ORANGE COUNTY ROAD DEPT.

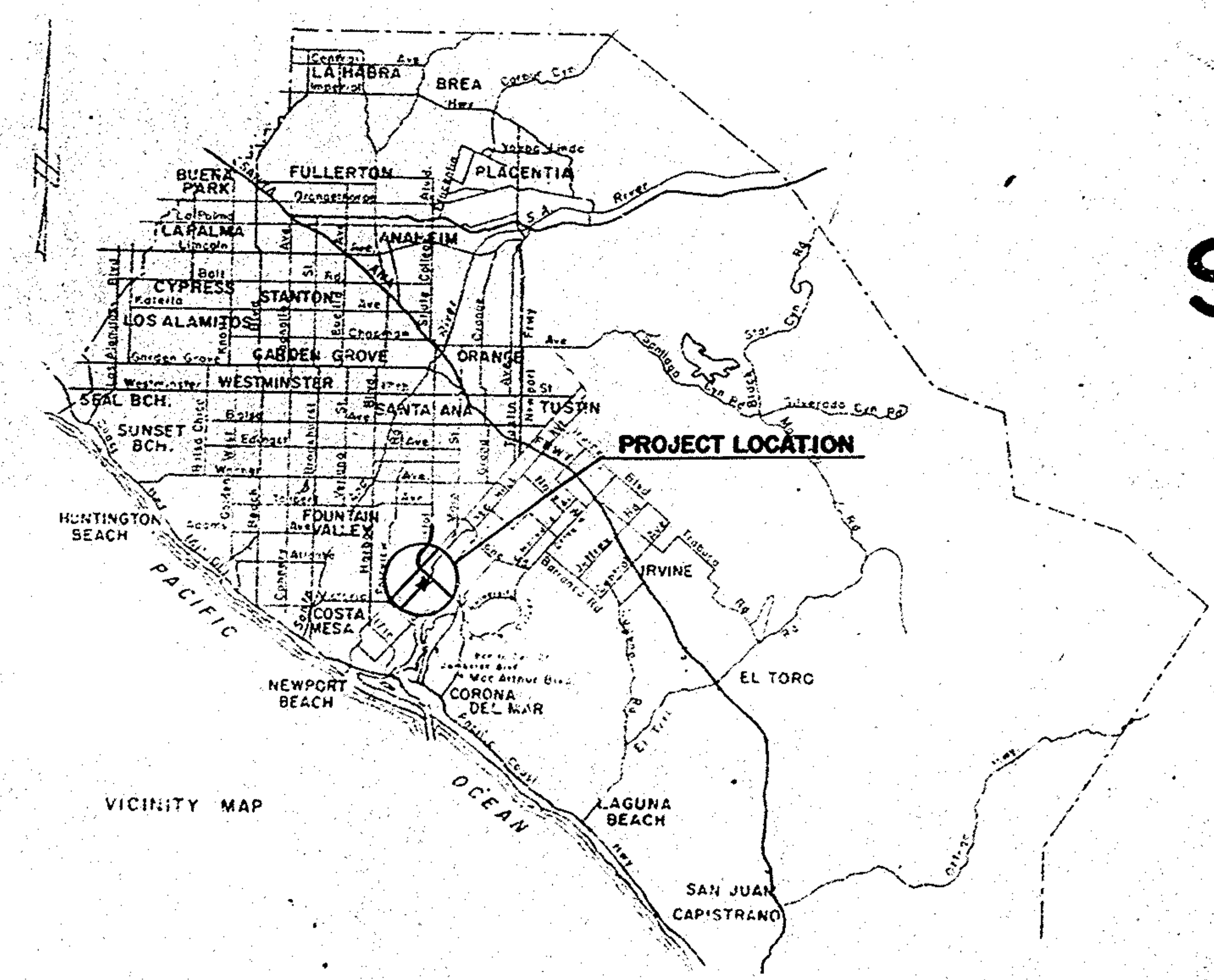
STATE OF CALIFORNIA

PLANS FOR WIDENING OF

SANTA ANA AVE. BRIDGE

DE - 12 ⇒ DE-12A

ACROSS FLOOD CONTROL CHANNEL FO 1

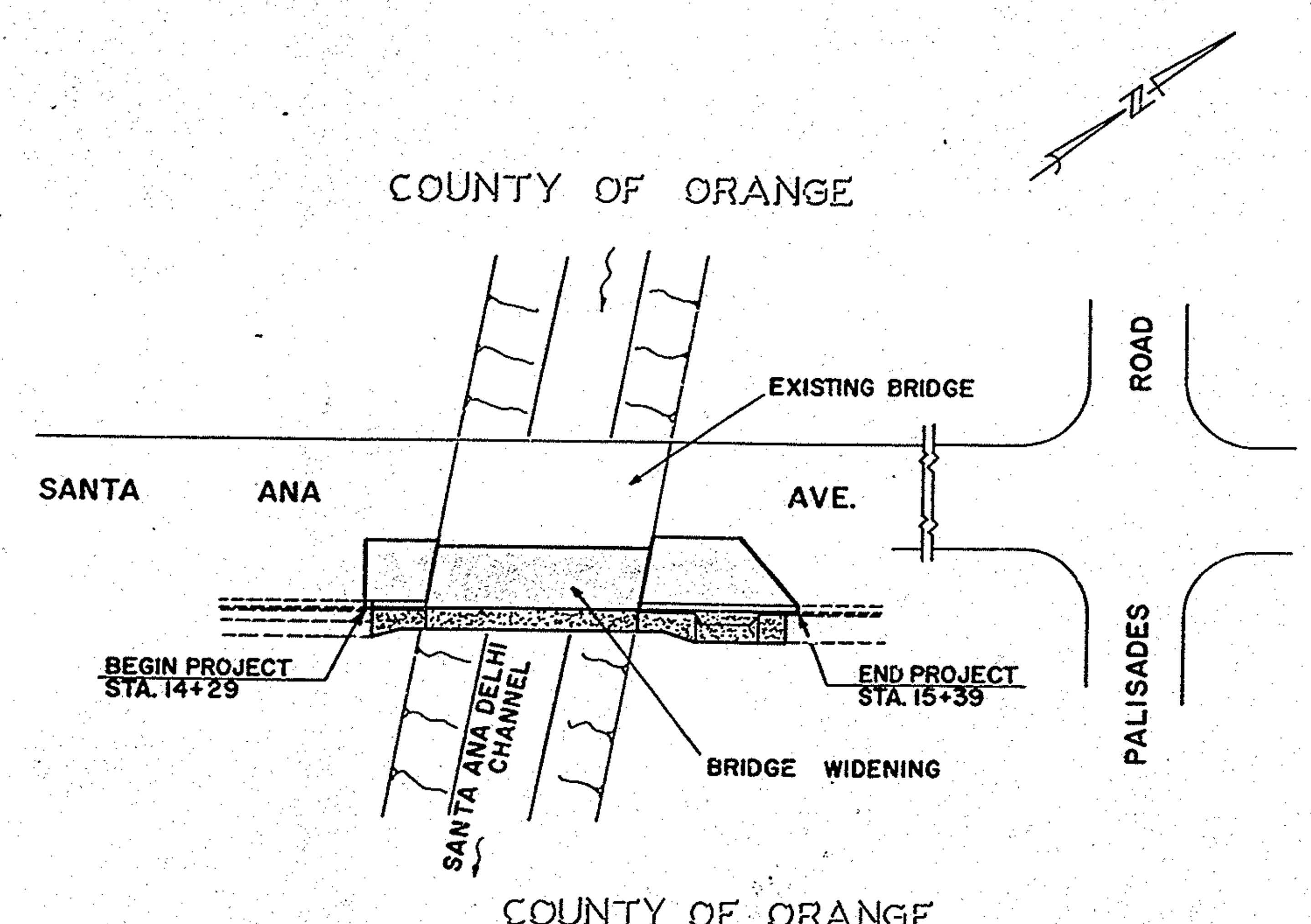


VICINITY MAP

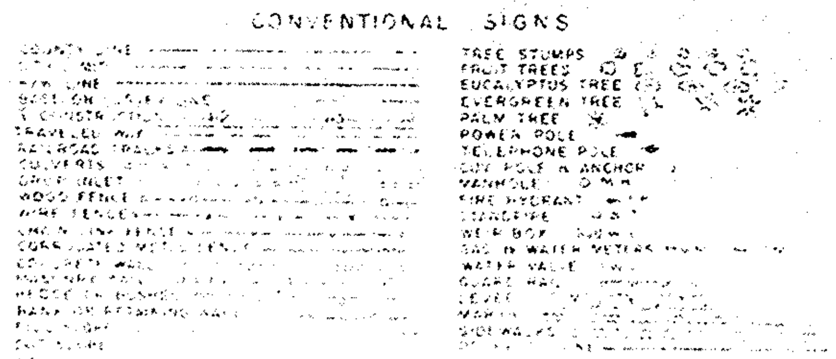
INDEX OF SHEETS

Sheet Nº	Description
1	TITLE SHEET
2	GENERAL PLAN
3	BRIDGE PLAN
4	MISCELLANEOUS DETAILS
5	GUARD RAIL & FENCE DETAILS
6	PILE DETAILS

ALL WORK WITHIN THE FLOOD CONTROL DISTRICT RIGHT OF WAY SHALL BE PERFORMED IN ACCORDANCE WITH THE PROVISIONS OF THE CONSTRUCTION PERMIT GRANTED BY ORANGE COUNTY FLOOD CONTROL DISTRICT AND THE PLANS STAMPED WITH THE APPROVAL OF ORANGE COUNTY FLOOD CONTROL DISTRICT. CONTRACTOR SHALL HAVE A COPY OF SAID PERMIT AND STAMPED PLANS ON THE JOB SITE.



