 474+53	Double	1	
68	12' R+ & Sta. 475+72	Double	1	
69	12' R+ & Sta. 477+02	Double	1	
70	12' R+ & Sta. 478+13	Double	1	
71	12' R+ & Sta. 479+45	Double	1	
72	12' L+ & Sta. 487+09	Triple	1	
73	12' L+ & Sta. 488+26	Double	1	
74	12' L+ & Sta. 489+51	Double	1	
75	12' L+ & Sta. 490+76	Double	1	
76	12' L+ & Sta. 492+01	Double	1	
77	12' L+ & Sta. 492+55	Double	1	
78	12' L+ & Sta. 493+23	Double	1	
79	12' R+ & Sta. 516+49	Double	1	
80	12' R+ & Sta. 517+51	Double	1	
81	12' R+ & Sta. 518+77	Triple	1	
82	12' R+ & Sta. 519+46	Triple	1	
83	12' R+ & Sta. 520+52	Double	1	
84	12' L+ & Sta. 522+31	Double	1	
85	12' L+ & Sta. 523+70	Triple	1	
86	12' L+ & Sta. 527+37	Double	1	
87	12' R+ & Sta. 540+08	Double	1	
88	12' R+ & Sta. 541+27	Double	1	
89	12' R+ & Sta. 542+73	Double	1	
90	12' R+ & Sta. 544+28	Double	1	
91	12' R+ & Sta. 547+27	Triple	1	
92	12' R+ & Sta. 549+01	Triple	1	
93	12' R+ & Sta. 550+46	Triple	1	
94	12' R+ & Sta. 551+76	Triple	1	
95	12' R+ & Sta. 553+62	Triple	1	
96	12' R+ & Sta. 555+45	Triple	1	
97	12' R+ & Sta. 557+31	Triple	1	
98	12' R+ & Sta. 559+15	Triple	1	
99	12' R+ & Sta. 559+89	Triple	1	
100	12' R+ & Sta. 560+42	Triple	1	
101	12' R+ & Sta. 562+26	Triple	1	
102	12' R+ & Sta. 564+10	Triple	1	
103	12' R+ & Sta. 565+96	Triple	1	
104	12' R+ & Sta. 567+83	Triple	1	
105	12' R+ & Sta. 569+28	Triple	1	
106	12' R+ & Sta. 575+01	Double	1	
107	13' R+ & Sta. 576+68	Double	1	
108	13.5' R+ & Sta. 578+26	Double	1	
109	12' L+ & Sta. 233+26	Double	1	
110	12' R+ & Sta. 286+11	Double	1	
111	12' R+ & Sta. 287+43	Double	1	
112	12' R+ & Sta. 288+73	Double	1	
113	12' R+ & Sta. 290+03	Double	1	
114	12' R+ & Sta. 291+32	Double	1	
115	12' R+ & Sta. 292+61	Double	1	
116	12' R+ & Sta. 293+41	Double	1	

INLET NO	LOCATION	TYPE	REMOV OLD STRS (INLETS) EA.	
117	12'Lt & Sta. 294+72	Double	1	
118	11.5'Lt & Sta. 295+72	Double	1	
119	11'Lt & Sta. 297+02	Double	1	
120	10.5'Lt & Sta. 298+16	Triple	1	
121	10'Lt & Sta. 301+85	Triple	1	
122	10'Lt & Sta. 302+61	Double	1	
123	10'Lt & Sta. 303+83	Double	1	
124	10'Rt & Sta. 310+48	Double	1	
125	10'Rt & Sta. 311+55	Double	1	
126	10'Rt & Sta. 312+85	Double	1	
127	10'Rt & Sta. 315+71	Triple	1	
128	10'Rt & Sta. 317+59	Triple	1	
129	10'Rt & Sta. 318+79	Double	1	
130	10'Rt & Sta. 320+00	Double	1	
131	10'Rt & Sta. 320+79	Triple	1	
132	10'Rt & Sta. 321+51	Double	1	
133	10'Rt & Sta. 322+26	Triple	1	
134	10'Rt & Sta. 370+77	Triple	1	
135	10'Rt & Sta. 371+13	Triple	1	
136	10'Rt & Sta. 371+67	Triple	1	
137	10'Rt & Sta. 372+13	Triple	1	
138	10'Rt & Sta. 372+48	Triple	1	
139	10'Rt & Sta. 373+49	Triple	1	
140	10'Rt & Sta. 374+49	Triple	1	
141	10'Rt & Sta. 375+50	Triple	1	
142	10'Rt & Sta. 376+51	Triple	1	
143	10'Rt & Sta. 377+55	Triple	1	
144	10'Rt & Sta. 380+23	Triple	1	
145	10'Rt & Sta. 381+37	Triple	1	
146	10'Rt & Sta. 382+51	Triple	1	
147	10'Rt & Sta. 383+75	Triple	1	
148	10'Rt & Sta. 385+05	Double	1	
149	10'Rt & Sta. 386+42	Double	1	
150	10'Rt & Sta. 388+13	Triple	1	
151	10'Rt & Sta. 389+13	Double	1	
152	10'Rt & Sta. 390+20	Double	1	
153	10'Rt & Sta. 391+19	Triple	1	
154	10'Rt & Sta. 392+00	Double	1	
155	9'Rt & Sta. 393+10	Double	1	
156	7.5'Rt & Sta. 394+10	Double	1	
157	6.5'Rt & Sta. 394+80	Double	1	
158	6'Lt & Sta. 395+41	Double	1	
159	6'Rt & Sta. 395+50	Double	1	
160	6'Lt & Sta. 396+21	Double	1	
161	6'Rt & Sta. 396+32	Double	1	
162	6'Lt & Sta. 397+60	Double	1	
163	6'Rt & Sta. 397+90	Double	1	
164	6'Lt & Sta. 398+90	Double	1	
165	6'Rt & Sta. 399+00	Double	1	
166	6'Lt & Sta. 400+02	Double	1	
167	6'Rt & Sta. 400+13	Double	1	
168	6'Rt & Sta. 402+20	Double	1	
169	6'Lt & Sta. 402+35	Double	1	
170	6'Rt & Sta. 403+30	Double	1	
171	6'Lt & Sta. 403+62	Double	1	
172	6'Rt & Sta. 404+43	Double	1	
173	6'Lt & Sta. 404+99	Double	1	
174	6'Rt & Sta. 405+78	Double	1	

[illegible]

SUMMARY

Item	Quantity
Inlets - Single	51
Inlets - Double	93
Inlets - Triple	42

SUMMARY SHEET

Sheet 7 of 9 Sheets.

135E-6(214)018

16 Dallas 442 2 7 1435E

STATION	EXIST. S.B. GUTTER ELEV.	EXIST. N.B. GUTTER ELEV.	P.E.	P.E. N.B.	P.E. -2.67'	P.E. -2.67' N.B.	TOP OF ASB AT 4' ELEV.
358+50	620.98	621.08					
359+00	621.89	621.90					
360+00	623.69	623.79	626.95		624.28		624.20
361+00	626.50	626.56	629.64		626.97		626.89
362+00	629.09	629.20	632.27		629.60		629.52
363+00	631.18	631.26	634.34		631.67		631.59
364+00	632.56	632.66	635.80		633.13		633.05
365+00	633.39	633.39	636.67		634.00		633.92
365+20.75			636.80		634.13		634.05
366+00		1.93	637.01		634.34		
366+47.23		2.09	636.81		634.14		
367+00	633.24	633.18	636.41		633.74		633.66
368+00	632.10	632.11	635.27		632.60		632.52
369+00	630.36	630.43	633.55		630.88		630.80
370+00	628.09	628.14	631.26		628.59		628.51
371+00	625.38	625.36	628.50		625.83		625.75
372+00	622.54	622.58	625.71		623.04		622.96
373+00	619.73	619.93	622.95		620.28		620.20
374+00	617.59	617.75	620.79		618.12		618.04
375+00	616.21	616.39	619.45		616.78		616.70
376+00	614.90	615.05	618.12		615.45		615.37
377+00	613.13	613.26	616.34		613.67		613.59
378+00	611.11	611.27	614.33		611.66		611.58
379+00	609.11	609.26	612.31		609.64		609.56
380+00	607.14	607.27	610.30		607.63		607.55
381+00	604.84	605.03	608.07		605.40		605.32
382+00	602.68	602.66	605.18		602.51		602.43
383+00	598.47	598.47	601.64		598.97		598.89
384+00	594.44	594.51	597.65		594.98		598.90
385+00	590.50	590.54	593.65		590.98		590.90
386+00	586.91	586.86	590.01		587.34		587.26
387+00	584.22	584.23	587.34		584.67		584.59
388+00	582.56	582.51	585.65		582.98		582.90
389+00	581.82	581.77	584.89		582.22		582.14
390+00	581.25	581.24	584.34		581.64		581.17
391+00	580.73	580.66	583.79		581.12		580.65
392+00	580.21	580.09	583.23		580.51		580.19
393+00	579.64	579.54	582.68		579.46		579.00
394+00	579.08	579.03	582.13		578.91		578.41
395+00	578.57	578.45	581.58		578.39		577.61
396+00	577.69	577.61	580.72		577.85		577.19
397+00	576.28	576.18	579.26		576.59		576.51
398+00	574.10	574.02	577.18		574.51		573.94
399+00	571.49	571.38	574.51		571.84		571.30
400+00	568.39	568.40	571.52		568.85		568.32
401+00	565.40	565.52	568.54		565.87		565.44
402+00	562.48	562.51	565.56		562.89		562.43
402+48			564.60				564.85
404+85			562.18				559.43
405+00	558.76	558.69	561.92		559.25		559.17
406+00	558.32	558.29	561.39		558.72		558.64
407+00	557.79	557.80	560.89		558.22		558.14
408+00	557.32	557.34	560.40		557.73		557.65
409+00	556.81	556.83	559.90		557.23		557.15
410+00	556.33	556.32	559.41		556.74		556.66
411+00	555.83	555.83	558.91		556.24		556.16
412+00	555.35	555.35	558.42		555.75		555.67
413+00	555.05	555.03	558.17		555.50		555.42
414+00	555.35	555.35	558.42		555.25		555.17
415+00	555.80	555.81	558.92		556.25		556.17
416+00	556.28	556.32	558.42		555.72		555.67
417+00	556.85	556.83	559.92		556.25		556.17
418+00	557.64	557.63	560.77		558.10		558.02
419+00	559.49	559.45	562.59		559.92		559.84
420+00	562.27	562.34	565.42		562.75		562.67
421+00	565.84	566.12	569.19		566.52		566.44
422+00	569.84	570.11	573.19		570.52		570.44
423+00	574.62	574.08	577.19		574.52		574.44
424+00	578.61	577.98	581.19		578.52		578.44
425+00	582.61	581.98	585.19		582.52		582.44
426+00	586.30	585.86	589.05		586.38		586.30
427+00	589.13	589.13	592.29		589.62		589.54
428+00	591.78	591.70	594.87		592.20		591.71

STATION	EXIST. S.B. GUTTER ELEV.	EXIST. N.B. GUTTER ELEV.	P.E.	P.E. N.B.	P.E. -2.67'	P.E. -2.67' N.B.	TOP OF ASB AT 4' ELEV.
429+00	593.75	593.65	596.78		594.11		593.67
430+00	594.93	594.95	598.04		595.37		594.85
431+00	595.54	595.54	598.63		595.96		595.46
432+00	595.53	595.47	598.56		595.89		595.45
433+00	594.87	594.90	597.82		595.15		594.79
434+00	594.44	593.49	596.43		593.76		593.36
435+00	591.57	591.52	594.56		591.89		591.49
436+00	589.71	589.69	592.77		590.10		589.63
437+00	588.57	588.56	591.63		588.96		588.49
438+00	588.05	588.05	591.16		588.49		587.97
439+00	587.70	587.70	590.78		588.11		588.03
440+00	587.27	587.31	590.40		587.73		587.65
441+00	586.87	587.89	590.02		587.35		587.27
442+00	586.50	586.57	589.64		586.97		586.89
443+00	586.16	586.18	589.26		586.59		586.51
444+00	585.82	585.79	588.88		586.21		585.71
445+00	585.52	585.67	588.74		586.07		585.59
446+00	586.36	586.29	589.54		586.87		586.21
447+00	588.10	588.12	591.28		588.61		588.04
448+00	590.15	590.14	593.26		590.59		590.04
449+00	592.15	592.13	595.23		592.56		592.05
450+00	594.10	594.11	597.21		594.54		594.03
451+00	596.16	596.08	599.19		596.52		596.00
452+00	598.09	598.05	601.11		598.44		597.97
453+00	599.44	599.44	602.48		599.81		599.36
454+00	600.08	600.08	603.21		600.54		600.00
455+00	600.06	600.11	603.23		600.56		600.48
456+00	599.40	599.50	602.59		599.92		599.84
457+00	598.18	598.17	601.28		598.61		598.53
458+00	596.18	596.22	599.31		596.64		596.56
459+00	593.55	593.60	596.68		594.01		593.93
460+00	590.21	590.30	593.39		590.72		590.64
461+00	586.37	586.44	589.51		586.84		586.76
462+00	582.35	582.45	585.53		582.86		582.78
463+00	578.84	578.90	582.05		579.38		579.30
464+00	576.35	576.36	579.57		576.90		576.82
465+00	574.33	574.38	577.59		574.92		574.84
466+00	572.33	572.42	575.61		572.94		572.86
467+00	570.36	570.51	573.63		570.96		570.88
468+00	568.57	568.64	571.66		568.99		568.91
469+00	566.55	566.63	569.68		567.01		566.55
470+00	564.63	564.68	567.70		565.03		564.60
471+00	562.65	562.72	565.72		563.25		562.64
472+00	560.68	560.67	563.74		561.07		560.59
473+00	558.67	558.68	561.76		559.09		558.60
474+00	556.54	556.58	559.64		556.97		556.50
475+00	553.85	553.80	556.89		554.22		553.72
476+00	550.41	550.41	553.46		550.79		550.33
477+00	546.42	546.42	549.49		546.82		546.34
478+00	542.44	542.40	545.48		542.81		542.32
479+00	538.35	538.34	541.47		538.86		538.26
480+00	534.28	534.22	537.36		534.69		534.14
481+00	530.33	530.25	533.35		530.68		530.60
482+00	526.24	526.20	529.33		526.66		526.58
483+00	522.22	522.17	525.32		522.65		522.57
484+00	518.28	518.24	521.33		518.66		518.58
485+00	514.28	514.19	517.35		514.68		514.20
486+00	510.30	510.23	513.36		510.69		510.22
487+00	506.20	506.19	509.37		506.70		506.12
488+00	502.30	502.27	505.38		502.71		502.22
489+00	498.42	498.42	501.49		498.82		498.34
490+00	495.33	495.32	498.43		495.76		495.25
491+00	493.26	493.31	496.39		493.71		493.18
492+00	492.20	492.19	495.35		492.65		492.12
493+00	492.11	492.03	495.32		492.65		492.03
493+80.99			495.77		493.10		
494+00	492.65	492.67	495.87		493.20		
495+00	493.15	493.17	496.43		493.76		
496+00	493.62	493.64	496.84		494.17		
496+14.01			497.60		494.93		494.85
497+00	494.76	494.80	497.96		495.29		495.21
498+00	495.29	495.32	498.44		495.77		495.69
499+00	495.82	495.82	498.94		496.27		496.19
500+00	496.34	496.29	499.44		496.77		496.69
501+00	496.82	496.82	499.94		497.27		497.19

STATION	EXIST. S.B. GUTTER ELEV.	EXIST. N.B. GUTTER ELEV.	P.E.	P.E. N.B.	P.E. -2.67'	P.E. -2.67' N.B.	TOP OF ASB AT 4' ELEV.
502+00	497.34	497.32	500.44		497.77		497.69
503+00	497.89	497.84	500.95		498.28		498.20
504+00	498.39	498.34	501.45		498.78		498.70
505+00	498.82	498.82	501.94		499.27		499.19
506+00	499.35	499.32	502.42		499.75		499.67
507+00	499.78	499.78	502.91		500.24		50

STATION	EXIST. S.B. GUTTER ELEV.	EXIST. N.B. GUTTER ELEV.	P.E.	P.E. N.B.	P.E. -2.67	P.E. -2.67 N.B.	TOP OF ASB AT 4' ELEV.
358+50	620.98	621.08					
359+00	621.89	621.90					
360+00	623.29	623.79	626.95		624.28		624.20
361+00	626.50	626.56	628.64		626.97		626.89
362+00	629.09	629.20	632.27		629.60		629.52
363+00	631.18	631.26	634.34		631.67		631.59
364+00	632.56	632.66	635.60		633.13		633.05
365+00	633.39	633.39	636.67		634.00		633.92
365+20.75			636.80		634.13		634.05
366+00		1.93	637.01		634.34		
366+47.23		2.09	636.81		634.14		
367+00	633.24	633.18	636.41		633.74		633.66
368+00	632.10	632.11	635.27		632.60		632.52
369+00	630.36	630.43	633.55		630.88		630.80
370+00	628.09	628.14	631.26		628.59		628.51
371+00	625.38	625.36	628.50		625.83		625.75
372+00	622.54	622.58	625.71		623.04		622.96
373+00	619.73	619.93	622.95		620.26		620.20
374+00	617.59	617.75	620.79		618.12		618.04
375+00	616.21	616.39	618.45		616.75		616.70
376+00	614.90	615.05	616.12		615.45		615.37
377+00	613.13	613.26	614.34		613.67		613.59
378+00	611.11	611.27	611.33		611.66		611.58
379+00	609.11	609.26	612.31		609.64		609.56
380+00	607.14	607.27	610.30		607.63		607.55
381+00	604.84	605.03	608.07		605.40		605.32
382+00	602.08	602.06	605.18		602.51		602.43
383+00	600.47	600.47	601.64		600.97		600.89
384+00	598.44	598.51	597.65		598.98		598.90
385+00	596.50	596.54	593.65		596.98		596.90
386+00	594.91	594.86	590.01		593.34		593.26
387+00	592.22	592.29	587.34		590.67		590.59
388+00	589.54	589.51	584.65		588.00		587.92
389+00	587.82	587.77	582.95		586.28		586.20
390+00	586.09	586.04	581.22		584.55		584.47
391+00	584.36	584.31	579.49		582.82		582.74
392+00	582.63	582.58	577.76		581.09		581.01
393+00	580.90	580.85	576.03		579.36		579.28
394+00	579.17	579.12	574.30		577.63		577.55
395+00	577.44	577.39	572.57		575.90		575.82
396+00	575.71	575.66	570.84		574.17		574.09
397+00	573.98	573.93	569.11		572.44		572.36
398+00	572.25	572.20	567.38		570.71		570.63
399+00	570.52	570.47	565.65		568.98		568.90
400+00	568.79	568.74	563.92		567.25		567.17
401+00	567.06	567.01	562.19		565.52		565.44
402+00	565.33	565.28	560.46		563.79		563.71
403+00	563.60	563.55	558.73		562.06		561.98
404+00	561.87	561.82	557.00		560.33		560.25
405+00	560.14	560.09	555.27		558.60		558.52
406+00	558.41	558.36	553.54		556.87		556.79
407+00	556.68	556.63	551.81		555.14		555.06
408+00	554.95	554.90	550.08		553.41		553.33
409+00	553.22	553.17	548.35		551.68		551.60
410+00	551.49	551.44	546.62		549.95		549.87
411+00	549.76	549.71	544.89		548.22		548.14
412+00	548.03	547.98	543.16		546.49		546.41
413+00	546.30	546.25	541.43		544.76		544.68
414+00	544.57	544.52	539.70		543.03		542.95
415+00	542.84	542.79	537.97		541.30		541.22
416+00	541.11	541.06	536.24		539.57		539.49
417+00	539.38	539.33	534.51		537.84		537.76
418+00	537.65	537.60	532.78		536.11		536.03
419+00	535.92	535.87	531.05		534.38		534.30
420+00	534.19	534.14	529.32		532.65		532.57
421+00	532.46	532.41	527.59		530.92		530.84
422+00	530.73	530.68	525.86		529.19		529.11
423+00	529.00	528.95	524.13		527.46		527.38
424+00	527.27	527.22	522.40		525.73		525.65
425+00	525.54	525.49	520.67		524.00		523.92
426+00	523.81	523.76	518.94		522.27		522.19
427+00	522.08	522.03	517.21		520.54		520.46
428+00	520.35	520.30	515.48		518.81		518.73
429+00	518.62	518.57	513.75		517.08		517.00
430+00	516.89	516.84	512.02		515.35		515.27
431+00	515.16	515.11	510.29		513.62		513.54
432+00	513.43	513.38	508.56		511.89		511.81
433+00	511.70	511.65	506.83		510.16		510.08
434+00	509.97	509.92	505.10		508.43		508.35
435+00	508.24	508.19	503.37		506.70		506.62
436+00	506.51	506.46	501.64		504.97		504.89
437+00	504.78	504.73	500.91		503.24		503.16
438+00	503.05	503.00	500.18		501.51		501.43
439+00	501.32	501.27	498.45		499.78		499.70
440+00	499.59	499.54	496.72		498.05		497.97
441+00	497.86	497.81	494.99		496.32		496.24
442+00	496.13	496.08	493.26		494.59		494.51
443+00	494.40	494.35	491.53		492.86		492.78
444+00	492.67	492.62	489.80		491.13		491.05
445+00	490.94	490.89	488.07		489.40		489.32
446+00	489.21	489.16	486.34		487.67		487.59
447+00	487.48	487.43	484.61		485.94		485.86
448+00	485.75	485.70	482.88		484.21		484.13
449+00	484.02	483.97	481.15		482.48		482.40
450+00	482.29	482.24	479.42		480.75		480.67
451+00	480.56	480.51	477.69		479.02		478.94
452+00	478.83	478.78	475.96		477.29		477.21
453+00	477.10	477.05	474.23		475.56		475.48
454+00	475.37	475.32	472.50		473.83		473.75
455+00	473.64	473.59	470.77		472.10		472.02
456+00	471.91	471.86	469.04		470.37		470.29
457+00	470.18	470.13	467.31		468.64		468.56
458+00	468.45	468.40	465.58		466.91		466.83
459+00	466.72	466.67	463.85		465.18		465.10
460+00	464.99	464.94	462.12		463.45		463.37
461+00	463.26	463.21	460.39		461.72		461.64
462+00	461.53	461.48	458.66		460.00		459.92
463+00	459.80	459.75	456.93		458.27		458.19
464+00	458.07	458.02	455.20		456.54		456.46
465+00	456.34	456.29	453.47		454.81		454.73
466+00	454.61	454.56	451.74		453.08		453.00
467+00	452.88	452.83	449.01		451.35		451.27
468+00	451.15	451.10	447.28		449.62		449.54
469+00	449.42	449.37	445.55		447.89		447.81
470+00	447.69	447.64	443.82		446.16		446.08
471+00	445.96	445.91	442.09		444.43		444.35
472+00	444.23	444.18	440.36		442.70		442.62
473+00	442.50	442.45	438.63		440.97		440.89
474+00	440.77	440.72	436.90		439.24		439.16
475+00	439.04	438.99	435.17		437.51		437.43
476+00	437.31	437.26	433.44		435.78		435.70
477+00	435.58	435.53	431.71		434.05		433.97
478+00	433.85	433.80	429.98		432.32		432.24
479+00	432.12	432.07	428.25		430.59		430.51
480+00	430.39	430.34	426.52		428.86		428.78
481+00	428.66	428.61	424.79		427.13		427.05
482+00	426.93	426.88	423.06		425.40		425.32
483+00	425.20	425.15	421.33		423.67		423.59
484+00	423.47	423.42	419.60		421.94		421.86
485+00	421.74	421.69	417.87		420.21		420.13
486+00	420.01	419.96	416.14		418.48		418.40
487+00	418.28	418.23	414.41		416.75		416.67
488+00	416.55	416.50	412.68		415.02		414.94
489+00	414.82	414.77	410.95		413.29		413.21
490+00	413.09	413.04	409.22		411.56		411.48
491+00	411.36	411.31	407.49		409.83		409.75
492+00	409.63	409.58	405.76		408.10		408.02
493+00	407.90	407.85	404.03		406.37		406.29
494+00	406.17	406.12	402.30		404.64		404.56
495+00	404.44	404.39	400.57		402.91		402.83
496+00	402.71	402.66	398.84		401.18		401.10
497+00	400.98	400.93	397.11		399.45		399.37
498+00	399.25	399.20	395.38		397.72		397.64
499+00	397.52	397.47	393.65		395.99		395.91
500+00	395.79	395.74	391.92		394.26		394.18
501+00	394.06	394.01	390.19		392.53		392.45

STATION	EXIST. S.B. GUTTER ELEV.	EXIST. N.B. GUTTER ELEV.	PE.	P.E. N.B.	P.E. -2.67	P.E. -2.67 N.B	TOP OF ASB AT 4' ELEV.
429+00	593.75	593.65	596.78		594.11		593.67
430+00	594.93	594.95	598.04		595.37		594.85
431+00	595.54	595.54	598.63		595.96		595.46
432+00	595.53	595.47	598.56		595.89		595.45
433+00	594.87	594.90	597.82		595.15		594.79
434+00	594.44	593.49	596.43		593.76		593.36
435+00	591.57	591.52	594.56		591.89		591.49
436+00	589.71	589.69	592.77		590.10		589.63
437+00	588.57	588.56	591.63		588.96		588.49
438+00	588.05	588.05	591.16		588.49		587.97
439+00	587.70	587.70	590.78		588.11		588.03
440+00	587.27	587.31	590.40		587.73		587.65
441+00	586.87	587.89	590.02		587.35		587.27
442+00	586.50	586.57	589.64		586.97		586.89
443+00	586.16	586.18	589.26		586.59		586.51
444+00	585.82	585.79	588.88		586.21		585.71
445+00	585.52	585.67	588.74		586.07		585.59
446+00	586.36	586.29	589.54		586.87		586.21
447+00	588.10	588.12	591.28		588.61		588.04
448+00	590.15	590.14	593.26		590.59		590.06
449+00	592.15	592.13	595.23		592.56		592.05
450+00	594.10	594.11	597.21		594.54		594.03
451+00	596.16	596.08	599.19		596.52		596.00
452+00	598.09	598.05	601.11		598.44		597.97
453+00	599.44	599.44	602.48		599.81		599.36
454+00	600.08	600.08	603.21		600.54		600.00
455+00	600.06	600.11	603.23		600.56		600.48
456+00	599.40	599.50	602.59		599.92		599.84
457+00	598.18	598.17	601.28		598.61		598.53
458+00	596.16	596.22	599.31		596.64		596.56
459+00	593.55	593.60	596.68		594.01		593.93
460+00	590.21	590.30	593.39		590.72		590.64
461+00	586.37	586.44	589.51		586.84		586.76
462+00	582.35	582.45	585.53		582.86		582.78
463+00	578.84	578.90	582.05		579.38		579.30
464+00	576.35	576.36	579.57		576.90		576.82
465+00	574.33	574.38	577.59		574.92		574.84
466+00	572.33	572.42	575.61		572.94		572.86
467+00	570.36	570.51	573.63		570.96		570.88
468+00	568.57	568.64	571.66		568.99		568.91
469+00	566.55	566.63	569.68		567.01		566.55
470+00	564.63	564.68	567.70		565.03		564.60
471+00	562.65	562.72	565.72		563.05		562.64
472+00	560.68	560.67	563.74		561.07		560.59
473+00	558.67	558.68	561.76		559.09		558.60
474+00	556.54	556.58	559.64		556.97		556.50
475+00	553.85	553.80	556.89		554.22		553.72
476+00	550.41	550.41	553.46		550.79		550.33
477+00	546.42	546.42	549.48		546.82		546.34
478+00	542.44	542.40	545.48		542.81		542.32
479+00	538.35	538.34	541.47		538.86		538.26
480+00	534.28	534.22	537.36		534.69		534.14
481+00	530.33	530.25	533.35		530.68		530.60
482+00	526.24	526.20	529.33		526.66		526.58
483+00	522.22	522.17	525.32		522.65		522.57
484+00	518.23	518.24	521.33		518.66		518.58
485+00	514.28	514.19	517.35		514.68		514.20
486+00	510.30	510.23	513.36		510.69		510.22
487+00	506.20	506.19	509.37		506.70		506.12
488+00	502.30	502.27	505.38		502.71		502.22
489+00	498.42	498.42	501.49		498.82		498.34
490+00	495.33	495.32	498.43		495.76		495.25
491+00	493.26	493.31	496.38		493.71		493.18
492+00	492.20	492.19	495.35		492.66		492.12
493+00	492.11	492.03	495.32		492.65		492.03
493+80.99			495.77		493.10		
494+00	492.65	492.67	495.87		493.20		
495+00	493.15	493.17	496.43		493.76		
496+00	493.62	493.64	496.84		494.17		
496+14.01			497.60		494.93		494.85
497+00	494.76	494.80	497.96		495.29		495.21
498+00	495.29	495.32	498.44		495.77		495.69
499+00	495.82	495.82	498.94		496.27		496.19
500+00	496.34	496.29	499.44		496.77		496.69
501+00	496.82	496.82	499.94		497.27		497.19

STATION	EXIST. S.B. GUTTER ELEV.	EXIST. N.B. GUTTER ELEV.	P.E.	P.E. N.B.	P.E. -2.67'	P.E. -2.67' N.B.	TOP OF ASB AT ELEV.
573+00	574.05	574.06	577.18		574.51		573.98
574+00	573.51	573.50	576.58		573.93		573.42
575+00	573.82	573.85	576.87	576.91	574.19	574.24	574.16
576+00	575.53	575.94	578.57	578.69	575.90	576.02	575.94
577+00	578.35	578.05	581.47	581.72	578.80	579.05	578.97
578+00	580.73	581.61	583.94	584.31	581.27	581.64	581.56
578+78.69	581.87	583.16					
578+602-60(NB)							
604+00	564.44	564.59	568.11		565.44		565.36
605+00	567.01	567.29	570.45		567.73		567.70
606+00	570.35	570.39	573.51		570.84		570.76
606+55.12(NB)			575.23		572.54		572.50
607+00	577.23	577.23	577.23		574.56		574.48
607+235-59.63			577.23		574.56		574.48
236+00	573.32	573.33	576.57		573.90		573.70
237+00	571.12	571.15	574.25		571.58		571.47
238+00	567.68	567.78	570.86		568.19		568.11
239+00	563.75	563.83	566.86		564.19		564.11
240+00	559.67	559.75	562.86		560.19		560.11
241+00	555.77	555.75	558.86		556.19		556.11
242+00	551.87	551.91	555.00		552.33		552.25
243+00	549.07	549.12	552.16		549.49		549.41
244+00	547.38	547.42	550.48		547.81		547.73
245+00	546.71	546.73	549.81		547.14		547.06
246+00	546.19	546.25	549.29		546.62		546.54
247+00	545.69	545.69	548.76		546.09		546.01
248+00	545.69	545.69	548.76		546.09		546.01
249+00	544.55	544.64	547.71		545.04		544.96
250+00	544.04	544.08	547.19		544.52		544.44
251+00	543.50	543.51	546.63		543.96		543.88
252+00	542.72	542.79	545.84		543.17		543.09
253+00	541.70	541.72	544.81		541.14		541.06
254+00	540.67	540.67	543.75		541.08		541.00
255+00	539.60	539.63	542.69		540.02		539.94
256+00	538.53	538.54	541.63		538.96		538.88
257+00	537.47	537.49	540.57		537.90		537.82
258+00	536.30	536.30	539.43		536.76		536.68
259+00	534.58	534.57	537.70		535.03		534.95
260+00	532.24	532.27	533.39		530.72		530.64
261+00	530.12	530.12	533.23		529.55		529.47
262+00	529.09	529.08	532.22		529.80		529.72
263+00	529.36	529.39	532.47		531.30		531.22
264+00	530.85	530.88	533.97		533.80		533.72
265+00	533.37	533.37	536.47		535.56		535.48
266+00	535.18	535.25	538.23		536.15		536.07
267+00	535.78	535.80	538.82		535.54		535.46
268+00	535.23	535.24	538.23		533.80		533.72
269+00	533.43	533.42	536.47		531.20		531.12
270+00	530.84	530.83	533.87		528.56		528.51
271+00	528.22	528.19	531.23		526.84		526.76
272+00	526.46	526.46	529.51		526.37		526.29
273+00	525.94	525.93	529.04		527.16		527.10
274+00	526.74	526.71	529.87		529.24		529.16
275+00	528.77	528.79	531.91		531.71		531.64
276+00	531.27	531.26	534.39		533.81		533.76
277+00	533.39	533.43	536.51		534.79		534.71
278+00	534.38	534.36	537.46		534.53		534.46
279+00	534.10	534.12	537.20		533.05		532.97
280+00	532.63	532.65	535.72		530.39		530.31
281+00	529.97	529.97	533.06		527.39		527.31
282+00	526.96	526.96	530.06		524.39		524.31
283+00	523.96	523.90	527.06		521.83		521.75
284+00	521.43	521.51	524.50		520.17		520.09
285+00	519.79	519.85	522.84		518.95		518.49
286+00	518.58	518.57	521.62		517.73		517.24
287+00	517.29	517.32	520.40		516.51		516.07
288+00	516.04	516.15	519.18		515.29		514.83
289+00	514.88	514.91	517.96		514.07		513.67
290+00	513.71	513.75	516.74		512.85		512.46
291+00	512.48	512.54	515.52		511.63		511.22
292+00	511.28	511.30	514.30		510.28		509.86
293+00	509.95	509.94	512.95		508.65		508.22
294+00	508.32	508.30	511.32		506.89		506.50
295+00	506.55	506.48	509.56				

STATION	EXIST. S.B. GUTTER ELEV.	EXIST. N.B. GUTTER ELEV.	P.E.	P.E. N.B.	P.E. -2.67'	P.E. -2.67' N.B.	TOP OF ASB AT ELEV.
296+00	504.81	504.74	507.80		505.13		504.73
297+00	502.93	502.89	506.04		503.37		502.85
298+00	501.54	501.45	504.56		501.89		501.46
299+00	500.63	500.62	503.61		500.94		500.55
299+92							500.88
300+00							
301+00							
301+46							499.62
302+00	499.23	499.27	502.34		499.67		499.15
303+00	500.16	500.20	503.24		500.57		500.08
304+00	502.60	502.56	505.51		502.84		502.52
305+00	506.14	506.09	509.17		506.50		506.42
305+34							
306+00							
307+00							
308+00							
309+00							
309+89							517.72
310+00	518.04	517.15	520.89		518.22		517.07
311+00	520.06	518.94	523.09		520.42		518.86
312+00	521.81	520.67	524.84		522.17		520.59
313+00	523.57	522.41	526.59		523.92		522.33
313+54							522.53
314+00							
315+00							
315+31							522.60
316+00	521.44	520.33	524.51		521.84		520.25
317+00	518.42	517.30	521.43		518.76		517.22
318+00	514.63	513.43	517.69		515.02		513.35
319+00	511.56	510.39	514.54		511.87		510.31
320+00	509.61	508.69	512.67		510.00		508.61
321+00	509.05	508.39	512.10		509.43		508.31
322+00	509.74	509.42	512.82		510.15		509.34
323+00			514.18		511.51		
324+00							
340+00							
341+00			493.59		490.92		
342+00	490.02	490.02	493.08		490.41		490.33
343+00	489.53	489.51	492.57		489.90		489.82
344+00	489.00	488.97	492.06		489.39		489.31
345+00	488.53	488.48	491.55		488.88		488.80
346+00	487.98	488.01	491.04		488.37		488.29
347+00	488.03	488.02	491.03		488.36		488.28
348+00	488.87	488.94	492.03		489.37		489.28
349+00	490.54	490.53	493.53		490.86		490.78
350+00	492.03	492.06	495.03		492.36		492.28
351+00	493.56	493.54	496.53		493.86		493.78
352+00	495.03	495.05	498.03		495.36		495.28
353+00	496.55	496.51	499.53		496.86		496.78
354+00	497.52	497.52	500.48		497.81		497.73
355+00	497.31	497.32	500.33		497.64		497.58
356+00	497.04	496.07	499.08		496.41		496.33
357+00	493.68	493.67	496.73		494.06		493.98
358+00	490.30	490.30	493.28		490.61		490.53
359+00	486.26	486.27	489.28		486.61		486.53
360+00	482.84	482.86	485.84		483.17		483.09
361+00	480.76	480.77	483.77		481.10		481.02
362+00	480.08	480.10	483.08		480.41		480.33
363+00	480.77	480.76	483.77		481.10		481.02
364+00	482.25	482.18	485.29		482.62		482.53
365+00	483.19	482.52	486.22		483.55		483.47
366+00	482.95	481.73	486.02		483.35		483.27
367+00	481.66	479.86	484.70		482.03		481.95
368+00	479.13	476.73	482.25		479.58		479.50
369+00	475.79	473.19	478.77		476.10		476.02
370+00	472.37	469.92	475.40		472.73		469.84
371+00	470.38	467.73	473.36		470.69		467.65
372+00	469.50	467.21	472.65		469.98		467.13
373+00	470.06	467.68	473.10		470.43		467.60
374+00	471.76	469.61	474.90		472.23		469.53
375+00	474.98	472.86	478.03		475.36		472.78
376+00	478.57	476.54	481.65		478.98		476.46
377+00	481.53	479.49	484.54		481.87		479.41
378+00	483.29	481.31	486.30		483.63		481.23
379+00	483.96	481.96	486.91		484.24		481.88

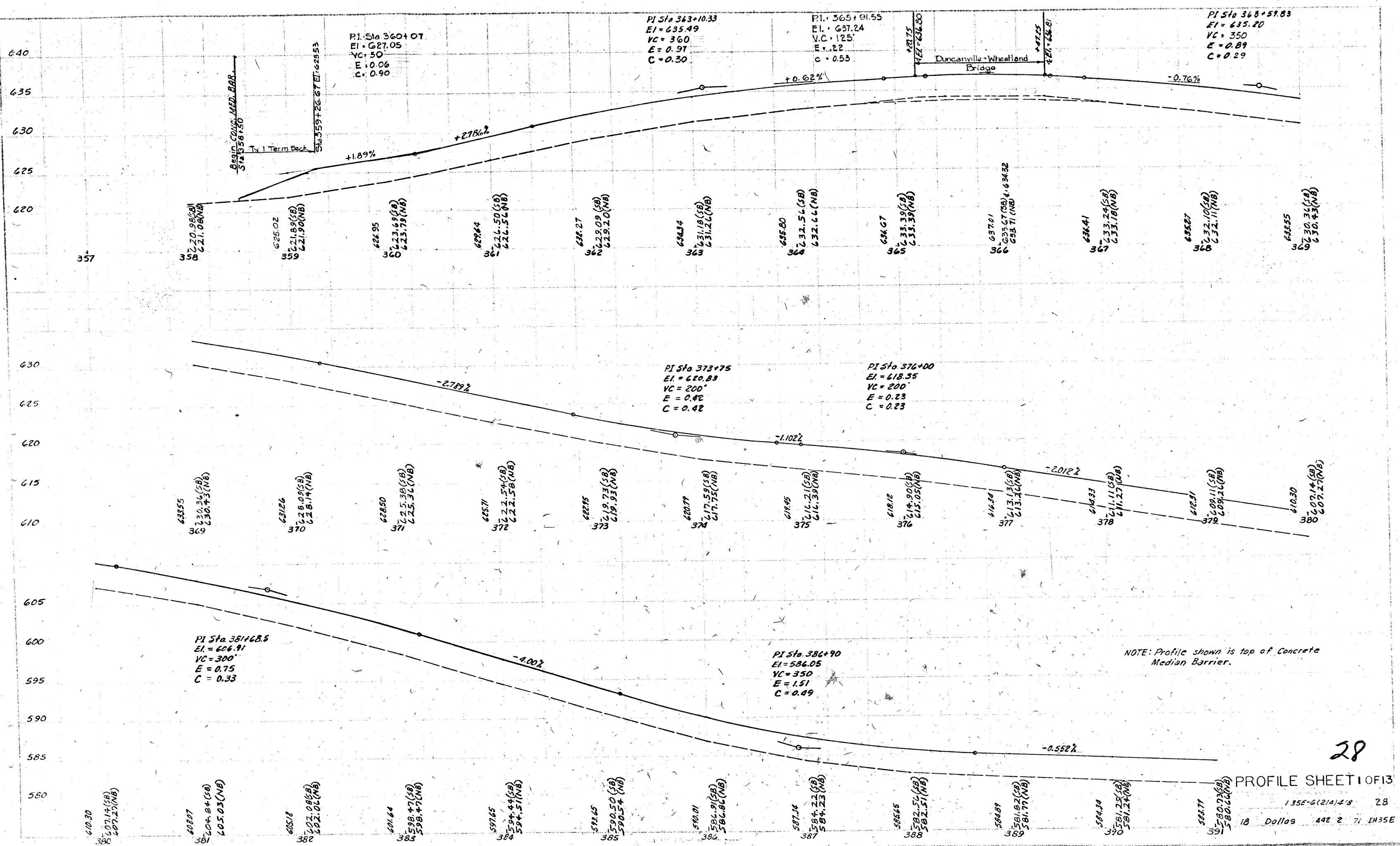
STATION	EXIST. S.B. GUTTER ELEV.	EXIST. N.B. GUTTER ELEV.	P.E.	P.E. N.B.	P.E. -2.67'	P.E. -2.67' N.B.	TOP OF ASB AT ELEV.
380+00	483.38	481.41	486.39		483.72		481.33
381+00	481.96	479.98	484.96		482.29		479.90
382+00	480.38	478.58	483.47		480.80		478.50
383+00	479.09	477.15	482.03		479.36		477.07
384+00	477.71	475.53	480.60		477.93		475.45
385+00	476.12	473.98	479.16		476.49		473.90
386+00	474.47	472.48	477.46		474.79		472.40
386+40							473.12
387+00							
387+55							473.56
388+00	471.65	469.90	473.70		471.03		469.82
389+00	470.15	468.16	473.19		470.52		468.08
390+00	468.61	466.74	471.63		468.96		466.66
391+00	467.50	465.77	470.50		467.83		465.69
392+00	467.57	466.01	470.61		467.94		465.93
393+00	468.12	466.60	471.10		468.43		465.52
394+00	468.47	467.21	471.21		468.54		467.13
395+00	468.27	467.91	471.32		468.65		467.83
396+00	468.45	468.37	471.42		468.75		468.29
397+00	468.95	468.86	471.64		468.97		468.78
398+00	469.81	469.78	472.53		469.86		469.70
399+00	470.90	470.86	473.52		470.85		470.78
400+00	471.88	471.80	474.52		471.85		471.72
401+00	472.51	472.43	475.3		472.56		472.35
402+00	472.01	471.99	474.71		472.04		471.91
403+00	470.89	470.86	473.47		470.80		470.78
404+00	469.55	469.55	472.22		469.55		469.48
405+00	468.21	468.46	471.07		468.40		468.13
406+00	466.64	467.10	469.76		467.09		466.50
407+00	464.30	464.58					464.50
406+58							464.53
407+52							462.21
408+00	461.31	461.52	464.19		461.52		461.44
409+00	458.42	458.55	461.20		458.53		458.47
410+00	455.38	455.25	458.26		455.59		455.17
411+00	452.44	451.87	455.32		452.65		451.79
412+00	449.49	448.46	452.57		449.70		448.38
413+00	446.49	445.37	449.37		446.70		445.24
414+00	443.04	442.51	445.94		443.27		442.43
415+00	439.77	439.57	442.46		439.79		439.49
416+00	436.69	436.72	439.39		436.72		439.61
417+00	433.60	433.71	436.34		433.67		433.52
417+79	430.78	430.67	434.09		431.42		430.59

CURVE DATA

[illegible]

HORIZONTAL CURVE DATA 27

FED NO DIV. NO.	STATE	FEDERAL PROJECT NO.				SHEET
6	TEXAS	135E-6(24)718				27
STATE DIST. NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.	
1A	DALLAS	442	2		5-11	

