

SKEW	7.6 m ROADWAY			8.8 m ROADWAY		
	SPACING	NO. OF GIRDERS	TOTAL LENGTH	SPACING	NO. OF GIRDERS	TOTAL LENGTH
0°	300	7 SP @ 1 214	8 498	300	8 SP @ 1 215	9 720
15°	300	7 SP @ 1 258	8 806	300	8 SP @ 1 258	10 064
30°	300	7 SP @ 1 402	9 814	300	8 SP @ 1 402	11 216

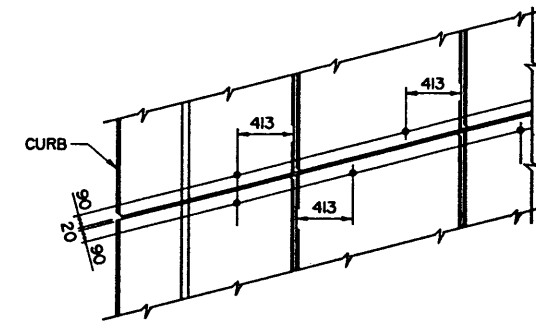
7.6 m AND 8.8 m ROADWAY PIER OR ABUTMENT ELEVATION

(0° SKEW SHOWN; CAPS ARE IDENTICAL FOR LHF AND RHF SKEWS)

1:75

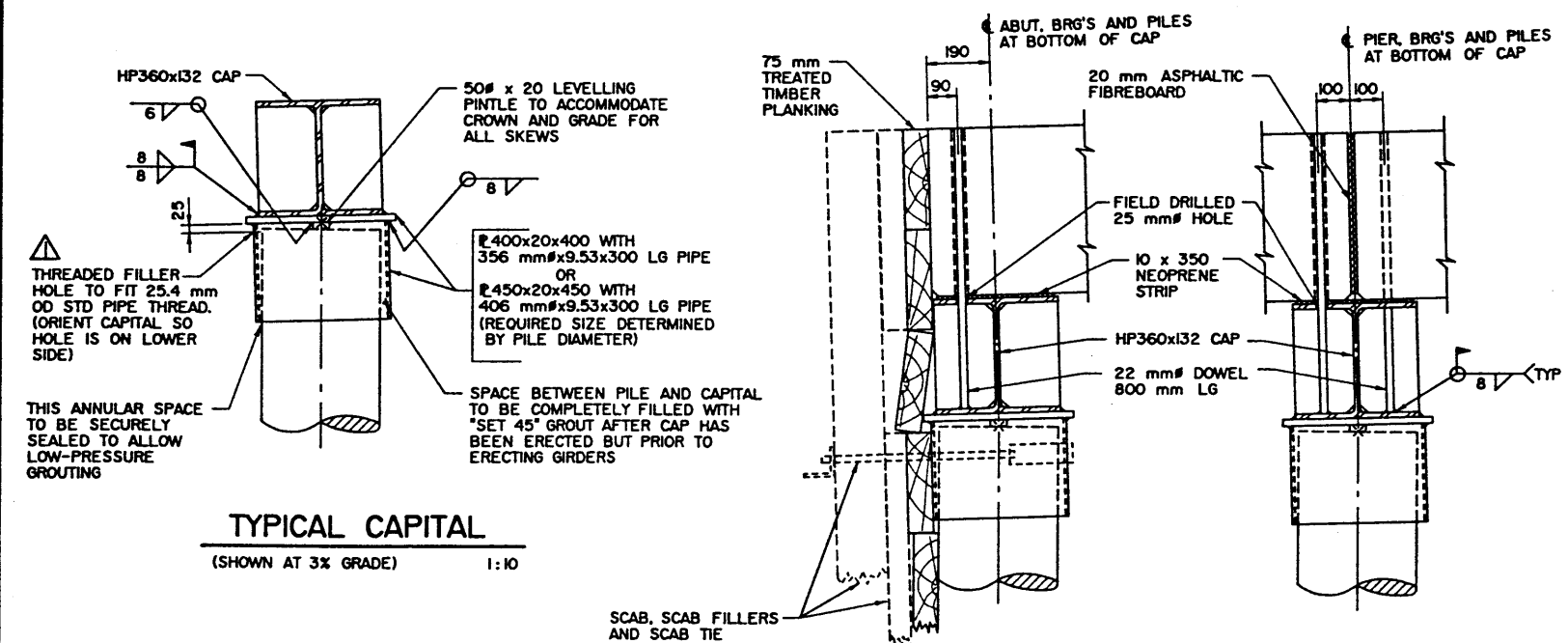
CLEAR ROADWAY	7.6 m	8.8 m	REMARKS
CAPITALS: 356 mm# (50 kg) 406 mm# (60 kg)	8	9	AS DETAILED FIELD SELECTED
NEOPRENE STRIP	1	1	10x350 (LENGTH TO MATCH CAP)
DOWELS: ABUTMENTS	7	8	22 mm# x 800
PIERS	14	16	
SET 45 GROUT OR EQUIVALENT	65 LITRES (2 CU FT)		QUANTITY WILL VARY CONSIDERABLY
CAP LENGTH AND WEIGHT:			AS DETAILED
SQUARE	9 098 (1300 kg)	10 320 (1460 kg)	
15° SKEW	9 406 (1340 kg)	10 664 (1510 kg)	
30° SKEW	10 414 (1470 kg)	11 816 (1670 kg)	