CONVENTIONAL SIGNS



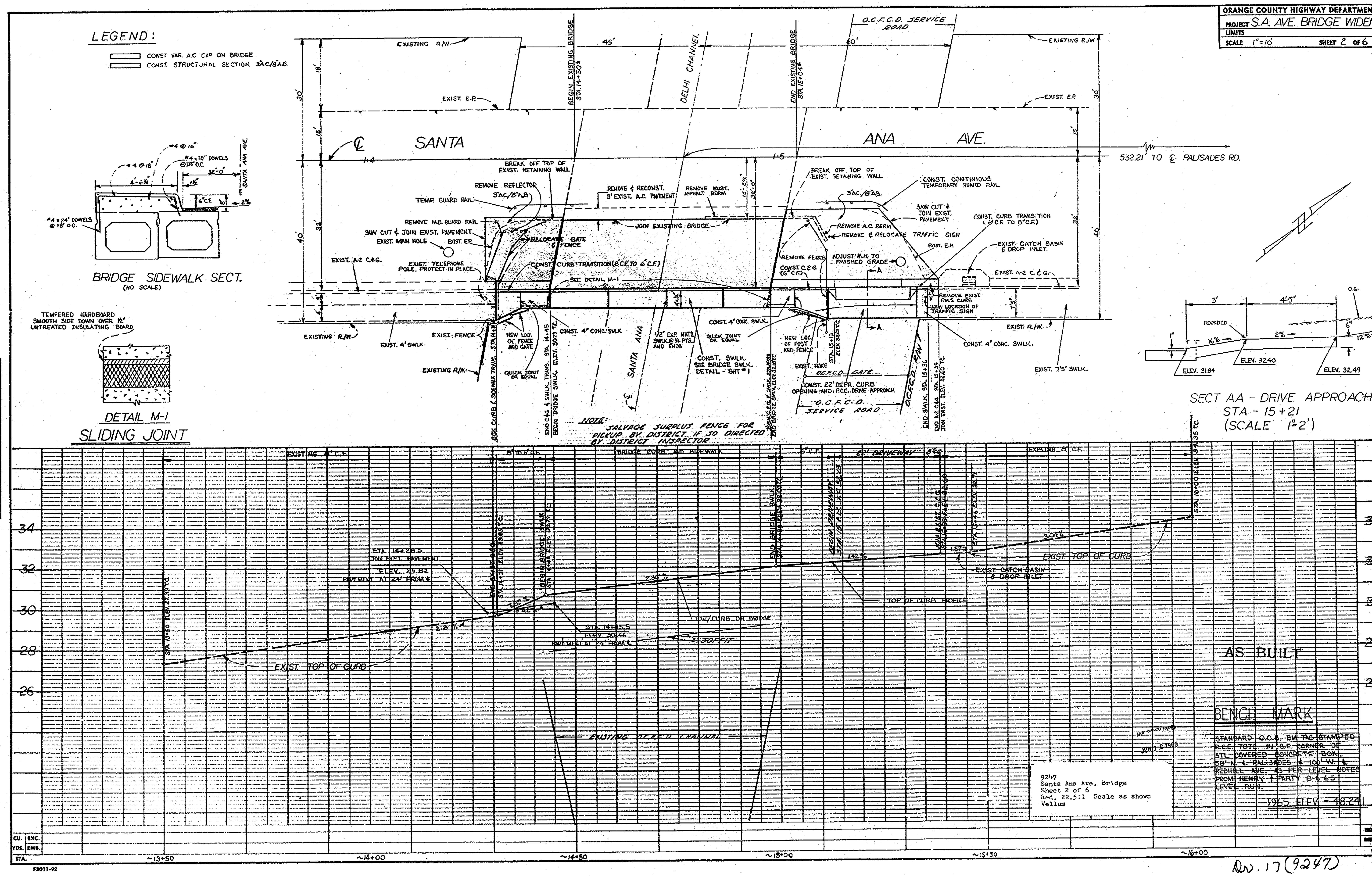
AS BUILT

MICROFILMED JUN 1 2 1968

9247
Santa Ana Ave. Bridge
Sheet 1 of 6
Red. 22.5:1 Scale as shown
Seria

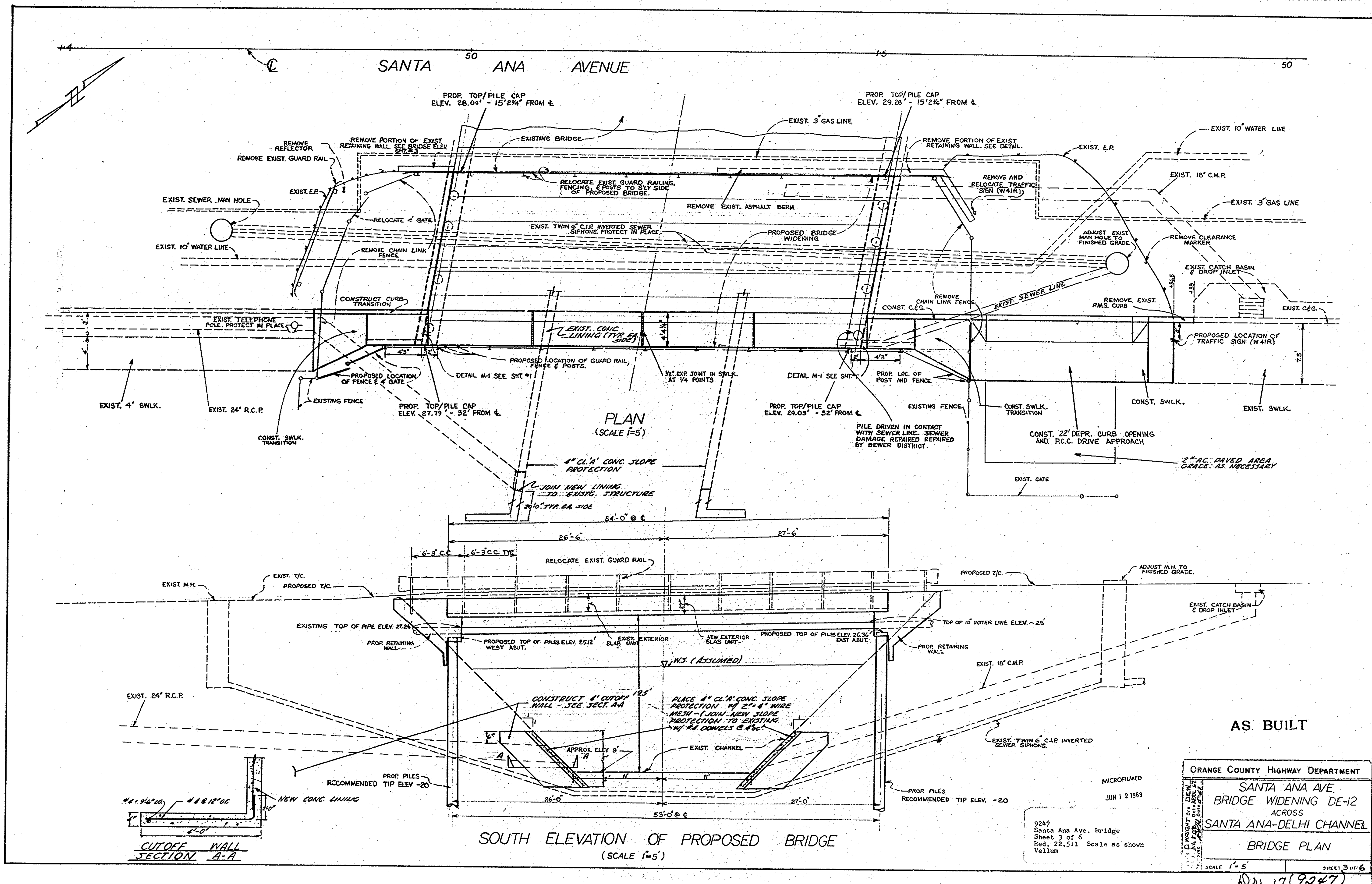
APPROVED: [signature] 5-24-67
ROAD COMMISSIONER R.C.E. 7872 DATE