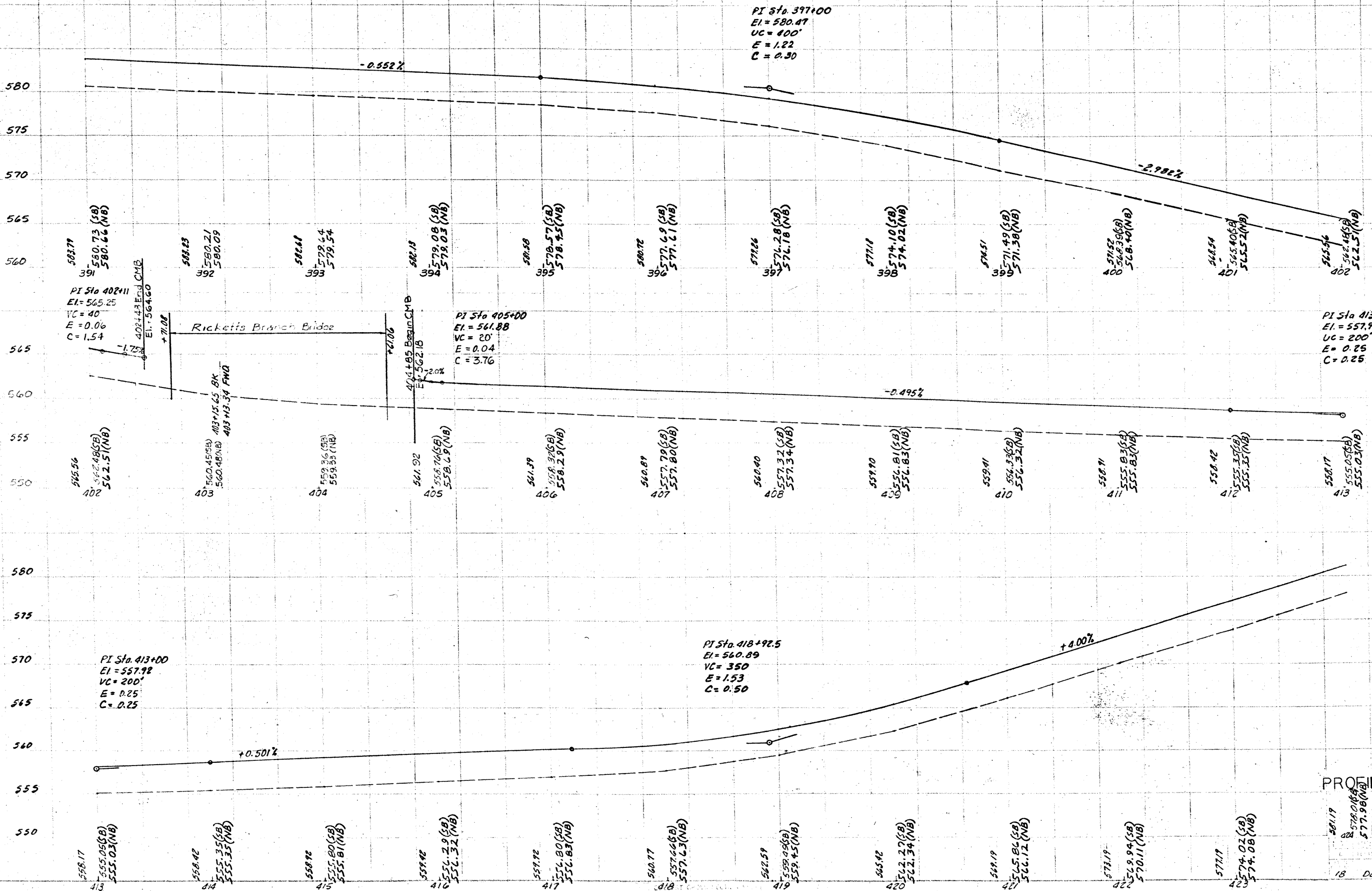


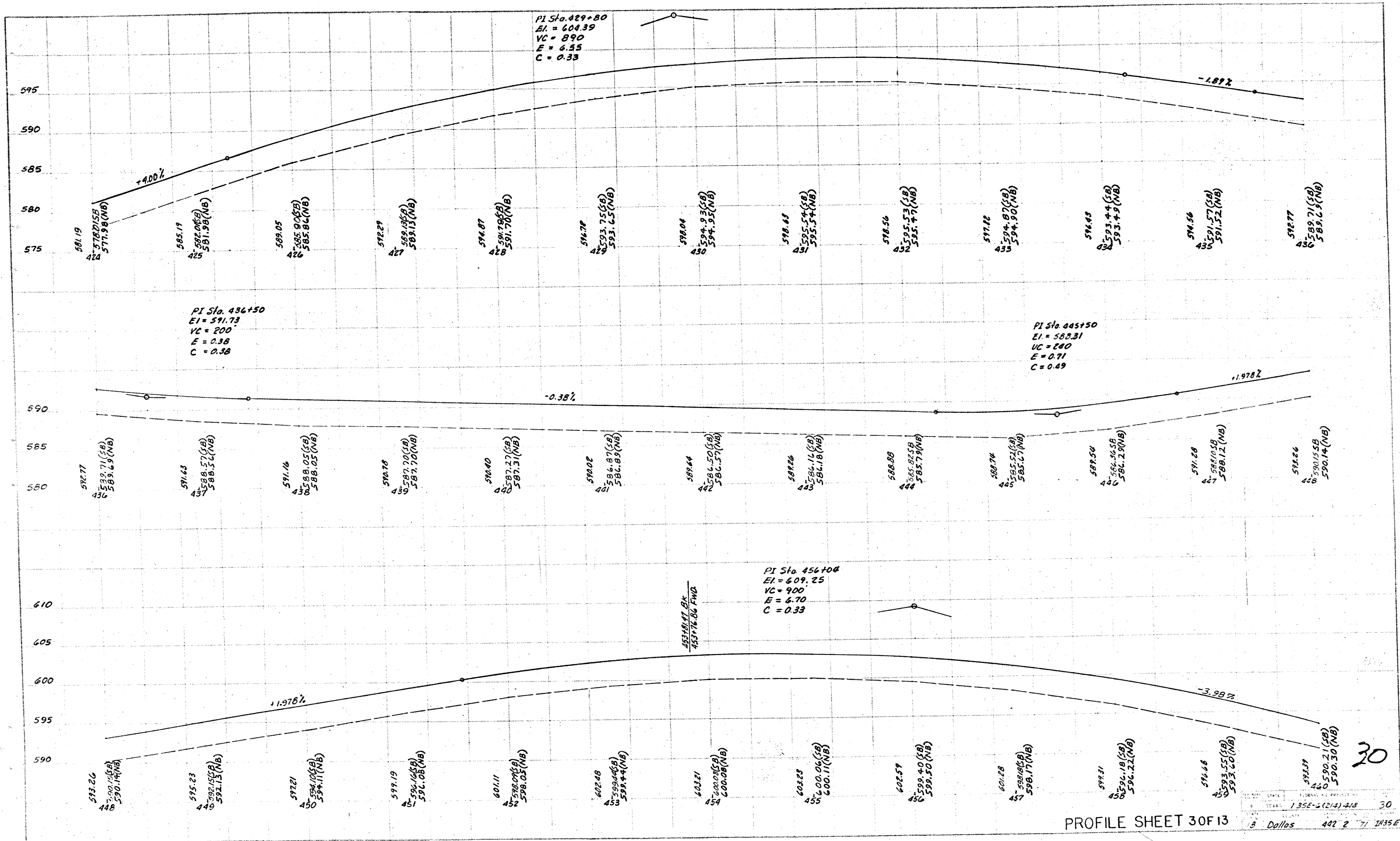
28

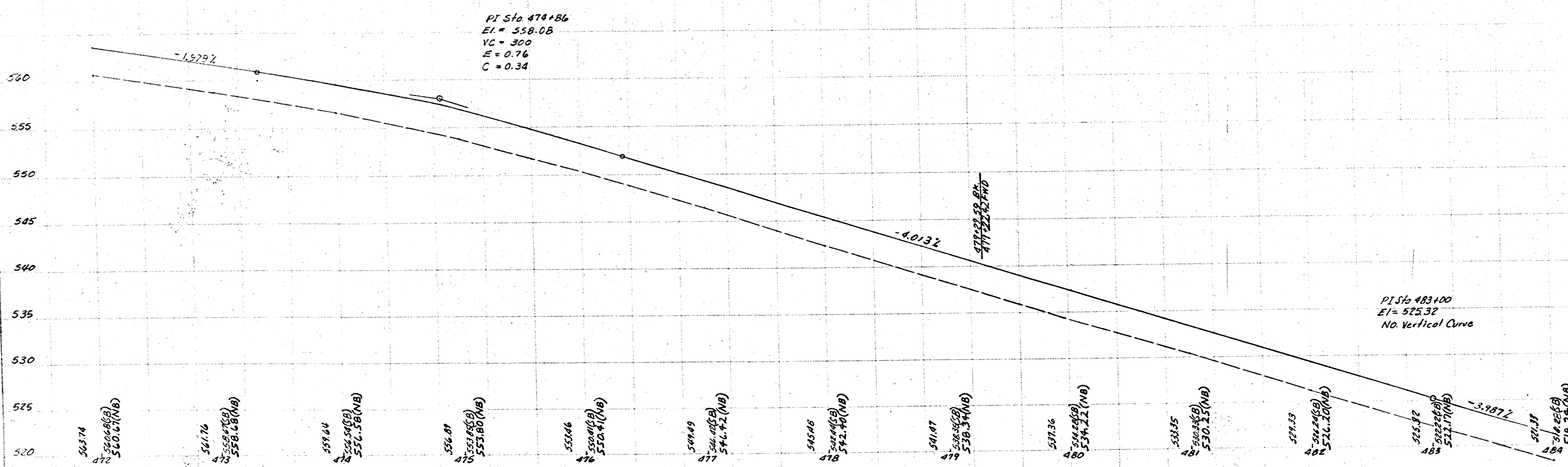
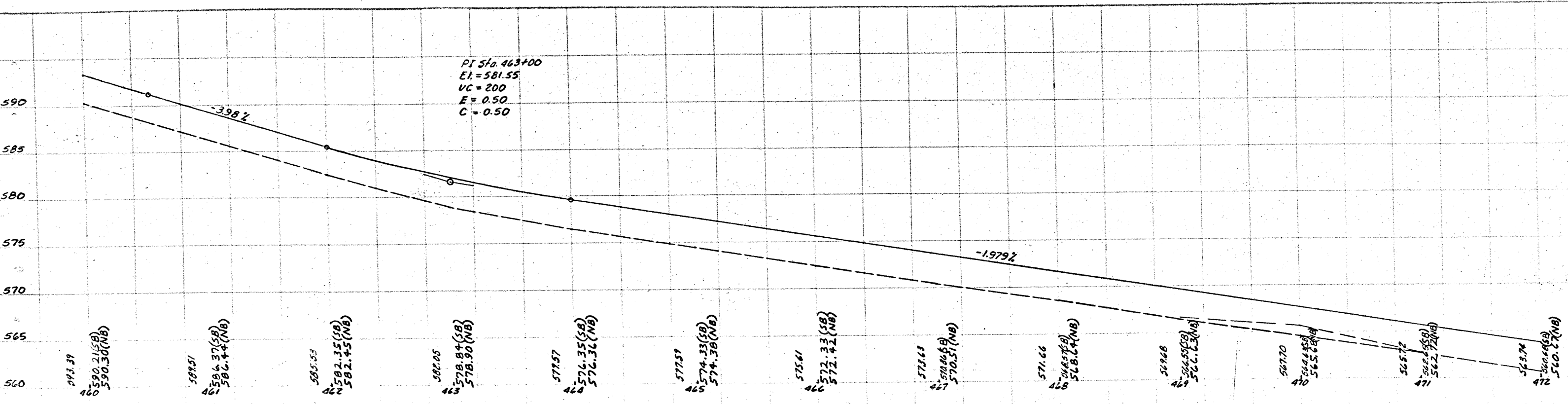
PROFILE SHEET 1 OF 13

135E-6(214)4/8 28

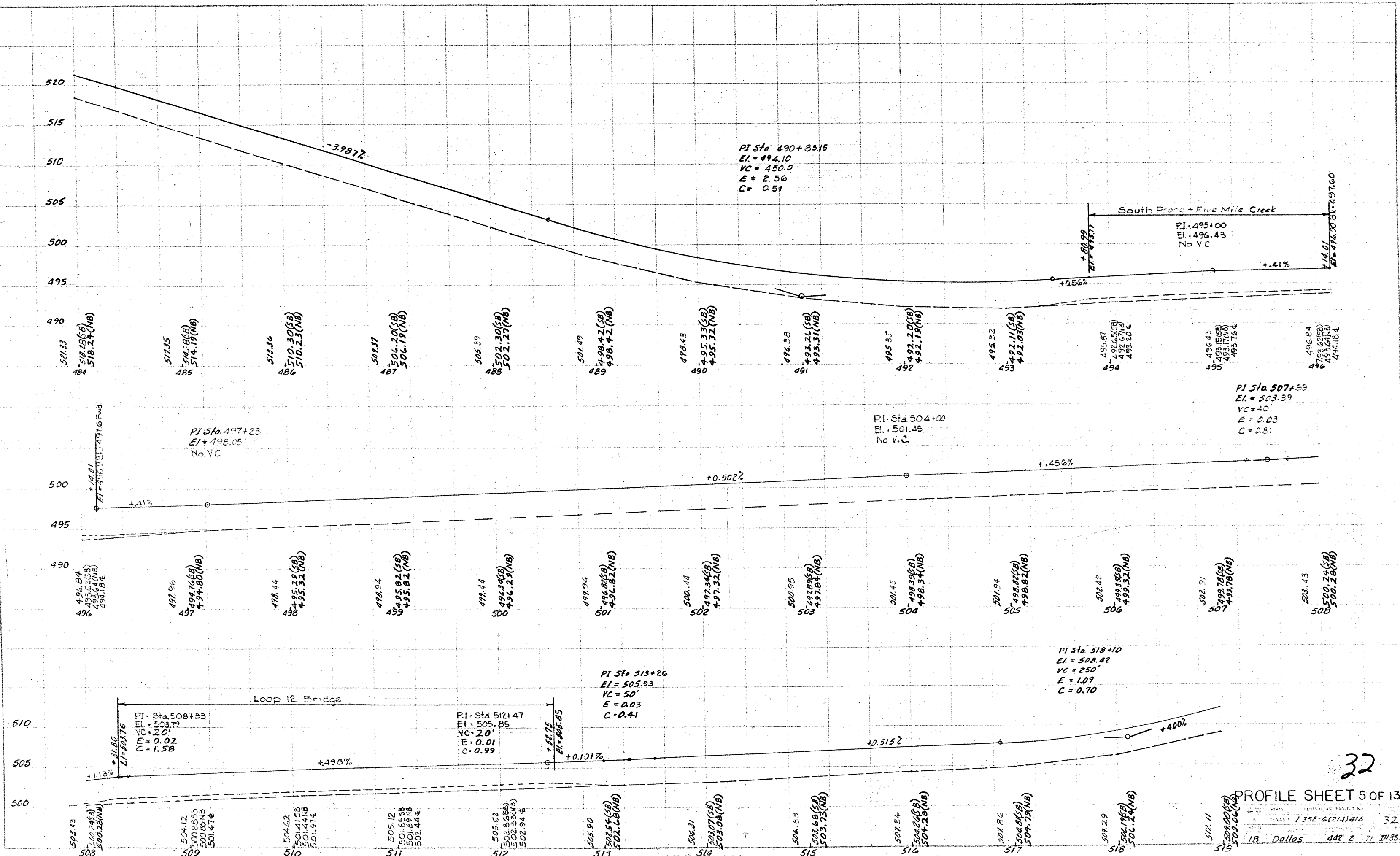
18 Dollos 442 2 71 IN35E



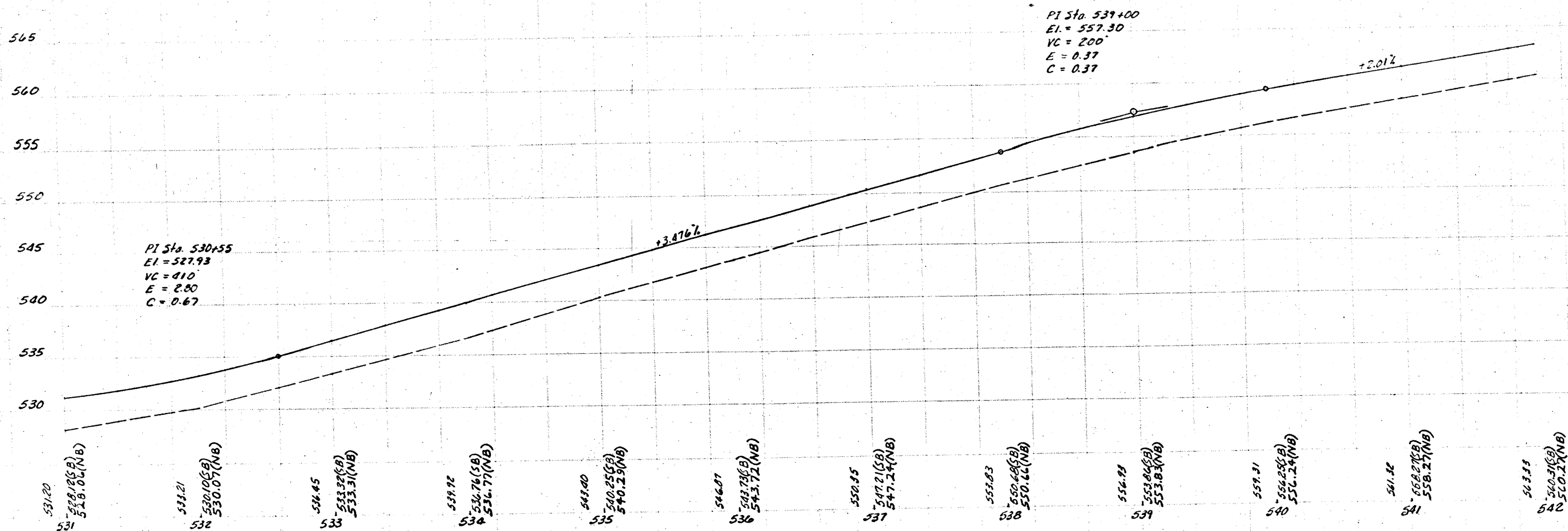
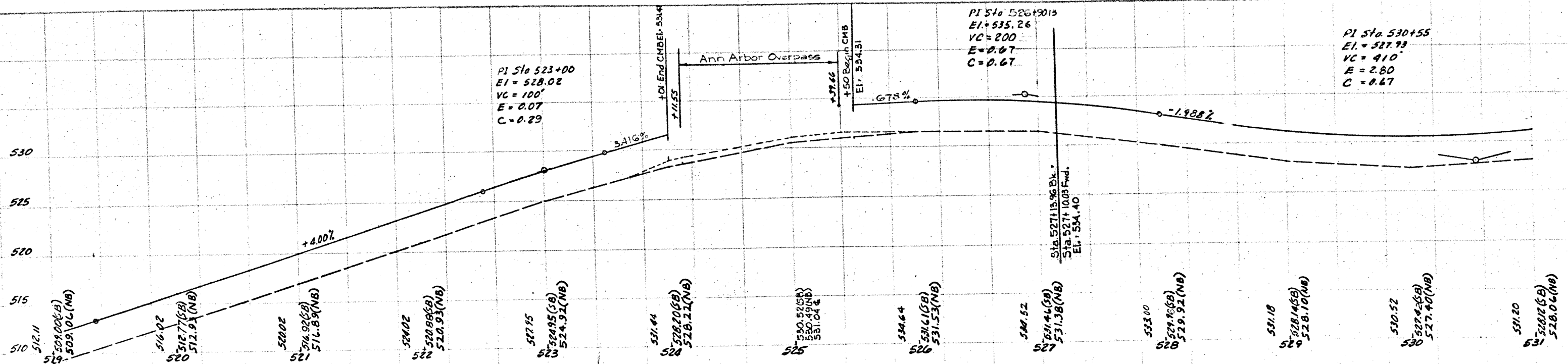




PI Sta. 483+00
 EI = 525.32
 No. Vertical Curve



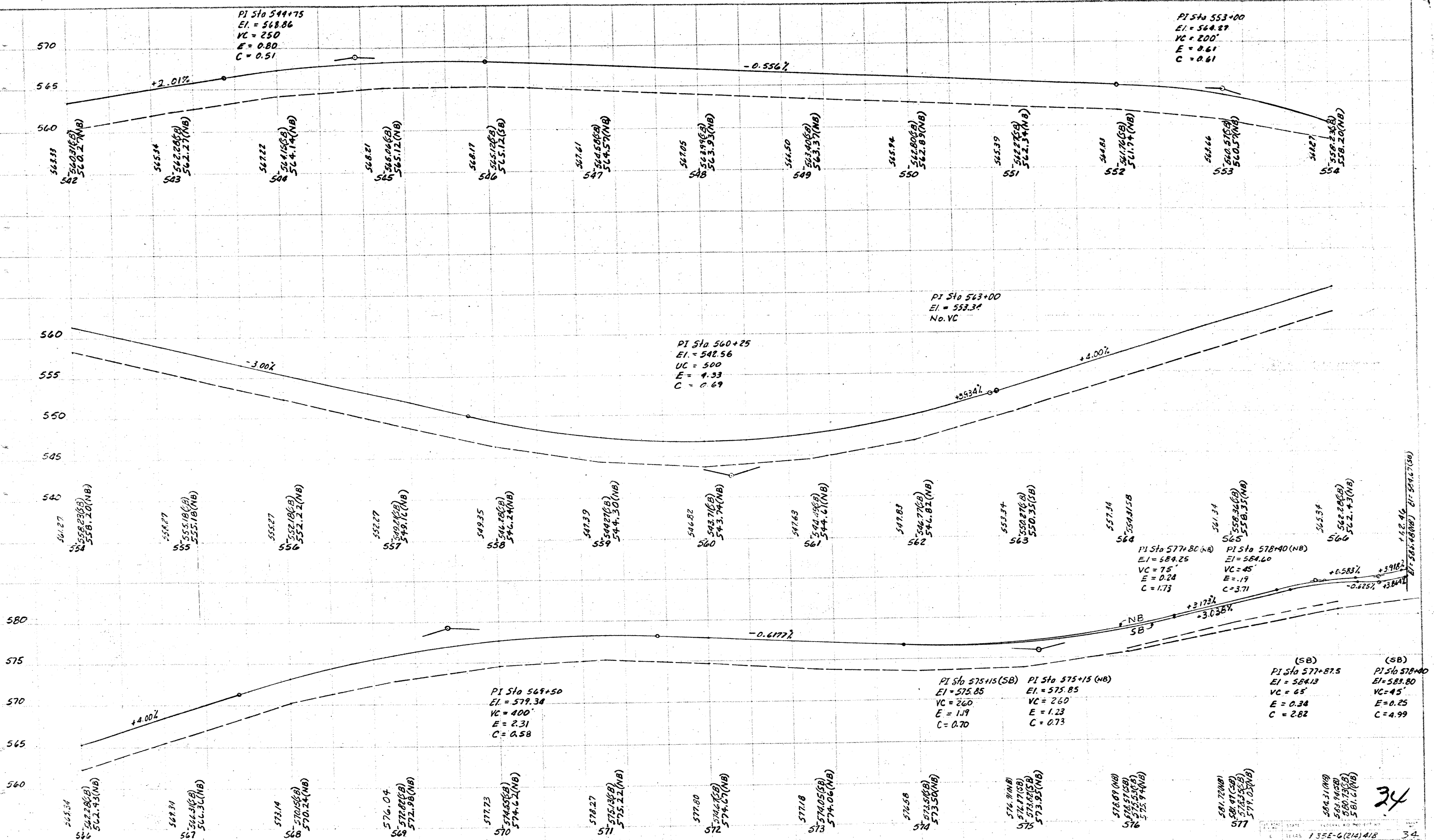
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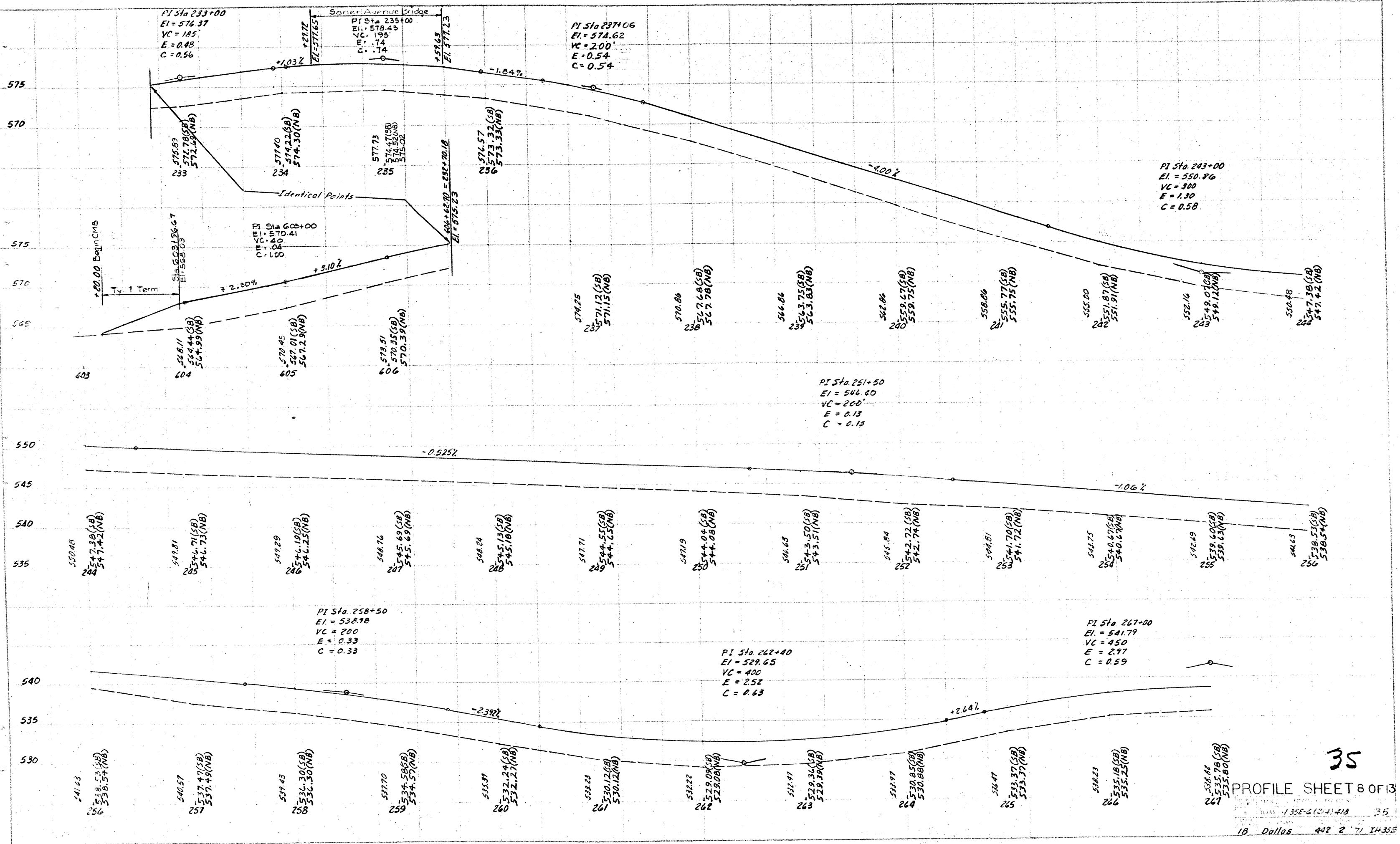
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PROFILE SHEET 6 OF 13

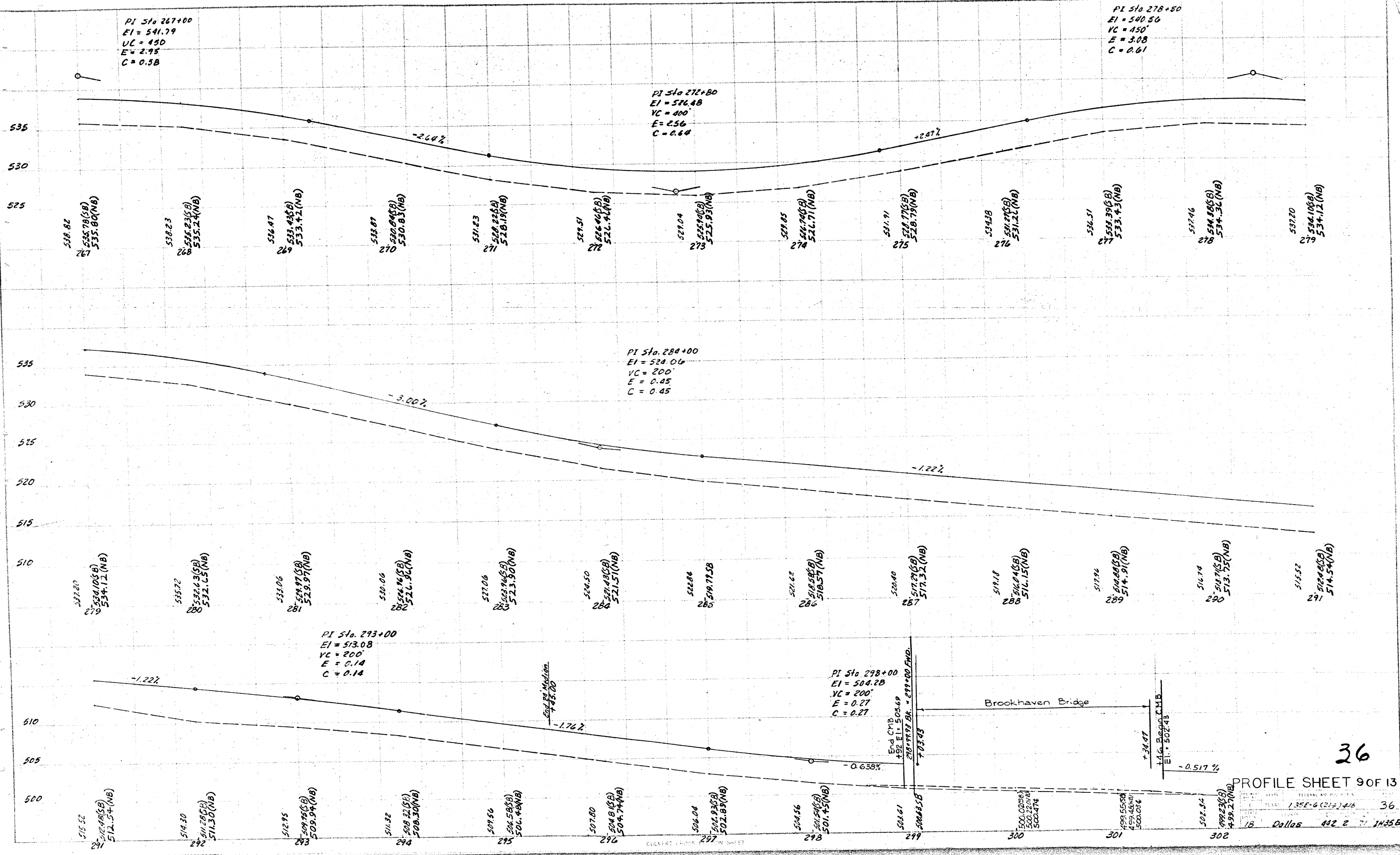
18 Dallas 442 2 7 1A35E

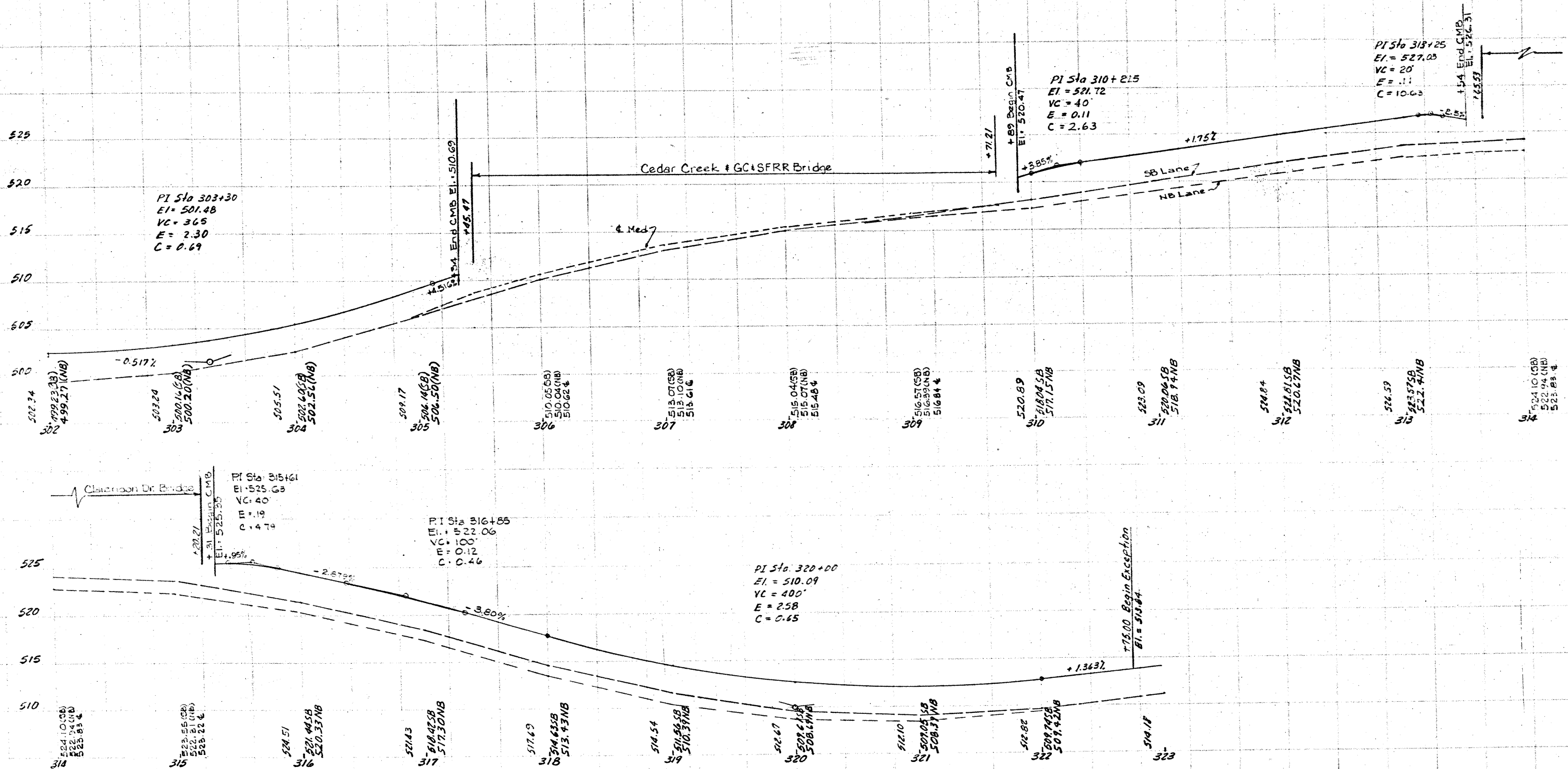


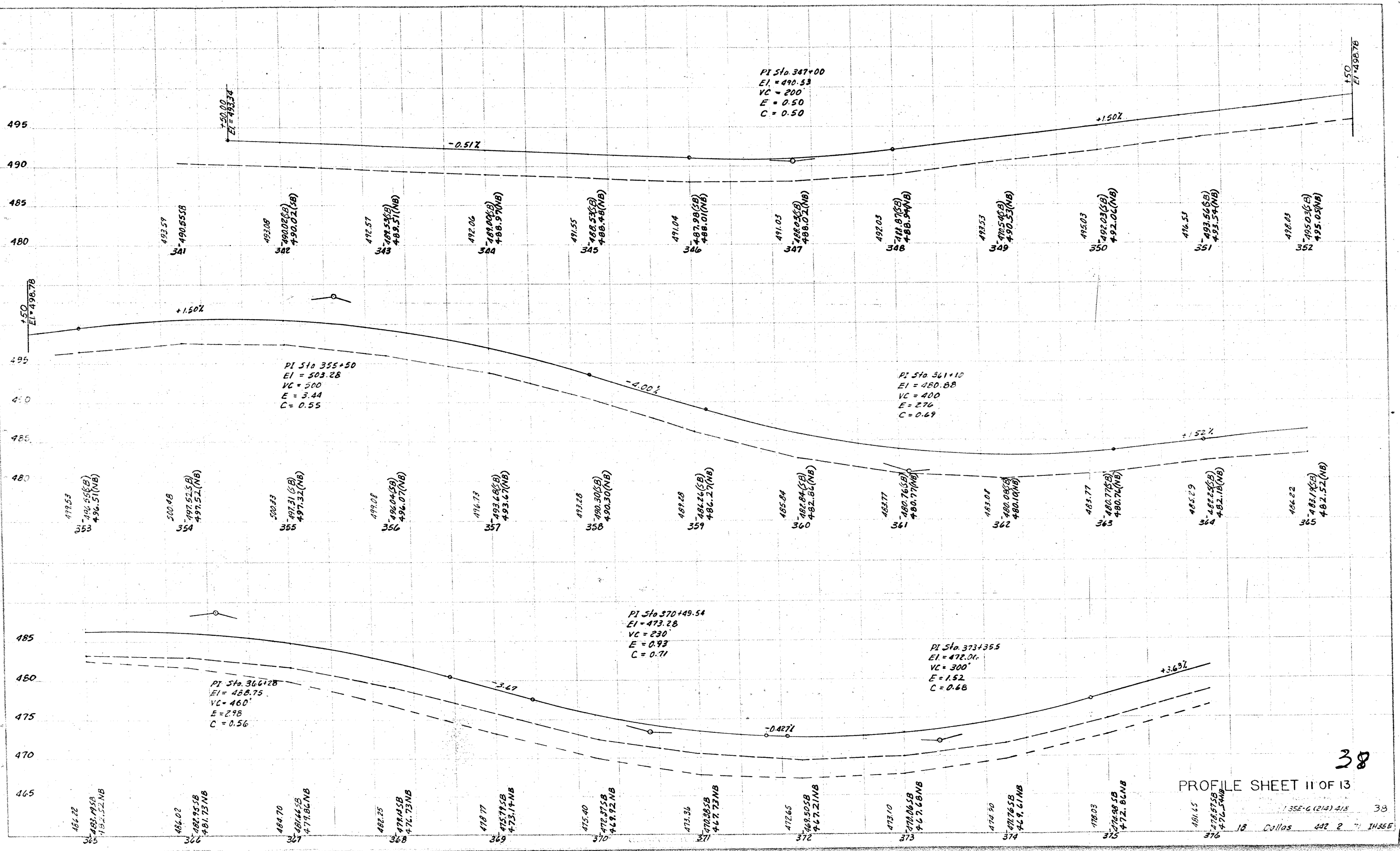
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35





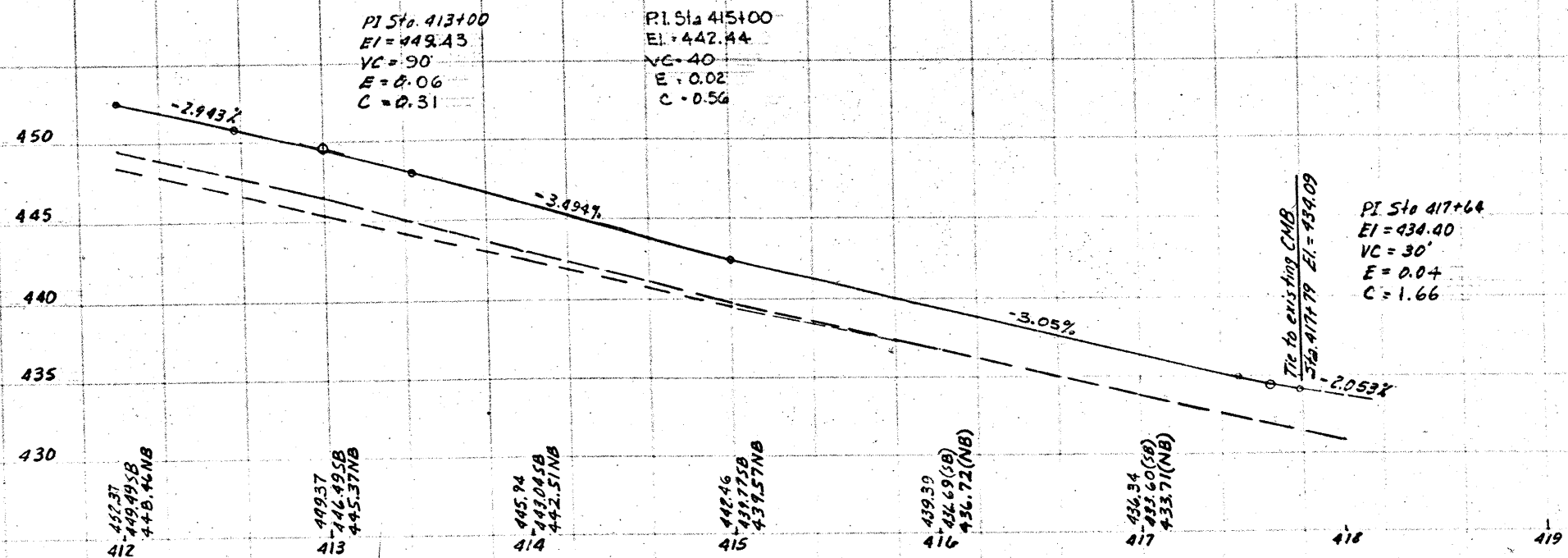


38

PROFILE SHEET II OF 13

135E-G (214) 4/8 38

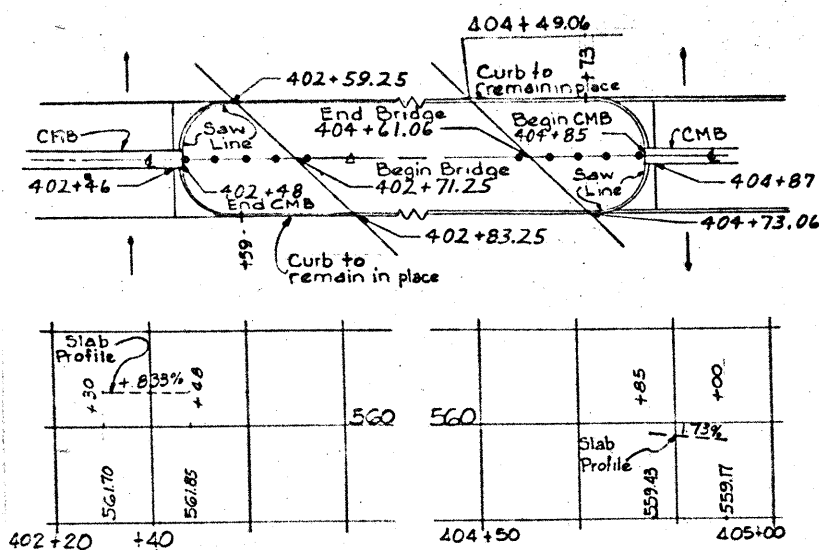
18 Collas 402 2 IN 35E



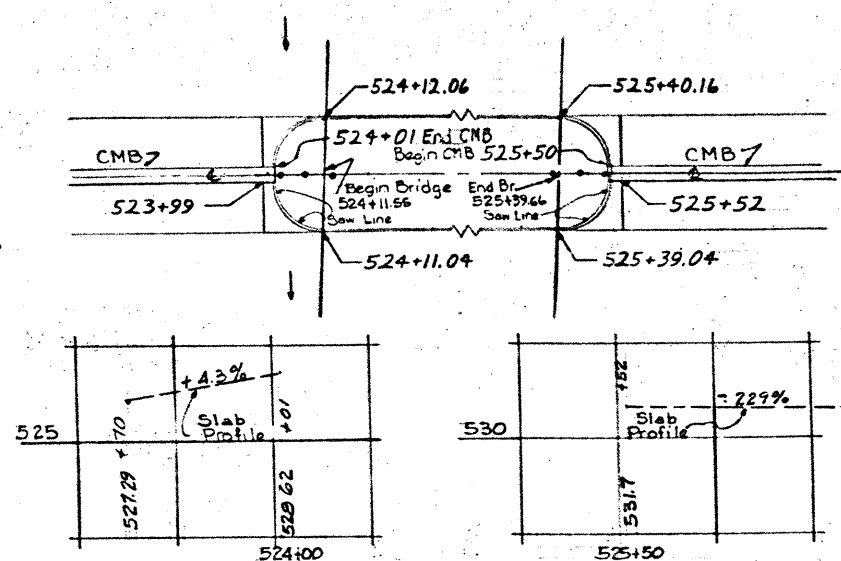
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PROFILE SHEET 13 OF 13

