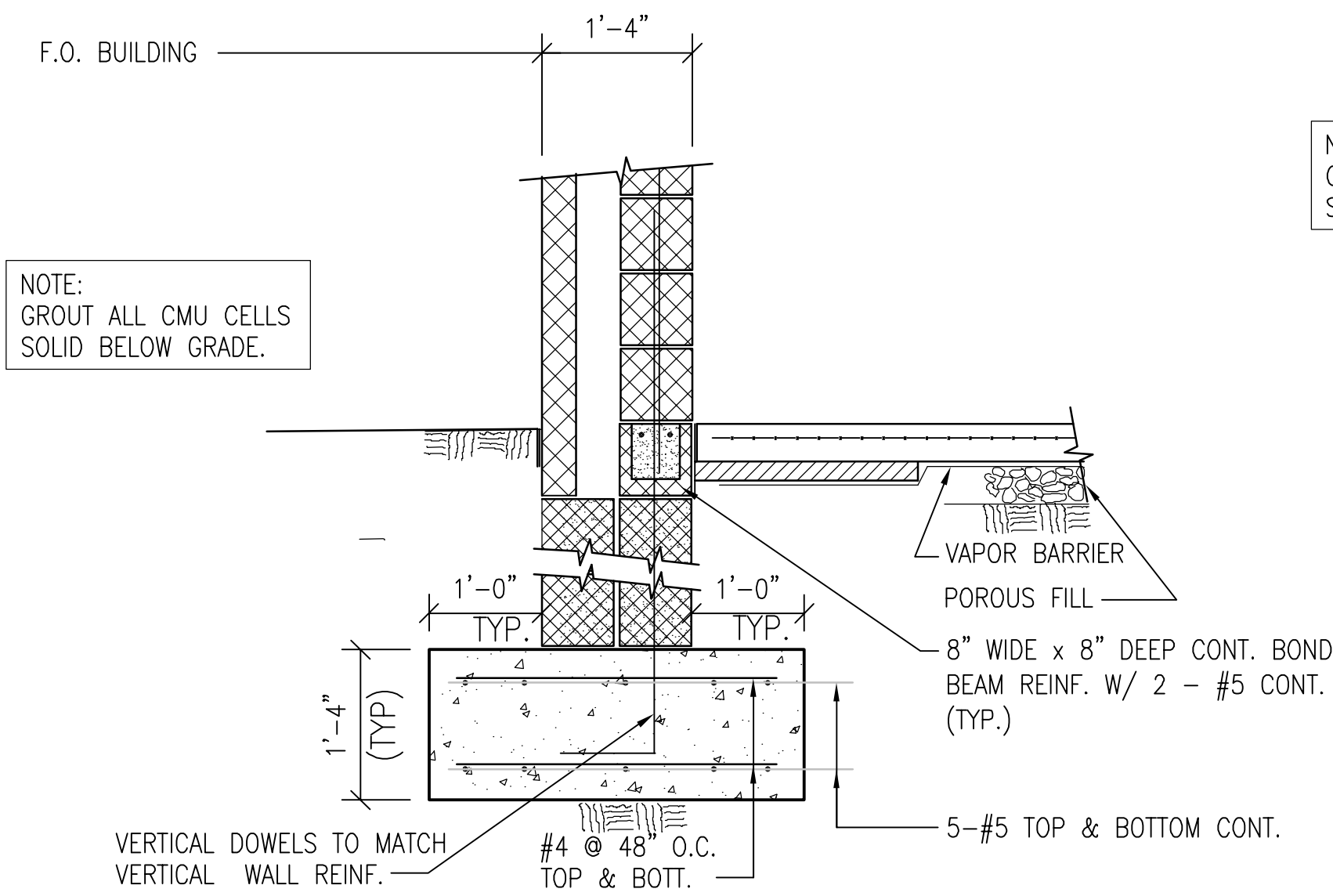


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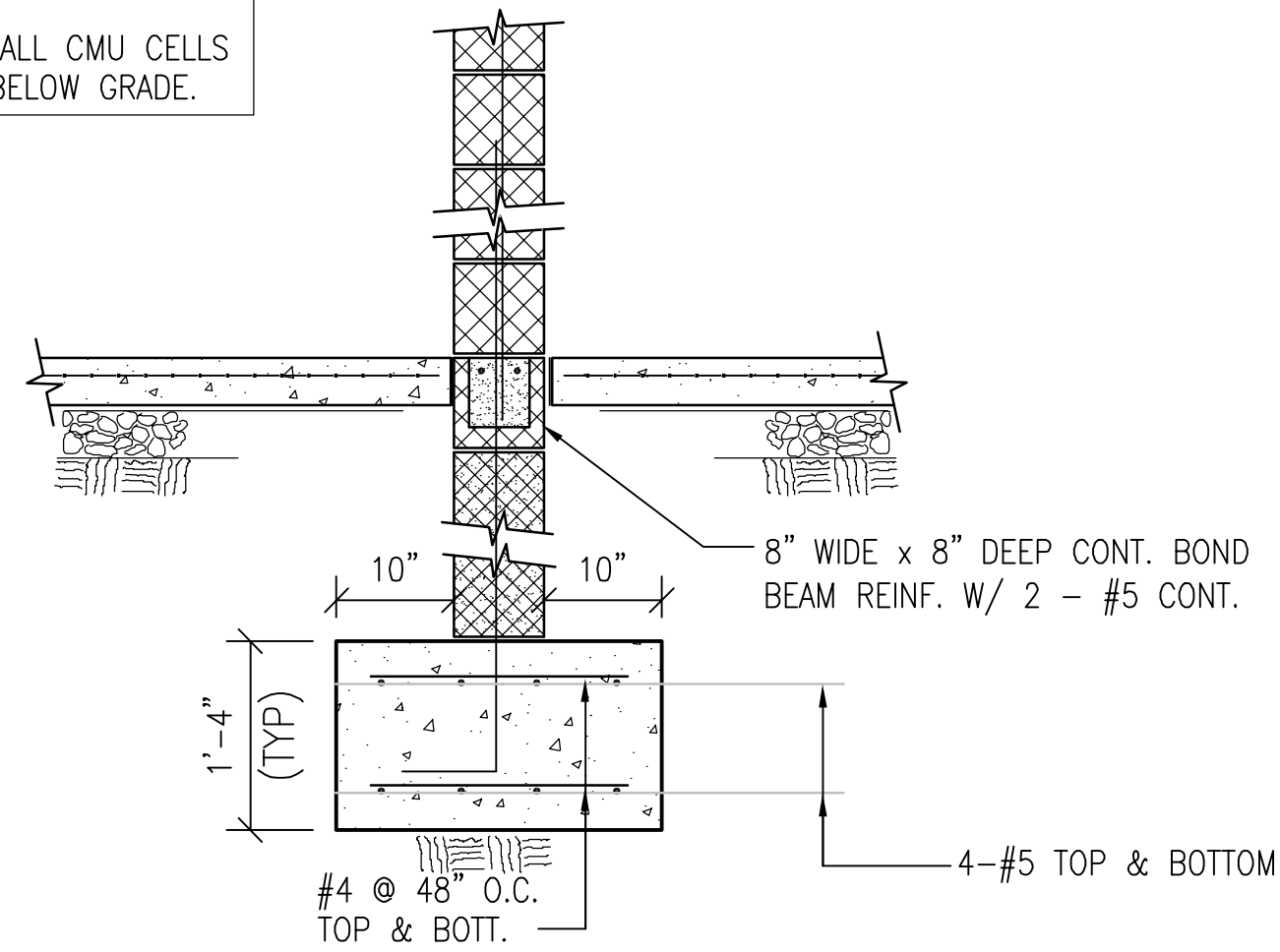


**SECTION - EXT. WALL**

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

A3

NOTE: GROUT ALL CMU CELLS SOLID BELOW GRADE.