Dr. 17 (9247) # 9247 ; 1968
SANTA ANA AVE BR. WIDENING
DE-12A over Santa Ana Delhi
55C-205, Thomas 859-D7



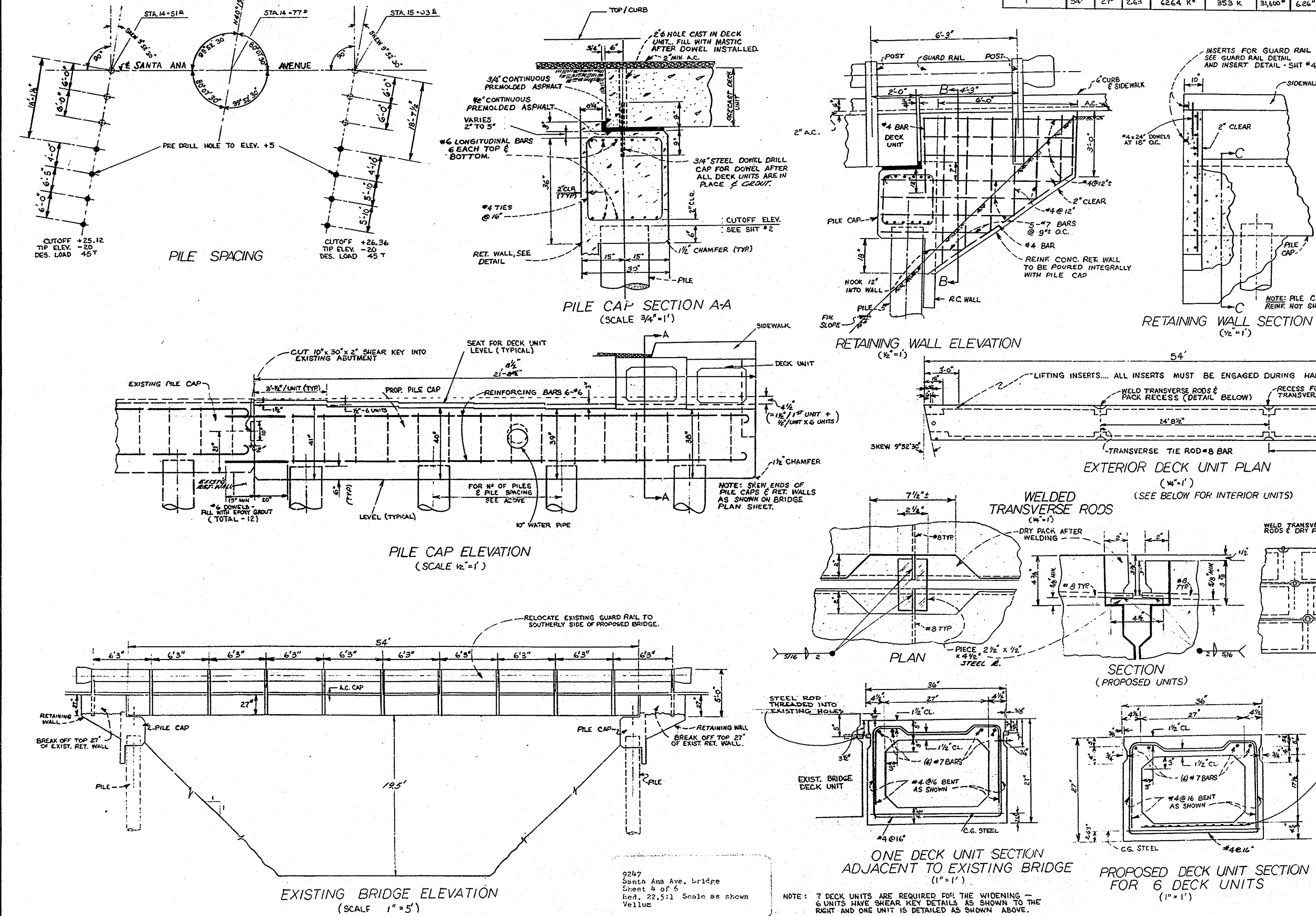
9247
Santa Ana Ave. Bridge
Sheet 2 of 6
Red. 22.5:1 Scale as shown
Vellum

