FED. ROAD DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	CALIF.				

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
VIII	RIV	19	RIV	1	10

Bridge Engineer

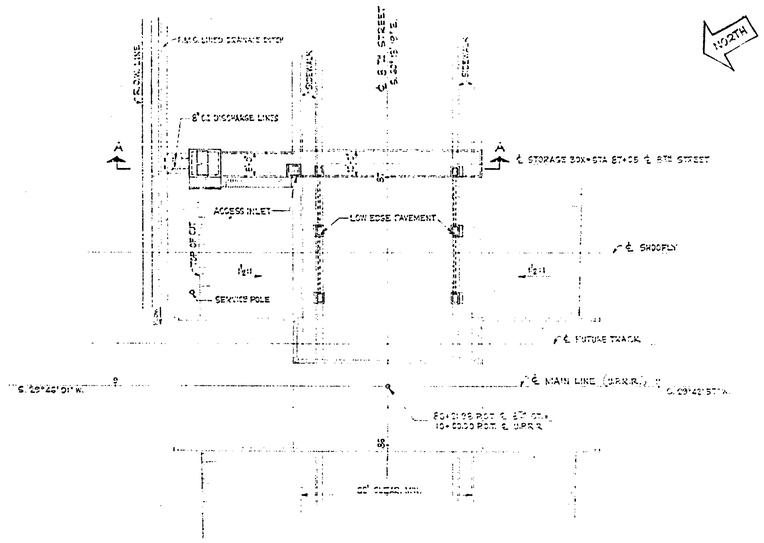
Date approved: SEPTEMBER 1957

G.E. McGill

District Bridge Engineer

by Chas. E. Waite

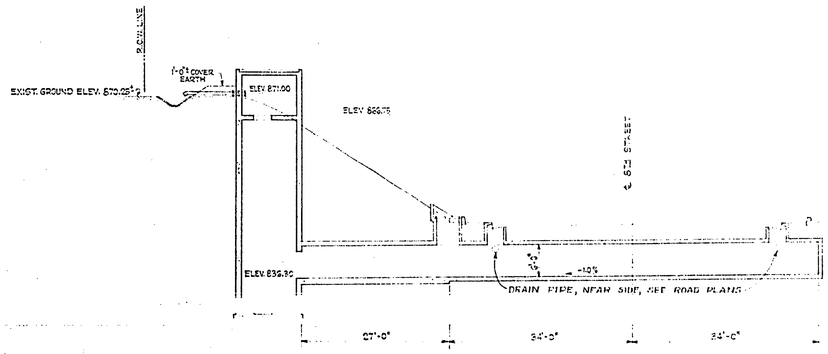
Deputy State Bridge Engineer



PLAN

SCALE: 1" = 20'

LOW EDGE OF PAVEMENT, ELEV. 842.19, 24 FT. RT. AND LT. OF STA. 86+79.00 ℄ EIGHTH STREET



SECTION A-A

SCALE: 1" = 10'

INDEX TO PLANS

SHEET NO.	TITLE
1	GENERAL PLAN
2	STORAGE BOX & STANDARD DETAILS
3	STRUCTURE DETAILS
4	STANDARD STEEL DETAILS NO. 1
5	" " " NO. 2
6	" " " NO. 3
7	DRAINAGE & PUMPING EQUIPMENT
8	PUMPING EQUIPMENT DETAILS
9	ELECTRICAL DETAILS
10	METERING ENCLOSURE

APPROXIMATE QUANTITIES

* STRUCTURE EXCAVATION	870 C.Y.
* STRUCTURE BACKFILL	390 C.Y.
CLASS "A" CONCRETE (BRIDGES)(160 C.Y.)	LUMP SUM
BAR REINFORCING STEEL (BRIDGES)(25,000 LBS.)	LUMP SUM
MISCELLANEOUS IRON AND STEEL	2,160 LBS.
PUMPING PLANT METAL WORK (2,430 LBS)	LUMP SUM
DRAINAGE PUMPING EQUIPMENT	LUMP SUM
PUMPHOUSE ELECTRICAL EQUIPMENT	LUMP SUM

* Final payquantity - see special provisions

GENERAL NOTES

PUMPING RATES: (TWO PUMPS AT 10 H.P. EACH)
2000 G.P.M., SUMP WATER ELEV. 842.19 (LOW EDGE PAVEMENT)
420 G.P.M., AVERAGE SUMP WATER ELEV. 836.30 TO ELEV. 843.00

STORAGE: 3150 CUBIC FEET

FOR DETAILS OF DRAINAGE COLLECTION SYSTEM AND TRAPEZOIDAL DISCHARGE DITCH, SEE ROAD PLANS.

FOR "GENERAL NOTES", SEE SHEET NO. 11 "STEEL RAILING" STRUCTURAL PLANS

DESIGN SECTION 11

Project Designer: W. M. Wiedopath

Chief Designer: William M. Wiedopath

DESIGN	W. M. Wiedopath 6/57	Checked	
DETAILS	W. L. MYCZEK 6-57	Checked	W. M. Wiedopath
QUANTITIES	W. M. Wiedopath 6/57	Checked	
SPECIFICATIONS	W.	Field and Office Checked All	

Approved Recommended by: Bridge Engineer — Chief of Bridges and Structures — Date approved 9-6-57

DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

VINE STREET UNDERPASS
PUMPING PLANT

SCC-66

GENERAL PLAN

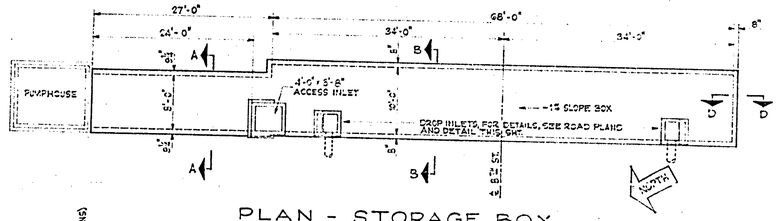
SCALE: AS SHOWN | BRIDGE ~~56-339~~W | FILE | DRAWING P-5413-13

PREL. DRAWING No. P-5413- 1 2 3

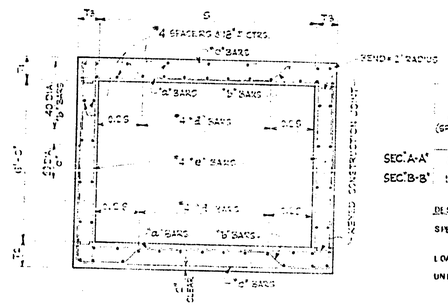
46

FED. ROAD DIST. NO.	STATE	PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	CALIF.				

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
VIII	ALV	19	ALV	5	10



PLAN - STORAGE BOX
SCALE: 1/8" = 1'-0"



SECTIONS "A-A" & "B-B"

DATA SCHEDULE

	G (SPAN)	CONCRETE TOP SLAB T1	BOT. SLAB T2	SIDE-WALLS T3	REINFORCING STEEL "a" SIZE BAR#	SPACING	"b" SIZE BAR#	SPACING	"c" SIZE BAR#	SPACING	"d" DIST. BARS TOP SLAB	BOT. SLAB	"e" BARS SPACING	SPACERS NUMBER
SEC. A-A	8'	10"	11½"	9½"	6	12"	6	12"	6	12"	7	7	12"	24
SEC. B-B	10'	8½"	8½"	8"	6	15"	6	15"	6	15"	6	7	15"	40

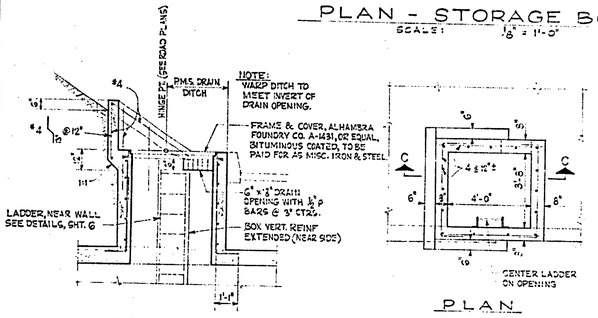
DESIGN NOTES

SPECIFICATION: A.A.S.H.O. DATED 1953 WITH SUBSEQUENT MODIFICATIONS AND BRIDGE DEPARTMENT SUPPLEMENT DATED 1953.

LOADS: LIVE LOAD = ONE H20-S16-44 TRUCK WITH 30% IMPACT.

UNIT STRESSES: F_S = 20,000 P.S.I.; fc = 1,000 P.S.I.; N = 10. REINFORCEMENT TO BE ROUND DEFORMED BARS. EMBEDMENT IS 1 1/2 DIAMETER CLEAR, MIN. 1" EXCEPT AS NOTED. PACKING FOR HOOKS IS FOUR DIAMETERS, UNLESS NOTED.

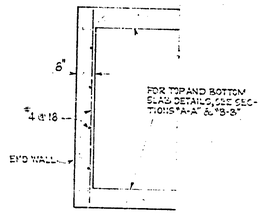
CONSTRUCTION: SEE VINE ST. U.P. STRUCTURAL PLANS, SHEET 11



SECTION C-C

PLAN

STANDARD 3'-8" x 4'-0" ACCESS INLET
SCALE: 3/8" = 1'-0"

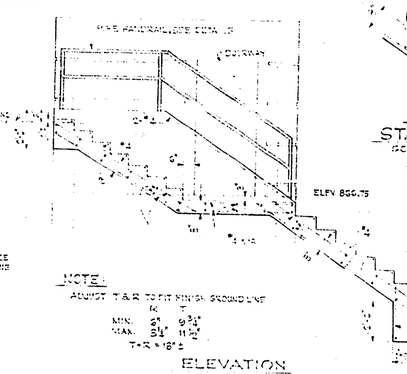


SECTION D-D
SCALE: 1/2" = 1'-0"

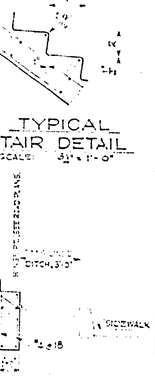
DOWEL: PLACE AGAINST FORM, BEND OUT AFTER STRIPPING FORM

NOTE:
WHERE DOWELS ARE SPECIFIED, THE METHOD SHOWN IS OPTIONAL. METHOD APPROVED BY THE ENGINEER, MAY BE USED.

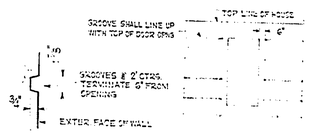
TYPICAL DOWEL DETAIL
NO SCALE



ELEVATION



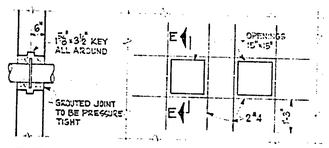
TYPICAL STAIR DETAIL
SCALE: 3/4" = 1'-0"



GROOVE DETAILS
NO SCALE

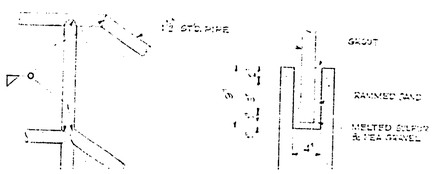
NOTE: ONLY THE EXPOSED SURFACES OF PIPE HOUSE SHALL HAVE GROOVES.

REINFORCEMENT AT DOOR OPENING
SCALE: 3/4" = 1'-0"



SEC. E-E NOTE: PIPE & FLANGE OMITTED IN THIS VIEW

DETAILS AT DISCHARGE PIPE OPENINGS
NO SCALE

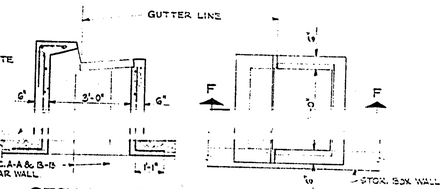


WELDING DETAIL ANCHORAGE DETAIL

PIPE HANDRAIL
SCALE: 1½" = 1'-0"

NOTE:
WELD AND GRIND SMOOTH ALL CONNECTIONS. HEIGHT OF HANDRAIL SHALL BE 3'-0". ALL RAILING SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION.

NOTE:
FRAME & GRATE NOT SHOWN, SEE ROAD PLANS FOR COMPLETE DETAILS. GRATE & FRAME TO BE PAID FOR AS MISC. IRON AND STEEL.



SECTION F-F PLAN

2' x 3' DROP INLET

BRIDGE DEPARTMENT
*** DESIGN SECTION *** 11

Project Designer			
Chief Designer			
DESIGN	By	Checked	A.H. McGEEK 7-57
DETAILS	A.H. McGEEK 7-57	Checked	
QUANTITIES	By	Checked	
SPECIFICATIONS	By	Checked	
Approval Recommended by:			

