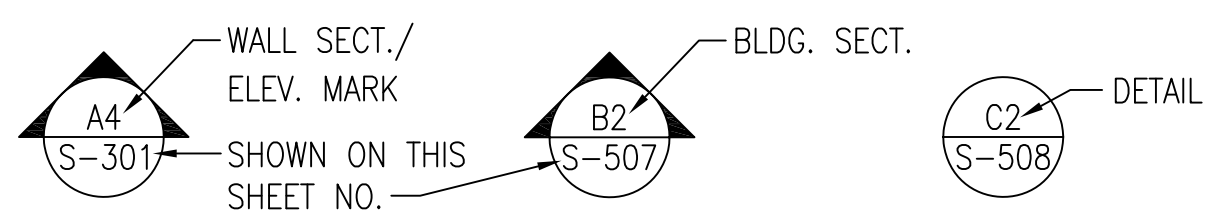


GENERAL NOTES

MATERIALS AND CONSTRUCTION

- 1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF f'c = 4,000 psi AT 28 DAYS.
2. ALL REINFORCING BARS SHALL CONFORM TO THE SPECIFICATION FOR DEFORMED BILLET STEEL BARS FOR CONCRETE REINFORCEMENT, ASTM A615, GRADE 60
3. CONCRETE AGGREGATE SHALL HAVE A MAXIMUM SIZE OF 1 INCH.
4. ALL REINFORCING BARS SHALL BE CONTINUOUS IN ANY ONE DIRECTION EXCEPT WHERE OTHERWISE SHOWN ON THE DRAWINGS. PROVIDE CLEAR COVER IF NOT SHOWN PER ACI 318 RECOMMENDATIONS.
5. EXCEPT AS NOTED, ALL CONCRETE CONSTRUCTION AND DETAILING SHALL CONFORM TO THE LATEST STANDARDS OF THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI 315), AND BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318).
6. EXCEPT FOR WELDED WIRE FABRIC, NO WELDING OF REINFORCING BARS SHALL BE PERMITTED UNLESS INDICATED ON DRAWINGS.
7. STRUCTURAL STEEL SHAPES SHALL CONFORM TO THE STANDARD SPECIFICATION FOR STRUCTURAL STEEL SHAPES, ASTM A-992.
8. ALL STRUCTURAL STEEL PLATES AND BARS SHALL CONFORM TO THE STANDARD SPECIFICATION FOR CARBON STRUCTURAL STEEL ASTM A36.
9. METAL ROOFING AND SIDING SHALL CONFORM TO THE NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL MEMBERS BY THE AMERICAN IRON AND STEEL INSTITUTE (AIS), LATEST EDITION.
10. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), LATEST EDITION.
11. WELDING FOR STRUCTURAL STEEL SHALL CONFORM TO THE STRUCTURAL WELDING CODE, AWS D1.1, LATEST EDITION.
12. BOLTS, NUTS, AND WASHERS SHALL CONFORM TO THE STANDARD SPECIFICATION FOR CARBON STEEL BOLTS AND STUDS, ASTM A307, GRADE A, AND HIGH STRENGTH BOLTS FOR STRUCTURAL STEEL JOINTS, ASTM A325. ALL BOLTS SHALL HAVE THREADS EXCLUDED FROM THE SHEAR PLANE.
13. ALL STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED IN ACCORDANCE WITH THE COATING AND PAINTING SPECIFICATIONS.
14. TOP 12 INCHES OF SUBGRADE SHALL BE COMPACTED TO 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM STANDARD D1557
15. UNLESS NOTED ON DRAWINGS, SPLICE LENGTH OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 318 (LATEST EDITION) FOR CLASS B SPLICES.
16. FOR FILLET WELD SIZES NOT SHOWN ON DRAWINGS, PROVIDE MINIMUM SIZE FILLET WELDS IN ACCORDANCE WITH WELDING CODE AWS D1.1, LATEST EDITION.
17. UNLESS SHOWN OTHERWISE, ALL REINFORCING BAR HOOKS SHALL BE STANDARD HOOKS IN ACCORDANCE WITH BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE ACI 318, LATEST EDITION.



ELECTRICAL BONDING & GROUNDING

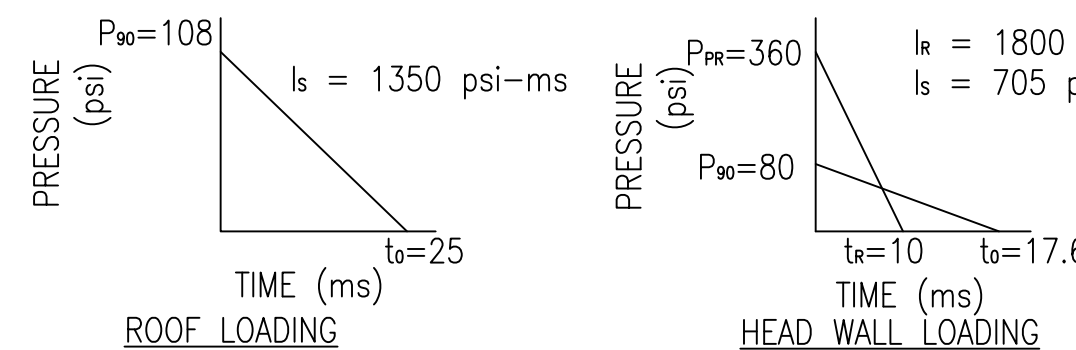
- 1. ALL STEEL DOORS AND FRAMES SHALL BE ELECTRICALLY BONDED TO THE MAGAZINE REINFORCING CAGE.
2. ALL STRUCTURAL AND MISCELLANEOUS ITEMS EMBEDDED IN CONCRETE SHALL BE ELECTRICALLY BONDED TO THE REINFORCING CAGE BY WIRE TIES.
3. THE REINFORCING CAGE SHALL BE MADE ELECTRICALLY CONTINUOUS BY WIRE TIES AT A MINIMUM OF 4'-0" ON CENTERS IN ANY DIRECTION.
4. ALL WALL AND CONSTRUCTION JOINTS SHALL BE ELECTRICALLY BONDED. SEE THE ELECTRICAL DRAWINGS FOR DETAILS.

DESIGN LOADS

- 1. STATIC LOADS:
A. ROOF DEAD LOAD (1 1/2 FT. EARTH FILL +6" GRAVEL) = 200 PSF
B. FLOOR LOADS
a) UNIFORM STORAGE LIVE LOAD = 2000 PSF
b) FORKLIFT WHEEL LOAD:
BASED ON DREXEL MODEL NO. SL-88-ESS = 8000 LB MAX LOAD
MAXIMUM WHEEL LOAD = 26,000 LBS
WHEEL CONTACT AREA = 65 SQ. IN.
C. PLATFORM AND RAMP LIVE LOAD = 1,000 PSF
D. ROOF LIVE LOAD = 100 PSF
2. SEISMIC DESIGN DATA:
A. OCCUPANCY CATEGORY ----- III
B. IMPORTANCE FACTOR ----- 1.25
C. SEISMIC DESIGN CATEGORY ----- "D"
D. SITE SEISMICITY ----- Ss = 1.95g
Si = 0.75g
E. SITE CLASS ----- "D"
3. WIND DESIGN DATA:
A. DESIGN WIND SPEED ----- 132 MPH
B. EXPOSURE ----- "C"
C. OCCUPANCY CATEGORY ----- III
D. IMPORTANCE FACTOR ----- 1.15
4. BLAST LOADS:

ORIGINAL BLAST DESIGN BASED ON INTERMAGAZINE SEPARATION DISTANCES FOR NET EQUIVALENT WEIGHT EXPLOSIVE EQUAL TO 350,000 LBS (W) AS FOLLOWS:

- A. ROOF DESIGN: DONOR MAGAZINE AT 141' (2 X W^1/3) TO THE REAR OF THE ACCEPTOR MAGAZINE
B. HEADWALL DESIGN: DONOR MAGAZINE AT 141' (2 X W^1/3) TO THE FRONT OF THE ACCEPTOR MAGAZINE.



DESIGN SOIL DATA

- A. DESIGN SOIL BEARING PRESSURE - 4,000 PSF
B. DESIGN DYNAMIC RESPONSE FACTOR (SOIL BEARING) - 2.5
C. DESIGN LATERAL SOIL PRESSURE COEF. :
1. MAGAZINE WALLS - 0.5
2. WING WALLS - 0.3
D. DESIGN COEF. OF FRICTION (CONC. ON SOIL) - 0.50
E. MODULUS OF SUBGRADE REACTION - 150 PCI TO 250 PCI

DEFLECTION CRITERIA

MAXIMUM SUPPORT ROTATIONS OR DUCTILITY RATIO:

- A. ROOF SLAB = 8 degrees
B. HEAD WALL = 6 degrees
C. HEADER BEAM = 2 degrees
D. PILASTERS XW/XE = 3.0
E. BLAST DOORS = 12 degrees

NOTES TO DESIGNER - REMOVE THESE NOTES WHEN PREPARING CONSTRUCTION DRAWINGS FOR SITE ADAPTATION OF THIS DESIGN

- 1. FOUNDATIONS SHALL BE REVISED TO REFLECT SPECIFIC SITE SOIL CONDITIONS.
2. THE FLOOR SLAB AND TRENCH COVER MUST BE REDESIGNED IF WHEEL LOADING WILL BE SIGNIFICANTLY HIGHER THAN THE DESIGN LOADING. MUST BE VERIFIED AT LOCATIONS UTILIZING A SIDE LOADING LIFT TRUCK.
3. DESIGN CONSIDERATIONS (TO BE COORDINATED WITH CONTRACTING OFFICER):
A.) HIGH SECURITY LOCKING DEVICE - STANDARD OR ILD (INTERNAL LOCKING DEVICE).
B.) LOADING PLATFORM OR CONCRETE PAD.
C.) HEAT TRACING REQUIREMENT (SEE NOTES TO DESIGNER ON SHEET E-001 & E-801).
D.) HAZARDOUS ELECTRICAL EQUIPMENT REQUIREMENT (SEE NOTES TO DESIGNER ON SHEET E-001).
4. SHEETS S-513 & S-513(ALT) IDENTIFY DIFFERENT LOCKING SYSTEMS. THE EOR SHALL VERIFY THE CORRECT LOCKING SYSTEM REQUIRED AND REMOVE THE REDUNDANT SHEET FROM THE CONSTRUCTION CONTRACT DOCUMENTS FOR THE SYSTEM NOT USED (COORDINATE WITH CONTRACTING OFFICER).
5. PROVIDE COATING AND PAINTING SPECIFICATIONS AS PART OF THE CONSTRUCTION CONTRACT DOCUMENTS THAT REQUIRES THE FOLLOWING FOR THE STEEL SLIDING DOORS:
A. ALL DUST, DIRT, OIL, GREASE, WELD FLUX RESIDUE, LOOSE DIRT & OTHER FOREIGN MATTER THAT MAY INHIBIT COATING BOND TO STRUCTURAL STEEL SHALL BE REMOVED IN THE SHOP IN ACCORDANCE WITH THE STEEL STRUCTURES PAINTING COUNCIL (SSPC), SPG.
B. EXCEPT FOR CONTACT SURFACES OF MOVING PARTS, ALL EXPOSED SURFACES OF STRUCTURAL STEEL SHALL RECEIVE 1.5 MIL (DRY) COAT OF ZINC CHROMATE PRIMER CONFORMING TO FEDERAL SPECIFICATION TT-P-645. UNEXPOSED SURFACES SHALL RECEIVE 1.0 MIL (DRY) COAT OF ASPHALT VARNISH CONFORMING TO FEDERAL SPECIFICATION TT-V-51. ALL PRIMER COATING SHALL BE PERFORMED IN THE SHOP.
C. ALL EXPOSED SURFACES OF STRUCTURAL STEEL SHALL RECEIVE TWO FIELD COATS OF COATING WITH A MINIMUM THICKNESS OF 4.0 MIL (DRY) CONFORMING TO FEDERAL SPECIFICATION TT-P-102 OR TT-P-37.

DEPARTMENT OF DEFENSE EXPLOSIVE SAFETY BOARD (DDESB) APPROVAL NOTES

- 1. THIS STANDARD WAS APPROVED ORIGINALLY BY THE DDESB FOR CONSTRUCTION AS A 7-BAR STRUCTURE FOR EXPLOSIVE WEIGHTS UP TO 350,000 POUNDS OF (NEW) HAZARD DIVISION (HD) 1.1 MATERIAL. SUBSEQUENTLY THE STANDARD WAS APPROVED FOR EXPLOSIVE WEIGHTS UP TO 500,000 POUNDS (NEW), AS PER DDESB-PD MEMORANDUM OF 2 FEB 2006, SUBJ: ANALYSIS OF NAVY BOX MAGAZINE C, D, E, AND F FOR POTENTIAL INCREASE IN MAXIMUM-RATED NET EXPLOSIVES WEIGHT CAPACITY.
2. ANY DEVIATION FROM THE STANDARD APPROVED DRAWINGS, EXCEPT FOR FOUNDATION MODIFICATIONS, WITHOUT THE WRITTEN APPROVAL FROM THE DEPARTMENT OF DEFENSE EXPLOSIVE SAFETY BOARD (DDESB) MAY REQUIRE THE MAGAZINE TO BE CONSIDERED AN UNDEFINED MAGAZINE AND MAY SEVERELY RESTRICT THE ALLOWABLE STORAGE CAPACITY.

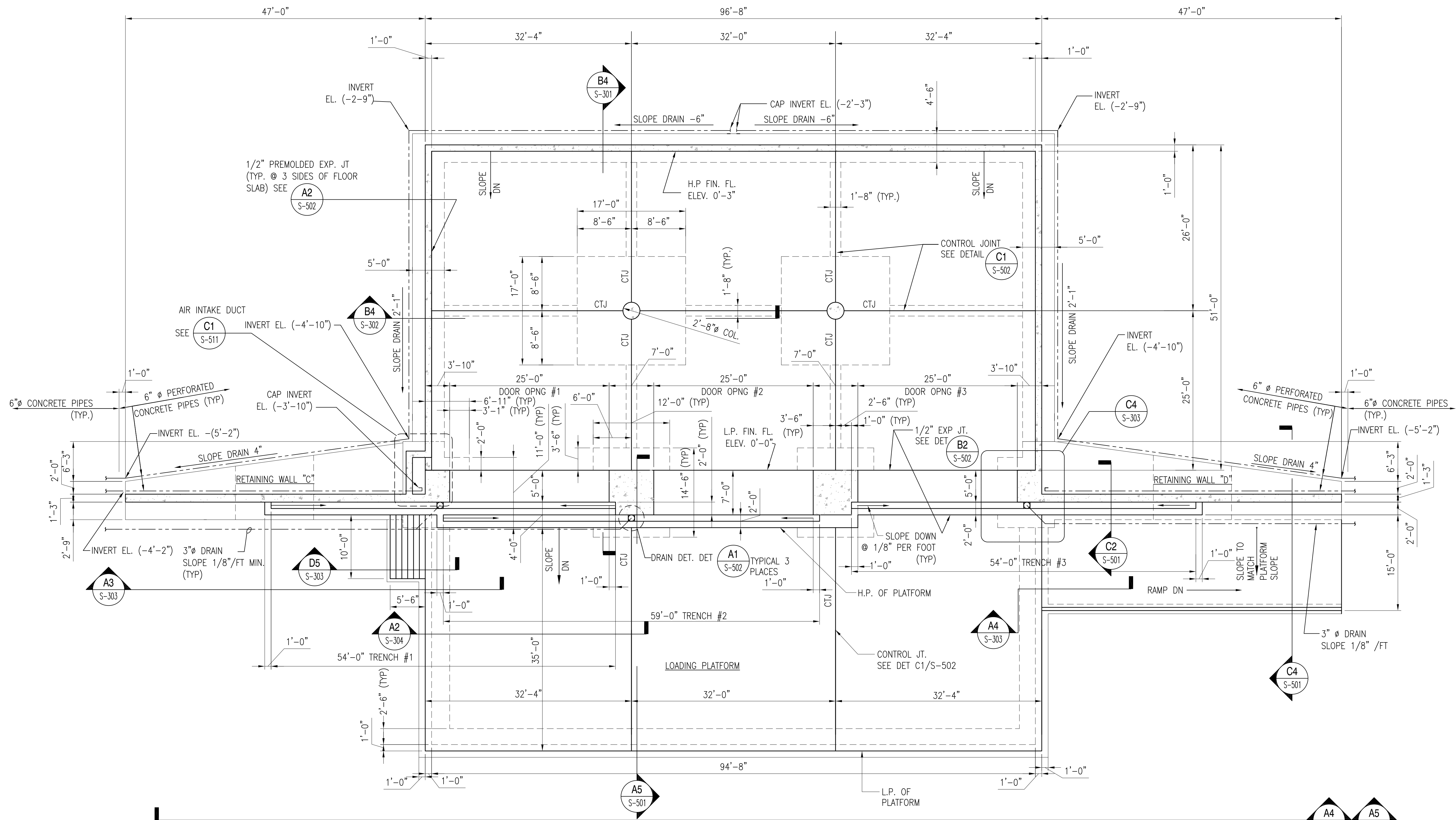
THESE STANDARD DRAWINGS ARE BASED ON THE FOLLOWING ORIGINAL STANDARD DRAWINGS:
DESIGN BY: AMMANN & WHITNEY, CONSULTING ENGINEERS
PROJECT TITLE: BOX MAGAZINE TYPE C
DRAWING NUMBER: 1404430 - 1404444
DATE: 5 NOVEMBER, 1985
NUMBER OF SHEETS: 15

THIS STANDARD DESIGN DRAWINGS DATED 15 DECEMBER 2010; NO. 14004689 - 14004720 AND NO. 14005091 - 14005122, UPDATE AND SUPERSEDE THE AMMANN & WHITNEY DESIGN; DRAWING NO. 1404430 - 1404444.

THE STRUCTURAL DESIGN IN THESE UPDATED STANDARD DRAWINGS DOES NOT SUBSTANTIALLY DEVIATE FROM THE ORIGINAL STANDARD. SOME ASPECTS OF THE ELECTRICAL DESIGN HAVE BEEN MODIFIED FROM THE ORIGINAL STANDARD.

Vertical sidebar containing project information, logos (NAVFAC), and drawing metadata including sheet number 1 of 31 and drawing number 14005091.

REVDATE: FILE NAME: \\naefac\k54\NAVFAC\YRKT\_16AA\NAVFAC\_YRKT\_16AA\CISE\Magazines\Box C FINALS\Final Drawings Box C BOX C WITH PLATFORM COMPL.dwg LAYOUT NAME: S-101 PLOTTED: Tuesday, December 14, 2010 - 4:33pm



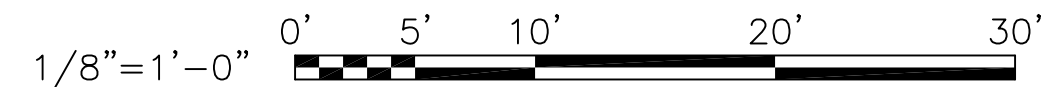
**FOUNDATION / SLAB PLAN**

SCALE: 1/8" = 1'-0"

**PLAN NOTES**

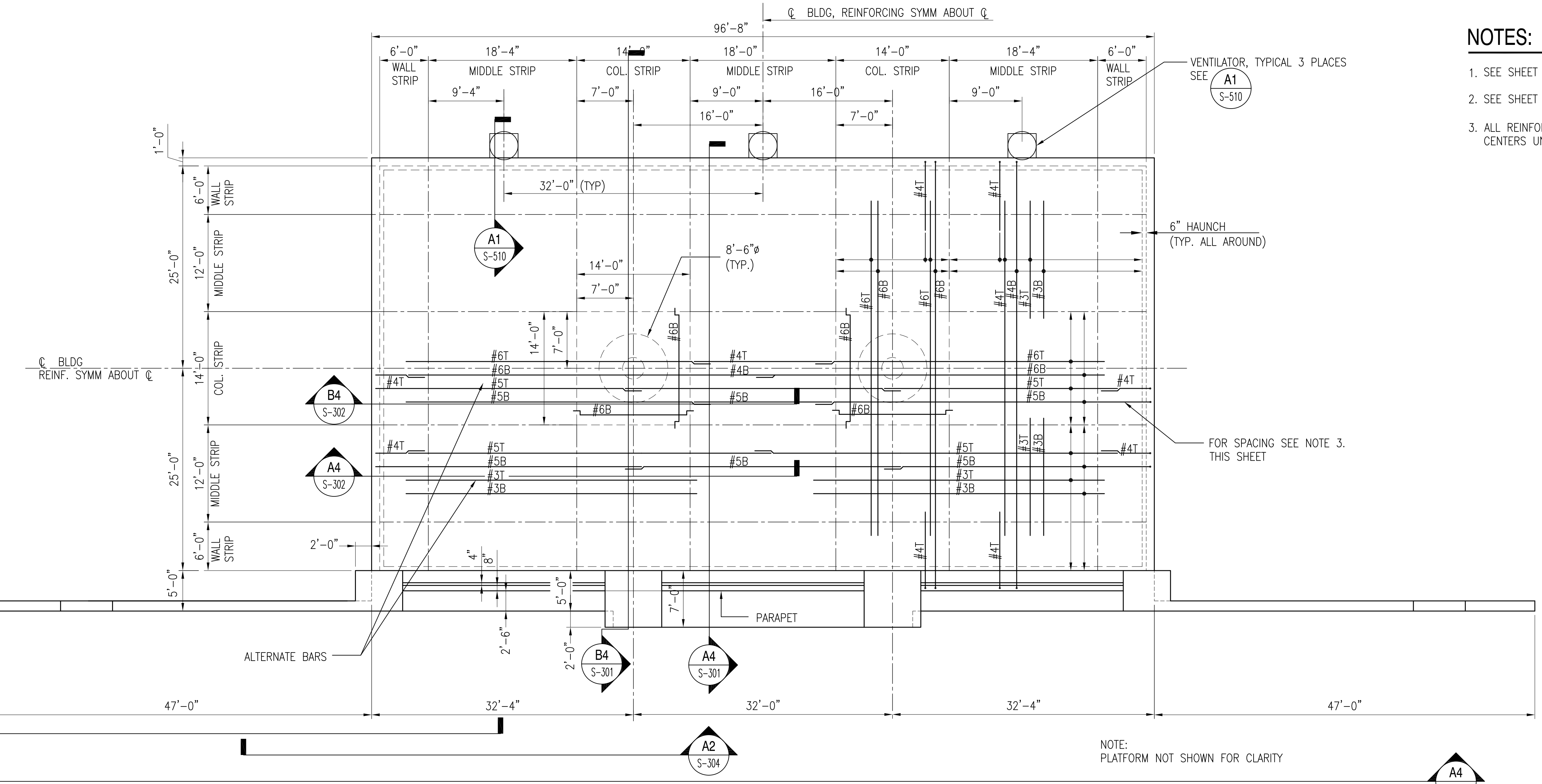
1. ALL REINFORCING SHALL BE SPACED AT 10" ON CENTER UNLESS NOTED OTHERWISE. TYPICAL FOR ALL SHEETS.
2. GROUND COVER SHALL BE DETERMINED BY GENERAL SITE FILL MATERIAL AND CLIMATIC CONDITIONS. (GROUND COVER MUST BE MAINTAINED AT MAXIMUM 6" HEIGHT.)
3. PLACE SLAB IN CHECKERBOARD PATTERN.
4. IF THE DEPTH OF FOOTINGS (SIDEWALLS, BACKWALL, COLUMNS, PILASTERS & GRADE BEAMS) HAVE TO BE INCREASED EITHER BECAUSE OF THE DEPTH OF FROST OR TO OBTAIN SUITABLE SOIL BEARING CAPACITY AS SPECIFIED, THE VOLUME OF SOIL BETWEEN THE DEPTH OF THE FOOTING SHOWN ON THE DRAWING AND THE DEPTH REQUIRED SHALL BE REPLACED WITH CONCRETE. RETAINING WALLS WHOSE FOOTING DEPTHS MUST BE INCREASED FOR FROST SHALL BE REDESIGNED. IF THE SOIL BEARING CAPACITY IS LESS THAN THAT SPECIFIED THEN THE RETAINING WALL FOOTINGS MUST BE REDESIGNED.

**GRAPHIC SCALE:**

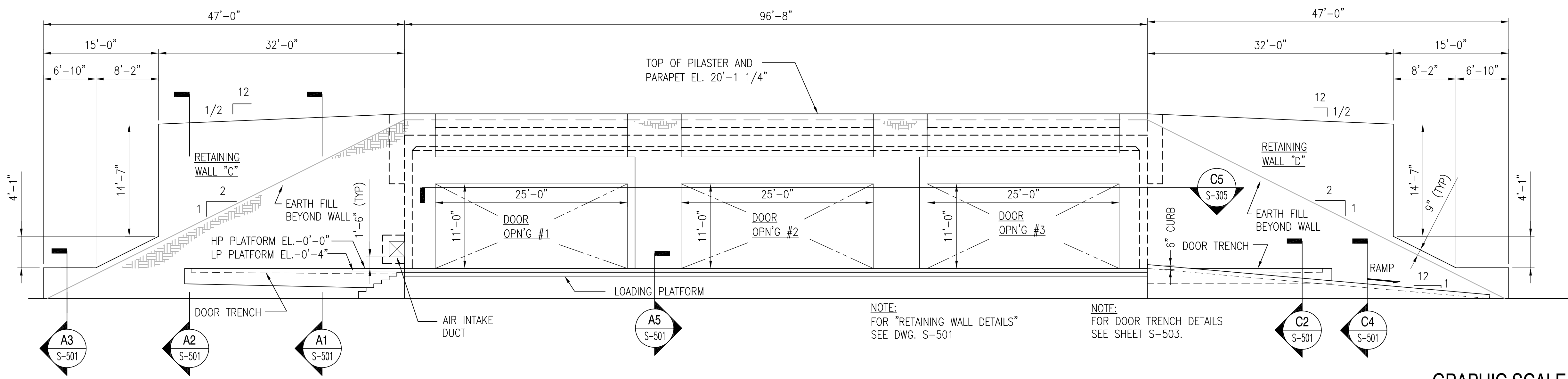


	DATE
	DESCRIPTION
	SYM
SAT-10	
APPROVED	
FOR COMMANDER NAVFAC	DR
CHK	GC
NAVFAC MANAGER	
REVIEWED BY	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL STATION - NORFOLK, VIRGINIA NAVFACANT	
<b>TYPE C BOX MAGAZINE WITH LOADING PLATFORM</b>	
FLOOR PLAN	
CODE ID. NO. 80091	SIZE D
SCALE: <b>AS NOTED</b>	
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. <b>14005092</b>	
SHEET <b>2</b> OF <b>31</b>	
<b>S-101</b>	
DRAWING REVISION: 15 JANUARY 2008	

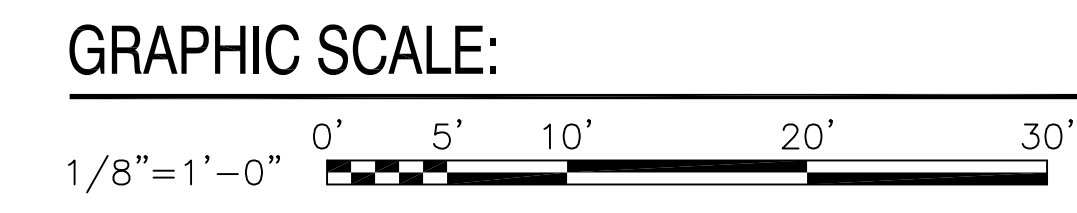
REVDATE: FILE NAME: \\nasar\k34\NAVFAC\YRKT\_16AA\NAVFAC\YRKT\_16AA\CISE\Magazines\BBox\_MAGZINES - Updated 2010\BBox\_C\_FINALS\Final Drawings Box C BOX C WITH PLATFORM COMPL.dwg LAYOUT NAME: S-102 PLOTTED: Tuesday, December 14, 2010 - 4:35pm



**ROOF PLAN**  
SCALE: 1/8" = 1'-0"



**ELEVATION**  
SCALE: 1/8" = 1'-0"

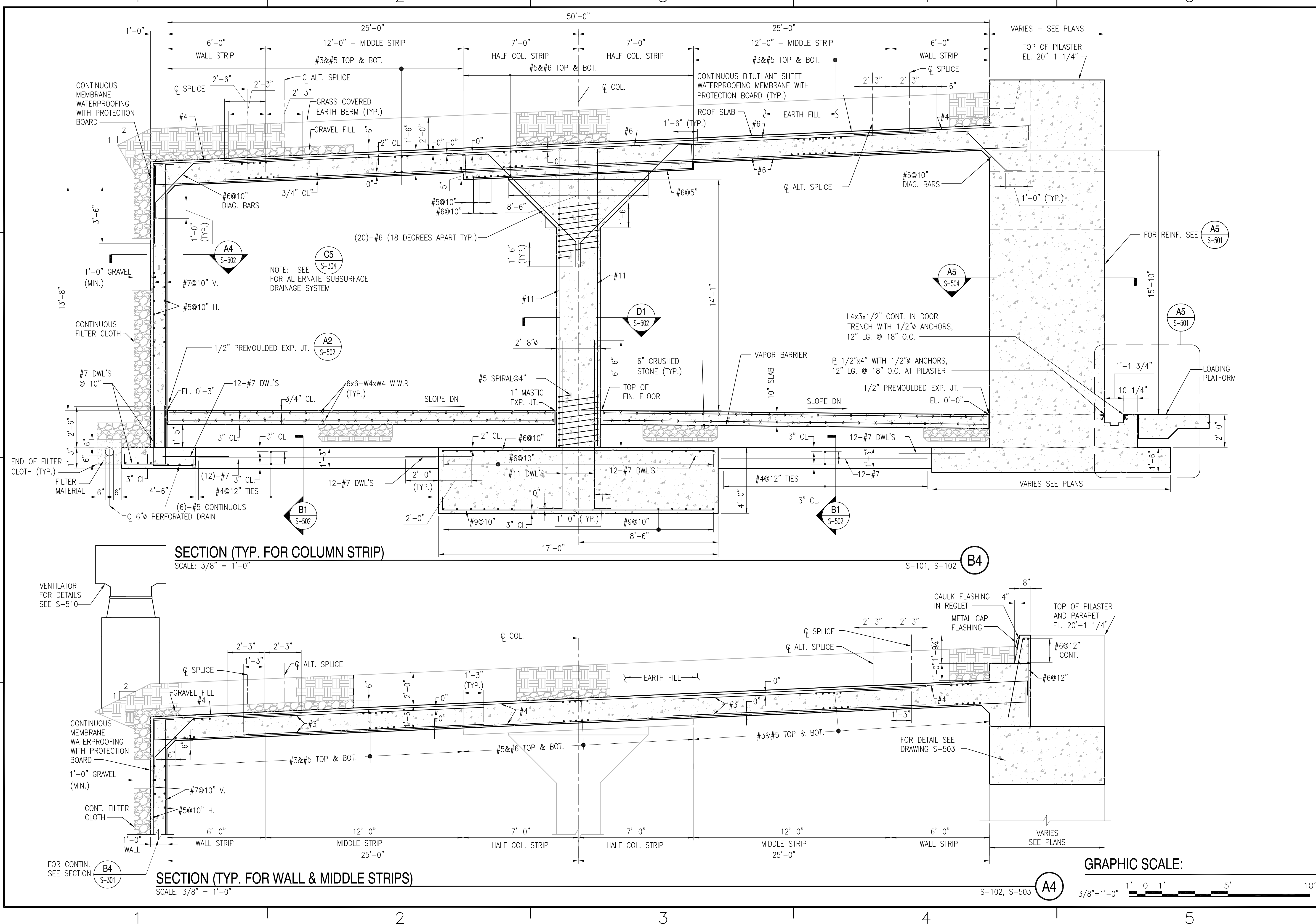


**NOTES:**

1. SEE SHEET S-001 FOR GENERAL NOTES.
2. SEE SHEET S-101 FOR PLAN NOTES.
3. ALL REINFORCING SHALL BE SPACED AT 10" ON CENTERS UNLESS NOTED OTHERWISE.

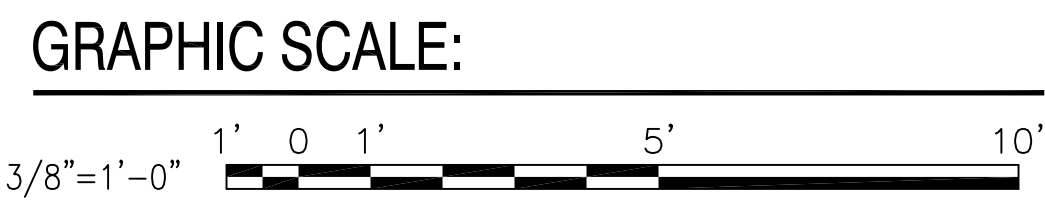
	DATE
	APPR.
	DESCRIPTION
	SYM
SEAL	
SAT-10	
A/E LOGO	
APPROVED	
FOR COMMANDER NAVFAC	
DES	DR
CHK	GC
NAVFAC MANAGER	
REVIEWED BY	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL STATION - NORFOLK, VIRGINIA NAVFACANT	
<b>TYPE C BOX MAGAZINE WITH LOADING PLATFORM</b> ROOF PLAN AND FRONT ELEVATION	
CODE ID. NO. 80091 SIZE D	
SCALE: AS NOTED	
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. 14005093	
SHEET 3 OF 31	
<b>S-102</b>	
DRAWING REVISION: 15 JANUARY 2008	

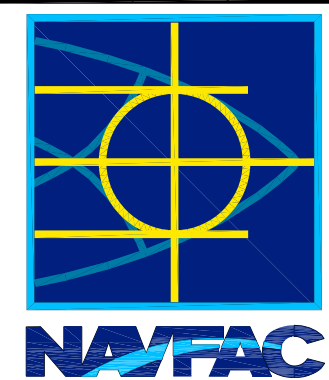
REVDATE: FILE NAME: \\naefac\k534\NAVFAC\YRKT\_16AA\NAVFAC\YRKT\_16AA\CISE\Magazines\08Box\_MAGZINES - Updated 2010\BOX C BOX C WITH PLATFORM COMPLING LAYOUT NAME: S-301 PLOTTED: Tuesday, December 14, 2010 - 4:34pm



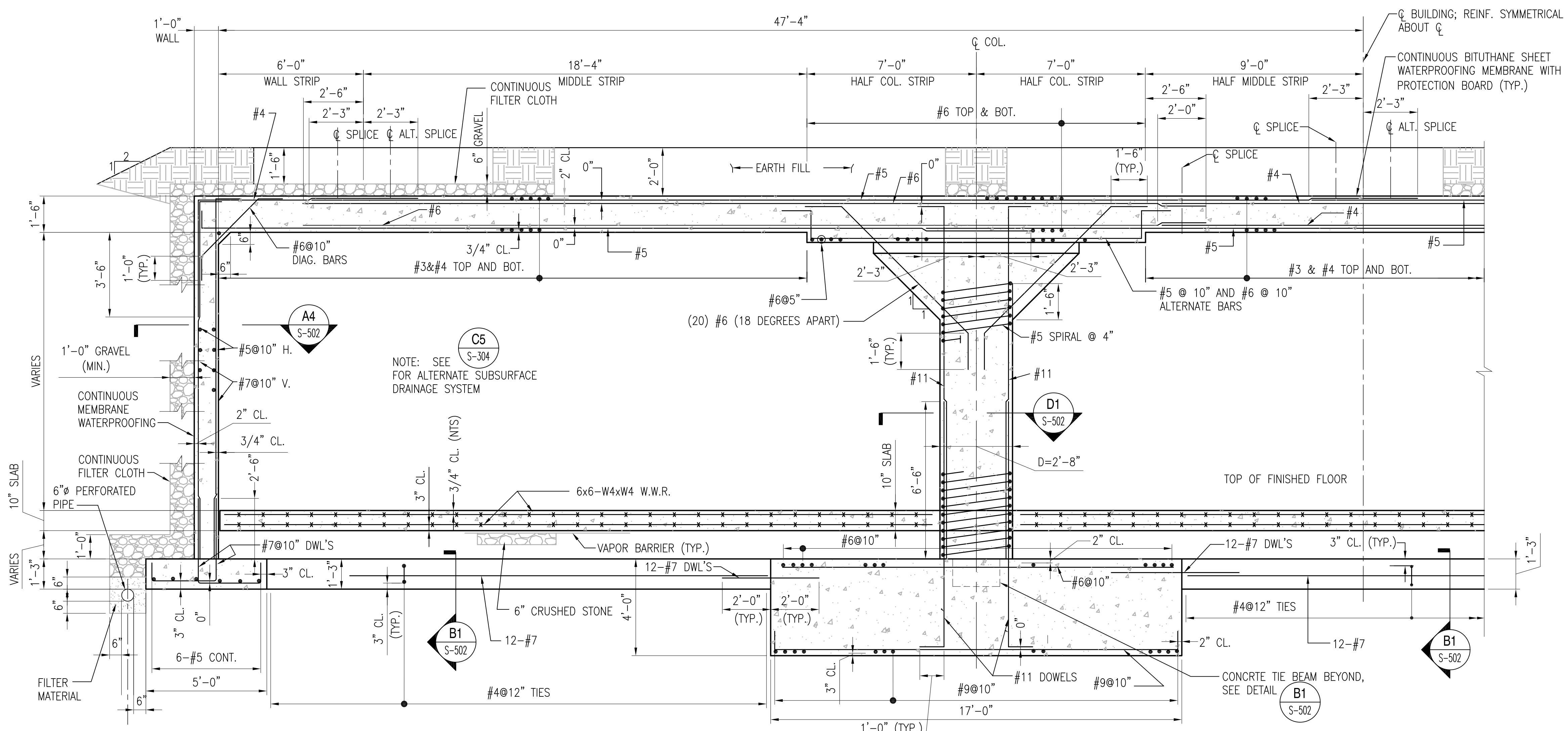
**SECTION (TYP. FOR COLUMN STRIP)**  
SCALE: 3/8" = 1'-0"

**SECTION (TYP. FOR WALL & MIDDLE STRIPS)**  
SCALE: 3/8" = 1'-0"

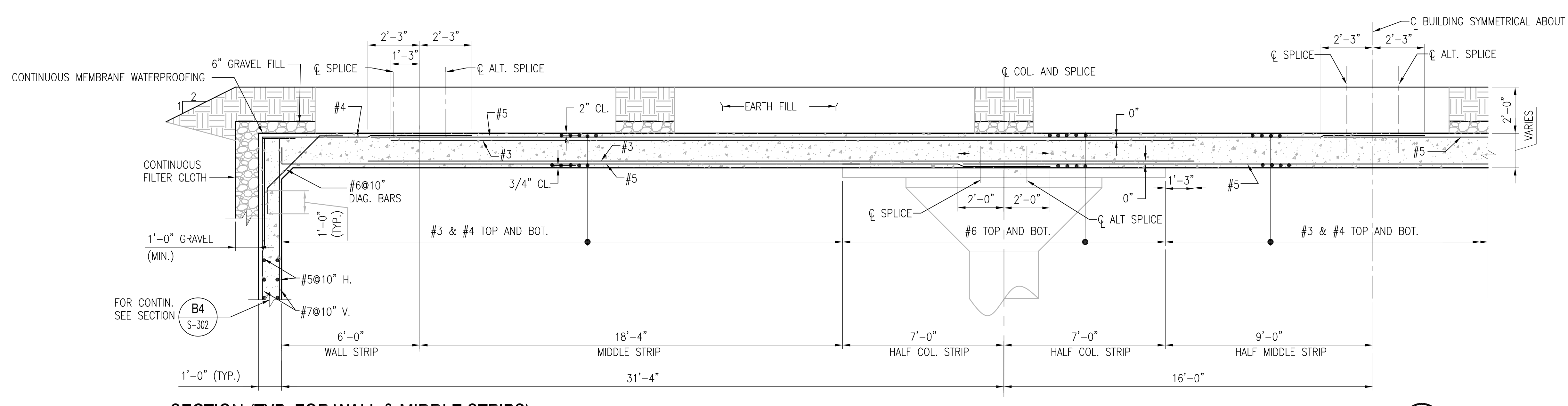


DATE	APPR.
DESCRIPTION	
SYM	
	
FOR REINF. SEE <b>A5 S-501</b>	
SEAL	
A/E LOGO	
SAT-TO	
APPROVED	
FOR COMMANDER NAVFAC	
DES	DR
CHK	GC
NAVFAC MANAGER	
REVIEWED BY	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL STATION - NORFOLK, VIRGINIA NAVFACANT	
<b>TYPE C BOX MAGAZINE WITH LOADING PLATFORM</b> SECTIONS AND DETAILS	
CODE ID. NO. 80091	SIZE D
SCALE: <b>AS NOTED</b>	
SPEC. NO. CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. <b>14005094</b>	
SHEET <b>4</b> OF <b>31</b>	
<b>S-301</b>	
DRAWING REVISION: 15 JANUARY 2008	

REVDATE: FILE NAME: \\nasanmk434\NAVFAC\_YRKT\_16AA\NAVFAC\_YRKT\_16AA\CISE\Magazines\Box C BOX C WITH PLATFORM COMPLYING LAYOUT NAME: S-302 PLOTTED: Tuesday, December 14, 2010 4:35pm

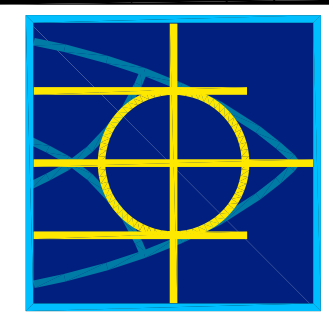


**SECTION (TYP. FOR COLUMN STRIP)**  
SCALE: 3/8" = 1'-0"

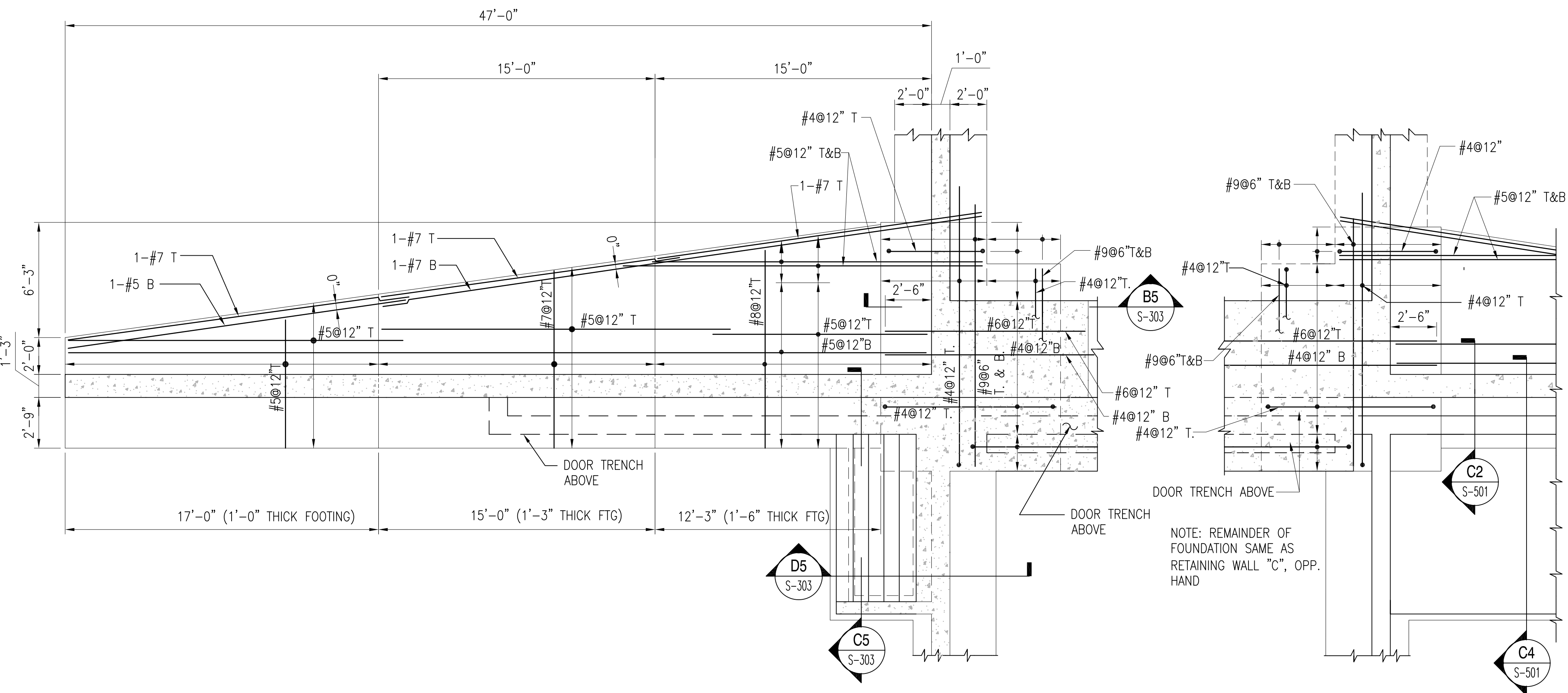


**SECTION (TYP. FOR WALL & MIDDLE STRIPS)**  
SCALE: 3/8" = 1'-0"

**GRAPHIC SCALE:**  
3/8"=1'-0" 1' 0' 1' 5' 10'

DATE	APPR.
DESCRIPTION	
SYM.	
 <b>NAVFAC</b>	
SEAL	
A/E LOGO	
SAT-10	
APPROVED	
FOR COMMANDER NAVFAC	
DES.	DR.
CHK.	GC.
NAVFAC MANAGER	
REVIEWED BY	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL STATION - NORFOLK, VIRGINIA NAVFACANT	
<b>TYPE C BOX MAGAZINE WITH LOADING PLATFORM</b> SECTIONS AND DETAILS	
CODE ID. NO. 80091	SIZE D
SCALE: AS NOTED	
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. 14005095	
SHEET 5 OF 31	
<b>S-302</b>	
DRAWING REVISION: 15 JANUARY 2008	

REVDATE: FILE NAME: \\nasar\k434\NAVFAC\YRKT\_16AA\NAVFAC\YRKT\_16AA\CISE\Magazines\Box C FINALS\Final Drawings Box C BOX C WITH PLATFORM COMPLYng LAYOUT NAME: S-303 PLOTTED: Tuesday, December 14, 2010 - 4:35pm



**RETAINING WALL "C" FOUNDATION PLAN**

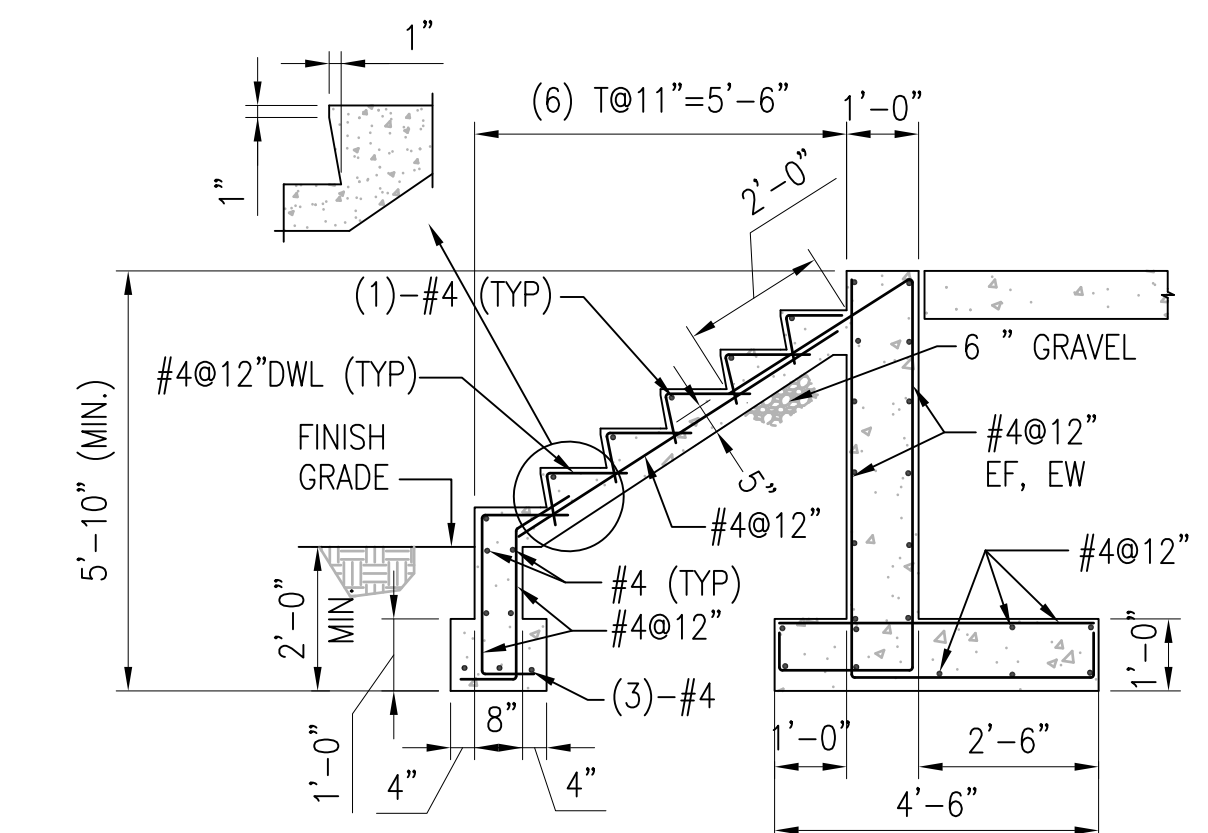
SCALE: 1/4" = 1'-0"  
RETAINING WALL "D" OPPOSITE HAND WITH RAMP

S-303 C3

**RETAINING WALL "D" PLAN**

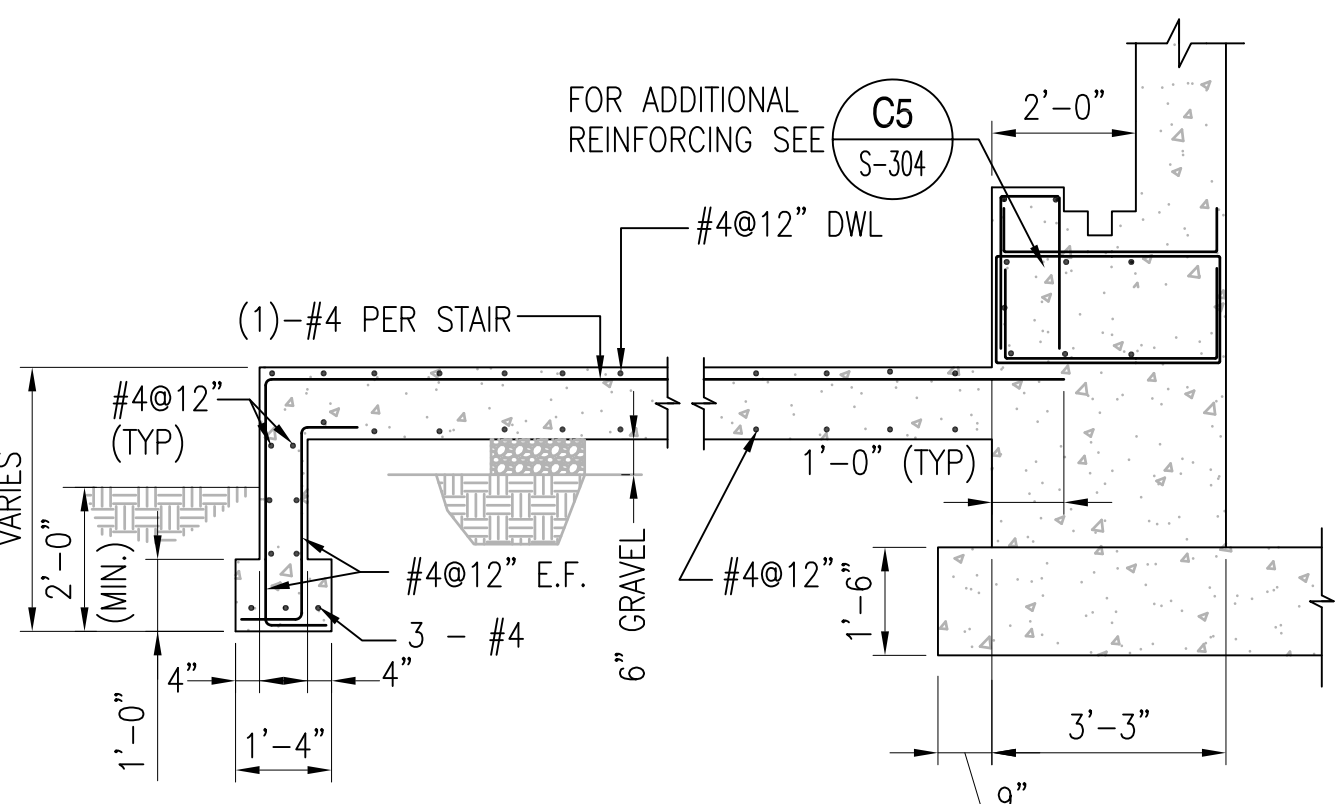
SCALE: 1/4" = 1'-0"

