

GNS
 TITLE SHEET
 W. MARKER
 COUNTY LINE
 TOWNSHIP OR RANGE LINE
 LAND LINES SECTION LINE
 RAILROAD TITLE SHEET PLAN SHEET
 BARBED WIRE FENCE
 COMBINATION WIRE FENCE
 SNOW FENCE
 TELEPHONE & TELEGRAPH LINE
 POWER LINE
 PRESENT ROAD (Plan Sheets)
 POINTS OF ACCESS
 CONTROL OF ACCESS LINE
 ACCESS DENIED BY DEED
 VIRGIN CONTROL OF ACCESS

COLORADO

DEPARTMENT OF HIGHWAYS

PLAN AND PROFILE OF PROPOSED FEDERAL AID PROJECT NO. I-25-2(28)145 STATE HIGHWAY NO. 11 EL PASO COUNTY

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.
9	COLORADO	I-25-2(28)145	1

UNIT 2
25.0220 145.00

INDEX OF SHEETS

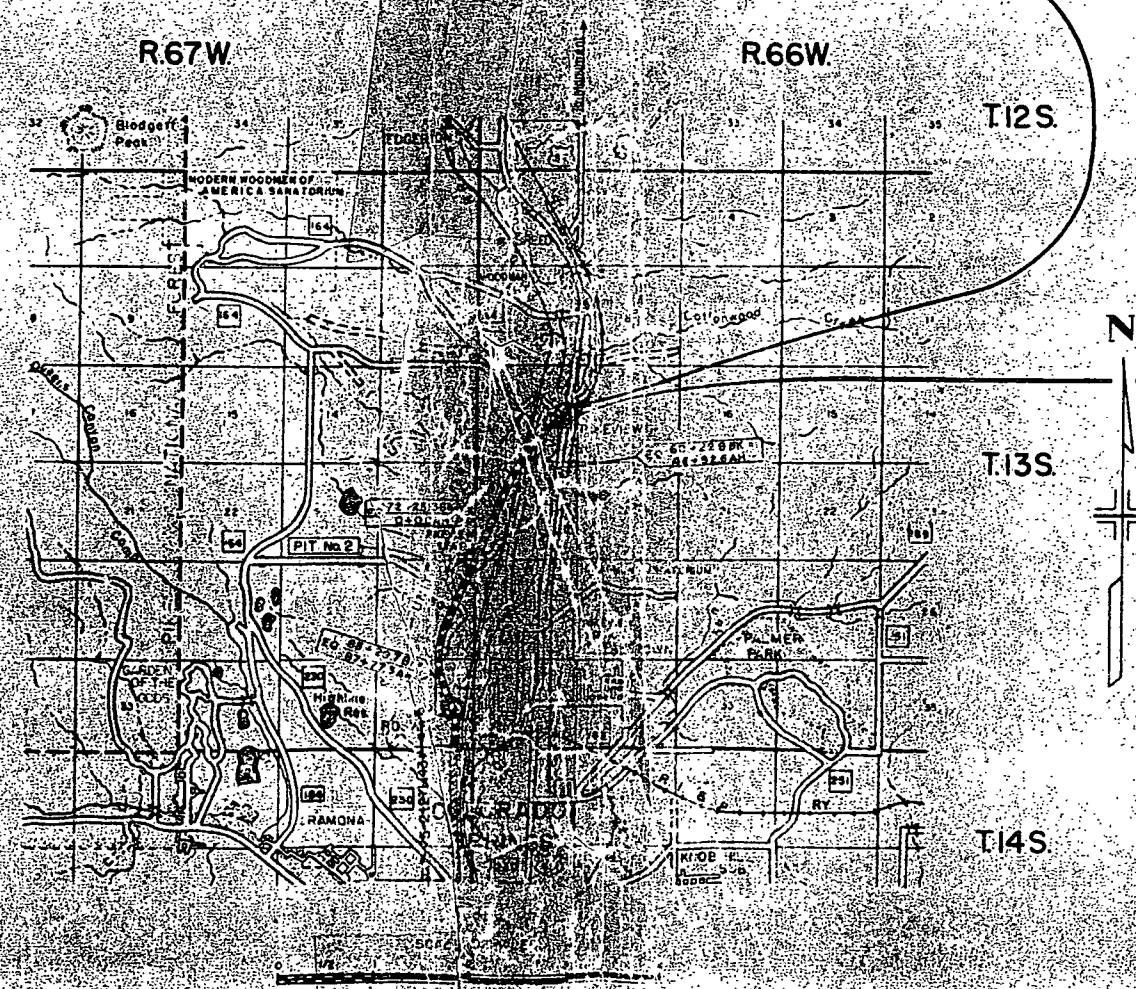
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TABULATION OF LENGTH & DESIGN

STATION	DESCRIPTION	ROADWAY Lin. Ft.	MAJ. STR. Lin. Ft.	LOADING
0+00	BEGIN PROJECT NO. I-25-2(28)145 = STATION 187+28.7 F 002-2(12) SOUTH BOUND	2,617.0		
26+17.0	BEGIN BRIDGE MONUMENT CREEK STR. NO. I-17-DU		411.3	
30+28.3	END BRIDGE	643.0		
36+71.3 Bk. 36+71.9 Ah.	EQUATION = END SOUTH BOUND			
0+00	BEGIN PROJECT NO. I-25-2(28)145 = STATION 187+28.7 FAP 116A(2) NORTH BOUND	2,120.9		
21+20.9	BEGIN BRIDGE STR. NO. I-17-DS		208.3	
23+29.2	END BRIDGE	516.8		
28+46.0	BEGIN BRIDGE MONUMENT CREEK STR. NO. I-17-DT		416.3	
32+52.3	END BRIDGE	525.7		
37+88.0 Bk. 36+71.9 Ah.	EQUATION = END NORTH BOUND			
TOTAL		6,423.4	1,035.9	
AVERAGE NORTH & SOUTH BOUND LANES		3,211.7	518.0	

SCALES OF ORIGINAL DRAWINGS
 ON PLAN 1" = 100 FT.
 ON PROFILE 1" = 10 FT. HORIZONTAL
 1" = 10 FT. VERTICAL
 GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD
 GROSS LENGTH OF PROJECT 3,729.7 FT. = 0.706 MILES
 NET LENGTH OF PROJECT 3,729.7 FT. = 0.706 MILES

O+00 Beg. Proj. No. I-25-2(28)145 UNIT NO. 2 =
 STA. 187+28.7 F 002-2(12)



36+71.9 Ah. End Proj. No. I-25-2(28)145 UNIT NO. 1
 36+71.9 Ah. Beg. Proj. No. I-25-2(28)145 UNIT NO. 1

See Special Provisions for Notice to Bidders.

COLORADO
 DEPARTMENT OF HIGHWAYS
 APPROVED
Mark A. [Signature]
 CHIEF ENGINEER

DEPARTMENT OF COMMERCE
 BUREAU OF PUBLIC ROADS
 APPROVED

DIVISION ENGINEER

SUMMARY		LIN. FT.	MILES
ROADWAY		3,211.7	0.608
MAJOR STRUCTURES		3,900	0.098
TOTAL (Gross & Net Length)		3,729.7	0.706

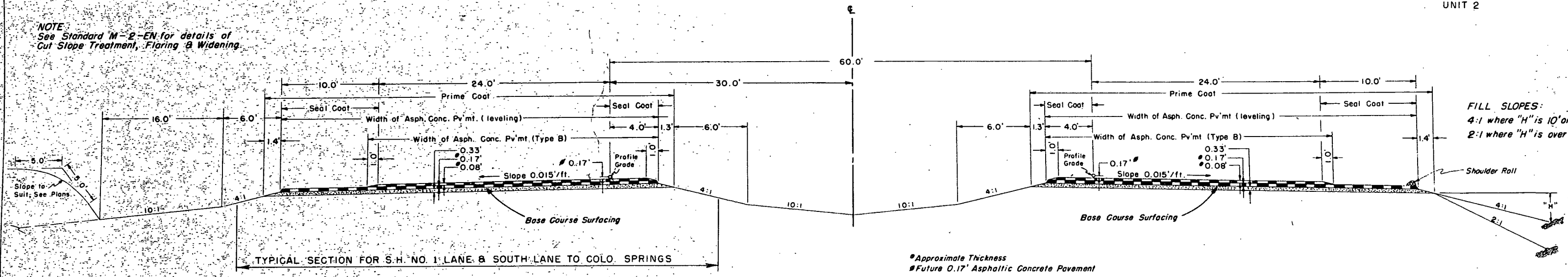
DESIGN DATA	
Maximum Degree Curve	3°00'
Maximum Grade	5.00%
Minimum N.P.S.D. Horizontal	1500'
Minimum N.P.S.D. Vertical	690'
Maximum Speed-Design MPH	70

TYPICAL CROSS SECTION OF IMPROVEMENT

FEDERAL ROAD DIVISION NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEET
9	COLORADO	I-25-2(28)145	2	

UNIT 2

NOTE:
See Standard M-2-EN for details of
Cut Slope Treatment, Flaring & Widening.



FILL SLOPES:
4:1 where "H" is 10' or less.
2:1 where "H" is over 10'.

Excavation and or Borrow below 4:1 slope and/or 10:1 slope will not be permitted.
The depth and width of the side ditch shall be varied where necessary in order to provide proper drainage and/or entrance to drainage structures.

Approximate 0.58' compacted thickness of Gravel or Crushed Rock Surfacing shall be placed in separate courses at the following rates per 100 lin. ft. of roadway:

Asph. Conc. P.v.mt.	Type B	36 Tons
	Leveling	24 Tons
Base Course Surfacing		173 Tons

GENERAL NOTES

This project is to be constructed in conformity with the Standard Specifications of the Colorado Department of Highways, adopted January 1, 1958.
All quantities on preliminary plans are to be considered approximate only.
All poles encroaching on construction are to be moved by the owners.
Approximate location and quantities involved in construction of intercepting ditches are tabulated in Summary of Earthwork Quantities Tabulation.
All curves are to be superelevated and widened as provided by the Standard Superelevation sheet included with the plans.

The force account item, 'Clearing of Building Sites, including removal of Foundation and Appurtenances,' shall include removal of all foundations, wells, outhouses and other appurtenances not removed by the owner, and any necessary backfilling of cellars, cess pools, wells, etc., to provide neat road-side conditions. It is estimated that this item applies at the following location: Sta. 34+.

For preliminary plan quantities of asphaltic road materials, asphaltic concrete pavement, asphalt and stone screenings, the following rates of application were used:

Prime Coat (Bridges) R C	at	0.10 gal. per sq. yd.
Prime Coat M C	at	0.40 gal. per sq. yd.
Asphaltic Concrete Pavement	at	111.00 lbs. per sq. yd. per 1" thickness
Asphalt (85-100) penetration	at	6.50 lbs. per sq. yds. per 1" thickness.
Seal Coat R C	at	0.25 gal. per sq. yd.
Stone Screenings (Limestone)	at	25.00 lbs. per sq. yd.

Rate of application and grade of Asphaltic Material shall be determined by the Engineer at the time of application.

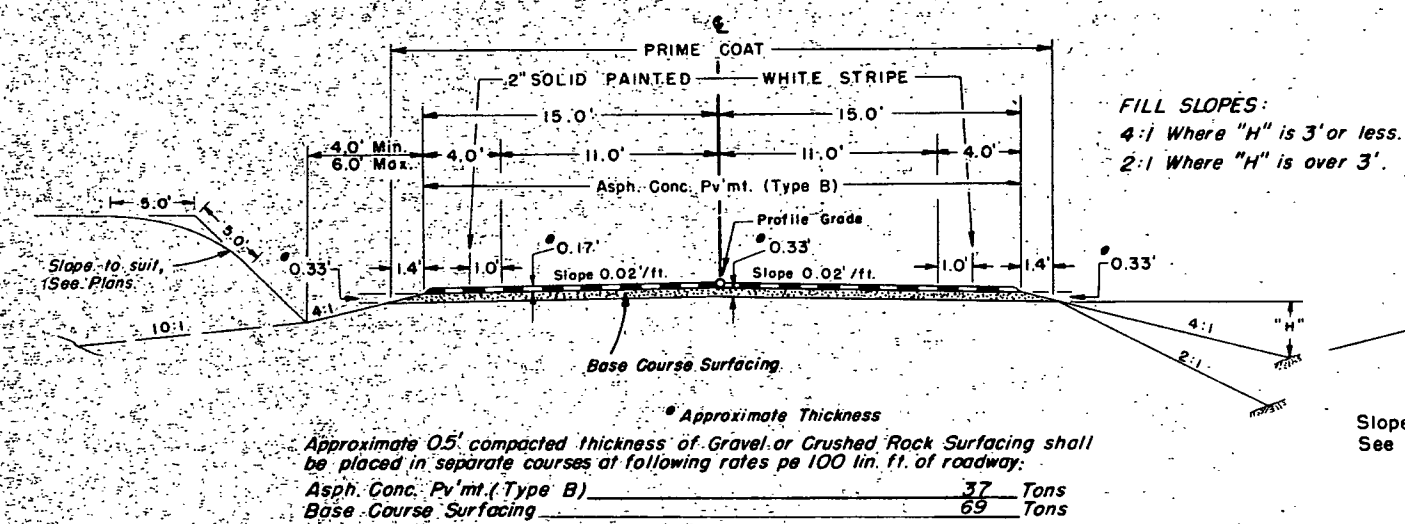
Application methods for liquid asphaltic road material which result in the discoloration of concrete pavement, curbs or gutters will not be permitted.

TABULATION OF SHOULDER ROLL & DITCH PAVING

SHOULDER ROLL			DITCH PAVING	
LOCATION	SIDE	LIN. FT.	LOCATION	LIN. FT.
SOUTHBOUND				
12+00 to 25+75	RT.	1375		
NORTHBOUND				
16+00 to 21+10	RT.	510	ENTIRE PROJECT *	210
23+29 to 28+40	RT.	511		
TOTAL		2396	TOTAL	210

*Location to be determined by the Engineer during construction.
2396 Lin. ft. = 39 Tons / 210 Lin. ft. = 19 Tons

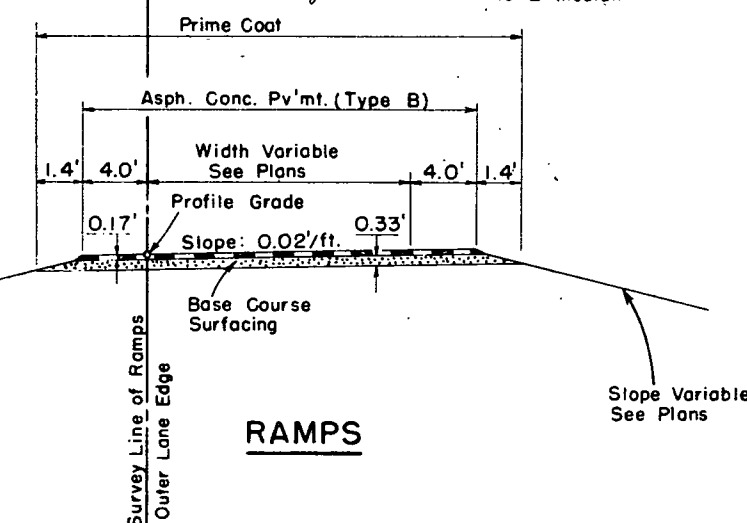
FRONTAGE ROADS



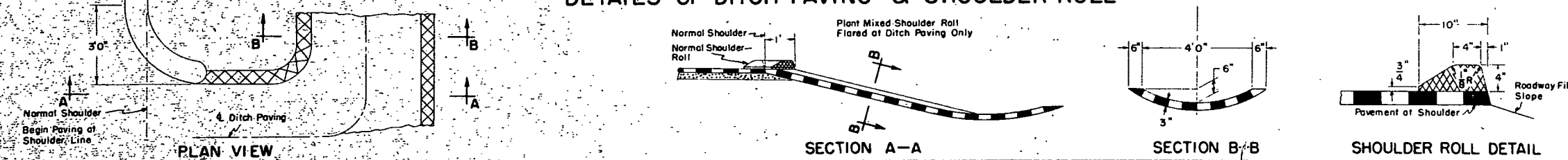
FILL SLOPES:
4:1 Where "H" is 3' or less.
2:1 Where "H" is over 3'.

Asph. Conc. P.v.mt. (Type B)	37 Tons
Base Course Surfacing	69 Tons

RAMPS



DETAILS OF DITCH PAVING & SHOULDER ROLL



SUMMARY OF APPROXIMATE QUANTITIES

FEDERAL ROAD DIVISION NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLORADO	I-25-2(28)145	3	

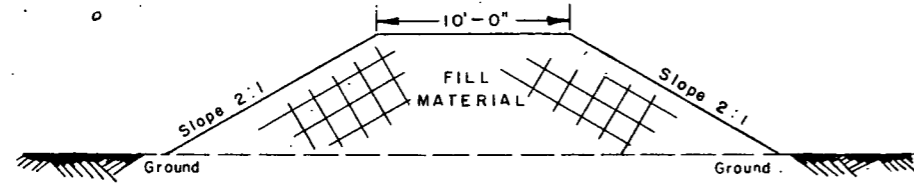
UNIT 2

ITEM NO.	ITEM	UNIT	ROADWAY	STR. NO. I-17-DS STA. 21+	STR. NO. I-17-DT STA. 28+	STR. NO. I-17-DU STA. 26+	PROJECT TOTALS
10	Clearing & Grubbing Entire Project	L.S.	•				•
11	Removal of Headwalls	Each	2				2
11	Plug Culverts	Each	1				1
12	Removing Fence	Lin. Ft.	1,100				1,100
13	Unclassified Excavation	Cu. Yd.	441,000				441,000
13	Unclassified Ditch Excavation	Cu. Yd.	200				200
14	Unclassified Structural Excavation - Miscellaneous	Cu. Yd.	770	285	596	477	770
14	Unclassified Structural Excavation - Bridges	Cu. Yd.		200	390	280	1,358
16	Structure Backfill (Class I)	Cu. Yd.	410				1,280
17	Compaction (Standard)	Cu. Yd.	461,000				461,000
17	Wetting	M Gal.	18,620				18,620
18	Station Yard Overhaul	Sta. Yd.	2,684,000	2,200	4,300	3,100	2,693,600
18	Yard Mile Overhaul	Yd. Mi.	44,000	10	50	40	44,100
26	Gravel or Crushed Rock Surfacing (Grading C)	Ton	13,500				13,500
29	Asphalt (85-100 Penetration) (Tack Coat)	Ton	20				20
30	Asphaltic Road Material MC (Prime)	Gal.	12,800				12,800
30	Asphaltic Road Material RC	Gal.	2,550	70	140	140	2,900
31	Stone Screenings (Limestone)	Ton	120				120
32	Plant Mixed Asphaltic Shoulder Roll	Ton	40				40
32	Plant Mixed Asphaltic Ditch Paving	Ton	20				20
34	Asphaltic Concrete Pavement (Leveling Course)	Ton	5,450				5,450
34	Asphaltic Concrete Pavement (Type B)	Ton	4,000	75	150	145	4,370
42	Treated Bridge Timber	Mftbm.		0.4	0.4	0.4	1.2
46	Class "A" Concrete	Cu. Yd.	748	501	763	680	2,692
46	Prestressed Concrete Beams (65 ft. to 69 ft. llin. incl.)	Each			30	30	60
47	Reinforcing Steel	Lb.	71,300	140,600	122,900	100,300	435,100
48	Structural Steel	Lb.		17,300	60,500	62,400	140,200
52	24" Reinforced Concrete Culvert Pipe (Class III)	Lin. Ft.	154				154
52	24" Reinforced Concrete Culvert Pipe (Class IV)	Lin. Ft.	170				170
52	36" Reinforced Concrete Culvert Pipe (Class III)	Lin. Ft.	94				94
53	24" Corrugated Metal Culvert Pipe	Lin. Ft.	70				70
61	Steel Pipe Piling (10 3/4" O.D. x 0.179" Thick)	Lin. Ft.		880			880
61	Steel Pipe Piling (12 3/4" O.D. x 0.179" Thick)	Lin. Ft.		450	560	320	1,330
65	Concrete Slope & Ditch Paving	Cu. Yd.	180				180
67	Riprap	Cu. Yd.	5,800		730	660	1,390
76	Barbed Wire Fence with Metal Posts	Lin. Ft.					5,800
80	Sheet Copper	Lb.	4		19	21	40
81	Right of Way Markers	Each				4	4
89	Drain Pipe (Concrete Floor) (4" x 1'-6")	Each			6	6	12
90	1/4" Electrical Conduit with Junction Boxes	Lin. Ft.	500				500
90	1/2" Electrical Conduit with Junction Boxes	Lin. Ft.	100	462	420	420	1,402
90	1/4" Electrical Conduit (Plastic) with Junction Boxes	Lin. Ft.	7,800				7,800
90	1/2" Electrical Conduit (Plastic) with Junction Boxes	Lin. Ft.	840				840
92	Timber Guard Posts	Each	244				244
98	Light Standards (1-Arm)	Each	41				41
98	Light Standards (2-Arm)	Each	1				1
98	Luminaires (20,000 Lumen Mercury Vapor)	Each	43				43
125	24" Automatic Drain Gates	Each	1				1
152	24" Flared End Sections for Reinforced Concrete Culvert Pipe	Each	1				1
152	36" Flared End Sections for Reinforced Concrete Culvert Pipe	Each	2				2
81	Project Markers	Each	1				1
	Signing & Striping Entire Project (Non-Federal Aid)	L.S.	•				•
	STATE FORCES						
	Relocating Pump House & Appurtenances	L.S.	•				•
	Clearing of Building Sites, Etc.	L.S.	•				•

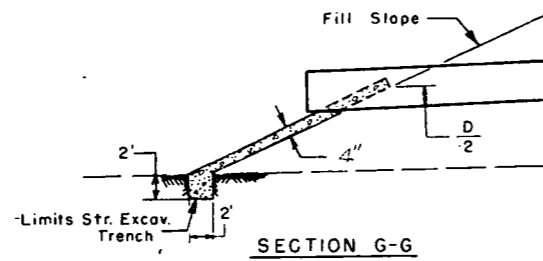
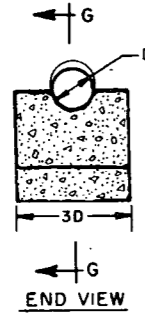
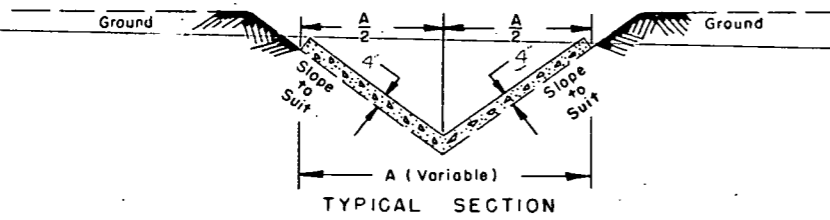
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9	COLORADO	I-25-2(28)145	4	

UNIT 2

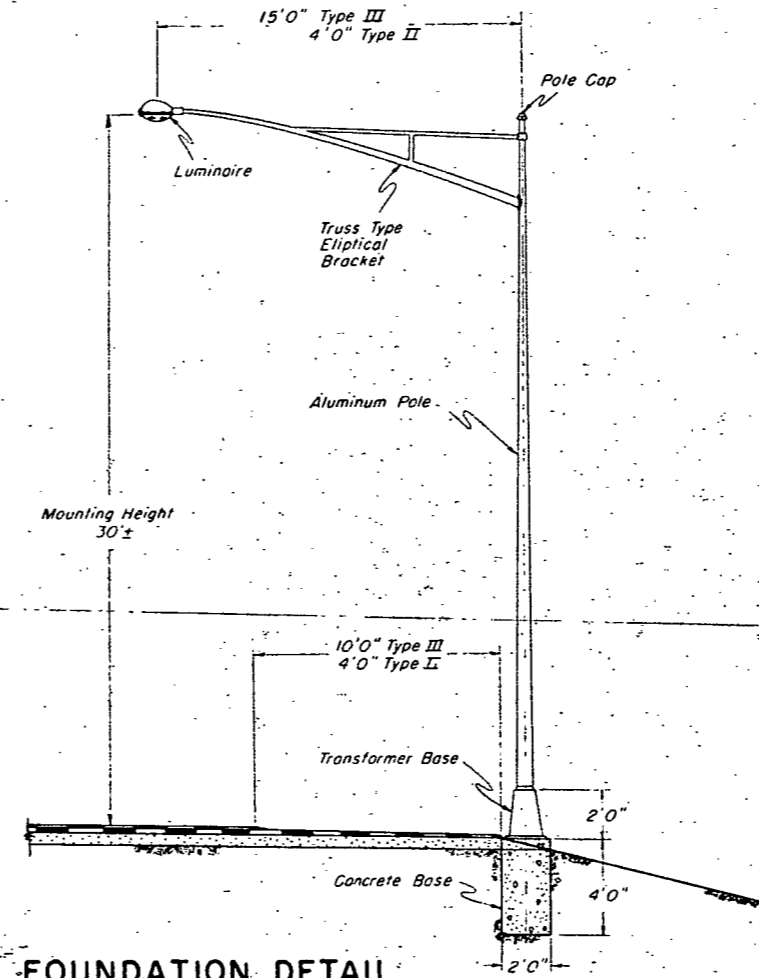
DETAIL OF DIKE, STA. 26+
(South Bound Only)



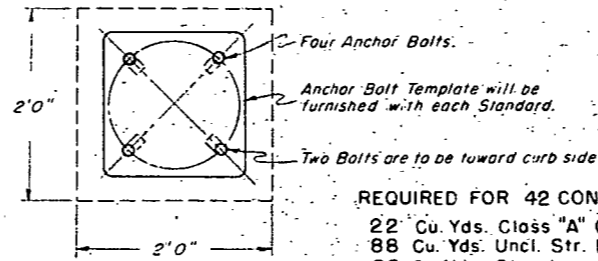
DETAILS OF CONCRETE SLOPE & DITCH PAVING



TYPICAL LIGHTING STANDARD



FOUNDATION DETAIL



REQUIRED FOR 42 CONCRETE BASES:
 22 Cu. Yds. Class "A" Concrete
 88 Cu. Yds. Uncl. Str. Excavation
 66 Cu. Yds. Structure Backfill

SUMMARY OF EARTHWORK QUANTITIES

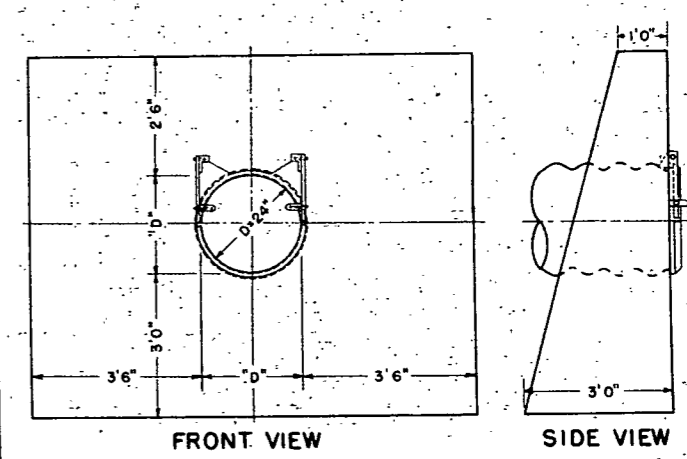
EXCAVATION FROM CROSS SECTIONS	118,129
BORROW	226,881
BORROW (Top portion Sub-grade)	25,546
EST. FOR SUBSIDENCE	34,501
LIST OF STRUCTURES AS EXCAVATION	31,370
LIST OF STRUCTURES AS EMBANKMENT	2,790
EST. OF CUT SLOPE TREATMENT	1,000
EST. FOR COVERING ENDS OF CULVERTS	60
TOTALS	440,277 Cu. Yds.
EXCAVATION FROM CROSS SECTIONS	118,129
BORROW	226,881
TOTALS	345,010 Cu. Yds.
EMBANKMENT FROM CROSS SECTIONS	265,393
EMBANKMENT x FACTOR	345,010
STATION YARD OVERHAUL FROM MASS DIAGRAM	2,180,362
EST. FOR SUBSIDENCE	218,036
EST. FOR STRUCTURE BACKFILL	4,433
EST. FOR GROSS HAUL	280,925
TOTALS	2,683,756 Sta. Yds.
YARD MILE OVERHAUL FROM MASS DIAGRAM	8,599
EST. FOR SUBSIDENCE	860
EST. FOR STRUCTURE BACKFILL	339
EST. FOR GROSS HAUL	34,202
TOTALS	44,000 Yd. Mi.
UNCLASSIFIED DITCH EXCAVATION	
INTERCEPTING DITCHES	
*STATION	SIDE
29+ to 36+ (SB)	Rt.
	CU. YDS.
	125
SUB-TOTAL FROM LIST OF STRUCTURES	
	125
TOTAL	
	135 Cu. Yds.
*Approximate location, may be changed by the Engineer.	
COMPACTION	
TOTAL UNCLASSIFIED EXCAVATION	440,277
BASE OF CUTS & FILL	20,000
TOTALS	460,277 Cu. Yds.

TABULATION OF LIGHTING REQUIREMENTS

* LOCATION	LUMINAIRES 20,000 LUMEN		STANDARDS	
	TYPE II NO.	TYPE III NO.	1- ARM NO.	2- ARM NO.
Intersection (0+ to 30+)	3	40	41	1
TOTALS	3	40	41	1

* See Layouts of Intersections for locations.
 3-4'0" Arms & 40-15'0" Arms.
 500 lin. ft. 1 1/4" and 100 lin. ft. 1 1/2" Electrical Conduit (Metal) with Junction Boxes.
 7,800 lin. ft. 1 1/4" and 840 lin. ft. 1 1/2" Electrical Conduit (Plastic) with Junction Boxes.

**DETAIL AUTOMATIC DRAINAGE GATE
STA. 26+38**



Automatic Drainage Gate (Colco Model 100 or suitable equivalent) to be anchored to headwall with anchor bolts as recommended by the Manufacturer.
 Req'd 4.64 Cu. Yds. of Class "A" Concrete.

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UNIT 2

PIT NO. 1

LOCATION: NW 1/4 Sec. 30 T.13S. R. 66W.
 OWNER: HOLLAND DAIRY FARM CO.
 QUANTITY AVAILABLE: 135,203 CU. YDS.
 PROPOSED USE: BORROW MATERIAL

LOG OF PIT

TEST NO	DEPTH	CLASSIFICATION
1	0.0' - 5.0'	A-4(4)
1A	5.0' - 15.0'	A-4(7) R=41
2	0.0' - 7.0'	A-6(12)
2A	7.0' - 9.0'	A-2-4(0) R=53
2B	9.0' - 12.0'	A-4(7) R=41
3	0.0' - 6.0'	A-6(12) R=53
3A	6.0' - 9.0'	A-2-4(0)
3B	9.0' - 12.0'	A-4(7) R=41
4	0.0' - 4.5'	A-4(2)
5	0.0' - 6.0'	A-1-a(0) R=81
5A	6.0' - 10.0'	A-4(6) R=68

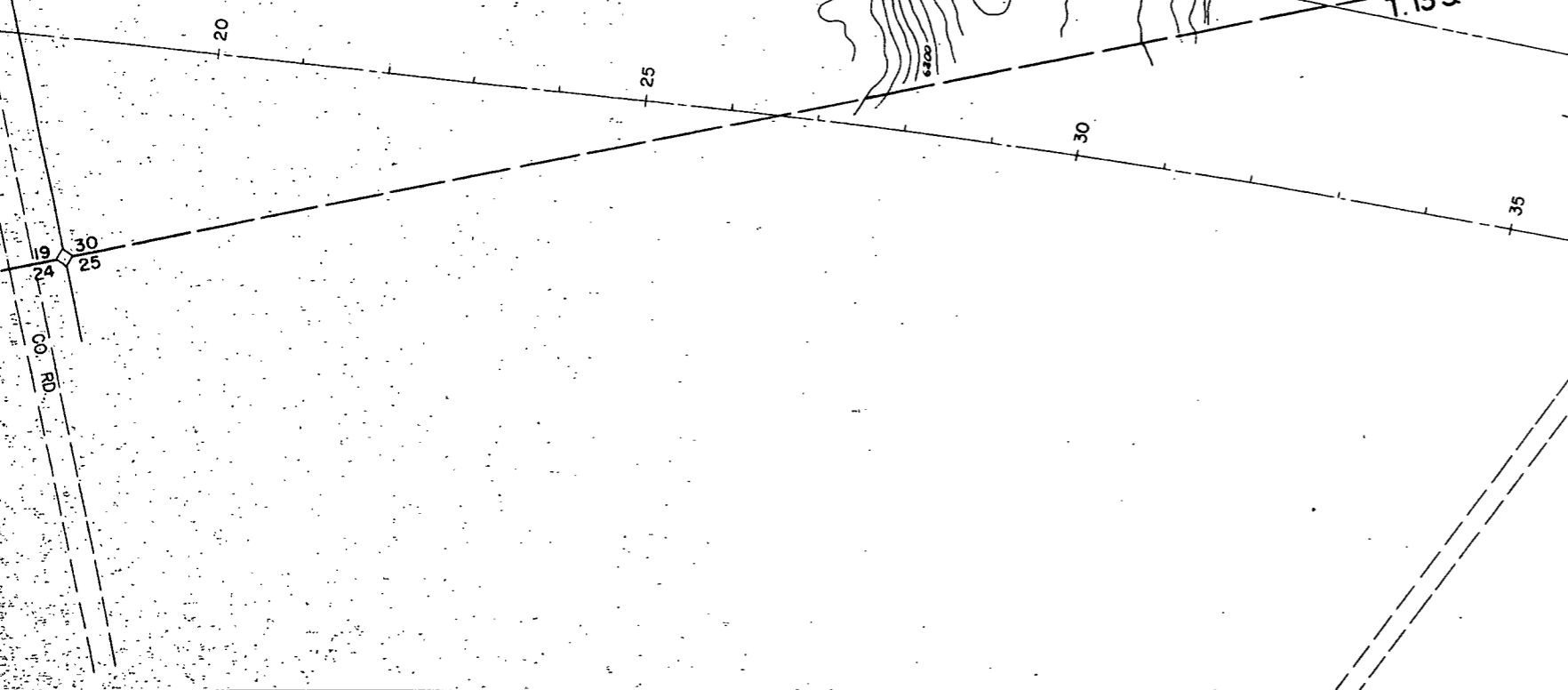
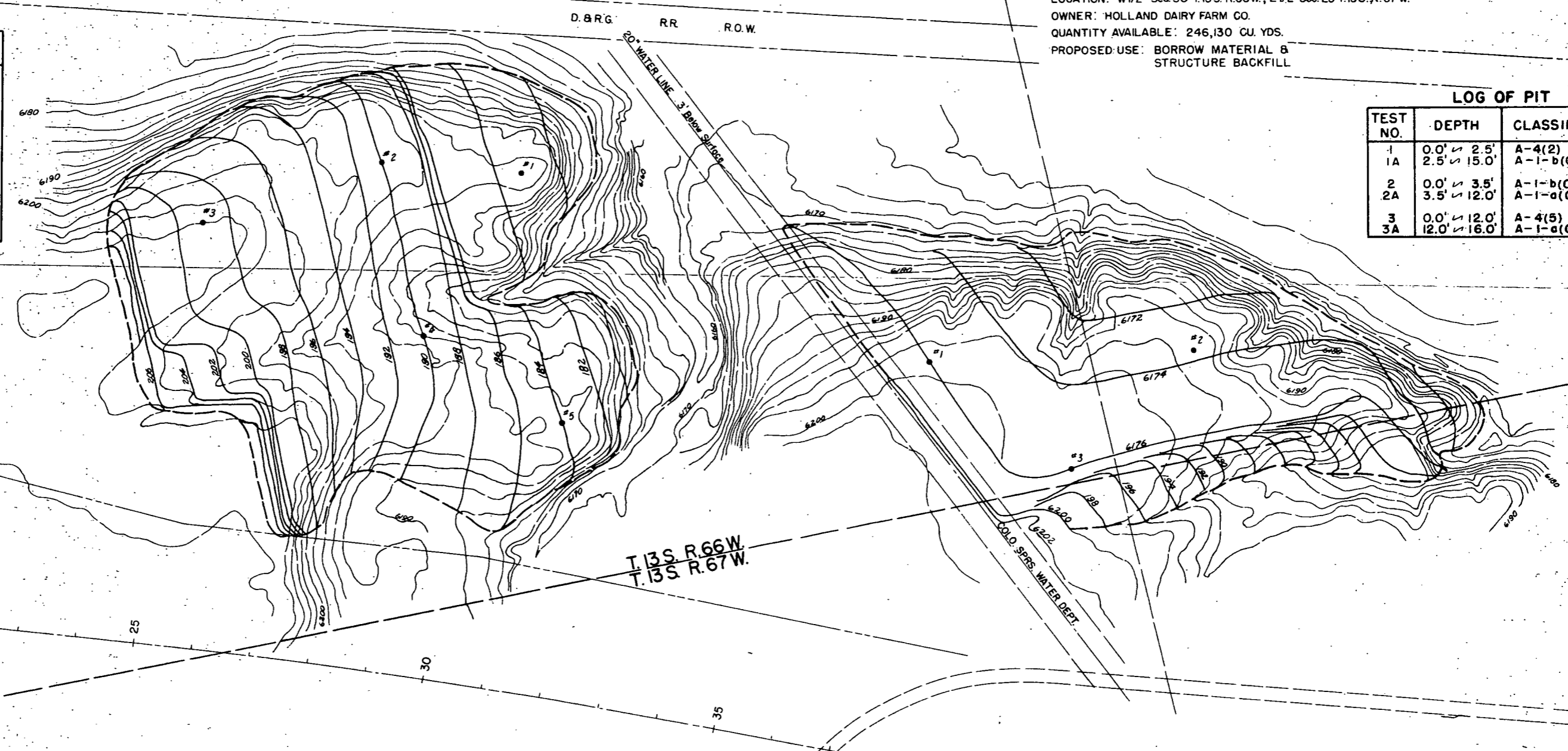
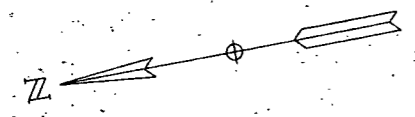
PIT NO. 2

LOCATION: W 1/2 Sec. 30 T.13S. R.66W., E 1/2 Sec. 25 T.13S. R.67W.
 OWNER: HOLLAND DAIRY FARM CO.
 QUANTITY AVAILABLE: 246,130 CU. YDS.
 PROPOSED USE: BORROW MATERIAL & STRUCTURE BACKFILL

LOG OF PIT

TEST NO	DEPTH	CLASSIFICATION
1	0.0' - 2.5'	A-4(2)
1A	2.5' - 15.0'	A-1-b(0) R=81
2	0.0' - 3.5'	A-1-b(0) R=77
2A	3.5' - 12.0'	A-1-a(0)
3	0.0' - 12.0'	A-4(5) R=57
3A	12.0' - 16.0'	A-1-a(0)

ORIGINAL SCALE: 1"=100'



LIST OF STRUCTURE QUANTITIES

COLORADO STATE HIGHWAY DEPARTMENT
S.H.D. Form 125
JANUARY 1952

FED. ROAD DIVISION NO.	DISTRICT	PROJECT NO.	SHEET NO.	TOTAL SHEETS
9.	COLO.	I-25-2(28)145	6	

UNIT 2

LOCATION	MISCELLANEOUS	EXCAVATION			UNCLASSIFIED STRUCTURAL EXCAVATION MISCELLANEOUS CUBIC YARDS	STRUCTURE BACKFILL CUBIC YARDS	GRAVEL OR CRUSHED ROCK SURFACING TONS	ASPHALTIC CONCRETE PAVEMENT (TYPE B) TONS	CONCRETE CUBIC YARDS	REINFORCING STEEL LBS.	CONCRETE SLOPE & DITCH PAVING CU. YDS.	CLASS III REINFORCED CONCRETE CULVERT PIPE		FLARED END SECTIONS FOR R C CULV. PIPE				
		CUBIC YARDS										LINEAR FEET		NO.				
		UNCL.	EMB.	UNCL. DITCH								24"	36"	24"	36"			
0+00Bk ✓			*				∅	∅										
0+00 ✓	1-Project Marker (State Forces) ✓																	
0+4.22+ ✓	<u>SOUTH BOUND LANE</u>		*				∅	∅										
11+ ✓ 15+ ✓	Relocate 10" Water Main (Force Account) ✓			160			35	15										
17+00 ✓ 18+25 ✓ 23+ ✓ 25+ ✓ 26+ ✓				220	15	17			35248	33,348		62						
26+170+30+28.3 ✓ 26+38 ✓	1-24" Automatic Drain Gate, 70 Lin. Ft. 24" Corrugated Metal Culvert Pipe. ✓			1,895														
28+ ✓ 28+ ✓	Relocating Pump House & Appurtenances. (Force Account) ✓		\$		11	23			4.64									
28+ ✓ 31+25 ✓				3,150							24	94			2			
17+43 ✓ 21+209+23+29.2 ✓ 24+50 ✓ 28+46.0+32+62.3 ✓	<u>NORTH BOUND LANE</u> 2-Removal of Headwall 15' ✓ 170 Lin. Ft. 24" Reinforced Concrete Culvert Pipe (Class III) ✓				188	111			368.00	37,920								
12+38+ ✓ 20+ ✓ 24+35 ✓	<u>SOUTH LANE TO COLO. SPRINGS</u> * 735						∅	∅										
					19	37						92						

CONTINUED ON SHEET NO. 7

LIST OF STRUCTURE QUANTITIES

UNIT 2

LOCATION	MISCELLANEOUS	EXCAVATION			UNCLASSIFIED STRUCTURAL EXCAVATION MISCELLANEOUS CUBIC YARDS	STRUCTURE BACKFILL CUBIC YARDS	GRAVEL OR CRUSHED ROCK SURFACING TONS	ASPHALTIC CONCRETE PAVEMENT (TYPE B) TONS	CONCRETE CUBIC YARDS	REINFORCING STEEL LBS.	CONCRETE SLOPE & DITCH PAVING CU. YDS.	CLASS III REINFORCED CONCRETE CULVERT PIPE LINEAR FEET		FLARED END SECTIONS FOR R C CULV. PIPE NO.		
		CUBIC YARDS		CL. "A"								24"	36"	24"	36"	
		UNCL.	EMB.													UNCL. DITCH
150+ ~ 174+	<u>PRESENT ROAD (S.H. NO. 1)</u>	*					∅	∅								
150+ ~ 176+ 152+ ~ 169+		*					∅	∅			150					
167+40	1- Plug Culverts.															
0+00 ~ 6+85	<u>RAMP NO. 1</u>	*					∅	∅								
Entire Project	Concrete Bases for Light Standards			88	66			22								
TOTALS			31,370	2,790	10,763	403	35	15	747.12	71,268	174	154	94	1	2	

* Included in Roadway Quantities.
∅ Included in Surfacing Plan.
\$ Included in Roadway Quantities as Borrow Material.

