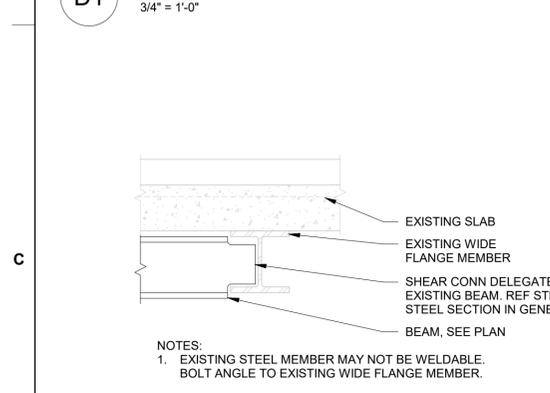
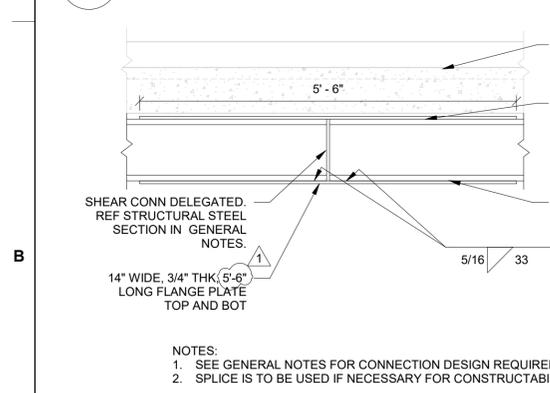


NOTES:  
 1. FILTER MATERIAL MUST SATISFY THE REQUIREMENTS OF AASHTO SIZE NO. 7.  
 2. PERMEABLE GEOTEXTILE FABRIC SHOULD HAVE AN EQUIVALENT OPENING SIZE NOT GREATER THAN THE NO. 70 U.S. STANDARD SIEVE SIZE.  
 3. SUBDRAINAGE PIPING MUST BE 4 INCH DIAMETER, SLOTTED, CORRUGATED POLYETHYLENE TUBING IN ACCORDANCE WITH ASTM F104 WITH A MAXIMUM 1/8 SLOT WIDTH.

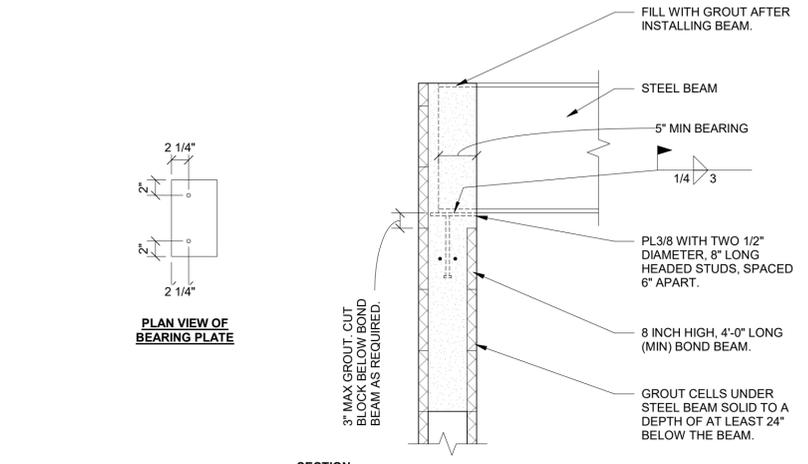
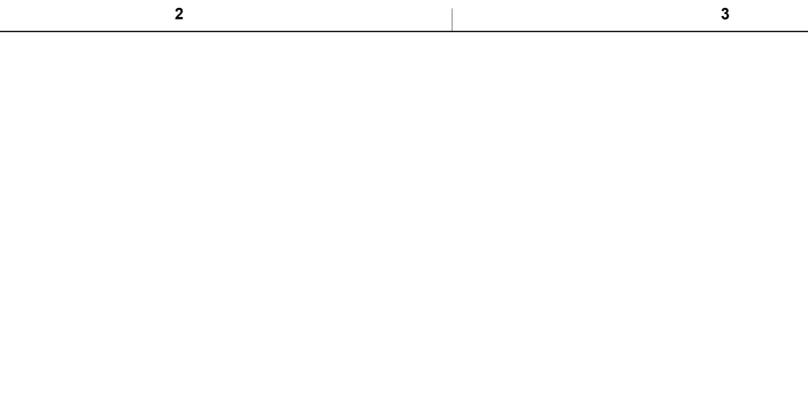
**D1 SLAB-ON-GRADE UNDERSLAB DRAINAGE**  
 3/4" = 1'-0"



