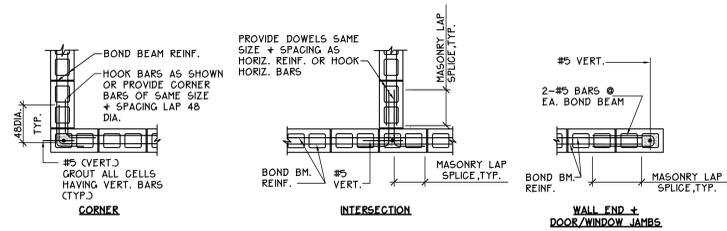


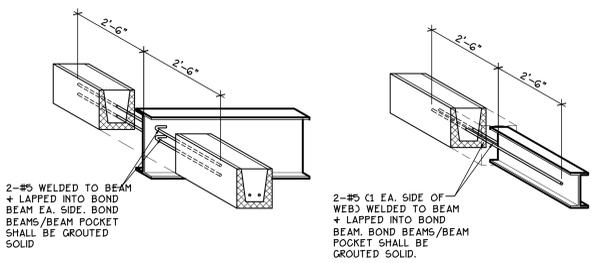
three eighths inch = one foot  
 one half inch = one foot  
 one quarter inch = one foot  
 one eighth inch = one foot



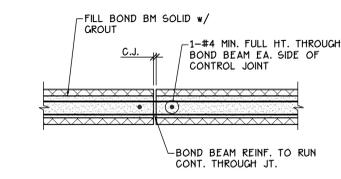
**NOTES:**  
 1. CORNERS AND INTERSECTIONS UNLESS OTHERWISE NOTED OR SPECIFIED, AT POINTS WHERE CONCRETE MASONRY WALLS MEET OR INTERSECT, LAY 50% OF UNITS IN MASONRY BOND WITH ALTERNATE UNITS HAVING A BEARING ON NOT LESS THAN 4 INCHES ON THE UNIT BELOW

2. DOWELS UNLESS OTHERWISE NOTED OR SPECIFIED, PROVIDE DOWELS FROM CONCRETE FOOTING OR WALL BELOW WITH SAME SIZE AND SPACING AS VERTICAL BARS AT LEVEL BELOW. LAP 48 BAR DIAMETERS MINIMUM UNO.

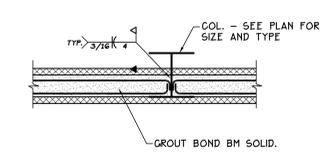
**DETAIL 1**  
 TYPICAL 8" MASONRY WALL DETAILS N.T.S.



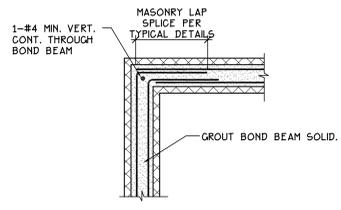
**DETAIL 2**  
 TYPICAL STEEL BEAM FRAMING INTO BOND BEAM  
 3/4" = 1'-0"



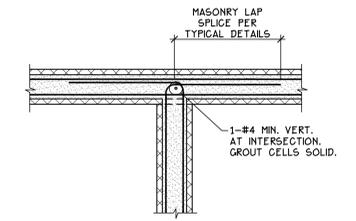
**TYPICAL BOND BEAM CONTROL JOINT**



**TYPICAL BOND BEAM AT COLUMN**

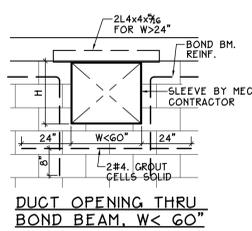


**TYPICAL BOND BEAM CORNER**

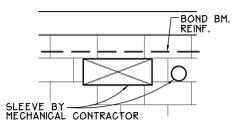


**TYPICAL BOND BEAM INTERSECTION**

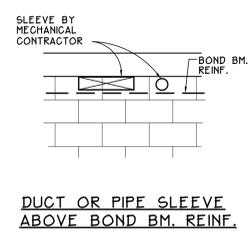
**DETAIL 3**  
 TYPICAL BOND BEAM DETAILS  
 3/4" = 1'-0"



