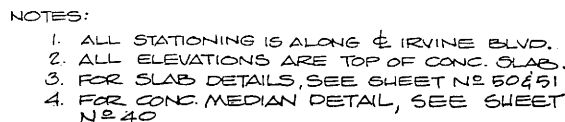




NOTE:
CAMBER DIAGRAM DOES NOT INCLUDE
ALLOWANCE FOR FALSEWORK SETTLEMENT.
THE TOTAL DEFLECTION WILL BE REACHED
ABOUT FOUR YEARS AFTER FALSEWORK
REMOVAL. FOR VALUES AT TIME OF
FALSEWORK REMOVAL, DIVIDE THOSE
SHOWN BY FOUR. THE AMOUNT OF CAMBER
FOR CONSTRUCTION WILL BE DETERMINED
BY THE ENGINEER.



⊕ CURVE DATA

B.C. STA. 74+85.99
E.C. STA. 84+19.34
 $R = 2100'$
 $\Delta = 25^{\circ}27'55''$
 $L = 933.35'$
 $T = 474.51'$

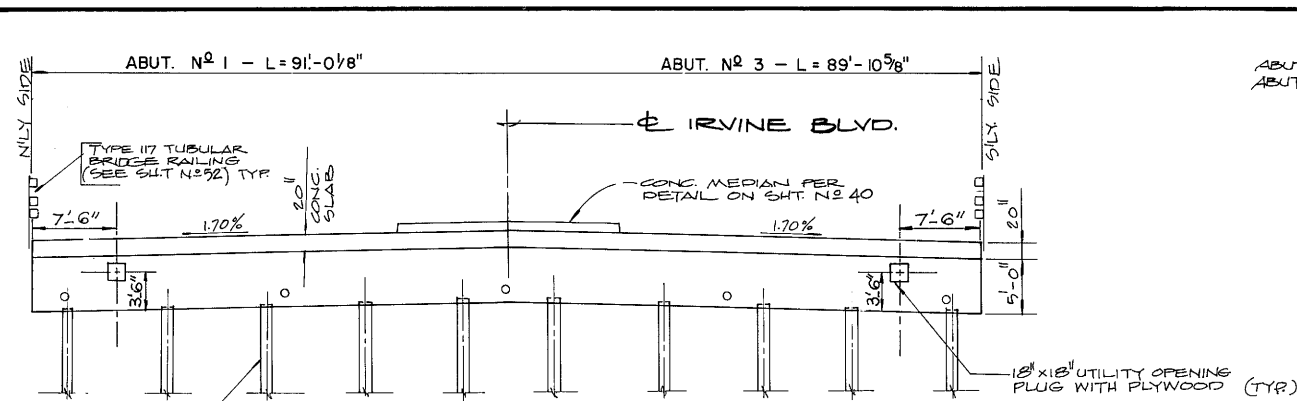
STAGES	TYPE OF STORM	DISCHARGE cfs
ONE	STORM OF RECORD	2080
	Q ₅₀	3700
	BASE FLOOD Q ₁₀₀	4100
TWO	Q ₅₀	4300
	BASE FLOOD Q ₁₀₀	4800
	Q ₅₀	10080
THREE	BASE FLOOD Q ₁₀₀	11200

	STRUCTURE EXCAVATION	295	C.Y.
	STRUCTURE BACKFILL	50	C.Y.
(F)	STRUCTURE CONCRETE	689	C.Y.
(F)	REINFORCING STEEL	115,615	LBS.
	FURNISH CONCRETE PILES	1035	L.F.
(F)	DRIVE CONC. PILES	46	EA.
(F)	BRIDGE RAILING TYPE 117	199	L.F.
(S)	SLOPE PROTECTION ROCK CL. 1/4 TON METHOD "B" PLACEMENT	2096	TONS
	MEDAL BEAM GUARD RAILING	130	L.F.

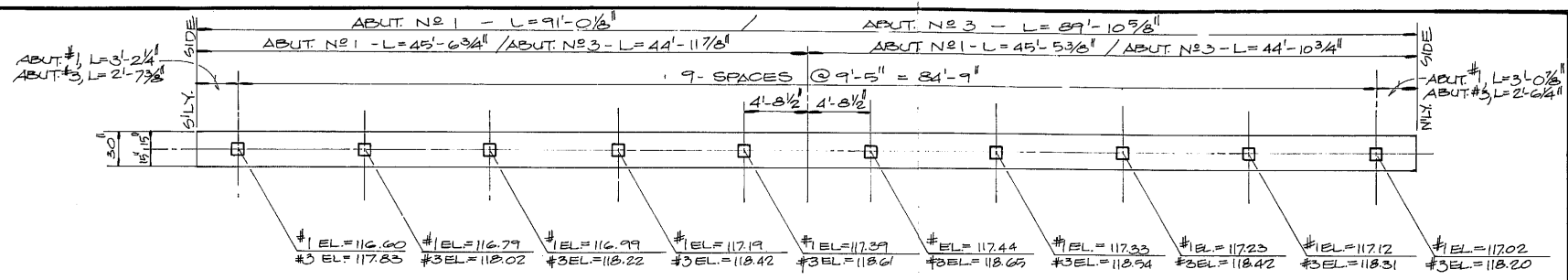
SETTLEMENT PIN ELEVATIONS		
LEFT SIDE (DECK PIN)	LOCATIONS	RIGHT SIDE (DECK PIN)
	± ABUTMENT #1	
	± SPAN #1	
	± PIER #2	
	± SPAN #2	
	± ABUTMENT #3	
DESCRIPTION OF DATUM:		

NOTE:
FOR USE OF PROJECT ENGINEER UPON
COMPLETION OF CONSTRUCTION.

		ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY		
		17000 BLVD. BRIDGE OVER PETER'S CANYON WASH 55C - 246		
		<u>GENERAL PLAN</u>		
MARK	DATE	DESCRIPTION	PREPARED UNDER SUPERVISION OF <u>Larry A. Soglin</u>	SHEET
		REVISIONS	<u>R.C.E. 10727 2-25-83</u> DATE	36
73		DESIGNED <u>C.L.M.</u>	SCALE	
		DRAWN <u>T.S.B.</u> CHECKED <u>J.B.</u>	AS SHOWN	DATE
				DWG. NO.



SECTION "A-A" ABUT. NO 1 & 3
SCALE: 1/8" = 1'-0"



TYPICAL PILE LAYOUT
ABUT. NO 1 & NO 3
SCALE: 1" = 2'-0"

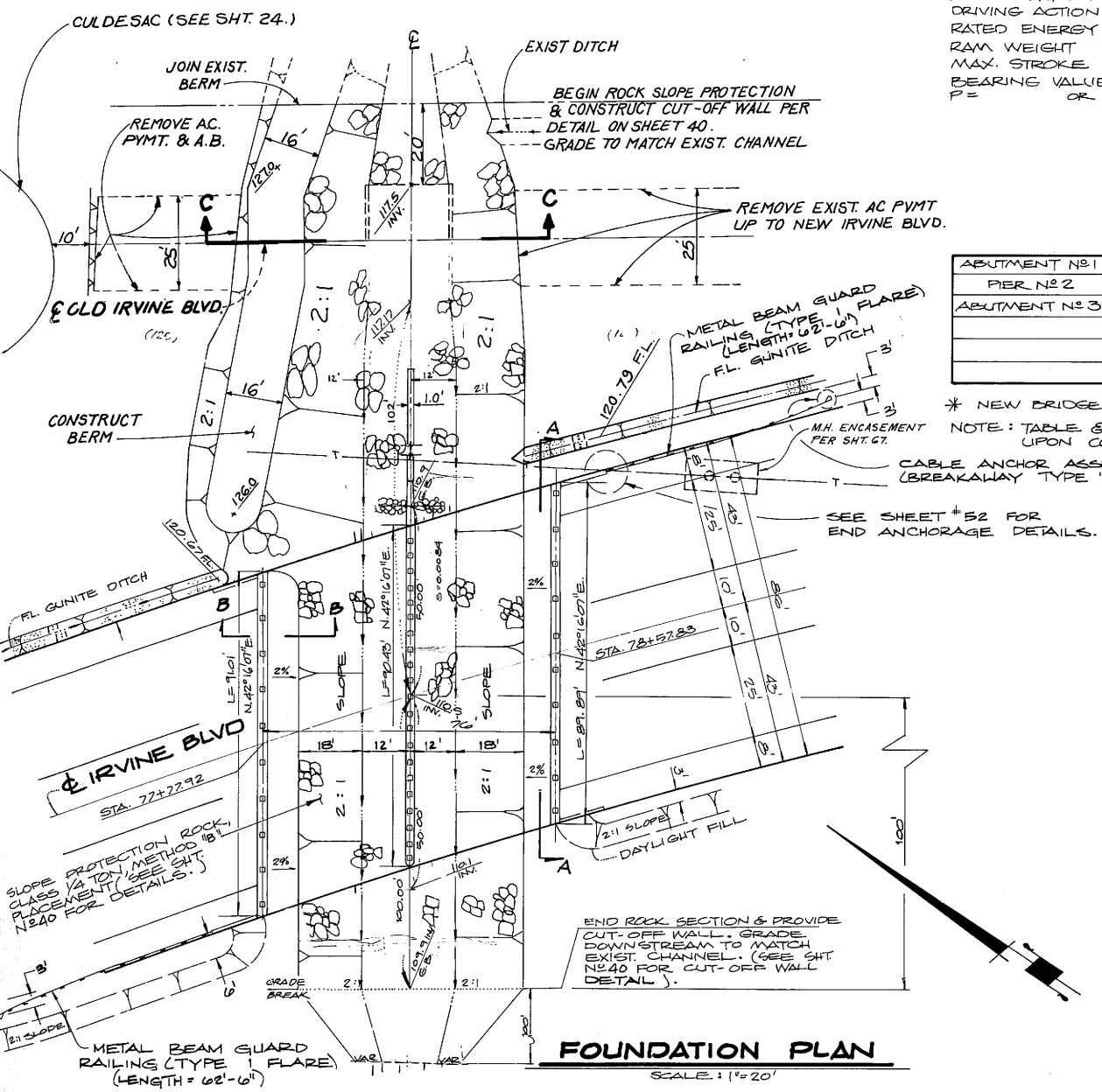
NOTE:
ELEVATIONS SHOWN PERTAIN
TO PILE CUTOFFS ONLY.
ESTIMATED PILE TIP ELEV. = 87.0'

"AS-BUILT" PILE DRIVING DATA

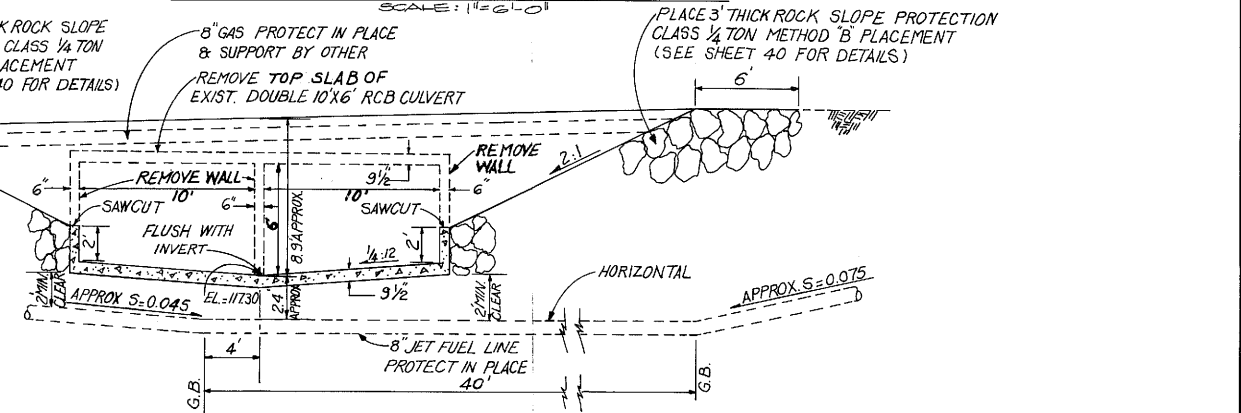
PILE DRIVING MAKE & MODEL
DRIVING ACTION
RATED ENERGY
RAM WEIGHT
MAX. STROKE
BEARING VALUE FORMULA
P =
STD. SPEC. SEC. 49-1.08

	* CUT-OFF ELEV.	* MAX. TIP ELEV.	* MIN. TIP LENGTH	* AVERAGE "AS- BUILT" PILE TIP ELEV.	* AVG. STROKE HEIGHT	* AVG. BLOWS PER FOOT	* AVG. BEARING VALUE (TONS)
ABUTMENT NO 1							
PIER NO 2							
ABUTMENT NO 3							

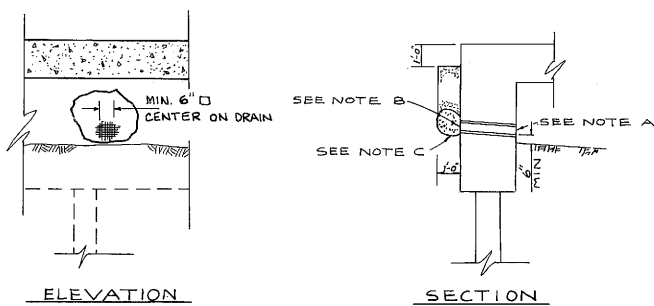
* NEW BRIDGE CONSTRUCTION
NOTE: TABLE & DATA ABOVE FOR USE OF RESIDENT ENGR.
UPON COMPLETION OF CONSTRUCTION.