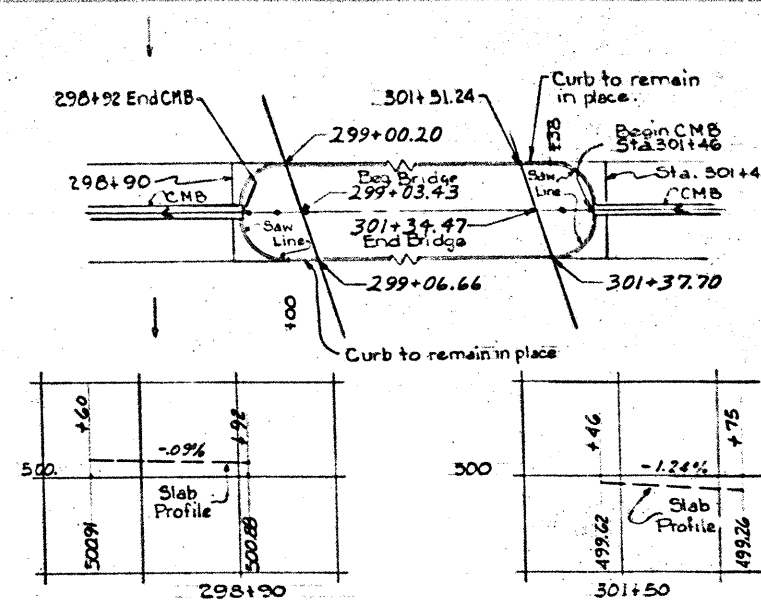
FEDERAL AID PROJ NO. 135F-6(214)418
 COUNTY Dallas
 SHEET 40
 DATE 11/35E



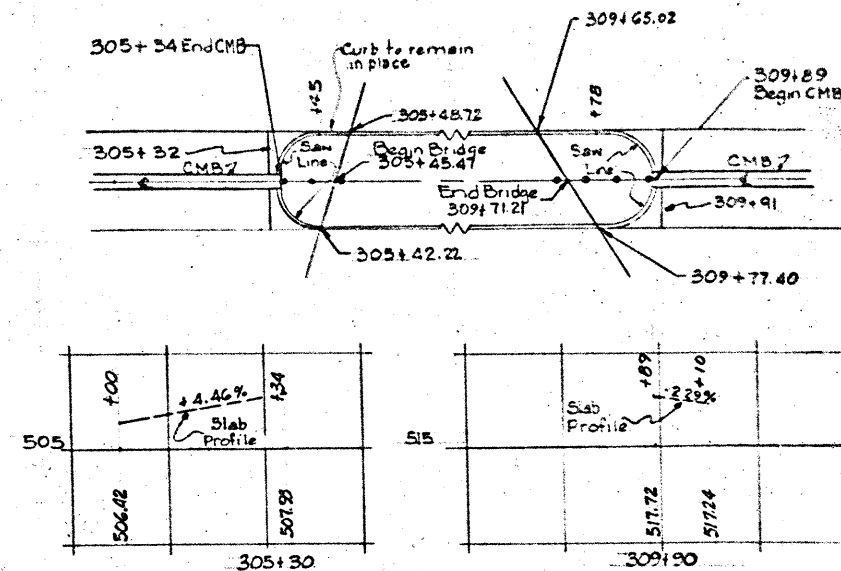
RICKETTS BRANCH BRIDGE



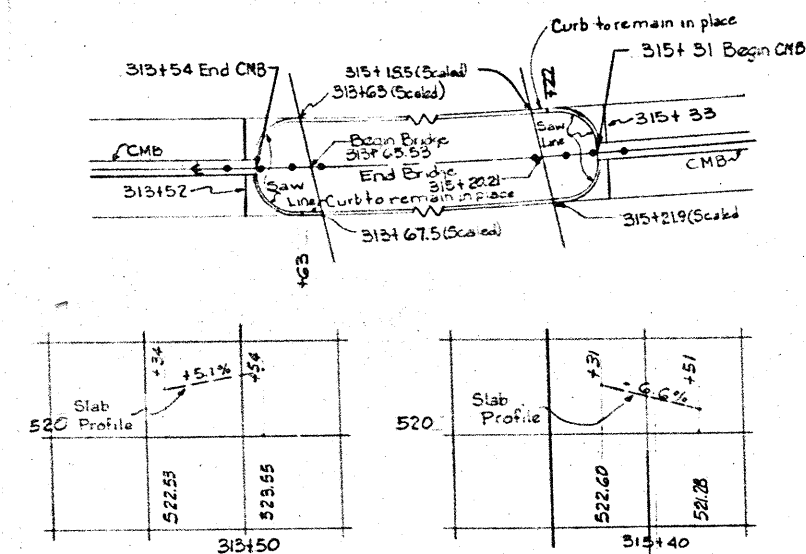
ANN ARBOR OVERPASS



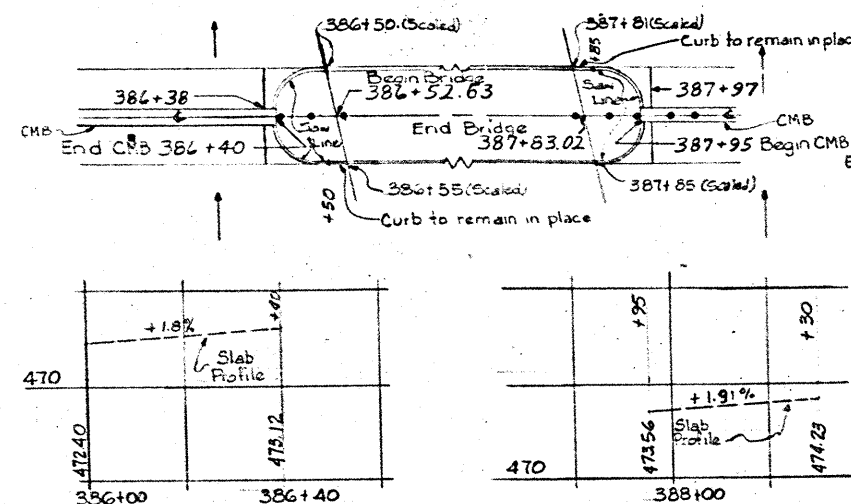
BROOKHAVEN BRIDGE



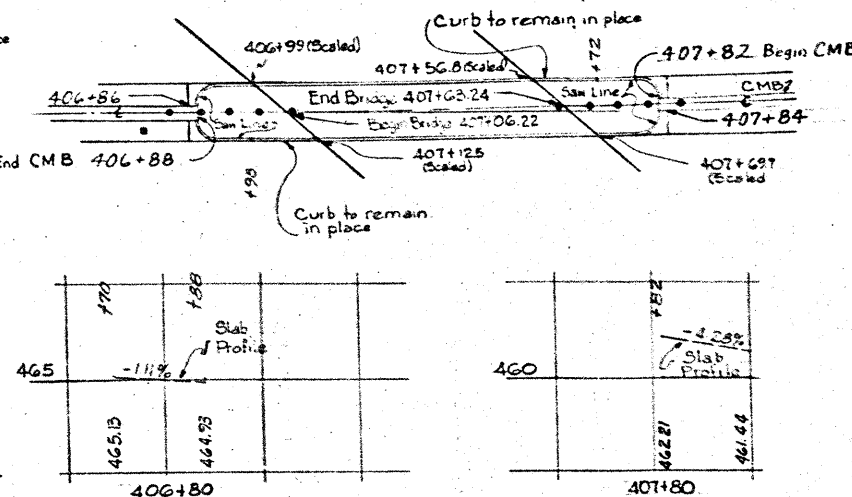
CEDAR CREEK - GC & SF



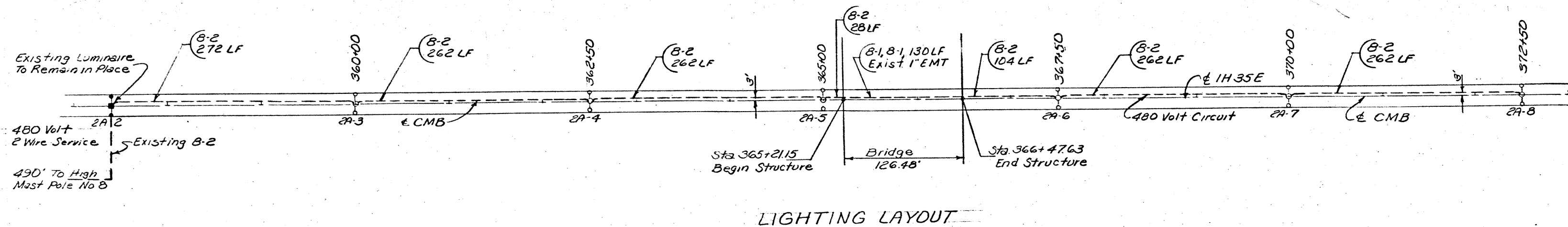
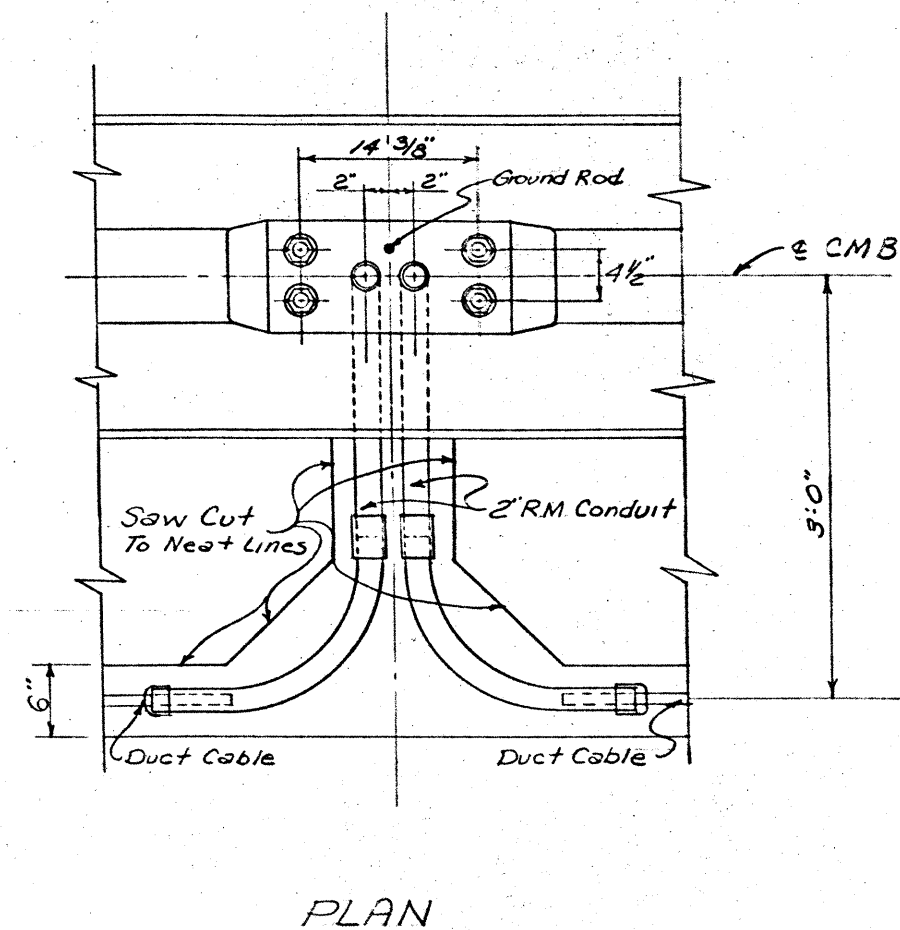
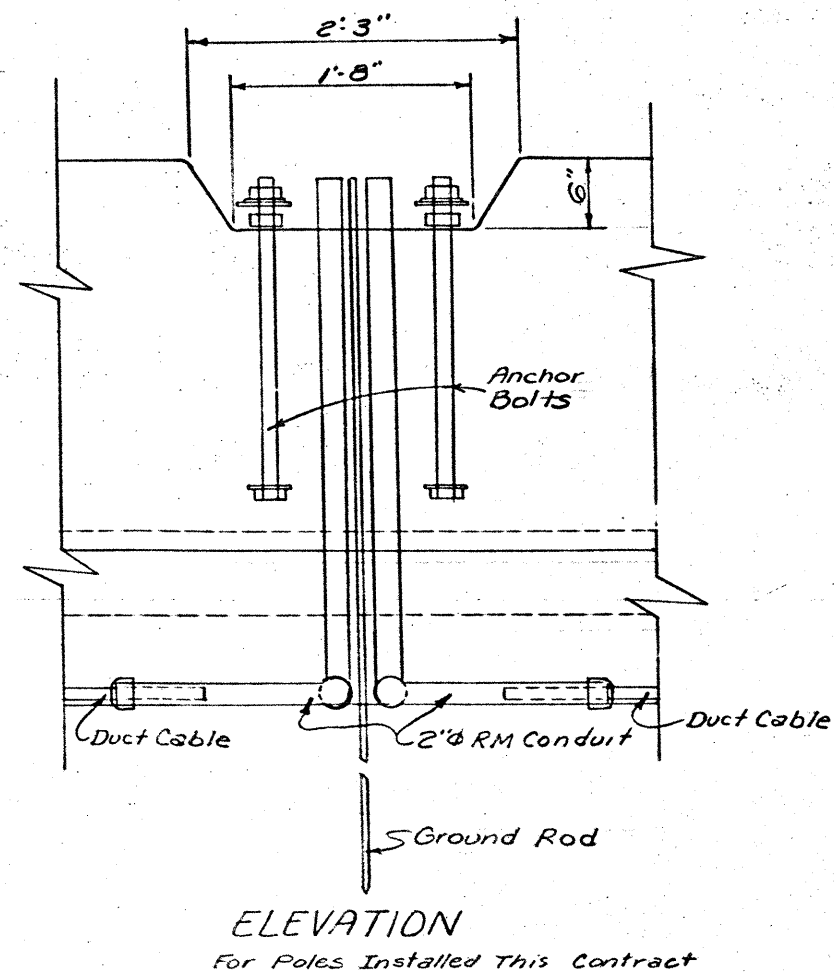
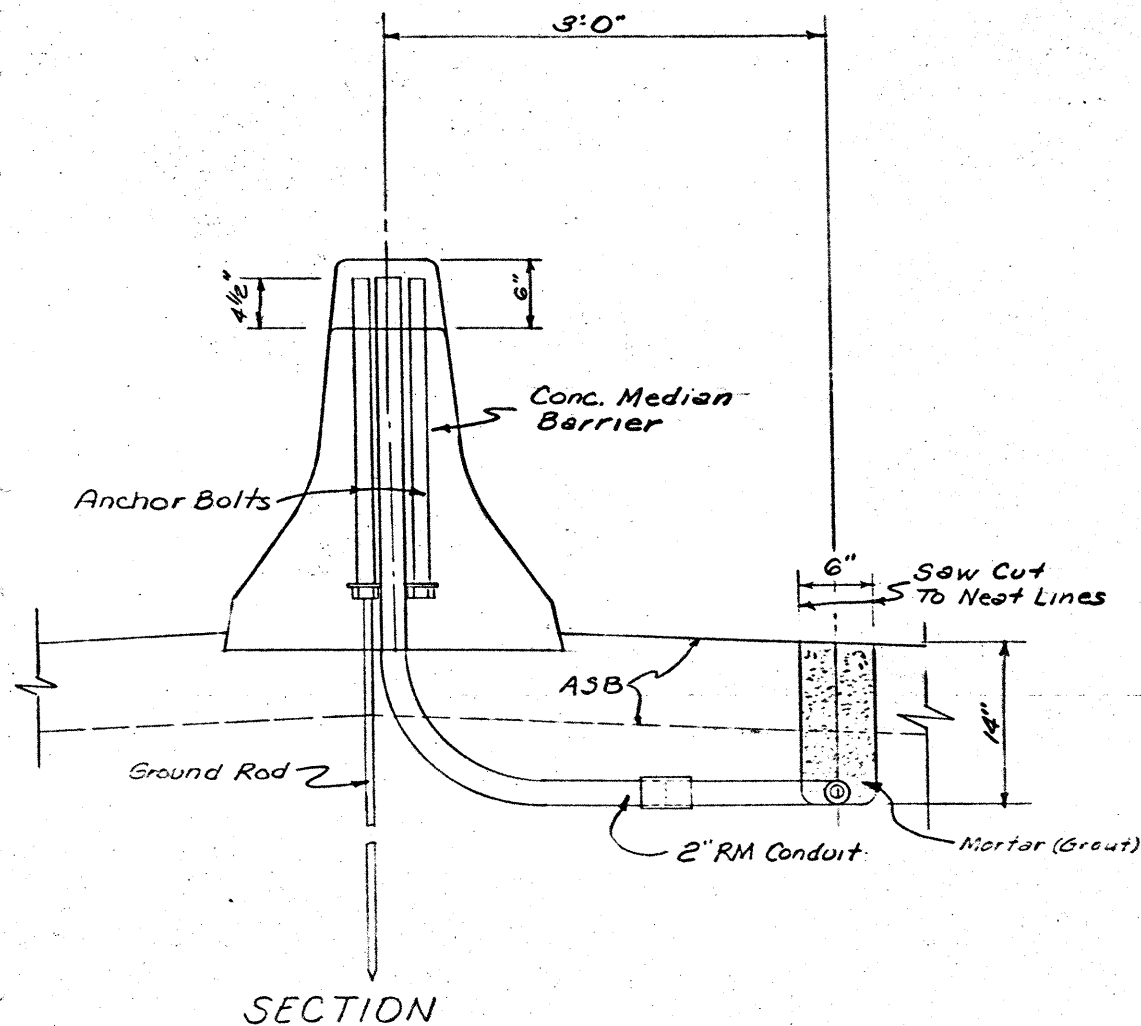
CLARENDON DRIVE BRIDGE



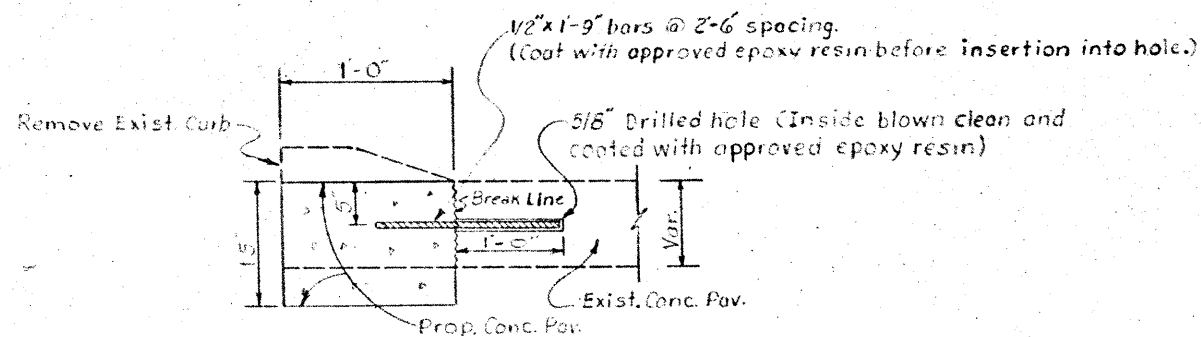
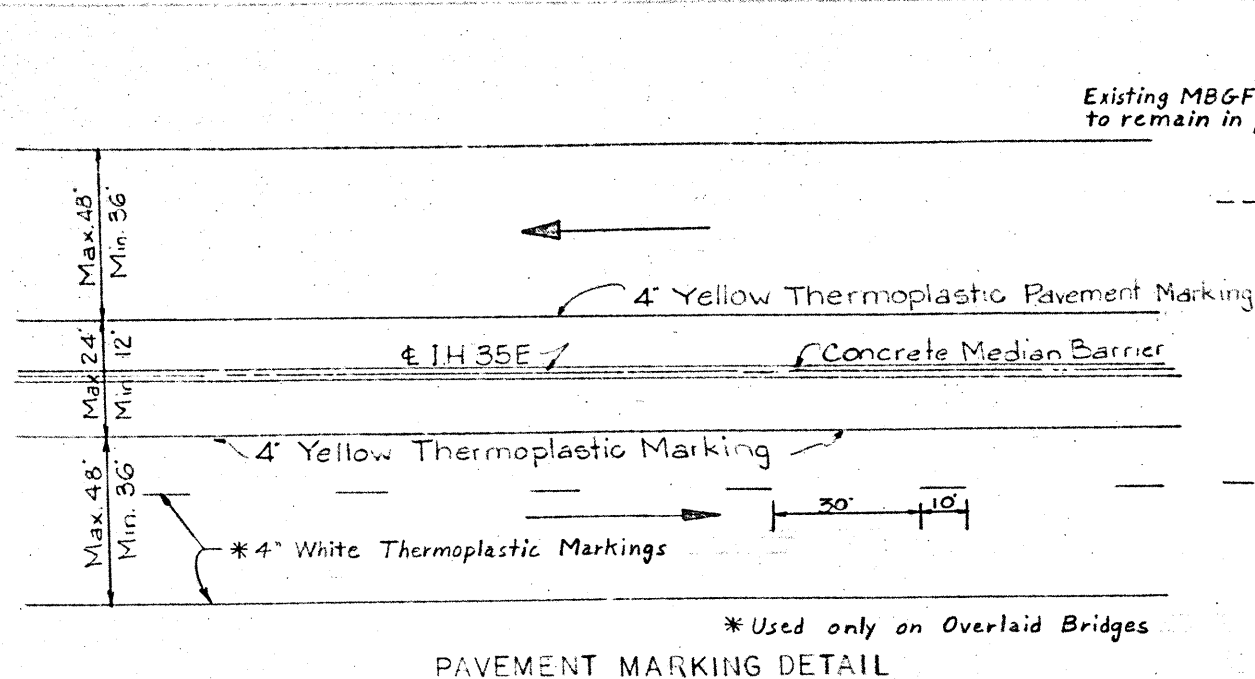
TENTH STREET BRIDGE



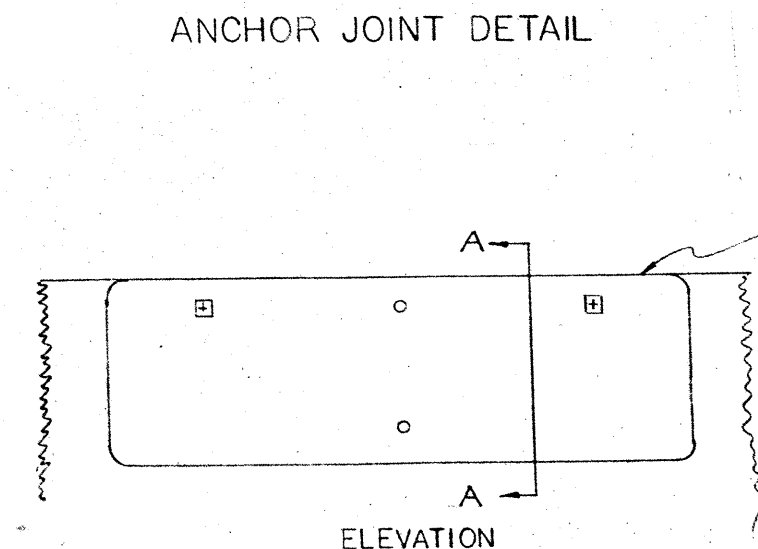
FLEMING PLACE BRIDGE



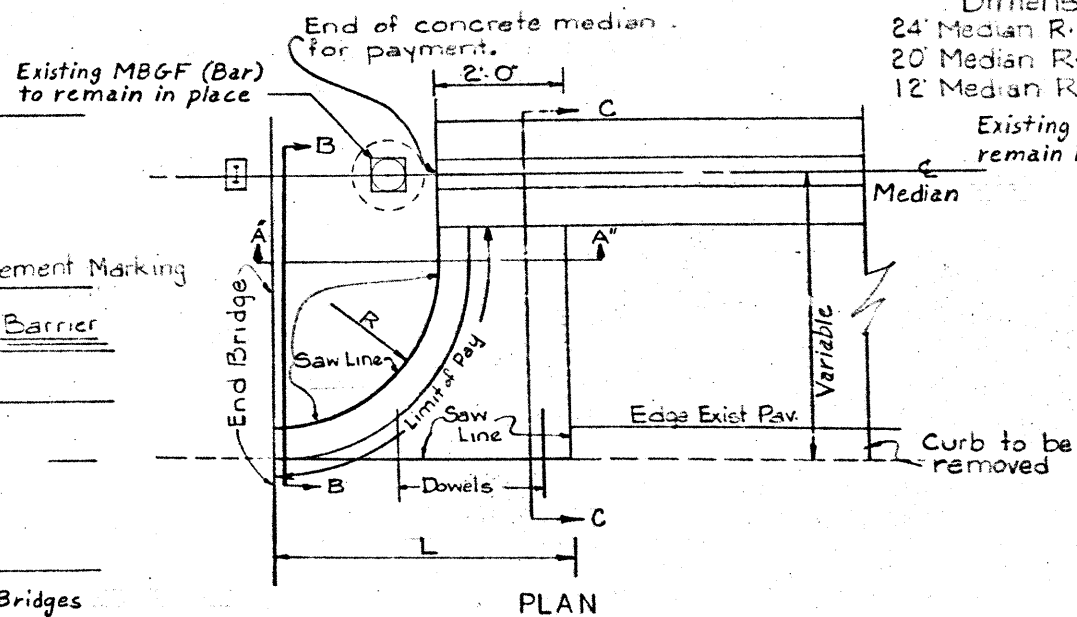
LIGHTING
DETAILS 43



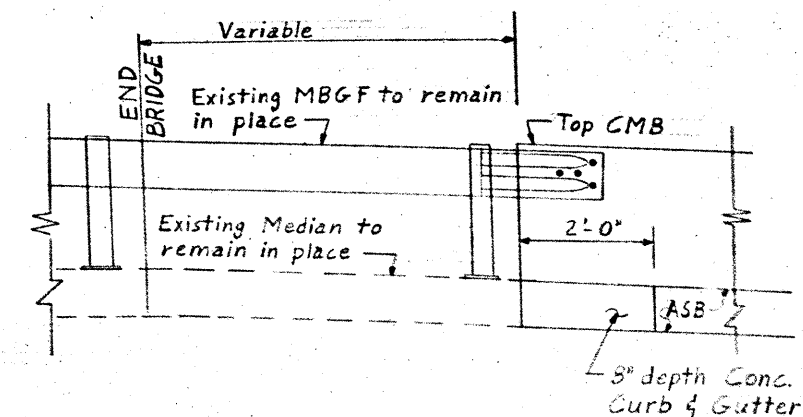
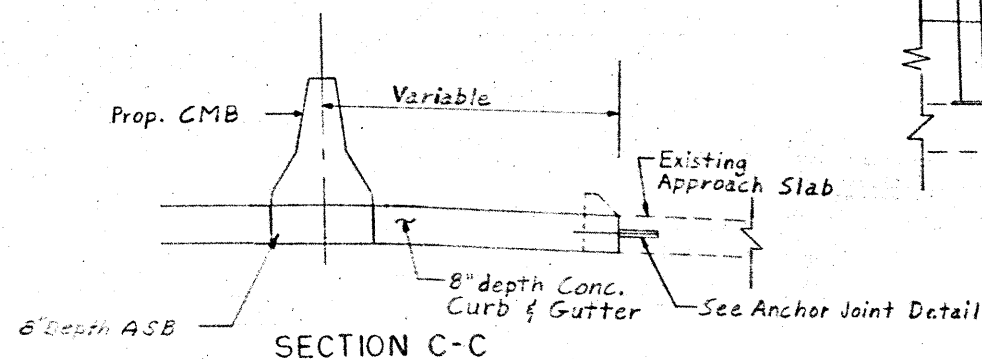
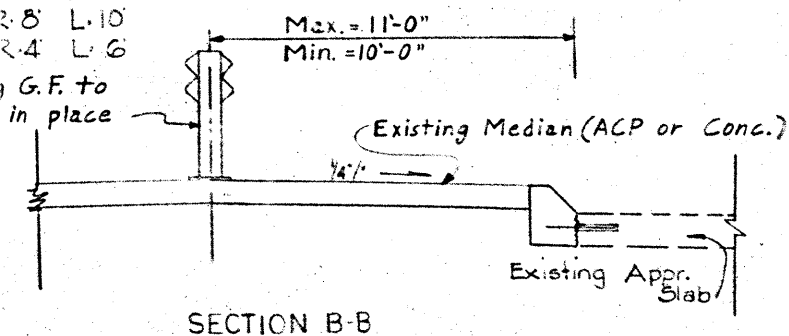
Note: To be used where new pavement ties into existing pavement.
 The installation of the anchor joint will not be paid for directly, but shall be considered subsidiary to item 364 "Concrete Pavement."



MILEPOST MARKER ASSEMBLY

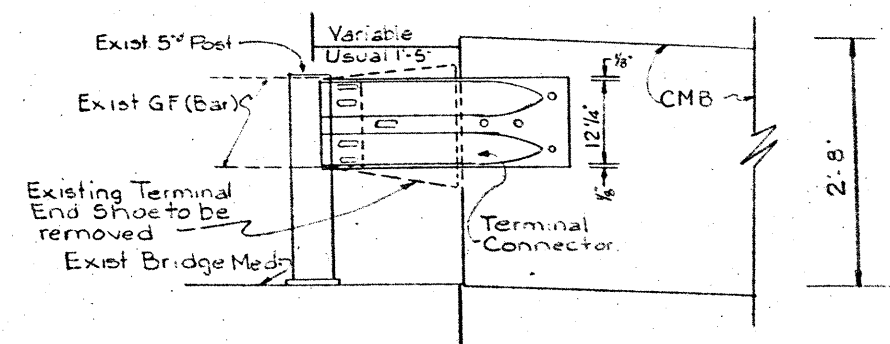
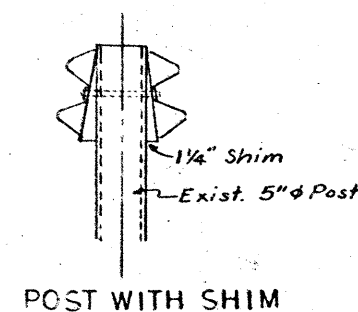
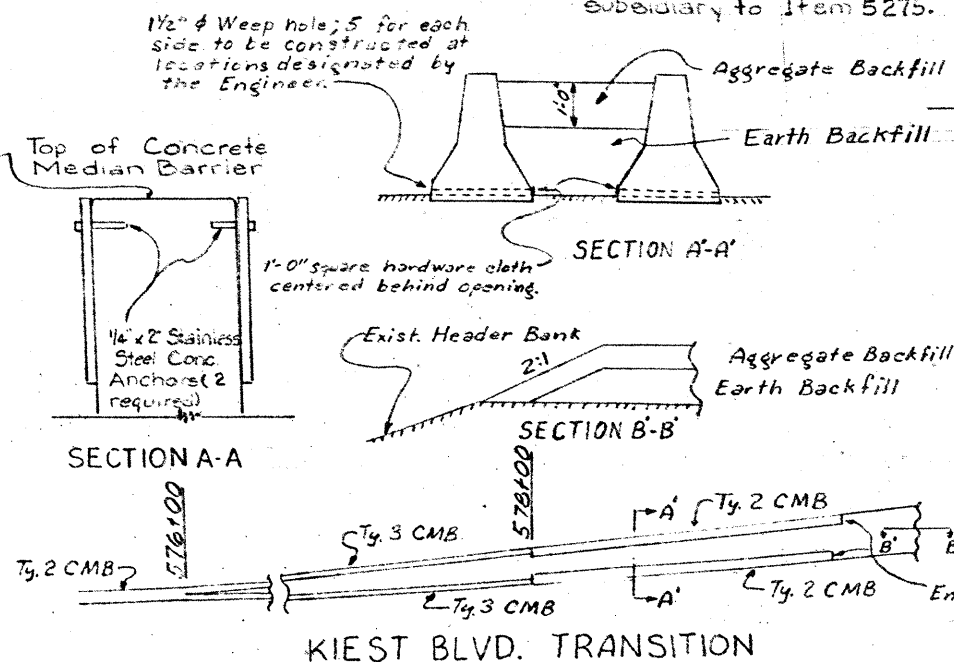
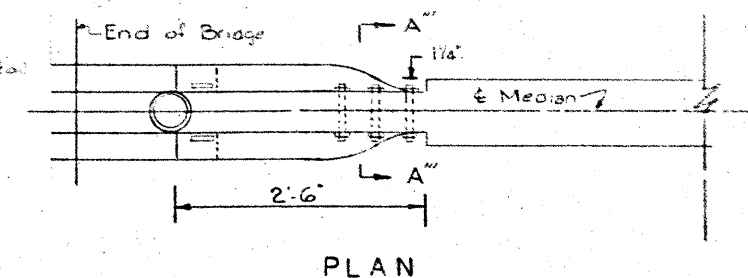
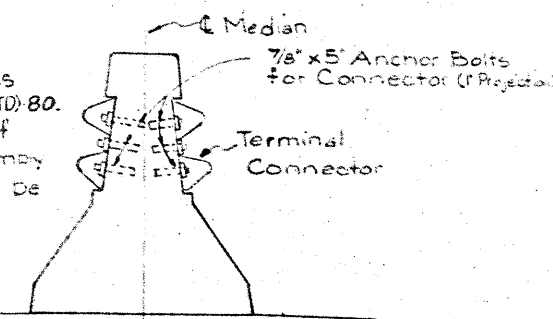


Dimensions
 24' Median R-10' L-12'
 20' Median R-8' L-10'
 12' Median R-4' L-6'



CURB FLARE-TYPE II

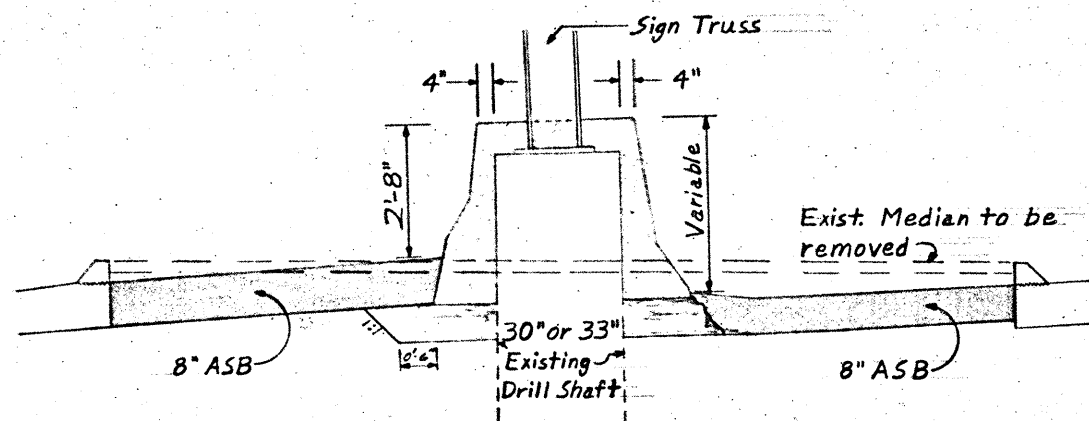
Note: For details and general notes not shown see Std. Sheet GF (TD)-80. The materials and installation of the terminal connector assembly will not be paid directly, but will be subsidiary to Item 5275.



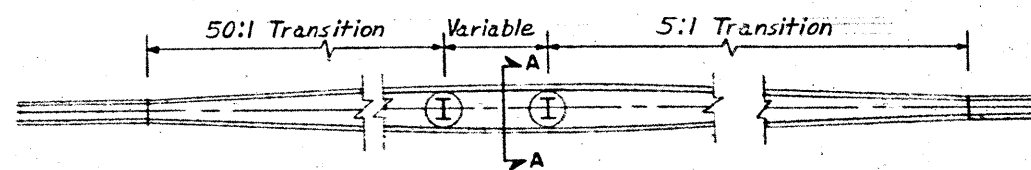
Note: Location of 1" Diameter Holes pattern on Median Barrier will vary at each installation.

Note: For details and general notes not shown see Std. Sheet CMB1-75(2)(MOD)

MISCELLANEOUS DETAIL SHEET



SECTION A-A



PLAN

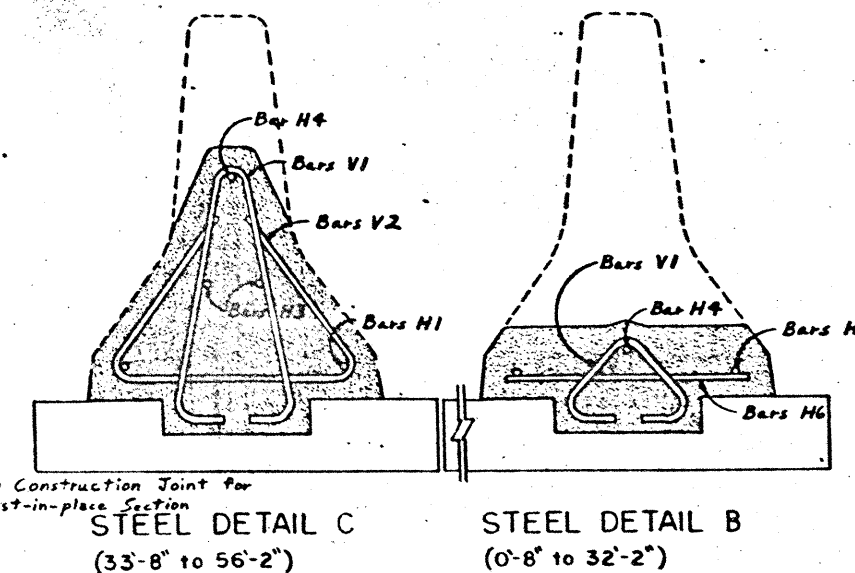
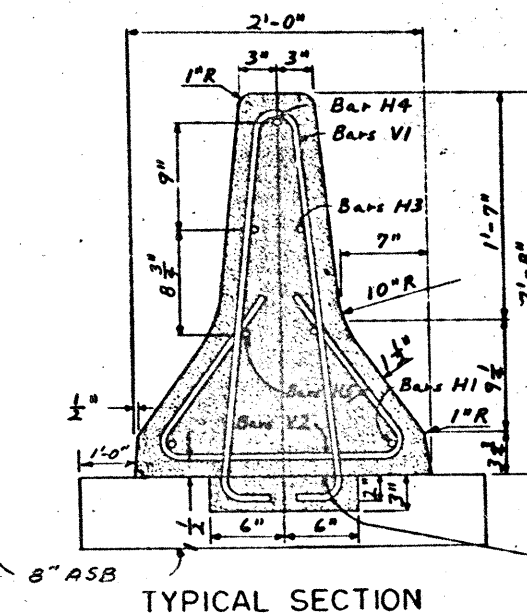
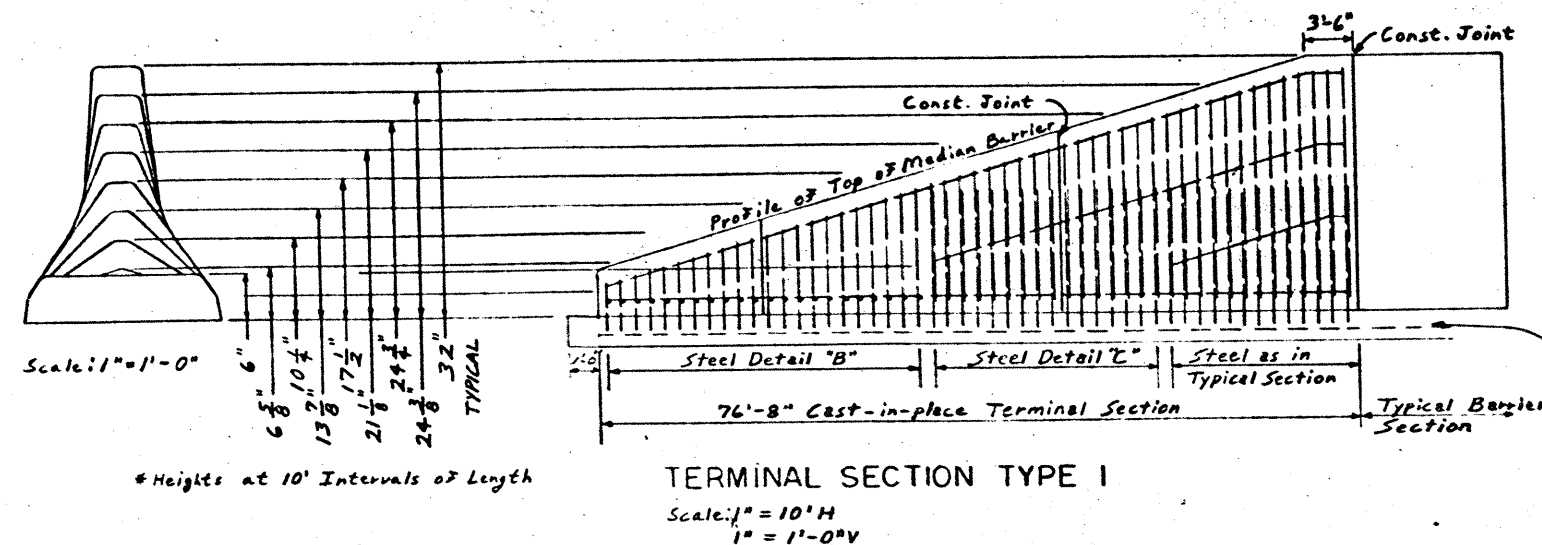
CMB AT OVERHEAD SIGN LOCATIONS IN SPLIT GRADE AREAS

45

MISCELLANEOUS DETAIL SHEET

135E-6(214) 418 45

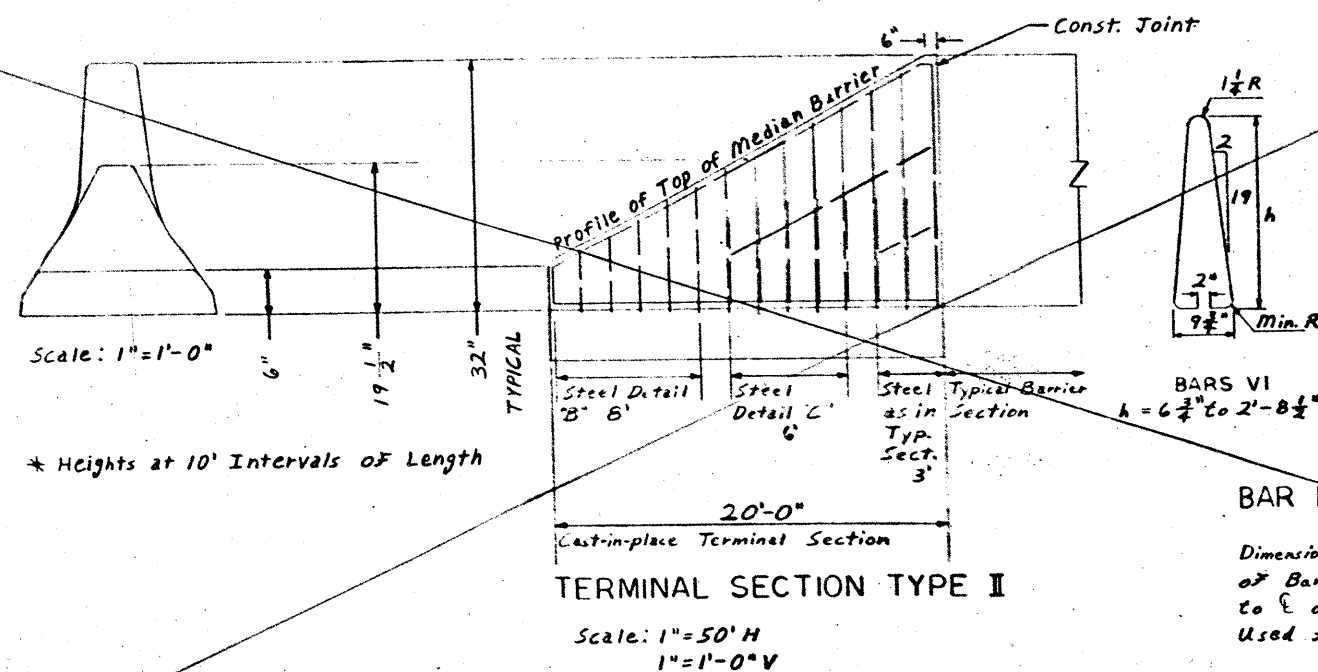
18 Dallas 442 2 711H35E



GENERAL NOTES:

1. All Concrete for CMB TY 2 & 3 including Drilled Shaft Foundation shall be class "A"
2. Minimum cover for reinforcing steel is 1 1/2".
3. All reinforcing steel is No. 4 bars unless otherwise noted.
4. All vertical bars are on 18" Centers.