**DUCT OPENING THRU BOND BEAM, W < 60"**



**DUCT OPENING BELOW BOND BEAM, W < 30"**

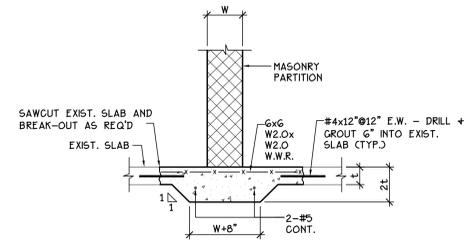


**DUCT OR PIPE SLEEVE ABOVE BOND BEAM REINF.**

**PIPE + DUCT PENETRATIONS THRU MASONRY WALLS**

**NOTE:**  
 1. PROVIDE 12" OF MASONRY BETWEEN ADJACENT DUCT PENETRATIONS  
 2. MECHANICAL OPENINGS IN MASONRY WALLS LARGER THAN 60" NOT SHOWN ON THE STRUCTURAL DRAWINGS, SHALL NOT BE PLACED WITHOUT WRITTEN PERMISSION/FRAMING RECOMMENDATIONS FROM THE PROFESSIONAL NOT SHOWN ON THE STRUCTURAL DRAWINGS.

**DETAIL 4**  
 TYPICAL BEAM BEARING ON MASONRY WALL  
 3/4" = 1'-0"



**NOTES:**  
 1. CONTRACTOR FIELD VERIFY EXISTING SLAB THICKNESS "L".

**SECTION 5**  
 THICKENED SLAB AT MASONRY PARTITION AT EXISTING SLAB  
 3/4" = 1'-0"

**MASONRY LAP SPLICE LENGTH (in.)**  
 Fy = 60,000 psi IBC 2107

| BAR SIZE | NOMINAL CMU SIZE |      |      |      |      |      |      |      |
|----------|------------------|------|------|------|------|------|------|------|
|          | 6"               |      | 8"   |      | 10"  |      | 12"  |      |
|          | CEN.             | IF.  | CEN. | IF.  | CEN. | IF.  | CEN. | IF.  |
| 3        | 16               | 19   | 16   | 19   | 16   | 19   | 16   | 19   |
| 4        | 21               | 34   | 21   | 34   | 21   | 34   | 21   | 34   |
| 5        | 32               | 53   | 26   | 53   | 16   | 53   | 26   | 53   |
| 6        | M.S.             | M.S. | 43   | M.S. | 40   | M.S. | 40   | M.S. |
| 7        | N/A              | N/A  | M.S. | M.S. | M.S. | M.S. | M.S. | M.S. |
| 8        | N/A              | N/A  | M.S. | M.S. | M.S. | M.S. | M.S. | M.S. |
| 9        | N/A              | N/A  | N/A  | N/A  | M.S. | M.S. | M.S. | M.S. |

**NOTES:**  
 CEN. = BARS CENTERED IN THE WALL.  
 IF. = BARS ON INSIDE OR OUTSIDE FACE OF WALL.  
 M.S. = MECHANICAL SPLICE.

1. MECHANICAL SPLICES MAY BE SUBSTITUTED FOR THE ABOVE, PROVIDED BARS ARE CONNECTED TO DEVELOP TENSION OR COMPRESSION, AS REQUIRED, AT LEAST 125% OF THE SPECIFIED YIELD STRENGTH.

2. MASONRY LAP SPLICE LENGTHS INDICATED IN THE SCHEDULE ARE BASED ON THE FOLLOWING:  
 A. 2001 INTERNATIONAL BUILDING CODE.  
 B. ACI 530 "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES".  
 C. ASTM C-90 CONCRETE MASONRY DIMENSIONS, MINIMUM FACE SHELL, AND MINIMUM WEB THICKNESS.  
 D. MAXIMUM OF ONE BAR PER CELL, AND CELLS GROUTED AT REINFORCEMENT LOCATIONS ONLY.

3. COMPLY WITH ACI 530 "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" FOR REINFORCING PLACEMENT, COVER, AND GROUTING REQUIREMENTS.

