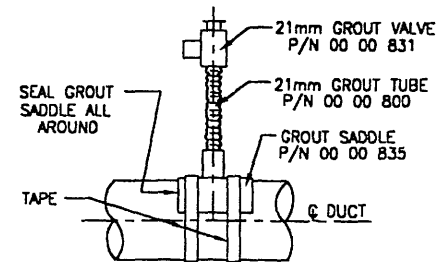


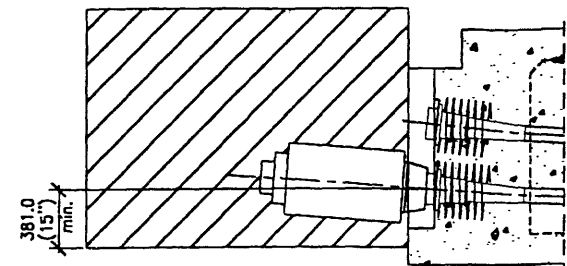
HIGH POINT NOTE:
21mm GROUT TUBE IS TO BE PLUGGED WITH 21mm GROUT PLUG PRIOR TO STRESSING. REMOVE PLUG BEFORE GROUTING. EXTEND GROUT TUBE BY A MINIMUM OF 2 FT ABOVE THE DECK AND ATTACH 21mm GROUT VALVE.



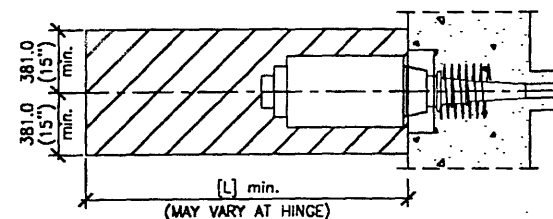
LOW POINT
(OPTIONAL - ONLY WHERE REQUIRED DUE TO WEATHER CONDITIONS)

INTERMEDIATE VENT DETAILS

DIM.	12-0.6\"/>
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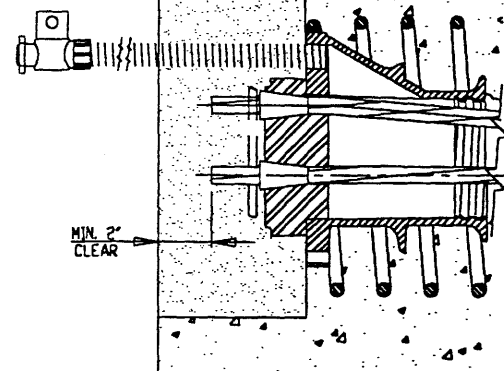
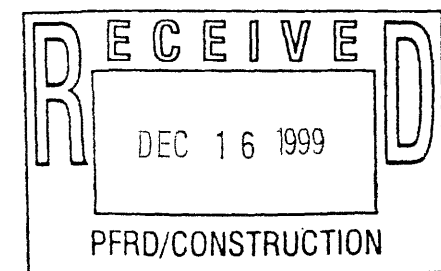


STRESSING CLEARANCE - CROSS SECTION



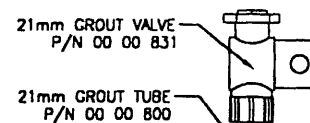
STRESSING CLEARANCE - PLAN VIEW

**APPROVAL STAMP MUST BE
IN RED INK TO BE VALID**



DETAIL FOR GROUTING WITHOUT GROUT CAP

NOTE:
CONTRACTOR SHALL PROVIDE A HOLE (Ø[M]) IN FORMWORK FOR ACCESS TO THE INSIDE OF THE TENDON. THIS HOLE SHALL BE LOCATED AT THE CENTER OF THE ANCHORAGE. (SEE PT DETAILS FOR LOCATION).