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

R-1787

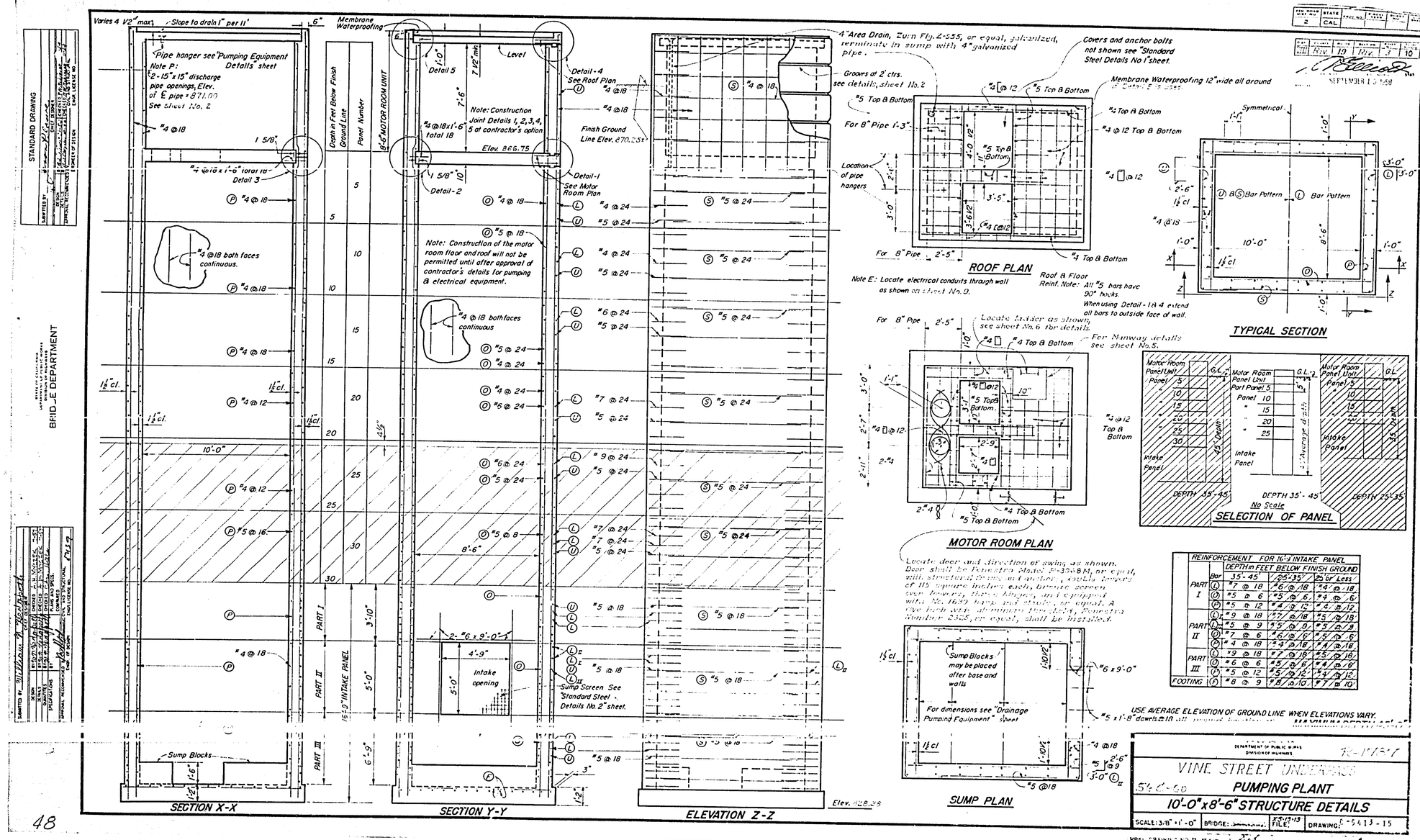
VINE STREET UNDERPASS
PUMPING PLANT

56C-60

STORAGE BOX & STANDARD DETAILS

SCALE: AS SHOWN	BRIDGE 56-359-W	FILE	DRAWING E-5413-14

PREL. DRAWING No. P-5413-56 14



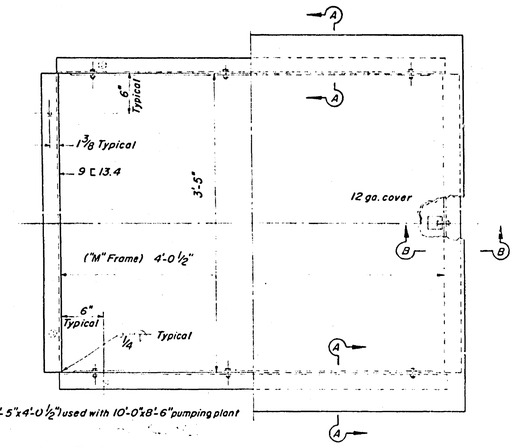
REINFORCEMENT FOR 16'-3" INTAKE PANEL			DEPTH in FEET BELOW FINISH GROUND		
		Bar	35'-45'	25'-35'	25' or Less
PART I	(L)	#7 @ 18	#6 @ 18	#4 @ 18	
	(U)	#5 @ 6	#5 @ 6	#4 @ 6	
	(P)	#5 @ 12	#4 @ 12	#4 @ 12	
PART II	(L)	#9 @ 18	#7 @ 18	#5 @ 18	
	(U)	#5 @ 9	#5 @ 9	#5 @ 9	
	(O)	#7 @ 6	#6 @ 6	#5 @ 6	
	(P)	#4 @ 18	#4 @ 18	#4 @ 18	
PART III	(L)	#9 @ 18	#7 @ 18	#5 @ 18	
	(U)	#6 @ 6	#5 @ 6	#4 @ 6	
	(P)	#5 @ 12	#5 @ 12	#4 @ 12	
FOOTING	(P)	#8 @ 9	#8 @ 10	#7 @ 10	

FED. AID PROJ. NO.	STATE	PROJ. NO.	FISCAL YEARS	SHEET NO.	TOTAL SHEETS
7	CALIF.				

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
VIII	Riv.	19	Riv. 1	4	10

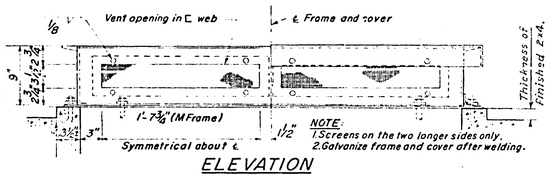
Resident Engineer Area Eng. Engr. Section Engr.

Date approved NOVEMBER 1968



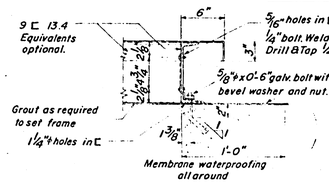
NOTE:
"M" Frame (3'-5" x 4'-0 1/2") used with 10'-0" x 8'-6" pumping plant

HALF PLAN-FRAME HALF PLAN-COVER

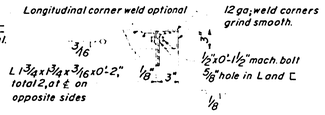


NOTE:
1. Screens on the two longer sides only.
2. Galvanize frame and cover after welding.

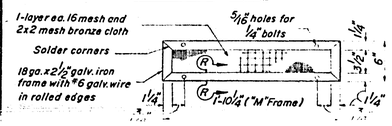
ELEVATION



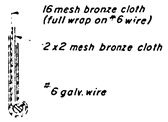
SECTION A-A



SECTION B-B

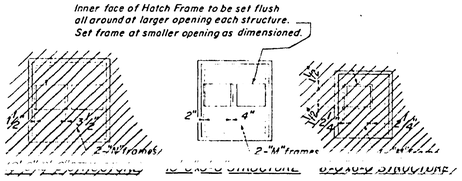


SCREEN DETAILS



SECTION R-R
Full Size

HATCH FRAME AND COVER
Scale Except as shown, 1 1/2" = 1'-0"



ROOF PLANS
No Scale

BRIDGE DEPARTMENT
DESIGN
DETAILS
QUANTITIES
SPECIFICATIONS
Chief Designer William N. Bedgpeth

DIVISION OF HIGHWAYS

VINE STREET UNDERPASS
PUMPING PLANT
STANDARD STEEL DETAILS No. 1

SCALE AS SHOWN | BRIDGE ~~S-1999W~~ X-S-13-0" | FILE | DRAWING C-S-13-1

PREL. DRAWING No. P- S-13 1 of 36

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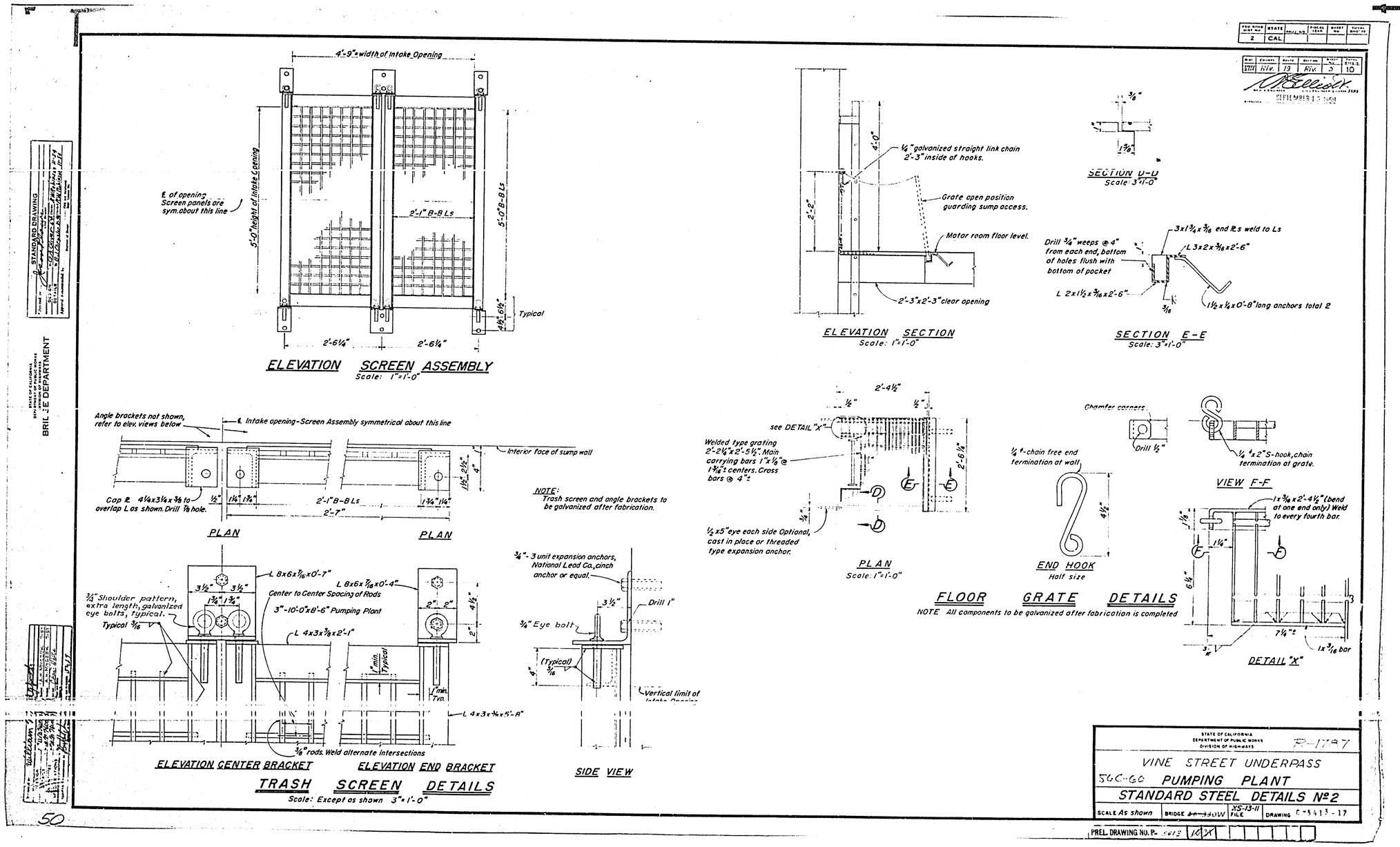
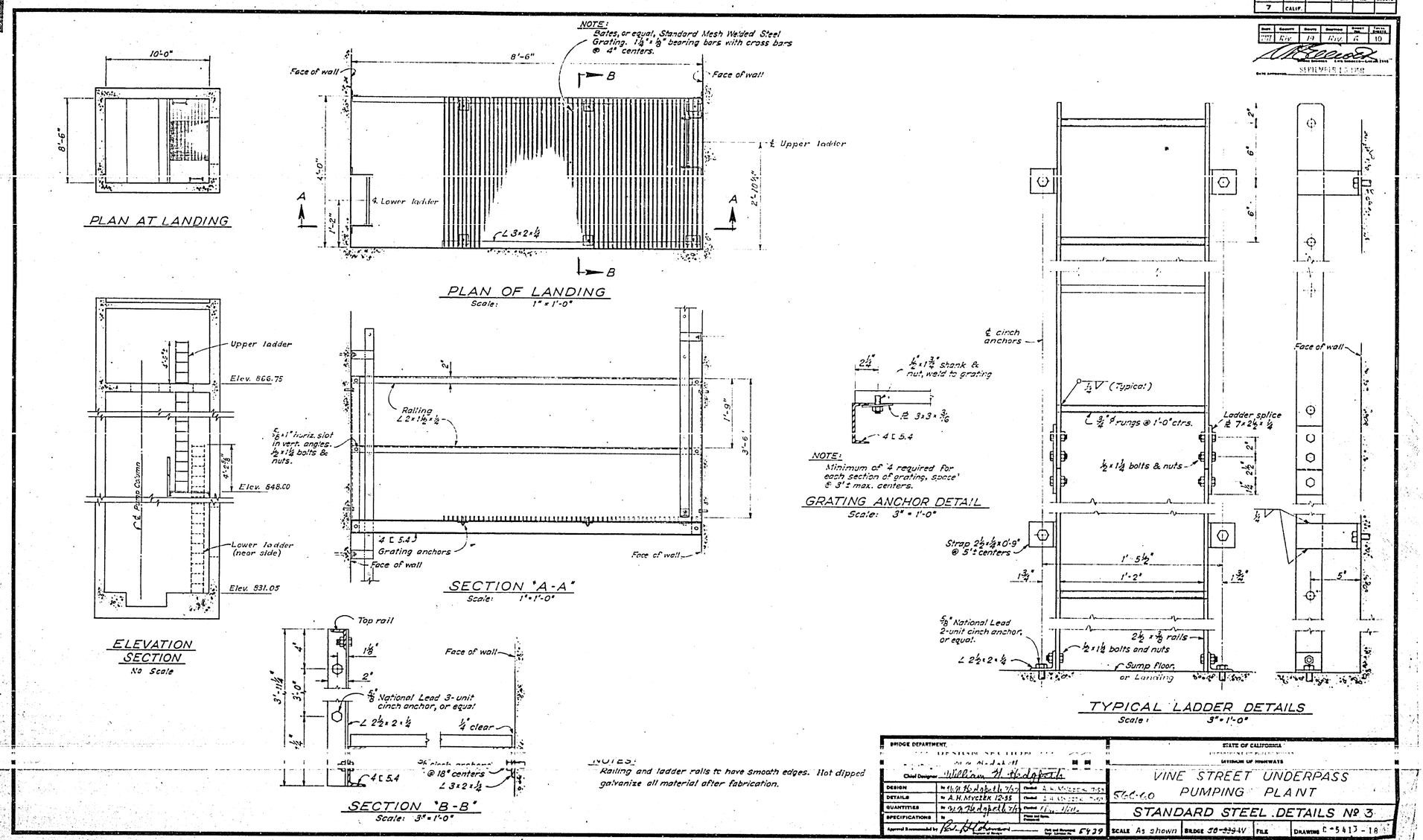


4'-9" = width of Intake Opening
℄ of opening Screen panels are sym. about this line
5'-0" height of Intake Opening
2'-1" B-B Ls
5'-0" B-B Ls
Typical
2'-6¼"
2'-6¼"
ELEVATION SCREEN ASSEMBLY
Scale: 1"=1'-0"
Angle brackets not shown, refer to elev. views below
℄ Intake opening-Screen Assembly symmetrical about this line
Interior face of sump wall
Cap ℞ 4¼x3¼x⅜ to overlap L as shown. Drill ⅞ hole.
2'-1" B-B Ls
2'-7"
PLAN
PLAN
NOTE: Trash screen and angle brackets to be galvanized after fabrication.
L 8x6x7/16x0'-7"
L 8x6x7/16x0'-4"
¾" Shoulder pattern, extra length, galvanized eye bolts, typical.
Typical 3/16
Center to Center Spacing of Rods
3"-10'-0"x8'-6" Pumping Plant
L 4x3x⅜x2'-1"
L 4x3x⅜x5'-8"
⅜" rods. Weld alternate intersections
ELEVATION CENTER BRACKET
ELEVATION END BRACKET
¾"-3 unit expansion anchors, National Lead Co., cinch anchor or equal.
Drill 1"
¾" Eye bolt
(Typical) 3/16
Vertical limit of Intake Opening
SIDE VIEW
TRASH SCREEN DETAILS
Scale: Except as shown 3"=1'-0"
¼" galvanized straight link chain 2'-3" inside of hooks.
Grate open position guarding sump access.
Motor room floor level.
2'-3"x2'-3" clear opening
ELEVATION SECTION
Scale: 1"=1'-0"
SECTION D-D
Scale: 3"=1'-0"
Drill ¾" weeps @ 4" from each end, bottom of holes flush with bottom of pocket
3x1¾x3/16 end ℞s weld to Ls
L 3x2x3/16x2'-6"
L 2x1½x3/16x2'-6"
1½x¼x0'-8" long anchors total 2
SECTION E-E
Scale: 3"=1'-0"
see DETAIL "X"
Welded type grating 2'-2¼"x2'-5½". Main carrying bars 1"x⅛" @ 1 3/16"± centers. Cross bars @ 4"±
½x5" eye each side Optional, cast in place or threaded type expansion anchor.
PLAN
Scale: 1"=1'-0"
Chamfer corners
Drill ½"
¼"-chain free end termination at wall
END HOOK
Half size
¼"x2" S-hook, chain termination at grate.
VIEW F-F
1x3/16x2'-4½" (bend at one end only) Weld to every fourth bar.
1x3/16 bar
DETAIL "X"
FLOOR GRATE DETAILS
NOTE All components to be galvanized after fabrication is completed
STATE OF CALIFORNIA DEPARTMENT OF PUBLIC WORKS DIVISION OF HIGHWAYS
R-1787
VINE STREET UNDERPASS
56C-60 PUMPING PLANT
STANDARD STEEL DETAILS No 2
SCALE As shown
BRIDGE
XS-13-11 FILE
DRAWING C-5413-17
PREL. DRAWING NO. P-
STANDARD DRAWING
BRIDGE DEPARTMENT



NOTES:
Railing and ladder rails to have smooth edges. Hot dipped galvanize all material after fabrication.