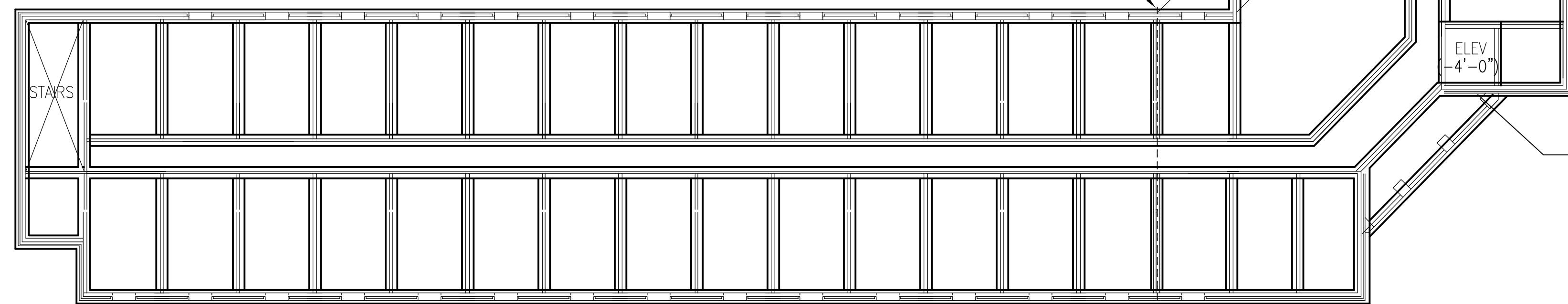
**SECTION - INT. WALL**

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

B3

INTERIOR WALL REINFORCEMENT: #4 @ 48" O.C. (TYPICAL UNLESS OTHERWISE NOTED)

EXTERIOR WALL REINFORCEMENT:  
FOUNDATION - 3RD FLOOR: #5 @ 32" O.C.  
3RD FLOOR - ROOF: #5 @ 48" O.C.



**FOUNDATION PLAN**

1/16" = 1'-0"

**FOUNDATION PLAN:**

- UNLESS OTHERWISE NOTED, PROVIDE 4-INCH SLAB ON GRADE ON 10 MIL VAPOR BARRIER ON 4" POROUS FILL. REINFORCE SLAB WITH 6x6-W2.9xW2.9 W.W.F. LOCATED 1" CLEAR FROM TOP OF SLAB. (PROVIDE 6-INCH SLAB IN MECHANICAL ROOM)
- WHERE GRADE ADJACENT TO BUILDING IS WITHIN 8" OF FINISHED FLOOR, TOP OF FOOTINGS SHALL BE (-1'-4") BELOW FINISHED FLOOR.
- WHERE GRADE ADJACENT TO BUILDING IS BETWEEN 8" AND 16" BELOW FINISHED FLOOR, TOP OF FOOTINGS SHALL BE (-2'-0") BELOW FINISHED FLOOR.

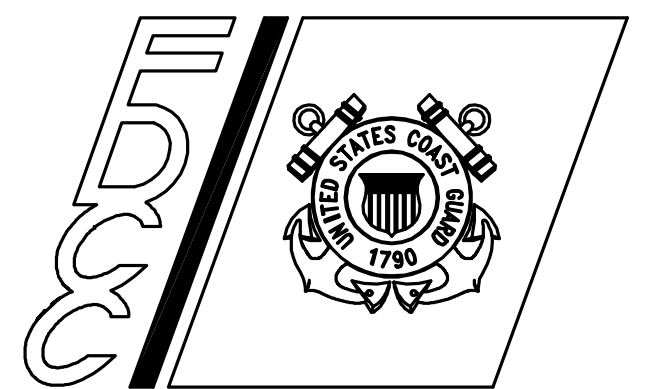
**CONSULTANTS**

**WALLER TODD & SADLER ARCHITECTS**  
1909 CYPRESS AVENUE VIRGINIA BEACH, VA 23451 (757) 417-0140

**NRW ENGINEERING, P.C.**  
748 Lord Dunmore Dr, #101 Virginia Beach, VA 23464 tel 757-474-0612

5-17-2010

**U. S. COAST GUARD FACILITIES DESIGN & CONSTRUCTION CENTER**



5505 ROBIN HOOD ROAD SUITE K NORFOLK, VIRGINIA 23513-2431

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO: 1018
CAD FILE NAME:
DESIGNED BY: DPI
DRAWN BY: DRP
EDITED BY:
CHECKED BY:

SCALE: AS NOTED	PLOT SCALE: 1 : 1
SHEET TITLE	

DB FOR REPLACE THRUN HALL BARRACKS & GALLEY USCG BASE SUPPORT UNIT (BSU) ELIZABETH CITY NORTH CAROLINA

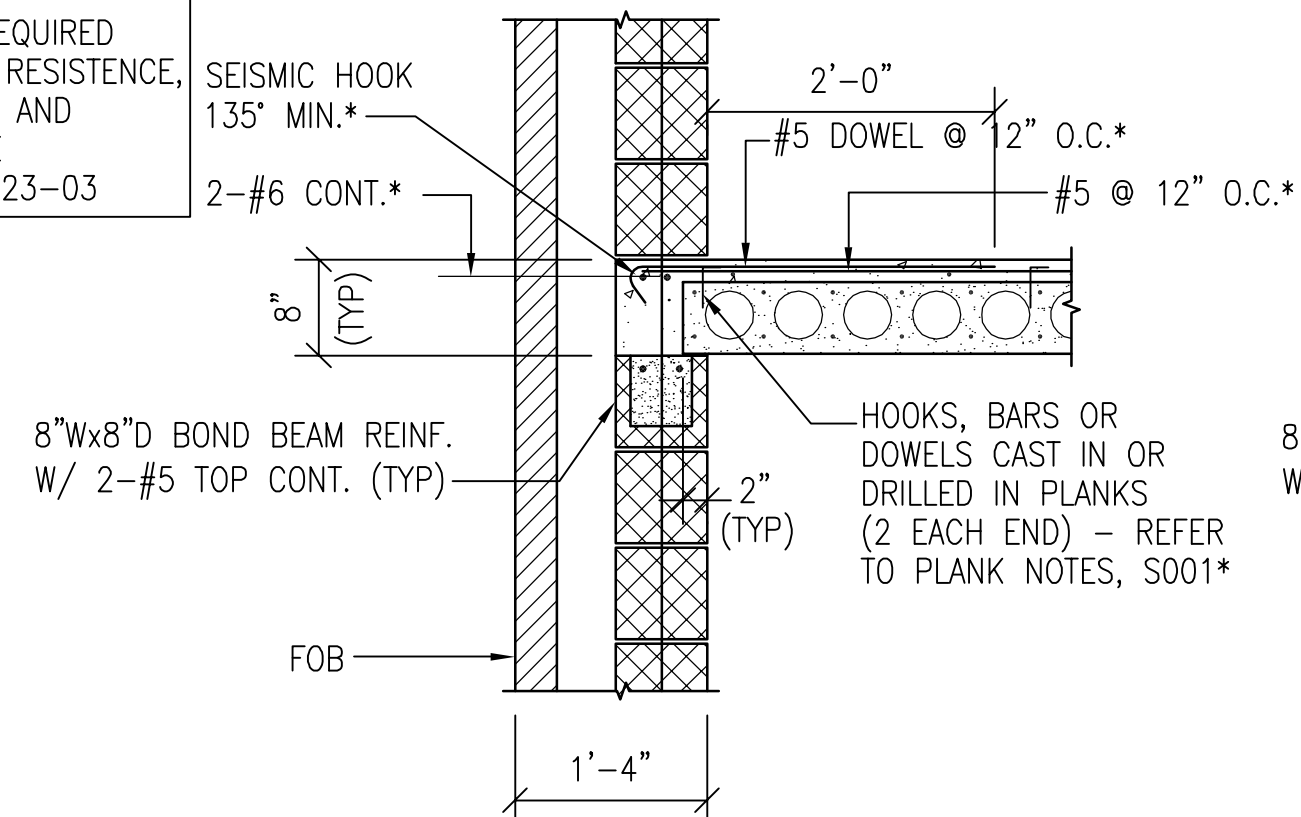
**STRUCTURAL FOUNDATION PLAN & SECTIONS**

