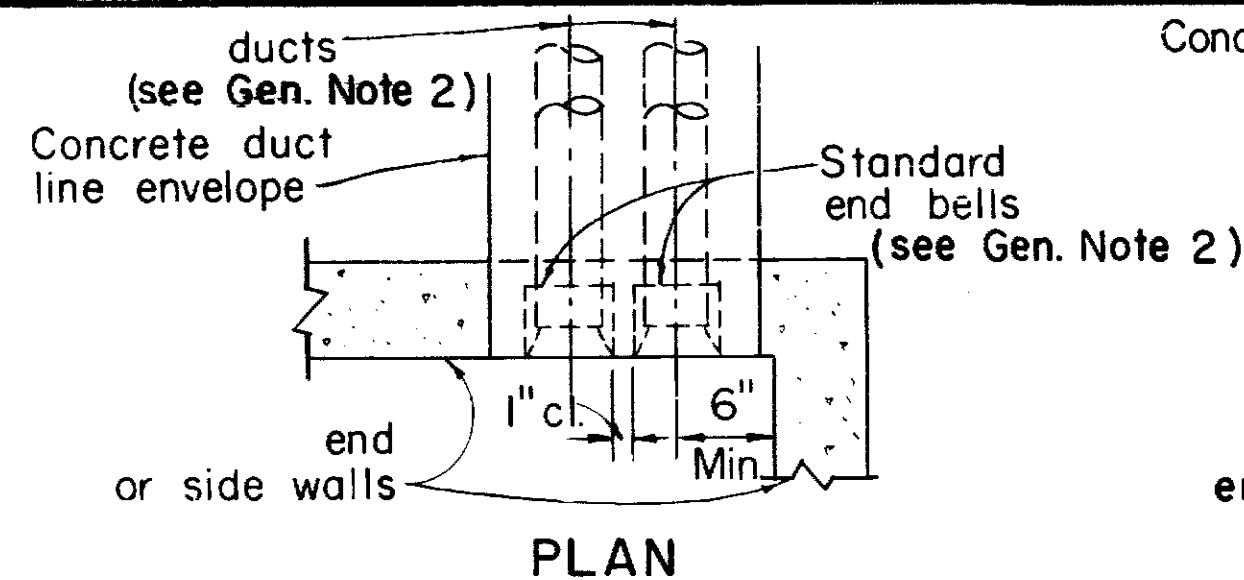
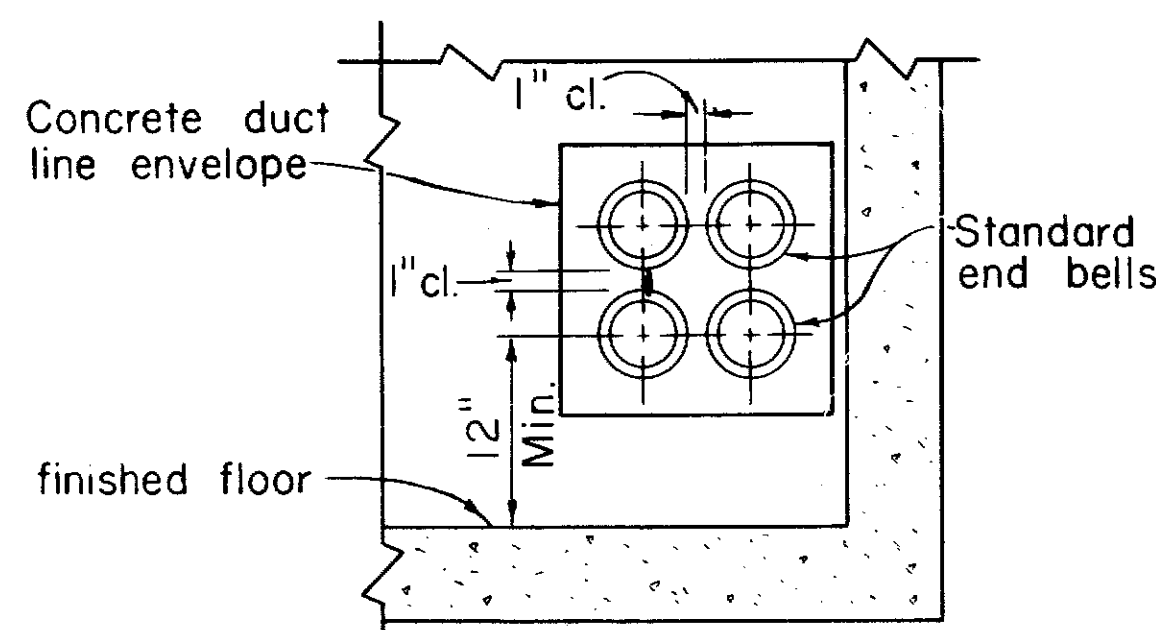


GENERAL NOTES

1. THE GENERAL CONDITIONS OF SPECIFICATIONS CS-7202 SHALL GOVERN THROUGHOUT THE ENTIRE WORK.
2. FOR CONSTRUCTION OF UNDERGROUND FACILITIES & DUCT LINES REFER TO SPECIFICATION CS-7001 AND CS-7003.
3. ALL WORK SHALL BE SUBJECT TO INSPECTION BY THE HAWAIIAN ELECTRIC CO., INC., DIVISION OF ENGINEERING, CITY & COUNTY OF HONOLULU AND/OR DIVISION OF HIGHWAYS, STATE OF HAWAII, WHICHEVER GOVERNMENT AGENCY HAS AUTHORITY OVER THE WORK.
4. DUCTS: FOR NUMBER, SIZE AND EXACT LOCATION OF DUCT ENTRIES, REFER TO PROJECT DRAWINGS.
5. PULLING IRONS: FOR NUMBER & LOCATIONS, REFER TO PROJECT DRAWINGS.
6. HANDHOLE COVERS (REMOVABLE CONC. COVERS) MAXIMUM CLEARANCES BETWEEN REMOVABLE CONCRETE COVERS AND CONCRETE OPENINGS AT THE SUPPORTS MUST BE KEPT. CONCRETE CONTRACTOR SHALL MEASURE CONC. COVER STEEL FRAME AFTER FABRICATION TO OBTAIN PROPER CLEARANCES. ALL COVERS AFTER BEING INSTALLED SHALL BE SEATED FIRMLY AND EVENLY AND FREE FROM ROCKING. ANY VARIATION IN CLEARANCE AND UNEVENNESS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
7. CONCRETE POURING: NOTIFY THE HAWAIIAN ELECTRIC CO., INC. CONTRACTING & INSPECTION DIVISION, PHONE 548-4427 OR 548-4428 24 HOURS BEFORE POURING CONCRETE. ALL CONCRETE POURING SHALL BE DONE IN THE PRESENCE OF AN H.E.CO., INC., ENGINEER OR INSPECTOR.
8. ALL MATERIALS SHALL BE NEW AND MANUFACTURED IN THE UNITED STATES OF AMERICA.