4. LAP LENGTH SHALL BE BASED ON THE LARGER BAR DIAMETER BEING LAPPED.

**NON LOAD-BEARING WALL MASONRY REINFORCING SCHEDULE**

| HEIGHT           | THICKNESS | REINFORCING |                   |                  |  | REMARKS |
|------------------|-----------|-------------|-------------------|------------------|--|---------|
|                  |           | INTERIOR    | ZONE 4 (TYP WALL) | ZONE 5 (CORNERS) |  |         |
| < 9 ft.          | 6"        | #4 @ 48"    | NOT PERMITTED     | NOT PERMITTED    |  |         |
|                  | 8"        | NONE REQ'D  | #4 @ 48"          | #4 @ 48"         |  |         |
|                  | 12"       | NONE REQ'D  | #4 @ 48"          | #4 @ 48"         |  |         |
| 9 ft. to 12 ft.  | 6"        | #4 @ 48"    | NOT PERMITTED     | NOT PERMITTED    |  |         |
|                  | 8"        | #4 @ 48"    | #4 @ 48"          | #4 @ 32"         |  |         |
| 12 ft. to 16 ft. | 6"        | #4 @ 24"    | NOT PERMITTED     | NOT PERMITTED    |  |         |
|                  | 8"        | #5 @ 48"    | #5 @ 32"          | #5 @ 24"         |  |         |
|                  | 12"       | #4 @ 48"    | #4 @ 48"          | #4 @ 32"         |  |         |
| 16 ft. to 20 ft. | 8"        | #4 @ 24"    | NOT PERMITTED     | NOT PERMITTED    |  |         |
|                  | 12"       | #5 @ 48"    | #5 @ 48"          | #5 @ 32"         |  |         |
| 20 ft. to 24 ft. | 8"        | #5 @ 24"    | NOT PERMITTED     | NOT PERMITTED    |  |         |
|                  | 12"       | #4 @ 24"    | #5 @ 24"          | #5 @ 16"         |  |         |

**NOTES:**  
 1. PROVIDE REINF. IN ALL MASONRY WALLS PER ABOVE SCHEDULE, UNLESS NOTED OTHERWISE IN PLAN OR SECTION. REINFORCING NOTED ON PLANS IS IN ADDITION TO MASONRY REINFORCING PER THE SCHEDULE UNLESS SPECIFICALLY NOTED OTHERWISE.  
 2. PROVIDE DOWELS TO FOOTING/FOUN. WALL OF SAME SIZE AND SPACING AS VERT. REINF. REFER TO "MASONRY LAP SPLICE LENGTH" SCHEDULE FOR LAP SPLICES.  
 3. REFER TO TYPICAL DETAILS FOR ADDITIONAL REINFORCING REQUIREMENTS, I.E. JAMB REINFORCING ADJACENT TO OPENINGS IN WALLS, ADDITIONAL CORNER REINFORCING, ETC.  
 4. GROUT CELLS WITH REINFORCING SOLID.  
 5. PROVIDE LAPS IN VERTICAL REINFORCING AS REQ'D. REFER TO "MASONRY LAP SPLICE LENGTH" SCHEDULE FOR REQ'D SPLICE LENGTH.  
 6. ALL REINFORCING INDICATED IS TO BE CENTERED IN MASONRY WALL UNLESS NOTED OTHERWISE.  
 7. HEIGHT OF MASONRY IN TABLE REFERS TO THE VERTICAL CENTER TO CENTER DIMENSION BETWEEN LATERAL SUPPORTS FOR THE MASONRY. REFER TO THE PLANS + SECTIONS FOR ADDITIONAL INFORMATION.  
 8. ZONE 4 AND ZONE 5 NOTED IN SCHEDULE REFER TO INTERIOR ZONE AND END ZONES OF EXTERIOR WALLS RESPECTIVELY AS DEFINED BY THE BUILDING CODE. SEE GENERAL NOTES FOR END ZONES DIMENSIONS. ZONE 5 EXTENDS 15 FEET MINIMUM FROM BUILDING CORNERS, TYP.

**FULLY SPRINKLERED BID DOCUMENTS**

|   |  |   |   |  |  |                                   |
|---|--|---|---|--|--|-----------------------------------|
| <p><b>CONSULTANTS:</b></p> <p>HOPE FURKER ASSOCIATES, INC.<br/>         Structural Design and Consulting for Architectural Projects<br/>         400 Commonwealth Blvd., Suite 100, Pittsburgh, PA 15222<br/>         412.287.7333 FAX: 412.287.7334<br/>         www.hfassoc.com</p> | <p><b>ARCHITECTS/ENGINEERS:</b></p> <p>A E works<br/>         6587 HAMILTON AVENUE<br/>         PITTSBURGH, PA 15206<br/>         PH: 412.287.7333 FAX: 412.287.7334<br/>         www.ae-works.com</p> | <p>Drawing Title<br/> <b>STRUCTURAL CMU DETAILS</b></p> | <p>Project Title<br/> <b>BUILDING 9 - SECOND FLOOR RENOVATION</b></p>         | <p>Project Number<br/> <b>542-13-105</b></p> | <p><b>Office of Construction and Facilities Management</b><br/>         Department of Veterans Affairs</p> |                                   |
|   |  | <p>Approved: Project Director</p>                       | <p>Location: 1400 Blackhorse Hill Road<br/>         Coatesville, PA 19320</p> | <p>Drawing Number<br/> <b>S402</b></p>       |  | <p>Date<br/>         05/12/14</p> |