

GENERAL LAYOUT

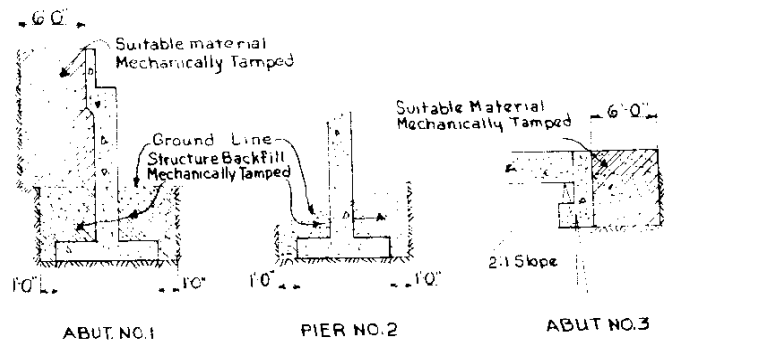
SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	SUPER STRUCTURE	ABUT. NO. 1	PIER NO. 2	ABUT. NO. 3	TOTAL	APPROACH & SLABS
14a	Common Excav. (Str.)	Cu. Yd.		1440	215		1655	
16a	Structure Backfill (Class A)	Cu. Yd.		280	166		446	
16c	Mechanical Tamping	Hrs.		225	17		242	
18a	Station Yard Overhaul	Sta. Yd.						
18b	Yard Mile Overhaul	Yd. Mi.						
46a	Class A Concrete	Cu. Yd.	311.6	773.4	77.9	51.1	1214.0	62.5
47	Reinforcing Steel (incl. 1% Overrun)	Lbs.	56,065	84,425	12,210	4335	157,035	8,820
48	Structural Steel (incl. 1/2% for Paint)	Lbs.	370,860				370,860	
60x	Drill Holes to Facilitate Driving Piles	Lin. Ft.				421	421	
61a	Steel Pipe Piling 10 1/2" O.D. x 18"	Lin. Ft.				950	950	
91b	Steel Railing (incl. Appr. Slab Railing)	Lin. Ft.	514	19		19	612	60
*	1/2" Exp'n Joint Mat'l. Type III	Sq. Ft.	203	82		24	309	
+	16ga Sheet Metal	Sq. Ft.	96				96	
4	Rich Mixed Asphaltic Concrete	Ton						

± To be included in the bid prices of Class "A" Concrete.
 * Expansion Joint Material shall be in accordance with A.A.S.H.O. Spec M-153-54 and of the type shown, to be included in the bid price of Class "A" Concrete.
 □ The bid price of Steel Pipe Piling shall include 20.6 cu. yd. of Class "A" Concrete to fill piles.
 Δ See project Summary.
 ± Bridge total does not include Approach Slab Quantities.

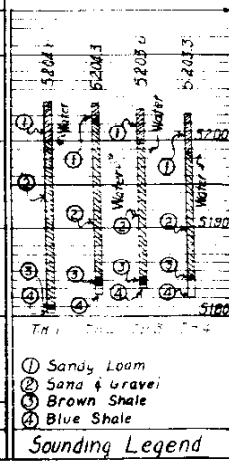
Note 14 R.C. of Spur Sta. 115+34 to 115+00
 Reg'd 36 x 156 R.C.P. 2 Flared Ends
 Outlet E. 520.60 Inlet E. 521.20

FIB. ROAD DISTRICT PROJECT NO. SHEET TOTAL SHEETS
 A 9 COLO. 1,002-2 (48) 17



STRUCTURE BACKFILL & MECHANICAL TAMPING DIAGRAMS

All material that is to be mechanically tamped, shall be placed in horizontal layers not more than 6 inches in depth and tamped before the next layer is placed.



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 AS EXTENDED AS SPECIFIED.
 ALL CONCRETE SURFACES EXPOSED TO NORMAL VIEW BY HIGHWAY TRAFFIC SHALL RECEIVE 1/2" SURFACE FINISH WITH SURFACES SHALL RECEIVE ORDINARY WRAP & 1/2" FINISH FOR CONCRETE SURFACES EXPOSED IN THE FINISHED WORK SHALL BE CONSTRUCTED OF SHEAP OR TONGUE AND GROOVE LUMBER 3/4" UNFINISHED FACED WITH PANEL BOARD.
 FOOTINGS IN ROCK SHALL BE BOLTED 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 IN SPECT AND DETERMINE IF REVISIONS ARE NECESSARY.
 ALL REINFORCING STEEL SHALL CONFORM TO ASTM SPECIFICATION A 305 10T 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. PRIMARY BARS SHALL NOT BE SPICED AND EXCEPT BY PERMISSION OF THE ENGINEER, DIMENSIONS FOR REINFORCING STEEL SHALL 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 BOLTS EXCEPT AS NOTED ARE 1/2" DIA. AND SHALL BE POWER DRIVEN.
 WHEN TREATED TIMBER OF 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 METHOD.
 HIGH TENSILE STRENGTH BOLTS SHALL AS ESTIMATED FOR FIELD BOLTS BUT AT NO ADDITIONAL EXPENSE TO THE STATE. THE BOLTS SHALL BE ASSEMBLED IN ACCORDANCE WITH SPECIFICATIONS APPROVED BY THE RESEARCH COUNCIL ON BOLTED AND BOLTED STRUCTURAL JOINTS OF THE ENGINEERING FOUNDATION (A.S.T.M. 301).
 PRIMARY BARS WHICH ARE SPICED SHALL BE 20 DIAMETERS OF THE BAR WHEN PRIMARY BARS ARE SPICED THEY SHALL LAP 36 DIAMETERS FOR BARS NEAR TOP OF BEAM AND UNLESS OTHERWISE SPECIFIED SHALL LAP 48 DIAMETERS AT BOTTOM OF MEMBERS.

LOADING DATA

LIVE LOAD: A.A.S.H.O. HS 20-44
 DEAD LOAD: ASSUMED 25 LBS PER SQ FT ASPHALTIC SURFACING

DESIGNING DATA

A.A.S.H.O. 1955 UNIT STRESS EXCEPT AS NOTED
 Reinforcing Steel: 20000 lbs per sq in
 Structural Steel: 16000 lbs per sq in
 Concrete: 1200 lbs per sq in
 n = 10

COLORADO

DEPARTMENT OF HIGHWAYS

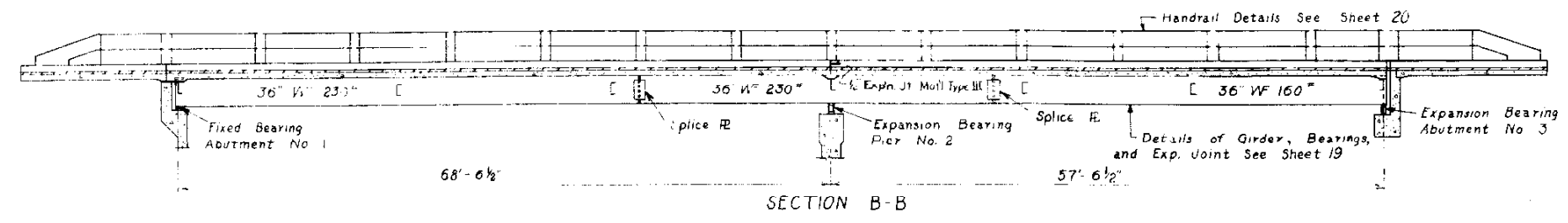
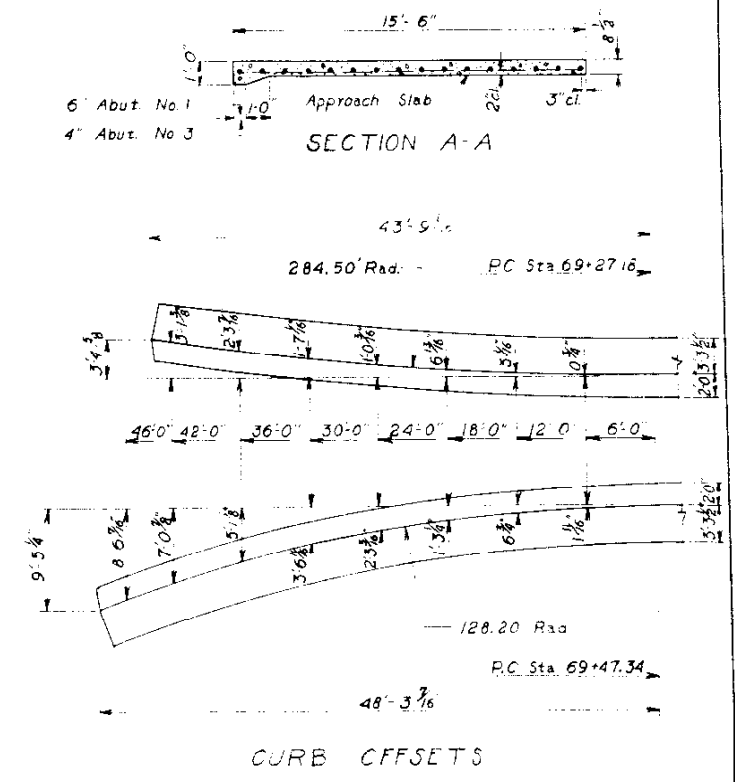
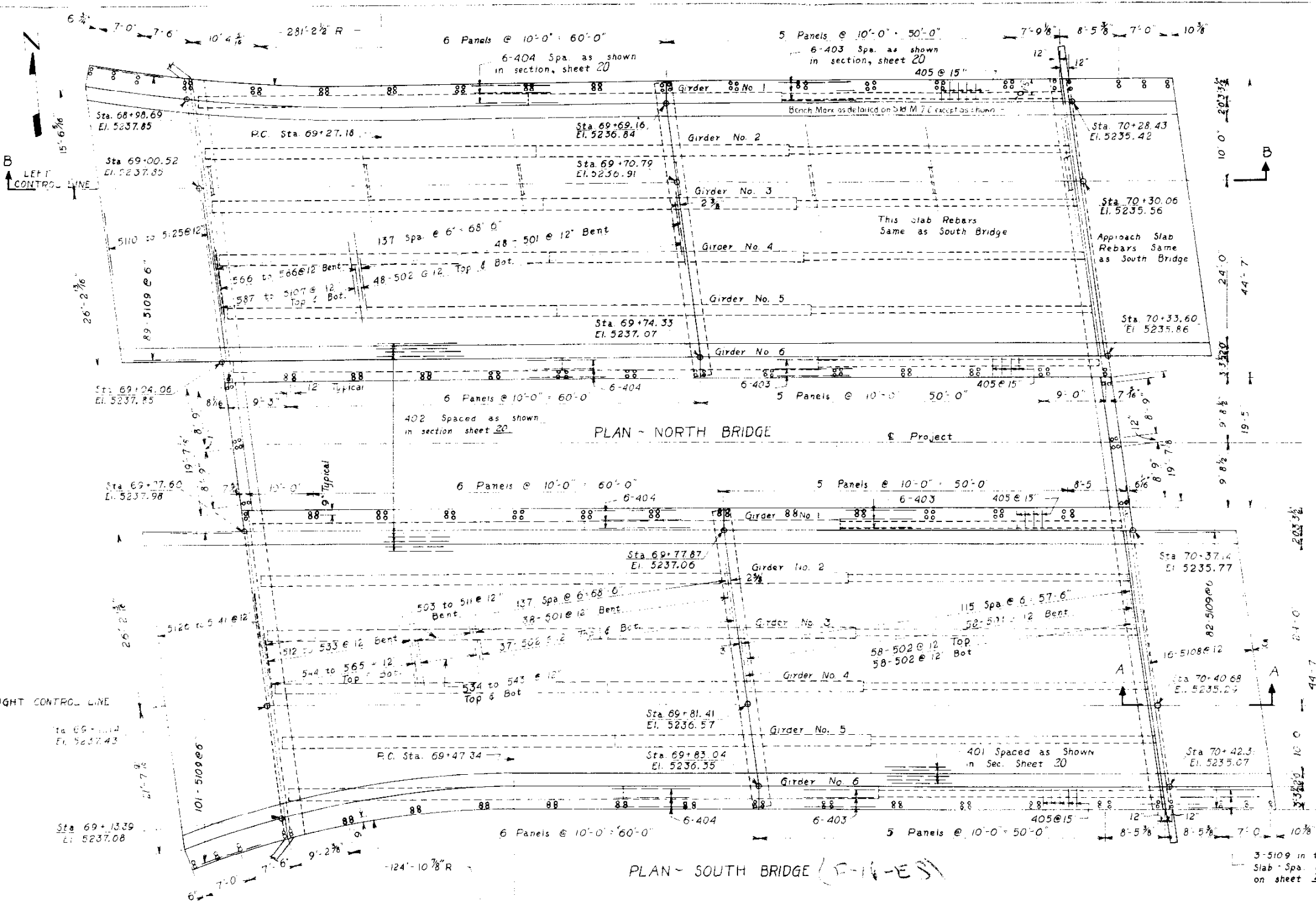
2 SPAN CONCRETE & I BEAM