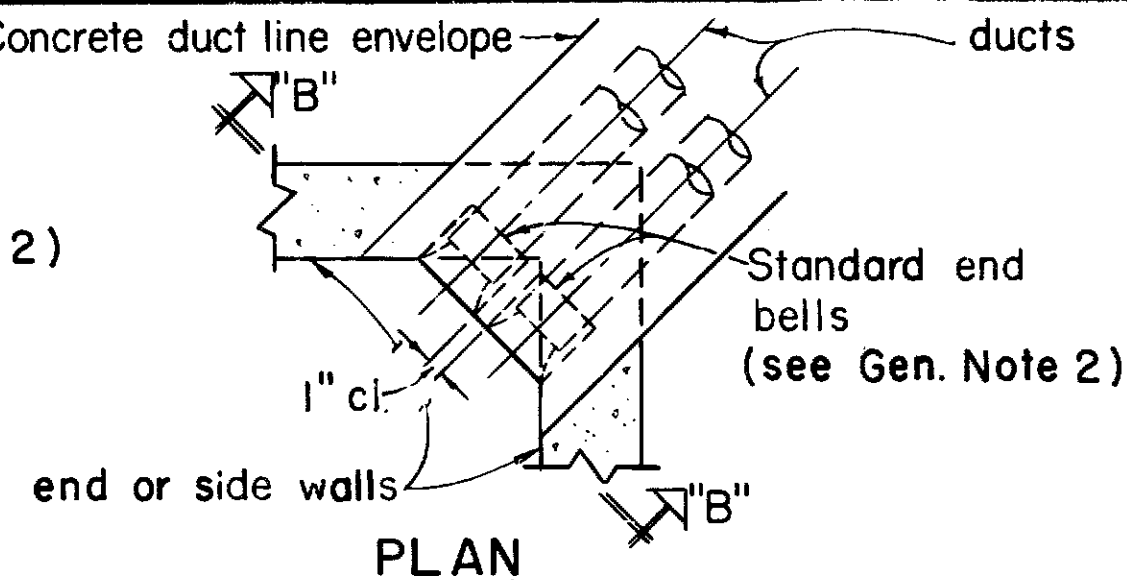


PLAN

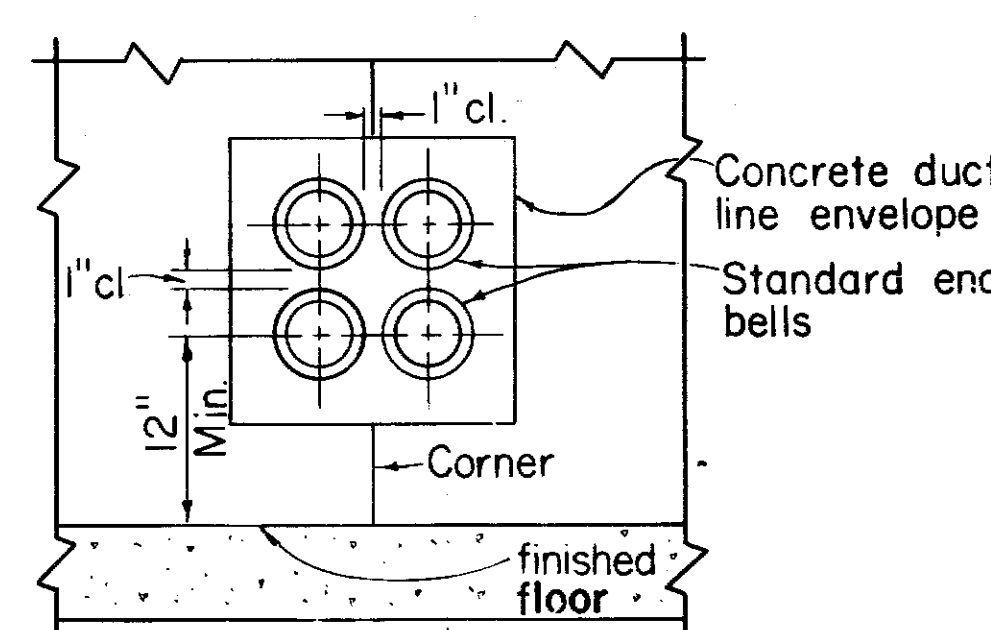


ELEVATION
END OR SIDE ENTRANCE

Scale: 1" = 1'-0"

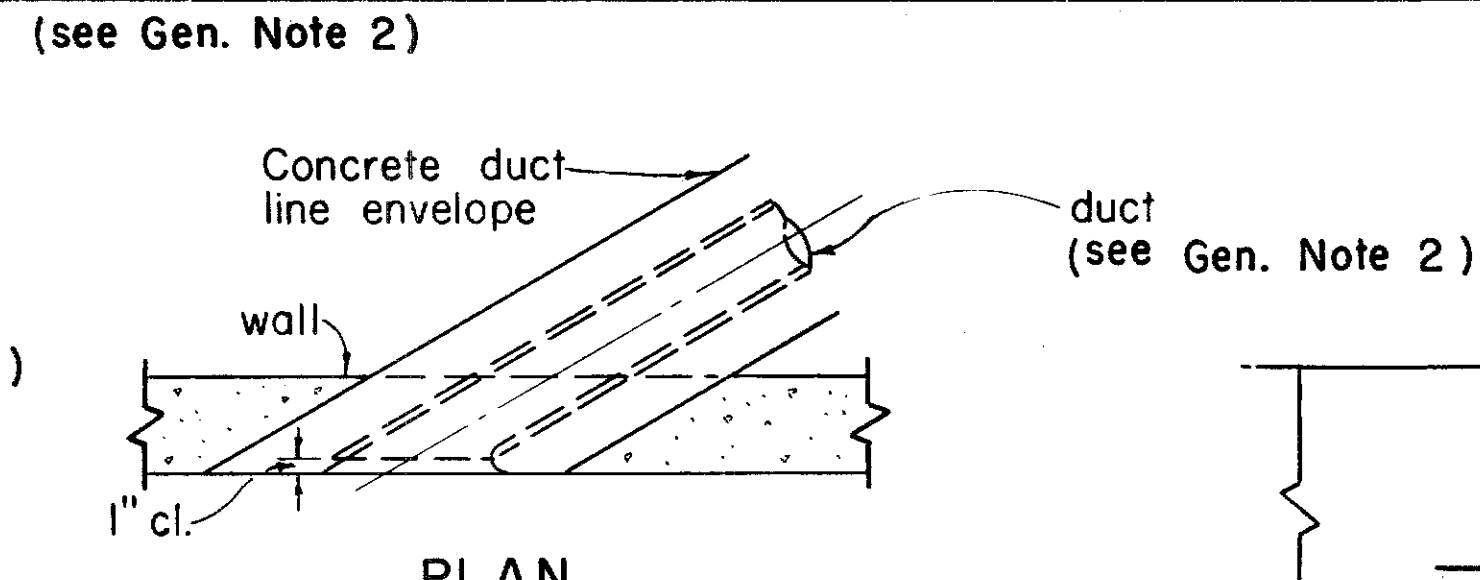


PLAN

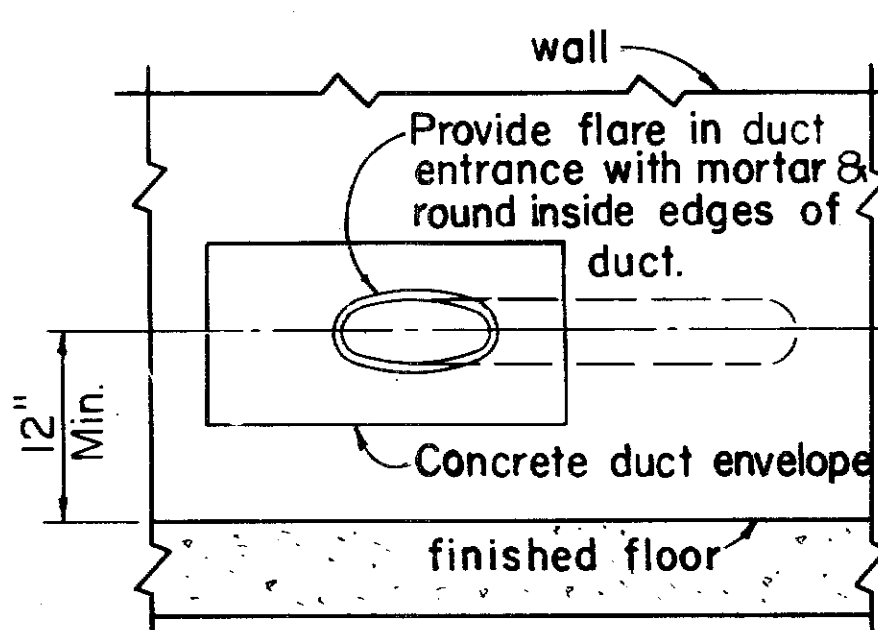


ELEVATION "B-B"
CORNER ENTRANCE

Scale: 1" = 1'-0"