Dr. 17 (9247)



SANTA ANA AVENUE
PROP. TOP/PILE CAP ELEV. 28.04' - 15'2¼" FROM ℄
PROP. TOP/PILE CAP ELEV. 29.28' - 15'2¼" FROM ℄
EXIST. 3" GAS LINE
EXISTING BRIDGE
REMOVE REFLECTOR
REMOVE PORTION OF EXIST. RETAINING WALL. SEE BRIDGE ELEV. SHT. # 3
REMOVE PORTION OF EXIST. RETAINING WALL. SEE DETAIL.
REMOVE EXIST. GUARD RAIL
EXIST. E.P.
EXIST. 10" WATER LINE
EXIST. 18" C.M.P.
REMOVE AND RELOCATE TRAFFIC SIGN (W41R)
RELOCATE EXIST. GUARD RAILING, FENCING, & POSTS TO S'LY SIDE OF PROPOSED BRIDGE.
REMOVE EXIST. ASPHALT BERM
EXIST. 3" GAS LINE
EXIST. SEWER MAN HOLE
RELOCATE 4' GATE
EXIST. TWIN 6" C.I.P. INVERTED SEWER SIPHONS. PROTECT IN PLACE.
PROPOSED BRIDGE WIDENING
ADJUST EXIST. MAN HOLE TO FINISHED GRADE.
REMOVE CLEARANCE MARKER
EXIST. 10" WATER LINE
REMOVE CHAIN LINK FENCE
EXIST. CATCH BASIN & DROP INLET
CONSTRUCT CURB TRANSITION
REMOVE CHAIN LINK FENCE
EXIST. SEWER LINE
REMOVE EXIST. P.M.S. CURB
CONST. C.&G.
EXIST. C.&G.
EXIST. TELEPHONE POLE. PROTECT IN PLACE.
EXIST. CONC. LINING (TYP. EA. SIDE)
PROPOSED LOCATION OF TRAFFIC SIGN (W41R)
PROPOSED LOCATION OF GUARD RAIL, FENCE & POSTS.
½" EXP. JOINT IN SWLK. AT ¼ POINTS
PROPOSED LOCATION OF FENCE & 4' GATE
DETAIL M-1 SEE SHT. #1
DETAIL M-1 SEE SHT. #1
PROP. LOC. OF POST AND FENCE
EXIST. 4' SWLK.
EXIST. 24" R.C.P.
EXISTING FENCE
PROP. TOP/PILE CAP ELEV. 27.79' - 32' FROM ℄
PROP. TOP/PILE CAP ELEV. 29.03' - 32' FROM ℄
EXISTING FENCE
CONST. SWLK. TRANSITION
CONST. SWLK.
EXIST. SWLK.
PLAN
(SCALE 1"=5')
CONST. SWLK. TRANSITION
PILE DRIVEN IN CONTACT WITH SEWER LINE. SEWER DAMAGE REPAIRED REPAIRED BY SEWER DISTRICT.
CONST. 22' DEPR. CURB OPENING AND P.C.C. DRIVE APPROACH
2" A.C. PAVED AREA GRADE AS NECESSARY
4" CL. 'A' CONC. SLOPE PROTECTION
JOIN NEW LINING TO EXIST. STRUCTURE
EXIST. GATE
2'-0" TYP. EA. SIDE
54'-0" @ ℄
26'-6"
27'-6"
6'-3" C.C.
6'-3" C.C. TYP.
RELOCATE EXIST. GUARD RAIL
EXIST. M.H.
EXIST. T/C.
PROPOSED T/C.
PROPOSED T/C.
ADJUST M.H. TO FINISHED GRADE.
EXIST. CATCH BASIN & DROP INLET
EXISTING TOP OF PIPE ELEV. 27.26
TOP OF 10" WATER LINE ELEV. ~ 26'
PROP. RETAINING WALL
PROPOSED TOP OF PILES ELEV. 25.12' WEST ABUT.
EXIST. EXTERIOR SLAB UNIT
NEW EXTERIOR SLAB UNIT
PROPOSED TOP OF PILES ELEV. 26.34' EAST ABUT.
PROP. RETAINING WALL
W.S. (ASSUMED)
EXIST. 18" C.M.P.
EXIST. 24" R.C.P.
CONSTRUCT 4' CUTOFF WALL - SEE SECT. A-A
PLACE 4" CL.'A' CONC. SLOPE PROTECTION W/ 2"x4" WIRE MESH - (JOIN NEW SLOPE PROTECTION TO EXISTING W/ #4 DOWELS @ 4" o.c.)
APPROX. ELEV. 9'
EXIST. CHANNEL
EXIST. TWIN 6" C.I.P. INVERTED SEWER SIPHONS.
PROP. PILES RECOMMENDED TIP ELEV -20
PROP. PILES RECOMMENDED TIP ELEV. -20
NEW CONC. LINING
#4 @ 9½" o.c.
#4 @ 12" o.c.
4'-0"
CUTOFF WALL SECTION A-A
26'-0"
27'-0"
53'-0" @ ℄
SOUTH ELEVATION OF PROPOSED BRIDGE
(SCALE 1"=5')
AS BUILT
MICROFILMED
JUN 1 2 1969
9247
Santa Ana Ave. Bridge
Sheet 3 of 6
Red. 22.5:1 Scale as shown
Vellum
ORANGE COUNTY HIGHWAY DEPARTMENT
SANTA ANA AVE. BRIDGE WIDENING DE-12 ACROSS SANTA ANA-DELHI CHANNEL
BRIDGE PLAN
SCALE 1"=5'
SHEET 3 OF 6
Dw. 17 (9247)