BRIDGES WITH 36" ROADWAY

GENERAL LAYOUT SUMMARY & GENERAL NOTES

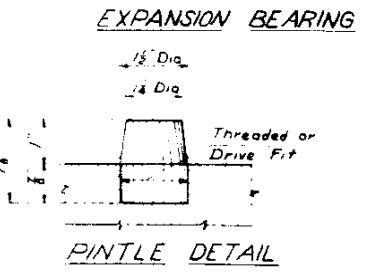
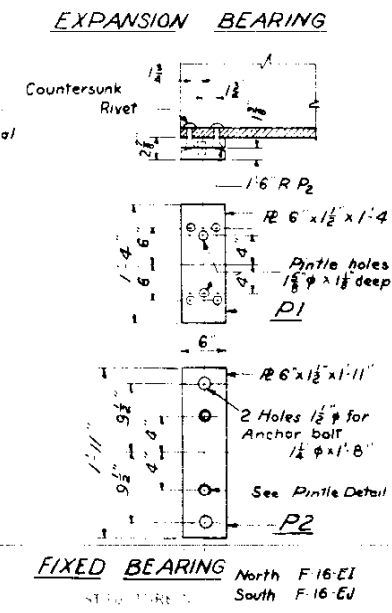
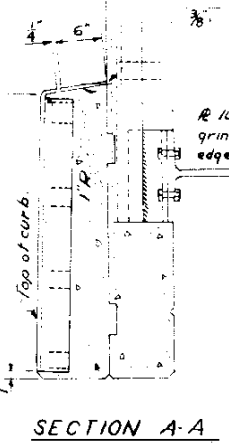
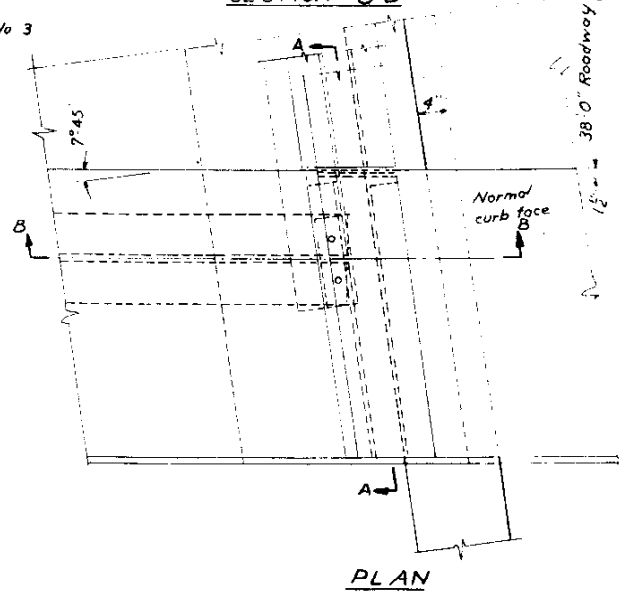
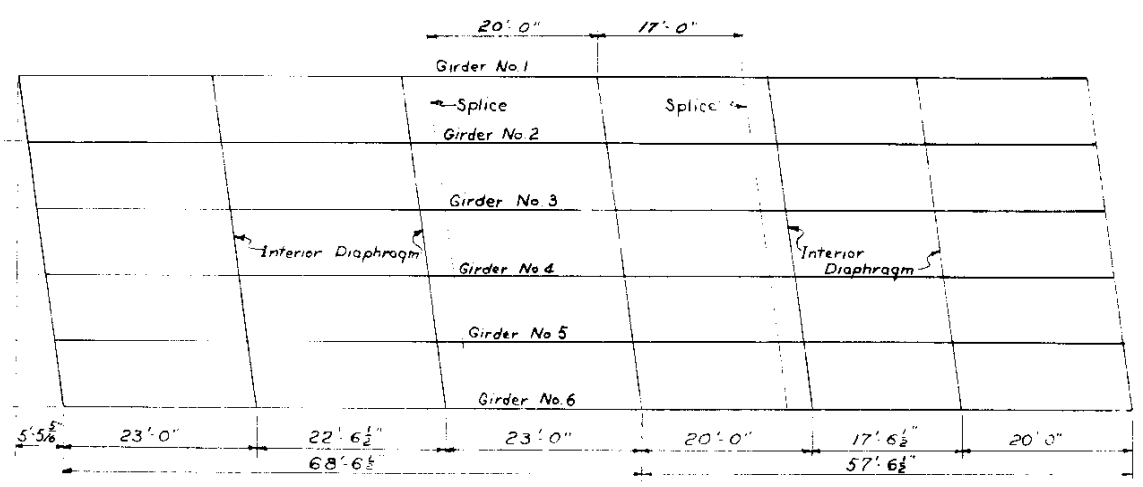
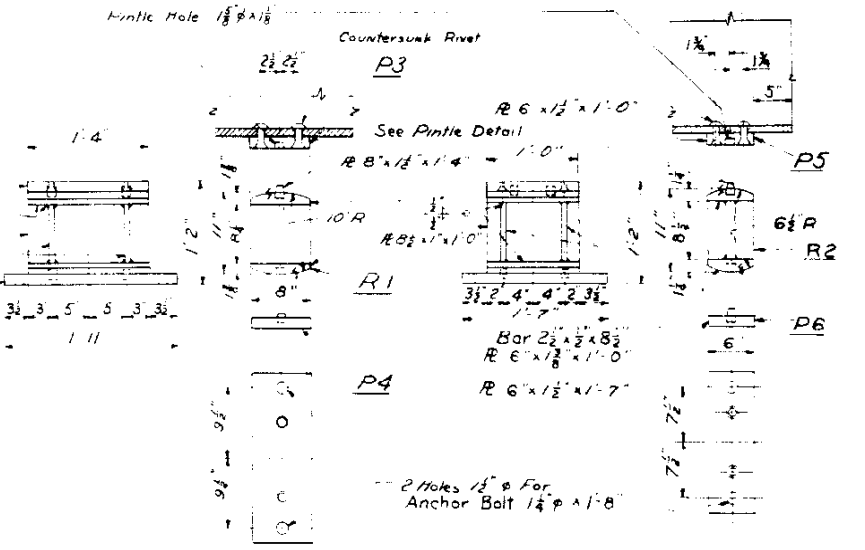
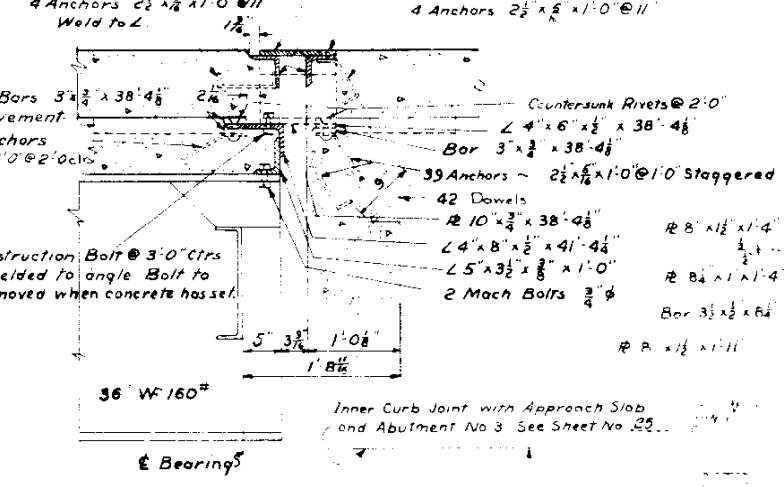
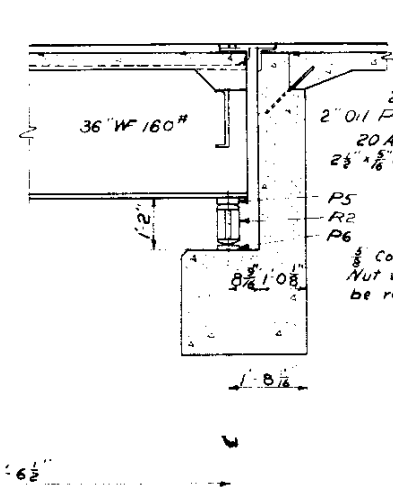
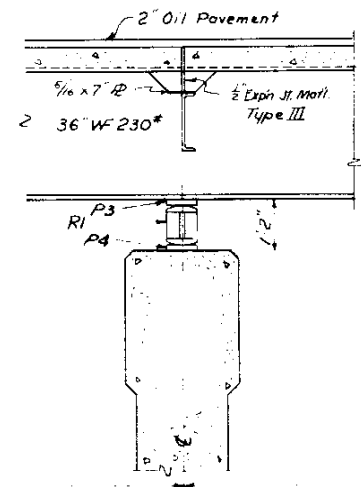
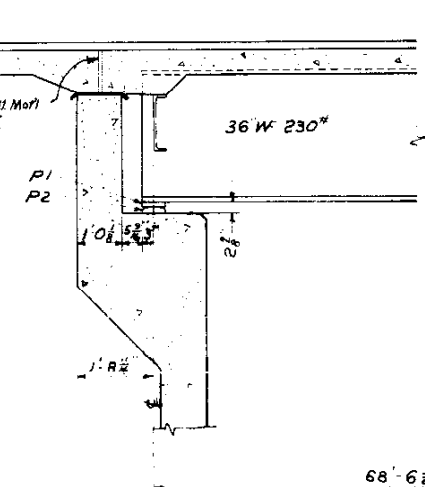
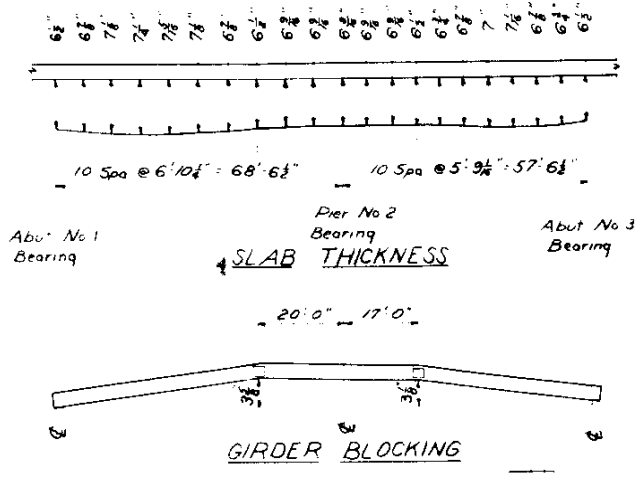
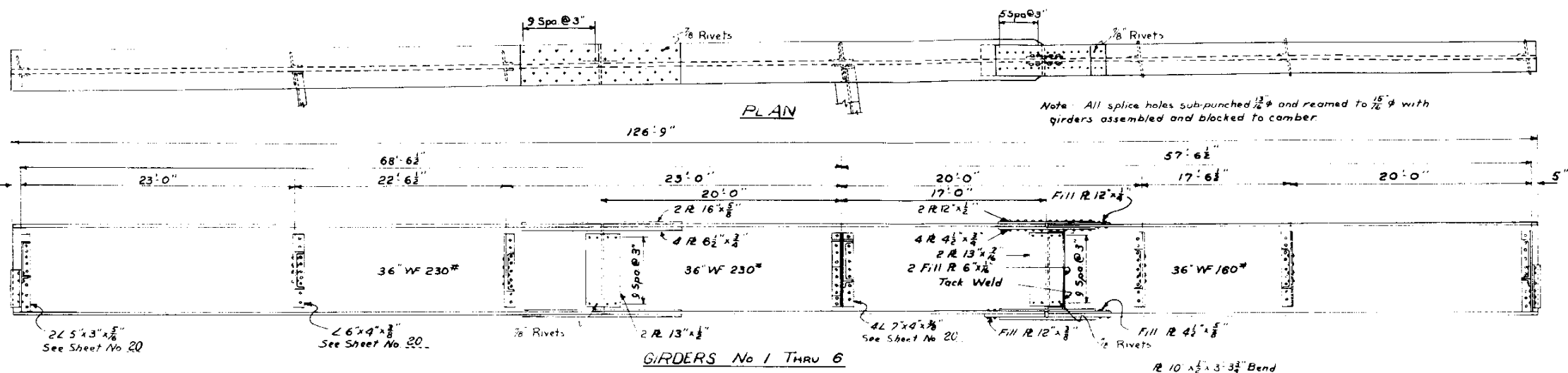
Over C&G-ATS# Railroad Station Ave
 Sta. 69+
 In Denver Sec 4 & 145 66th
 Designed by G.E.T. Approved by R.E.S.
 Made by RES. Checked by Date 1956

