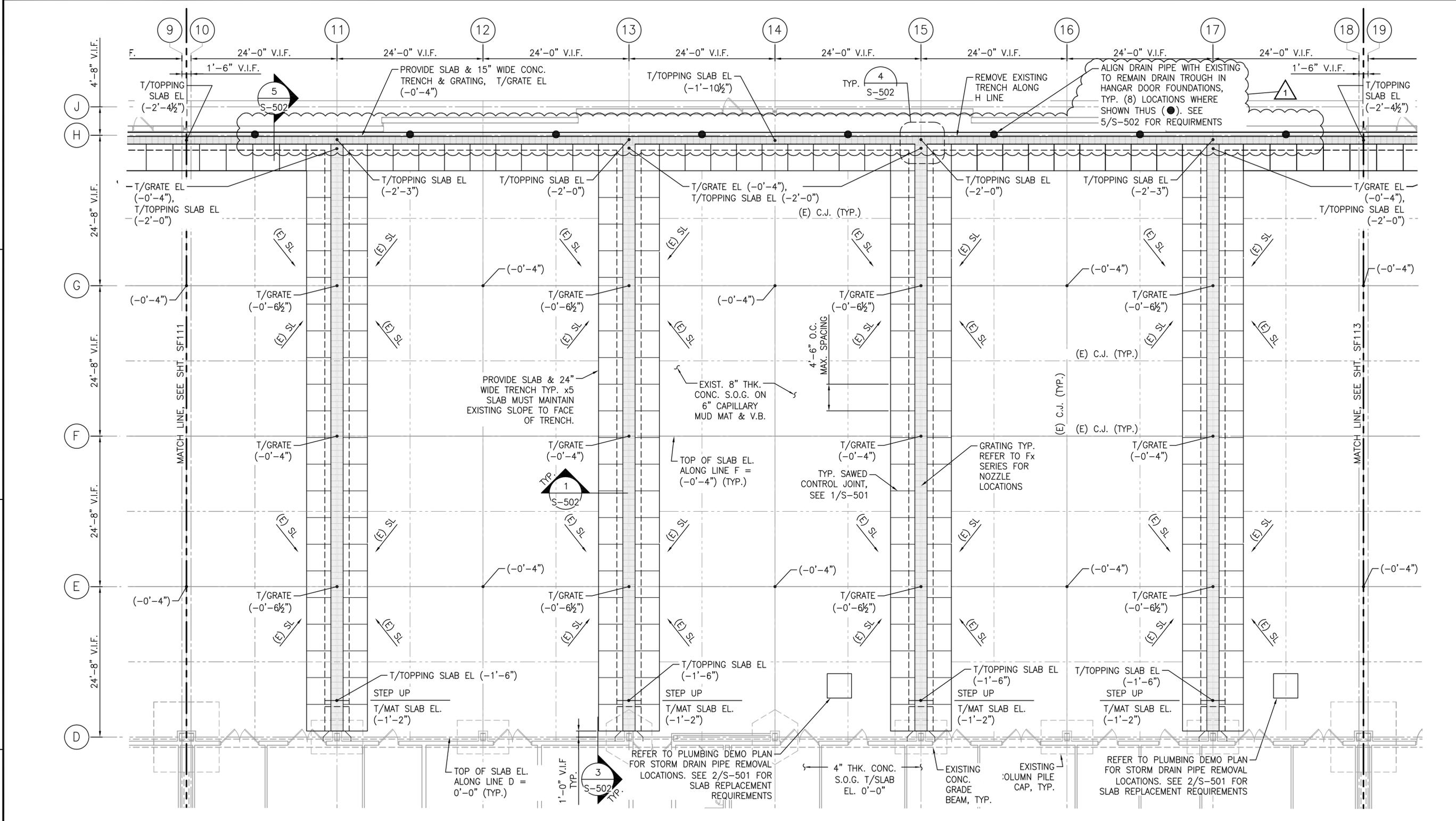






FILE NAME: P:\Projects\GHD\GHD01501-NAVFAC\_Hanger\_111\DESIGN\1372146\_SF112.dwg LAYOUT NAME: SF112 PLOTTED: Wednesday, May 11, 2016 - 4:19pm USER: Mluzsar