CONCRETE MEDIAN BARRIER TERMINAL



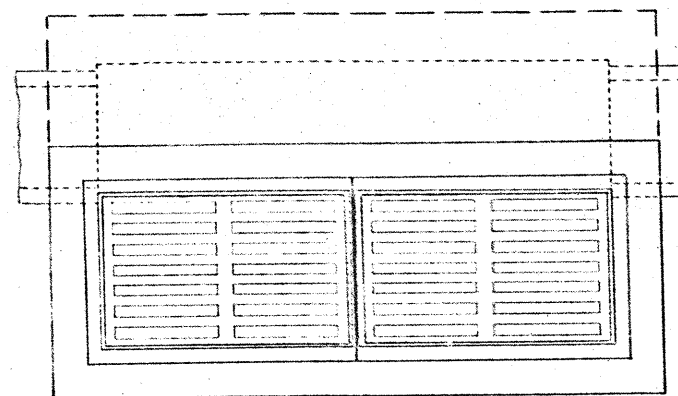
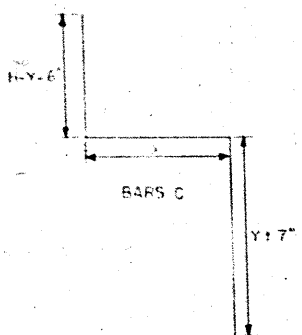
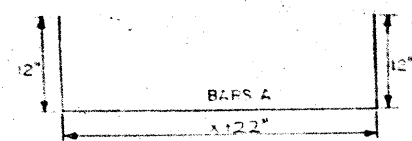
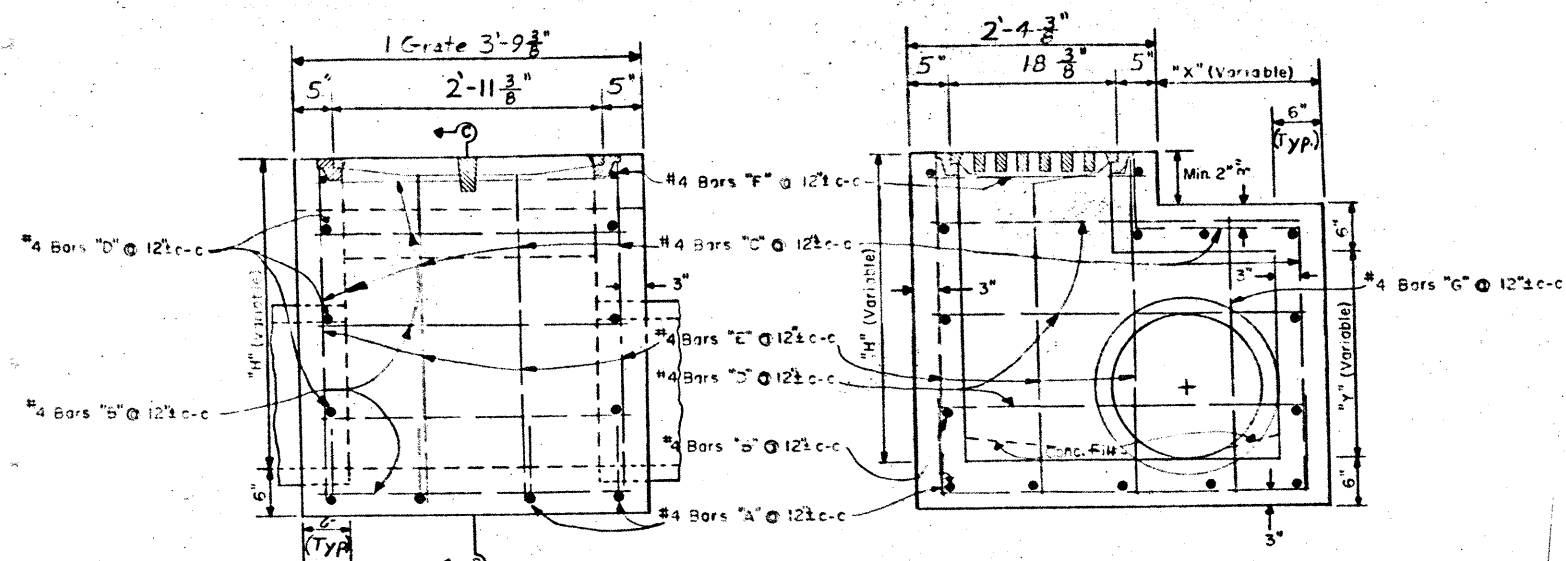
BAR BENDING DIAGRAMS

Dimensions Are Given as Out to Out of Bars. Radius Dimensions Are Given to C of Bar. No. 4 Bars Shall Be Used For All Reinforcing.

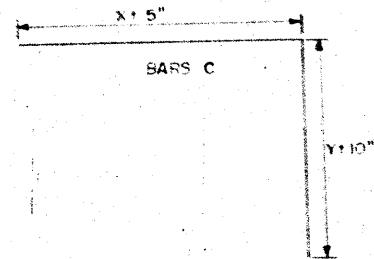
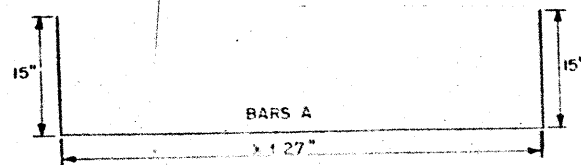
QUANTITIES	76'-8" SECTION	20' SECTION
* CONCRETE	5.82 CY	1.5 CY
* STEEL	491 LBS.	126 LBS.

* FOR CONTRACTOR'S INFORMATION ONLY

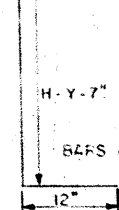
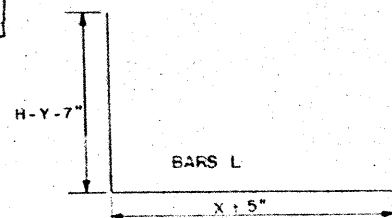
FED. NO.	STATE	GENERAL PROJECT NO.	SHEET NO.
18	DALLAS	135E-6(214)4/8	46
CON.	SECT.	JOB	REMARKS
442	2	71	TH35E



SECTION C-C



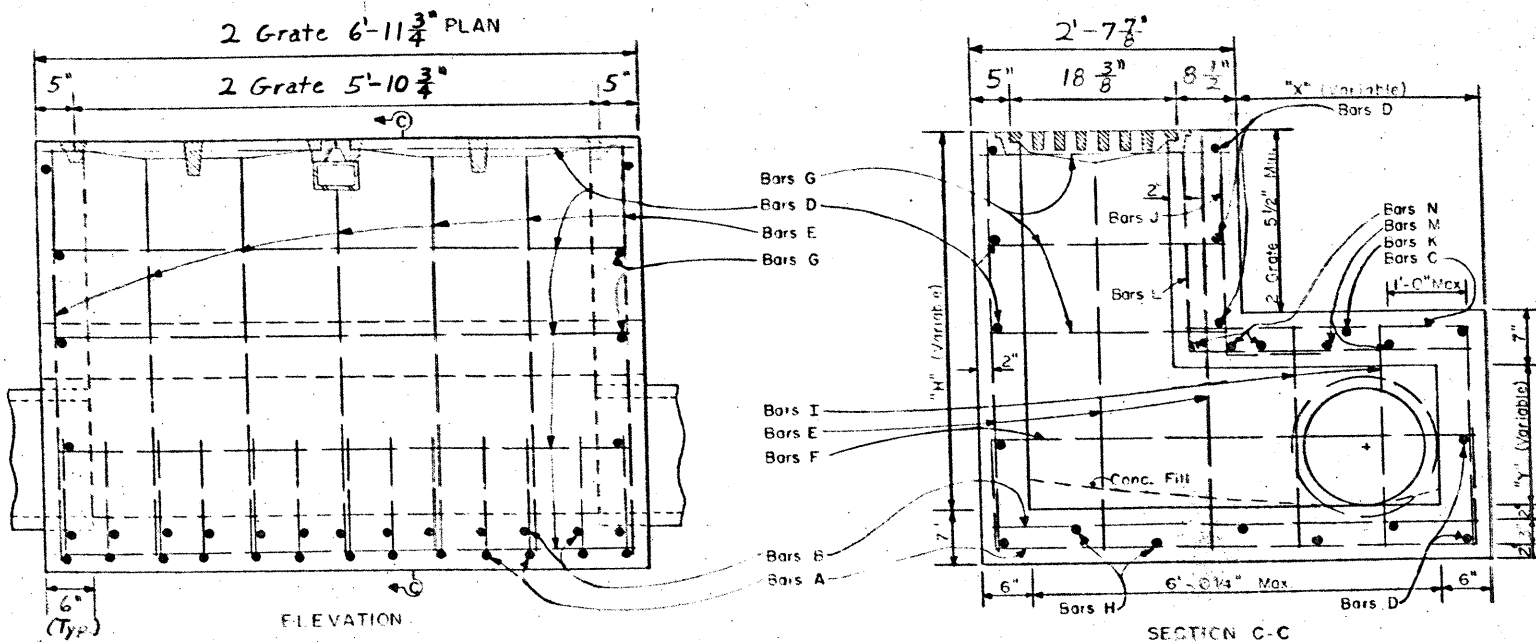
2 GRATE



REINFORCING STEEL 2 GRATE																	TOTALS	
	BARS	A	B	C	D	E	F	G	H	I	J	K	L	M	N		REINFC. STEEL	CONC. C.Y.
H= 2'-6"	NO.	13	13	13	7	11	2	2	5	4	7	1	14	2	3			
X= 2'-6"	SIZE	4	4	4	4	4	4	4	4	4	4	4	4	4	4			
Y= 1'-6"	SPACING	6"	6"	6"	2"	12"	12"	12"	8"	12"	12"	18"	5 1/2"	8"	4 1/2"			
	LENGTH	7'-5"	4'-9"	5'-3"	6'-7"	2'-9"	4'-9"	2'-5"	6'-7"	2'-4"	1'-11"	6'-7"	3'-10"	6'-7"	6'-7"			
	WEIGHT	63	41	46	31	20	6	6	22	6	9	3	55	14	21		333	2.08
H= 3'-0"	NO.	13	13	13	9	11	2	4	5	4	7	1	14	2	3			
X= 2'-6"	SIZE	4	4	4	4	4	4	4	4	4	4	4	4	4	4			
Y= 1'-6"	SPACING	6"	6"	6"	12"	12"	12"	12"	8"	12"	12"	18"	5 1/2"	8"	4 1/2"			
	LENGTH	7'-5"	4'-9"	5'-3"	6'-7"	2'-9"	4'-9"	2'-5"	6'-7"	2'-4"	1'-11"	6'-7"	3'-10"	6'-7"	6'-7"			
	WEIGHT	63	41	46	40	24	6	6	22	6	9	3	55	14	21		358	2.13
H= 3'-6"	NO.	13	13	13	9	11	2	4	5	4	7	1	14	2	3			
X= 2'-6"	SIZE	4	4	4	4	4	4	4	4	4	4	4	4	4	4			
Y= 1'-6"	SPACING	6"	6"	6"	12"	12"	12"	12"	8"	12"	12"	18"	5 1/2"	8"	4 1/2"			
	LENGTH	7'-5"	4'-9"	5'-3"	6'-7"	2'-9"	4'-9"	2'-5"	6'-7"	2'-4"	1'-11"	6'-7"	3'-10"	6'-7"	6'-7"			
	WEIGHT	63	41	46	40	28	6	6	22	6	11	3	55	14	21		371	2.42
H= 4'-0"	NO.	13	13	13	11	11	2	6	5	4	7	1	14	2	3			
X= 2'-6"	SIZE	4	4	4	4	4	4	4	4	4	4	4	4	4	4			
Y= 1'-6"	SPACING	6"	6"	6"	12"	12"	12"	12"	8"	12"	12"	18"	5 1/2"	8"	4 1/2"			
	LENGTH	7'-5"	4'-9"	5'-3"	6'-7"	2'-9"	4'-9"	2'-5"	6'-7"	2'-4"	1'-11"	6'-7"	3'-10"	6'-7"	6'-7"			
	WEIGHT	63	41	46	40	31	6	6	22	6	14	3	55	14	21		393	2.61

* Contractor's Information Only

Note: For Details not shown Refer to sheet No. 49



TYPE B (Mod) INLETS

BAR SCHEDULE (1 GRATE)

INLET NO.	X	Y	H	BARS A				BARS B				BARS C				BARS D				BARS E				BARS F				BARS G				REIN. STEEL	CONC. C.Y.
				NO.	SIZE	LGTH	WT.	NO.	SIZE	LGTH	WT.	NO.	SIZE	LGTH	WT.	NO.	SIZE	LGTH	WT.	NO.	SIZE	LGTH	WT.	NO.	SIZE	LGTH	WT.	NO.	SIZE	LGTH	WT.		
9	2'-6"	1'-6"	3.78	4	4	6'-4"	17	15	4	3'-5"	34	4	4	6'-4"	17	4	4	4'-6"	12	8	4	3'-1"	21	2	4	2'-0"	3	10	4	2'-2"	14	138	1.68
10	5'-0"	1'-6"	2.97	4	4	8'-10"	24	18	4	3'-5"	41	4	4	8'-0"	21	4	4	7'-0"	19	8	4	2'-4"	16	2	4	2'-0"	3	10	4	2'-2"	14	138	1.68
11	5'-0"	1'-6"	4.30	4	4	8'-10"	24	22	4	3'-5"	50	4	4	9'-4"	25	4	4	7'-0"	19	8	4	4'-5"	24	4	4	2'-0"	5	10	4	2'-2"	14	161	1.91
12	5'-3"	1'-9"	3.90	4	4	9'-1"	24	20	4	3'-5"	46	4	4	9'-5"	25	4	4	7'-3"	19	8	4	4'-1"	22	2	4	2'-0"	3	10	4	2'-5"	16	155	1.93
13	5'-3"	1'-9"	3.89	4	4	9'-1"	24	20	4	3'-5"	46	4	4	9'-3"	25	4	4	7'-3"	19	8	4	4'-4"	22	2	4	2'-0"	3	10	4	2'-5"	16	155	1.93
14	2'-6"	1'-6"	3.64	4	4	6'-4"	17	15	4	3'-5"	34	4	4	6'-3"	17	4	4	4'-6"	12	8	4	3'-10"	20	2	4	2'-0"	3	4	4	2'-2"	6	109	1.30
26	1'-9"	1'-9"	3.77	4	4	5'-7"	15	13	4	3'-5"	30	4	4	5'-7"	15	4	4	3'-9"	12	8	4	3'-11"	21	2	4	2'-0"	3	2	4	2'-5"	3	97	1.19
37	2'-0"	2'-3"	4.96	4	4	5'-10"	16	18	4	3'-5"	41	4	4	7'-0"	19	6	4	4'-0"	16	8	4	5'-2"	27	4	4	2'-0"	5	4	4	2'-4"	8	132	1.50
38	2'-0"	2'-3"	4.15	4	4	5'-10"	16	16	4	3'-5"	36	4	4	6'-3"	17	6	4	4'-0"	16	8	4	4'-5"	23	2	4	2'-0"	3	4	4	2'-4"	8	119	1.35
39	1'-9"	1'-9"	3.85	4	4	5'-7"	15	13	4	3'-5"	30	4	4	5'-8"	15	4	4	3'-9"	10	8	4	4'-0"	21	2	4	2'-0"	3	2	4	2'-5"	3	96	1.20
56	1'-9"	1'-9"	3.55	4	4	5'-7"	15	13	4	3'-5"	30	4	4	5'-5"	14	4	4	3'-9"	10	8	4	3'-9"	20	2	4	2'-0"	3	2	4	2'-5"	3	95	1.15
59	1'-9"	2'-0"	3.71	4	4	5'-7"	15	15	4	3'-5"	34	4	4	5'-7"	15	4	4	3'-9"	16	8	4	3'-11"	21	2	4	2'-0"	3	2	4	2'-5"	3	108	1.20
60	2'-0"	2'-3"	4.52	4	4	5'-10"	16	16	4	3'-5"	36	4	4	6'-7"	17	6	4	4'-0"	16	8	4	4'-8"	25	2	4	2'-0"	3	4	4	2'-4"	8	121	1.42
61	2'-0"	2'-6"	4.21	4	4	5'-10"	16	16	4	3'-5"	36	4	4	6'-4"	17	6	4	4'-0"	16	8	4	4'-5"	24	2	4	2'-0"	3	4	4	2'-4"	8	120	1.39
66	3'-6"	1'-6"	7.08	4	4	7'-4"	20	25	4	3'-5"	57	4	4	10'-8"	28	4	4	5'-6"	15	8	4	7'-2"	38	10	4	2'-0"	13	6	4	2'-2"	9	160	2.15
71	1'-9"	1'-9"	3.13	4	4	5'-7"	15	11	4	3'-5"	25	4	4	5'-0"	13	4	4	3'-9"	10	8	4	3'-3"	17	2	4	2'-0"	3	2	4	2'-5"	3	96	1.07
72	3'-6"	1'-6"	4.05	4	4	7'-4"	20	19	4	3'-5"	43	4	4	7'-8"	20	4	4	5'-6"	15	8	4	4'-3"	23	4	4	2'-0"	5	6	4	2'-2"	9	135	1.57
77	3'-3"	1'-9"	5.16	4	4	7'-1"	18	18	4	3'-5"	41	4	4	8'-6"	23	4	4	5'-3"	14	8	4	5'-4"	28	4	4	2'-0"	5	6	4	2'-5"	3	140	1.76
78	3'-3"	1'-9"	5.18	4	4	7'-1"	18	18	4	3'-5"	41	4	4	8'-6"	23	4	4	5'-3"	14	8	4	5'-4"	28	4	4	2'-0"	5	6	4	2'-5"	3	140	1.77
79	3'-0"	1'-6"	5.17	4	4	6'-10"	18	20	4	3'-5"	46	4	4	8'-3"	22	4	4	5'-0"	13	8	4	5'-4"	28	6	4	2'-0"	5	6	4	2'-2"	9	144	1.69
80	3'-0"	1'-6"	5.44	4	4	6'-10"	18	20	4	3'-5"	46	4	4	8'-6"	23	4	4	5'-0"	13	8	4	5'-7"	30	6	4	2'-0"	6	6	4	2'-2"	9	147	1.74
81	3'-0"	1'-6"	4.90	4	4	6'-10"	18	18	4	3'-5"	41	4	4	8'-0"	21	4	4	5'-0"	13	8	4	5'-4"	27	4	4	2'-0"	5	6	4	2'-2"	9	134	1.64
82	3'-0"	1'-6"	4.94	4	4	6'-10"	18	18	4	3'-5"	41	4	4	8'-0"	21	4	4	5'-0"	13	8	4	5'-7"	27	4	4	2'-0"	5	6	4	2'-2"	9	134	1.64
83	3'-0"	1'-6"	5.03	4	4	6'-10"	18	20	4	3'-5"	46	4	4	8'-1"	21	4	4	5'-0"	13	8	4	5'-2"	27	6	4	2'-0"	8	6	4	2'-2"	9	142	1.66
84	3'-0"	1'-6"	5.59	4	4	6'-10"	18	22	4	3'-5"	50	4	4	9'-8"	26	4	4	5'-0"	13	8	4	6'-9"	36	8	4	2'-0"	11	6	4	2'-2"	9	163	1.96
85	3'-0"	1'-6"	7.71	4	4	6'-10"	18	24	4	3'-5"	55	4	4	10'-0"	29	4	4	5'-0"	13	8	4	7'-1"	42	10	4	2'-0"	13	6	4	2'-2"	9	179	2.17
86	3'-0"	1'-6"	4.80	4	4	6'-10"	18	20	4	3'-5"	41	4	4	7'-1"	21	4	4	5'-0"	13	8	4	5'-0"	27	4	4	2'-0"	5	6	4	2'-2"	9	154	1.62
87	3'-0"	1'-6"	4.85	4	4	6'-10"	18	20	4	3'-5"	41	4	4	7'-1"	21	4	4	5'-0"	13	8	4	5'-0"	27	4	4	2'-0"	5	6	4	2'-2"	9	134	1.63
88	3'-0"	1'-6"	10.74	4	4	6'-10"	18	20	4	3'-5"	68	4	4	8'-10"	37	4	4	5'-0"	13	8	4	10'-1"	58	16	4	2'-0"	21	6	4	2'-2"	9	224	2.75
89	3'-0"	1'-6"	9.48	4	4	6'-10"	18	20	4	3'-5"	64	4	4	8'-7"	33	4	4	5'-0"	13	8	4	9'-8"	52	14	4	2'-0"	19	6	4	2'-2"	9	228	2.51
90	3'-0"	1'-6"	8.25	4	4	6'-10"	18	20	4	3'-5"	59	4	4	8'-4"	30	4	4	5'-0"	13	8	4	8'-5"	45	12	4	2'-0"	16	6	4	2'-2"	9	190	2.27
91	3'-0"	1'-6"	5.50	4	4	6'-10"	18	20	4	3'-5"	46	4	4	8'-7"	23	4	4	5'-0"	13	8	4	5'-8"	30	6	4	2'-0"	8	6	4	2'-2"	9	147	1.75
92	3'-0"	1'-6"	4.52	4	4	6'-10"	18	20	4	3'-5"	41	4	4	7'-7"	20	4	4	5'-0"	13	8	4	4'-8"	25	4	4	2'-0"	5	6	4	2'-2"	9	131	1.56
93	3'-0"	1'-6"	4.74	4	4	6'-10"	18	18	4	3'-5"	41	4	4	7'-0"	21	4	4	5'-0"	13	8	4	4'-11"	26	4	4	2'-0"	5	6	4	2'-2"	9	133	1.60
94	3'-0"	1'-6"	4.90	4	4	6'-10"	18	20	4	3'-5"	41	4	4	8'-0"	21	4	4	5'-0"	13	8	4	5'-1"	27	4	4	2'-0"	5	6	4	2'-2"	9	134	1.58
95	3'-0"	1'-6"	4.73	4	4	6'-10"	18	20	4	3'-5"	41	4	4	7'-10"	21	4	4	5'-0"	13	8	4	4'-11"	26	4	4	2'-0"	5	6	4	2'-2"	9	133	1.60
96	3'-0"	1'-6"	4.88	4	4	6'-10"	18	20	4	3'-5"	41	4	4	7'-9"	21	4	4	5'-0"	13	8	4	4'-10"	26	4	4	2'-0"	5	6	4	2'-2"	9	133	1.60
97	3'-0"	1'-6"	2.72	4	4	6'-10"	18	14	4	3'-5"	32	4	4	7'-10"	15	4	4	5'-0"	13	8	4	4'-11"	16	2	4	2'-0"	3	6	4	2'-2"	9	106	1.22
98	3'-0"	1'-6"	4.69	4	4	6'-10"	18	20	4	3'-5"	41	4	4	7'-9"	21	4	4	5'-0"	13	8	4	4'-10"	26	4	4	2'-0"	5	6	4	2'-2"	9	133	1.64
36-A	2'-6"	1'-6"	4.43	4	4	6'-4"	17	17	4	3'-5"	39	4	4	7'-0"	18	4	4	4'-6"	12	8	4	4'-7"	24	4	4	2'-0"	5	4	4	2'-2"	14	121	1.45

BAF SCHEDULE (2. GRATE)

	BARS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	REIN* STEEL	CONC* C
INLET NO. 7																	
X = 0'-9"	NO.	13	13	13	13	11	2	8	3	0	7	0	14	0	3		
Y = 1'-9"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5		
H = 5.25'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5 3/4"	8"	4 1/2"		
	LENGTH	5'-6"	3'-2"	3'-9"	6'-7"	5'-3"	3'-2"	2'-5"	6'-7"	2'-7"	4'-2"	6'-7"	4'-1"	6'-7"	6'-7"		
	WEIGHT	48	27	33	57	39	4	13	13	0	19	0	60	0	21	334	2.44
INLET NO. 8																	
X = 2'-3"	NO.	13	13	13	9	11	2	4	5	2	7	1	14	1	3		
Y = 1'-6"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5		
H = 3.69'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5 3/4"	8"	4 1/2"		
	LENGTH	7'-0"	4'-8"	5'-0"	6'-7"	3'-8"	4'-6"	2'-5"	6'-7"	2'-4"	2'-10"	6'-7"	4'-3"	6'-7"	6'-7"		
	WEIGHT	61	41	43	40	27	6	6	22	3	13		62	7	21	356	2.50
INLET NO. 19																	
X = 1'-3"	NO.	13	13	13	7	11	2	4	3	0	7	0	14	0	3		
Y = 1'-6"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5		
H = 2.98'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5 3/4"	8"	4 1/2"		
	LENGTH	6'-0"	3'-8"	4'-0"	6'-7"	3'-0"	3'-8"	2'-5"	6'-7"	2'-4"	2'-1"	6'-7"	2'-6"	6'-7"	6'-7"		
	WEIGHT	52	32	35	31	22	5	6	13	0	10	0	37	0	21	264	1.81
INLET NO. 23																	
X = 1'-6"	NO.	13	13	13	9	11	2	4	5	2	7	0	14	0	3		
Y = 1'-9"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5		
H = 3.85'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5 3/4"	8"	4 1/2"		
	LENGTH	6'-3"	3'-11"	4'-6"	6'-7"	3'-10"	3'-11"	2'-5"	6'-7"	2'-7"	2'-9"	6'-7"	3'-5"	6'-7"	6'-7"		
	WEIGHT	54	34	39	40	28	5	6	22	3	13	0	50	0	21	315	2.24
INLET NO. 24																	
X = 1'-3"	NO.	13	13	13	11	11	2	6	3	0	7	0	14	0	3		
Y = 1'-6"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5		
H = 4.02'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5 3/4"	8"	4 1/2"		
	LENGTH	6'-0"	3'-8"	4'-0"	6'-7"	3'-10"	3'-8"	2'-5"	6'-7"	2'-4"	2'-2"	6'-7"	3'-7"	6'-7"	6'-7"		
	WEIGHT	52	32	35	48	29	5	10	13	0	15	0	52	0	21	312	2.21

BAR SCHEDULE (2 GRATE) cont.

	BAR#	A	B	C	D	E	F	G	H	I	J	K	L	M	N	REINSTEEL	CONC CY
INLET NO. 25																	
X= 1'-3"	NO.	13	13	13	9	11	2	6	3	0	7	0	14	0	3		
Y= 1'-6"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5		
H= 3.87	SPACING	6"	6"	6"	12"	12"	12"	12"	12"	12"	12"	18"	5 1/2"	8"	4 1/2"		
	LENGTH	6'-0"	3'-8"	4'-0"	6'-7"	3'-10"	3'-5"	2'-5"	6'-7"	2'-4"	3'-0"	6'-7"	3'-5"	6'-7"	6'-7"		
	WEIGHT	52	32	35	40	28	5	10	13	0	14	0	50	0	21	300	2.15
INLET NO. 45																	
X= 2'-3"	NO.	13	13	13	9	11	2	4	5	2	7	1	14	1	3		
Y= 1'-6"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5		
H= 3.80'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5 1/2"	8"	4 1/2"		
	LENGTH	7'-0"	4'-8"	5'-0"	6'-7"	3'-10"	4'-5"	2'-5"	6'-7"	2'-4"	2'-11"	6'-7"	4'-4"	6'-7"	6'-7"		
	WEIGHT	61	41	43	40	28	6	6	19	3	14	4	63	7	21	356	2.54
INLET NO. 46																	
X= 1'-3"	NO.	13	13	13	9	11	2	4	3	0	7	0	14	0	3		
Y= 1'-6"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5		
H= 3.79'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5 1/2"	8"	4 1/2"		
	LENGTH	6'-0"	3'-8"	4'-0"	6'-7"	3'-9"	3'-8"	2'-5"	6'-7"	2'-4"	2'-11"	6'-7"	3'-8"	6'-7"	6'-7"		
	WEIGHT	52	32	35	40	28	5	6	13	0	14	0	49	0	21	295	2.12
INLET NO. 47																	
X= 1'-3"	NO.	13	13	13	9	11	2	4	3	0	7	0	14	0	3		
Y= 1'-6"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5		
H= 3.78'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5 1/2"	8"	4 1/2"		
	LENGTH	6'-0"	3'-8"	4'-0"	6'-7"	3'-9"	3'-8"	2'-5"	6'-7"	2'-4"	2'-11"	6'-7"	3'-8"	6'-7"	6'-7"		
	WEIGHT	52	32	35	40	28	5	6	13	0	14	0	49	0	21	295	2.12
INLET NO. 48																	
X= 1'-3"	NO.	13	13	13	9	11	2	4	3	0	7	0	14	0	3		
Y= 1'-6"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5		
H= 3.83'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5 1/2"	8"	4 1/2"		
	LENGTH	6'-0"	3'-8"	4'-0"	6'-7"	3'-10"	3'-8"	2'-5"	6'-7"	2'-4"	2'-11"	6'-7"	3'-8"	6'-7"	6'-7"		
	WEIGHT	52	32	35	40	28	5	6	13	0	14	0	49	0	21	295	2.13

BAR SCHEDULE (2 GRATE) cont.

		BARS														REINFC		CONC	
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	STEEL	CY.		
INLET NO. 49																			
X= 15'6"	NO.	13	13	13	11	11	2	4	5	2	7	0	14	0	3				
Y= 15'9"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5				
H= 4.02'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5'3"	8"	4'6"				
	LENGTH	5'3"	3'11"	4'6"	6'7"	4'0"	3'11"	2'5"	6'7"	2'7"	2'11"	6'7"	3'7"	6'7"	6'5"				
	WEIGHT	54	34	39	48	29	5	6	22	3	14	0	52	0	21	327	2.31		
INLET NO. 50																			
X= 0'6"	NO.	13	13	13	11	11	2	6	3	0	7	0	14	0	3				
Y= 1'6"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5				
H= 4.22'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5'3"	8"	4'6"				
	LENGTH	5'3"	2'11"	3'3"	6'7"	4'3"	2'11"	2'5"	6'7"	2'4"	3'4"	6'7"	3'0"	6'7"	6'7"				
	WEIGHT	46	25	28	48	31	4	10	13	0	16	0	44	0	21	286	1.96		
INLET NO. 53																			
X= 1'3"	NO.	13	13	13	11	11	2	6	3	0	7	0	14	0	3				
Y= 1'6"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5				
H= 4.01'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5'3"	8"	4'6"				
	LENGTH	5'0"	3'8"	4'0"	6'7"	4'0"	3'8"	2'5"	6'7"	2'4"	3'2"	6'7"	3'7"	6'7"	6'7"				
	WEIGHT	52	32	35	48	29	5	10	13	0	14	0	52	0	21	311	2.21		
INLET NO. 54																			
X= 1'3"	NO.	13	13	13	7	11	2	4	3	0	7	0	14	0	3				
Y= 1'6"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5				
H= 2.86'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5'3"	8"	4'6"				
	LENGTH	5'0"	3'8"	4'0"	6'7"	2'10"	3'8"	2'5"	6'7"	2'4"	2'0"	6'7"	2'5"	6'7"	6'7"				
	WEIGHT	52	32	35	31	21	5	6	13	0	9	0	35	0	21	260	1.76		
INLET NO. 55																			
X= 1'3"	NO.	13	13	13	7	11	2	2	3	0	7	0	14	0	3				
Y= 1'6"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5				
H= 2.58'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5'3"	8"	4'6"				
	LENGTH	5'0"	3'8"	4'0"	6'7"	2'7"	3'5"	2'5"	6'7"	2'4"	1'8"	6'7"	2'11"	6'7"	6'7"				
	WEIGHT	52	32	35	31	19	5	3	13	0	8	0	30	0	21	249	1.65		
INLET NO. 57																			
X= 1'6"	NO.	13	13	13	9	11	2	4	5	2	7	0	14	0	3				
Y= 1'9"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5				
H= 3'13"	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5'3"	8"	4'6"				
	LENGTH	5'3"	3'11"	4'6"	6'7"	3'2"	3'11"	2'5"	6'7"	2'7"	2'0"	6'7"	2'5"	6'7"	6'7"				
	WEIGHT	54	34	39	40	23	5	6	22	3	9	0	39	0	21	295	1.95		
INLET NO. 58																			
X= 1'6"	NO.	13	13	10	9	11	2	4	5	2	7	0	14	0	3				
Y= 2'0"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5				
H= 3.86'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5'3"	8"	4'6"				
	LENGTH	5'3"	3'11"	4'9"	6'7"	3'13"	3'11"	2'5"	6'7"	2'10"	2'6"	6'7"	3'2"	6'7"	6'7"				
	WEIGHT	54	34	41	40	28	5	6	22	4	14	0	46	0	21	315	2.23		
INLET NO. 62																			
X= 1'9"	NO.	13	13	13	11	11	4	4	5	2	7	0	14	1	3				
Y= 2'6"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5				
H= 4.65'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5'3"	8"	4'6"				
	LENGTH	6'6"	4'2"	5'6"	6'7"	4'8"	4'2"	2'5"	6'7"	2'7"	2'9"	6'7"	3'8"	6'7"	6'7"				
	WEIGHT	56	36	46	48	34	11	6	22	4	13	0	54	6	21	359	2.63		
INLET NO. 63																			
X= 4'3"	NO.	13	13	13	17	11	6	8	7	6	7	2	14	4	3				
Y= 4'0"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5				
H= 7.66'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5'3"	8"	4'6"				
	LENGTH	9'0"	6'8"	9'6"	6'7"	7'8"	6'8"	2'5"	6'7"	4'10"	4'3"	6'7"	7'8"	6'7"	6'7"				
	WEIGHT	78	58	82	74	56	27	13	31	19	22	8	112	24	21	625	4.80		
INLET NO. 64																			
X= 4'3"	NO.	13	13	13	23	11	6	14	7	6	7	2	14	4	3				
Y= 4'0"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5				
H= 10.87'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5'3"	8"	4'6"				
	LENGTH	9'0"	6'8"	9'6"	6'7"	7'8"	6'8"	2'5"	6'7"	4'10"	7'6"	6'7"	10'11"	6'7"	6'7"				
	WEIGHT	78	58	82	101	80	27	23	31	19	35	9	159	27	21	750	6.00		

* Contractor's Information Only

TYPE B (Mod) INLETS

48

SHEET 2 OF 2 SHEETS

135E-C(24)418 48
18 Dallas 442 2 7/ 135E

BAR SCHEDULE (1 GRATE)

INLET NO.	X	Y	H	BARS A				BARS B				BARS C				BARS D				BARS E				BARS F				BARS G				REIN. STEEL	CONC. C.Y.	
				NO.	SIZE	LGTH	WT.	NO.	SIZE	LGTH	WT.	NO.	SIZE	LGTH	WT.	NO.	SIZE	LGTH	WT.	NO.	SIZE	LGTH	WT.	NO.	SIZE	LGTH	WT.	NO.	SIZE	LGTH	WT.			
9	2'-6"	1'-6"	3.78	4	4	6'-4"	17	15	4	3-5"	34	4	4	6'-4"	17	4	4	4'-6"	12	8	4	3'-4"	21	2	4	2'-0"	3	4	4	2'-2"	6	104	1.35	
10	5'-0"	1'-6"	2.97	4	4	8'-10"	24	18	4	4	3-5"	41	4	4	8'-0"	21	4	4	7'-0"	19	8	4	3'-4"	16	2	4	2'-0"	3	10	4	2'-2"	14	138	1.68
11	5'-0"	1'-6"	4.30	4	4	8'-10"	24	22	4	4	3-5"	50	4	4	9'-4"	25	4	4	7'-0"	19	8	4	4'-5"	24	4	4	2'-0"	5	10	4	2'-2"	14	161	1.91
12	5'-3"	1'-9"	3.90	4	4	9'-1"	24	20	4	4	3-5"	46	4	4	9'-5"	25	4	4	7'-3"	19	8	4	4'-4"	22	2	4	2'-0"	3	10	4	2'-5"	16	155	1.93
13	5'-3"	1'-9"	3.89	4	4	9'-1"	24	20	4	4	3-5"	46	4	4	9'-5"	25	4	4	7'-3"	19	8	4	4'-4"	22	2	4	2'-0"	3	10	4	2'-5"	16	155	1.93
14	2'-6"	1'-6"	3.64	4	4	6'-4"	17	15	4	4	3-5"	34	4	4	6'-3"	17	4	4	4'-6"	12	8	4	3'-10"	20	2	4	2'-0"	3	4	4	2'-2"	6	109	1.30
26	1'-9"	1'-9"	3.77	4	4	5'-7"	15	13	4	4	3-5"	30	4	4	5'-7"	15	4	4	3'-9"	10	8	4	3'-11"	21	2	4	2'-0"	3	2	4	2'-5"	3	97	1.19
37	2'-0"	2'-3"	4.96	4	4	5'-10"	16	18	4	4	3-5"	41	4	4	7'-0"	19	6	4	4'-0"	16	8	4	5'-2"	27	4	4	2'-0"	5	4	4	2'-4"	8	132	1.50
38	2'-0"	2'-3"	4.15	4	4	5'-10"	16	16	4	4	3-5"	36	4	4	6'-3"	17	6	4	4'-0"	16	8	4	4'-5"	23	2	4	2'-0"	3	4	4	2'-4"	8	119	1.35
39	1'-9"	1'-9"	3.65	4	4	5'-7"	15	13	4	4	3-5"	30	4	4	5'-8"	15	4	4	3'-9"	10	8	4	4'-0"	21	2	4	2'-0"	3	2	4	2'-5"	3	96	1.20
56	1'-9"	1'-9"	3.55	4	4	5'-7"	15	13	4	4	3-5"	30	4	4	5'-5"	14	4	4	3'-9"	10	8	4	3'-9"	20	2	4	2'-0"	3	2	4	2'-5"	3	95	1.15
59	1'-9"	2'-0"	3.71	4	4	5'-7"	15	15	4	4	3-5"	34	4	4	5'-7"	15	4	4	3'-9"	16	8	4	3'-4"	21	2	4	2'-0"	3	2	4	2'-8"	4	108	1.20
60	2'-0"	2'-3"	4.52	4	4	5'-10"	16	16	4	4	3-5"	36	4	4	6'-7"	17	6	4	4'-0"	16	8	4	4'-8"	25	2	4	2'-0"	3	4	4	2'-4"	8	121	1.42
61	2'-0"	2'-6"	4.21	4	4	5'-10"	16	16	4	4	3-5"	36	4	4	6'-4"	17	6	4	4'-0"	16	8	4	4'-5"	24	2	4	2'-0"	3	4	4	2'-8"	8	120	1.39
66	3'-6"	1'-6"	7.08	4	4	7'-4"	20	25	4	4	3-5"	57	4	4	10'-8"	26	4	4	5'-6"	15	8	4	7'-2"	38	10	4	2'-0"	13	6	4	2'-2"	9	180	2.15
71	1'-9"	1'-9"	3.13	4	4	5'-7"	15	11	4	4	3-5"	25	4	4	5'-0"	13	4	4	3'-9"	10	8	4	3'-5"	17	2	4	2'-0"	3	2	4	2'-5"	3	86	1.07
72	3'-6"	1'-6"	4.05	4	4	7'-4"	20	19	4	4	3-5"	43	4	4	7'-8"	20	4	4	5'-6"	15	8	4	4'-3"	23	4	4	2'-0"	5	6	4	2'-2"	9	135	1.57
77	3'-3"	1'-9"	5.16	4	4	7'-1"	18	18	4	4	3-5"	41	4	4	8'-6"	23	4	4	5'-3"	14	8	4	5'-4"	28	4	4	2'-0"	5	6	4	2'-5"	10	140	1.76
78	3'-3"	1'-9"	5.18	4	4	7'-1"	18	18	4	4	3-5"	41	4	4	8'-6"	23	4	4	5'-3"	14	8	4	5'-4"	28	4	4	2'-0"	5	6	4	2'-5"	10	140	1.77
79	3'-0"	1'-6"	5.17	4	4	6'-10"	8	20	4	4	3-5"	46	4	4	8'-3"	22	4	4	5'-0"	13	8	4	5'-4"	28	6	4	2'-0"	8	6	4	2'-2"	9	144	1.69
80	3'-0"	1'-6"	5.44	4	4	6'-10"	8	20	4	4	3-5"	46	4	4	8'-6"	23	4	4	5'-0"	13	8	4	5'-7"	30	6	4	2'-0"	8	6	4	2'-2"	9	147	1.74
81	3'-0"	1'-6"	4.90	4	4	6'-10"	8	16	4	4	3-5"	41	4	4	8'-0"	21	4	4	5'-0"	13	8	4	5'-7"	27	4	4	2'-0"	5	6	4	2'-2"	9	134	1.64
82	3'-0"	1'-6"	4.94	4	4	6'-10"	8	18	4	4	3-5"	41	4	4	8'-0"	21	4	4	5'-0"	13	8	4	5'-7"	27	4	4	2'-0"	5	6	4	2'-2"	9	134	1.64
83	3'-0"	1'-6"	5.03	4	4	6'-10"	8	20	4	4	3-5"	46	4	4	8'-1"	21	4	4	5'-0"	13	8	4	5'-7"	27	6	4	2'-0"	8	6	4	2'-2"	9	142	1.66
84	3'-0"	1'-6"	6.59	4	4	6'-10"	8	22	4	4	3-5"	50	4	4	9'-8"	26	4	4	5'-0"	13	8	4	6'-9"	36	8	4	2'-0"	11	6	4	2'-2"	9	163	1.96
85	3'-0"	1'-6"	7.71	4	4	6'-10"	8	24	4	4	3-5"	55	4	4	10'-3"	29	4	4	5'-0"	13	8	4	7'-11	42	10	4	2'-0"	13	6	4	2'-2"	9	179	2.17
86	3'-0"	1'-6"	4.80	4	4	6'-10"	8	18	4	4	3-5"	41	4	4	7'-11	21	4	4	5'-0"	13	8	4	5'-0"	27	4	4	2'-0"	5	6	4	2'-2"	9	134	1.62
87	3'-0"	1'-6"	4.85	4	4	6'-10"	8	18	4	4	3-5"	41	4	4	7'-11	21	4	4	5'-0"	13	8	4	5'-0"	27	4	4	2'-0"	5	6	4	2'-2"	9	134	1.63
88	3'-0"	1'-6"	5.074	4	4	6'-10"	8	20	4	4	3-5"	64	4	4	8'-11	27	4	4	5'-0"	13	8	4	7'-11	58	16	4	2'-0"	21	6	4	2'-2"	9	224	2.75
89	3'-0"	1'-6"	9.48	4	4	6'-10"	8	22	4	4	3-5"	64	4	4	8'-7	23	4	4	5'-0"	13	8	4	8'-8"	52	14	4	2'-0"	19	6	4	2'-2"	9	208	2.51
90	3'-0"	1'-6"	8.25	4	4	6'-10"	8	26	4	4	3-5"	59	4	4	11'-4"	30	4	4	5'-0"	13	8	4	8'-5"	45	12	4	2'-0"	16	6	4	2'-2"	9	190	2.27
91	3'-0"	1'-6"	5.50	4	4	6'-10"	8	20	4	4	3-5"	46	4	4	8'-7	23	4	4	5'-0"	13	8	4	7'-8"	30	6	4	2'-0"	8	6	4	2'-2"	9	147	1.75
92	3'-0"	1'-6"	4.52	4	4	6'-10"	8	16	4	4	3-5"	41	4	4	7'-7	20	4	4	5'-0"	13	8	4	4'-8"	25	4	4	2'-0"	5	6	4	2'-2"	9	131	1.56
93	3'-0"	1'-6"	4.74	4	4	6'-10"	8	18	4	4	3-5"	41	4	4	7'-13	21	4	4	5'-0"	13	8	4	4'-11	26	4	4	2'-0"	5	6	4	2'-2"	9	133	1.60
94	3'-0"	1'-6"	4.90	4	4	6'-10"	18	18	4	4	3-5"	41	4	4	8'-0"	21	4	4	5'-0"	13	8	4	5'-11	27	4	4	2'-0"	5	6	4	2'-2"	9	134	1.58
95	3'-0"	1'-6"	4.74	4	4	6'-10"	8	18	4	4	3-5"	41	4	4	7'-13	21	4	4	5'-0"	13	8	4	4'-11	26	4	4	2'-0"	5	6	4	2'-2"	9	133	1.60
96	3'-0"	1'-6"	4.89	4	4	6'-10"	8	18	4	4	3-5"	41	4	4	7'-9	21	4	4	5'-0"	13	8	4	3'-10	26	4	4	2'-0"	5	6	4	2'-2"	9	133	1.60
97	3'-0"	1'-6"	2.74	4	4	6'-10"	8	18	4	4	3-5"	32	4	4	5'-13	15	4	4	5'-0"	13	8	4	4'-11	16	4	4	2'-0"	3	6	4	2'-2"	9	106	1.22
98	3'-0"	1'-6"	4.69	4	4	6'-10"	8	18	4	4	3-5"	41	4	4	7'-9	21	4	4	5'-0"	13	8	4	4'-10	26	4	4	2'-0"	5	6	4	2'-2"	9	133	1.64
99	3'-6"	1'-6"	4.4	4	4	6'-10"	8	18	4	4	3-5"	39	4	4	7'-0"	18	4	4	4'-6"	12	8	4	4'-2	24	4	4	2'-0"	5	4	4	2'-2"	9	121	1.45

BAF 25501 (2 GRATE)

	BARS	A	B	C	D						J	K	L	M	N	REINER* STEEL	CONC. C.Y.
INLET NO. 7																	
X = 0'-9"	NO.	13	13	13	13	11	2	8	3	0	7	0	14	0	3		
Y = 1'-9"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5		
H = 5.25'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5 3/4"	8"	4 1/2"		
	LENGTH	5'-6"	3'-2"	3'-0"	6'-7"	5'-9"	3'-2"	2'-5"	6'-7"	2'-7"	4'-2"	6'-7"	4'-1"	6'-7"	6'-7"		
	WEIGHT	48	27	33	57	39	4	13	13	0	19	0	60	0	21	334	2.44
INLET NO. 8																	
X = 2'-3"	NO.	13	13	13	9	11	2	4	5	2	7	1	14	1	3		
Y = 1'-6"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5		
H = 3.69'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5 3/4"	8"	4 1/2"		
	LENGTH	7'-0"	4'-8"	5'-0"	6'-7"	3'-5"	4'-8"	2'-5"	6'-7"	2'-4"	2'-10"	6'-7"	4'-3"	6'-7"	6'-7"		
	WEIGHT	61	41	43	40	27	6	2	22	3	13		62	7	21	356	2.50
INLET NO. 10																	
X = 1'-3"	NO.	13	13	13	7	11	2	4	3	0	7	0	14	0	3		
Y = 1'-6"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5		
H = 2.98'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5 3/4"	8"	4 1/2"		
	LENGTH	6'-0"	3'-8"	4'-0"	6'-7"	3'-0"	3'-8"	2'-5"	6'-7"	2'-4"	2'-11"	6'-7"	2'-0"	6'-7"	6'-7"		
	WEIGHT	52	32	35	31	22	5	6	13	0	10	0	37	0	21	264	1.81
INLET NO. 23																	
X = 1'-6"	NO.	13	13	13	9	11	2	4	5	2	7	0	14	0	3		
Y = 1'-0"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5		
H = 3.85'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5 3/4"	8"	4 1/2"		
	LENGTH	6'-3"	3'-11"	4'-6"	6'-7"	3'-0"	3'-11"	2'-5"	6'-7"	2'-7"	2'-9"	6'-7"	3'-5"	6'-7"	6'-7"		
	WEIGHT	54	34	39	40	25	5	6	22	3	13	0	50	0	21	315	2.24
INLET NO. 24																	
X = 1'-3"	NO.	13	13	13	11	11	2	6	3	0	7	0	14	0	3		
Y = 1'-6"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5		
H = 4.02'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5 3/4"	8"	4 1/2"		
	LENGTH	6'-0"	3'-8"	4'-0"	6'-7"	4'-0"	3'-8"	2'-5"	6'-7"	2'-4"	3'-2"	6'-7"	3'-7"	6'-7"	6'-7"		
	WEIGHT	52	32	35	45	29	5	10	13	0	15	0	52	0	21	312	2.21

BAR SCHEDULE (2 GRATE) cont.