S-303 C4



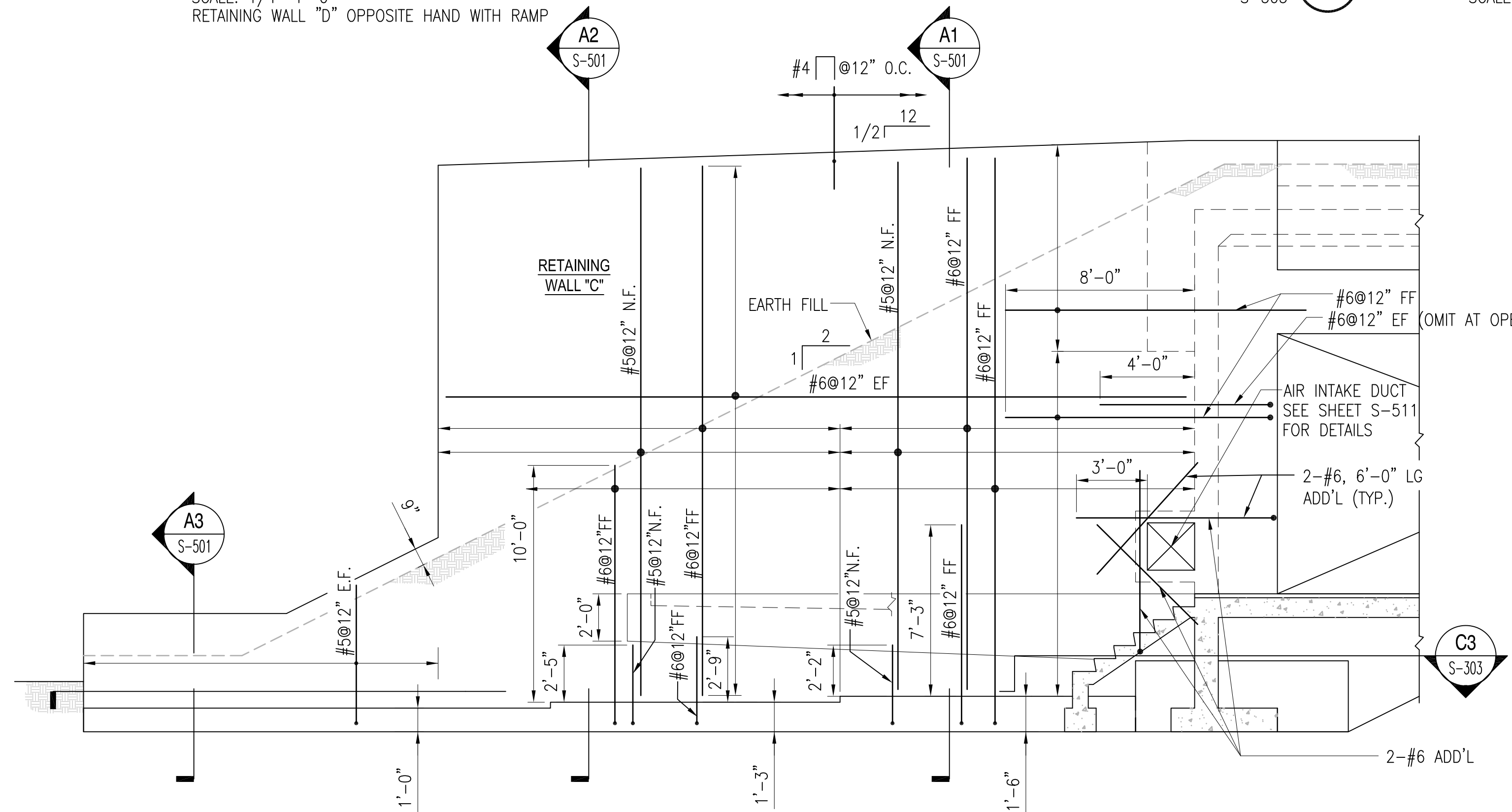
**SECTION D5**

SCALE: 3/8" = 1'-0" S-101, S-303



**SECTION C5**

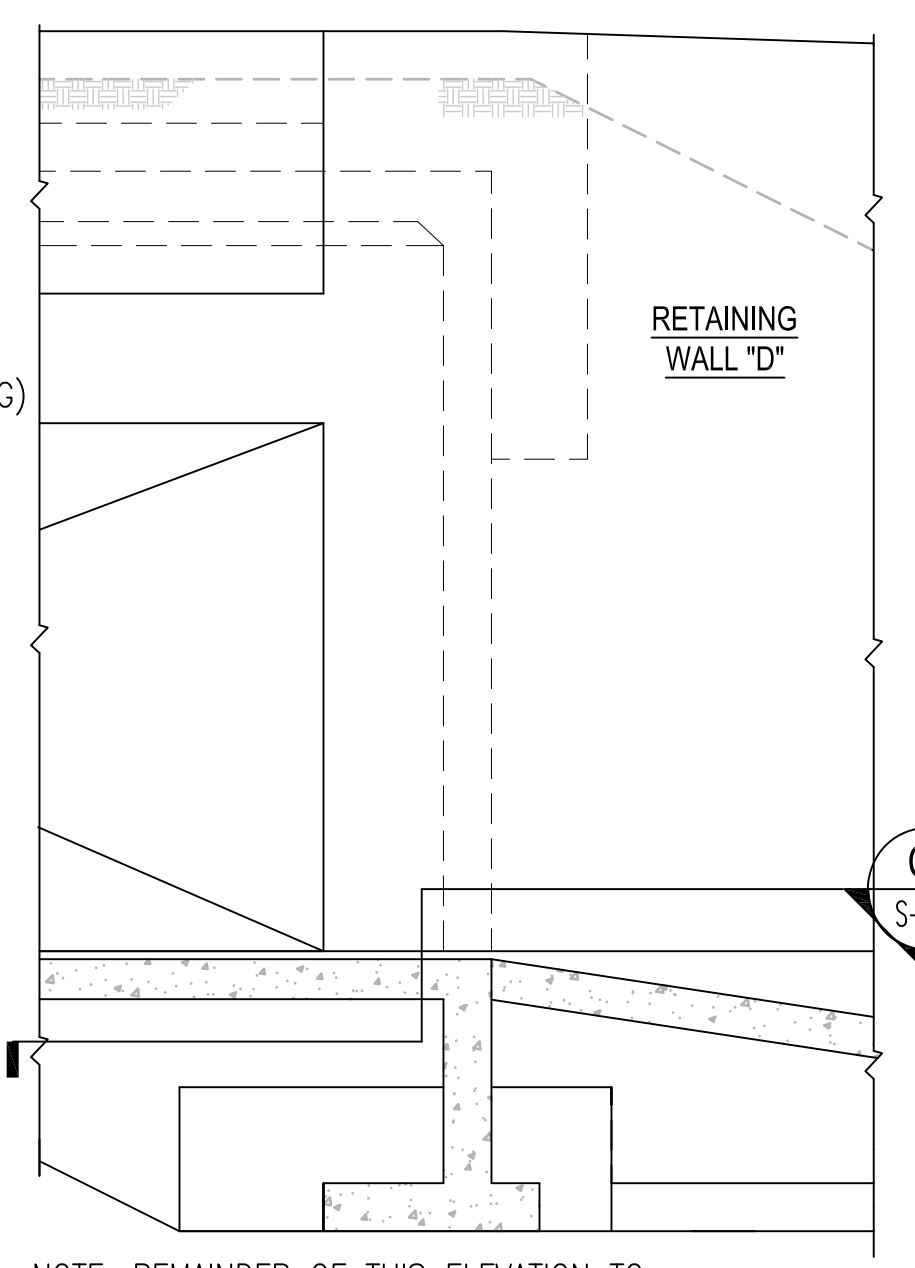
SCALE: 3/8" = 1'-0" S-303



**RETAINING WALL "C" ELEVATION**

SCALE: 1/4" = 1'-0"  
RETAINING WALL "D" OPPOSITE HAND WITH RAMP

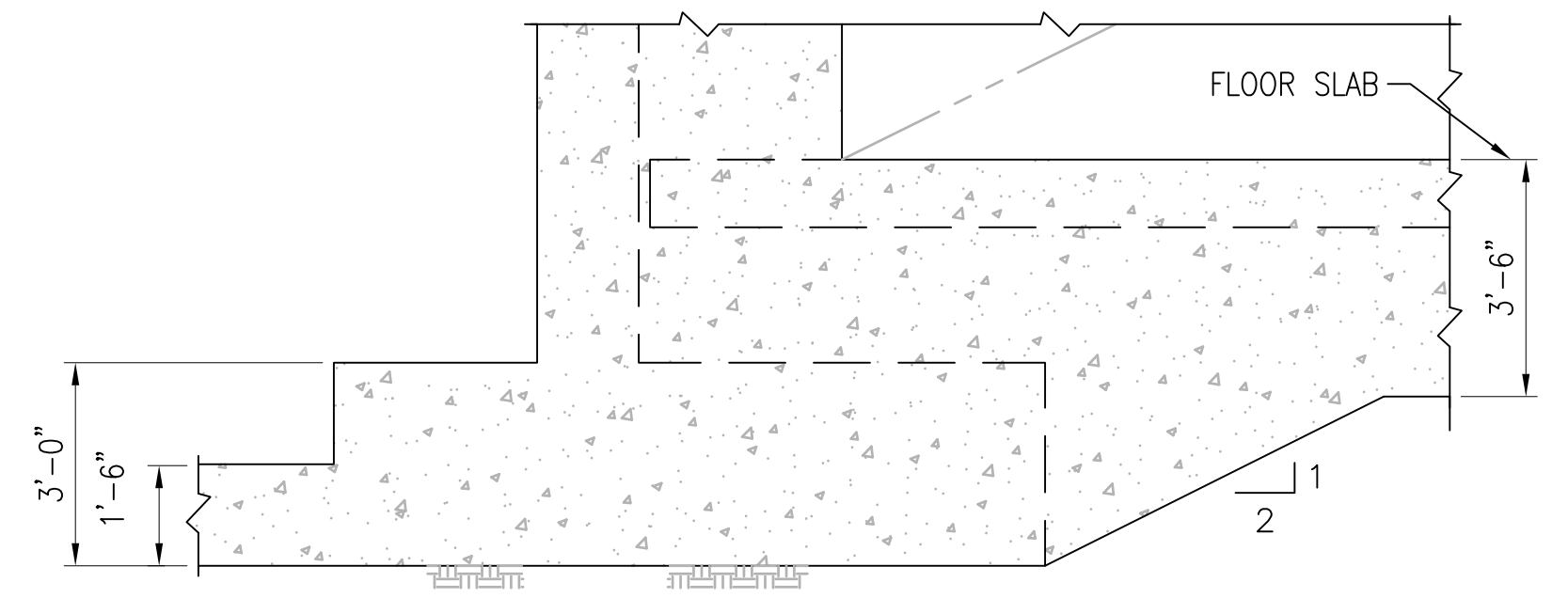
S-101 A3



**RETAINING WALL "D" ELEVATION**

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

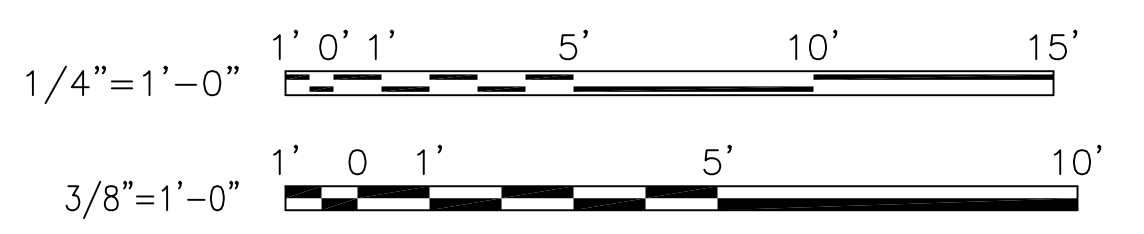
S-101 A4



**SECTION B5**

SCALE: 3/8" = 1'-0" S-303

**GRAPHIC SCALE:**



FOR COMMANDER NAVFAC	DES	DR
NAVFAC MANAGER	CHK	GC
REVIEWED BY		
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL STATION - NORFOLK, VIRGINIA NAVFACANT		
<b>TYPE C BOX MAGAZINE WITH LOADING PLATFORM</b>		
RETAINING WALL PLANS, ELEVATIONS AND SECTIONS		

CODE ID. NO. 80091	SIZE	D
SCALE:	AS NOTED	
SPEC. NO.		
CONSTR. CONTR. NO.		
NAVFAC DRAWING NO.	14005096	
SHEET	6	OF 31
<b>S-303</b>		
DRAWING REVISION: 15 JANUARY 2008		

1

2

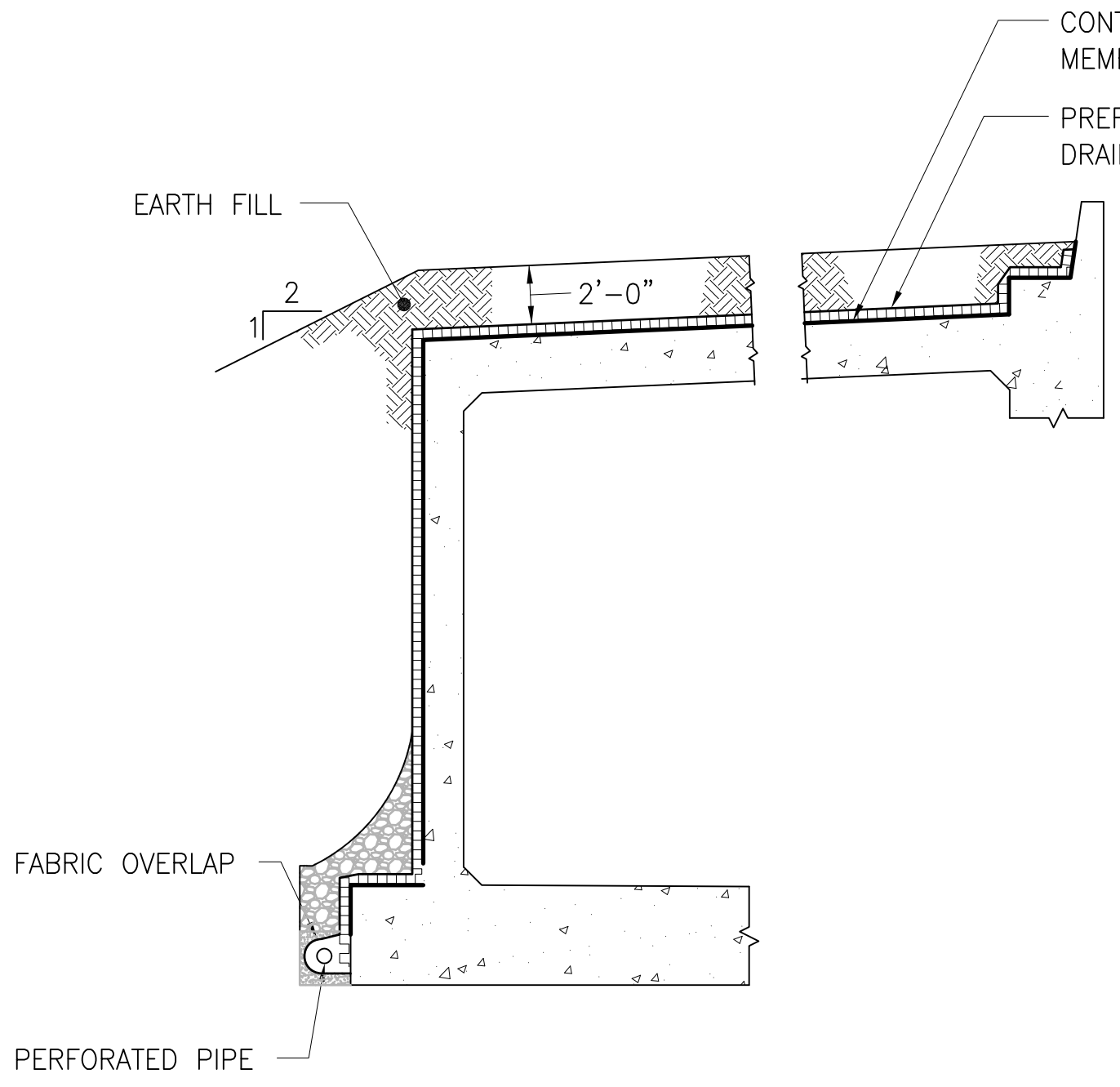
3

4

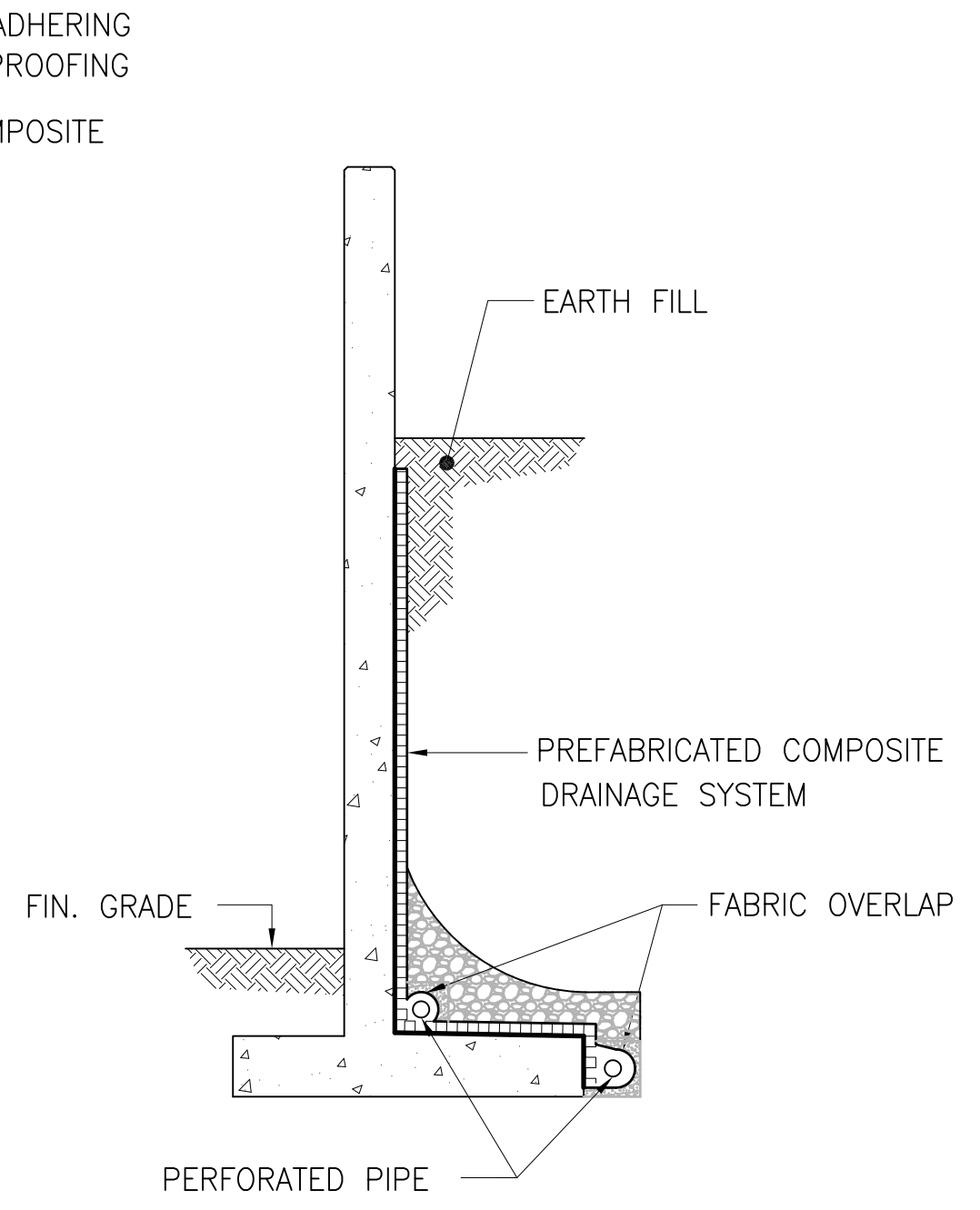
5

**SUBSURFACE DRAINAGE SYSTEM NOTES**  
 IN LIEU OF SUBSURFACE DRAINAGE SYSTEM (GRANULAR FILL, FILTER FABRIC, PERFORATED DRAIN) AND THE PROTECTION BOARD FOR THE CONTINUOUS MEMBRANE WATERPROOFING INDICATED, THE CONTRACTOR MAY PROVIDE THE OPTIONAL SUBDRAINAGE SYSTEM CONSISTING OF PERFORATED DRAIN AND GRANULAR FILL, WATERPROOFING MEMBRANE, PREFABRICATED DRAINAGE BOARD OR MAT, AND FILTER FABRIC. PROTECTION BOARD IS ACCEPTABLE OVER THE WATERPROOFING MEMBRANE IF REQUIRED BY THE MEMBRANE MANUFACTURER AT THE MAGAZINE WALLS AND TOP OR/AND AT THE RETAINING WALLS FOR THE MAGAZINE AS DETAILED BELOW. THE LOCATION, GRADES, AND MATERIALS SHOWN FOR DOWNSLOPE PIPING (DRAINAGE AND FILTER FABRIC/FILL MATERIAL) INTO WHICH THE PREFABRICATED DRAINAGE SYSTEM CONNECTS SHALL NOT VARY FROM THAT INDICATED. THE OPTIONAL PREFABRICATED DRAINAGE SYSTEMS LISTED BELOW ARE ACCEPTABLE FOR USE. A COMPLETE SET OF SHOP DRAWINGS, ALONG WITH THE MANUFACTURER'S PRODUCT LITERATURE, THICKNESS CALCULATIONS, AND INSTALLATION INSTRUCTIONS SHALL BE SUBMITTED TO THE CONTRACTING OFFICER FOR APPROVAL:

GEOFAB	BY	MERCANTILE DEVELOPMENT INC.
ENKADRAIN	BY	AMERICAN ENKA CO.
STRIPDRAIN	BY	ARMCO CONSTRUCTION PRODUCTS
MIRADRAIN	BY	MIRAFI INC.
GEOTECH	BY	GEOTECH SYSTEM CORP.



**BUILDING ROOF AND WALLS**



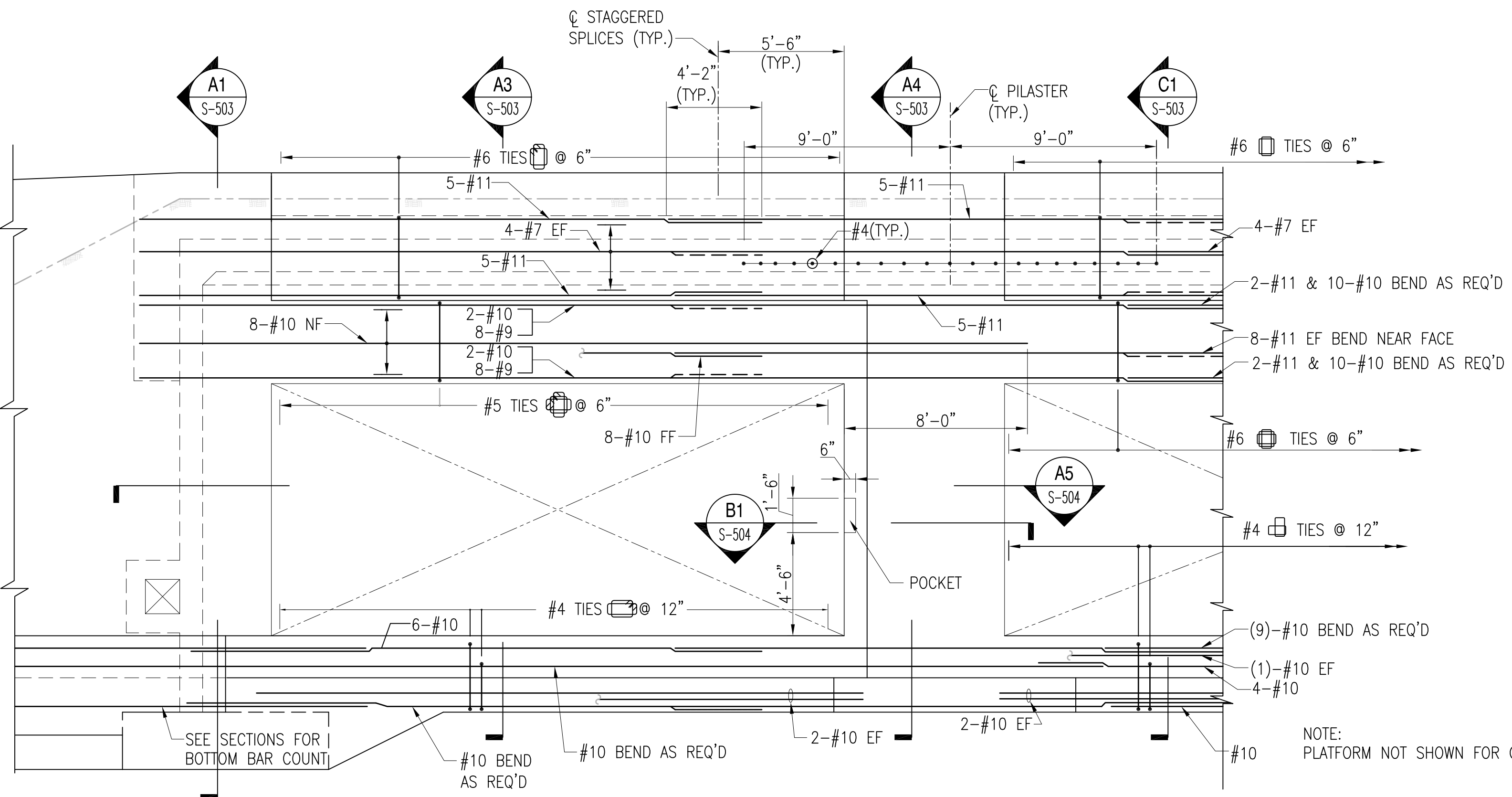
**RETAINING WALLS**

**ALTERNATE SUBSURFACE DRAINAGE SYSTEM**

N.T.S.

S-301, S-302, S-501

C5



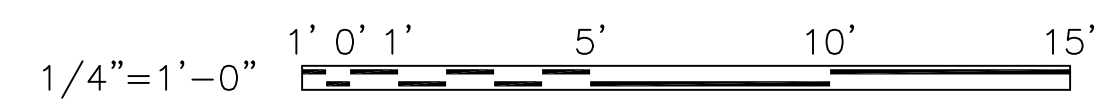
**PARTIAL ELEVATION AT SLIDING DOORS**

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

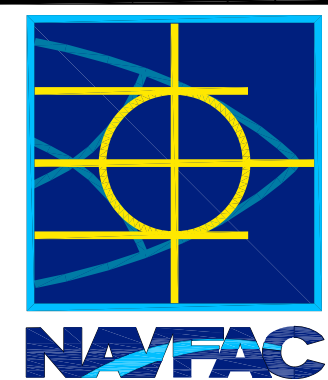
S-101, S-102, S-503

A2

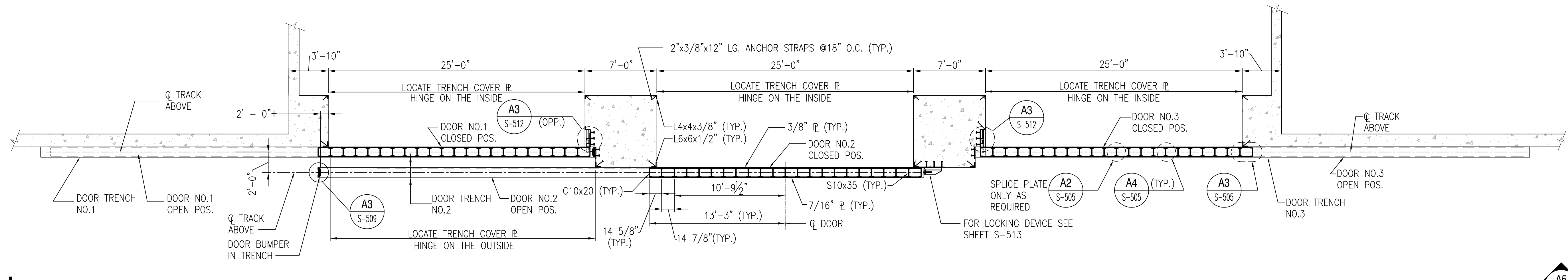
**GRAPHIC SCALE:**



REVDATE: FILE NAME: \\nasamrk634\NAVFAC\_YRKT\_16AA\NAVFAC\_YRKT\_16AA\CISE\Magazines\Box C FINALS\Final Drawings Box C BOX C WITH PLATFORM COMPL.dwg LAYOUT NAME: S-304 PLOTTED: Tuesday, December 14, 2010 - 4:35pm

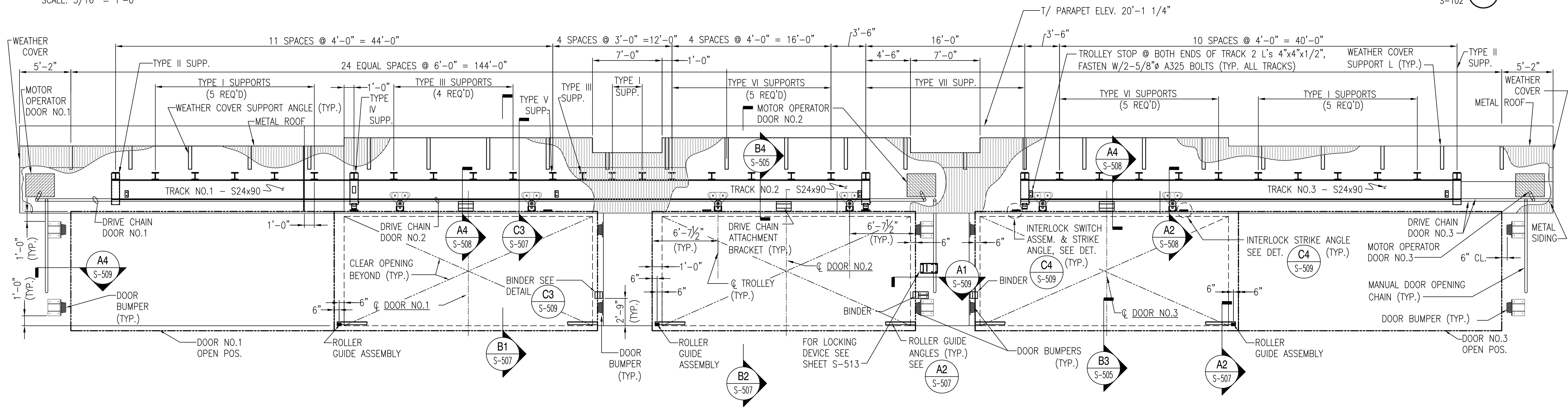
DATE	APPR				
DESCRIPTION	SYM				
					
<p>FOR COMMANDER NAVFAC</p> <table border="0"> <tr> <td>DES</td> <td>DR</td> </tr> <tr> <td>CHK</td> <td>GC</td> </tr> </table> <p>NAVFAC MANAGER</p> <p>REVIEWED BY</p>		DES	DR	CHK	GC
DES	DR				
CHK	GC				
<p>DEPARTMENT OF THE NAVY</p> <p>NAVAL FACILITIES ENGINEERING COMMAND</p> <p>NAVAL FACILITIES ENGINEERING COMMAND</p> <p>NAVAL STATION - NORFOLK, VIRGINIA</p> <p>NAVFACANT</p>					
<p><b>TYPE C BOX MAGAZINE WITH LOADING PLATFORM</b></p> <p>PARTIAL ELEVATION</p>					
CODE ID. NO. 80091	SIZE D				
SCALE: AS NOTED					
SPEC. NO.					
CONSTR. CONTR. NO.					
NAVFAC DRAWING NO. 14005097					
SHEET 7 OF 31					
<b>S-304</b>					
DRAWING REVISION: 15 JANUARY 2008					

REVDATE: FILE NAME: \\naflant\k1634\NAVFAC\_166A\NAVFAC\_166A\NAVFAC\_166A\CAD\CADD\Drawings\Box C BOX C WITH PLATFORM COMPL\dwg LAYOUT NAME: S-305 PLOTTED: Tuesday, December 14, 2010 4:35pm



**PARTIAL PLAN AT SLIDING DOORS**

SCALE: 3/16" = 1'-0"

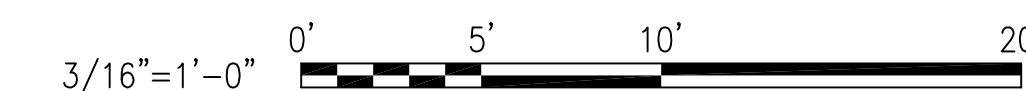


**PARTIAL ELEVATION AT SLIDING DOORS**

SCALE: 3/16" = 1'-0"

- NOTES:**
- 1. EMBEDDED PLATES AND ANGLES TO SUPPORT DOOR MOTOR OPERATORS SHALL BE PROVIDED.
  - 2. SEE SHEET S-001 FOR COATING REQUIREMENTS.
  - 3. SEE S-506 FOR TYPES I THROUGH VIII DOOR MONORAIL SUPPORT BRACKET DETAILS.
  - 4. SEE S-512 FOR INTERIOR LOCKING DEVICE DETAILS, S-513 FOR STANDARD HIGH SECURITY HASP DETAILS AND S-513 (ALT.) FOR OPTIONAL HIGH SECURITY HASP INTERNAL LOCKING DEVICE (ILD).

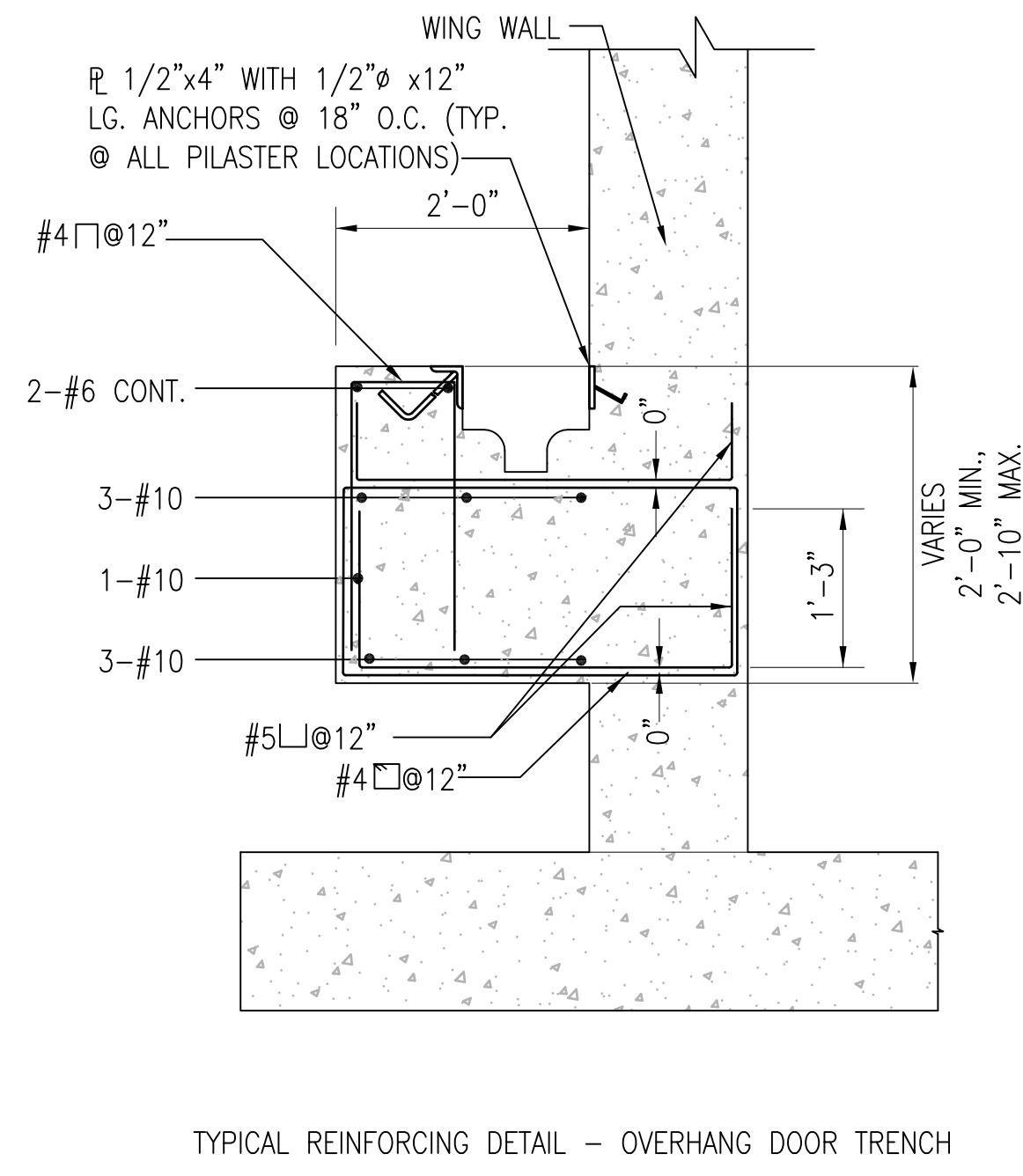
**GRAPHIC SCALE:**



DATE	APPR.								
DESCRIPTION	SYM								
<p>FOR COMMANDER NAVFAC</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">DES.</td> <td style="width: 50%;">DR.</td> </tr> <tr> <td>CHK.</td> <td>GC.</td> </tr> <tr> <td colspan="2">NAVFAC MANAGER</td> </tr> <tr> <td colspan="2">REVIEWED BY</td> </tr> </table>		DES.	DR.	CHK.	GC.	NAVFAC MANAGER		REVIEWED BY	
DES.	DR.								
CHK.	GC.								
NAVFAC MANAGER									
REVIEWED BY									
<p>DEPARTMENT OF THE NAVY</p> <p>NAVAL FACILITIES ENGINEERING COMMAND</p> <p>NAVAL STATION - NORFOLK, VIRGINIA</p> <p>NAVFAC/ANT</p>									
<p><b>TYPE C BOX MAGAZINE WITH LOADING PLATFORM</b></p> <p>PARTIAL PLAN AND ELEVATION</p>									
<p>CODE ID. NO. 80091    SIZE    D</p> <p>SCALE: <b>AS NOTED</b></p> <p>SPEC. NO.</p> <p>CONSTR. CONTR. NO.</p> <p>NAVFAC DRAWING NO. <b>14005098</b></p> <p>SHEET <b>8</b> OF <b>31</b></p> <p><b>S-305</b></p> <p style="font-size: small;">DRAWING REVISION: 15 JANUARY 2008</p>									

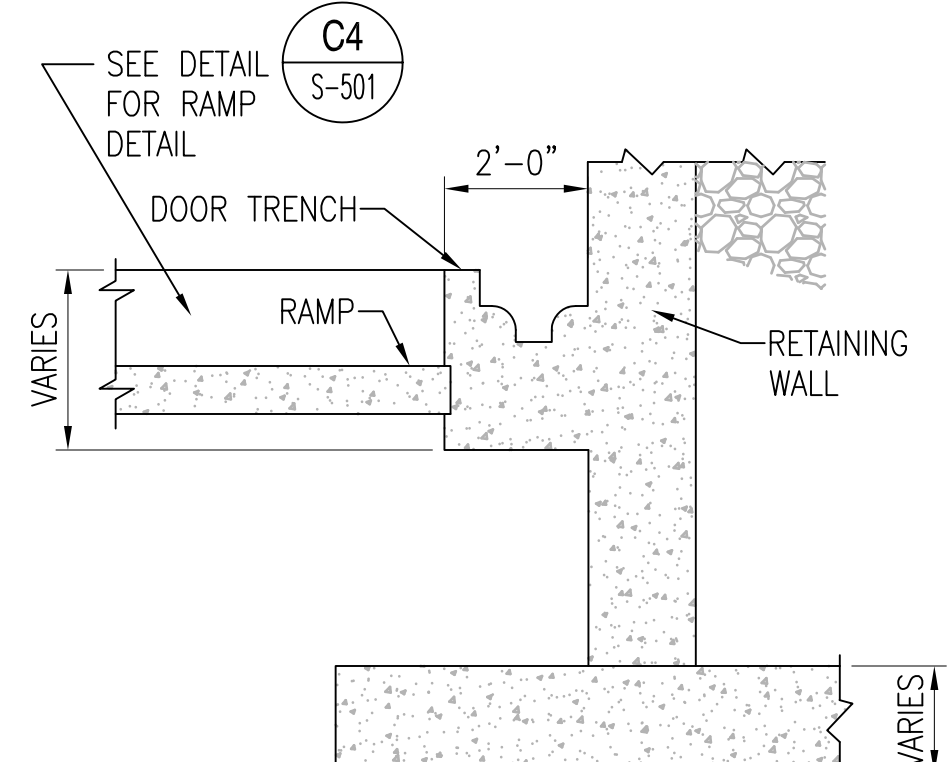


REVDATE: FILE NAME: \\nasarmk434\NAVFAC\YRKT\_16AA\NAVFAC\_YRKT\_16AA\CISE\Magazines\Box C BOX C WITH PLATFORM COMPL\Layout NAME: S-501 PLOTTED: Tuesday, December 14, 2010 - 4:35pm

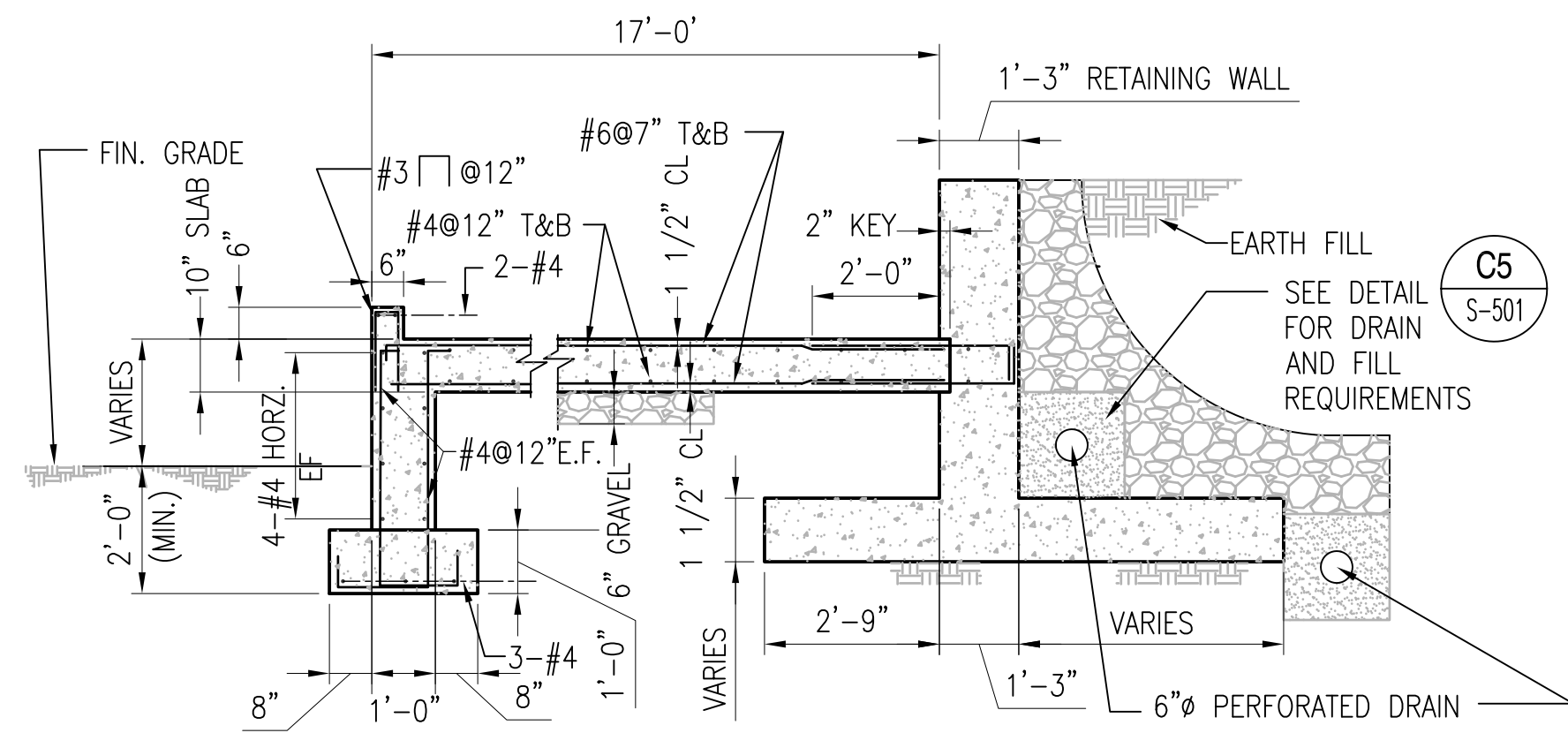


TYPICAL REINFORCING DETAIL - OVERHANG DOOR TRENCH

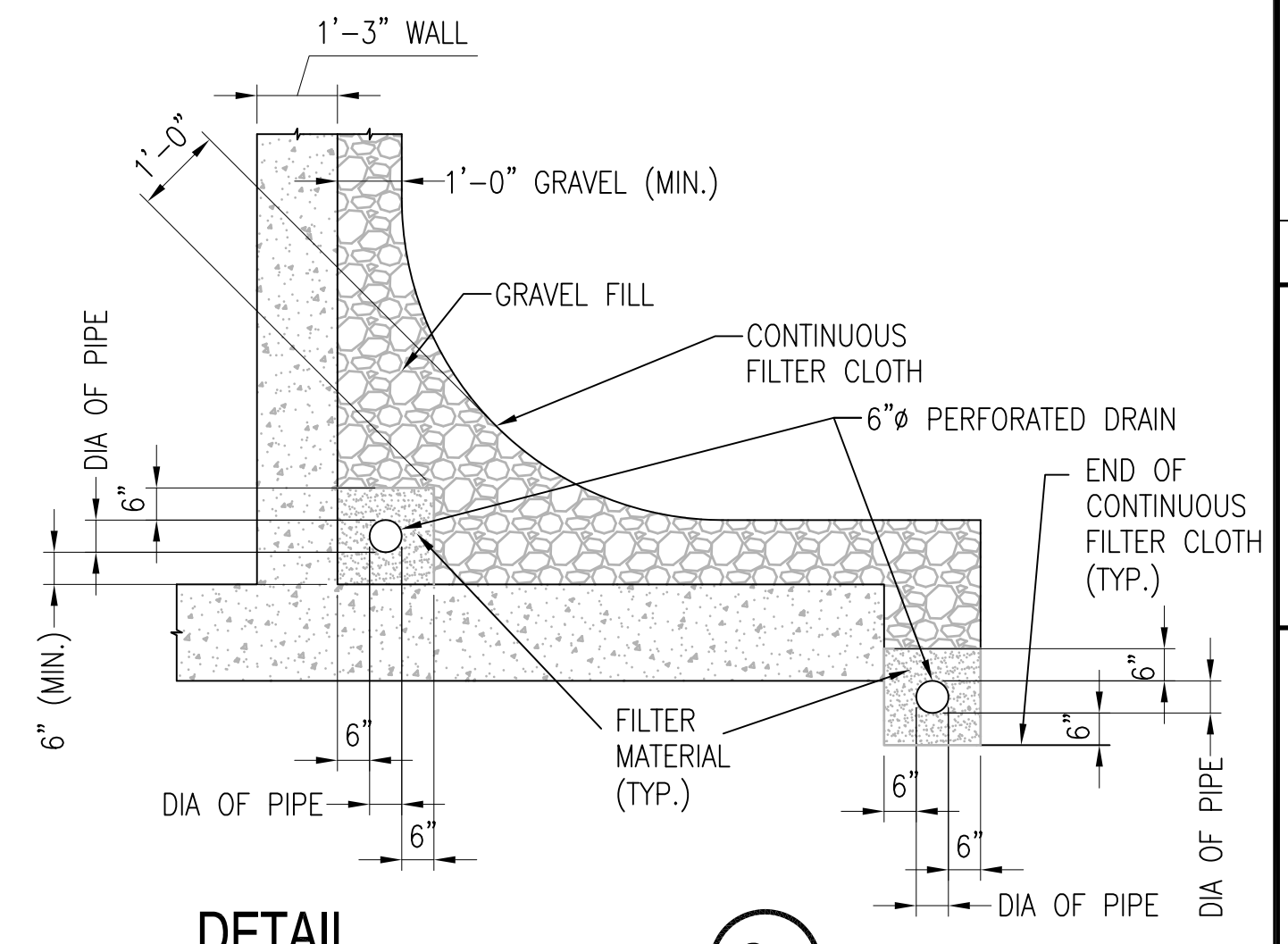
**SECTION**  
SCALE: 3/4" = 1'-0"  
S-501 **C1**



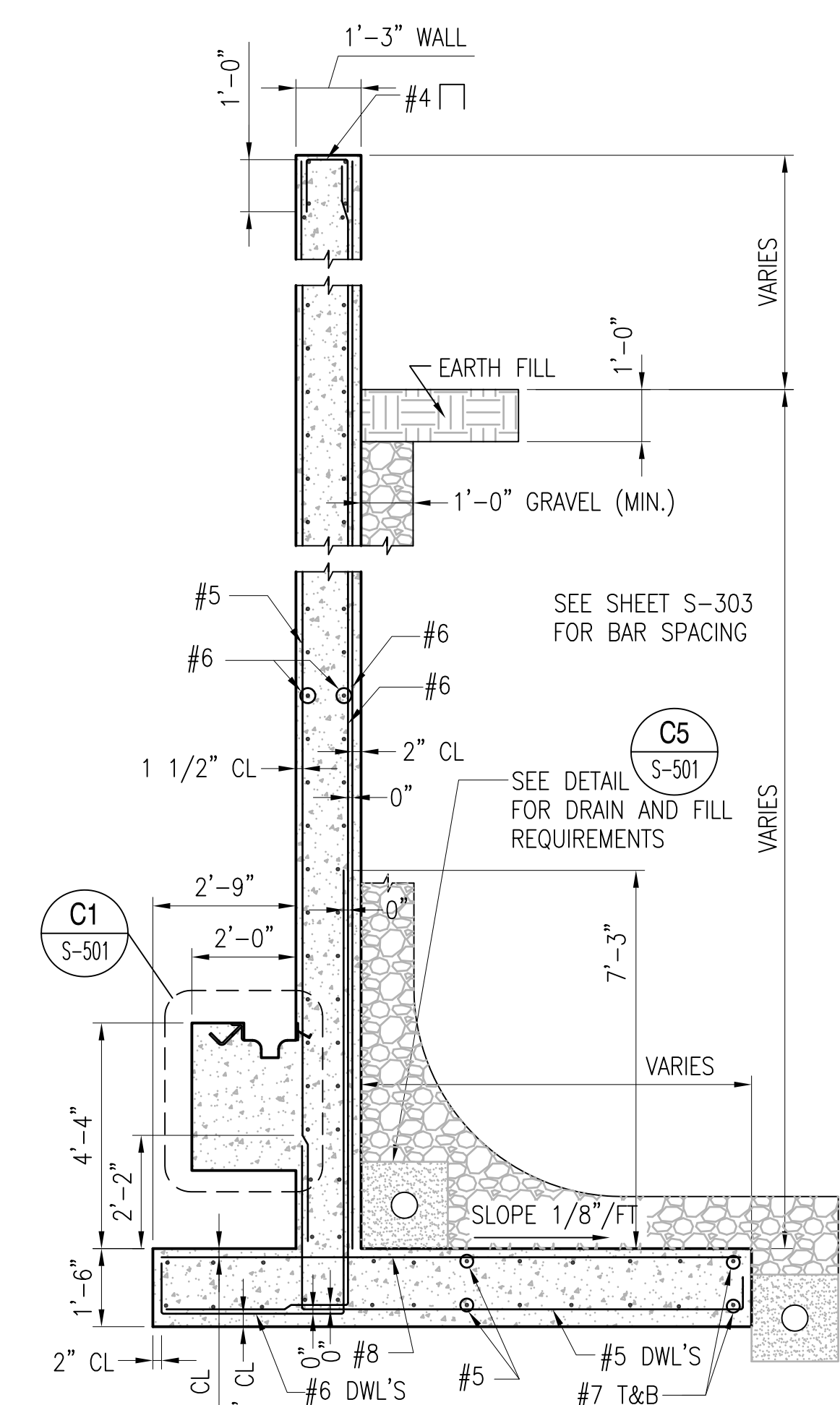
**SECTION**  
SCALE: 3/8" = 1'-0"  
S-101, S-102, S-303 **C2**



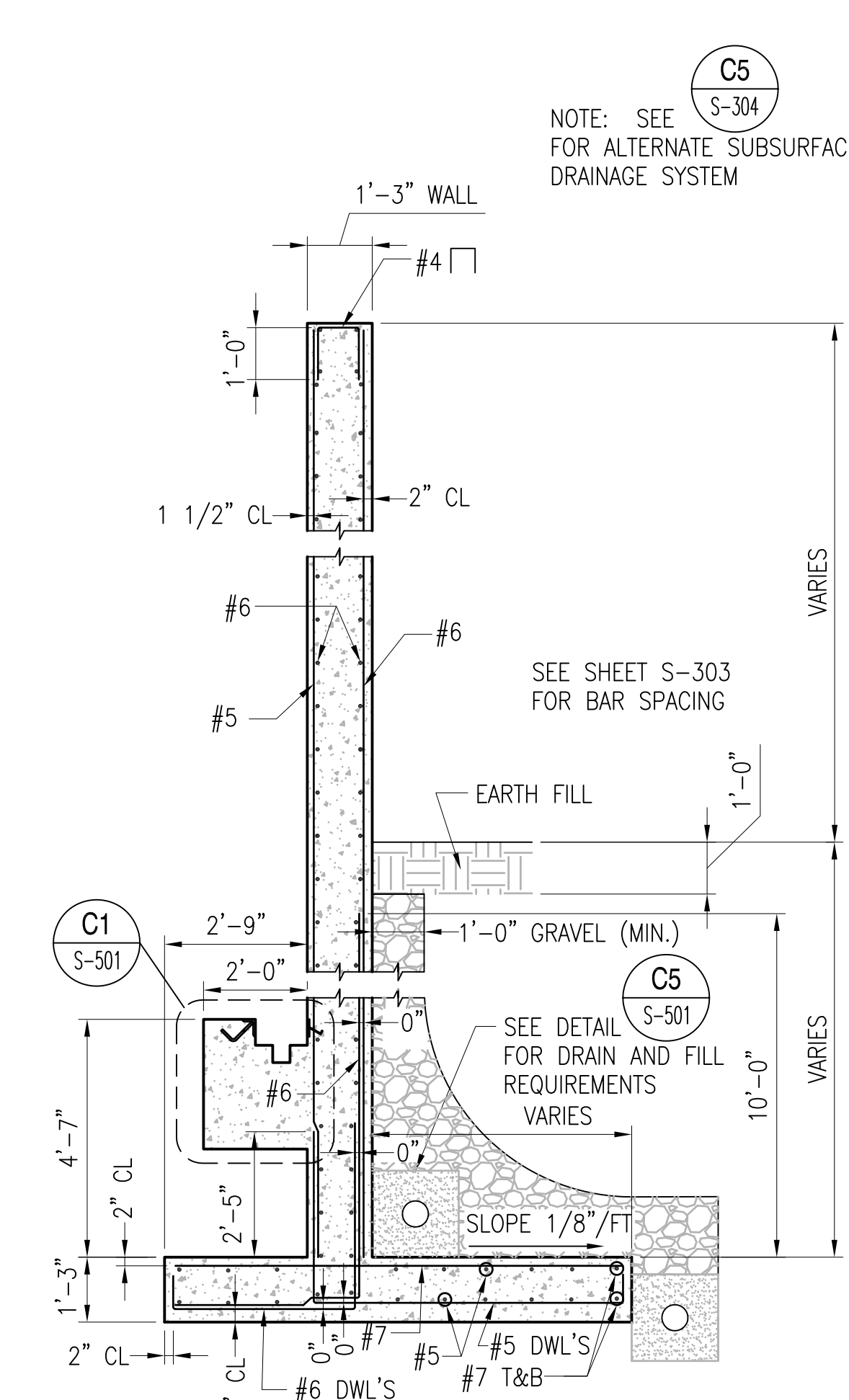
**SECTION**  
SCALE: 3/8" = 1'-0"  
S-101, S-102, S-303, S-501 **C4**



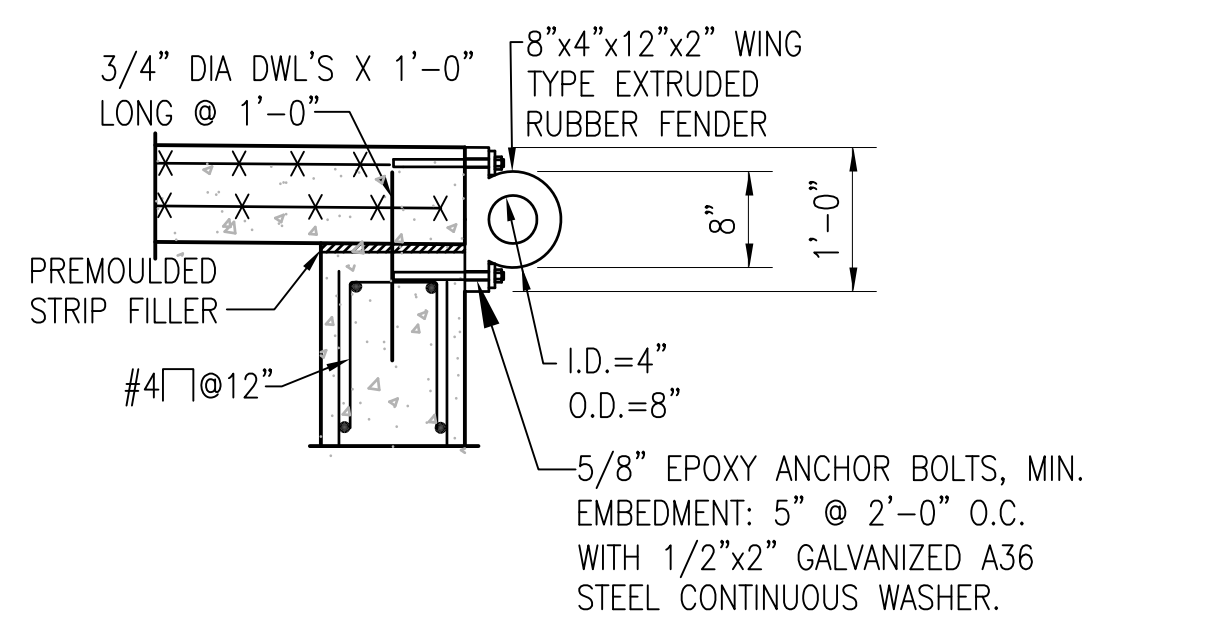
**DETAIL**  
SCALE: 3/8" = 1'-0"  
S-501 **C5**