F-16-EI Sta 69+00.52 to 70+30.06
 STRUCTURE NO. F-16-EJ Sta 69+11.14 to 70+40.68



C.E.S. AT & S.T. H. & C. CIV. ENGRS.
 North - F-16-D1
 South - F-16-EJ

COLORADO
 DEPARTMENT OF HIGHWAYS
 TWO BRIDGES SPANS - 68'-6 1/2" & 57'-6 1/2"
 CONCRETE DECK & APPROACH SLAB
 SUPERSTRUCTURE DETAILS
 38'-0" ROADWAY 7'-4 1/2" SKEW
 Sta. 69+00.02 to 70+30.06 North
 Sta. 69+10.14 to 70+40.68 South
 Denver, Colorado
 Made by J.L.B. Bridge Engineer
 Checked by [] Date: [] 1956



COLORADO DEPARTMENT OF HIGHWAYS

DETAILS OF GIRDER, BEARINGS, AND EXPANSION JOINT

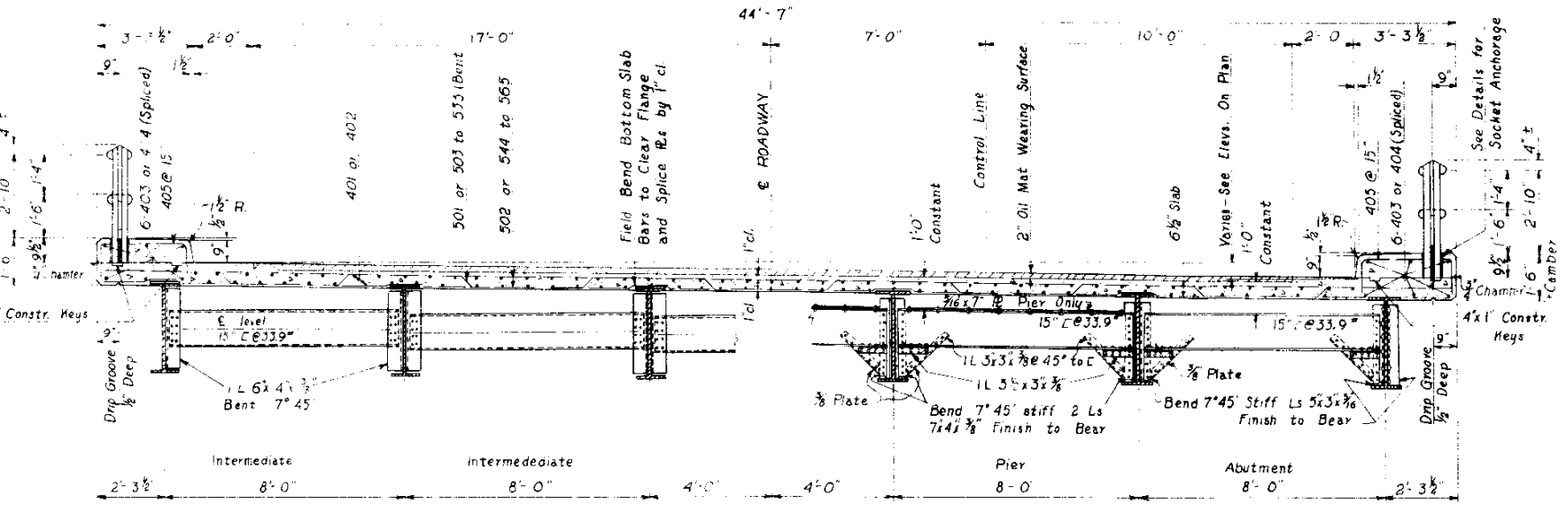
Sta North Bridge 69+00.22 to 70+30.06
Sta South Bridge 69+11.14 to 70+40.68

C&S-ATSF RR @ W 6th Ave.

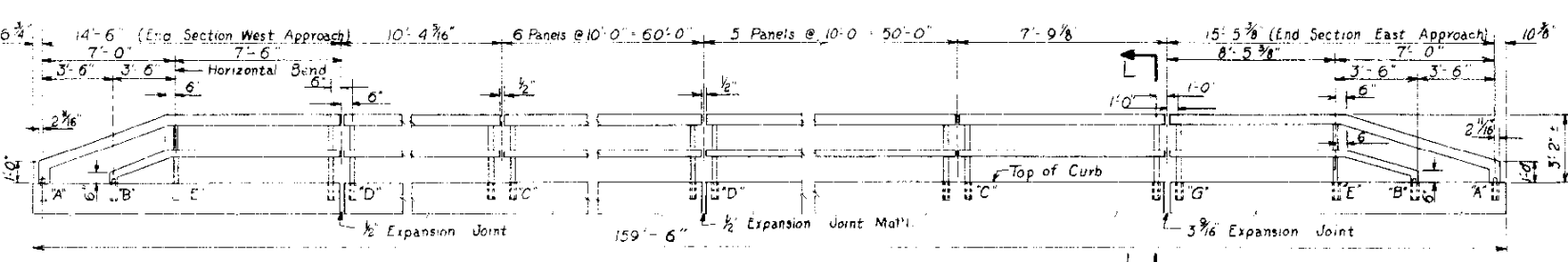
In Denver 4/5 45 68W

GET
JLB

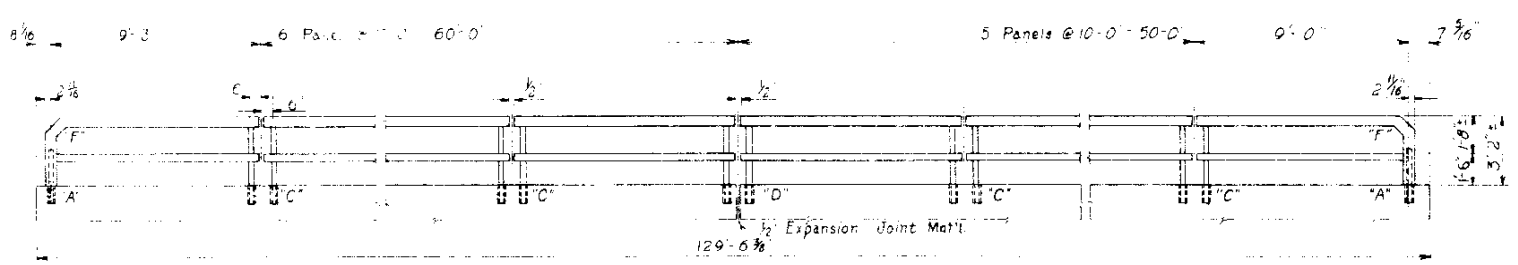
1956



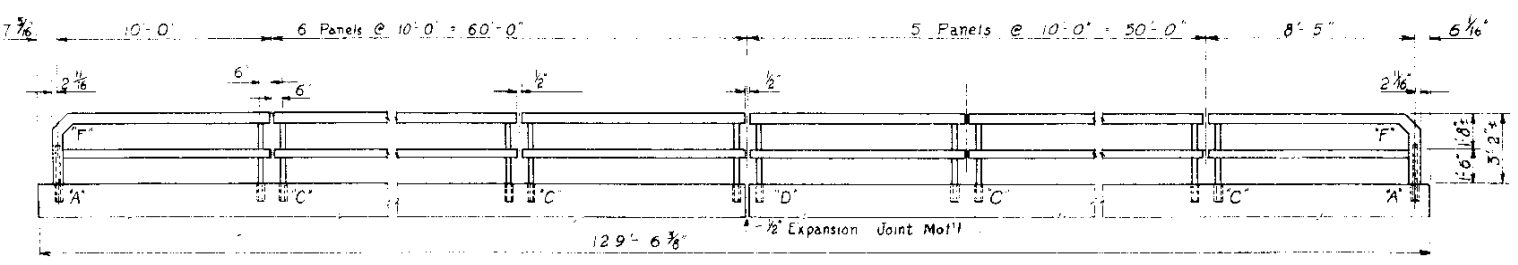
TRANSVERSE SECTION - TYPICAL DIAPHRAGMS



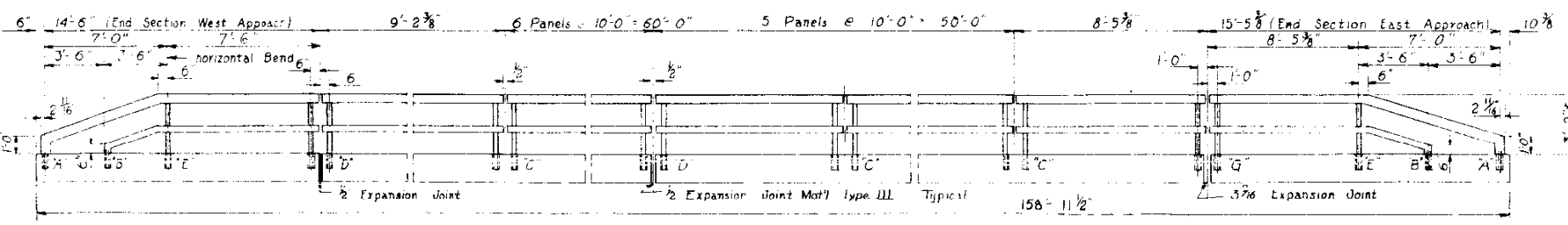
HANDRAIL ELEVATION - NORTH SIDE OF NORTH LANE