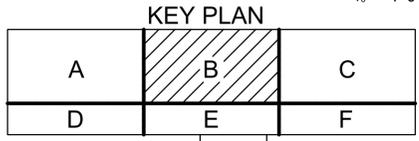
**1 PARTIAL SLAB PLAN**  
 SCALE: 1/8" = 1'-0"  
**PLAN NOTES**

1. FOR ADDITIONAL NOTES, SEE PLAN SHEET SF111.



CAUTION: IF THIS PLAN IS A REDUCTION,  
 GRAPHIC SCALE MUST BE USED

1/8" = 1'-0"



DATE	5/12/2016
DATE	5/2/2016
DESCRIPTION	ADD HANGAR DOOR TROUGHS
DATE	5/2/2016
DESCRIPTION	FINAL SUBMISSION
DATE	5/2/2016
DESCRIPTION	FINAL SUBMISSION

**the PROTECTION ENGINEERING GROUP**  
 14585 Avon Parkway, Suite 150  
 Chantilly, Virginia 20151  
 T 757.497.7472 F 757.497.0250

**PENNONI ASSOCIATES INC.**  
 349 Southport Circle, Suite 100  
 Virginia Beach, Virginia 23452  
 T 757.497.7472 F 757.497.0250

APPROVED

FIR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO

DES	JL	DRW	KOM	CHK	DMS
FM/DM	KPL/IAS				

BRANCH MANAGER  
 CHIEF ENG/ARCH Mark J. Araghi, PE

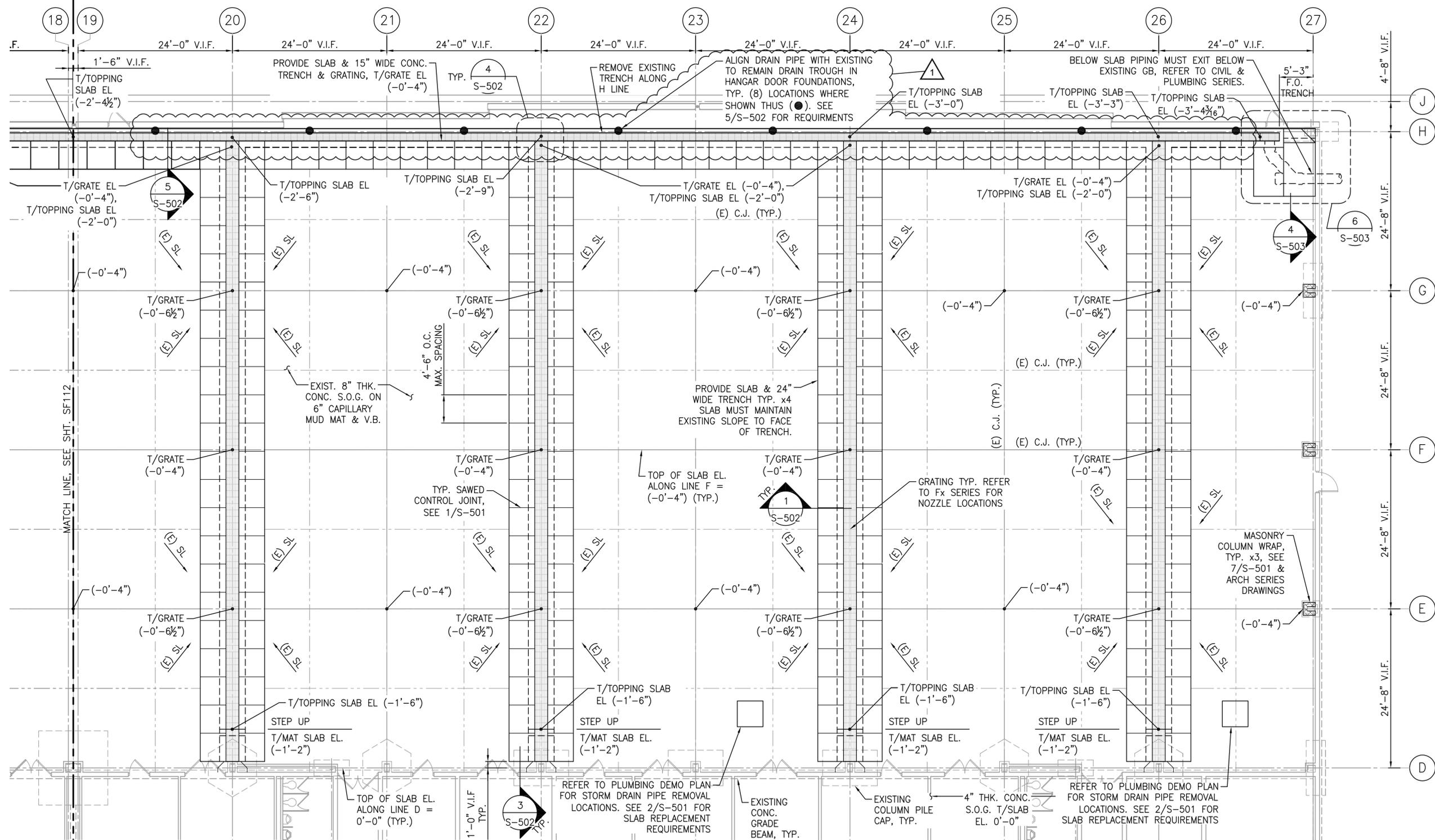
FIRE PROTECTION

NAVAL FACILITIES ENGINEERING COMMAND  
 NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
 VIRGINIA BEACH, VIRGINIA

NAVAL AIR STATION OCEANA  
 HANGAR 111 FIRE PROTECTION AND STRUCTURAL REPAIRS  