FED. ROAD DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	CALIF.				

DATE	CHECKED	DRAWN	CHECKED	SHEET NO.	TOTAL SHEETS
7/71	Riv.	19	Riv.	6	10

SEPTEMBER 15 1969

BRIDGE DEPARTMENT
Chief Designer: William H. Hedgpeth

DESIGN	by W.H. Hedgpeth 7/57	Checked	A.H. Myczek 7-57
DETAILS	by A.H. Myczek 12-55	Checked	A.H. Myczek 7-57
QUANTITIES	by W.H. Hedgpeth 7/57	Checked	[illegible]
SPECIFICATIONS	by	Plans and Specs. Checked	

Approval Recommended by: [signature] Division of Bridges — Civil and Structural Engr. Lab. No. 5439

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

VINE STREET UNDERPASS
PUMPING PLANT

566-60

STANDARD STEEL DETAILS Nº 3

SCALE As shown | BRIDGE 50-339W | FILE | DRAWING C-5413-18

PREL. DRAWING NO. P-5413 | 11/32

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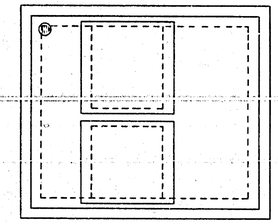
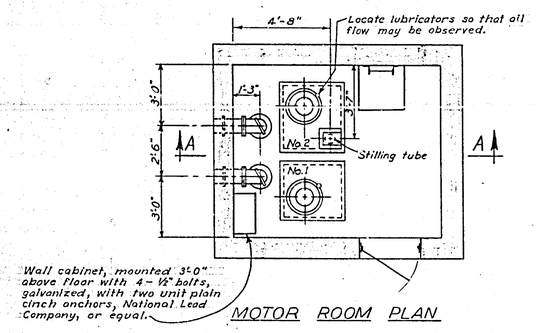
FED. ROAD DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	CALIF.				

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
VIII	Riv.	19	Riv.	7	10

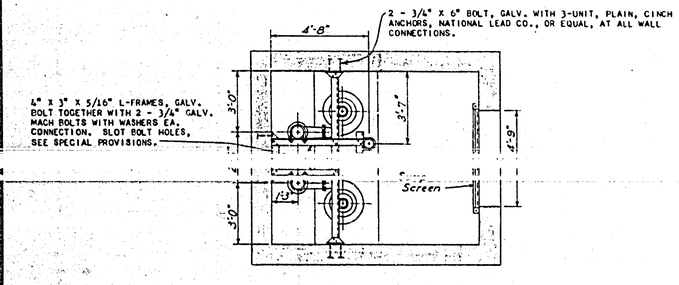
SEPTEMBER 15 1958



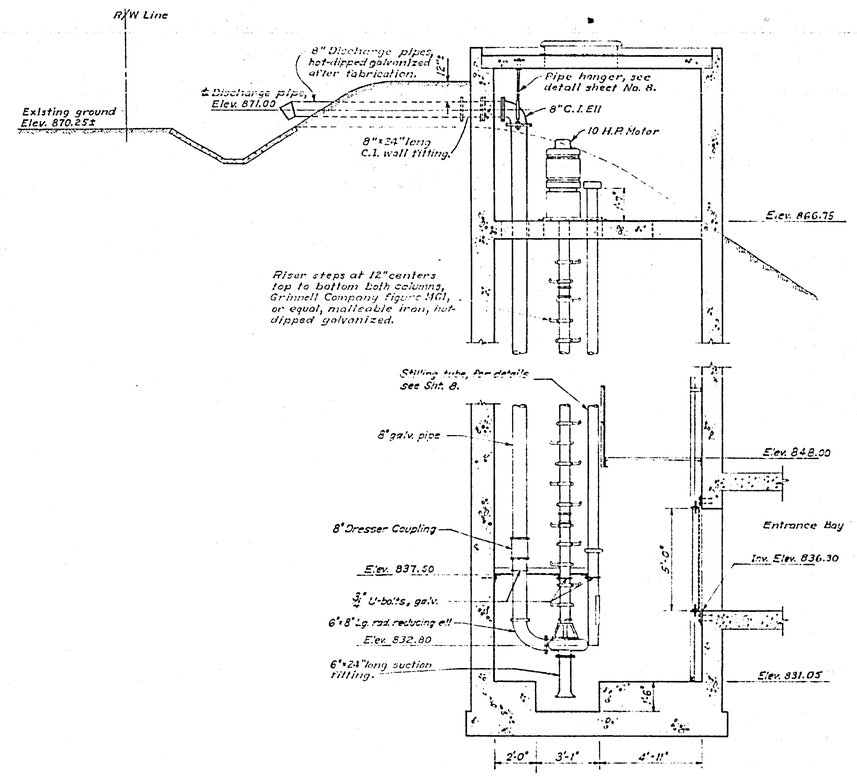
ROOF PLAN



MOTOR ROOM PLAN



SUMP PLAN



SECTION "A-A"

NOT TO SCALE

BRIDGE DEPARTMENT

Revisions	Date	Approved
Revised Pump Data	7-25-58	
Revised Motor Data	7-25-58	
Revised Motor Data	7-25-58	
Revised Motor Data	7-25-58	
Revised Motor Data	7-25-58	
Revised Motor Data	7-25-58	
Revised Motor Data	7-25-58	
Revised Motor Data	7-25-58	
Revised Motor Data	7-25-58	
Revised Motor Data	7-25-58	

Drawn H. Jordan
Traced
Checked
Quantities
Specifications
Approved

DESIGN SECTION 11

56L-60 — STATE OF CALIFORNIA, DEPARTMENT OF PUBLIC WORKS, DIVISION OF HIGHWAYS — R-1787

VINE STREET UNDERPASS PUMPING PLANT

DRAINAGE PUMPING EQUIPMENT

SCALE 3/8" = 1'-0" | BRIDGE ~~56-330W~~ | FILE | DRAWING C-5413-19

PREL. DRAWING NO. P-5413 18 33

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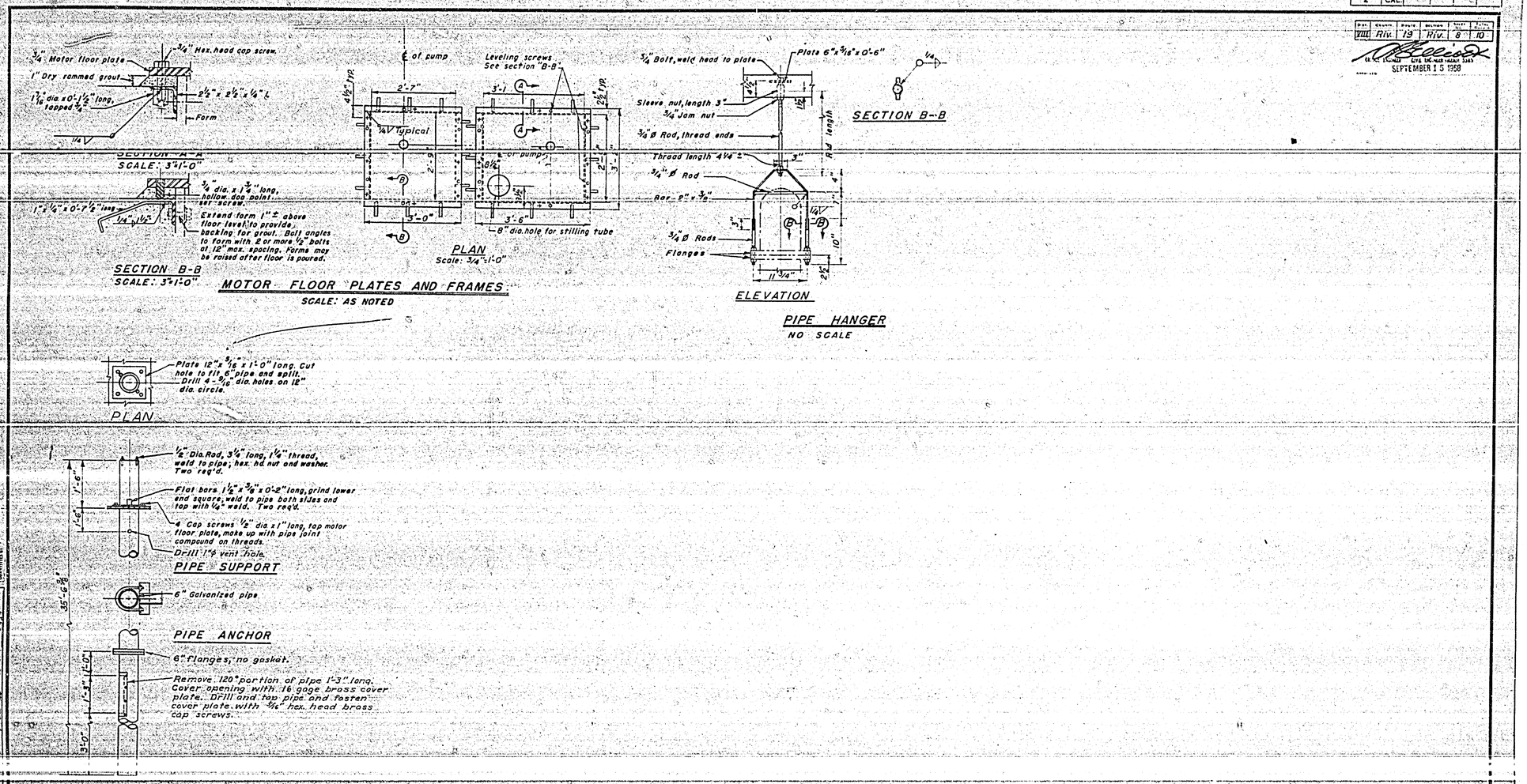


NOTE:
Pumps shall be set on leveling screws only, free of all other contacts and their position adjusted so that floor plates are level and the column vertical. Bracing shall be adjusted so that it provides contact with column without moving or bringing stress upon any part of the pump or bracing and pumps secured tightly in proper position. Motor floor plate bolts shall be tightened up snugly against the plate. Dry grout shall then be rammed under the floor plate, allowed to set, leveling screws slacked, and the plates then bolted down tight against the grout.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
2	CAL.				

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
VIII	Riv.	19	Riv.	8	10

SEPTEMBER 15 1958

56C-60 STATE OF CALIFORNIA DEPARTMENT OF PUBLIC WORKS DIVISION OF HIGHWAYS R-1787

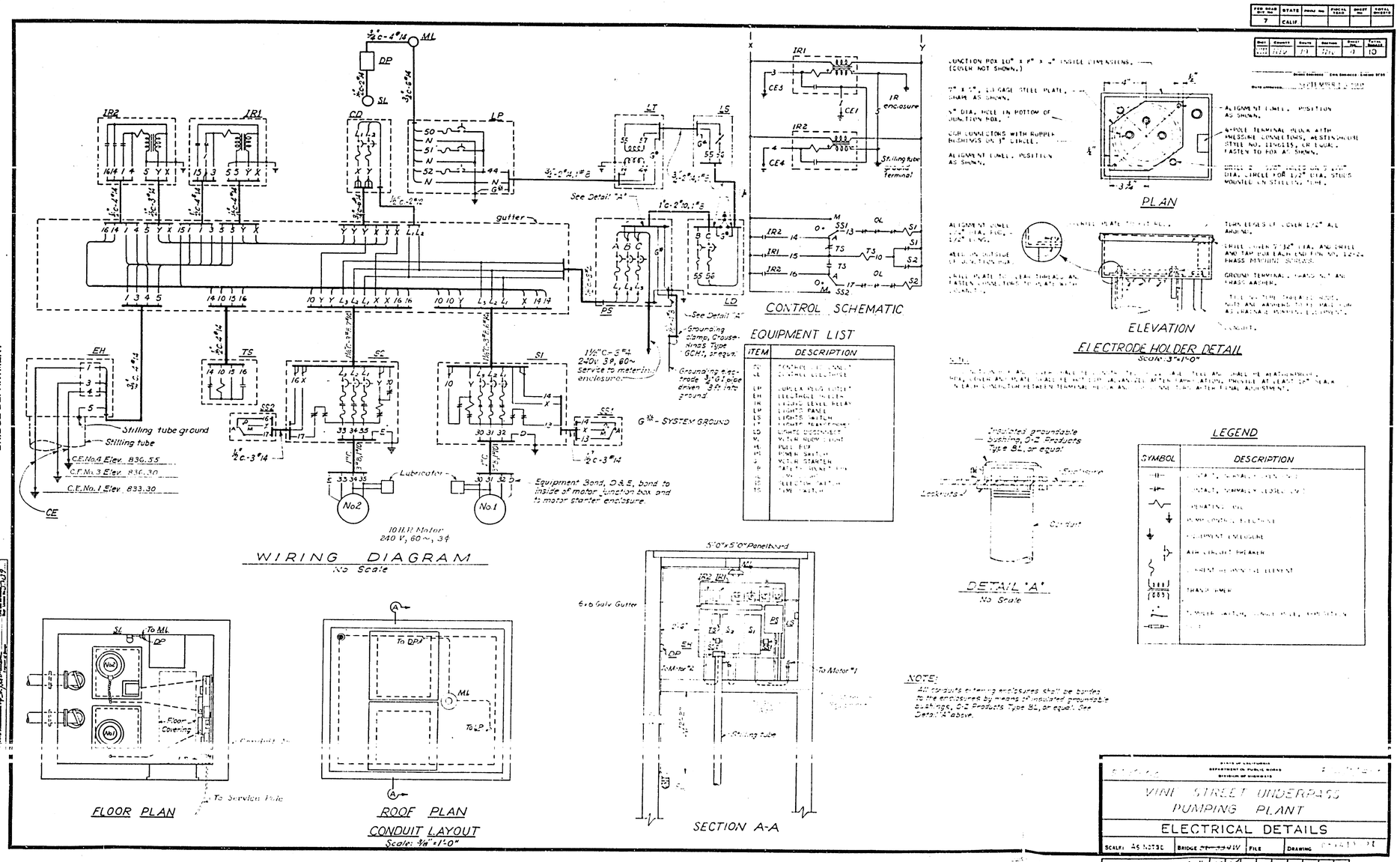
VINE STREET UNDERPASS PUMPING PLANT

PUMPING EQUIPMENT DETAILS

SCALE: As Shown | BRIDGE: ~~56-339W~~ | FILE: | DRAWING: C-5413-20

FULL DRAWING NO. P-5413 19 34

FED. ROAD DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	CALIF.				