FOUNDATION PLAN
SCALE: 1" = 20'

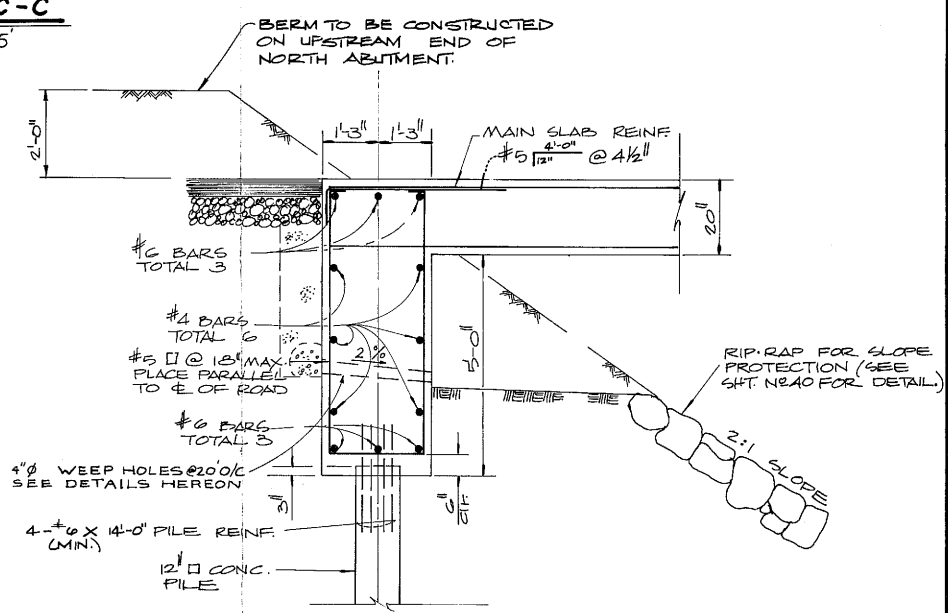


SECTION "C-C"
SCALE: 1" = 5'



WEEP HOLE AND PERVIOUS BACKFILL
N.T.S.

- NOTES:
- 4" Ø DRAINS 20' O.C. EXPOSED WALL DRAINS SHALL BE LOCATED 6" ± ABOVE FINISH GRADE.
 - 6" SQUARE ALUMINUM OR GALVANIZED STEEL WIRE 4" MESH HARDWARE CLOTH (MIN. WIRE DIA 0.03") ANCHORE FIRMLY TO BACKFACE.
 - ONE CUBIC FOOT PERVIOUS BACKFILL MATERIAL IN A BURLAP SACK, SECURELY TIED.
 - PERVIOUS BACKFILL MATERIAL CONTINUOUS BEHIND RETAINING WALL OR ABUTMENT.



SECTION "B-B"
SHOWING TYP. ABUT. DETAIL
SCALE: 1/2" = 1'-0"

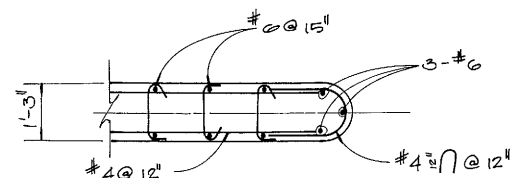
CHECKED BY:

Gene Williams 6-1-83
RCE 2383

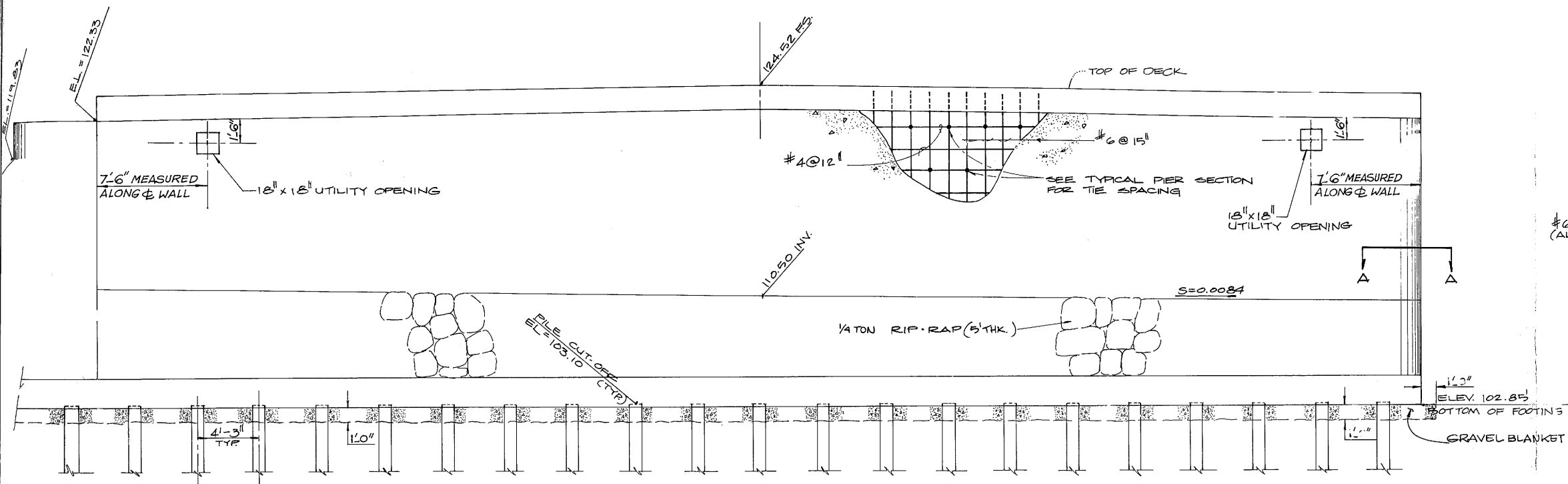
MARK	DATE	DESCRIPTION
		REVISIONS
DESIGNED	DATE	DWG. NO.
DRAWN	CHECKED	AS SHOWN

ORANGE COUNTY
ENVIRONMENTAL MANAGEMENT AGENCY
IRVINE BLVD. BRIDGE OVER
PETERS CANYON WASH
55C-276
**PILE LAYOUT,
ABUTS. &
FOUNDATION PLAN**

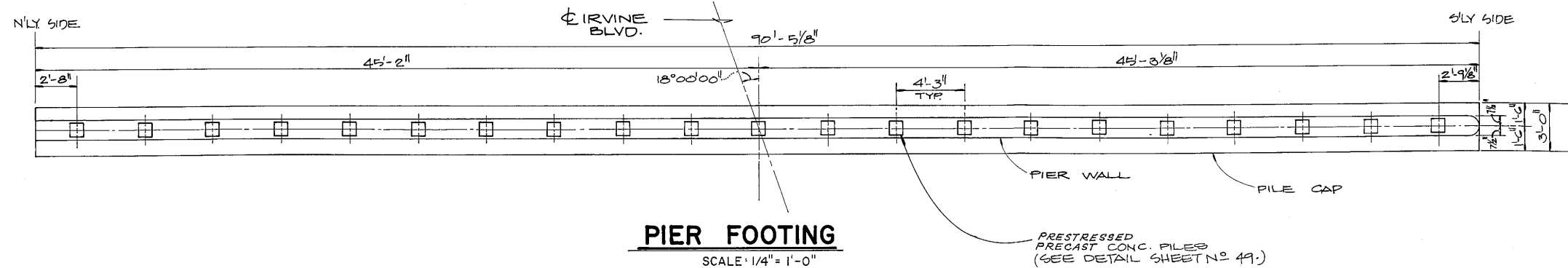
PREPARED UNDER SUPERVISION OF *George A. Gagliardi*
RCE 20927 2-25-83
SCALE DATE DWG. NO.
SHEET 37



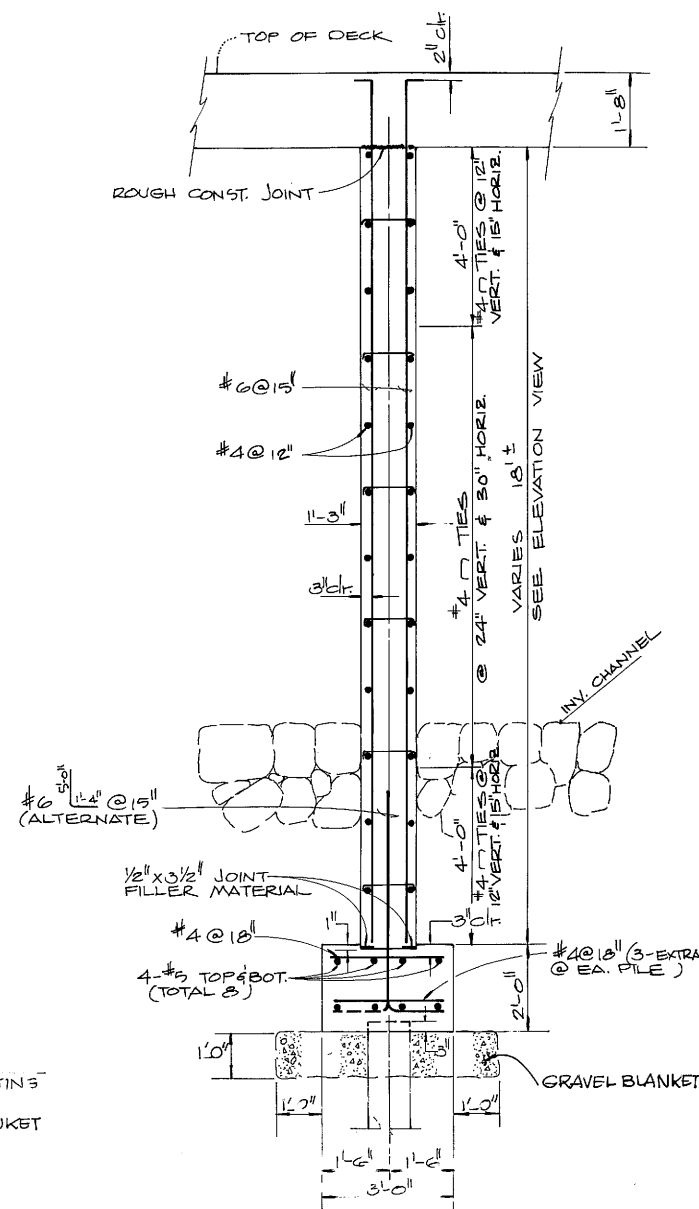
SECTION A-A
SCALE: 1/2" = 1'-0"



TYPICAL PIER ELEVATION
SCALE: 1/4" = 1'-0"