HANDRAIL ELEVATION - SOUTH SIDE OF NORTH LANE

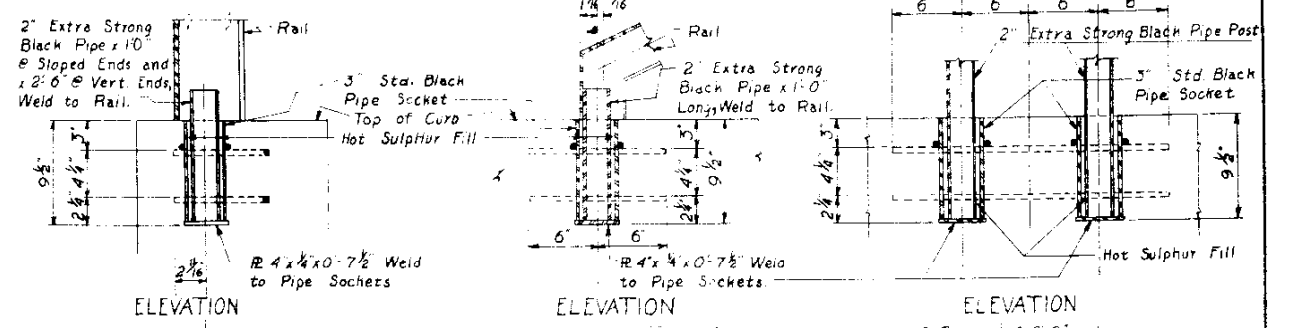


HANDRAIL ELEVATION - NORTH SIDE OF SOUTH LANE



HANDRAIL ELEVATION - SOUTH SIDE OF SOUTH

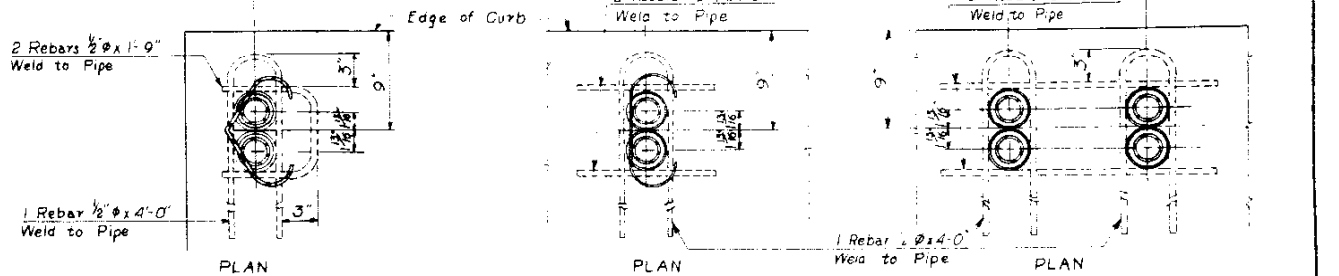
NOTE: Handrail for Median Walls to be Interior Sections, for Dims See Sheets 21, 22, & 25



ELEVATION

ELEVATION

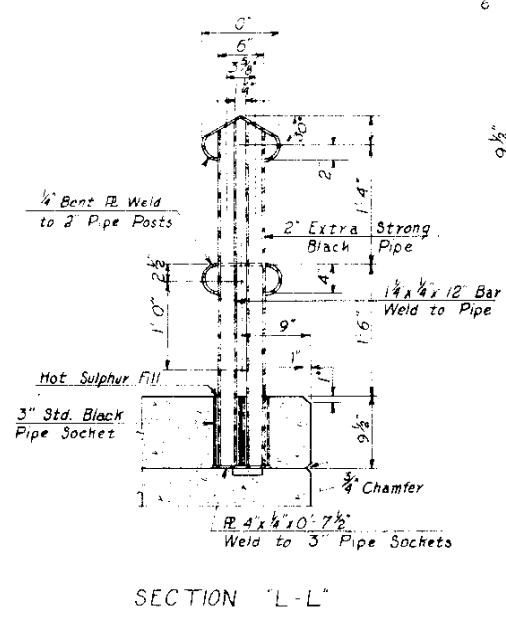
ELEVATION



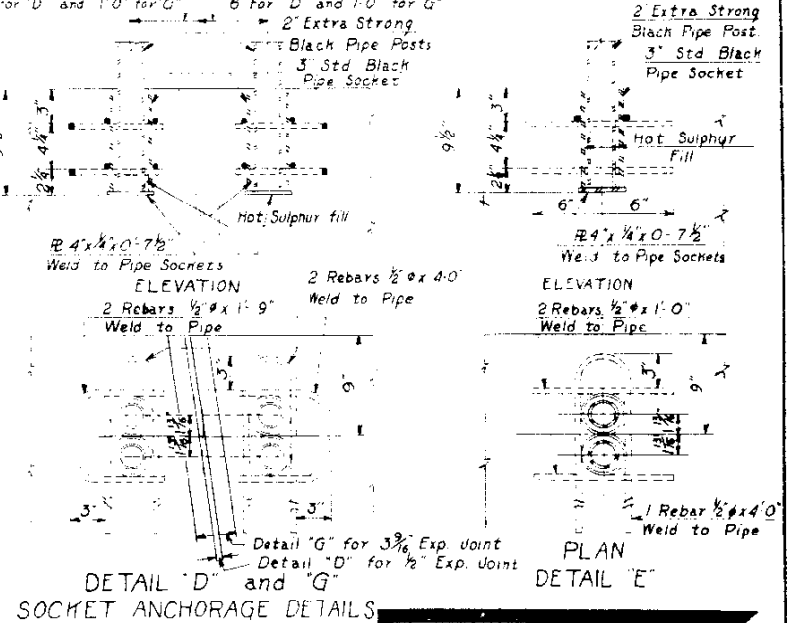
PLAN

PLAN

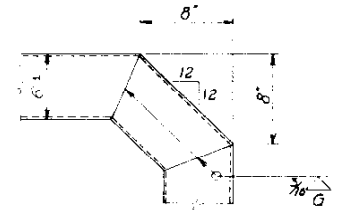
PLAN



SECTION 'L-L'