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

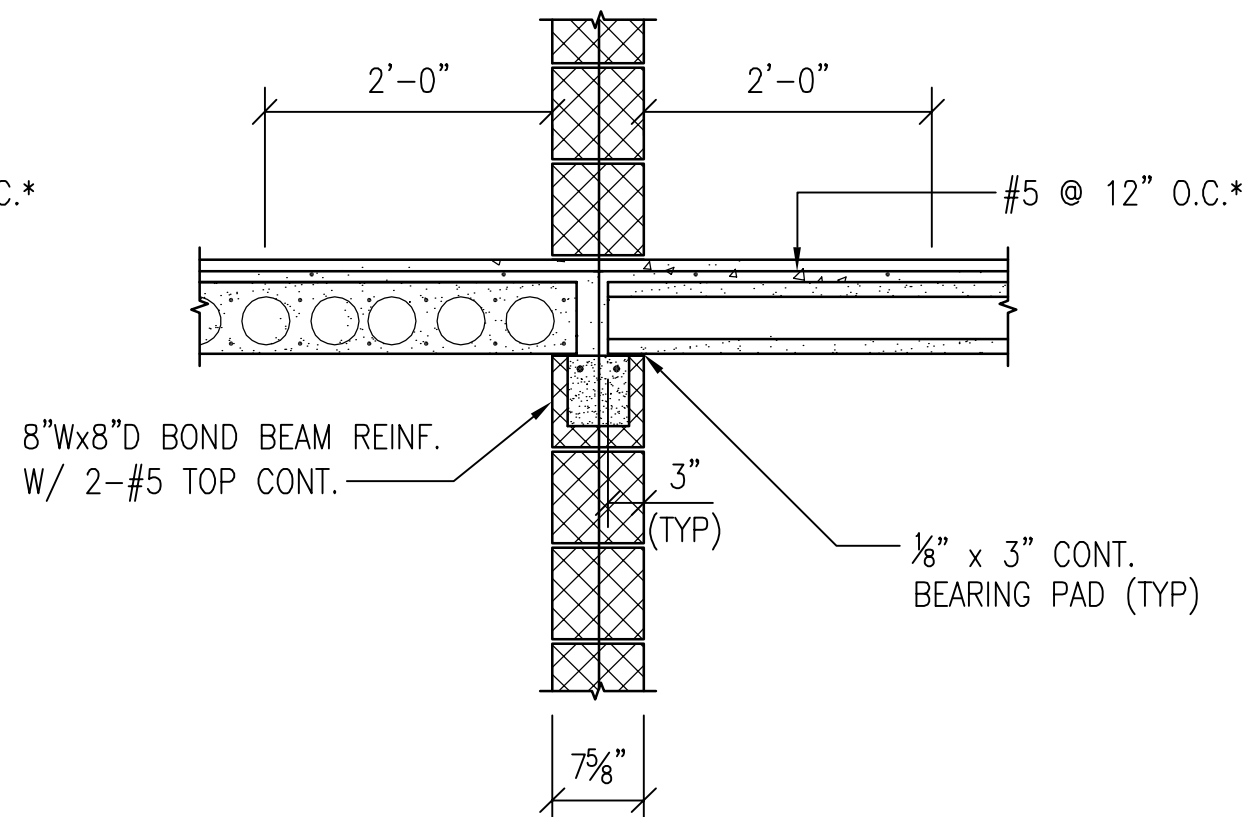
APPROVING OFFICER	DATE
PROJECT NUMBER	DRAWING NUMBER

DISCIPLINE/SHT NO	SHEET X OF XX
S-101	X OF XX

\* IDENTIFIES ITEMS REQUIRED FOR PROGRESSIVE COLLAPSE RESISTENCE, TIE FORCES, ALTERNATE PATH AND ENHANCED LOCAL RESISTANCE REQUIREMENTS PER UFC 4-023-03



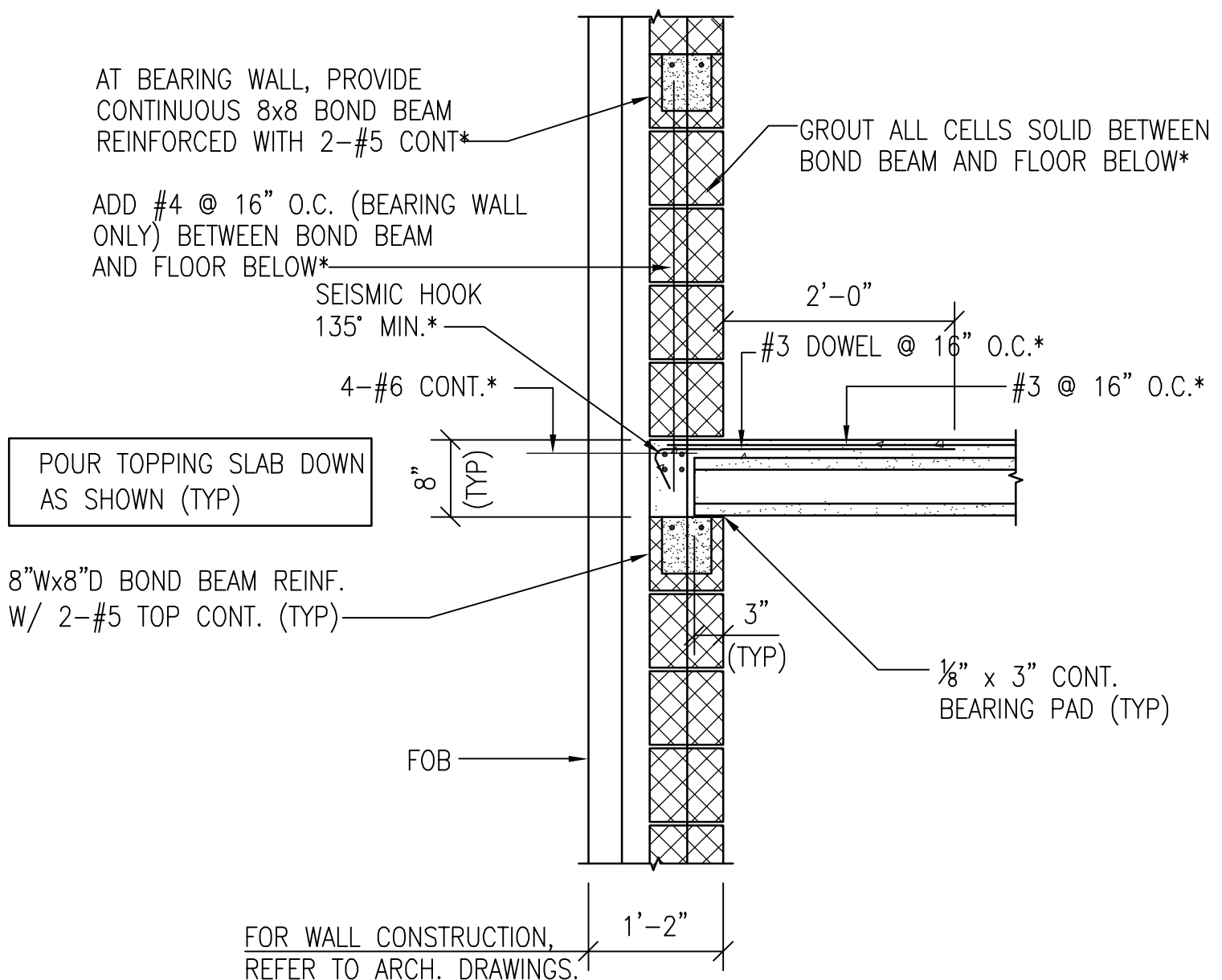
**SECTION @ NONBRG EXT. WALL**  
SCALE: 3/4" = 1'-0" (C1)