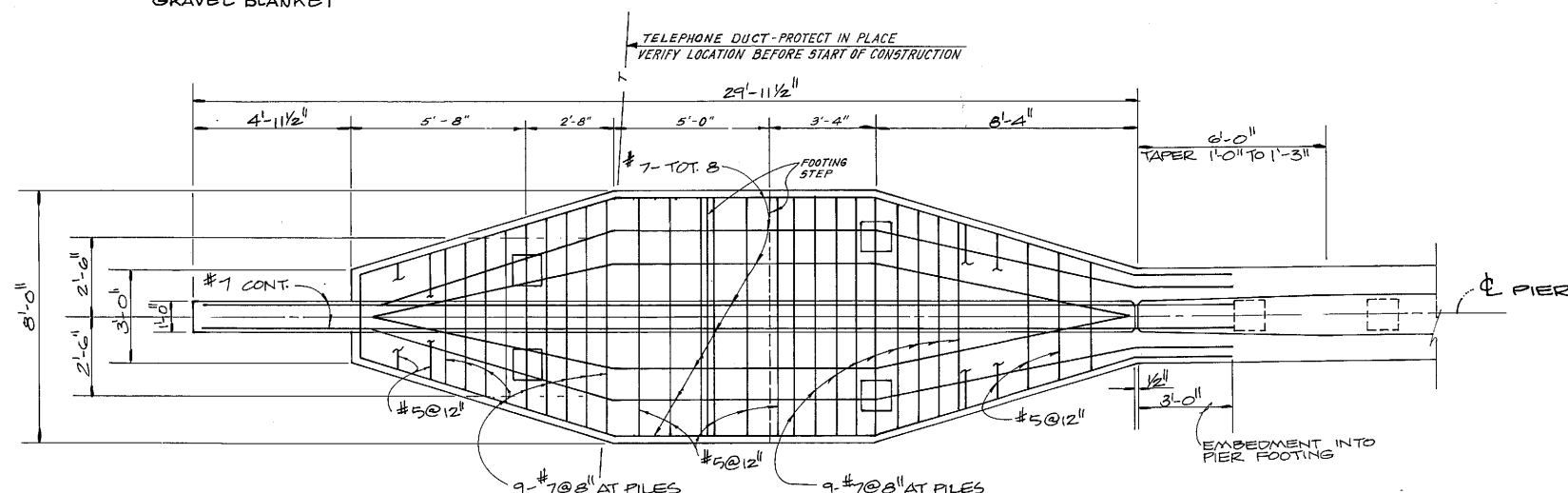
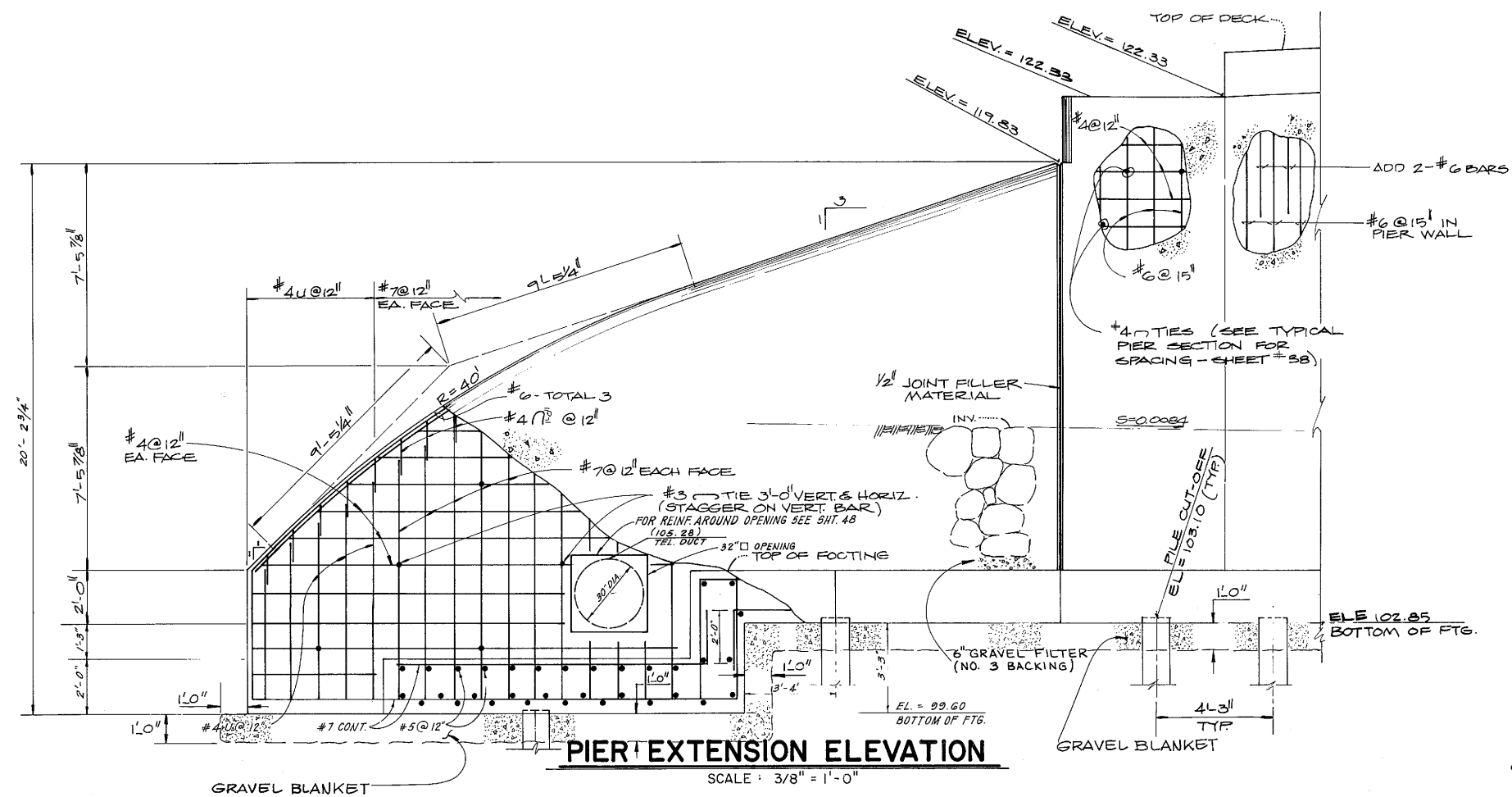
PIER FOOTING
SCALE: 1/4" = 1'-0"



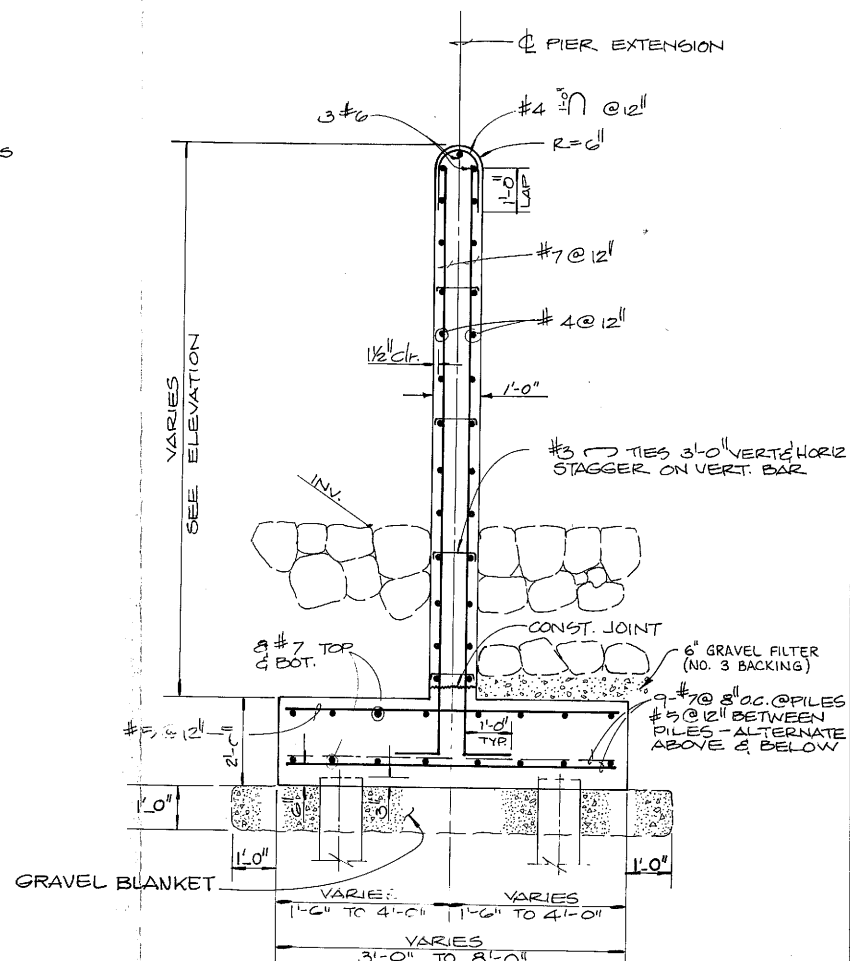
TYPICAL PIER SECTION
SCALE: 1/2" = 1'-0"

1/2 0 1 2
3 inches on original drawing

ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY IRVINE BLVD. BRIDGE OVER PETERS CYN. WASH 55C-246			
PIER WALL DETAIL			
MARK	DATE	DESCRIPTION	PREPARED UNDER SUPERVISION OF
DESIGNED	DATE	SCALE	DATE
DRAWN	CHECKED	AS SHOWN	DWG. NO.
CHECKED BY: <i>Chen</i> RCE 25831			SHEET 38



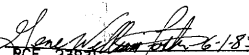
NOTE:
BOTTOM REINF. SHOWN SEE PIER EXTENSION
SECTION THIS SHEET FOR TOP REINF.

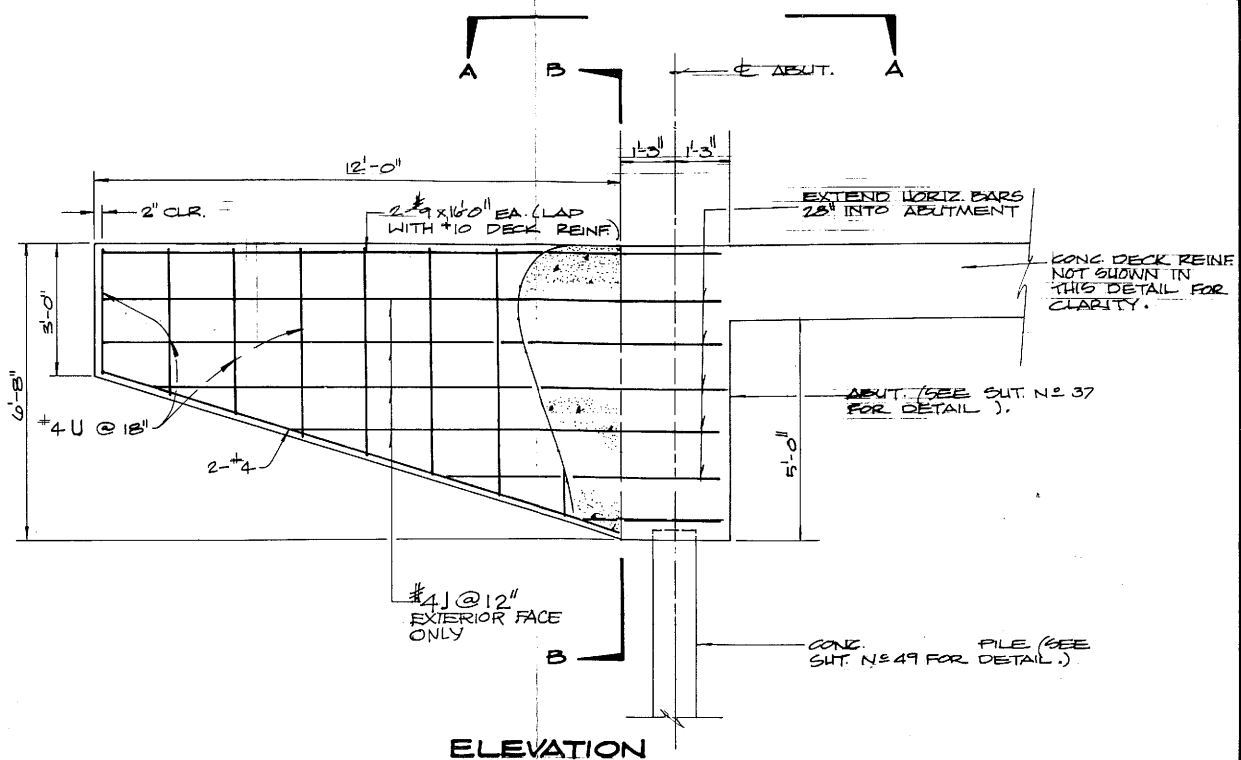
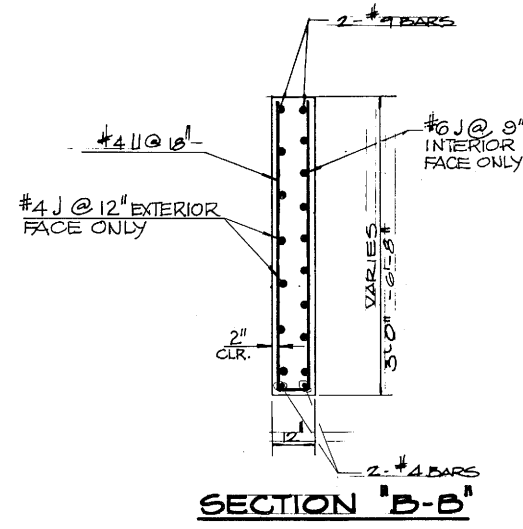
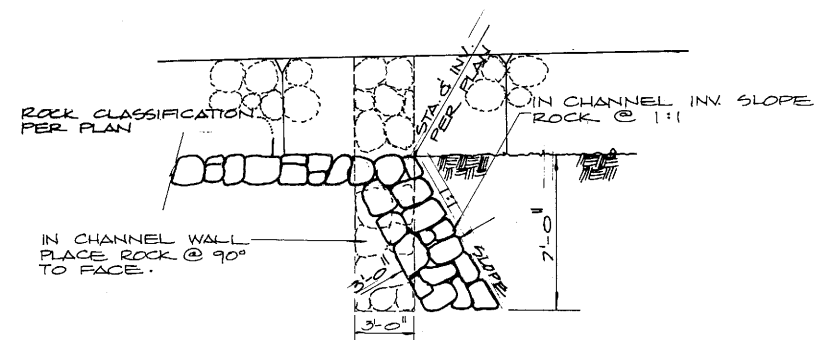
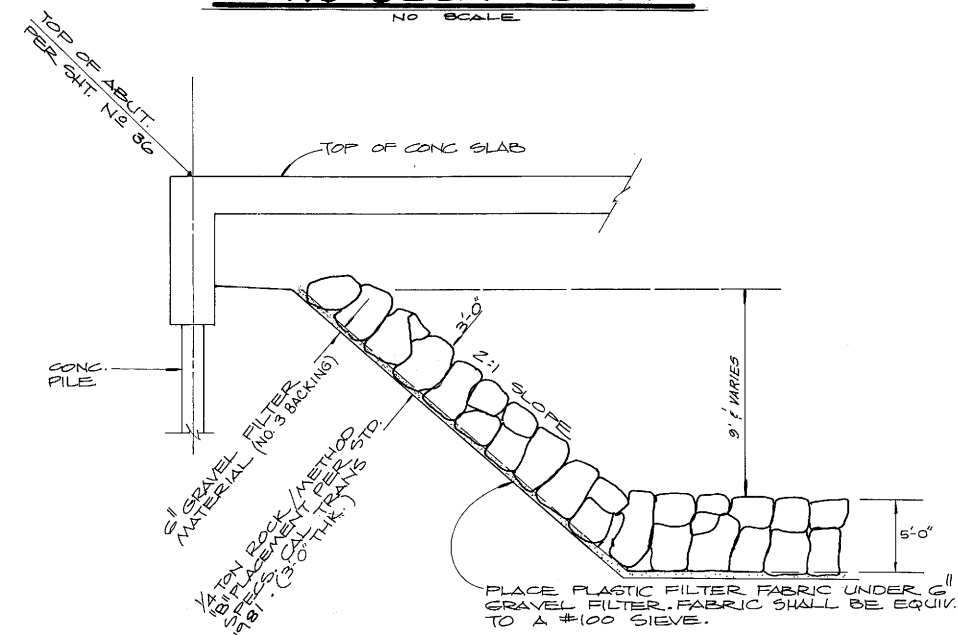
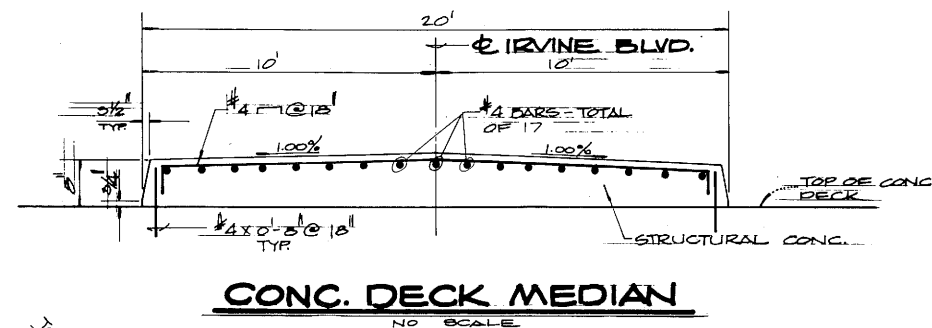