21mm GROUT TUBE
P/N 00 00 800

21mm GROUT VALVE
P/N 00 00 831

3-PART WEDGE
P/N 68 00 0536

GOLF TEE
AS VENT HOLE PLUG

AT DEAD END USE
TEMPORARY KEEPER
PLATE DURING STRESSING

GROUT CAP
(REUSABLE)

GROUT CAP SEAL
(REUSABLE)

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TAB FOR SPIRAL
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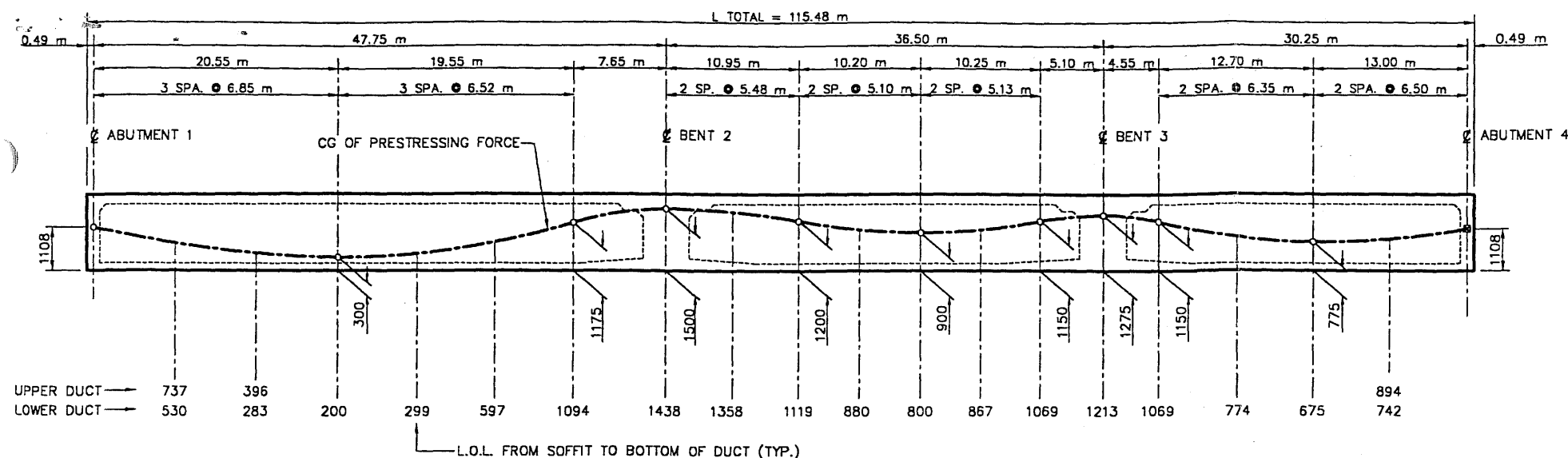
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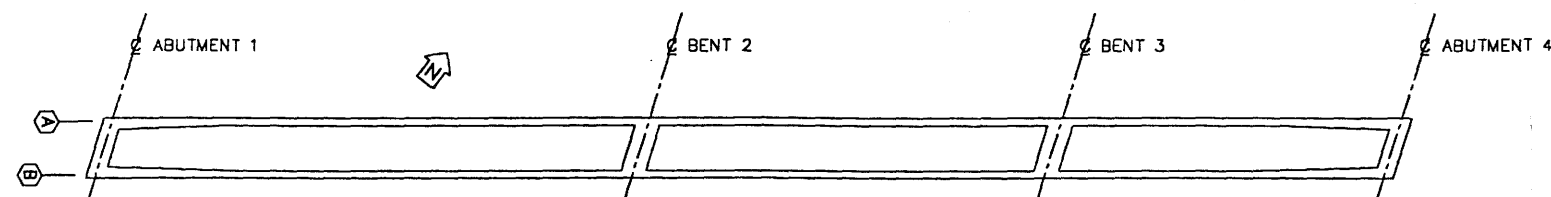
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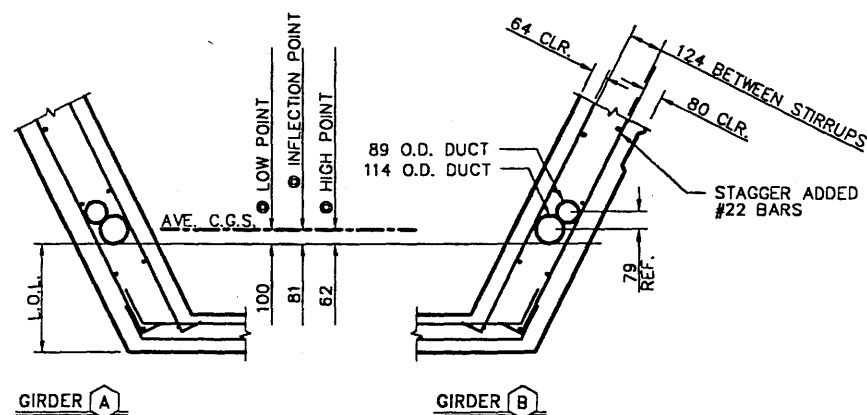
3/8\"/>