 FOUNDATION AND SLAB PLAN - AREA B

SCALE: 1/8" = 1'-0"  
 EPROJECT NO.: 1372146  
 CONSTR. CONTR. NO.  
 NAVFAC DRAWING NO. 12716256  
 SHEET 34 OF 170  
**SF112**  
 DRAWING REVISION: 10 MAY 2014

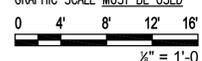
FILE NAME: P:\Projects\GHD\1501-NAVFAC\Hanger 111\DESIGN\1372146\_SF111.dwg LAYOUT NAME: SF111 PLOTTED: Wednesday, May 11, 2016 - 4:18pm USER: Mluzzer



**1 PARTIAL SLAB PLAN**  
SCALE: 1/8" = 1'-0"  
**PLAN NOTES**

1. FOR ADDITIONAL NOTES, SEE PLAN SHEET SF111.

CAUTION: IF THIS PLAN IS A REDUCTION, GRAPHIC SCALE MUST BE USED.



**KEY PLAN**

A	B	C
D	E	F

DATE	5/12/2016
DATE	5/2/2016
DESCRIPTION	ADD HANGAR DOOR TROUGHS
DATE	5/2/2016
DESCRIPTION	FINAL SUBMISSION
DATE	5/2/2016
DESCRIPTION	FINAL SUBMISSION

COMMONWEALTH OF VIRGINIA  
**DENNIS MATTHEW STUART**  
Lic. No. 029761  
PROFESSIONAL ENGINEER

the PROTECTION ENGINEERING GROUP  
14555 Avon Parkway, Suite 150  
Chantilly, Virginia 20151  
703-488-9999  
www.PEGroup-inc.com

PENNONI ASSOCIATES INC.  
349 Southport Circle, Suite 100  
Virginia Beach, Virginia 23452  
T 757.497.7472 F 757.497.0250