BAR SCHEDULE (E OF A L T CO.)																	REIN. STEEL	CONC. C.Y.
INLET NO. 25	NO.	13	13	13	9	11	2	4	3	0	7	0	14	0	3			
X= 15.3"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5			
Y= 15.6"	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5 3/4"	8"	4 1/2"			
H= 3.87	LENGTH	6'-0"	3'-8"	4'-0"	6'-7"	3'-10"	3'-8"	2'-5"	6'-7"	2'-4"	6'-0"	6'-7"	3'-5"	6'-7"	6'-7"			
	WEIGHT	52	32	35	40	38	5	10	13	0	14	0	50	0	21	300	2.15	
INLET NO. 45	NO.	13	13	13	9 <td>11</td> <td>2</td> <td>4</td> <td>5</td> <td>2</td> <td>7</td> <td>1</td> <td>14</td> <td>1</td> <td>3</td> <th></th> <th></th>	11	2	4	5	2	7	1	14	1	3			
X= 25.3"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5			
Y= 15.6"	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	15"	5 3/4"	8"	4 1/2"			
H= 3.80'	LENGTH	7'-0"	4'-8"	5'-0"	6'-7"	3'-10"	4'-8"	2'-5"	6'-7"	2'-4"	6'-10"	6'-7"	4'-4"	6'-7"	6'-7"			
	WEIGHT	61	41	43	40	28	6	19	3	14	4	63	7	21	356	2.54		
INLET NO. 46	NO.	13	13	13	9 <td>11</td> <td>2</td> <td>4</td> <td>3</td> <td>0</td> <td>7</td> <td>0</td> <td>14</td> <td>0</td> <td>3</td> <th></th> <th></th>	11	2	4	3	0	7	0	14	0	3			
X= 15.3"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5			
Y= 15.6"	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5 3/4"	8"	4 1/2"			
H= 3.79'	LENGTH	6'-0"	3'-8"	4'-0"	6'-7"	3'-9"	3'-8"	2'-5"	6'-7"	2'-4"	2'-11"	6'-7"	3'-4"	6'-7"	6'-7"			
	WEIGHT	52	32	35	40	28	5	6	13	0	14	0	49	0	21	295	2.12	
INLET NO. 47	NO.	13	13	13	9 <td>11</td> <td>2</td> <td>4</td> <td>3</td> <td>0</td> <td>7</td> <td>0</td> <td>14</td> <td>0</td> <td>3</td> <th></th> <th></th>	11	2	4	3	0	7	0	14	0	3			
X= 15.3"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5			
Y= 15.6"	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5 3/4"	8"	4 1/2"			
H= 3.73'	LENGTH	6'-0"	3'-8"	4'-0"	6'-7"	3'-9"	3'-8"	2'-5"	6'-7"	2'-4"	2'-11"	6'-7"	3'-4"	6'-7"	6'-7"			
	WEIGHT	52	32	35	40	28	5	6	13	0	14	0	49	0	21	295	2.12	
INLET NO. 48	NO.	13	13	13	9 <td>11</td> <td>2</td> <td>4</td> <td>3</td> <td>0</td> <td>7</td> <td>0</td> <td>14</td> <td>0</td> <td>3</td> <th></th> <th></th>	11	2	4	3	0	7	0	14	0	3			
X= 15.3"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5			
Y= 15.8"	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	18"	5 3/4"	8"	4 1/2"			
H= 3.8"	LENGTH	6'-0"	3'-8"	4'-0"	6'-7"	3'-10"	3'-8"	2'-5"	6'-7"	2'-4"	2'-11"	6'-7"	3'-4"	6'-7"	6'-7"			
	WEIGHT	52	32	35	40	28	5	6	13	0	14	0	49	0	21	295	2.13	

BAR SCHEDULE (2 GRATE) cont.

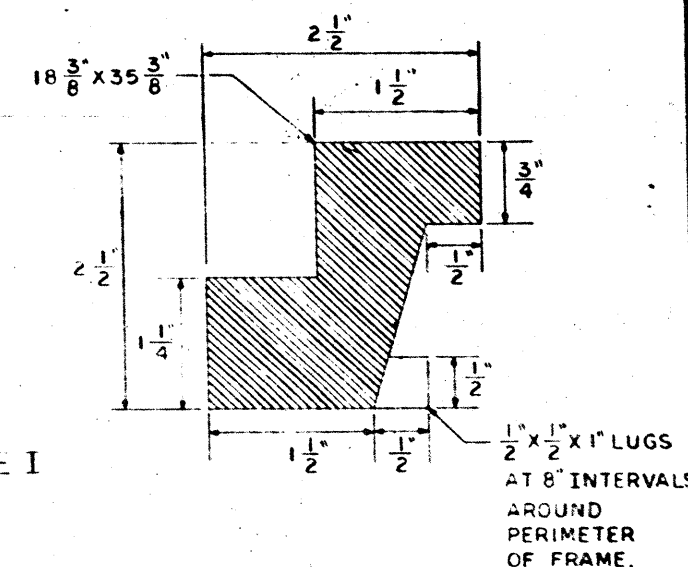
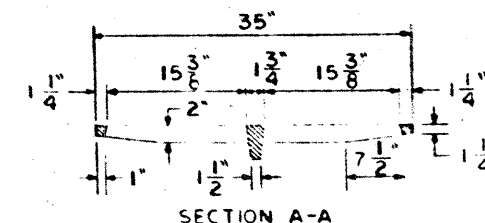
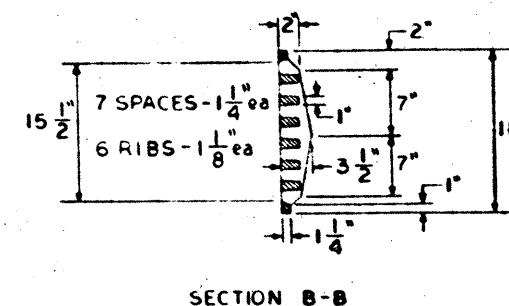
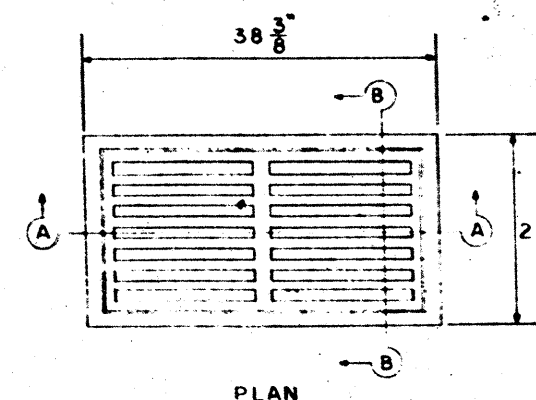
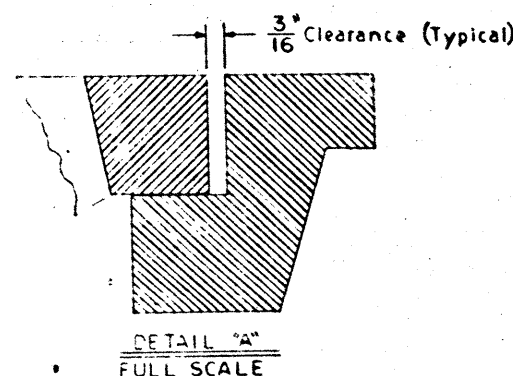
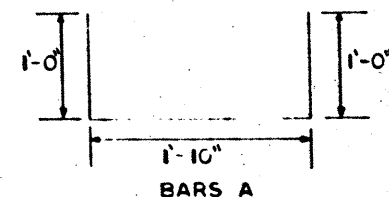
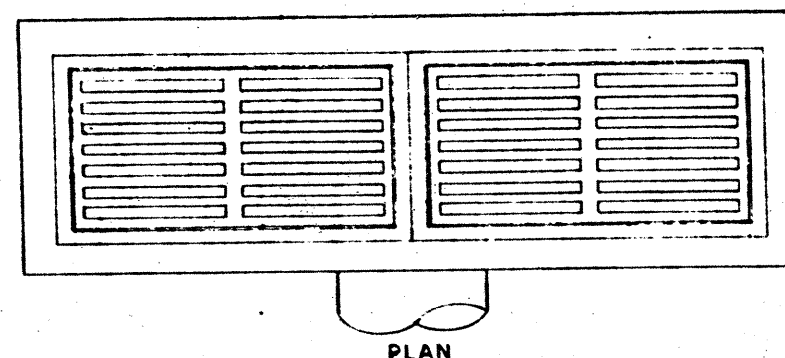
		BARS																REIN. STEEL		CONC.	
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	STEEL	CONC.				
INLET NO. 49																					
X= 1.6'	NO.	13	13	13	11	11	2	4	5	2	7	0	14	0	3						
Y= 1.9'	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5						
H= 4.02'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	12"	5/8"	8"	4 1/2"						
	LENGTH	5'3"	3'11"	4'6"	6'7"	4'0"	3'11"	5'5"	6'7"	2'7"	2'11"	0'7"	6'7"	6'7"	6'7"						
	WEIGHT	54	34	19	48	29	5	6	22	3	14	0	52	0	21	327	2.31				
INLET NO. 50																					
X= 0.6'	NO.	13	13	13	11	11	2	6	3	0	7	0	14	0	3						
Y= 1.6'	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5						
H= 4.22'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	12"	5/8"	8"	4 1/2"						
	LENGTH	5'3"	2'11"	3'3"	6'7"	4'3"	2'11"	2'5"	6'7"	2'4"	3'4"	6'7"	6'7"	6'7"	6'7"						
	WEIGHT	46	25	16	48	31	4	10	13	0	16	0	44	0	21	286	1.96				
INLET NO. 53																					
X= 1.3'	NO.	13	13	13	11	11	2	6	3	0	7	0	14	0	3						
Y= 1.6'	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5						
H= 4.01'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	12"	5/8"	8"	4 1/2"						
	LENGTH	5'0"	3'8"	4'0"	6'7"	4'0"	3'8"	2'5"	6'7"	2'4"	3'2"	6'7"	6'7"	6'7"	6'7"						
	WEIGHT	52	32	35	48	29	5	10	13	0	14	0	52	0	21	311	2.21				
INLET NO. 54																					
X= 1.1'	NO.	13	13	13	11	11	2	4	3	0	7	0	14	0	3						
Y= 1.6'	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5						
H= 2.86'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	12"	5/8"	8"	4 1/2"						
	LENGTH	5'0"	3'8"	4'0"	6'7"	4'0"	3'8"	2'5"	6'7"	2'4"	2'0"	6'7"	6'7"	6'7"	6'7"						
	WEIGHT	52	32	35	31	21	5	6	13	0	9	0	35	0	21	260	1.76				
INLET NO. 55																					
X= 1.3'	NO.	13	13	13	11	11	2	2	3	0	7	0	14	0	3						
Y= 1.3'	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5						
H= 2.58'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	12"	5/8"	8"	4 1/2"						
	LENGTH	5'0"	3'8"	4'0"	6'7"	4'0"	3'8"	2'5"	6'7"	2'4"	1'8"	6'7"	6'7"	6'7"	6'7"						
	WEIGHT	52	32	35	31	19	5	4	13	0	8	0	35	0	21	249	1.65				
INLET NO. 57																					
X= 1.6'	NO.	13	13	13	9	11	2	4	5	2	7	0	14	0	3						
Y= 1.9'	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5						
H= 3.13'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	12"	5/8"	8"	4 1/2"						
	LENGTH	5'3"	3'11"	4'6"	6'7"	4'0"	3'11"	5'5"	6'7"	2'7"	2'0"	6'7"	6'7"	6'7"	6'7"						
	WEIGHT	54	34	39	40	23	5	6	22	3	9	0	59	0	21	295	1.95				
INLET NO. 59																					
X= 1.6'	NO.	13	13	13	9	11	2	4	5	2	7	0	14	0	3						
Y= 2.0'	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5						
H= 3.65'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	12"	5/8"	8"	4 1/2"						
	LENGTH	5'3"	3'11"	4'3"	6'7"	3'11"	3'11"	5'5"	6'7"	2'10"	2'6"	6'7"	3'2"	6'7"	6'7"						
	WEIGHT	54	34	41	40	23	5	6	22	4	14	0	46	0	21	315	2.23				
INLET NO. 62																					
X= 1.9'	NO.	13	13	13	11	11	2	4	5	2	7	0	14	1	2						
Y= 2.6'	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5						
H= 4.65'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	12"	5/8"	8"	4 1/2"						
	LENGTH	6'6"	4'0"	5'6"	6'7"	4'5"	4'2"	2'5"	6'7"	3'4"	2'9"	6'7"	3'8"	6'7"	6'7"						
	WEIGHT	56	26	48	48	34	11	6	22	4	13	0	54	6	21	359	2.63				
INLET NO. 63																					
X= 4'3"	NO.	13	13	13	17	11	6	9	7	6	7	2	14	4	3						
Y= 4'0"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5						
H= 7.66'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	12"	5/8"	8"	4 1/2"						
	LENGTH	9'0"	3'8"	9'0"	6'7"	7'8"	6'5"	2'5"	6'7"	4'8"	4'3"	6'7"	7'5"	6'7"	6'7"						
	WEIGHT	78	58	52	74	66	27	13	31	19	62	8	112	64	21	625	4.80				
INLET NO. 64																					
X= 4'3"	NO.	13	13	13	23	11	6	14	7	6	7	2	14	4	3						
Y= 4'0"	SIZE	4	4	4	4	4	4	4	4	4	4	4	5	5	5						
H= 10.87'	SPACING	6"	6"	6"	12"	12"	12"	12"	18"	12"	12"	12"	5/8"	8"	4 1/2"						
	LENGTH	9'0"	6'8"	9'0"	6'7"	10'10"	6'8"	2'5"	6'7"	4'8"	7'6"	6'7"	10'11"	6'7"	6'7"						
	WEIGHT	78	58	52	101	30	27	23	31	19	35	9	102	27	21	750	6.00				

* Contractor's Information Only

TYPE B (Mod) INLETS

SHEET 2 OF 2 SHEETS

135E-C(214)418 48
18 Dallas 442 2 7/ 135E



GRATE AND FRAME-TYPE I
FRAME AND GRATE

ESTIMATED QUANTITIES

1 GRATE																		
REINF. STEEL														TOTALS				
Ht.	Bars 'A'				Bars 'B'				Bars 'C'				Bars 'D'				Reinf. Steel	Conc. C.Y.
	No.	Size	Lgt.	Wt.	No.	Size	Lgt.	Wt.	No.	Size	Lgt.	Wt.	No.	Size	Lgt.	Wt.		
3'-0"	4	#4	3'10"	10	11	#4	3'-5"	25	10	#4	3'-1"	21	8	#4	2'-0"	11	67	0.72
3'-6"	4	#4	3'10"	10	11	#4	3'-5"	25	10	#4	3'-7"	24	8	#4	2'-0"	11	70	0.82
4'-0"	4	#4	3'10"	10	13	#4	3'-5"	30	10	#4	4'-1"	27	10	#4	2'-0"	13	80	0.92
4'-6"	4	#4	3'10"	10	13	#4	3'-5"	30	10	#4	4'-7"	31	10	#4	2'-0"	13	84	1.02

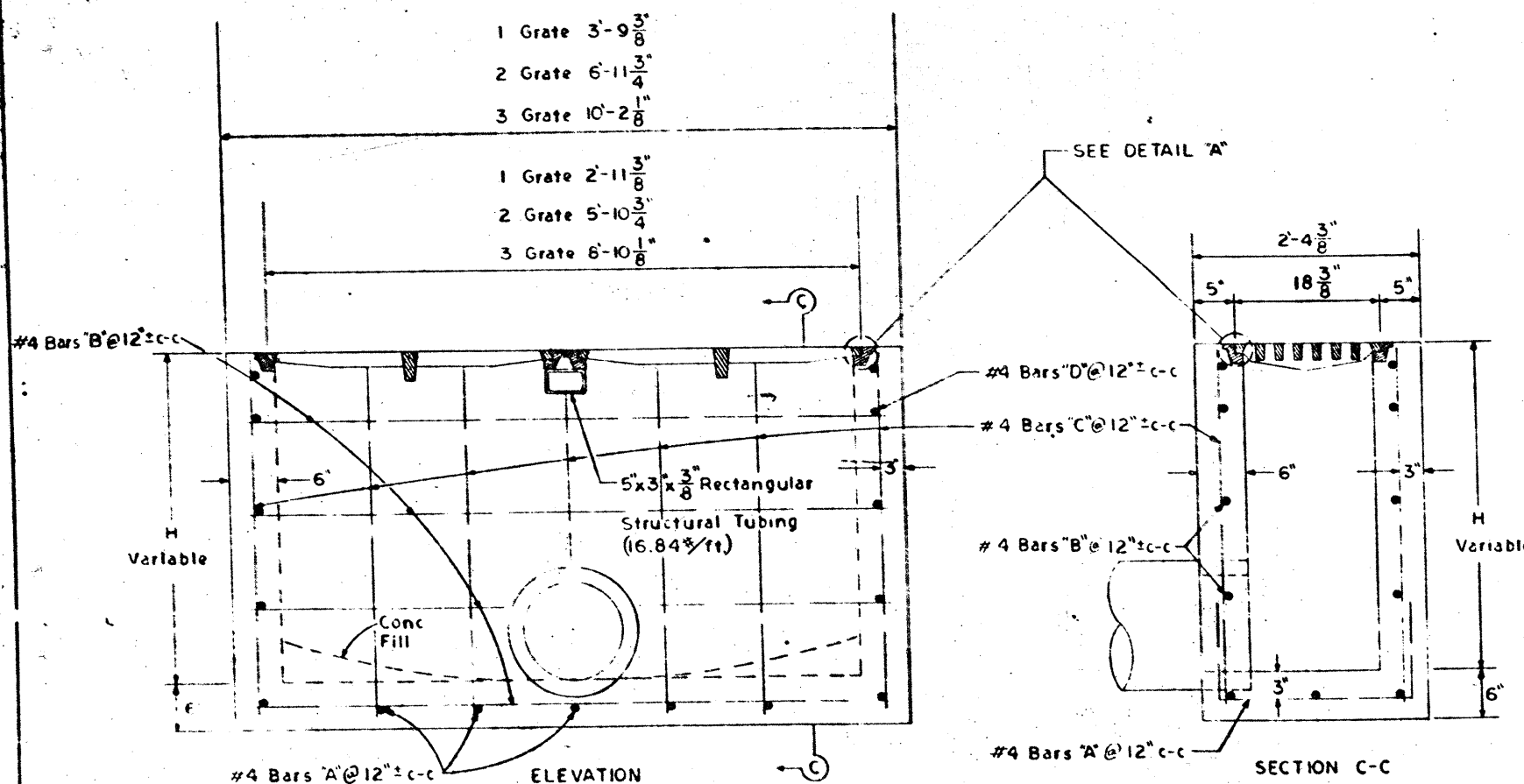
2 GRATE																		
REINF. STEEL														TOTALS				
Ht.	Bars "A"			Bars "B"			Bars "C"			Bars "D"			Reinf. Steel C.Y.	Conc. C.Y.				
	No.	Size	Lgt.	No.	Size	Lgt.	No.	Size	Lgt.	No.	Size	Lgt.						
3'-0"	7	#4	3'10"	18	11	#4	6'-7"	48	16	#4	3'-1"	33	8	#4	2'-0"	11	110	1.2
3'-6"	7	#4	3'10"	18	11	#4	6'-7"	48	16	#4	3'-7"	38	8	#4	2'-0"	11	115	1.3
4'-0"	7	#4	3'10"	18	13	#4	6'-7"	57	16	#4	4'-1"	44	10	#4	2'-0"	13	132	1.5
4'-6"	7	#4	3'10"	18	13	#4	6'-7"	57	16	#4	4'-7"	49	10	#4	2'-0"	13	137	1.6

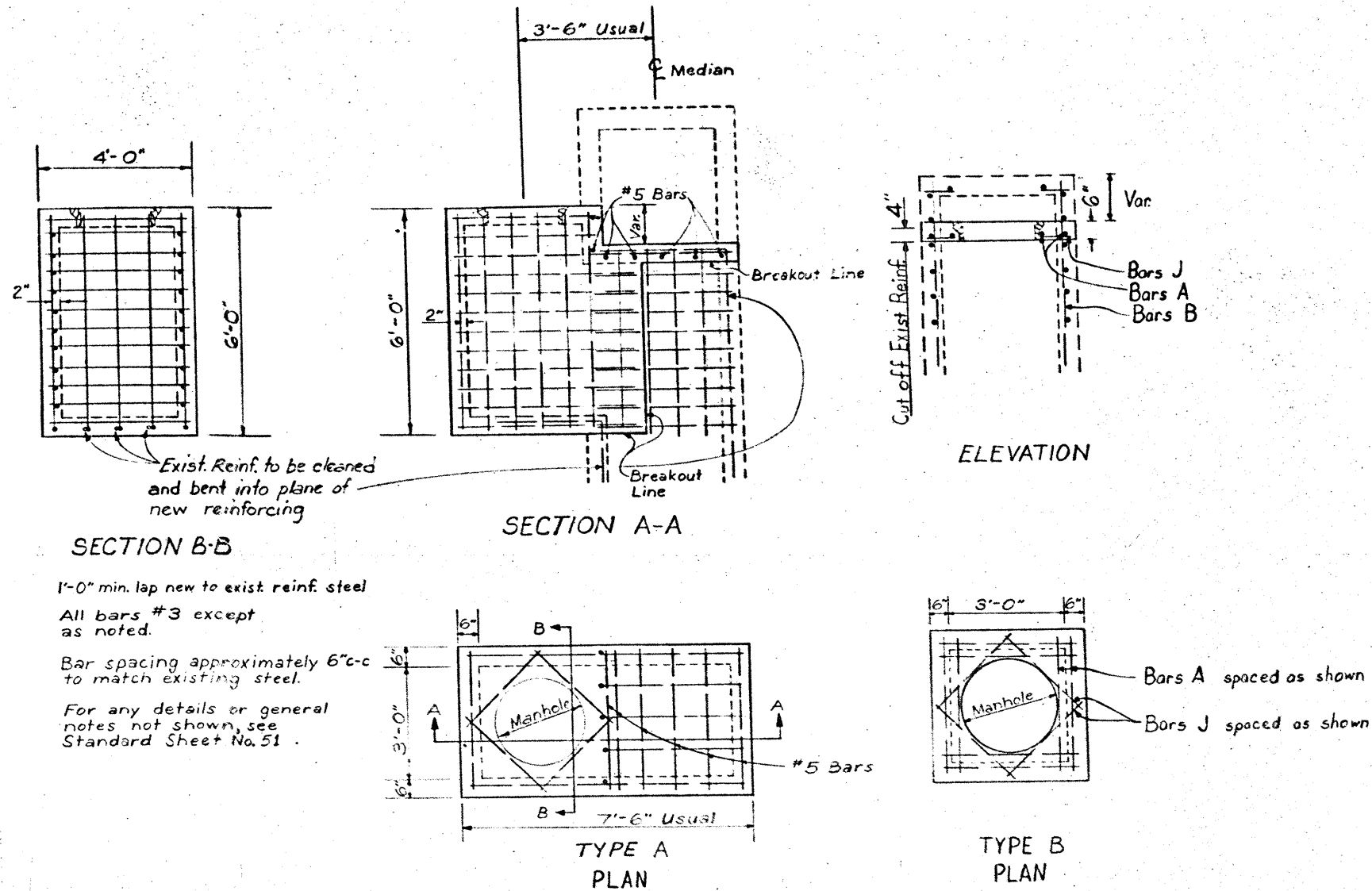
3 GRATE														TOTAL				
REINF STEEL														TOTAL				
Ht.	Bars "A"				Bars "B"				Bars "C"				Bars "D"				Reinf. Steel	Conc. C.
	No.	Size	Lgt.	Wt.	No.	Size	Lgt.	Wt.	No.	Size	Lgt.	Wt.	No.	Size	Lgt.	Wt.		
3'-0"	10	#4	3'-0"	26	11	#4	9'-10"	72	22	#4	3'-7"	45	8	#4	2'-0"	11	154	1.7
3'-6"	10	#4	3'-10"	26	11	#4	9'-10"	72	22	#4	3'-7"	53	8	#4	2'-0"	11	162	1.9
4'-0"	10	#4	3'-10"	26	13	#4	9'-10"	85	22	#4	4'-1"	60	10	#4	2'-0"	13	184	2.1
4'-6"	10	#4	3'-10"	26	13	#4	9'-10"	85	22	#4	4'-7"	67	10	#4	2'-0"	13	191	2.2

GENERAL NOTES:

- All concrete shall be Class "A"
- All dimensions to reinforcing steel are to centers of bars
- Grates and Frames shall be of Gray Cast Iron conforming to ASTM Specification A-48 for Class No. 30 Cast Iron
- After the Inlet has been constructed and the inside forms removed, additional Class "A" concrete shall be placed in the bottom of the Inlet as indicated. The circular surface shall receive a smooth steel trowel finish.
- Quantities are for informational purposes only.
- Lateral pipe may enter Inlet at any location.
- Install steps same as for Manhole in all Inlets when the height of inlet is more than 4 feet.

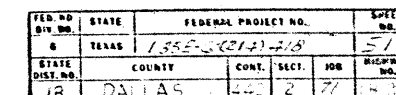
DETAIL OF GRATE INLET TYPE B



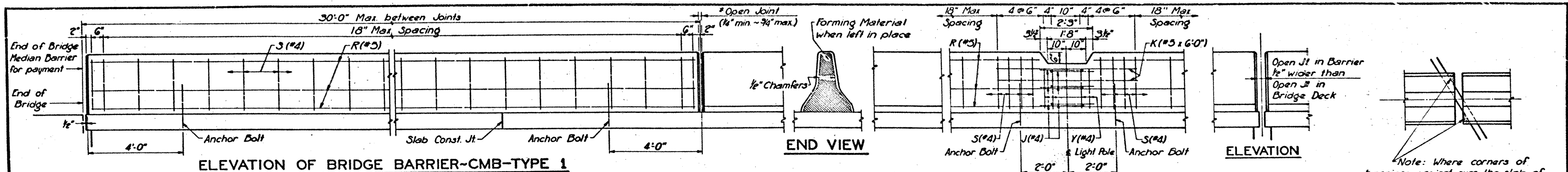


MANHOLE MODIFICATION

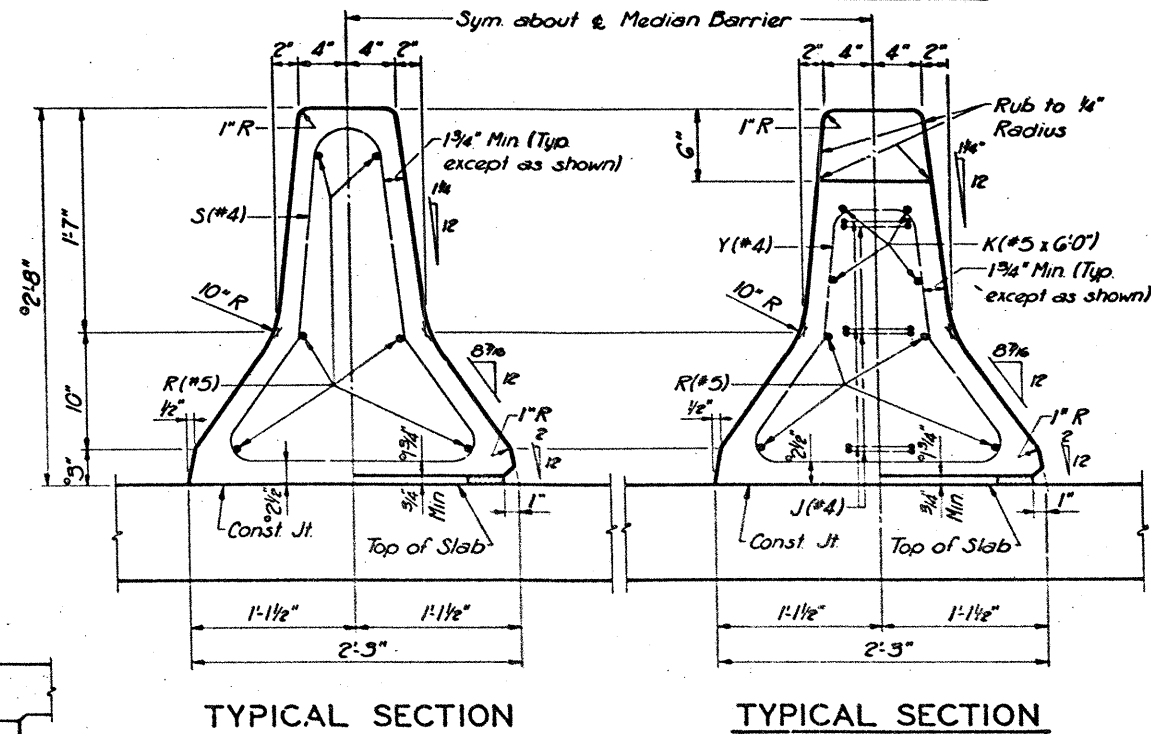
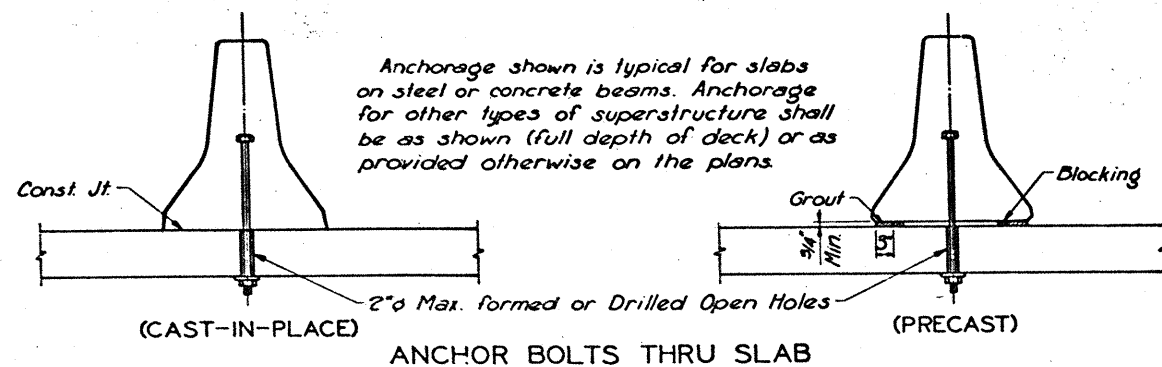
MANHOLE DETAILS 50



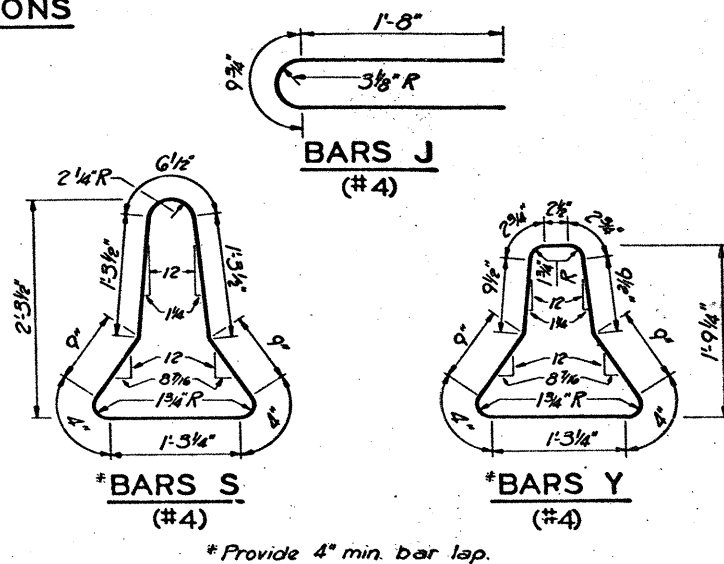
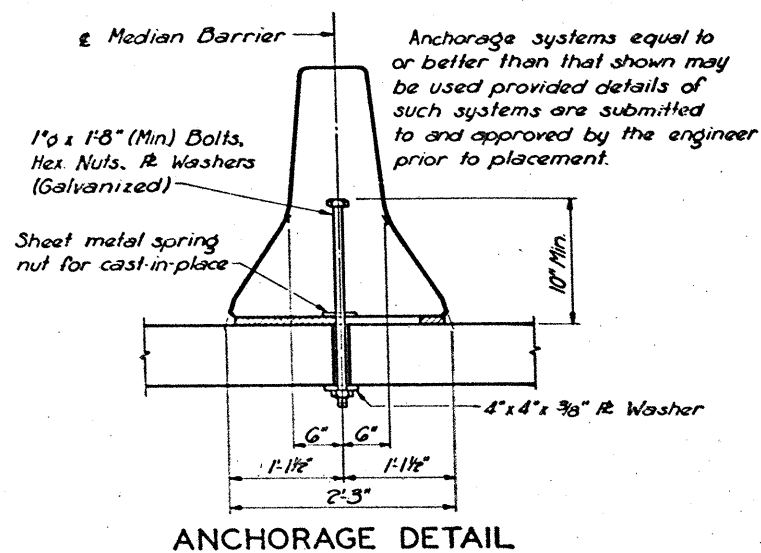
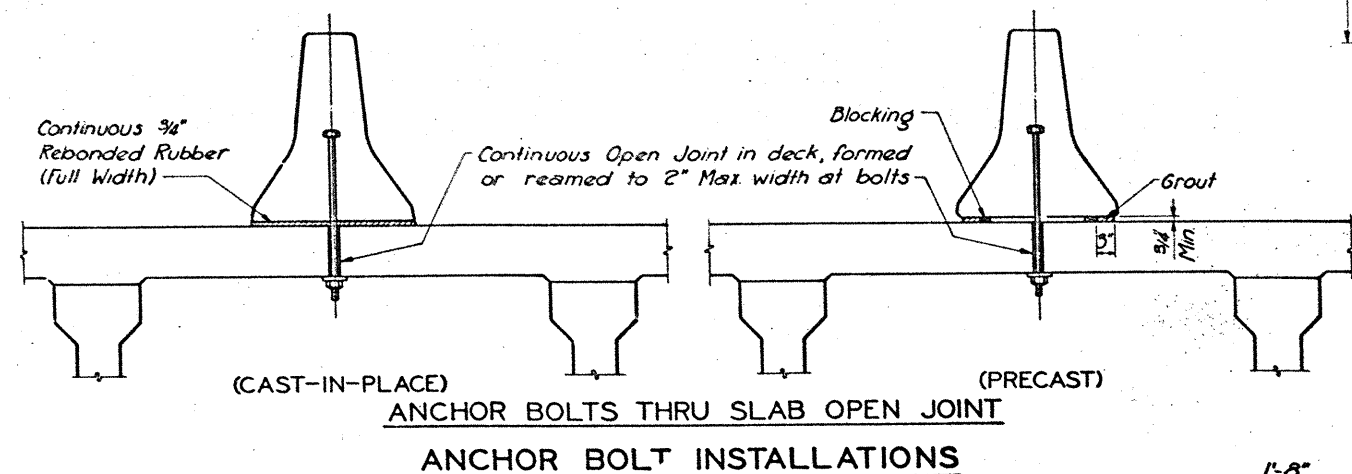
TYPE II MANHOLE



*Joints shall be prepared at ends of spans, over interior supports for continuous units, and at equal intervals in between as necessary to maintain a 30' Maximum and a 15' Minimum length of unbroken wall. Material used in forming joint may be left in place if it is compressible and light in color such as the following materials: polystyrene, molded cork granules, sponge rubber sheets, etc.



*Note: If bridge deck has Asphaltic Concrete Overlay, the height of cast-in-place and precast barriers must be adjusted accordingly. See bridge layout sheet for overlay thickness.



*Provide 4" min. bar lap.

EXPANSION JOINT

ESTIMATED QUANTITIES (FOR INFORMATION ONLY)			
	Concrete	Reinf. Steel	Str. Steel (Anchor Bolts)
	CY	Lb.	Lb.
One ~ 30'-0" Section Barrier	3.54	292	13
Additional ~ One Light Pole Anchorage		67	13

GENERAL NOTES:

Designed according to A.A.S.H.O. 1973 Standard and Interim Specifications.

Reinforcing Steel, Anchor Bolts, Blocking, etc. as shown in Median Barrier Sections shall be paid for as price per linear foot for Concrete Median Barrier.

Axis of Median Barrier shall be vertical, except where median is superelevated, then axis shall be normal to roadway surface.

Unless otherwise shown in the plans, the Contractor has the option of furnishing either a precast or cast-in-place Concrete Median Barrier.

Concrete for Concrete Median Barrier shall be Class "C".

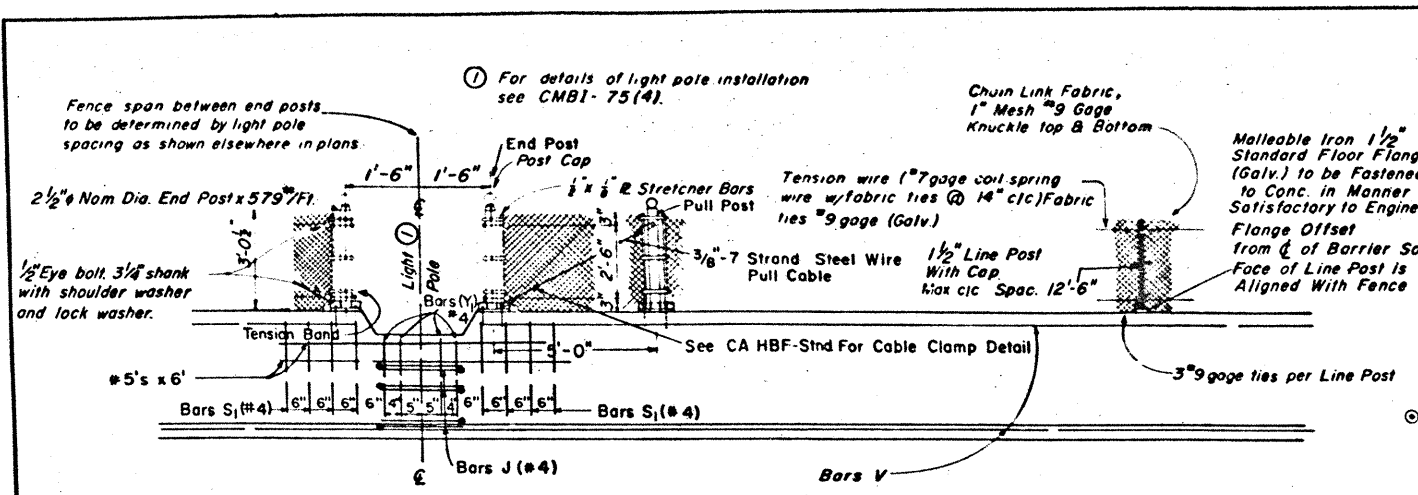
See Illumination Sheet for light pole anchor bolts and conduit details.