FENCING REQUIREMENTS

STATION	SIDE	REMOVE FENCE	BUILD BARBED WIRE
		Lin. Ft.	Lin. Ft.
17+75 (SB)	X	425	
31+75 (SB)	X	650	
0+00 ~ 25+80 (SB)	Rt.		2,740
30+00 ~ 37+30 Ah (SB)	Rt.		1,210
28+50 (NB) ~ 36+00 Ramp	Rt.		1,350
33+00 (NB) ~ 36+71.9 Ah	Lt.		490
TOTALS		1,075	5,790

SURFACING PLAN

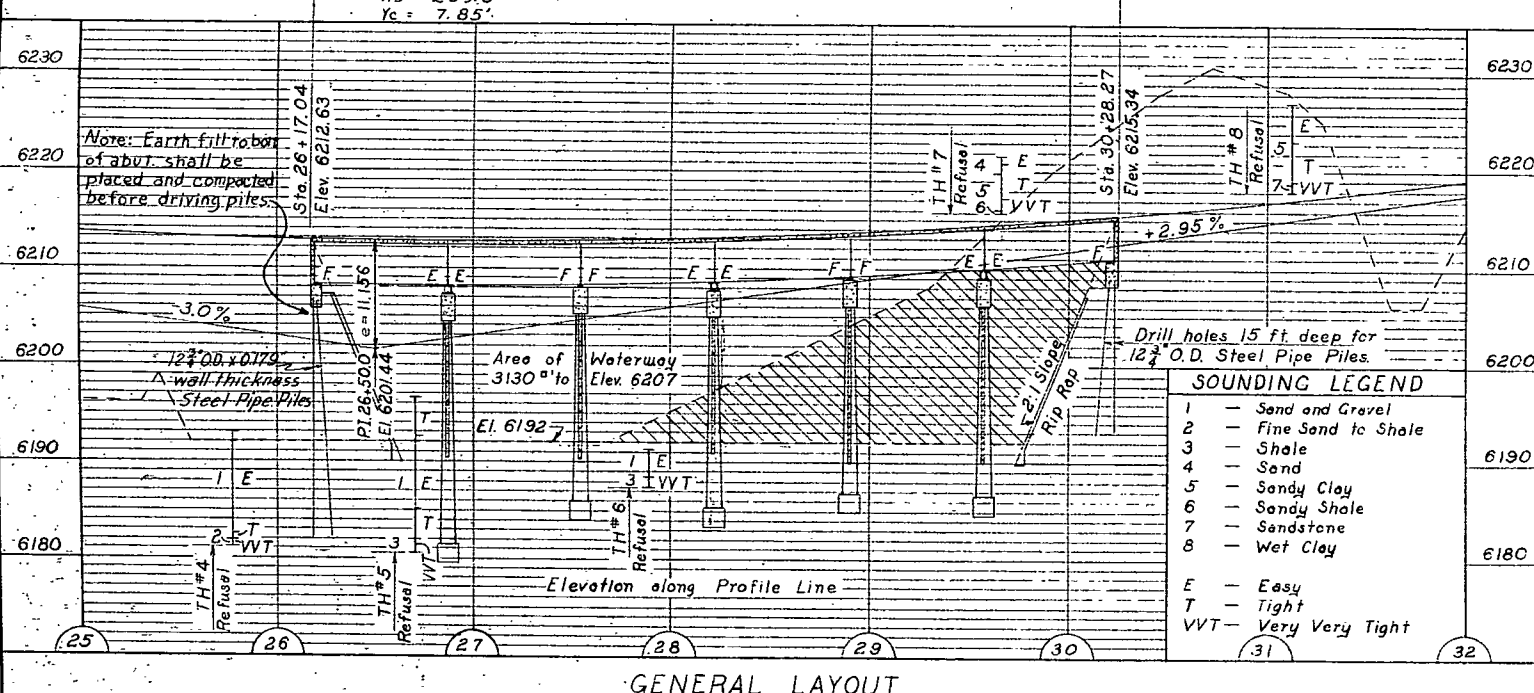
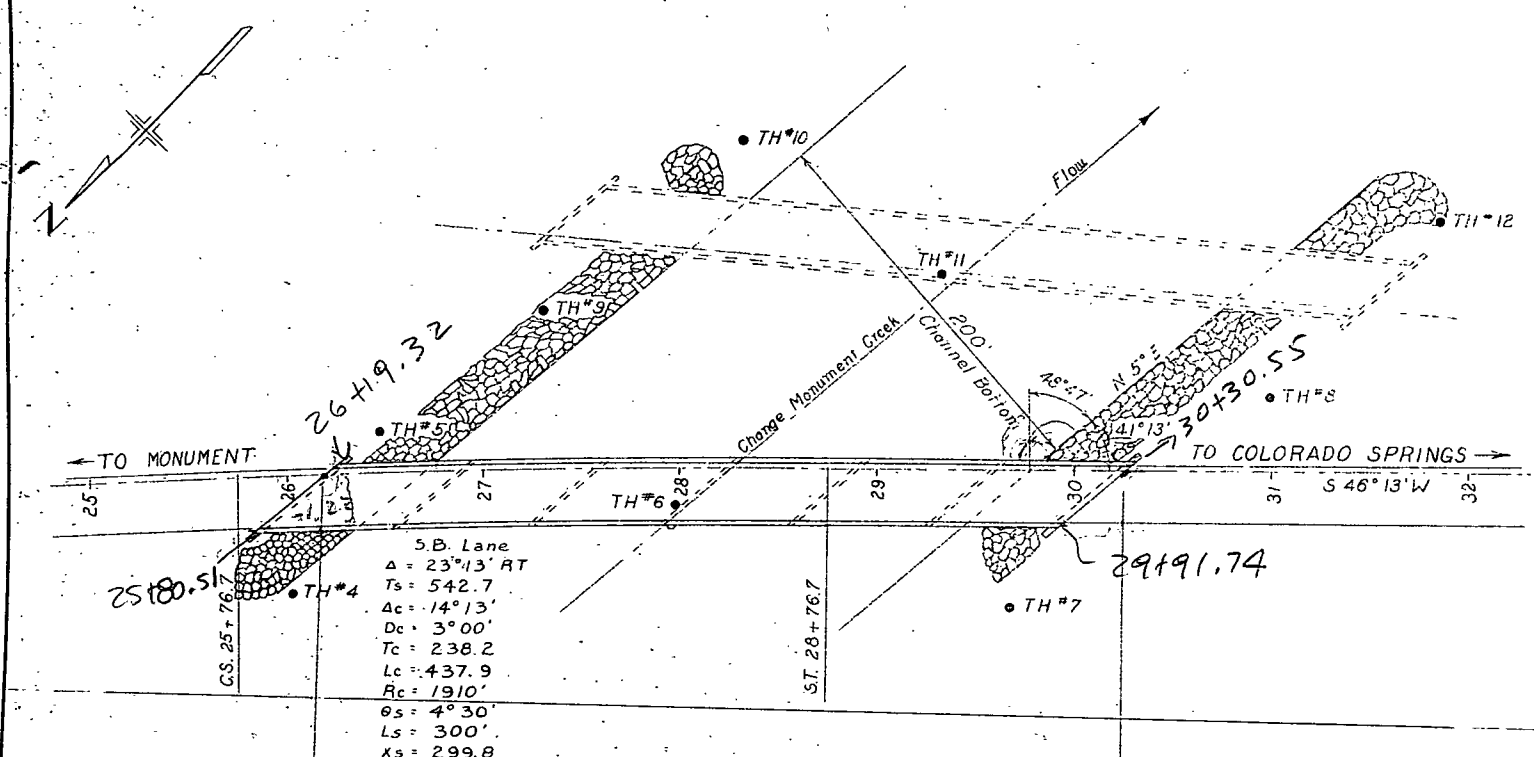
MATERIAL TO BE PLACED	SOURCE	TONS USED			
		ASPHALTIC CONCRETE PAVEMENT		BASE COURSE	
		TYPE "B"	LEVELING COURSE	GRADING "C"	
SOUTH BOUND LANE					
0+00 ~ 26+17.0	Undesignated	471	1,243	2,303	
30+28.3 ~ 36+71.3 Bk.		116	306	566	
NORTH BOUND LANE					
0+00 ~ 21+20.9		382	1,007	1,867	
23+29.2 ~ 28+46.0		93	246	455	
32+62.3 ~ 37+88.0 Bk.		95	251	463	
MAINLINE (Both Lanes)					
SH 1 150+ ~ 174+			1,028	1,116	3,147
S. Lane to Colo. Spgs. 16+ ~ 36+			362	954	1,767
Ramp 1 26+			244		427
Frontage Rd. 150+ ~ 176+ SH 1		1,019		1,820	
Accel. & Decel. Lanes 0+ ~ 31+		167	319	569	
List of Structures		15		35	
TOTALS		3,992	5,442	13,419	

TIMBER GUARD POSTS

STATION	SIDE	SPACING	NO POSTS Each
2+ ~ 24+ (SB)		Intersection	147
25+19.9 ~ 30+32.2 (SB)	Lt. & Rt.	Bridge	14
28+42.6 ~ 33+54.1 (NB)	Lt. & Rt.	Bridge	14
34+ ~ 44+ (SB)		Intersection	69
TOTAL			244

ROW MARKERS

STATION	SIDE	NO. MARKERS Each
T.S. 0+00	Rt.	1
S.T. 8+33.3 SB	Rt.	1
31+85.2 SB	Rt.	1
37+88.0 Bk. NB	Lt.	1
TOTAL		4



SUMMARY OF QUANTITIES

Item	Description	Unit	Super Structure	Abutment No. 1	Pier No. 2	Pier No. 3	Pier No. 4	Pier No. 5	Pier No. 6	Abutment No. 7	Total
14	Unclassified Structural Excav-Bridges	Cu. Yd.		50	104	72	74	65	64	48	477
16	Structure Backfill (Class I)	Cu. Yd.			78	50	56	47	45		276
30	Asphaltic Road Material (RC)	Gal.	138								138
18	Station Yard Overhaul	Sq. Yd.									3100
18	Yard Mile Overhaul	Yd. Mi.									40
42	Treated Bridge Timber	Mft. bm.		0.198						0.182	0.380
46	Class 'A' Concrete	Cu. Yd.	343.0	27.7	57.3	55.8	55.0	56.7	56.5	28.0	680.0
46	Prestressed Girder (65"-69" inc)	Each	30								30
47	Reinforcing Steel (Includes 1% for Overrun)	Lb.	63,155	2,910	6,545	6,230	6,125	6,285	6,285	2,750	100,285
48	Structural Steel (Includes 1/2% for Point)	Lb.	58,955	580	410	440	430	470	470	580	62,335
4	Drilling Holes to Facilitate Pile Driving	Lin. Ft.		112						120	232
61	12" O.D. x 0.179" Steel Pipe Piling	Lin. Ft.		200						120	320
67	Riprap (1/6" thick)	Cu. Yd.		315						336	651
80	Sheet Copper (32 oz.)	Lb.	21								21
89	Drain Pipe (4" x 1/8" Concrete Floor)	Each	6								6
34	Asphaltic Concrete Pavement (Type B)	Ton.	144								144
6	16 gage Galvanized Sheet Metal	Sq. Ft.	120								120
6	1/2" Exph. Jt. Material (Type III)	Sq. Ft.	70								70

BAR LIST - SUPERSTRUCTURE

Mark	Size	No. Req'd	Length	Type	Dimensions
401	3/8"	384	40'-0"	Str.	
402	3/8"	256	28'-1"	Str.	
403	1/2"	170	4'-0"	I	1'-1" 7"
404	3/8"	616	4'-0"	II	1'-2" 1'-8"
405	1/2"	128	30'-8"	Str.	
4100	1/2"	7	3'-0"	Str.	
501	3/8"	340	33'-8"	Str.	
502	1/2"	164	34'-8"	III	33'-8" 4'-5"
503	1/2"	12	32'-0"	III	31'-4" 2'-1"
504	1/2"	12	31'-3"	II	30'-3" 1'-0"
505	1/2"	29	29'-11"		29'-2" 6'-11"
to	12 ea.	110 1/2"	10	IV	11'-0 1/2" 1'-0 1/2"
511	1/2"	23	23'-8"		22'-11" 8"
512	1/2"	22	22'-5"		21'-11" 6'-5"
to	12 ea.	110 1/2"	10	V	11'-0 1/2" 1'-0 1/2"
517	1/2"	17	17'-2"		15'-8" 1'-5"
518	1/2"	30	30'-8"		
to	24 ea.	110 1/2"	10	Str.	
531	1/2"	17	17'-2"		
532	1/2"	16	16'-1"		
to	24 ea.	110 1/2"	10	Str.	
557	1/2"	3	3'-0"	Str.	
4101	1/2"	3	3'-0"	Str.	
601	3/8"	8	38'-2"	Str.	
602	1/2"	2	55'-8"	Str.	
603	1/2"	2	51'-3"	Str.	
610	3/4"	4	9'-2"	II	4'-0" 1'-2"

BAR SUMMARY - SUPERSTRUCTURE

36,601 lin. ft. 3/8" @ 0.668 lb./lin. ft. = 24,449 lb.
35,594 lin. ft. 1/2" @ 1.043 lb./lin. ft. = 37,125 lb.
636 lin. ft. 1" @ 1.502 lb./lin. ft. = 955 lb.
Plus 1% for Overrun = 626 lb.
Total = 63,155 lb.

BAR LIST - ABUTMENT No. 1 (Cont.)

Mark	Size	No. Req'd	Length	Type	Dimensions
414	3/8"	6	10'-10"	Str.	
415	3/8"	4	4'-0"	Str.	
416	3/8"	6	7'-10"	Str.	
417	3/8"	6	12'-5"	II	5'-10" 9"
418	3/8"	1	13'-5"	II	6'-4" 9"
419	3/8"	8	15'-9"	II	7'-6" 9"
420	3/8"	1	13'-1"	II	6'-2" 9"
421	3/8"	1	12'-1"	II	5'-8" 9"
422	3/8"	54	9'-1"	II	4'-2" 9"
423	3/8"	54	13'-10"	I	1'-6" 2'-1"
801	1"	10	53'-0"	Str.	

BAR SUMMARY - ABUTMENT No. 1

2,195 lin. ft. 3/8" @ 0.668 lb./lin. ft. = 1,466 lb.
530 lin. ft. 1" @ 2.670 lb./lin. ft. = 1,415 lb.
Plus 1% for Overrun = 29 lb.
Total = 2,910 lb.

BAR LIST - PIER No. 2

Mark	Size	No. Req'd	Length	Type	Dimensions
437	1/2"	42	12'-0"	I	2'-6" 3'-2"
438	1/2"	7	7'-4"	I	1'-8" 1'-8"
to	3 ea.	110 1/2"	10	VI	11'-0 1/2" 1'-8"
460	1/2"	2	9'-2"	Str.	
461	1/2"	2	3'-0"	Str.	
to	1 ea.	110 1/2"	10	VI	11'-0 1/2" 1'-8"
463	1/2"	2	4'-5"	Str.	
464	1/2"	28	36'-0"	Str.	
485	1/2"	64	14'-8"	Str.	
563	3/8"	66	5'-6"	Str.	
564	3/8"	6	49'-3"	Str.	
803	1"	2	36'-0"	Str.	
901	1/2"	24	4'-3"	Str.	
902	1/2"	24	22'-9"	Str.	

BAR SUMMARY - PIER No. 2

3,152 lin. ft. 3/8" @ 0.668 lb./lin. ft. = 2,106 lb.
658 lin. ft. 1/2" @ 1.043 lb./lin. ft. = 686 lb.
72 lin. ft. 1" @ 2.670 lb./lin. ft. = 192 lb.
648 lin. ft. 1 1/2" @ 3.400 lb./lin. ft. = 2,203 lb.
244 lin. ft. 1 3/4" @ 5.313 lb./lin. ft. = 1,296 lb.
Plus 1% for Overrun = 62 lb.
Total = 6,545 lb.

BAR LIST - ABUTMENT No. 1

Mark	Size	No. Req'd	Length	Type	Dimensions
401	3/8"	8	40'-0"	Str.	
403	3/8"	8	4'-0"	I	1'-1" 7"
412	3/8"	8	28'-7"	Str.	
413	3/8"	4	2'-4"	Str.	

BAR LIST - PIER No. 3 (Cont.)

Mark	Size	No. Req'd	Length	Type	Dimensions
461	1/2"	3	3'-0"	Str.	
470	1/2"	1 ea.	110 1/2"	VI	11'-0 1/2" 1'-8"
479	1/2"	3	4'-1"	Str.	
484	1/2"	30	36'-0"	Str.	
486	1/2"	64	15'-8"	Str.	
563	3/8"	66	5'-6"	Str.	
565	3/8"	6	48'-1"	Str.	
803	1"	2	36'-0"	Str.	
901	1/2"	24	4'-3"	Str.	
903	1/2"	24	19'-4"	Str.	
1103	1/2"	3	48'-3"	Str.	
1101	1/2"	8	12'-0"	Str.	

BAR SUMMARY - PIER No. 3

3,138 lin. ft. 3/8" @ 0.668 lb./lin. ft. = 2,096 lb.
651 lin. ft. 1/2" @ 1.043 lb./lin. ft. = 679 lb.
72 lin. ft. 1" @ 2.670 lb./lin. ft. = 192 lb.
560 lin. ft. 1 1/2" @ 3.400 lb./lin. ft. = 1,924 lb.
241 lin. ft. 1 3/4" @ 5.313 lb./lin. ft. = 1,280 lb.
Plus 1% for Overrun = 59 lb.
Total = 6,230 lb.

BAR LIST - PIER No. 4

Mark	Size	No. Req'd	Length	Type	Dimensions
437	1/2"	42	12'-0"	I	2'-6" 3'-2"
438	1/2"	7	7'-4"	I	1'-8" 1'-8"
to	3 ea.	110 1/2"	10	VI	11'-0 1/2" 1'-8"
479	1/2"	28	36'-0"	Str.	
487	1/2"	64	15'-2"	Str.	
563	3/8"	66	5'-6"	Str.	
566	3/8"	6	47'-0"	Str.	
803	1"	2	36'-0"	Str.	
901	1/2"	24	4'-3"	Str.	
1101	1/2"	8	12'-0"	Str.	
1102	1/2"	3	49'-5"	Str.	

BAR SUMMARY - PIER No. 4

3,010 lin. ft. 3/8" @ 0.668 lb./lin. ft. = 2,011 lb.
645 lin. ft. 1/2" @ 1.043 lb./lin. ft. = 673 lb.
72 lin. ft. 1" @ 2.670 lb./lin. ft. = 192 lb.
566 lin. ft. 1 1/2" @ 3.400 lb./lin. ft. = 1,924 lb.
238 lin. ft. 1 3/4" @ 5.313 lb./lin. ft. = 1,264 lb.
Plus 1% for Overrun = 61 lb.
Total = 6,125 lb.

BAR LIST - PIER No. 5 (Similar)

Mark	Size	No. Req'd	Length	Type	Dimensions
437	1/2"	42	12'-0"	I	2'-6" 3'-2"
438	1/2"	7	7'-4"	I	1'-8" 1'-8"
to	3 ea.	110 1/2"	10	VI	11'-0 1/2" 1'-8"
479	1/2"	28	36'-0"	Str.	
487	1/2"	64	15'-2"	Str.	
563	3/8"	66	5'-6"	Str.	
566	3/8"	6	47'-0"	Str.	
803	1"	2	36'-0"	Str.	
901	1/2"	24	4'-3"	Str.	
903	1/2"	24	19'-4"	Str.	
1101	1/2"	8	12'-0"	Str.	
1104	1/2"	3	47'-2"	Str.	

BAR SUMMARY - PIER No. 5 (Similar)

3,250 lin. ft. 3/8" @ 0.668 lb./lin. ft. = 2,171 lb.
645 lin. ft. 1/2" @ 1.043 lb./lin. ft. = 673 lb.
72 lin. ft. 1" @ 2.670 lb./lin. ft. = 192 lb.
566 lin. ft. 1 1/2" @ 3.400 lb./lin. ft. = 1,924 lb.
238 lin. ft. 1 3/4" @ 5.313 lb./lin. ft. = 1,264 lb.
Plus 1% for Overrun = 61 lb.
Total = 6,285 lb.

BAR LIST - ABUTMENT No. 7

Mark	Size	No. Req'd	Length	Type	Dimensions
401	3/8"	8	40'-0"	Str.	
403	3/8"	8	4'-0"	I	1'-1" 7"
416	3/8"	6	7'-10"	Str.	
422	3/8"	51	9'-1"	II	4'-2" 9"
423	3/8"	51	13'-10"	I	4'-6" 2'-1"
427	3/8"	6	10'-11"	II	5'-1" 9"
428	3/8"	1	11'-11"	II	5'-7" 9"
429	3/8"	8	14'-5"	II	6'-10" 9"
436	3/8"	1	12'-5"	II	5'-10" 9"
431	3/8"	1	11'-5"	II	5'-4" 9"
432	3/8"	4	2'-5"	Str.	
433	3/8"	6	10'-2"	Str.	
434	3/8"	4	4'-2"	Str.	
424	3/8"	8	24'-4"	Str.	
802	1"	10	50'-2"	Str.	

BAR SUMMARY - ABUTMENT No. 7

2,067 lin. ft. 3/8" @ 0.668 lb./lin. ft. = 1,381 lb.
502 lin. ft. 1" @ 2.670 lb./lin. ft. = 1,340 lb.
Plus 1% for Overrun = 29 lb.
Total = 2,750 lb.

SUMMARY OF QUANTITIES FOR ONE PRESTRESSED GIRDER

Item	Description	1-67'-6"
46	Class 'D' Concrete	10.13 Cu. Yd.
47	Reinforcing Steel (Includes 1% for Overrun)	1120 Lb.
48	Structural Steel (Inc 1/2% for Point)	220 Lbs.
6	1" Exph. Jt. Material (Type I)	1 Sq. Ft.

SUMMARY OF QUANTITIES (CONT.)

Item	Description	Unit	Superstructure
90	Electrical Conduit with Junction Boxes	Lin. Ft.	420
6	1" Exph. Jt. Material (Type I)	Lin. Ft.	30

GENERAL NOTES

ALL WORK SHALL BE DONE ACCORDING TO THE STANDARD SPECIFICATIONS OF THE COLORADO DEPARTMENT OF HIGHWAYS APPLICABLE TO THE PROJECT.

ALL CONCRETE SHALL BE CLASS "A" AND UNLESS OTHERWISE SPECIFIED, SURFACES MARKED WITH THE SYMBOL "S" AS SHOWN ON SHEET NO. 35 SHALL RECEIVE CLASS "S" SURFACE FINISH.

FORMS FOR CONCRETE SURFACES EXPOSED IN THE FINISHED WORK SHALL BE CONSTRUCTED OF SHIP LAP OR TONGUE AND GROOVE LUMBER 5/8" UNLESS FACED WITH PANEL BOARD.

FOUNDATIONS IN ROCK SHALL BE POURED OUT TO ROCK AND NOT FORMED.

FOUNDATIONS AND DEPTH OF FOOTING SHOWN ARE IN ACCORDANCE WITH THE BEST AVAILABLE DATA AND WHEN DIFFERENT CONDITIONS ARE ENCOUNTERED THE BRIDGE ENGINEER WILL INSPECT AND DETERMINE IF REDSIGN IS NECESSARY.

ALL REINFORCING STEEL SHALL CONFORM TO ASTM SPECIFICATION A-305-50T OR THE LATEST REVISION THEREOF, AND SHALL BE INTERMEDIATE GRADE STEEL OF A DEFORMED TYPE. EACH BAR SHALL BE TAGGED WITH THE NUMBER DESIGNATION AND THE STATION NUMBER OF THE PROJECT.

17 DIAMETERS OF THE BAR. DIMENSIONS FOR REINFORCING STEEL NOT SHOWN AS CLEAR SHALL BE TO THE CENTER LINE OF THE BAR.

ALL STRUCTURAL STEEL SHALL BE PAINTED ONE SHOP COAT OF ZINC CHROMATE AND TWO FIELD COATS OF ALUMINUM, UNLESS OTHERWISE NOTED, EXCEPT THE UNEXPOSED PORTION OF STEEL PILING NEED NOT BE PAINTED.

HANDRAIL BOLTS SHALL HAVE CONE HEADS, NUTS, AND LOCK WASHERS UNLESS OTHERWISE SPECIFIED AND ALL RIVETS, EXCEPT AS NOTED ARE 1/2" DIA. AND SHALL BE POWER DRIVEN.

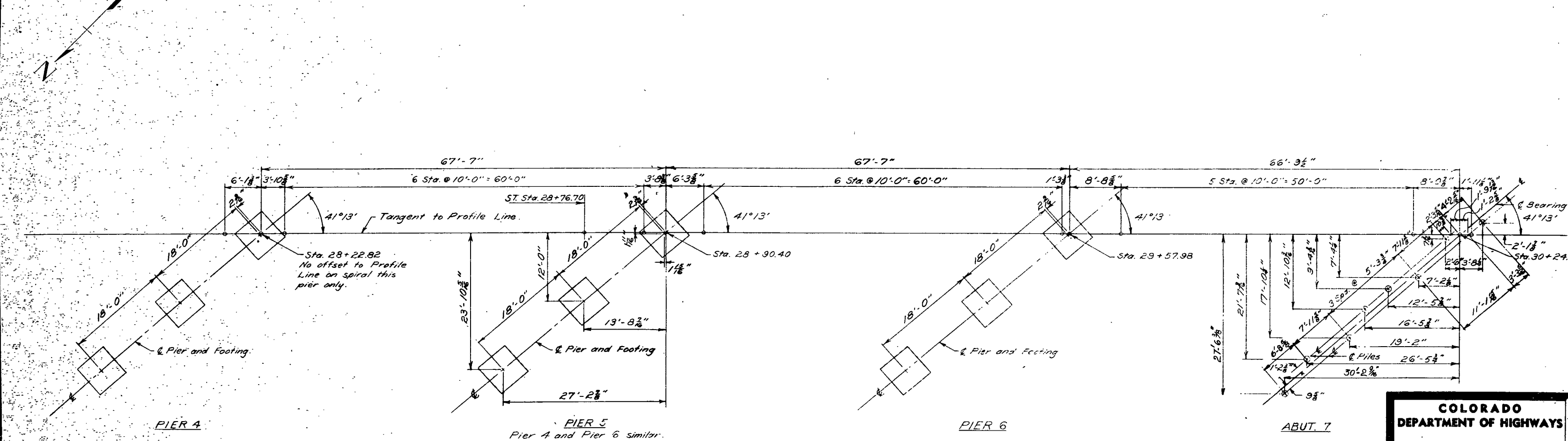
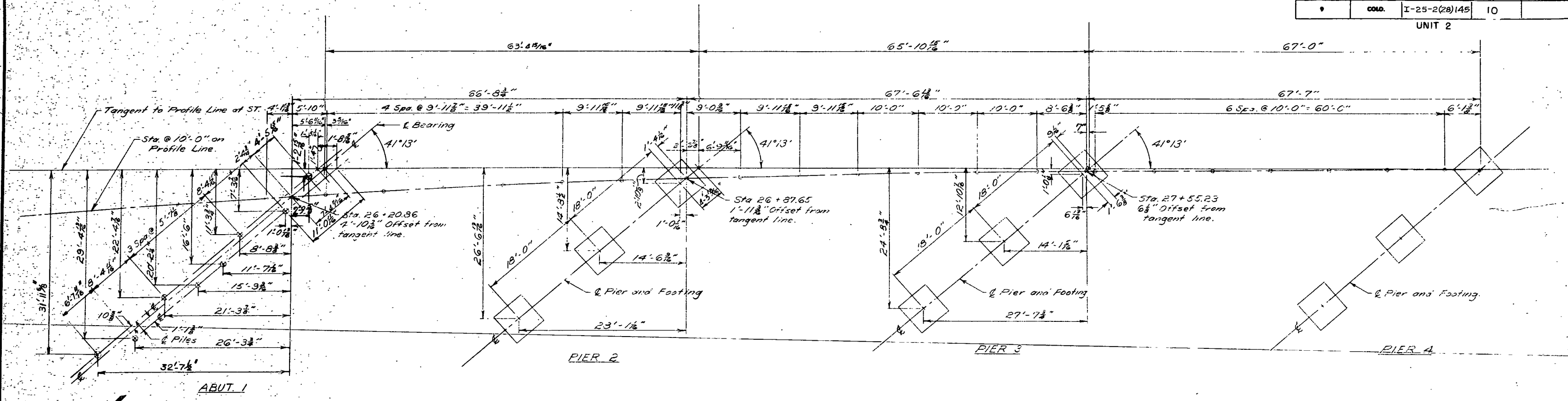
WHEN TREATED TIMBER OR PILING IS SHOWN ON THE DRAWING THE PRESERVATIVE FOR TREATMENT SHALL BE CREOSOTE OIL.

WHEN EXCAVATING FOR FOOTINGS THE FINAL ONE FOOT IN DEPTH SHALL BE DONE BY HAND LABOR METHODS.

IF BY PERMISSION OF THE ENGINEER PRIMARY BARS ARE SPICED, THEY SHALL LAP 24 DIAMETERS FOR BARS NEAR TOP OF BEAMS AND 20 DI

REG. ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.	TOTAL SHEETS
9	COLD.	I-25-2(28)145	10	

UNIT 2



**COLORADO
DEPARTMENT OF HIGHWAYS**

LAYOUT OF PIERS AND FOOTINGS
AND ABUT. PILES

Across Channel Change Monument Cr.
Sta. 26+17.04 to 30+28.27
Near Colo Springs Sec. 18 T.13S. R.66W

Designed by NGM	Approved by a. d. Kourkoff
Made by JLB	Bridge Engineer
Checked by	Date 8/26/41, 19.57

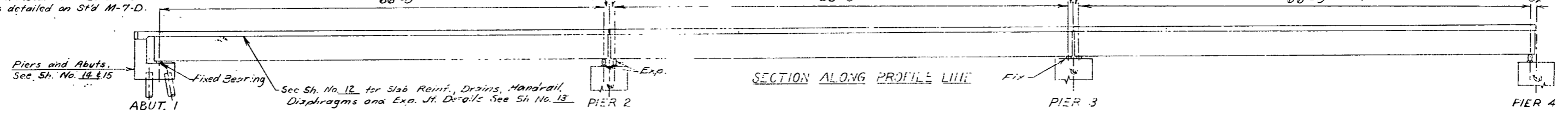
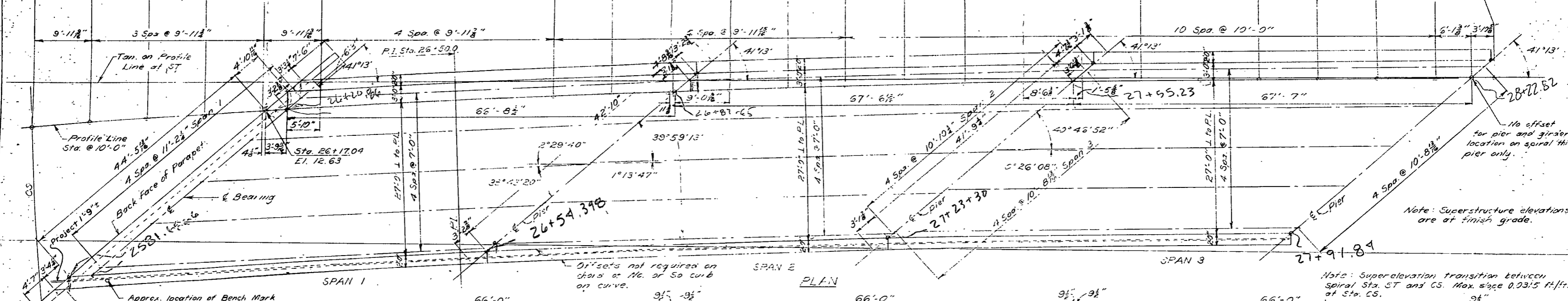
STRUCTURE NO. I-17-DU NORTH BR.