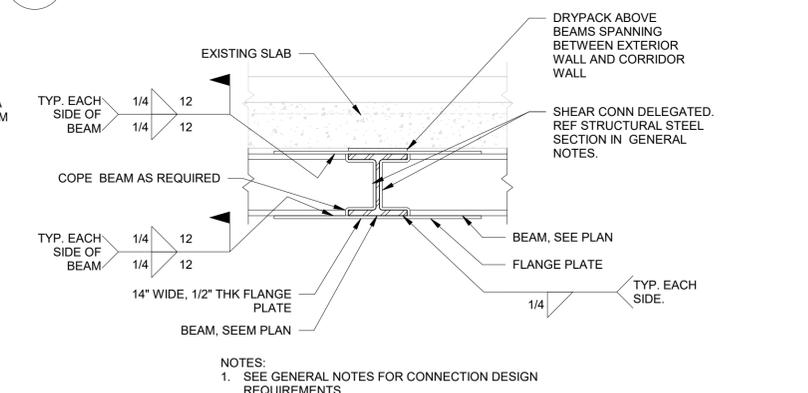
**C1 BEAM TO EXISTING GIRDER - TYPICAL**  
 3/4" = 1'-0"



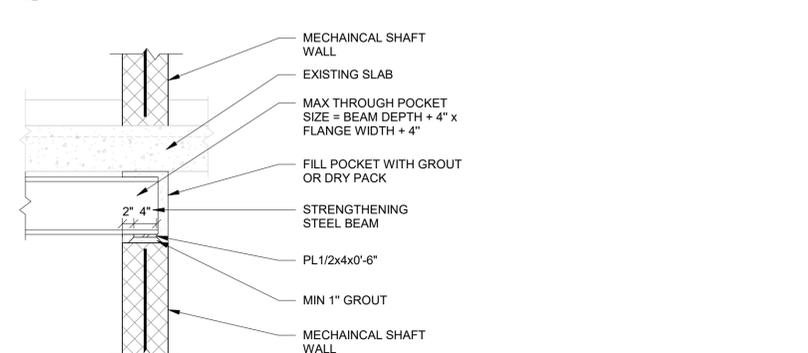
**B1 BEAM SPLICE - TYPICAL**  
 3/4" = 1'-0"



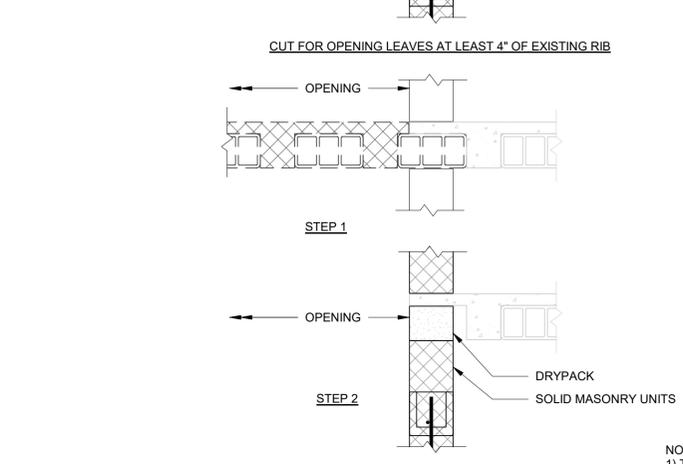
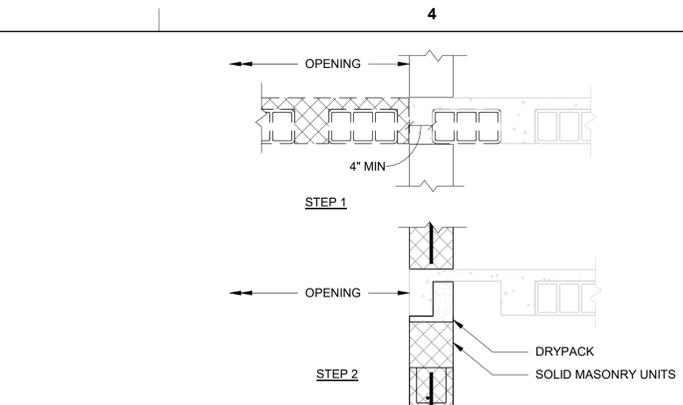
**C2 STEEL BEAM BEARING ON MASONRY - TYPICAL**  
 1" = 1'-0"