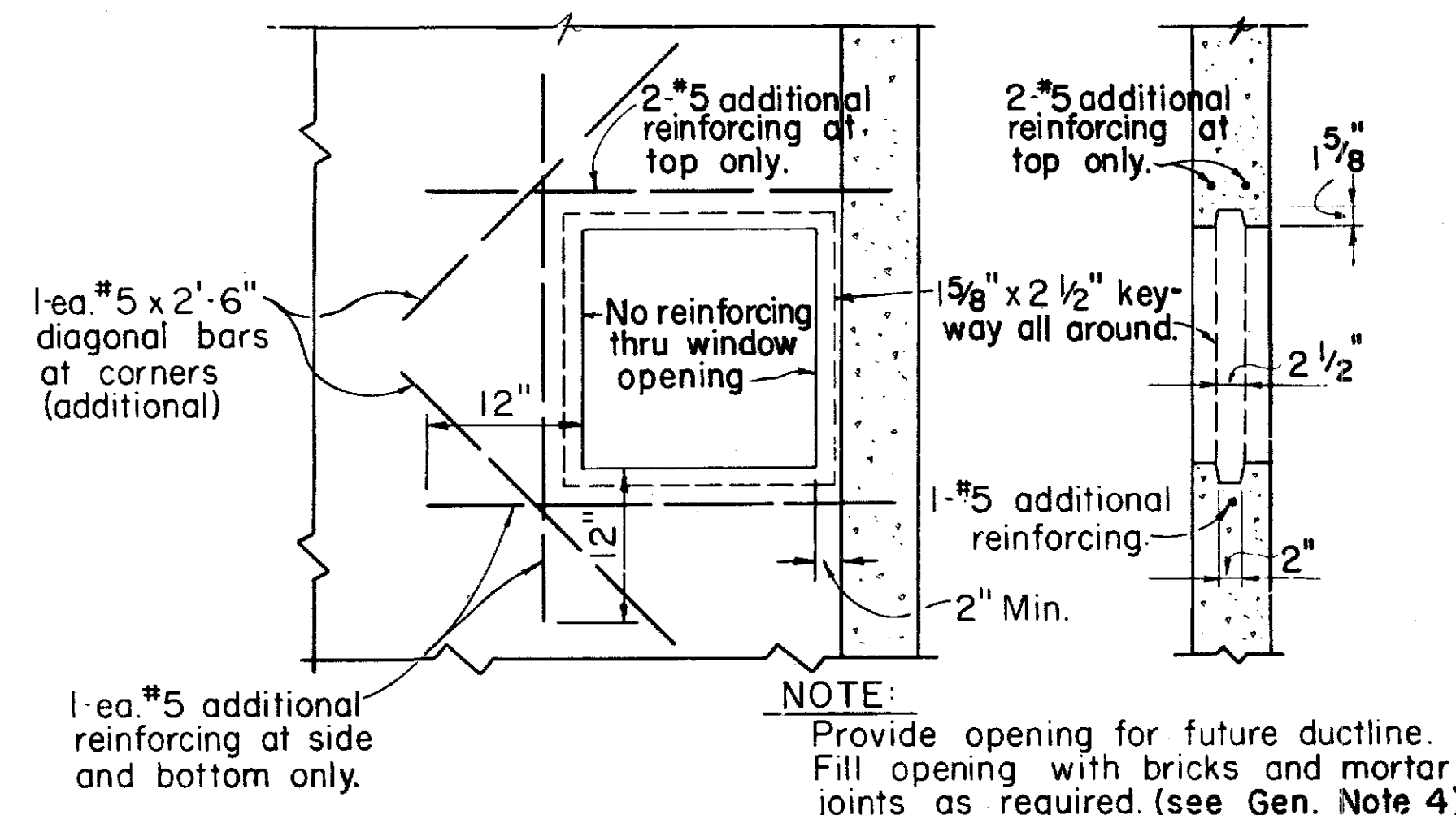


PLAN



ELEVATION
DIAGONAL ENTRANCE

Scale: 1" = 1'-0"