CLEAR ROADWAY	SKEW	GRADE	DIFFERENTIALS (mm) FOR CROWN STRUCTURE DEPTH, CAP AND CAPITAL DIMENSIONS.				
			PILE 1	PILE 2	PILE 3	PILE 4	PILE 5
7.6 m	ALL	ALL	996	972	947	926	
8.8 m	ALL	ALL	1 008	984	950	935	916
CLEAR ROADWAY	SKEW	GRADE	DIFFERENTIALS FOR GRADE (mm)				
			PILE 1	PILE 2	PILE 3	PILE 4	PILE 5
7.6 m	15°	1	11	8	5	2	
		2	23	16	10	3	
		3	34	24	15	5	
		4	46	33	20	7	
7.6 m	30°	1	25	18	11	4	
		2	49	35	21	7	
		3	74	53	32	11	
		4	98	70	42	14	
8.8 m	15°	1	13	10	7	3	0
		2	26	20	13	7	0
		3	39	29	20	10	0
		4	52	39	26	13	0
8.8 m	30°	1	28	21	14	7	0
		2	56	42	28	14	0
		3	84	63	42	21	0
		4	112	84	56	28	0



TYPICAL PIER DOWEL ARRANGEMENT SHOWN FOR SKEWED GIRDERS

(SIMILAR FOR SQUARE GIRDERS AND AT ABUTMENT LOCATIONS) 1:25

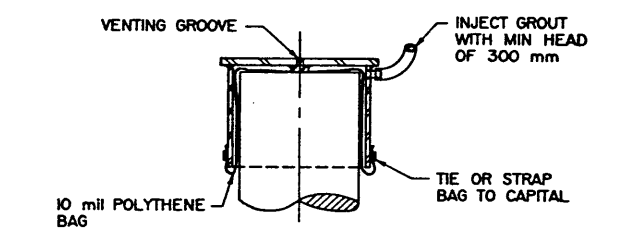


TYPICAL CAPITAL

(SHOWN AT 3% GRADE) 1:10

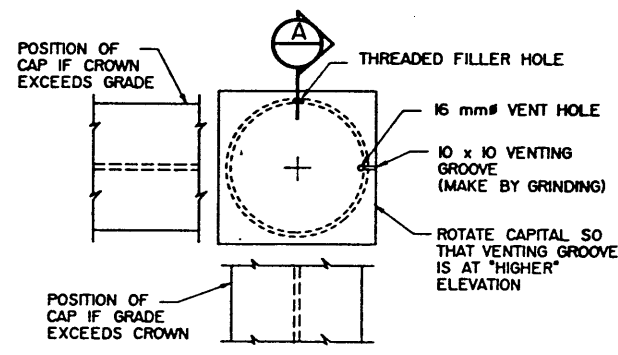
ABUT AND PIER CAP ATTACHMENT

(SHOWN AT 3% GRADE) 1:10



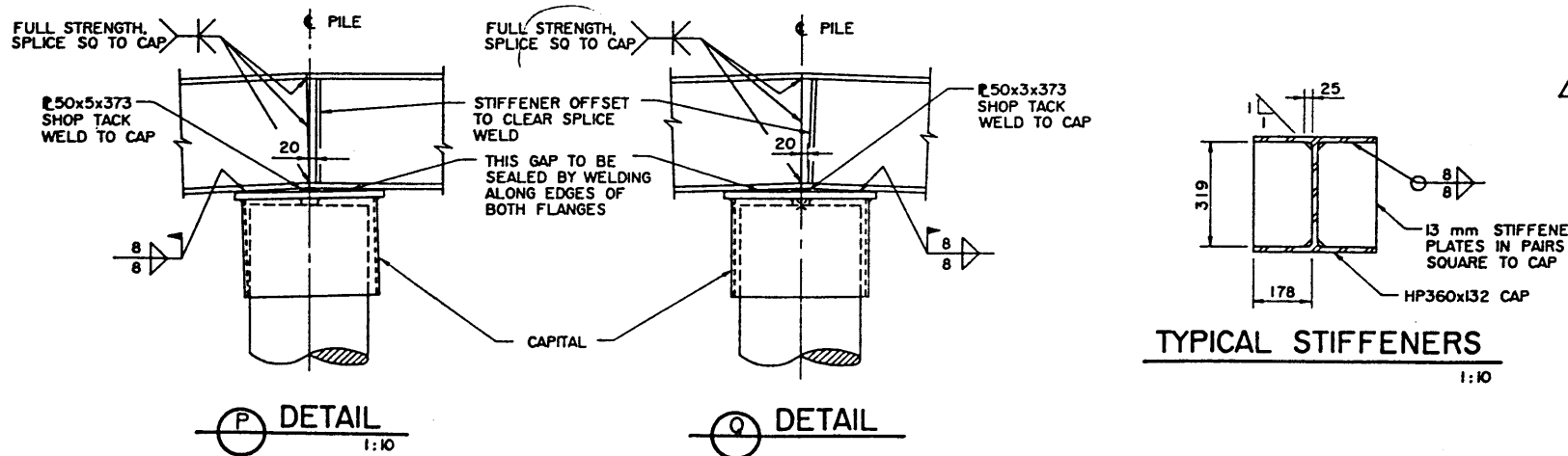
SECTION A

1:10



CAPITAL ORIENTATION AND GROUTING DETAIL

1:10



TYPICAL STIFFENERS

1:10

GENERAL NOTES

- ALL SUBSTRUCTURE DETAILS AS GIVEN ON DRAWINGS S-1420 AND S-1421 SHALL APPLY EXCEPT AS MODIFIED OR SUBSTITUTED ON THIS DRAWING.
- ALL DIMENSIONS GIVEN IN MILLIMETRES UNLESS OTHERWISE SHOWN.
- DESIGN: LIVE LOAD - CSA S6-M78, MS230
- ALL REQUIREMENTS OF THE CURRENT BRIDGE BRANCH SPECIFICATION FOR THE SUPPLY OF STRUCTURAL STEEL FOR BRIDGES (SPEC NO B-187M) SHALL BE MET.
- ALL STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36 OR CSA G40.21M-300W.
- ALL WELDING SHALL CONFORM TO CURRENT AWS SPECIFICATION D1.5.
- CAPS AND EXTERIOR SURFACES OF CAPITALS SHALL BE BLAST CLEANED AND SHOP PAINTED WITH ONE PRIME COAT AND TWO FINISH COATS. CLEANING TO BE APPROVED BY THE ENGINEER PRIOR TO PAINTING.