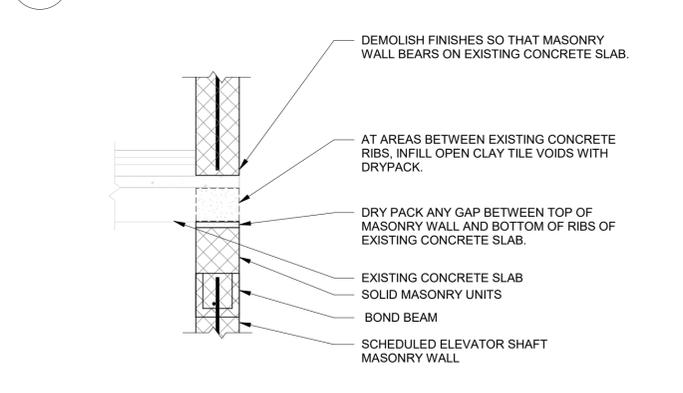
**B2 STEEL MOMENT CONNECTION - TYPICAL**  
 3/4" = 1'-0"



**A2 STEEL BEAM BEARING ON MECHANICAL SHAFT WALL**  
 3/4" = 1'-0"



**C3 SLAB OPENING - WALL PARALLEL TO SLAB**  
 3/4" = 1'-0"

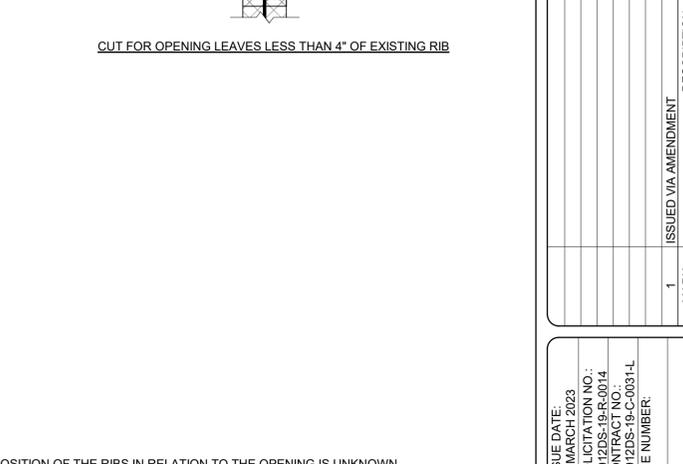
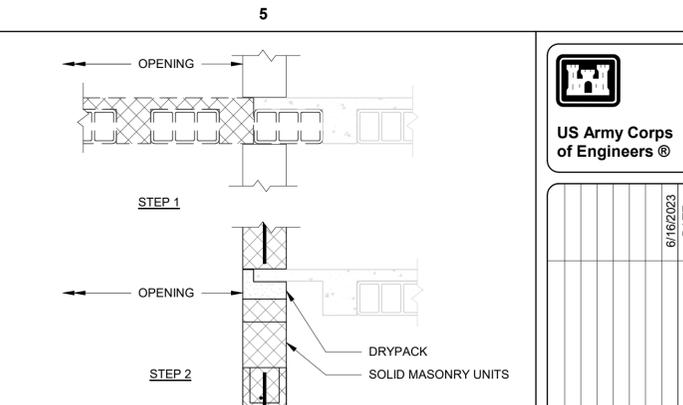