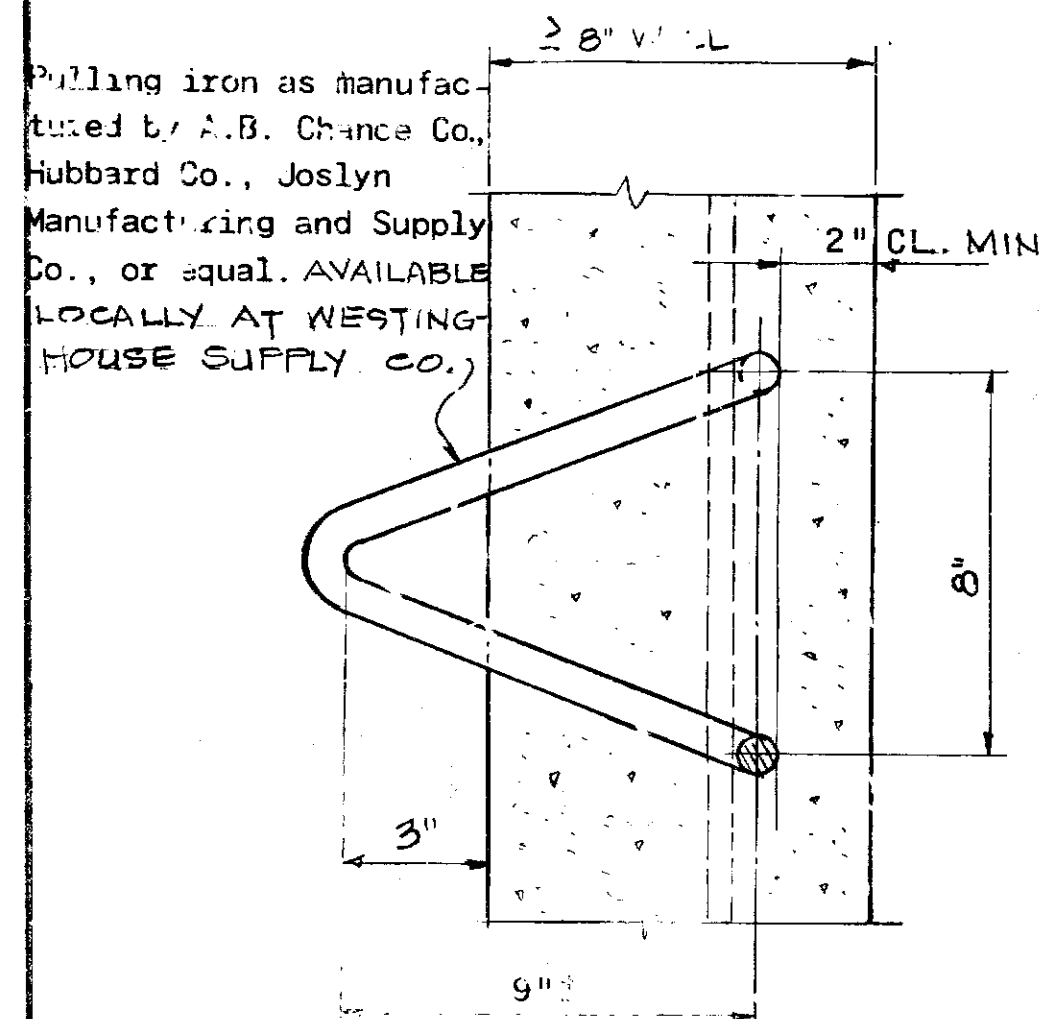


ELEVATION

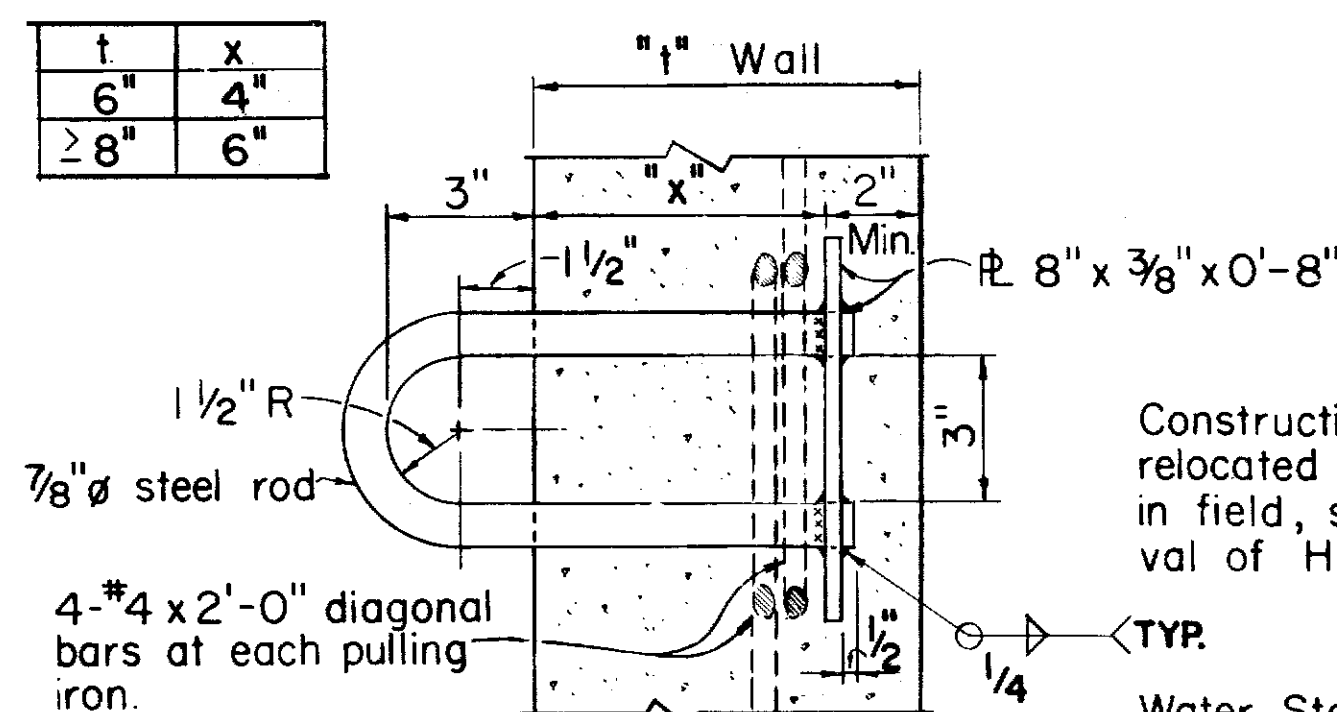
SECTION

KNOCKOUT FOR FUTURE DUCT LINE

Scale: 1" = 1'-0"



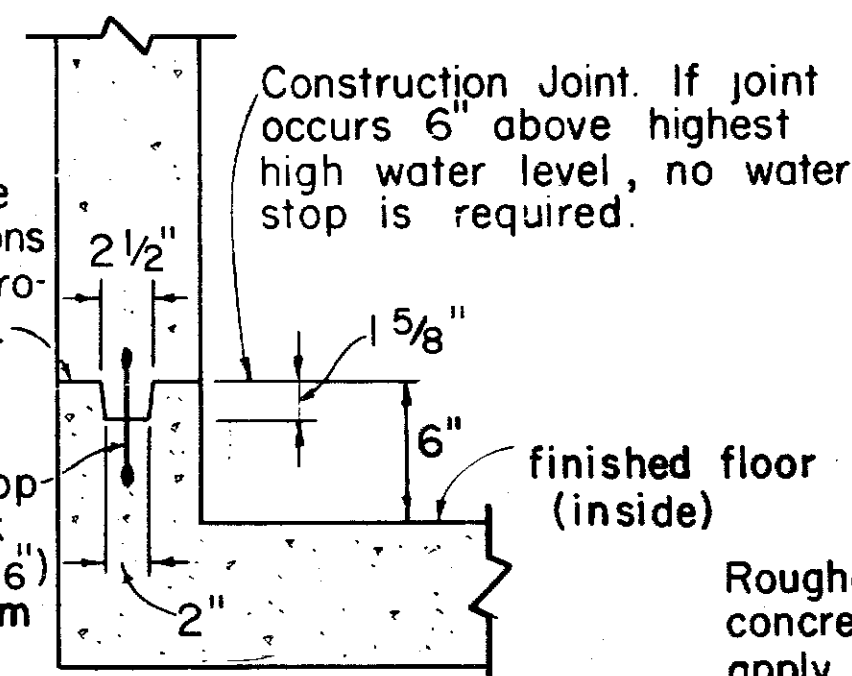
PLAN



SECTION

PULLING IRON FOR 6" & 8" WALL

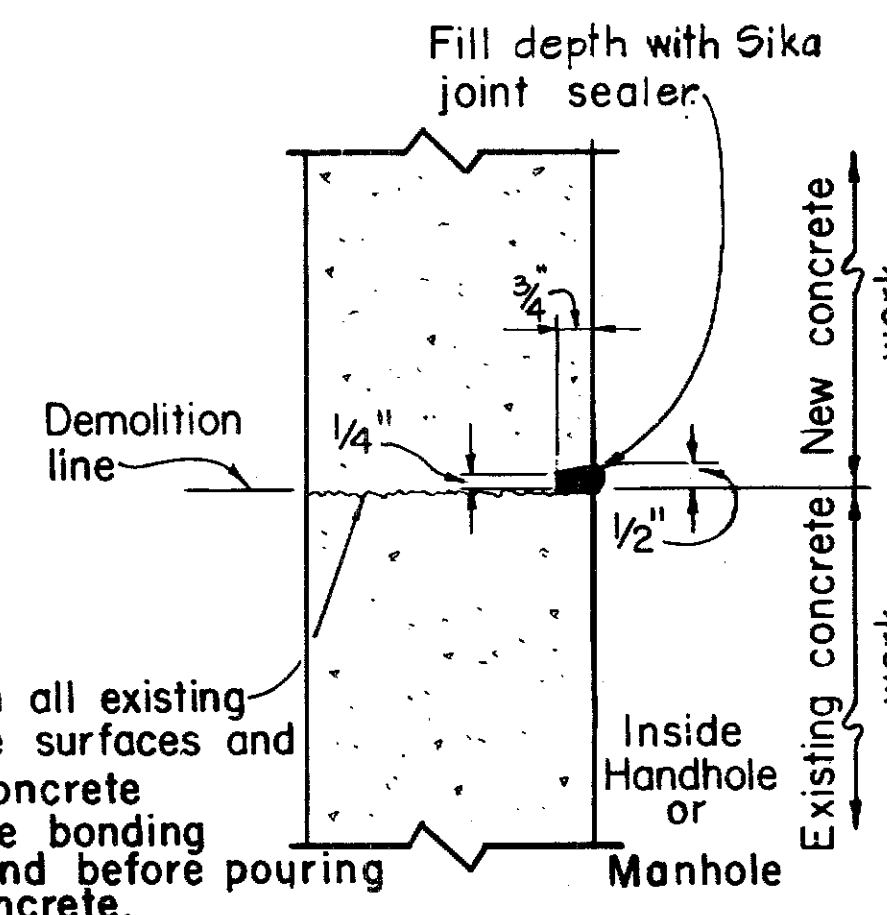
Scale: 3" = 1'-0"