BRIDGE DEPARTMENT

DESIGN	W. Ellison		
DETAILS			
QUANTITIES			
Checked			

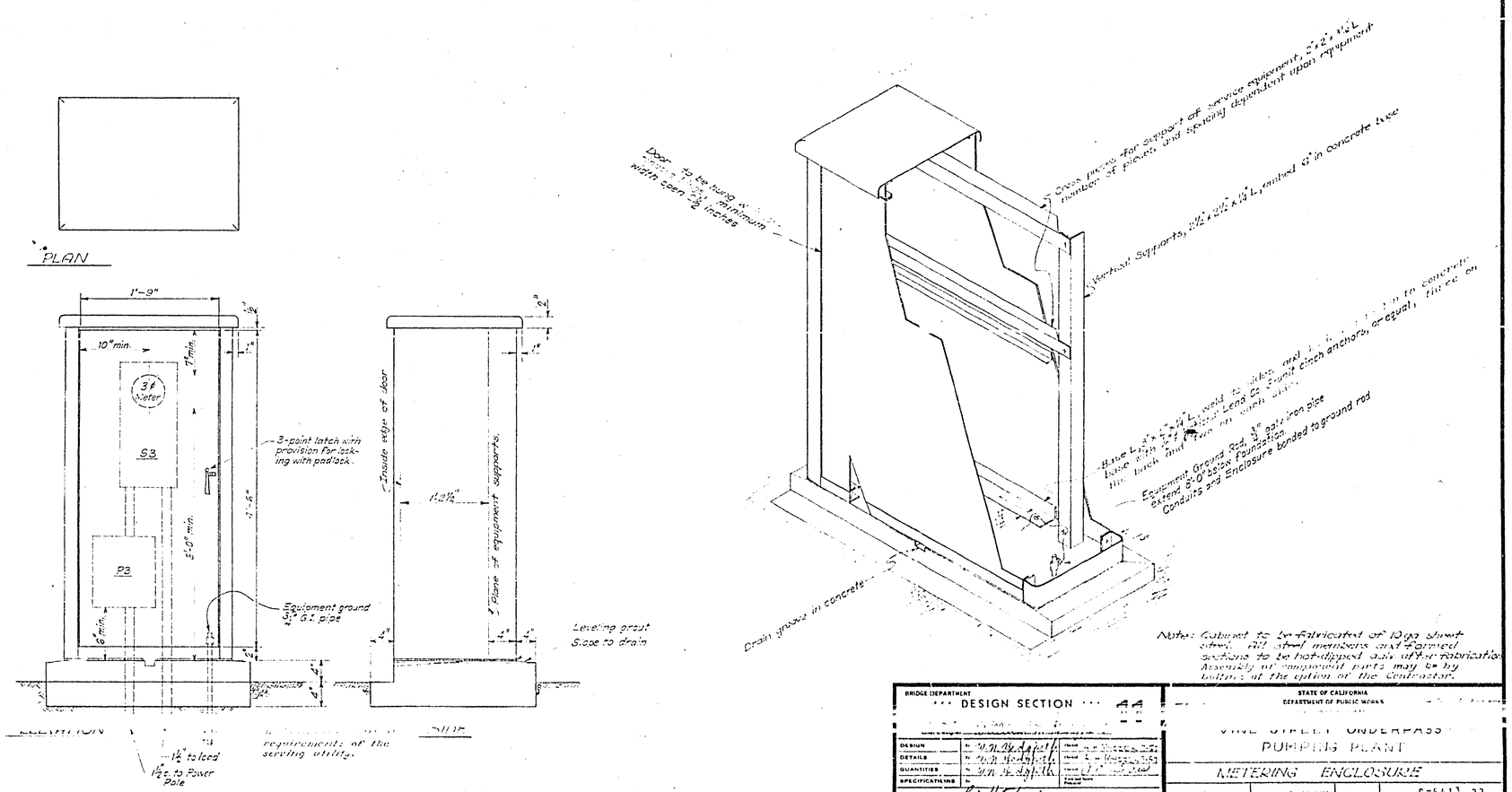
STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

VINE STREET UNDERPASS
PUMPING PLANT

ELECTRICAL DETAILS

SCALE: AS NOTED	BRIDGE	FILE	DRAWING

PREL. DRAWING NO. P-54-12 of 35



Note: Cabinet to be fabricated of 10 ga sheet steel. All steel members and formed sections to be hot-dipped galv after fabrication. Assembly of component parts may be by bolting at the option of the Contractor.

BRIDGE DEPARTMENT
DESIGN SECTION 44

DESIGN			
DETAILS			
QUANTITIES			
SPECIFICATIONS			

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

VINE STREET UNDERPASS
PUMPING PLANT
METERING ENCLOSURE

SCALE None | BRIDGE 56-339W | FILE | DRAWING C-5413-22

PREL. DRAWING No. P-5413-

55

FED. AID PROJ. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	CALIF.				

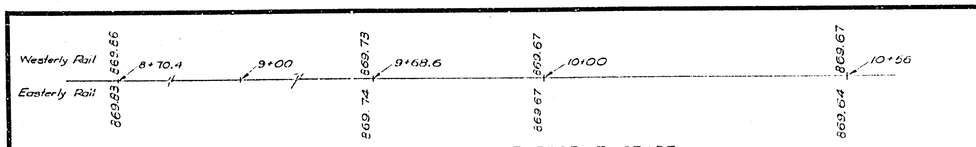
DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
VIII	RIV	19	R.W.	7	12

SEPTEMBER 1, 1967

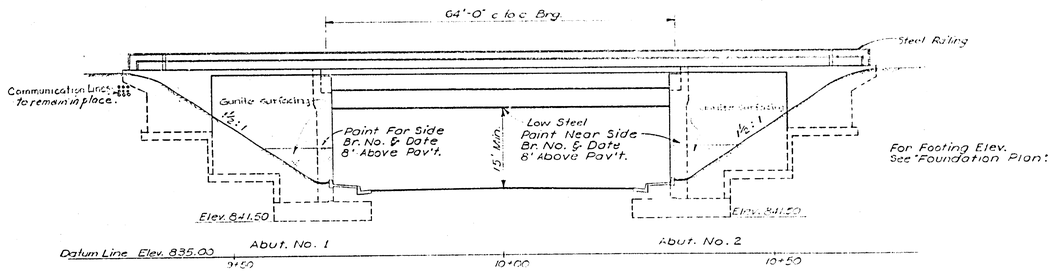
G. T. McCoy

STATE HIGHWAY ENGINEER

by Chas. E. Waite

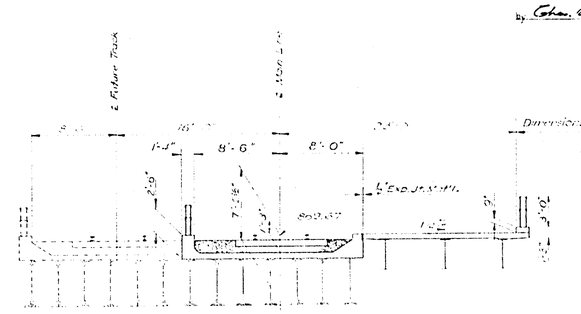


MAIN LINE PROFILE GRADE

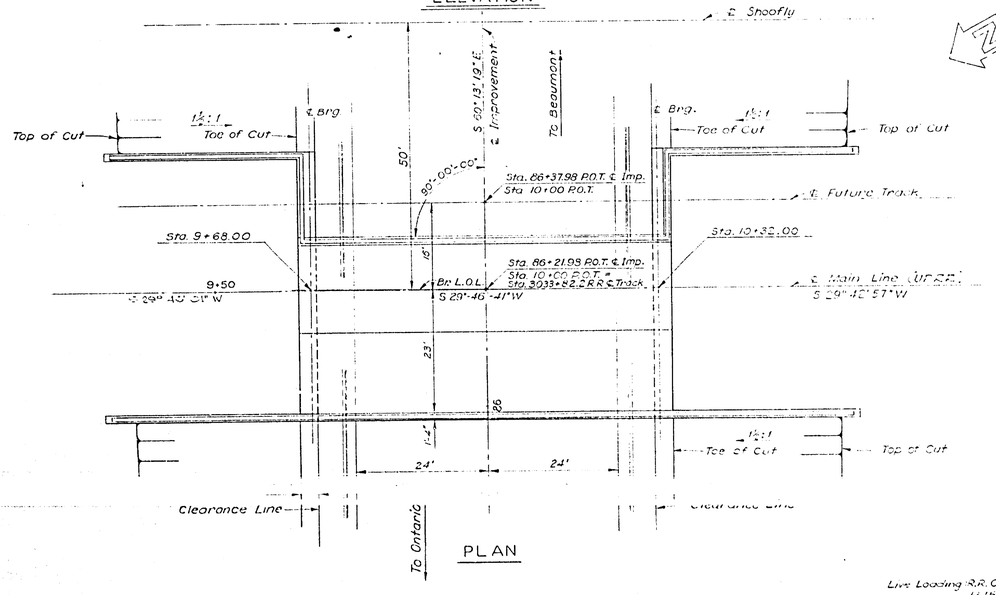


ELEVATION

For Footing Elev. See "Foundation Plan"



TYPICAL SECTION
Scale: 1" = 1'-0"



PLAN

Live Loading R.R. Cooper's E 75
H 15 S 12-44

INDEX TO PLANS

Sheet No.	Title
1	General Plan
2	Foundation Plan
3	Abutment No. 1 & 2
4	Abutment No. 1 & 2 Details
5	Typical Section
6	Steel Layout & Details, E 75 Loading
7	Girder Layout & Details, H15 S12 44
8	Bearing Details
9	Type 1A Cantilever Retaining Wall
10	Type 2A Cantilever Retaining Wall
11	Steel Railing Details
12	Log of Test Borings

APPROXIMATE QUANTITIES

* STRUCTURE EXCAVATION	1,204 C.Y.
* STRUCTURE BACKFILL	1,172 C.Y.
CLASS "A" CONCRETE (BRIDGES)(448 C.Y.)	LUMP SUM
RUBBER WATERSTOPS	82 L.F.
BAR REINFORCING STEEL (BRIDGES)(100,000 LBS.)	LUMP SUM
MEMBRANE WATERPROOFING, 3 PLY	184 S.Y.
PROTECTIVE COVERING	124 S.Y.
STRUCTURAL STEEL (204,000 LBS.)	LUMP SUM
CLEANING AND PAINTING STRUCTURAL STEEL	LUMP SUM
STEEL RAILING	141 L.F.

* Final pay quantity: See special provisions

For General Notes See Sheet No. 11

··· DESIGN SECTION ···

Project Designer: [illegible]
Chief Designer: [illegible]

DESIGN	[illegible]	Checked	
DETAILS	[illegible] 7/67	Checked	
QUANTITIES	[illegible]	Checked	
SPECIFICATIONS	By	Final and Name Checked	
Approval Recommended by	[illegible]	Final Approval Date	

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

VINE STREET UNDERPASS

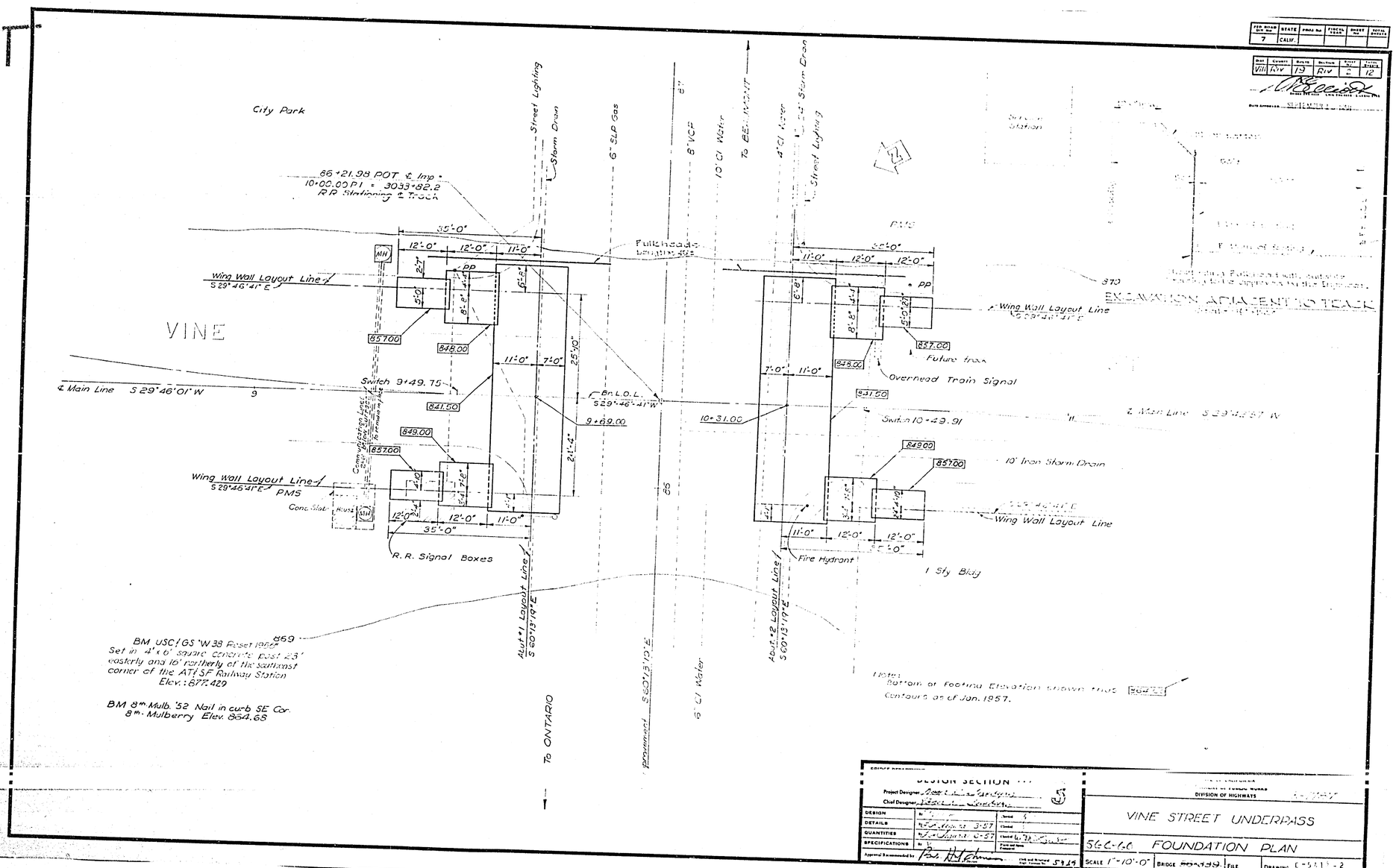
LOCATED ON EIGHTH STREET ABOUT 0.1 MILE EAST OF ROUTE 43 IN CITY OF RIVERSIDE

54.C-6.6

GENERAL PLAN

SCALE	BRIDGE	FILE	DRAWING
1"=10' Except As Noted	[illegible]		[illegible]-1

PREL. DRAWING NO. P- [illegible] 1 2 2 13 37



FED. ROAD DIV. NO.	STATE	PROJ. No.	FUNCTIONAL CLASS.	SHEET NO.	TOTAL SHEETS
7	CALIF.				