CONSTRUCTION PROCEDURE FOR NEW SUBSTRUCTURES

- PILES TO BE CUT OFF SQUARE AT REQUIRED ELEVATIONS;
- PLACE SUITABLY SIZED CAPITALS (TRIM PILE TOPS IF NECESSARY); POSITION OPTIMALLY TO ALLOW FOR TILTING OF PINTLES RELATIVE TO PILES FOR CROWN AND GRADE;
- PLACE CAP AND TILT LONGITUDINALLY TO SUIT GRADE;
- DRAW PILES INTO ALIGNMENT; WELD CAPITAL TO CAP;
- ATTACH PIER SWAY BRACING;
- PRESSURE GROUT CAPITALS TO PILE;
- PLACE NEOPRENE BEARING STRIP;
- ERECT GIRDERS; DRILL HOLES THROUGH NEOPRENE STRIP AND TOP FLANGE AND INSTALL DOWELS;
- CLEAN AND FIELD PAINT WELD-DAMAGED PAINTED AREAS.

PROCEDURE MODIFICATIONS FOR REPLACING EXISTING TIMBER CAPS

- PREFABRICATED CAPS MUST BE CHECKED FOR DIMENSIONAL SUITABILITY TO MATCH EXISTING PILE LOCATIONS;
- EXISTING DECK CAN BE DISMANTLED OR UNIFORMLY RAISED ONE PIER AT A TIME BY JACKING ON FALSE BENTS TO ALLOW EXISTING PILES TO BE CUT OFF AT THE REQUIRED LOWER ELEVATIONS;
- WHERE A PILE IS TOO SHORT BY REASON OF EXISTING SUBCAPS, INSERT ANOTHER CAPITAL AND WELD ALL AROUND TO LOWER CAPITAL WITH 8 mm FILLET WELD;
- REMAINING PROCEDURE IS SIMILAR TO THAT FOR NEW STRUCTURES.

WORK THESE DRAWINGS TOGETHER: S-1420, S-1421 AND S-1446

REV	DATE	DESCRIPTION	BY
98-04-22		WELDING SPECIFICATION	
86-07-04		GROUTING DETAILS REVISED	D H O

DESIGNED	DRAWN	DATE	CHECKED	DATE	STREAM	LOCATION	HIGHWAY	FILE	SHEET	DRAWING
D H O	W S	86-02-25	R. E. T.	July 6, 1986					1 of 1	S-1446

APPROVED
[Signature]
EXECUTIVE DIRECTOR
BRIDGE ENGINEERING

DATE July 4, 1986

Alberta TRANSPORTATION
BRIDGE ENGINEERING BRANCH

STEEL CAP SYSTEM FOR TREATED TIMBER PILES STANDARD SM BRIDGES