SECTION

TYPICAL CONSTRUCTION JOINT

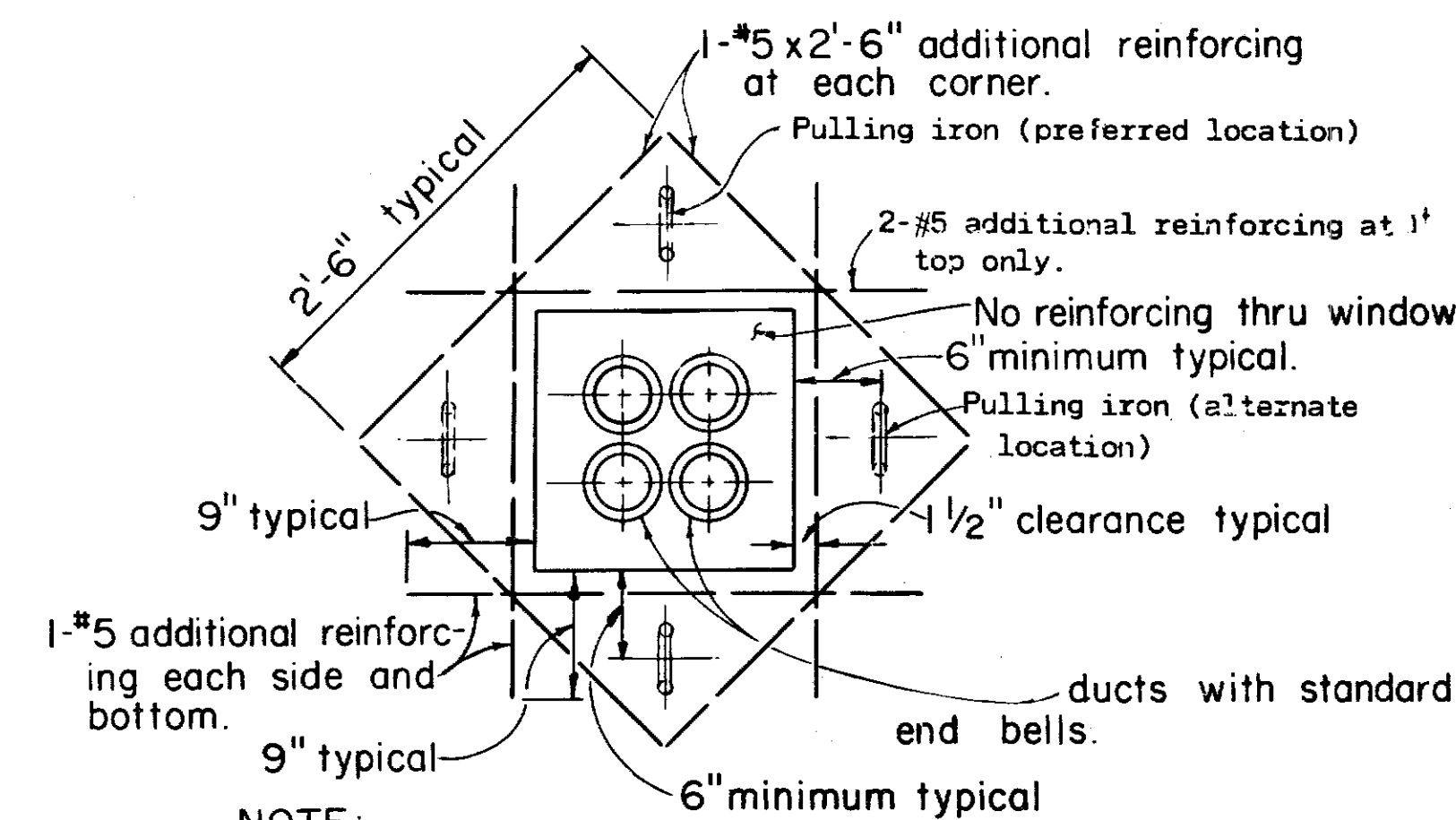
Scale: 1 1/2" = 1'-0"



SECTION

TYPICAL COLD JOINT

Scale: 3" = 1'-0"



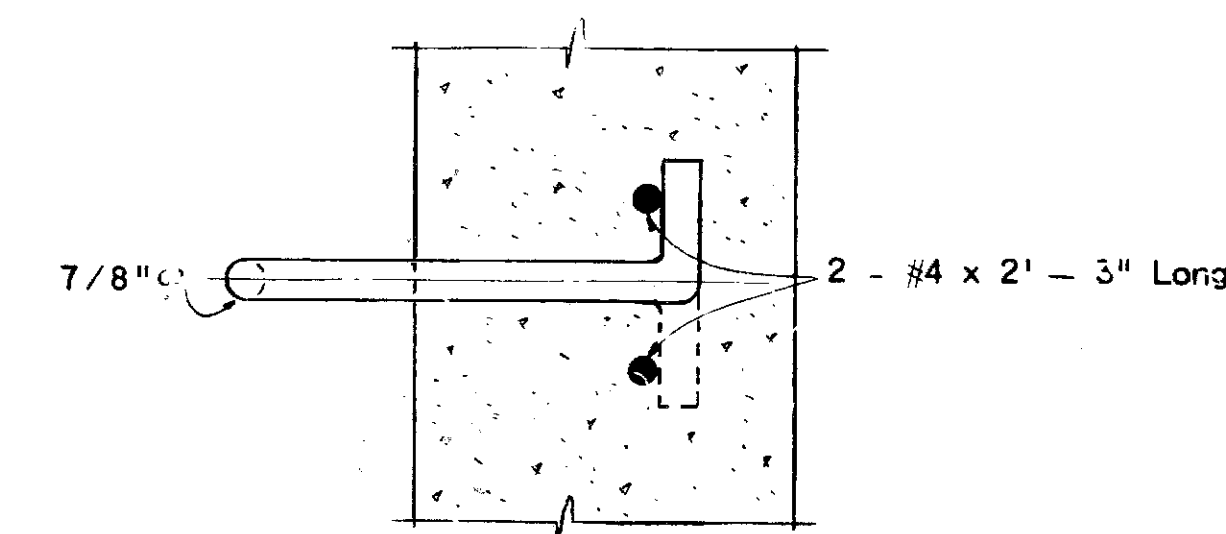
NOTE:

Generally 2 pulling irons are required and located on opposite wall of each duct window unless otherwise shown or noted. H.E.Co. Engineer shall determine number required.