DIST.	COUNTY	ROUTE	SECTION	ROUTE	TOTAL SHEETS
VIII	Riv	13	Riv		12

DESIGN SECTION

Project Designer
Chief Designer

DESIGN		Checked
DETAILS		Checked
QUANTITIES		Checked
SPECIFICATIONS		Field and Main Checked

Approval Recommended by

Chief Bridge Engineer 5-8-59

DIVISION OF HIGHWAYS

VINE STREET UNDERPASS

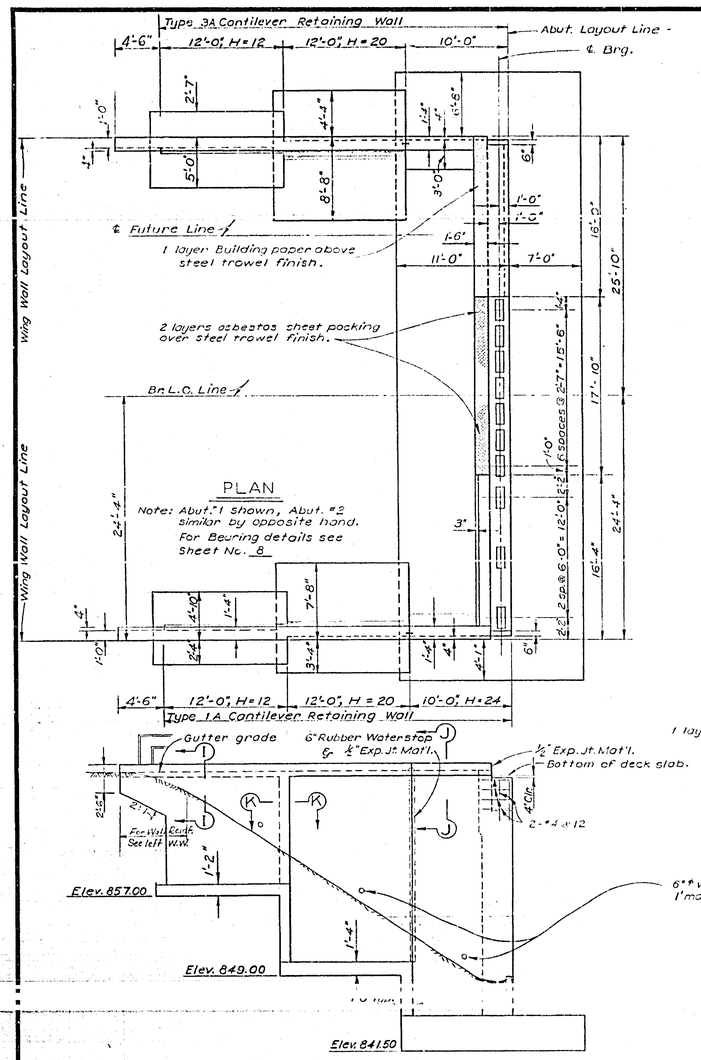
56-C-1.6 FOUNDATION PLAN

SCALE 1" = 10'-0" | BRIDGE | FILE | DRAWING C-5411-2

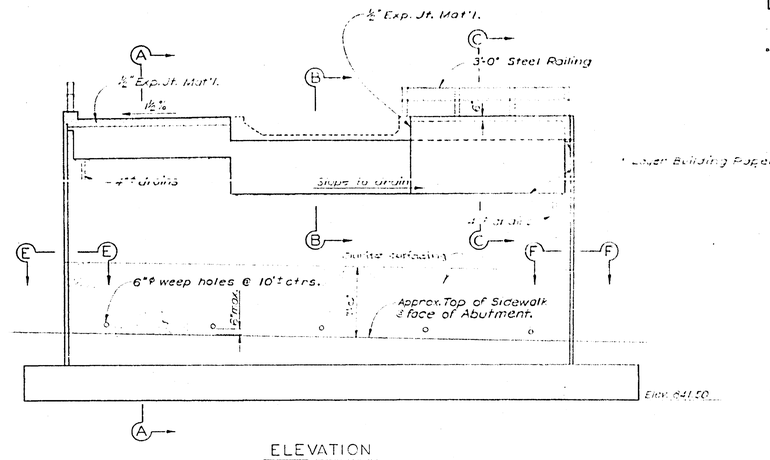
PREL. DRAWING No. P-5412

FED. ROAD DIV. NO.	STATE	PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	CALIF.				

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
VIII	Riv.	19	Riv.	3	12



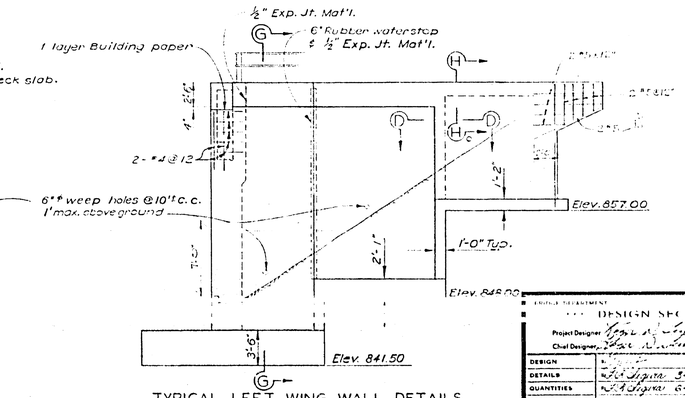
TYPICAL RIGHT WING WALL DETAILS



ELEVATION

MASONRY ℄ ELEVATIONS

Abut. # 1 & # 2	Elev.
Grid. # 1	[illegible]
Grid. # 2	[illegible]
Grid. # 3	[illegible]
Grid. # 4 - # 10	[illegible]



TYPICAL LEFT WING WALL DETAILS

Notes: For Rubber Waterstop see "Type 3A Contilever Retaining Wall" sheet. Det. W-1
For Section A-A, B-B, C-C, D-D, E-E, F-F, G-G, H-H, I-I, J-J, & K-K see "Abutment No. 1 & 2 Details" sheet #4.

DESIGN SECTION 3

Project Designer
Chief Designer

DESIGN			
DETAILS			
QUANTITIES			
SPECIFICATIONS			

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

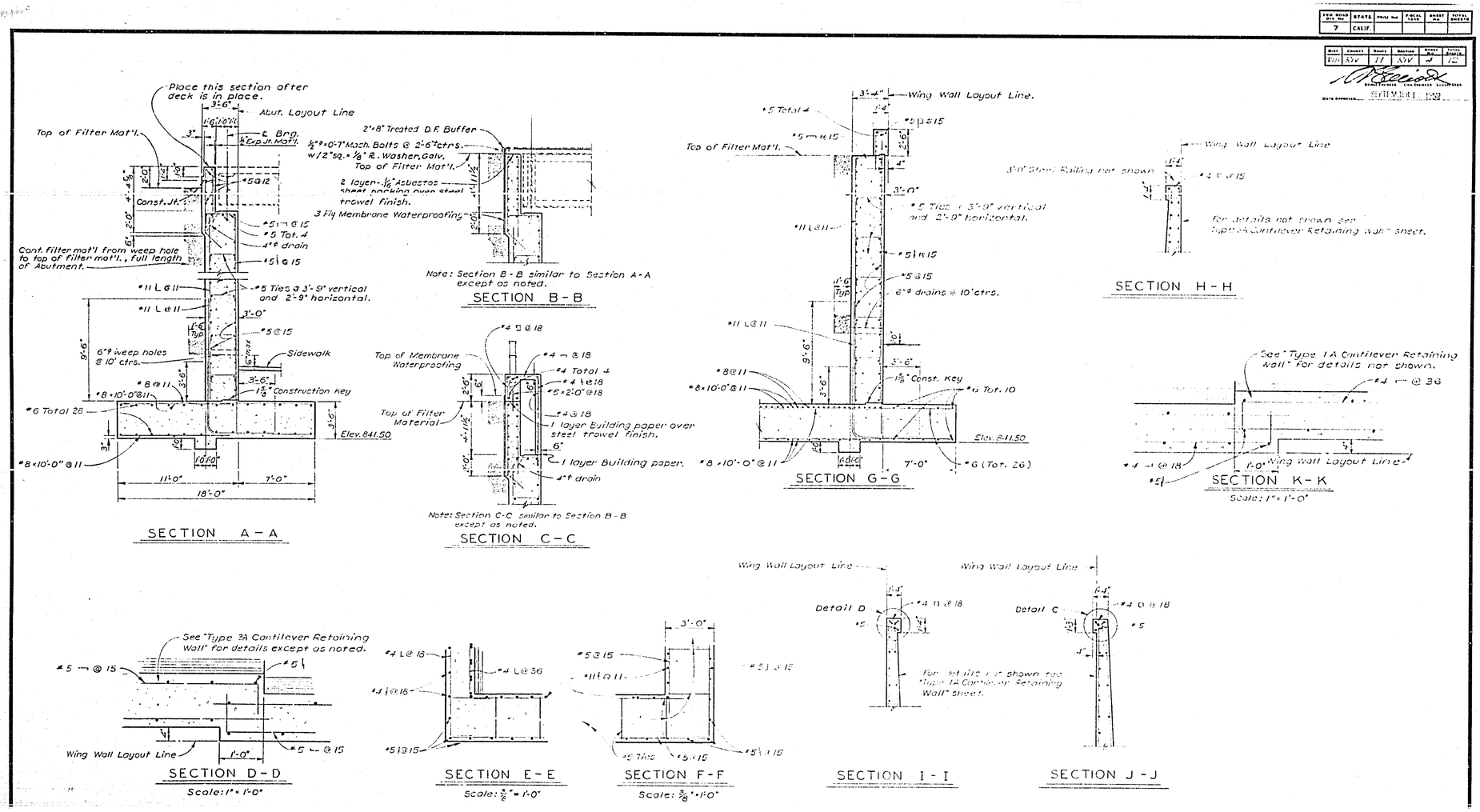
VINE STREET UNDERPASS

56C-60 ABUTMENT NO. 1 & 2

SCALE 3/16" = 1'-0" | BRIDGE ~~56-330~~ | FILE | DRAWING C-5413-3

PREL. DRAWING No P-5413

36



FED. ROAD DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	CALIF.				

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
VIII	RIV	11	RIV	4	12

DATE APPROVED SEPTEMBER 1962

BRIDGE DEPARTMENT
DESIGN SECTION 3
Project Designer
Chief Designer
DESIGN
DETAILS 3-57
QUANTITIES 6-57
SPECIFICATIONS
Approval Recommended by

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
K-1787

VINE STREET UNDERPASS
56C-60
ABUTMENT NO. 1 & 2 DETAILS

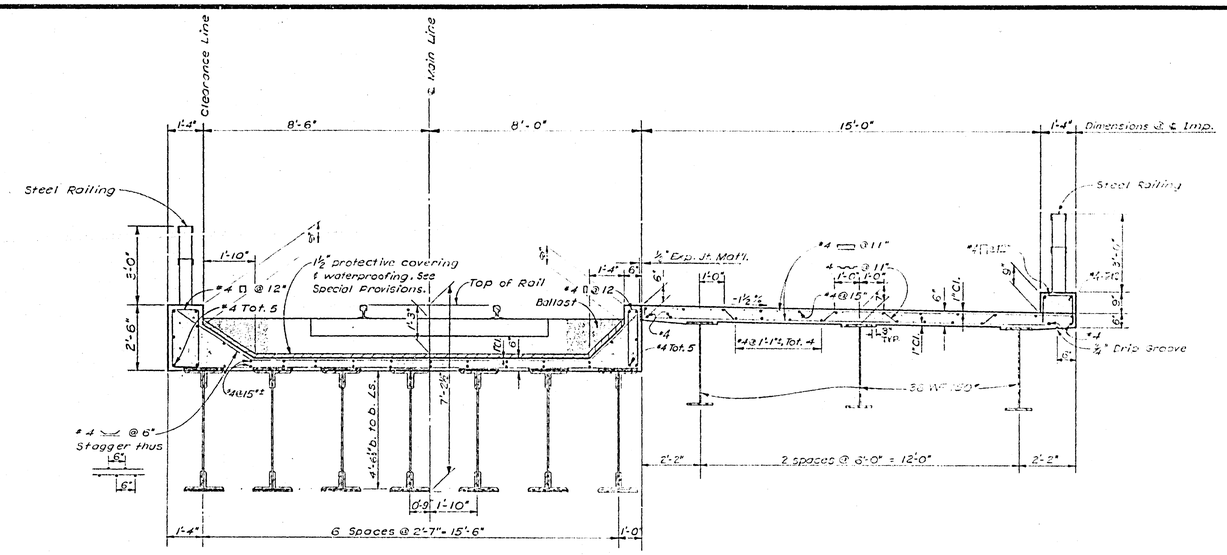
1/4" = 1'-0", EXCEPT AS NOTED | BRIDGE ~~66-338~~ | FILE | DRAWING C-5413-4

PREL. DRAWING NO. P-5413 | 1 | 40

37

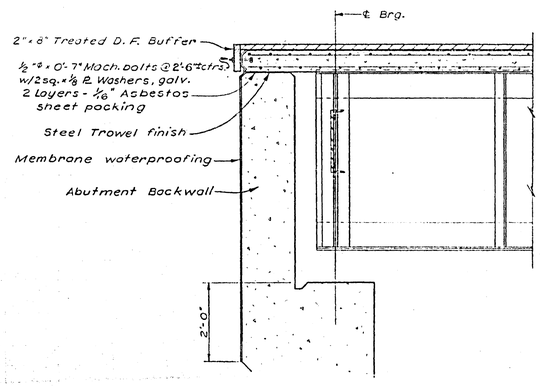
FED. ROAD DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	CALIF.				