PRETENSIONED - PRESTRESSED - PRECAST DECK UNITS								
TOTAL NO. DECK UNITS	LENGTH L	DEPTH d	DIST "A" TO C.G.S	DESIGN MOMENT	PRESTRESS DESIGN FORCE	BASIC WEIGHT	"X"	CONCRETE COMP. STR'H
7	54'	27"	2.63	6264 K"	353 K	31,600#	6.26"	f'_c = 5000psi



NOTE: 7 DECK UNITS ARE REQUIRED FOR THE WIDENING — 6 UNITS HAVE SHEAR KEY DETAILS AS SHOWN TO THE RIGHT AND ONE UNIT IS DETAILED AS SHOWN ABOVE.

9247
Santa Ana Ave. Bridge
Sheet 4 of 6
Red. 22.5:1 Scale as shown
Vellum

WIRE MESH 32" x 48" GALV. 3x3 – 10/10 EACH END OF EXTERIOR UNIT ONLY

AS BUILT

ORANGE COUNTY HIGHWAY DEPARTMENT

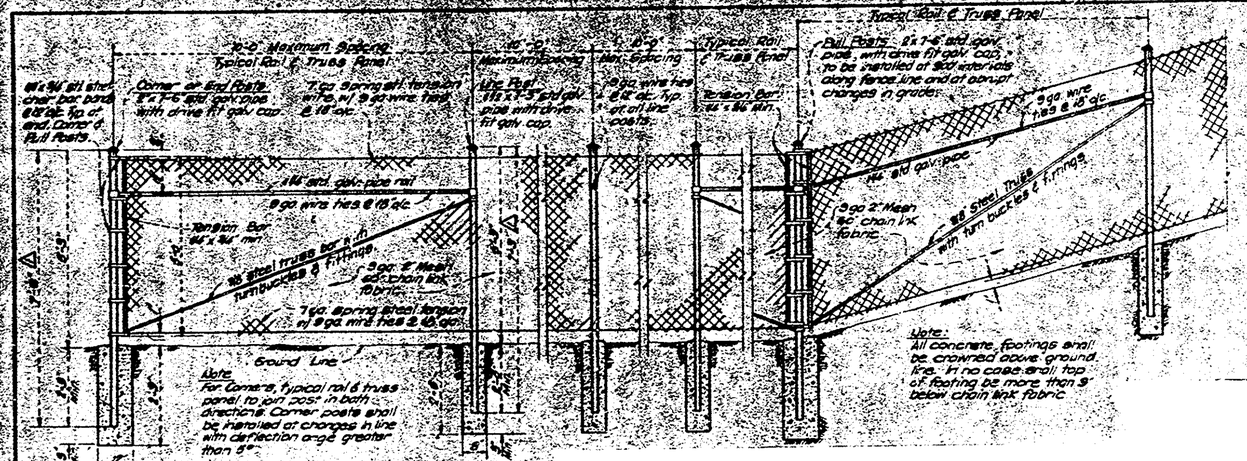
SANTA ANA AVE.
BRIDGE WIDENING DE-12
ACROSS
SANTA ANA-DELHI CHANNEL

MISCELLANEOUS DETAILS

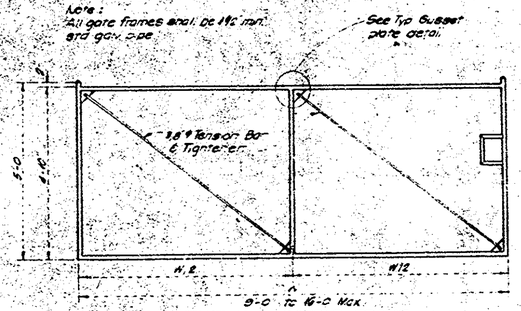
D. WRIGHT · D.E.W. · APRIL 67

SCALE AS SHOWN · SHEET 4 OF 6

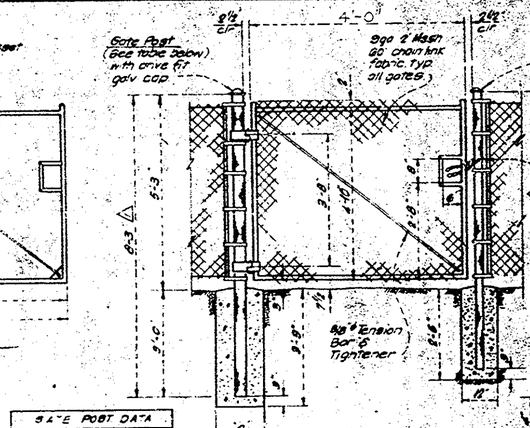
Dr. 17 (9247)



TYPICAL FENCE ELEVATION
TYPE I CHAIN LINK
RIGHT OF WAY FENCE
SCALE 1/2"=1'-0"



EXISTING DOUBLE FRAME
GATE DETAIL
SCALE 1/2"=1'-0"

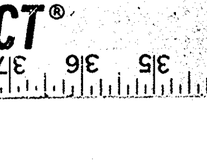


GATE POST DATA		
W	POST DIA	"D"
0'-1" MAX	4"	16"
2'-0" TO 5'-0"	5"	18"
5'-1" TO 12'-0"	8"	18"