Station	25+83.58	26+17.04	26+20.72	26+20.86	26+55.43	26+57.65	26+91.20	27+23.73	27+55.23	27+58.69	27+91.84	28+22.82	28+26.24
Offset from Tan.	34'-4 1/2"	5'-1 1/2"	1'-10 1/2"	4'-10 1/2"	30'-2 1/2"	1'-11 1/2"	1'-1 1/2"	28'-0 1/2"	6 1/2"	2'-6 1/2"	27'-2 1/2"	1 1/2"	2'-11 1/8"
El. on Profile Line		12.63		12.62		12.61		12.79		12.87		13.15	13.22
El. Sp. Curb			12.71				12.70						13.22
El. No. Curb	11.85					11.81							12.49

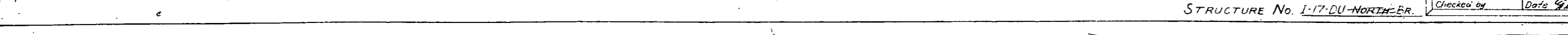
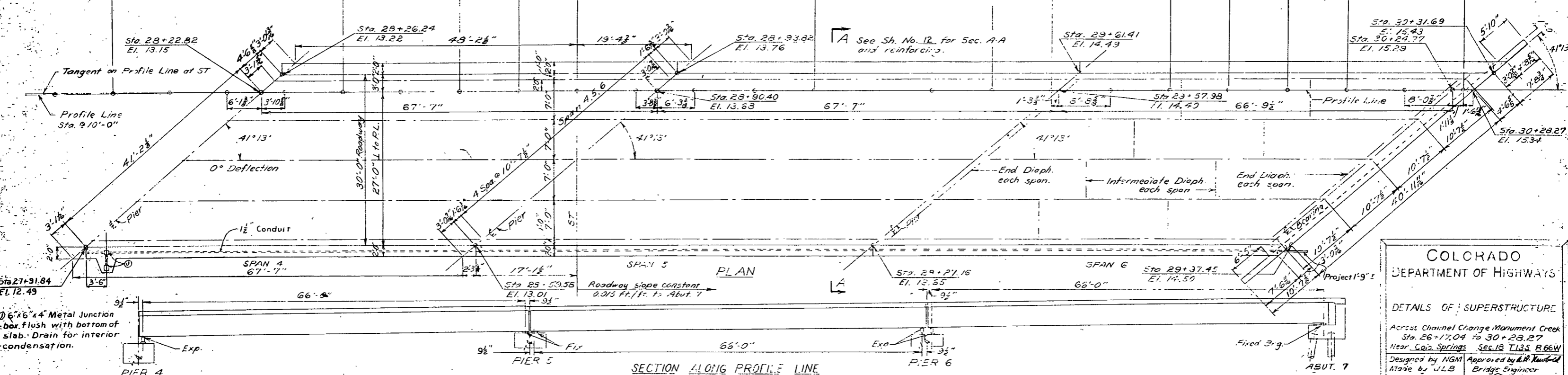
FED. ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	I-25-2(28)145	11	

UNIT 2

CS	25+76.70	25+86.70	25+96.70	26+6.70	26+16.70	26+26.70	26+36.70	26+46.70	26+56.70	26+66.70	26+76.70	26+86.70	26+96.70	27+6.70	27+16.70	27+26.70	27+36.70	27+46.70	27+56.70	27+66.70	27+76.70	27+86.70	27+96.70	28+6.70	28+16.70	28+26.70	Sta. on Profile L.	
Offset to P.L.	7'-10 1/2"	7'-1 1/2"	6'-4 1/2"	5'-8 1/2"	5'-1 1/2"	4'-6 1/2"	4'-0 1/2"	3'-6 1/2"	3'-1 1/2"	2'-8 1/2"	2'-3 1/2"	2'-0"	1'-8 1/2"	1'-5 1/2"	1'-2 1/2"	11 1/2"	9 1/2"	7 1/2"	6 1/2"	4 1/2"	3 1/2"	2 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	13.17
El. on Profile L.	6212.72	12.69	12.67	12.65	12.63	12.61	12.60	12.60	12.60	12.60	12.60	12.61	12.63	12.65	12.67	12.69	12.72	12.76	12.80	12.84	12.88	12.93	12.99	13.04	13.11	13.17	13.17	



Sta. on Profile Line	27+96.70	28+6.70	28+16.70	28+26.70	28+36.70	28+46.70	28+56.70	28+66.70	28+76.70	28+86.70	28+96.70	29+6.70	29+16.70	29+26.70	29+36.70	29+46.70	29+56.70	29+66.70	29+76.70	29+86.70	29+96.70	30+6.70	30+16.70	30+26.70
Offset to P.L.	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
El. on Profile Line	12.99	13.04	13.11	13.17	13.24	13.31	13.39	13.47	13.56	13.65	13.74	13.84	13.94	14.05	14.15	14.27	14.39	14.51	14.63	14.76	14.89	15.03	15.17	15.31



COLORADO DEPARTMENT OF HIGHWAYS

DETAILS OF SUPERSTRUCTURE

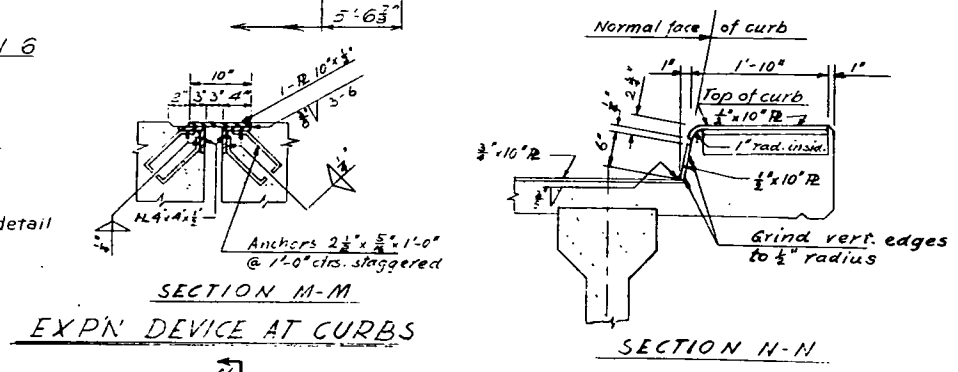
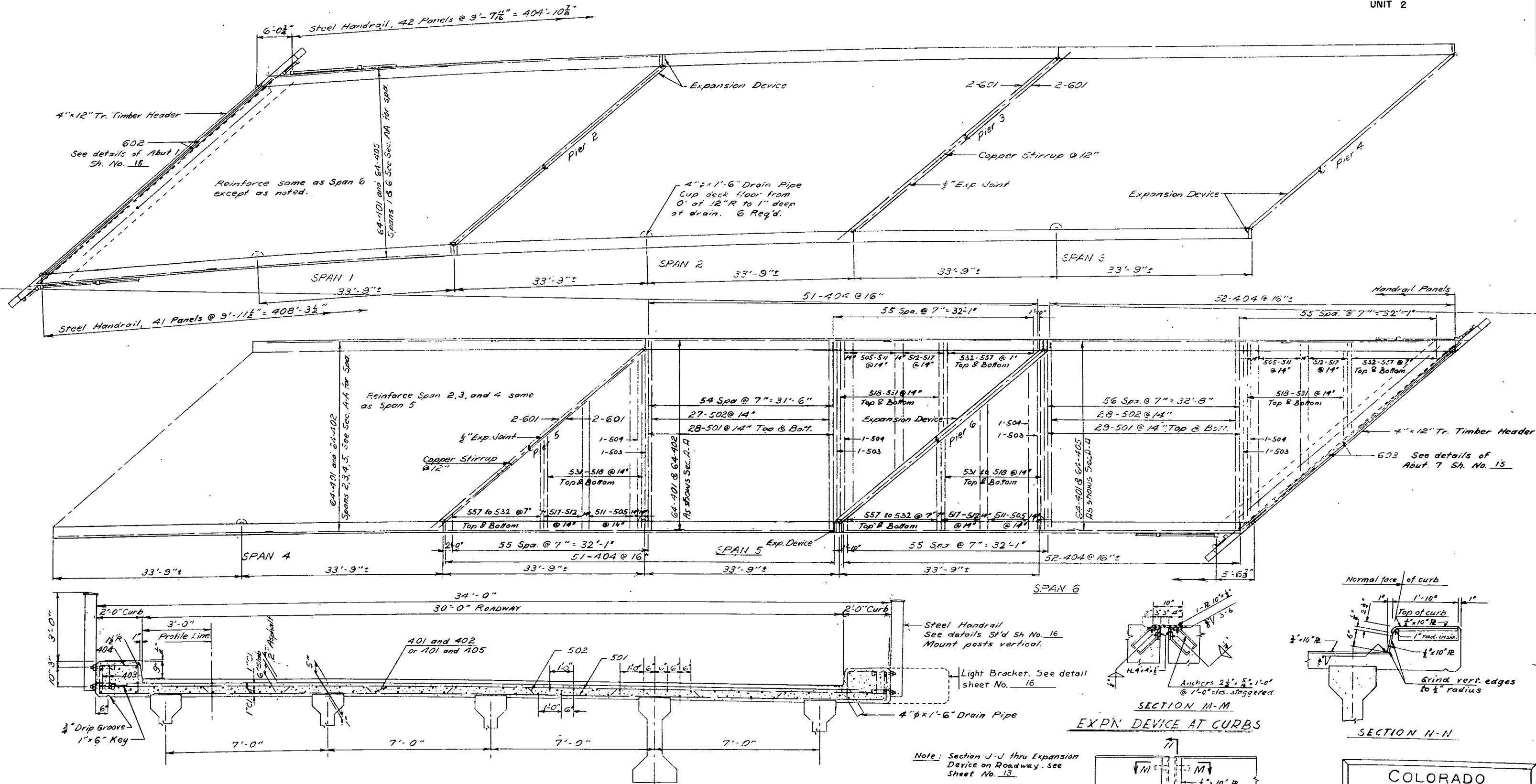
Across Channel Change Monument Creek
Sta. 26+17.04 to 30+28.27
Near Coals Springs Sec. 18 T13S R66W

Designed by NGM Approved by L.P. Kaufman
11/29/56 by J.L.B. Bridge Engineer
Checked by Date 9/16/21/1958

STRUCTURE No. I-17-DU-NORTH-ER.

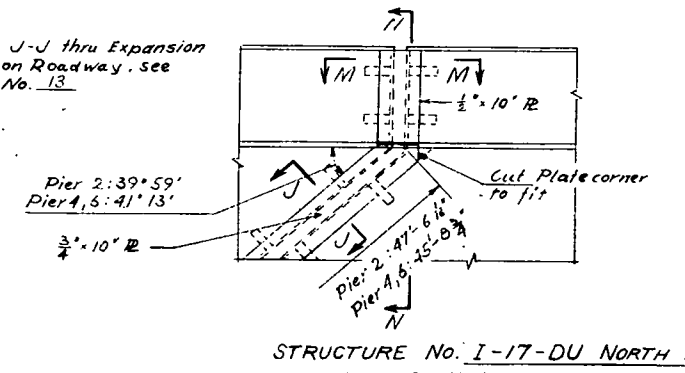
FED. ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	I-25-2(28)145	12	

UNIT 2



SECTION A-A

Note: Section J-J thru Expansion Device on Roadway. See Sheet No. 13



COLORADO DEPARTMENT OF HIGHWAYS

DETAILS OF SUPERSTRUCTURE

Across Channel Change Monument Cr.

Sta. 26+77.04 to 30+28.27

Near Colo. Springs Sec. 12 T13S R6W

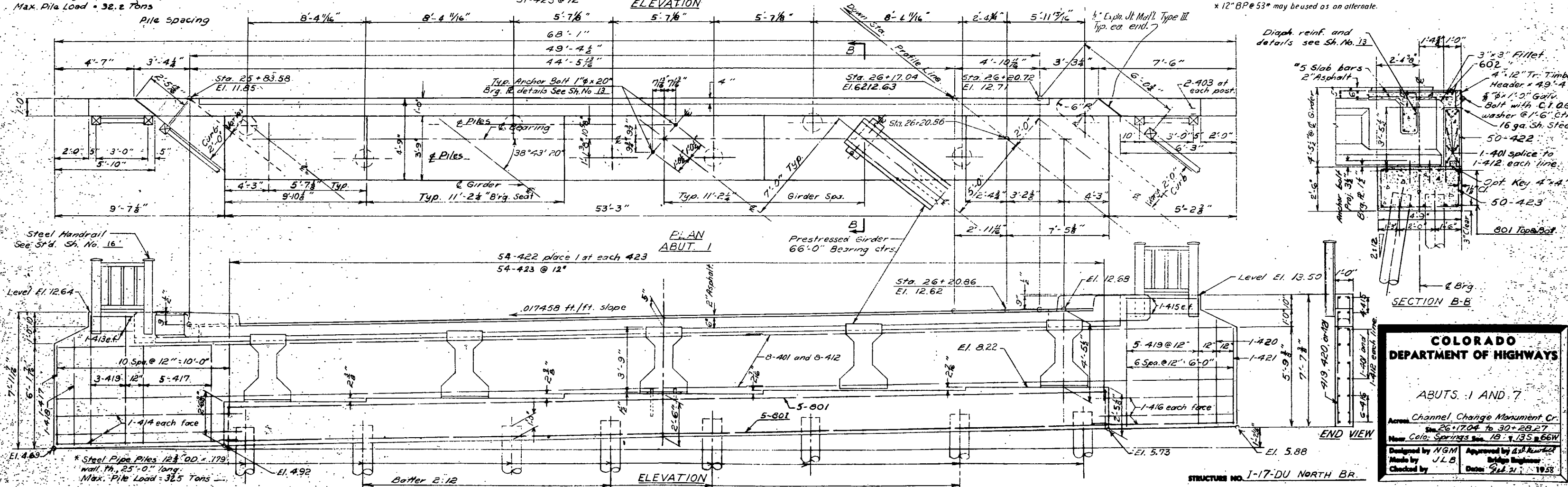
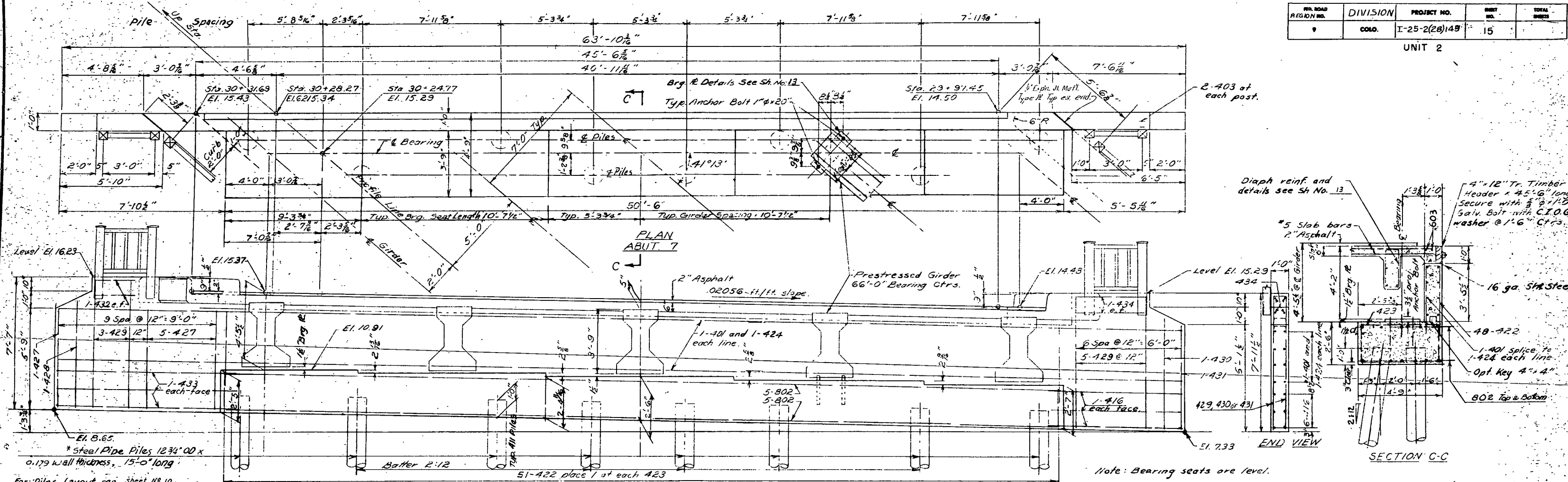
Designed by NGM Approved by J.W.M.

Made by J.L.B. Bridge Engineer

Checked by Datic Feb. 21, 1958

REG. ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	I-25-2(2B)149	15	

UNIT 2



COLORADO DEPARTMENT OF HIGHWAYS

ABUTS. 1 AND 7

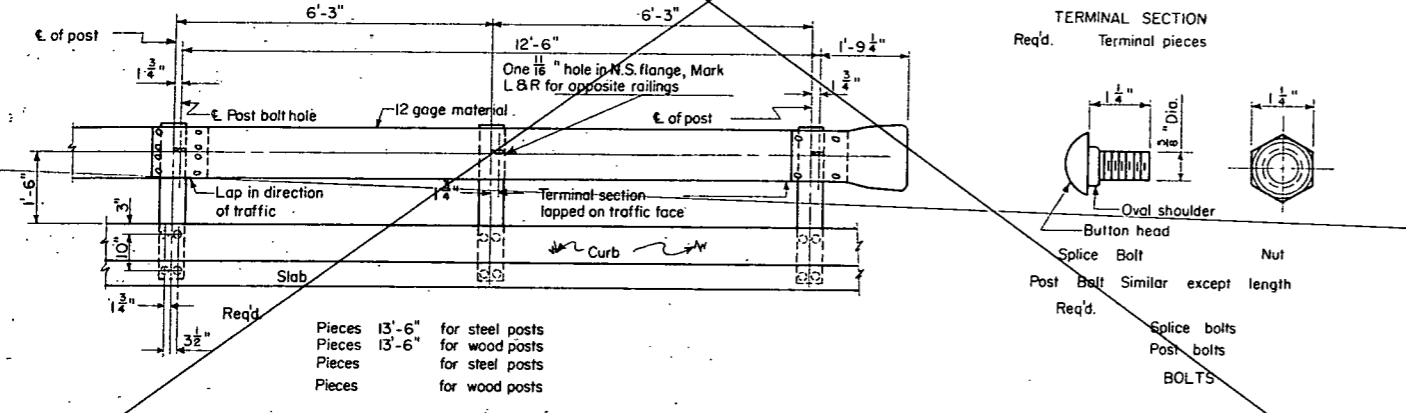
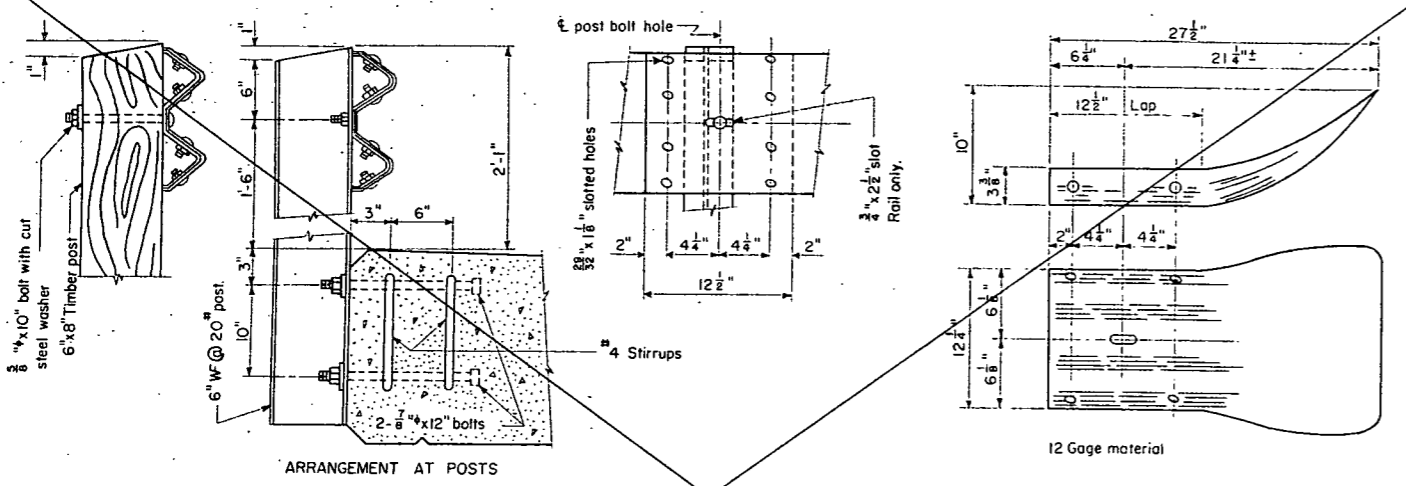
Across Channel Change Monument Cr.
Sta. 26+17.04 to 30+28.27
Near Colo. Springs Sta. 18+435.66W

Designed by NGM
Made by J.L.B.
Checked by

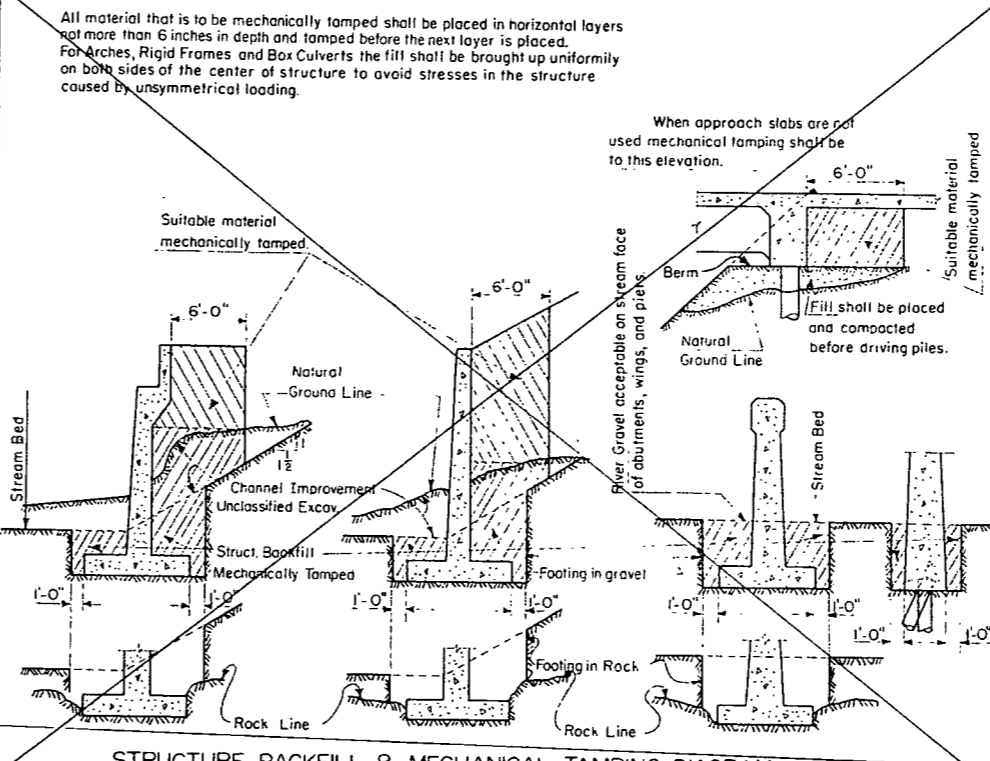
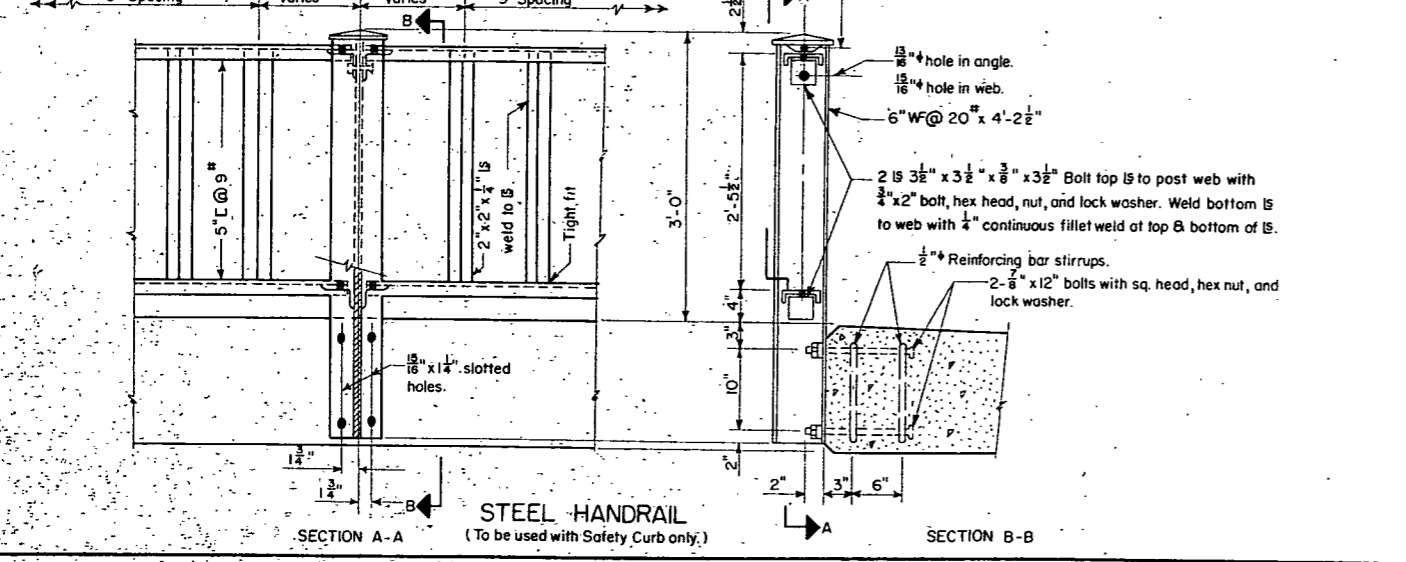
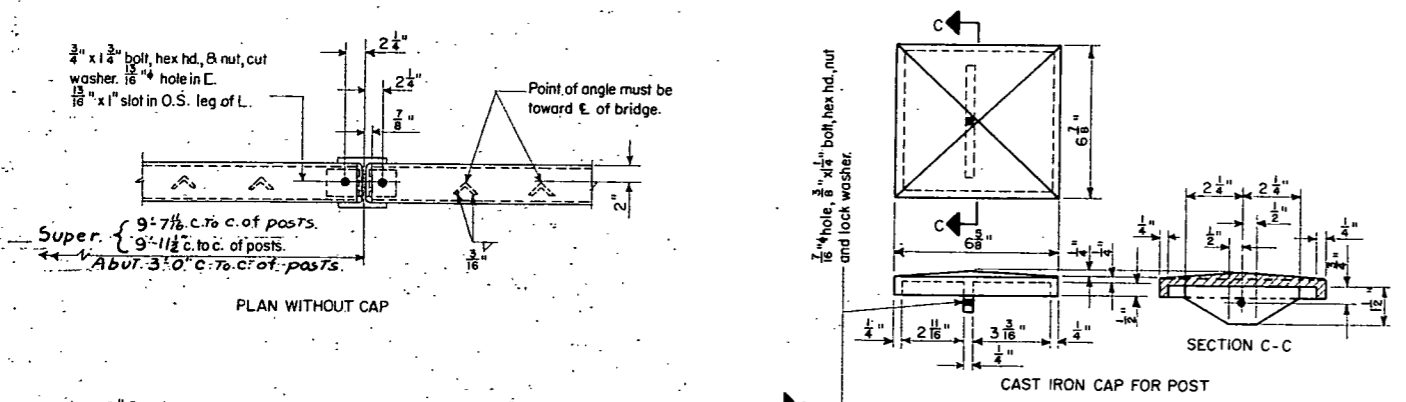
Approved by
Bridge Engineer
Date: Feb. 21, 1958

FED ROAD REGION NO	DIVISION	PROJECT NO.	SHEET NO	TOTAL SHEETS
9	COLO	I-25-2(28)145	16	

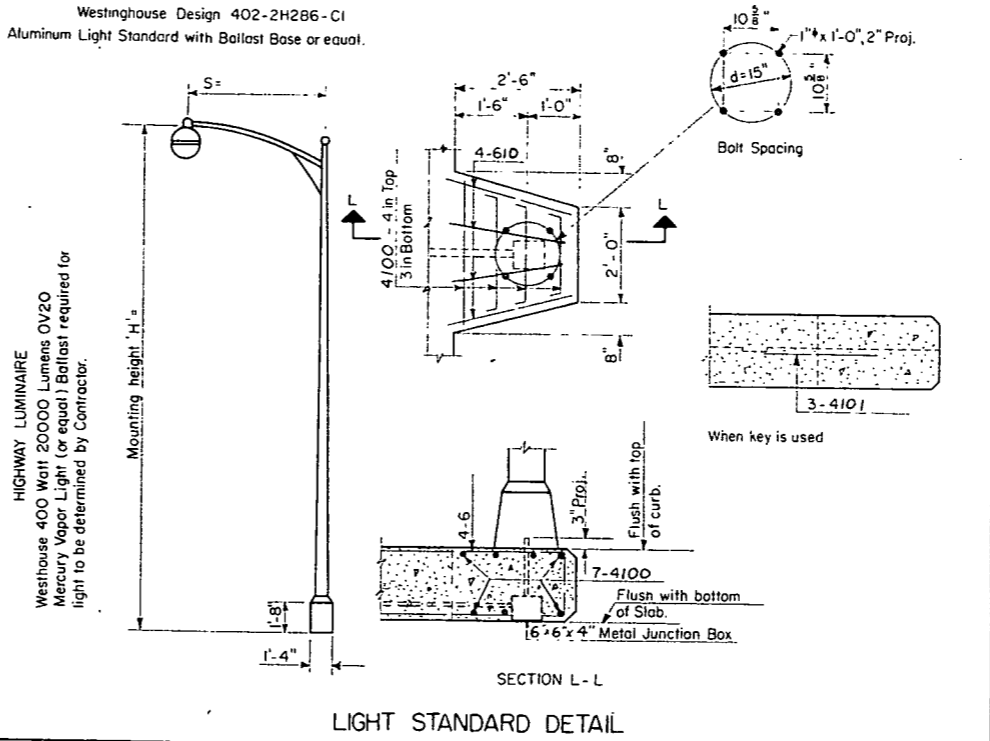
UNIT 2



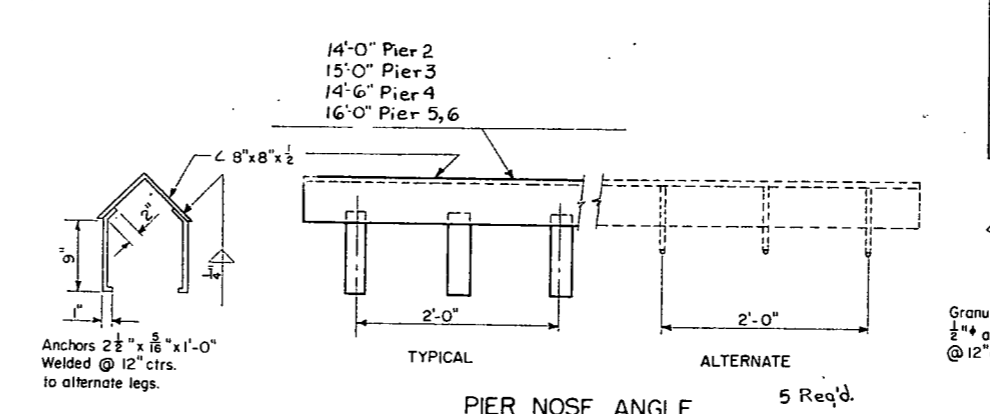
INSTALLATION METAL PLATE GUARD RAIL



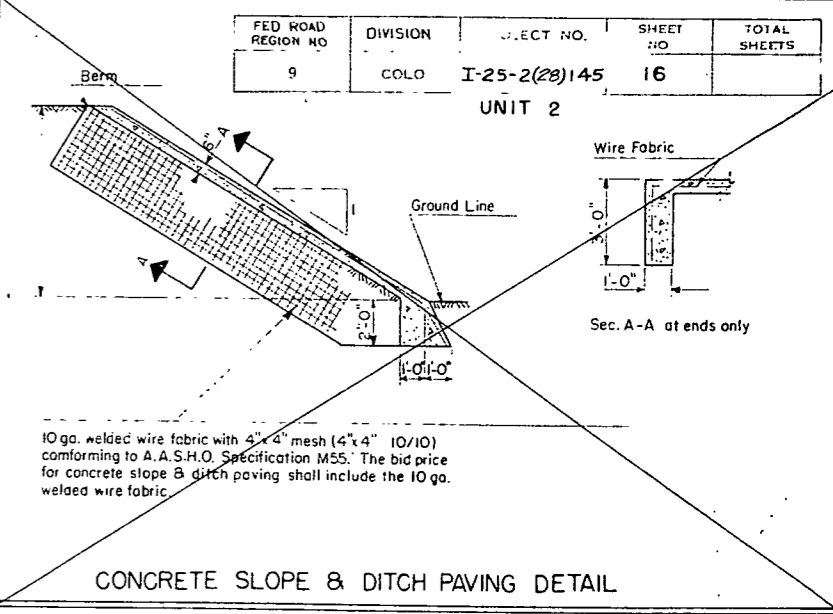
STRUCTURE BACKFILL & MECHANICAL TAMPING DIAGRAM



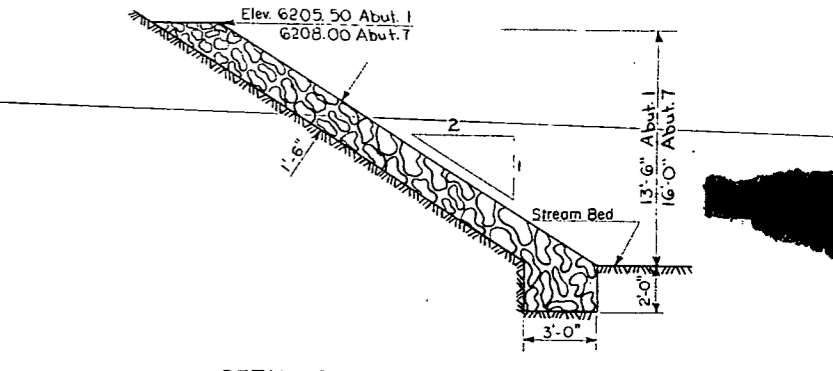
LIGHT STANDARD DETAIL



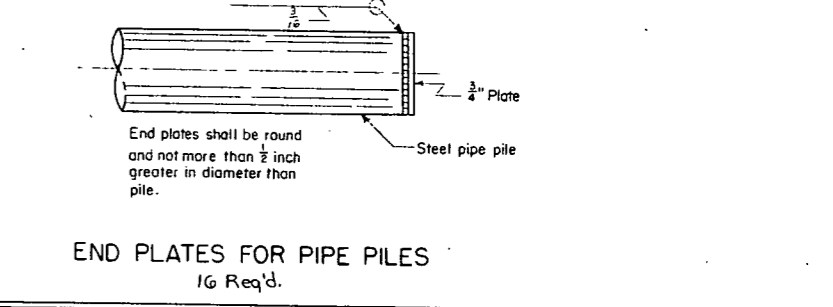
PIER NOSE ANGLE 5 Req'd.



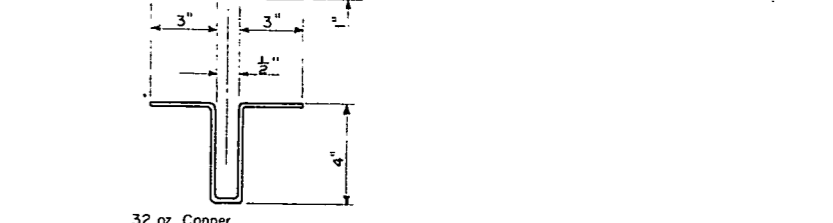
CONCRETE SLOPE & DITCH PAVING DETAIL



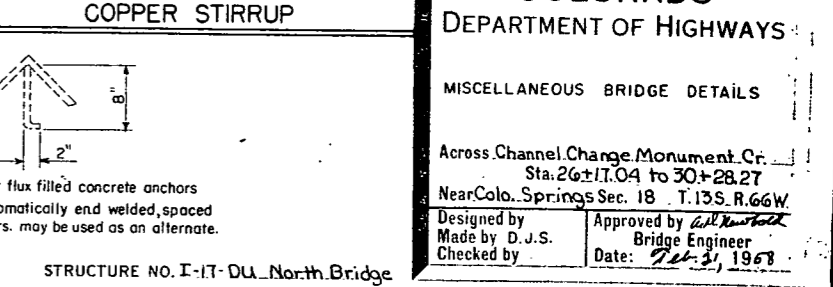
DETAIL OF RIPRAP



END PLATES FOR PIPE PILES 16 Req'd.