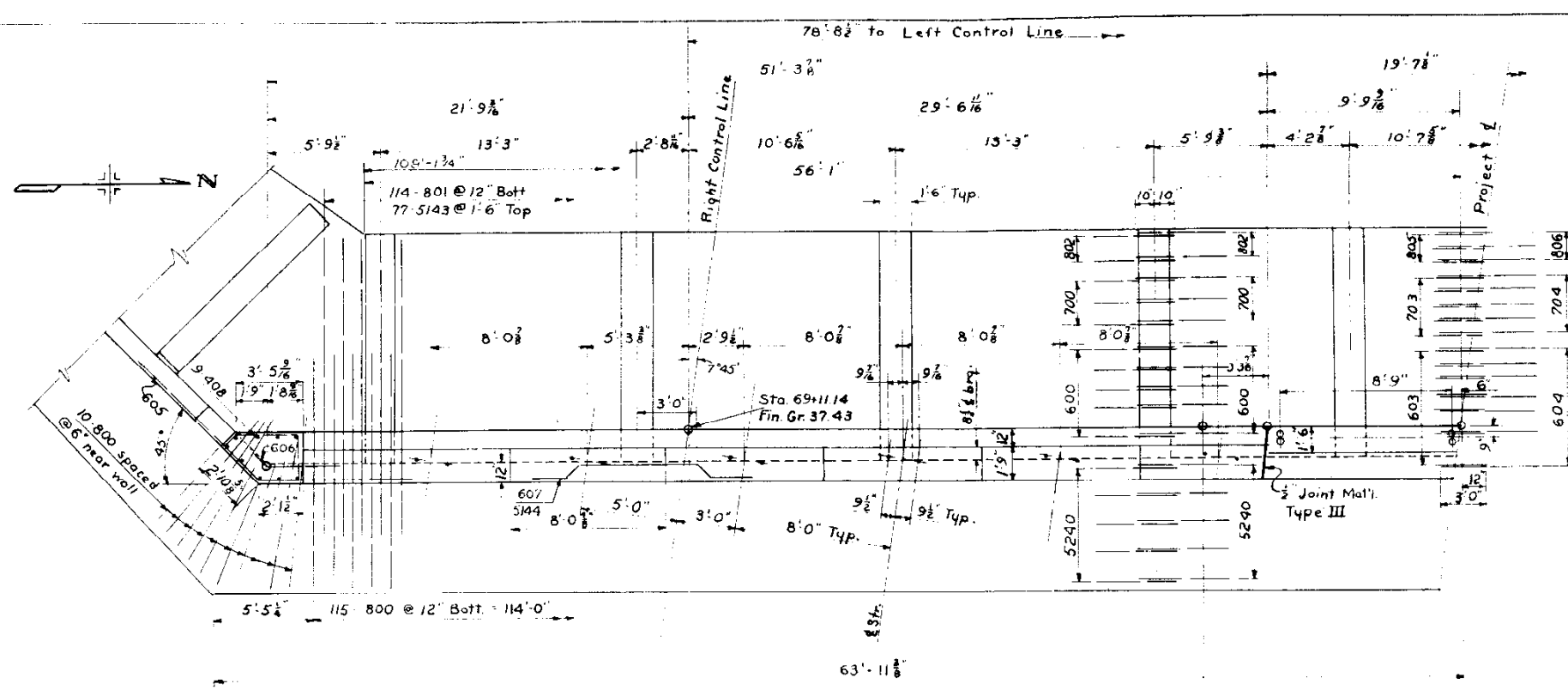
SOCKET ANCHORAGE DETAILS



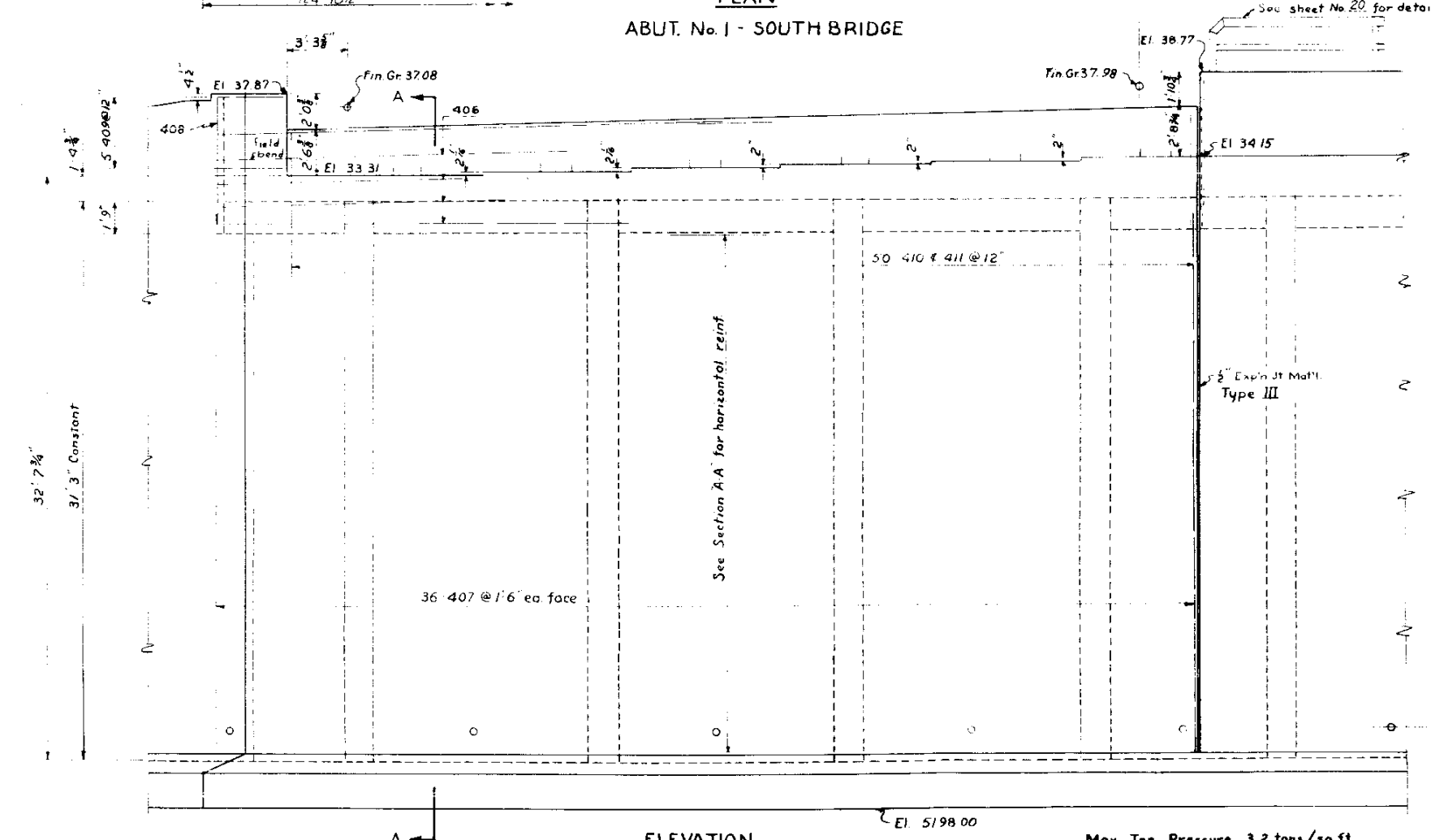
DETAIL 'F'

COLORADO
 DEPARTMENT OF HIGHWAYS
 DIAPHRAGMS & HANDRAIL
 Across C&S-AT&P RR @ W 6th Ave.
 Sta. 69+00.52 to 70+30.06 North
 Sta. 69+11.14 to 70+40.68 South
 in Denver S. 1/9 T. 43 R. 68 W.
 Made by G.E.T. Approved by J.L.B.
 Checked by U.L.B. Bridge Engineer
 Date: Jan. 3, 1956

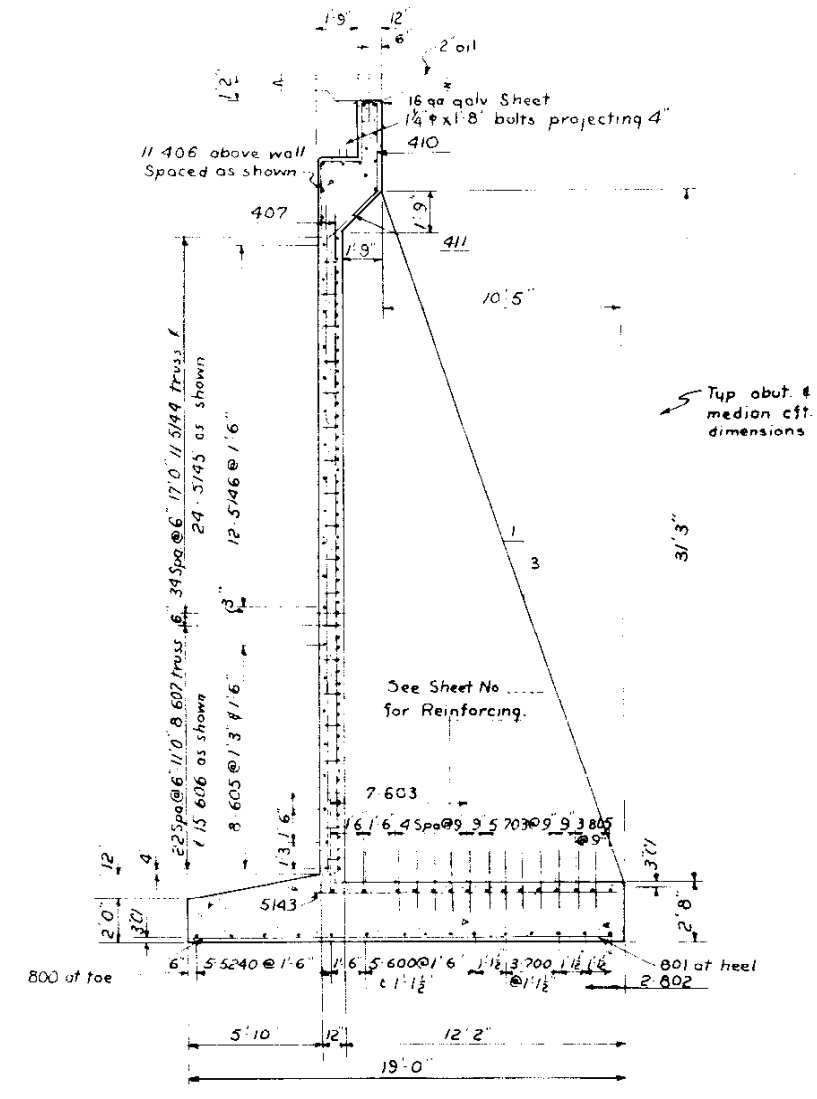
North F-16-EI
 South F-16-EU
 STRUCTURE NO.



PLAN
ABUT. No. 1 - SOUTH BRIDGE

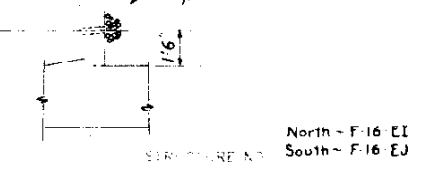


ELEVATION



SECTION A-A

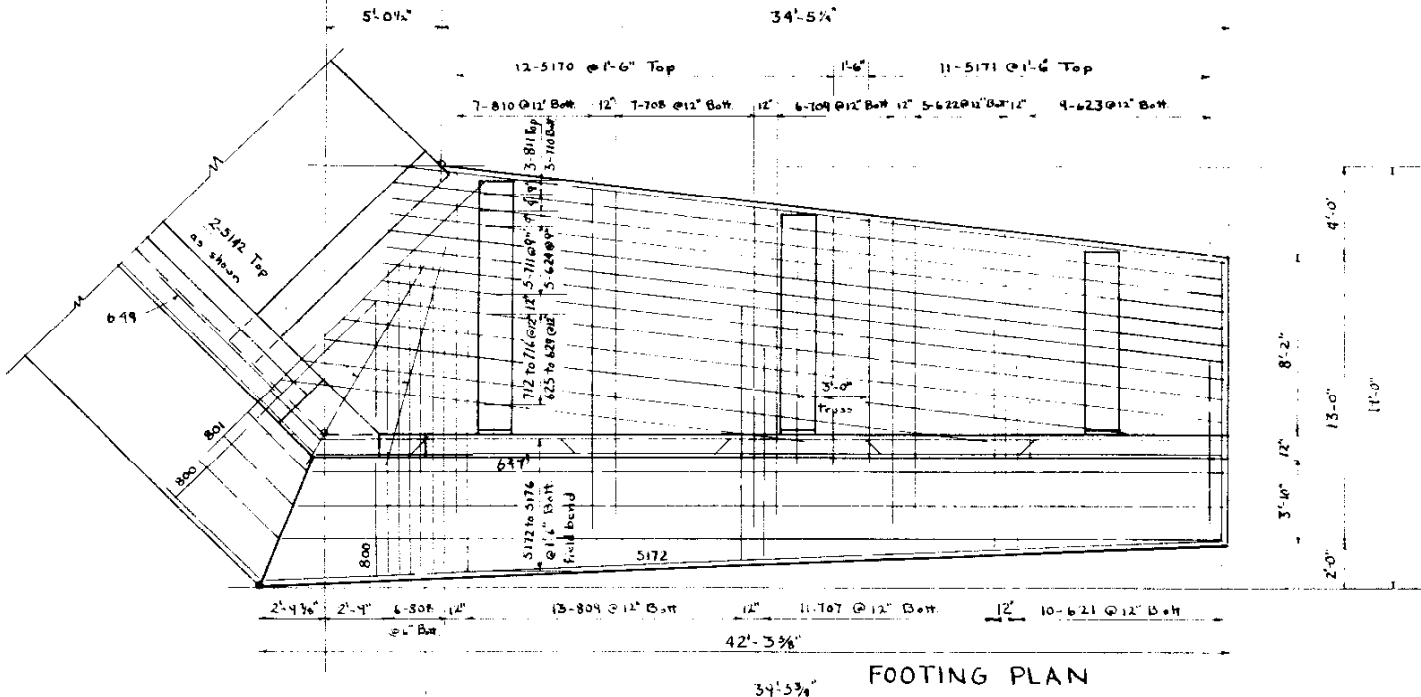
4" Weep hole well.
Surround with coarse gravel.



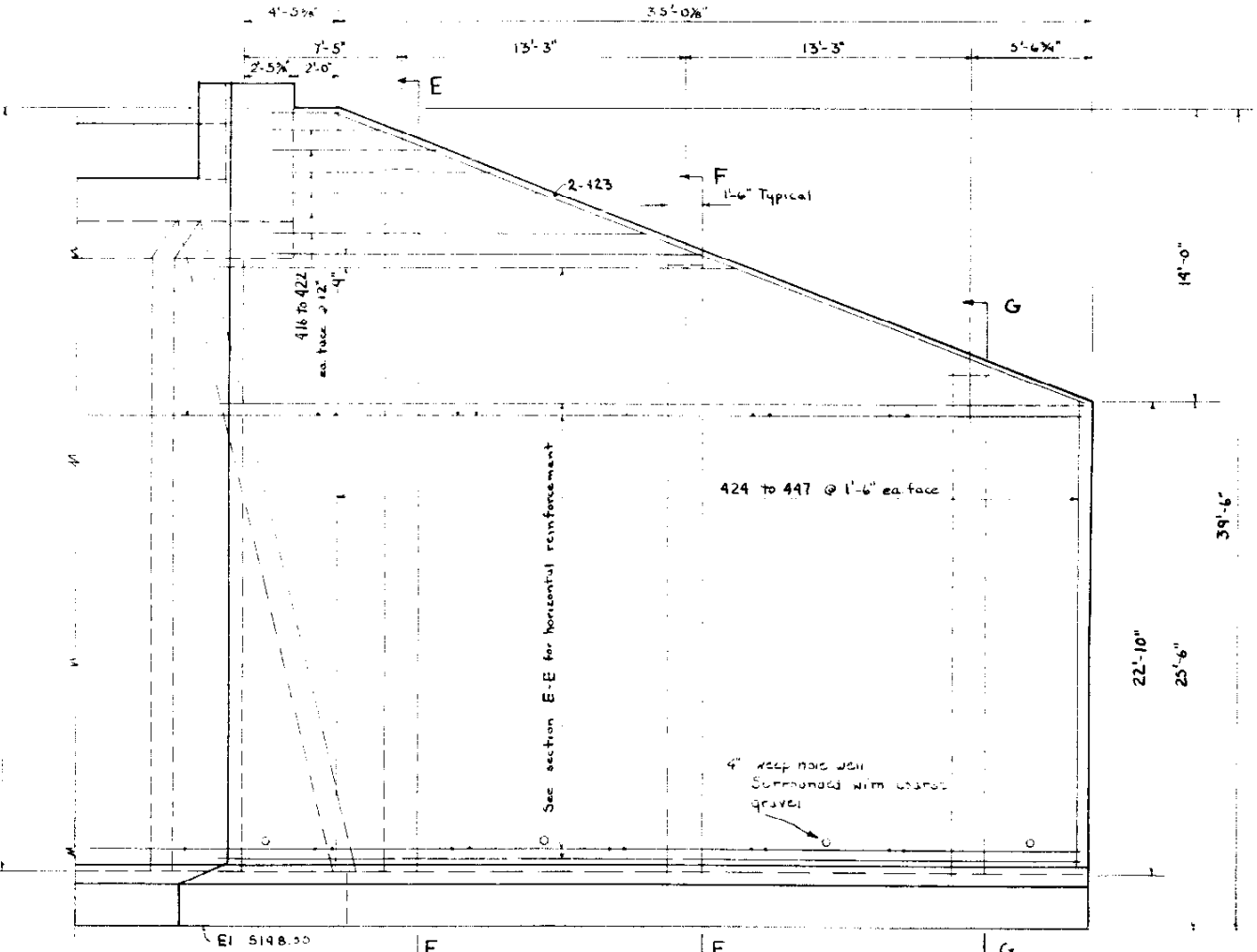
COLORADO
DEPARTMENT OF HIGHWAYS
DETAILS ABUT. No. 1
SOUTH BRIDGE
Address: C-S-AT&SF R.R. @ W. 6th Ave
Sta North Bridge 69+00.52 to 70+30.06
Sta South Bridge 69+11.14 to 70+40.68
In Denver 4/9 45 68W
GET: [Signature]
Date: [Signature]