LONGITUDINAL SECTION



GIRDER LAYOUT



TYPICAL SECTION

APPROVED
PURSUANT TO SECTION 5-1.02
OF THE CALTRANS
STANDARD SPECIFICATIONS

JAN 19 2000

COUNTY OF ORANGE
PUBLIC FACILITIES & RESOURCES DEPT.
DESIGN DIVISION

APPROVAL STAMP MUST BE
IN RED INK TO BE VALID

[Signature]

PRESTRESSING CALCULATIONS

USE: 0.6" ϕ , GRADE 270, LOW-RELAXATION, 7-WIRE STRAND (ASTM A416)
GUARANTEED MINIMUM ULTIMATE STRENGTH = 260.7 kN (58,600 LBS.)

GIVEN: MU = 0.20, K = 0, AND MODIFIED FOR HORIZONTAL CURVE, IF ANY;
ANCHOR SET = 10 mm (3/8"); PROVISION FOR 20,000 PSI LOSS IN STRESS
INITIAL FORCE AT Δ = 0.883 TIMES THE JACKING FORCE

PJACK: 15,250 kN NO. OF STRANDS: 15,250 kN / (0.75)(260.7 kN) = 78 STRANDS

USE: 2 - TENDONS W/27 STRANDS EACH PJACK = 5279 kN (1,187 KIPS)
2 - TENDONS W/12 STRANDS EACH PJACK = 2346 kN (527 KIPS)

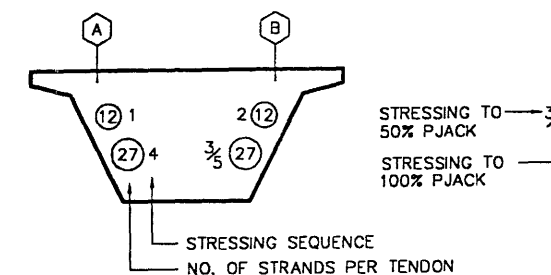
ELONGATION:

STRESSING FROM ONE END: $\Delta = \frac{(195.5 \text{ kN})(1 + 0.883)}{2} \times \frac{(115.5 + 1.0 \text{ m})(10^6)}{(140 \text{ mm}^2)(193,000 \text{ MPa})} = 794 \text{ mm}$
AT ABUTMENT 1

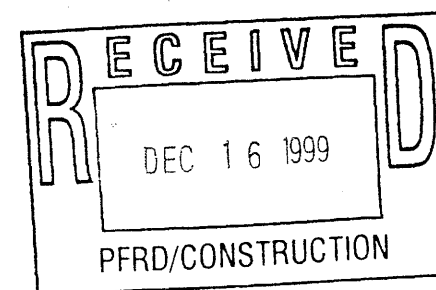
80% Δ = (0.8)(794) = 635 mm (25")

NOTES:

1. ASSUMED A = 140 mm² (0.217 in²) AND E = 193,000 MPa (28,000 KSI) USED FOR ELONGATION CALCULATIONS TO BE VERIFIED ON ACTUAL PRESTRESSING STEEL USED. THESE FIGURES MAY VARY, WHICH MAY RESULT IN A VARIANCE OF THE CALCULATED ELONGATION.
2. CONCRETE STRENGTH: f_{ci} = 25 MPa (3600 PSI) @ TIME OF STRESSING
3. SEE DRAWING NO. 1 FOR GENERAL NOTES AND ANCHORAGE DETAILS.