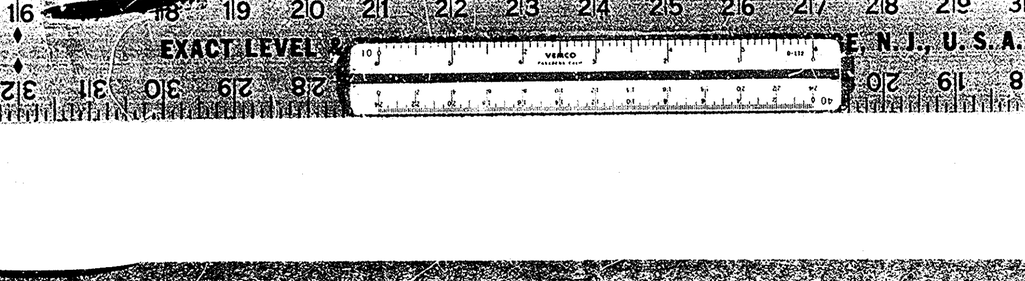
Note: All gate post shall be std galv. pipe.

TYPICAL SINGLE FRAME GATE
AND GATE POST DETAIL
NO SCALE

TYPICAL GUSSET PLATE DETAIL
NO SCALE



EXISTING POST SECTION
SCALE 1/2"=1'-0"



USE ON APPROACHES

ALTERNATIVE ANCHORS

NOTE:

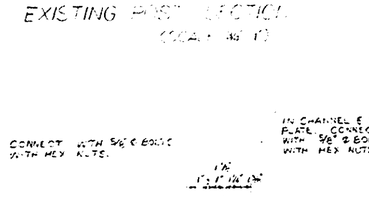
All bolts to have cut washers unless otherwise noted.

Paint entire unit white. See Special Provisions.

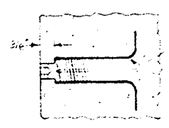
All timber to be S4S.

Remove bolts and fill holes with grout when railing is no longer needed.

TEMPORARY GUARD RAIL EXTENDS FROM STA. 14+86 TO STA. 15+24

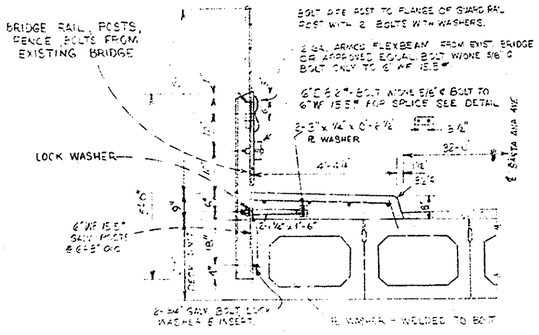


EXISTING CHANNEL SPLICE
SCALE 1"=1'-0"

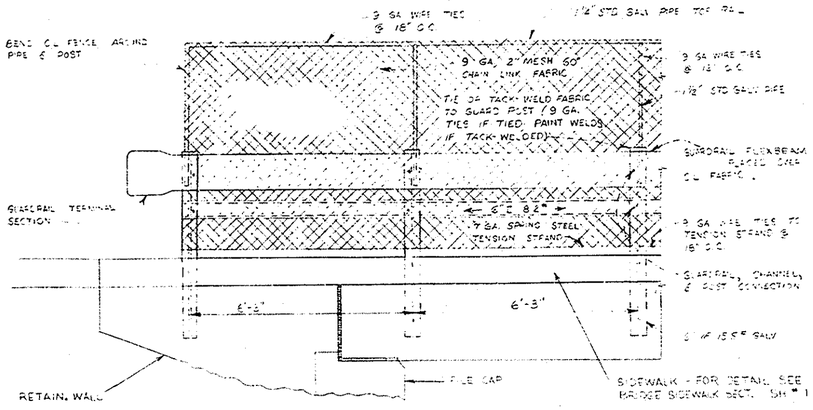


USE ON POSTS

TEMPORARY RAILING (METAL BEAM)



GUARD RAIL DETAIL
SCALE 1/2"=1'-0"



BRIDGE GUARD RAIL & FENCE DETAIL
SCALE 1/2"=1'-0"

GENERAL NOTES

1. — All metal parts of all type fences and gates, including fence fabric and barbed wire shall be hot galv. material.
2. — Std. st. pipe shall be of following min. weights before galv.

Nominal Dia	Wt./Ft.	No. Dia	Wt./Ft.
1"	1.68#	2 1/2"	5.79#
1 1/4"	2.27#	4"	10.79#
1 1/2"	2.72#	6"	18.97#
2"	3.65#		