North - F-16 EI
South - F-16 EJ

Max. Toe Pressure 3.2 tons/sq.ft.

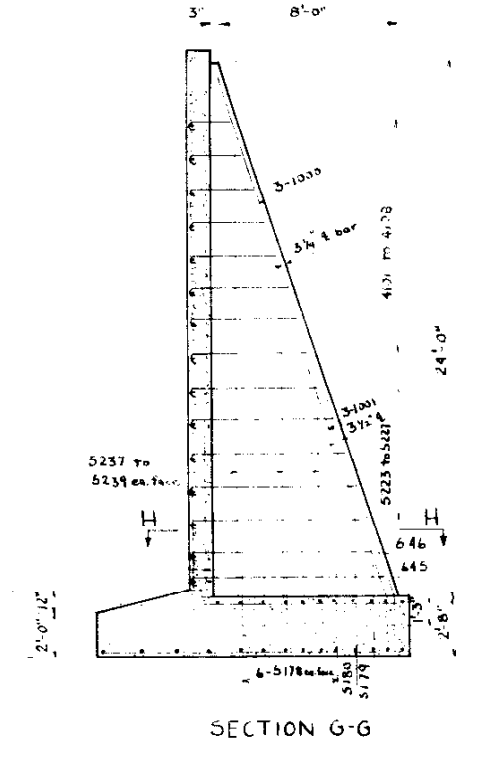


FOOTING PLAN

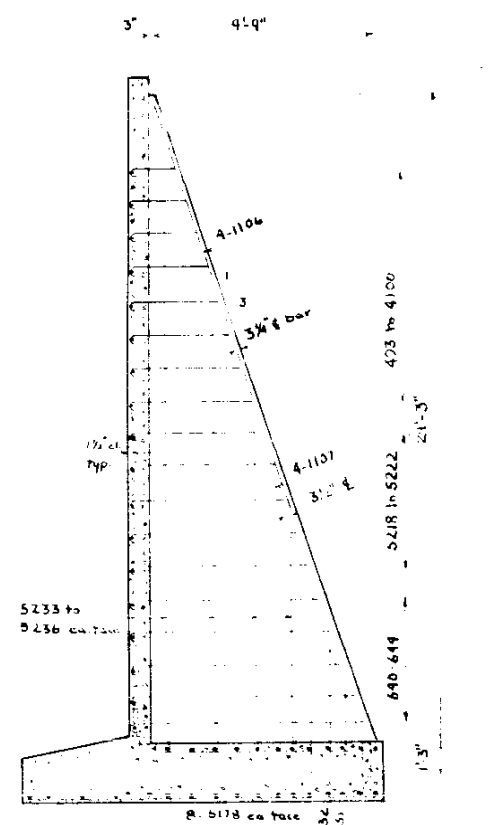


ELEVATION NORTH WING South Wing Opposite

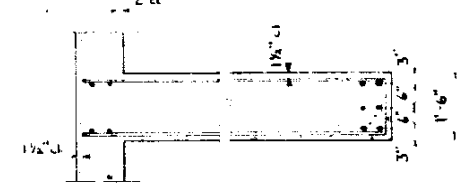
Max. Toe Pressure 3.2 Tons/sq. ft.



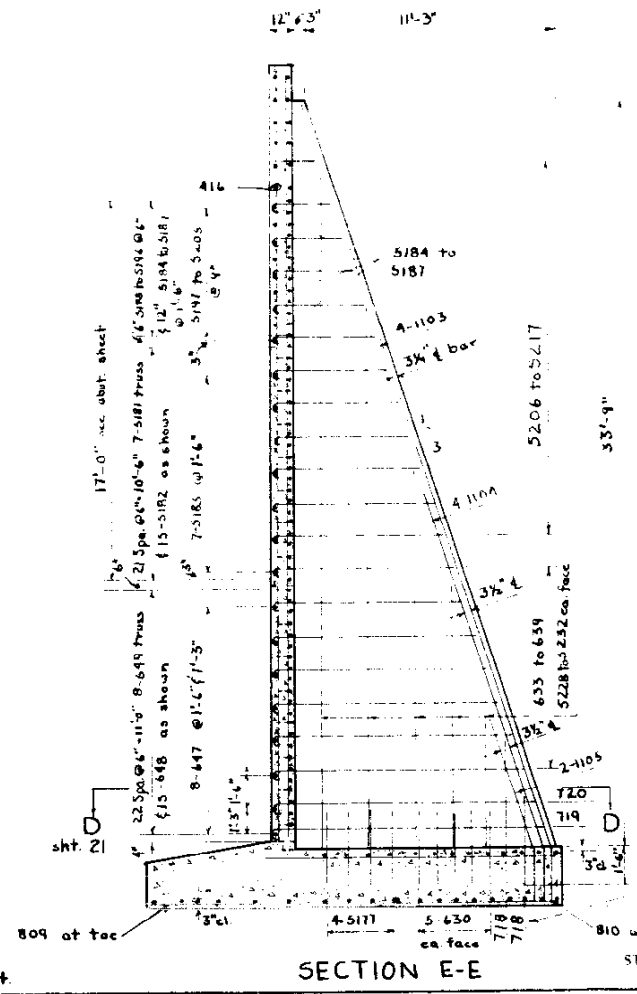
SECTION G-G



SECTION F-F



SECTION H-H



SECTION E-E

Dowels spaced same as bars in top of footing (See plan)

STRUCTURE NO. North F16-E1
 South F16-E2

COLORADO
 DEPARTMENT OF HIGHWAYS

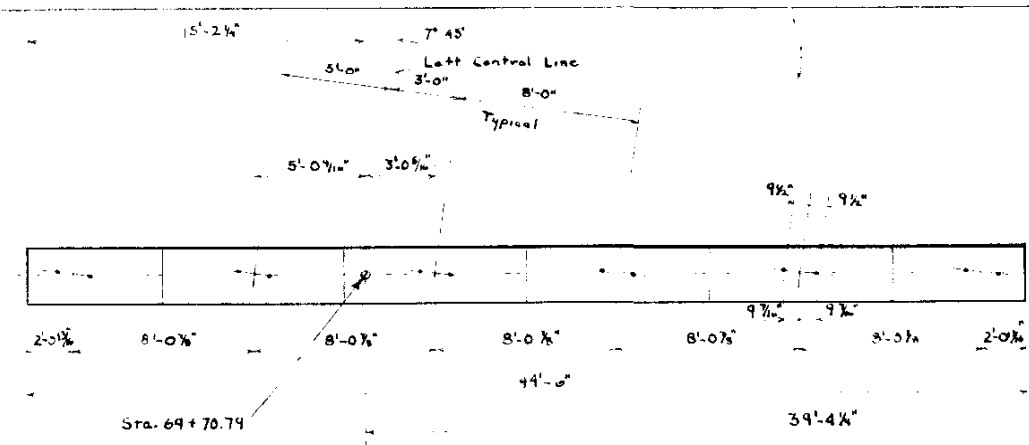
WING WALLS
ABUT #1

Across C&D AT&SF RR / W.M. Ave.
 Sta. N.W. 69+00.00 to 70+30.00
 Sta. South 69+11.14 to 70+40.68

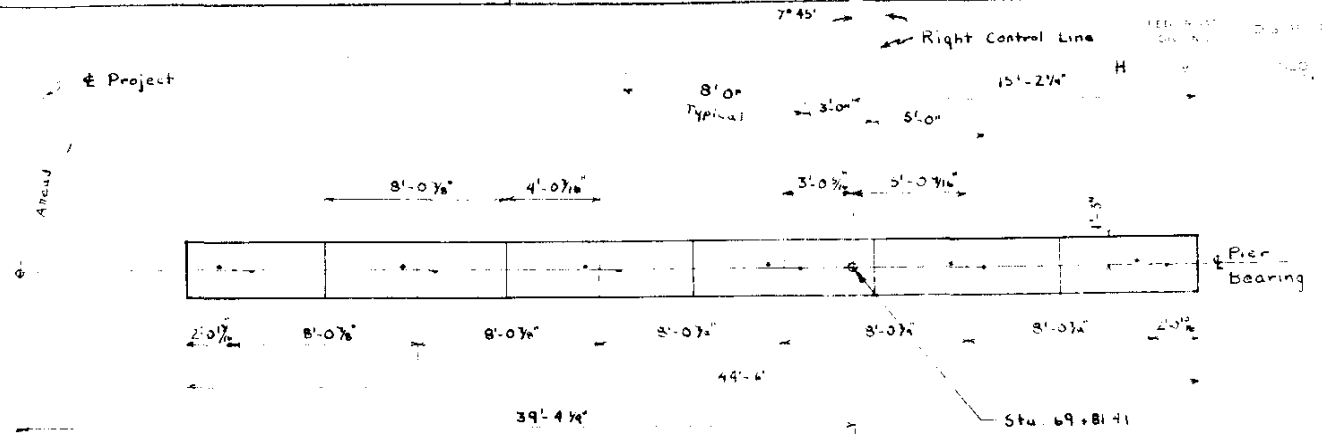
In Denver, Sta. 4/9 1.45 R 68W

Designed by: GET
 Made by: GET
 Checked by: [Signature]

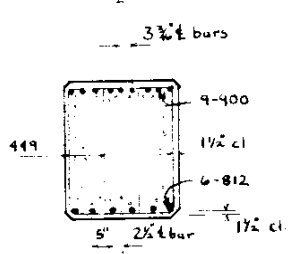
Approved by: [Signature]
 Bridge Engineer
 Date: 8/19/56