STATE DEPARTMENT OF HIGHWAYS
AND PUBLIC TRANSPORTATION

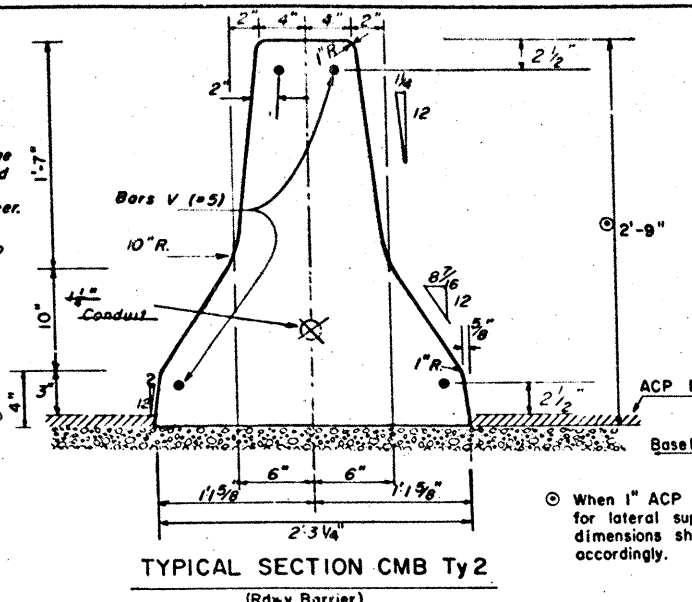
CONCRETE MEDIAN BARRIER
(BRIDGE)

CMB1-75 (1) 52

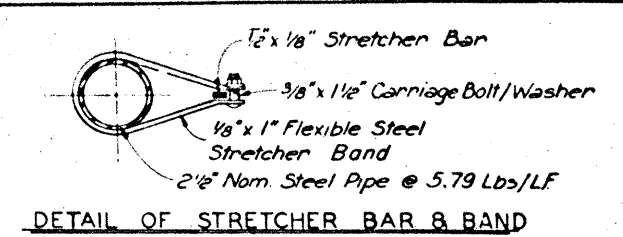
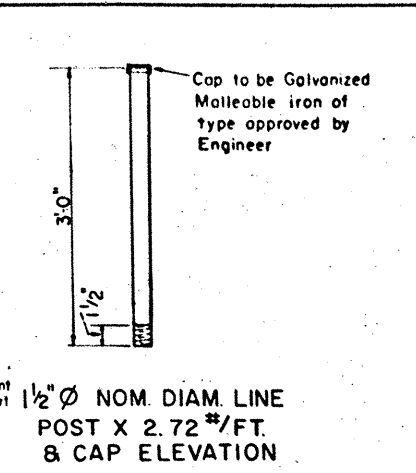
DN	CHANGING	DATE	FED. NO.	STATE	FEDERAL PROJECT NO.	SHEET NO.
CK DN	ORIGINAL		6	TEXAS	1352-6(2)4.4/6	52
CK DN	REVISED					
CK DN	REVISED					
CK DN	REVISED					
CK DN	REVISED					
CK DN	REVISED					



ELEVATION OF ROADWAY BARRIER CMB Ty 2



TYPICAL SECTION CMB Ty 2 (Rdwy Barrier)



GENERAL NOTES

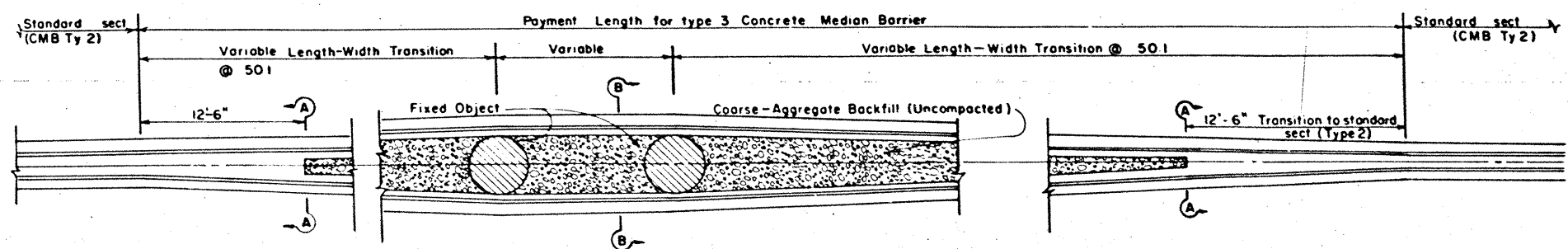
FENCE TO BE USED ON BARRIER ONLY WHEN CALLED FOR ON LAYOUT AND PAID FOR BY LINEAR FT. OF CONTROL-OF-ACCESS HEADLIGHT-BARRIER FENCE.

AXIS OF MEDIAN BARRIER SHALL BE VERTICAL, EXCEPT WHERE MEDIAN IS SUPERELEVATED, THEN AXIS SHALL BE NORMAL TO ROADWAY SURFACE.

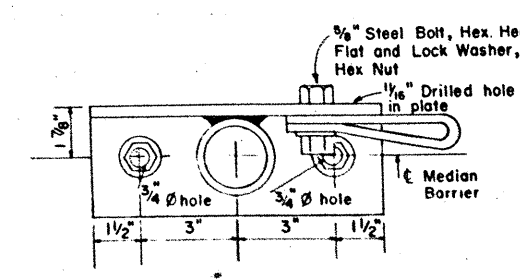
FOR CONTROL-OF-ACCESS HEADLIGHT-BARRIER FENCE DETAILS NOT SHOWN SEE CLF STANDARD AND CA HBF STANDARD

ALL STEEL FITTINGS SHALL BE GALVANIZED AFTER FABRICATION. PLACING & INSTALLATION OF ROADWAY LIGHTING CONDUITS SHALL BE AS DETAILED ON CMB 1-75 (4).

UNLESS OTHERWISE SHOWN IN THE PLANS THE CONTRACTOR HAS THE OPTION OF PLACING EITHER PRECAST OR CAST IN PLACE CONCRETE MEDIAN BARRIER.



TYPE 3 BARRIER PLAN



ELEVATION END & PULL POST

BID PRICE PER LINEAR FOOT OF CMB TY 263, INCLUDING TERMINAL AND ANCHOR SECTIONS SHALL INCLUDE ALL OF THE CONCRETE, REINFORCEMENT, DRILLED SHAFT FOUNDATIONS & AGGREGATE AND EARTH BACKFILL.

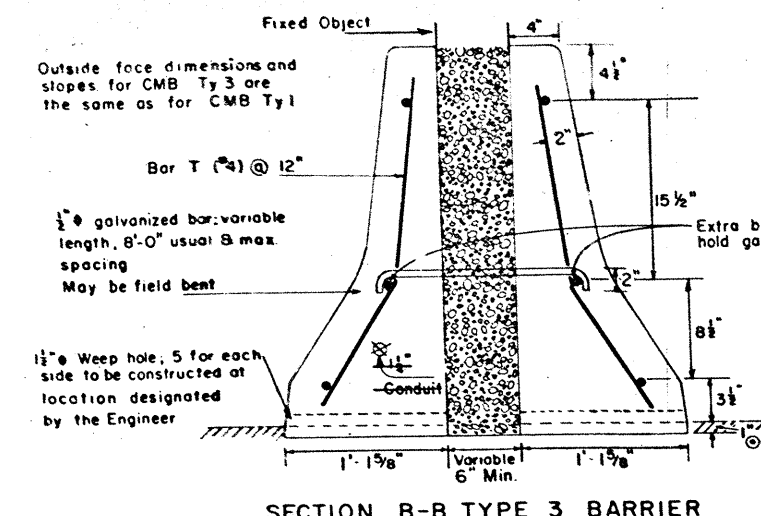
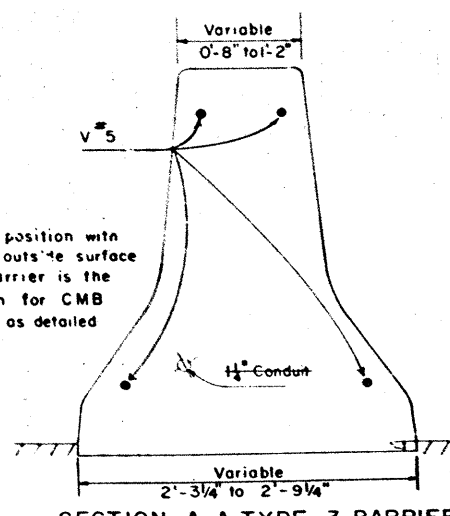
ALL CONCRETE FOR CMB TY 263 INCLUDING DRILLED SHAFT FOUNDATION SHALL BE CLASS 'A' OR CLASS 'C'.

LONGITUDINAL BARS FOR ROADWAY BARRIER SHALL CONFORM TO ASTM A-615 OR ASTM A-616 (GRADE 60). VERTICAL BARS SHALL CONFORM TO ASTM A-615 (GRADE 40).

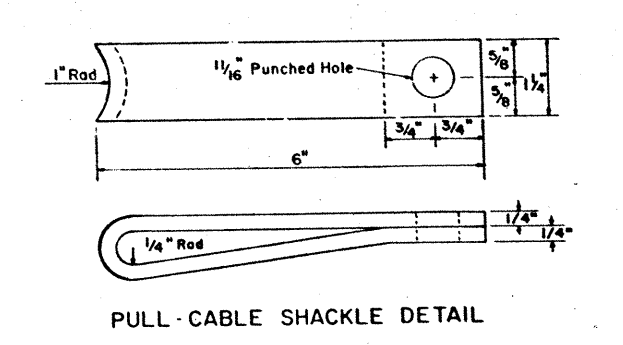
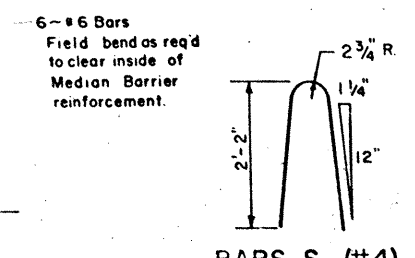
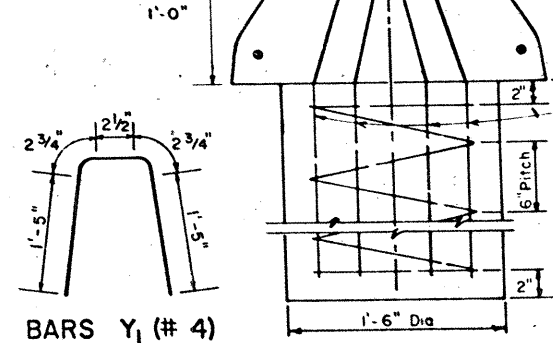
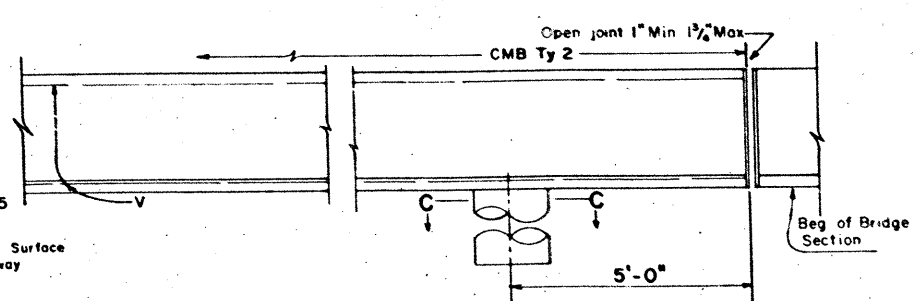
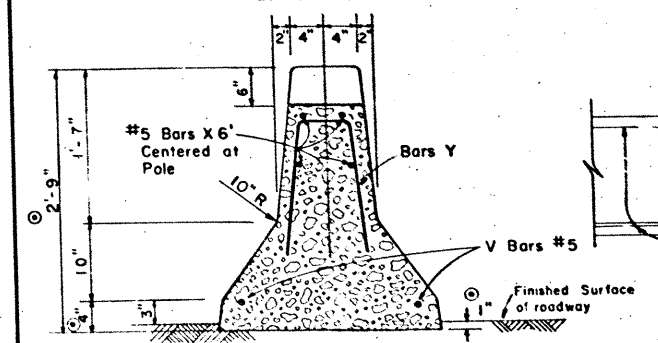
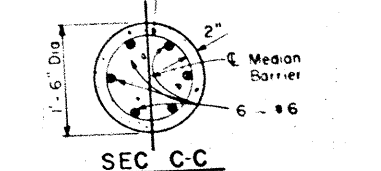
AT CONSTRUCTION JOINTS FOR THE ROADWAY BARRIER, THE LONGITUDINAL BARS SHALL EXTEND BEYOND THE JOINT SO THAT BAR SPLICES WILL BE A MINIMUM OF TWO FEET FROM THE CONSTRUCTION JOINT.

BAR SPLICES FOR ROADWAY BARRIER SHALL BE A MINIMUM OF 24 TIMES THE NOMINAL DIAMETER OF THE BAR.

ANY METHOD DEvised BY THE CONTRACTOR AND APPROVED BY THE ENGINEER THAT WILL ASSURE THE LONGITUDINAL ROADWAY STEEL FOR CMB TY 263 WILL BE POSITIONED ± 1" UNLESS AS DIMENSIONED WILL BE SATISFACTORY.



SECTION B-B TYPE 3 BARRIER



STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

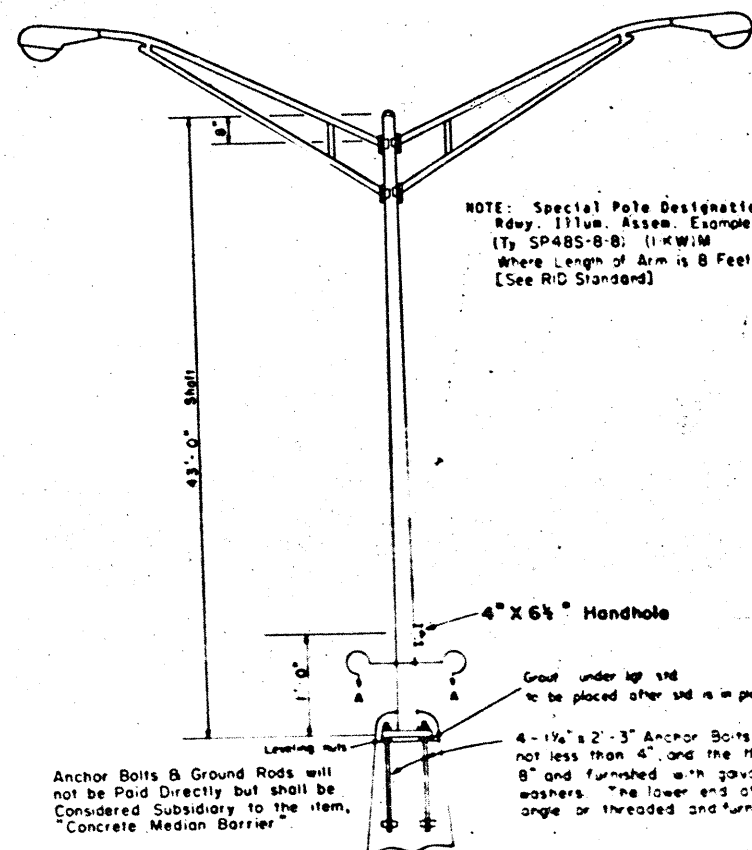
CONCRETE MEDIAN BARRIER

ROADWAY (CAST IN PLACE) WITH ILLUMINATION

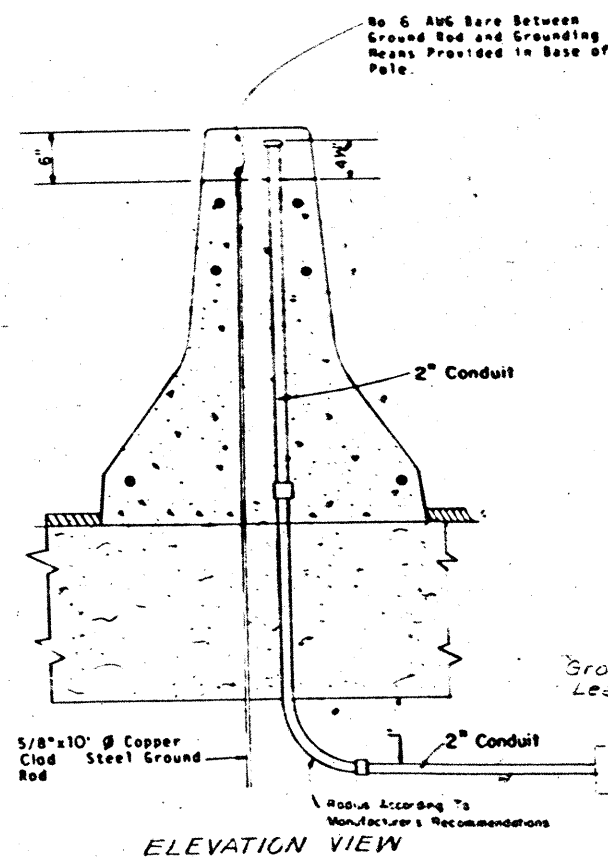
CMBI-75(2) (MOD)

52A

DN	DRAWING	DATE	FED NO	STATE	FEDERAL PROJECT NO	SHEET NO
CK DN	ORIGINAL			TEXAS	1353-000-215	52A
DW	REVISED					
CK DW	REVISED					
TR						
CK TR						

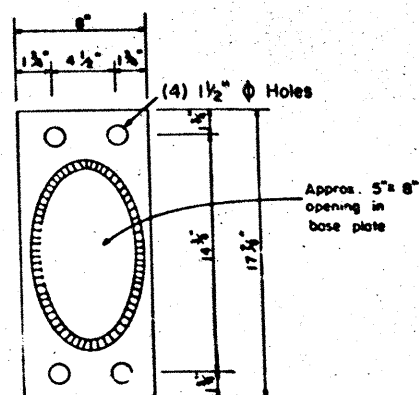


POLE DETAIL



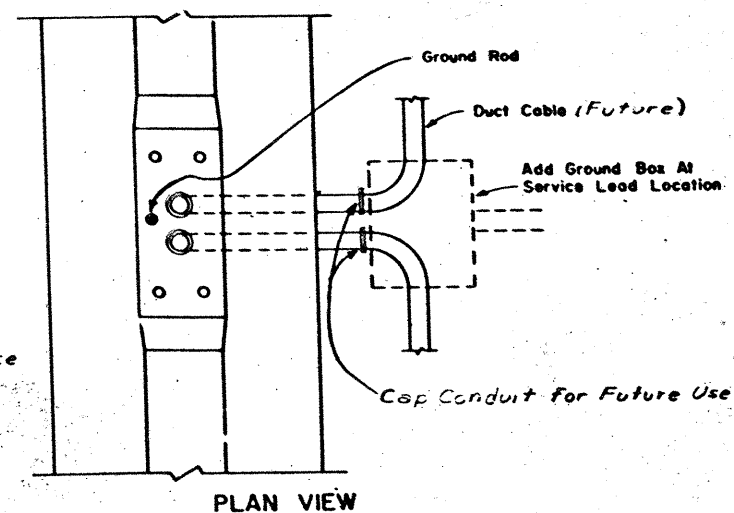
ELEVATION VIEW

DUCT CABLE DETAIL

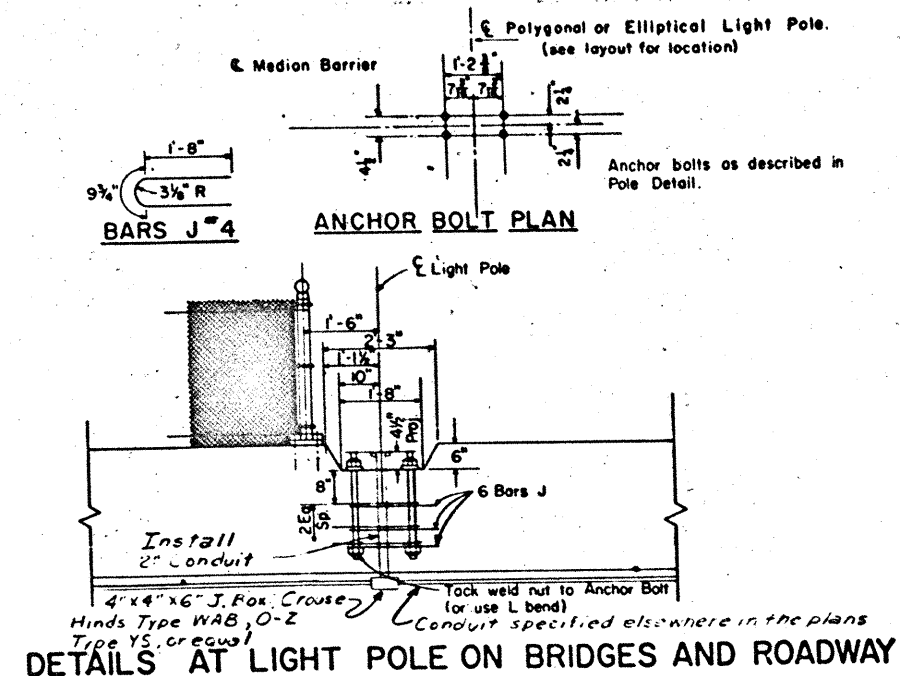


Section A-A

Shape of pole may be Elliptical
or Polygonal

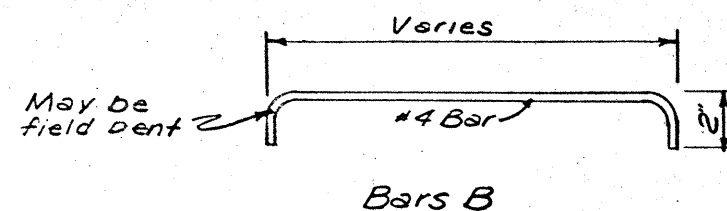
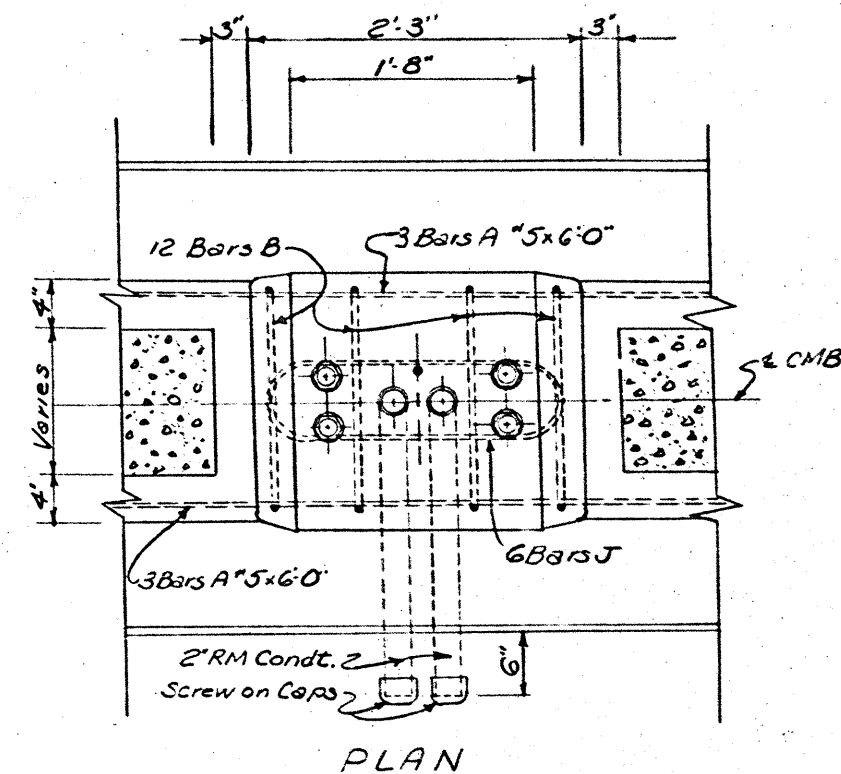
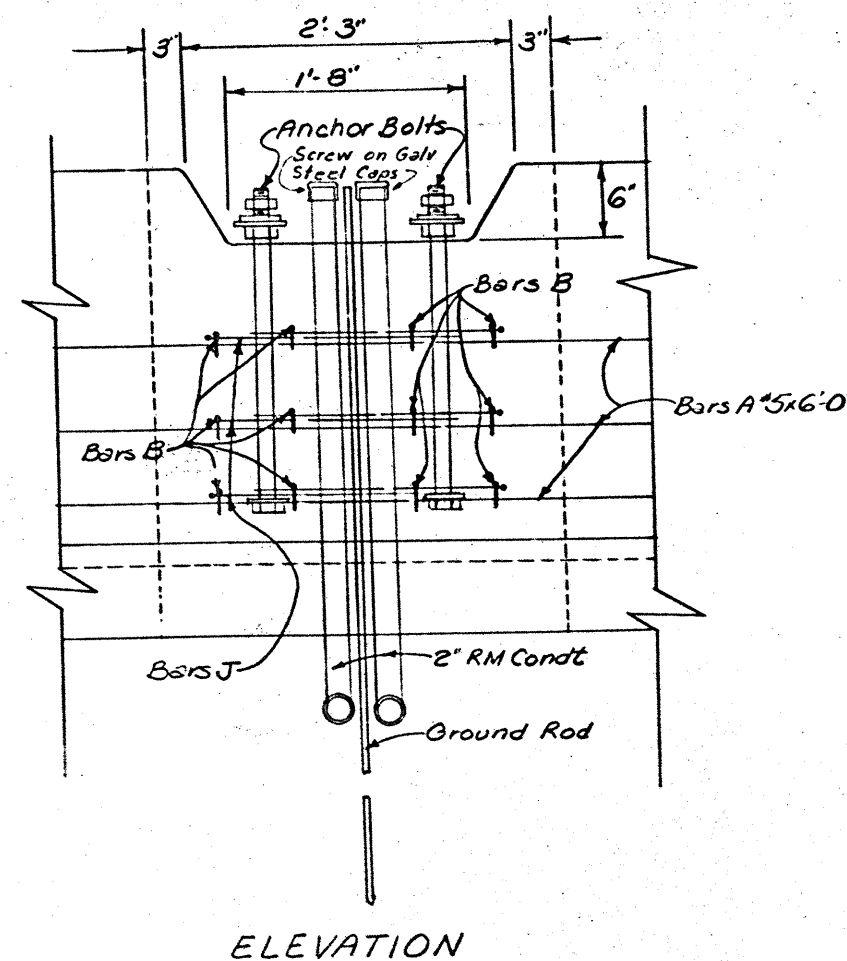
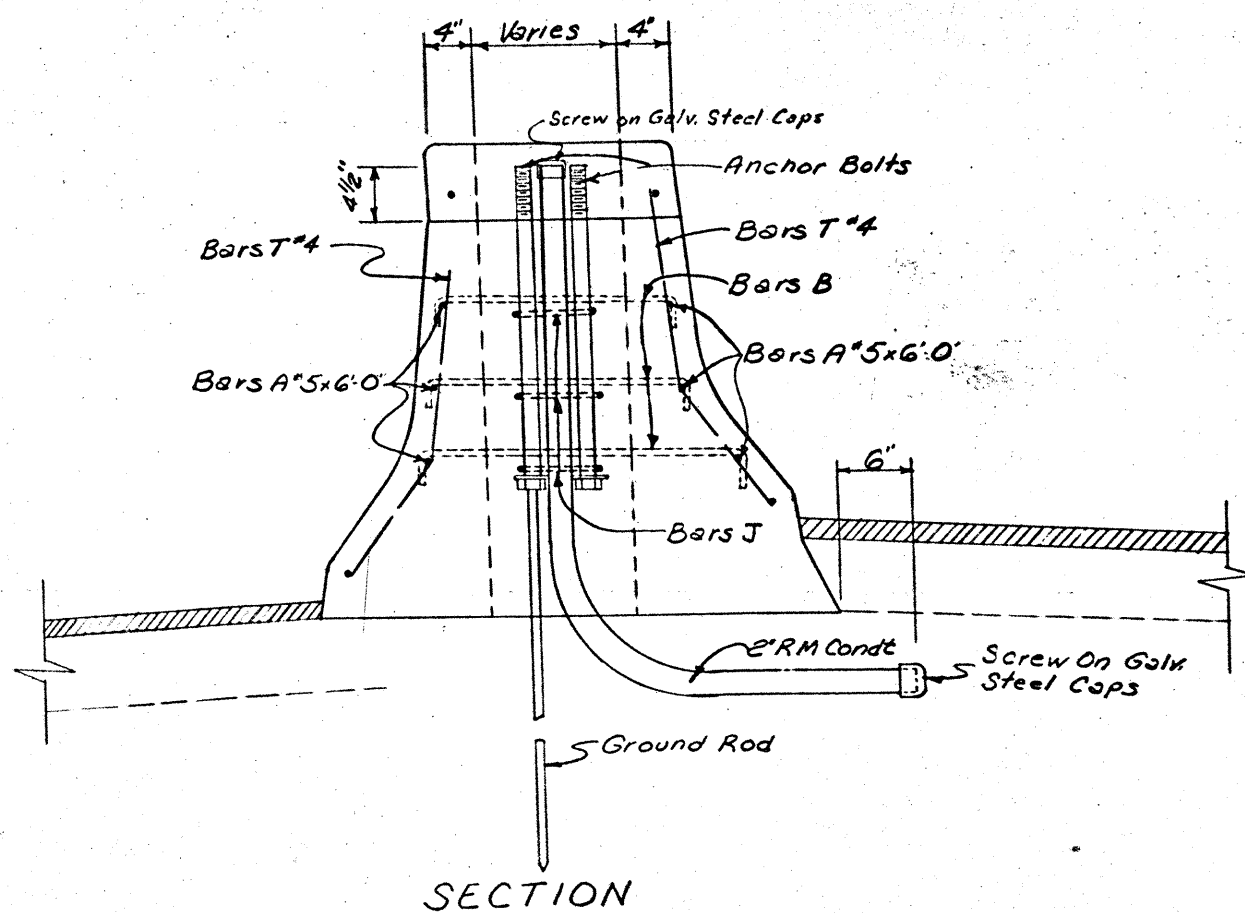


PLAN VIEW



STATE DEPARTMENT OF HIGHWAYS
AND PUBLIC TRANSPORTATION
**CONCRETE
MEDIAN BARRIER**
BRIDGE AND ROADWAY **53**
WITH ILLUMINATION
CMBI-75 (4) (MOD)

DN	DRAWING	DATE	FED RD DIV NO	STATE	FEDERAL PROJECT NO	SHEET NO.
CH DN	ORIGINAL		6	TEXAS	1555-6(214)-B	5
DW	REVISED					
CH DW	REVISED			STATE	COUNTY	CONT. DET. JOB
TR						NO.
CH TR			18	Da as	442 2	71 UNRS



DETAILS FOR ILLUMINATION
POLE BASES ON TYPE 3 AND
TY. 12 CONC. MED BARRIER

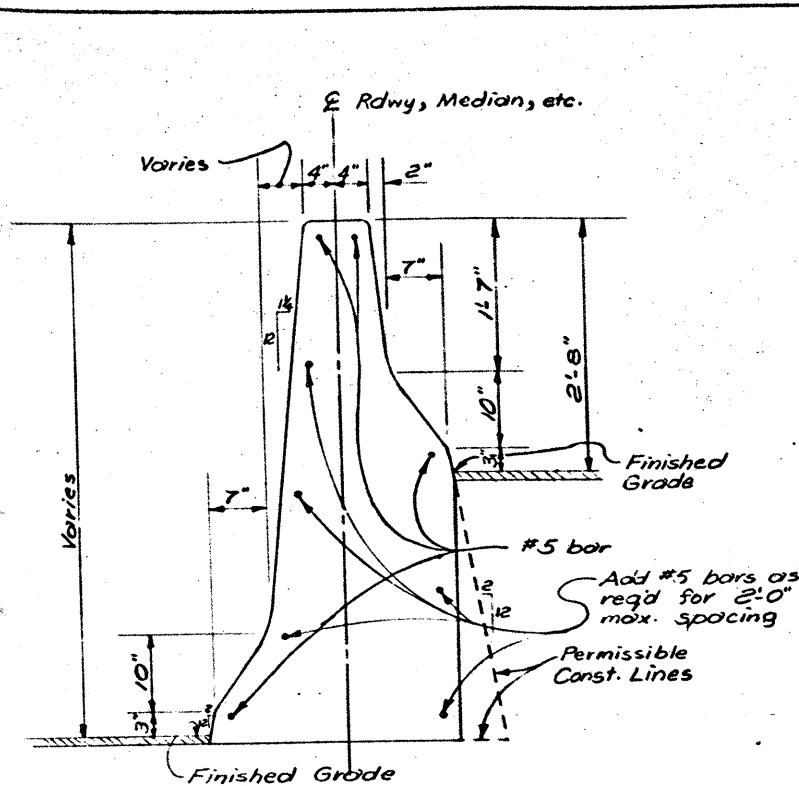
NOTE: See CMBI-75(2)(Mod) &
CMBI-75(4)(Mod) for dimensions and
details not shown.

54

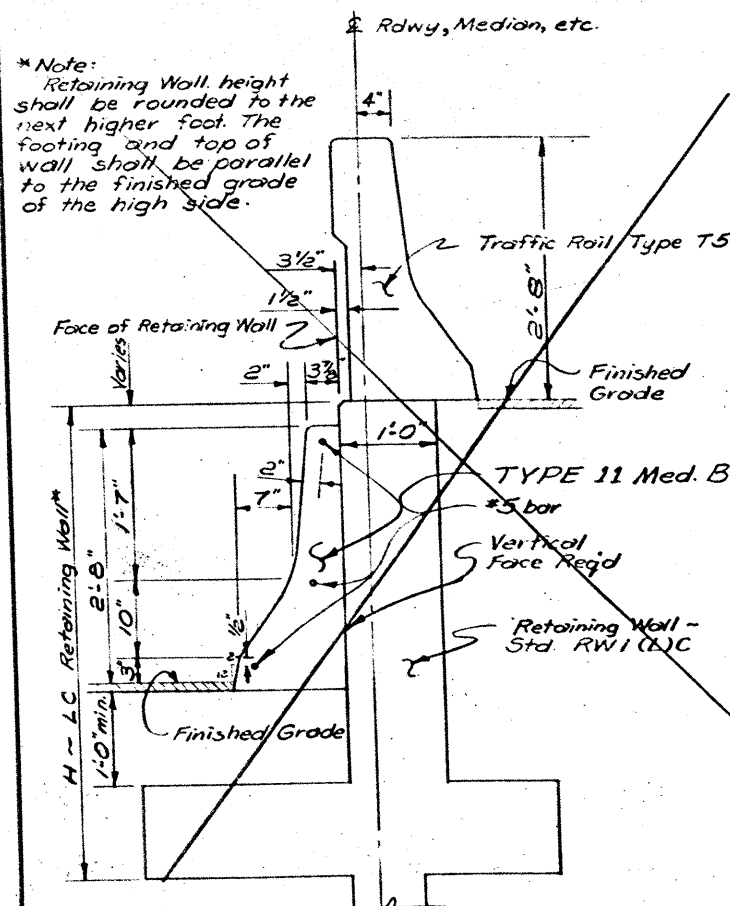
MISCELLANEOUS
CMBI DETAILS for
ILLUMINATION BASES

135E-6(21A)418 54

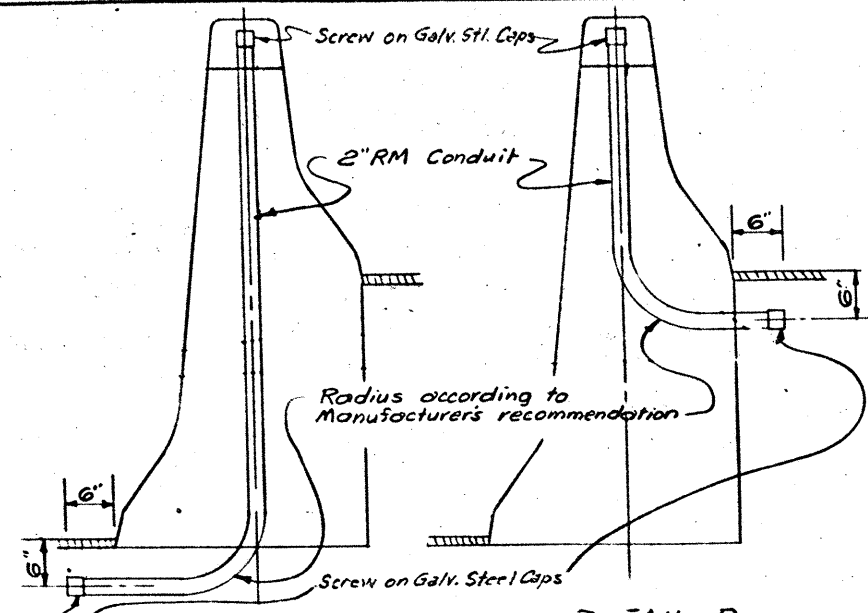
18 DALLAS 442 2 71 1H35E



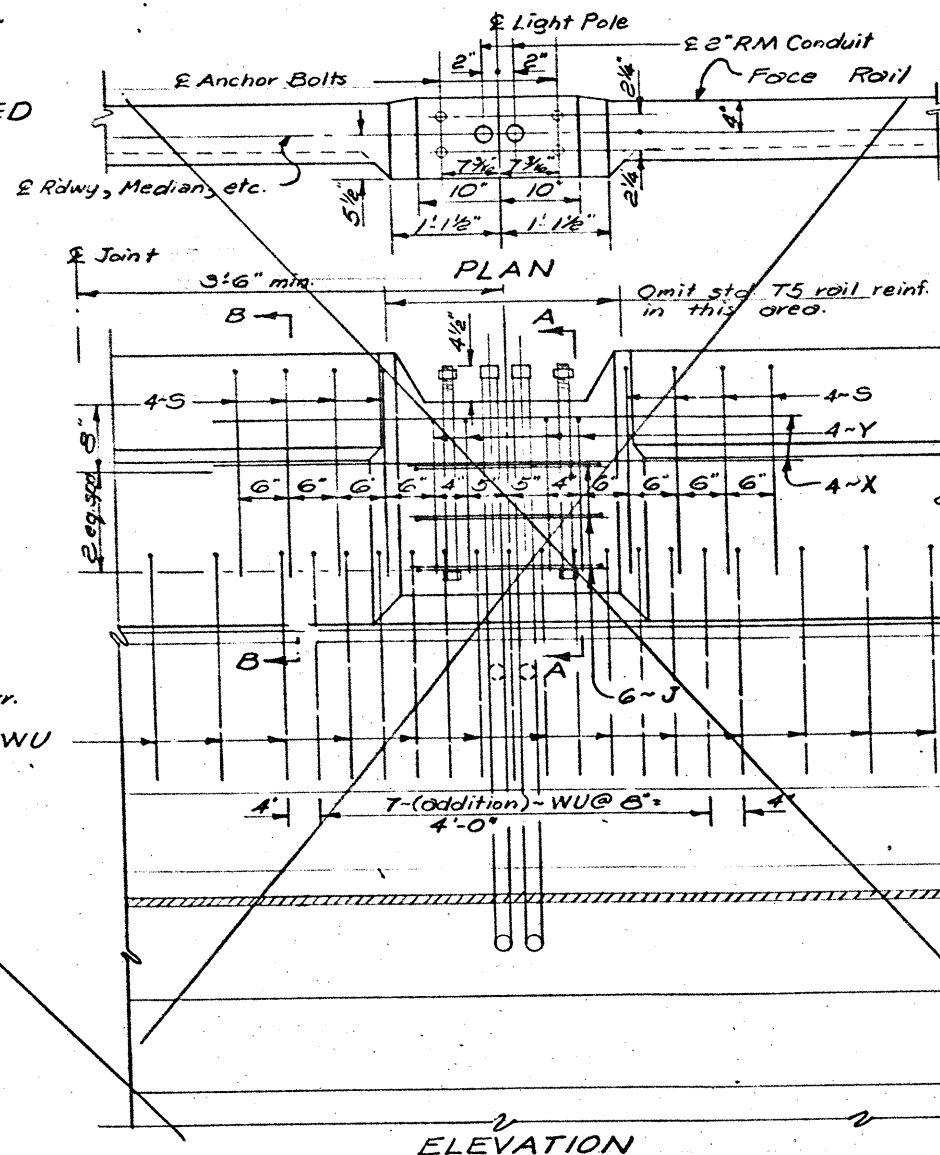
TYPE 10 MEDIAN BARRIER
SECTION WHERE DIFFERENCE IN FINISHED
GRADE IS 2'9" OR LESS



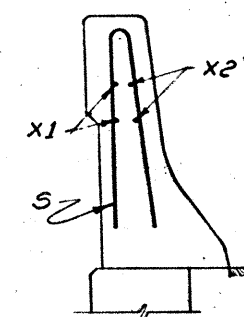
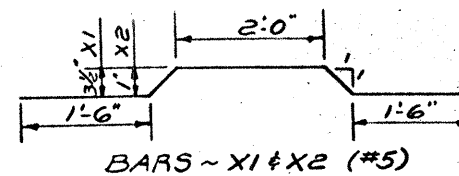
TYPE 11 MEDIAN BARRIER with
RETAINING WALL & TYPE T5 RAIL ~
SECTION WHERE DIFFERENCE IN FINISHED
GRADE IS GREATER THAN 2'9"



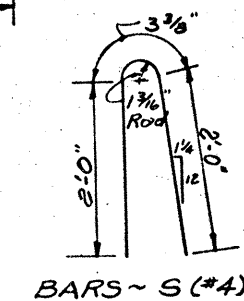
DETAIL - C
DETAIL - D
DUCT CABLE DETAILS - TYPE 10 BARR.
Note: Use Detail C or D as req'd to provide access
from North or West side of Barrier



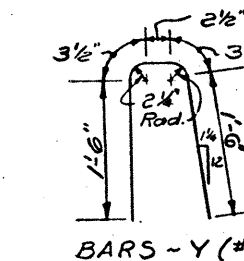
DETAIL AT LIGHT POLE ON T5 RAIL



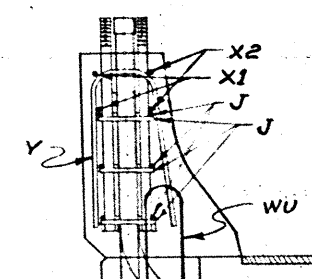
SECTION B-B



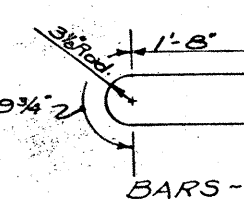
BARS ~ S (#4)



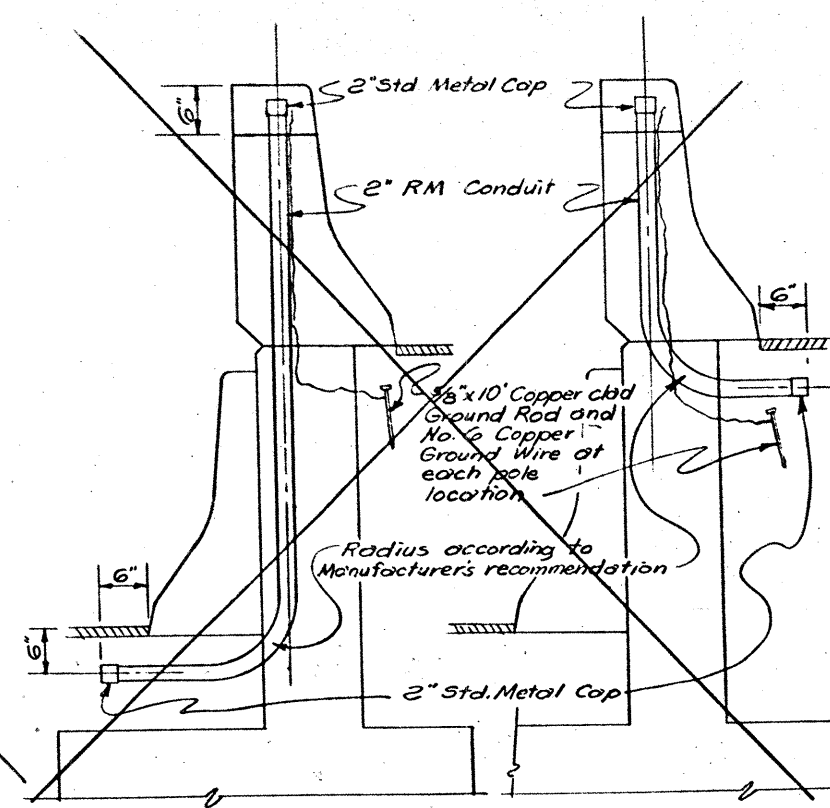
BARS ~ Y (#4)



SECTION A-A



BARS ~ J (#4)



DETAIL - A

DETAIL - B

DUCT CABLE DETAILS - TYPE 11 BARR.