PIER EXTENSION SECTION

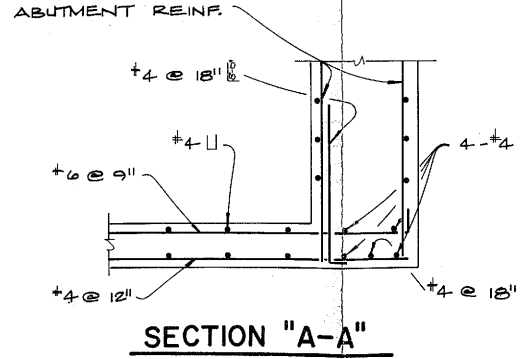
SCALE : $1/2'' = 1'-0''$



CHECKED BY:  RCE 23831	MARKDATEDESCRIPTION REVISIONS DESIGNED DRAWN CHECKED	ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY IRVINE BLVD. BRIDGE OVER PETERS CYN. WASH 55C-246 PIER EXTENSION DETAILS			SHEET 39	
		PREPARED UNDER SUPERVISION OF RCE 20927 Henry A. Zaglio 2-25-83 DATE				
		SCALE AS SHOWN		DATE		DWG. NO.



NOTE:
1) BARRIER RAILING TYPE 117 NOT SHOWN IN THIS DETAIL. SEE SHT. N° 52.
2) FOR CORNER DETAIL SEE SHT. N° 51.



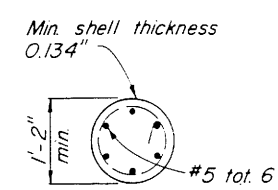
1 1/2 0 1 2
3 inches on original drawing

CHECKED BY:
[Signature]
RCE 23831

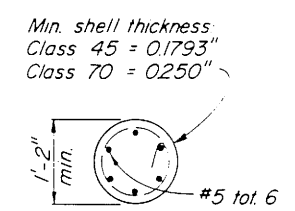
ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY			
IRVINE BLVD. BRIDGE OVER PETERS CANYON WASH 550-246			
MISC. DETAILS			
MARK	DATE	DESCRIPTION	PREPARED UNDER
DESIGNED	SCALE	DATE	SUPERVISION OF
DRAWN	CHECKED	AS SHOWN	DATE
SHEET			40

**CONC.
PILE DETAILS**

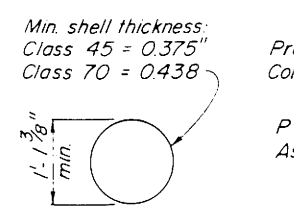
MARK	DATE	DESCRIPTION	PREPARED UNDER SUPERVISION OF	DATE	SHEET
DESIGNED					49
DRAWN					
CHECKED					
SCALE	AS SHOWN	DATE	DWG. NO.		



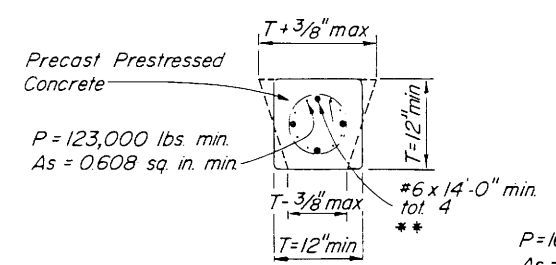
SECTION U-U
(Mandrel driven)



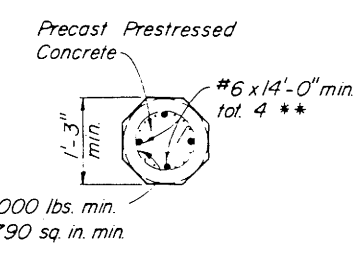
SECTION V-V



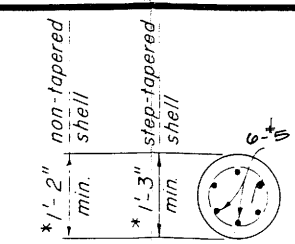
SECTION W-W



SECTION X-X



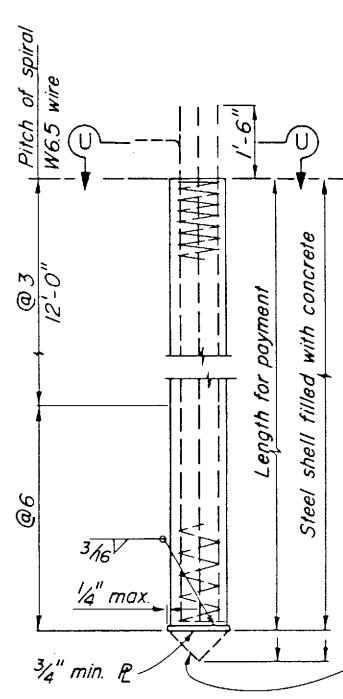
SECTION Y-Y



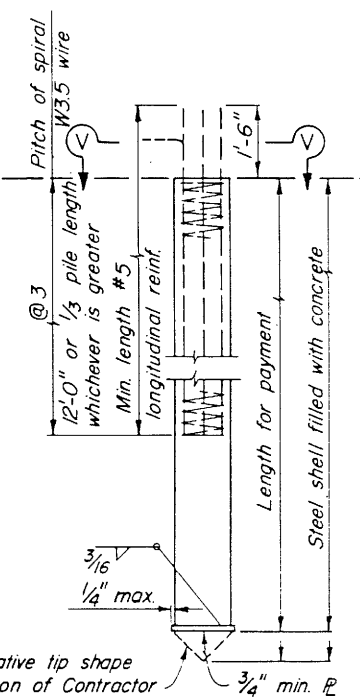
SECTION Z-Z

*Measured out to out of corrugations.

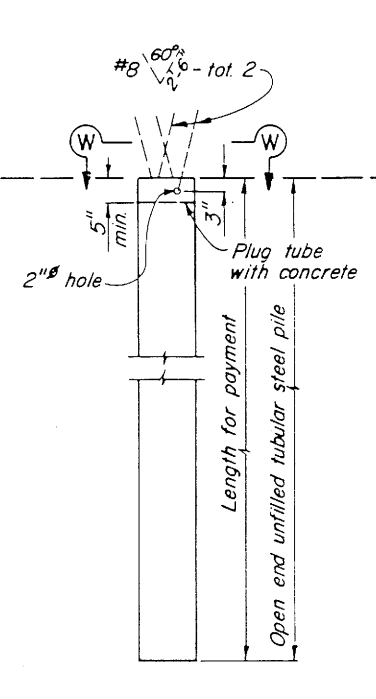
#9 with standard 90° hook, total 2 (bundled) grouted in 3" dia. hole cast or drilled into center of pile



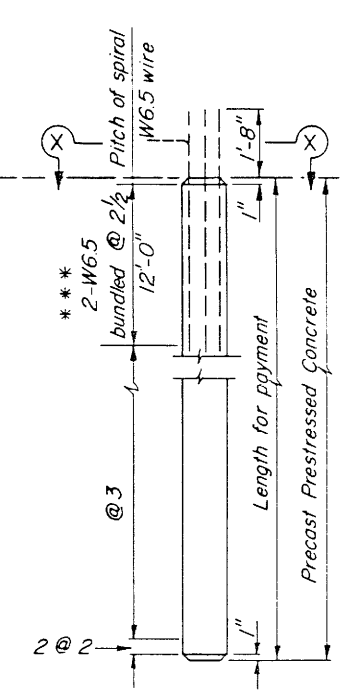
ALTERNATIVE "U"



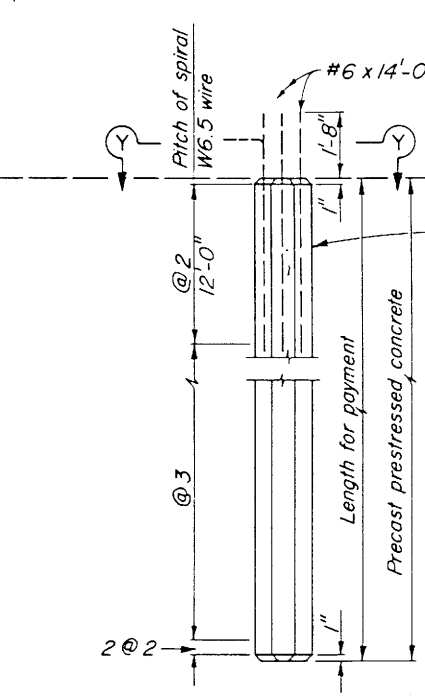
ALTERNATIVE "V"



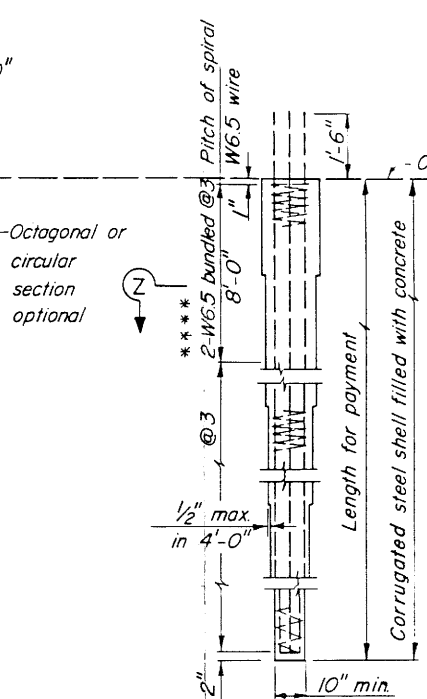
ALTERNATIVE "W"