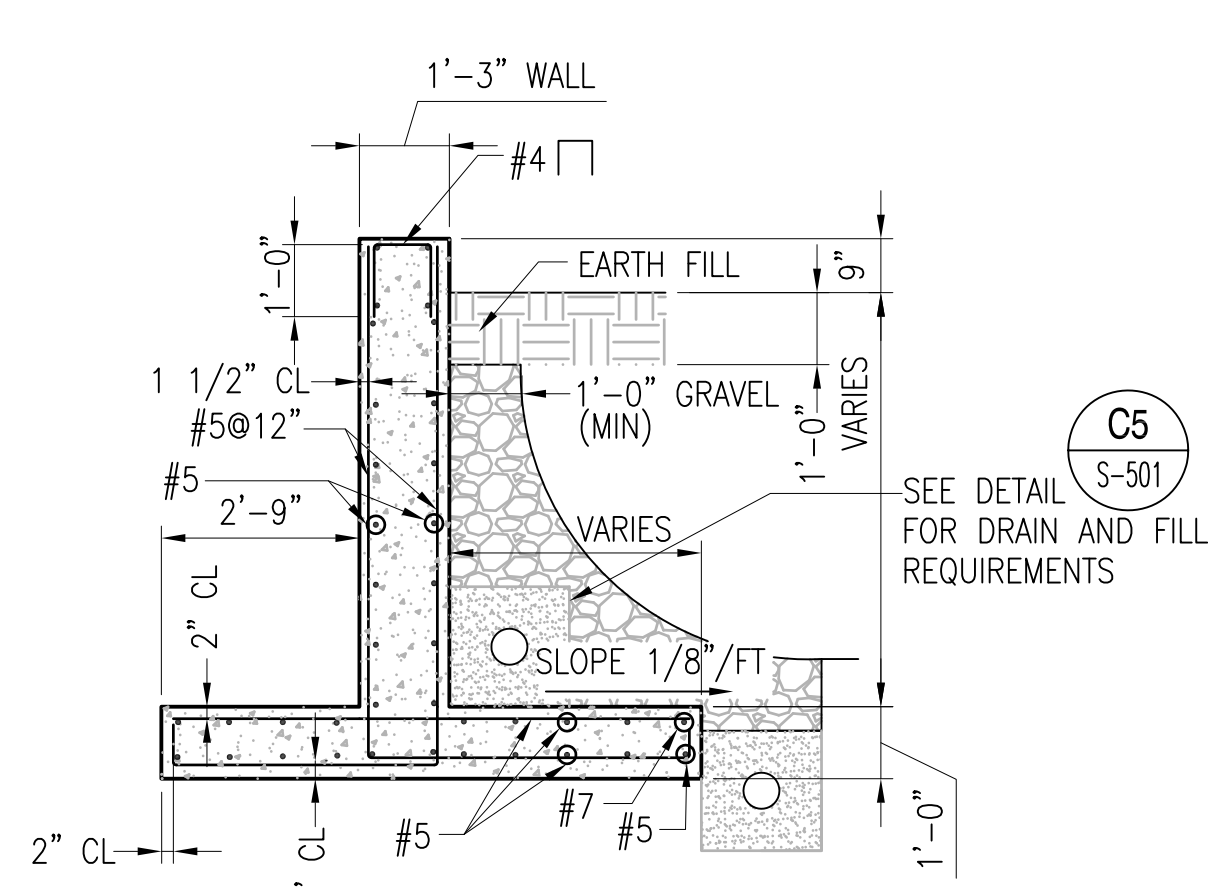
**SECTION**  
SCALE: 3/8" = 1'-0"  
S-102, S-303 **A1**



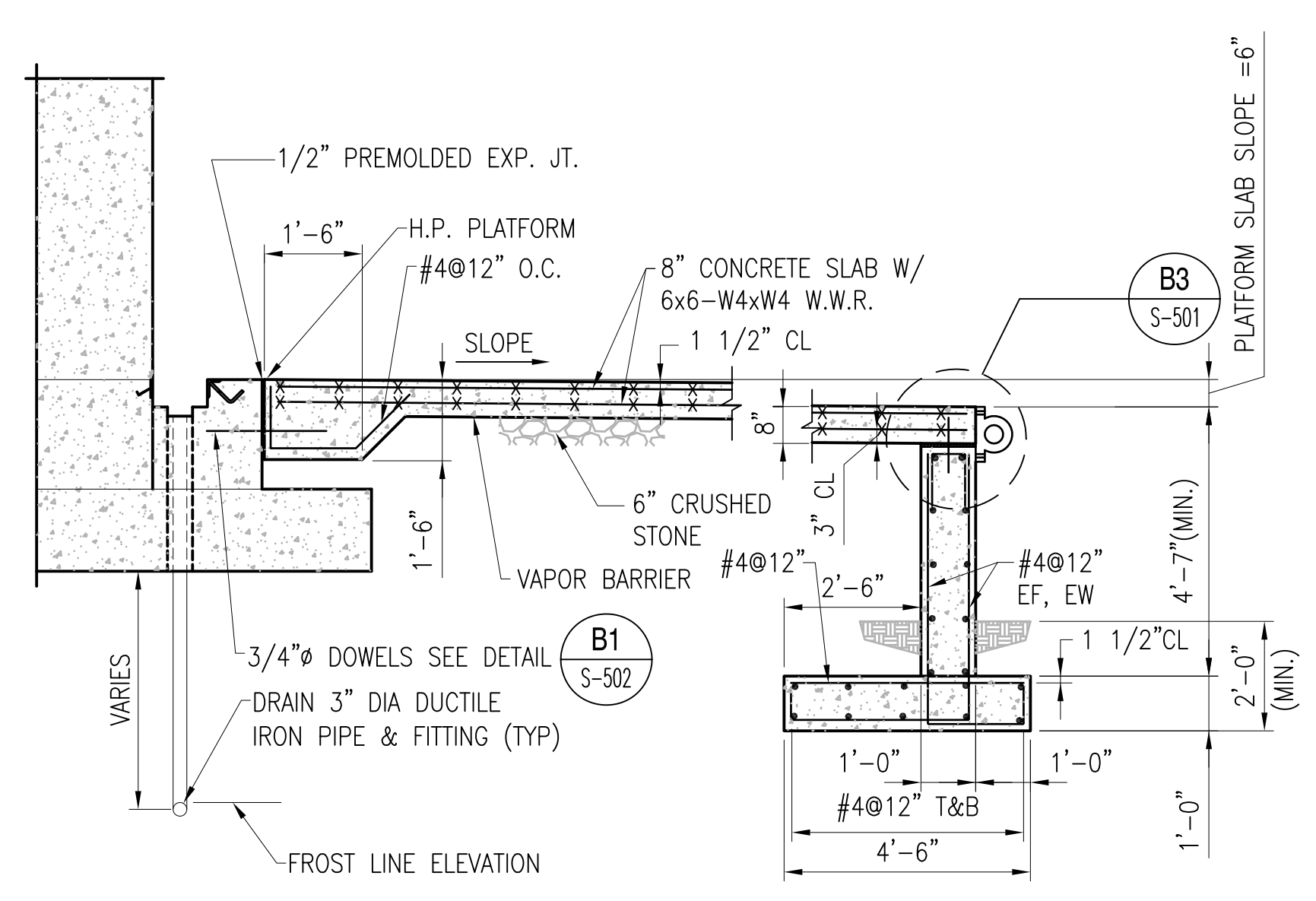
**SECTION**  
SCALE: 3/8" = 1'-0"  
S-102, S-303 **A2**



**DETAIL**  
SCALE: 3/4" = 1'-0"  
S-501 **B3**



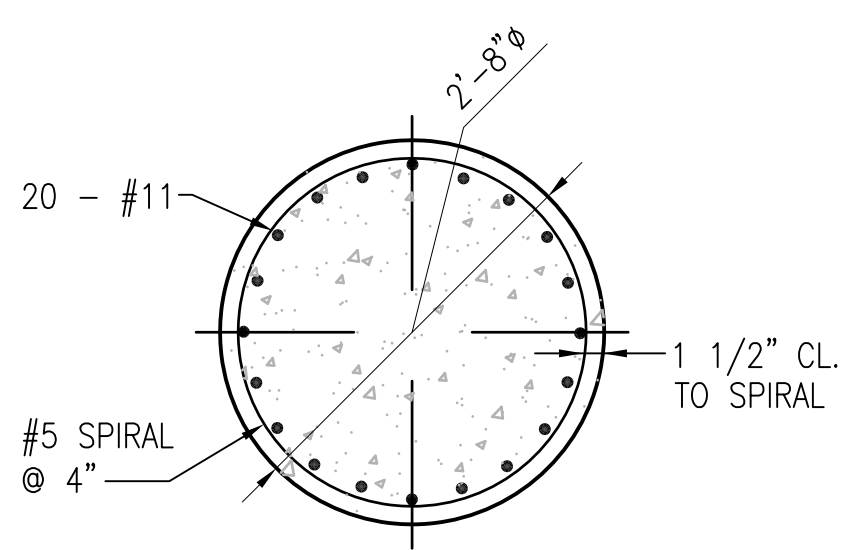
**SECTION**  
SCALE: 3/8" = 1'-0"  
S-102, S-303 **A3**



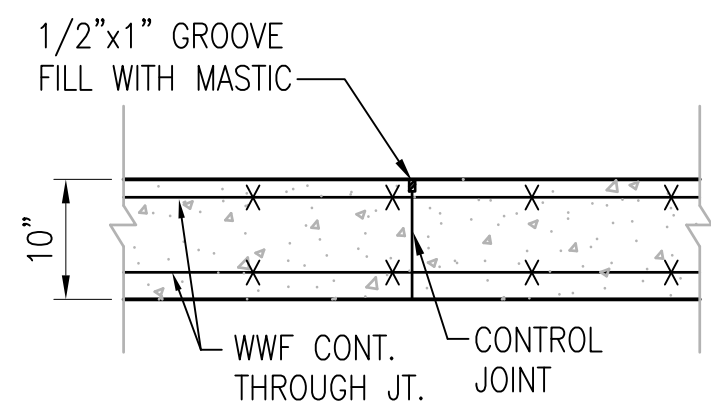
**SECTION**  
SCALE: 3/8" = 1'-0"  
S-101, S-102, S-301 **A5**



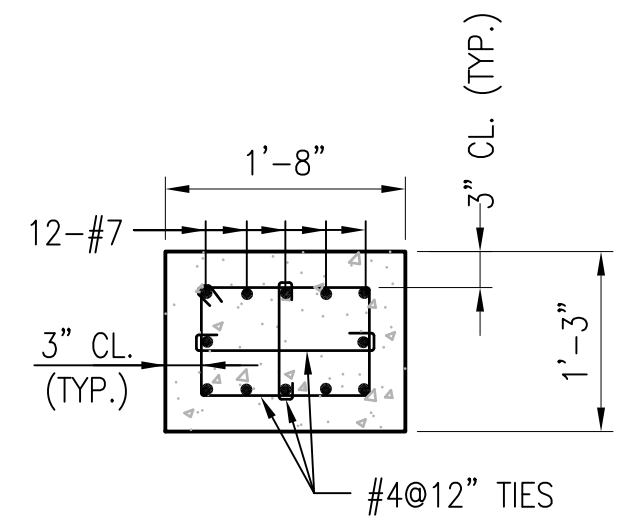
FOR COMMANDER NAVFAC	
DES	DR
CHK	GC
NAVFAC MANAGER	
REVIEWED BY	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL STATION - NORFOLK, VIRGINIA NAVFACANT	
<b>TYPE C BOX MAGAZINE WITH LOADING PLATFORM</b> RETAINING WALL DETAILS	
CODE ID. NO. 80091	SIZE D
SCALE: AS NOTED	
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. 14005099	
SHEET 9	OF 31
<b>S-501</b>	
DRAWING REVISION: 15 JANUARY 2008	



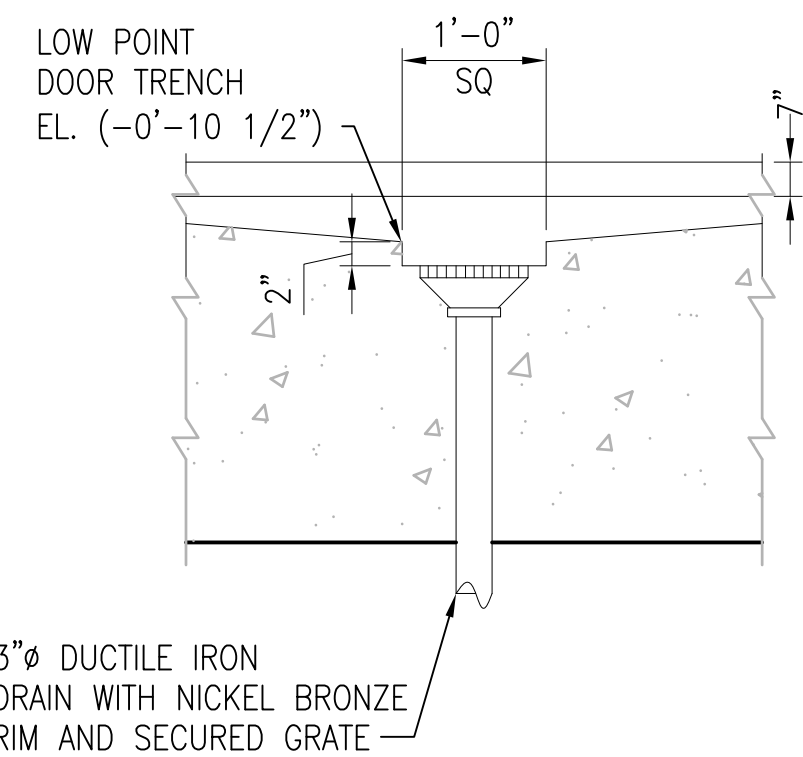
**SECTION**  
SCALE: 3/4" = 1'-0" S-301, S-302 **D1**



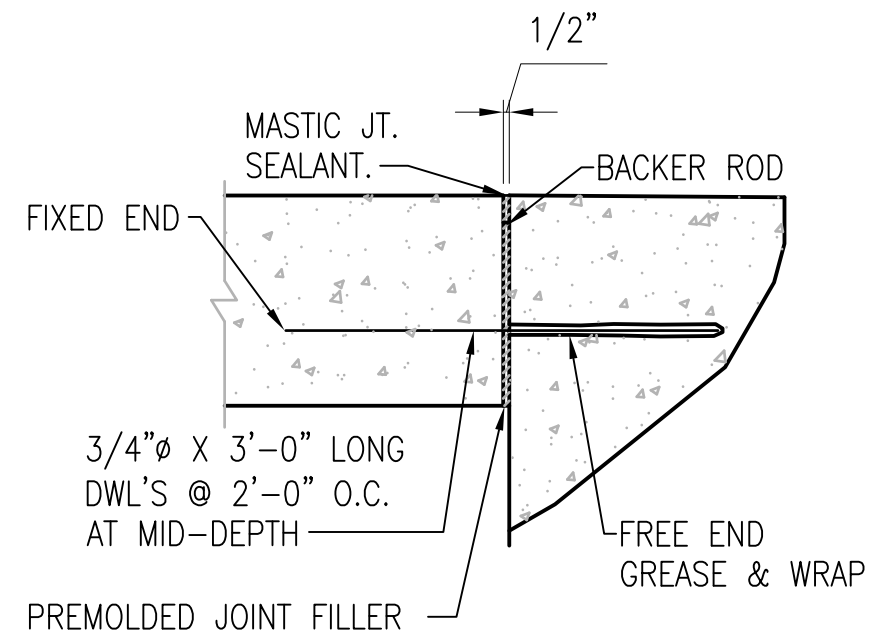
**DETAIL**  
SCALE: 3/4" = 1'-0" S-101 **C1**



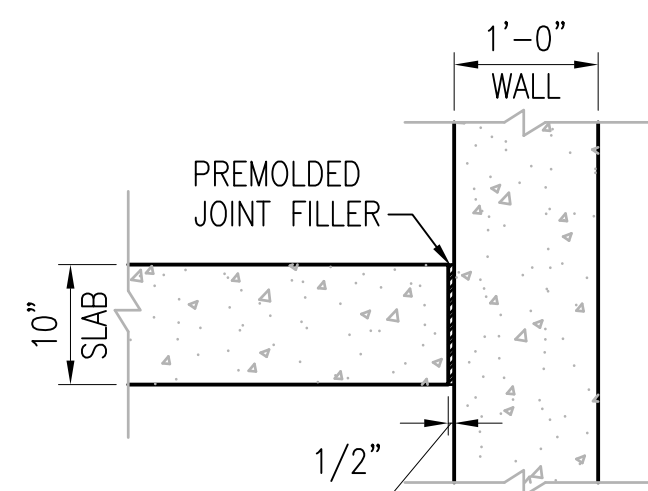
**SECTION - CONCRETE TIE BEAM**  
SCALE: 3/4" = 1'-0" S-301, S-302 **B1**



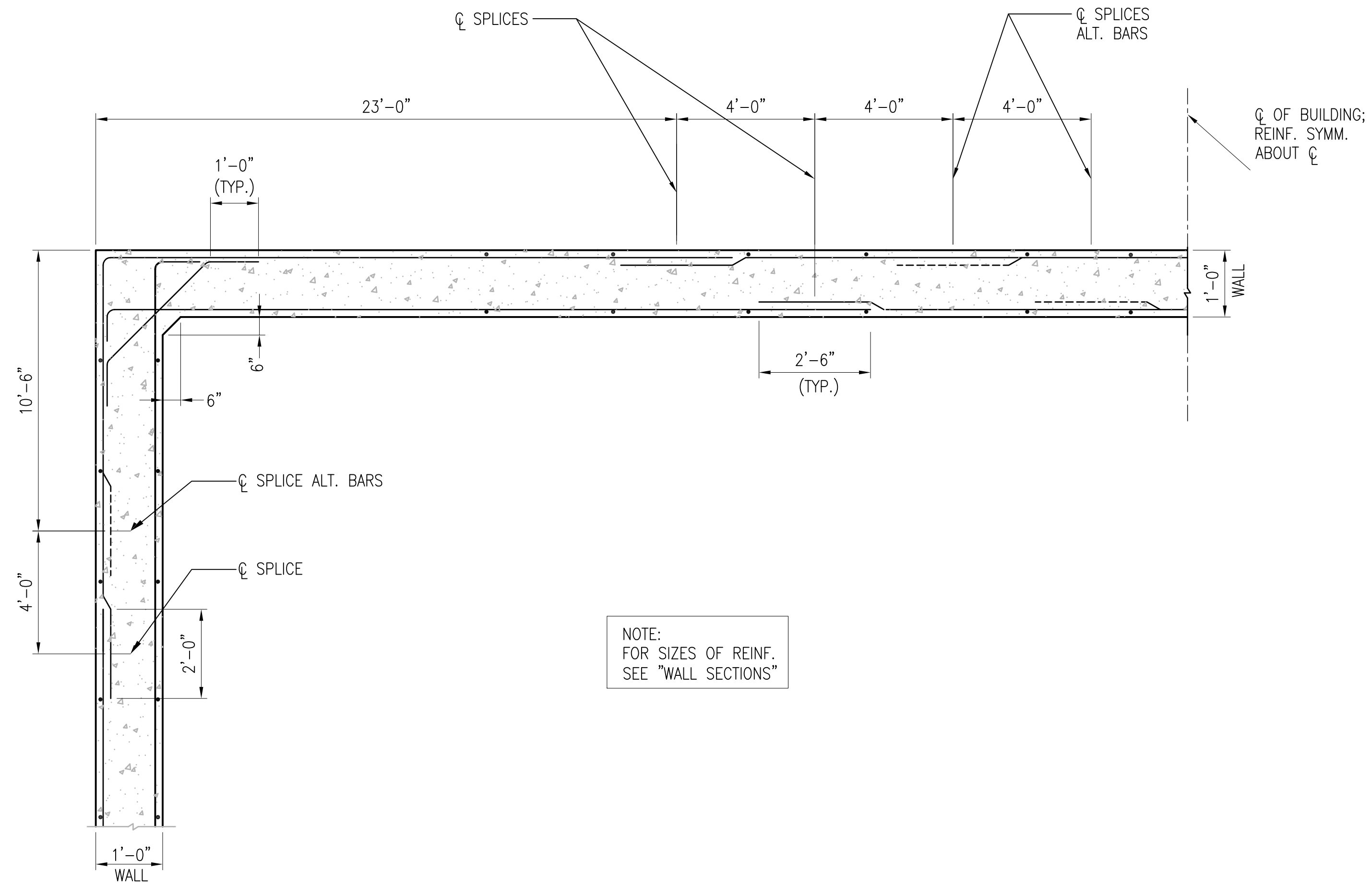
**DETAIL**  
SCALE: 3/4" = 1'-0" S-101 **A1**



**DETAIL**  
SCALE: 3/4" = 1'-0" S-101, S-501 **B2**



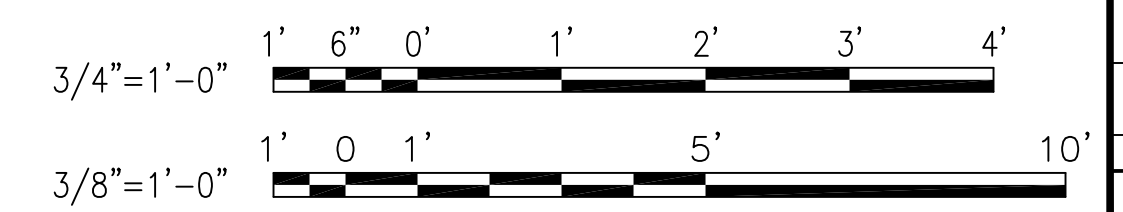
**DETAIL**  
SCALE: 3/4" = 1'-0" S-101, S-301 **A2**



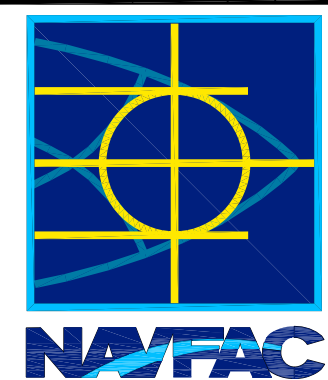
NOTE:  
FOR SIZES OF REINF.  
SEE "WALL SECTIONS"

**WALL SECTION**  
SCALE: 3/8" = 1'-0" (REQUIRED SPLICES OF HORIZONTAL REINFORCEMENT) S-302 **A4**

GRAPHIC SCALE:



DATE	APPR.
DESCRIPTION	
SYM	



FOR COMMANDER NAVFAC

DES	DR
CHK	GC
NAVFAC MANAGER	
REVIEWED BY	

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL STATION - NORFOLK, VIRGINIA  
NAVFACANT

**TYPE C BOX MAGAZINE WITH LOADING PLATFORM**  
SECTIONS AND DETAILS

CODE ID. NO. 80091	SIZE D
SCALE: AS NOTED	
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. 14005100	
SHEET 10 OF 31	
<b>S-502</b>	

DRAWING REVISION: 15 JANUARY 2008

REVDATE: FILE NAME: \\nasam\k454\NAVFAC\YRKT\_16AA\NAVFAC\YRKT\_16AA\CISE\Magazines\08Box\_MAGAZINES - Updated 2010\BOX C FINALS\Final Drawings Box C BOX C WITH PLATFORM COMPL.dwg LAYOUT NAME: S-502 PLOTTED: Tuesday, December 14, 2010 - 4:37pm

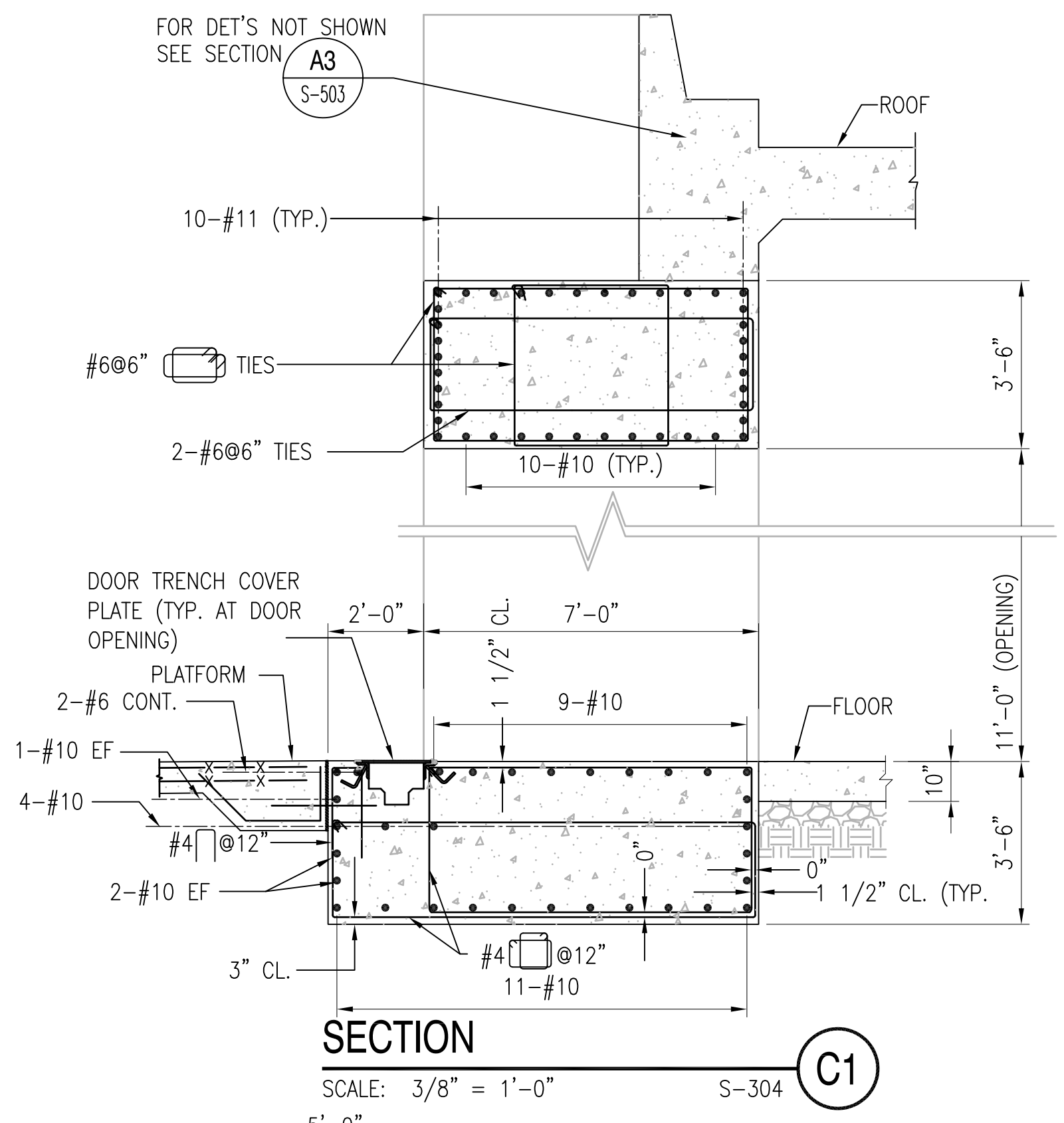
1

2

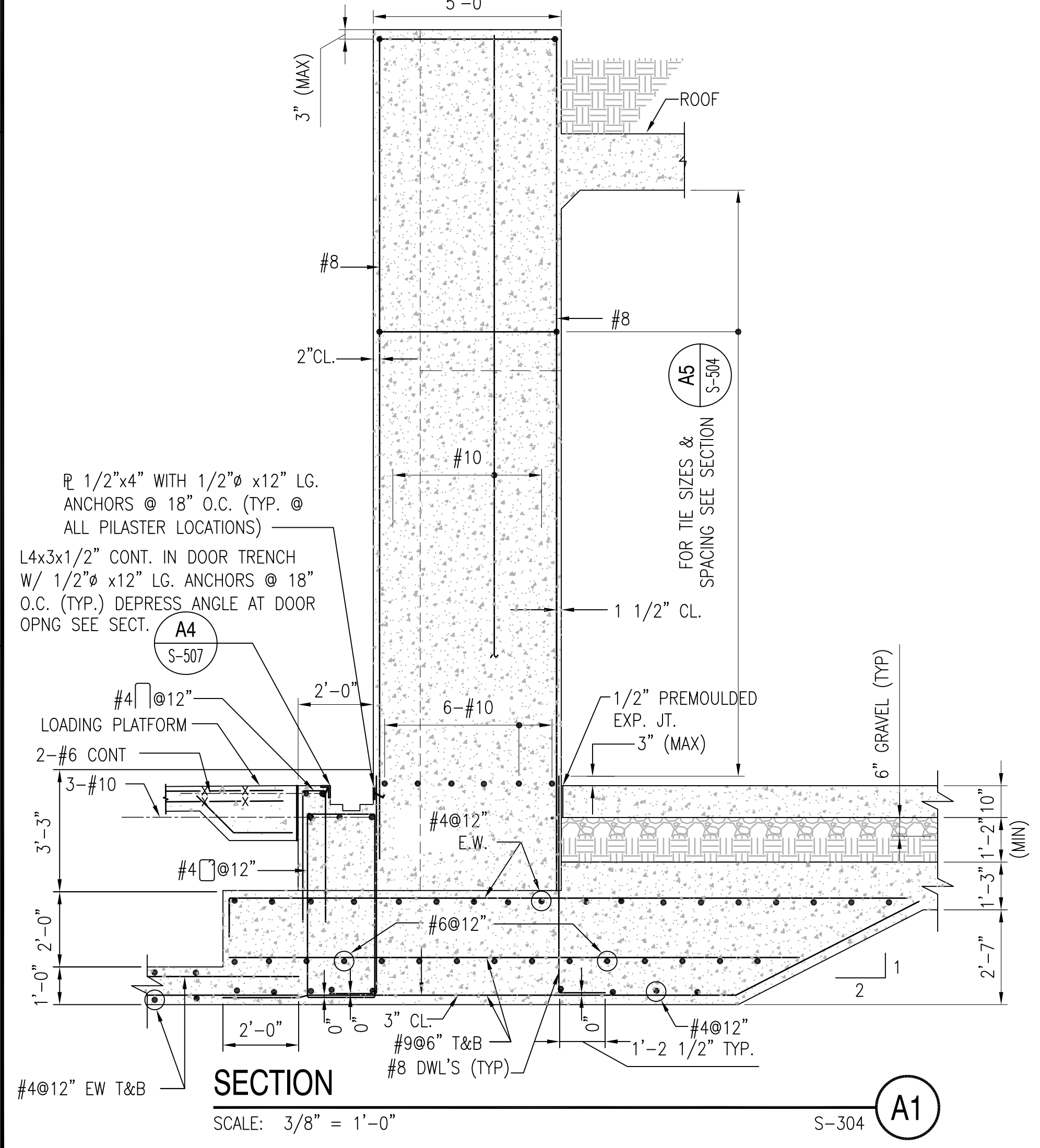
3

4

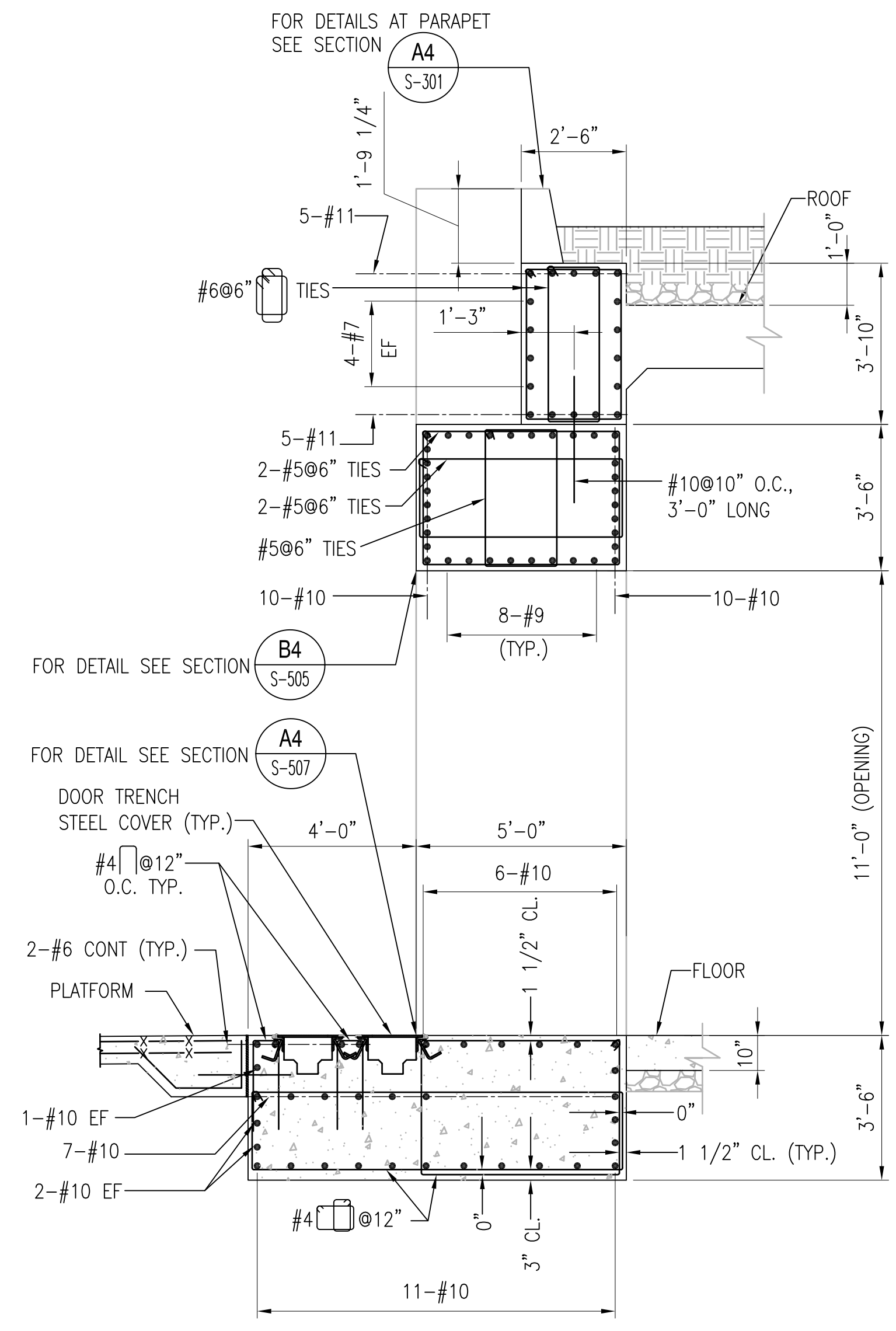
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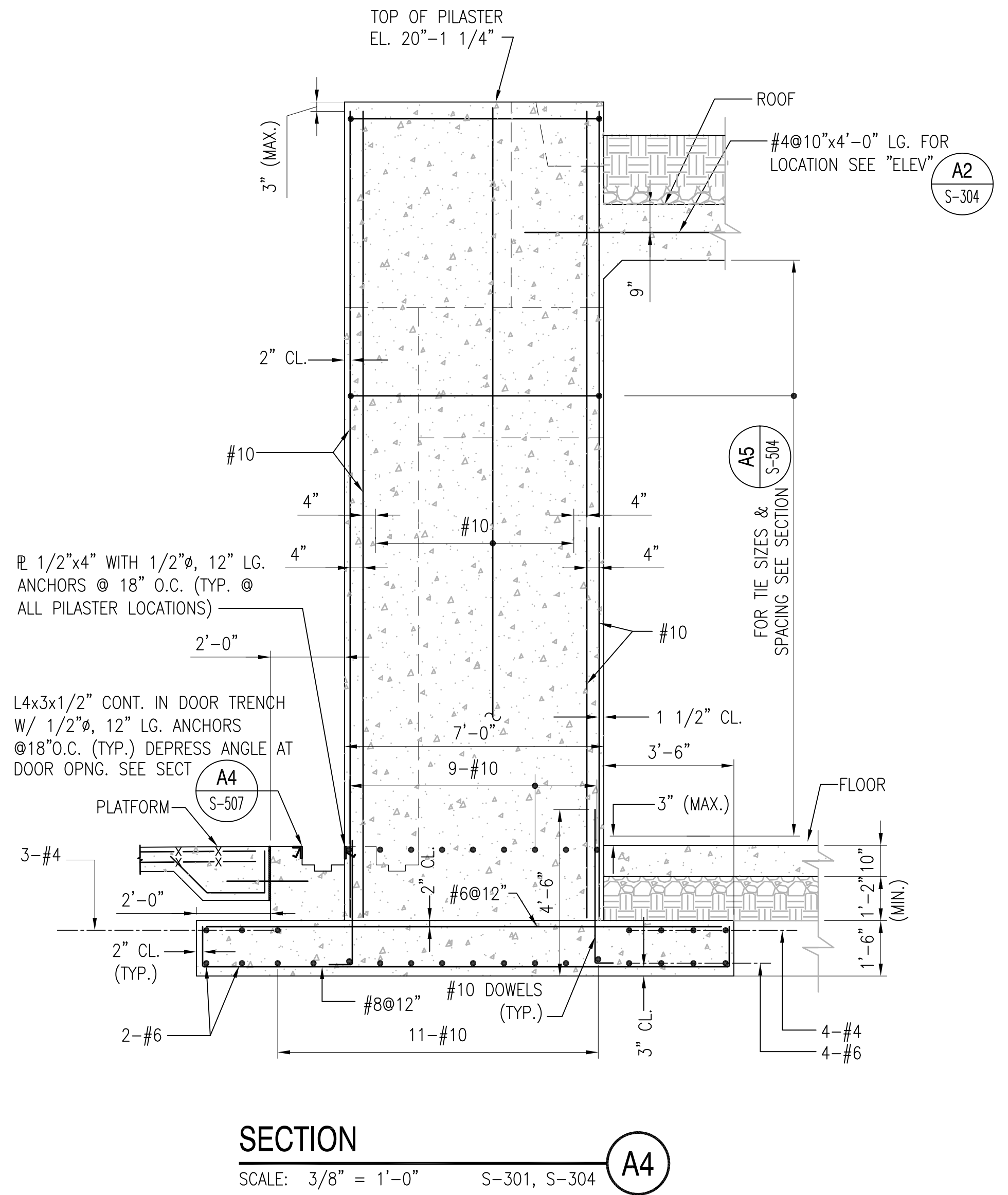
**SECTION C1**  
SCALE: 3/8" = 1'-0"  
S-304



**SECTION A1**  
SCALE: 3/8" = 1'-0"  
S-304

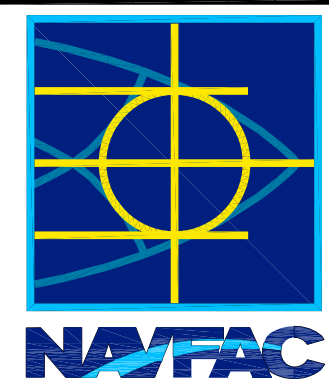

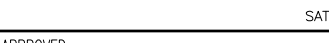


**SECTION A3**  
SCALE: 3/8" = 1'-0"  
S-304, S-503



**SECTION A4**  
SCALE: 3/8" = 1'-0"  
S-301, S-304



DATE	APPR.
DESCRIPTION	
SYM	
	
	
	
FOR COMMANDER NAVFAC	
DES	DR
CHK	GC
NAVFAC MANAGER	
REVIEWED BY	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL STATION - NORFOLK, VIRGINIA NAVFACANT	
<b>TYPE C BOX MAGAZINE WITH LOADING PLATFORM</b> SECTIONS AND DETAILS	
CODE ID. NO. 80091	SIZE D
SCALE: AS NOTED	
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. 14005101	
SHEET 11 OF 31	
<b>S-503</b>	
DRAWING REVISION: 15 JANUARY 2008	

REVDATE: FILE NAME: \\nascent\k534\NAVFAC\YRKT\_16AA\NAVFAC\YRKT\_16AA\CISE\Magazines\Box C BOX C WITH PLATFORM COMPLYing LAYOUT NAME: S-503 PLOTTED: Tuesday, December 14, 2010 - 4:39pm

REVDATE: FILE NAME: \\nasanr1634\NAVFAC\YRKT\_16AA\NAVFAC\_YRKT\_16AA\CISE\Magazines\Box C FINALS\Final Drawings Box C BOX C WITH PLATFORM COMPLYing LAYOUT NAME: S-504 PLOTTED: Tuesday, December 14, 2010 4:38pm

D

C

B

A

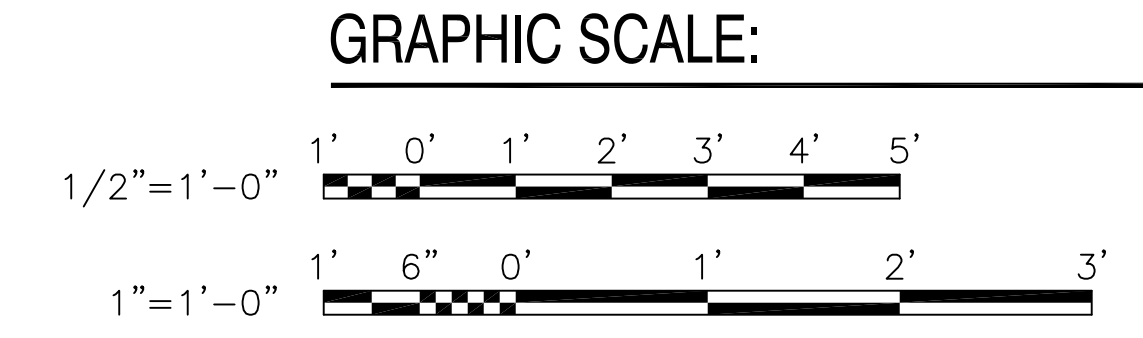
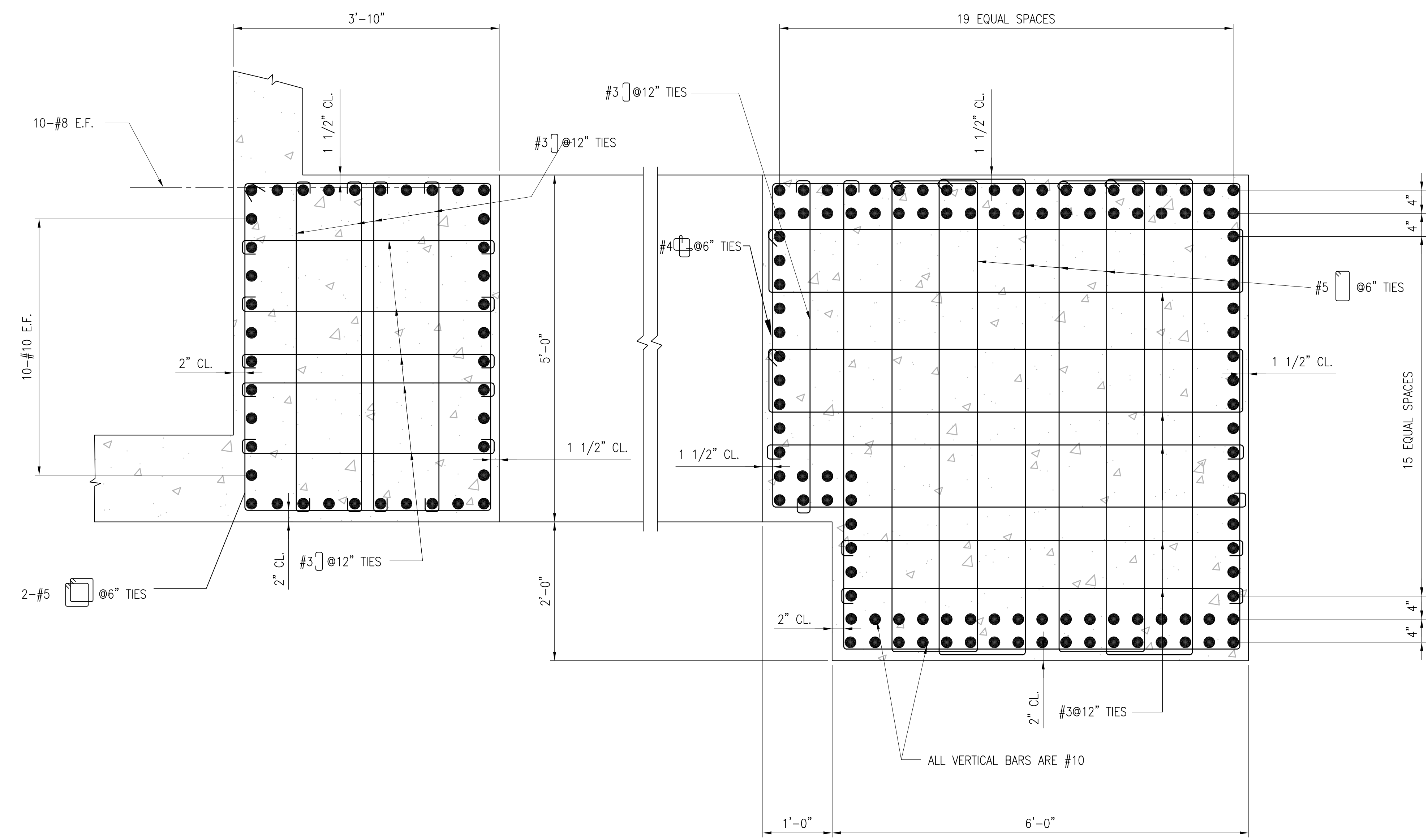
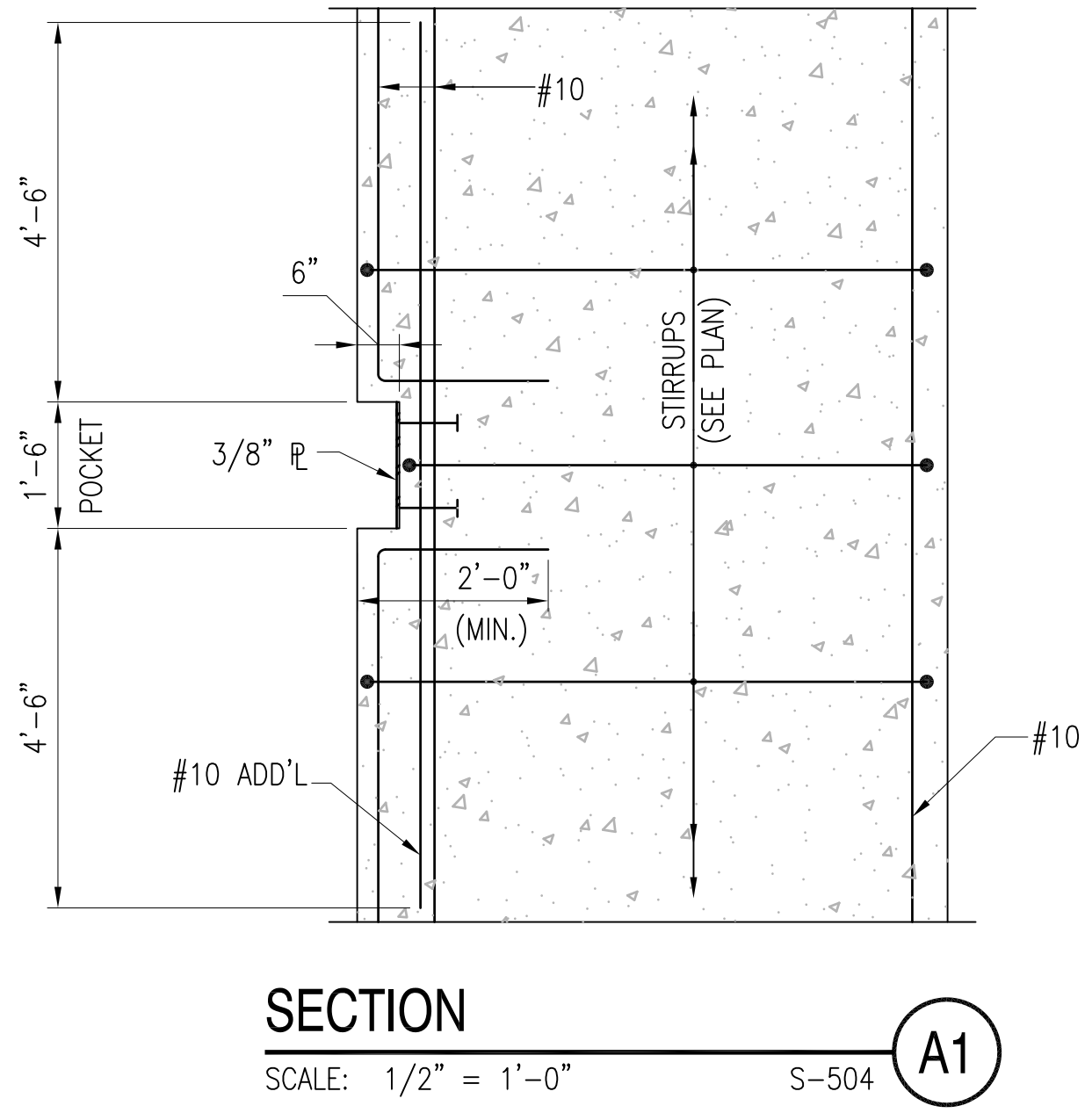
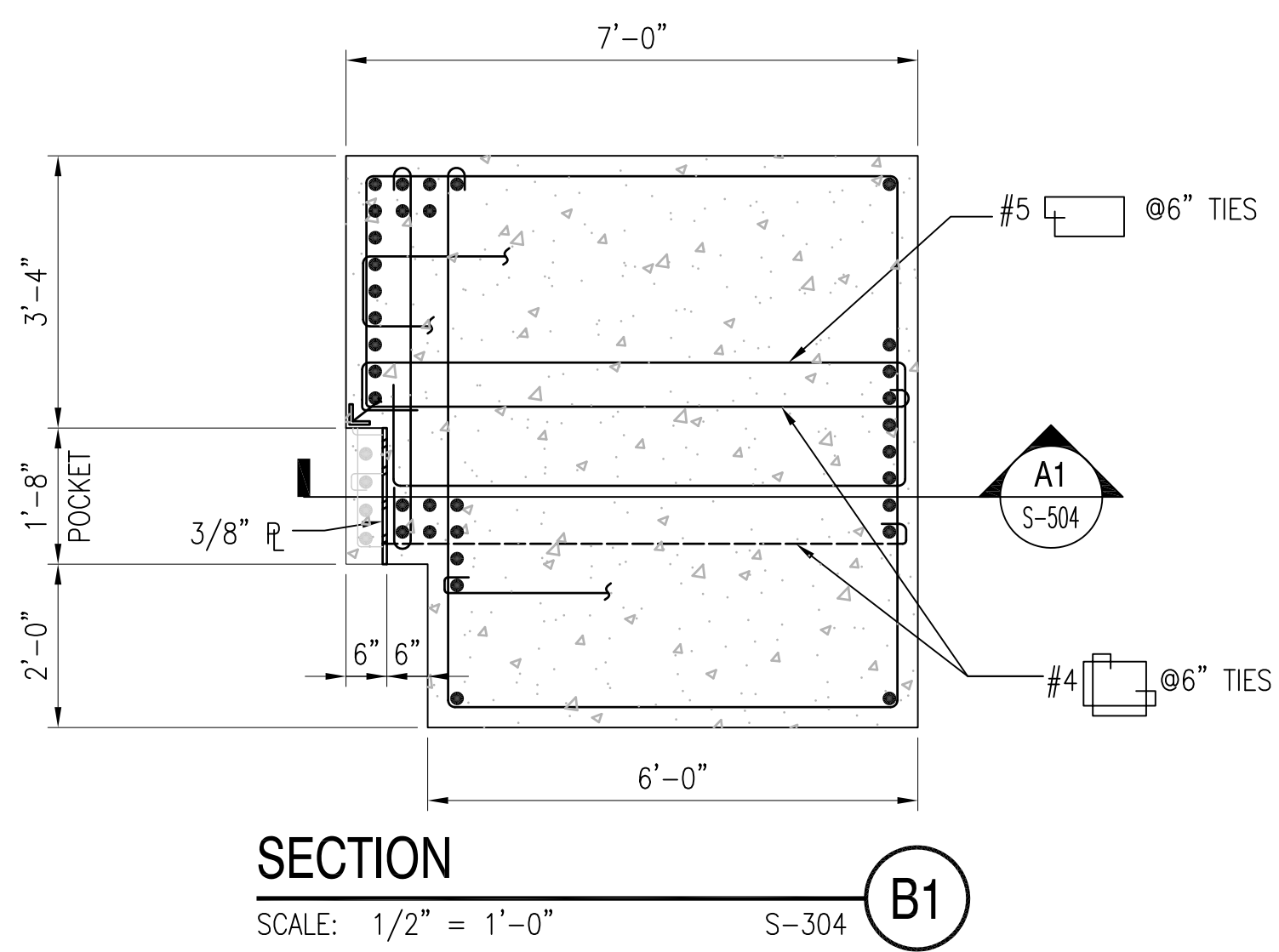
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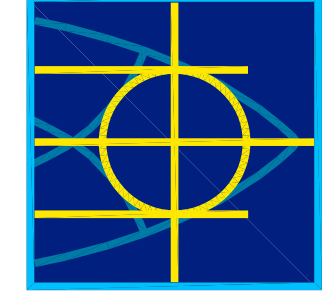

2

3

4

5



DATE	APPR.
DESCRIPTION	
SYN	
 <b>NAVFAC</b>	
 A/E LOGO	
SAT-TO	
APPROVED	
FOR COMMANDER NAVFAC	
DES	DR
CHK	GC
NAVFAC MANAGER	
REVIEWED BY	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL STATION - NORFOLK, VIRGINIA NAVFACANT	
<b>TYPE C BOX MAGAZINE  WITH LOADING PLATFORM</b>	
SECTIONS AND DETAILS	
CODE ID. NO. 80091	SIZE D
SCALE: AS NOTED	
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. 14005102	
SHEET 12 OF 31	
<b>S-504</b>	
DRAWING REVISION: 15 JANUARY 2008	