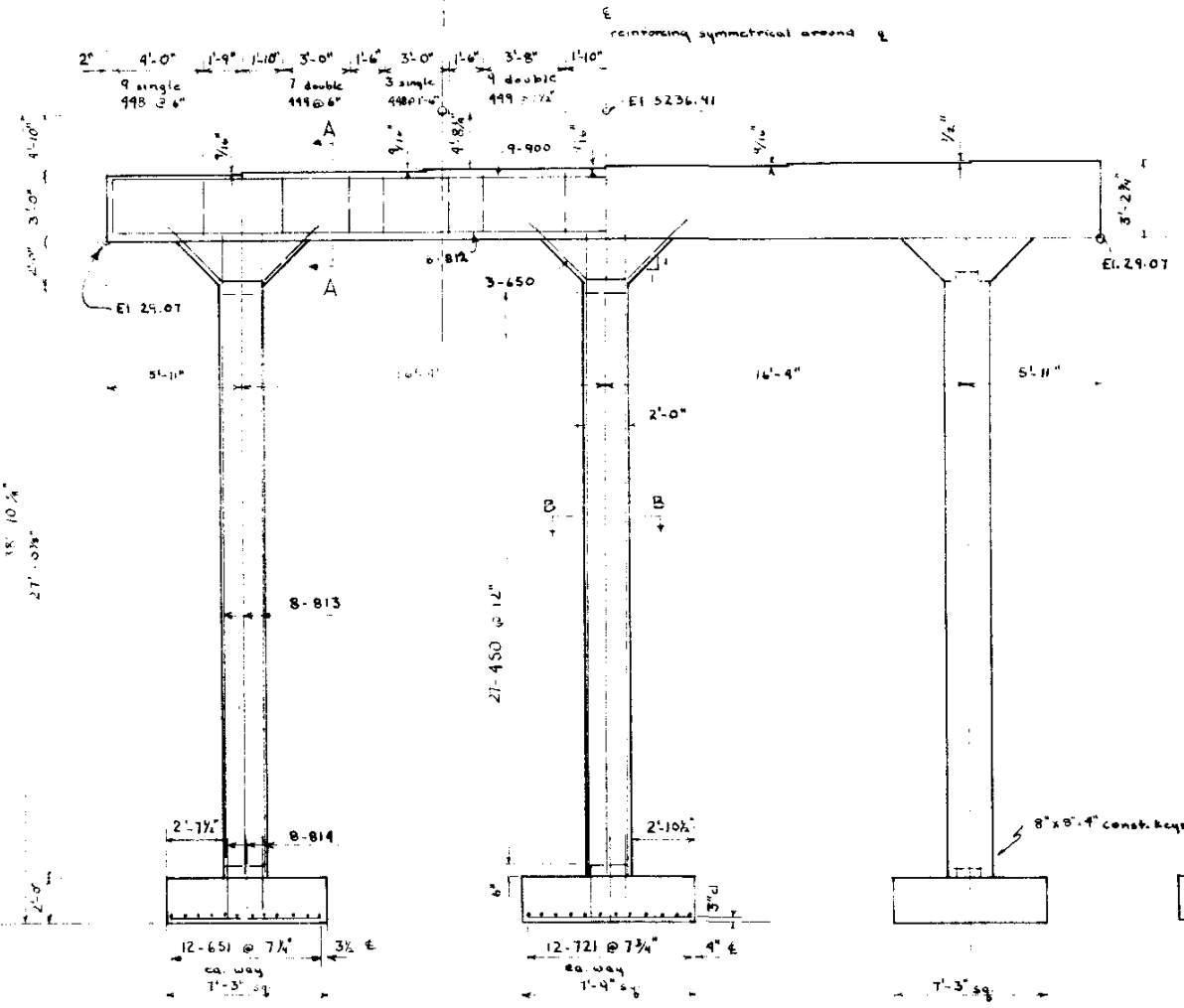
PLAN-NORTH PIER



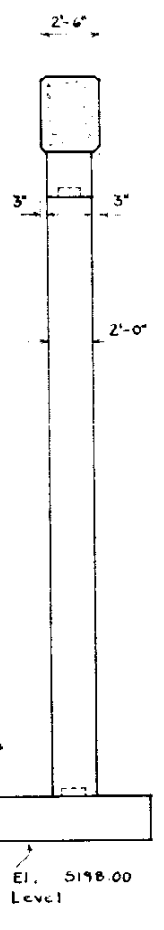
PLAN-SOUTH PIER



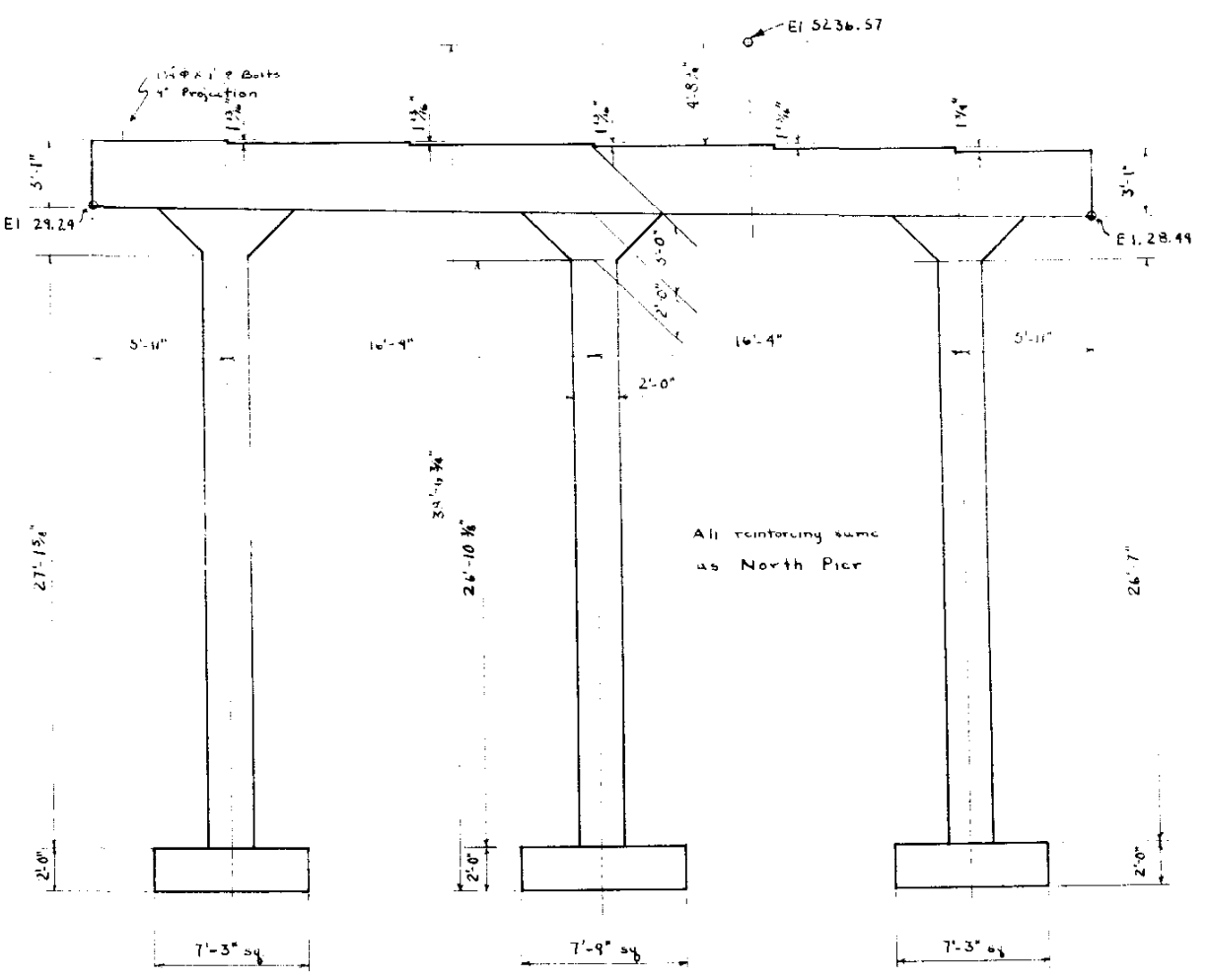
SECTION A-A



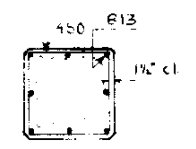
ELEVATION



END VIEW



ELEVATION



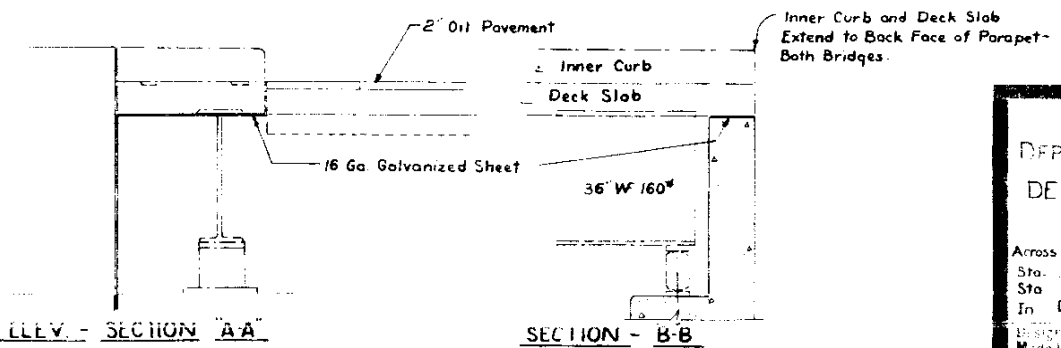
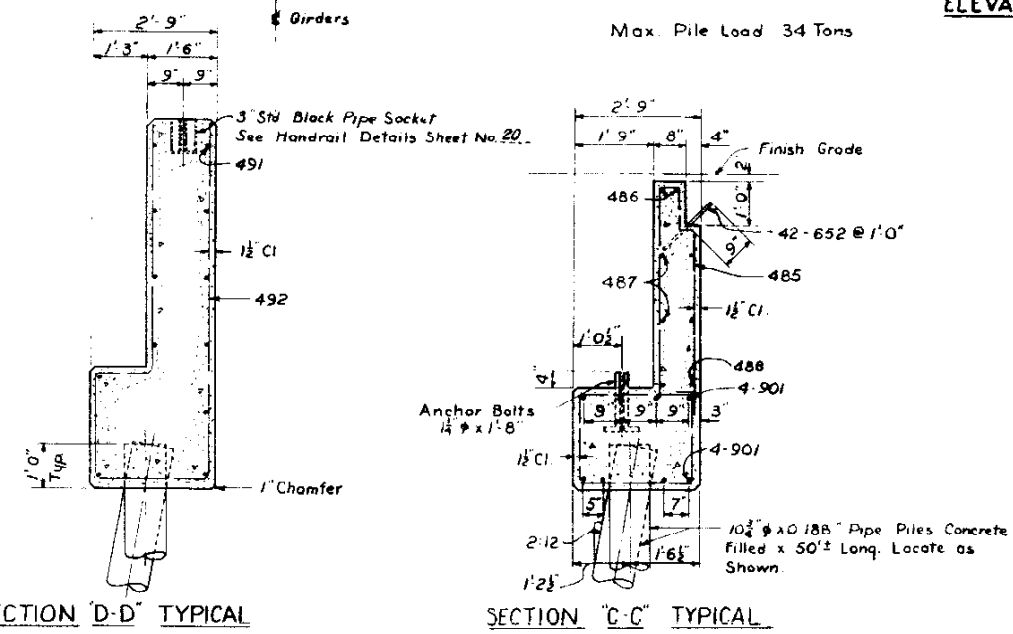
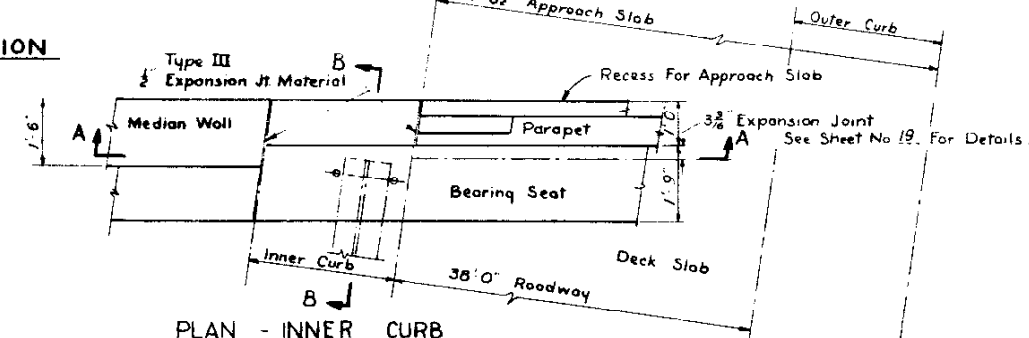
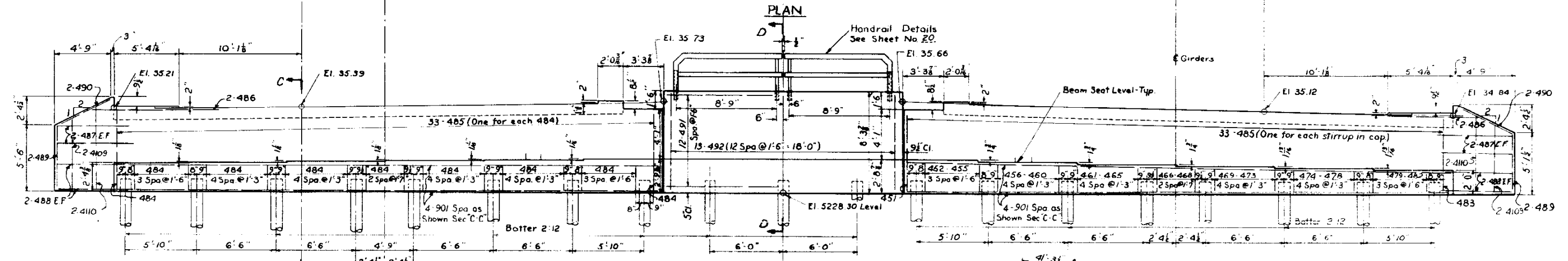
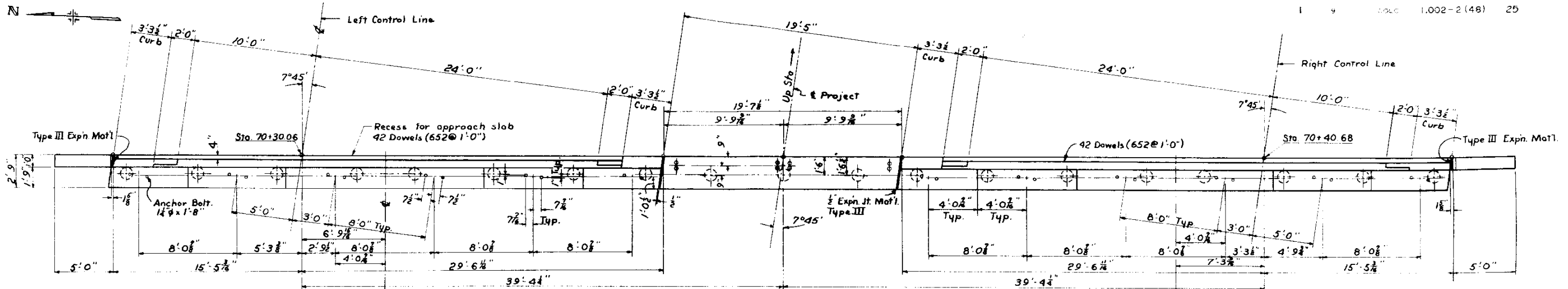
SECTION B-B

Footing Pressure 3.2 Tons/sq.ft.

STRUCTURE NO. North F16-EI
 South F16-EJ

COLORADO
 DEPARTMENT OF HIGHWAYS

DETAILS PIER #2
 Across C.S. AT/SF RR @ W 6th Ave
 Sta. 69+00.52 to 70+30.00
 Sta. 69+11.14 to 70+40.68
 in Denver A-1 45 88W
 Checked by GET Bridge Engineer
 Date: Nov-5, 1956



COLORADO
 DEPARTMENT OF HIGHWAYS
 DETAILS ABUT No 3

Across C&ST&P RR @ W 6th Ave.
 Sta. North Bridge 69+00.52 to 70+30.06
 Sta. South Bridge 69+11.14 to 70+40.68
 In Denver S. 4th 145 H68W

Designed by G.E.T. Checked by J.L.B.
 Approved by E.D.H. Bridge Engineer
 Date: Nov. 8, 1956

STRUCTURE NO. North - F-16-EJ
 South - F-16-WJ

Table with columns: BAR LIST- ABUTMENT NO. 1, Str. F-16-EI, No., Length, Type, Dimensions (l, m, n, p).