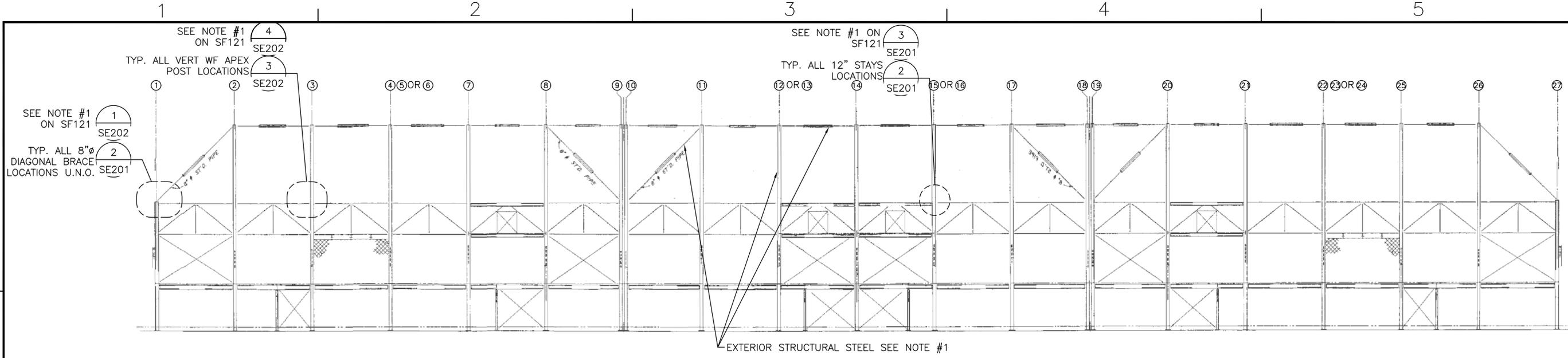
APPROVED: \_\_\_\_\_  
FIR COMMANDER NAVFAC

SATISFACTORY TO: \_\_\_\_\_  
DES: JL | DRW: KGM | CHK: DMS  
PW/DW: \_\_\_\_\_  
BRANCH MANAGER: KPL/IAS  
CHIEF ENG/ARCH: Mark J. Airaghi, PE  
FIRE PROTECTION: \_\_\_\_\_

NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
NAVFAC OCEANA - VIRGINIA BEACH, VIRGINIA  
NAVFAC HAMPDEN ROADS IPT  
NAVAL AIR STATION OCEANA  
VIRGINIA BEACH, VIRGINIA

**HANGAR 111 FIRE PROTECTION AND STRUCTURAL REPAIRS**  
FOUNDATION AND SLAB PLAN - AREA C

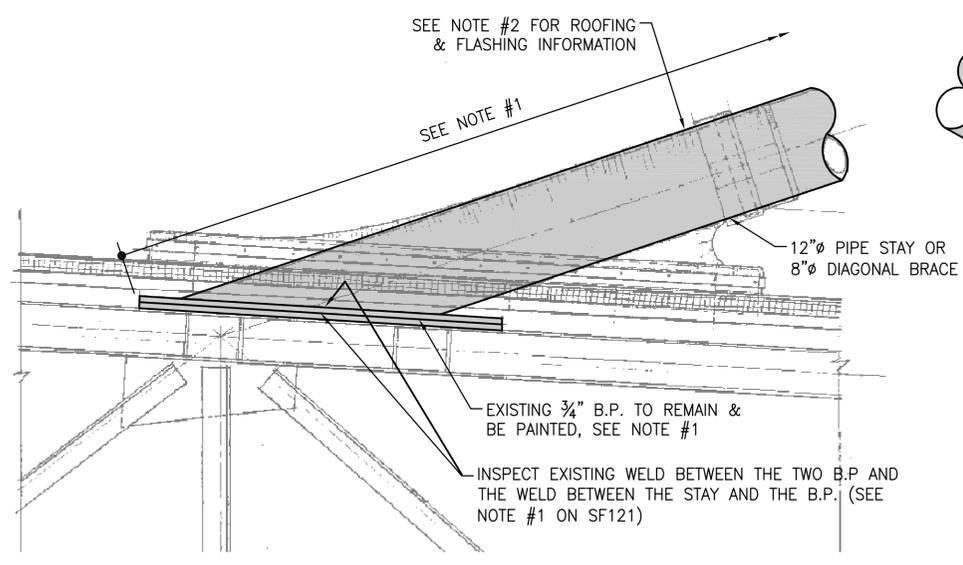
SCALE: 1/8" = 1'-0"  
EPROJECT NO.: 1372146  
CONSTR. CONTR. NO.: \_\_\_\_\_  
NAVFAC DRAWING NO.: 12716257  
SHEET 35 OF 170  
**SF113**  
DRAWING REVISION: 10 MAY 2014