Note: Use Detail A or Detail B as req'd to
provide access from North or West
side of Barrier

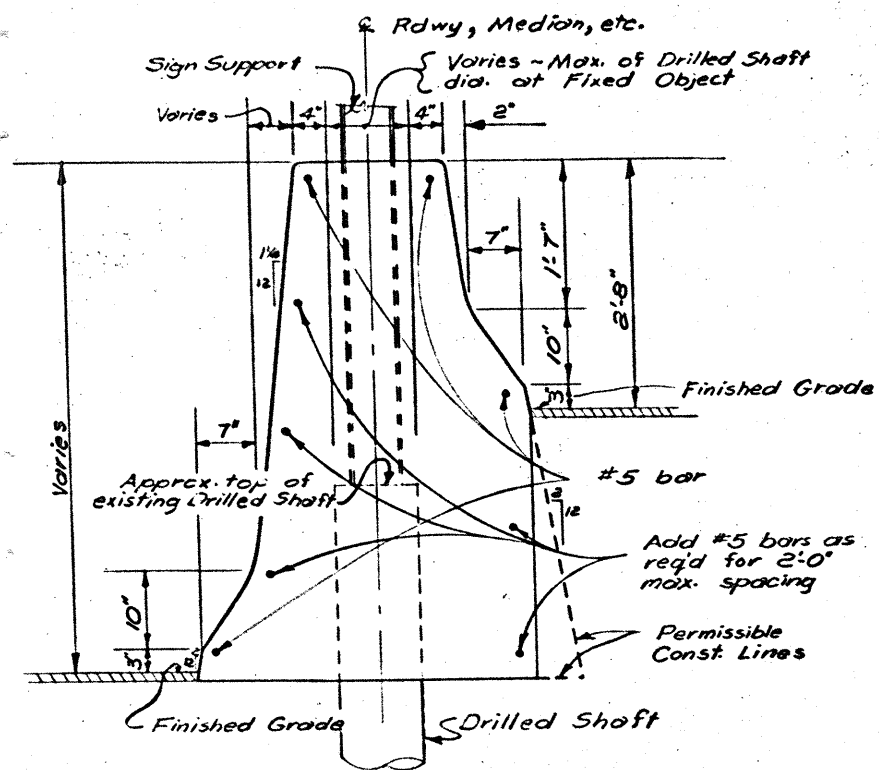
Notes:
Railing may be constructed with slip forms
with equipment approved by the Engineer. Sensor
Control for both line and grade must be provided.
When slip forming is used the concrete may be
cured with membrane curing compound.
For details and notes not shown for:
Type 10 & 11 CMB - see notes for CMB
Type 2 & 3 on CMBI-75(2)
(MO)

Detail at Light Pole - see CMBI-75(4)(MO)

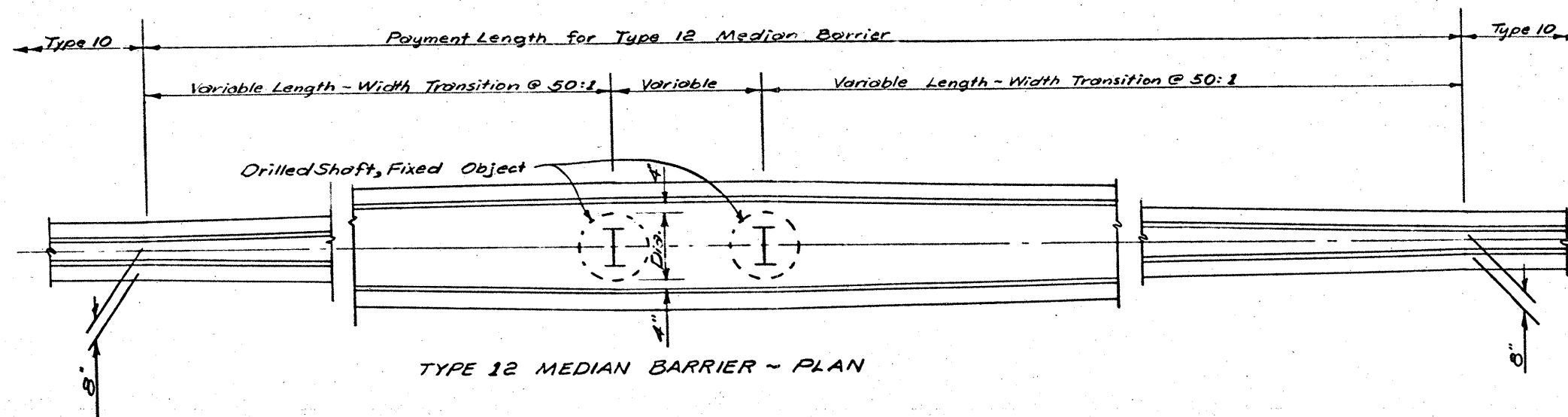
STATE DEPARTMENT OF HIGHWAYS
AND PUBLIC TRANSPORTATION

TYPE 10 & 11
MEDIAN BARRIER

DN LA	Drawing	Date	FED. NO.	STATE	FEDERAL PROJECT NO.	SHEET
CK	Original	3-80	8	TEXAS	135E-6(214)4/8	55
DW: VMM	DATE	STATE	COUNTY	CONTRACT	SECTION	JOB
CK LA	1/8	DALLAS	242	2	7	CH-55



TYPE 12 MEDIAN BARRIER ~ SECTION
WHERE DIFFERENCE IN FINISHED GRADE
IS 2'9" OR LESS



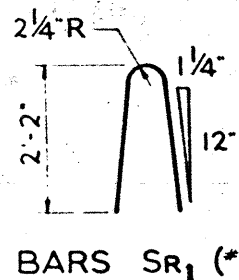
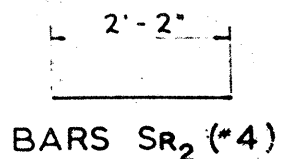
Note:
See TYPE 10 MEDIAN BARRIER for notes.

STATE DEPARTMENT OF HIGHWAYS
AND PUBLIC TRANSPORTATION

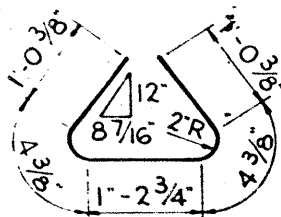
TYPE 12
MEDIAN BARRIER

56

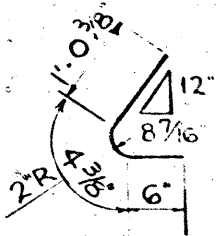
DW LA	Drawing	Date	FED. RD. DIST. NO.	STATE	FEDERAL PROJECT NO.	SHEET NO.
CK: BB	Original	6-80	6	TEXAS	135E-6214-18	56
DW VMM			STATE DIST. NO.	COUNTY	CONTRACT NO.	MILEPOST NO.
CK: BB			18	Dallas	442	71



NOTE: BARS SR_1 AND TR_1 MAY BE FURNISHED AS ONE CONTINUOUS BAR WITH A 4" LAP AT THE CONTRACTOR'S OPTION.



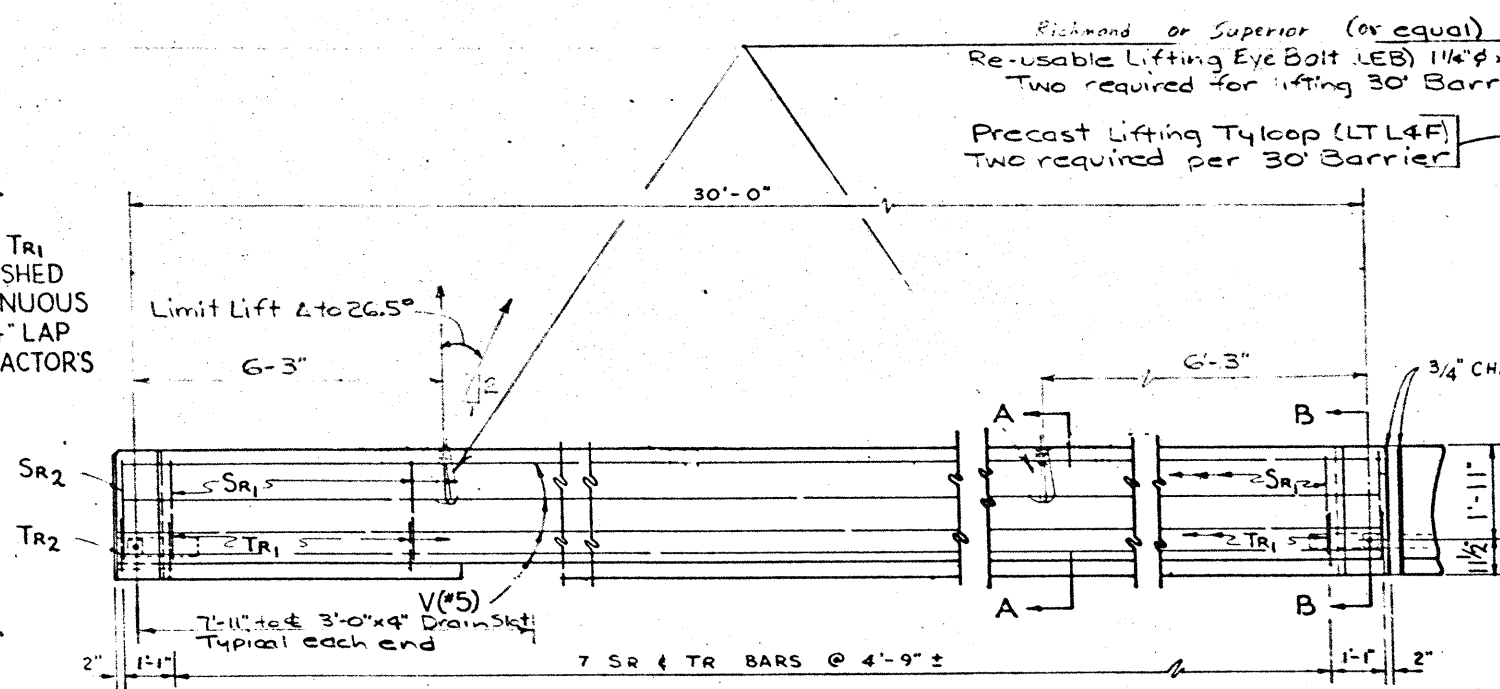
BARS TR_1 (#4)



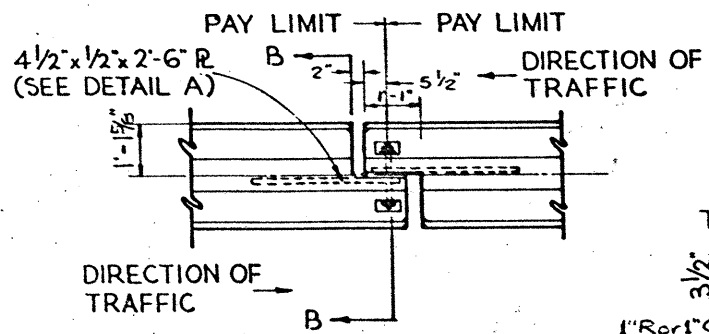
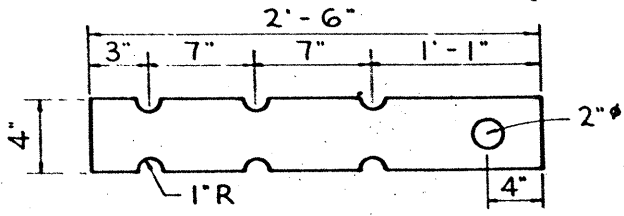
BARS TR_2 (#4)

NOTE: BARS SR_2 AND TR_2 MAY BE FURNISHED AS ONE BAR

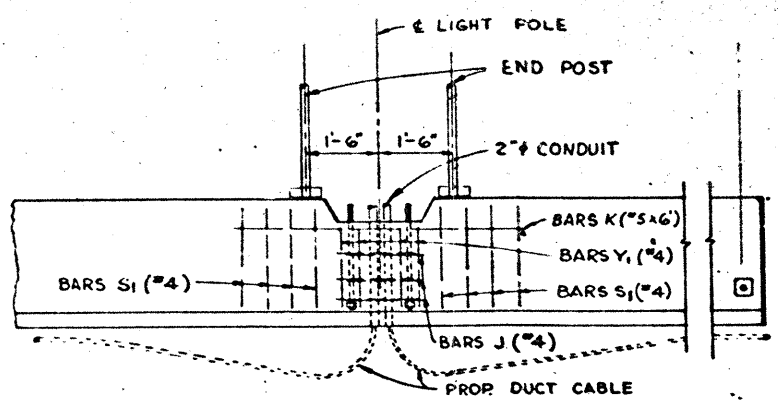
ELEVATION OF BARRIER ON ROADWAY



ANCHORAGE PLATE
DETAIL A

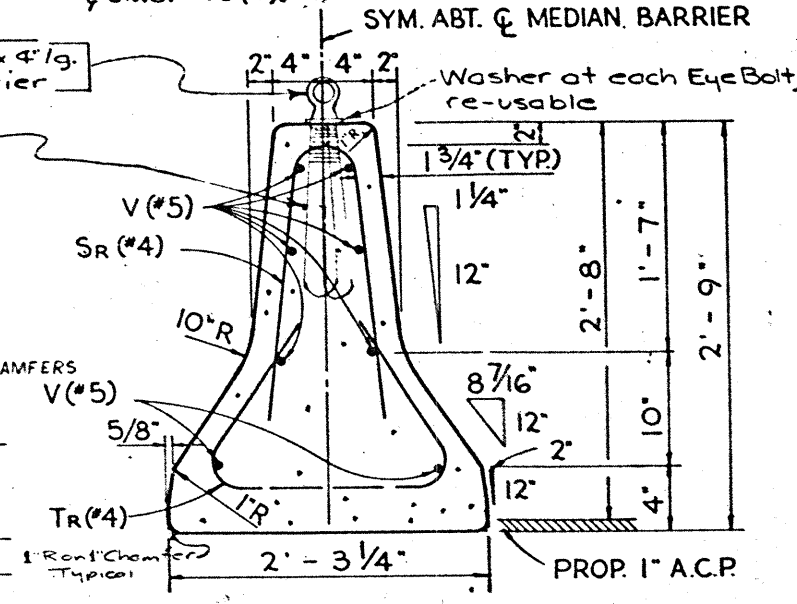


END DETAIL

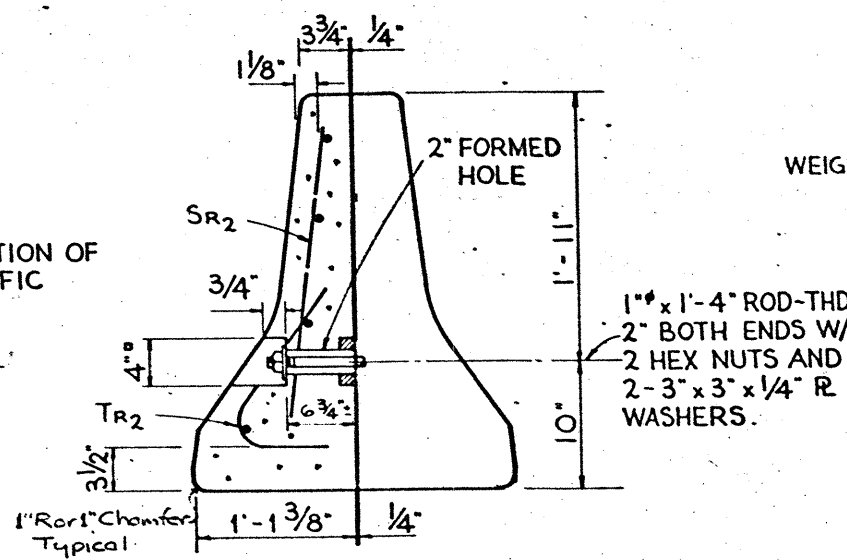


ELEVATION OF BARRIER AT LIGHT POLE

NOTE: FOR DETAILS NOT SHOWN SEE CMBI-75 (2) (MOD)
CMBI 75 (4) (MOD)



SECTION A-A



SECTION B-B

GENERAL NOTES

1. ALL FORMS FOR PRECAST MEDIAN BARRIER SHALL BE CONSTRUCTED OF STEEL.
2. LONGITUDINAL BARS FOR ROADWAY BARRIER SHALL CONFORM TO ASTM A-615 OR ASTM A-616 (GRADE 60). VERTICAL BARS SHALL CONFORM TO ASTM A-615 (GRADE 40). BAR SPLICES FOR ROADWAY BARRIER SHALL BE A MINIMUM OF 24 TIMES THE NORMAL DIAMETER OF THE BAR.
3. CHAMFER ALL EXPOSED CORNERS 3/4" UNLESS OTHERWISE SHOWN.
4. THE CONCRETE MEDIAN BARRIER SHALL RECEIVE AN "ORDINARY SURFACE FINISH" FOR EXPOSED CONCRETE AS DESCRIBED IN THE ITEM CONCRETE STRUCTURES. CONCRETE SHALL BE CLASS "C" (CLASS "H"-4000 P.S.I. MAY BE USED IN LIEU OF CLASS "C" WHEN APPROVED BY THE ENGINEER.
5. AXIS OF MEDIAN BARRIER SHALL BE VERTICAL.
6. ALL STEEL FITTINGS SHALL BE GALVANIZED AFTER FABRICATION.
7. THE REINFORCING CAGE MAY BE TACK WELDED IN LIEU OF TYING.
8. REGARDLESS OF METHOD OF HANDLING, BARRIER SECTION LIFTING POINTS SHALL BE 6 1/4 FEET FROM THE ENDS OF THE BARRIER. LIFTING DEVICES AND ATTACHMENTS TO BARRIER SECTION SHALL BE APPROVED BY THE ENGINEER.

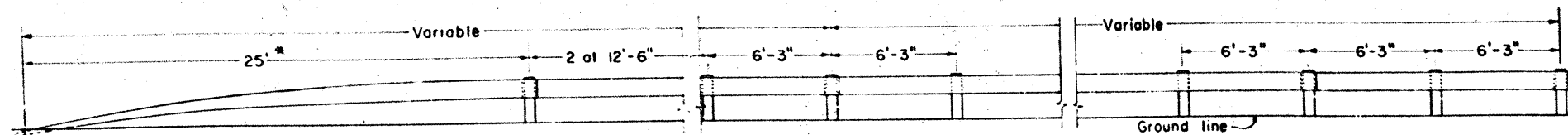
# APPROX. P.L.F. QUANTITIES		
CONCRETE	CY	0.112
REINF. STEEL	LB	8.8

* FOR CONTRACTOR'S INFORMATION ONLY.

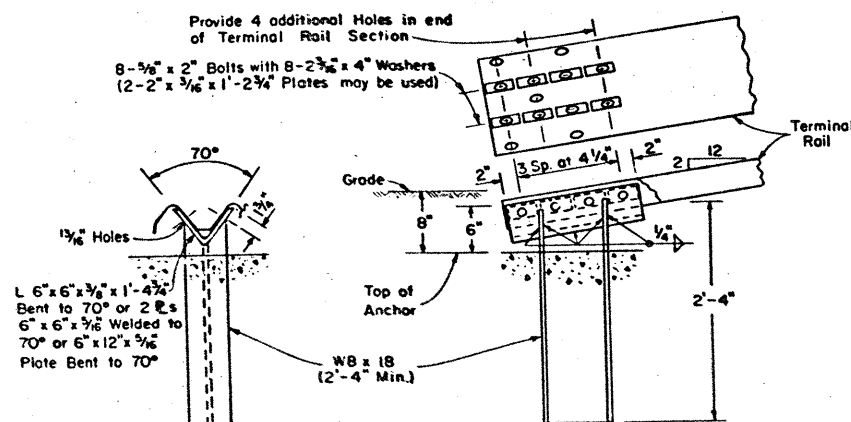
WEIGHT OF ONE 30' UNIT = APPROXIMATELY 7 TONS

STATE DEPARTMENT OF HIGHWAYS
AND PUBLIC TRANSPORTATION
PRECAST CONCRETE
BARRIER RAIL
PCBR (MOD.)

FIG. NO.	STATE	FEDERAL PROJECT NO.	SHEET NO.
18	TEXAS	135E-6(214) 418	57
DIST. NO.	COUNTY	CONT. SECT.	TOB. HIGHWAY NO.
18	DALLAS	442	1H55E

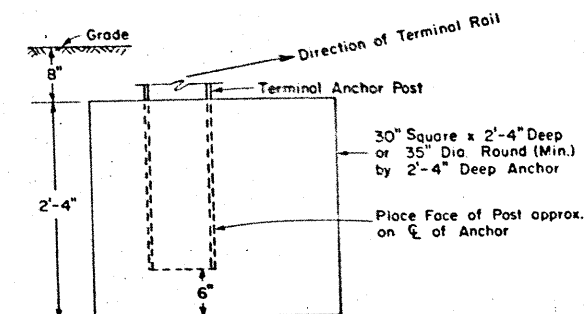


*NOTE: This dimension measured to center of splice when Terminal Connector is used.



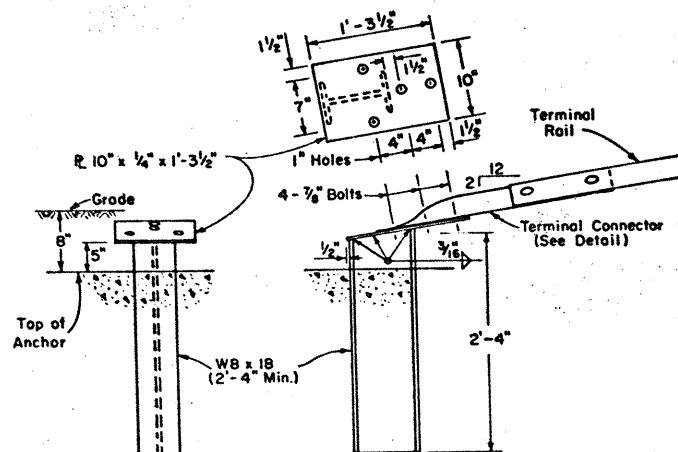
TERMINAL ANCHOR POST

NOTE: This Post requires 4 additional Holes (Shop or Field) in the Terminal Rail member with 8-5/8" Bolts and Washer Plates as shown for attachment.



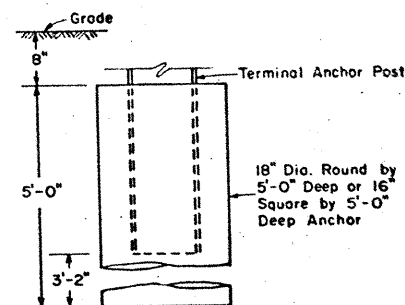
TERMINAL CONCRETE ANCHOR

NOTE: Either Post may be used with either Anchor. No Construction Joint is allowed in the Concrete Anchor. Terminal Rail may be bolted to Post and in twist position prior to placing Concrete Anchor. Upper 10" (Min.) of Anchor Post must be Galvanized.

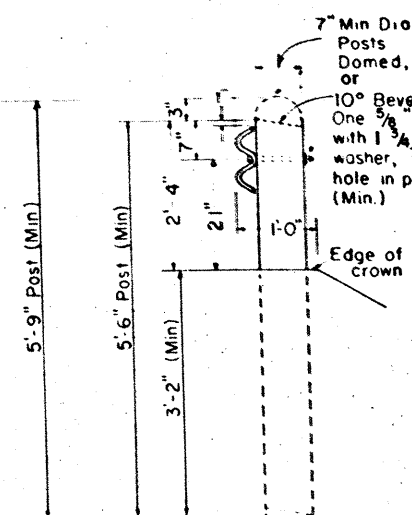


OPTIONAL TERMINAL ANCHOR POST

NOTE: This Optional Post requires the use of the 10 Ga. Terminal Connector with 4-7/8" Bolts for attachment to the Anchor Post.

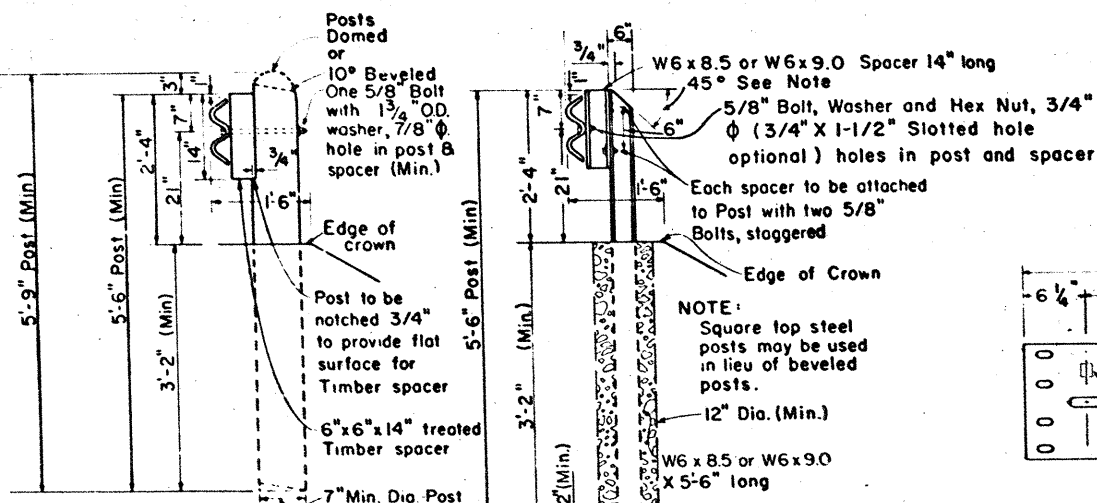


OPTIONAL TERMINAL CONCRETE ANCHOR



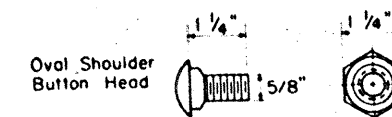
WOOD LINE POST

NOTE: When undisturbed solid rock is encountered the minimum depth of the hole shall be 1'-6".

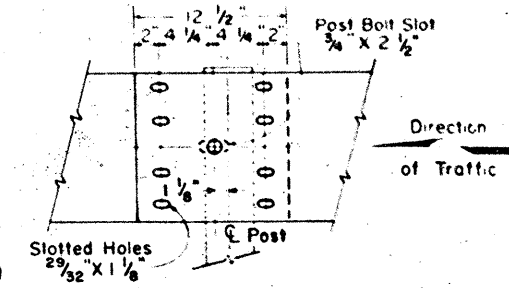


WOOD LINE POST (Blockout)

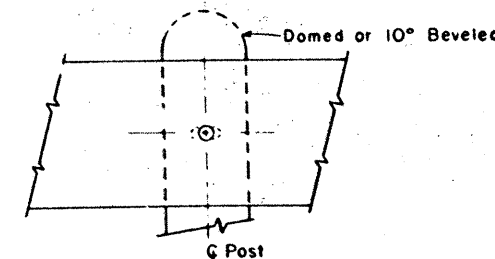
STEEL LINE POST (Blockout)



ANCHOR OR SPLICE BOLT 5/8" NUT
POST BOLT: Similar except length
(7/8" Hex bolts required for Terminal Connector)

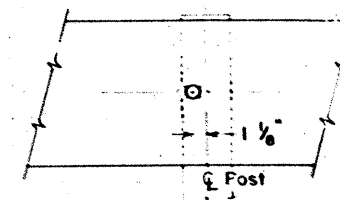


RAIL SPLICE



POST CONNECTION WOOD POST

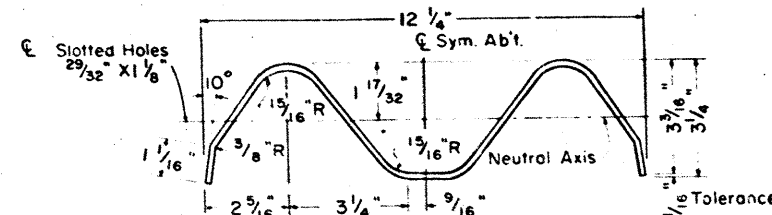
Wood Post May Be Domed, or Beveled



POST CONNECTION STEEL POST

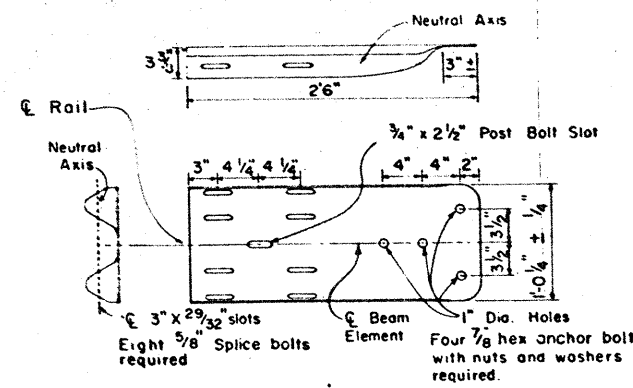
GENERAL NOTES

1. THE EXACT POSITION OF GUARD FENCE SHALL BE AS SHOWN ELSEWHERE ON THE PLANS OR AS DIRECTED BY THE ENGINEER. GUARD FENCE SHALL BE TRANSITIONED TO A SMOOTH CONNECTION WITH OTHER GUARD FENCE OR STRUCTURE RAILING AS SHOWN ELSEWHERE ON PLANS.
2. AT THE OPTION OF THE CONTRACTOR THE RAIL ELEMENTS FOR THE GUARD FENCE MAY BE FURNISHED IN EITHER 12 1/2' OR 25' FOOT NOMINAL LENGTHS WITH POST BOLT SLOTS FOR CONNECTION TO POSTS.
3. BOLTS SHALL BE OF SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 3/4" BEYOND IT.
4. THE TOP OF THE TERMINAL ANCHOR POST AND ALL STEEL FITTINGS THEREON SHALL BE GALVANIZED A MINIMUM OF 10" AS SHOWN.
5. WHERE ROCK IS ENCOUNTERED OR WHERE SHOWN ON THE PLANS, THE DIAMETER OF THE HOLES AND THE MATERIAL FOR BACKFILLING SHALL BE AS DIRECTED BY THE ENGINEER. TIMBER POSTS SHALL NOT BE SET IN CONCRETE.
6. THE TERMINAL ANCHOR POST SHALL BE SET IN CLASS "A", "B" OR "C" CONCRETE IN ACCORDANCE WITH ITEM "CONCRETE FOR STRUCTURES", OR SET IN CONCRETE IN ACCORDANCE WITH ITEM "CONCRETE PAVEMENT". CONCRETE SHALL BE SUBSIDIARY TO THE BID ITEM REQUIRING CONSTRUCTION OF THE TERMINAL RAIL SECTION AND ANCHORAGE SYSTEM.
7. TIMBER POSTS MAY BE BEVELED AT APPROXIMATELY 10 DEGREES ON THE TOP OR BOTH ENDS WITH HIGH SIDE OF TOP OF POST PLACED TOWARD THE ROADWAY OR THEY MAY BE DOMED. WHEN "BLOCKED OUT", THE UPPER PORTION OF THE POST SHALL BE NOTCHED 3/4" TO PROVIDE FLAT SURFACE FOR TIMBER SPACER. A TOLERANCE OF 1/8" WILL BE PERMITTED ON THE NOTCHED PORTION OF THE POST.
8. AN ANCHOR OTHER THAN TO A TERMINAL ANCHOR POST SHALL CONSIST OF A CONNECTION SIMILAR TO THE RAIL SPLICE OR SIMILAR TO THE TERMINAL CONNECTOR.
9. SPECIAL FABRICATION WILL BE REQUIRED IN INSTALLATIONS HAVING A CURVATURE OF LESS THAN 150' RADIUS.
10. POST SPACING WILL BE 6' - 3" EXCEPT THAT THE FIRST POST WILL BE 25' FROM THE TERMINAL ANCHOR POST AND THE NEXT TWO POSTS SPACED AT 12' - 6" WITH A MINIMUM OF 8 POSTS ADJACENT TO STRUCTURES SPACED AT 3' - 1 1/2".
11. THE 10 GAUGE TERMINAL CONNECTOR MUST BE USED WITH THE OPTIONAL TERMINAL ANCHOR POST. EITHER ANCHOR POST MAY BE USED WITH EITHER CONCRETE ANCHOR.
12. CROWN WILL BE WIDENED TO ACCOMMODATE GUARD FENCE.
13. STEEL POSTS SHALL BE SET IN CONCRETE AND BLOCKED OUT. A W6x8.5 OR W6x9.0 STEEL SPACER SHALL BE USED WITH STEEL POSTS. CONCRETE FOR LINE POST FOOTINGS SHALL BE SUBSIDIARY TO THE BID ITEM "METAL BEAM GUARD FENCE".
14. WHEN BLOCKOUT GUARD FENCE IS SPECIFIED ELSEWHERE IN THE PLANS, A 6" x 6" x 14" TREATED TIMBER SPACER OF YELLOW PINE SHALL BE USED WITH WOOD POSTS.
15. UNLESS OTHERWISE SHOWN IN THE PLANS, GUARD FENCE PLACED IN THE VICINITY OF CURBS SHALL BE BLOCKED OUT SO THAT THE FACE OF CURB IS LOCATED DIRECTLY BELOW OR BEHIND THE FACE OF RAIL. RAIL PLACED OVER CURBS SHALL BE INSTALLED SO THAT THE POST BOLT IS LOCATED APPROXIMATELY 21-INCHES ABOVE THE CUTTER PAN OR ROADWAY SURFACE.

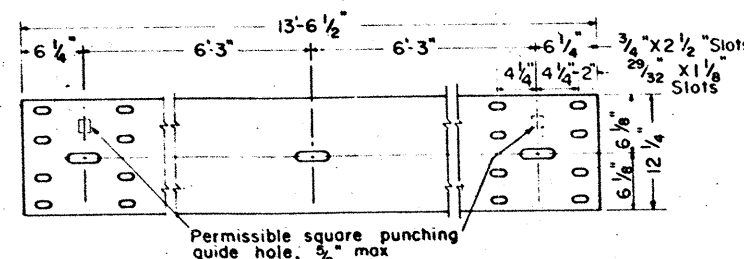


NOTE: Actual section may be slightly different depending upon the manufacturer

SECTION THRU GUARD RAIL



TERMINAL CONNECTOR (10 GAUGE MINIMUM)



ELEVATION OF NOMINAL 12 1/2 FOOT GUARD RAIL
(25 Foot sections may also be supplied)



STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

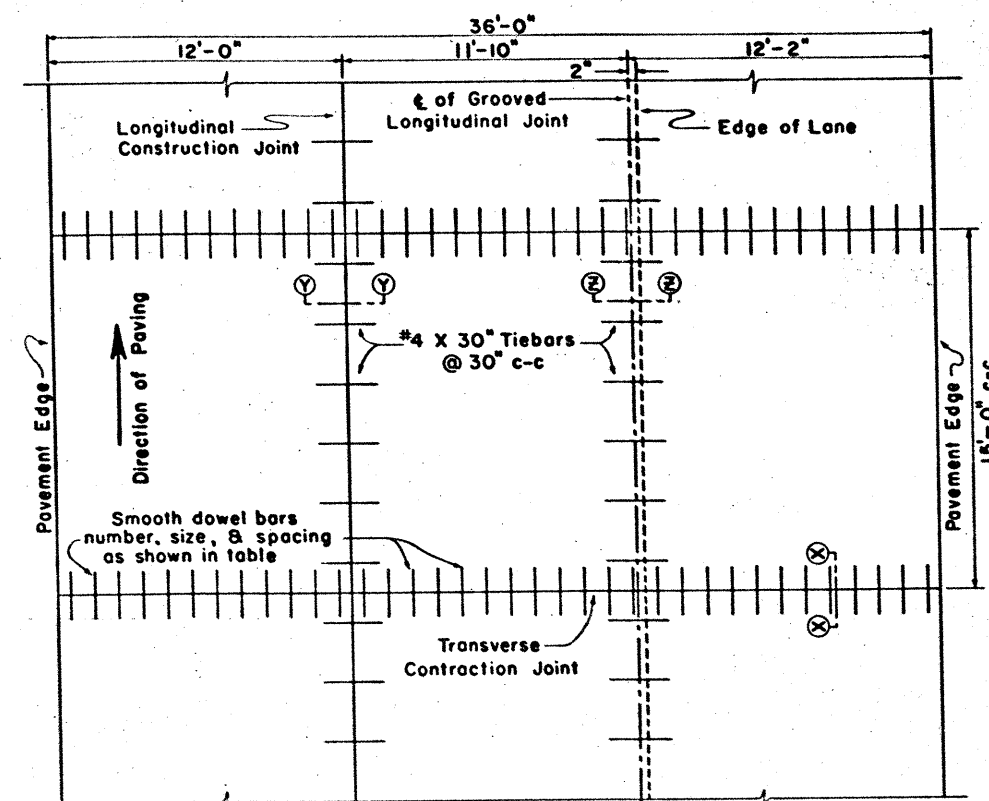
METAL BEAM GUARD FENCE GF (TD) - 80

58

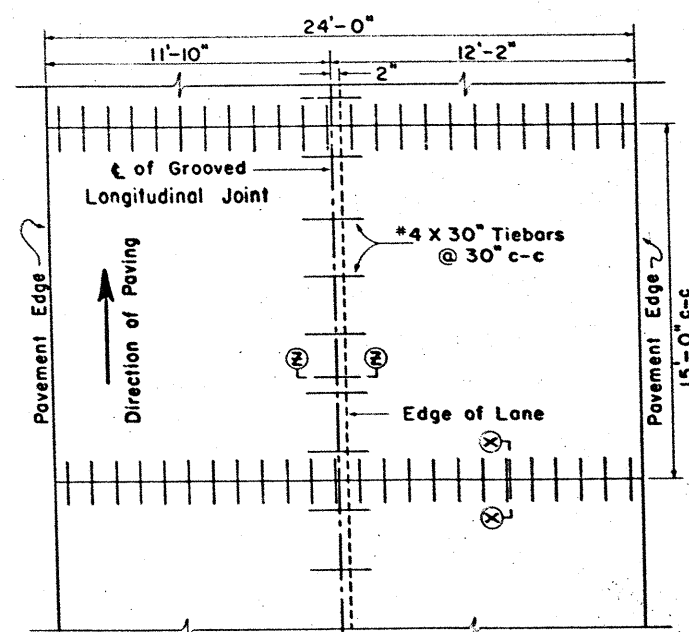
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CD	DN	ORIGINAL		TX		80
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CD	DN	REVISED		TX		80

GENERAL NOTES

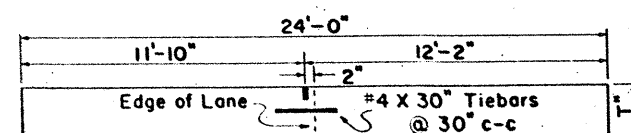
- NO EXPANSION JOINTS WILL BE USED EXCEPT AT STRUCTURE ENDS OR FIXED OBJECTS AS SHOWN ELSEWHERE IN THE PLANS.
- FOR FURTHER INFORMATION REGARDING THE PLACEMENT OF CONCRETE AND LOAD TRANSFER DEVICES REFER TO THE GOVERNING SPECIFICATIONS FOR "CONCRETE PAVEMENT".
- DETAILS AS TO PAVEMENT WIDTH, PAVEMENT THICKNESS, AND THE CROWN CROSS-SLOPE SHALL BE AS SHOWN ELSEWHERE IN THE PLANS.
- JOINT GROOVE AND SEAL DETAILS SHALL BE AS SHOWN ELSEWHERE IN THE PLANS.
- TIEBARS SHALL BE SECURED PARALLEL TO THE PAVEMENT SURFACE AND PERPENDICULAR TO THE CENTERLINE BY:
 - USE OF BAR CHAIRS
 - ACCURATELY PLACED IN POSITION ON THE SCREEDED CONCRETE BY MEANS OF AN APPROVED TEMPLATE AND FORCED TO THE PROPER POSITION WITH A SUITABLE TOOL; OR
 - BY ANY OTHER MEANS WHICH, PRIOR TO ITS USE, HAS BEEN APPROVED BY THE ENGINEER.
- DOWEL BARS SHALL BE SECURED PARALLEL TO THE PAVEMENT SURFACE AND CENTERLINE BY A DOWEL BAR CHAIR.
- WHEN WORK IS STOPPED DUE TO BREAKDOWN OR OTHER CAUSE, CONCRETE SHALL BE REMOVED BEYOND LAST CONTRACTION JOINT IN PLACE AND A HEADER INSTALLED.
- WHERE A MONOLITHIC CURB IS SPECIFIED, THE JOINT IN THE CURB SHALL COINCIDE WITH PAVEMENT JOINTS AND MAY BE FORMED BY ANY MEANS WHICH, PRIOR TO ITS USE, HAS BEEN APPROVED BY THE ENGINEER.
- CONSTRUCTION JOINTS MAY BE FORMED BY USE OF METAL OR WOOD FORMS EQUAL IN DEPTH TO THE NOMINAL DEPTH OF THE PAVEMENT, OR BY OTHER MEANS WHICH HAVE BEEN APPROVED BY THE ENGINEER PRIOR TO THEIR USE.
- LONGITUDINAL AND TRANSVERSE STEEL SPACING SHALL NOT VARY MORE THAN ONE TWELFTH OF THE SPACING SHOWN HEREON.
- THE TIEBAR SPACINGS SHOWN ARE FOR ASTM DESIGNATIONS: A-615, OR A-616, GRADE 60, TIEBARS, WHICH SHALL NOT BE BENT. IF TIEBARS ARE TO BE BENT, THEY SHALL BE STEEL CONFORMING TO ASTM DESIGNATION: A-615, GRADE 40, WITH A CENTER TO CENTER SPACING OF 24 INCHES.



THREE LANE PAVEMENT PLAN
(12 ft. & 24 ft. Placement)*

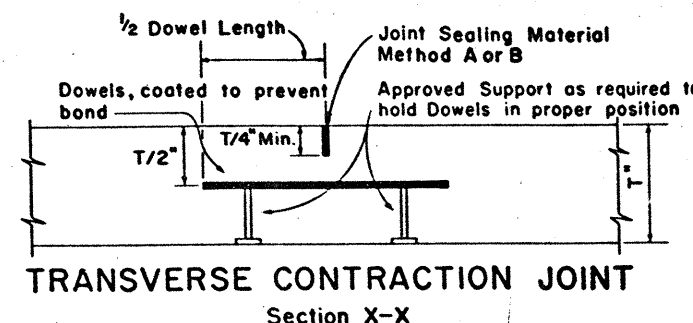


TWO LANE PAVEMENT PLAN

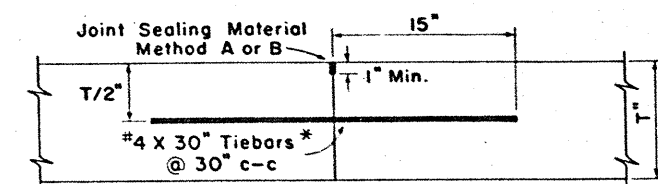


TYPICAL SECTION
(24 ft. Placement)*

* Lane widths are for illustrative purposes only and should not be used if in conflict with typical cross sections shown elsewhere in the plans.

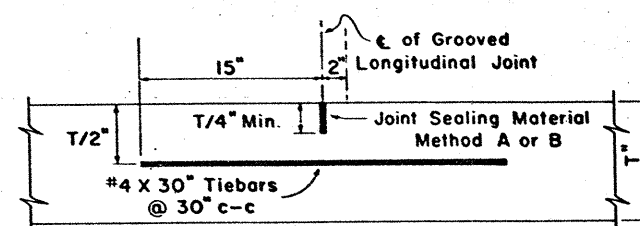


TRANSVERSE CONTRACTION JOINT
Section X-X



LONGITUDINAL CONTRACTION JOINT
Section Y-Y

*WITH THE APPROVAL OF THE ENGINEER, MULTIPLE PIECE TIEBARS (THREADED COUPLING OR OTHER ADEQUATE DEVICE) MAY BE USED TO FACILITATE CONSTRUCTION PROVIDED THE SYSTEM DEVELOPS A FORCE EQUAL TO 1 1/2 TIMES THE MINIMUM FORCE OF THE TIEBAR SHOWN. THE SPACINGS FOR THE SYSTEM SHALL BE LESS THAN OR EQUAL TO THE SPACING ALLOWED FOR BARS OF SIMILAR YIELD STRENGTH.