**B3 SLAB OPENING - WALL PERPENDICULAR TO SLAB**  
 3/4" = 1'-0"

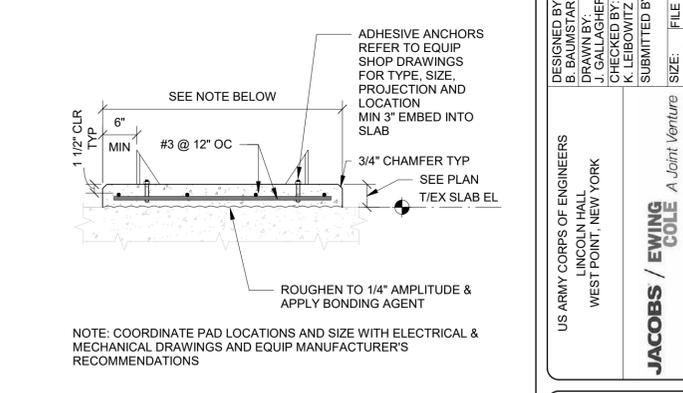
POST-INSTALLED ANCHOR SCHEDULE			
ANCHORING TO NORMAL CONCRETE			
ANCHOR TYPE BASIS OF DESIGN	ANCHOR DIAMETER	MIN EFFECTIVE EMBEDMENT, UON	REQUIRED SHEAR CAPACITY (KIP)
EXPANSION ANCHOR	1/2"	3 1/4"	6.9
	5/8"	4"	10.5
	3/4"	4 3/4"	13.9
ADHESIVE ANCHOR	1/2"	2 3/4"	5.3
	3/4"	4"	9.5
ANCHORING TO BRICK OR STONE MASONRY			
ANCHOR TYPE BASIS OF DESIGN	ANCHOR DIAMETER	MIN EFFECTIVE EMBEDMENT, UON	REQUIRED SHEAR CAPACITY (LBS)
ADHESIVE ANCHOR	5/8"	6"	1.2
	3/4"	6"	1.7

NOTES:  
 1. MINIMUM EFFECTIVE EMBEDMENT IS APPLIED TO POST INSTALLED ANCHORS UNLESS OTHERWISE NOTED IN THE DETAIL.  
 2. REQUIRED SHEAR CAPACITY IS AN UNFACTORED LOAD.

**A3 POST-INSTALLED ANCHOR SCHEDULE**  
 NTS



**B5 EQUIPMENT PAD**  
 NTS



**A5 TENSION DEVELOPMENT LENGTHS**  
 NTS

BAR SIZE	REBAR TENSION DEVELOPMENT LENGTHS (INCHES)	
	CASE 1	CASE 2
#3	17	25
#4	22	33
#5	28	42
#6	33	50
#7	48	72
#8	55	83
#9	62	93
#10	70	105
#11	78	116

NOTES:  
 1. CASE 1 IS DEFINED AS BARS WITH CLEAR SPACING OF AT LEAST 2 x db AND WITH CLEAR COVER AT LEAST db.  
 2. CASE 2 IS DEFINED AS BARS THAT DO NOT SATISFY THE REQUIREMENTS OF CASE 1.  
 3. FOR BARS CAST WITH 12" OR MORE OF FRESH CONCRETE BELOW, MULTIPLY THE VALUES BY 1.3.  
 4. FOR LAP SPLICES, MULTIPLY THE VALUES BY 1.3.  
 5. FOR LIGHTWEIGHT CONCRETE, MULTIPLY THE VALUES BY 1.34.

**US Army Corps of Engineers @**

ISSUE DATE: 01 MARCH 2023  
 SOLICITATION NO.: 697PAC-19-0014  
 CONTRACT NO.: W912DS-19-C-0031-L  
 FILE NUMBER:

DESIGNED BY: B. BAUNSTARK  
 DRAWN BY: J. CALLENDER  
 CHECKED BY: K. LEIBOWITZ  
 SUBMITTED BY:

ISSUED VIA AMENDMENT: 1  
 MARK

6/16/2023  
 DATE

DESCRIPTION

US ARMY CORPS OF ENGINEERS  
 LINCOLN HALL  
 WEST POINT, NEW YORK

JACOBS / EWING COLE  
 A Joint Venture

BUILDINGS 605/607 RENOVATION - LINCOLN HALL

TYPICAL DETAILS - DEVELOPMENT LENGTHS, POST-INSTALLED ANCHORS, STEEL BEAMS

SHEET ID  
**S-502**