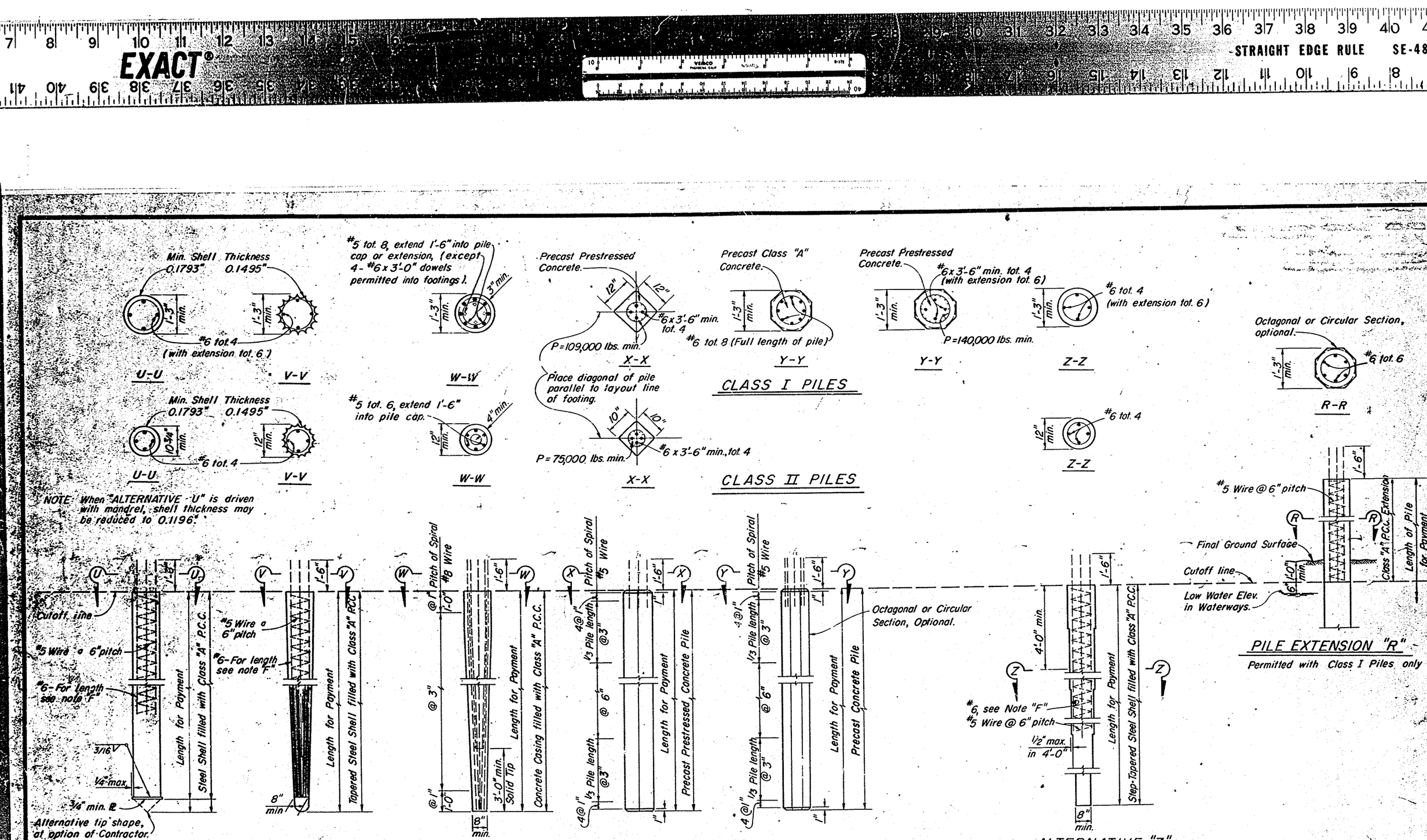
3. — The fencing on bridges, headwalls, and wingwalls shall be installed in such a manner that there are no openings or gaps which in the opinion of the Engineer, could be hazardous.
4. — All gate hinges are 3" heavy duty malleable iron or steel, industrial service type, 180 degree swing, of approved quality and design.
5. — Ground shall be graded before fence construction begins. Bottom of fence shall be located one inch above ground surface. Localized ground depressions in excess of 3 inches shall be eliminated by properly placed compacted fill, by placing additional fabric or by installation of additional posts as directed by the Engineer.
6. — Unless otherwise shown on the plans, Contractor shall construct fence with fabric 0.2' inside of R/W Line.

AS BUILT

JUN 1 0 1969

SANTA ANA AVE
BRIDGE WIDENING DET.
ACROSS
SANTA ANA-DELHI CHANNEL
GUARD RAIL
AND FENCE DETAIL

RDD. 17 (9247)



PILE NOTES

Alternatives "W" & "Y" may be driven full length or may be extended. All exposed piles or pile extensions shall be consistant in cross-section throughout the project.

Alternatives "X" & "Y" (Precast Prestressed)
P = Prestressing Force (after losses)
Concrete stress:
f'c = 6,000 p.s.i. (Alt. "X"); 4,500 p.s.i. (Alt. "Y") @ 28 days
f'ci = 3,500 p.s.i. @ transfer (3/8" strand)
f'ci = 4,000 p.s.i. @ transfer (7/16" strand and 1/2" strand)

Note 1: In Alternatives "U", "V", "Z" the #6 bars shall extend a minimum of 12' below the lowest of the following:
1. Bottom of footing.
2. Top of final ground surface.
3. Top of original ground surface when piles are driven through fills.

Class I Piles may be substituted for Class II Piles.

Unless indicated to the contrary all piles shall be Class I Piles.

Alternative "X" may not extend above ground line nor be used with Pile Extension "R".

10" min. dia. pipe extension may be used at the tip when step taper is 30' or more in length.

Minimum thickness of pipe extension = 0.1793".

DESIGN LOADING = 45 TONS

AS BUILT

ORANGE COUNTY ROAD DEPARTMENT
SANTA ANA AVE.
BRIDGE WIDENING DE-12
ACROSS
SANTA ANA-DELHI CHANNEL
PILE DETAILS
D. WRIGHT STD. APRIL 61
SCALE: NONE
6 of 6

Dw. 17 (9247)