Table with columns: BAR LIST- ABUTMENT NO.1 (cont.), Str. F-16-EI, No., Length, Type, Dimensions (l, m, n, p).

Table with columns: BAR LIST- ABUTMENT NO.1 (cont.), Str. F-16-EI, No., Length, Type, Dimensions (l, m, n, p).

Table with columns: BAR LIST- SUPERSTRUCTURE, Str. F-16-EI, No., Length, Type, Dimensions (l, m).

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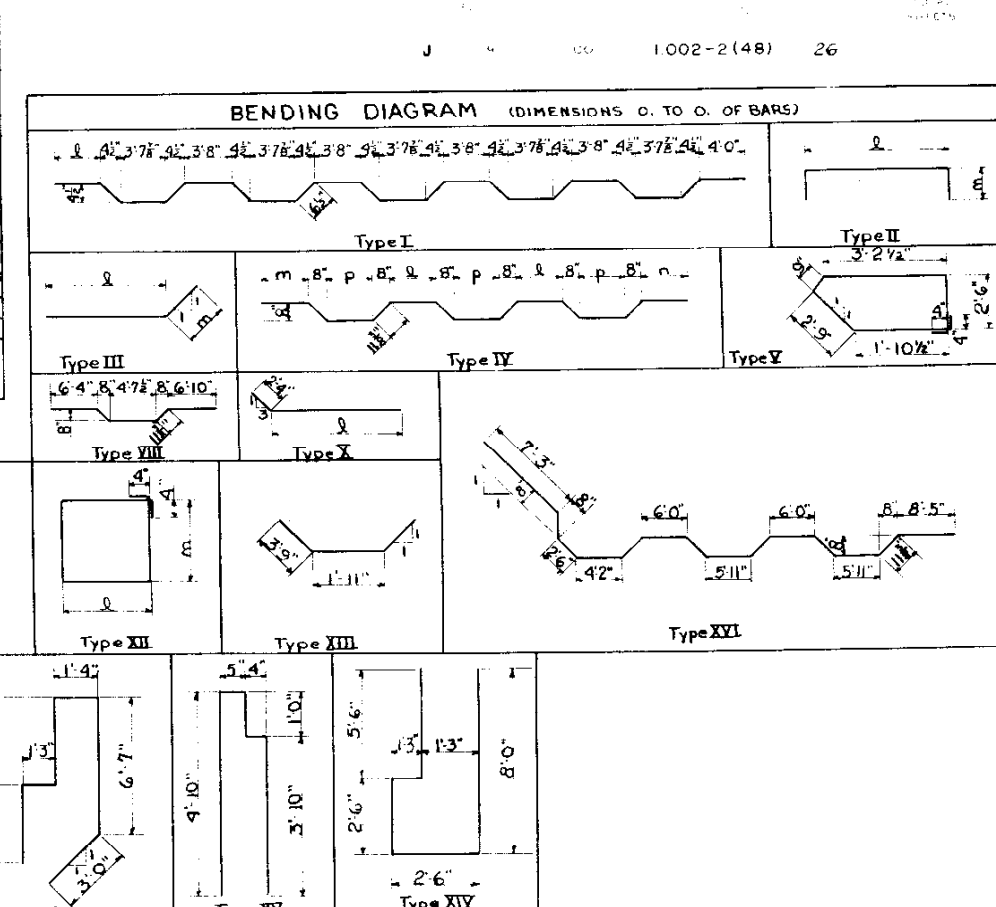


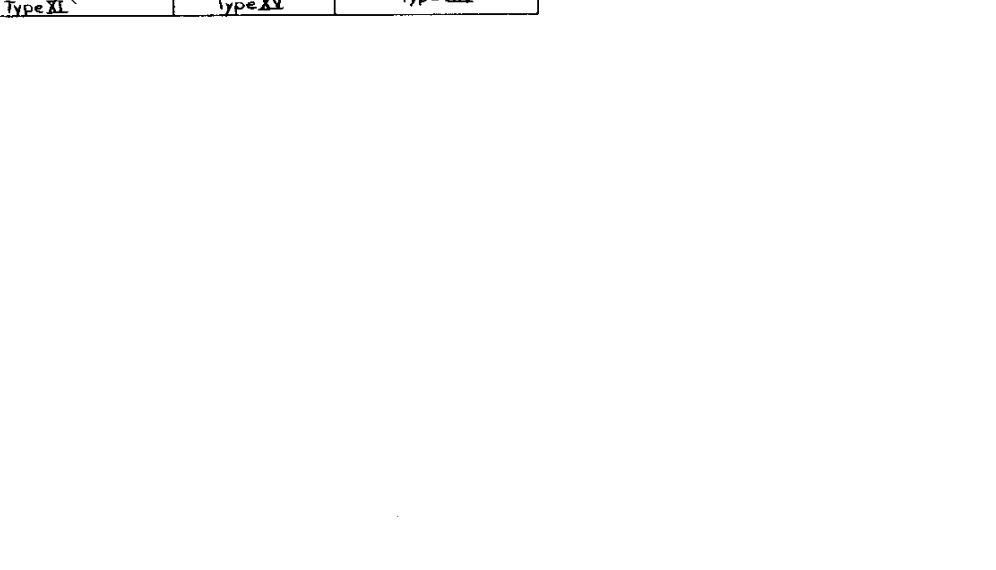
Table with columns: BAR LIST- SUPERSTRUCTURE, Str. F-16-EI, No., Length, Type, Dimensions (l, m).

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Table with columns: BAR LIST- ABUTMENT NO.3, Str. F-16-EI, No., Length, Type, Dimensions (l, m).

Table with columns: BAR LIST- PIER NO.2 (cont.), Str. F-16-EI, No., Length, Type, Dimensions (l, m).

Table with columns: BAR LIST- PIER NO.2, Str. F-16-EI, No., Length, Type, Dimensions (l, m).



COLORADO DEPARTMENT OF HIGHWAYS BAR LIST BENDING DIAGRAMS. Address: C&S - A.T.S.F. Railroads@W 6th Ave. Sta. 69+00.52 to 70+30.06 North. Sta. 69+11.14 to 70+40.68 South. No. Denver, S. 4/9 14S R68W. Checked by J.L.B. Date: Nov. 5, 1956.