D

C

B

A

1

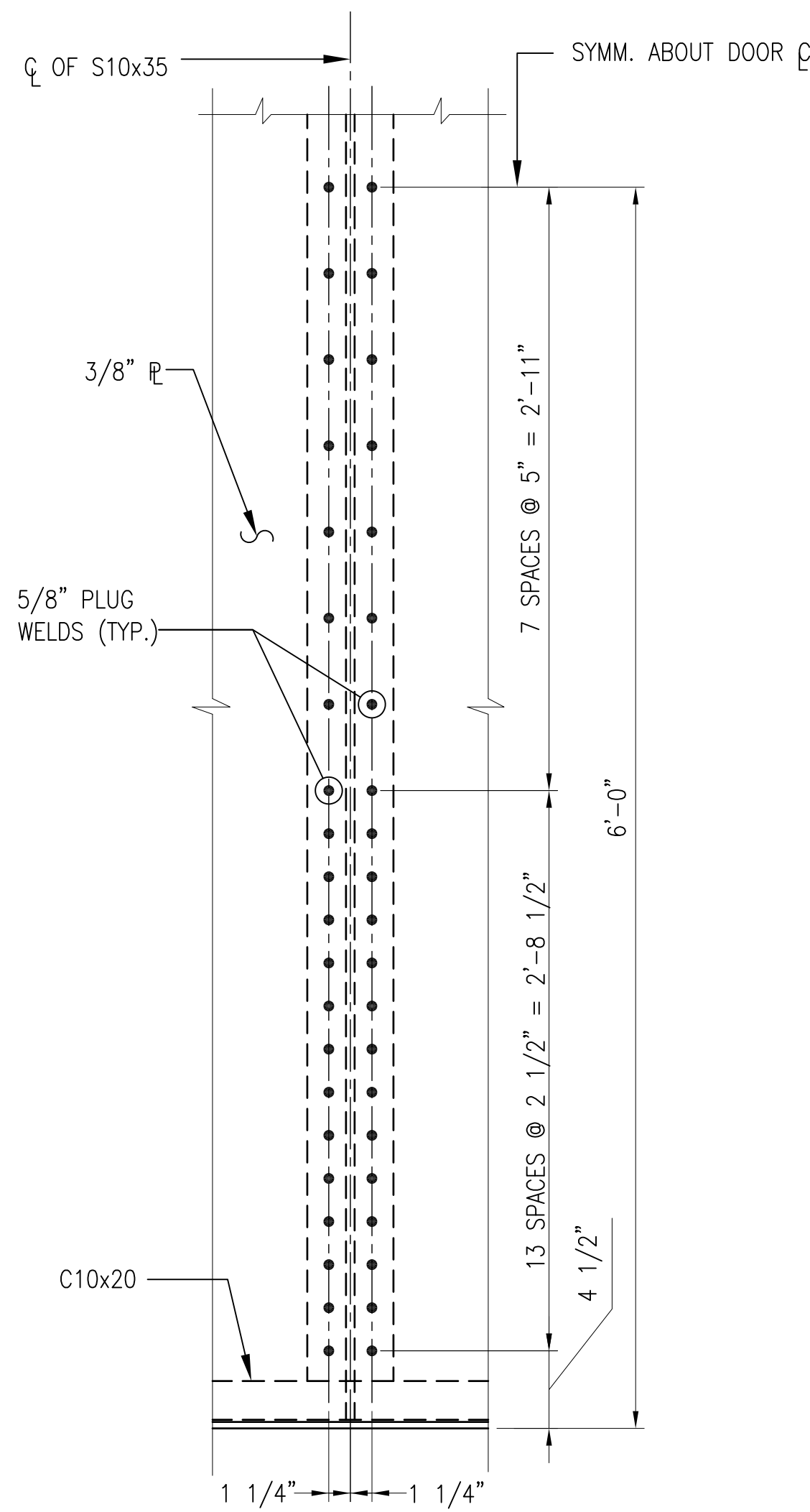
2

3

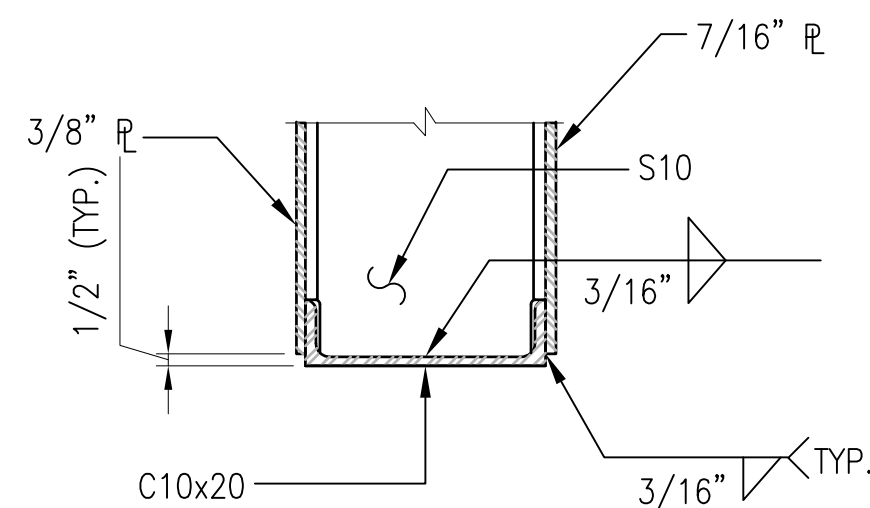
4

5

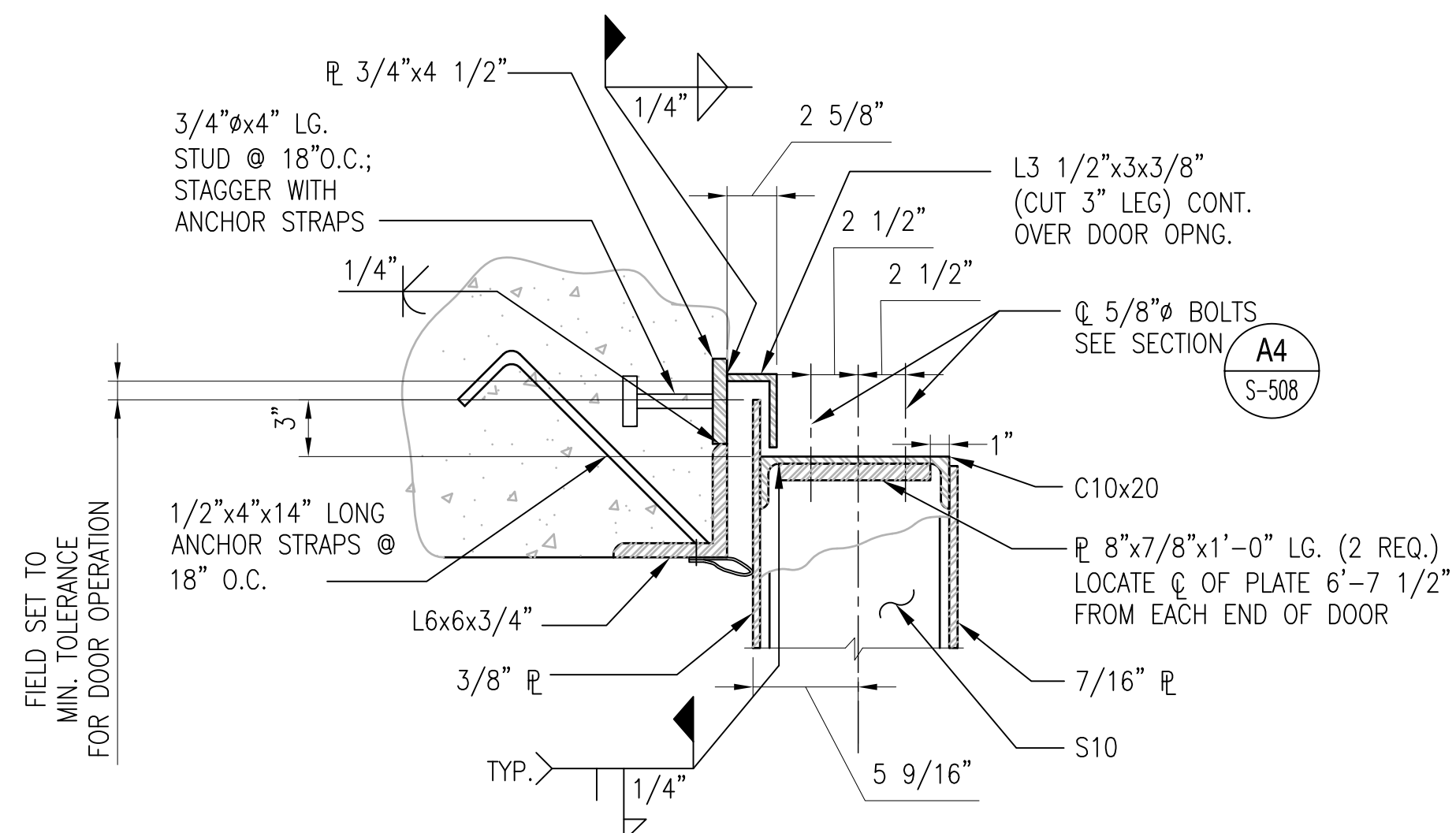
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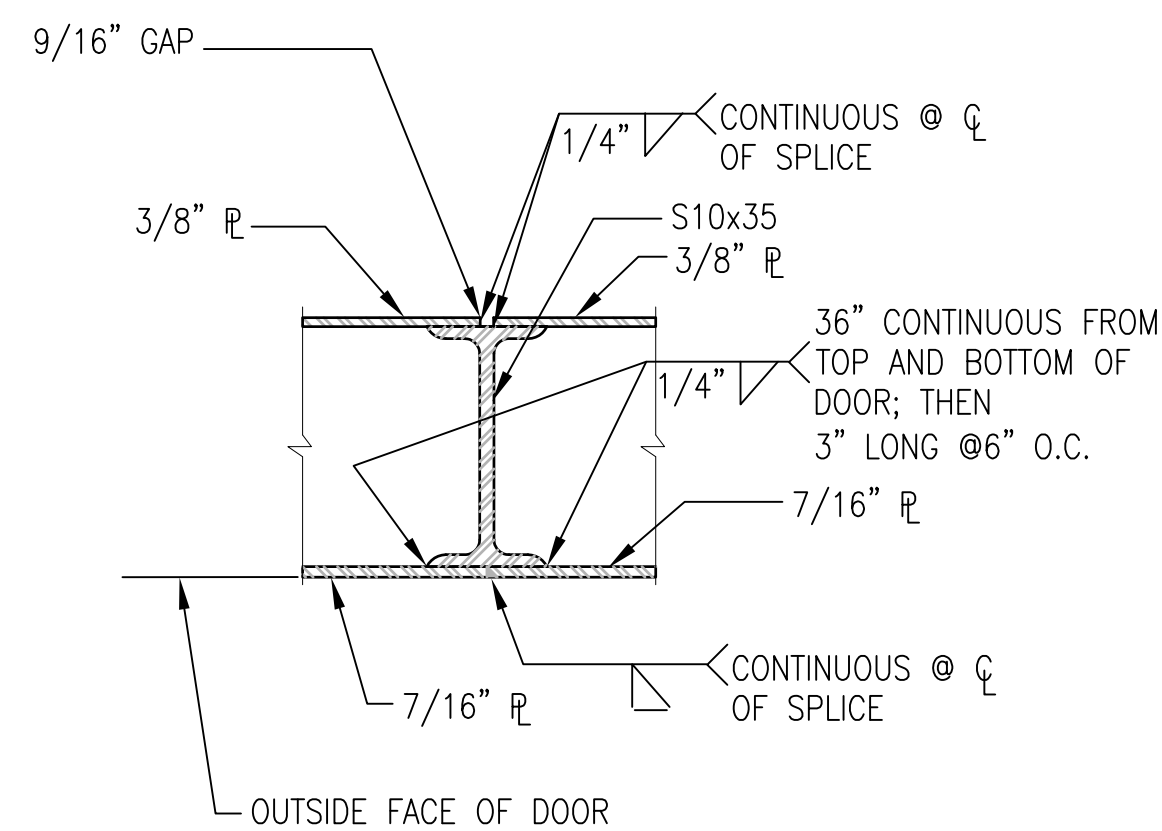
**ELEVATION**  
1 1/2"=1'-0" S-505 **B1**



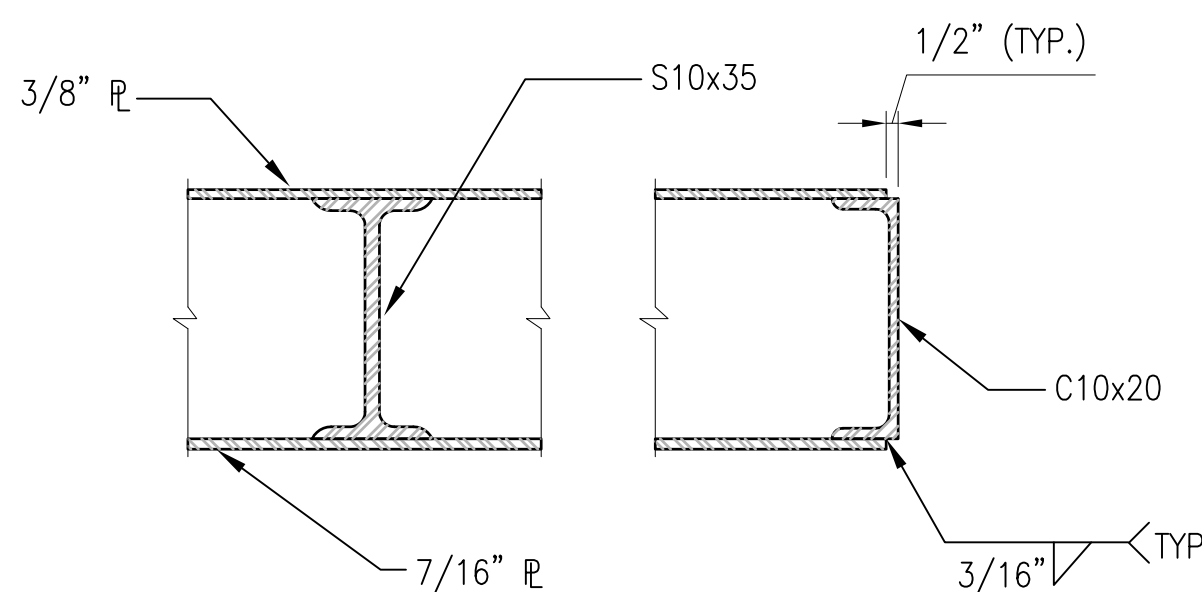
**TYP. DOOR SECTION**  
1 1/2"=1'-0" S-305 **B3**



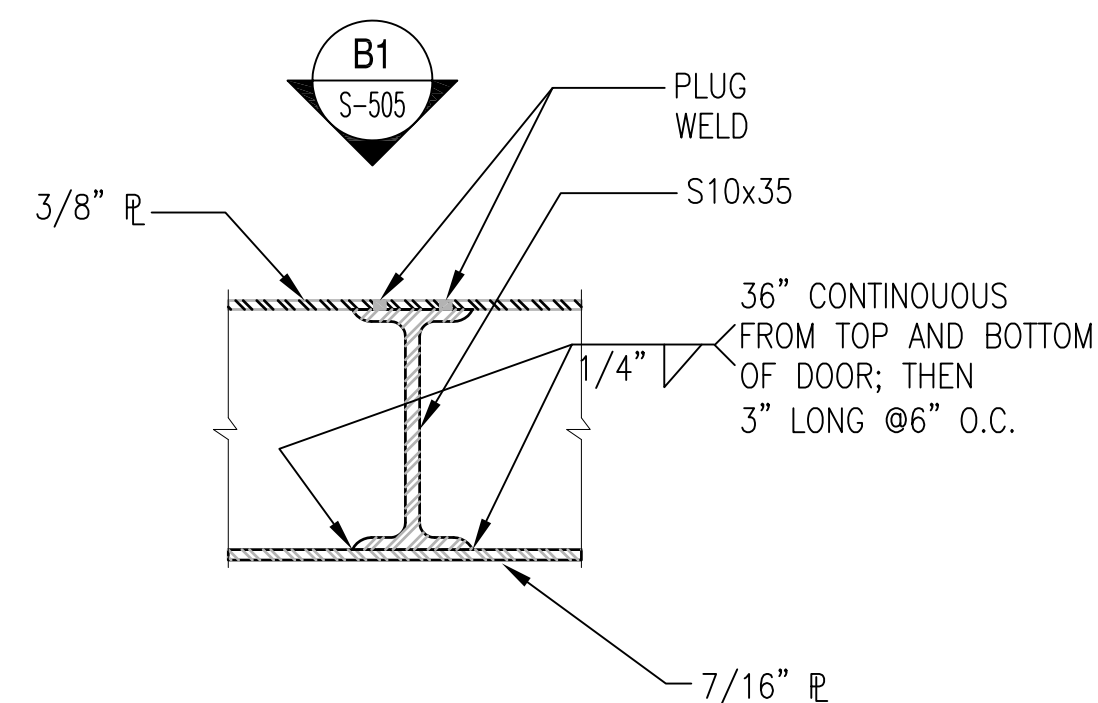
**TYP. DOOR SECTION**  
1 1/2"=1'-0" S-305, S-503, S-507 **B4**



**COVER PLATE SPLICE DETAIL**  
1 1/2"=1'-0" S-305 **A2**

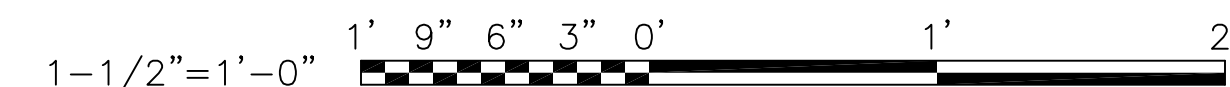


**TYP. DOOR DETAIL**  
1 1/2"=1'-0" S-305 **A3**



**TYP. DOOR DETAIL**  
1 1/2"=1'-0" S-305 **A4**

GRAPHIC SCALE:



APPROVED	SAT-TO
FOR COMMANDER NAVFAC	
DES	DR
CHK	GC
NAVFAC MANAGER	
REVIEWED BY	

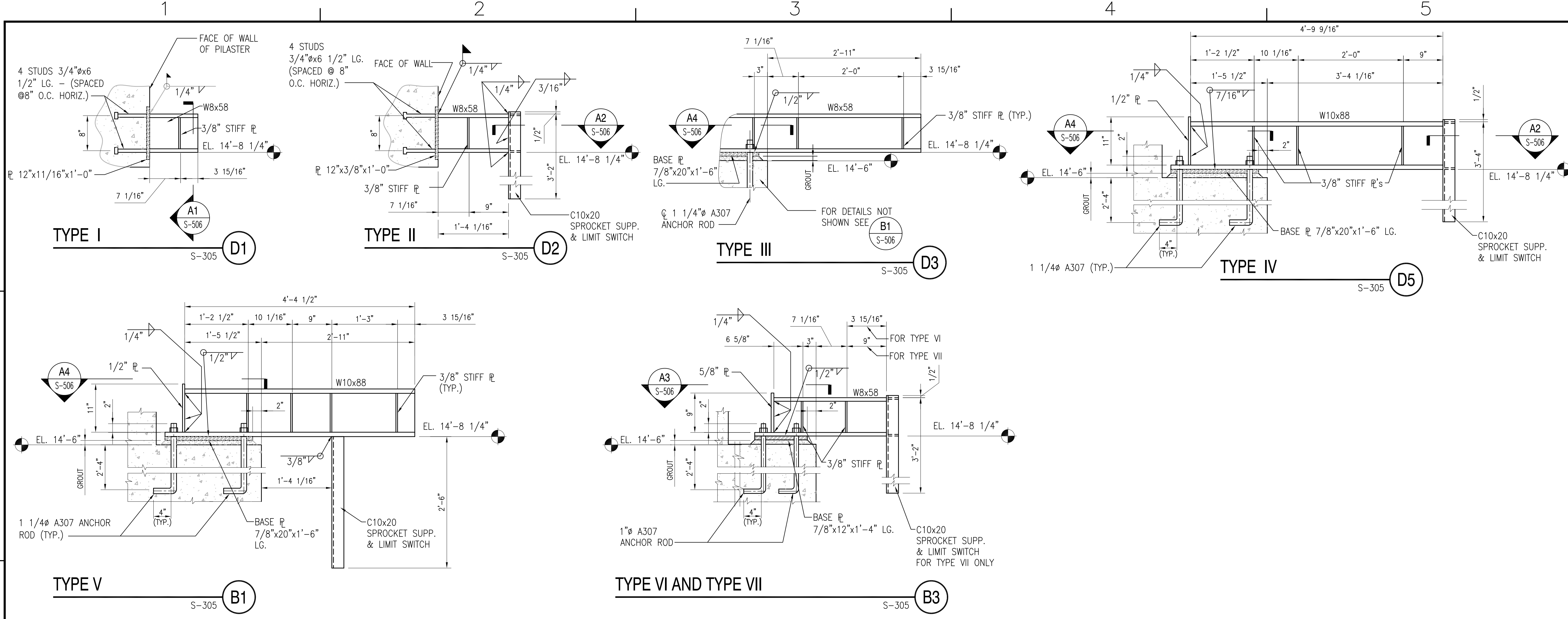
DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL STATION - NORFOLK, VIRGINIA  
NAVFACANT

**TYPE C BOX MAGAZINE WITH LOADING PLATFORM**  
DOOR SECTIONS AND DETAILS

CODE ID. NO. 80091	SIZE D
SCALE: AS NOTED	
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. 14005103	
SHEET 13 OF 31	
<b>S-505</b>	

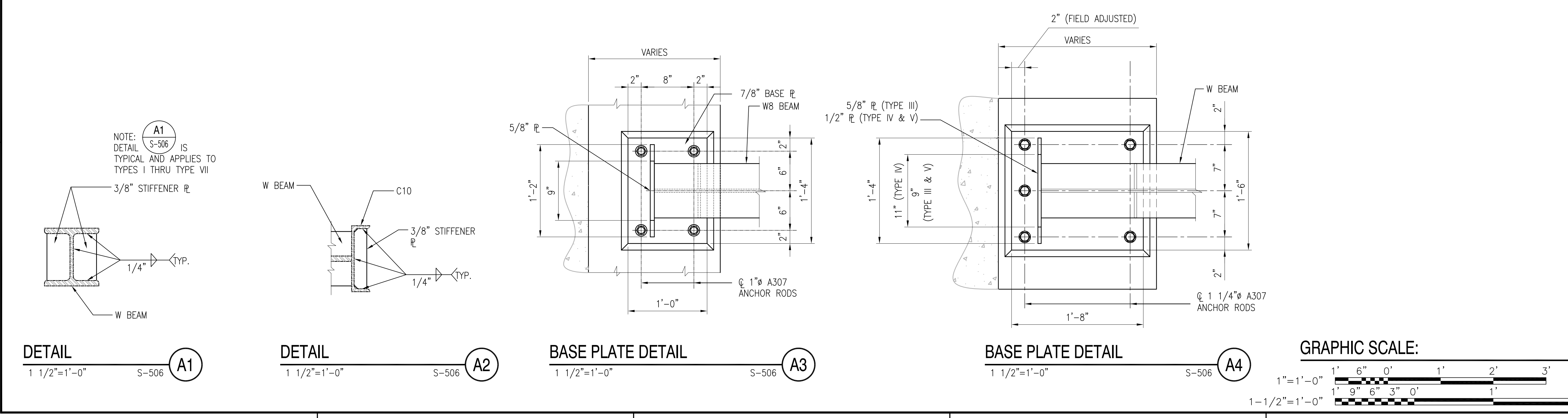
DRAWING REVISION: 15 JANUARY 2008

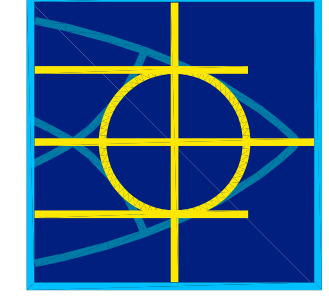

REVDATE: FILE NAME: \\nasar\k1634\NAVFAC\_YRKT\_16AA\NAVFAC\_YRKT\_16AA\CISE\Magazines\Box C BOX C WITH PLATFORM COMPL.dwg LAYOUT NAME: S-506 PLOTTED: Tuesday, December 14, 2010 - 4:39pm



**DOOR MONORAIL SUPPORT BRACKET DETAILS**

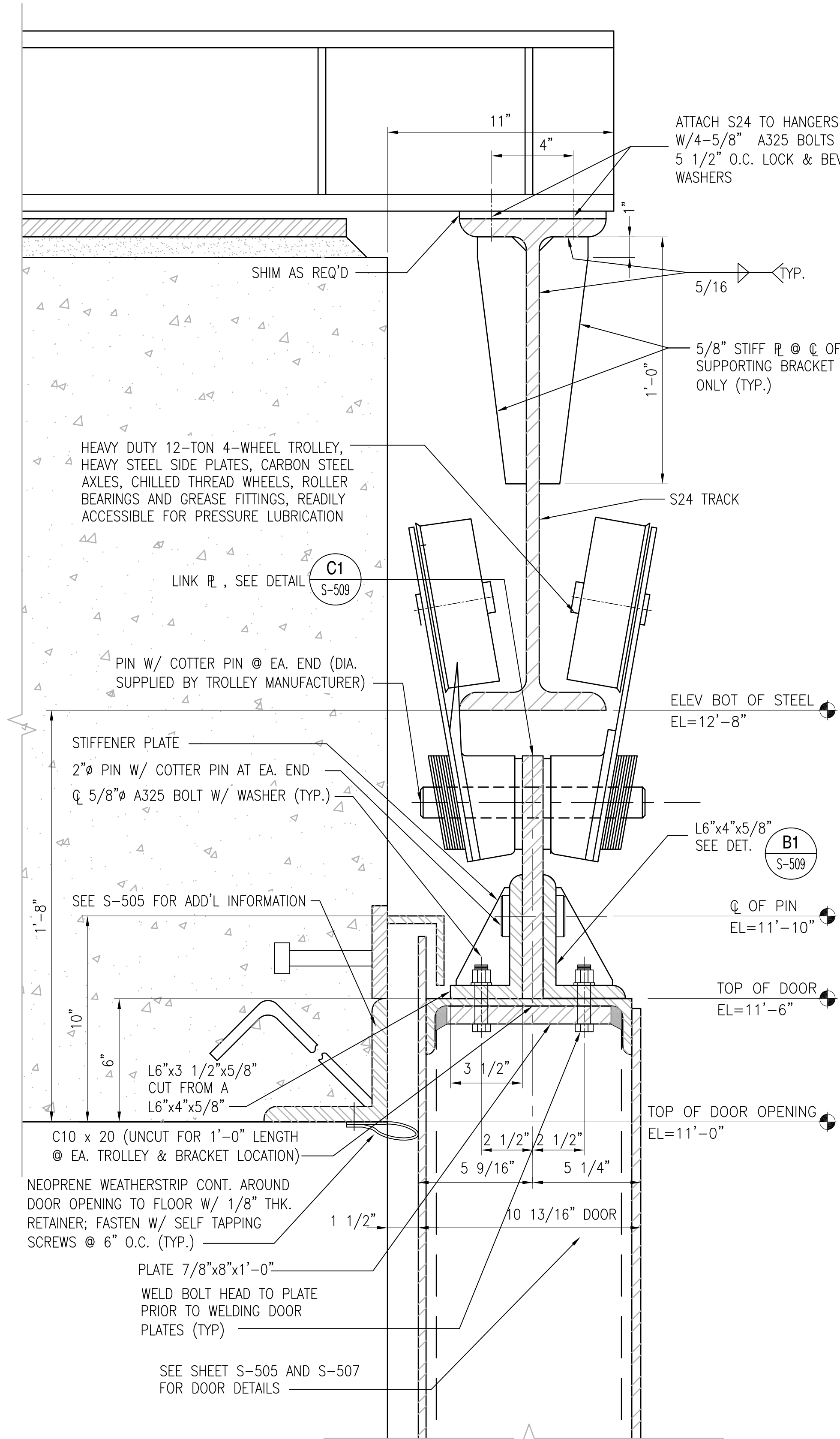
SCALE: 1" = 1'-0"



DATE	APPR.
DESCRIPTION	
SYM	
	
	
A/E LOGO	
SAT-TO	
FOR COMMANDER NAVFAC	
DES	DR
CHK	GC
NAVFAC MANAGER	
REVIEWED BY	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL STATION - NORFOLK, VIRGINIA NAVFACANT	
<b>TYPE C BOX MAGAZINE WITH LOADING PLATFORM</b> DOOR MONORAIL SUPPORT BRACKETS AND DETAILS	
CODE ID. NO. 80091	SIZE D
SCALE: AS NOTED	
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. 14005104	
SHEET 14 OF 31	
<b>S-506</b>	
DRAWING REVISION: 15 JANUARY 2008	



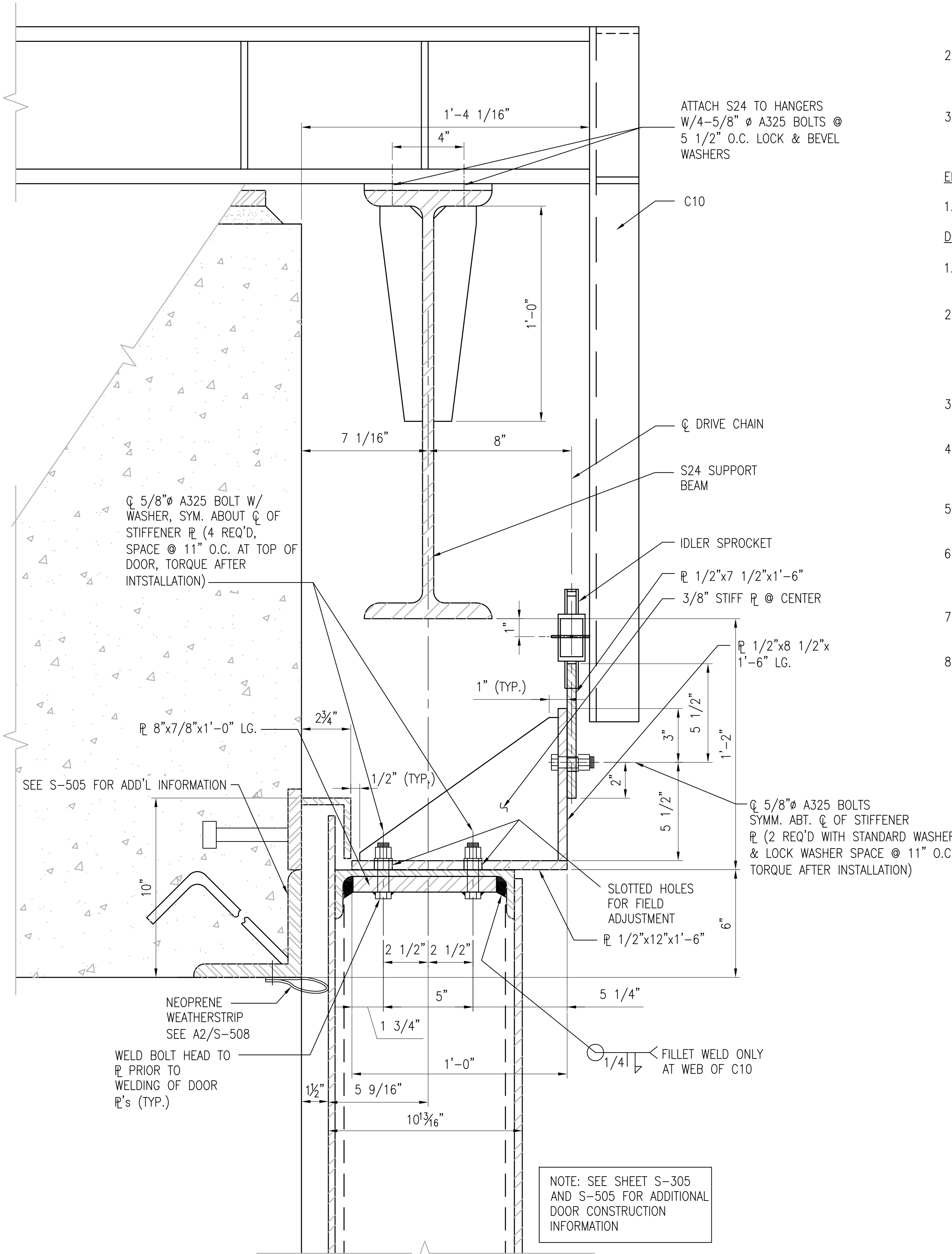
REVDATE: FILE NAME: \\nasanmk634\NAVFAC\_YRKT\_16AA\NAVFAC\_YRKT\_16AA\CISE\Magazines\Box C BOX C WITH PLATFORM COMPL.dwg LAYOUT NAME: S-508 PLOTTED: Tuesday, December 14, 2010 4:40pm



SECTION - TROLLEY ASSEMBLY

SCALE: 3" = 1'-0"

S-305 A2



SECTION - DRIVE CHAIN ATTACHMENT BRACKET

SCALE: 3" = 1'-0"

S-305, S-505 A4

NOTES:

DOOR REQUIREMENTS

- DOOR & HARDWARE SHALL BE SHOP ASSEMBLED TO INSURE PROPER CONTACT, CLEARANCES, ALIGNMENT & ENGAGEMENT OF THE DOORS & SMOOTH OPERATION OF LOCKING & DRIVE MECHANISMS. THIS ASSEMBLY WILL BE AT NO ADDITIONAL COST TO THE GOVERNMENT.
- ALL WEATHER STRIPPING SHALL BE CLOTH INSERTED NEOPRENE, ONE-EIGHTH INCH (1/8") THICK & CONFORMING TO THE FEDERAL SPECIFICATION HH-P-151.
- ALL PINS, BEARINGS, GEARS, SPROCKETS, SHAFTS & SHEAVES SHALL BE DESIGNED FOR A DOOR LIFE OF 5,000 HOURS OF OPERATION.

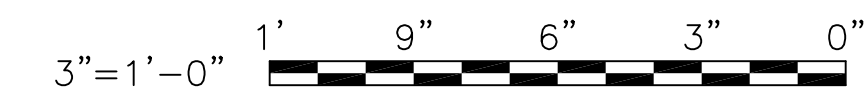
ELECTRICAL REQUIREMENTS

- SEE ELECTRICAL DRAWINGS FOR ELECTRICAL REQUIREMENTS

DOOR OPERATOR REQUIREMENTS

- DESIGN REQUIREMENTS - (A) OUTDOOR OPERATION, (B) 80PSF WIND LOAD, (C) 15 FPM VELOCITY FOR OPENING AND CLOSING DOORS.
- GEARS, SHAFTS AND SPROCKETS - ALL GEARS IN SPEED REDUCTION UNIT SHALL BE MACHINED TYPE. GEARS AND SHAFTS SHALL BE MOUNTED WITH LONG-LIFE BEARINGS, ENCLOSED IN OIL TIGHT HOUSING AND OPERATED AT ALL TIMES IN AN OIL BATH. ALL SPROCKETS SHALL BE STEEL PLATES.
- CASTINGS - SHEAVES & OTHER CASTINGS SHALL BE CLOSE GRAINED ALLOYED GRAY CAST IRON.
- ROLLER CHAINS - ALL ROLLER CHAINS SHALL BE HEAVY DUTY, HIGH STRENGTH, PRECISION ASSEMBLED AND DESIGNED FOR A SAFETY FACTOR OF 5.
- MOTOR - THE MOTOR SHALL OPERATE NORMALLY AT NO MORE THAN 75 PERCENT OF RATED CAPACITY.
- LIMIT SWITCHES - TYPE: MECHANICALLY ACTUATED. LIMIT SWITCH SHALL STOP THE DOOR AT END OF TRAVEL (OPEN AND CLOSED POSITIONS)
- PUSH BUTTON STATION - PUSH BUTTON UNIT SHALL BE A CONSTANT PRESSURE, HEAVY DUTY WEATHER PROOF CONTROL STATION.
- EMERGENCY OPERATION - PROVIDE A CHAIN-GEAR MECHANISM FOR MANUAL OPERATION OF THE DOOR IN THE EVENT OF ELECTRICAL FAILURE, A MOTOR DISCONNECT, USING A MECHANICAL DEVICE, SHALL BE PROVIDED FOR EMERGENCY OPERATION.

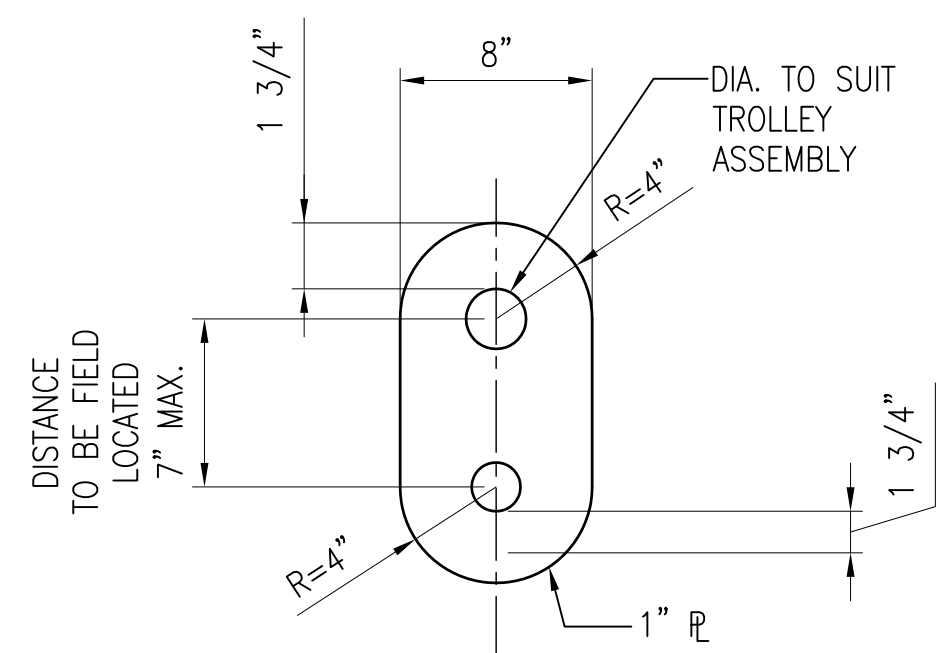
GRAPHIC SCALE:



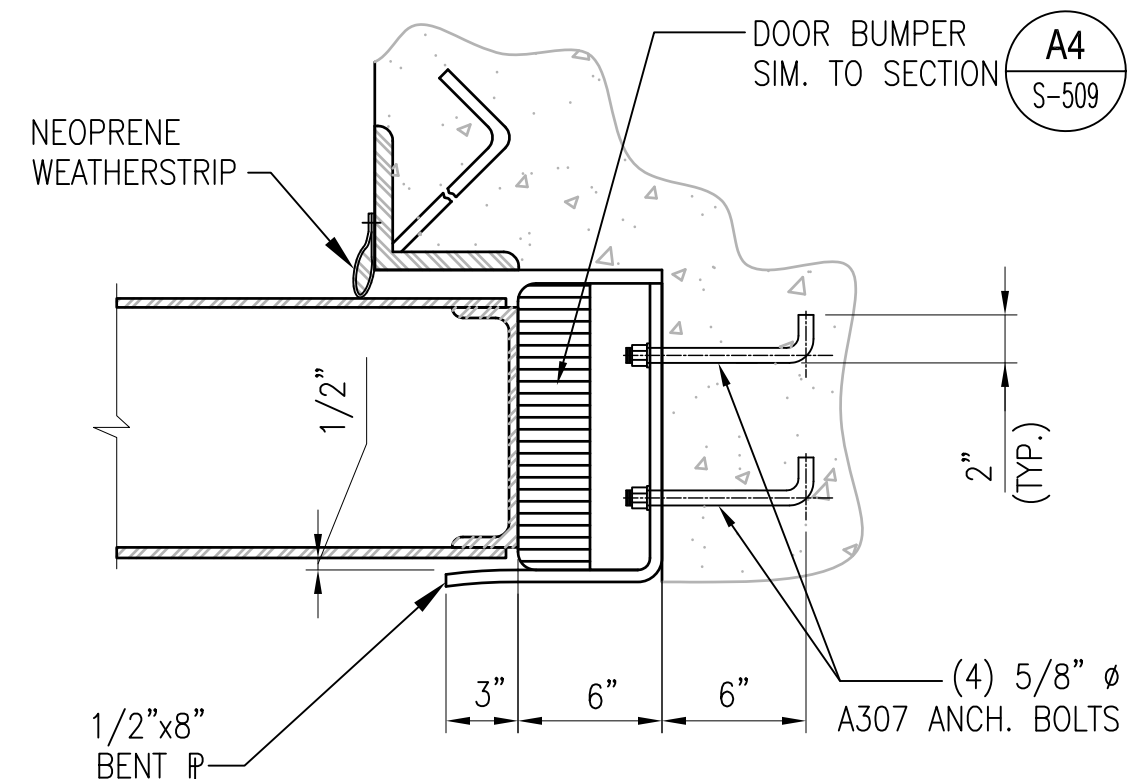
DATE	APPROVED
DESCRIPTION	SYMBOL
SCALE	SCALE TO
A/E LOGS	SAFETY
FOR COMMANDER NAVFAC	DESIGN
DR	CHK
GC	NAVFAC MANAGER
REVIEWED BY	REVIEWED BY
DEPARTMENT OF THE NAVY	NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND	NAVAL STATION - NORFOLK, VIRGINIA
NAVFACANT	NAVFACANT
TYPE C BOX MAGAZINE WITH LOADING PLATFORM	
DOOR DETAILS AND SECTIONS	
CODE ID. NO. 80091	SIZE D
SCALE: AS NOTED	
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. 14005106	
SHEET 16 OF 31	
S-508	
DRAWING REVISION: 15 JANUARY 2008	



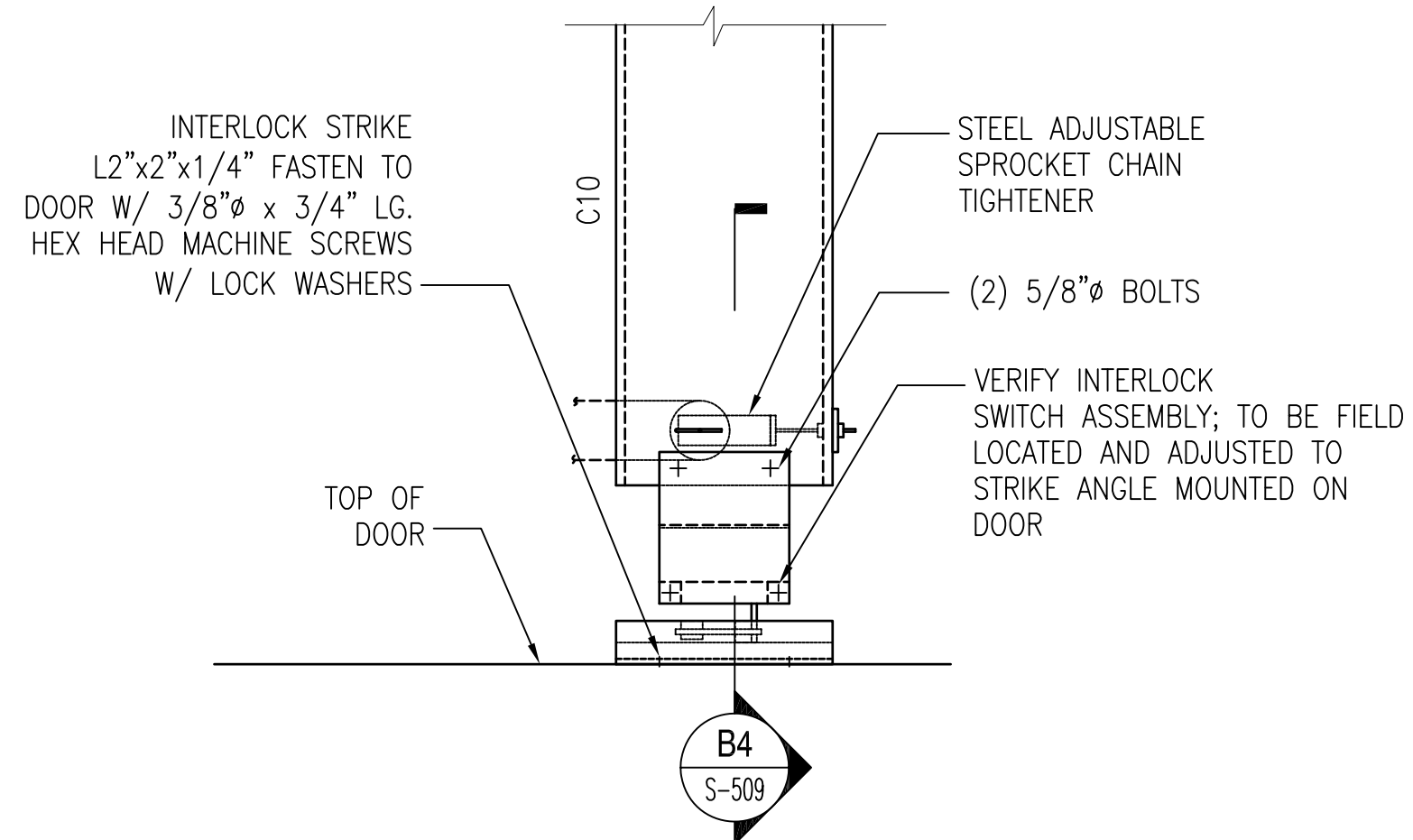
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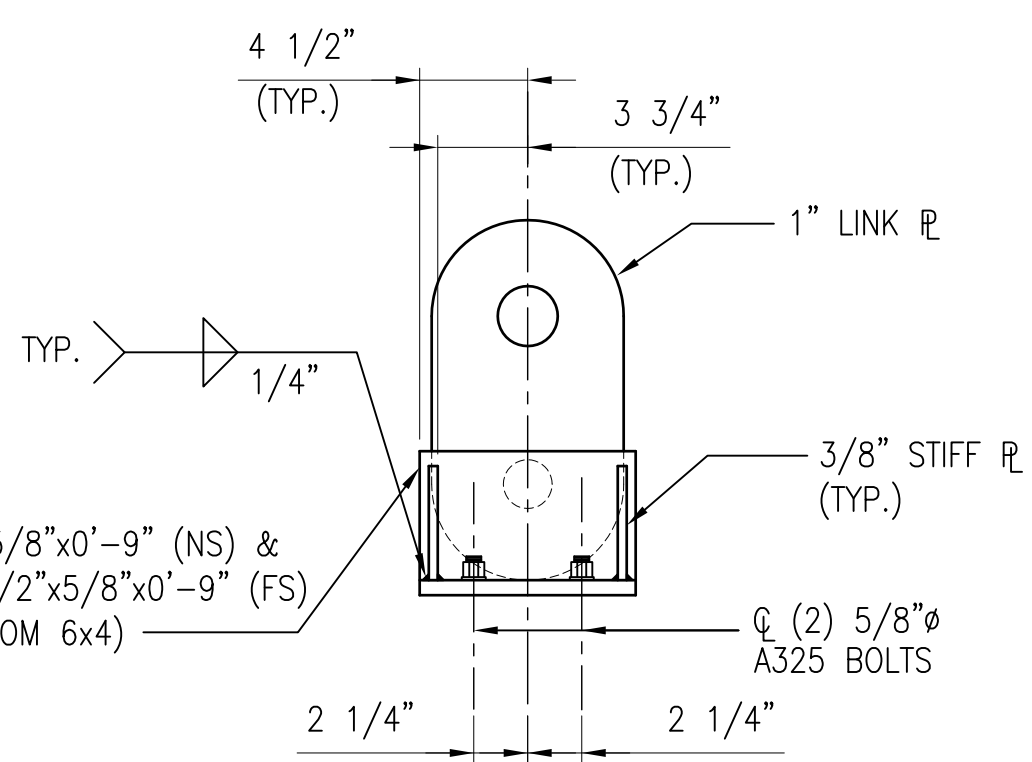
**LINK PLATE DETAIL**  
SCALE: 1 1/2" = 1'-0" S-508 C1



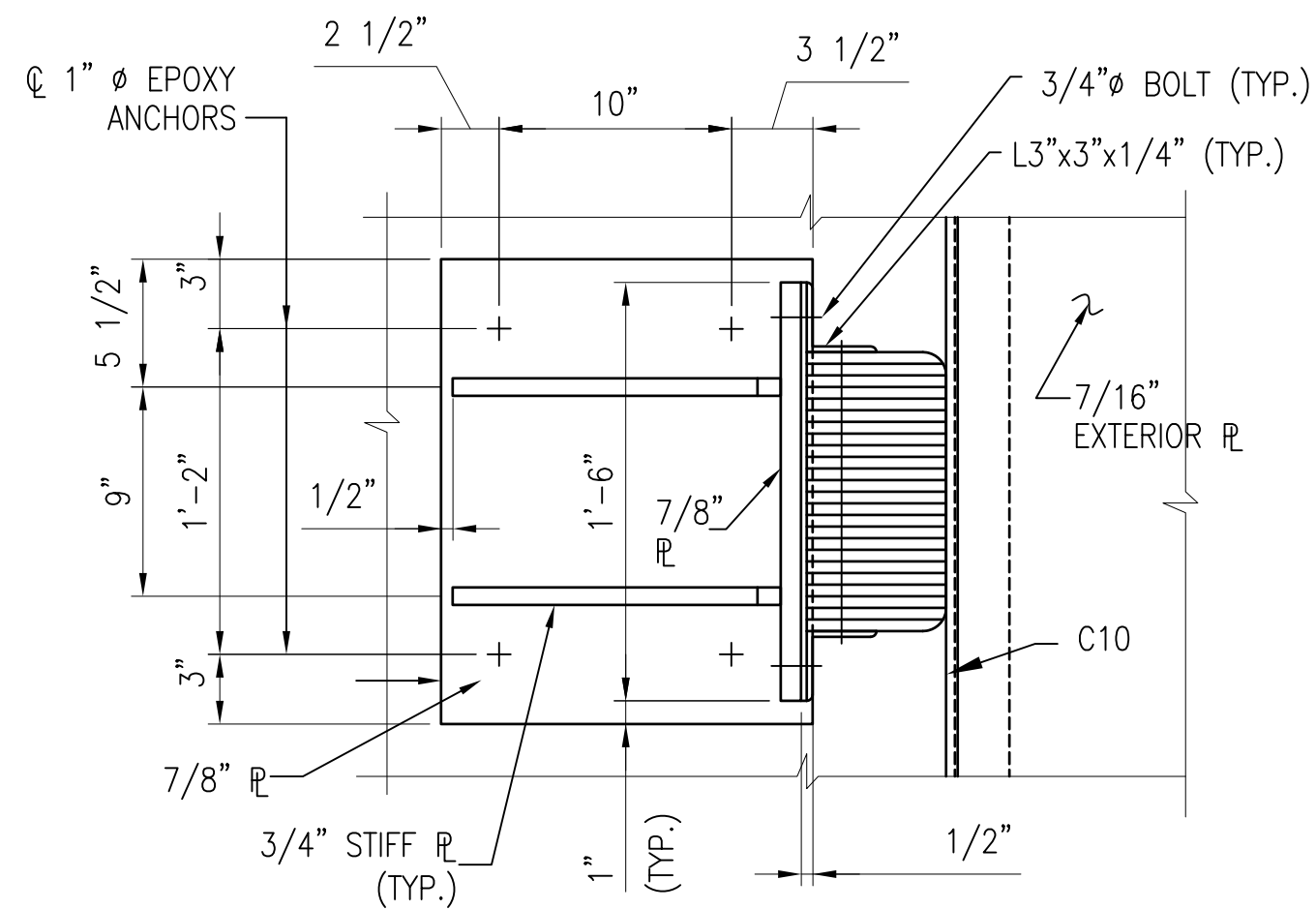
**DOOR BINDER DETAIL**  
SCALE: 1 1/2" = 1'-0" S-305 C3



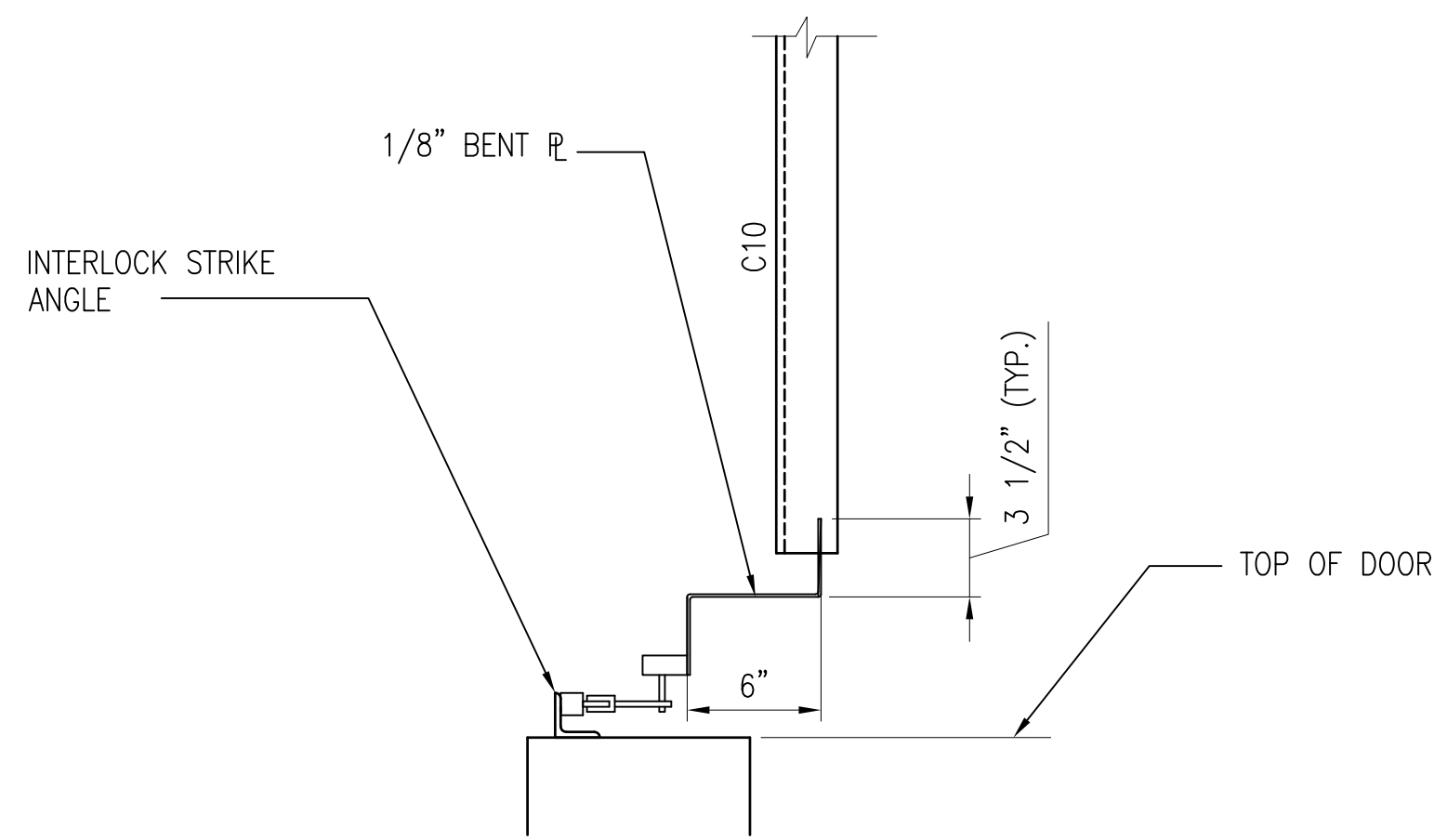
**DOOR INTERLOCK DETAIL**  
SCALE: 1 1/2" = 1'-0" S-305 C4



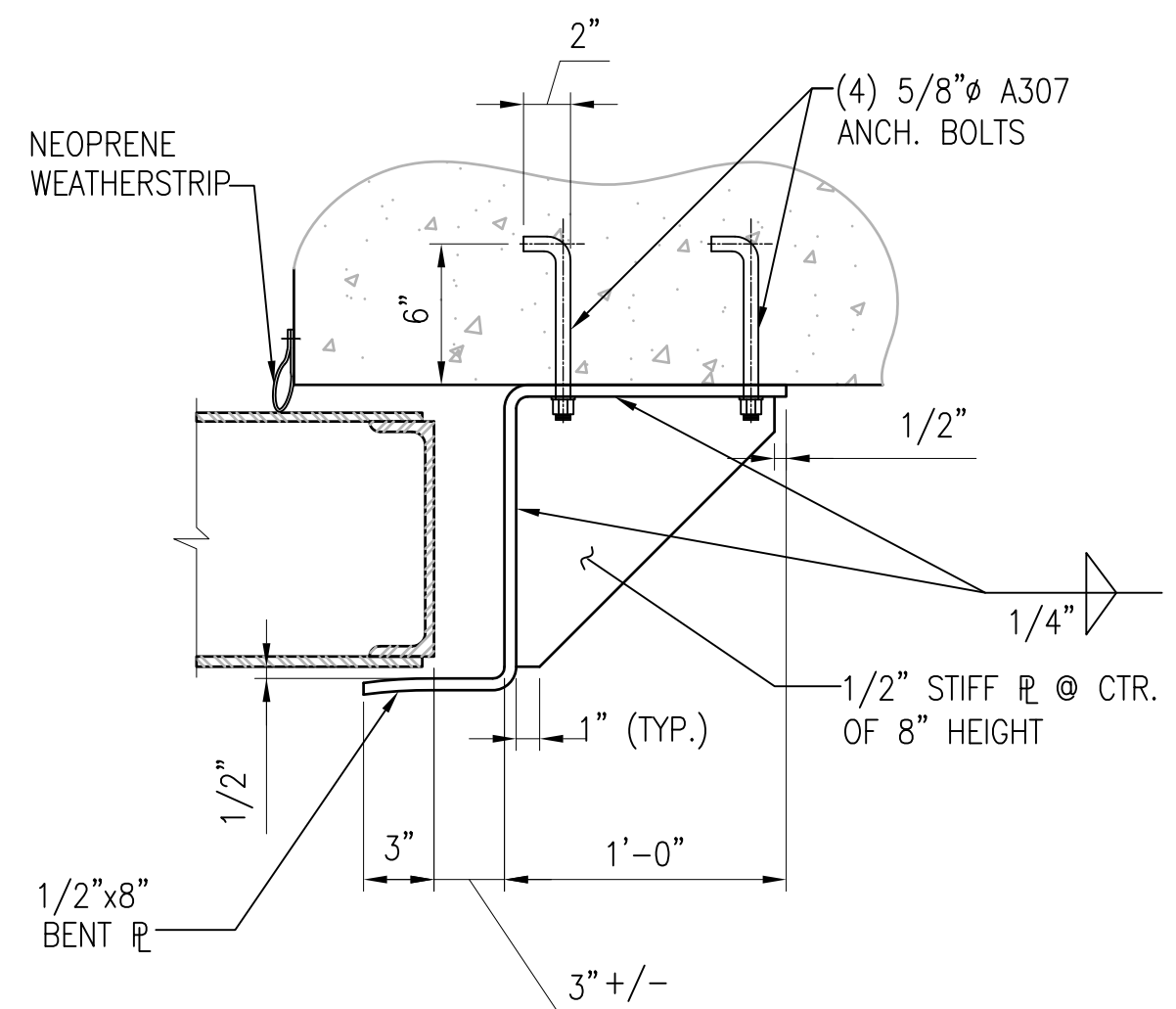
**DETAIL**  
SCALE: 1 1/2" = 1'-0" S-508 B1