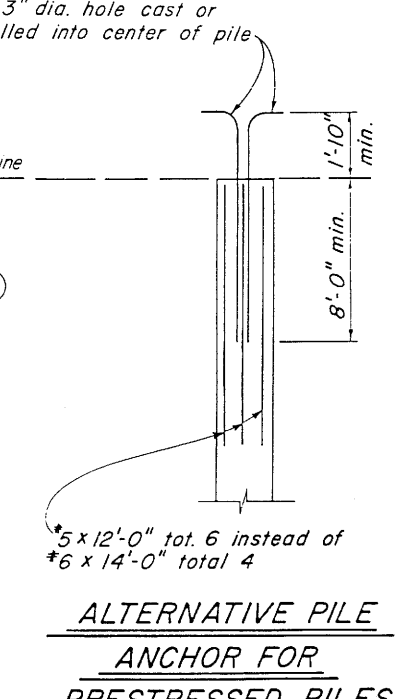
ALTERNATIVE "X"



ALTERNATIVE "Y"



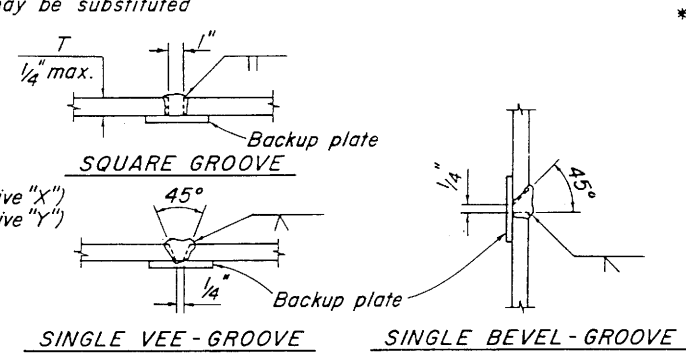
ALTERNATIVE "Z"



ALTERNATIVE PILE ANCHOR FOR PRESTRESSED PILES

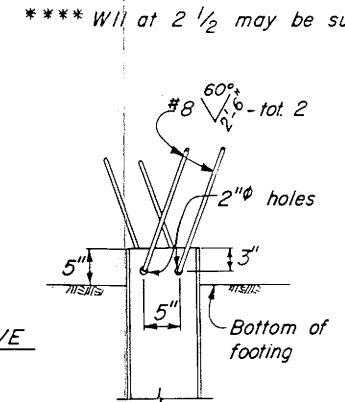
Notes:
Details are the same for both Class 45 and Class 70 piles unless noted otherwise.
A 10" minimum diameter pipe extension (thickness = 0.1798" min. for Class 45 and 0.250" min. for Class 70) may be used at the tip of Alternative "Z" when taper is 30' or more in length.
Pile reinforcement extending into a footing shall be hooked as required to provide clearance to top of footing. Piles shall be extended only in accordance with details shown elsewhere in these plans.
Lapped splices in spiral pile reinforcement shall be lapped 80 wire diameters minimum. Spiral pile reinforcement at splices and at ends shall be terminated by a 135° hook with 6" tail hooked around a longitudinal bar or strand.
2" clearance to spiral reinforcement shall be maintained if section used is larger than the minimum section shown.

PRECAST PRESTRESSED PILES:
P = Prestressing Force If section used is larger than the min. section shown, then "P" shall provide 860 psi min.
@ anchorage
As = Minimum area of prestressing steel required.
Concrete Strength: f'c @ 28 days = 6,000 psi (Alternative "X")
5,000 psi (Alternative "Y")
f'ci @ transfer = 4,000 psi
DESIGN LOADING
Class 45 = 45 tons
Class 70 = 70 tons
NOTE: This sheet supersedes Sheet No. B2-1, page 86 and Sheet No. B2-5, page 88 of the Standard Plans dated January, 1981
Supersedes Sheet RSP B2-5 dated April, 1982



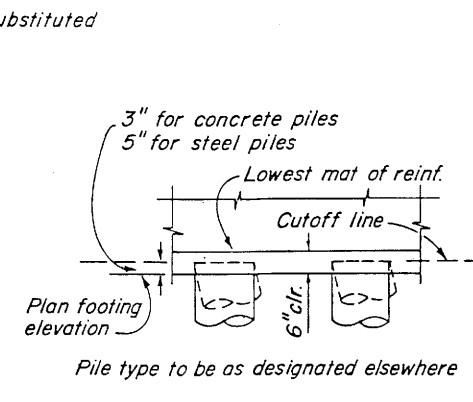
PILE WELDING DETAIL - BUTT JOINTS

Notes:
1. Single Vee-Groove and Square Groove permitted for all positions.
2. Single Bevel-Groove permitted for horizontal joints only.



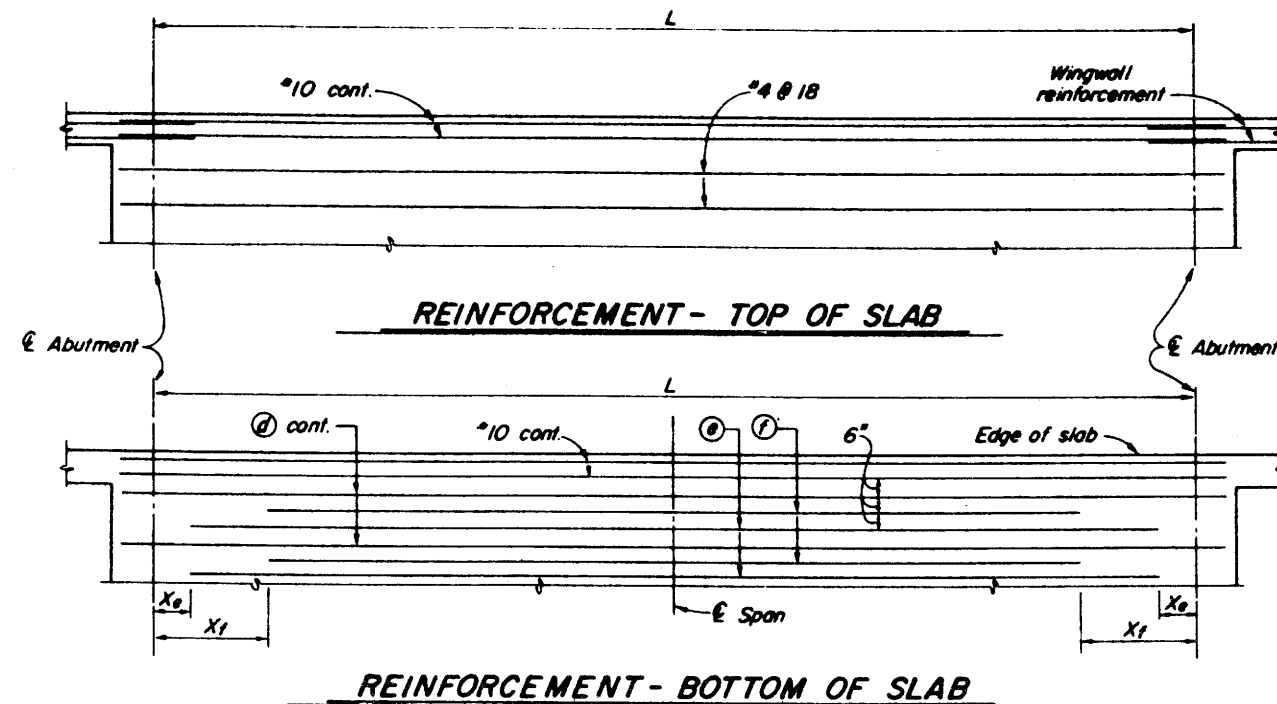
STEEL PILE ANCHOR

Steel piles, except for "Alternative W" to be used only when shown on plans or permitted by the Special Provisions.



PILE EMBEDMENT

Pile type to be as designated elsewhere



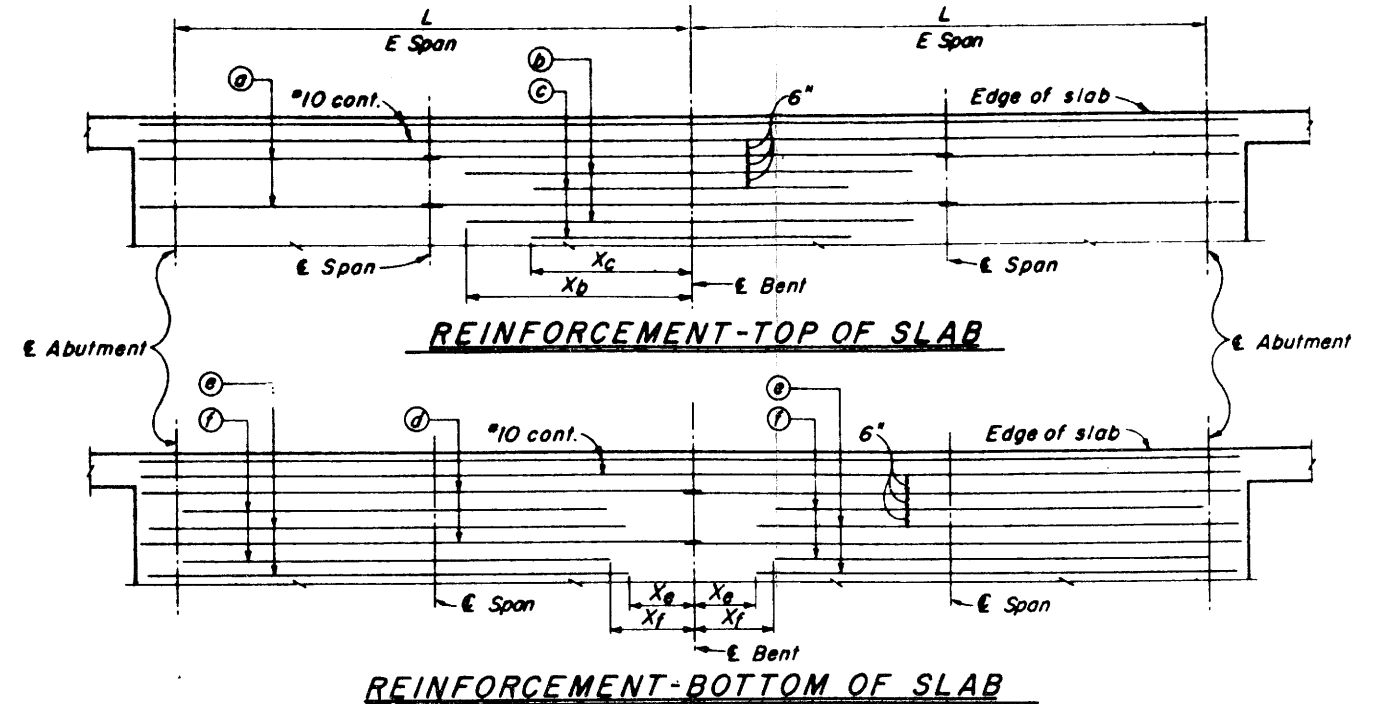
L = Length of Span			16'	18'	20'	22'	24'	26'	28'	30'	32'	34'	36'	38'	40'	42'	44'		
REINF.	Bottom of Slab	⊙ bars	Size	#8	#8	#9	#9	#9	#9	#10	#10	#10	#10	#10	#11	#11	#11	#11	
		Length	Continuous																
		⊙ bars	Size	#8	#8	#8	#8	#9	#9	#9	#9	#10	#10	#10	#10	#11	#11	#11	#11
		Length	15'-0"	17'-0"	18'-0"	20'-0"	22'-0"	24'-0"	24'-0"	26'-0"	28'-0"	30'-0"	31'-0"	34'-0"	36'-0"	37'-0"	40'-0"		
		X _e	0'-6"	0'-6"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-6"	2'-0"	2'-6"	2'-0"		
		⊙ bars	Size	#7	#7	#8	#8	#8	#9	#8	#9	#8	#9	#10	#10	#10	#11	#11	
		Length	11'-0"	12'-0"	12'-0"	14'-0"	15'-0"	17'-0"	17'-0"	19'-0"	19'-0"	22'-0"	22'-0"	25'-0"	25'-0"	27'-0"	29'-0"		
		X ₁	2'-6"	3'-0"	4'-0"	4'-0"	4'-6"	4'-6"	5'-6"	5'-6"	6'-6"	6'-0"	7'-0"	6'-6"	7'-6"	7'-6"	7'-6"		
		T = Thickness of slab ⊕			13"	14"	15"	16"	18"	19"	20"	21"	22"	23"	24"	25"	26"	28"	31"
		Approx. Quantities per ft. of width		Conc. ft. ³	18.3	22.1	26.3	30.6	37.5	42.8	48.6	54.4	60.5	67.4	74.3	81.5	89.3	100.6	116.5
		Steel lbs.	110	120	145	165	185	210	230	260	280	315	340	390	450	475	505		
Deflection at Midspan Δ			01'	02'	03'	03'	04'	04'	05'	06'	07'	09'	10'	11'	13'	13'	13'		

⊕ Add 1/2" for "Marine Environment" & adjust concrete quantity.