ELEVATION

TYPICAL DUCT WINDOW

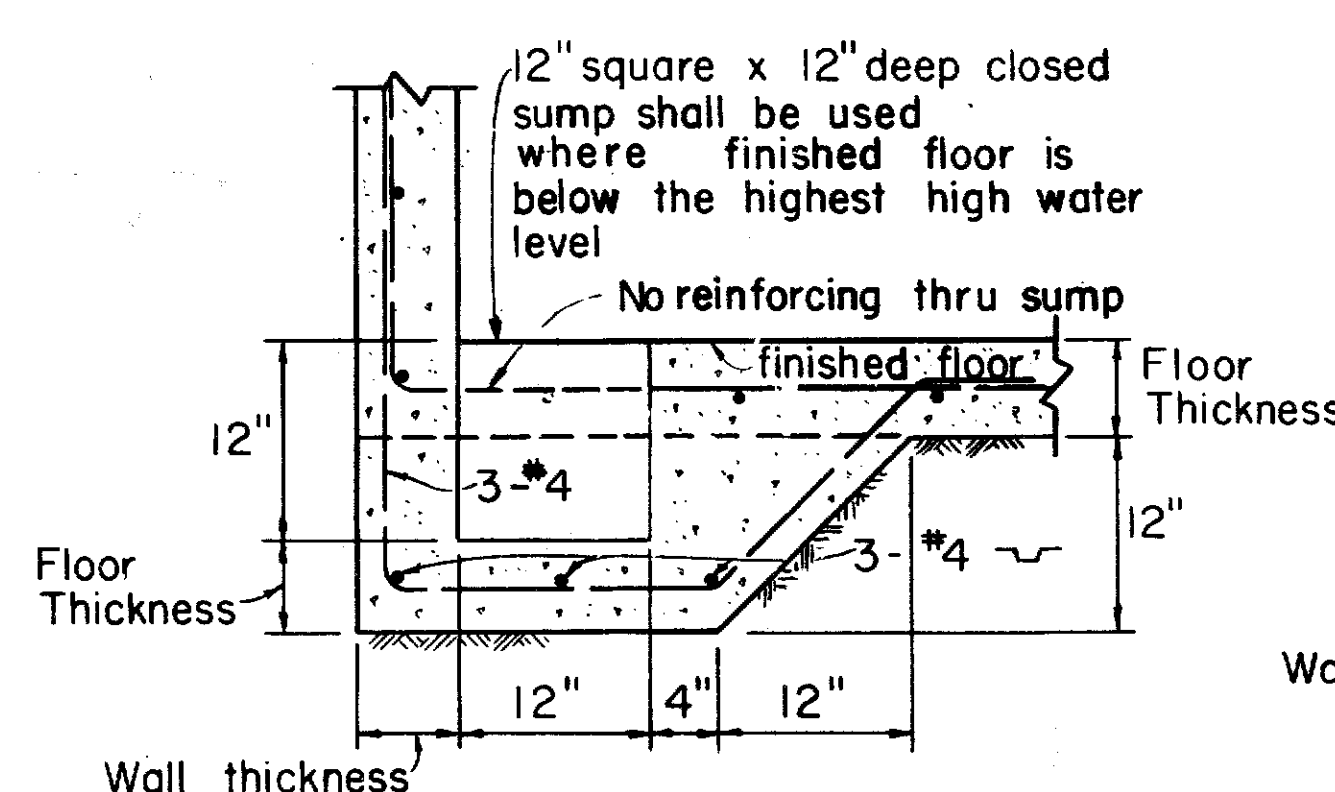
Scale: 1" = 1'-0"



SECTION

PULLING IRON FOR >= 8" WALL

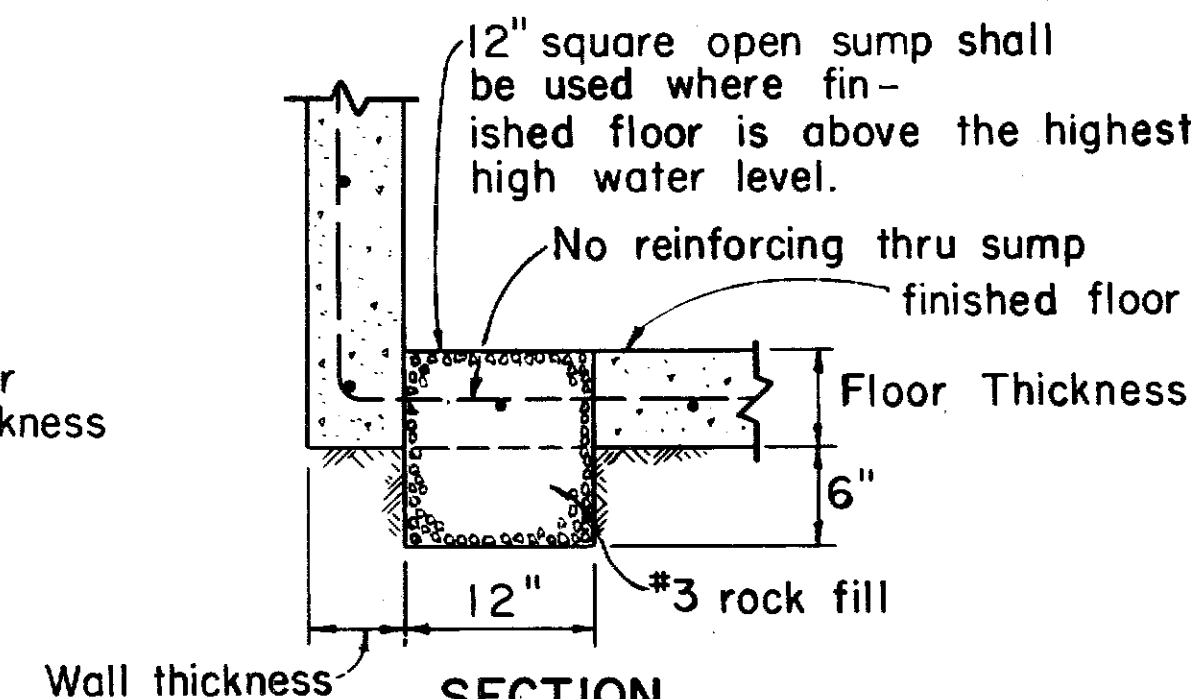
Scale: 3" = 1'-0"



SECTION

CLOSED SUMP

Scale: 1" = 1'-0"



SECTION

OPEN SUMP

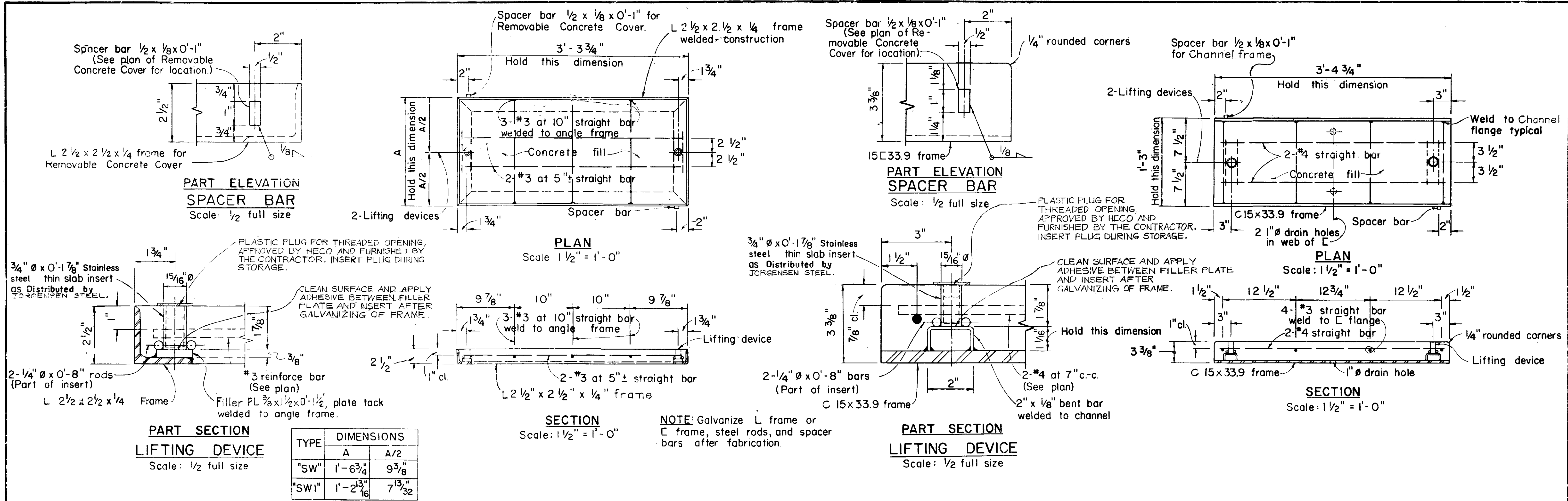
Scale: 1" = 1'-0"