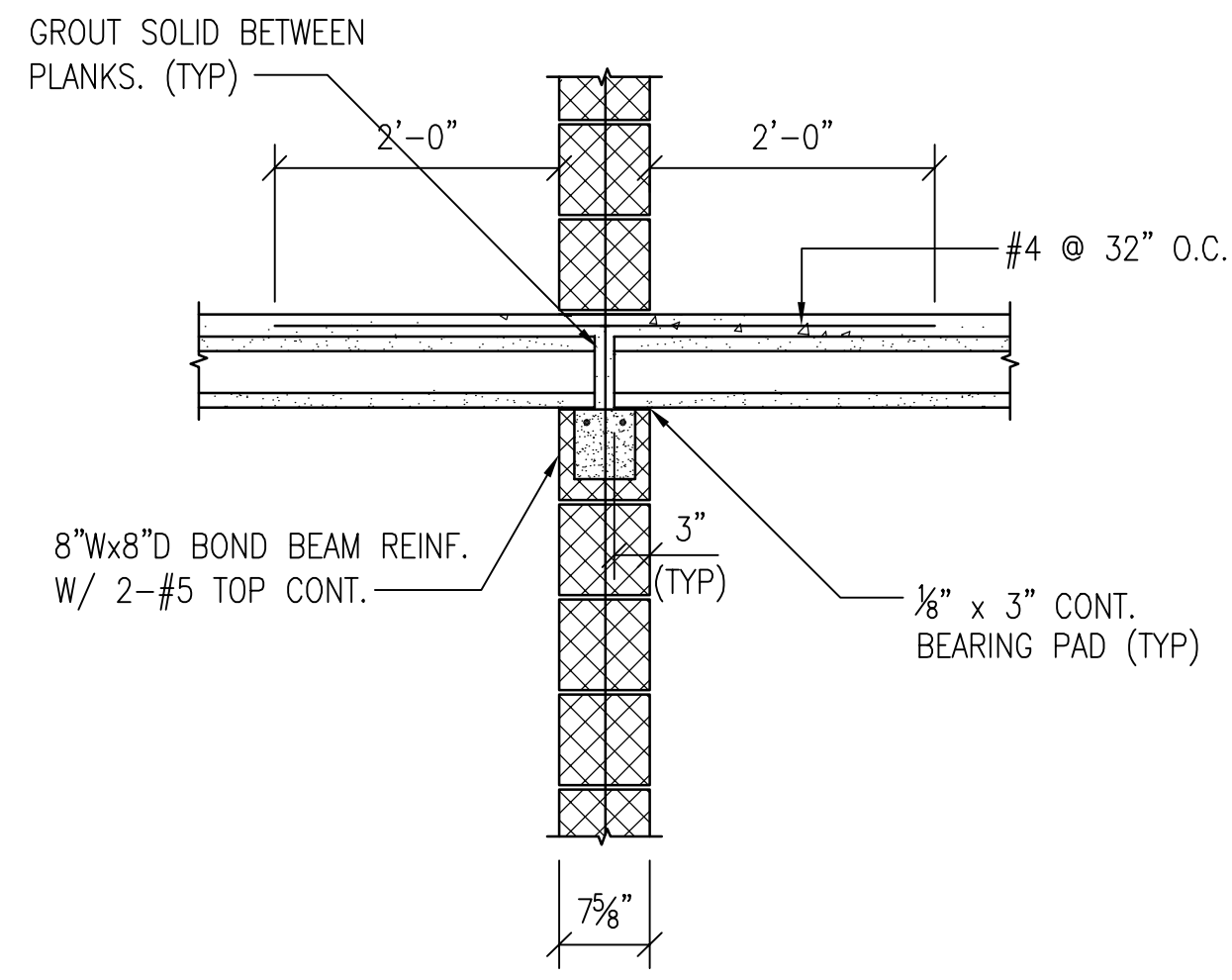
**SECTION**  
SCALE: 3/4" = 1'-0" (C3)

SECOND AND THIRD FLOOR FRAMING NOTES:

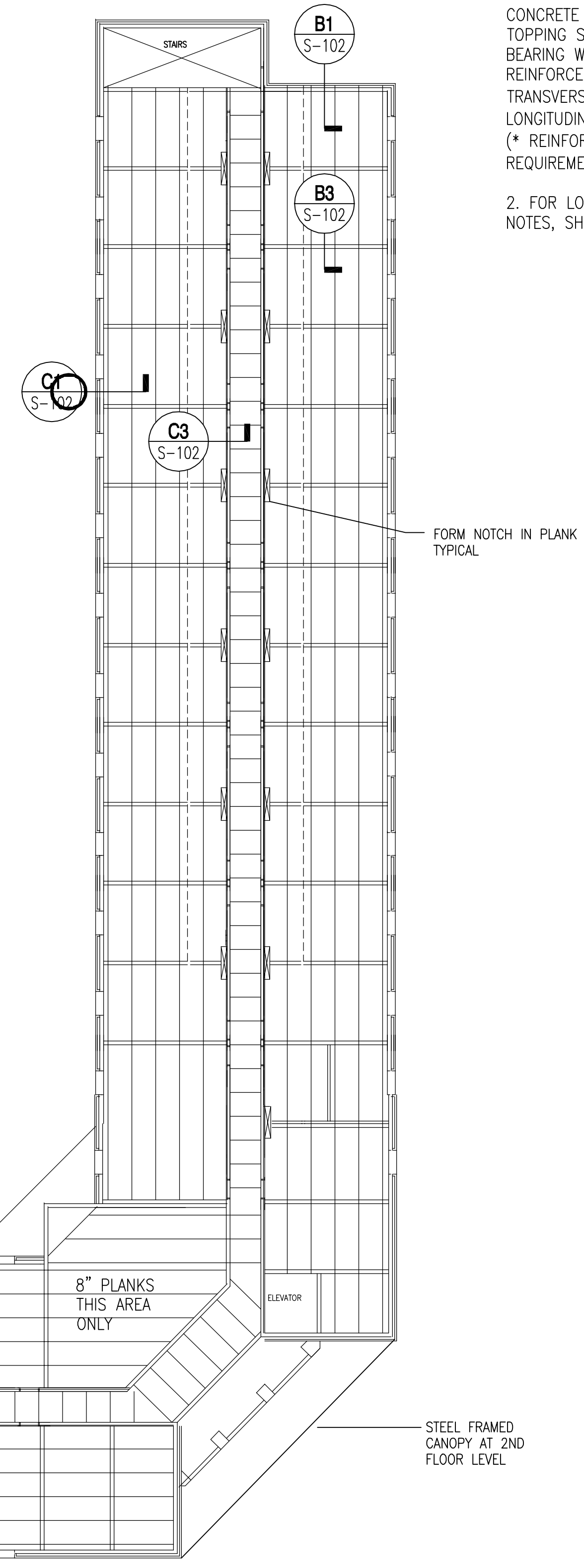
- UNLESS OTHERWISE NOTED, SECOND FLOOR CONSTRUCTION CONSISTS OF 6" PRECAST PRESTRESSED HOLLOW CORE CONCRETE PLANKS WITH 2" CONCRETE TOPPING SLAB SPANNING TO MASONRY BEARING WALL. TOPPING SLAB SHALL BE REINFORCED AS FOLLOWS:  
TRANSVERSE: #5 @ 12" O.C. \*  
LONGITUDINAL: #3 @ 16" O.C. \*  
(\* REINFORCING FOR PROGRESSIVE COLLAPSE REQUIREMENTS)
- FOR LOW ROOF FRAMING, REFER TO NOTES, SHEET S103



**SECTION @ EXT. BEARING WALL**  
SCALE: 3/4" = 1'-0" (B1)



**SECTION**  
SCALE: 3/4" = 1'-0" (B3)



**2nd & 3rd FLOOR FRAMING PLANS**  
1/16" = 1'-0"

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5-17-2010

U. S. COAST GUARD FACILITIES DESIGN & CONSTRUCTION CENTER

5505 ROBIN HOOD ROAD SUITE K NORFOLK, VIRGINIA 23513-2431

MARK	DATE	DESCRIPTION

A/E PROJECT NO: 1018
CAD FILE NAME:
DESIGNED BY: DPI
DRAWN BY: DRP
EDITED BY:
CHECKED BY:
SCALE: AS NOTED PLOT SCALE: 1 : 1
SHEET TITLE