COPPER STIRRUP



STRUCTURE NO. I-IT-DU North Bridge

COLORADO
DEPARTMENT OF HIGHWAYS

MISCELLANEOUS BRIDGE DETAILS

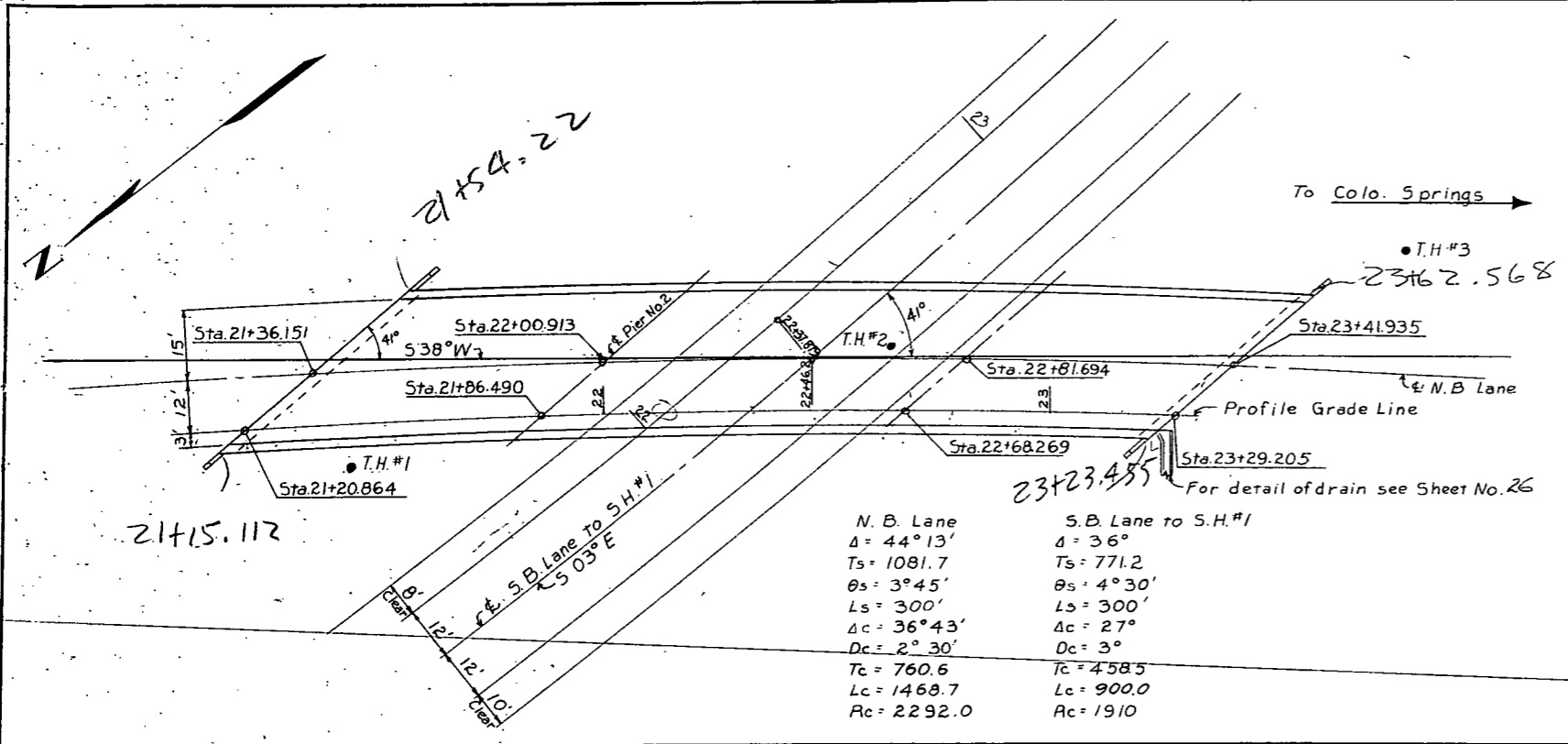
Across Channel Change Monument Cr.
Sta. 26+11.04 to 30+28.27
Near Colo. Springs Sec. 18 T.13S.R.66W

Designed by *[Signature]* Approved by *[Signature]*
Made by D.J.S. Bridge Engineer
Checked by *[Signature]* Date: 7-23-1968

OF HIGHWAYS
 38
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 ADING DATA
 AL NOTES

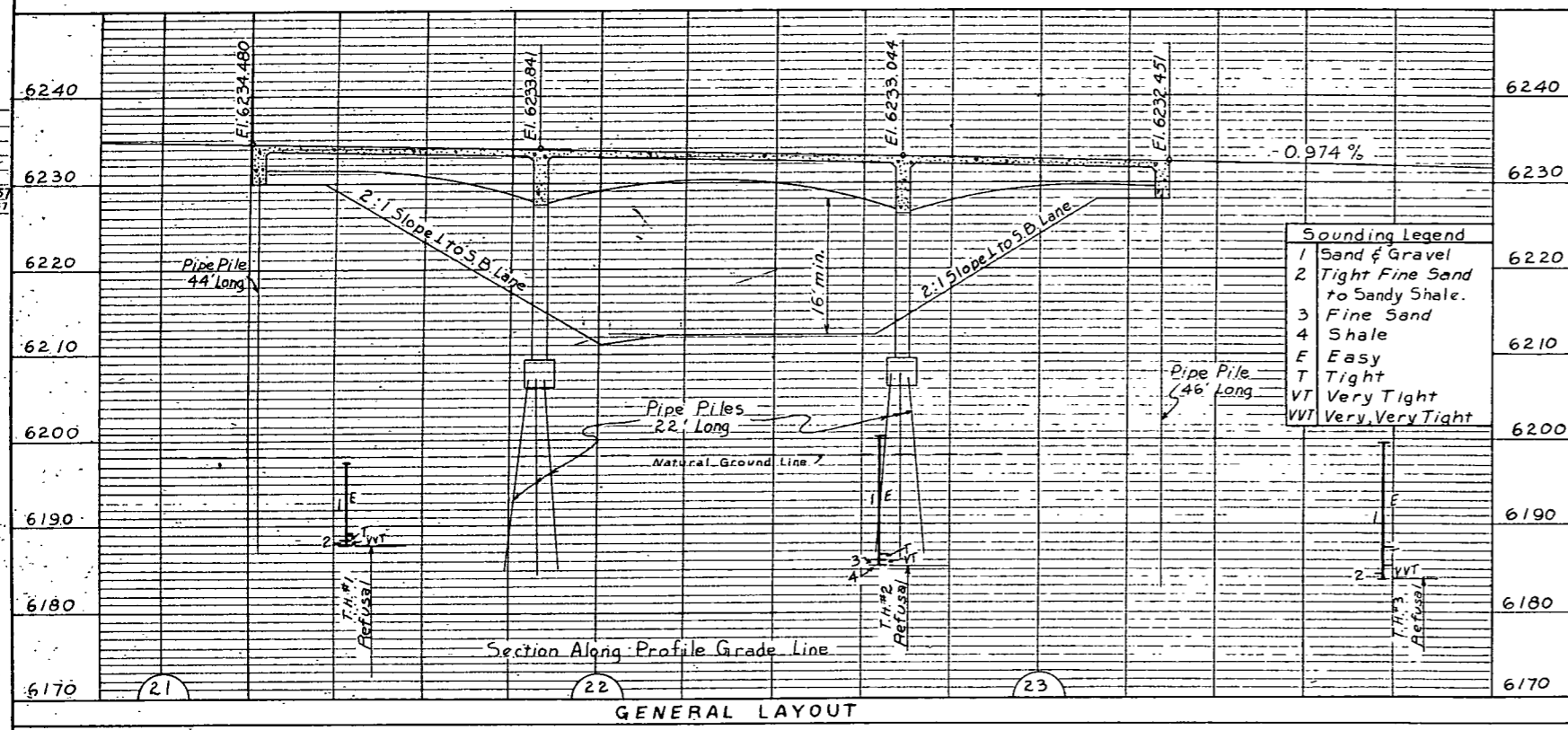
FED. ROAD DIV. NO.	DISTRICT	PROJECT NO.	SHEET NO.	TOTAL SHEETS
	COLO.	I-25-2(28)145	17	

UNIT 2



SUMMARY OF QUANTITIES								
Item	Description	Unit	Super-Structure	Abut. No.1	Pier No.2	Pier No.3	Abut. No.4	Total
14	Unclassified Structural Excavation-Bridges	Cu.Yd.			155	130		285
16	Structure Backfill (Class I)	Cu.Yd.			109	88		197
30	Asphaltic Road Material (RC)	Gal.	70					70
18	Station Yard Overhaul	Sta.Yd.						2200
18	Yard Mile Overhaul	Yd.Mi.						10
42	Treated Bridge Timber	Mft.Bm.		0.184			0.184	0.368
① 46	Class "A" Concrete	Cu.Yd.	348.1	17.8	56	55.5	23.6	501
47	Reinforcing Steel (Inc. 1% overrun)	Lb.	119,315	2,640	8,200	8,000	2,385	140,540
48	Structural Steel (Inc. 1/2% for paint)	Lb.	17,210					17,210
⑤⑥ 61	12" O.D. X 0.179" Steel Pipe Pile	Lin.Ft.		220			230	450
⑤⑥ 61	10 3/4" O.D. X 0.179" Steel Pipe Pile	Lin.Ft.			440	440		880
34	Asphaltic Concrete Pavement (Type B)	Ton	72.6					72.6
④	Drilling Holes to Facilitate Pile Driving	Lin.Ft.		170	170	170	130	640
90	1/2" Electrical Conduit & Junction Boxes	Lin.Ft.	462					462

- ① Includes 7.5 Cu. Yd. for concrete drain on Abut. No. 4
- ② 14.0 Cu. Yd. Class "A" Concrete required to fill steel pipe piles shall be included in the bid price of the steel pipe piling.
- ③ 20.0 Cu. Yd. Class "A" Concrete required to fill steel pipe piles shall be included in the bid price of the steel pipe piling.
- ④ To be included in the Bid Price for Item 61.
- ⑤ 12" BP @ 53" may be used as an alternate at option of the Contractor.
- ⑥ 10" BP @ 42" may be used as an alternate at option of the Contractor.



GENERAL NOTES

ALL WORK SHALL BE DONE ACCORDING TO THE STANDARD SPECIFICATIONS OF THE COLORADO DEPARTMENT OF HIGHWAYS APPLICABLE TO THE PROJECT.

ALL CONCRETE SHALL BE CLASS "A" AND AIR ENTRAINMENT AS SPECIFIED.

SURFACES MARKED WITH THE SYMBOL "F" AS SHOWN ON SHEET NO. 25 SHALL RECEIVE CLASS I SURFACE FINISH.

CONCRETE GIRDERS AND FLOOR SLAB SHALL BE POURED MONOLITHICALLY.

FORMS FOR CONCRETE SURFACES EXPOSED IN THE FINISHED WORK SHALL BE CONSTRUCTED OF SHIP LAP OR TONGUE AND GROOVE LUMBER 3/4" UNLESS FACED WITH PANEL BOARD.

FOOTINGS IN ROCK SHALL BE POURED OUT TO ROCK AND NOT FORMED.

SOUNDINGS AND DEPTH OF FOOTING SHOWN ARE IN ACCORDANCE WITH THE BEST AVAILABLE DATA AND WHEN DIFFERENT CONDITIONS ARE ENCOUNTERED THE BRIDGE ENGINEER WILL INSPECT AND DETERMINE IF REDSIGN IS NECESSARY.

ALL REINFORCING STEEL SHALL CONFORM TO ASTM SPECIFICATION A 305-50T OR THE LATEST REVISION THEREOF, AND SHALL BE INTERMEDIATE GRADE STEEL OF A DEFORMED TYPE. EACH BAR SHALL BE TAGGED WITH THE NUMBER DESIGNATION AND THE STATION NUMBER OF THE PROJECT.

SECONDARY BARS WHEN SPLICED SHALL LAP 17 DIAMETERS OF THE BAR. DIMENSIONS FOR REINFORCING STEEL NOT SHOWN AS CLEAR SHALL BE TO THE CENTER LINE OF THE BAR.

ALL STRUCTURAL STEEL SHALL BE PAINTED ONE SHOP COAT OF ZINC CHROMATE AND TWO FIELD COATS OF ALUMINUM, UNLESS OTHERWISE NOTED, EXCEPT THE UNEXPOSED PORTION OF STEEL PILING NEED NOT BE PAINTED.

HANDRAIL BOLTS SHALL HAVE HEX HEADS, NUTS, AND LOCK WASHERS UNLESS OTHERWISE SPECIFIED AND ALL RIVETS, EXCEPT AS NOTED ARE 1/2" DIA. AND SHALL BE POWER DRIVEN.

WHEN TREATED TIMBER OR PILING IS SHOWN ON THE DRAWING THE PRESERVATIVE FOR TREATMENT SHALL BE CREOSOTE OIL.

WHEN EXCAVATING FOR FOOTINGS THE FINAL ONE FOOT IN DEPTH SHALL BE DONE BY HAND LABOR METHODS.

IF BY PERMISSION OF THE ENGINEER PRIMARY BARS ARE SPLICED THEY SHALL LAP 28 DIAMETERS FOR BARS NEAR TOP OF BEAMS AND GIRDERS HAVING MORE THAN 12 INCHES OF CONCRETE UNDER THE BARS AND 17 DIAMETERS FOR BARS NEAR BOTTOM OF MEMBERS.

GIRDER SHORING SHALL REMAIN IN PLACE FULL LENGTH UNTIL ALL GIRDER POURS HAVE REACHED A MINIMUM STRENGTH OF 2500 P.S.I.

FOR DETAILS OF STRUCTURAL EXCAVATION AND STRUCTURE BACKFILL SEE STD. H-60-B.

LOADING DATA (INTERSTATE ALTERNATE)

LIVE LOAD = A.A.S.H.O. **NEO-510-44**

DEAD LOAD ASSUMES 15 LBS. PER SQ. FT. ADDITIONAL WEARING SURFACE WHICH INCLUDES THE 1/2" INCH CONCRETE MONOLITHIC WEARING SURFACE SHOWN.

DESIGNING DATA

A.A.S.H.O. 1953 UNIT STRESSES, EXCEPT AS NOTED.

Reinforcing Steel $f_s = 20000$ lbs. per sq. in.

Structural Steel $f_s = 18000$ lbs. per sq. in.

$n = 10$

COLORADO DEPARTMENT OF HIGHWAYS

3 SPAN (61'-81'-61') CONTINUOUS CONCRETE SLAB & GIRDER BRIDGE

30' ROADWAY, GENERAL LAYOUT, GENERAL NOTES & QUANTITIES.

North Bound across South Bound.
 Sta. 21+20.86 to 23+29.20

Near Colo. Springs Sec. 18 T.13 S. R.66W

Designed by _____
 Made by _____
 Checked by _____

Approved by *Ed. Kuntz*
 Bridge Engineer
 Date: Feb. 21, 1958

STRUCTURE NO. I-17-DS

BAR LIST ~ SUPERSTRUCTURE

Table with columns: MARK, SIZE, No. REQD., LENGTH, TYPE, DIMENSIONS (L, M). Rows 401-522.

BAR LIST ~ SUPERSTRUCTURE (CONT.)

Table with columns: MARK, SIZE, No. REQD., LENGTH, TYPE, DIMENSIONS (L, M). Rows 523-639.

BAR LIST ~ SUPERSTRUCTURE (CONT.)

Table with columns: MARK, SIZE, No. REQD., LENGTH, TYPE, DIMENSIONS (L, M). Rows 640-717.

BAR LIST ~ SUPERSTRUCTURE (CONT.)

Table with columns: MARK, SIZE, No. REQD., LENGTH, TYPE, DIMENSIONS (L, M). Rows 718-801.

BAR LIST ~ ABUT. No. 1 (CONT.)

Table with columns: MARK, SIZE, No. REQD., LENGTH, TYPE, DIMENSIONS (L, M). Rows 802-901.

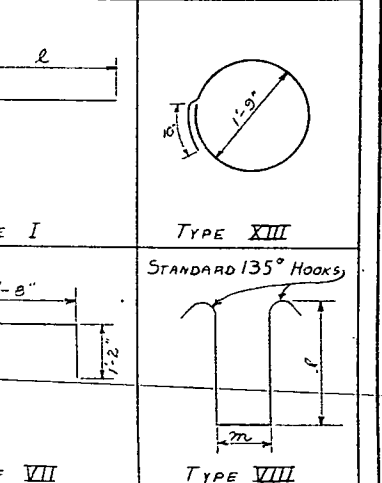
BAR LIST ~ ABUT. No. 4

Table with columns: MARK, SIZE, No. REQD., LENGTH, TYPE, DIMENSIONS (L, M). Rows 902-1001.

BAR SUMMARY ~ ABUT. No. 4

802 Lin. Ft. 1/2" @ 0.668"/Lin. Ft. = 536 LBS.
90 Lin. Ft. 3/4" @ 1.502"/Lin. Ft. = 135 LBS.
418 Lin. Ft. 1" @ 2.044"/Lin. Ft. = 854 LBS.
314 Lin. Ft. 1" @ 2.67"/Lin. Ft. = 838 LBS.
Plus 1% Overrun = 22 LBS.
TOTAL = 2385 LBS.

BAR BENDING DIAGRAMS *



BAR SUMMARY ~ ABUT. No. 1

879 Lin. Ft. 1/2" @ 0.668"/Lin. Ft. = 587 LBS.
90 Lin. Ft. 3/4" @ 1.502"/Lin. Ft. = 135 LBS.
464 Lin. Ft. 1" @ 2.044"/Lin. Ft. = 948 LBS.
352 Lin. Ft. 1" @ 2.67"/Lin. Ft. = 940 LBS.
Plus 1% Overrun = 30 LBS.
TOTAL = 2640 LBS.

BAR LIST ~ PIER No. 2

Table with columns: MARK, SIZE, No. REQD., LENGTH, TYPE, DIMENSIONS (L, M). Rows 1002-1118.

BAR SUMMARY ~ SUPERSTRUCTURE

22,255 Lin. Ft. 1/2" @ 0.668"/Lin. Ft. = 14,866 LBS.
13,707 Lin. Ft. 3/4" @ 1.043"/Lin. Ft. = 14,296 LBS.
7,295 Lin. Ft. 1" @ 1.502"/Lin. Ft. = 10,959 LBS.
192 Lin. Ft. 1" @ 2.67"/Lin. Ft. = 513 LBS.
14,587 Lin. Ft. 1" @ 5.313"/Lin. Ft. = 77,500 LBS.
Plus 1% Overrun = 1,181 LBS.
TOTAL = 119,315 LBS.

BAR SUMMARY ~ PIER No. 2

889 Lin. Ft. 1/2" @ 0.668"/Lin. Ft. = 594 LBS.
1117 Lin. Ft. 1" @ 2.67"/Lin. Ft. = 2982 LBS.
1036 Lin. Ft. 1" @ 3.4"/Lin. Ft. = 3522 LBS.
192 Lin. Ft. 1" @ 5.313"/Lin. Ft. = 1020 LBS.
Plus 1% Overrun = 82 LBS.
TOTAL = 8200 LBS.

BAR LIST ~ ABUT. No. 1

Table with columns: MARK, SIZE, No. REQD., LENGTH, TYPE, DIMENSIONS (L, M). Rows 1119-1201.

BAR LIST ~ PIER No. 3

Table with columns: MARK, SIZE, No. REQD., LENGTH, TYPE, DIMENSIONS (L, M). Rows 1202-1301.

BAR SUMMARY ~ PIER No. 3

664 Lin. Ft. 1/2" @ 0.668"/Lin. Ft. = 577 LBS.
1110 Lin. Ft. 1" @ 2.67"/Lin. Ft. = 2964 LBS.
988 Lin. Ft. 1" @ 3.4"/Lin. Ft. = 3359 LBS.
192 Lin. Ft. 1" @ 5.313"/Lin. Ft. = 1020 LBS.
Plus 1% Overrun = 80 LBS.
TOTAL = 6000 LBS.

BAR SUMMARY ~ PIER No. 3

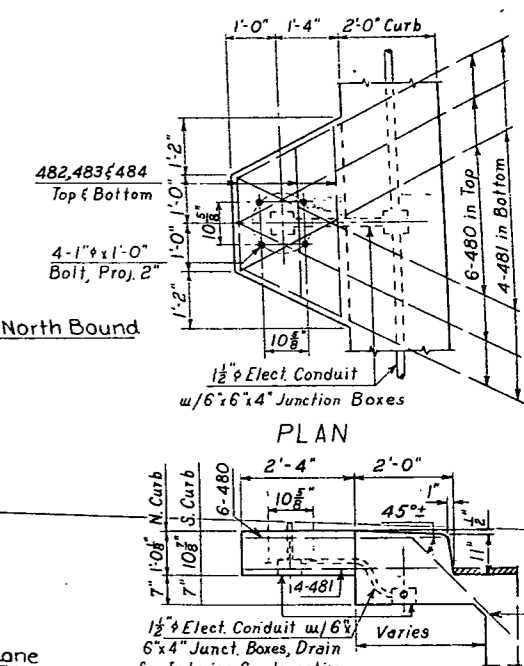
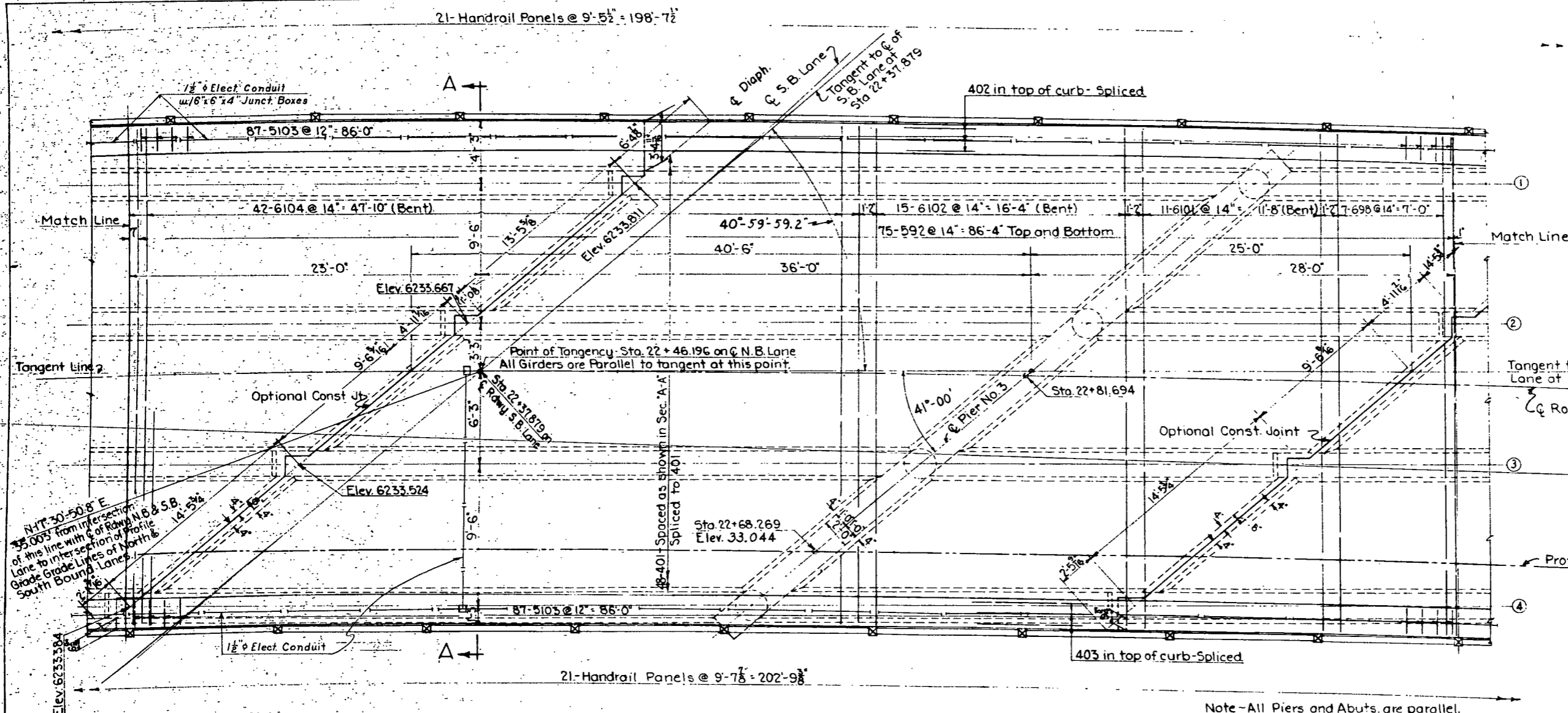
664 Lin. Ft. 1/2" @ 0.668"/Lin. Ft. = 577 LBS.
1110 Lin. Ft. 1" @ 2.67"/Lin. Ft. = 2964 LBS.
988 Lin. Ft. 1" @ 3.4"/Lin. Ft. = 3359 LBS.
192 Lin. Ft. 1" @ 5.313"/Lin. Ft. = 1020 LBS.
Plus 1% Overrun = 80 LBS.
TOTAL = 6000 LBS.

COLORADO DEPARTMENT OF HIGHWAYS

BAR LIST, BAR SUMMARY, & BAR BENDING DIAGRAMS
North Bound Across South Bound
Sta. 21+20.00 to 23+29.20
Near Colo. Seams Sec. 18, T. 13 S. R. 66 W.
Designed by GHW Approved by TGB
Made by TGB Bridge Engineer
Checked by Date: Feb 21, 1958

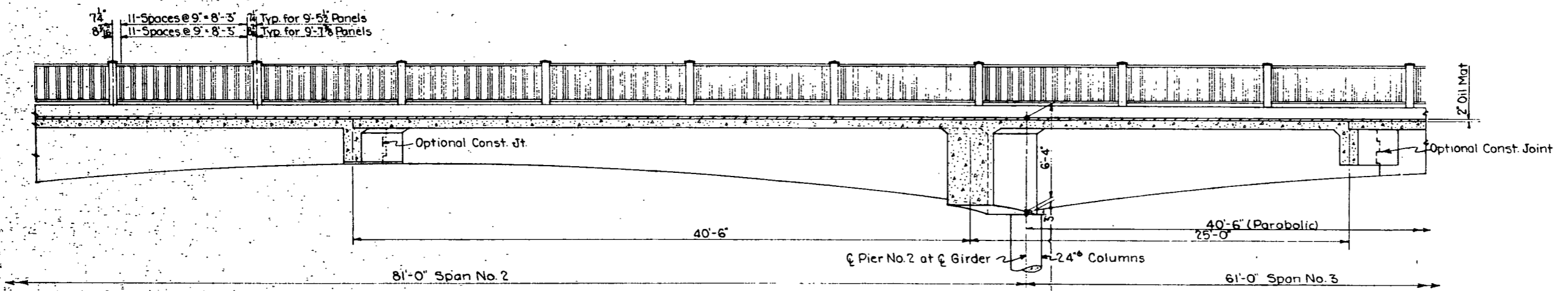
Federal Road Division No.	State	Project No.	Sheet No.	Total Sheets
9	Colo.	I-25-2(28)145	20	

UNIT 2



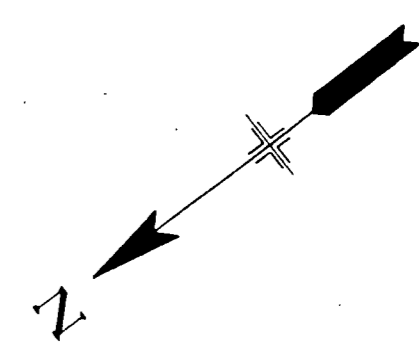
Note - All Piers and Abuts. are parallel.

PART PLAN OF SPANS NO. 2 AND NO. 3



3	4	5	6	7	8	9	0	1	2	3	4	Point
3'-8 1/8"	3'-4 1/2"	3'-3"	3'-4 1/2"	3'-8 1/8"	4'-4 1/2"	5'-2 1/8"	6'-4"	5'-5 1/8"	4'-9 1/8"	4'-2 1/8"	3'-8 1/8"	From top of oil mat to bottom of girder
.025	.036	.042	.036	.025	.012	.002	0.0	.001	.006	.015	.026	Camber for dead load, in feet

SECTION ALONG TANGENT LINE



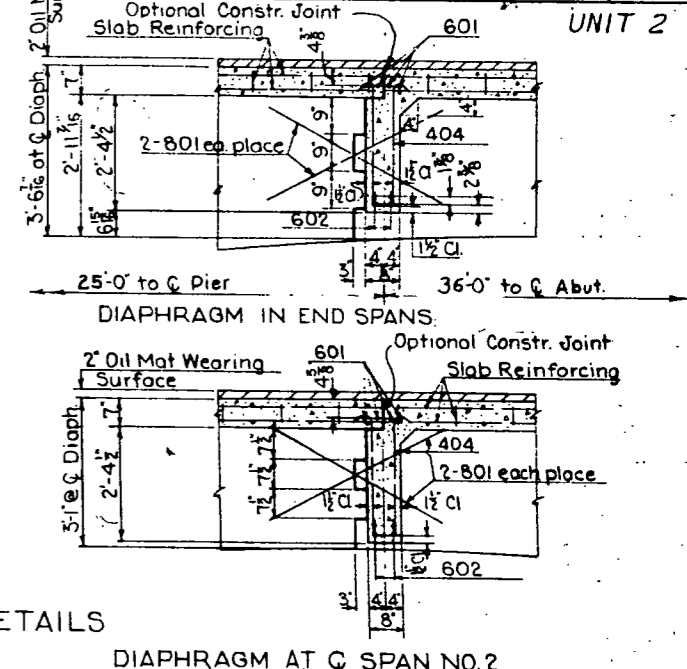
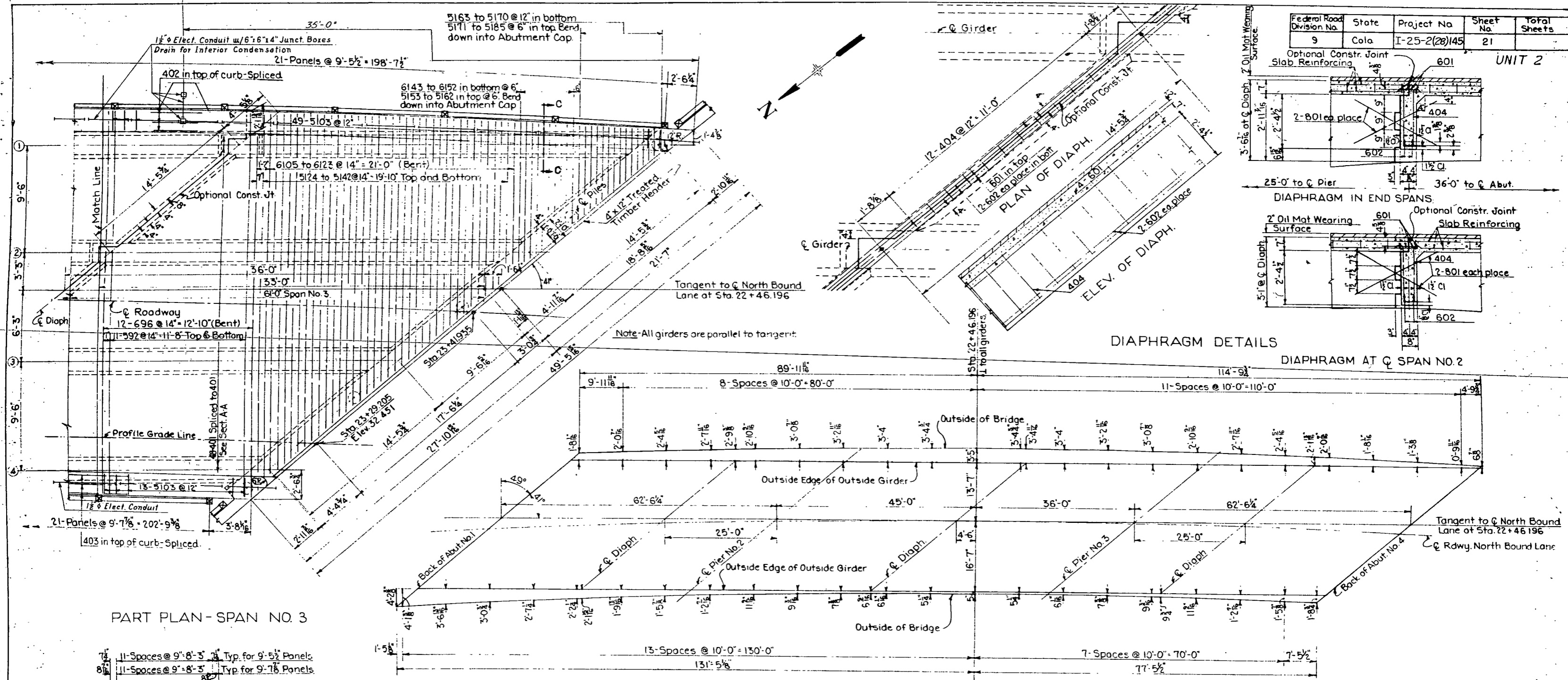
COLORADO DEPARTMENT OF HIGHWAYS

PART PLAN AND ELEVATION OF SPANS 2 & 3 - SUPERSTRUCTURE Across North Bound across South Bound Sta. 21+20.86 to Sta. 23+29.20 Near Colo Springs, Sec. 18 T. 135 R. 66W

Designed By 6/11/54 Approved By B. D. E.
 Made By B. D. E. Bridge Engineer
 Checked By Date Feb. 24, 1958

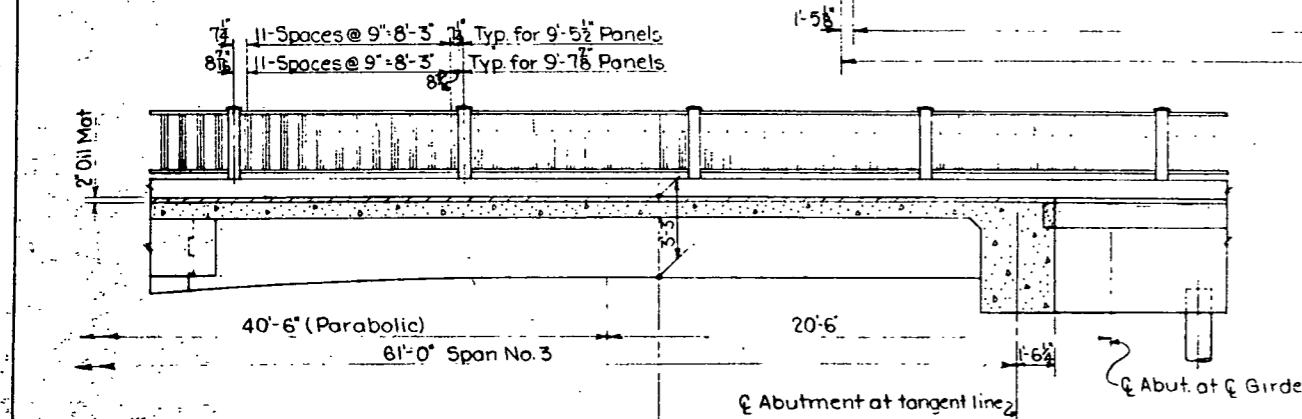
Federal Road Division No.	State	Project No.	Sheet No.	Total Sheets
9	Colo.	I-25-2(28)145	21	

UNIT 2



DIAPHRAGM DETAILS
DIAPHRAGM AT Q SPAN NO. 2

PART PLAN - SPAN NO. 3



SECTION ALONG TANGENT LINE

DIAGRAM SHOWING CURB OFFSETS

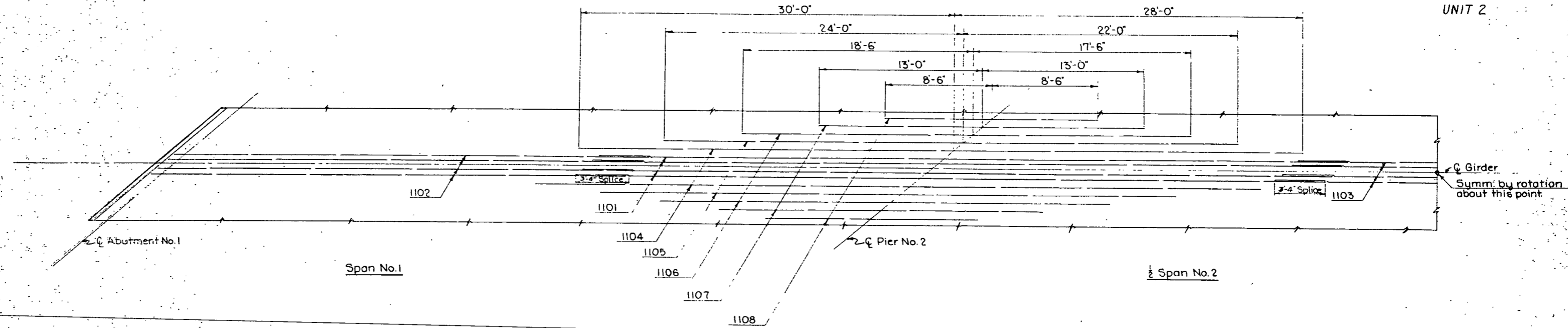
3	4	5	6	7	8	9	Point
3'-8 1/8	3'-5 1/4	3'-3 3/8	3'-3	3'-3	3'-3	3'-3	From top of Oil Mat to bottom of girder.
.015	.026	.037	.041	.039	.031	.017	Camber for dead load, in feet.