GROOVED LONGITUDINAL JOINT
Section Z-Z

DEPTH OF PAVEMENT (INCHES)	DOWELS (SMOOTH BARS)		
	SIZE AND LENGTH	AVERAGE SPACING (INCHES)	WEIGHT PER FOOT OF JOINT (LBS)
8	1" X 18"	12	4.01
9	1 1/8" X 20"	12	5.63
10	1 1/4" X 22"	12	7.65
11	1 3/8" X 24"	12	10.10

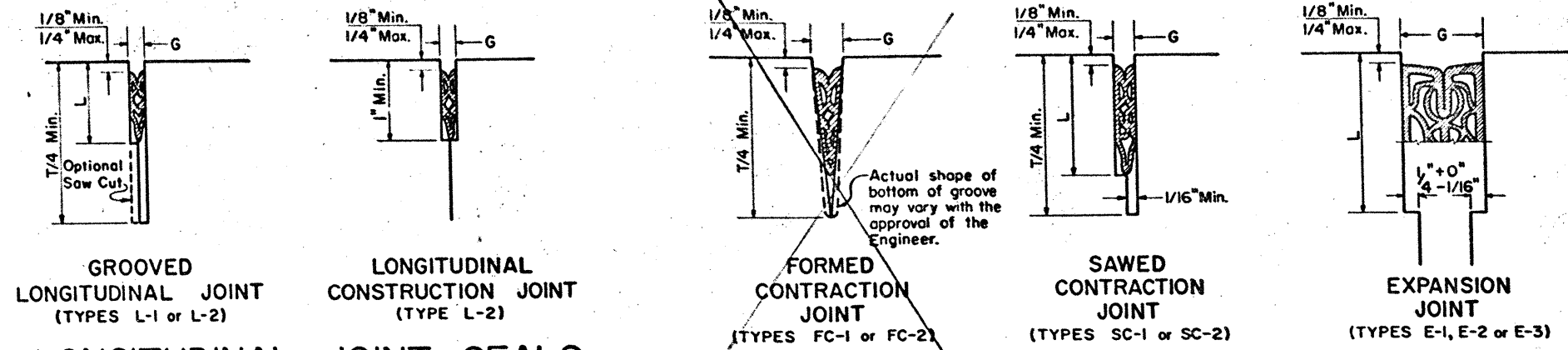


STATE DEPARTMENT OF HIGHWAYS
AND PUBLIC TRANSPORTATION

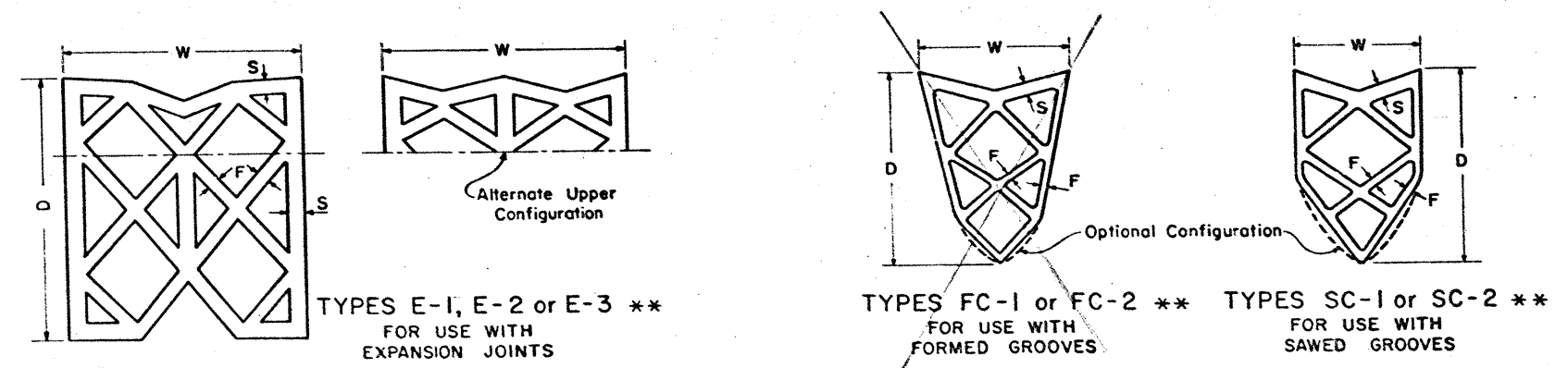
CONCRETE PAVEMENT DETAILS
CONTRACTION DESIGN
CPCD - 75 (I)

59

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TRANSVERSE JOINT SEALS



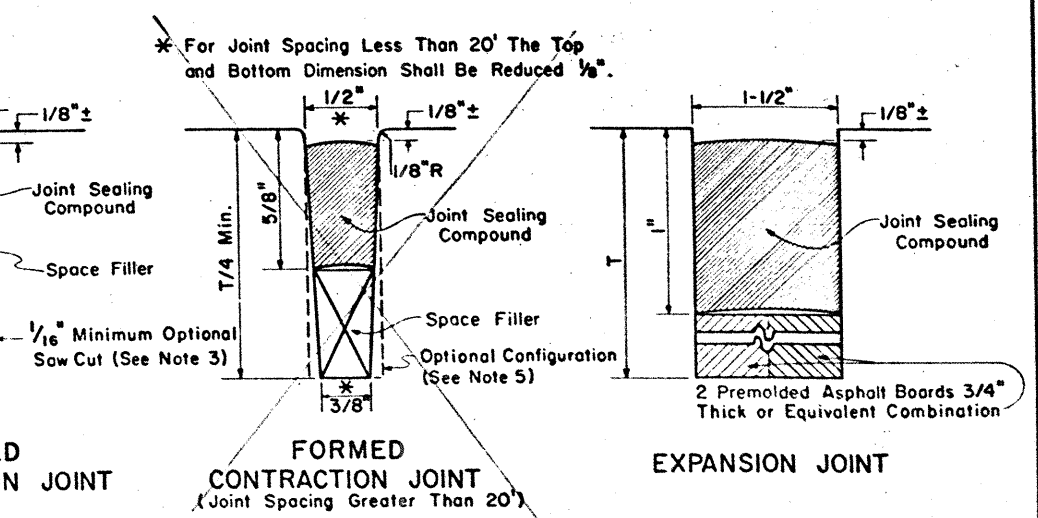
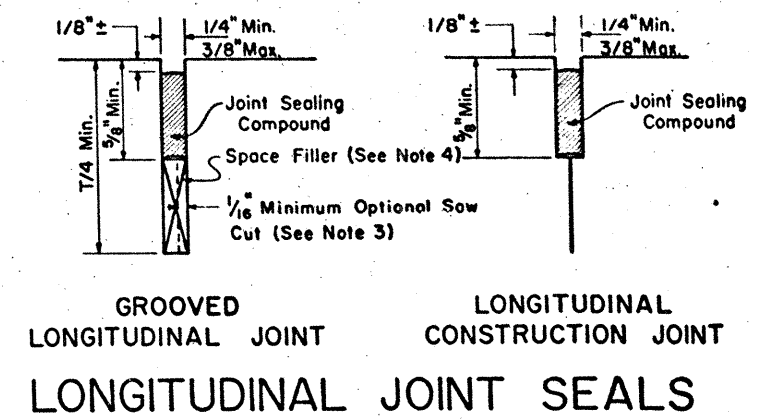
PREFORMED COMPRESSION SEAL TYPES ** See General Note No. 6

METHOD A: PREFORMED COMPRESSION SEALS

JOINT TYPE	JOINT GROOVE		MINIMUM JOINT SEAL SIZE TO BE USED ²								SEAL DESIGNATION & TYPE
	WIDTH G (in.)	DEPTH L (in.)	WIDTH W (in.)	DEPTH D (in.)	MAX. WID. LAT. COMP. (in.)	THICK. S (in.)	TOLER. S (in.)	THICK. F (in.)	TOLER. F (in.)		
LONGITUDINAL JOINT	1/8 - 0 + 1/16	7/8	5/16	5/8	1/8	0.040	-0.005	0.040	-0.005		L-1
	1/4 ± 1/32	1	7/16	23/32	7/32	0.062	-0.005	0.040	-0.005		L-2
SAWED TRANSVERSE CONTRACTION JOINT	1/4 - 0 + 1/16	1-1/2	11/16	1-1/8	1/4	0.080	-0.012	0.040	-0.009		SC-1
	3/8 - 0 + 1/16	1-3/4	13/16	1-1/8	5/16	0.080	-0.012	0.040	-0.009		SC-2
FORMED TRANSVERSE CONTRACTION JOINT	3/8	N/A	13/16	1-1/8	5/16	0.080	-0.012	0.040	-0.009		FC-1
	5/8	N/A	1-1/4	1-1/2	5/8	0.080	-0.012	0.080	-0.012		FC-2
EXPANSION JOINTS	1	2-1/8	1-5/8	1-5/8	7/8	0.094	-0.016	0.080	-0.012		E-1
	1-1/4	2-3/4	2	2	1	0.125	-0.016	0.110	-0.016		E-2
	1-5/8	3-3/8	2-1/2	2-3/4	1-1/4	0.187	-0.016	0.125	-0.016		E-3

- * THIS GROOVE WIDTH IS FOR SUMMER CONCRETE PLACEMENT. WHEN CONCRETE IS PLACED DURING THE WINTER SEASON, THIS GROOVE SHALL BE INCREASED 1/8".
- DUE TO SMALL VARIATIONS IN SEAL SIZES, THIS DIMENSION MAY HAVE TO BE MODIFIED SLIGHTLY TO INSURE PROPER INSTALLATION. THIS DIMENSION IS APPLICABLE ONLY WHEN A STEPPED GROOVE IS USED. N/A: NOT APPLICABLE.
 - THESE DIMENSIONS ARE MINIMUM DIMENSIONS. DIMENSIONS GREATER THAN THOSE SHOWN MAY BE USED IF APPROVED BY THE ENGINEER AND IF THEY PERMIT INSTALLATION IN A WORKMANLIKE MANNER AT NO EXTRA EXPENSE TO THE STATE.
 - ONLY MINIMUM TOLERANCES ARE SHOWN. ANY REASONABLE OVERSIZE WILL BE ACCEPTED PROVIDED PROPER INSTALLATION IS POSSIBLE.

- GENERAL NOTES FOR METHOD "A"
- A SAMPLE OF EACH SIZE AND TYPE OF SEAL PROPOSED FOR USE SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
 - THE SEALS SHOWN AS METHOD "A" OR METHOD "B" MAY BE USED AT ANY JOINT REQUIRING A SEAL, HOWEVER, THE SAME SEAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.
 - LONGITUDINAL JOINTS SHALL BE SAWED STRAIGHT AND TRUE TO LINE AS DETAILED IN THE STANDARD SPECIFICATIONS.
 - TRANSVERSE JOINTS SHALL BE SAWED AND SHALL BE PLACED AS SHOWN ELSEWHERE IN THE PLANS.
 - THE SEALS DESIGNATED L-1 AND L-2 SHALL HAVE A CONFIGURATION SIMILAR TO THE TYPE SC.
 - OTHER INTERIOR CONFIGURATIONS MAY BE USED PROVIDED THE MATERIAL MEETS ALL OF THE REQUIREMENTS OF THE SPECIFICATIONS AND AS OTHERWISE SHOWN HEREON OR ELSEWHERE IN THE PLANS. THE NUMBER OF INTERIOR CELLS AND/OR THE THICKNESS OF THE EXTERIOR AND INTERIOR WALLS SHALL BE SUCH AS TO PROVIDE AN ADEQUATE COMPRESSIVE FORCE TO MAINTAIN A POSITIVE SEAL.
 - UNLESS OTHERWISE SPECIFIED, THE SIDES OF THE FORMED CONTRACTION JOINT MAY BE FORMED PARALLEL, BUT IF SO FORMED, THE SEAL SHALL BE AN APPROPRIATE TYPE SC SEAL APPROVED BY THE ENGINEER.
 - UNLESS THE GROOVE AND SEAL COMBINATION IS SPECIFICALLY DESIGNATED ELSEWHERE IN THE PLANS, ANY GROOVE AND SEAL COMBINATION SHOWN IN THE TABLE FOR A PARTICULAR TYPE JOINT MAY BE USED, BUT MUST BE APPROVED BY THE ENGINEER.



TRANSVERSE JOINT SEALS

METHOD B: JOINT SEALING COMPOUND

- GENERAL NOTES FOR METHOD "B"
- LONGITUDINAL JOINTS SHALL BE SAWED AS DETAILED IN THE STANDARD SPECIFICATIONS.
 - TRANSVERSE JOINTS SHALL BE SAWED AND SHALL BE PLACED AS SHOWN ELSEWHERE IN THE PLANS.
 - A SUITABLE SPACE FILLER SHALL BE USED WHERE SHOWN AND THE JOINT SEAL COMPOUND POURED TO THE DEPTH INDICATED EXCEPT THAT IF THE MINIMUM SAW CUT IS USED, THE SPACE FILLER MAY BE DELETED.
 - AT THE OPTION OF THE CONTRACTOR, THE SPACE FILLER MAY BE OMITTED IN THE LONGITUDINAL JOINT ONLY AND THE JOINT SEALING COMPOUND POURED FULL DEPTH.
 - UNLESS OTHERWISE SPECIFIED, THE SIDES OF THE FORMED CONTRACTION JOINT MAY BE FORMED PARALLEL AT THE OPTION OF THE CONTRACTOR.
 - UNLESS OTHERWISE SHOWN IN THE PLANS, EITHER METHOD "A" OR METHOD "B" MAY BE USED.

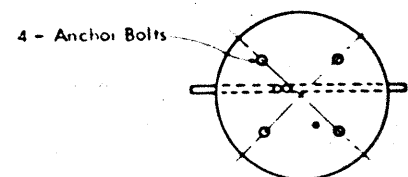
STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

CONCRETE PAVING DETAILS

JOINT SEALS

JS-75 (MOD) 60

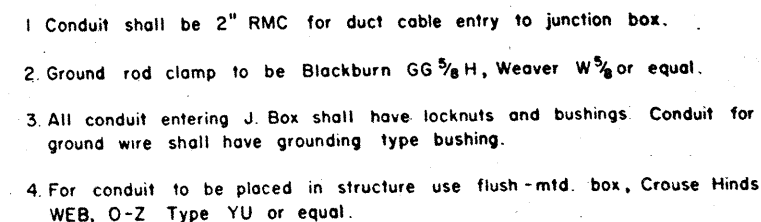
DATE	DRAWING	DATE	FED. RD. DIST. NO.	STATE	FEDERAL PROJECT NO.	SHEET NO.
11/14/69	ORIGINAL		6	TEXAS	155-1(2-4)	60
	REVISED					
	REVISED					
			STATE DIST. NO.	COUNTY	CON. SECT.	HIGHWAY NO.



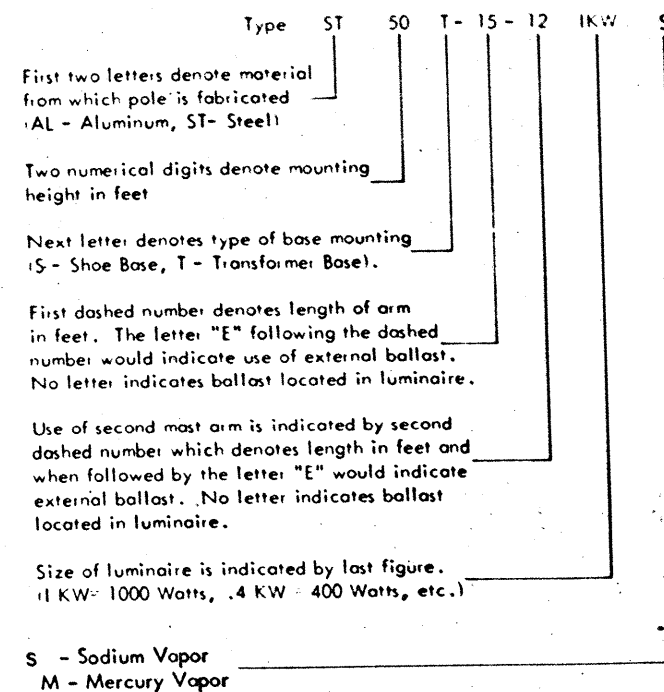
Technical drawing of a street lighting pole and luminaire assembly. The drawing shows a vertical pole with a luminaire arm extending from it. The pole is labeled "Shaft (Pole), Either Round or Octagonal". The luminaire arm is labeled "All bracket arms shall be truss type." and the luminaire is labeled "Regulated Output Ballast in Luminaire". The pole has a "Cap" at the top. The base of the pole is labeled "Base Flange" and "Transformer Base". The drawing includes dimensions: "M.H." (Mounting Height) for the height of the luminaire, "S.L." (Shaft Length) for the height of the pole, "S." (Spread) for the horizontal distance from the pole to the luminaire, and "R." (Rise) for the vertical distance from the top of the pole to the luminaire. A note states: "The shoe base mount is only where the unit is protected from vehicle impact". A detail view of the "Shoe Base" is shown at the bottom right.

Labels and Dimensions:

- Cap
- Regulated Output Ballast in Luminaire
- All bracket arms shall be truss type.
- Shaft (Pole), Either Round or Octagonal
- M.H. = Mounting Height
- S.L. = Shaft Length
- S. = Spread (8 Ft. Min.)
- R. = Rise of Luminaire above the top of pole shaft which shall not exceed 5'.
- M.H. = S.L. + R.
- Base Flange
- Transformer Base
- Shoe Base



EXPLANATION OF ROADWAY ILLUMINATION ASSEMBLY DESIGNATIONS



I SCOPE


II MATERIALS

A. General. All materials shall be new and unused and shall be of the latest design.

B. Roadway Illumination Assembly

1. Structural Support Design for Mast-Arm Mounted Luminaires

- a. The complete lighting assembly shall sustain a vertical load of 200 pounds applied at the point of luminaire attachment without failure or permanent deformation of any portion of the assembly. Deflection of the shaft center line shall be not more than 5 percent of the shaft length when a horizontal load of 500 pounds is applied in any direction 18 inches from the top of the pole. The Engineer may, at any time prior to final acceptance, subject the lighting standards to test loading. Failure of lighting standards to meet the structural requirements herein shall constitute cause for rejection.
- b. Alternately, lighting standards may be designed in accordance with the latest issue of AASHTO's "Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals," using wind loads based on a 50-year mean recurrence interval. The Engineer may require design calculations to be submitted.
2. Slip Joint Poles. Poles having a shaft length in excess of 40 feet may be fabricated in two sections and field-assembled by the lap-joint method. The two sections shall telescope together with a lap length of not less than $1\frac{1}{2}$ times the shaft diameter at the lap joint.
3. Bracket Arm Attachments. All poles shall be fabricated in such a manner that each pole will accommodate any of the various length mast arms. All bracket arms shall be designed for a 66-pound luminaire having a projected area of 2.7 square feet.
4. Minor Damage Repair. The finished pole shall have a smooth, uniform finish free of pits, blisters or other defects. Scratched, chipped, or damaged areas on galvanized poles and mast arms shall be thoroughly cleaned by wire brushing. The cleaned area shall be painted with two coats of zinc dust-zinc oxide paint conforming to the requirements of Federal Specifications TT-P-641b, or repaired by the application of repair compounds meeting Federal Specification 0-G93 (stick only) in accordance with the manufacturer's recommendations.
5. Straightness of Shaft. At any time prior to erection the pole shaft may be inspected for straightness. A deviation in excess of 1/4 inch in ten feet shall be considered cause for rejection.
6. Pole Bonding Means. A grounding lug with 1/2 - 13 NC female threads shall be provided inside the pole near the base flange.
7. Hand Holes. All poles for shoe base mounting shall have hand holes with reinforcing frames and covers. The openings on all poles, except poles on CMB, shall be approximately 4" x 6 1/2" located approximately 10 inches from the bottom of the pole and placed 90° to bracket arm unless otherwise noted in plans.
8. CMB Poles. Poles installed on concrete median shall also meet the requirements of CMB details.
9. Steel Poles
 - a. Steel poles shall be fabricated in accordance with the Item "Steel Structures." Complete-penetration welds shall be used for pole sections joined by circumferential welds. Longitudinal seam welds for pole sections shall have 60 percent minimum penetration, except that longitudinal seam welds within six inches of circumferential welds which are complete-penetration welds shall be complete-penetration welds. All welding shall be in accordance with Departmental Construction Bulletin C-5.



STATE DEPARTMENT OF HIGHWAYS
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ROADWAY ILLUMINATION DETAILS

RID (1)-79

IN	JOB NO.	DATE	FED. RD. DIST. NO.	STATE	FEDERAL PROJECT NO.	SHEET NO.
1	105-4	7-20-76	1	TEXAS	135F-2(24) 2	
EW		10-15-76	1	STATE		
CR-C		7-10-78	1	COUNTY	CONT. SECT. JOB	MEMORANDUM NO.
TR		6-6-79	1			

REVISED

105-4

GENERAL NOTES

- b. Pole components shall be constructed using the following material:
- Shaft: ASTM A-570 Grade C, ASTM A-607 Grade 45, or ASTM A-595 - galvanized in accordance with ASTM A-123.
- Base Flange: ASTM A-181, ASTM A-27 Grade 65-35, or ASTM A-36 - galvanized in accordance with ASTM A-123.
- Bracket Attachments: ASTM A-27 Grade 65-35 - galvanized in accordance with ASTM A-153.
- Bracket Arms: 2" Pipe ASTM A-53 Grade A or B galvanized in accordance with ASTM A-123.
- Cap: ASTM A-27 or ASTM A-48, galvanized in accordance with ASTM A-153; or aluminum alloy ASTM B-26 or B-108 B-443.0 secured by three machine screws.
- Pole Hardware: All fasteners, except bracket arm connection bolts, shall be stainless steel or standard steel machine bolts, nuts and washers galvanized ASTM-A-153. Bracket arm attachment bolts shall be ASTM A-325, ASTM A-321, or ASTM A-193 Grade B-7, galvanized ASTM A-153. Screws for attaching hand hole covers shall be treated with anti-seize compound: Never-Seez Compound or Permatex 133K or equal.

Alternate material equal to or better than those specified may be substituted with the approval of the Engineer.

10. Aluminum Poles

- a. Aluminum poles shall be fabricated in accordance with AASHTO's "Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals."
- b. Pole components shall be constructed using the following material:
- Shaft: ASTM B-221 or B-241 6063-T6; ASTM B-209 5086-H34; ASTM B-221 6005-T5.
- Base Flange: ASTM B-108 or B-26 356.0-T6; ASTM B-108 A356.0-T6.
- Bracket Attachments: ASTM B-209 6061-T6; ASTM B-221 6005-T5
- Bracket Arms: ASTM B-241 6061-T6 or 6063-T6
- Cap: ASTM B-209 5086-H32; ASTM B-108 or B-26 356.0-T6
- Bolts: Stainless Steel AISI 300. Bolts threading into aluminum threads shall be treated with anti-seize compound: Never-Seez Compound or Permatex 133K or equal.

C. Foundations

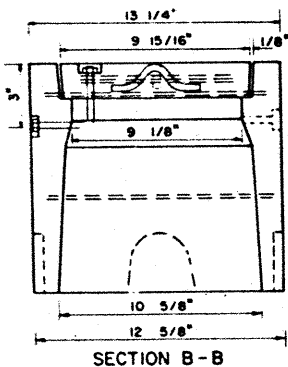
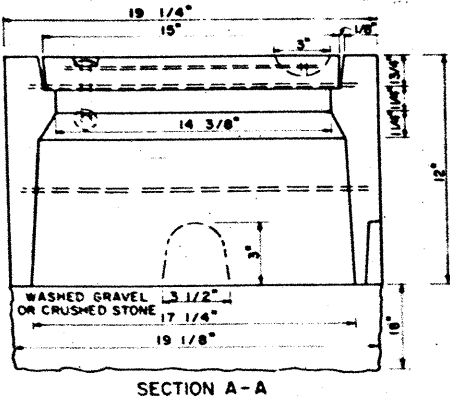
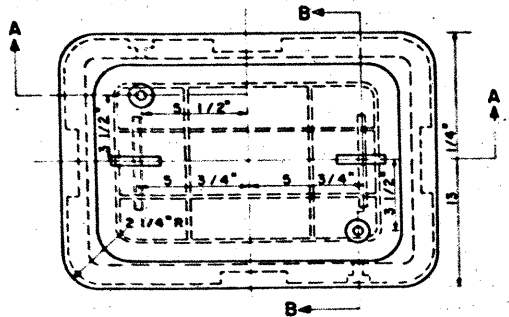
1. Concrete for foundations will be included for payment under Item "Roadway Illumination Assembly Foundations" only.
2. Anchor bolts shall be steel, ASTM A-36 or ASTM A-576 modified to Grade 50, top end galvanized not less than eight inches. Alternate material equal to or better than those specified may be substituted with the approval of the Engineer.
3. Anchor bolts shall be 1 1/2" x 48" with top threaded not less than 4 inches and furnished with galvanized hexagon nuts, flat and lock washers. The lower end of the bolt shall be bent at a right angle or threaded and furnished with nut and washer. When bolts with rolled threads are furnished, bolt body need not be full size.
4. The bolt circle in foundations for shafts 36 feet and less shall be 15 inches in diameter. The bolt circle in foundations for shafts in excess of 36 feet shall be 17 1/2 inches in diameter if a transformer base is used and 15 inches if a shoe base mounting is used. Poles placed on existing bridge brackets or foundations shall be coordinated with anchor bolts in place.

D. Transformer Base

1. Transformer base shall be cast from aluminum alloy ASTM B-108 or B-26 356.0-T6 and shall be furnished with four galvanized anchor lugs 1/2 inch thick (minimum) and shaped to conform with the transformer base flange. Transformer base shall have a bolt circle at the bottom to match bolt circle of the foundation and a bolt circle at the top to match bolt circle of the pole. The transformer base shall be approximately 20 inches high and shall have a door approximately 13" x 8" x 9 1/2". Screws or bolts for attachment of door to base shall be treated with anti-seize compound: Never-Seez Compound, Permatex 133K or equal. Four machine bolts with four nuts, eight flat washers and four lock washers, galvanized ASTM A-153, shall be provided with each transformer base.

NOTES

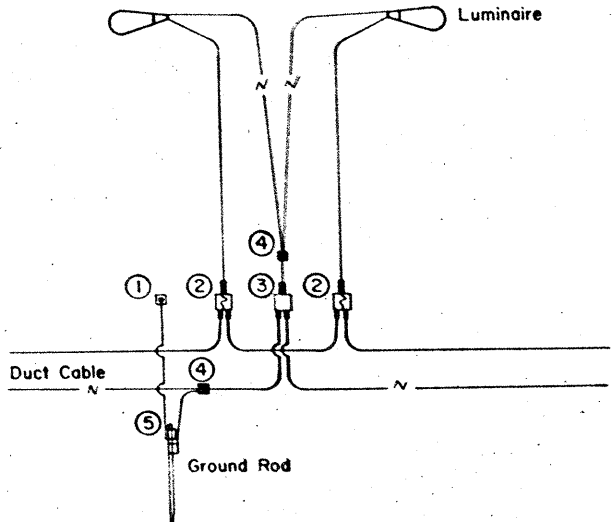
- 1 Concrete shall be class A.
- 2 Body reinforcing - 2 welded frames-No 9 wire
- 3 Cover reinforcing - Welded grid - No. 3 wire.
- 4 Cover lift eyes - 3/8" galv. steel - Cast in place.
- 5 Cover hold downs - 3/8" brass rods and nuts.
- 6 Cover lettering - 1" incised letters "ILLUMINATION HIGH VOLTAGE"
- 7 Use Type I pull box for junctions of up to 8 conductors and/or 4 conduit runs Use Type II for greater numbers of conductors and conduit runs.



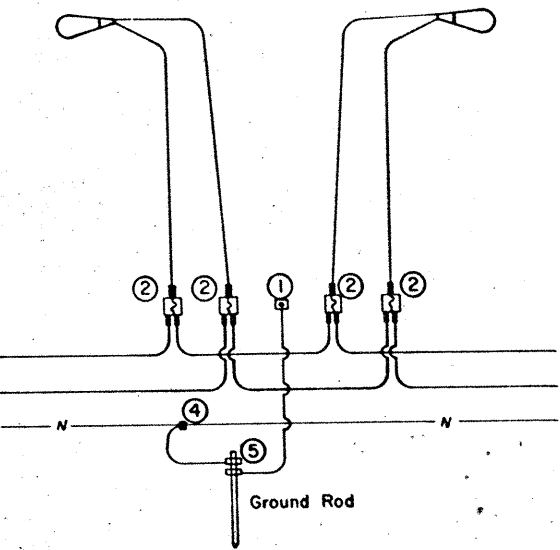
GROUND BOX (PRECAST CONCRETE)
Type I (13"x19"x12")
Type II Similar Except (15"x25"x12")

NOTES:

- ① Pole Bonding Connector - Blackburn * TTC3 or Weaver * TGC3 or equal.
- ② Fused Connector - Elastimold 82S, Joy X8919 or equal.
- ③ Un-fused Connector - Elastimold 83S, Joy X8920 or equal.
- ④ Split Bolt Connector.
- ⑤ Ground Rod Clamp - 2 Required - Blackburn GG 5/8H, Burndy GKP635 or equal.




FOR TWO-WIRE GROUNDED CIRCUITS



FOR THREE-WIRE CIRCUIT-CENTER GROUNDED

TYPICAL WIRING - ROADWAY ILLUMINATION ASSEMBLY
Twin Luminaire Shown - Single Luminaire Similar



STATE DEPARTMENT OF HIGHWAYS
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ROADWAY ILLUMINATION DETAILS
RID (2)-79 MOD. 62

CH	DRAWING	DATE	FIG. NO.	STATE	FEDERAL PROJECT NO.	SHEET NO.
CH DN	ORIGINAL	7-20-76	6	TEXAS	15-6(2)-79	33
CH DN	REVISED	10-15-76				
CH DN	REVISED	7-10-78				
CH DN	REVISED	6-6-79				

GENERAL NOTES:

2. Transformer bases shall meet the breakaway requirements of AASHTO's "Standard Specifications for Highway Signs, Luminaires and Traffic Signals", 1975 edition. Bases that have been modified mechanically (e.g. slotted, notched) shall have been tested to carry the design load for a 90 mph wind. Certification of tests shall be submitted with the shop drawings.

E. All Luminaires

- 1. The luminaire housing shall be cast or drawn from a non-ferrous alloy and shall be free of cracks and excessive porosity. All nuts, screws, clips, washers and attaching hardware shall be made of stainless steel or steel electro-zinc-plated, minimum thickness 0.0002 inch with olive drab or yellow chromate conversion coating. All threaded surfaces used in the housing shall be lubricated with a silicone grease.
- 2. The slipfitter shall securely clamp the luminaire to the mast arm. A positive means of vertical adjustment shall be provided. The refractor shall be crystal-clear pressed glass. The optic assembly shall be provided with resilient gaskets and so constructed that a positive seal against weather and other contaminants will be maintained. The luminaire shall be designed to permit ready removal of the refractor from the luminaire but shall provide a positive means of preventing an unintentional separation. The latch shall provide a positive means of maintaining closure of the luminaire. The socket shell shall be rigidly attached to a high grade porcelain base which shall extend and completely enclose the metal shell. A locking means shall be incorporated in the shell of the socket to positively resist the removal of the lamp.
- 3. Mast-arm mounted luminaires shall be provided with a leveling device which is clearly visible from the ground. Unless otherwise directed by the Engineer, mast-arm mounted luminaires will be installed and tested in the level position.
- 4. The underpass luminaire shall have mounting provisions to attach the luminaire directly to the wall or to an outlet box. Wiring entries into the luminaire shall be made through threaded holes or water-tight hubs. Luminaire housing, raceway fittings and attaching hardware shall be installed in such a manner as to prevent water entry into the luminaire or ballast housing. A protective guard shall be provided for the refractor.

F. High Pressure Sodium Vapor Luminaires

1. Photometrics

- a. The 250-watt luminaire, when mounted 40 feet above the midpoint of either long side of a rectangular area 200 feet by 50 feet, shall provide a measured minimum intensity of 0.1 footcandle at any point on the surface of this area. Light intensities measured in footcandles along a line parallel to and 20 feet in from the long side of the previously defined rectangular area above which the luminaire is mounted shall decrease at a rate not to exceed 0.8 footcandle in any ten-foot interval along the aforementioned line from 10 to 70 feet on both sides of the luminaire.

The uniformity factor "F" shall be not less than 7.0 when calculated from the equation:

$$F = \frac{L (I \text{ Min.})}{I \text{ Max.}}$$
 Where: F = The uniformity factor
L = 200
I Min. = Minimum measured intensity within the rectangle
I Max. = Maximum measured intensity within the rectangle

- b. The 400-watt luminaire, when mounted 50 feet above the midpoint of either long side of a rectangular area 250 feet by 80 feet, shall provide a measured minimum intensity of 0.1 footcandle at any point on the surface of this area. Light intensities measured in footcandles along a line parallel to and 30 feet in from the long side of the previously defined rectangle above which the luminaire is mounted shall decrease at a rate not to exceed 0.8 footcandle in any ten-foot interval along the aforementioned line from 10 to 70 feet on both sides of the luminaire.

The uniformity factor "F" shall be not less than 7.0 when calculated from the equation:

$$F = \frac{L (I \text{ Min.})}{I \text{ Max.}}$$
 Where: F = The uniformity factor
L = 250
I Min. = Minimum measured intensity within the rectangle
I Max. = Maximum measured intensity within the rectangle

- c. The luminaires shall meet the photometric requirements of paragraphs F.1a or F.1b when energized at 90 percent of rated line voltage.

2. Ballasts

- a. The ballast shall be regulated-type and shall be designed to operate high pressure sodium lamps.
- b. When the circuit voltage indicated in the plans is applied, the ballast input wattage during fluctuations of the test voltage of +5 and -10 percent shall not exceed the following:

Nominal Lamp Rating, Watts	Maximum Wattage Input
150	220
250	400
400	552

- c. During fluctuation of the test voltage of +5 and -10 percent, the lamp wattage fluctuation shall not exceed a total of 20 percent and ballast shall maintain lamp wattage within the following limits:

Nominal Lamp Watts	Minimum Lamp Watts	Maximum Lamp Watts
150	110	180
250	175	370
400	280	475

- d. The power factor of any ballast when tested at circuit voltage indicated in the plans shall be not less than 90 percent.

- e. The electronic starting aid shall provide a starting pulse with an amplitude of 2500 volts minimum, 4000 volts maximum. The pulse width shall be a minimum of 0.8 microseconds at 2250 volts. The pulse shall occur when the open-circuit voltage is equal to or greater than 90 percent of peak open-circuit voltage. Pulse repetition rate shall be a minimum of one per cycle and pulse current shall be a minimum of 0.18 amperes. Electronic starting aids for mast-arm mounted poles shall be replaceable without the use of tools.

- 3. Luminaires or ballasts shall permanently and clearly indicate the following: lamp type, catalog number, voltage rating, connection diagram, and manufacturer.

4. Testing

- a. Ballasts and luminaires will be tested using a lamp furnished for the same project.
- b. Luminaires, ballasts, and lamps will be sampled and tested in accordance with the Texas Highway Department Manual of Testing Procedures.

- G. Wood Poles. For projects requiring more than 10 transformer and/or service poles, poles shall be creosote-treated to eight pounds per cubic foot-retention, or pentachlorophenol-treated to 0.4 pounds per cubic foot-retention in accordance with Item "Timber Preservative and Treatment."

For projects requiring ten or fewer poles, treatment shall be as stated above and Contractor may purchase poles locally if source and treatment are documented. Poles shall meet the requirements of ANSI 05.1-1972.

H. Electrical Conductors

- 1. All conductors shall be of annealed copper meeting the requirements of ASTM B-3 or B-33, and shall be Class B stranded in accordance with ASTM B-8, except that grounding conductors No. 8 and smaller may be solid.
- 2. Insulated conductors shall be NEC Type THW unless otherwise noted on the plans. Conductors in circuits containing two or more insulated conductors shall be color-coded throughout the entire circuit. Color-coding will be required on pre-conduitized duct cable containing two or more insulated conductors.
- 3. Insulated conductors shall be marked in accordance with Article 310 of the NEC, and shall meet the requirements of Underwriters Laboratories' Standard No. 83.

I. Conduit and Fittings

- 1. Conduit must be U.L. Approved for the intended use shown on plan sheets. Aluminum conduit will not be permitted.
- 2. Fittings for steel conduit shall be steel or malleable iron, threaded or threadless, raintight. Die cast, set screw, indenter or push-on (socks) fittings will not be permitted.
- 3. Insulating-type fittings shall be used on all metallic conduit entries into sheet metal boxes or enclosures.
- 4. Expansion joints for metallic conduit shall be provided with a grounding strap. Expansion joints shall be Appleton UNYL 50 Series, OZ AX Series or equal, with expansion capacity as shown in plans.



STATE DEPARTMENT OF HIGHWAYS
AND PUBLIC TRANSPORTATION

ROADWAY ILLUMINATION DETAILS

RID (3)-79

CD	DRAWING	DATE	FED. RD. DIST. NO.	STATE	FEDERAL PROJECT NO.	SHEET NO.
CD	ORIGINAL	7-20-76	6	TEXAS	35F-3(24)	
CD	REVISED	10-15-76				
CD	REVISED	6-6-79				
CD				COUNTY	CONT. SECT.	JOB
CD						NO.

GENERAL NOTES:

J. Ground Boxes

- 1. Precast concrete ground boxes shall have minimum inside dimensions of approximately 10" x 17" and at least 10 inches deep. The cover shall be of reinforced concrete or cast iron. The box and cover shall have sufficient strength to support vehicles using the adjacent roadway. A minimum gravel fill of 18 inches shall be provided under each ground box.
- 2. A plastic ground box meeting the following requirements may be used if permitted by plan note:
 - a. It shall be manufactured from Reinforced Plastic Mortar (RPM) composed of borosilicate glass fiber, a catalyzed polyester resin and an aggregate.
 - b. Minimum inside dimensions (LxWxH) for Type I: 21" x 12" x 18"; for Type II: 29" x 16" x 26".
 - c. RPM ground box shall be designed for a 5000-pound single-wheel load over a 10" x 10" area in accordance with AASHTO specifications.
 - d. Cover shall be bolt-down with "ELECTRIC" imprint.
 - e. A minimum gravel fill of 18 inches shall be placed under each ground box.
 - f. Unless otherwise stated, ground boxes will not be paid for directly but will be subsidiary to the various bid items.

K. Junction Boxes

- 1. Junction boxes for use above grade in or on structures shall be cast iron with hot-dipped galvanized finish.
- 2. Boxes for metallic conduit 1½" or larger shall be minimum size 6" x 6" x 4", Crouse Hinds Type WAB, O-Z Type YS or equal. For metallic conduit 1" or smaller and conductor size #10 or smaller, boxes shall be 4½" OD round, approximately 2 inches deep, Crouse Hinds Type GRFX, Appleton Type JBDX or equal. For PVC conduit, PVC boxes shall not be used within 8 feet of grade or where exposed to accidental impact. Threaded adapters shall be used to connect PVC conduit to metal boxes. Where protected from accidental impact, PVC boxes of approximately same size as metal boxes may be used.

L. Ground Rods

- 1. Ground rods shall be steel with a copper-clad surface applied to the steel by the molten-weld process.
- 2. Ground rod clamps for attaching conductor to rod shall be Blackburn GC5/8H, Weaver W5/8 or equal.

M. Connectors and Splices

- 1. Quick-disconnect connectors for connecting lighting pole conductors to line shall be Elastimold, Joy or equal.
- 2. Connector for connecting bonding wire to pole shall be stud-type, Blackburn TTC3, Weaver TGC3 or equal.
- 3. Connections to neutral or grounded line conductor shall be made with split-bolt or compression connectors. Only two conductors will be allowed per connector.
- 4. Splices, where permitted by the Engineer, will be made with compression-type sleeves and insulated with thermosetting-compound kit. The neutral or ground wire splice need not be insulated.

III. CONSTRUCTION METHODS

- A. General. The location of poles, conductors, conduits, junction boxes, transformer stations and service poles is diagrammatic only and may be shifted by the Engineer to accommodate local conditions.

B. Roadway Illumination Assemblies

- 1. Roadway illumination assembly poles shall be erected plumb and true. Top of foundation shall be struck level and shims used to plumb pole, except that for shoe base poles leveling nuts may be used. If leveling nuts are used, the space between the base flange and the foundation shall be filled with approved grout and two 3/8" drain holes will be provided in the grouting.
- 2. In each pole, continuous, color-coded stranded No. 12 AWG Copper Type THW conductors shall be connected to the line side of each ballast.
- 3. A fused connector assembly or fuse-holder as specified shall be connected in each hot wire on the line side of each ballast. Luminaires on poles will be fused using quick-disconnect fuse-holders as shown in details. Underpass luminaires shall be fused internally.
- 4. For median-mounted poles placed on concrete median barrier, all access plates (hand holes) shall be on same side of the median.
- 5. Acorn nuts will not be allowed for attaching pole to transformer base or foundation.

C. Duct Cable

- 1. Duct cable shall be placed by the open trench method, except where otherwise noted, at a depth of approximately 18 inches unless otherwise indicated.
- 2. All ducts entering ground boxes shall be securely lashed together in a vertical position.

D. Conduit

- 1. Continuous runs of conduit in excess of 150 feet attached to structures shall have expansion joints at mid-span or 150-foot intervals and at structure expansion joints or as shown in plans.
- 2. Spacing of conduit hangers shall be as specified in the current issue of the NEC. Hangers shall be Uni-strut Series J1200, Globe Series 450 or equal unless otherwise indicated in the plans.
- 3. Conduit hangers shall not be attached directly to prestressed concrete girders.
- 4. Conduit placement beneath existing paved surfaces shall be accomplished by jacking or boring in accordance with the pertinent provisions of Article 476.3 "Construction" of the Item "Jacking, Boxing or Tunneling Pipe." Jacking or boring will not be paid for directly but will be subsidiary to the Item "Conduit." Duct cable shall be extended through the conduit in one continuous length or conductors shall be encased in a continuous length of plastic conduit where passing under an existing roadway. Direct burial of conductor will not be allowed.

E. Circuits and Connections

- 1. After installation and prior to connecting ends, each continuous length of insulated conductor shall exhibit the following minimum D.C. insulation resistance to ground when tested at 500 volts D.C.:

AWG Size	Megohm Resistance (60°F)
1	336,000 divided by length in feet
2	310,000 " " " " "
4	374,000 " " " " "
6	450,000 " " " " "
8	592,000 " " " " "
10	566,000 " " " " "
12	668,000 " " " " "
14	784,000 " " " " "


All or part of conductors may be tested at the Engineer's direction. The Contractor will not be required to furnish megger for testing. Conductors exhibiting a value less than the above values shall be rejected and shall be replaced by the Contractor at his own expense.

- 2. Any connection to be taped shall be taped with three half-lapped layers of rubber tape of minimum thickness of 0.030 inch, covered with two half-lapped layers of friction tape or plastic tape.

F. Bonding and Grounding

- 1. Contractor shall insure that all exposed metal containing electrical conductors is bonded and grounded, using ground rods, grounding bushings and locknuts and other fittings as necessary.
- 2. Conduit and luminaires on structures shall be grounded by installing a 5/8" by 10-foot ground rod near the point at which the circuit enters the structure and connecting a No. 10 AWG solid grounding conductor to the conduit if conduit is metal. For non-metallic conduit in or on structure, a No. 10 AWG solid conductor shall be installed from the ground rod to each underpass luminaire or structure-mounted lighting pole. Ground rods, connectors and other items necessary for grounding will not be paid for directly but will be subsidiary to the Item "Conduit."
- 3. Lightning arrester grounding conductor shall be tied directly to the pole-grounding conductor.

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STATE DEPARTMENT OF HIGHWAYS
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ROADWAY ILLUMINATION DETAILS

RID (4) - 79

DATE	7-20-76	STATE	TEXAS	FEDERAL PROJECT NO.	1356-GC-4-50	SHEET NO.	64
REVISION	10-15-76	COUNTY		CONTRACT		SECTION	
REVISION	6-6-79	COUNTY		CONTRACT		SECTION	