KALANIANA'OLE HIGHWAY WIDENING PHASE I

3	7-11-81	REVISED PULLING IRON FOR 8" WALL DETAIL		gka	gka	gka
2	4-22-77	Removed "Brass Pulling Eye Insert" and added "Pulling Iron for 8" Wall", revised "Pulling Iron" title to "Pulling Iron for 6" & 8" Wall", and remove Pulling Eye Insert from General Note 5.		gka	gka	gka
1	1-21-76	REVISED TYP. COLD JOINT DETAIL		SA	SA	SA
0	8/20/75	P. SHANN		SA	SA	SA
NO.	DATE	REVISIONS		BY	CHK'D	APP'D

MISCELLANEOUS DETAILS						
HANDHOLES & MANHOLES						
UNDERGROUND STANDARDS						

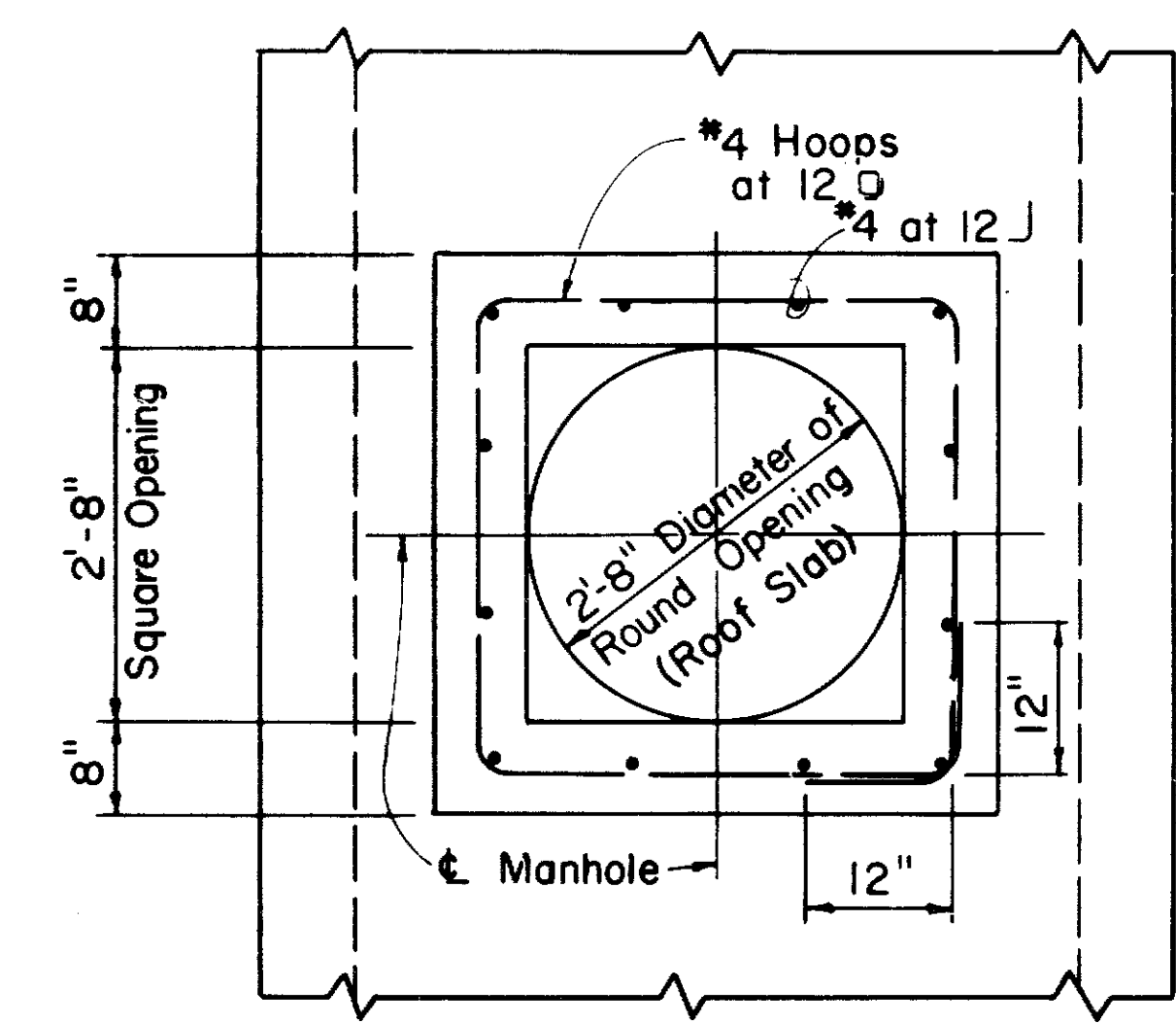
DESIGNED	gka	DRAWN	gka	DATE	5-12-76	SCALE	AS NOTED
CHECKED	gka	SCALE	AS NOTED	ENGINEERING DESIGN DEPARTMENT			
APPROVAL	A I Janso			HAWAIIAN ELECTRIC CO., INC.			
HKS Stewart				DRAWING NUMBER		REV	
				16688		3	
SH. 1 OF 2							