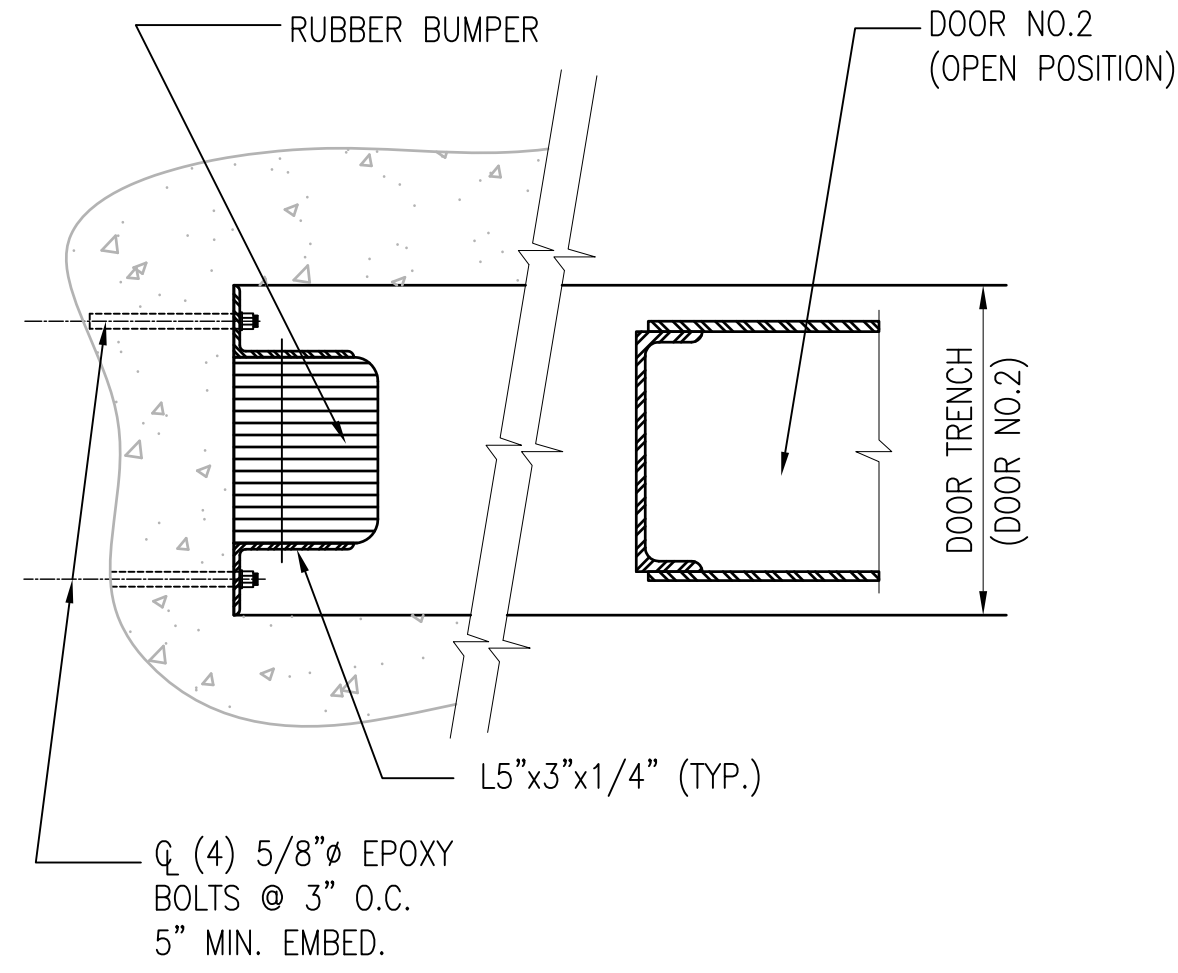
**DOOR BUMPER SECTION**  
SCALE: 1 1/2" = 1'-0" S-509 B3



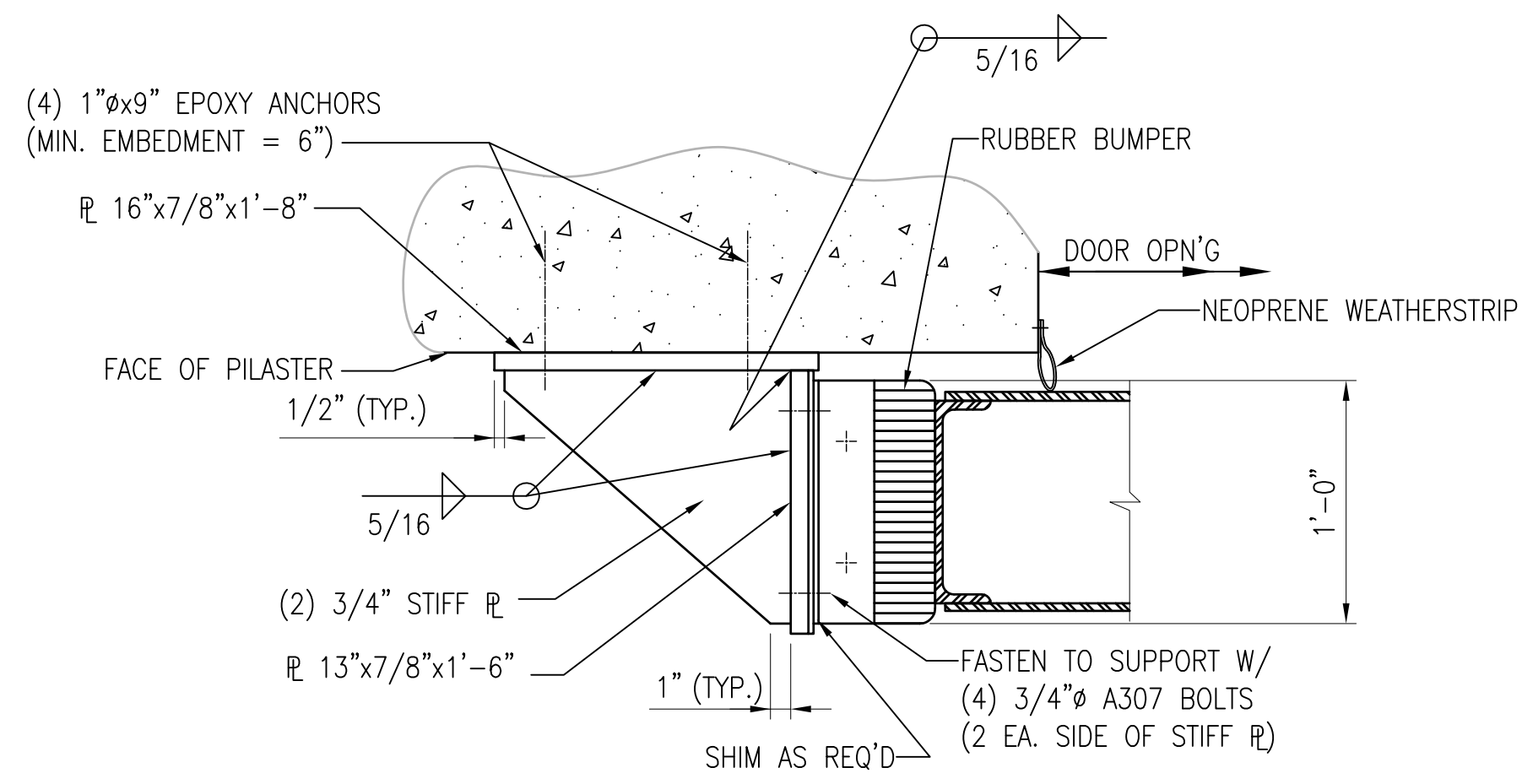
**SECTION**  
SCALE: 1 1/2" = 1'-0" S-509 B4



**DOOR BINDER DETAIL**  
SCALE: 1 1/2" = 1'-0" S-305 A1

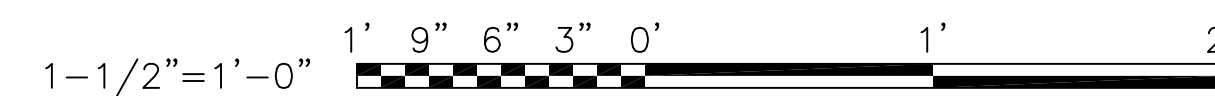


**DOOR BUMPER IN TRENCH DETAIL**  
SCALE: 1 1/2" = 1'-0" S-305 A3



**DOOR BUMPER SECTION**  
SCALE: 1 1/2" = 1'-0" S-305, S-509 A4

GRAPHIC SCALE:



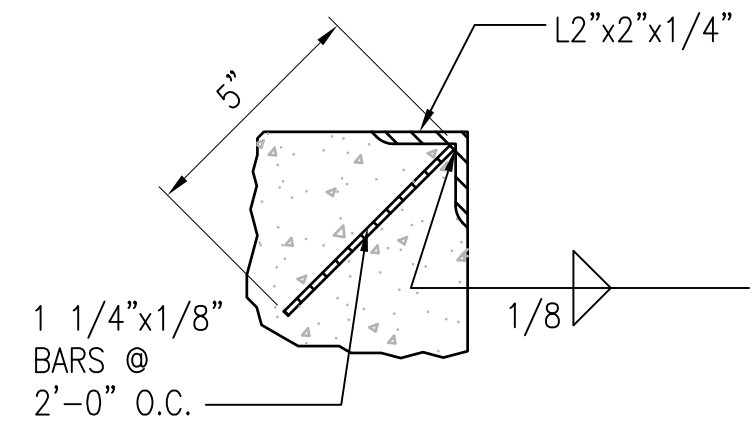
DES	DR
CHK	GC
NAVFAC MANAGER	
REVIEWED BY	

FOR COMMANDER NAVFAC  
 DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND  
 NAVAL STATION - NORFOLK, VIRGINIA  
**TYPE C BOX MAGAZINE WITH LOADING PLATFORM**  
 DOOR DETAILS AND SECTIONS

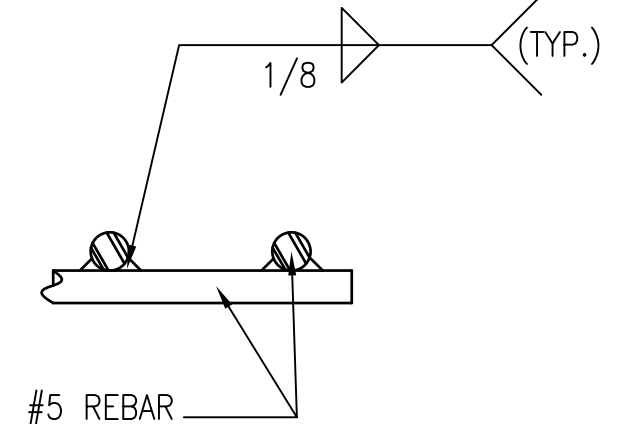
CODE ID. NO. 80091	SIZE D
SCALE: AS NOTED	
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. 14005107	
SHEET 17 OF 31	
<b>S-509</b>	

DRAWING REVISION: 15 JANUARY 2008

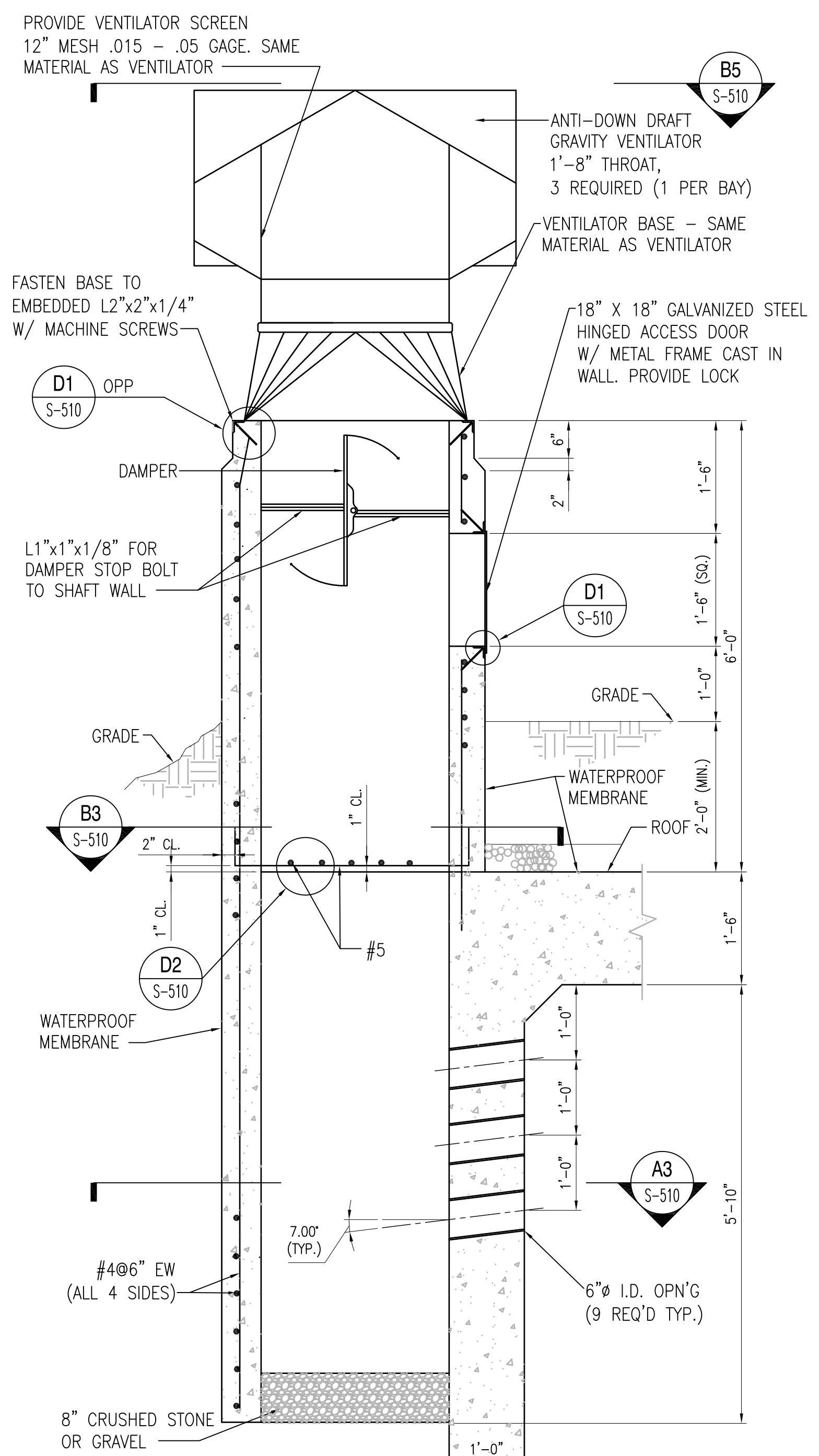
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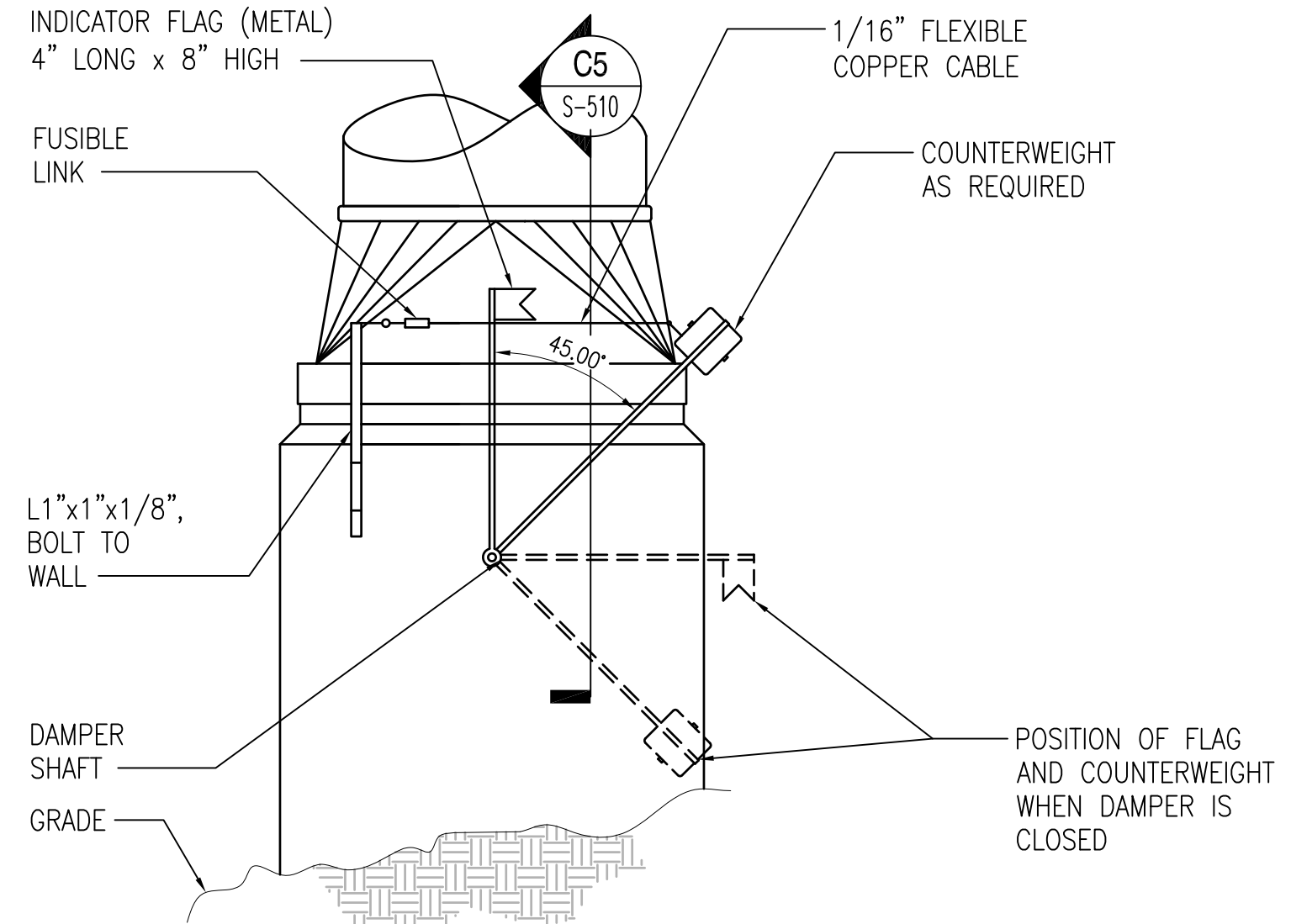
**DETAIL D1**  
SCALE: 3" = 1'-0" S-510



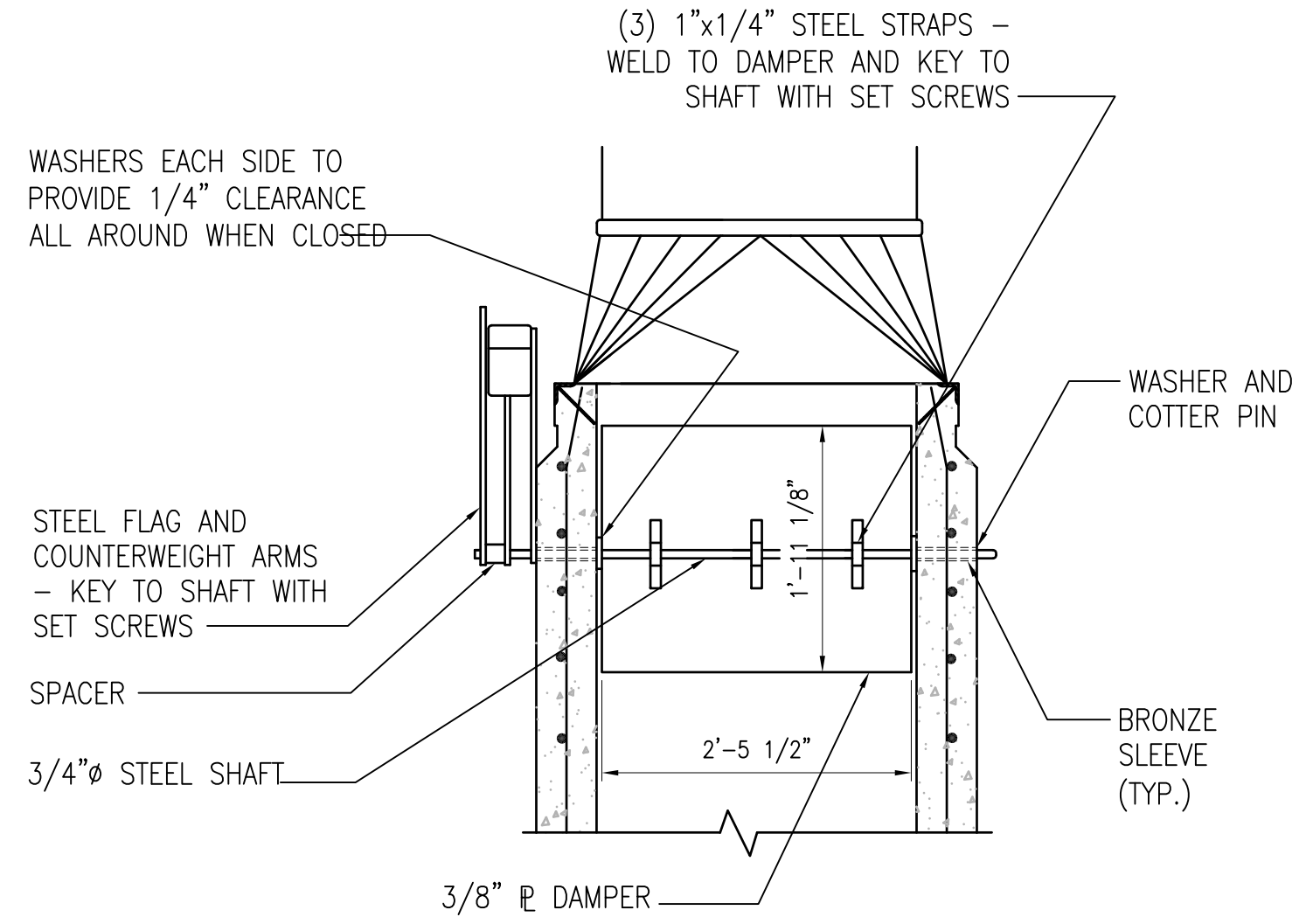
**DETAIL D2**  
SCALE: 3" = 1'-0" S-510



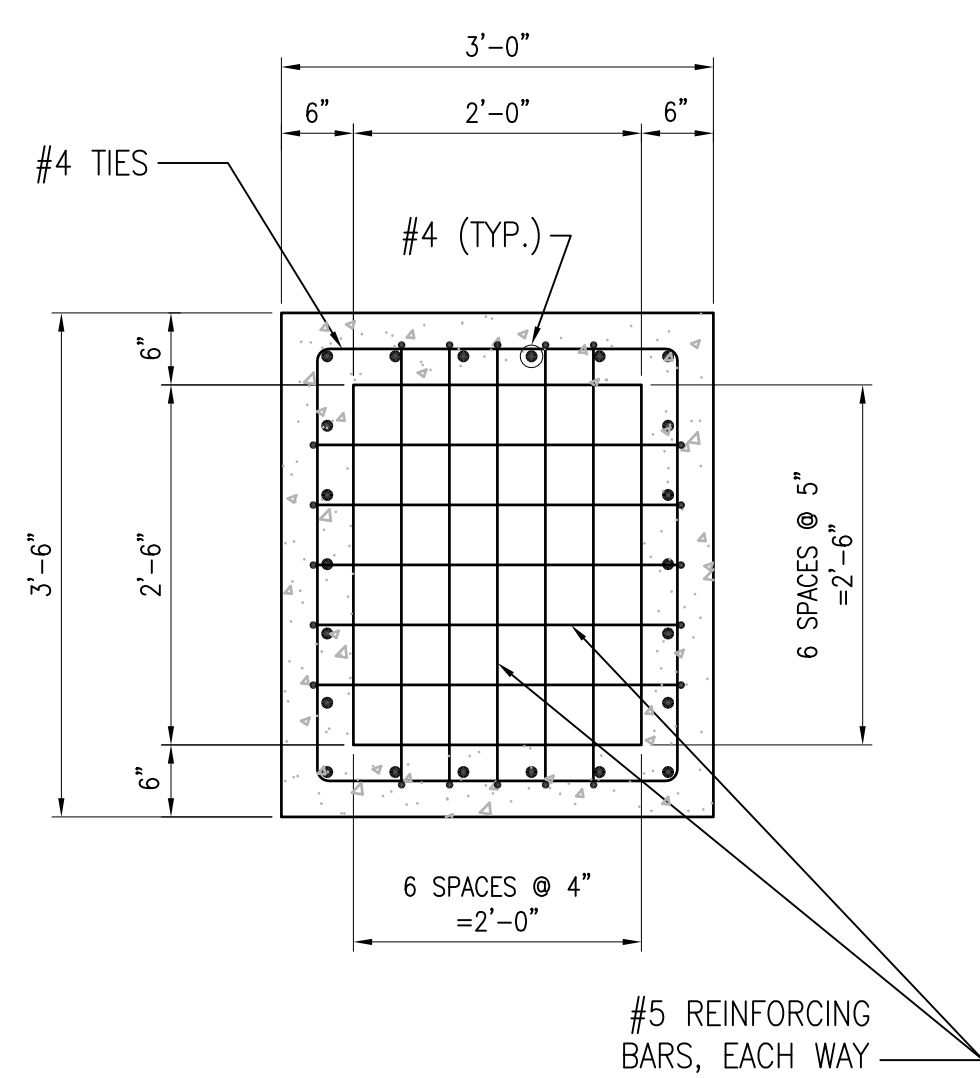
**VENTILATOR SECTION**  
SCALE: 3/4" = 1'-0" S-102, S-510 **A1**



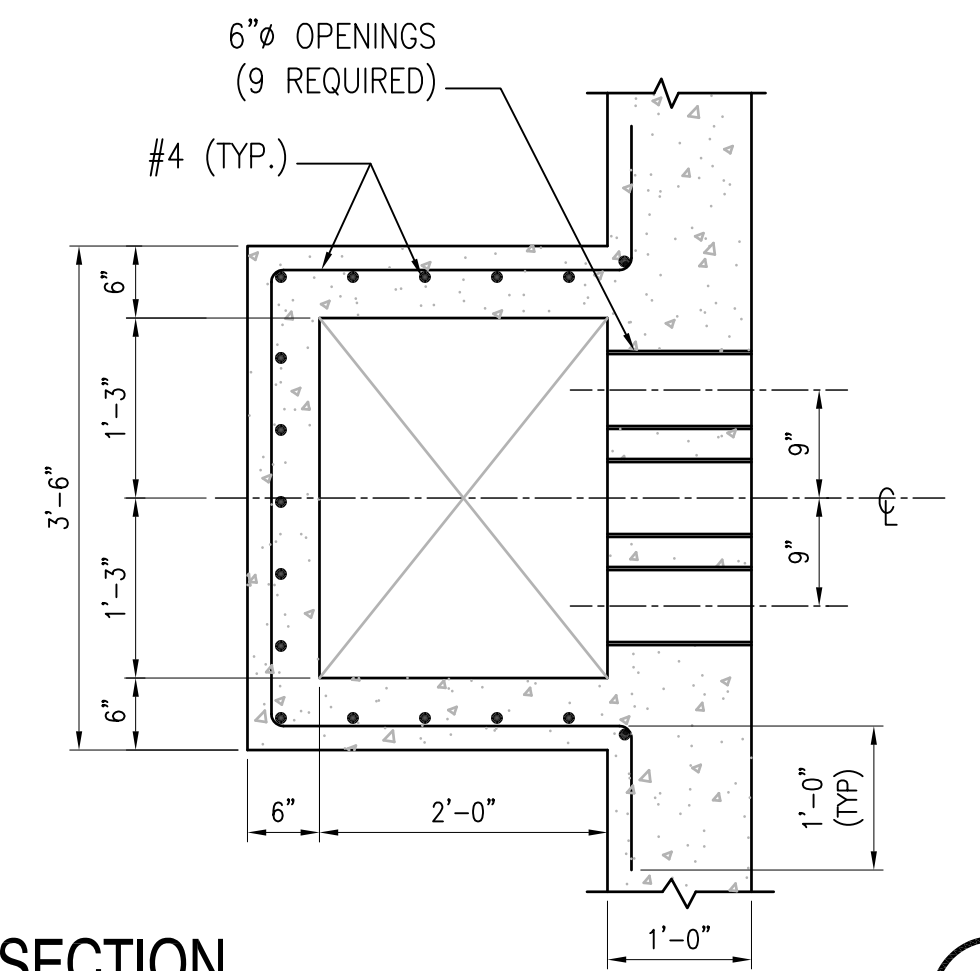
**ELEVATION C3**  
SCALE: 3/4" = 1'-0" S-510



**SECTION C5**  
SCALE: 3/4" = 1'-0" S-510

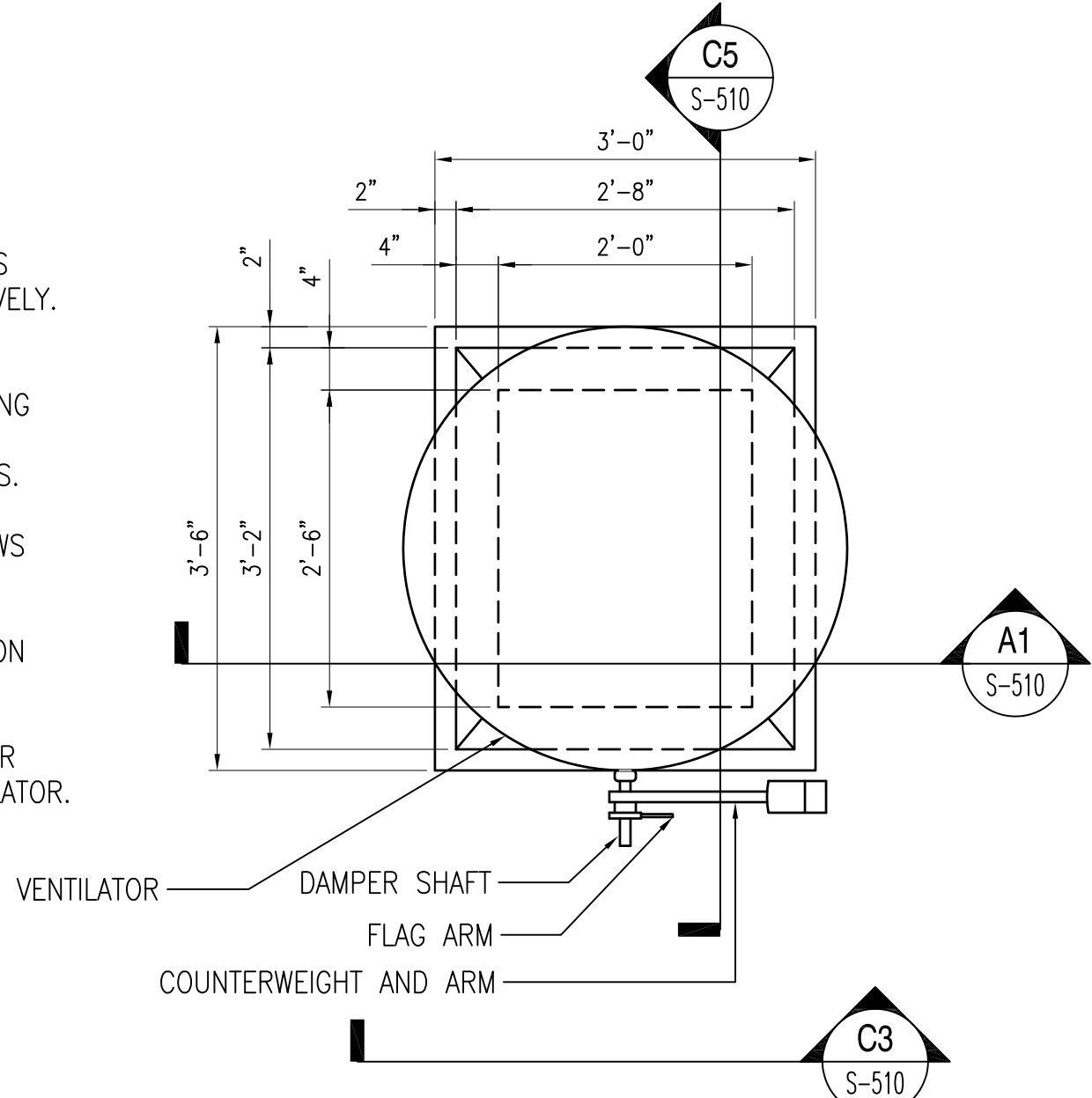


**SECTION B3**  
SCALE: 3/4" = 1'-0" S-510



**SECTION A3**  
SCALE: 3/4" = 1'-0" S-510

- NOTES:**
1. ALL DAMPER AND SHAFT ASSEMBLIES SHALL OPERATE FREELY AND POSITIVELY.
  2. FUSIBLE LINKS SHALL HAVE MELTING POINT OF 160° TO 165° F. BREAKING STRENGTH SHALL BE SUITABLE FOR LOADS IMPOSED BY COUNTERWEIGHTS.
  3. ALL SET SCREWS & MACHINE SCREWS SHALL BE BRASS.
  4. DESIGN FOR VENTILATOR IS BASED ON STEADY WIND SPEED OF 85 MPH.
  5. REFER TO ELECTRICAL DRAWINGS FOR LIGHTNING ROD LOCATION ON VENTILATOR.



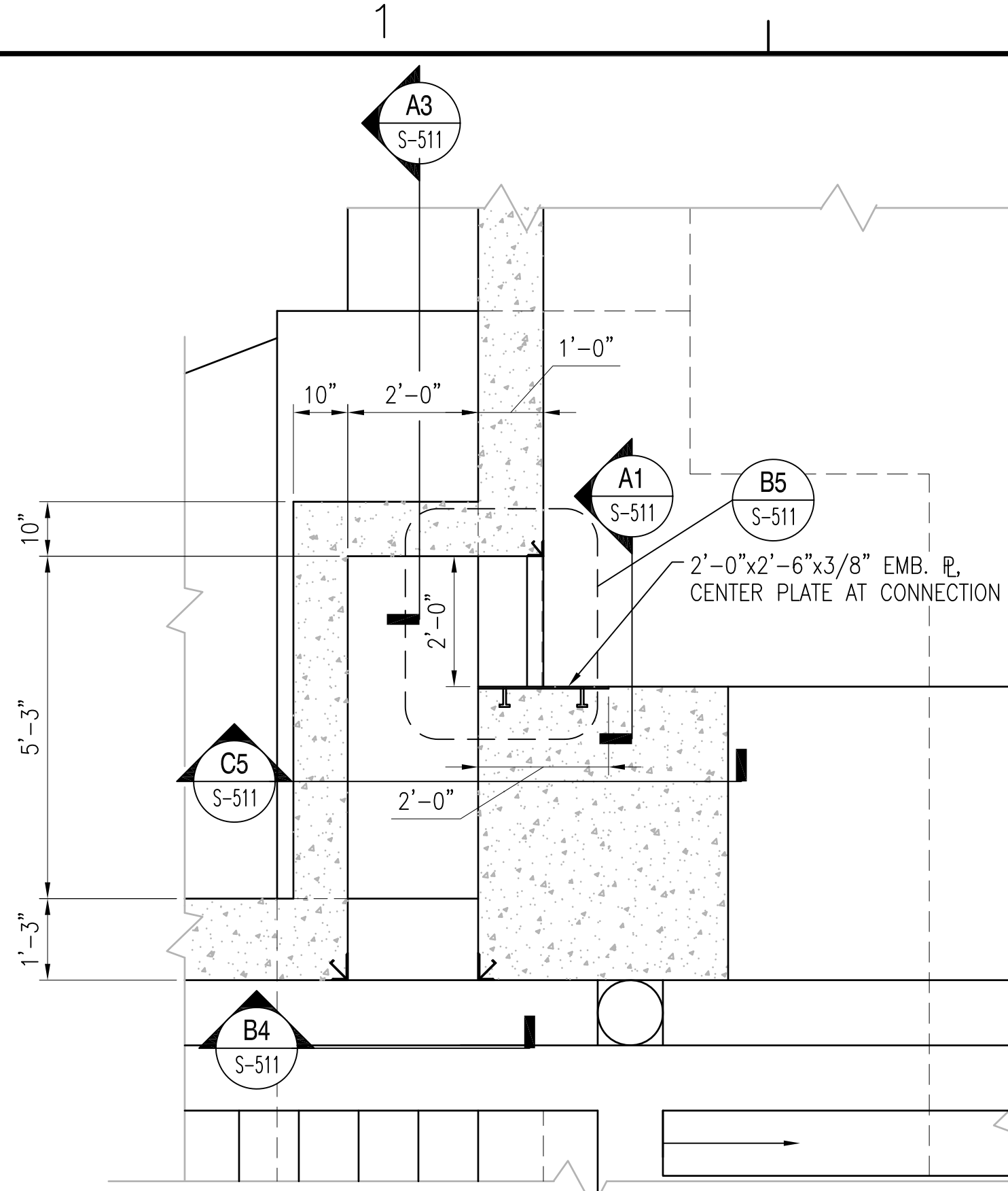
**DETAIL B5**  
SCALE: 3/4" = 1'-0" S-510

**GRAPHIC SCALE:**



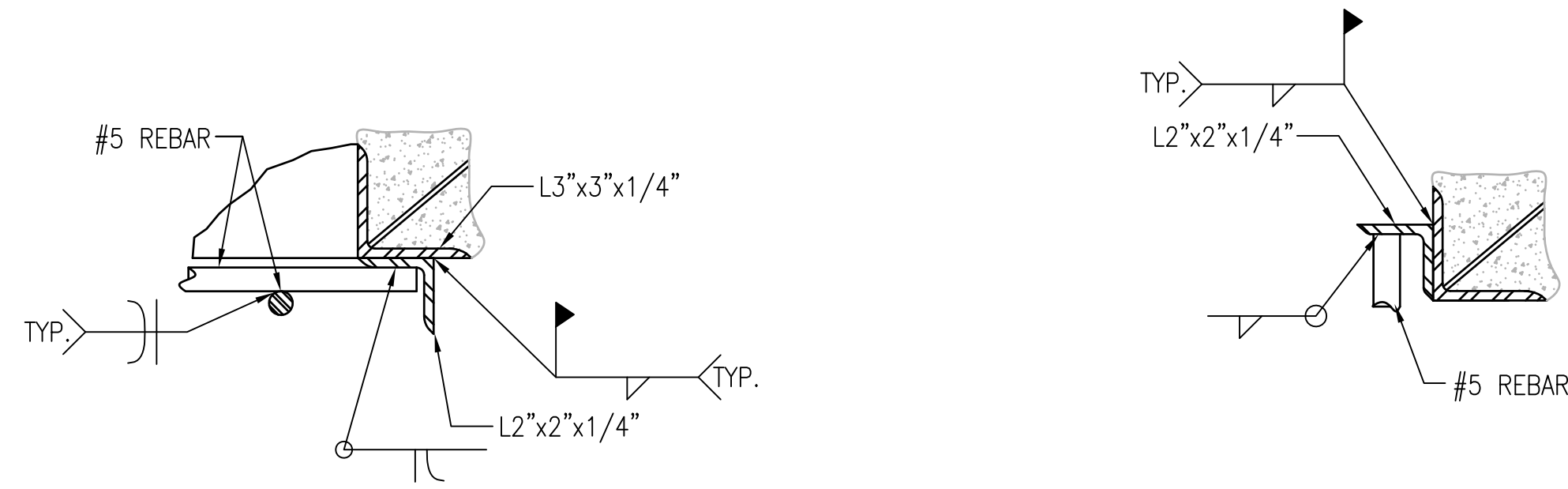
DATE	APPR.
DESCRIPTION	
SYM	
<b>VENTILATOR DETAILS</b>	
<b>TYPE C BOX MAGAZINE WITH LOADING PLATFORM</b>	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL STATION - NORFOLK, VIRGINIA NAVFACANT	
CODE ID. NO. 80091	SIZE D
SCALE: AS NOTED	
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	14005108
SHEET	18 OF 31
<b>S-510</b>	
DRAWING REVISION: 15 JANUARY 2008	

REVDATE: FILE NAME: \\nasar\k1634\NAVFAC\_YRKT\_16AA\NAVFAC\_YRKT\_16AA\CISE\Magazines\Box C BOX C WITH PLATFORM COMPL.dwg LAYOUT NAME: S-511 PLOTTED: Tuesday, December 14, 2010 - 4:41pm



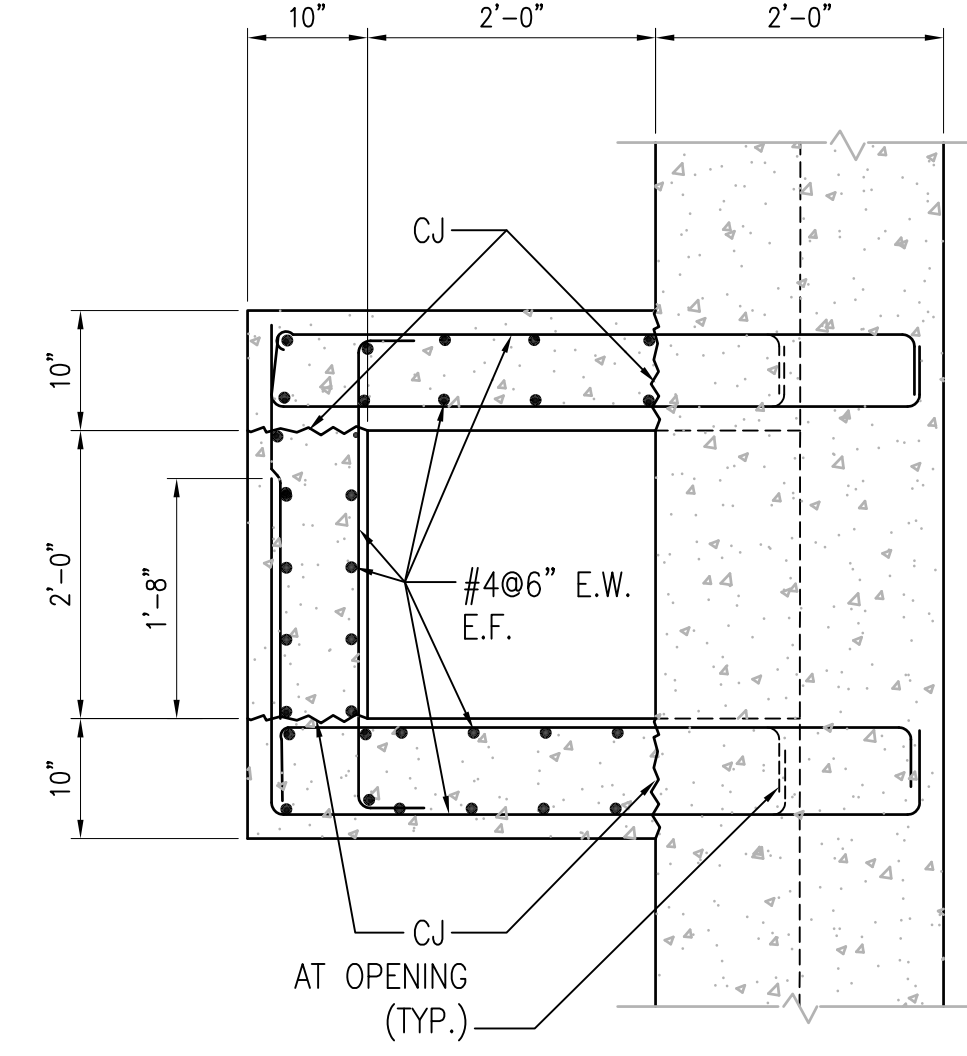
**ENLARGED PLAN OF AIR INTAKE DUCT**  
SCALE: 1/2" = 1'-0"

S-101 **C1**

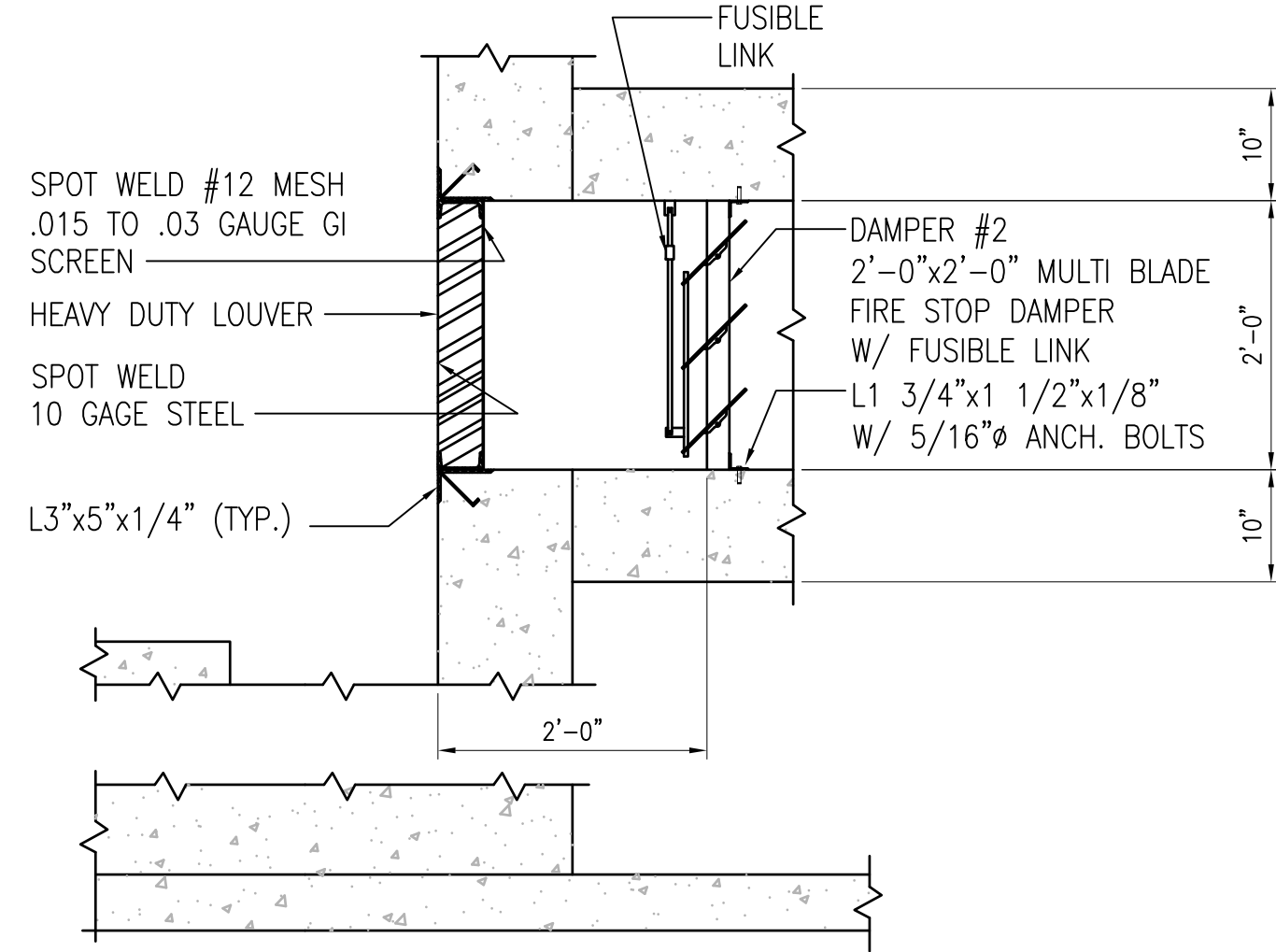


**DETAIL**  
SCALE: 3" = 1'-0" S-511 **C3**

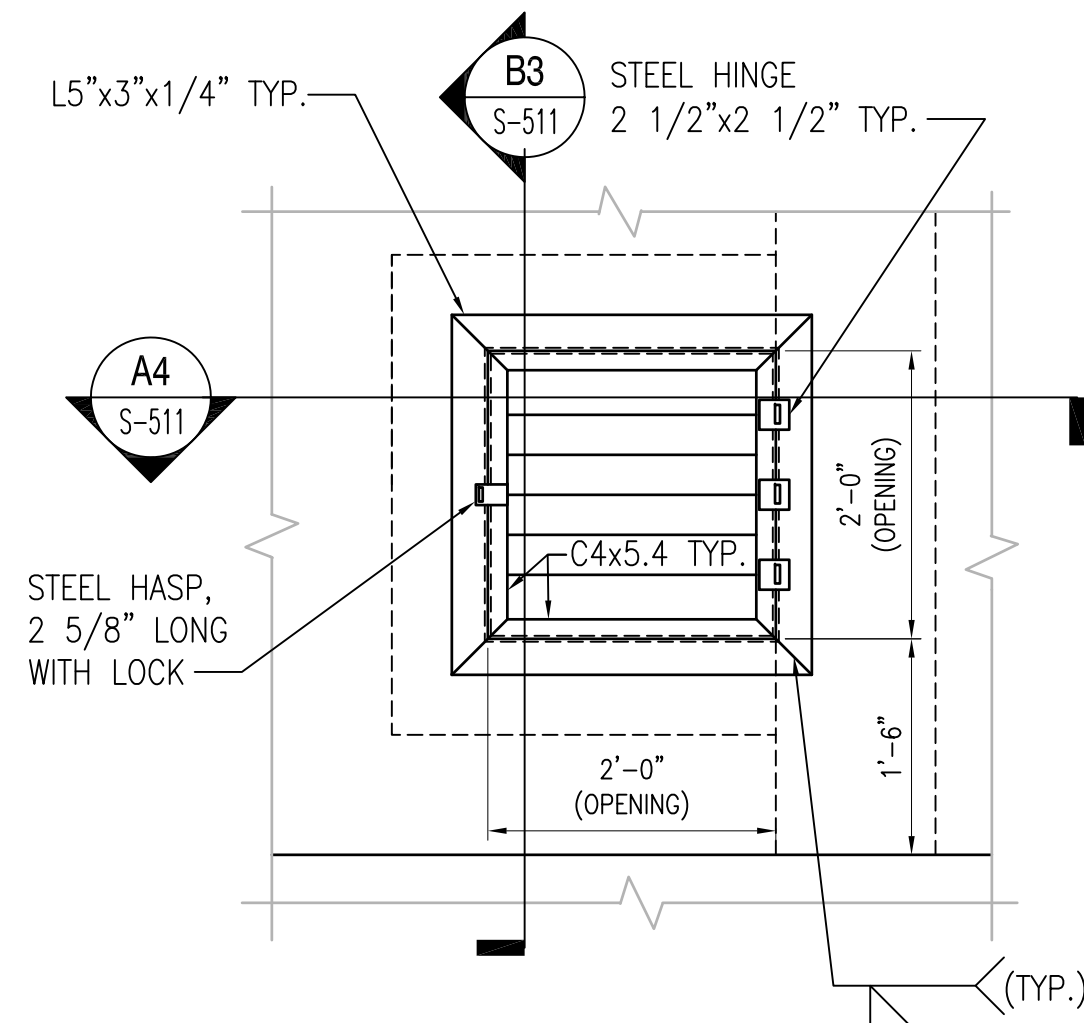
**DETAIL**  
SCALE: 3" = 1'-0" S-511 **C4**



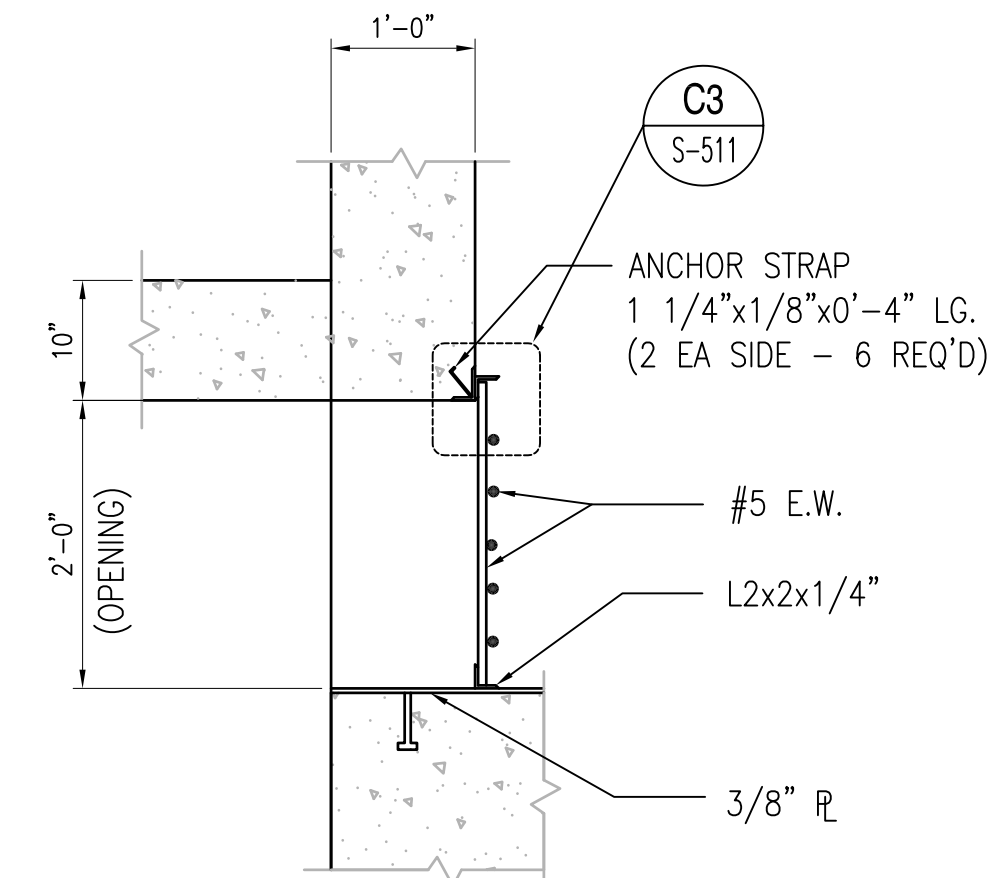
**SECTION**  
SCALE: 3/4" = 1'-0" S-511 **C5**



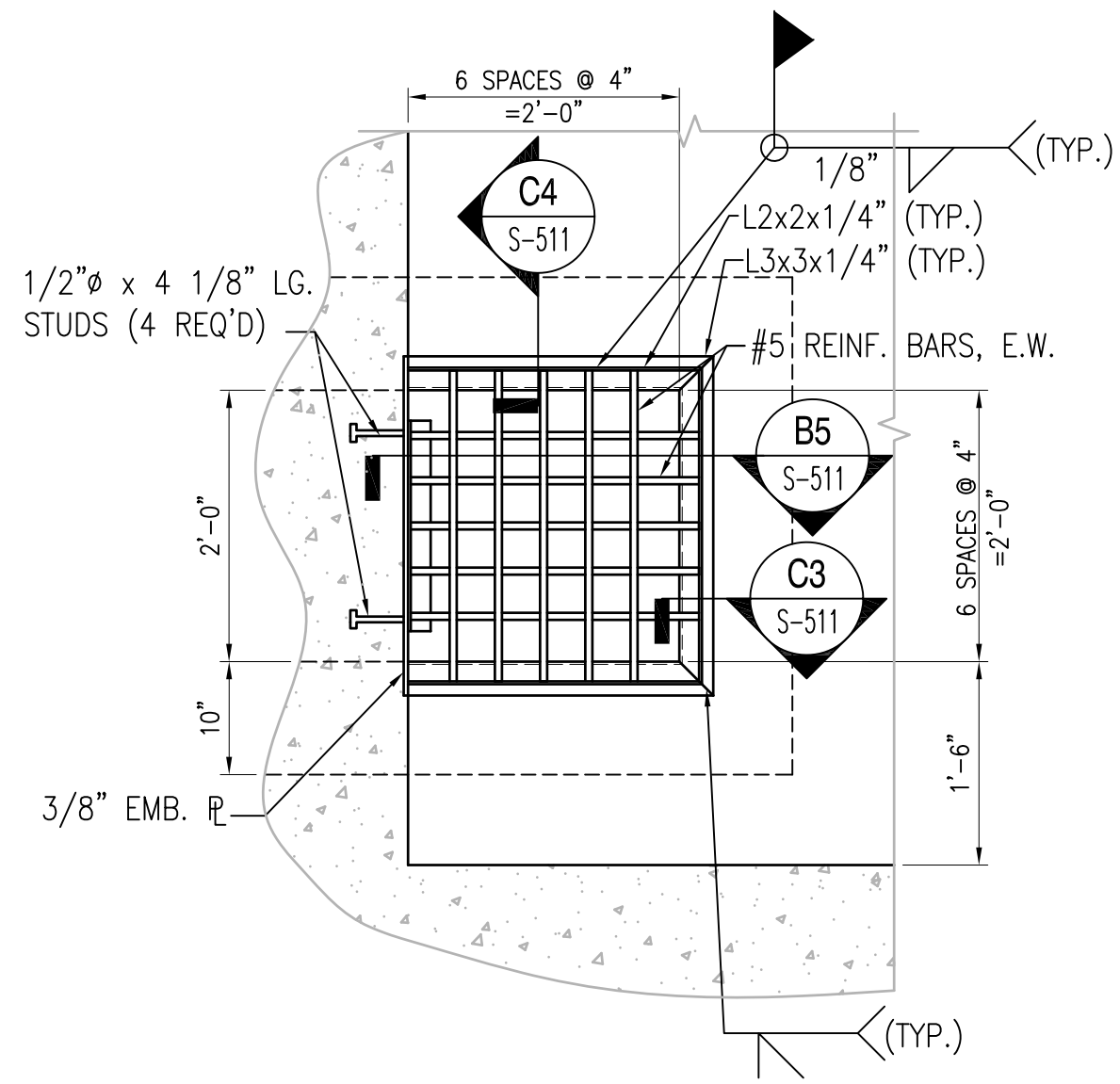
**SECTION**  
SCALE: 3/4" = 1'-0" S-511 **B3**