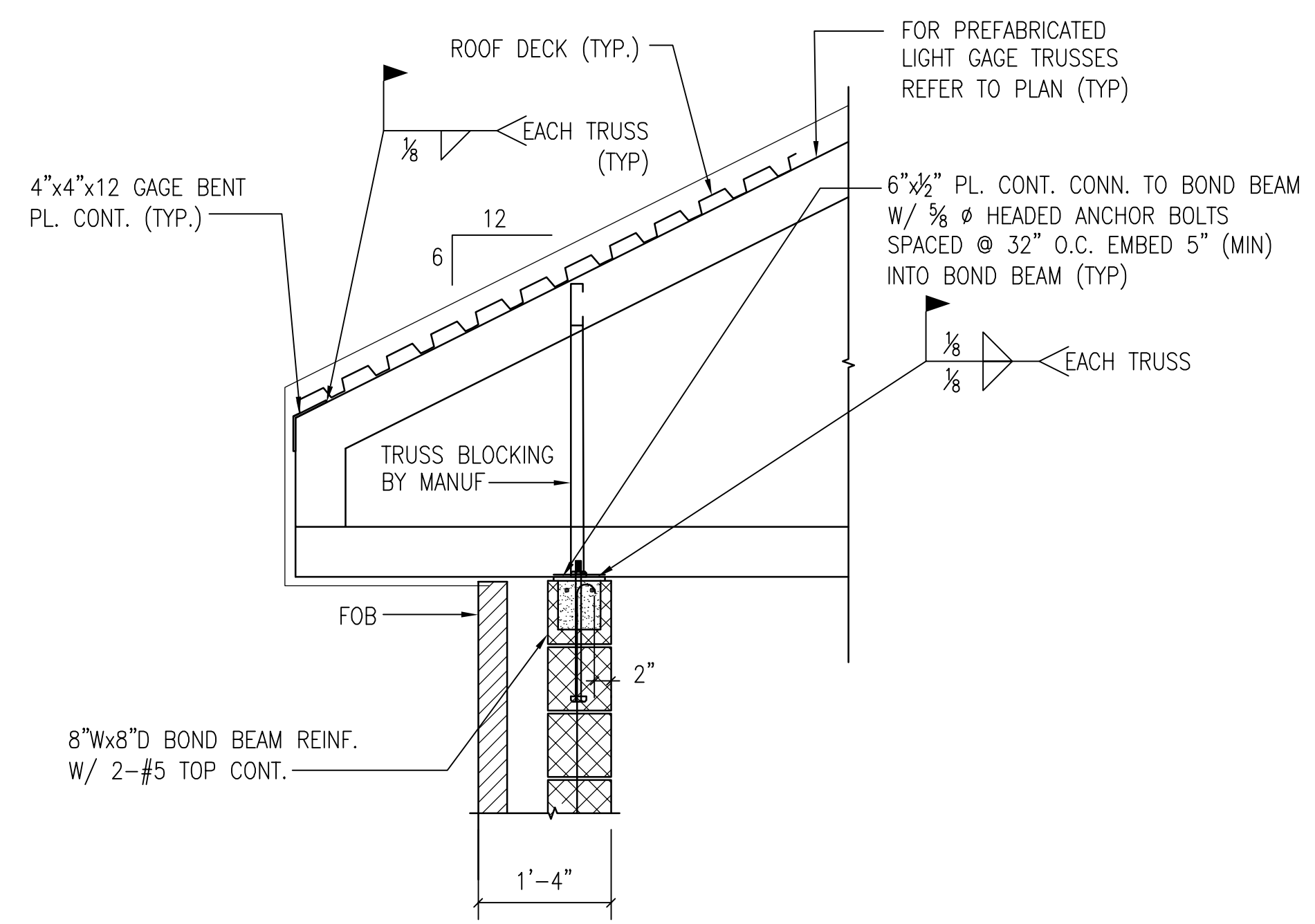
DB FOR REPLACE THRUN HALL BARRACKS & GALLEY USCG BASE SUPPORT UNIT (BSU) ELIZABETH CITY NORTH CAROLINA

STRUCTURAL		
2ND & 3RD FLOOR PLANS & SECTIONS		
REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

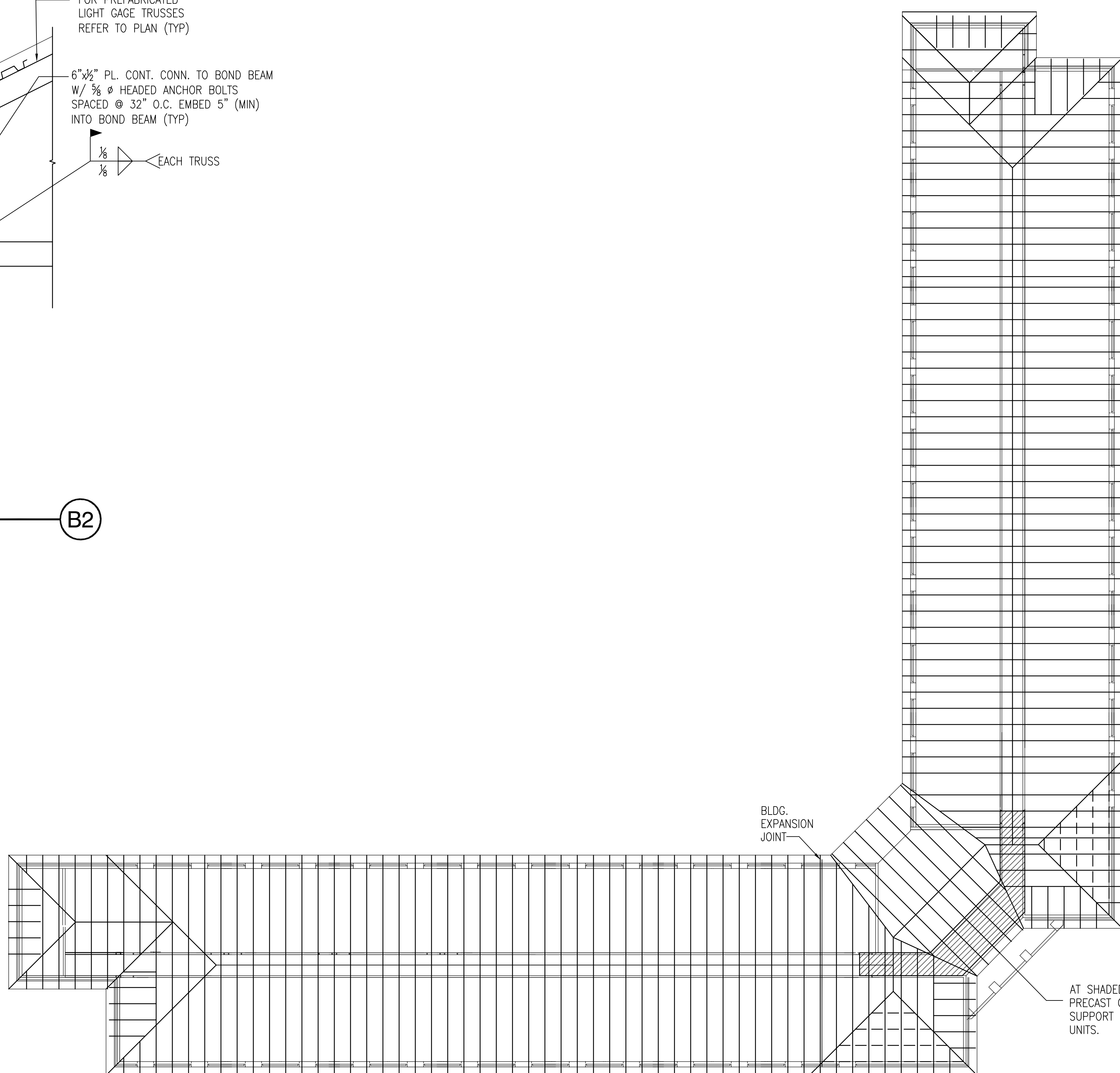
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DISCIPLINE/SHT NO	SHEET X OF XX
S-102	

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COMPUTER:\2010 JOBS\10.XXX - DB USCG BARRACKS - WTS\STRUCTURAL DWGS.DWG LAYOUT: S-103 5/17/2010 9:38AM DIMSCALE: 1/8" = 1'-0"



**SECTION**  
SCALE: 3/4" = 1'-0"  
**B2**



**ROOF FRAMING PLAN**  
1/16" = 1'-0"

- ROOF FRAMING NOTES:
1. ROOF CONSTRUCTION IS A 1 1/2" DEEP 20 GAGE TYPE B GALVANIZED ROOF DECK SUPPORTED ON PREFABRICATED LIGHTGAGE METAL ROOF TRUSSES.
  2. PROVIDE L-4x4x1/4 FRAMING AROUND ALL MECHANICAL AND ARCHITECTURAL ROOF OPENINGS.
  3. LIGHTGAGE TRUSSES SHALL BE FABRICATED TO ACTUAL RIDGE, VALLEY AND HIP LOCATIONS. TRUSS FRAMING SHALL INCLUDE ALL OVERFRAMING AT HIPS AND VALLEYS. TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING LOADS:  
 ROOF DEAD LOAD (TOP CHORD): 8 PSF  
 ROOF DEAD LOAD (BOTT. CHORD): 12 PSF  
 ROOF LIVE LOAD: (TOP CHORD): 20 PSF  
 WIND LOAD: V=120 MPH, I=1.15, EXP. 'C'  
 TRUSS PANEL POINTS SHALL BE CONCENTRIC UNLESS DESIGN INCLUDES CALCULATIONS FOR UNCONCENTRIC LOADS INCLUDING MOMENTS INDUCED IN TOP AND BOTTOM CHORDS. ALL CALCULATIONS SHALL BE SUBMITTED FOR REVIEW AND BE SIGNED/SEALED BY DESIGN ENGINEER.
  4. TOP CHORD OF LIGHTGAGE TRUSS SHALL BE 16 GAGE MINIMUM.