COLORADO DEPARTMENT OF HIGHWAYS
PART PLAN AND ELEV. OF SPAN NO. 3 - DETAILS OF DIAPHS & CURB OFFSETS.
Across North Bound across South B.
Sta. 21+20.86 to Sta. 23+29.20
Near Colo. Springs Sec. 18 T13S R. 66W
Designed By G.H.W. Approved By [Signature]
Made By B.D.E. Bridge Engineer
Checked By [Signature] Date Feb 21, 1959

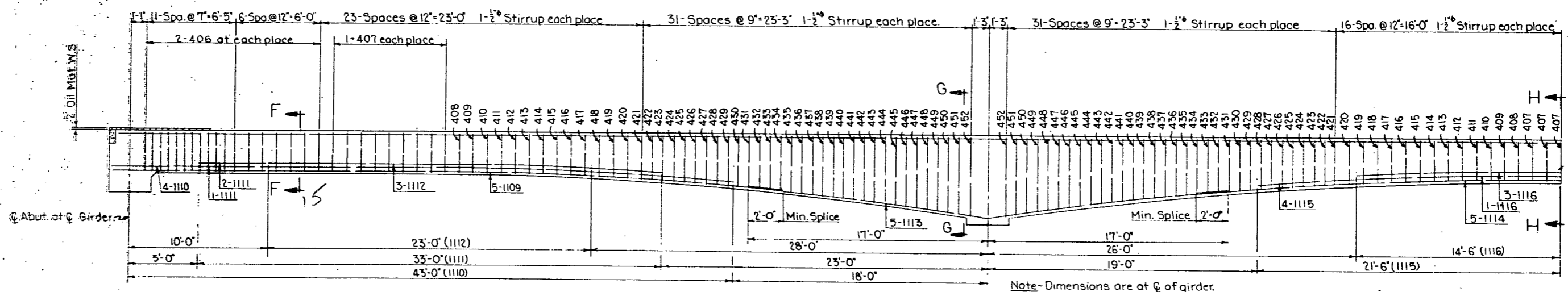
Structure No. I-17-DS

FED. ROAD DIST. NO.	DISTRICT	PROJECT NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	I-25-2(28)145	23	

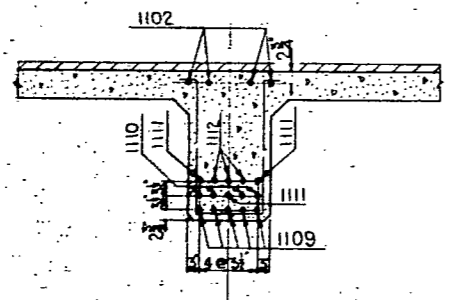
UNIT 2



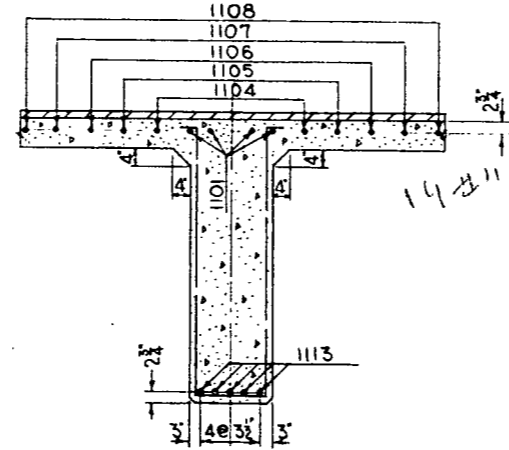
PLAN AT GIRDER
(Top Reinforcing Steel in Slab Shown. See Section A-A)



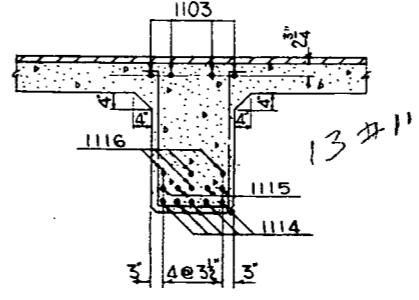
ELEVATION OF GIRDER-SPAN NO. 1 & 1/2 SPAN NO. 2



SECTION F-F



SECTION G-G



SECTION H-H

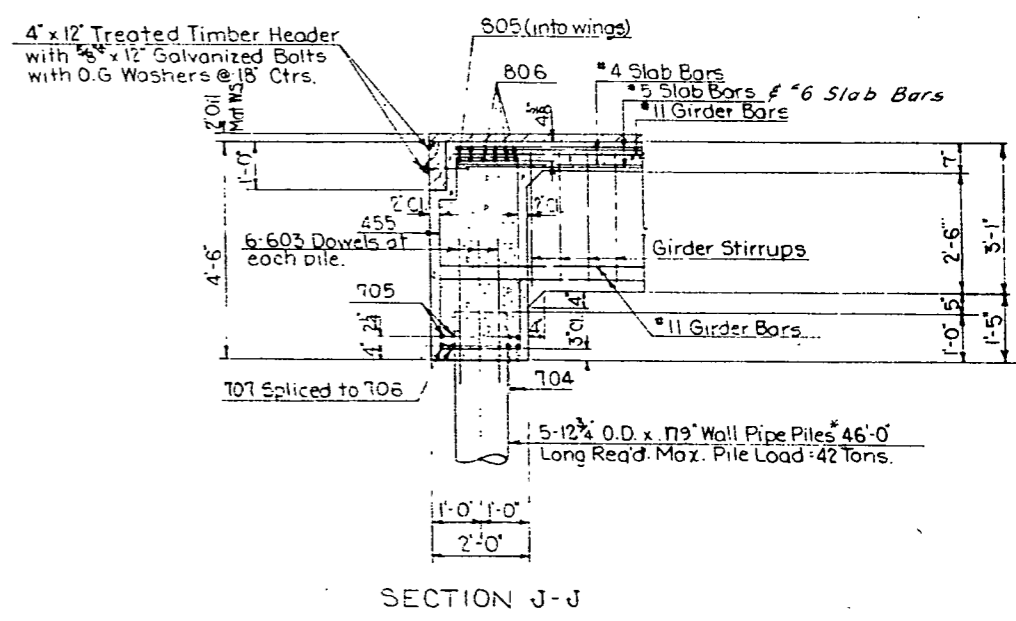
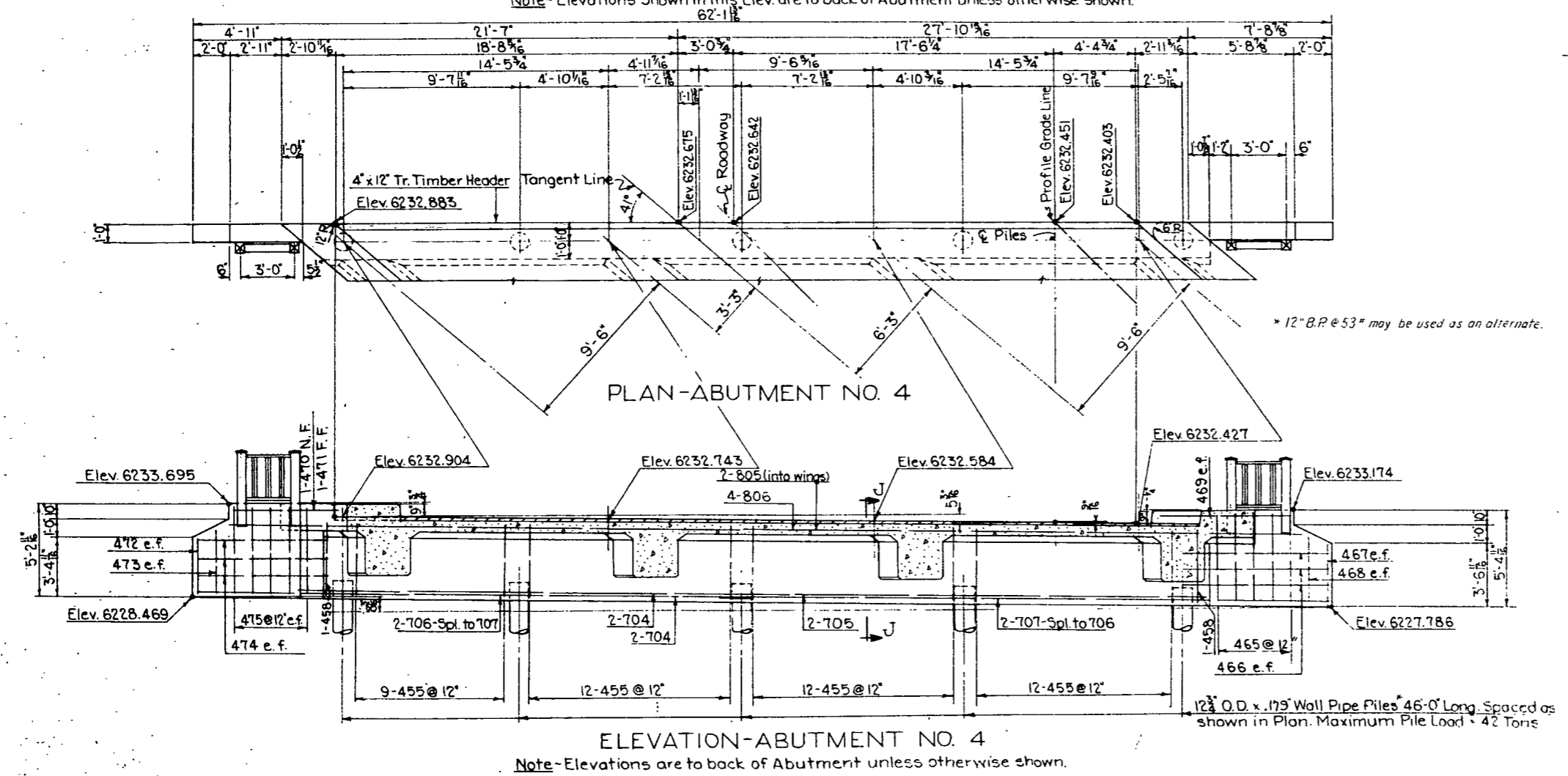
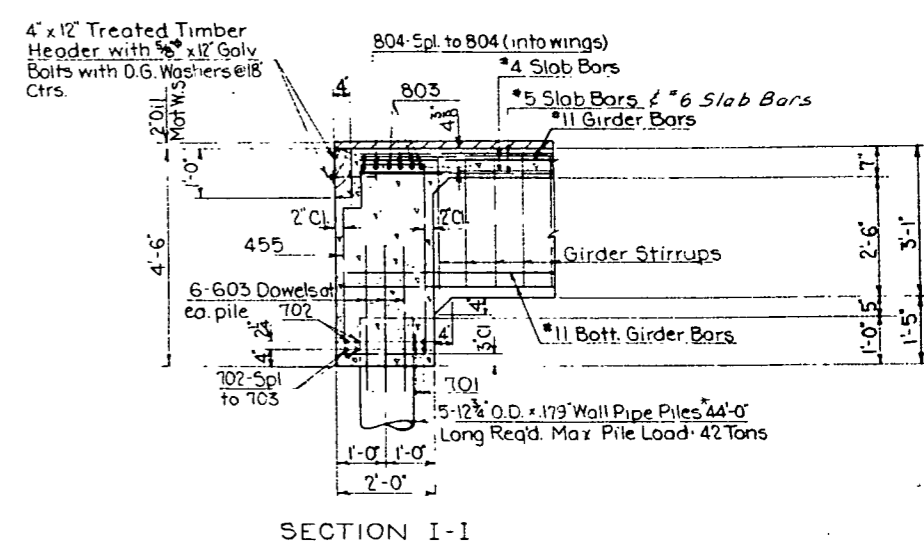
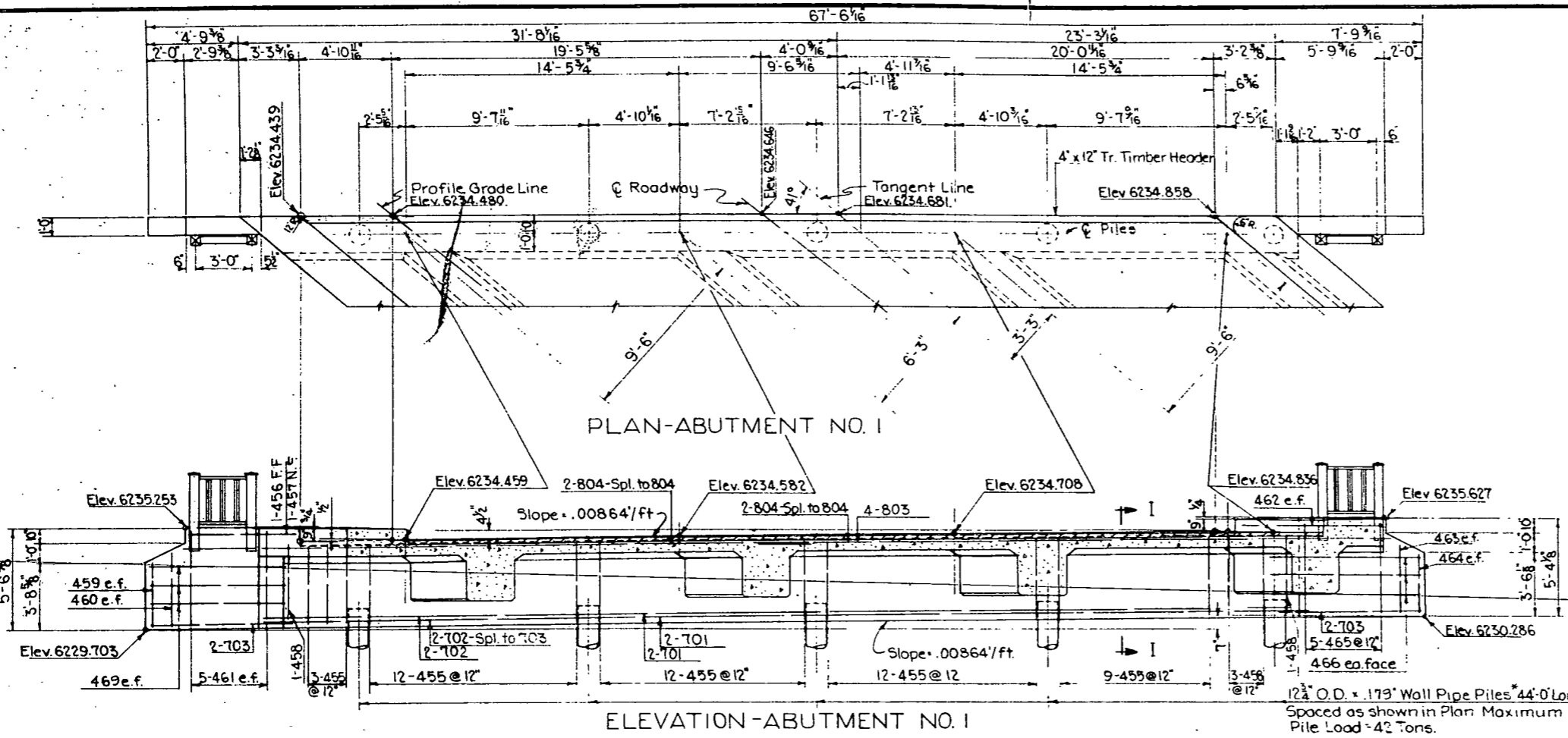
COLORADO DEPARTMENT OF HIGHWAYS
GIRDER REINFORCING DETAILS

Across North Bound across South B.
Sta. 24 + 20.86 to Sta. 23 + 29.20
Near Colo. Springs Sec. 16 T. 13 S. R. 66 W.

Designed by G.H.W. Approved by A.D. Newhall
Made by B.D.E. Bridge Engineer
Checked by Date: Feb 21, 1958

REL. ROAD DIST. NO.	DISTRICT	PROJECT NO.	SHEET NO.	TOTAL SHEETS
9	COLD.	I-25-2(28)145	24	-

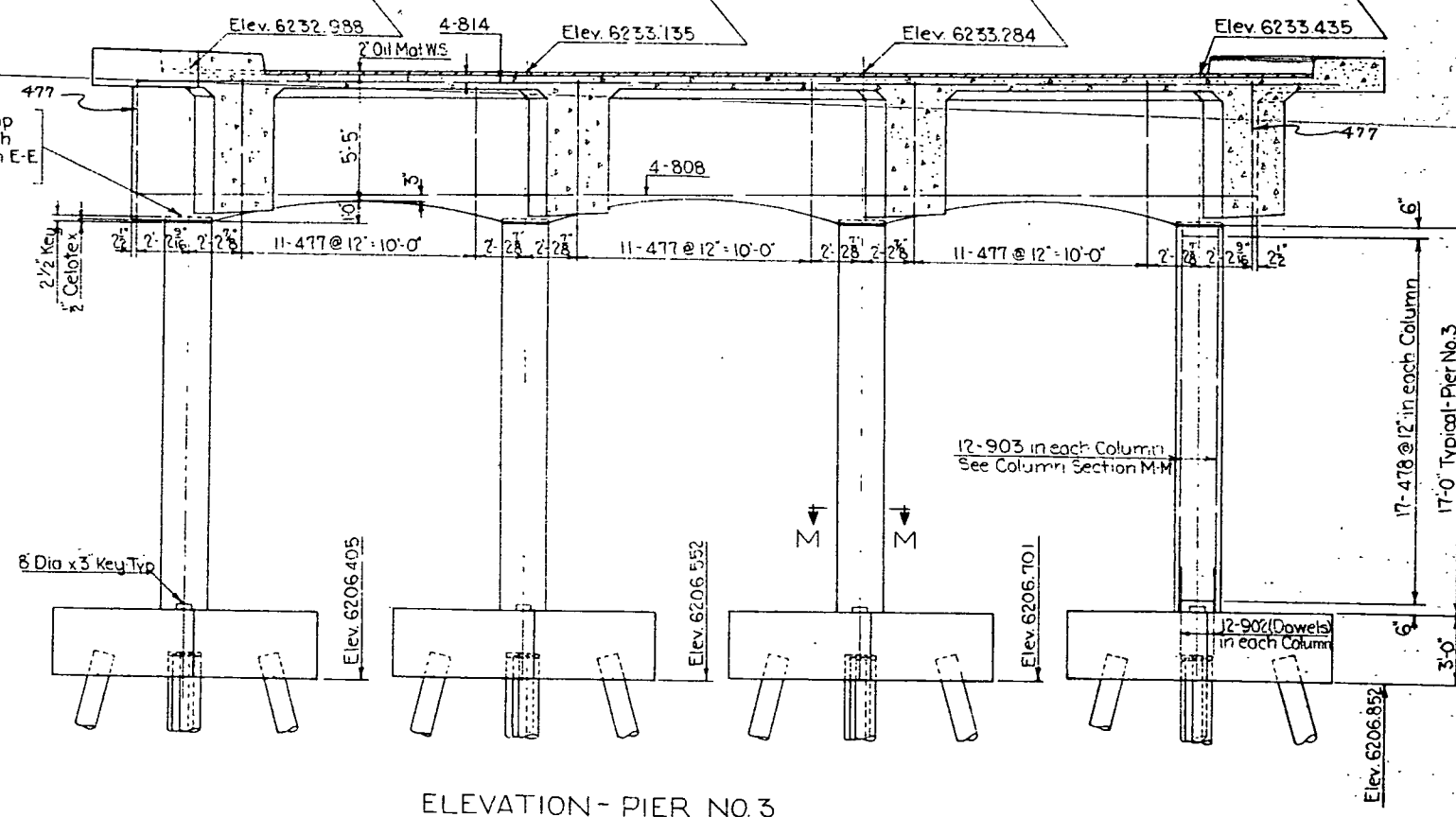
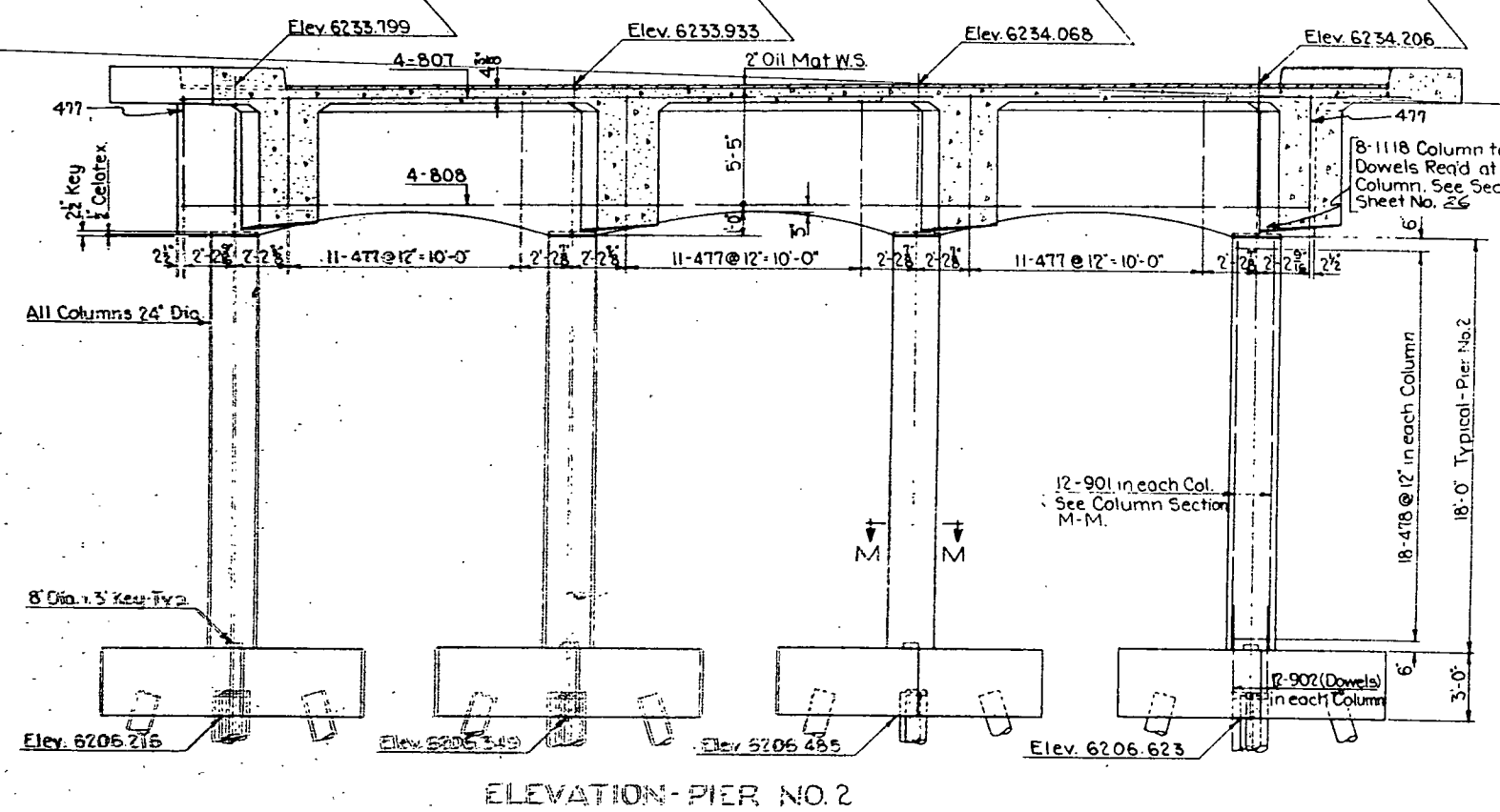
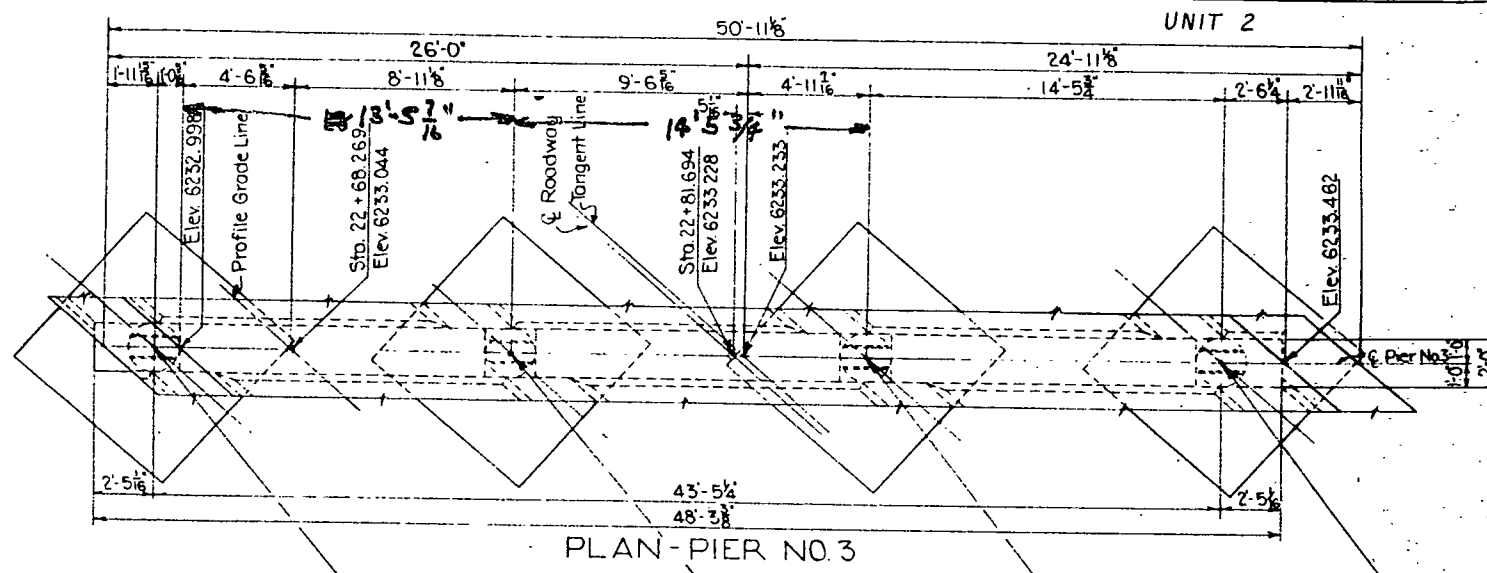
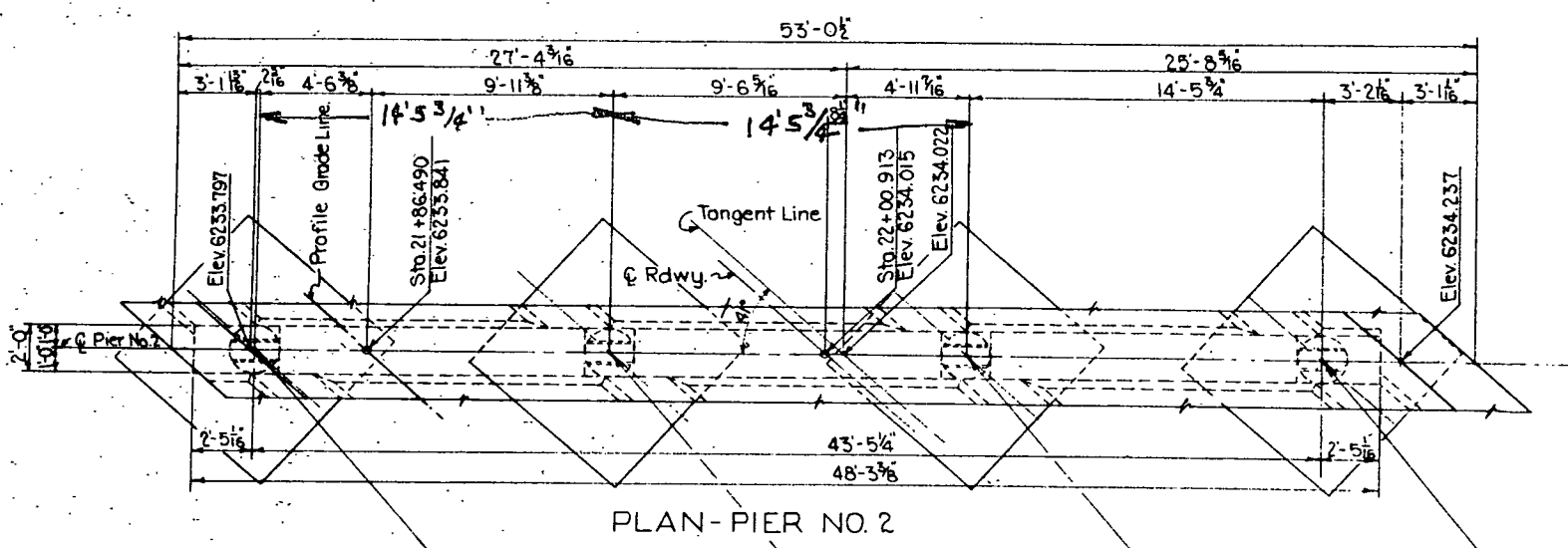
UNIT 2



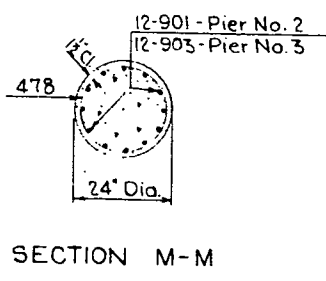
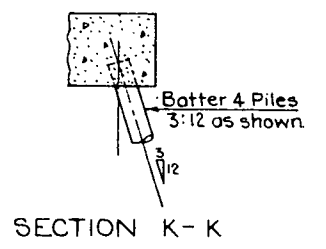
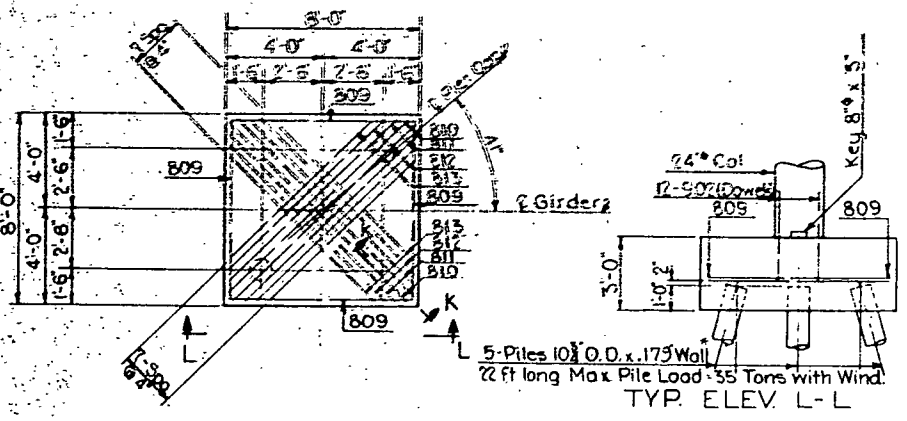
COLORADO DEPARTMENT OF HIGHWAYS
 DETAILS OF ABUT. NO. 1 AND NO. 4

Across North Sound across South B.
 Sta. 21+20.86 to Sta. 25+29.20
 Near Colo. Springs, Sec. 18, T. 13S, R. 66W
 Designed by G.H.W. Approved by A.B. Rowland
 Made by B.D.E. Bridge Engineer
 Checked by Date: Feb. 21, 1958

NO. ROAD DIST. NO.	DISTRICT	PROJECT NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	I-25-2(28)145	25	



Note- Maximum Pile Load = 35 Tons with Wind- Pier No. 2 & No. 3

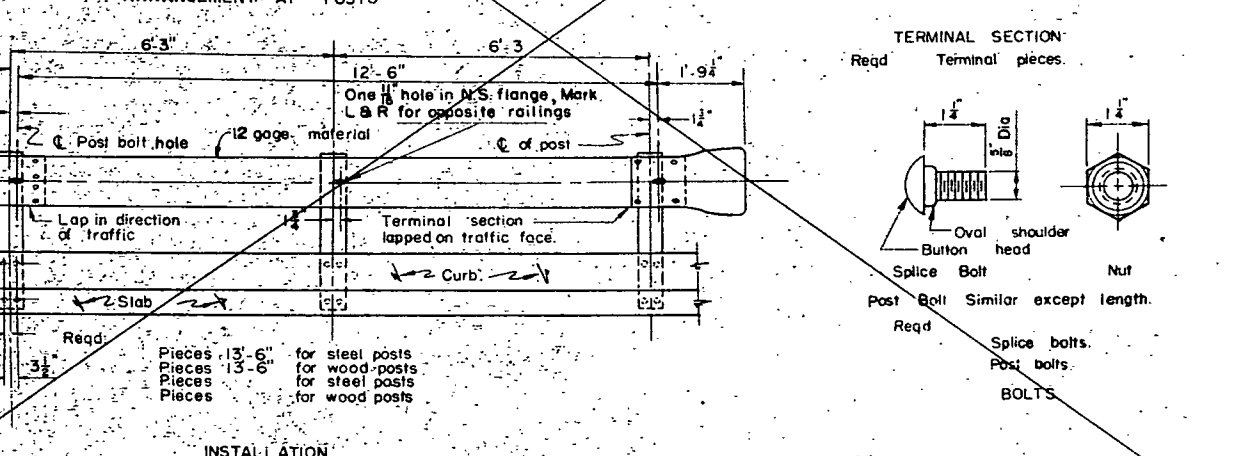
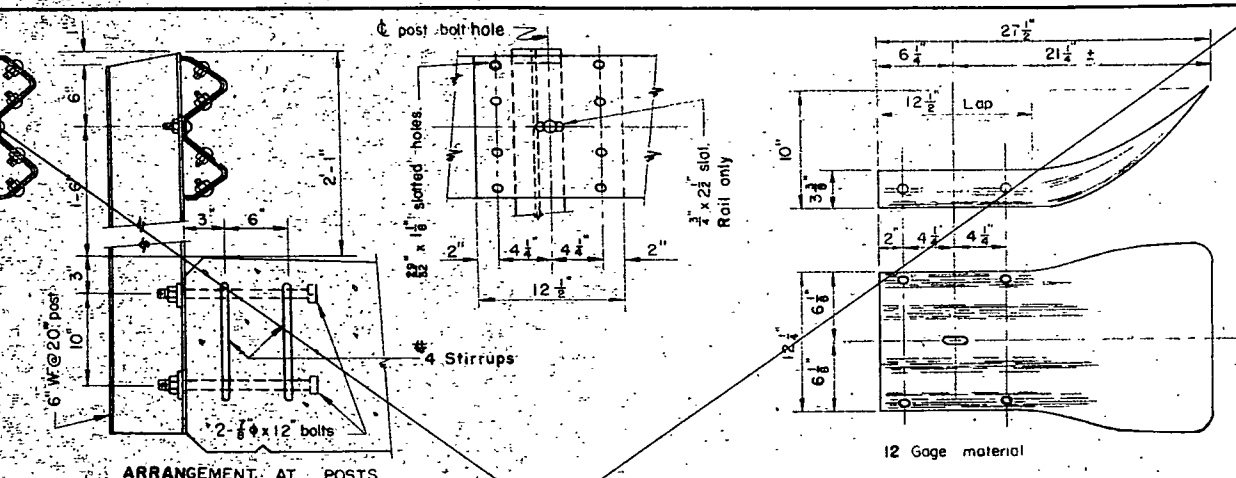