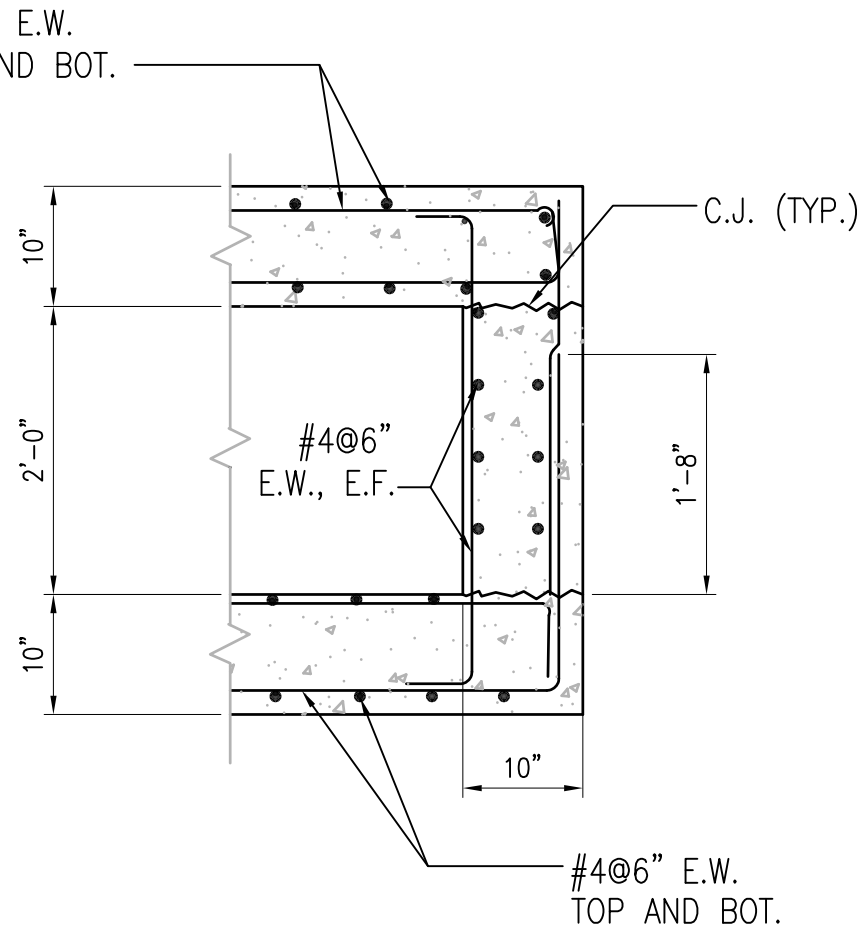
**SECTION**  
SCALE: 3/4" = 1'-0" S-511 **B4**



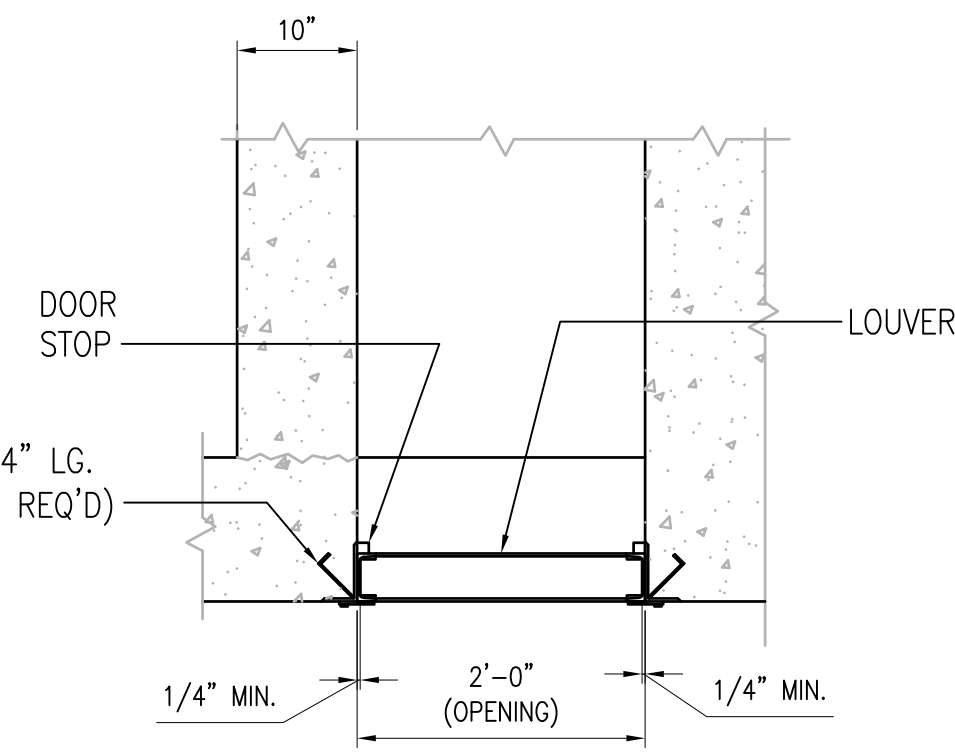
**SECTION**  
SCALE: 3/4" = 1'-0" S-511 **B5**



**SECTION**  
SCALE: 3/4" = 1'-0" S-511 **A1**

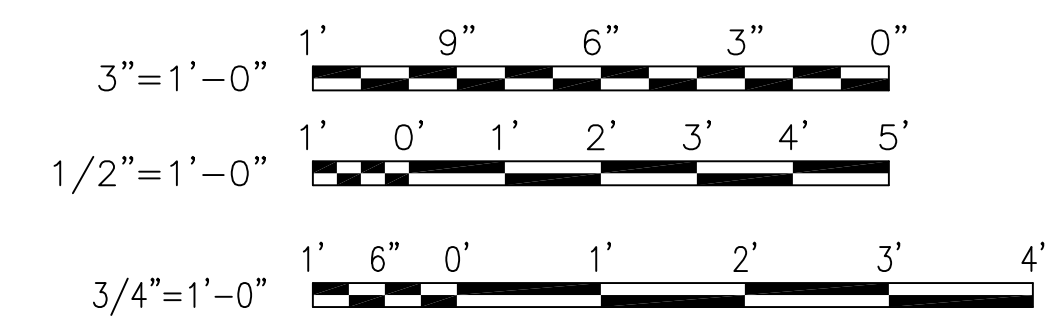


**SECTION**  
SCALE: 3/4" = 1'-0" S-511 **A3**



**SECTION**  
SCALE: 3/4" = 1'-0" S-511 **A4**

**GRAPHIC SCALE:**



DATE	APPR.
DESCRIPTION	
SYM.	
<b>TYPE C BOX MAGAZINE WITH LOADING PLATFORM</b> INTAKE VENTILATOR DETAILS	
FOR COMMANDER NAVFAC	DR
DESIGNER	GC
CHKD	
NAVFAC MANAGER	
REVIEWED BY	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL STATION - NORFOLK, VIRGINIA NAVFACANT	
CODE ID. NO. 80091	SIZE D
SCALE: AS NOTED	
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. 14005109	
SHEET 19 OF 31	
<b>S-511</b>	
DRAWING REVISION: 15 JANUARY 2008	



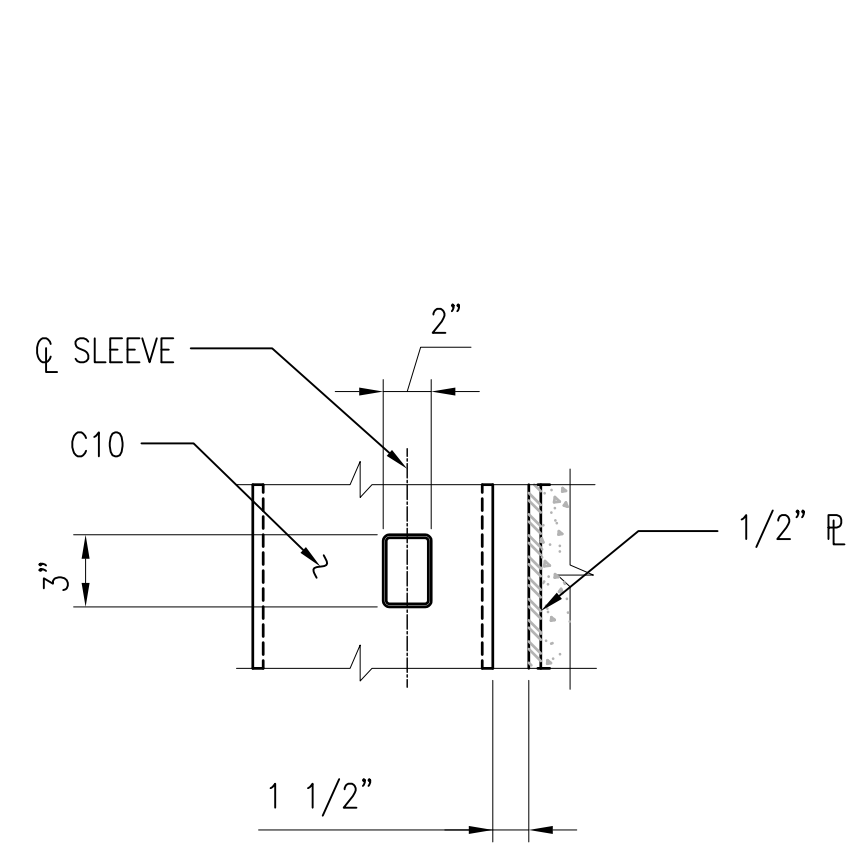
1 2 3 4 5

D

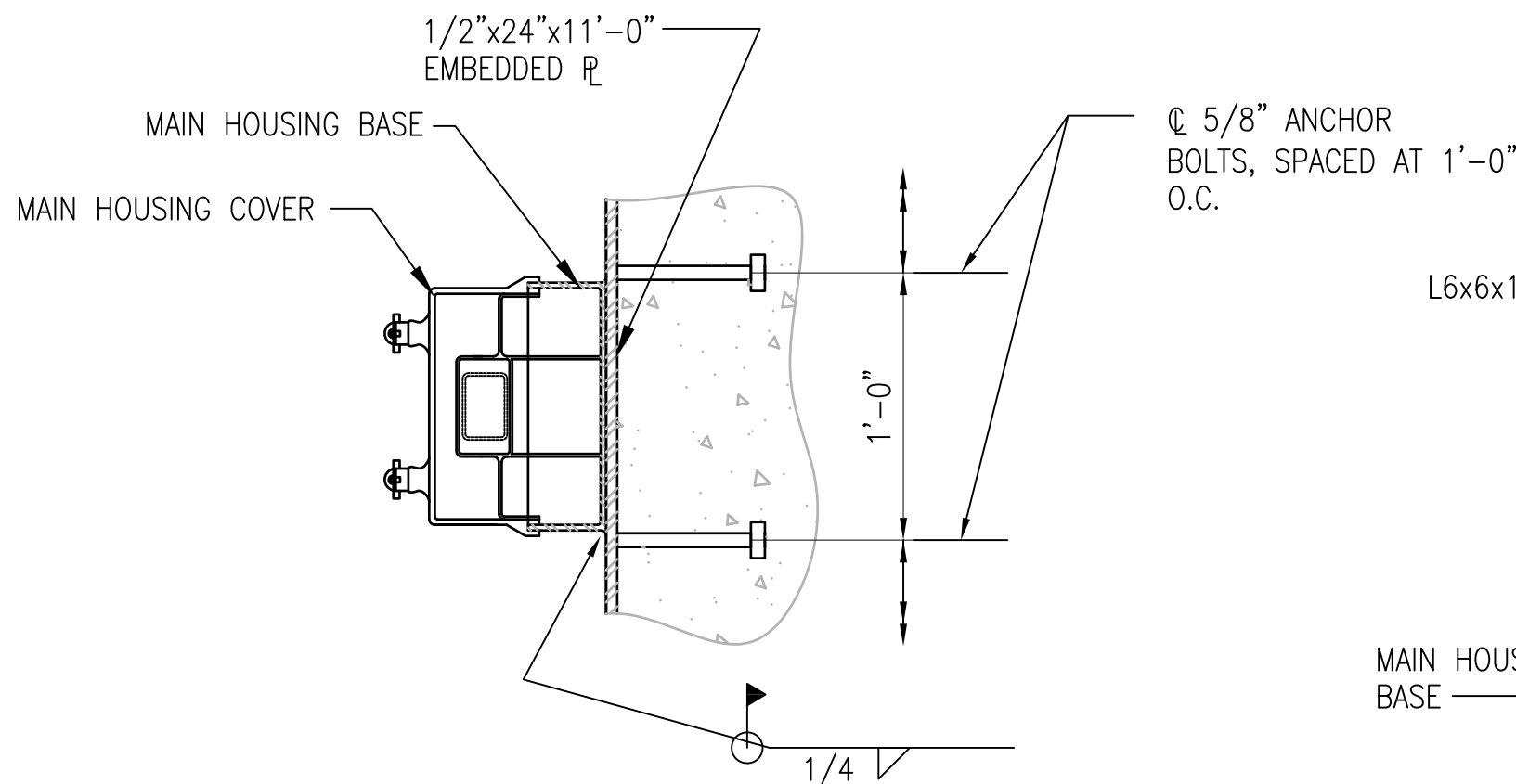
C

B

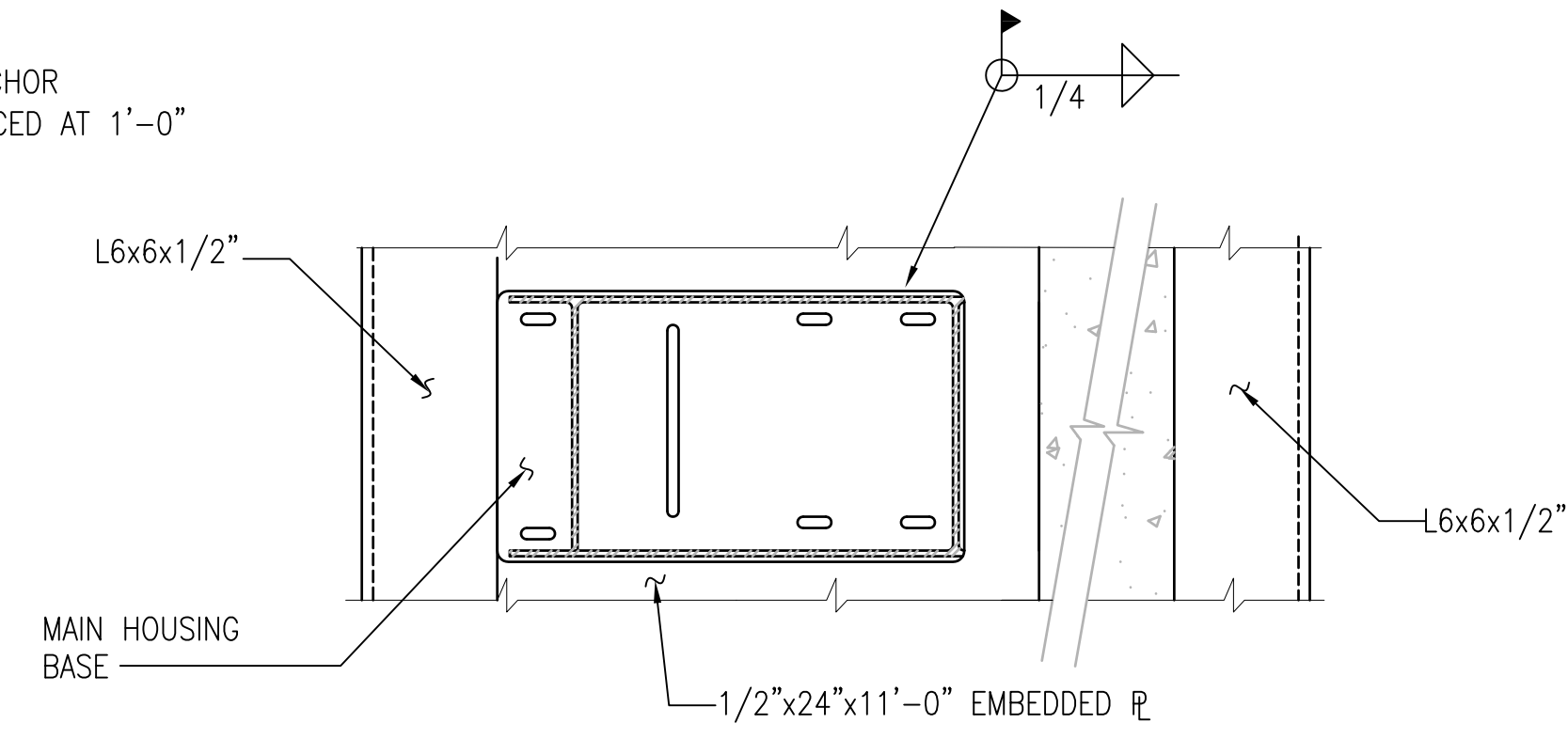
A



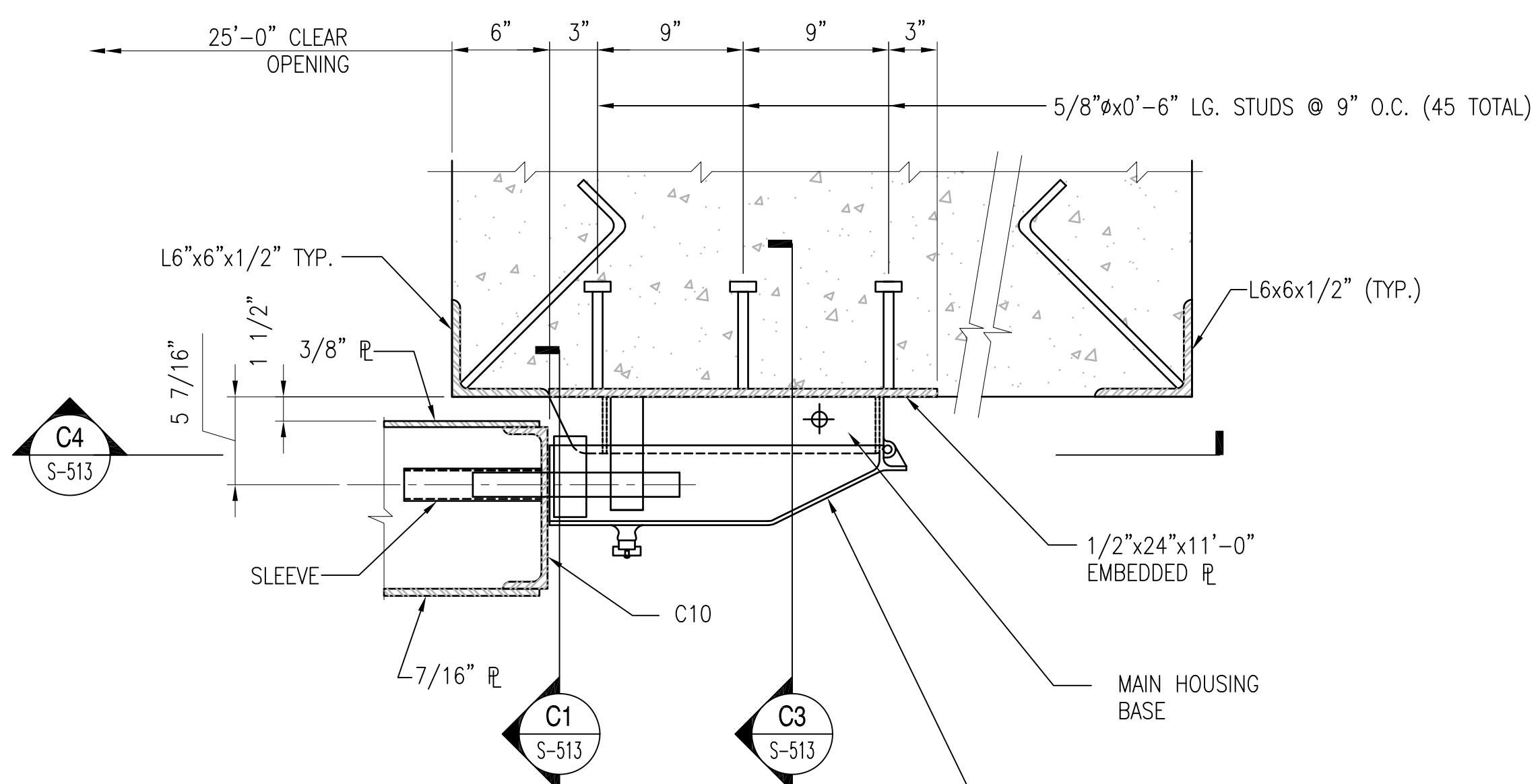
**SECTION C1**  
1 1/2"=1'-0" S-513



**SECTION C3**  
1 1/2"=1'-0" S-513



**SECTION C4**  
1 1/2"=1'-0" S-513



NOTE: PUSH BUTTON DOOR MOTOR CONTROL LOCATED INSIDE THE HASP, SEE NAPEC DWG. No. 53711-5532340

NOTE: HIGH SECURITY HASP ON DOOR NO.2 SHALL BE NAPEC 1332 UNIVERSAL HASP, GOV'T FURNISHED AND SHALL BE INSTALLED IN ACCORDANCE WITH NAVAMPROENGCEP PUBLICATION "STANDARD PLANS FOR HIGH SECURITY HASPS AND INTRUDER DETECTION SYSTEMS ASHORE" INSTALLATION PROCEDURE FOR THE HASP SHALL FOLLOW STEPS 1 THRU 8 LISTED ON NAPEC STANDARD DWG. 1446.

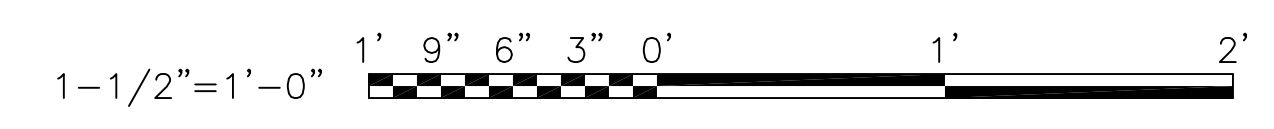
**NOTES TO DESIGNER - REMOVE THESE NOTES WHEN PREPARING CONSTRUCTION DRAWINGS FOR SITE ADAPTATION OF THIS DESIGN**

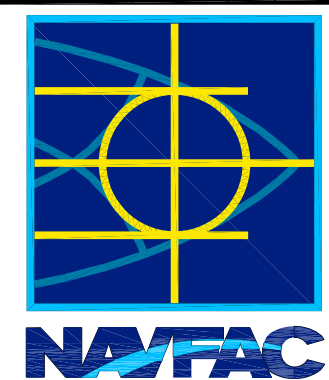

1. SHEETS S-513 & S-513(ALT) IDENTIFY DIFFERENT LOCKING SYSTEMS. THE EOR SHALL VERIFY THE CORRECT LOCKING SYSTEM REQUIRED AND REMOVE THE REDUNDANT SHEET FROM THE CONSTRUCTION CONTRACT DOCUMENTS FOR THE SYSTEM NOT USED (COORDINATE WITH CONTRACTING OFFICER).

**DETAIL - HIGH SECURITY HASP (NAPEC 1332)**  
1 1/2"=1'-0"

S-305 **A4**

**GRAPHIC SCALE:**



DATE	APPR.
DESCRIPTION	
SYM	
	
	
APPROVED	SAT-TO
FOR COMMANDER NAVFAC	
DES	DR
CHK	GC
NAVFAC MANAGER	
REVIEWED BY	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL STATION - NORFOLK, VIRGINIA NAVFACANT	
<b>TYPE C BOX MAGAZINE WITH LOADING PLATFORM</b> STANDARD HIGH SECURITY HASP DETAILS	
CODE ID. NO. 80091	SIZE D
SCALE: <b>AS NOTED</b>	
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. <b>14005111</b>	
SHEET <b>21</b> OF <b>31</b>	
<b>S-513</b>	
<small>DRAWING REVISION: 15 JANUARY 2008</small>	

1 2 3 4 5

D

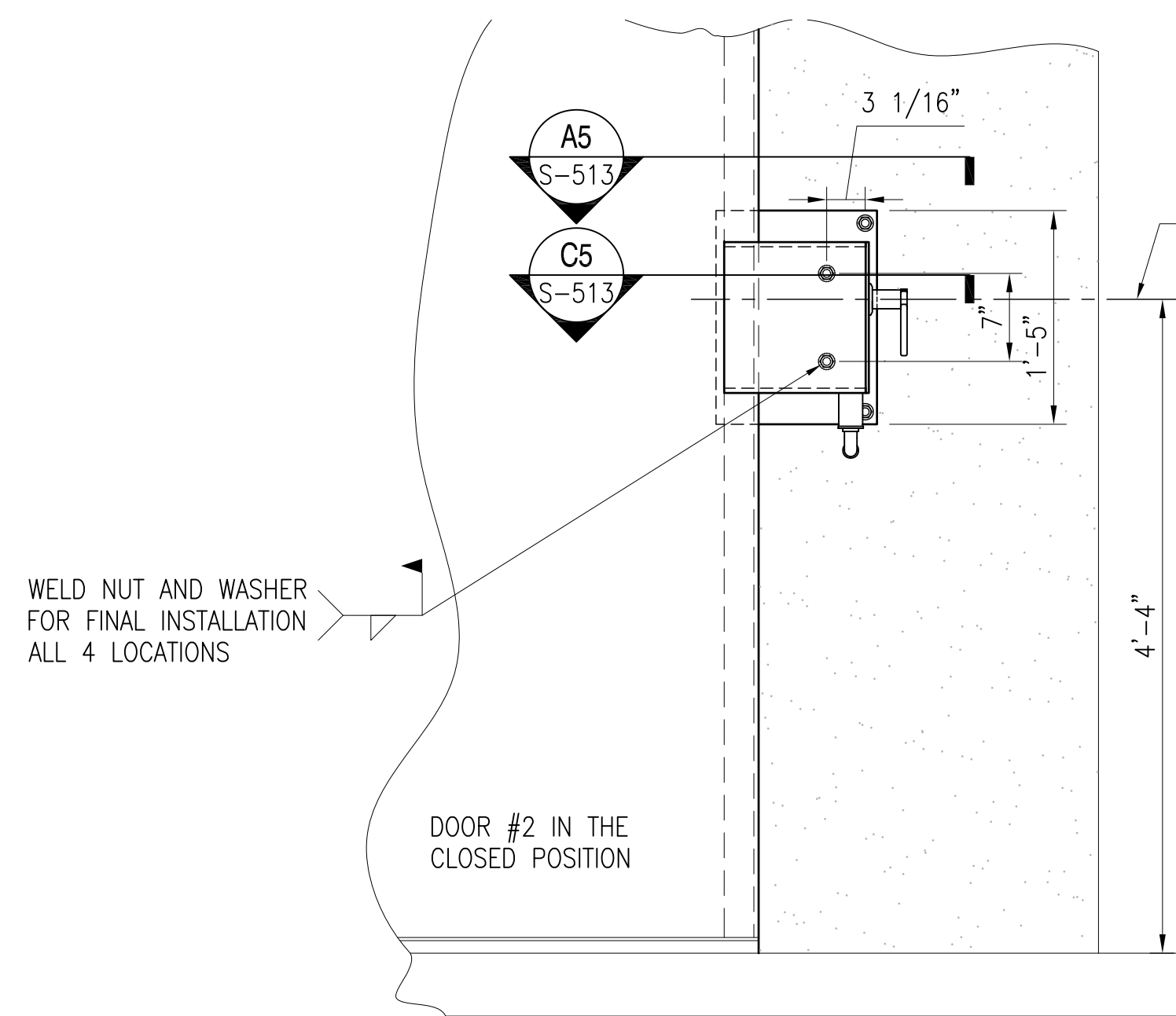
C

B

A

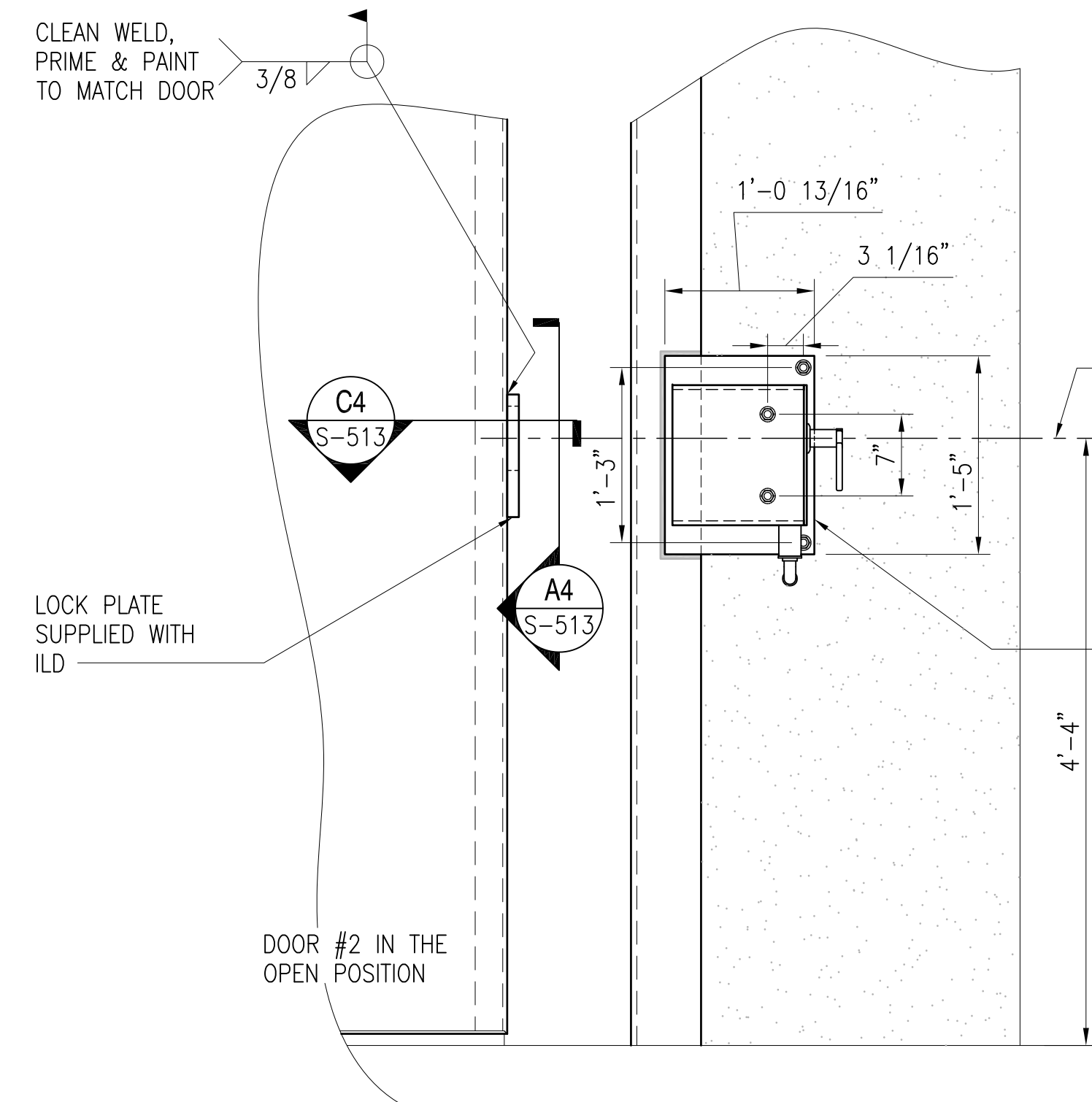
REVDATE: FILE NAME: \\nasanmk634\NAVFAC\_YRKT\_16AA\NAVFAC\_YRKT\_16AA\CISE\Magazines\Box C BOX C WITH PLATFORM COMPL.dwg LAYOUT NAME: S-513 PLOTTED: Tuesday, December 14, 2010 - 4:42pm

REVDATE: FILE NAME: \\nasamr1k1534\NAVFAC\_YRKT\_16AA\NAVFAC\_YRKT\_16AA\CISE\Magazines\Box C BOX C WITH PLATFORM COMPLowg LAYOUT NAME: S-513(ALT) PLOTTED: Tuesday, December 14, 2010 - 4:42pm



NOTE: SEE MANUFACTURERS INSTALLATION DATA FOR ADDITIONAL INFORMATION

DOOR IN THE CLOSED POSITION



NOTE: SEE MANUFACTURERS INSTALLATION DATA FOR ADDITIONAL INFORMATION

DOOR IN THE OPEN POSITION

**ELEVATION - HIGH SECURITY HASP - DOOR #2**

SCALE: 1" = 1'-0"

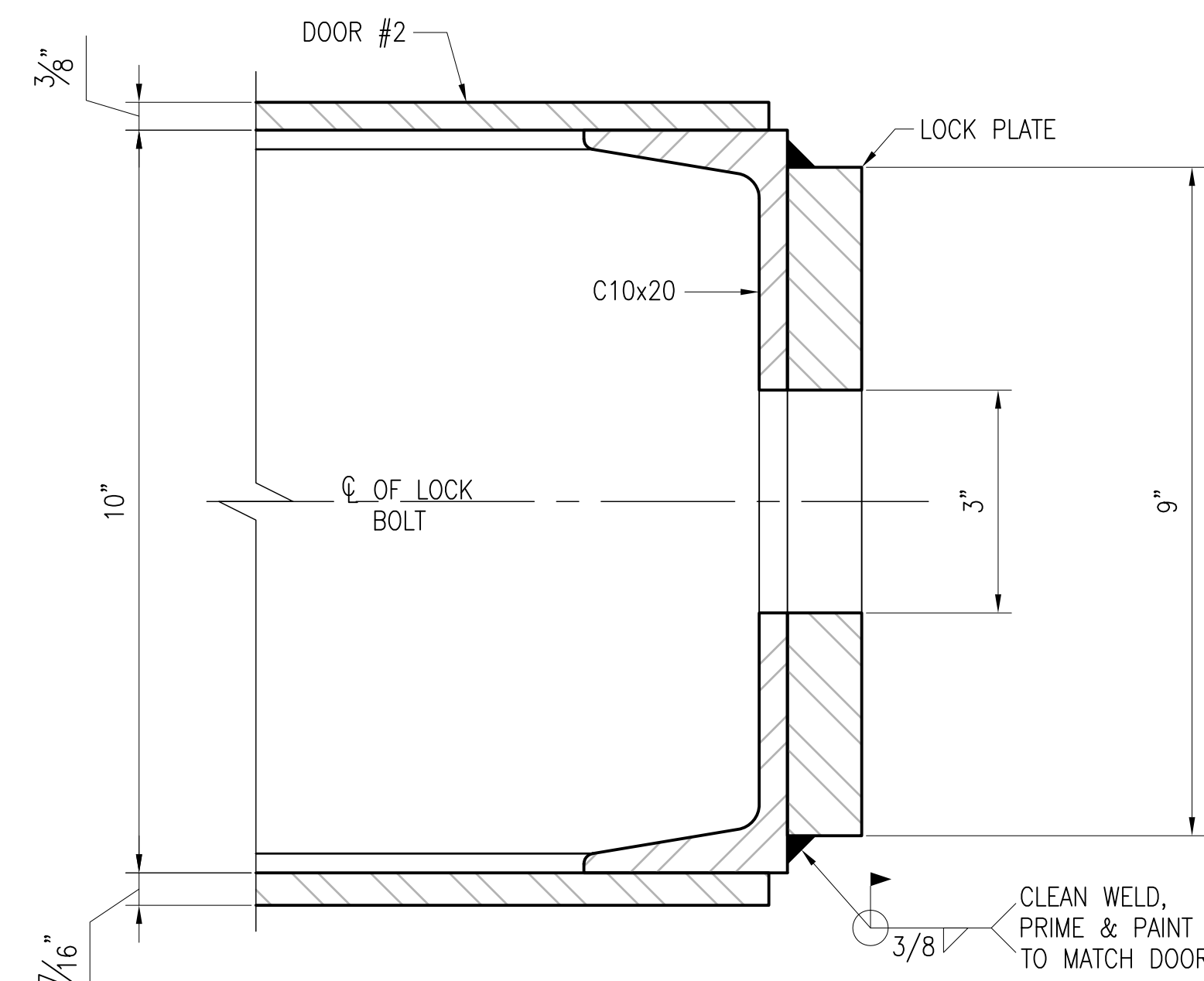
S-305



**NOTES TO DESIGNER - REMOVE THESE NOTES WHEN PREPARING CONSTRUCTION DRAWINGS FOR SITE ADAPTATION OF THIS DESIGN**

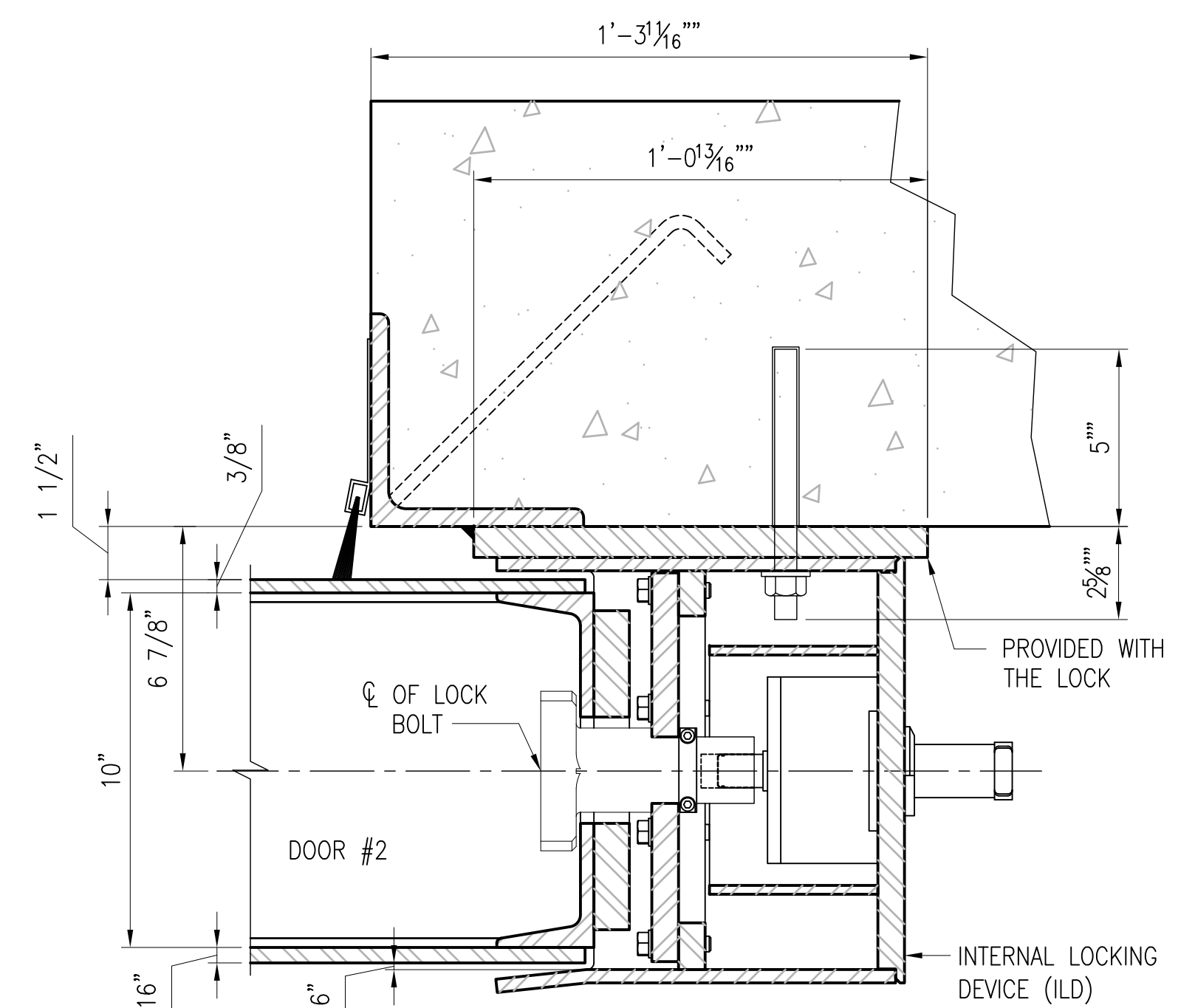
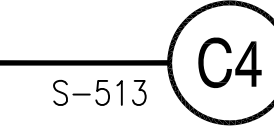
1. SHEETS S-513 & S-513(ALT) IDENTIFY DIFFERENT LOCKING SYSTEMS. THE EOR SHALL VERIFY THE CORRECT LOCKING SYSTEM REQUIRED AND REMOVE THE REDUNDANT SHEET FROM THE CONSTRUCTION CONTRACT DOCUMENTS FOR THE SYSTEM NOT USED (COORDINATE WITH CONTRACTING OFFICER).

INTERNAL LOCKING DEVICE (ILD) CONTACT THE DOD LOCK PROGRAM (805) 982-1212



**SECTION**

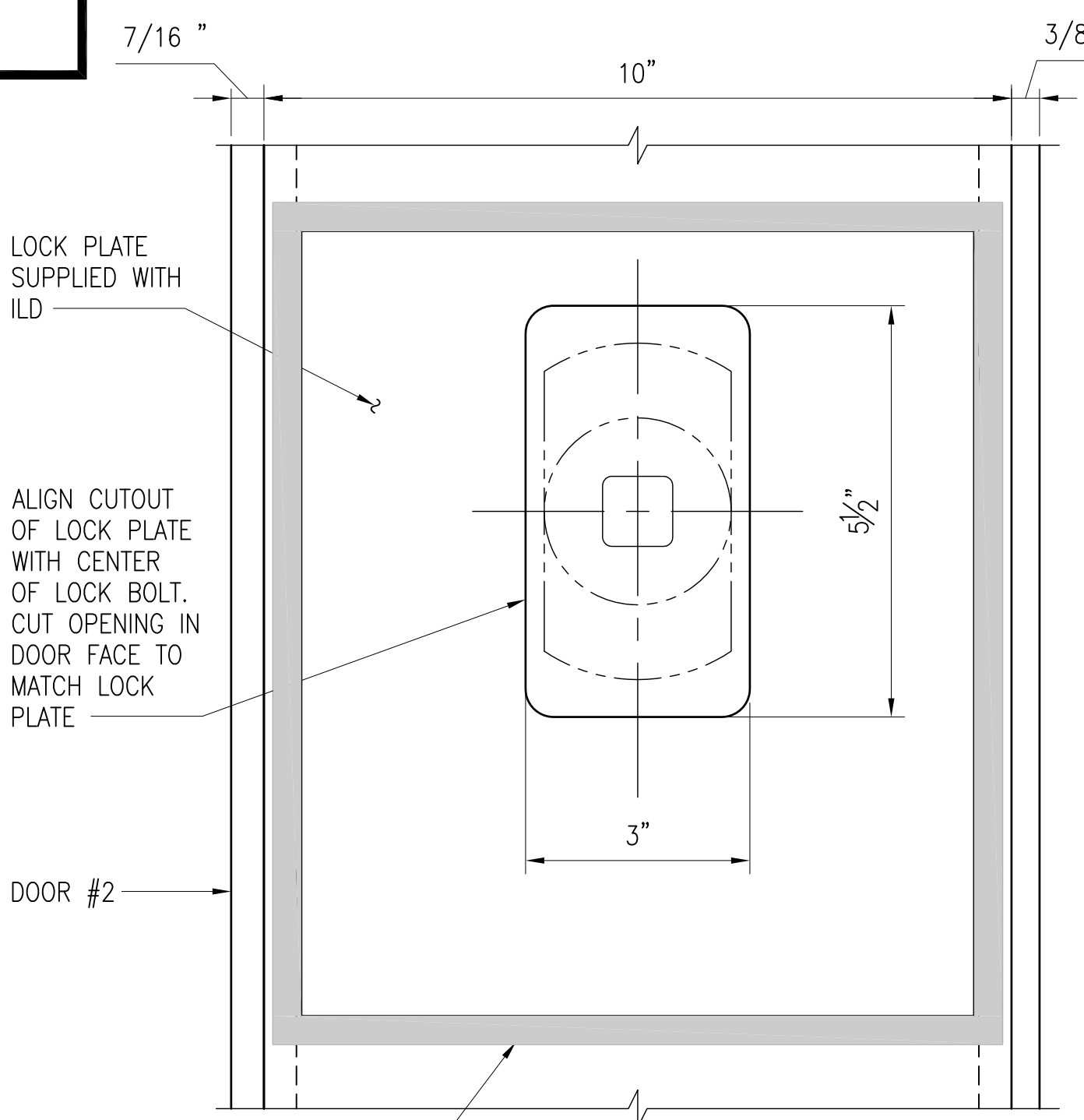
SCALE: 6" = 1'-0"



**SECTION AT LOCKING ASSEMBLY CLOSED**

SCALE: 3" = 1'-0"

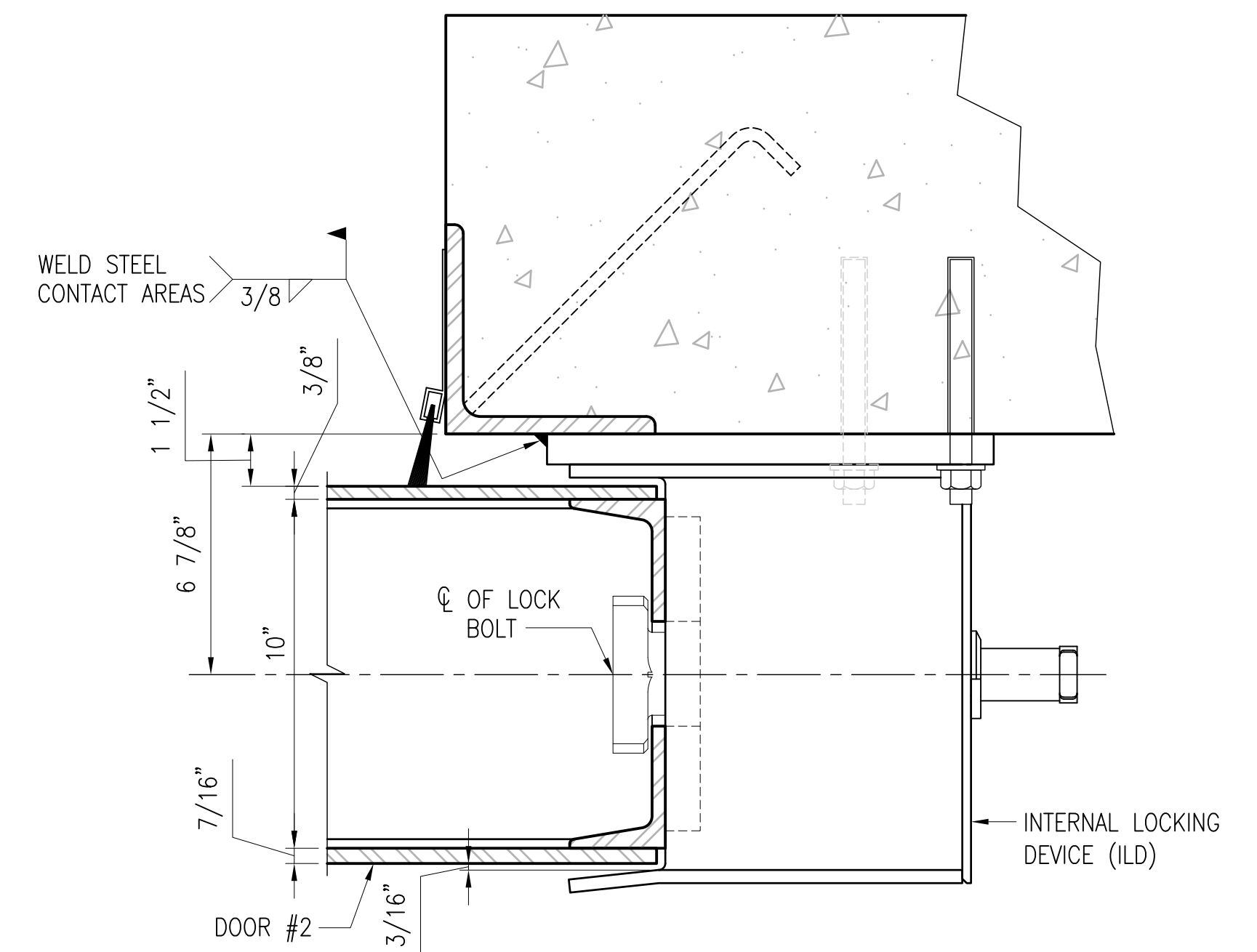
S-513



**SECTION**

SCALE: 6" = 1'-0"

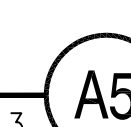
S-513



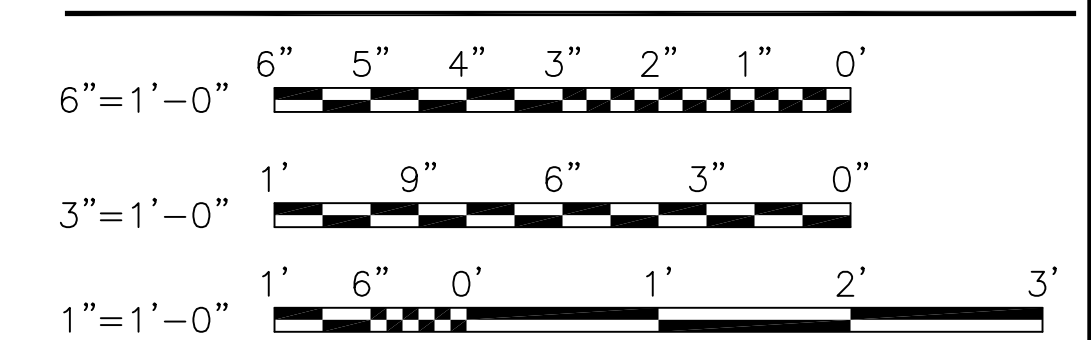
**SECTION ABOVE LOCKING ASSEMBLY**

SCALE: 3" = 1'-0"

S-513



**GRAPHIC SCALE:**



DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL STATION - NORFOLK, VIRGINIA  
NAVFACANT

FOR COMMANDER NAVFAC  
DES: DR  
CHK: GC  
NAVFAC MANAGER  
REVIEWED BY:

**TYPE C BOX MAGAZINE WITH LOADING PLATFORM**

OPTIONAL HIGH SECURITY HASP - ILD DETAILS

CODE ID. NO. 80091    SIZE D  
SCALE: AS NOTED

SPEC. NO.  
CONSTR. CONTR. NO.

NAVFAC DRAWING NO. 14005112  
SHEET 21 OF 31

**S-513(ALT)**

DRAWING REVISION: 15 JANUARY 2008

### INTERIOR ELECTRICAL LEGEND

- HID LIGHTING FIXTURE.
- FLUORESCENT LIGHTING FIXTURE.
- LIGHTING FIXTURE TYPE. SEE LIGHTING FIXTURE SCHEDULE ON SHEET E-101.
- SINGLE POLE SWITCH. 20A., 120/277V. LOWER CASE LETTER, WHEN USED, INDICATES FIXTURES CONTROLLED.
- DUPLEX CONVENIENCE RECEPTACLE. 20 A., 125 VAC.
- WEATHERPROOF DUPLEX CONVENIENCE RECEPTACLE WITH INTERNAL GROUND FAULT PROTECTION AND COVER THAT MAINTAINS WEATHERPROOF RATING WITH PLUG ATTACHED, 20 A., 125 VAC.
- JUNCTION BOX.
- MAGNETIC MOTOR CONTROLLER IN NEMA 4X ENCLOSURE.
- COMBINATION REVERSING STARTER.
- ELECTRICAL PANELBOARD (120/240 VOLT).
- SINGLE POINT GROUND BAR (SPGB). SEE DETAIL "D4" ON SHEET E-501.
- TRANSIENT VOLTAGE SURGE SUPPRESSOR.
- WATT-HOUR DEMAND METER.
- BRANCH CIRCUIT OR FEEDER WIRING IN RGS CONDUIT UDN. NO TICK MARKS INDICATE 2 #12 CONDUCTORS & 1 #12 GND. IN 1/2" RGS CONDUIT UDN. TICK MARKS, WHEN SHOWN, INDICATE NUMBER OF #12 CONDUCTORS IF OTHER THAN THREE; q > INDICATES GROUND. CONDUIT LARGER THAN 1/2" & WIRE LARGER THAN #12 SHALL BE AS INDICATED.
- HOMERUNS TO PANEL. PANEL & CIRCUIT DESIGNATIONS AS INDICATED.
- LIGHTNING PROTECTION AIR TERMINAL.
- DOOR PUSHBUTTON CONTROL. WP, WHEN USED, INDICATES WEATHERPROOF.
- DOOR MOTOR OPERATOR, 3/4 HORSEPOWER, 240 VOLT, 1 PHASE.
- LIMIT SWITCH.
- POWER CABLE REEL.
- BYPASS SWITCH.
- CONTACTOR.
- HEAT SENSOR EMBEDDED IN PAVEMENT.
- COLD SENSOR EMBEDDED IN PAVEMENT.
- HEAT TRACING POWER BOX.
- AUTOMATIC SNOW DETECTOR CONTROL PANEL.
- TEMPERATURE CONTROL PANEL.
- DRAIN PIPE HEAT TRACING CABLE.
- DOOR TRENCH HEAT TRACING CABLE.
- GROUND ELECTRODE CONDUCTOR.
- WORK NOTE SYMBOL.

### EXTERIOR ELECTRICAL LEGEND

- GROUND ROD - 3/4" X 10' COPPER GROUND ROD. GROUND ROD SHALL BE INSTALLED AT A MINIMUM OF 10' IN NATURAL GRADE.
- GROUND TEST WELL. SEE DETAIL "C1" ON SHEET E-501.
- GROUND CONDUCTOR, #2/0 BARE CU WITH EXOTHERMIC WELD OR APPROVED COMPRESSION CONNECTOR.