CONSULTANTS

**WALLER TODD & SADLER ARCHITECTS**

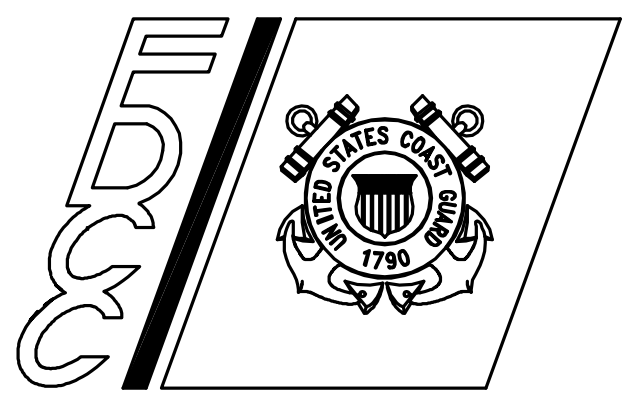
**NRW ENGINEERING, P.C.**

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5505 ROBIN HOOD ROAD SUITE K NORFOLK, VIRGINIA 23513-2431

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO: 1018  
 CAD FILE NAME:  
 DESIGNED BY: DPI  
 DRAWN BY: DRP  
 EDITED BY:  
 CHECKED BY:

SCALE: AS NOTED PLOT SCALE: 1 : 1

SHEET TITLE

DB FOR REPLACE THRUN HALL BARRACKS & GALLEY  
 USCG BASE SUPPORT UNIT (BSU)  
 ELIZABETH CITY NORTH CAROLINA

**STRUCTURAL ROOF FRAMING PLAN & SECTION**

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR
APPROVING OFFICER	DATE	
PROJECT NUMBER	DRAWING NUMBER	
DISCIPLINE/SHT NO	SHEET X OF XX	
S-103		

**GENERAL NOTES:**

GENERAL:

1. THE PRELIMINARY DESIGN HAS BEEN DESIGNED IN ACCORDANCE WITH UFC 1-200-01, "GENERAL BUILDINGS REQUIREMENTS". PRELIMINARY INFORMATION HAS BEEN PROVIDED TO ASSIST IN PREPARATION FOR THE PROPOSAL AND REPRESENT ONLY A PROFESSIONAL OPINION BASED UPON PAST EXPERIENCE. FINAL DESIGN HAS NOT BEEN PERFORMED. CONTRACTOR SHALL PROVIDE ALLOWANCES AND CONTINGENCIES FOR POSSIBLE CHANGES IN DESIGN AND UNFORESEEN CONDITIONS.

CONCRETE WORK:

1. UNLESS OTHERWISE NOTED OR DETAILED ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE CODE (A.C.I. 318) AND ITS LATEST AMENDMENTS AND THE SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301).
2. ALL CONCRETE SHALL BE NORMAL WEIGHT AGGREGATE CONCRETE WITH THE MINIMUM COMPRESSIVE STRENGTH AT THE AGE OF 28 DAYS OF 3,500 PSI. CONCRETE EXPOSED TO WEATHER SHALL BE AIR ENTRAINED.
3. ALL REINFORCING SHALL CONFORM TO ASTM A-615, GRADE 60.
4. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185 AND PROVIDED IN FLAT SHEETS. WELDED WIRE MESH SHALL BE PROPERLY SUPPORTED PRIOR TO PLACING CONCRETE. HOOKING OF MESH IS NOT PERMITTED.

STRUCTURAL STEEL:

1. ALL STRUCTURAL STEEL SHALL BE NEW, CLEAN AND STRAIGHT. STEEL WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A-992, GRADE 50. ALL OTHER STEEL SHAPES SHALL CONFORM TO ASTM 36 UNLESS OTHERWISE NOTED. STRUCTURAL TUBES ( HSS ) SHALL CONFORM TO ASTM A-500, GRADE B.
2. STRUCTURAL STEEL FABRICATION AND ERECTION SHALL COMPLY WITH THE SPECIFICATIONS, IBC2006 AND THE "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS," ANSI/AISC 360-05, WITH ITS LATEST AMENDMENTS.
3. UNLESS OTHERWISE NOTED, ALL CONNECTIONS SHALL BE AISC TYPE 2, STANDARD FRAMED BEAM CONNECTIONS. THE FABRICATOR IS RESPONSIBLE FOR DESIGNING ALL CONNECTIONS. WHERE REACTIONS ARE NOT INDICATED ON PLAN, CONNECTIONS SHALL BE DESIGNED FOR 1/2 OF THE TOTAL ALLOWABLE UNIFORM LOAD FOR LATERALLY SUPPORTED BEAMS GIVEN IN PART 3 OF THE "STEEL CONSTRUCTION MANUAL", 13TH EDITION. CONNECTION DETAILS SHALL BE IN ACCORDANCE WITH AISC STANDARDS.
4. UNLESS OTHERWISE NOTED ALL SHOP CONNECTIONS SHALL BE WELDED AND ALL FIELD CONNECTIONS SHALL BE BOLTED. THE FABRICATOR IS RESPONSIBLE FOR THE DESIGN OF ALL CONNECTIONS. REFER TO SPECIFICATIONS.
5. ALL HOLES REQUIRED IN STRUCTURAL STEEL MEMBERS FOR PIPING SHALL BE SHOWN ON THE SHOP DRAWINGS AND BE MADE IN THE SHOP. NO HOLES SHALL BE CUT IN THE FIELD WITHOUT THE APPROVAL OF THE CONTRACTING OFFICER.
6. WELDING SHALL COMPLY WITH THE "STRUCTURAL WELDING CODE" PREPARED BY THE A.W.S., MINIMUM WELD SIZE SHALL BE 3/16" FILLET WELD, ELECTRODES SHALL BE E70XX.
7. UNLESS OTHERWISE NOTED HIGH STRENGTH BOLTS SHALL COMPLY WITH ASTM A-325 AND ANCHOR BOLTS SHALL COMPLY WITH ASTM A-307.
8. ALL EXPOSED LINTELS IN EXTERIOR WALLS SHALL BE GALVANIZED.

STEEL DECK NOTES:

1. STEEL DECK SHALL CONFORM TO THE LATEST EDITION OF THE AISI SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL STEEL MEMBERS AND THE STEEL DECK INSTITUTE DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS AND ROOF DECKS.
2. ATTACH ROOF DECK TO SUPPORTS WITH 5/8" DIAMETER PUDDLE WELDS IN ALL RIBS WHERE SIDELAPS OCCUR AND AT 12 INCHES ON CENTER ALONG SUPPORTS. FASTEN SIDELAPS WITH #10 SELF TAPPING SCREWS AT A MAXIMUM SPACING OF 3 FEET.
3. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.3, "STRUCTURAL WELDING CODE - SHEET STEEL."
4. DO NOT HANG OR SUPPORT ANY LOADS FROM METAL ROOF DECK.
5. DECK SHALL BE CONTINUOUS OVER A MINIMUM OF THREE SPANS.