SLAB DETAILS - SINGLE SPAN

CENTRAL IRVINE CHANNEL BRIDGE, L = 36'

LIVE LOADING: HS 20-44 & ALT.



L = Length of Span		16'	18'	20'	22'	24'	26'	28'	30'	32'	34'	36'	38'	40'	42'	44'		
REINFORCEMENT	Top of Slab	Ⓐ bars	Size	#7	#8	#9	#9	#10	#10	#10	#10	#11	#11	#11	#10	#10	#11	
		Ⓐ bars	Length	34'-0"	38'-0"	42'-0"	46'-0"	50'-0"	54'-0"	58'-0"	68'-0"	73'-0"	77'-0"	81'-0"	85'-0"	89'-0"	92'-0"	97'-0"
		Ⓐ bars	Size	#7	#7	#8	#7	#8	#8	#8	#8	#8	#9	#7	#8	#11	#11	#11
		Ⓐ bars	Length	12'-0"	11'-0"	12'-0"	11'-0"	12'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	15'-0"	16'-0"	21'-0"	22'-0"	21'-0"
		Ⓐ bars	X _b	6'-0"	5'-6"	6'-0"	5'-6"	6'-0"	6'-6"	6'-6"	6'-6"	6'-6"	6'-6"	7'-6"	8'-0"	10'-6"	11'-0"	10'-6"
		Ⓐ bars	Size	#6	#6	#7	#7	#8	#9	#9	#9	#9	#8	#8	#11	#11	#11	#11
	Bottom of Slab	Ⓒ bars	Length	5'-0"	5'-0"	5'-0"	5'-0"	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"	13'-0"	13'-0"	12'-0"	12'-0"	12'-0"
		Ⓒ bars	X _c	2'-6"	2'-6"	2'-6"	2'-6"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	6'-6"	6'-6"	6'-0"	6'-0"	6'-0"
		Ⓓ bars	Size	#7	#8	#9	#9	#10	#10	#10	#10	#11	#11	#11	#11	#11	#11	#11
		Ⓓ bars	Length	34'-0"	38'-0"	42'-0"	46'-0"	50'-0"	54'-0"	58'-0"	68'-0"	73'-0"	77'-0"	81'-0"	85'-0"	89'-0"	93'-0"	97'-0"
		Ⓓ bars	Size	#8	#7	#8	#8	#8	#9	#9	#9	#9	#8	#9	#9	#9	#9	#9
		Ⓓ bars	Length	15'-0"	14'-0"	15'-0"	16'-0"	17'-0"	19'-0"	20'-0"	21'-0"	21'-0"	21'-0"	21'-0"	24'-0"	24'-0"	25'-0"	30'-0"
		Ⓓ bars	X _e	1'-0"	4'-0"	4'-6"	5'-0"	6'-0"	6'-0"	7'-0"	7'-6"	8'-0"	10'-0"	9'-6"	11'-0"	11'-6"	12'-0"	13'-0"
Ⓓ bars		Size	#7	#7	#7	#7	#8	#8	#8	#8	#8	#7	#7	#7	#8	#8	#9	
Ⓓ bars		Length	10'-0"	11'-0"	10'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	16'-0"	15'-0"	16'-0"	16'-0"	18'-0"	19'-0"	22'-0"	
Ⓓ bars		X _f	4'-6"	5'-6"	7'-0"	7'-0"	8'-0"	8'-6"	9'-6"	10'-0"	11'-6"	12'-6"	13'-6"	14'-0"	14'-6"	14'-0"	15'-0"	
T = Thickness of Slab Ⓓ			10 1/2"	11"	11 1/2"	12 1/2"	13 1/2"	14"	15"	16"	17"	18"	18 1/2"	19"	20"	21"		
Approx. Quantities per ft. of width		Conc. ft. ³	14.9	17.4	20.2	24.0	28.1	31.5	36.2	41.3	46.7	52.5	57.0	61.7	68.3	73.3		
		Steel lbs.	140	160	200	225	275	310	335	340	400	430	470	520	525	570		
Deflection at Midspan Δ			00'	02'	02'	03'	04'	04'	05'	05'	06'	06'	07'	08'	09'	10'		

* Length includes allowance for one splice.

⊕ Add 1/2" for "Marine Environment" & adjust concrete quantity.

SLAB DETAILS - 2 SPANS

PETER'S CYN. BRIDGE, L = 40'
RATTLESNAKE CYN. BRIDGE, L = 34'

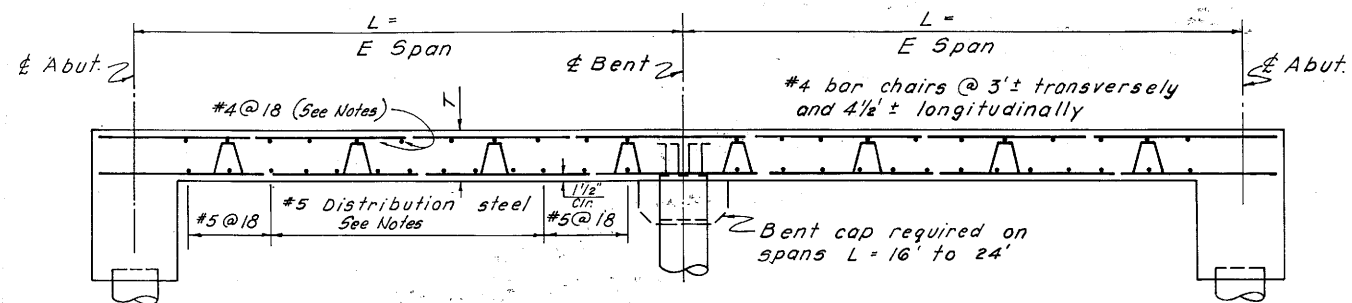
LIVE LOADING: HS 20-44 & ALT.

1 1/2 0 1 2
3 inches on original drawing

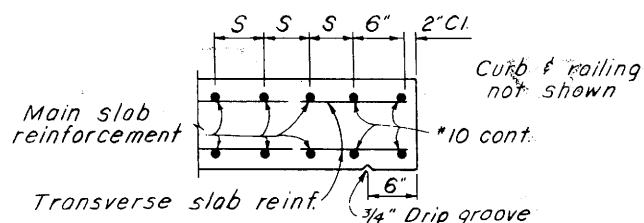
CHECKED BY:

Eric Williams Sub. 6-1-83
RCE 23831

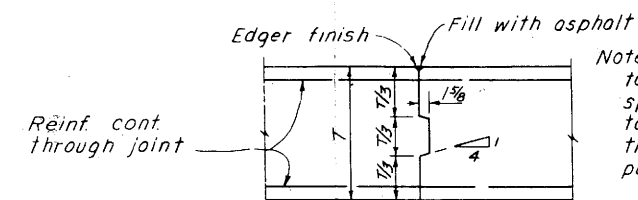
MARK	DATE	DESCRIPTION	PREPARED UNDER SUPERVISION OF	DATE	SHEET
			Orange County Environmental Management Agency		50
			IRVINE BLVD. BRIDGES OVER PETER'S CYN. WASH RATTLESNAKE CYN. WASH CENTRAL IRVINE CHANNEL		
			SLAB DETAILS		
			DESIGNED	SCALE	DATE
			DRAWN	CHECKED	AS SHOWN



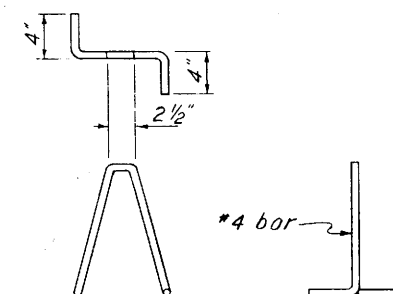
NOTES: Splices in top main bars to be 35 dia. and located near center of span.
 Splices in bottom main bars to be 20 dia. and located near bent.
 Spacing of #4 @ 18 is measured normal to bars.
 Spacing of #5 bars in bottom of slab is measured along roadway. For spacing in center half of span see table.
 Place all transverse bars parallel to bent.



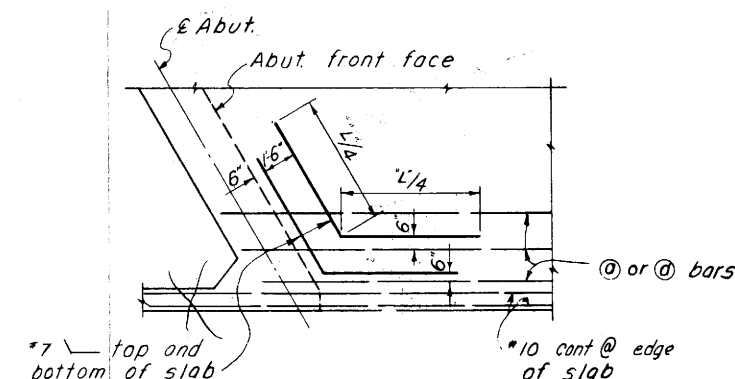
EDGE OF SLAB DETAIL



LONGITUDINAL OR TRANSVERSE SLAB CONSTRUCTION JOINT



BAR CHAIR DETAIL



OBTUSE CORNER DETAIL

1 1/2 0 1 2
 3 inches on original drawing

CHECKED BY:

DESIGNED BY: RCE 23831

MARK DATE DESCRIPTION
 REVISIONS
 DESIGNED
 DRAWN

ORANGE COUNTY
 ENVIRONMENTAL MANAGEMENT AGENCY
 IRVINE BLVD. BRIDGES OVER
 PETERS CANYON WASH
 RATTLESNAKE CREEK
 CENTRAL IRVINE CHANNEL

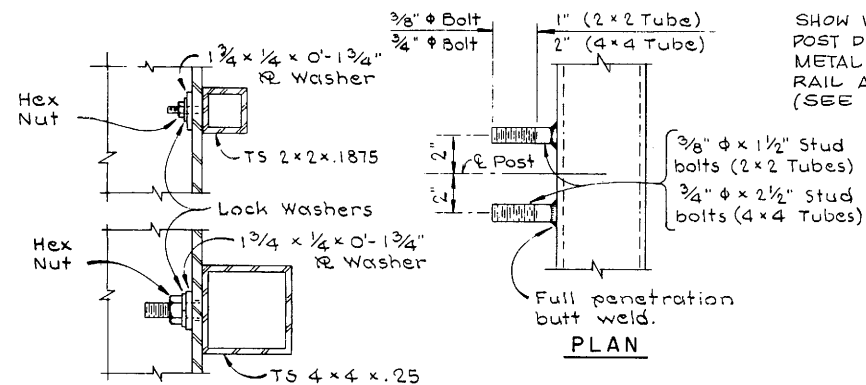
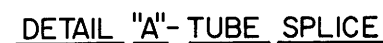
SLAB DETAILS

PREPARED UNDER SUPERVISION OF: Larry A. Bagley
 2-25-83 DATE
 SCALE DATE DWG. NO.
 AS SHOWN

SHEET
 51

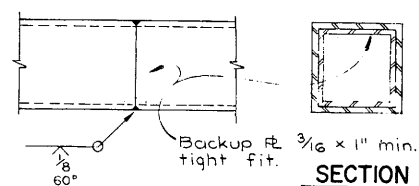


DETAIL "X"