### ABBREVIATIONS

- A AMPERES
- AFF ABOVE FINISHED FLOOR
- AWG AMERICAN WIRE GAUGE
- C CONDUIT
- COND CONDUIT
- CL CENTERLINE
- CU COPPER
- DWG DRAWING
- FA FIRE ALARM
- FT FOOT
- GFI GROUND FAULT INTERRUPTER
- GND GROUND
- HID HIGH INTENSITY DISCHARGE
- HT HEIGHT
- IDS INTRUSION DETECTION SYSTEM
- J JUNCTION BOX
- LS LIMIT SWITCH
- MIN MINIMUM
- MTG MOUNTING
- NOSSA NAVAL ORDNANCE SAFETY AND SECURITY ACTIVITY
- NTS NOT TO SCALE
- PNL PANEL
- PVC POLYVINYL CHLORIDE
- RGS RIGID GALVANIZED STEEL
- SPD SURGE PROTECTIVE DEVICE
- SPGB SINGLE POINT GROUND BAR
- TEL TELEPHONE
- TVSS TRANSIENT VOLTAGE SURGE SUPPRESSOR
- TYP TYPICAL
- V VOLTS
- VAC VOLTS ALTERNATING CURRENT
- UDN UNLESS OTHERWISE NOTED
- W WIRE
- WP INDICATES WEATHERPROOF EQUIPMENT

### GENERAL NOTES

1. UNLESS OTHERWISE INDICATED, ALL ELECTRICAL WORK AND MATERIAL IS NEW AND SHALL BE PROVIDED BY THE CONTRACTOR.
2. IF HEAT TRACING IS INSTALLED, REFER TO SHEET E-801 FOR THE ADDITIONAL POWER CIRCUITS.
3. PROVIDE SURGE PROTECTION FOR ALL CONDUCTORS (ENTERING AND EXITING THE MAGAZINE) IN ACCORDANCE WITH NFPA 780, INCLUDING ANNEX K. CONNECT ALL SURGE PROTECTION GROUNDING CONDUCTORS TO THE SECONDARY GROUND RING.
4. IF THE MAGAZINE SPACE IS DETERMINED TO BE A HAZARDOUS (CLASSIFIED) LOCATION, THEN EXTENSIVE REDESIGN IS REQUIRED TO MEET NFPA 70, ARTICLE 599.
5. ALL CONDUIT ENTERING AND INSIDE OF THE MAGAZINE SHALL BE RGS CONDUIT.

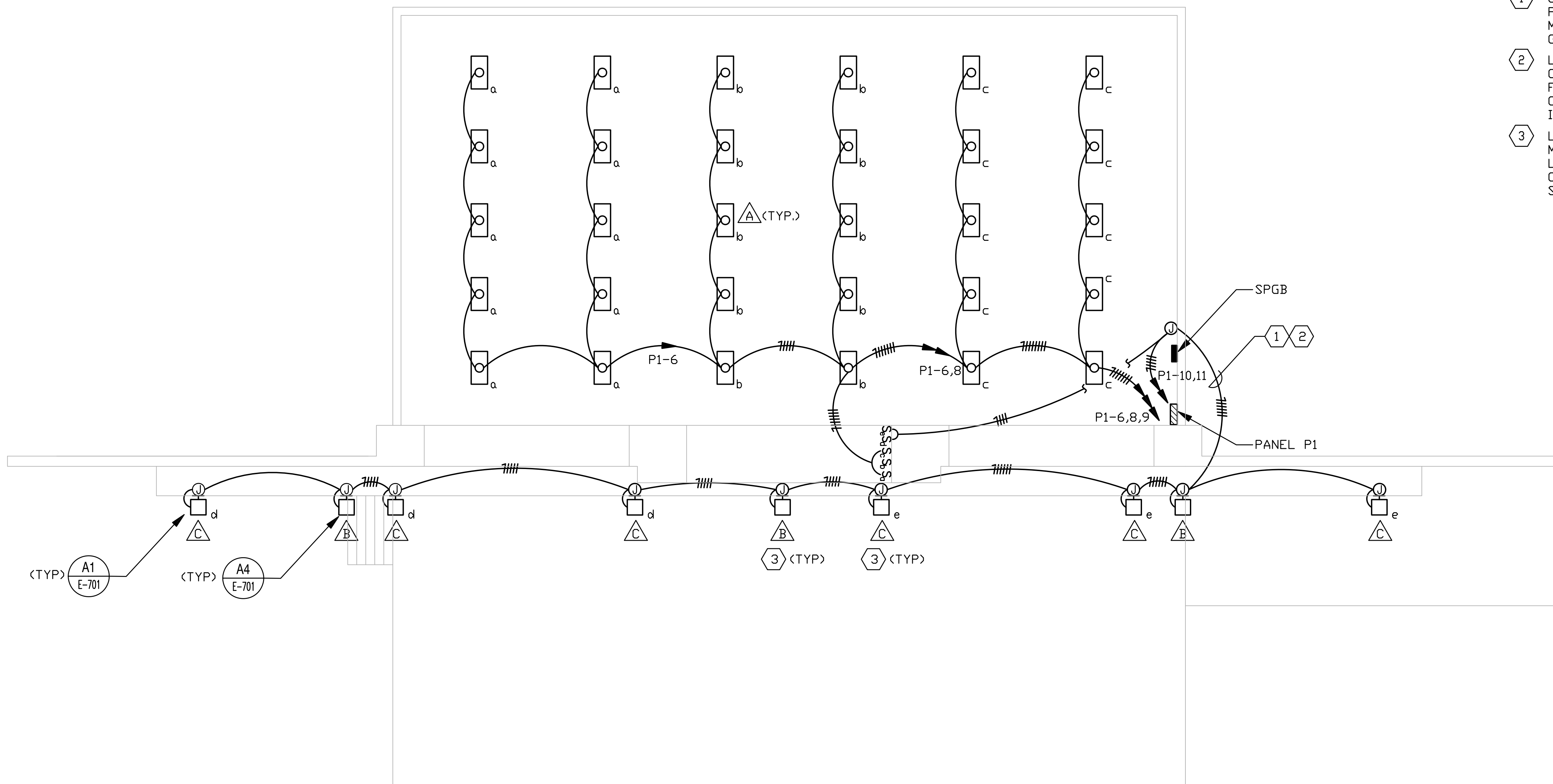
REVDATE: FILE NAME: \\nasarrk1634\NAVFAC\_YRKT\_16AA\NAVFAC\_YRKT\_16AA\CISE\Magazines\Box C FINALS\Final Drawings Box C BOX C WITH PLATFORM COMPL.dwg LAYOUT NAME: E-001 PLOTTED: Tuesday, December 14, 2010 - 4:43pm



APPROVED	SAT-TO
FOR COMMANDER NAVFAC	
DES	DR
CHK	GC
NAVFAC MANAGER	
REVIEWED BY	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL FACILITIES ENGINEERING COMMAND NAVAL STATION - NORFOLK, VIRGINIA NAVFACANT	
<b>TYPE C BOX MAGAZINE WITH LOADING PLATFORM</b> LEGENDS, ABBREVIATIONS AND GENERAL NOTES	

CODE ID. NO. 80091	SIZE D
SCALE: <b>AS NOTED</b>	
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. <b>14005113</b>	
SHEET <b>22</b> OF <b>31</b>	
<b>E-001</b>	

REVDATE: FILE NAME: \\nasarrk\k34\NAVFAC\RYKT\_16AA\NAVFAC\RYKT\_16AA\CISE\Magazines\Box C FINALS\Final Drawings Box C BOX C WITH PLATFORM COMPL.dwg LAYOUT NAME: E-101 PLOTTED: Tuesday, December 14, 2010 - 4:43pm



**NOTES**

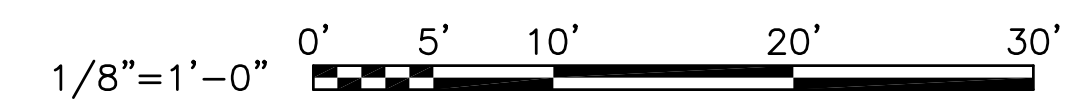
- 1 CONDUIT MUST ENTER VIA WALL NEAR SINGLE POINT GROUND BAR. AT POINT OF ENTRY INTO THE MAGAZINE, BOND CONDUIT TO SINGLE POINT GROUND BAR WITH #2/0 BARE CU.
- 2 LIGHTING TYPE "B" FIXTURES SHALL BE FED FROM CIRCUIT P1-10. LIGHTING FIXTURE TYPE "C" FIXTURES SHALL BE FED FROM CIRCUIT P1-11 AND CONTROLLED BY LIGHT SWITCHES "d" AND "e" AS INDICATED.
- 3 LIGHTING TYPE "B" AND "C" FIXTURES SHALL BE MOUNTED TO THE STRUCTURAL SUPPORT ANGLES LOCATED ON THE FRONT OF THE CANOPY. COORDINATE EXACT LOCATION OF STRUCTURAL SUPPORT ANGLES WITH THE STRUCTURAL DRAWINGS.

LIGHTING FIXTURE SCHEDULE					
FIXTURE SYMBOL	SKETCH NO. & TYPE	NUMBER AND TYPE OF LAMPS	VOLTAGE	MOUNTING	NOTES
△	DETAIL "A" SEE SHEET E-701	4-F32/T8	120	SURFACE CEILING MOUNT	1
△	NL-57, TYPE B SEE SHEET E-701	50W METAL HALIDE	120	WALL MOUNTED 14' AFG	2, 3, 4
△	XL-3 SEE SHEET E-701	75W METAL HALIDE	120	WALL MOUNTED 14' AFG	5

**LIGHTING FIXTURE SCHEDULE NOTES**

- 1. PROVIDE WITH LOW TEMP BALLAST.
- 2. PROVIDE WITH INTEGRAL PHOTOCELL CONTROL.
- 3. PROVIDE FULL CUT-OFF LUMINAIRE WITH FIXTURE.
- 4. SECURITY LIGHTING.
- 5. FLOOD LIGHTING.

**GRAPHIC SCALE**



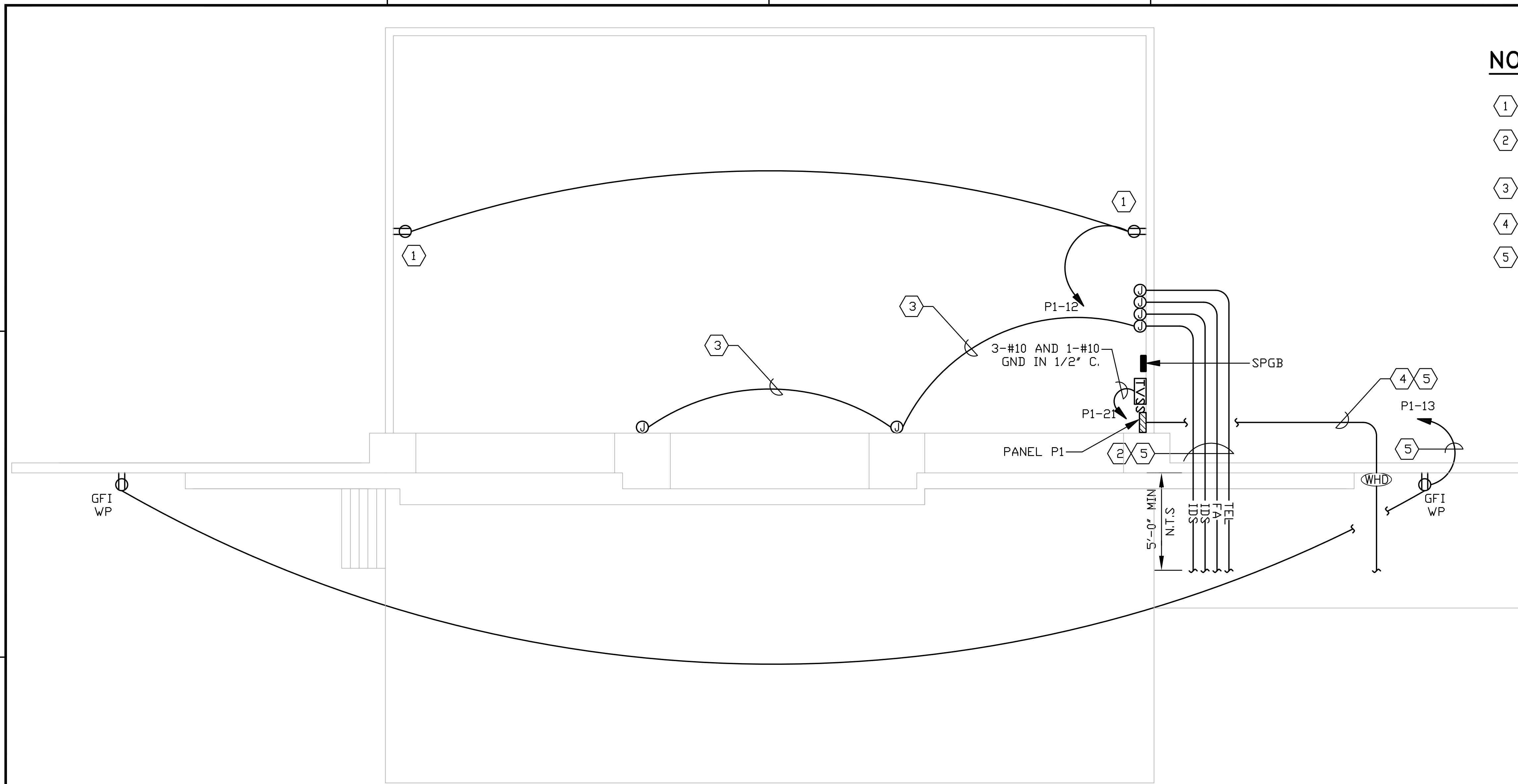
	DATE
	APPRO
	DESCRIPTION
	SYM
SEAL	
A/E LOGO	
SAT-TO	
APPROVED	
FOR COMMANDER NAVFAC	
DES	DR
CHK	GC
NAVFAC MANAGER	
REVIEWED BY	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL STATION - NORFOLK, VIRGINIA NAVFAC	
<b>TYPE C BOX MAGAZINE WITH LOADING PLATFORM</b>	
LIGHTING PLAN	
CODE ID. NO. 80091    SIZE    D	
SCALE: AS NOTED	
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. 14005114	
SHEET 23 OF 31	
<b>E-101</b>	
DRAWFORM REVISION: 15 JANUARY 2008	



REVDATE: FILE NAME: \\nasam\k1634\NAVFAC\YRKT\_16AA\NAVFAC\_YRKT\_16AA\CISE\Magazines\Box C BOX C WITH PLATFORM COMPL\dwg LAYOUT NAME: E-102 PLOTTED: Tuesday, December 14, 2010 - 4:44pm

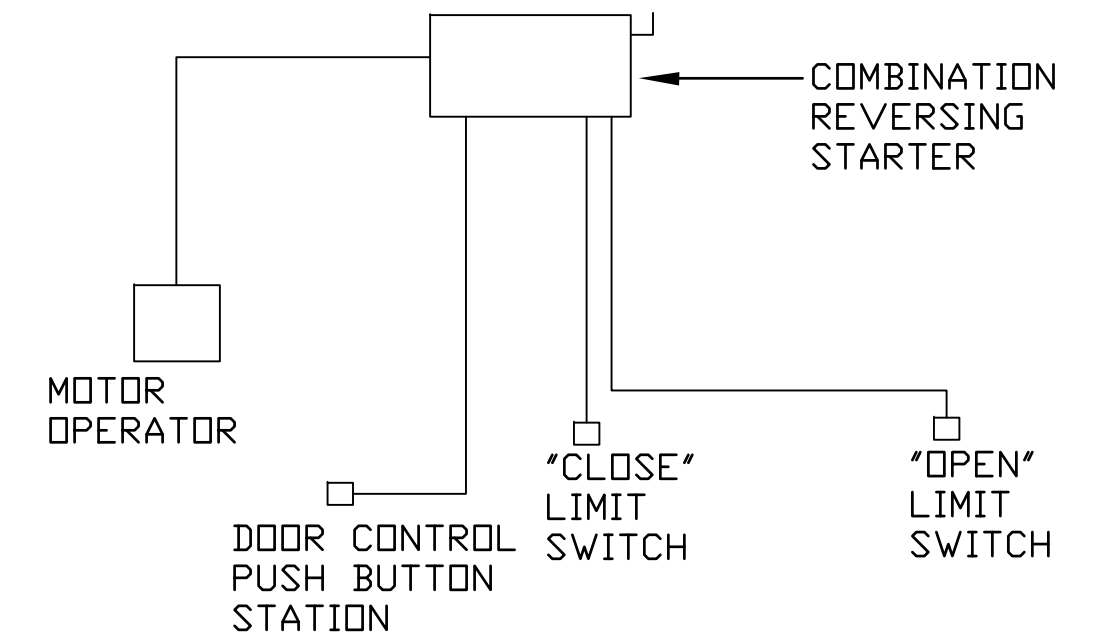
**NOTES**

- ① MOUNT RECEPTACLES AT 48" AFF OR AFG.
- ② 2" EMPTY CONDUITS FOR INTRUSION DETECTION SYSTEM (IDS), FIRE ALARM (FA) AND TELEPHONE (TEL).
- ③ 2" EMPTY CONDUIT FOR INTRUSION DETECTION SYSTEM (IDS).
- ④ 4" CONDUIT FOR POWER FEEDER TO PANELBOARD "P1".
- ⑤ CONDUITS MUST ENTER VIA WALL NEAR SINGLE POINT GROUND BAR. AT POINT OF ENTRY INTO THE MAGAZINE, BOND EACH CONDUIT TO SINGLE POINT GROUND BAR WITH #2/0 BARE CU.



**POWER PLAN**

SCALE : 1/8" = 1'-0"



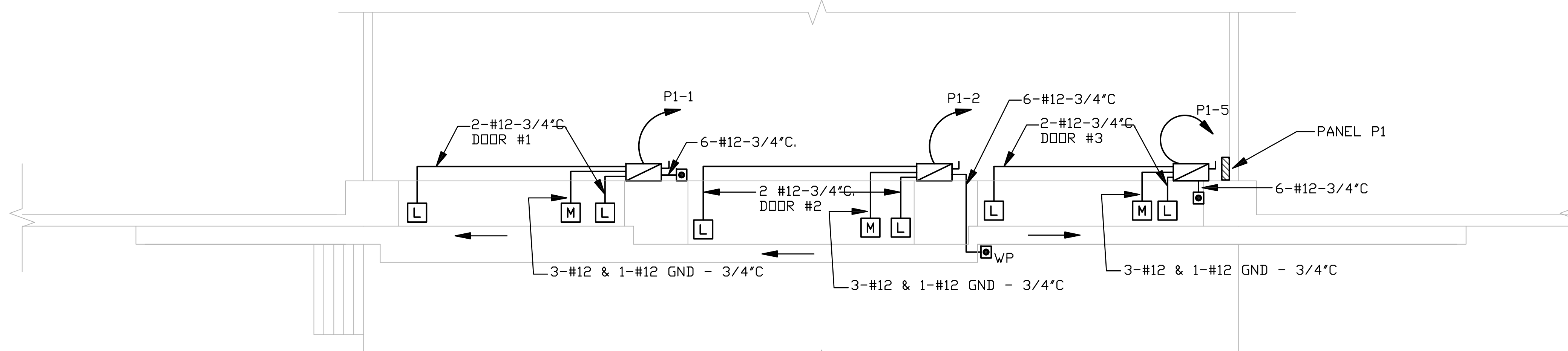
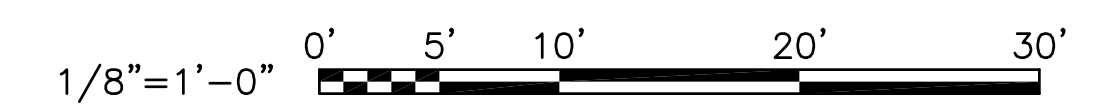
**SLIDING DOOR WIRING INSTALLATION DIAGRAM**

TYPICAL FOR DOOR #1, DOOR #2, AND DOOR #3

**SLIDING DOOR WIRING INSTALLATION DIAGRAM NOTES**

1. DESIGN USES 240V SINGLE PHASE POWER FOR THE MOTOR.
2. INCLUDE OPEN AND CLOSE LIMIT SWITCHES TO TURN OFF MOTOR IN THE MOTOR CONTROL CIRCUIT.
3. DOOR CONTROL PUSHBUTTON STATION SHALL BE MOUNTED 48" ABOVE PLATFORM. ROUTE CIRCUIT CONCEALED OUTSIDE OF THE MAGAZINE BACK TO THE COMBINATION REVERSING STARTER VIA THE SERVICE ENTRANCE PENETRATIONS.
4. THE EXACT LOCATION OF DOOR OPERATOR AND LIMIT SWITCHES SHALL BE IN ACCORDANCE WITH DOOR MANUFACTURER'S REQUIREMENTS.

**GRAPHIC SCALE**

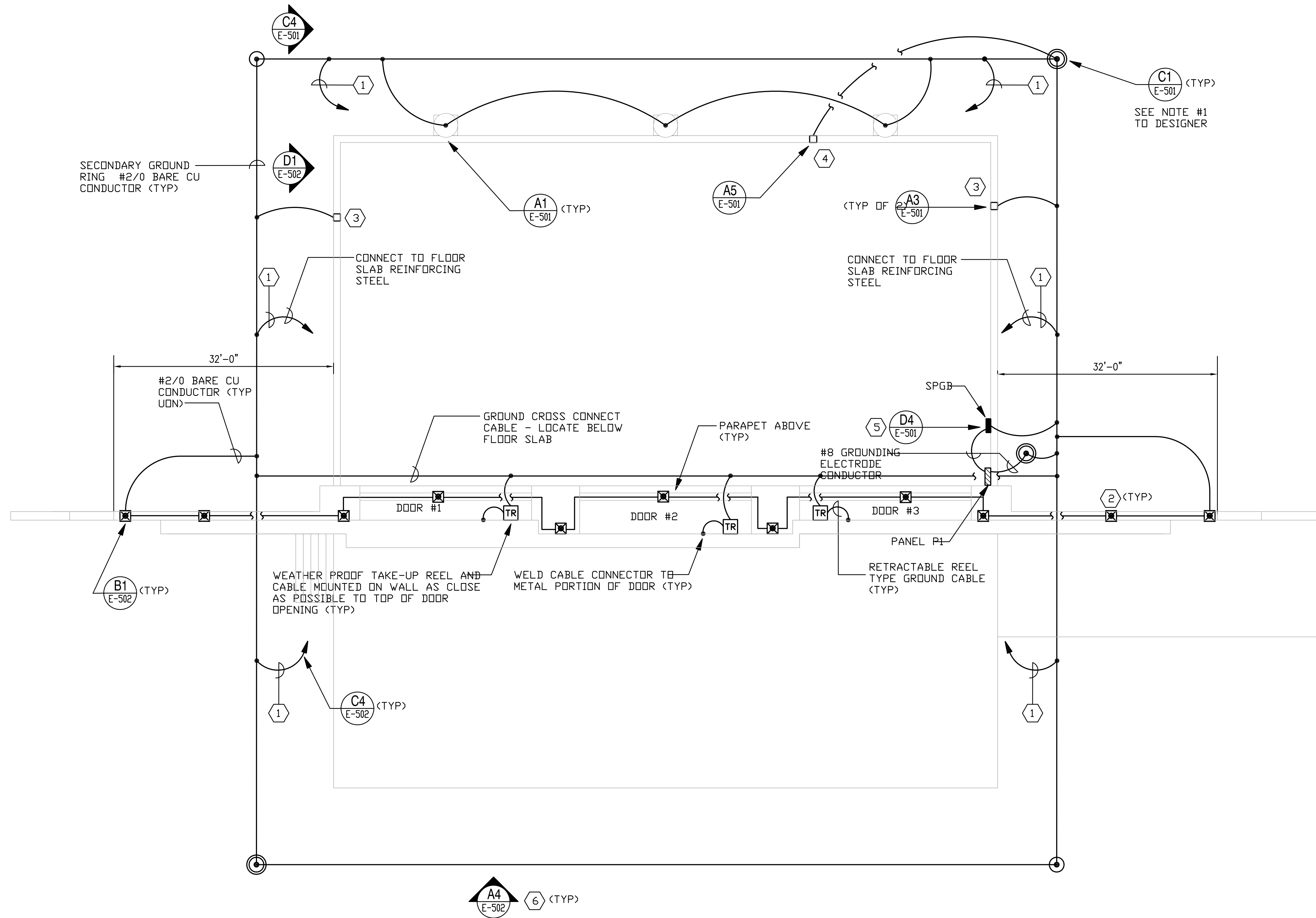


**PARTIAL POWER PLAN - DOOR CONTROLS**

SCALE : 1/8" = 1'-0"

DATE	APPR.
DESCRIPTION	
SYM	
SEAL	
A/E LOGS	
SAT-TO	
APPROVED	
FOR COMMANDER NAVFAC	
DES	DR
CHK	GC
NAVFAC MANAGER	
REVIEWED BY	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL FACILITIES ENGINEERING COMMAND NAVAL STATION - NORFOLK, VIRGINIA NAVFACANT	
<b>TYPE C BOX MAGAZINE WITH LOADING PLATFORM</b>	
POWER PLANS	
CODE ID. NO. 80091	SIZE D
SCALE:	AS NOTED
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	14005115
SHEET	24 OF 31
<b>E-102</b>	
DRAWING REVISION: 15 JANUARY 2008	

REVDATE: FILE NAME: \\nasan\k434\NAVFAC\_YRKT\_16AA\NAVFAC\_YRKT\_16AA\CISE\Magazines\Box C BOX C WITH PLATFORM COMPL.dwg LAYOUT NAME: E-103 PLOTTED: Tuesday, December 14, 2010 - 4:44pm



**NOTES**

- 1 ALL REINFORCING STEEL IN BUILDING SHALL BE BONDED WITH #2/0 BARE COPPER CONDUCTORS TO EARTH ELECTRODE SYSTEM (SECONDARY GROUND RING). SEE DETAILS ON SHEET E-502.
- 2 LIGHTNING PROTECTION POINTS SHALL BE LOCATED AS SHOWN ON THE PLAN. THE MAXIMUM SPACING SHALL BE 16'-0".
- 3 PROVIDE STATIC GROUND INSERT, NAMEPLATE AND REMOVABLE TAG ON EACH SIDE OF THE MAGAZINE AS INDICATED.
- 4 PROVIDE ORDNANCE GROUND INSERT WITH #2/0 BARE CU CONDUCTOR IN 3/4" PVC CONDUIT TO GROUND TEST WELL AS INDICATED. PROVIDE A NAMEPLATE AND REMOVABLE TAG.
- 5 SEE DETAIL. PROVIDE A GROUND BAR NEXT TO THE SERVICE ENTRANCE PENETRATIONS AND USE AS THE SINGLE POINT GROUND LOCATION FOR INCOMING SERVICES.
- 6 PROVIDE BONDING CONNECTIONS ACROSS CONSTRUCTION JOINTS WHEN THEY ARE USED.

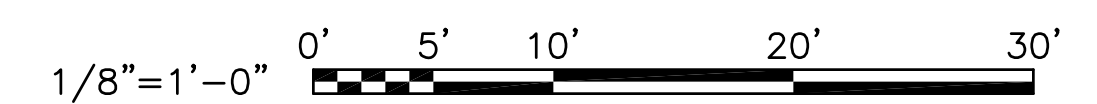
**NOTES TO DESIGNER**



1. DETERMINE THE PRECISE TEST WELL LOCATIONS DURING THE PROJECT DESIGN AND CONSIDER PERIODIC ACCESS TO THE TEST WELLS GIVEN THE INSTALLATION LOCATION.

**GROUNDING PLAN**

SCALE : 1/8" = 1'-0"

**GRAPHIC SCALE**



APPROVED	DATE	DESCRIPTION
		
		
FOR COMMANDER NAVFAC DES:                   DR: CHK:                   GC: NAVFAC MANAGER REVIEWED BY:		
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL STATION - NORFOLK, VIRGINIA NAVFACANT		
<b>TYPE C BOX MAGAZINE WITH LOADING PLATFORM</b> GROUNDING PLAN		
CODE ID. NO. 80091	SIZE D	
SCALE: AS NOTED		
SPEC. NO.		
CONSTR. CONTR. NO.		
NAVFAC DRAWING NO. 14005116		
SHEET 25 OF 31		
<b>E-103</b>		
DRAWING REVISION: 15 JANUARY 2008		

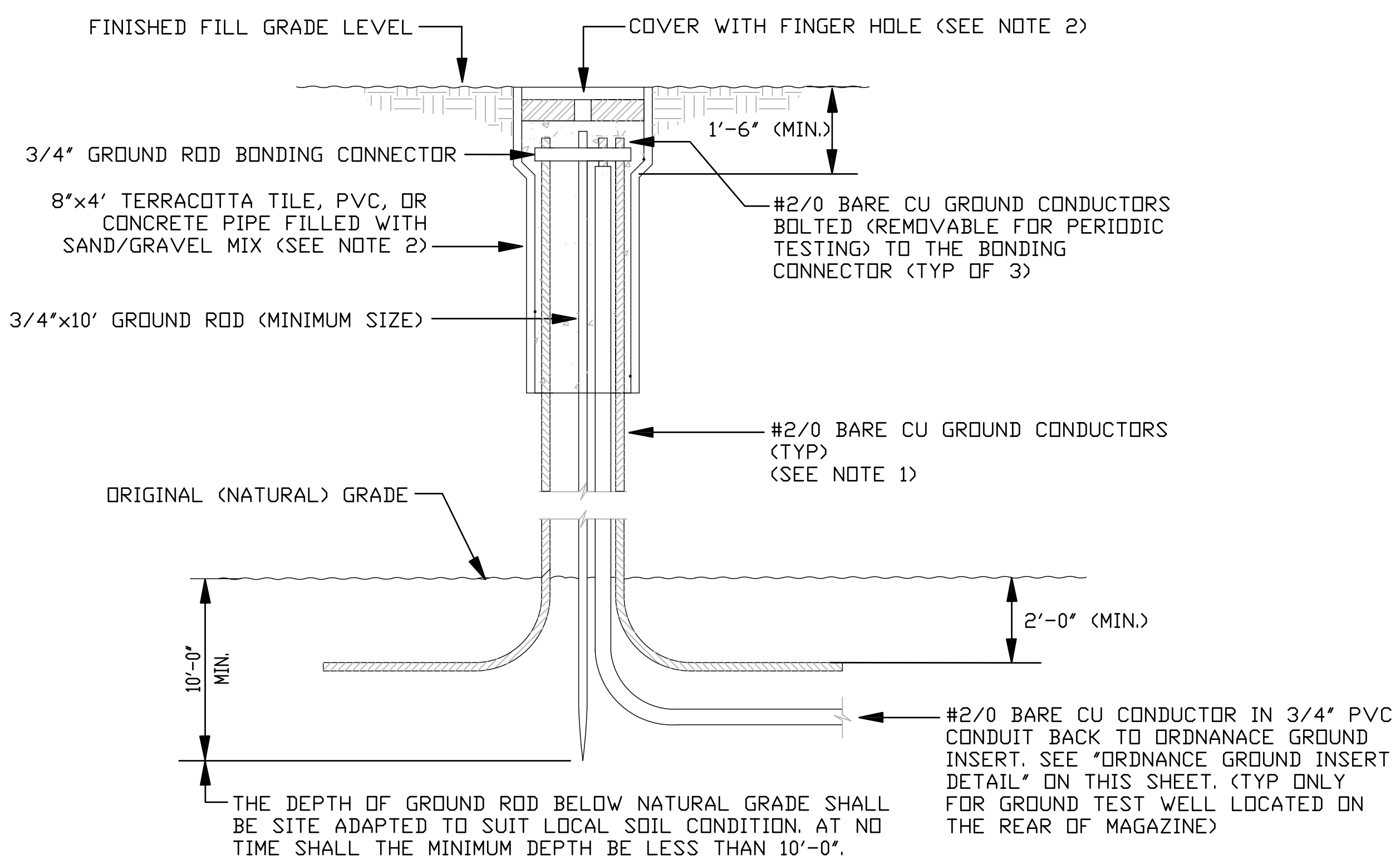
1

2

3

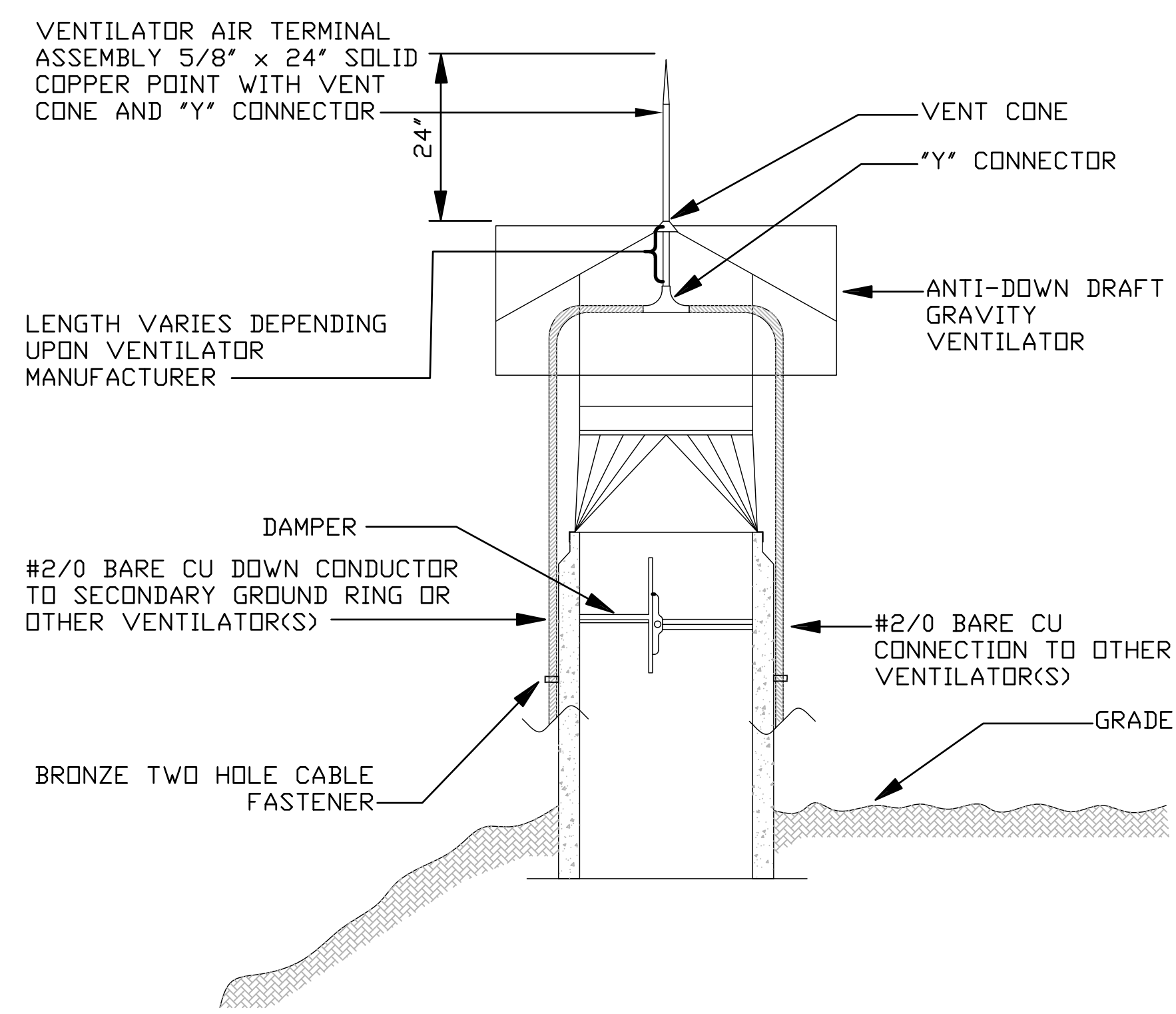
4

5

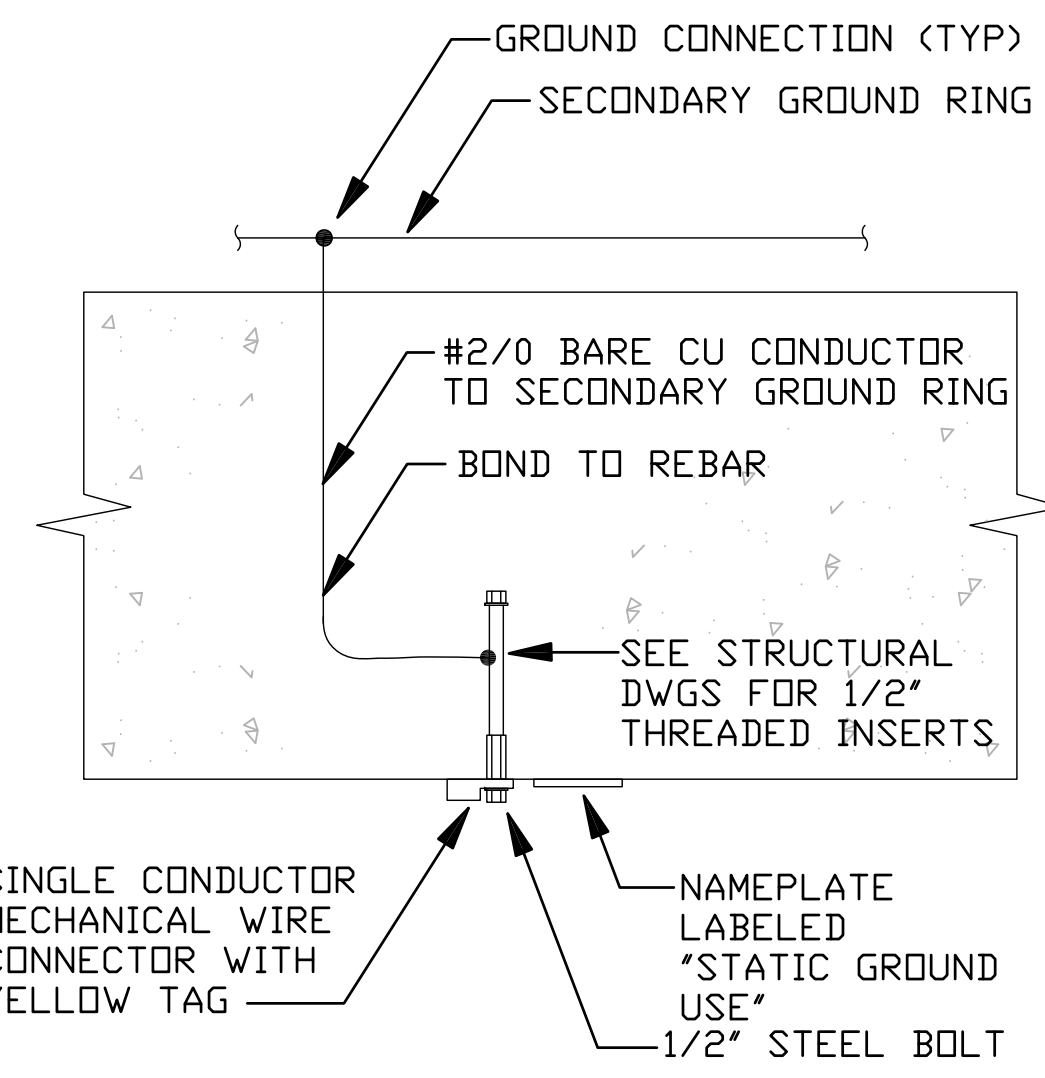


**GROUND TEST WELL  
INSTALLATION IN EARTH FILL** (C1)  
N.T.S. E-103

NOTE 1: MAINTAIN THE GROUND CONDUCTORS ISOLATED FROM THE GROUND ROD UNTIL THE BOND CONNECTION AT THE TOP.  
NOTE 2: PROVIDE 'TRAFFIC RATED' TEST WELL AND COVER FOR PAVED AREAS.

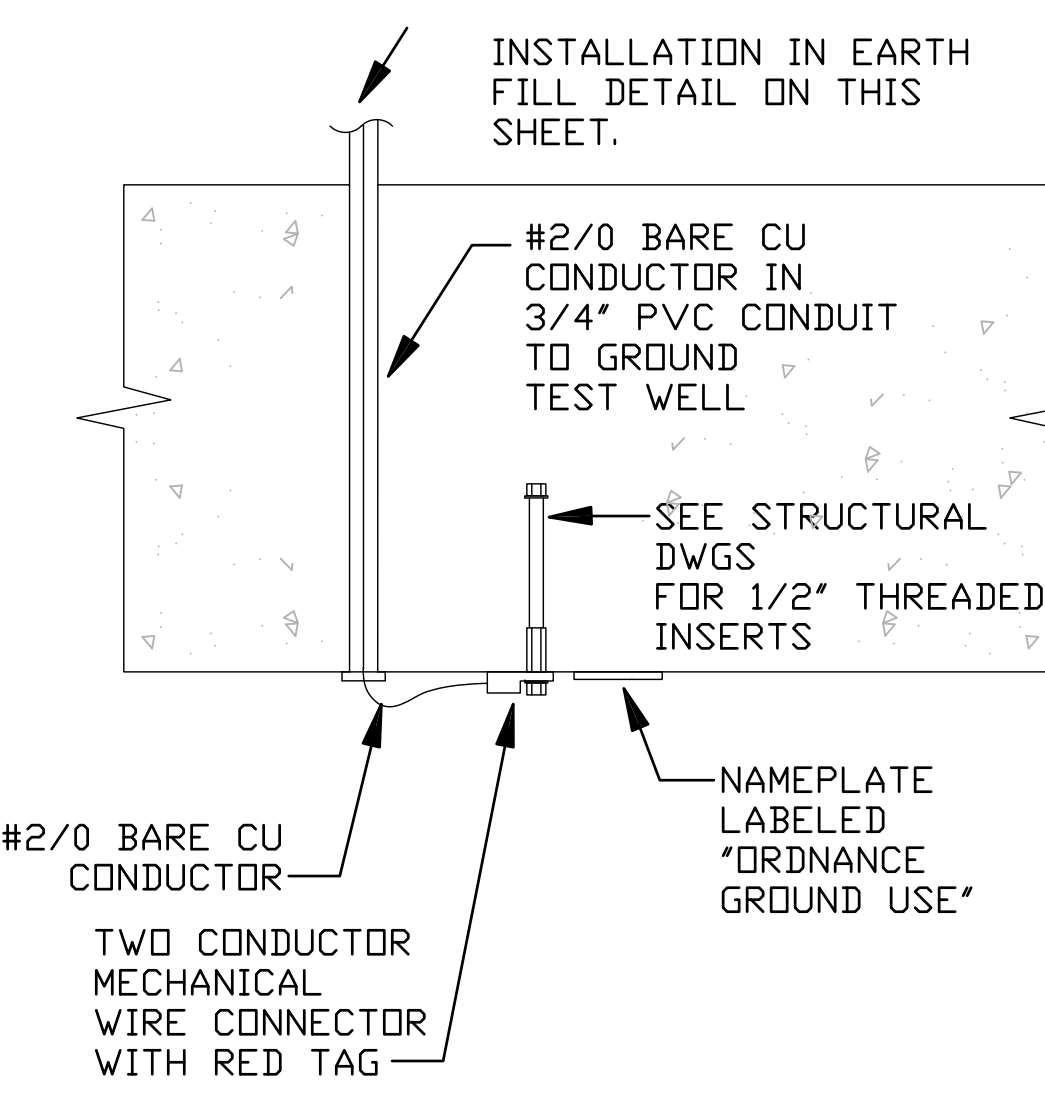


**TYPICAL VENTILATOR DETAIL** (A1)  
N.T.S. E-103



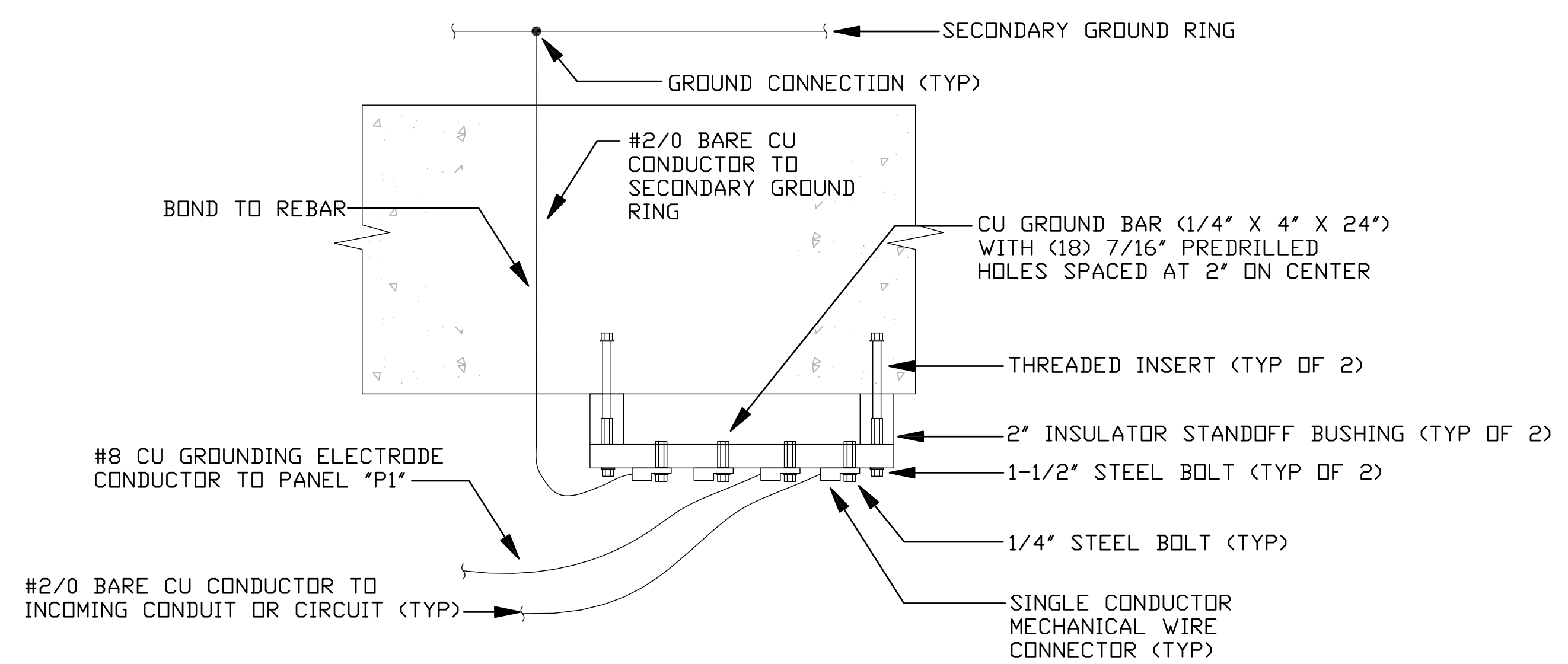
**STATIC GROUND INSERT DETAIL** (A3)  
N.T.S. E-103

**STATIC GROUND INSERT DETAIL NOTES:**  
1. PROVIDE A REMOVABLE YELLOW MELAMINE PLASTIC TAG THAT ATTACHES TO THE STATIC GROUND INSERT. THE TAG SHALL INCLUDE THE FOLLOWING INFORMATION:  
\*NOT IN SERVICE. NO MAINTENANCE REQUIRED.  
INSTALLATION MEETS STATIC/FACILITY GROUND REQUIREMENT PER NAVSEA OP-5. ACTIVITY SHALL PERFORM TESTING PER NAVSEA OP-5 AND ENACT MAINTENANCE SCHEDULE WHEN THE STATIC/FACILITY GROUND INSERT IS PLACED IN SERVICE.  
RETAIN THIS TAG TO REATTACH WHEN REMOVED FROM SERVICE."

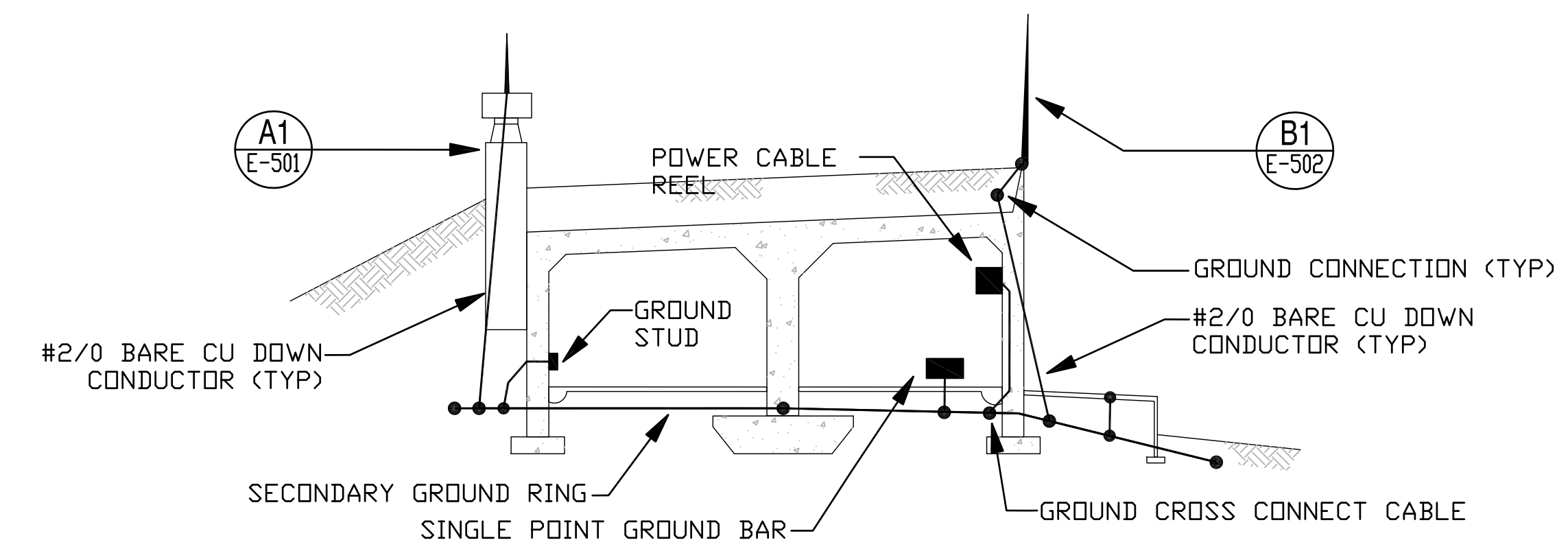


**ORDNANCE GROUND INSERT DETAIL** (A5)  
N.T.S. E-103

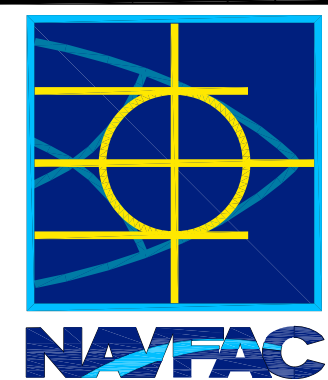
**ORDNANCE GROUND INSERT DETAIL NOTES:**  
1. PROVIDE A REMOVABLE RED MELAMINE PLASTIC TAG THAT ATTACHES TO THE ORDNANCE GROUND INSERT. THE TAG SHALL INCLUDE THE FOLLOWING INFORMATION:  
\*NOT IN SERVICE. NO MAINTENANCE REQUIRED.  
INSTALLATION MEETS ORDNANCE GROUND REQUIREMENT PER NAVSEA OP-5. ACTIVITY SHALL PERFORM TESTING PER NAVSEA OP-5 AND ENACT MAINTENANCE SCHEDULE WHEN THE ORDNANCE GROUND INSERT IS PLACED IN SERVICE.  
RETAIN THIS TAG TO REATTACH WHEN REMOVED FROM SERVICE."  
2. MAINTAIN THREADED INSERT ISOLATION. DO NOT ALLOW THE THREADED INSERT TO TOUCH REBAR OR OTHER METALLIC OBJECTS IN THE WALL.