PRECAST PRESTRESSED HOLLOW-CORE CONCRETE PLANK:

1. PLANK WIDTH AND PLANK LAYOUT SHOWN ON THE DRAWINGS ARE FOR THE PURPOSE OF DESCRIBING INTENT ONLY. PLANK MANUFACTURER MAY SUBMIT FOR APPROVAL, LAYOUT REVISIONS WHICH WOULD ACCOMMODATE DIFFERENT PLANK WIDTHS. MAXIMUM PLANK WIDTHS SHALL BE 4'-0".
2. PLANKS SHALL BE DESIGNED FOR LIVE LOADS AS INDICATED IN THE LIVE LOAD SCHEDULE AND FOR ALL DEAD LOADS AS SHOWN ON THE ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS. DESIGN PLANKS FOR A MINIMUM ADDITIONAL SUPERIMPOSED DEAD LOAD = 10 PSF.
3. IN EACH PLANK, INSTALL 2-#4 DOWELS, HOOKS OR LOOPS CAST OR DRILLED INTO TOP OF EACH PLANK AT EACH END FOR PROGRESSIVE COLLAPSE REQUIREMENTS.
4. ALL OPENINGS IN PLANKS SHALL BE EITHER CAST IN OR CUT IN THE FIELD AT THE DESIGN AND UNDER THE SUPERVISION OF THE MANUFACTURER. OPENING SIZE AND LOCATIONS SHALL BE COORDINATED WITH ARCH., STRUCT., AND MECH. DRAWINGS. ANY HEADERS OR SPECIAL REINFORCEMENT REQUIRED BY OPENING LOCATION OR SIZE SHALL BE DESIGNED AND FURNISHED BY THE MANUFACTURER.
5. ROUGHEN TOP OF PLANKS TO RECEIVE A TOPPING SLAB TO MINIMUM AMPLITUDE OF 1/4".
6. ALL HANGER CONNECTIONS TO PLANKS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

MASONRY:

1. MASONRY CONSTRUCTION SHALL CONFORM TO ACI 530 AND ACI 530.1, BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES.
2. MASONRY BLOCK SHALL CONFORM TO ASTM C90. MASONRY MORTAR SHALL CONFORM TO ASTM C270, TYPE S. MASONRY HAS BEEN DESIGNED FOR A NET AREA COMPRESSIVE STRENGTH OF 1500 PSI.
3. GROUT SHALL CONFORM TO ASTM C476. GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2000 PSI. SLUMP AT POINT OF PLACEMENT SHALL BE BETWEEN 8 AND 11 INCHES.
4. ALL REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60. BARS SHALL BE LAPPED 48 X BAR DIAMETERS MINIMUM AT SPLICES.
5. PROVIDE BAR POSITIONERS FOR VERTICAL REINFORCING AT A MAXIMUM SPACING OF 8 FEET ON CENTER.
6. GROUTING SHALL BE STOPPED 1-1/2" BELOW THE TOP OF A COURSE SO AS TO FORM A KEY AT THE POUR JOINT.
7. ALL BOLTS, ANCHORS, ETC. PLACED IN THE WALL, SHALL BE GROUTED SOLID INTO POSITION.

DESIGN CRITERIA:

1. INTERNATIONAL BUILDING CODE - 2006 EDITION.
2. REFERENCED CODES: ACI 318 & COMMENTARY, BUILDING CODE FOR REINF. CONCRETE; ANSI/AISC 360-05, "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS."

DESIGN LOADS

OCCUPANCY CATEGORY: IV

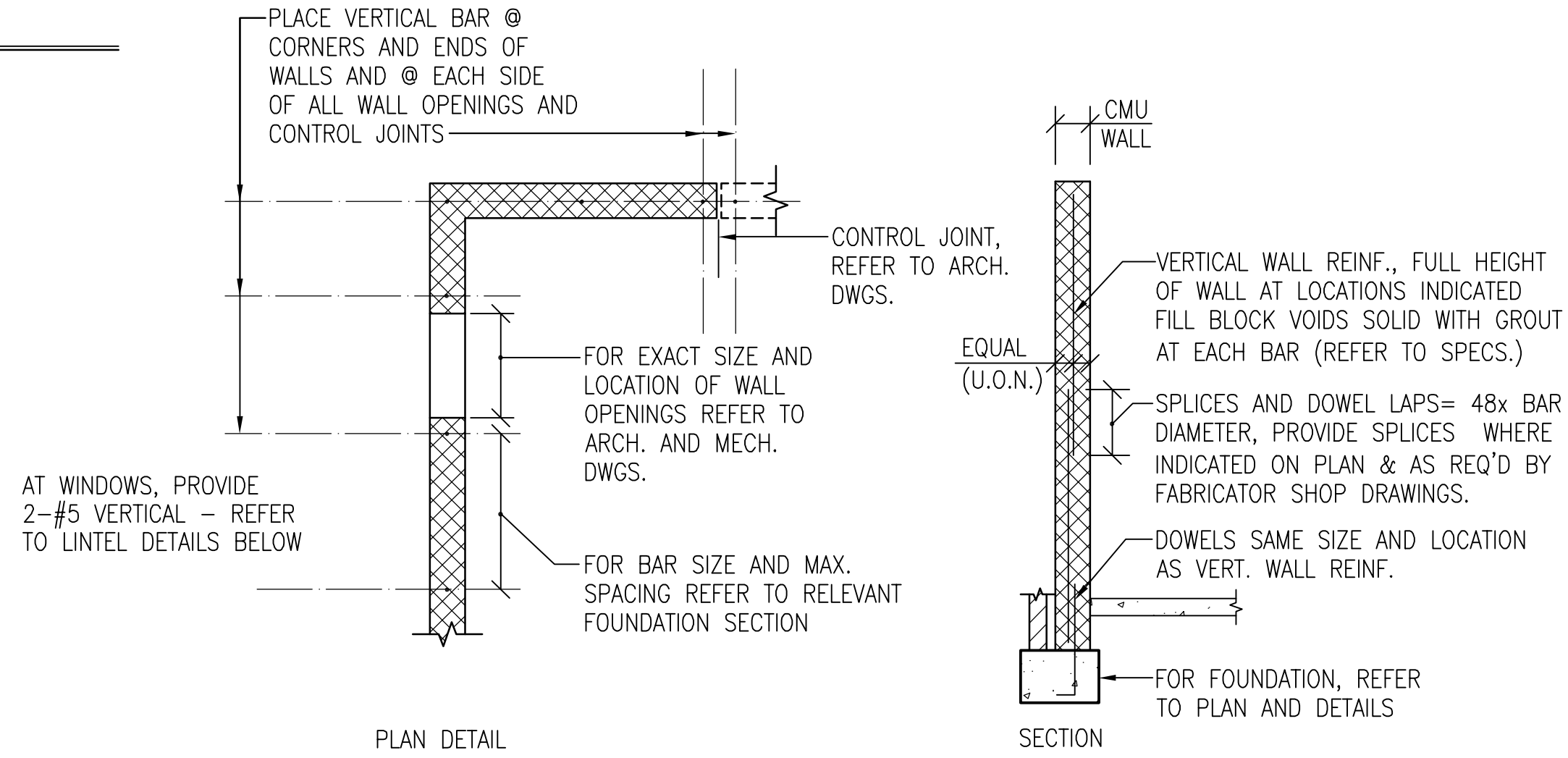
DESIGN LIVE LOADS USED IN THE DESIGN OF THIS STRUCTURE ARE AS FOLLOWS:

1. UNIFORM LIVE LOADS:  
SLAB ON GRADE: BEQ, 4" SLAB: 100 PSF  
ROOF: 20 PSF

SUPPORTED FLOORS:

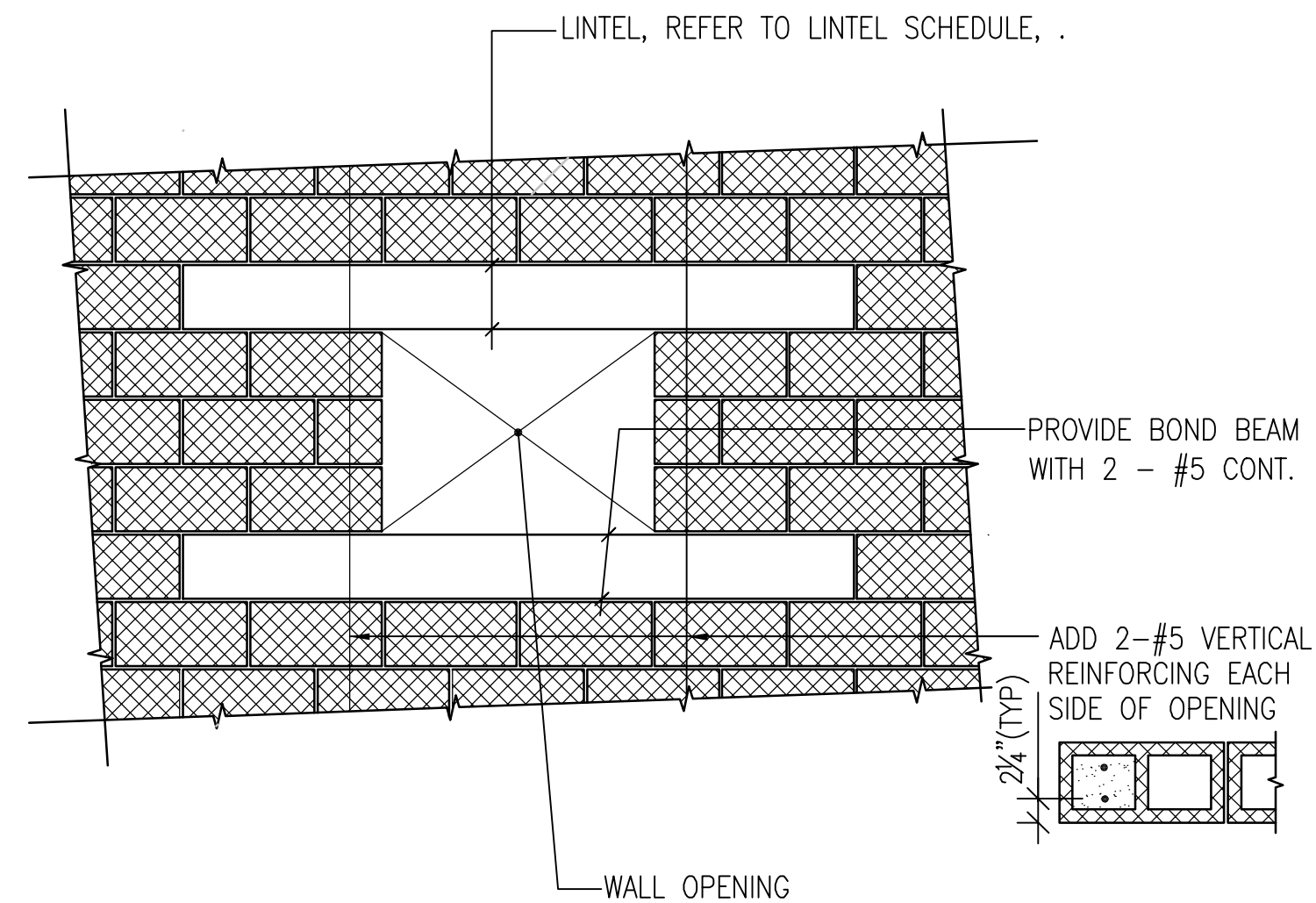
- DORMITORY ROOMS: 40 PSF  
DORM ROOM TOILETS: 80 PSF (INCLUDES PARTITION LOAD)  
PUBLIC ROOMS: 100 PSF  
LAUNDRY ROOMS 100 PSF  
CORRIDORS 100 PSF

2. ROOF SNOW LOADS:  
GROUND SNOW LOAD  $P_g = 10$  PSF  
SNOW EXPOSURE FACTOR  $C_e = 1.0$   
THERMAL FACTOR  $C_t = 1.0$



**TYPICAL DETAILS SHOWING VERTICAL REINFORCING IN MASONRY WALLS**

NOT TO SCALE



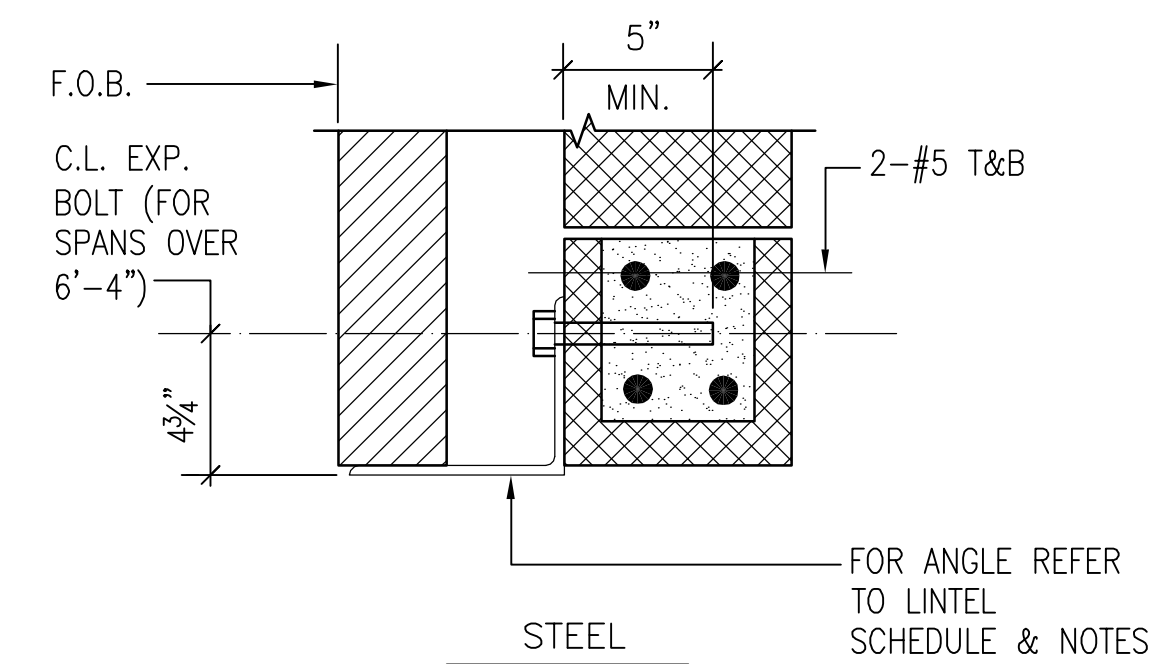
**CONDITION @ MASONRY WALLS @ WINDOW OPENINGS**

NO SCALE

**MASONRY LINTEL SCHEDULE FOR C.M.U. WALLS**

**NOTES:**

1. FOR SIZE AND LOCATION OF OPENINGS REFER TO ARCH. DRAWINGS.
2. BEARING SHALL BE 8" MINIMUM EACH END.
3. LINTELS IN NONBEARING WALLS SHALL BE 7/8". ALL LINTELS IN BEARING WALLS SHALL BE 1 1/2" DEEP.
4. IN ADDITION TO MASONRY LINTELS AND AS REQUIRED BY ARCHITECTURAL DETAILS PROVIDE 4"x6"x3/8" LOOSE LINTELS AND 8"x6"x3/8" ATTACHED LINTELS FOR BRICK SUPPORT.
5. FOR SPANS OVER 6'-0" LINTEL ANGLE SHALL BE ATTACHED TO MASONRY LINTEL WITH 3/4" EXPANSION BOLTS AT 3'-0" O.C. (MIN. 3 PER ANGLE).
6. STEEL LINTEL ANGLES SHALL BE GALVANIZED, REFER TO SPECS.
7. REINFORCING STEEL SHALL CONFORM TO A.S.T.M. 615, GRADE 60.
8. CONTRACTOR SHALL SUBMIT FOR APPROVAL SHOP DRAWINGS AND SCHEDULES SHOWING SIZE, DETAILS, LOCATION, ETC. FOR ALL LINTELS IN C.M.U. WALLS.



**TYPICAL LINTEL DETAILS**

TYPICAL FOR SPANS UP TO 7'-0" MAX

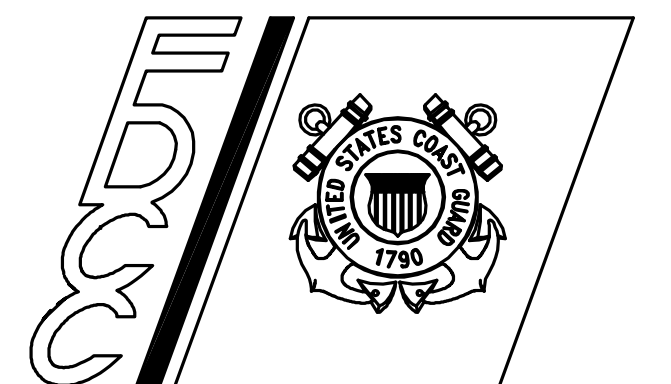
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ISSUE

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A/E PROJECT NO: 1018

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SCALE: AS NOTED PLOT SCALE: 1 : 1

SHEET TITLE

**DB FOR REPLACE THRU HALL BARRACKS & GALLEY USCG BASE SUPPORT UNIT (BSU) ELIZABETH CITY NORTH CAROLINA**

**STRUCTURAL GENERAL NOTES & TYPICAL DETAILS**

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

APPROVING OFFICER \_\_\_\_\_ DATE \_\_\_\_\_

PROJECT NUMBER	DRAWING NUMBER
DISCIPLINE/SHT NO	SHEET X OF XX
S-601	X OF XX