COLORADO
DEPARTMENT OF HIGHWAYS
DETAILS OF PIER NO. 2 AND NO. 3

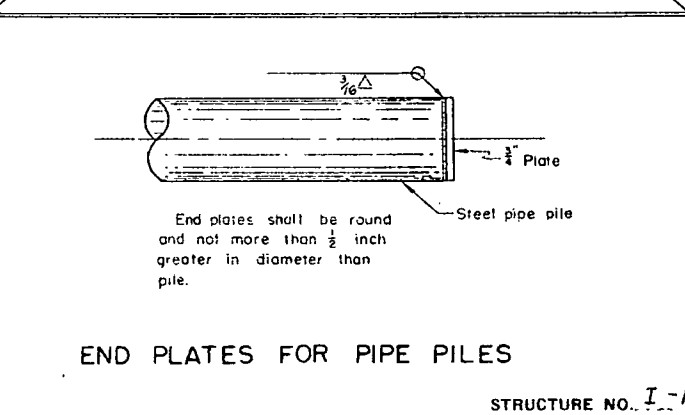
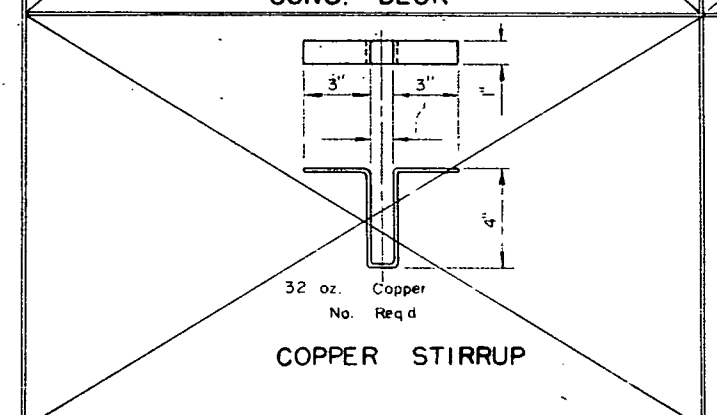
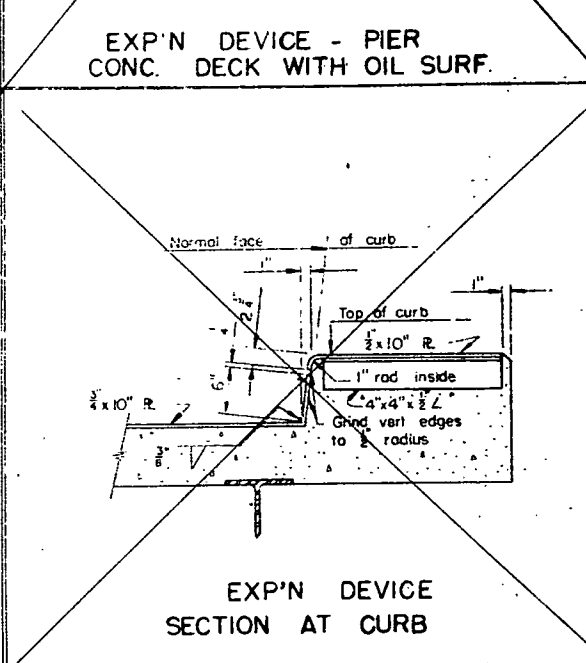
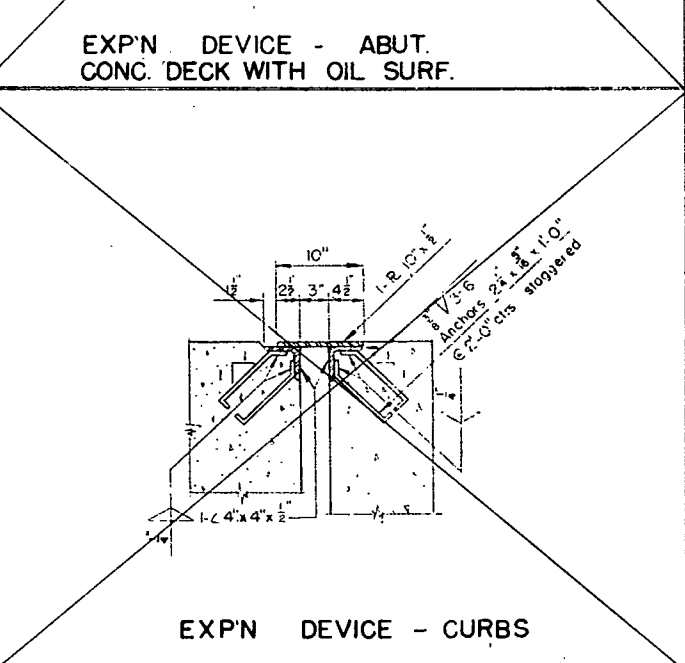
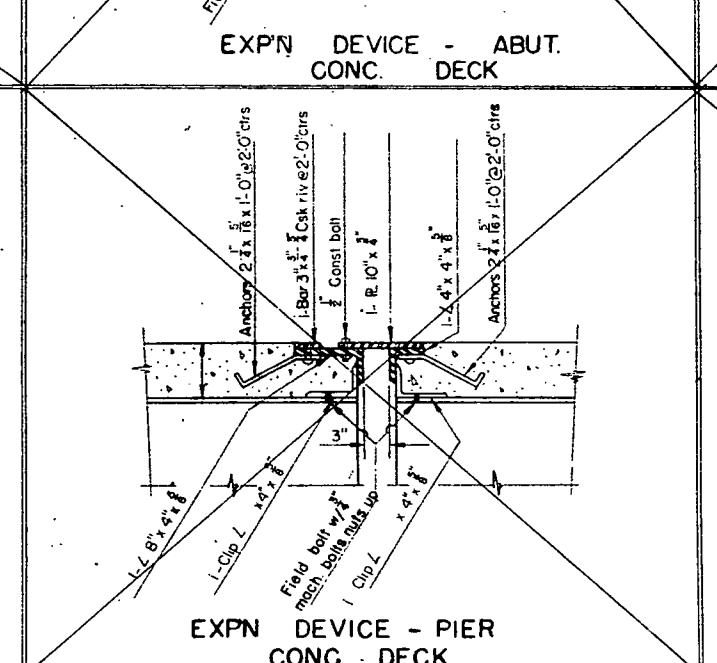
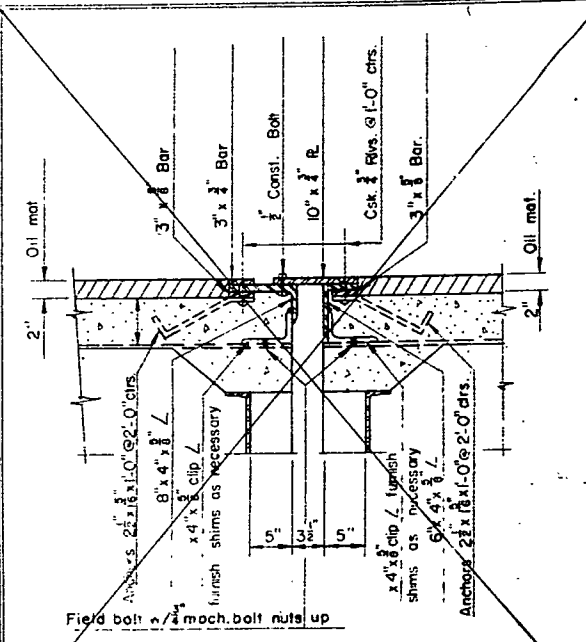
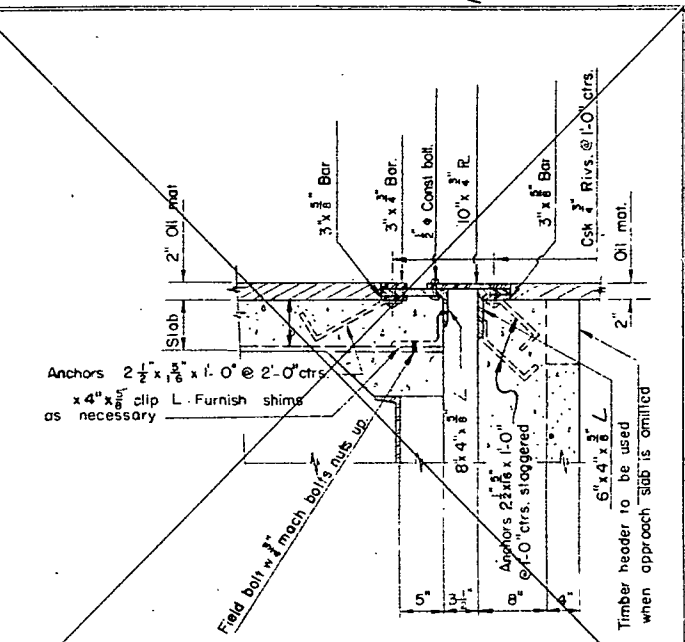
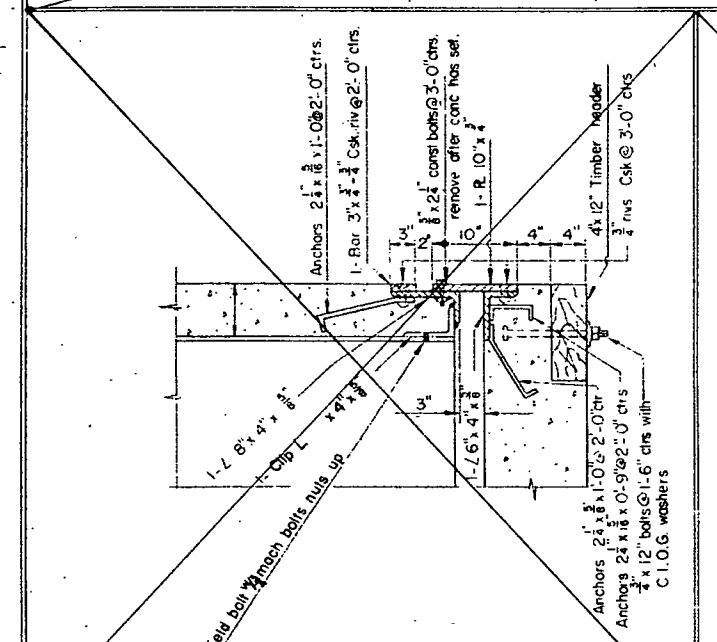
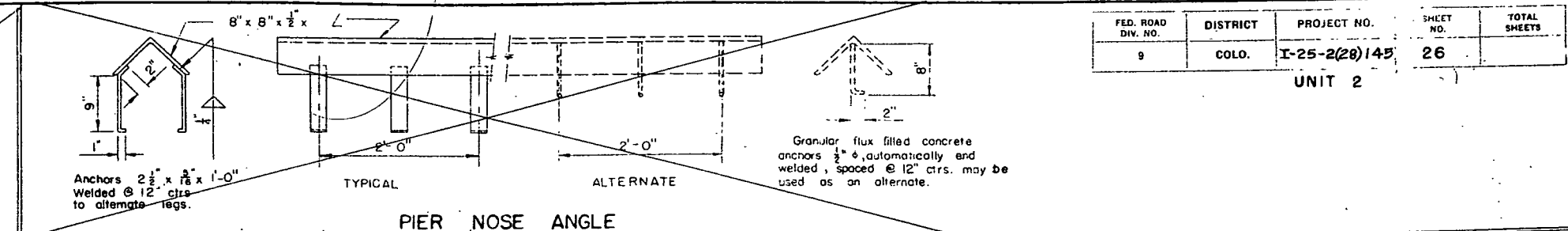
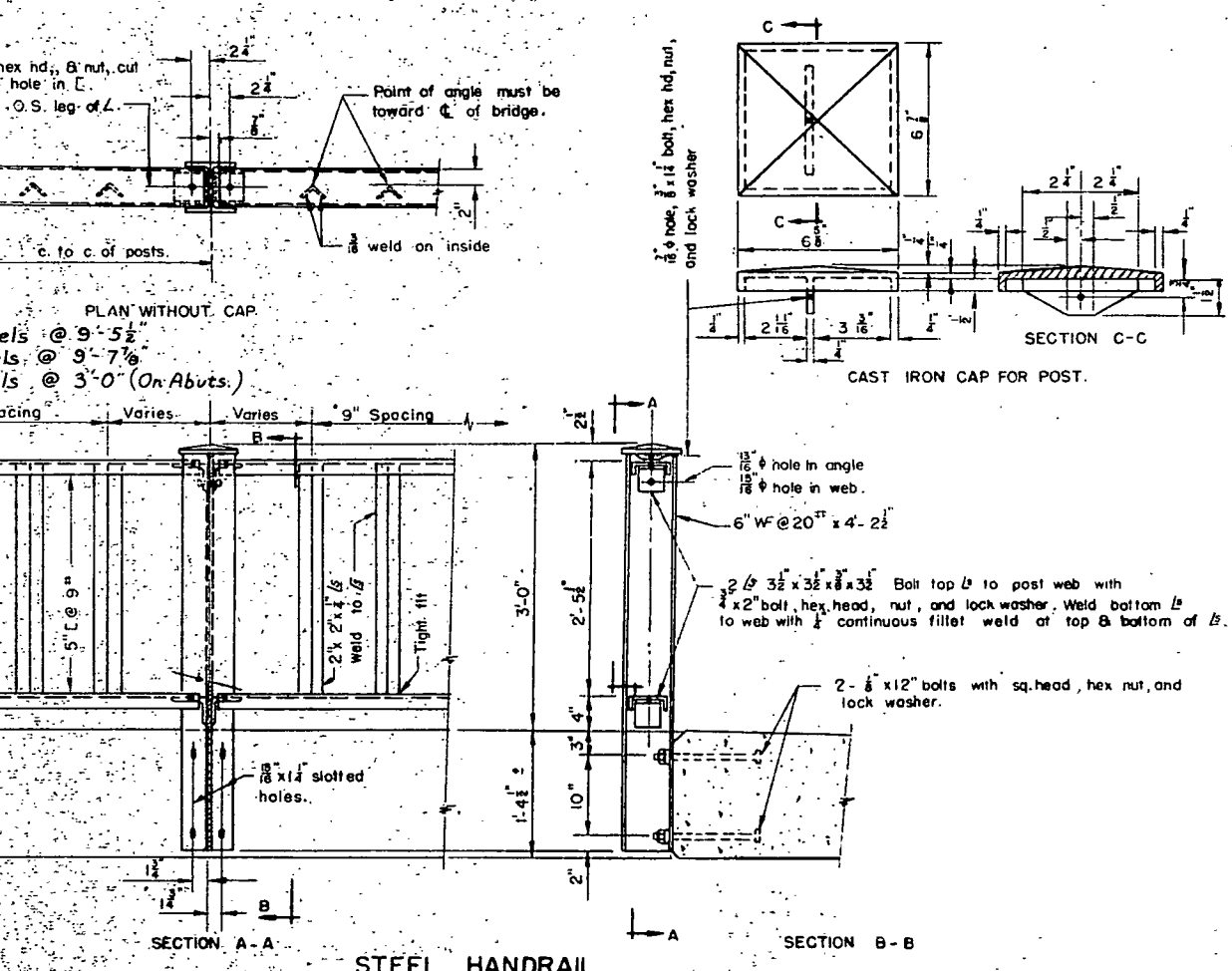
Across North Bound across South Bound
Sta. 21+20.86 to Sta. 23+29.20
Near Colo. Springs, Sec. 18 T. 135 S. R. 66W

Designed by G.H.W. Approved by *[Signature]*
Made by B.D.E. Bridge Engineer
Checked by *[Signature]* Date: Feb. 21, 1958

STRUCTURE NO. I-17-DS



METAL PLATE GUARD RAIL



COLORADO
DEPARTMENT OF HIGHWAYS

MISCELLANEOUS BRIDGE DETAILS

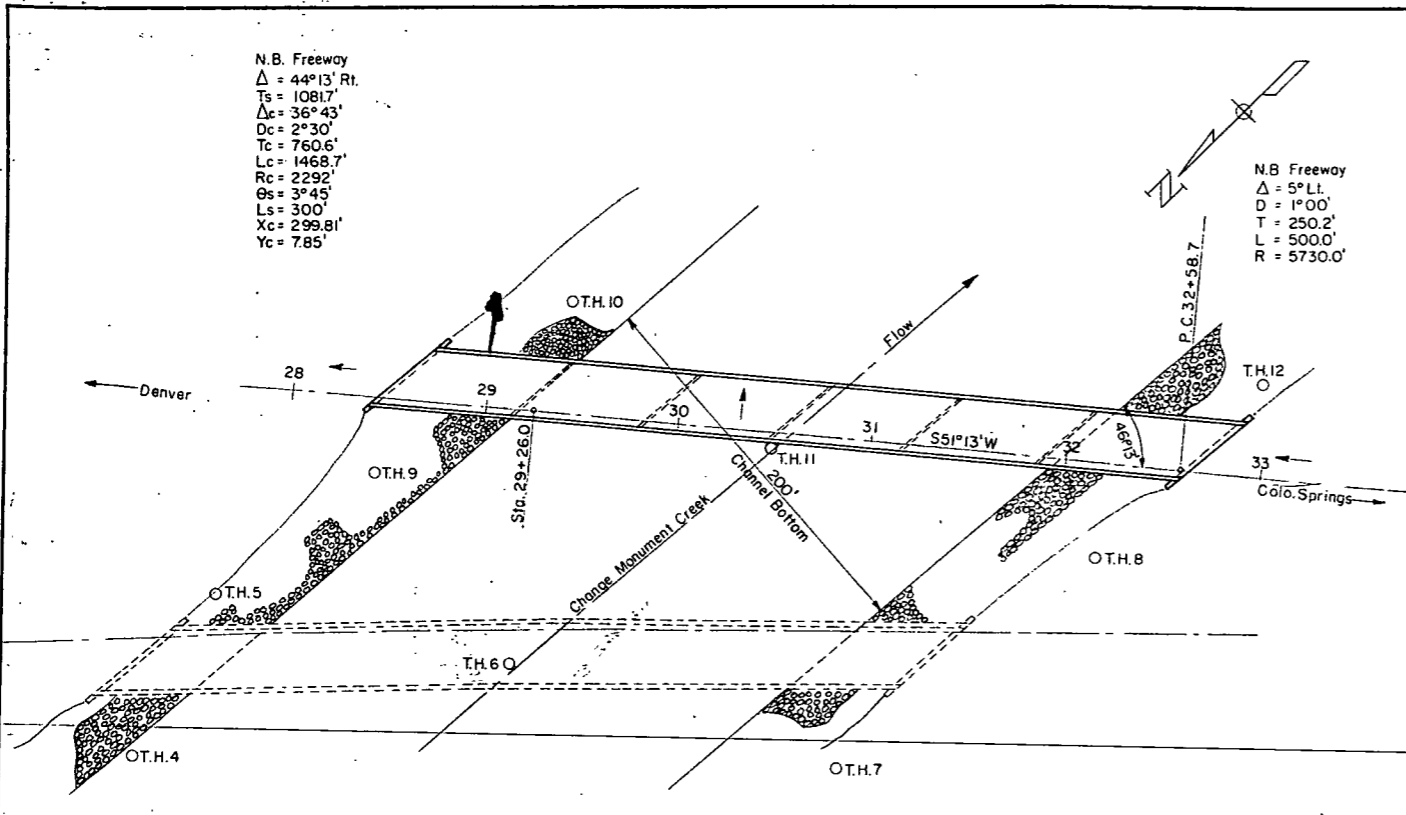
Across NORTH BOUND ACROSS SOUTH BOUND
Sta. 21+20.86 To 23+29.20
Near Colo. Springs, Sec. 18 T. 13 S. R. 66 W.

Designed by *A. P. Newhall*
Made by JRJ
Checked by *J. R. Johnson*
Date: Feb. 21, 1958

OF HIGHWAYS
138
500
LOADING DATA
GENERAL NOTES

N.B. Freeway
 $\Delta = 44^\circ 13' \text{ Rt.}$
 $T_s = 1081.7'$
 $\Delta c = 36^\circ 43'$
 $D_c = 2^\circ 30'$
 $T_c = 760.6'$
 $L_c = 1468.7'$
 $R_c = 2292'$
 $\theta_s = 3^\circ 45'$
 $L_s = 300'$
 $X_c = 299.81'$
 $Y_c = 7.85'$

N.B. Freeway
 $\Delta = 5^\circ \text{ Lt.}$
 $D = 1^\circ 00'$
 $T = 250.2'$
 $L = 5000.0'$
 $R = 5730.0'$



FED. ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	I-25-2(20)145	27	

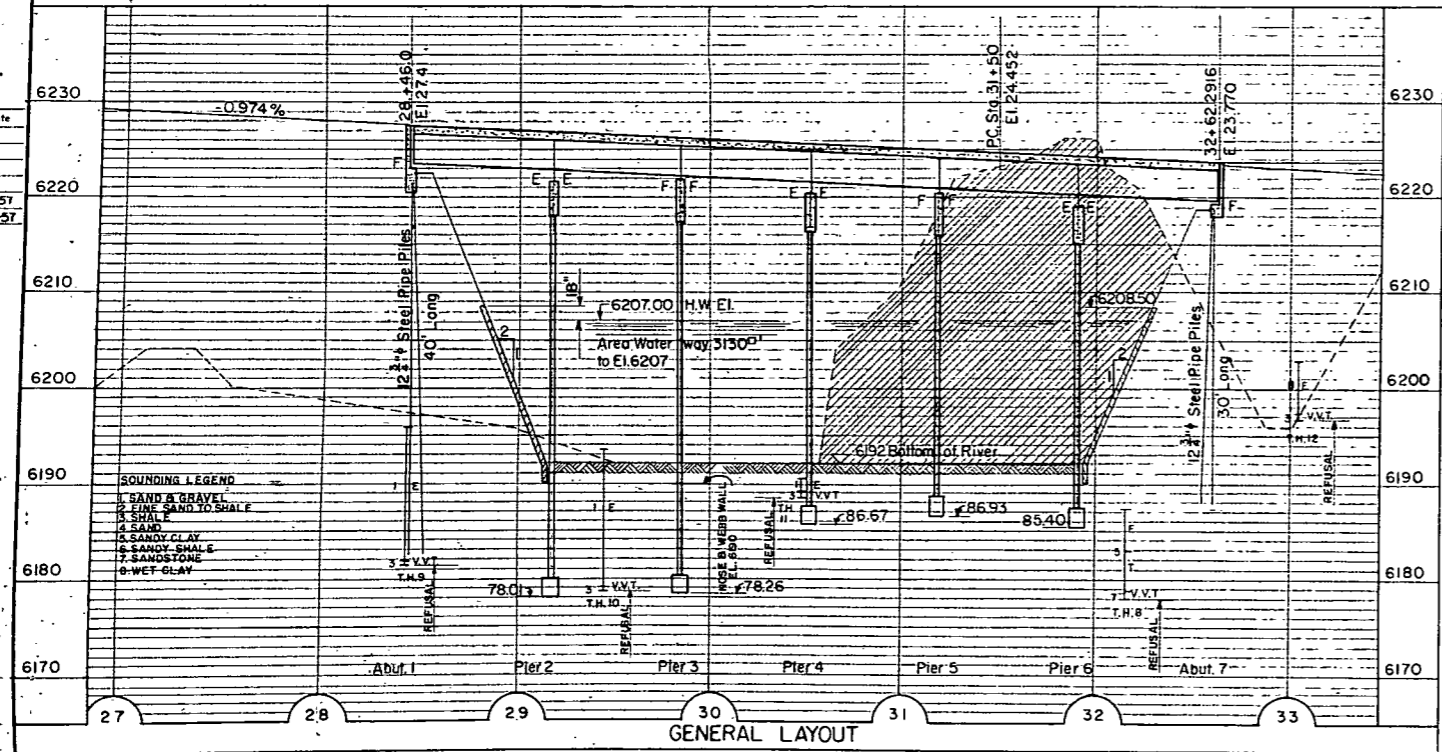
UNIT 2

Item	Description	Unit	Super Structure	Abut. No. 1	Pier No. 2	Pier No. 3	Pier No. 4	Pier No. 5	Pier No. 6	Abut. No. 7	Totals
14	Unclassified Structural Excav-Bridges	Cu. Yd.		42	168	165	56	54	69	42	596
16	Structure Backfill (Class I)	Cu. Yd.			130	130	39	36	47		382
30	Asphaltic Road Material (RC)	Gal.	139								139
18	Station Yard Overhaul	Sta. Yd.									4224
18	Yard Mile Overhaul	Yd. Mi.									47
34	Asphaltic Concrete Pavement (Type B)	Ton	145								145
42	Treated Bridge Timber	Mft. bm.		0.166						0.166	0.332
46	Class "A" Concrete	Cu. Yd.	354.0	28.1	77.1	77.1	66.0	66.0	66.0	28.7	763
47	Reinforcing Steel (Includes 1% for Overrun)	L. b.	64390	2480	12410	12410	9575	9575	9575	2480	122895
48	Structural Steel (Includes 2% for Paint)	L. b.	36630	580	540	540	540	540	540	580	60490
46	Prestressed Girder (65' to 69'-11" Inc.)	Ea.	30								30
49	Drilling Holes to Facilitate Pile Driving	Lin. Ft.		200						96	296
61	Steel Pipe Piling (12 3/4" O.D. x 0.179)	Lin. Ft.		320						240	560
67	Riprap (1'-6" thick)	Cu. Yd.		365						365	730
80	Sheet Copper (32 oz)	L. b.	19								19
89	Drain Pipe (Concrete floor) 4" x 1'-6"	Each	6								6
90	1/2" Electric Conduit With Junction Boxes	Lin. Ft.	420								420
91	16 Ga. Galv. Sheet Metal	Sq. Ft.	110								110
92	1/2" Exp'n. Joint Material (Type III)	Sq. Ft.	59								59
93	1" Exp'n. Joint Material (Type I)	Sq. Ft.	30								30

- ① Includes 17.2 cu. yd. to fill pipe piles. (9.8 cu. yd. Abut. No. 1 & 7.4 cu. yd. Abut. No. 7.)
- ② Includes 33,420 lb. of handrail steel.
- ③ To be included in the bid price for Item 46a.
- ④ Exp'n. Joint Material shall be in accordance to A. A. S. H. O. specification M-153-54 and of the type shown and shall be included in the bid price for Item 46a.
- ⑤ 12" BP@ 53" may be used as an alternate or option of the Contractor.
- ⑥ To be included in the Bid Price for Item 61.
- ⑦ Not included in Bridge Totals.

Item	Description	Quantity
46	Class "P" Concrete	10.3 cu. yd.
47	Reinforced Steel (Includes 1% for Overrun)	1130 lb.
48	Structural Steel (Includes 2% for Paint)	220 lb.
93	1" Expansion Joint Material (Type I)	1 sq. ft.

Initial Date
 J.B. 11-8-57
 K.V.G. 11-18-57



GENERAL NOTES

ALL WORK SHALL BE DONE ACCORDING TO THE STANDARD SPECIFICATIONS OF THE COLORADO DEPARTMENT OF HIGHWAYS APPLICABLE TO THE PROJECT.
 ALL CONCRETE SHALL BE CLASS "A" AND AIR ENTRAINMENT AS SPECIFIED.
 SURFACES MARKED WITH THE SYMBOL "F" AS SHOWN ON SHEET NO. 35 SHALL RECEIVE CLASS 1 SURFACE FINISH.
 FORMS FOR CONCRETE SURFACES EXPOSED IN THE FINISHED WORK SHALL BE CONSTRUCTED OF SHIP LAP OR TONGUE AND GROOVE LUMBER 3/4" UNLESS FACED WITH PANEL BOARD.
 FOOTINGS IN ROCK SHALL BE POURED OUT TO ROCK AND NOT FORMED.
 SOUNDINGS AND DEPTH OF FOOTING SHOWN ARE IN ACCORDANCE WITH THE BEST AVAILABLE DATA AND WHEN DIFFERENT CONDITIONS ARE ENCOUNTERED THE BRIDGE ENGINEER WILL INSPECT AND DETERMINE IF REDESIGN IS NECESSARY.
 ALL REINFORCING STEEL SHALL CONFORM TO ASTM SPECIFICATION A 305-50T OR THE LATEST REVISION THEREOF, AND SHALL BE INTERMEDIATE GRADE STEEL OF A DEFORMED TYPE. EACH BAR SHALL BE TAGGED WITH THE NUMBER DESIGNATION AND THE STATION NUMBER OF THE PROJECT.
 SECONDARY BARS WHEN SPICED SHALL LAP 17 DIAMETERS OF THE BAR. DIMENSIONS FOR REINFORCING STEEL NOT SHOWN AS CLEAR SHALL BE TO THE CENTER LINE OF THE BAR.
 ALL STRUCTURAL STEEL SHALL BE PAINTED ONE SHOP COAT OF ZINC CHROMATE AND TWO FIELD COATS OF ALUMINUM, UNLESS OTHERWISE NOTED, EXCEPT THE UNEXPOSED PORTION OF STEEL PILING NEED NOT BE PAINTED.
 HANDRAIL BOLTS SHALL HAVE HEX HEADS, NUTS, AND LOCK WASHERS UNLESS OTHERWISE SPECIFIED AND ALL RIVETS, EXCEPT AS NOTED ARE 3/4" DIA. AND SHALL BE POWER DRIVEN.
 WHEN TREATED TIMBER OR PILING IS SHOWN ON THE DRAWING THE PRESERVATIVE FOR TREATMENT SHALL BE CREOSOTE OIL.
 WHEN EXCAVATING FOR FOOTINGS THE FINAL ONE FOOT IN DEPTH SHALL BE DONE BY HAND LABOR METHODS.
 IF BY PERMISSION OF THE ENGINEER PRIMARY BARS ARE SPICED THEY SHALL LAP 34 DIAMETERS FOR BARS NEAR TOP OF BEAMS & GIRDERS HAVING MORE THAN 12 INCHES OF CONCRETE UNDER THE BARS & 20 DIAMETERS FOR BARS NEAR BOTTOM OF MEMBERS.
 FOR DETAILS OF STRUCTURAL EXCAVATION AND STRUCTURE BACKFILL SEE STD. M-60-B.

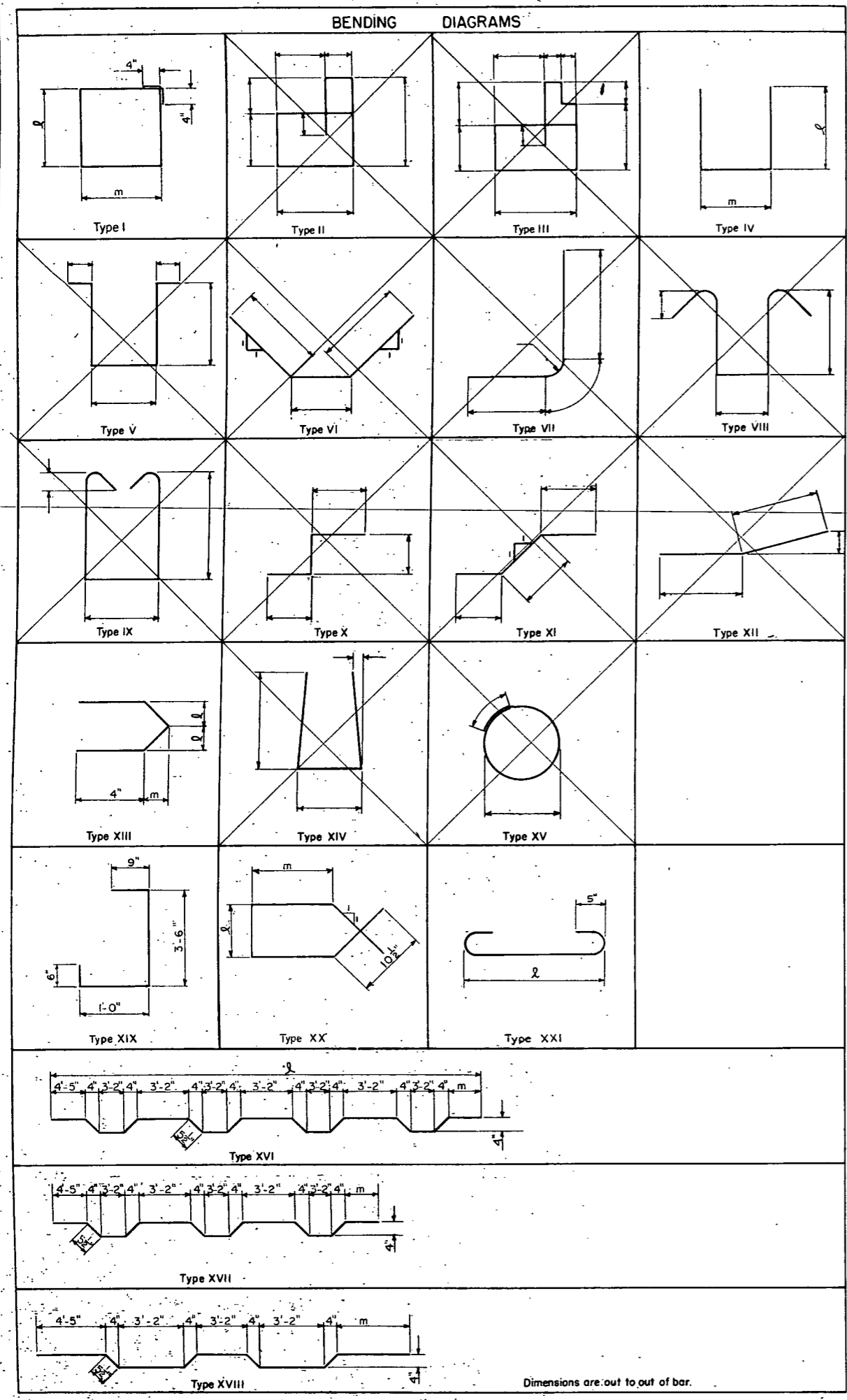
LOADING DATA
 INTERSTATE LOADING
 LIVE LOAD - A. A. S. H. O. (H20-S16-44) DATA
 DEAD LOAD ASSUMES 15 LBS. PER SQ. FT. ADDITIONAL WEARING SURFACE WHICH INCLUDES THE 1 1/2 INCH CONCRETE MONOLITHIC WEARING SURFACE SHOWN.
 DESIGNING DATA
 A. A. S. H. O. 1951 UNIT STRESSES, EXCEPT AS NOTED.
 Reinforcing Steel $f_s = 20000$ lbs. per sq. in.
 Structural Steel $f_c = 18000$ lbs. per sq. in.
 $f_c = 1200$ lbs. per sq. in.
 $n = 10$

COLORADO
 DEPARTMENT OF HIGHWAYS
 6 SPANS @ 67' PRESTRESSED CONC. BEAMS WITH CAST IN PLACE SLAB & DIAPHRAGMS 30' ROADWAY
 GENERAL LAYOUT, SUMMARY OF QUANTITIES & NOTES

Across Channel Monument Creek
 Sta. 28+46.10 to 32+62.29
 Near Colo. Springs, Sec. 18 T. 13S. R. 66W

Designed by _____
 Made by J.B.
 Checked by _____

Approved by _____
 Bridge Engineer
 Date: 9-16-57, 1957



BAR LIST-SUPERSTRUCTURE

Mark	Size	No.	Req'd	Length	Type	Dimensions	
						l	m
Slab & Diaphragms							
401	1/2"	364	40'-0"	Str.			
402	1/2"	256	28'-11"	Str.			
403	1/2"	172	4'-0"	I	1'-1"	7"	
404	1/2"	700	4'-1"	IV	1'-2"	1'-9"	
405	1/2"	128	30'-11"	Str.			
406	1/2"	720	5'-10"	I	2'-2"	5"	
407	1/2"	192	6'-1"	Str.			
408	1/2"	192	7'-6"	Str.			
4200	1/2"	3	2'-0"	Str.			
4201	1/2"	7	3'-0"	Str.			

501	3/8"	412	33'-8"	Str.			
502	3/8"	200	34'-8"	XVI	33'-8"	4'-5"	
503	3/8"	12 ea.	31'-9"		8'-9"		
508	3/8"	12 ea.	1'-2 1/2" to XVII		8'-2 1/2"		
509	3/8"	12 ea.	25'-8"		2'-8"		
514	3/8"	12 ea.	24'-2"		8'-5"		
515	3/8"	24 ea.	18'-1"		2'-4"		
525	3/8"	24 ea.	30'-5"				
526	3/8"	24 ea.	17'-0"				
548	3/8"	24 ea.	17'-0"				
548	3/8"	24 ea.	3'-8"				

601	3/8"	8	44'-0"	Str.			
602	3/8"	4	46'-9"	Str.			
605	3/8"	4	9'-8"	IV	4'-3"	1'-2"	

Girders *

806	1"	60	40'-0"	Str.			
491	1/2"	3780	5'-9"	XIX			
801	1"	60	29'-6"	Str.			

561	3/8"	930	4'-6"	XX	1'-1"	10"	
562	3/8"	300	4'-9"	IV	1'-10"	1'-1"	
563	3/8"	240	4'-7"	XXI	3'-5"		
564	3/8"	420	2'-3"	XXI	1'-1"		

SUMMARY-SUPERSTRUCTURE

37101 lin ft 1/2" @ 0.6687/lin ft = 24783 lb.
 36531 lin ft 3/8" @ 1.0437/lin ft = 38102 lb.
 578 lin ft 3/4" @ 1.5027/lin ft = 868 lb.
 Plus 1% ± for Overrun = 637 lb.
 Total = 64390 lb.

* Not included in bar summary or Bridge Totals.

BAR LIST-PIER 2 PIER 3 SIMILAR

Mark	Size	No.	Req'd	Length	Type	Dimensions	
						l	m
409	1/2"	3	3'-0"			10"	10"
to	1/2"	1 ea.	BY 3/2" to XIII			BY 2" to 2"	BY 1/2" to 1/2"
446	1/2"	1	5'-2"			1'-7"	1'-7"
447	1/2"	1	7'-4"			1'-8"	1'-8"
to	1/2"	3 ea.	BY 1" to I			BY 1/2" to 1/2"	
484	1/2"	1	10'-5"			3'-2 1/2"	1'-8"
486	1/2"	1	21'-11"	Str.			
487	1/2"	60	18'-2"	Str.			
488	1/2"	36	34'-0"	Str.			
489	1/2"	40	12'-2"	I	2'-7"	3'-2"	

801	1"	21	5'-6"	Str.			
804	1"	2	34'-0"	Str.			
901	1 1/8"	15	43'-0"	Str.			
902	1 1/8"	4	8'-6"	Str.			
903	1 1/8"	36	5'-6"	Str.			
1001	1 1/2"	30	4'-9"	Str.			
1002	1 1/2"	30	39'-8"	Str.			

SUMMARY-PIER 2 PIER 3 SIMILAR

4054 lin ft 1/2" @ 0.6687/lin ft = 2708 lb.
 268 lin ft 1" @ 2.6707/lin ft = 716 lb.
 920 lin ft 1 1/8" @ 3.4007/lin ft = 3128 lb.
 1333 lin ft 1 1/2" @ 4.3037/lin ft = 5736 lb.
 Plus 1% ± for Overrun = 122 lb.
 Total = 12410 lb.

BAR LIST-PIER 4 PIER 5 & 6 SIMILAR

Mark	Size	No.	Req'd	Length	Type	Dimensions	
						l	m
409	1/2"	3	3'-0"			10"	10"
to	1/2"	1 ea.	BY 3/2" to XIII			BY 2" to 2"	BY 1/2" to 1/2"
436	1/2"	1	4'-8"			1'-5"	1'-5"
447	1/2"	1	7'-4"			1'-8"	1'-8"
to	1/2"	3 ea.	BY 1" to I			BY 1/2" to 1/2"	
474	1/2"	1	9'-7"			2'-9 1/2"	1'-8"
486	1/2"	4	21'-11"	Str.			
487	1/2"	60	18'-2"	Str.			
488	1/2"	36	34'-0"	Str.			
489	1/2"	40	12'-2"	I	2'-7"	3'-2"	

803	1"	21	7'-6"	Str.			
804	1"	2	34'-0"	Str.			
901	1 1/8"	16	43'-0"	Str.			
902	1 1/8"	4	8'-6"	Str.			
903	1 1/8"	21	5'-6"	Str.			
1001	1 1/2"	24	4'-9"	Str.			
1003	1 1/2"	24	29'-8"	Str.			

SUMMARY-PIER 4 PIER 5 & 6 SIMILAR

3705 lin ft 1/2" @ 0.6687/lin ft = 2475 lb.
 226 lin ft 1" @ 2.6707/lin ft = 603 lb.
 838 lin ft 1 1/8" @ 3.4007/lin ft = 2849 lb.
 826 lin ft 1 1/2" @ 4.3037/lin ft = 3554 lb.
 Plus 1% ± for Overrun = 94 lb.
 Total = 9575 lb.

BAR LIST-ABUTMENT 1

Mark	Size	No.	Req'd	Length	Type	Dimensions	
						l	m
401	1/2"	8	40'-0"	Str.			
403	1/2"	8	4'-0"	I	1'-1"	7"	
495	1/2"	46	13'-2"	I	2'-0"	4'-3"	
496	1/2"	45	9'-1"	IV	4'-2"	9"	
497	1/2"	8	19'-9"	Str.			
498	1/2"	4	2'-6"	Str.			
499	1/2"	6	8'-7"	Str.			
4100	1/2"	1	12'-3"	IV	5'-9"	9"	
4101	1/2"	1	13'-3"	IV	6'-3"	9"	
4102	1/2"	5	15'-5"	IV	7'-4"	9"	
4103	1/2"	4	4'-0"	Str.			
4104	1/2"	6	6'-7"	Str.			
4105	1/2"	4	11'-9"	IV	5'-6"	9"	
4106	1/2"	1	12'-9"	IV	6'-0"	9"	
4107	1/2"	3	14'-11"	IV	7'-1"	9"	
802	1"	10	45'-8"	Str.			

SUMMARY-ABUTMENT 1

1849 lin ft 1/2" @ 0.6687/lin ft = 1235 lb.
 457 lin ft 1" @ 2.6707/lin ft = 1220 lb.
 Plus 1% ± for Overrun = 25 lb.
 Total = 2480 lb.

BAR LIST-ABUTMENT 7

Mark	Size	No.	Req'd	Length	Type	Dimensions	
						l	m
401	1/2"	8	40'-0"	Str.			
403	1/2"	8	4'-0"	I	1'-1"	7"	
495	1/2"	46	13'-2"	I	2'-0"	4'-3"	
496	1/2"	45	9'-1"	IV	4'-2"	9"	
497	1/2"	8	19'-9"	Str.			
498	1/2"	4	2'-6"	Str.			
499	1/2"	6	8'-7"	Str.			
4100	1/2"	4	12'-3"	IV	5'-9"	9"	
4101	1/2"	1	13'-3"	IV	6'-3"	9"	
4102	1/2"	3	15'-5"	IV	7'-4"	9"	
4103	1/2"	4	4'-0"	Str.			
4104	1/2"	6	6'-7"	Str.			
4105	1/2"	1	11'-9"	IV	5'-6"	9"	
4106	1/2"	1	12'-9"	IV	6'-0"	9"	
4107	1/2"	5	14'-11"	IV	7'-1"	9"	
802	1"	10	45'-8"	Str.			

SUMMARY-ABUTMENT 7

1849 lin ft 1/2" @ 0.6687/lin ft = 1235 lb.
 457 lin ft 1" @ 2.6707/lin ft = 1220 lb.
 Plus 1% ± for Overrun = 25 lb.
 Total = 2480 lb.