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
VIII	Riv.	19	Riv.	5	12



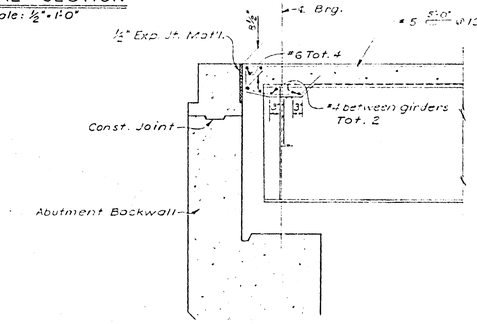
TYPICAL SECTION

Scale: ½" = 1'-0"



SECTION THRU ABUTMENT AT R.R.

Scale: ¾" = 1'-0"



SECTION THRU ABUTMENT AT HIGHWAY

Scale: ¾" = 1'-0"

··· DESIGN SECTION ···	3
Project Designer	
Chief Designer	
DESIGN	
DETAILS	J. Riguera 5-57
QUANTITIES	J. Riguera 6-57
SPECIFICATIONS	
Approved Recommended by	

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

P-1787

VINE STREET UNDERPASS

TYPICAL SECTION

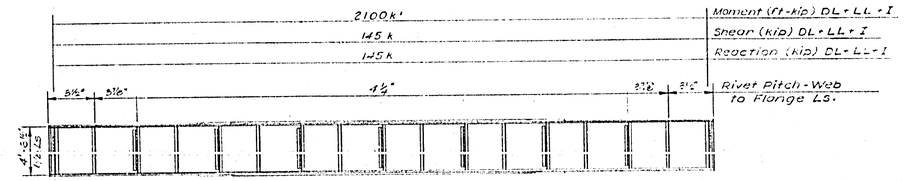
SCALE As Noted | BRIDGE ~~48-339~~ | FILE | DRAWING

PREL. DRAWING NO. P-5 3 8 96

38

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	CALIF.				

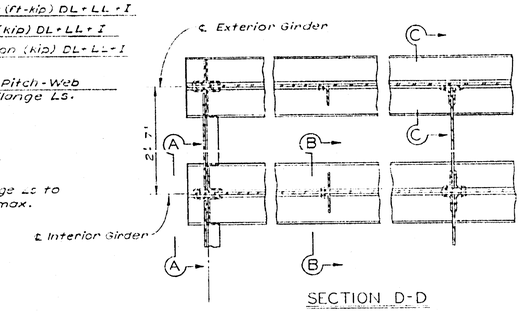
DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
VII	RIV	19	RIV	6	12



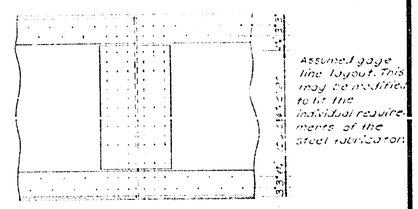
Web ℞ 54" × 3/8"
2-Ls 8" × 8" × 5/8" Cont. - Top & Bottom
1-Cov. ℞ 18" × 7/16" Cont. - Top & Bottom
1-Cov. ℞ 18" × 7/16" × 36'-0" - Top & Bottom

Note: Rivet pitch - Flange ∠s to cover ℞'s = 3 1/2" max.

ELEVATION
Scale: 3/16" = 1'-0"

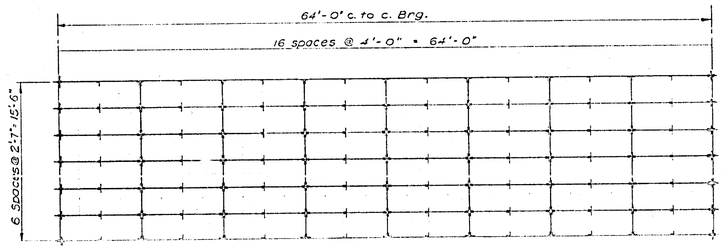


SECTION D-D

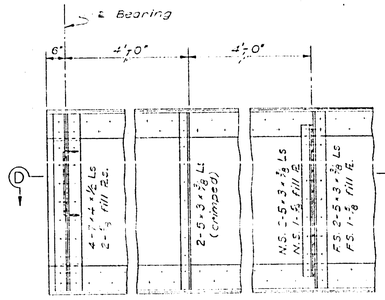


Assumed gage line layout. This may be modified to fit the individual requirements of the steel fabrication.

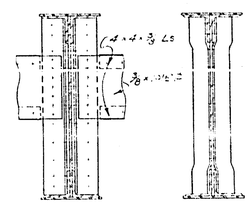
WEB SPLICE
(optional)



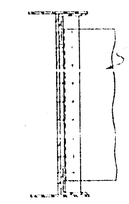
STEEL LAYOUT
Scale: 3/16" = 1'-0"



PART ELEVATION
(Interior Girder)

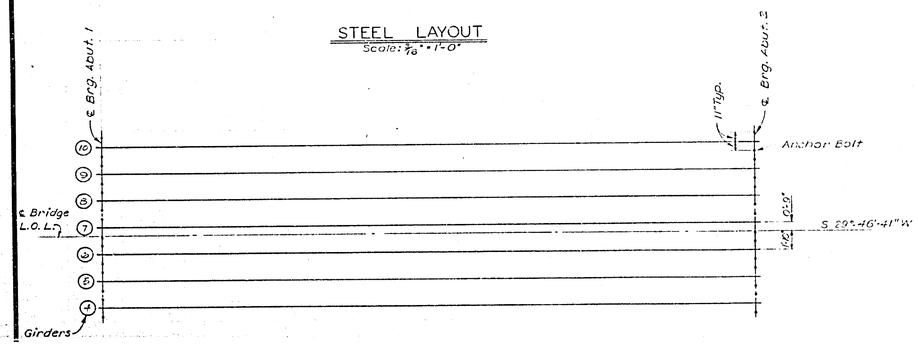


SECTION A-A



SECTION B-B

SECTION C-C



ANCHOR BOLT LAYOUT
Scale: 3/16" = 1'-0"

Note:
All rivets to be 7/8".
If flange splices are necessary they shall be designed to A.R.E.A. specifications and submitted for approval.
Flange splices shall be riveted.

BRIDGE DEPARTMENT
... DESIGN SECTION ... 2

Chief Designer

DESIGN		Checked	
DETAILS	4-57	Checked	
QUANTITIES	6-57	Checked	
SPECIFICATIONS		Checked	

Approval Recommended by

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

R-1787

VINE STREET UNDERPASS
56 C-1-C
STEEL LAYOUT & DETAILS, E75 LOADING

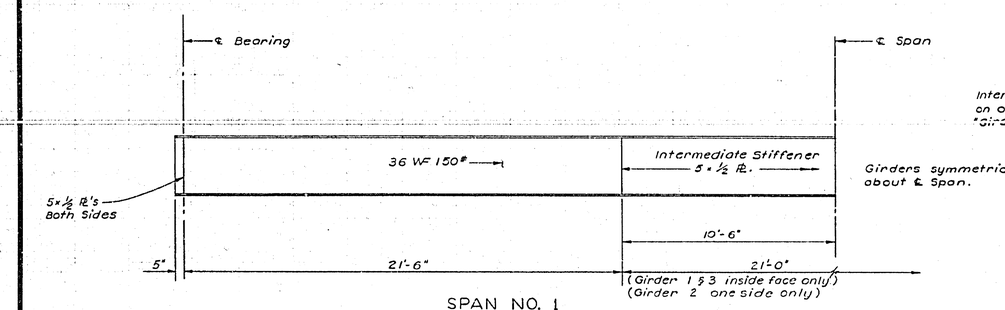
SCALE 3/16" = 1'-0" Except As Noted | BRIDGE | FILE | DRAWING S-5412-6

PREL. DRAWING NO. P-5413 | 10 | 57

39

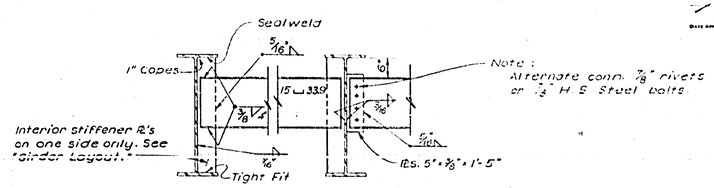
FED. ROAD DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	CALIF.				

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
VIII	Riv.	19	Riv.	7	12



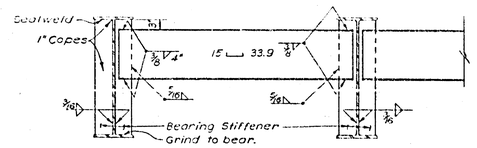
SPAN NO. 1

Scale: ⅜" = 1'-0"



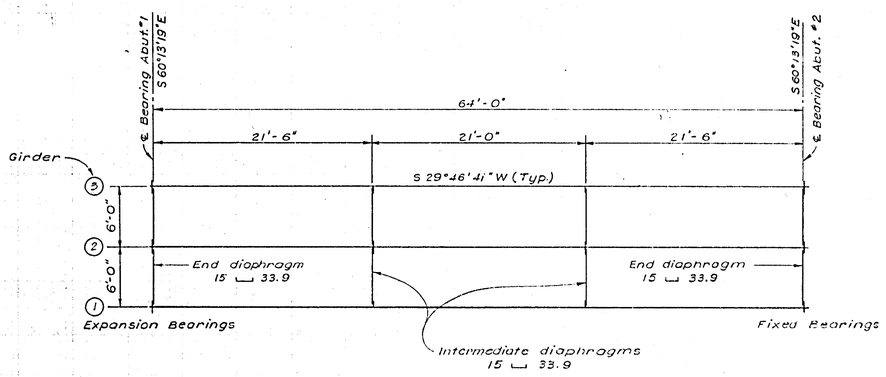
INTERMEDIATE DIAPHRAGM

Scale: ¾" = 1'-0"



END DIAPHRAGM

Scale: ¾" = 1'-0"



Scale: 3/16" = 1'-0"

··· DESIGN SECTION ··· 3

Project Designer [signature]

Chief Designer [signature]

DESIGN	By [signature]	Checked	[signature]
DETAILS	By [signature] 5-57	Checked	[signature]
QUANTITIES	By [signature] 6-57	Checked	[signature]
SPECIFICATIONS	By	Checked	

Approval Recommended by [signature]

DEPARTMENT OF PUBLIC WORKS

K-1187

VINE STREET UNDERPASS

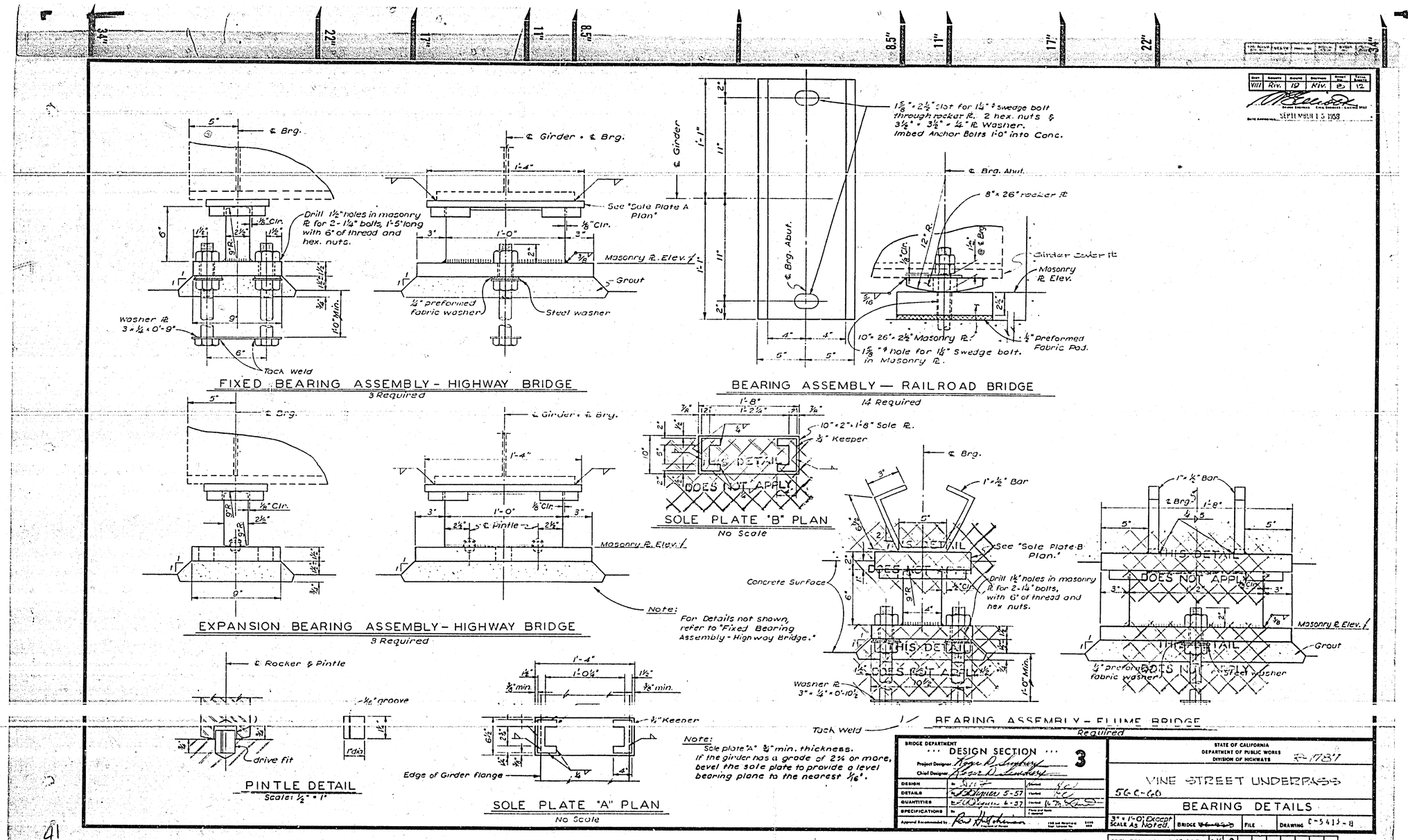
56C-60

GIRDER LAYOUT & DETAILS, H15 S12-44

SCALE As Noted | BRIDGE ~~56-339~~ | FILE | DRAWING C-5413-7

PREL. DRAWING No. P-5413

40



Dist.	County	Route	Section	Sheet No.	Total Sheets
VIII	Riv.	19	Riv.	8	12

SEPTEMBER 15 1958

BRIDGE DEPARTMENT
DESIGN SECTION 3
Project Designer: Roger D. Sunbury
Chief Designer: Roger D. Sunbury

DESIGN		Checked	
DETAILS	5-57	Checked	
QUANTITIES	6-57	Checked	
SPECIFICATIONS			

Approval Recommended by: Paul Hutchinson

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

R-1787

VINE STREET UNDERPASS
56-C-60

BEARING DETAILS

3" = 1'-0" Except As Noted. SCALE | BRIDGE | FILE | DRAWING C-5413-8

PREL. DRAWING NO. P-5413 | 21 | 29

41

F.E.D. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.				