TYPE "SW" & "SWI" REMOVABLE CONCRETE COVER

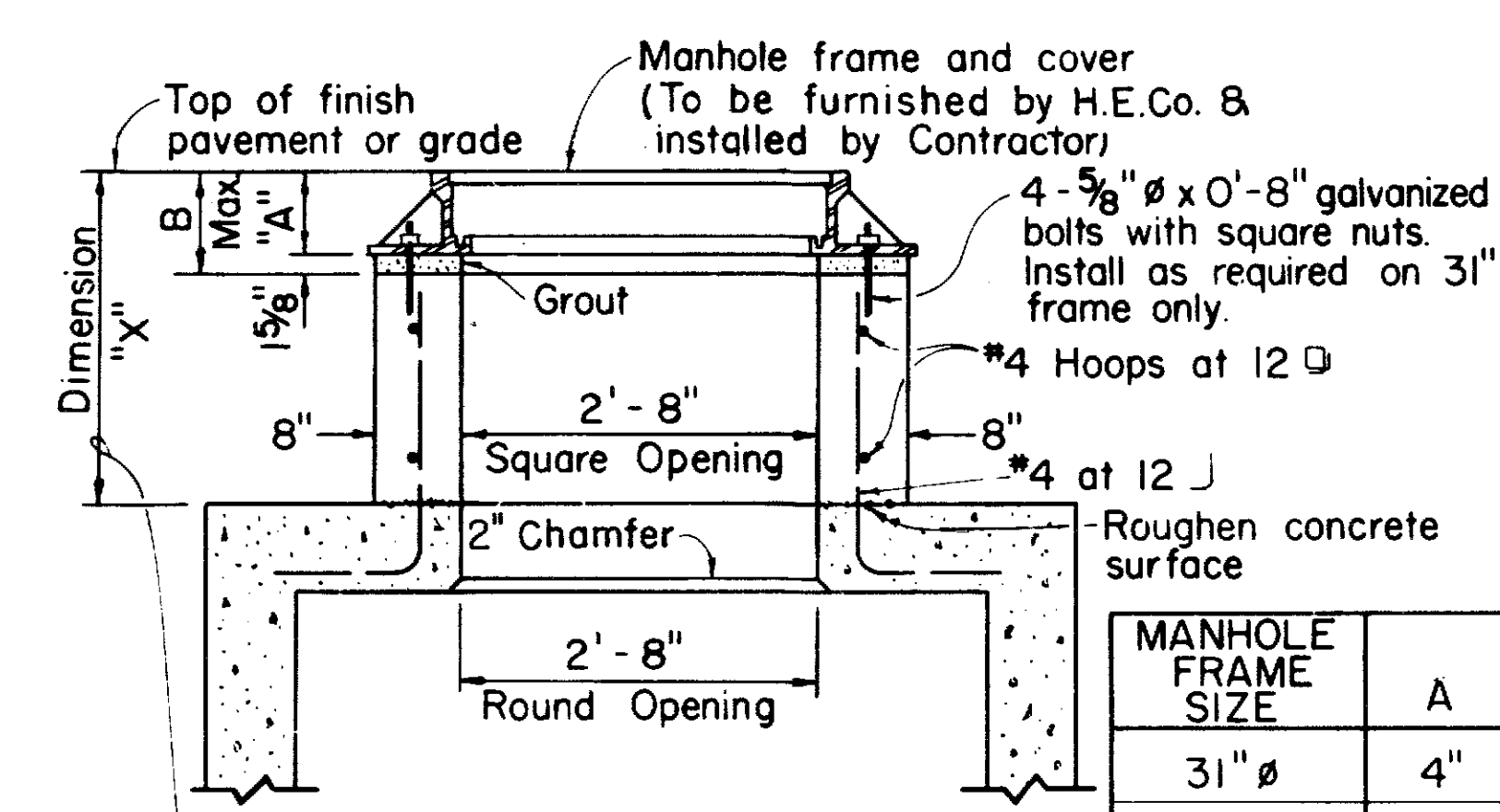
TYPE "TR" REMOVABLE CONCRETE COVER

(FOR REFERENCE ONLY)



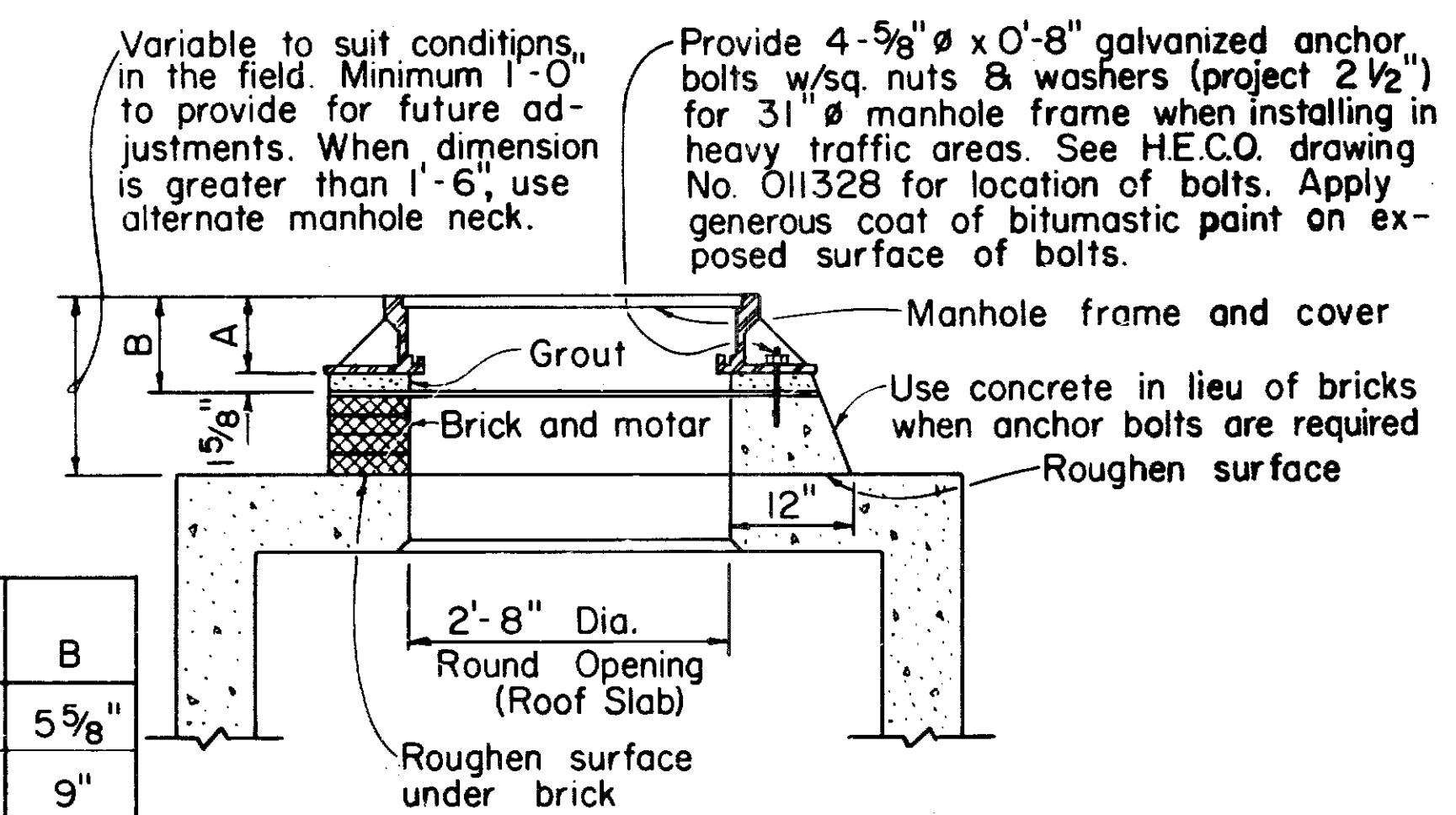
ALTERNATE MANHOLE NECK

Scale: 3/4" = 1' - 0"



MANHOLE FRAME SIZE	A	B
31" Ø	4"	5 5/8"
28" Ø	7 3/8"	9"

NOTE: Use alternate manhole neck only when dimension "X" is greater than 1'-6".



31" Ø & 28" Ø MANHOLE FRAME NECK DETAIL

Scale: 3/4" = 1' - 0"

NOTE: See table alternate manhole neck detail for dimension A and B.

NO.	DATE	REVISIONS	BY	CHK'D	APP'D
3	5-28-85	REVISED REFERENCE TO COVER	MM	ELC	AL
2	9-11-81	UPDATED DESIGNATION OF STEEL PARTS	SA	MM	AL
1	5-9-79	CHANGED THIN SLAB INSERT FROM CADMIUM PLATED TO STAINLESS STEEL	MM	ELC	AL
0	6-20-75	REDRAWN	SA	ELC	AL

MISCELLANEOUS DETAILS					
HANDHOLES & MANHOLES					
UNDERGROUND STANDARDS					
DESIGNED	RW	DRAWN	RG	DATE	5-14-75
CHECKED	ELC	NECH	ELC	SCALE	AS NOTED
APPROVAL	ENGINEERING DESIGN DEPARTMENT				
HAWAIIAN ELECTRIC CO., INC.					REV.
HONOLULU, HAWAII					16688
DRAWING NUMBER					3
SH. 2 OF 2					

KALANIANA'OLE HIGHWAY WIDENING PHASE I