STRESSING SEQUENCE



ISSUED
OCT 21 1999
For Approval

CH CLAUDIO HUNGER, P.E. 4774 TREGO DRIVE, SAN JOSE, CA 95118
CONSULTING ENGINEER TEL. (408) 269-1581 FAX (408) 269-1583

BILL OF MATERIALS (FOR INTERNAL USE BY DSI)

ANCHOR CASTING	MA 12-0.6"	68 12 212	4 EA.
ANCHOR CASTING	MA 27-0.6"	68 27 212	4 EA.
PE TRUMPET	MA 12-0.6"	68 12 586	4 EA.
PE TRUMPET	MA 27-0.6"	68 27 586	4 EA.
SPIRAL	MA 12-0.6"	68 12 214	4 EA.
SPIRAL	MA 27-0.6"	68 27 214	4 EA.
WEDGE PLATE	MA 12-0.6"	68 12 142	4 EA.
WEDGE PLATE	MA 27-0.6"	28 27 142	4 EA.
WEDGE	0.6" ϕ	68 00 0536	160 PR.
DUCT, 26 GA.	3 1/2" O.D.	--	780 FT.
DUCT, 26 GA.	4 1/2" O.D.	--	780 FT.
CEMENT	TYPE II	--	85 SX.
STRAND	0.6" ϕ LOW-LAX	--	32,000 FT. (3.7 PACKS)

TRABUCO CREEK BIKE TRAIL OVERCROSSING

DIST. 12 COUNTY Ora ROUTE 241 KM POST 30.1 BRIDGE NO. 55-953 W/O No. EH23075

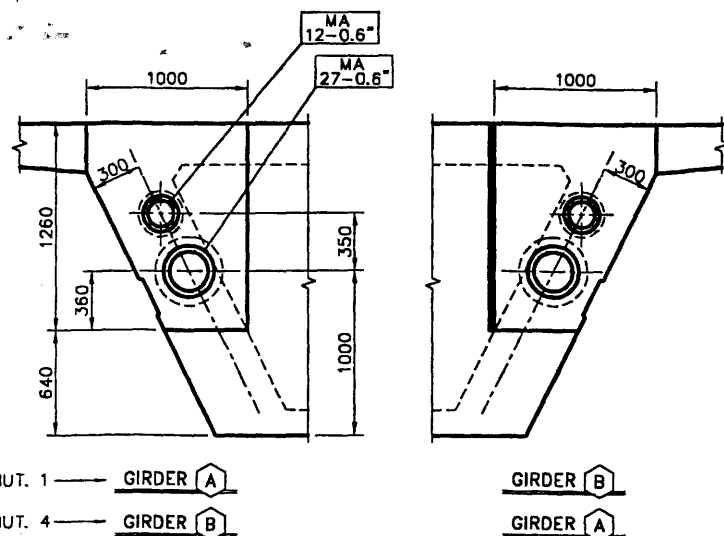
CONTRACTOR: LAPCO, INC.



DYWIDAG Systems International, USA, Inc.

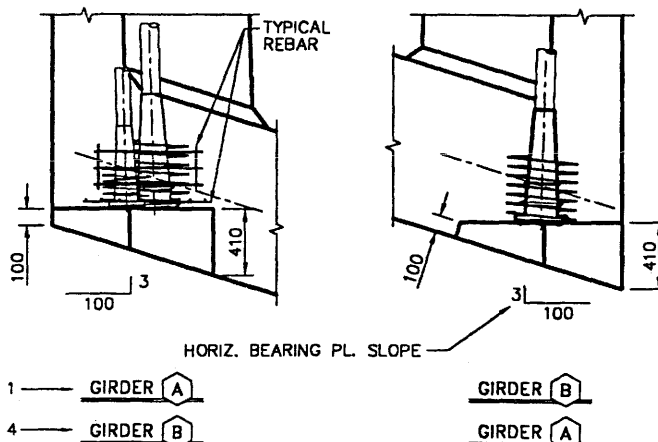
POST-TENSIONING DETAILS

REV.	DATE	ISSUE DESCRIPTION	NAME	CHKD.	SCALE	DRAWN	CH
					VARIABLES		
					DATE	CHKD.	
					10/21/99	APPD.	
					JOB NO. 420537		
					DWG. NO. 2 of 3		