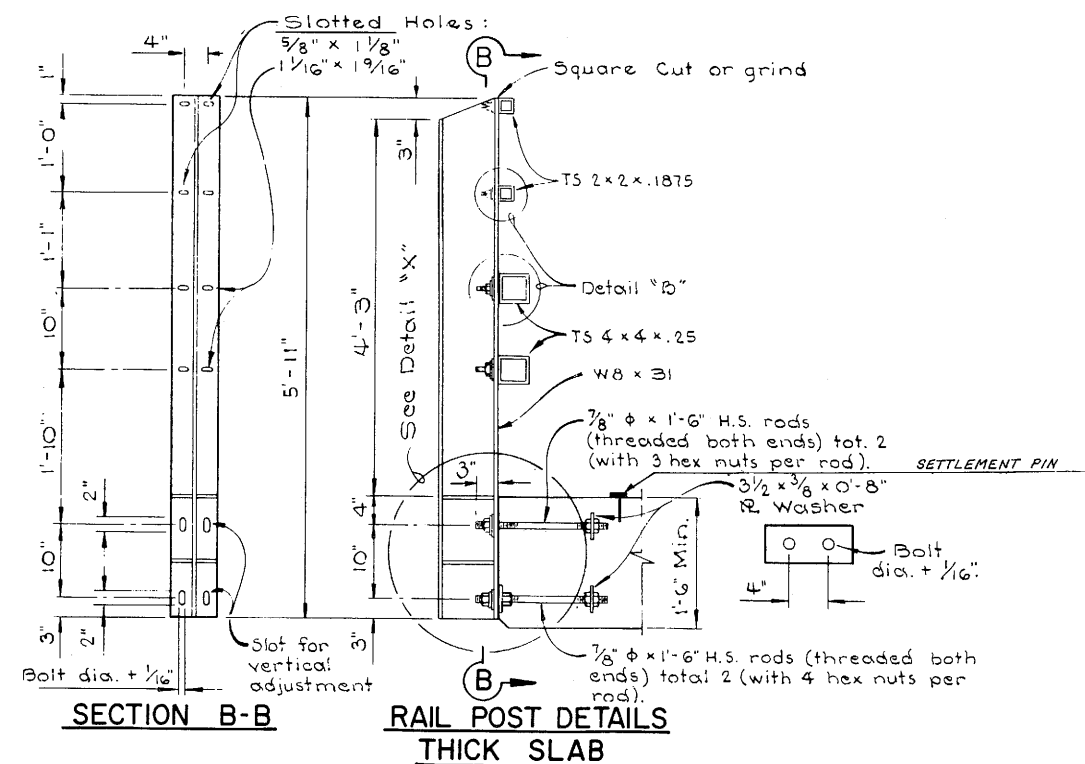


SECTION

DETAIL "B"



SHOP FABRICATION- WELDED TUBE SPLICE



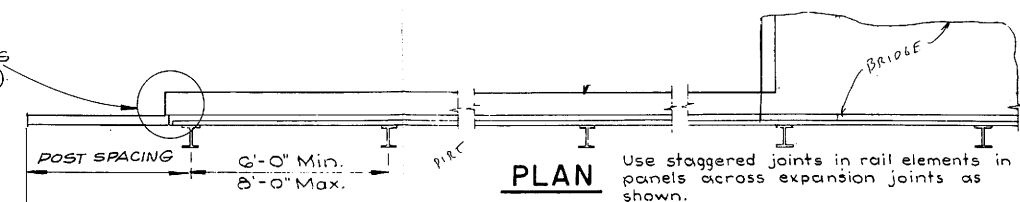
SECTION B-B

RAIL POST DETAILS
THICK SLAB

NOTES :

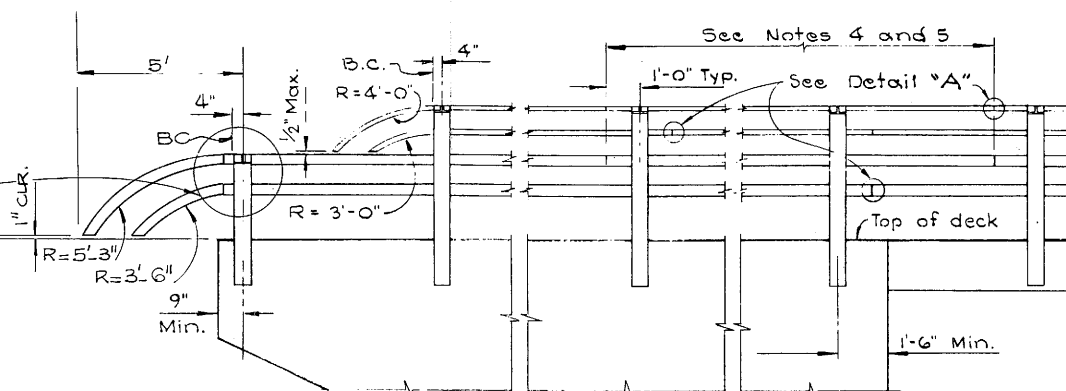
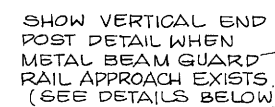
1. Posts shall be vertical.
2. Tubing shall be shop bent to fit horizontal curve when curve radius is less than 950'.
3. Tubing shall be parallel to vertical alignment.
4. Tubing shall be continuous over not less than 3 intermediate posts, with a minimum length of 3 panels except as noted.
5. No more than one tube splice per panel is permitted, except as noted.
6. Space posts to provide 1'-6" min clear between expansion joints and G.C. post.
7. Rail joints in top and bottom tubes at deck expansion joints shall provide allowance for movement equal to width of deck joint with corresponding increase in length of sleeve.
8. Railing on bridge wingwalls to be placed after walls are backfilled.
9. 3/4" stud bolt nuts shall be torqued to 175 ft lbs, 3/8" stud bolt nuts shall be wrench tight.
10. Anchor bolt nuts shall be wrench tight.
11. Galvanize rail assembly after fabrication.
12. Designed by AASHTO dated 1973 and Interim Specifications dated 1974, 1975 and 1976.
13. Design height of rail is based on a future overlay of 3 inches maximum.

SHOW VERTICAL END
POST DETAIL WHEN
METAL BEAM GUARD
RAIL APPROACH EXISTS
(SEE DETAILS BELOW).

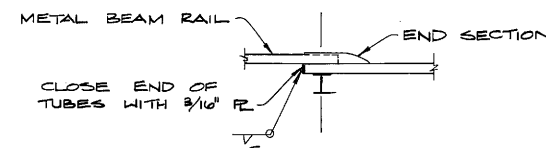


PLAN

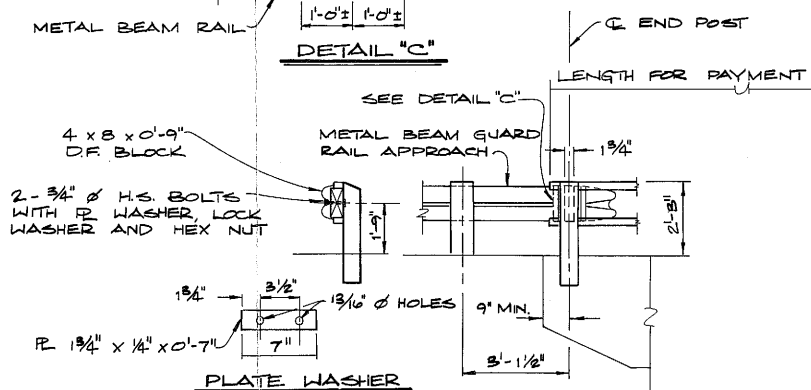
Use staggered joints in rail elements in panels across expansion joints as shown.



RAIL ELEVATION



8 1/2" 1-1/2" 2'-0" END SECTION MAY BE CUT FROM ALTERNATIVE TERMINAL SECTION OR FABRICATED



VERTICAL END POST DETAIL
AT METAL BEAM APPROACH

1 1/2 0 1
3 inches on original drawing

ORANGE COUNTY
ENVIRONMENTAL MANAGEMENT AGENCY
IRVINE BLVD. BRIDGES OVER
PETER'S CYN. WASH
RATTLESNAKE CYN. WASH
CENTRAL IRVINE CHANNEL

BRIDGE RAILING DETAILS

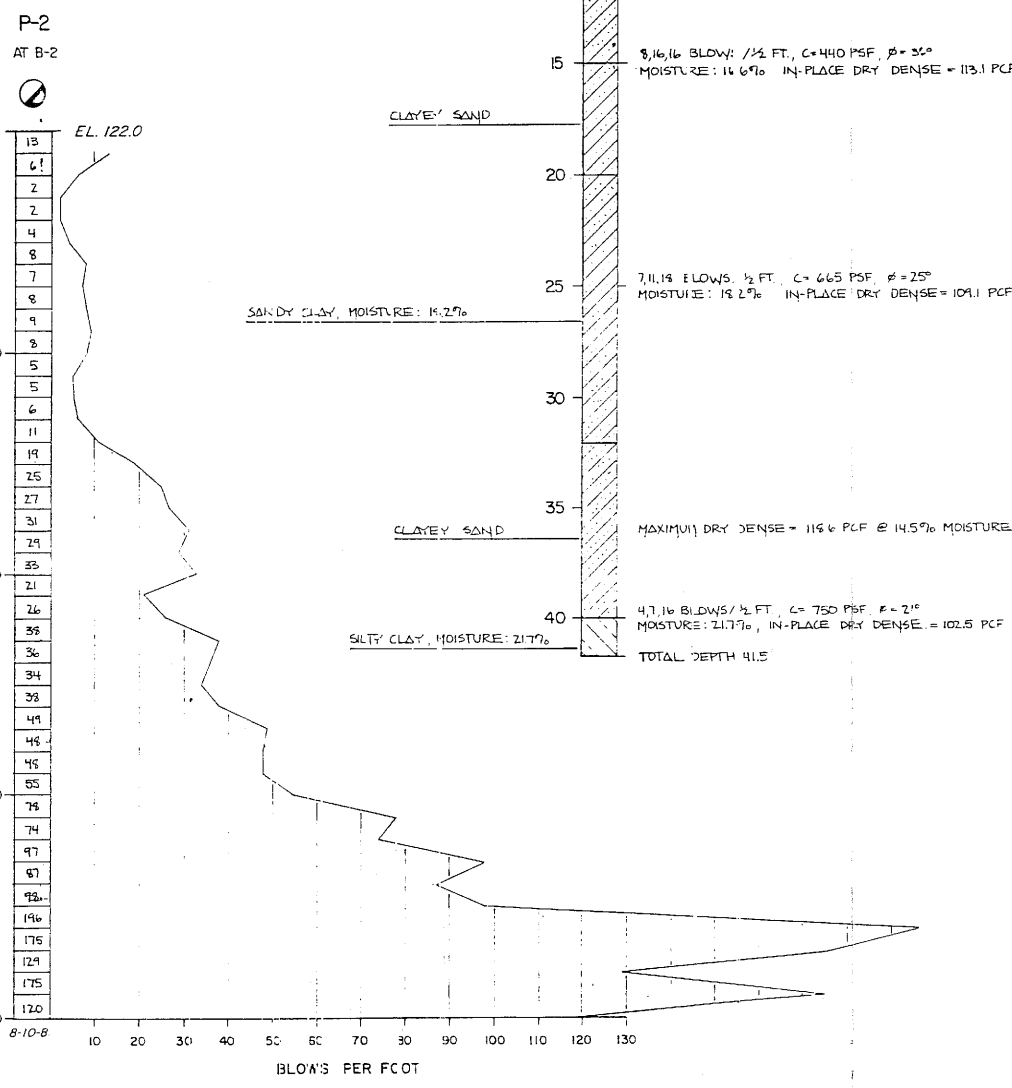
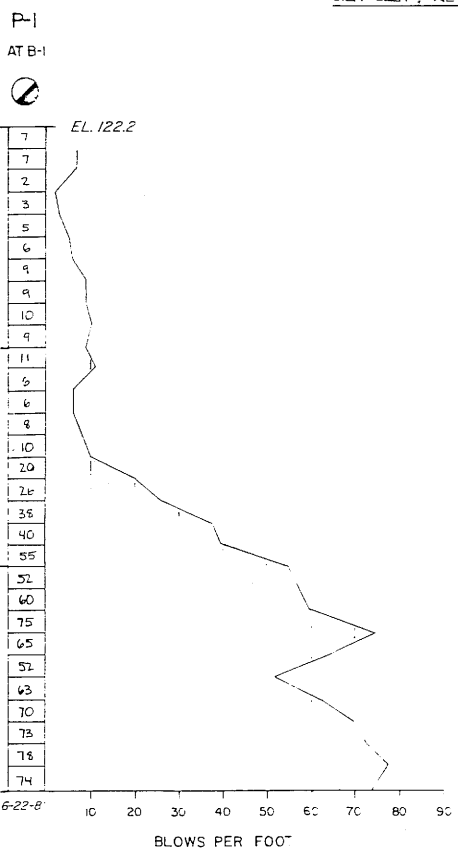
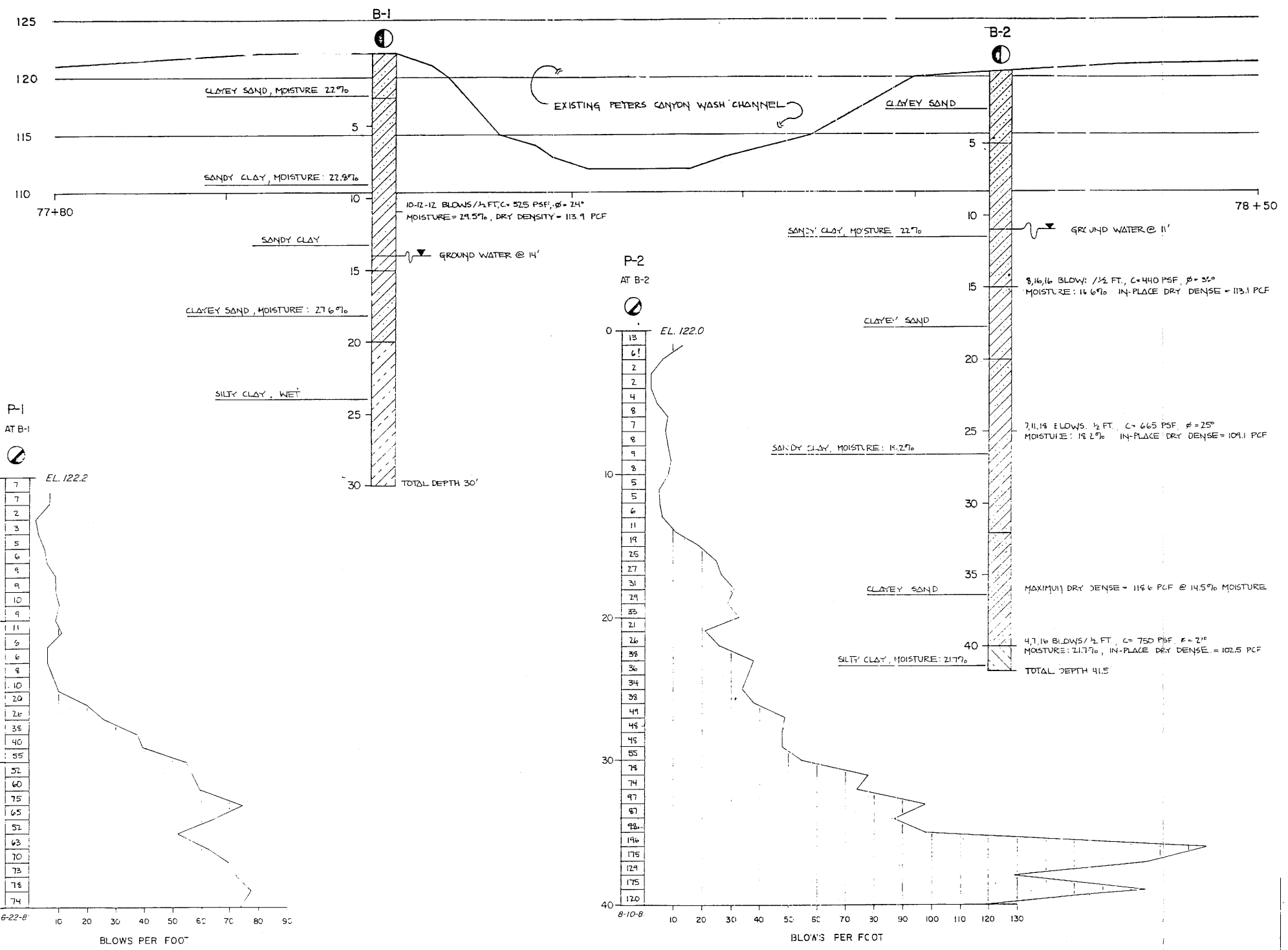
CHECKED BY:

Gene W.
RCF 2383

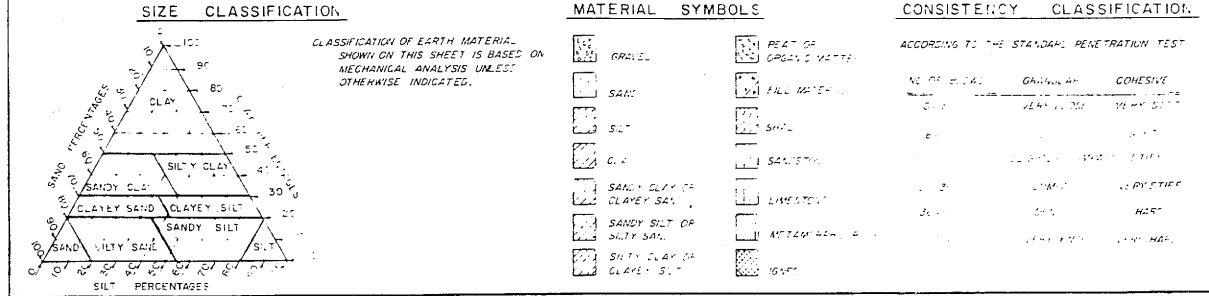
MARK	DATE	DESCRIPTION
REVISIONS		
1-88	DESIGNED	
DRAMIN	CHECKED	1-88

PREPARED UNDER SUPERVISION OF <u>Louise A. Baglio</u>		DATE <u>2-25-83</u>
SCALE AS SHOWN	OWG. NO.	

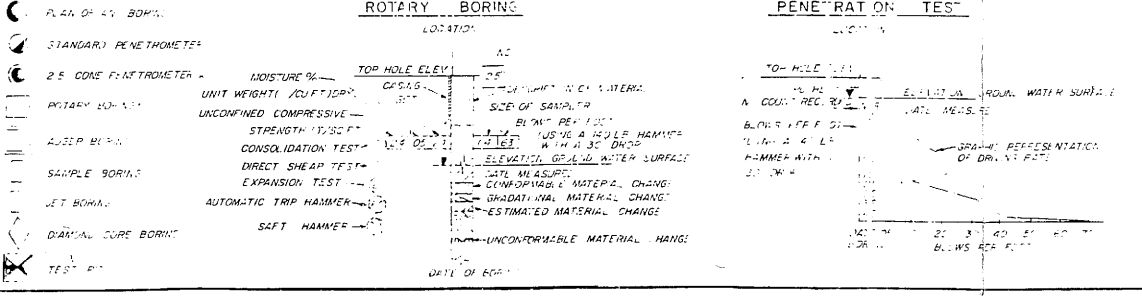
SHEET
52



LEGEND OF EARTH MATERIALS



LEGEND OF BORING OPERATIONS

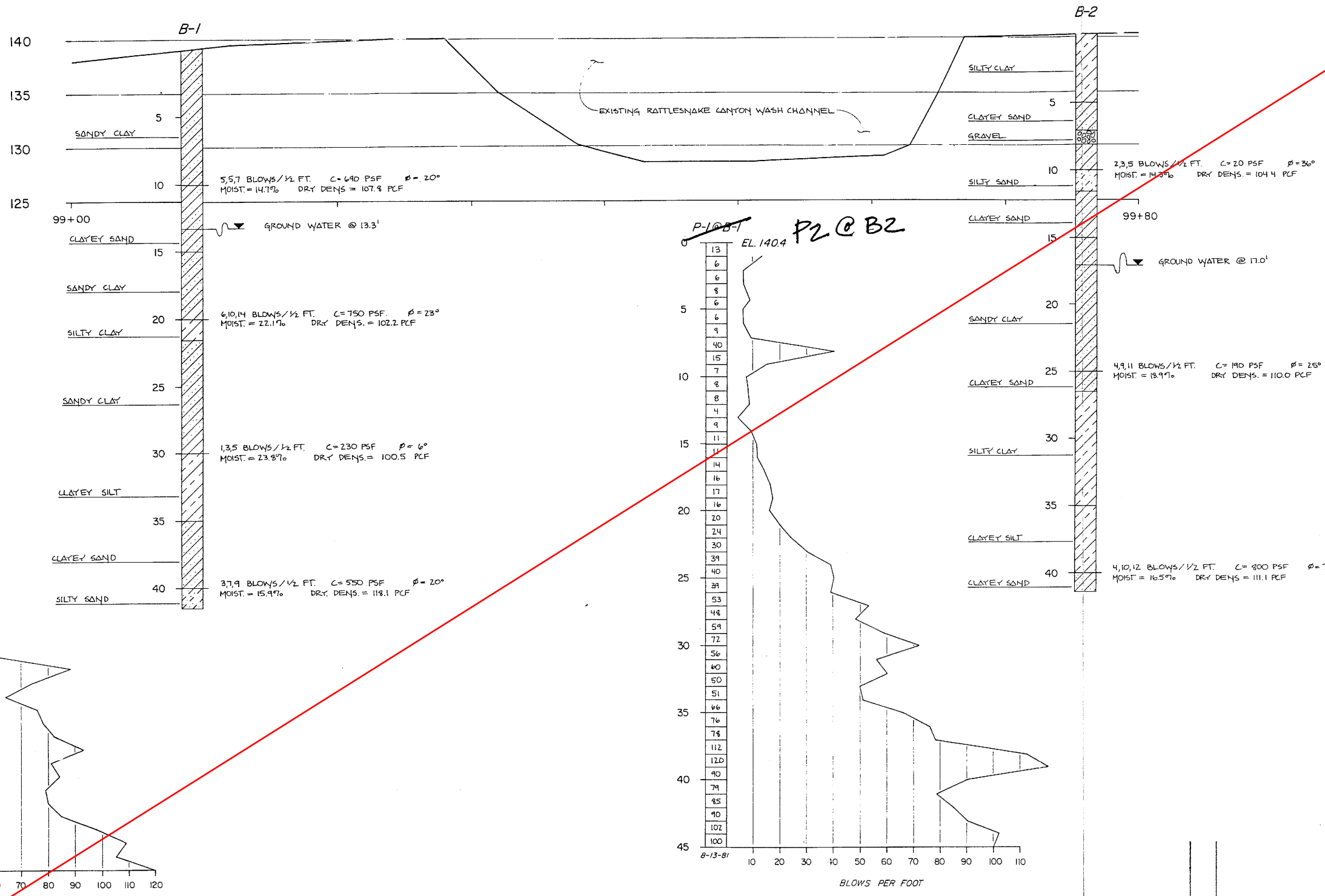


COUNTY OF ORANGE
ENVIRONMENTAL MANAGEMENT AGENCY

LOG, BORING/PENETROMETER
PETERS CANYON WASH
BRIDGE PROPOSAL

SHEET 53

SCALE: AS SHOWN | DATE: B-81 | DRAWING: G.E. ANDERSON

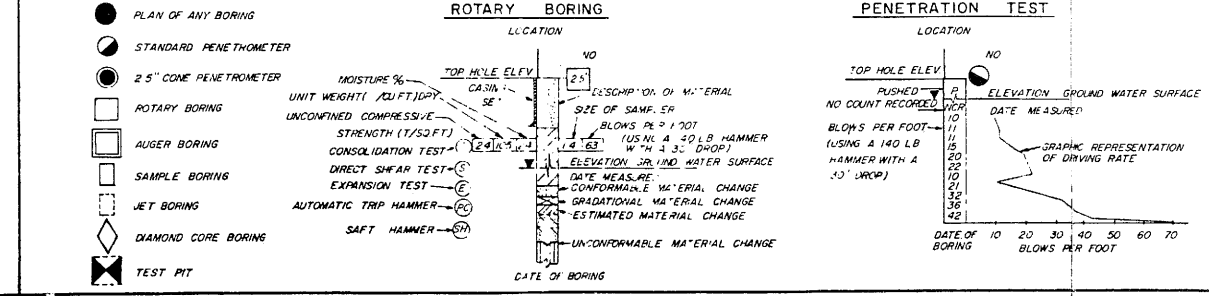
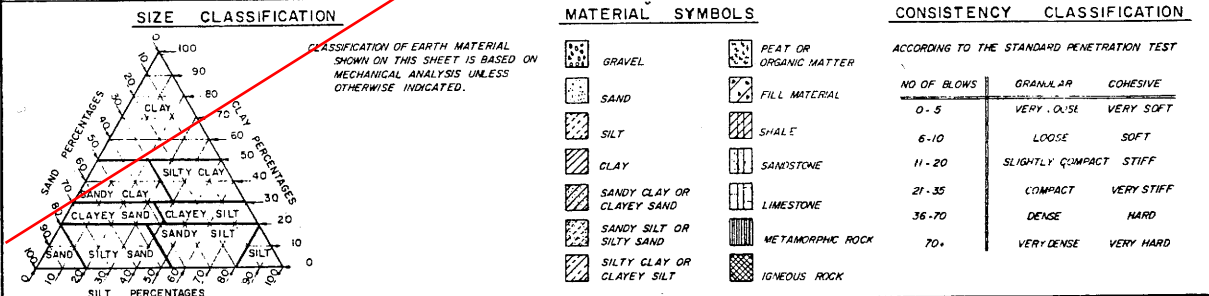


P-1 @ B-1

P-1 @ B-1 P-2 @ B-2

LEGEND OF EARTH MATERIALS

LEGEND OF BORING OPERATIONS



COUNTY OF ORANGE

ENVIRONMENTAL MANAGEMENT AGENCY

LOG, BORING/ PENETROMETER

RATTLESNAKE CYN. WASH

BRIDGE PROPOSAL

SHEET 54

SCALE AS SHOWN

DATE 9-81

DRAWING G.E. ANDERSON