**SINGLE POINT GROUND BAR DETAIL** (D4)  
N.T.S. E-103

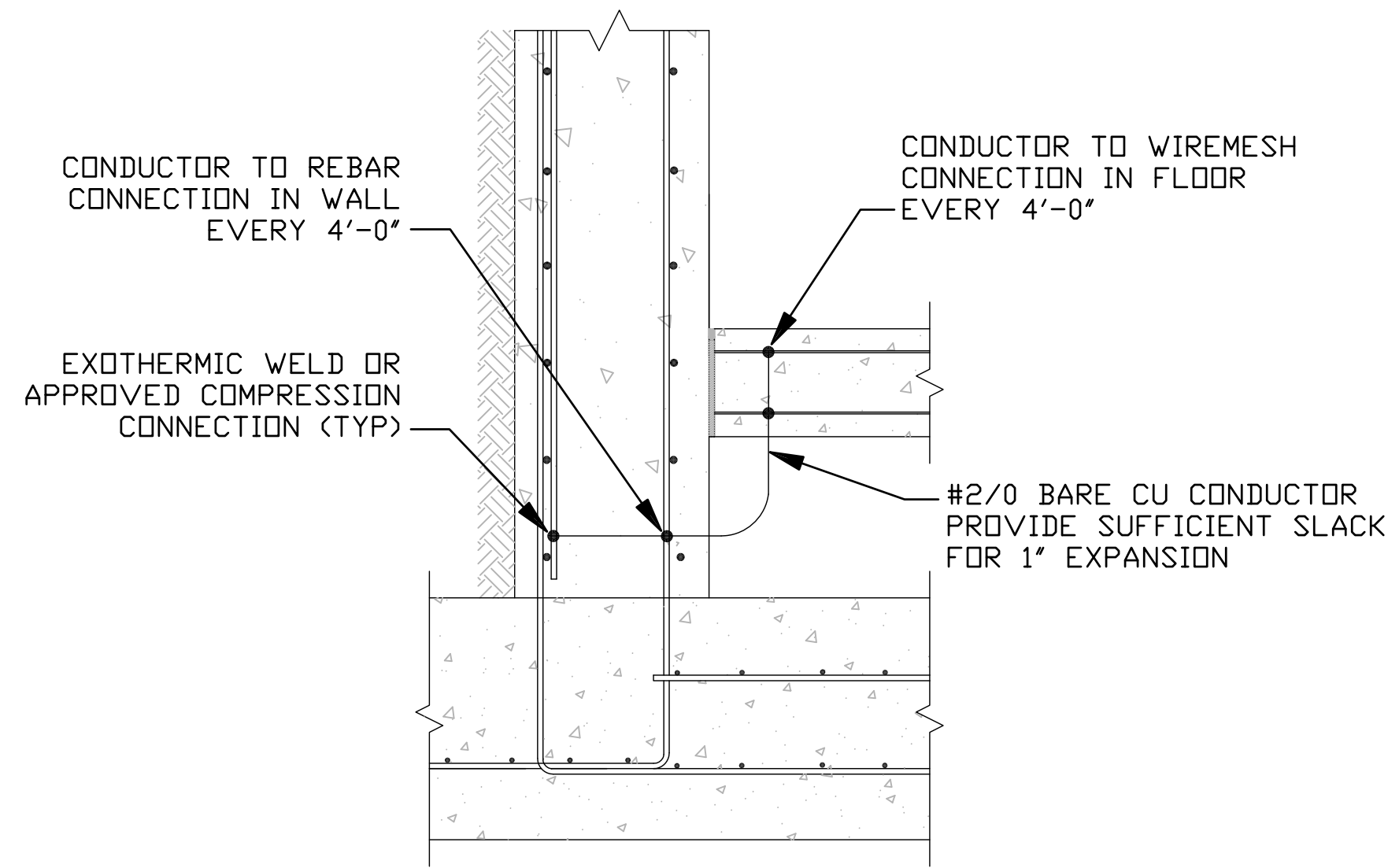


**GROUNDING SECTION DETAIL** (C4)  
N.T.S. E-103

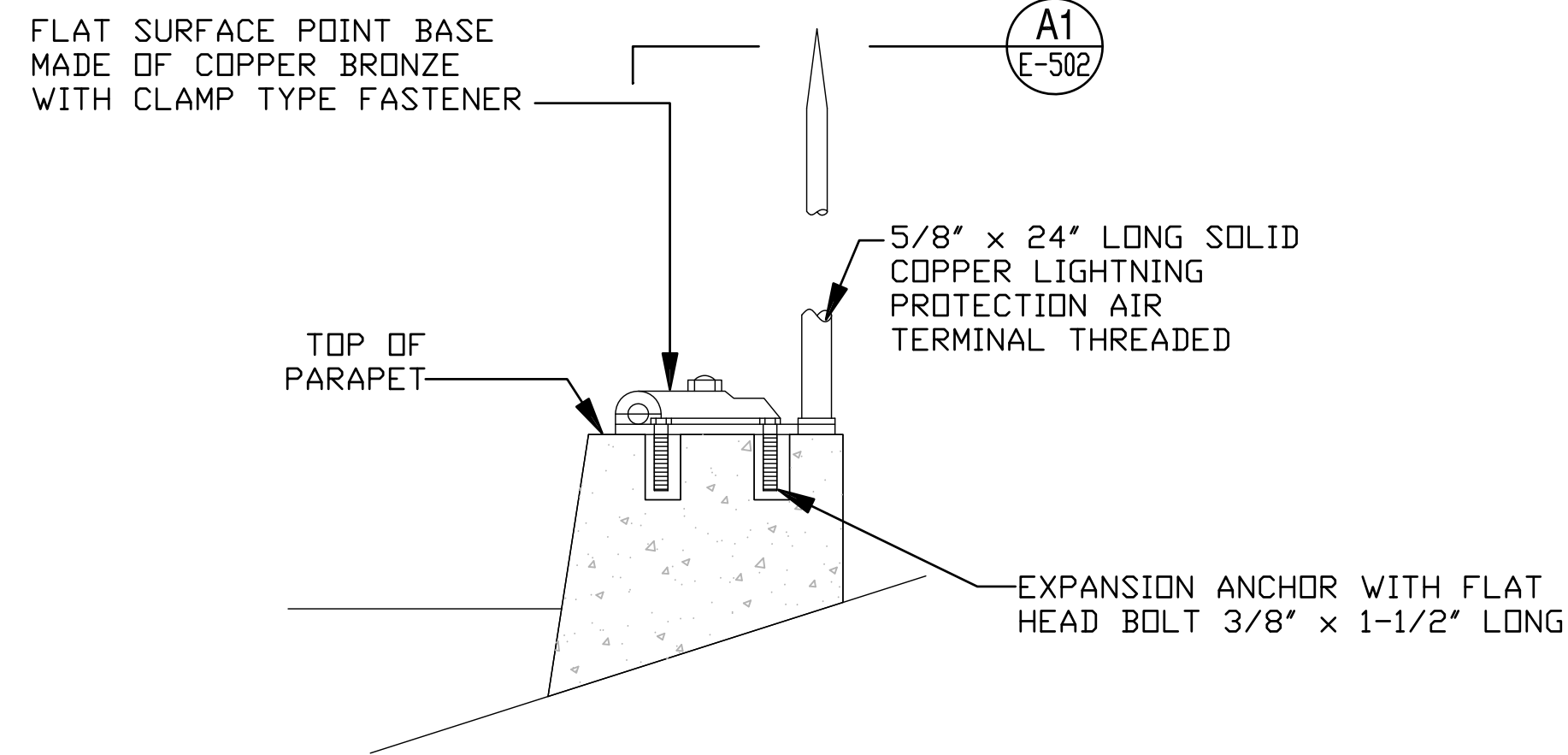
DATE	APPR.
SYN	DESCRIPTION
	
<b>TYPE C BOX MAGAZINE WITH LOADING PLATFORM</b> DETAILS	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL STATION - NORFOLK, VIRGINIA NAVFACANT	
CODE ID. NO. 80091	SIZE D
SCALE: AS NOTED	
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. 14005117	
SHEET 26 OF 31	
E-501	
DRAWING REVISION: 15 JANUARY 2008	

REVDATE: FILE NAME: \\nastrm1k634\NAVFAC\YRKT\_16AA\NAVFAC\YRKT\_16AA\CISE\Magazines\Box C FINALS\Final Drawings Box C BOX C WITH PLATFORM COMPL.dwg LAYOUT NAME: E-501 - 4:44pm PLOTTED: Tuesday, December 14, 2010 - 4:44pm

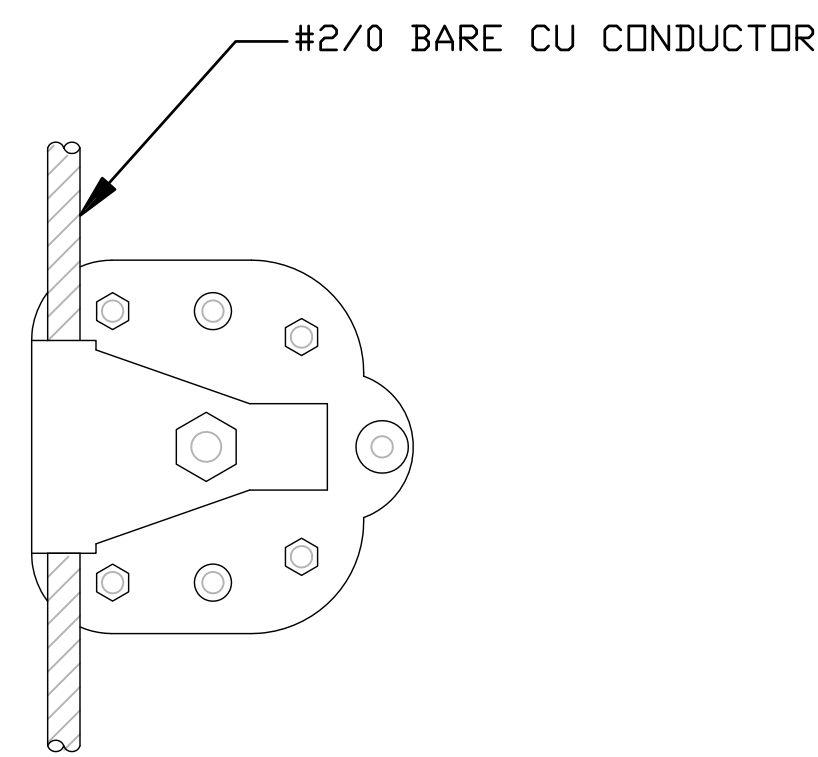
REVDATE: FILE NAME: \\nasanmk634\NAVFAC\_YRKT\_16AA\NAVFAC\_YRKT\_16AA\CISE\Magazines\Box C FINALS\Final Drawings Box C BOX C WITH PLATFORM COMPL.dwg LAYOUT NAME: E-502 PLOTTED: Tuesday, December 14, 2010 - 4:45pm



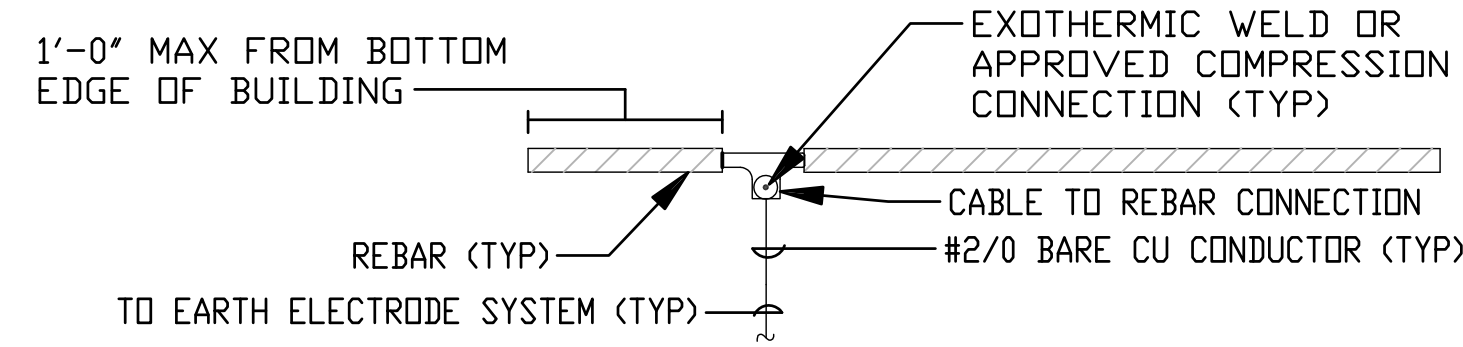
**FLOOR TO WALL CONNECTION** (D1)  
N.T.S E-103



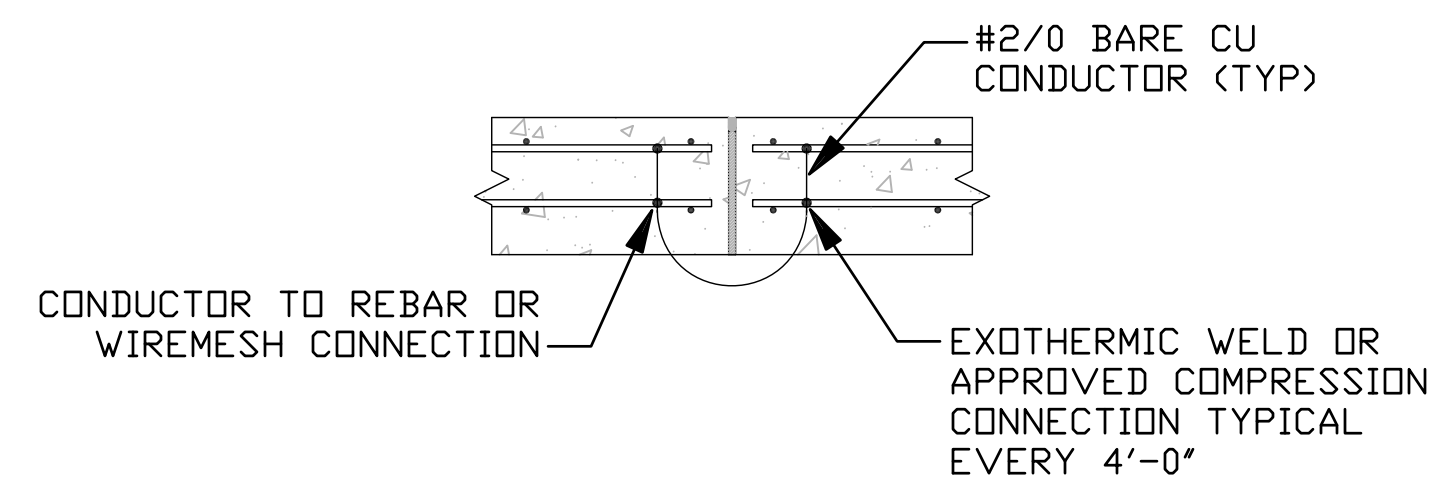
**MOUNTING DETAIL** (B1)  
N.T.S E-103



**CABLE CONNECTION DETAIL** (A1)  
N.T.S E-502



**GROUNDING REINFORCING STEEL** (C4)  
N.T.S E-103



**TYPICAL BOND CONNECTION AT EACH CONSTRUCTION JOINT** (A4)  
N.T.S E-103



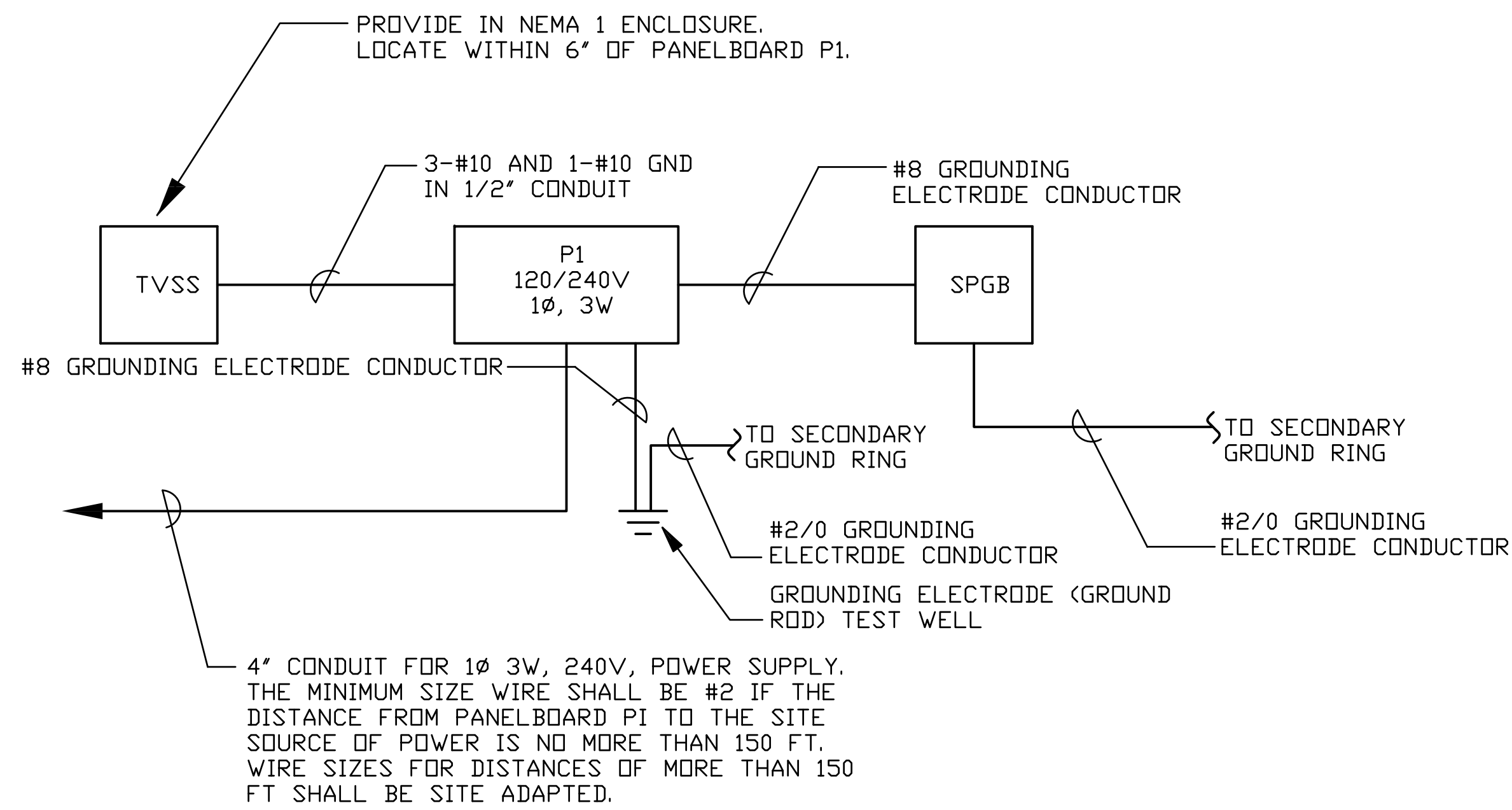
DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL STATION - NORFOLK, VIRGINIA  
NAVFAC

TYPE C BOX MAGAZINE WITH LOADING PLATFORM

CODE ID. NO. 80091	SIZE D
SCALE: AS NOTED	
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. 14005118	
SHEET 27 OF 31	
E-502	

DRAWING REVISION: 15 JANUARY 2008

REVDATE: FILE NAME: \\nasanmk634\NAVFAC\_YRKT\_16AA\NAVFAC\_YRKT\_16AA\CISE\Magazines\08Box\_Magazines - Updated 2010\BOX C\_FINALS\Final Drawings Box C BOX C WITH PLATFORM COMPL.dwg LAYOUT NAME: E-601 PLOTTED: Tuesday, December 14, 2010 - 4:45pm



### POWER RISER DIAGRAM

PANELBOARD "P1" SCHEDULE													
100A, 120/240 V., 1 PHASE, 3 WIRE, 10 KAIC MINIMUM, SURFACE MOUNT													
LOAD SERVED	LOAD (AMPS)		BKR. TRIP	WIRE SIZE	CKT. NO.	PHASE		CKT. NO.	WIRE SIZE	BKR. TRIP	LOAD (AMPS)		LOAD SERVED
	A	B				A	B				A	B	
DOOR #1	3		20	12	1	~	~	2	12	20	3		DOOR #2
		3				~	~					3	
DOOR #3	3		20	12	5	~	~	6	12	20	11		MAGAZINE LIGHTING
		3				~	~	8	12	20	11		MAGAZINE LIGHTING
MAGAZINE LIGHTING	11		20	12	9	~	~	10	12	20	4		SECURITY LIGHTING
FLOOD LIGHTING		9	20	12	11	~	~	12	12	20		1	RECEPTACLES
RECEPTACLES	1		20	12	13	~	~	14	12	20	10		DOOR #2 HEAT TRACING *
* DOOR #1 HEAT TRACING		10	20	12	15	~	~	16	12	20		10	DOOR #3 HEAT TRACING *
* DRAIN PIPE HEAT TRACING	8		20	12	17	~	~	18	12	20		8	DRAIN PIPE HEAT TRACING *
* DRAIN PIPE HEAT TRACING		8	20	12	19	~	~	20	12	20			SPARE
TVSS	0		30	10	21	~	~	22		20			SPARE
SPARE			30		23	~	~	24		20			SPARE
TOTAL	26	33									36	25	TOTAL
TOTAL CONNECTED AMPS A: 62 B: 58													

### NOTES

1. PROVIDE POWER FROM A DEDICATED SINGLE PHASE TRANSFORMER RATED FOR 120/240V SECONDARY.
2. PROVIDE LIGHTNING ARRESTERS IN THE SINGLE PHASE TRANSFORMER.
3. THE DOOR AND DRAIN PIPE HEAT TRACING CIRCUITS ONLY APPLY IF HEAT TRACING IS INSTALLED. SEE SHEET E-801.
4. ASTERISK INDICATES THAT THE BREAKERS ARE SPARE IF HEAT TRACING IS NOT PROVIDED.



DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL STATION - NORFOLK, VIRGINIA  
NAVFACANT

TYPE C BOX MAGAZINE WITH LOADING PLATFORM  
POWER RISER DIAGRAM AND PANELBOARD SCHEDULE

CODE ID. NO. 80091 SIZE D  
SCALE: AS NOTED

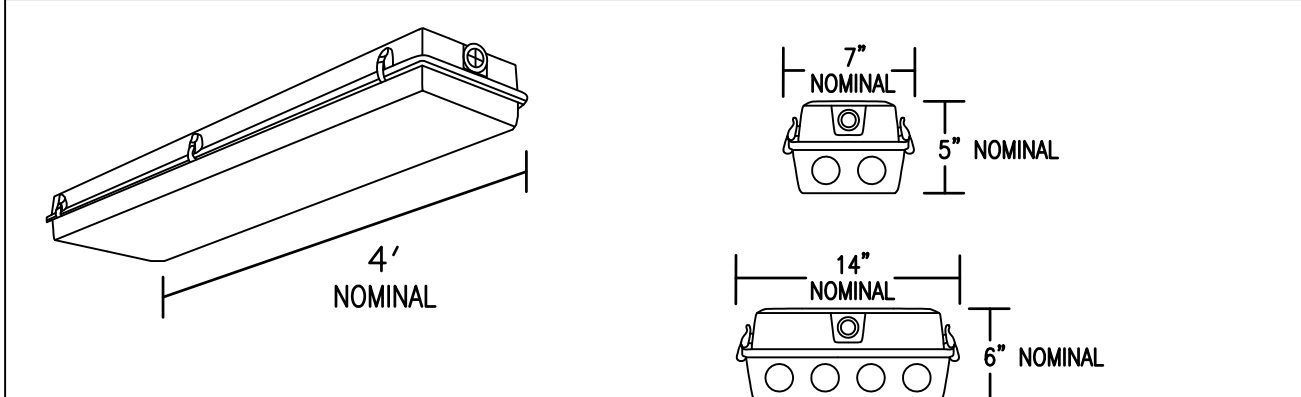
SPEC. NO.  
CONSTR. CONTR. NO.

NAVFAC DRAWING NO. 14005119  
SHEET 28 OF 31  
E-601

DATE  
DESCRIPTION  
SYM  
APPR

APPROVED FOR COMMANDER NAVFAC  
DES DR  
CHK GC  
NAVFAC MANAGER  
REVIEWED BY

DATE  
DESCRIPTION  
SYM  
APPR



**LUMINAIRE REQUIREMENTS:**

- HOUSING – ONE-PIECE, IMPACT-RESISTANT, FIBERGLASS REINFORCED POLYESTER WITH ENCLOSED COLD-ROLLED STEEL WIREWAY.
- FINISH – STEEL REFLECTOR WITH MULTI-STAGE PHOSPHATE BONDING TREATMENT FINISHED WITH HIGH REFLECTANCE (MINIMUM 85%), BAKED WHITE ENAMEL FINISH.
- LENS – 100% CLEAR ACRYLIC/DR OPTICAL DIFFUSER. STIPPLED INTERIOR SURFACES AND SMOOTH EXTERIOR. CLOSED CELL NEOPRENE GASKET WITH STAINLESS STEEL CAM ACTION LATCHES TO SECURE LENS TO HOUSING.
- LAMPS – LINEAR FLUORESCENT T8, TYPICALLY WITH WATTAGES AS INDICATED. SEE LIGHTING FIXTURE SCHEDULE.
- BALLAST – CLASS P, THERMALLY-PROTECTED, HIGH POWER FACTOR ( $\geq .95$ ), ELECTRONIC TYPE WITH SOUND RATING A. SEE SPECIFICATION OR LIGHTING FIXTURE SCHEDULE FOR BALLAST OPTIONS AND SPECIFICS.
- CERTIFICATION – UL LISTED AND LABELED. SUITABLE FOR DAMP OR WET LOCATION AS DESIGNATED IN LIGHTING FIXTURE SCHEDULE.
- PHOTOMETRICS – MINIMUM VALUE OF COEFFICIENT OF UTILIZATION (CU) AND EFFICIENCY, GIVEN INTERIOR CAVITY REFLECTANCES OF 80-50-20:

2 LAMP (F32/T8)

RCR	CU
1	78
2	67
3	58
4	51

EFFICIENCY – 76%

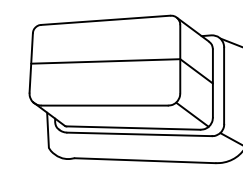
4 LAMP (F32/T8)

RCR	CU
1	88
2	76
3	67
4	59

EFFICIENCY – 85%

FIBERGLASS HOUSING DAMP/WET LOCATION FLUORESCENT

REVISED: DECEMBER 2009 LIGHTING PLATE: DETAIL "A"

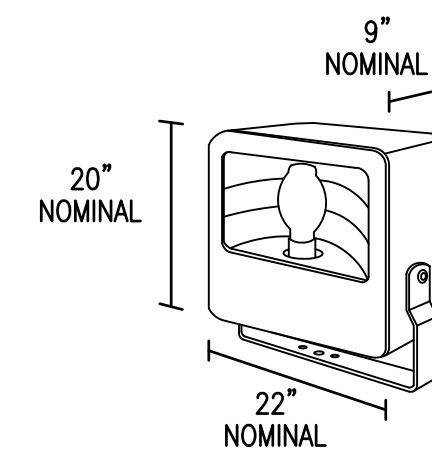


**LUMINAIRE REQUIREMENTS:**

- HOUSING/BACKPLATE – ONE-PIECE, DIE-CAST ALUMINUM WITH BAKED-ON POLYESTER POWDER COAT FINISH IN DARK BRONZE.
- DIFFUSER – CLEAR PRISMATIC, UV-STABILIZED, INJECTION-MOLDED ACRYLIC LENS PROVIDED WITH SILICON GASKET TO CREATE WEATHERPROOF ENCLOSURE. STAINLESS STEEL SCREWS FASTEN LENS TO HOUSING. POLISHED INTERNAL ALUMINUM SHROUD OVER TOP HALF OF SIDES AND FRONT ALONG WITH TOP OF FIXTURE PROVIDE LOW PROJECTION OF LIGHT OUTPUT.
- LAMP SOCKET – INTEGRAL, PRE-WIRED PORCELAIN LAMP SOCKET WITH NICKEL-PLATED SCREW AND CENTER CONTACT (HID OPTION). 4-PIN THERMOPLASTIC (COMPACT FLUORESCENT OPTION).
- BALLAST – CLASS P, HIGH POWER FACTOR ( $\geq .95$ ), PROGRAMMED RAPID START ELECTRONIC TYPE WITH  $\leq 10\%$  TOTAL HARMONIC DISTORTION FOR COMPACT FLUORESCENT LAMPS, OR PREWIRED, ENCASED AND POTTED (ENCAPSULATED), CONSTANT-WATTAGE AUTOTRANSFORMER, HIGH POWER FACTOR ( $\geq .90$ ), CORE AND COIL TYPE FOR USE WITH HID LAMP OPTION.
- LAMPS – COMPACT FLUORESCENT WITH 4-PIN BASE OR METAL HALIDE, TYPICALLY WITH WATTAGES AS INDICATED. SEE LIGHTING FIXTURE SCHEDULE.
- CERTIFICATION – UL LISTED AND LABELED FOR WET LOCATIONS.
- OPTIONS – LENS OPTIONS INCLUDE FULL FACE SHIELD WITH UP OR DOWN LIGHTING OR FULL FACE SHIELD WITH SIDES CLEAR. PHOTOCELL ALSO OPTIONAL.
- OTHER – LOW-WATTAGE COMPACT FLUORESCENT FIXTURES DO NOT REQUIRE BALLAST HOUSING AS SHOWN.

WALL-MOUNTED HALF-SHIELDED CUTOFF FIXTURE

REVISED: AUGUST 2004 LIGHTING PLATE: NL-57

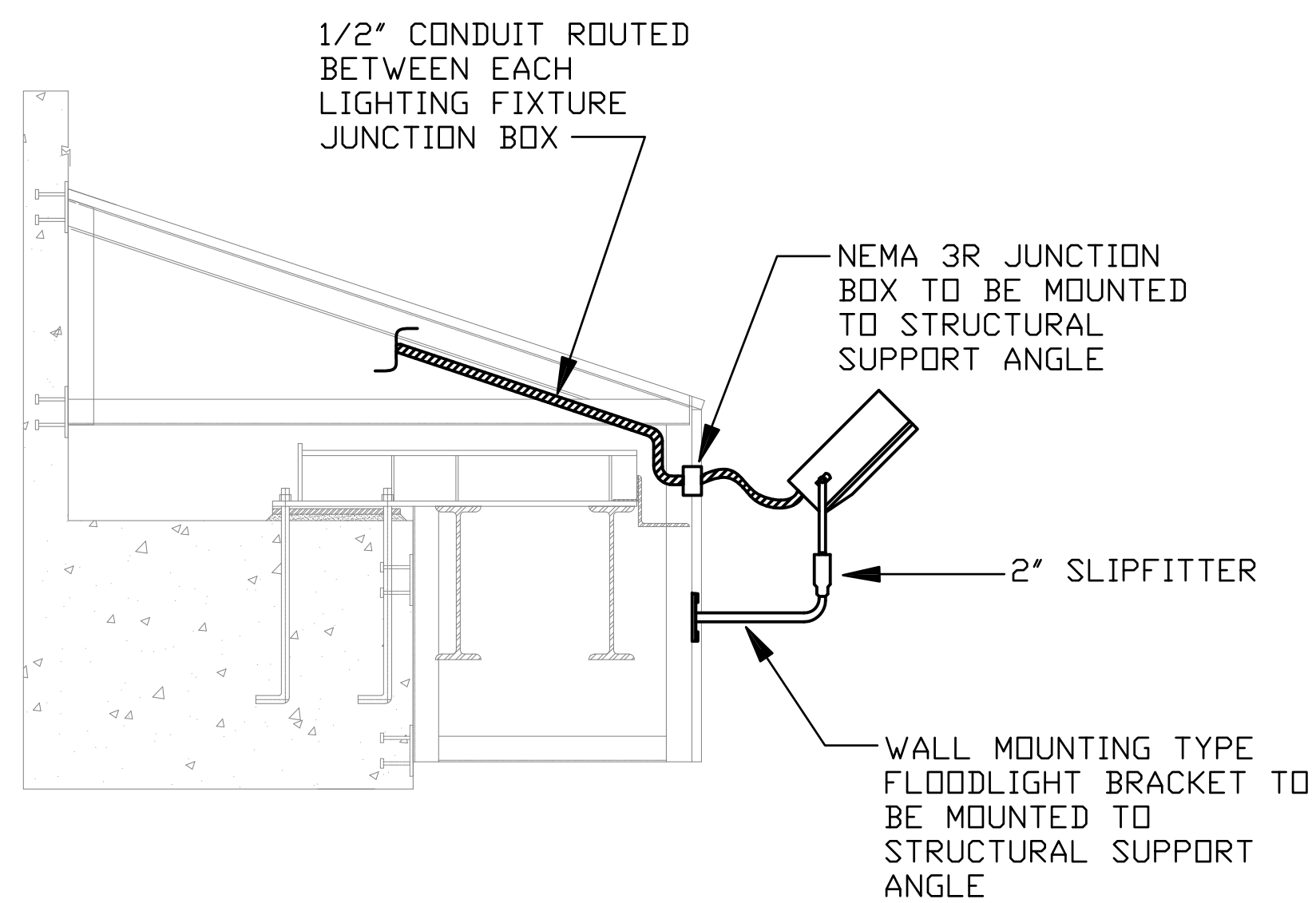


**LUMINAIRE REQUIREMENTS:**

- HOUSING – ONE-PIECE DIE-CAST ALUMINUM WITH HINGED, DIE-CAST ALUMINUM DOOR. PROVIDE CONTINUOUS, ONE-PIECE SILICONE GASKET TO SEAL DOOR FRAME TO HOUSING.
- FINISH – MULTI-STAGE PRE-TREATMENT, FINISHED WITH BAKED-ON POLYESTER POWDER COAT. FIXTURE SHALL PASS 2500 HOUR SALT SPRAY TEST FOR CORROSION RESISTANCE. DARK BRONZE OR BLACK STANDARD FINISHES. OTHER FINISHES AVAILABLE.
- REFLECTOR – DIE-FORMED, ANODIZED, SPECULAR ALUMINUM. NEMA/IES BEAM SPREAD PATTERN SHALL BE AS INDICATED.
- LAMP SOCKET – INTEGRAL, PRE-WIRED PORCELAIN LAMP SOCKET WITH NICKEL-PLATED SCREW AND CENTER CONTACT. HORIZONTAL OR VERTICAL AS INDICATED.
- LENS – CLEAR, TEMPERED GLASS WITH CONTINUOUS ONE-PIECE SILICONE GASKET.
- LAMPS – METAL HALIDE OR HIGH PRESSURE SODIUM WITH WATTAGES AS INDICATED. SEE LIGHTING FIXTURE SCHEDULE.
- BALLAST – PREWIRED, ENCASED AND POTTED (ENCAPSULATED), CONSTANT-WATTAGE AUTOTRANSFORMER, HIGH POWER FACTOR ( $\geq .90$ ), CORE AND COIL TYPE. PROVIDE PULSE-START TYPE FOR USE WITH MH LAMPS.
- CERTIFICATION – UL LISTED AND CERTIFIED FOR WET LOCATIONS.
- MOUNTING – TRUNNION, TENON SLIPFITTER, OR FLAT SURFACE KNUCKLE AS INDICATED. PROVIDE 16/3, PRE-WIRED, WEATHERPROOF SO CORD FOR MOUNTING OTHER THAN TENON. SPECIFY LENGTH OF CORD NEEDED.
- OPTIONS – UPPER OR FULL VISOR, PHOTOCELL AND RECEPTACLE, QUARTZ RESTRIKE WITH OR WITHOUT TIME DELAY, CUSTOM COLOR AS INDICATED, AND FUSING.

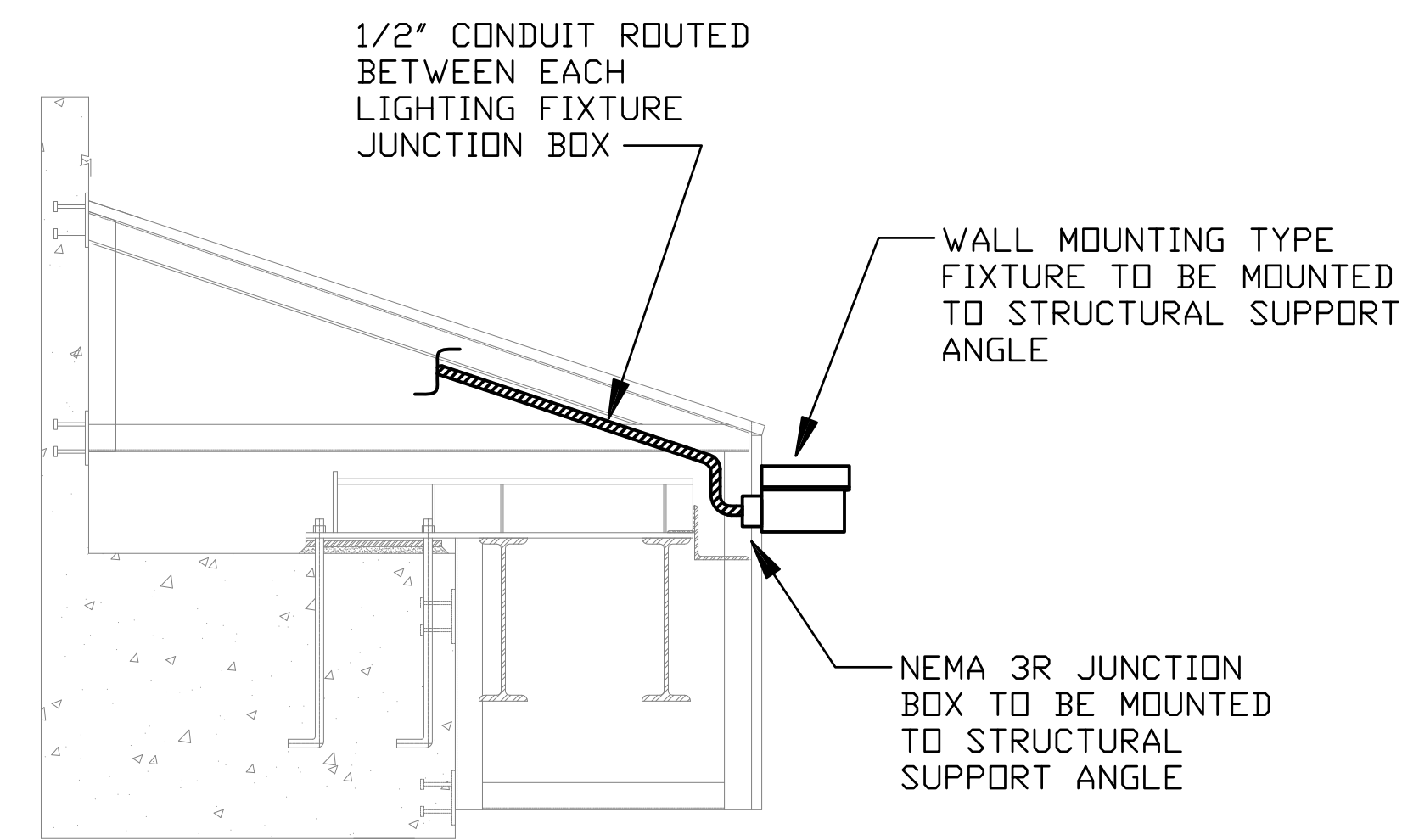
AREA FLOOD LIGHT

REVISED: AUGUST 2004 LIGHTING PLATE: XL-3



**FLOOD LIGHTING MOUNTING DETAIL**

N.T.S. E-101 A1



**SECURITY LIGHTING MOUNTING DETAIL**

N.T.S. E-101 A4



DATE	APPR	DESCRIPTION	SYM

DES	DR
CHK	GC
NAVFAC MANAGER	
REVIEWED BY	

DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND  
 NAVAL STATION - NORFOLK, VIRGINIA  
 NAVFAC  
 TYPE C BOX MAGAZINE WITH LOADING PLATFORM  
 LIGHTING DETAILS

CODE ID. NO. 80091	SIZE D
SCALE: AS NOTED	
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. 14005120	
SHEET 29 OF 31	
E-701	

1      2      3      4      5

D

C

B

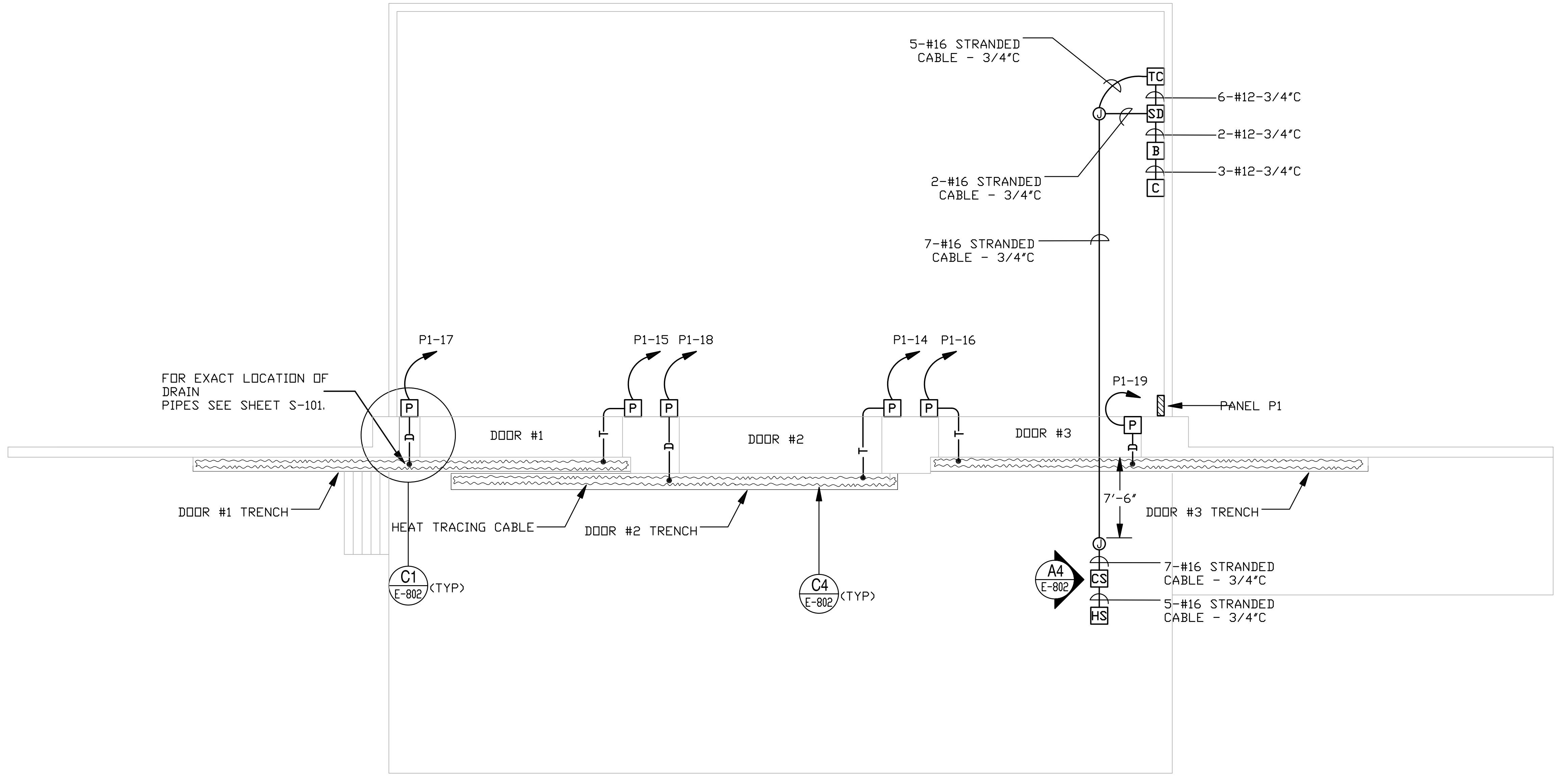
A

D

C

B

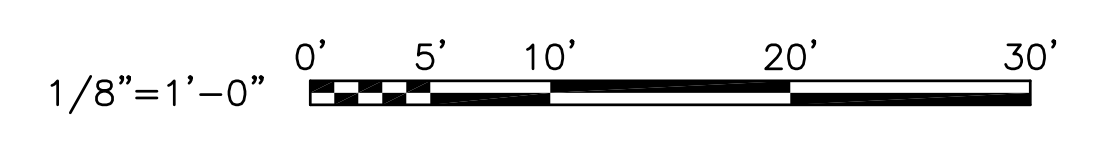
A



**HEAT TRACE PLAN**

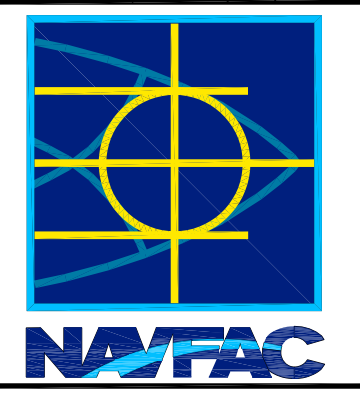
SCALE : 1/8" = 1'-0"

**GRAPHIC SCALE**



REVDATE: FILE NAME: \\nasar\k434\NAVFAC\_YRKT\_164A\CISE\Magazines\Box C FINALS\Final Drawings Box C BOX C WITH PLATFORM COMPLAwg LAYOUT NAME: E-801 PLOTTED: Tuesday, December 14, 2010 - 4:46pm

SYMBOL	DESCRIPTION	DATE	APPROVED



SEAL  
 A/E LOGG  
 SAT-TO

APPROVED

FOR COMMANDER NAVFAC	
DES	DR
CHK	GC
NAVFAC MANAGER	

DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND  
 NAVAL STATION - NORFOLK, VIRGINIA  
 NAVFACANT

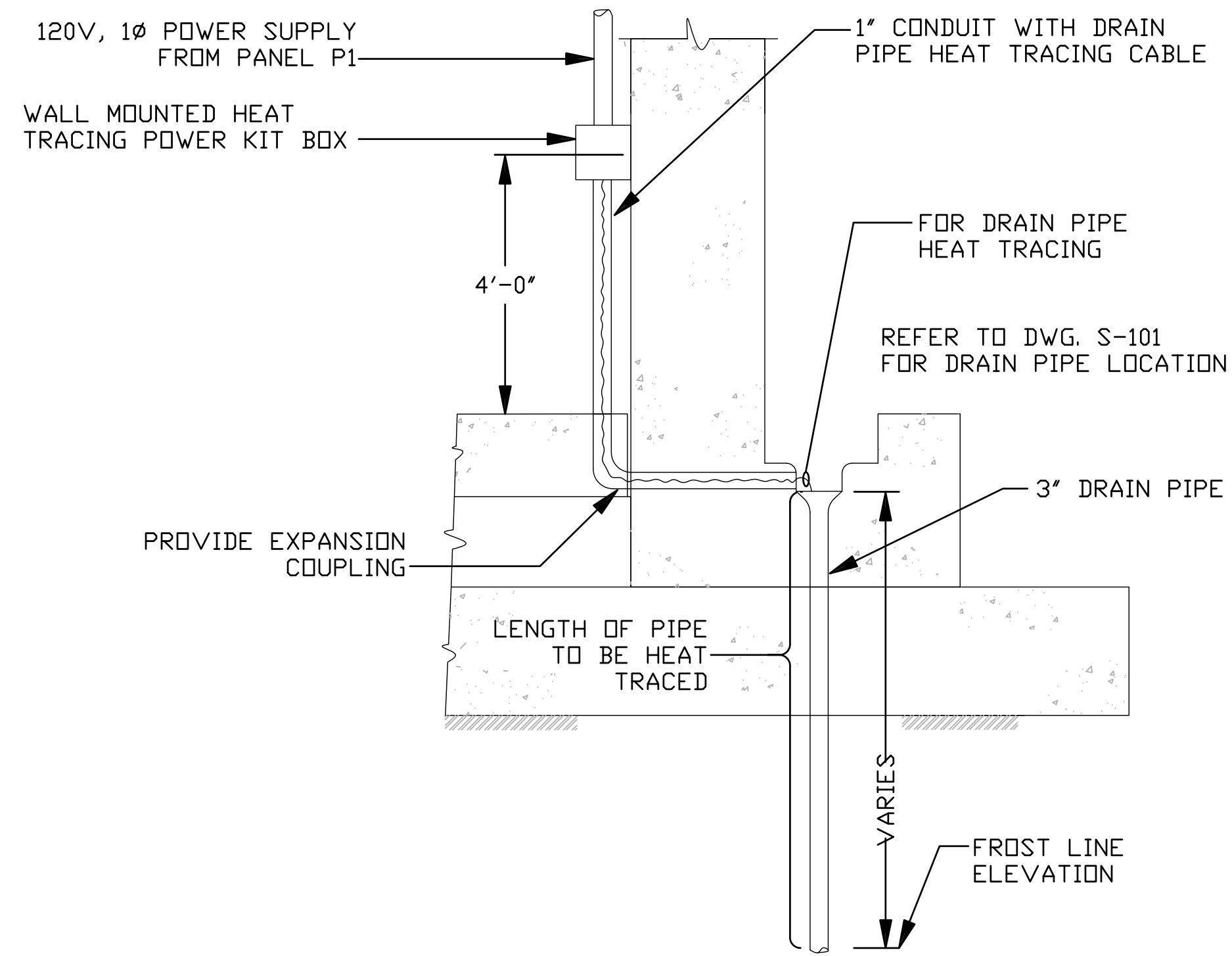
**TYPE C BOX MAGAZINE WITH LOADING PLATFORM**

HEAT TRACE PLAN

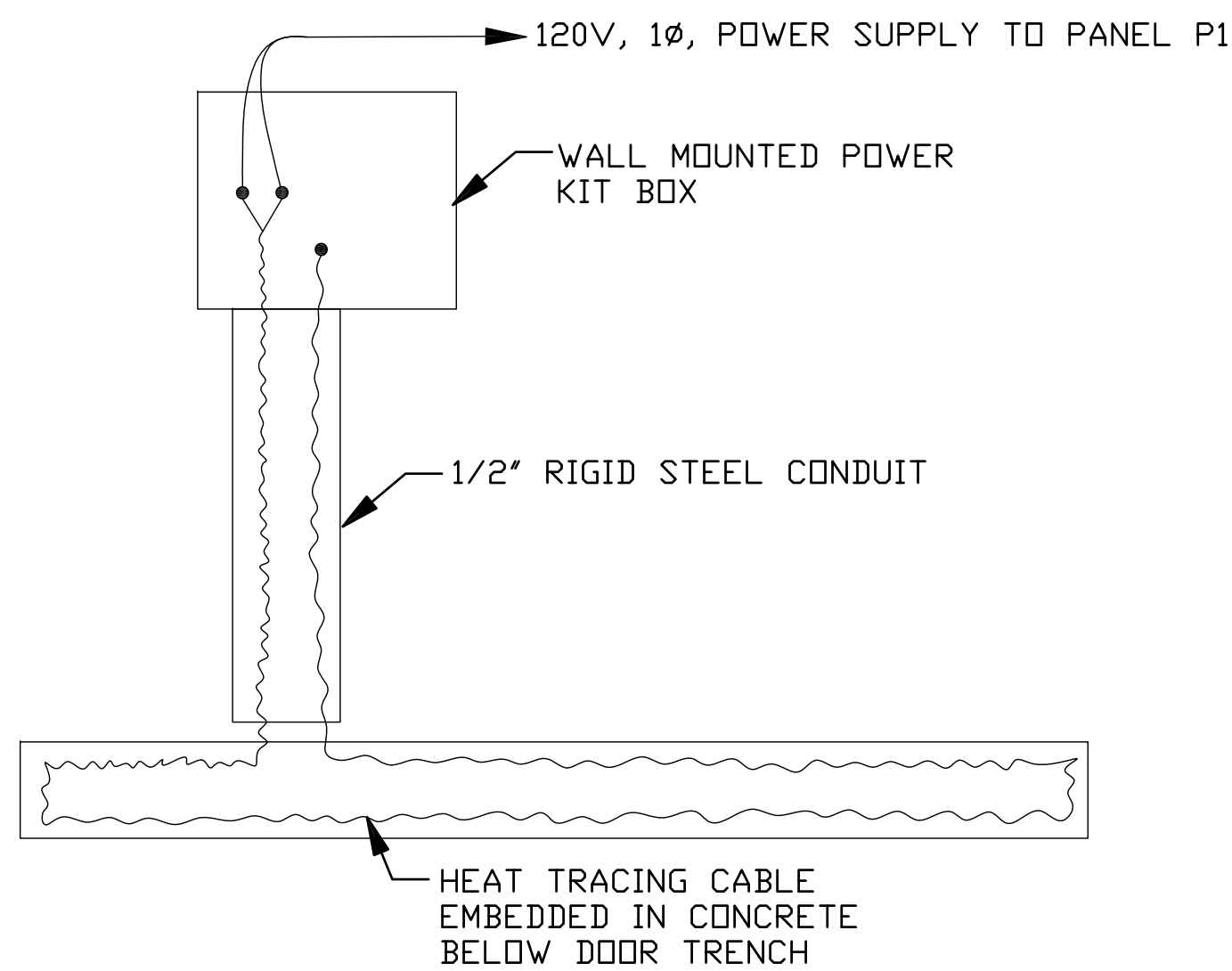
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SCALE: AS NOTED	
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. <b>14005121</b>	
SHEET <b>30</b> OF <b>31</b>	
<b>E-801</b>	

DRAWFORM REVISION: 15 JANUARY 2008

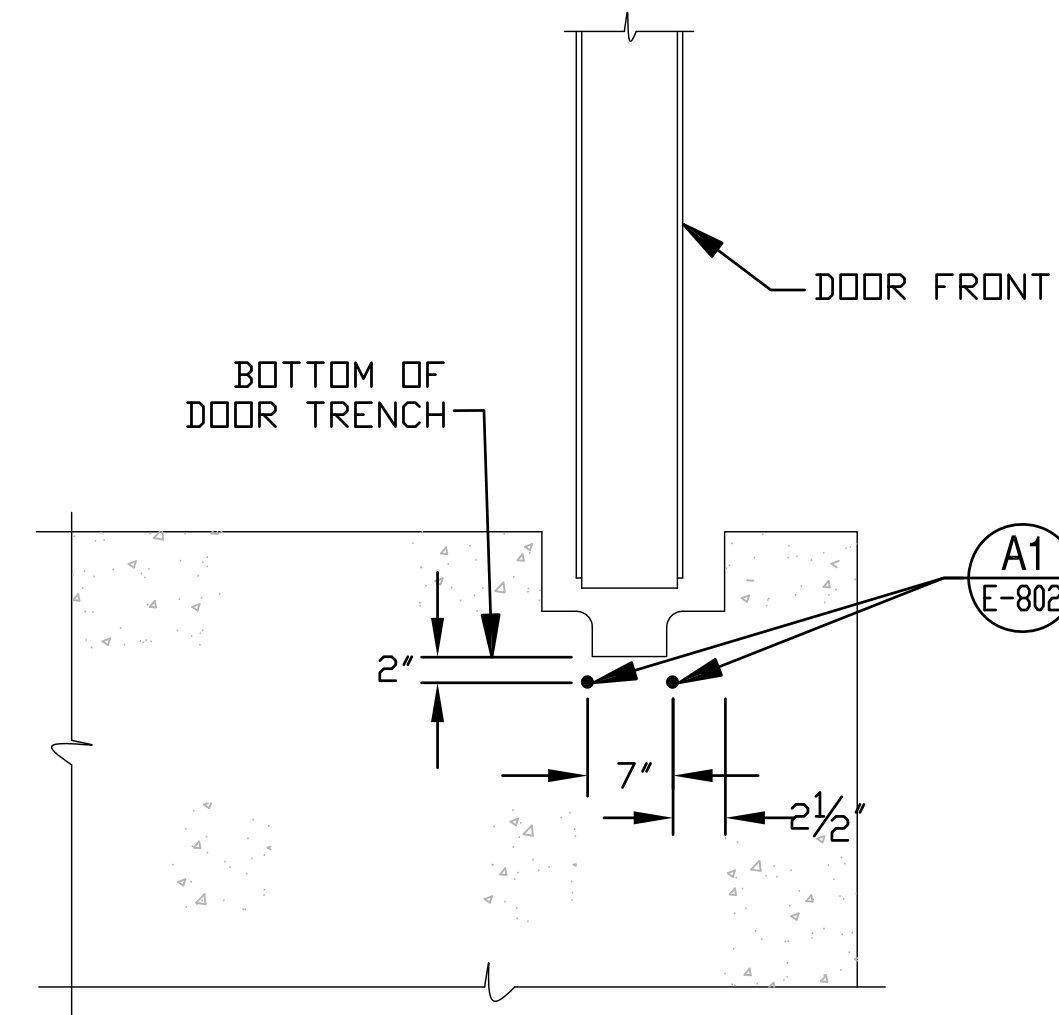
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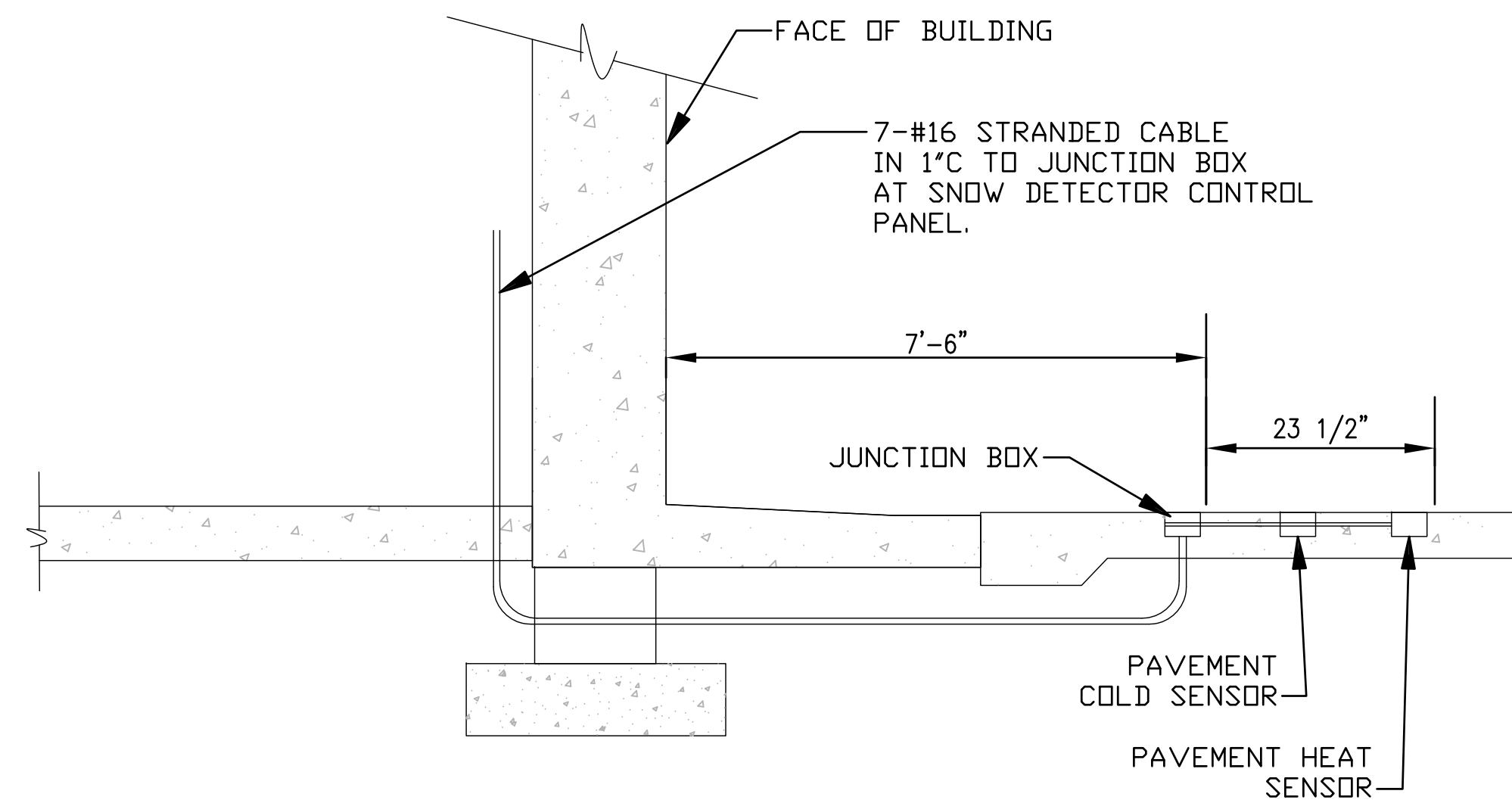
**DRAIN PIPE HEAT TRACING DETAIL** (C1)  
N.T.S. E-801



**TYPICAL DOOR TRENCH HEAT TRACING WIRING DIAGRAM** (A1)  
N.T.S. E-802



**HEAT TRACING CABLE DETAIL** (C4)  
N.T.S. E-801



**SNOW DETECTOR LOCATION DETAIL** (A4)  
N.T.S. E-801



DES	DR
CHK	GC
NAVFAC MANAGER	
REVIEWED BY	

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NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL STATION - NORFOLK, VIRGINIA  
NAVFACANT

**TYPE C BOX MAGAZINE WITH LOADING PLATFORM**  
HEAT TRACE DETAILS

CODE ID. NO. 80091	SIZE D
SCALE: AS NOTED	
SPEC. NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. 14005122	
SHEET 31 OF 31	
<b>E-802</b>	

DRAWING REVISION: 15 JANUARY 2008