ELEVATION AT ABUTMENTS

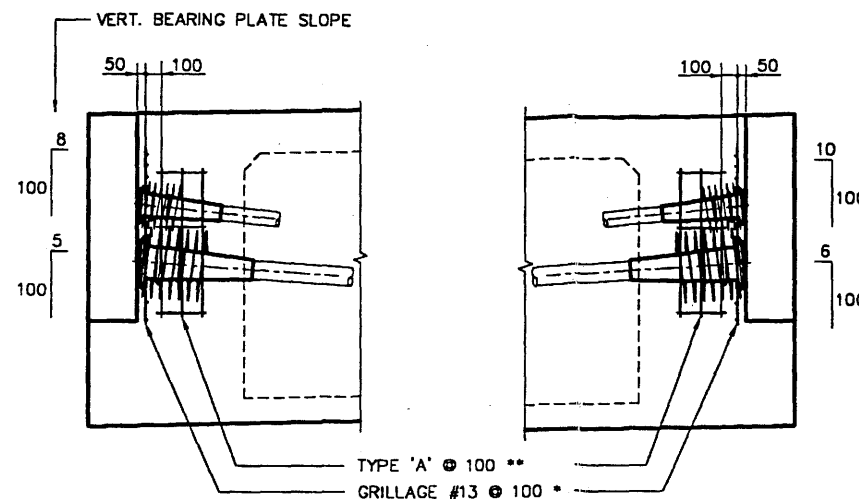
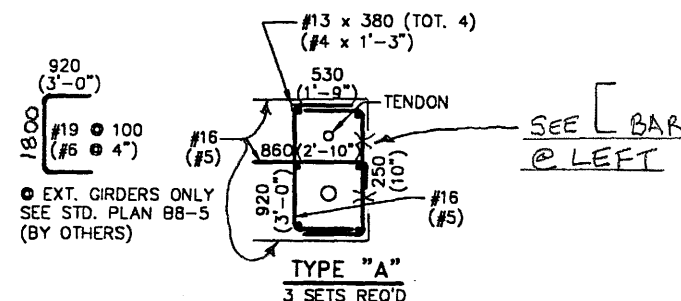
FOR STIRRUP REINFORCEMENT AT FLARE OF GIRDER STEM REFER TO CALTRANS STANDARD PLANS, SHEET B8-5



PLAN AT ABUTMENTS

NOTE:

- REINFORCING IN THE ANCHORAGE ZONES CONFORMING TO CALTRANS STANDARD DRAWINGS, SHEET B8-5
- ADDITIONAL REINFORCING CONFORMING TO CALTRANS LETTER OF APPROVAL OF DYWIDAG MA SYSTEMS: 5-0.6" THRU 27-0.6" STRANDS FROM 9/17/91. ALL REBARS N.I.C. TO BE FURNISHED AND INSTALLED BY OTHERS.



SECTION AT ABUTMENTS

NOTE: PRIOR TO STRESSING, REINFORCING STEEL SHALL BE BENT (BY OTHERS) IN THE AREA OF THE BLOCKOUT IN ORDER TO AVOID INTERFERENCE WITH STRESSING EQUIPMENT. FOR REQUIRED CLEARANCE SEE DRW. NO. 1.

ISSUED
OCT 21 1999
For Approval

CH CLAUDIO HUNGER, P.E. 4774 TREGO DRIVE, SAN JOSE, CA 95118
CONSULTING ENGINEER TEL (408) 269-1581 FAX (408) 269-1583

TRABUCO CREEK BIKE TRAIL OVERCROSSING

DIST. COUNTY ROUTE KM POST BRIDGE NO. W/O No. EH23075
12 Ora 241 30.1 55-953

CONTRACTOR: LAPCO, INC.



DYWIDAG Systems International, USA, Inc.

POST-TENSIONING DETAILS

REV.	DATE	ISSUE DESCRIPTION	NAME	CHKD.	SCALE	DRAWN	CH
					VARIES	CHKD.	
					DATE	APPD.	
					10/21/99	APPD.	
					JOB NO. 420537		
					DWG. NO. 3 of 3		

APPROVED
PURSUANT TO SECTION 5-1.02
OF THE CALTRANS
STANDARD SPECIFICATIONS

JAN 19 2000

COUNTY OF ORANGE
PUBLIC FACILITIES & RESOURCES DEPT.
DESIGN DIVISION

Rev H

APPROVAL STAMP MUST BE
IN RED INK TO BE VALID