COLORADO
 DEPARTMENT OF HIGHWAYS

BENDING DIAGRAMS & BAR LIST

Across Channel, Change Monument Creek
 Sta. 28+46 to 32+62.25
 Near Colo. Springs - Sec. 18 T. 13S. R. 36W

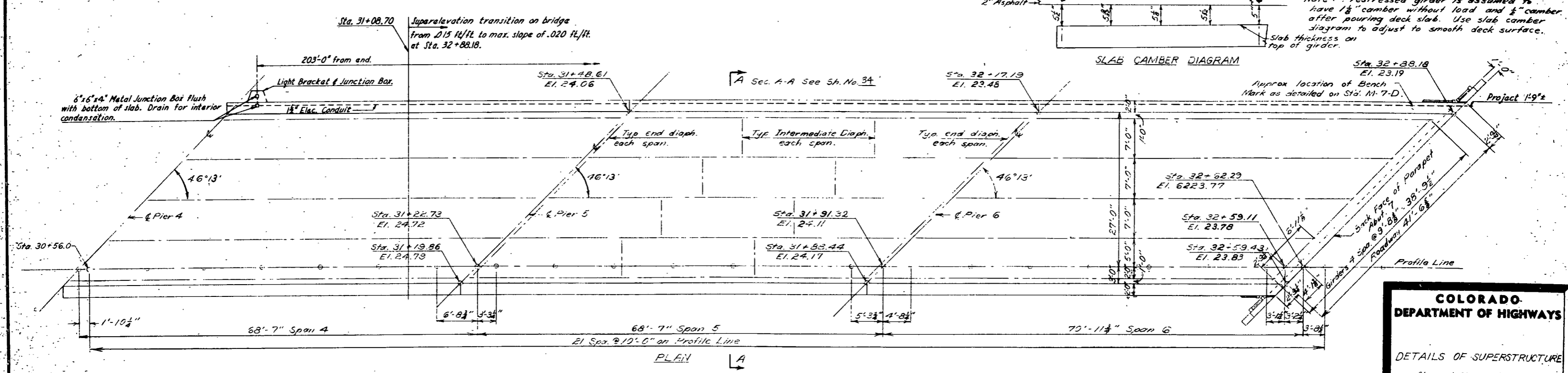
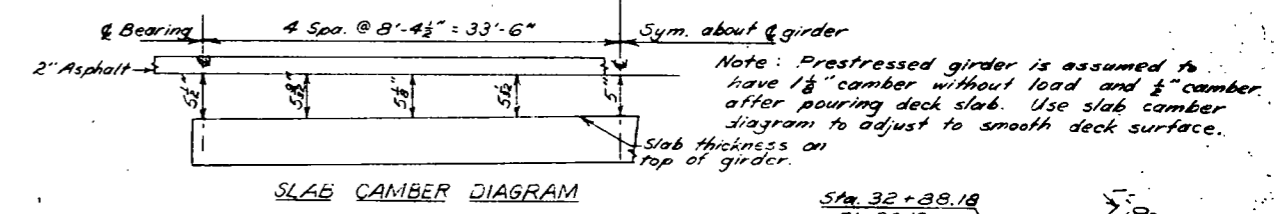
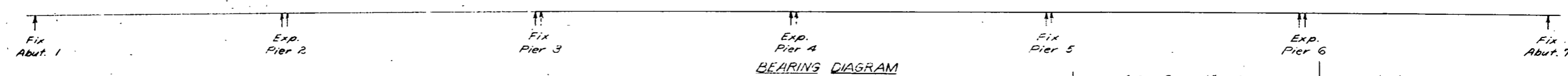
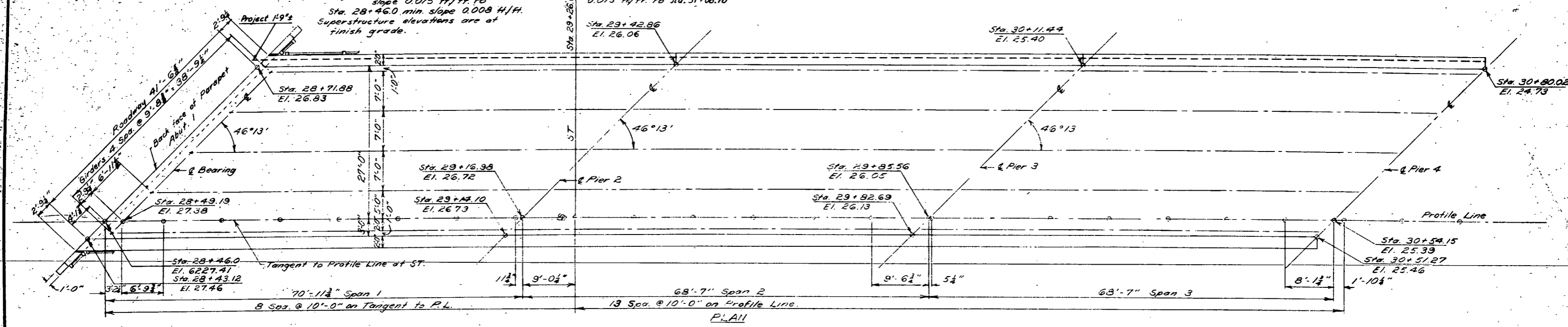
Designed by Made by J.B. Checked by	Approved by Bridge Engineer Date: Feb. 21, 1958
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REG. ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	I-25-2(28)145	29	

UNIT 2

Note: Girders and curbs are parallel to tangent to profile line at ST. Offsets not required. Super-elevation transition of Sta. 29+26.0 (ST) slope 0.015 ft./ft. to Sta. 28+46.0 min. slope 0.008 ft./ft. Superstructure elevations are at finish grade.

Roadway slope constant 0.015 ft./ft. to Sta. 31+08.70



COLORADO DEPARTMENT OF HIGHWAYS

DETAILS OF SUPERSTRUCTURE

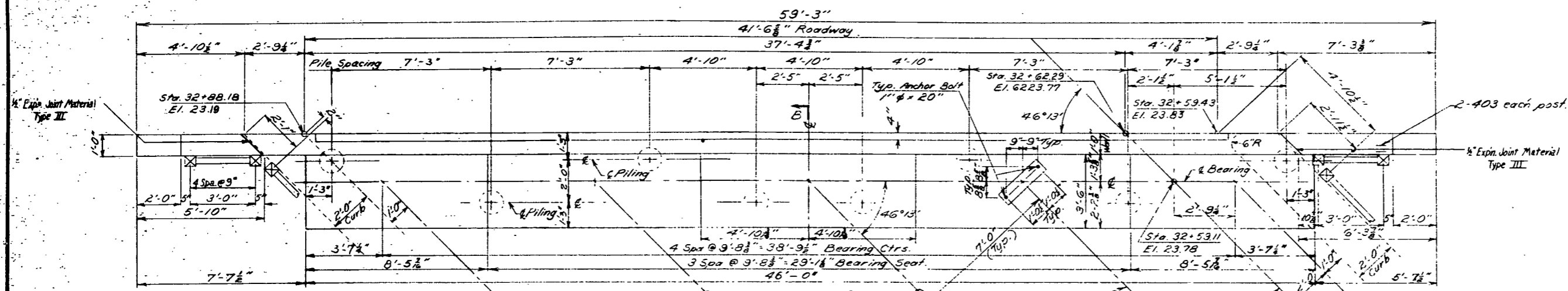
Across Channel Change Monument Cr.
Sta. 28+46.0 to 32+62.29
Near Colo. Springs Sec. 18 T. 13S R. 66W

Designed by NGM Approved by G.P. Reinhart
Made by J.L.B. Bridge Engineer
Checked by _____ Date: Feb. 21, 1968

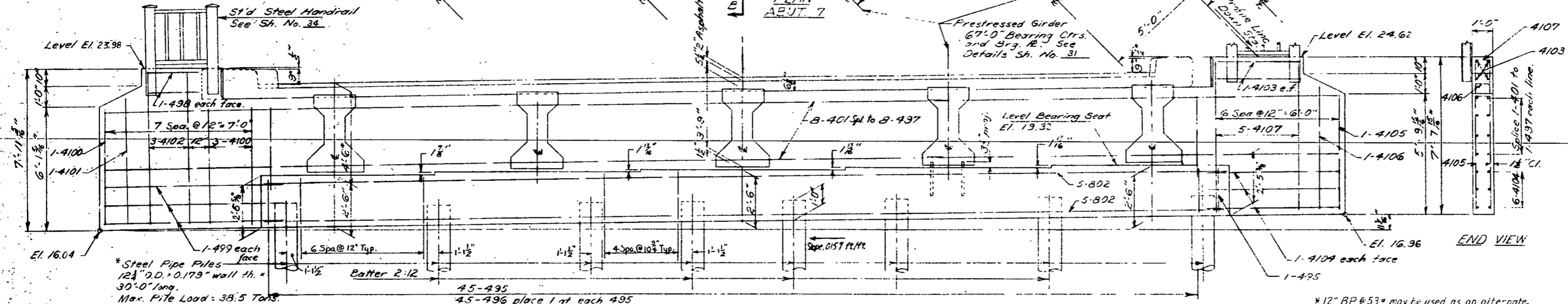
STRUCTURE NO. I-17-DT SOUTH BR.

RD. ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	I-25-2(28)145	32	

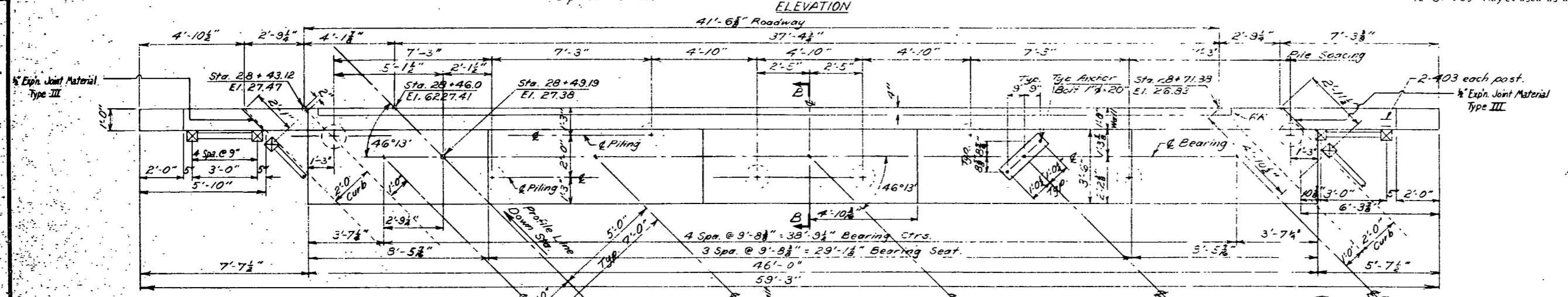
UNIT 2



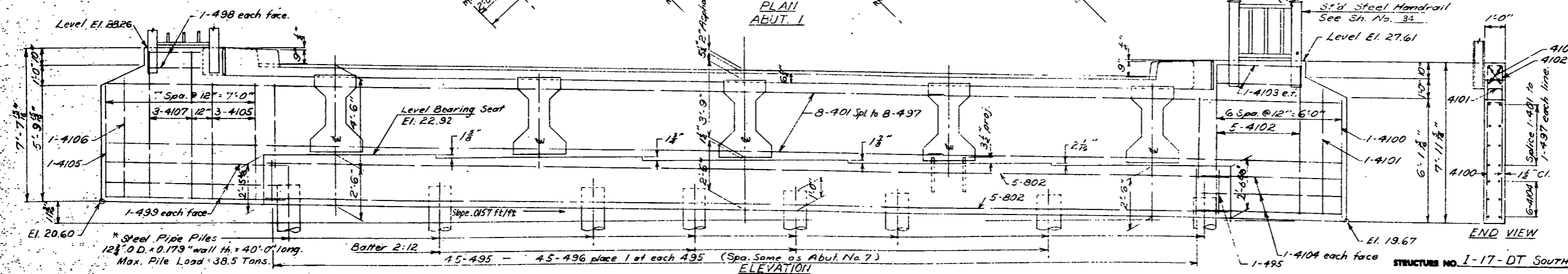
PLAN ABUT. 7



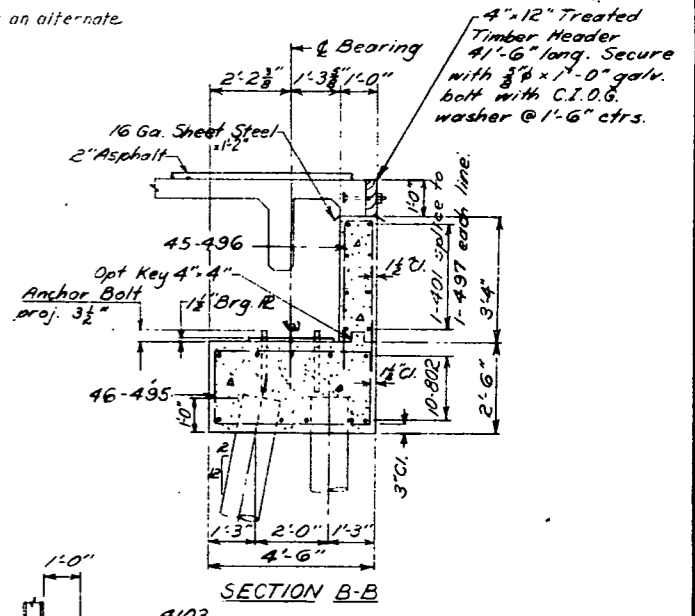
ELEVATION



PLAN ABUT. 1



ELEVATION



SECTION B-B

COLORADO DEPARTMENT OF HIGHWAYS

ABUTS. 1 AND 7

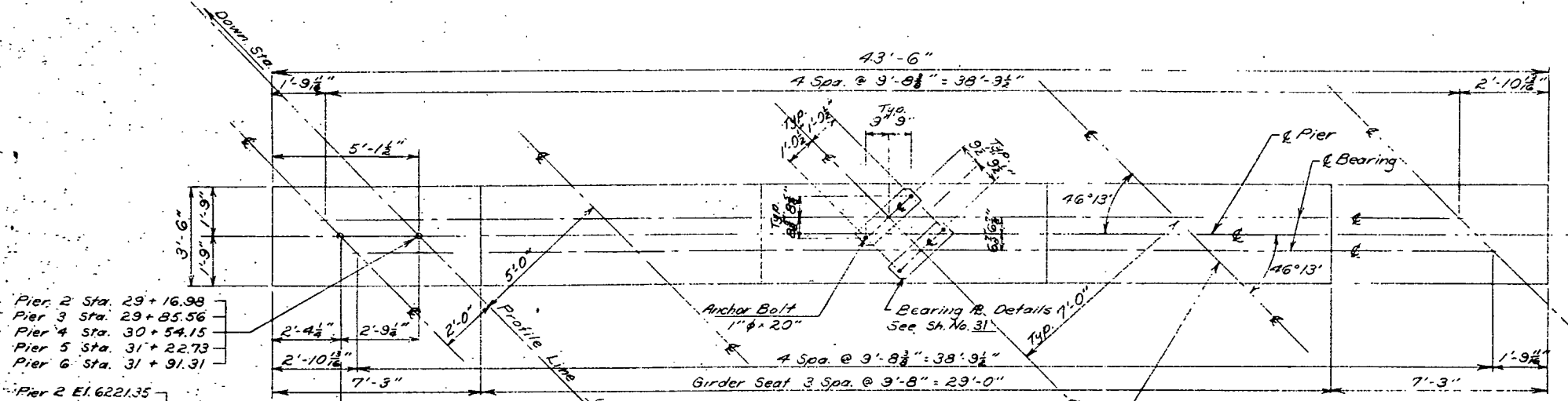
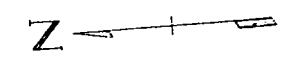
Across Channel Change Monument Cr.
Sta. 28+46.0 to 32+68.29
Near Colo. Springs Sec. 18 T. 13S R. 66W

Designed by N.G.M. Approved by E.D. Kurbell
Made by J.L.B. Bridge Engineer
Checked by _____ Date Feb. 21, 1953

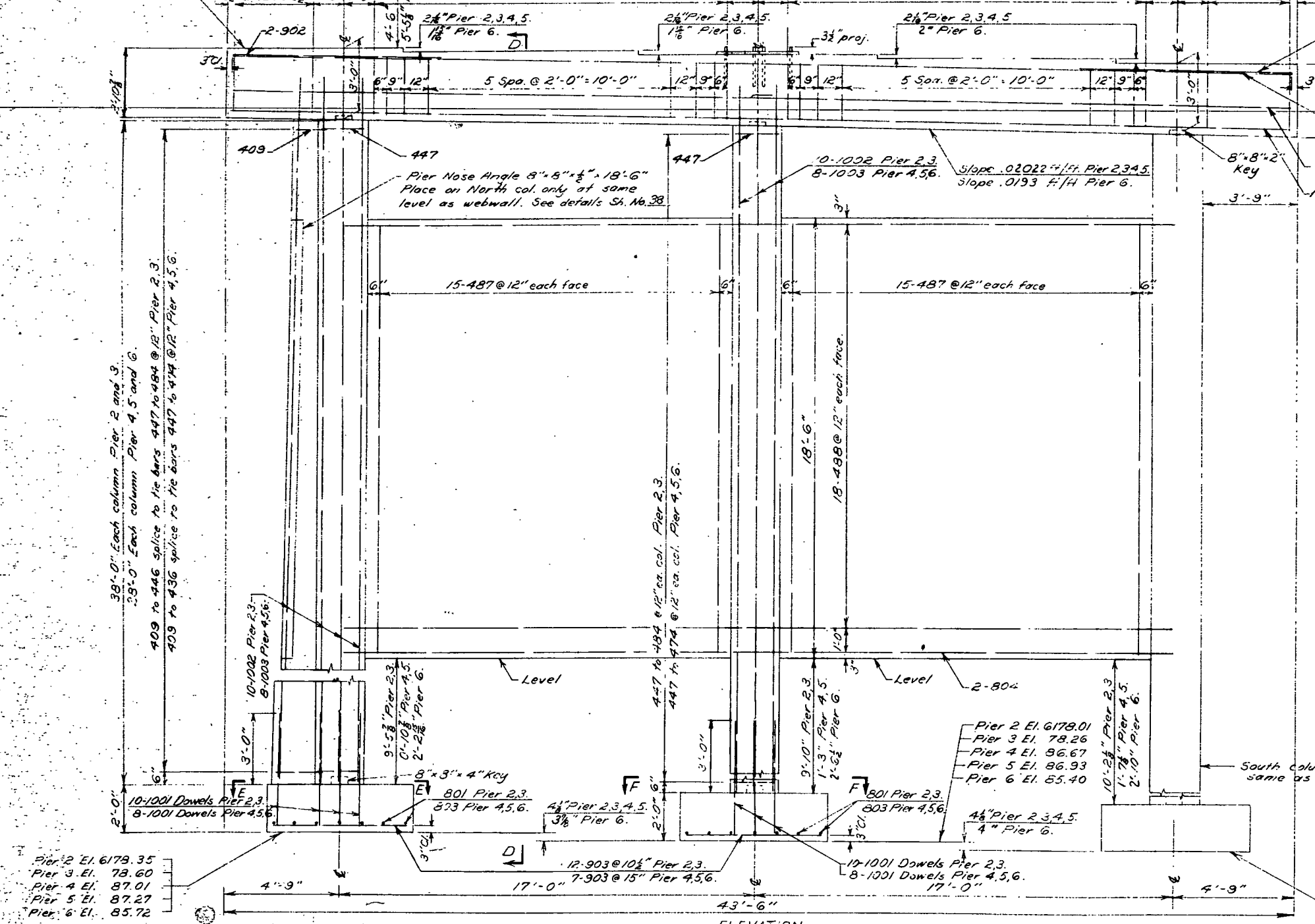
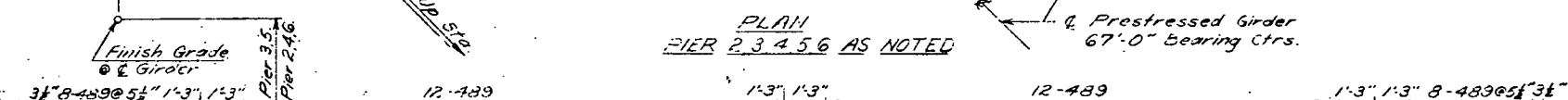
AM 10-3-57
E. 10-10-57

PIER NO.	DIVISION	PROJECT NO.	REV.	DATE
9	COLO.	I-25-2(28)145	33	

UNIT 2



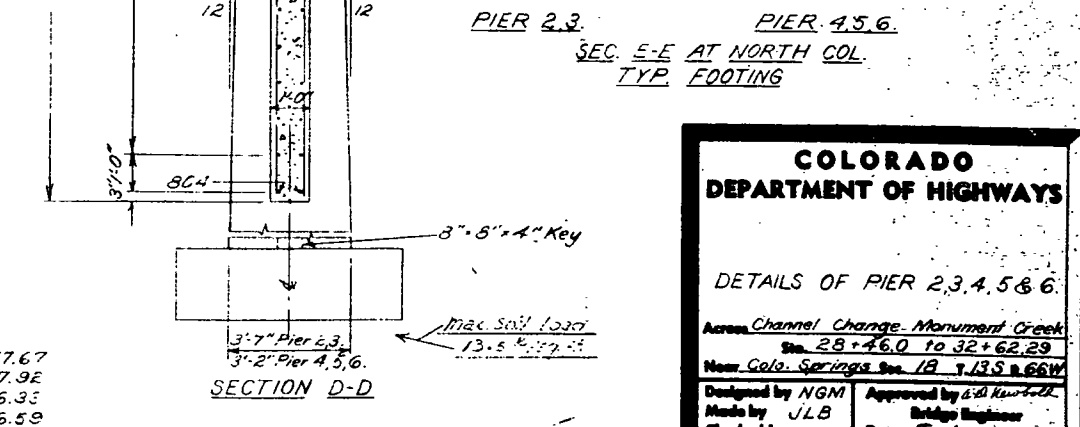
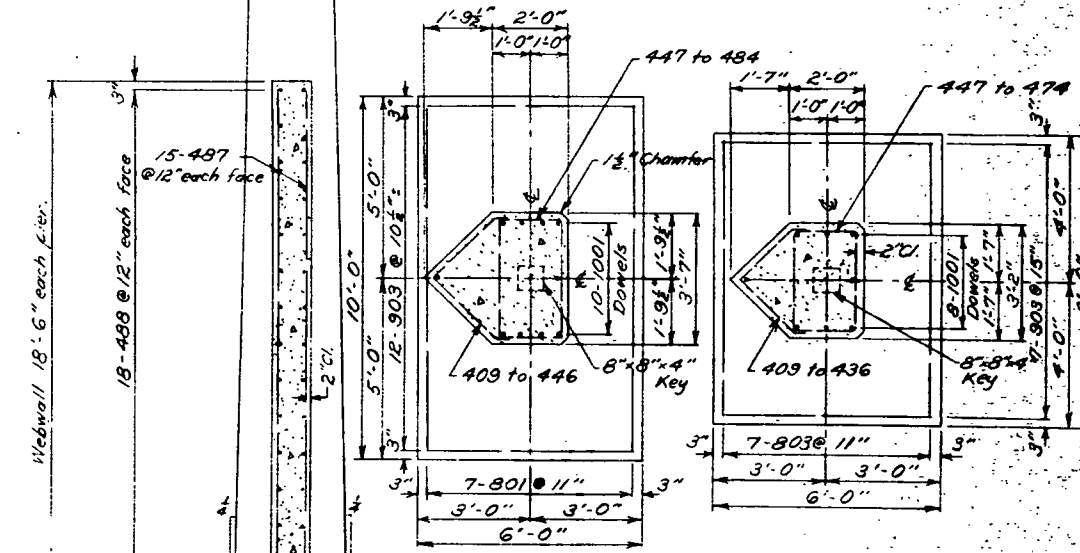
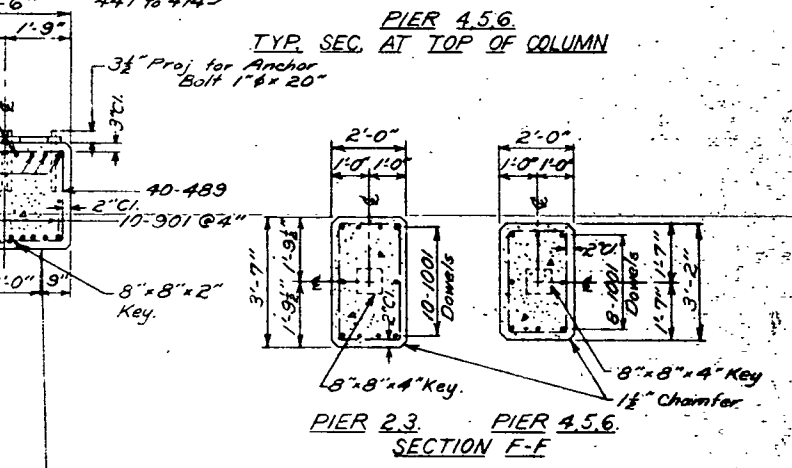
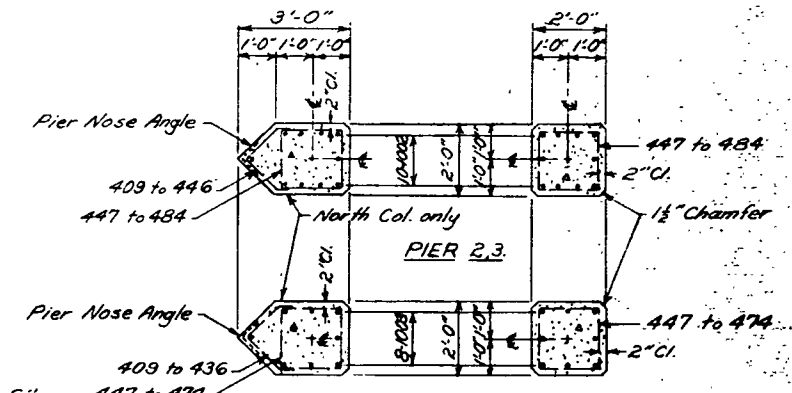
- Pier 2 Sta. 29 + 16.98
 - Pier 3 Sta. 29 + 85.56
 - Pier 4 Sta. 30 + 54.15
 - Pier 5 Sta. 31 + 22.73
 - Pier 6 Sta. 31 + 91.31
- Pier 2 El. 6221.35
 - Pier 3 El. 21.60
 - Pier 4 El. 20.01
 - Pier 5 El. 20.27
 - Pier 6 El. 78.72



- Pier 2 El. 6179.35
- Pier 3 El. 78.60
- Pier 4 El. 87.01
- Pier 5 El. 87.27
- Pier 6 El. 85.72

ELEVATION
Max. Footing Pressure = 6.75 Tons/Sq. Ft.

- Pier 2 El. 6177.67
- Pier 3 El. 77.92
- Pier 4 El. 86.35
- Pier 5 El. 86.59
- Pier 6 El. 85.07



COLORADO DEPARTMENT OF HIGHWAYS

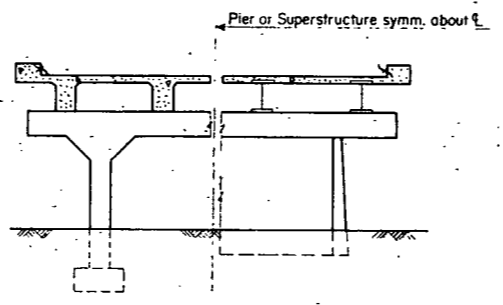
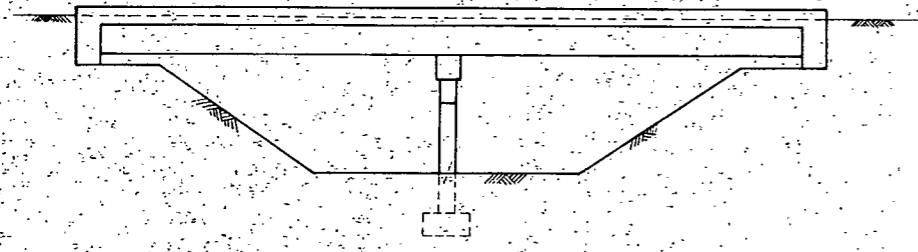
DETAILS OF PIER 2,3,4,5 & 6

Across Channel Change Monument Creek
Sta. 28 + 46.0 To 32 + 62.29
New Colo. Springs Sta. 12 + 13.5 @ 66W

Designed by NGM
Made by JLB
Checked by

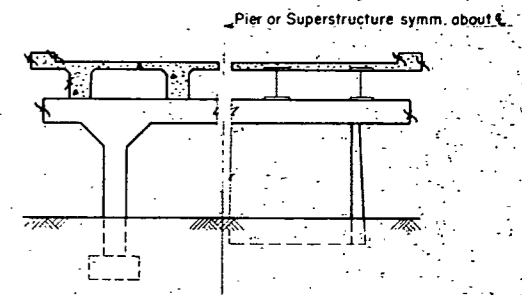
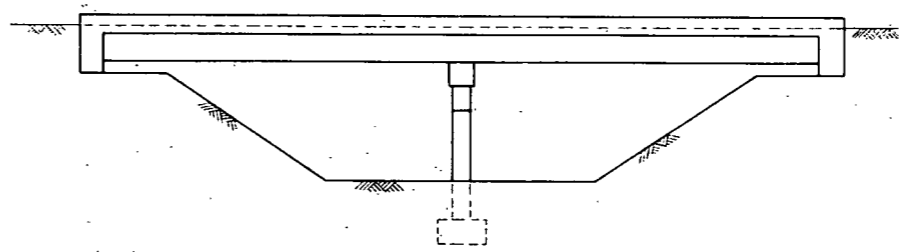
Approved by
Bridge Engineer
Date 7-26-51, 1951

STRUCTURE NO. I-17-DT SOUTH BR.



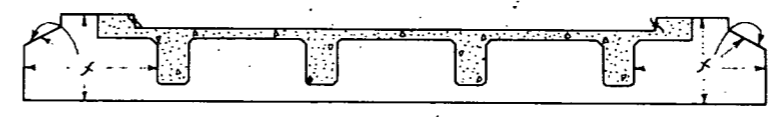
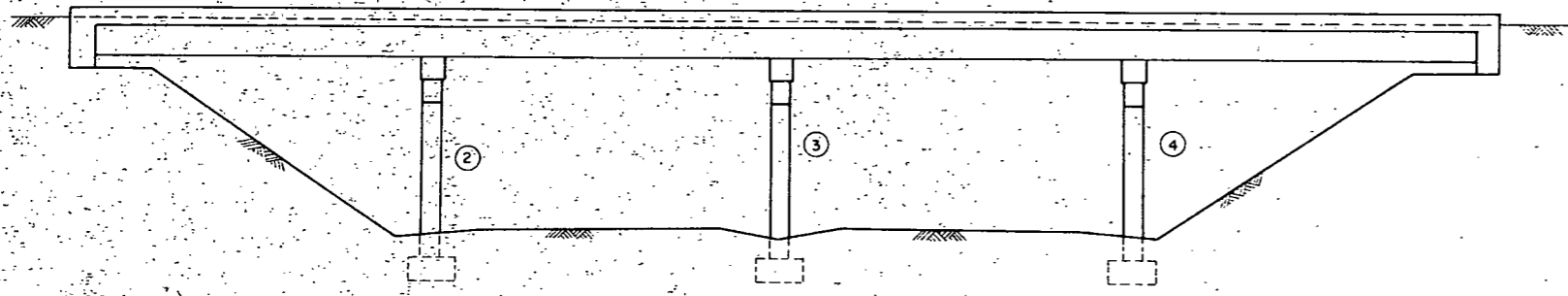
PIER AND SUPERSTRUCTURE

RURAL STREAM CROSSING

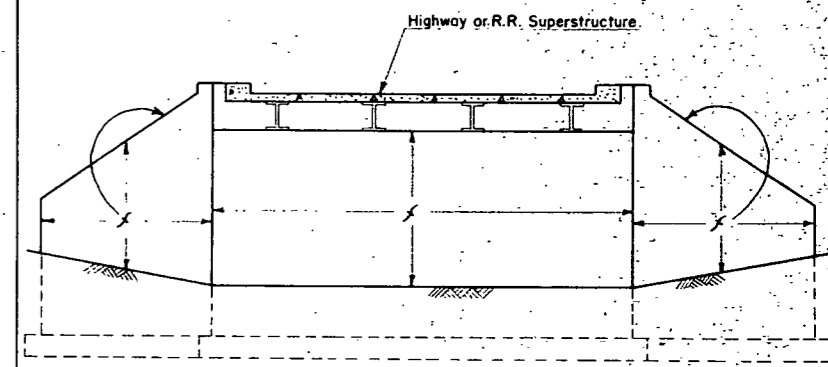


PIER AND SUPERSTRUCTURE

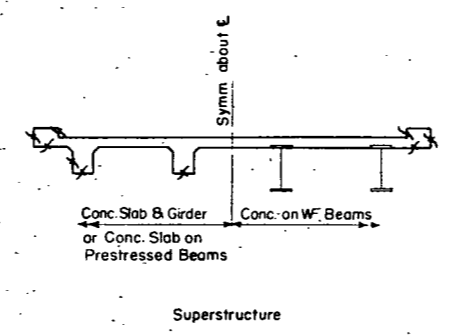
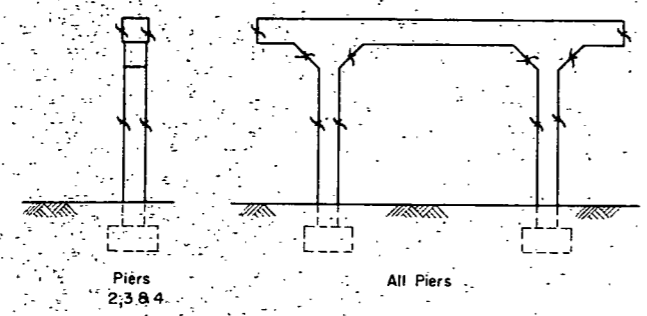
URBAN STREAM CROSSING OR NEAR URBAN AREA



STUB ABUTMENTS
(Underpass Only)



CANTILEVER ABUTMENTS
(Underpass Only)



In case of round columns the whole column shall receive Class "I" finish on all Piers.

UNDERPASS

COLORADO
DEPARTMENT OF HIGHWAYS

DETAILS SHOWING PORTIONS OF
STRUCTURE TO RECEIVE CLASS
"I" SURFACE FINISH.

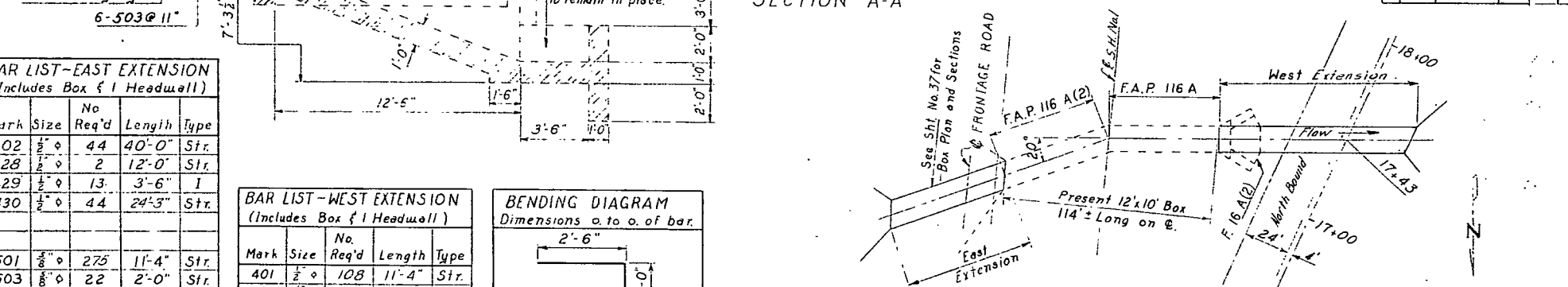
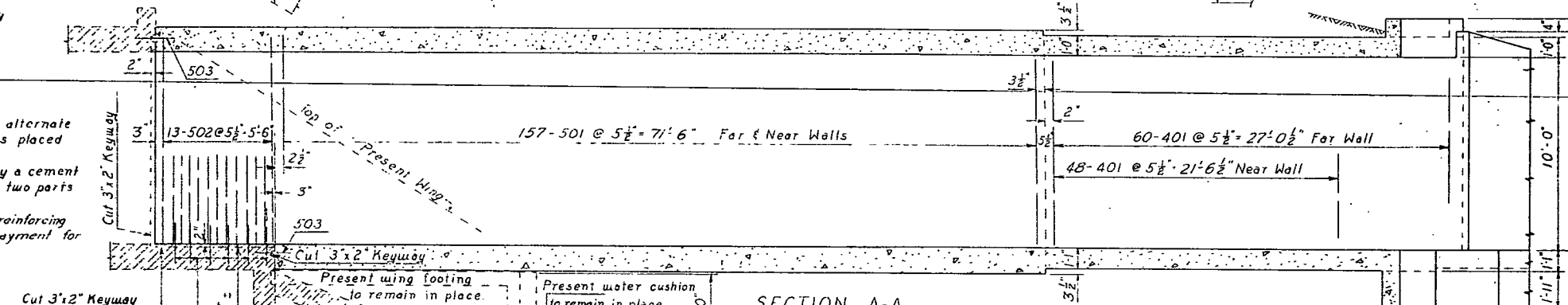
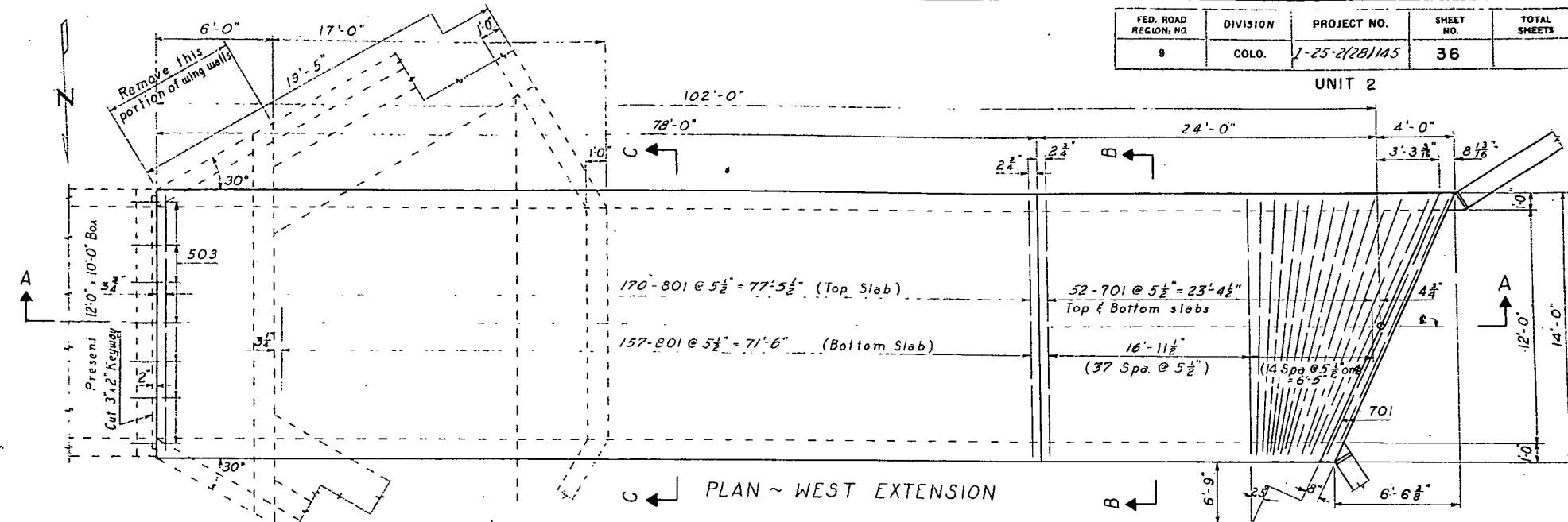
Across Various Locations
Sta. _____
Near Colo. Spgs. Sec. _____ T. _____ R. _____

Designed by A.D.N. Approved by _____
Made by R.R.A.-J.B. Bridge Engineer
Checked by _____ Date: _____

STRUCTURE NO. _____

FED. ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	1-25-2128/145	36	

UNIT 2

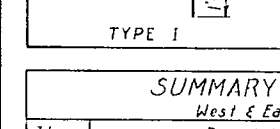


BAR LIST - EAST EXTENSION
(Includes Box & 1 Headwall)

Mark	Size	Req'd	Length	Type
402	1/2"	44	40'-0"	Str.
428	1/2"	2	12'-0"	Str.
429	1/2"	13	3'-6"	I
430	1/2"	44	24'-3"	Str.