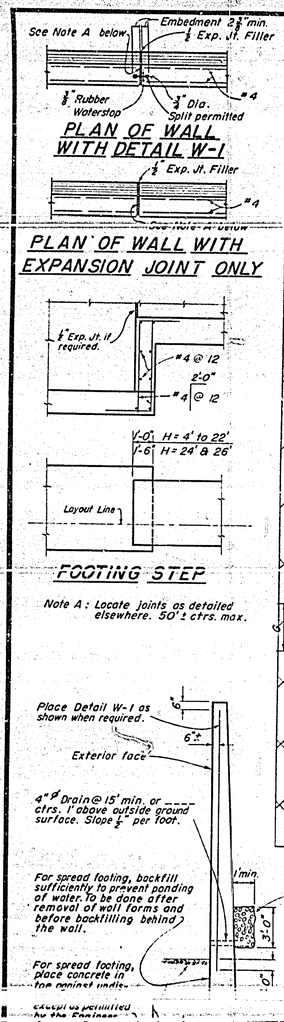
DIST.	COUNTY	ROUTE	POST MILE	SHEET NO.	TOTAL SHEETS
VIII	Riv	19	Riv	9	12

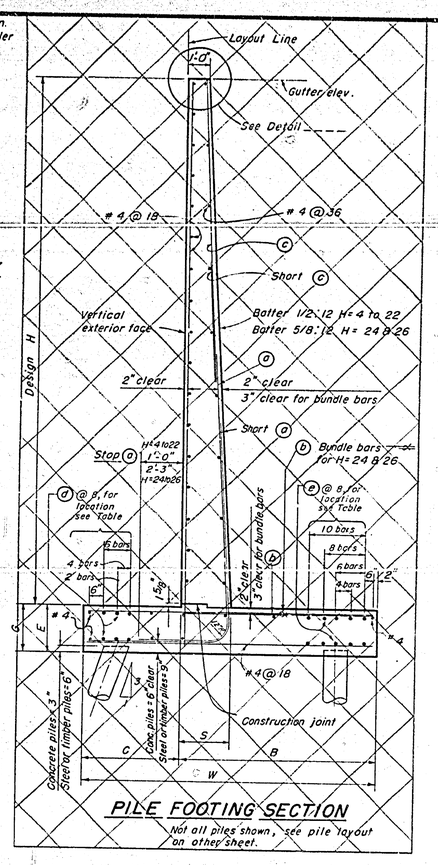
BRIDGE ENGINEER — CIVIL ENGINEER - LICENSE 5595

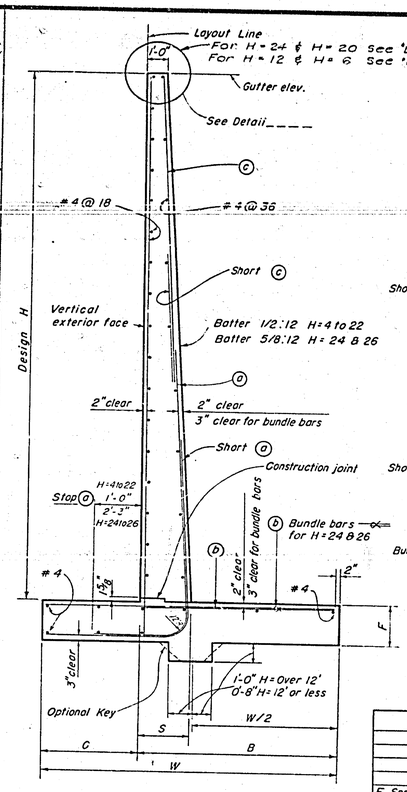
DATE APPROVED SEPTEMBER 15 1959

Revisions
Offset Diagram
10-56 F.Y.

STANDARD DRAWING







Note: Bar cut-offs may be varied in increments of 6".

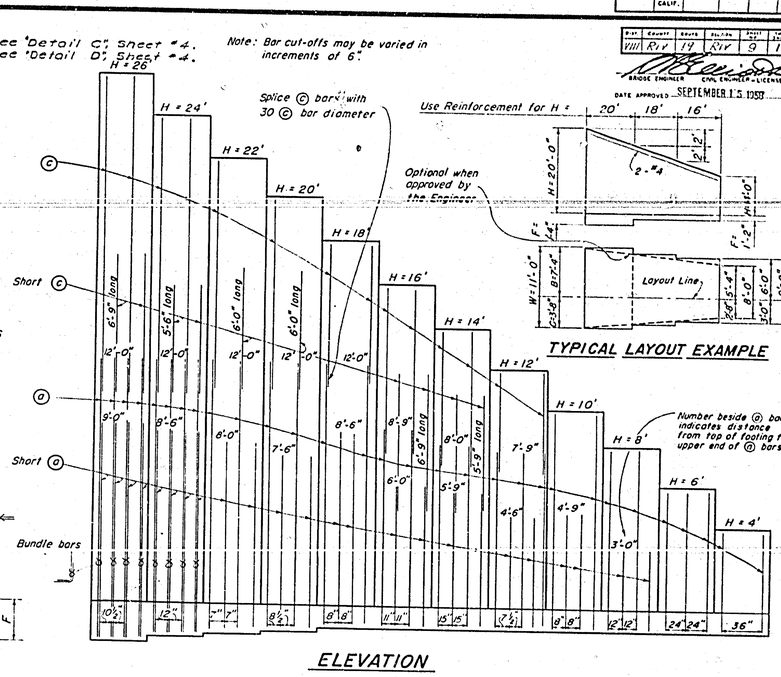
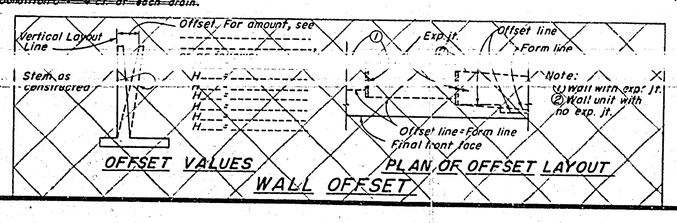


TABLE OF REINFORCING STEEL DIMENSIONS AND DATA

H	26'	24'	22'	20'	18'	16'	14'	12'	10'	8'	6'	4'
W	14'-3"	13'-3"	12'-0"	11'-0"	10'-0"	9'-0"	8'-0"	7'-0"	6'-2"	5'-2"	4'-2"	3'-2"
C	4'-9"	4'-5"	4'-0"	3'-8"	3'-4"	3'-0"	2'-8"	2'-4"	2'-0"	1'-8"	1'-4"	1'-0"
B	9'-6"	8'-10"	8'-0"	7'-4"	6'-8"	6'-0"	5'-4"	4'-10"	4'-2"	3'-6"	2'-10"	2'-2"
F Spread Flg.	1'-10"	1'-8"	1'-6"	1'-4"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"
E Concrete Pile	2'-1"	1'-11"	1'-9"	1'-7"	1'-5"	1'-5"	1'-5"	1'-5"	1'-5"	1'-5"	1'-5"	1'-5"
G Steel or Timber Pile												
S	2'-4"	2'-2"	2'-0"	1'-10"	1'-8"	1'-8"	1'-8"	1'-8"	1'-8"	1'-8"	1'-8"	1'-8"
© bars	2'-4 1/2"	2'-3"	1'-11"	1'-10"	1'-9"	1'-8"	1'-7"	1'-6"	1'-5"	1'-4"	1'-3"	1'-2"
@ bars	#8 @ 10 1/2	#8 @ 12	#7 @ 14	#7 @ 17	#6 @ 24	#5 @ 11	#5 @ 15	#5 @ 30				
ⓑ bars	#11 @ 10 1/2	#11 @ 12	#11 @ 7	#11 @ 8 1/2	#10 @ 8	#10 @ 11	#10 @ 15	#6 @ 7 1/2	#5 @ 8	#5 @ 12	#5 @ 24	#5 @ 36
	#10 @ 10 1/2	#10 @ 12	#10 @ 7	#10 @ 8 1/2	#9 @ 8	#9 @ 11	#9 @ 15	#5 @ 7 1/2	#4 @ 8	#4 @ 12	#5 @ 24	#5 @ 36
@ bars, number-size	2 - #7	2 - #7	4 - #7	4 - #7	4 - #7	6 - #7	6 - #7	6 - #7	6 - #7			
ⓑ bars, number-size	4 - #7	4 - #7	8 - #7	8 #7	8 - #7	10 - #7	10 - #7	10 - #7	10 - #7	6 - #6	6 - #6	6 - #6
Toe Pressure P.S.F.	5040	4640	4480	4000	3590	3290	2980	2640	2270	1930	1570	1240
Spread Footing	Conc. CF/ft.	7.18	6.31	5.21	4.50	3.85	3.38	2.95	2.43	2.02	1.63	1.26
	Steel lbs/ft	393	328	309	233	177	123	90	56	47	28	20	14
Conc.	Conc. CF/ft.	73.4	64.4	53.1	45.8	39.0	34.1	29.5	25.2	22.2	19.3	17.1	14.7



Note: For concrete quantities for steel or timber pile footings, add 3" depth x footing width W to concrete pile footing quantities. Steel quantities remain the same.

BRIDGE DEPARTMENT
DESIGN SECTION 3
PROJECT DESIGNER Roger D. Snodgrass
CHIEF DESIGNER Roger D. Snodgrass

DESIGN	BY	CHECKED	
DETAILS	R.D. Shipman 5-57	CHECKED	
QUANTITIES	R.D. Shipman 6-57	CHECKED	
SPECIFICATIONS	BY	PLANS AND SPECS. ACKNOWLEDGED	

APPROVAL RECOMMENDED BY Roy Hoffman — Assistant Bridge Engineer — Date 5-7-57

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

R-1787

VINE STREET UNDERPASS

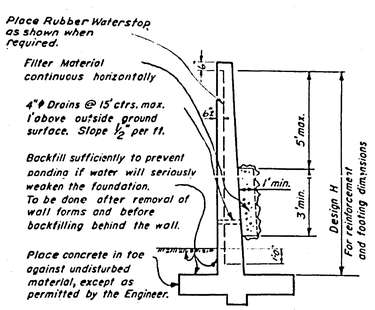
56C-60

TYPE 1A CANTILEVER RETAINING WALL

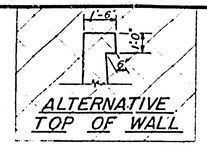
SCALE — NONE	BRIDGE ~~50-330~~	X5-3-40	DRAWING C-5413-9

PREL. DRAWING NO. P-5413 | 13

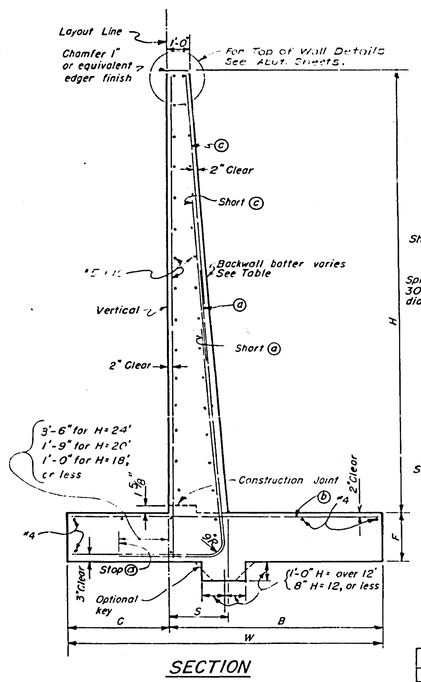
42



DESIGN AND DRAINAGE

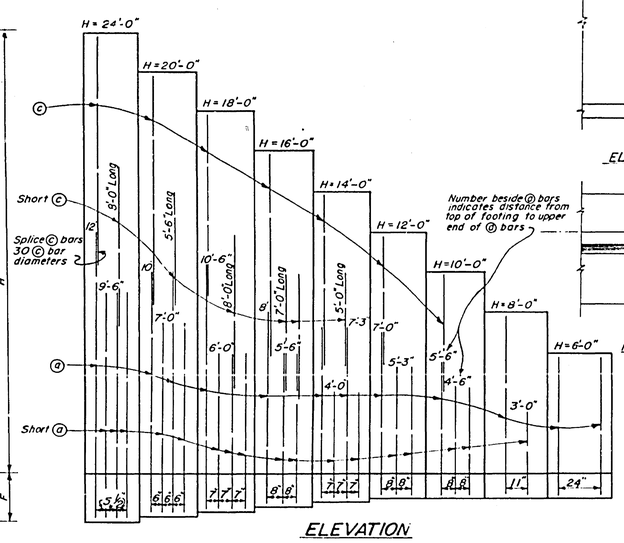


ALTERNATIVE TOP OF WALL

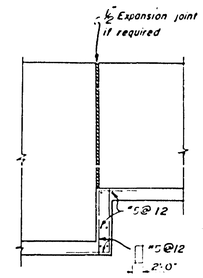


SECTION

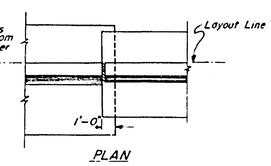
SPREAD FOOTING



ELEVATION



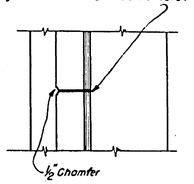
ELEVATION



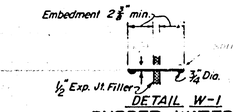
PLAN

FOOTING STEPS

TYPICAL LAYOUT EXAMPLE

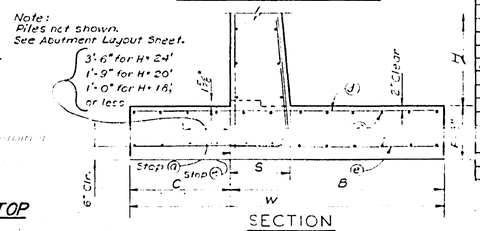


PLAN OF EXPANSION JOINT



DETAIL W-1

RUBBER WATERSTOP



SECTION

PILE FOOTING

TABLE OF REINFORCING STEEL DIMENSIONS AND DATA									
H	24'	20'	18'	16'	14'	12'	10'	8'	6'
W	14'-10"	13'-0"	11'-4"	10'-1"	8'-10"	7'-7"	6'-4"	5'-1"	3'-10"
C	5'-8"	4'-8"	3'-10"	3'-5"	3'-0"	2'-7"	2'-2"	1'-9"	1'-4"
B	9'-2"	8'-4"	7'-6"	6'-8"	5'-10"	5'-0"	4'-2"	3'-4"	2'-6"
F	2'-4"	2'-1"	1'-10"	1'-7"	1'-4"	1'-2"	1'-2"	1'-2"	1'-2"
S	2'-9"	2'-3"	1'-11¼"	1'-8"	1'-7"	1'-6"	1'-5"	1'-4"	1'-3"
B.W. Batter	⅞:12	¾:12	⅝:12	½:12	½:12	½:12	½:12	½:12	½:12
"c" Bars	#8 @ 11	#8 @ 12	#8 @ 14	#6 @ 8	#6 @ 14	#5 @ 24	#5 @ 24		
"a" Bars	#11 @ 5½	#11 @ 6	#11 @ 7	#11 @ 8	#9 @ 7	#8 @ 8	#6 @ 8	#5 @ 11	#5 @ 15
"b" Bars	#11 @ 5½	#11 @ 6	#11 @ 7	#11 @ 8	#9 @ 7	#8 @ 8	#6 @ 8	#5 @ 11	#5 @ 15
"e" Bars	#5 @ 11	—	—	#5 @ 16	—	—	—	—	#5 @ 12
"f" Bars	#5 @ 16	—	—	#5 @ 16	—	—	—	—	#5 @ 15

To Accompany Plans Dated NOV 1 1 1966

September 1, 1953

State Highway Engineer
Civil Engineer License No. 2084

5585

Design Conditions:

Footing key is required except when found unnecessary by the Engineer.