BAR LIST - WEST EXTENSION
(Includes Box & 1 Headwall)

Mark	Size	Req'd	Length	Type
401	1/2"	108	11'-4"	Str.
402	1/2"	88	40'-0"	Str.
403	1/2"		15'-3"	
414	1/2"		20'-9"	
415	1/2"	11	21'-3"	Str.
416	1/2"		21'-9"	
426	1/2"		26'-9"	
427	1/2"	10	27'-3"	Str.
428	1/2"	2	12'-0"	Str.
429	1/2"	13	3'-6"	I



SUMMARY OF QUANTITIES
West & East Extensions

Item	Description	Unit	Totals
11	Removal of Headwalls	Each	2
46	Class A Concrete	Cu. Yd.	368
47	Reinforcing Steel (inc. 1% for Overrun)	Lb.	37920

① Includes 34.7 Cu. Yd. for 4 Wings and 6.4 Cu. Yd. for 2 Headwalls. (Each 3.2 yards.)
② Includes 1998 Lb. for 4 Wings and 380 Lb. for 2 Headwalls.

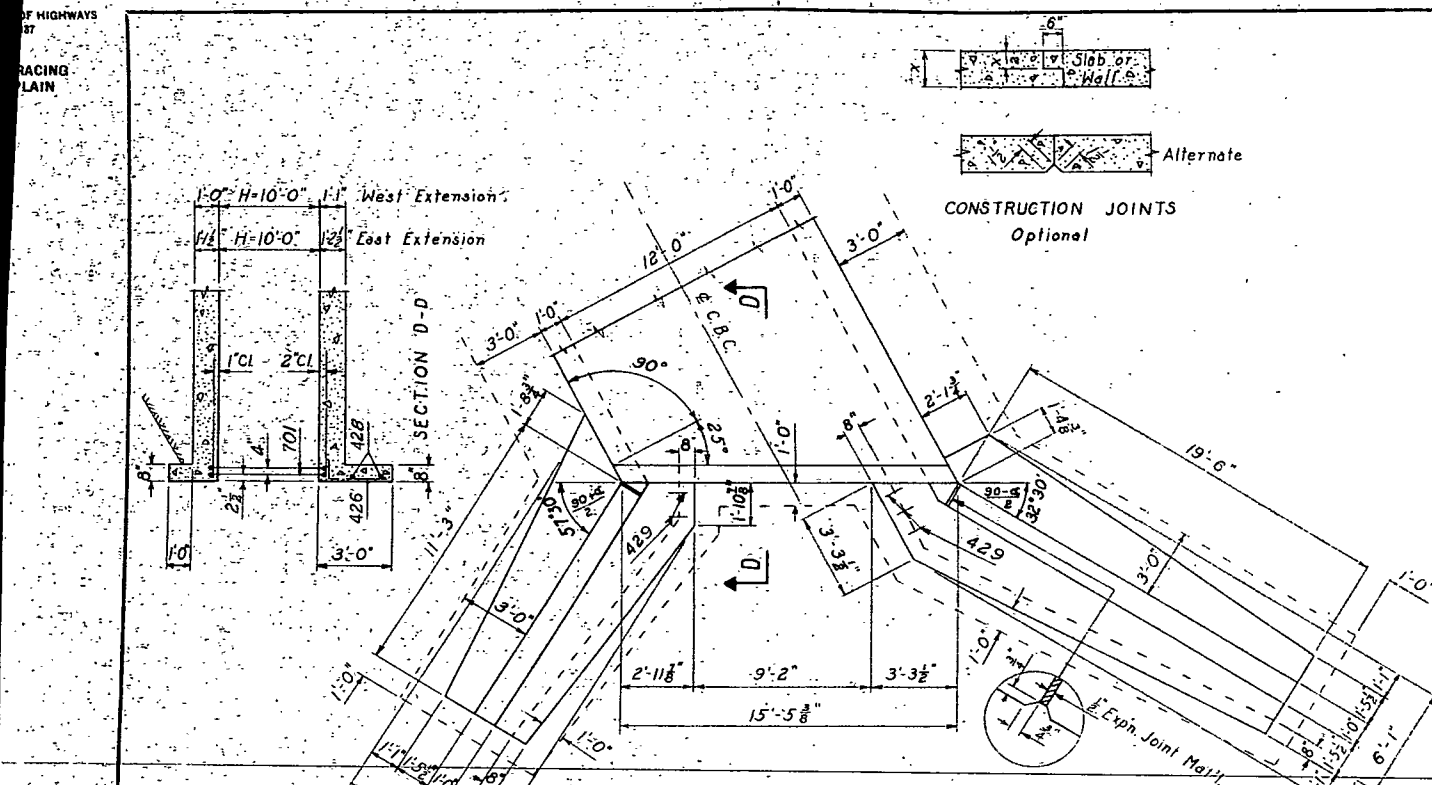
BAR SUMMARY ~ EAST EXTENSION

2897 Lin. Ft. 1/2" @ 0.668*/Lin. Ft. = 1935 Lb.
3161 Lin. Ft. 1/2" @ 1.043*/Lin. Ft. = 3297 Lb.
3726 Lin. Ft. 1/2" @ 2.044*/Lin. Ft. = 7616 Lb.
Plus 1% for Overrun = 133 Lb.
Plus 2 Wings from Std. M-50-BW = 999 Lb.
③ Total = 13980 Lb.

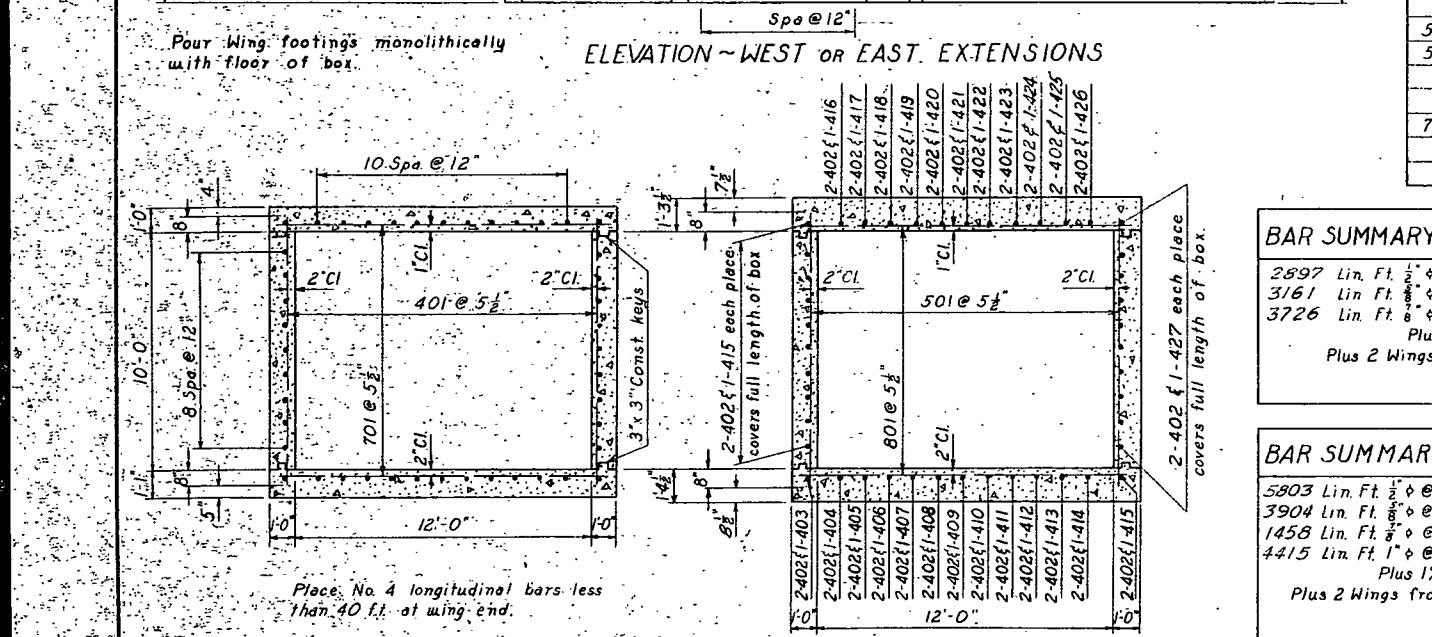
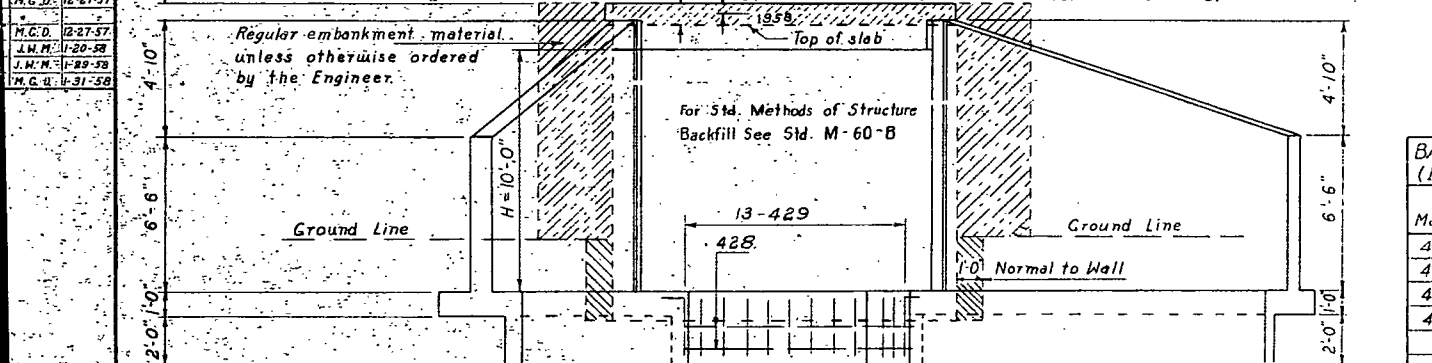
BAR SUMMARY ~ WEST EXTENSION

5803 Lin. Ft. 1/2" @ 0.668*/Lin. Ft. = 3876 Lb.
3904 Lin. Ft. 1/2" @ 1.043*/Lin. Ft. = 4072 Lb.
1458 Lin. Ft. 1/2" @ 2.044*/Lin. Ft. = 2980 Lb.
4415 Lin. Ft. 1" @ 2.670*/Lin. Ft. = 11788 Lb.
Plus 1% for Overrun = 225 Lb.
Plus 2 Wings from Std. M-50-BW = 999 Lb.
③ Total = 23940 Lb.

③ Includes 190 Lb. for 1 Headwall



22-503 dowel bars are to be placed at alternate 402 longitudinal bars and 12-503 dowel bars placed in present apron at alternate 502 bars.
Dowel bars are to be grouted in place by a cement grout composed of one part cement and two parts clean well graded sand.
The cost of drilling holes and placing reinforcing bars and cutting keyway is to be included in payment for Removal of Headwalls.



Place No. 4 longitudinal bars less than 40 ft. at wing end.

Initial	Date
M.C.D.	12-27-57
M.C.D.	2-27-57
J.W.M.	1-20-58
J.W.M.	1-29-58
M.C.D.	4-31-58

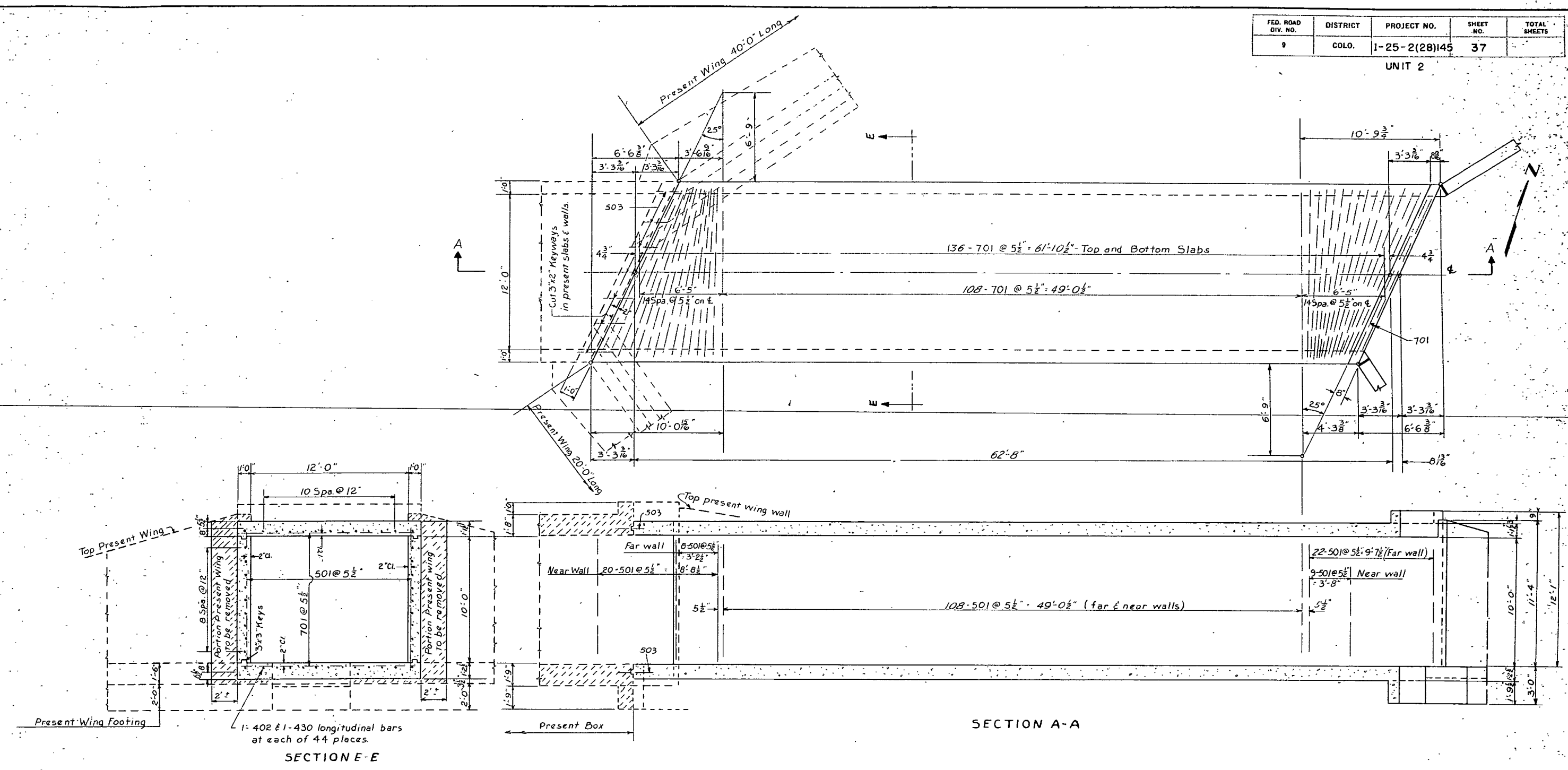
COLORADO
DEPARTMENT OF HIGHWAYS
12'-0" x 10'-0" CONCRETE BOX
CULVERT EXTENSIONS
MAXIMUM FILLS = 18 FT. AT STA. 17+43
12 FT. AT FRONTAGE ROAD

Sta. 17+43
Near COLO. SPRINGS Sec. 18 T.13S. R.66W

Designed by M.C.D. Approved by *[Signature]*
Made by M.G.D. Bridge Engineer
Checked by *[Signature]* Date: Feb. 14, 1958

FED. ROAD DIV. NO.	DISTRICT	PROJECT NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	1-25-2(28)145	37	

UNIT 2



Initial	Date
MGD	1-4-57
MGD	1-4-57
JWM	1-23-58
T.G.B.	1-27-58
M.C.D.	1-31-58

SECTION A-A

SECTION E-E

COLORADO
DEPARTMENT OF HIGHWAYS
 12' x 10' CONCRETE BOX CULVERT
 EAST EXTENSION AT
 FRONTAGE ROAD

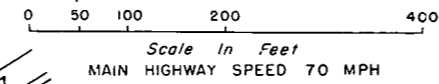
Across Sta. 17 + 43
 Near Colo. Springs Sec. 16 T. 13 S. R. 66W

Designed by MGD Approved by *[Signature]*
 Made by MGD Bridge Engineer
 Checked by *[Signature]* Date: 9/24/1958

STRUCTURE NO. 1-17-a

LAYOUT & DETAIL OF INTERSECTION

STA. 0+00 TO 31+



Rev. 8-19-59, Added Frontage Rd-Ramp No. 2 & South Bound Revised-G.S.

FEDERAL ROAD DIVISION NO.	DISTRICT	PROJ NO	SHEET NO	TOTAL SHEETS
9	COLORADO	I-25-2(28)145	52	

Rev. 10-2-59 G.S. Changed Ramp 2 & Fr. Rd. Access Control

UNIT 2

J

Δ = 34°22'
D = 30°00'
T = 59.1'
L = 114.6'
R = 191.0'

K

Δ = 51°56'
D = 20°00'
T = 139.5'
L = 259.7'
R = 286.5'

L

Δ = 33°34'
D = 30°00'
T = 57.6'
L = 111.9'
R = 191.0'

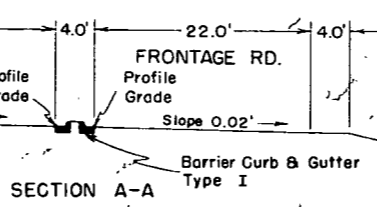
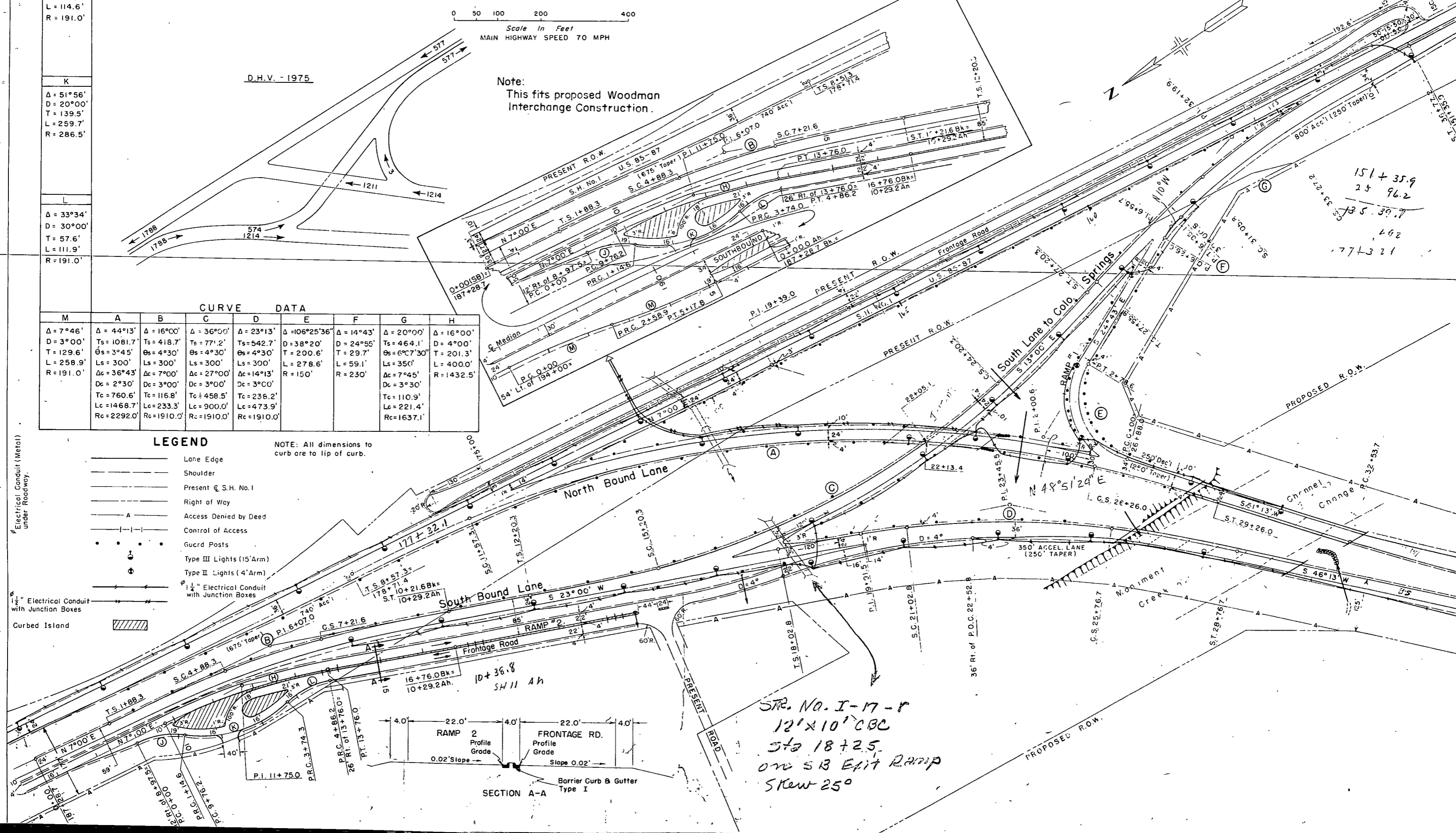
CURVE DATA

M	A	B	C	D	E	F	G	H
Δ = 7°46'	Δ = 44°13'	Δ = 16°00'	Δ = 36°00'	Δ = 23°13'	Δ = 106°25'36"	Δ = 14°43'	Δ = 20°00'	Δ = 16°00'
D = 3°00'	Ts = 1081.7'	Ts = 771.2'	Ts = 542.7'	D = 38°20'	D = 200.6'	D = 24°55'	Ts = 464.1'	D = 4°00'
T = 129.6'	Os = 3°45'	Os = 4°30'	Os = 4°30'	T = 200.6'	L = 278.6'	T = 29.7'	Os = 6°07'30"	T = 201.3'
L = 258.9'	Ls = 300'	Ls = 300'	Ls = 300'	L = 278.6'	R = 150'	L = 59.1'	Ls = 350'	L = 400.0'
R = 191.0'	Δc = 36°43'	Δc = 7°00'	Δc = 27°00'	Δc = 14°13'	R = 150'	R = 230'	Δc = 7°45'	R = 1432.5'
	Dc = 2°30'	Dc = 3°00'	Dc = 3°00'	Dc = 3°00'			Dc = 3°30'	
	Tc = 760.6'	Tc = 116.8'	Tc = 458.5'	Tc = 236.2'			Tc = 110.9'	
	Lc = 1468.7'	Lc = 233.3'	Lc = 900.0'	Lc = 473.9'			Lc = 221.4'	
	Rc = 2292.0'	Rc = 1910.0'	Rc = 1910.0'	Rc = 1910.0'			Rc = 1637.1'	

LEGEND

NOTE: All dimensions to curb are to lip of curb.

- Lane Edge
- Shoulder
- Present @ S.H. No. 1
- Right of Way
- Access Denied by Deed
- Control of Access
- Guard Posts
- Type III Lights (15' Arm)
- Type II Lights (4' Arm)
- 1 1/2" Electrical Conduit with Junction Boxes
- Curbed Island



STR. NO. I-17-r
 12'x10' CBC
 Sta 18+25
 on SB Exit Ramp
 Skew 25°

151 + 35.9
 25 96.2
 135.39.7
 462
 77 + 32.1

Alignment and Grades shown are subject to modification during construction after approval by the Denver Office.

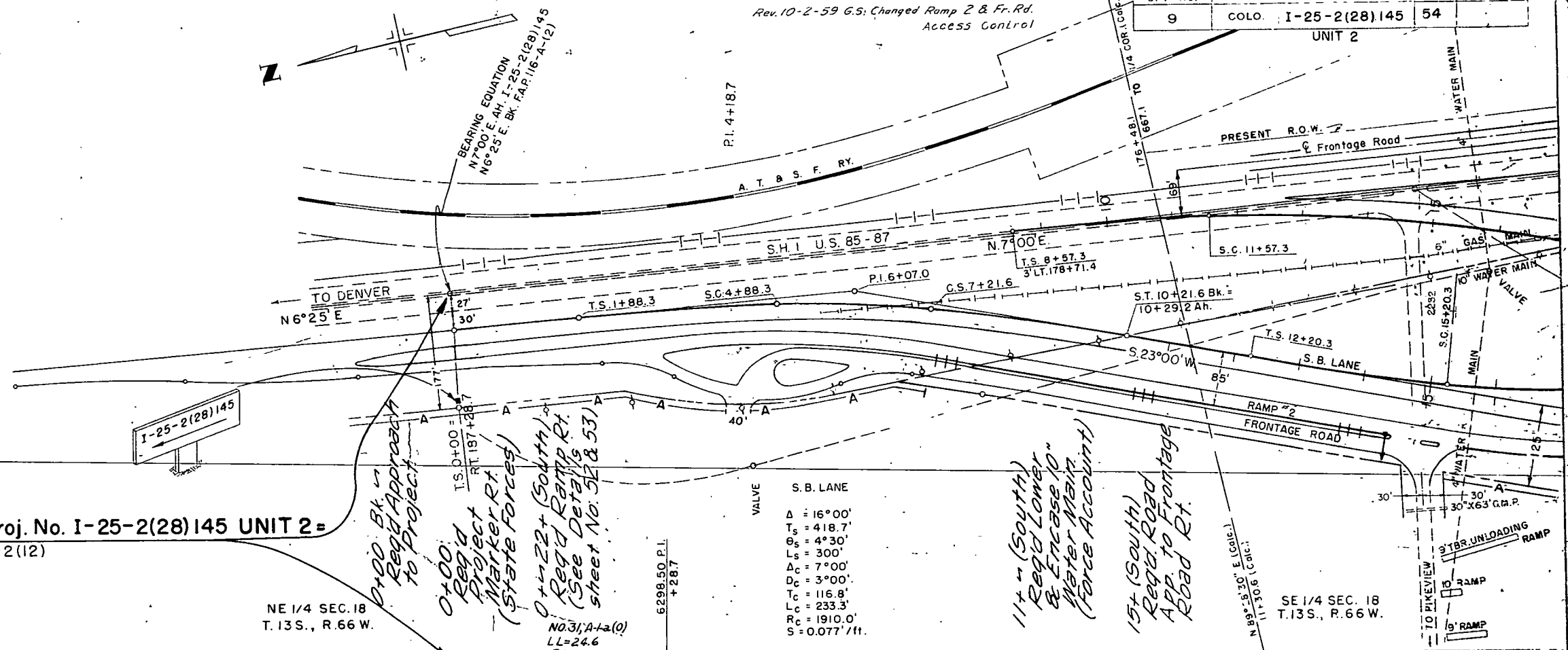
Soil data shown on the plans is obtained from best testing laboratory information. This information is shown for convenience of the Contractor and the Department does not guarantee the accuracy of these tests. If materials not conforming to the data on plans are encountered during construction the grading plan shown on plans will be modified where necessary to secure dense, stable embankments.

Rev. 8-19-59, Added Frontage Rd.-Ramp No. 2 & South Bound Revised-G.S.
 Rev. 10-2-59 G.S. Changed Ramp 2 & Fr. Rd. Access Control

Rev. 6-25-59, Access Control - J.C.R.

FED. ROAD DIV. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	I-25-2(28)145	54	

UNIT 2



Sta. 0+00 Beg. Proj. No. I-25-2(28)145 UNIT 2 =
 Sta. 187+28.7 FO02-2(12)

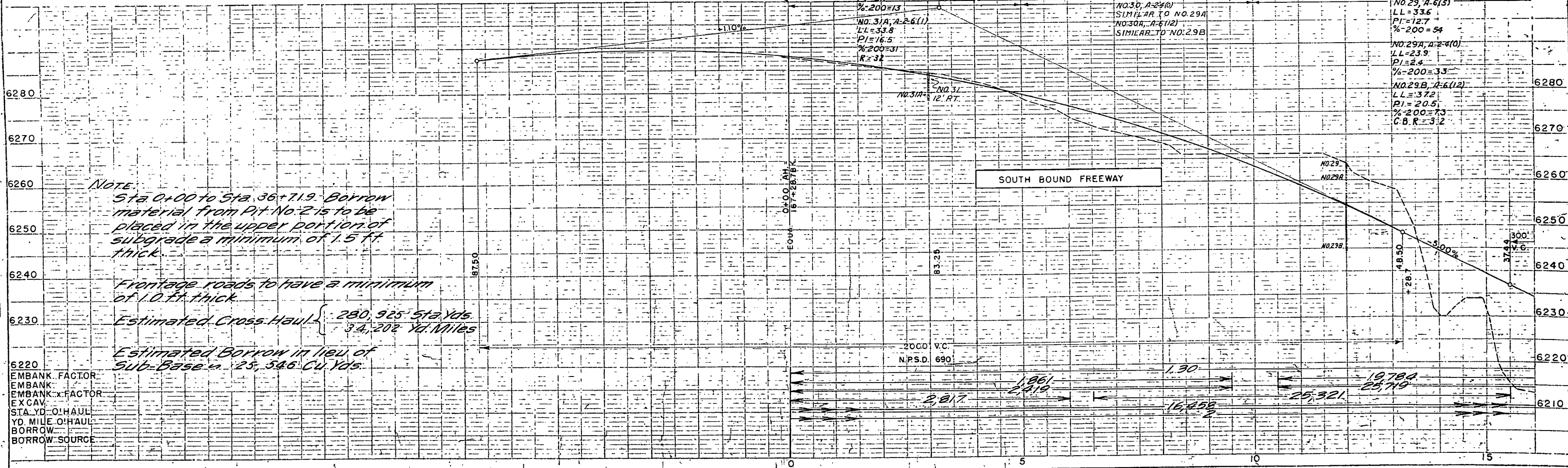
NE 1/4 SEC. 18
 T. 13S., R. 66W.

S. B. LANE
 Δ = 16°00'
 T_s = 418.7'
 θ_s = 4°30'
 L_s = 300'
 Δ_c = 7°00'
 D_c = 3°00'
 T_c = 116.8'
 L_c = 233.3'
 R_c = 1910.0'
 S = 0.077' / ft.

11' (South) Reg'd Lower & Increase 10" Water Main (Force Account)

15' (South) Reg'd Road App to Frontage Road Rt.

SE 1/4 SEC. 18
 T. 13S., R. 66W.



Note:
 Sta. 0+00 to Sta. 36+71.9 Borrow material from Pit No. 2 is to be placed in the upper portion of subgrade a minimum of 1.5 ft. thick.
 Frontage roads to have a minimum of 1.0 ft. thick.
 Estimated Cross Haul: 280,925 Sta. Yds. / 34,202 Yd. Miles
 Estimated Borrow in lieu of Sub-Base: 25,546 Cu Yds.

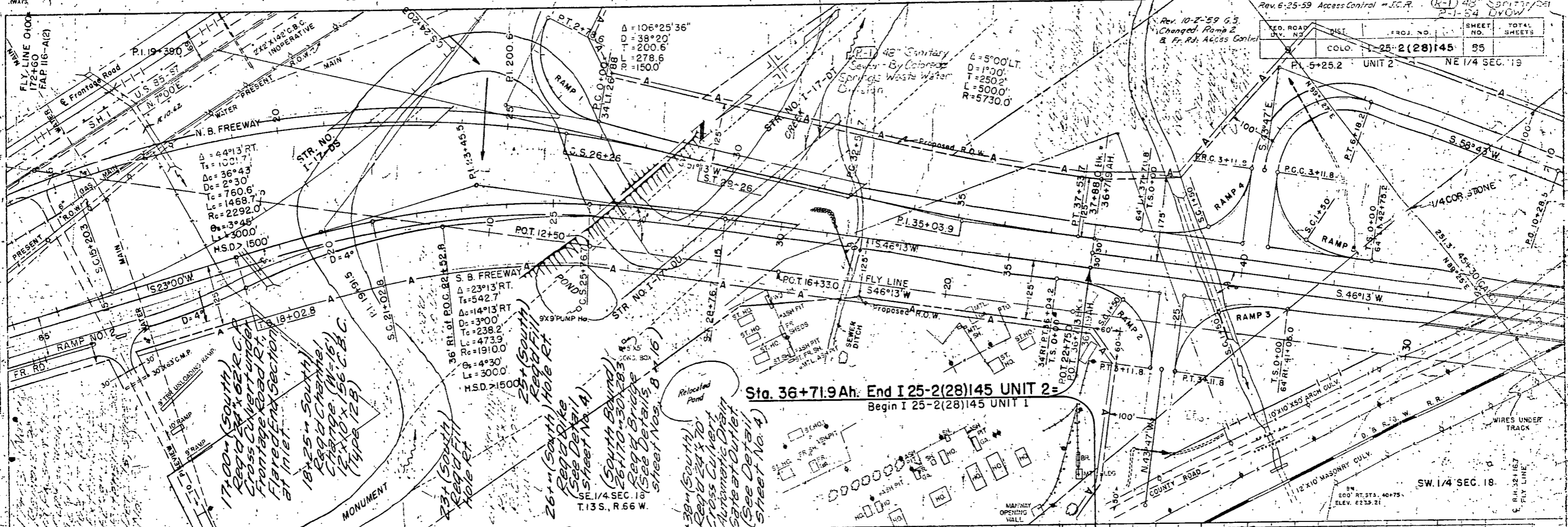
2000 V.C.
 N.P.S.D. 690

EMBAK. FACTOR	
EMBAK.	
EMBAK. x FACTOR	
E X CAV.	
STA. YD. O'HHAUL	
YD. MILE O'HHAUL	
BORROW	
BORROW SOURCE	

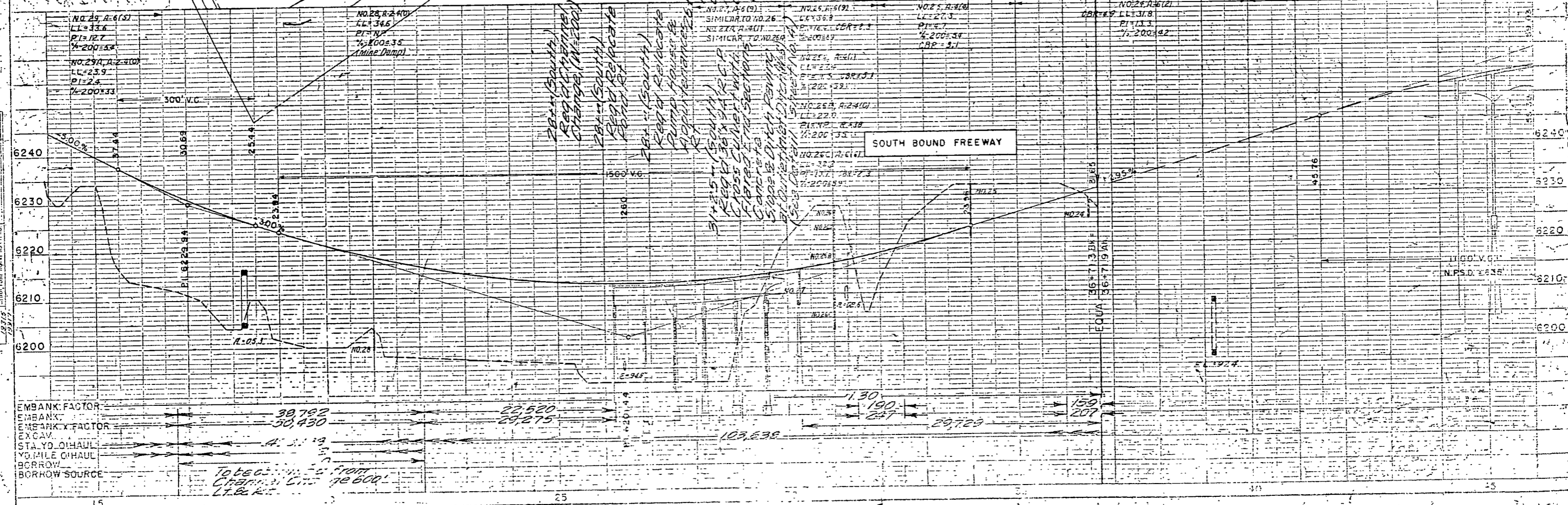
PLAN	
SURVEYED	
PLOTTED	
NOTE BOOK	
NO. 1937	
DATE OF WAY CHECKED	

PROFILE	
SURVEYED	
PLOTTED	
NOTE BOOK	
NO. 1937	
DATE OF WAY CHECKED	

PROJ. NO.	SHEET NO.	TOTAL SHEETS
125-2(28)145	55	



Sta. 36+71.9 Ah. End I 25-2(28)145 UNIT 2
Begin I 25-2(28)145 UNIT 1



Item	Value
EMBANK. FACTOR	38,782
EMBANK. X FACTOR	50,430
EXCAV.	22,620
STA. TO OHHAUL	29,275
1/2 MILE OHHAUL	103,638
BORROW	150
BORROW SOURCE	207

To be 50' from Channel Line to 600' L & R

PLAN
NOTE: SEE SHEET 54 FOR RAMP 1 & 2
NOTE: SEE SHEET 55 FOR RAMP 3 & 4

PROFILE
NOTE: SEE SHEET 54 FOR RAMP 1 & 2
NOTE: SEE SHEET 55 FOR RAMP 3 & 4