Design Data:
fc = 1200 psi, fs = 20,000 psi, n = 10 earth = 120 pcf.

Reinforcement:
Intermediate Grade, Hard Grade or Rail Steel. Deformations shall conform to ASTM A 305. Bars shall lap 20 diameters, where spliced, unless otherwise shown on the plans. Bends shall conform to the Manual of Standard Practice, A.C.I.

All bar embedments are clear distances to outside of bar. Spacing for parallel bars is ctr. to ctr. of bars.

NOTES

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STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

VINE STREET UNDERPASS

TYPE 3A CANTILEVER RETAINING WALL

SCALE None | BRIDGE | FILE XS-3-37 | DRAWING

BRIDGE DEPARTMENT

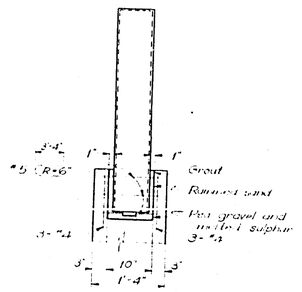
43

A65

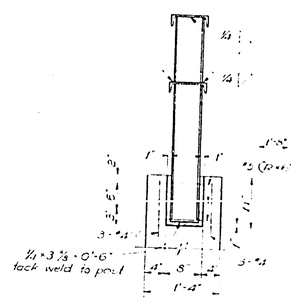
FED. AID PROJ. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	CALIF.				

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
VIII	Riv.	159	Riv	11	12

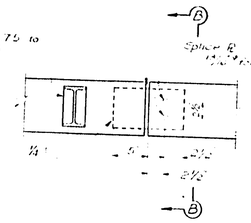
DATE APPROVED SEPTEMBER 13, 1962



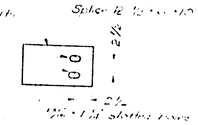
END VIEW
Scale: 1" = 1'-0"



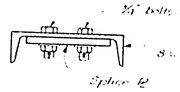
TYPICAL POST
Scale: 1" = 1'-0"



SECTION A-A
Scale: 1/2" = 1'-0"



SPLICE PLATE
Scale: 1/2" = 1'-0"



SECTION B-B
Scale: 1/2" = 1'-0"

GENERAL NOTES

SPECIFICATIONS:

DESIGN: A.A.S.H.O. DATED 1953 WITH SUBSEQUENT REVISIONS, A BRIDGE DEPARTMENT SUPPLEMENT DATED 1953.

AMERICAN RAILWAY ENGINEERING ASSOCIATION, CURRENT ISSUE, FOR RAILROAD.

CONSTRUCTION: STANDARD SPECIFICATIONS, DIVISION OF HIGHWAYS, DATED AUGUST 1954 AND THE SPECIAL PROVISIONS.

LIVE LOADING: ROADWAY [illegible]

RAILWAY [illegible]

UNIT STRESSES:

REINFORCED CONCRETE: f_s = 20,000 P.S.I., N = 10

f_c = 1,200 P.S.I. (EXCEPT AS NOTED)

f_c = 1,000 P.S.I (RD.WAY SLAB ON GIRD

STRUCTURAL STEEL: f_s = 18,000 P.S.I.

FOOTING PRESSURE: [illegible] TONS P.S.F.

RAIL LOADING: [illegible] TONS [illegible] TYPE [illegible]

REINFORCEMENT: ENBEDMENT IS CLEAR TO OUTSIDE OF BAR AND IS 2" TO MAIN REINFORCEMENT, EXCEPT AS NOTED. HACKING FOR HOOKS IS FOUR DIAMETERS, EXCEPT AS NOTED.

WHERE REINFORCING BARS ARE SPLICED THEY SHALL HAVE A 20 DIAMETER LAP UNLESS OTHERWISE CALLED FOR ON THE PLANS.

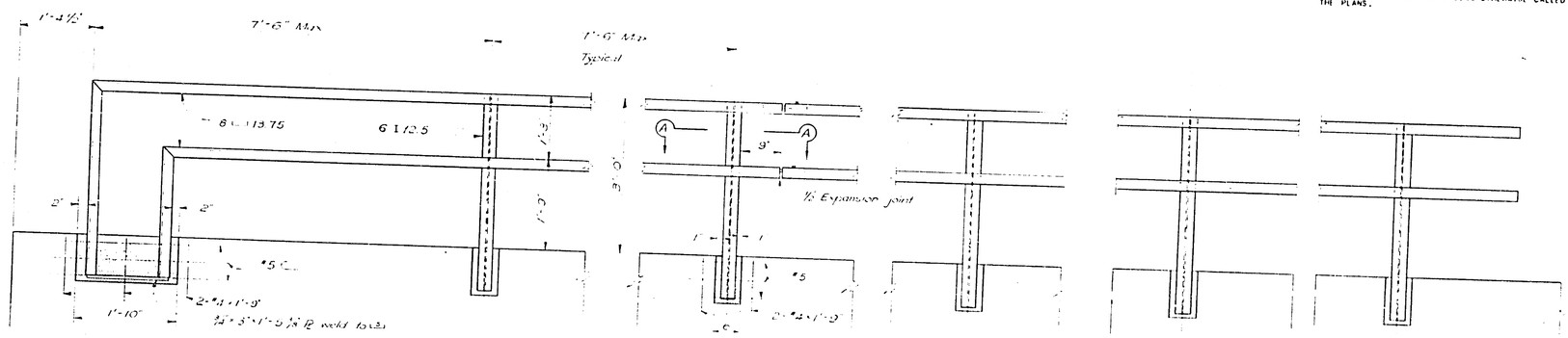
WELDED GIRDER GENERAL NOTES

THE RELATION BETWEEN FILLET WELD SIZE AND THE MAXIMUM THICKNESS OF MATERIAL ON WHICH VARIOUS SIZES OF FILLET WELD MAY BE USED SHALL BE IN ACCORDANCE WITH ARTICLE 222(c) OF THE A.W.S. SPECS. DATED 1956, UNLESS OTHERWISE NOTED.

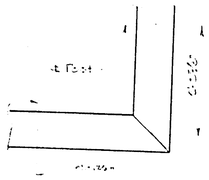
THE METHODS OF JOINT PREPARATION SHOWN ON THE PLANS ARE BASED ON THE USE OF MANUAL SHIELDED ARC WELDING. IN THE EVENT THAT AUTOMATIC OR SEMI-AUTOMATIC SUBMERGED ARC PROCESSES ARE USED, THE CONTRACTOR MAY SUBMIT ALTERNATIVE METHODS OF JOINT PREPARATION FOR APPROVAL BY THE ENGINEER. THE PLANS. "J" BUTT WELDS MAY BE SUBSTITUTED FOR VEE TYPE SHOWN ON SHOWN ON THE PLANS.

SHOP PLANS SHALL INDICATE WELDING SEQUENCE AND THE TYPE OF STEEL TO BE USED.

ALL FIELD SPLICES SHALL BE FITTED AND MATCHED IN THE SHOP.

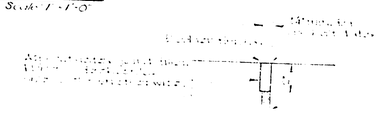


ELEVATION
Scale: 1" = 1'-0"



PLAN OF RAIL CORNER
Scale: 1" = 1'-0"

NOTE: [illegible]



LATEX AT EXPANSION JOINT
Scale: [illegible]

BRIDGE DEPARTMENT
*** DESIGN SECTION ***

Chief Designer [illegible]

DESIGN	[illegible]	Checked	
DETAILS	[illegible]	Checked	
QUANTITIES	[illegible]	Checked	
SPECIFICATIONS	[illegible]	Checked	

Approved for construction [illegible] Bridge Engineer — Date approved [illegible] — Plan No. S-427

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

VINE STREET UNDERPASS

RAILING DETAILS

SCALE As Noted | BRIDGE [illegible] | FILE | DRAWING S-5413-11

PREL. DRAWING No. P-5413 | 23

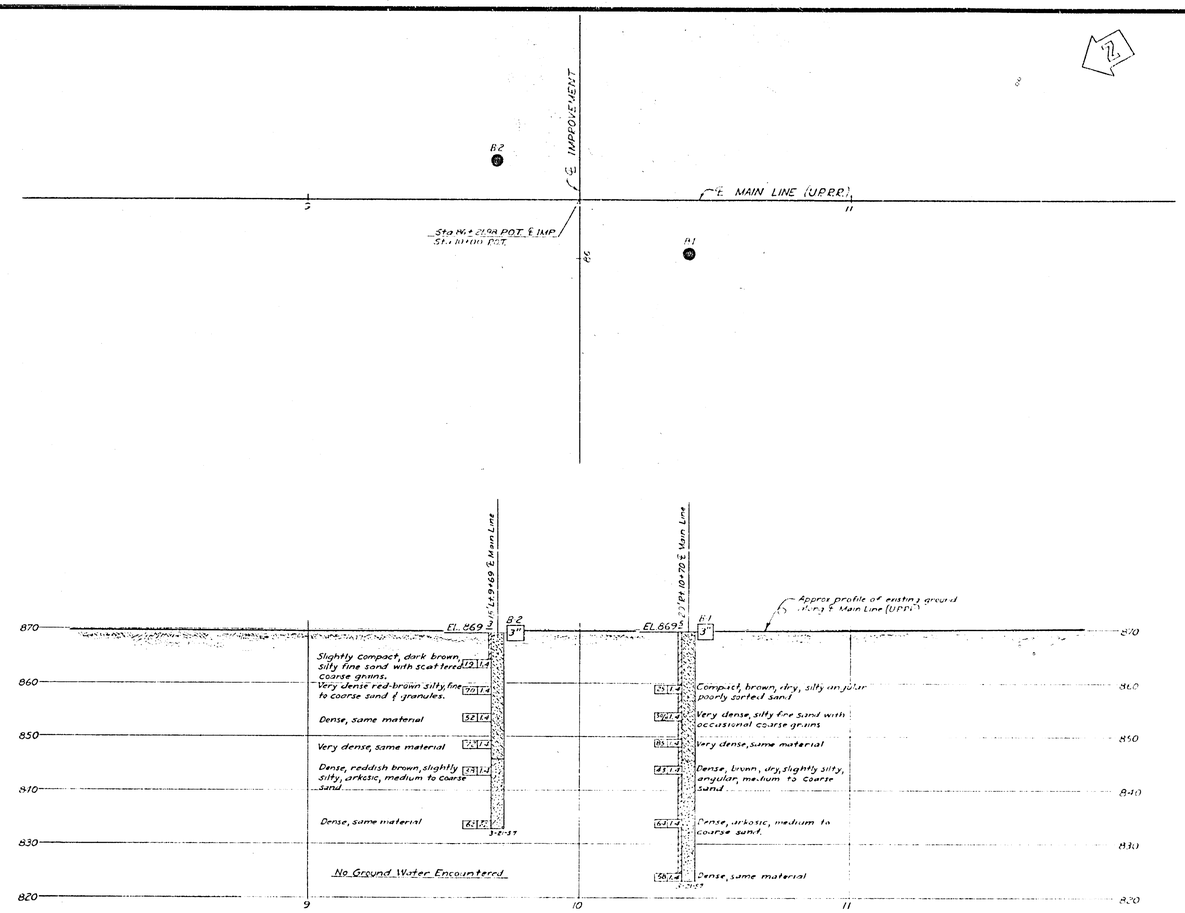
44

FED. ROAD DIST. No.	STATE	PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	CAL.				

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
07	Ker	19	Bvr	1	1

Date approved

BRIDGE DEPARTMENT



FIELD STUDY	by Albright 3-26-57
DESIGNED	by Albright 3-26-57
CHECKED	by [illegible]

Approved Recommended by [signature]

Classification of Material Based on Standard Grade Size Limits

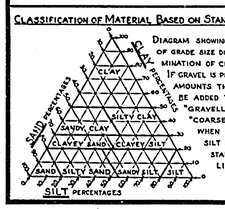


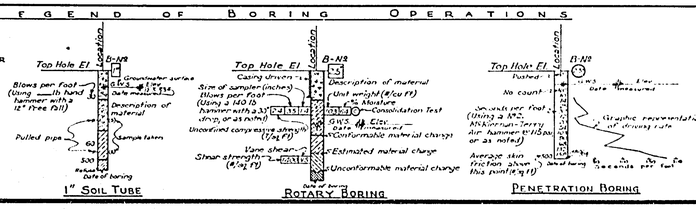
Diagram showing the basis for estimates of grade size distribution used in determination of class names. If gravel is present in appreciable amounts the term "gravelly" may be added to the class name, viz. "gravelly sand". The terms "coarse", "medium" and "fine" when used to describe sand, silt and gravel refer to standard grade size limits.

Legend of Earth Materials

- Gravel
- Sand
- Silt
- Clay
- Sandy Clay or Clayey Sand
- Sandy Silt or Silty Sand
- Silty Clay or Clayey Silt
- Peat and/or Organic Matter
- Fill Material
- Igneous Rock
- Sedimentary Rock
- Metamorphic Rock

Legend of Boring Operations

- Plan of any boring
- Penetrometer
- 2¼" Cone Penetrometer
- Sampler boring (dry)
- Rotary boring (wet)
- Auger boring (dry)
- Jet boring
- Core boring
- Test pit



Notes

The contractor's attention is directed to Section 2, Article (c) of the Standard Specifications and to the Special Provisions accompanying this set of plans.

Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

VINE ST. UNDERPASS

LOG OF TEST BORINGS

SCALE Vert. 1" = 10' Horiz. 1" = 20'	BRIDGE 56-339	FILE	DRAWING

PRELIM. DRAWING 3/13/58

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