**1 ELEVATION ALONG LINE D (LOOKING NORTH)**  
 SCALE: 1/16" = 1'-0" SF121

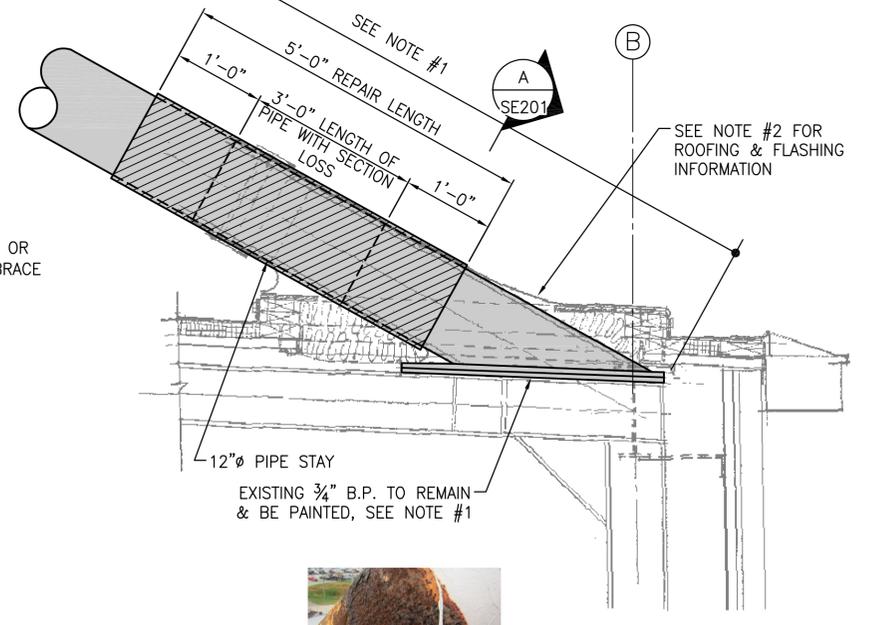
**SHEET NOTES**

1. COAT ALL EXTERIOR STRUCTURAL STEEL INCLUDING ROOF STAYS, HORIZONTALS AND DIAGONAL BRACES AND WF-APEX POST, ETC. WITH HIGH-PERFORMANCE 3-COAT PAINT SYSTEM. PROVIDE SURFACE PREPARATION AND PAINTING PER PROJECT SPECIFICATIONS.
2. THE CONTRACTOR MUST REMOVE PART OF EXISTING ROOF AT EACH ROOF PENETRATION TO ALLOW FOR STRUCTURAL STEEL INSPECTION AND COATING. AFTER COATING OF STRUCTURAL STEEL IS COMPLETE THE CONTRACTOR MUST RECONSTRUCT THE ROOF. FOR PARTIAL REMOVAL OF EXISTING ROOF, ROOF RECONSTRUCTION, FLASHING DETAILS, AND ADDITIONAL INFORMATION, SEE ARCHITECTURAL DRAWINGS.
3. STRENGTHENING REPAIR DETAIL 3 AS IT IS SHOWN IS FOR ESTIMATING PURPOSES ONLY. CONTRACTOR MUST DETERMINE NUMBER OF PLYS & OVERALL REPAIR LENGTH BASED ON PERCENTAGE OF SECTION LOSS TO RESTORE ORIGINAL CAPACITY OF STAY. REFER TO MATERIAL PROPERTIES AND INSTALLATION PROCEDURES DESCRIBED IN THE GENERAL NOTES 9.0-FRP COMPOSITE STRENGTHENING SYSTEM ON PLAN SHEET S-003.



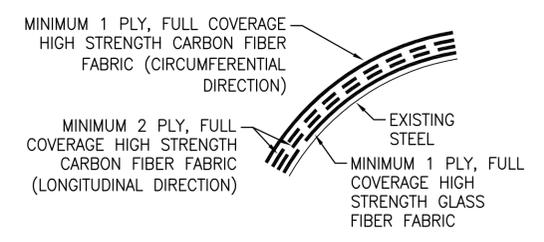
**2 TYPICAL DETAIL AT 12"Ø STAY & 8"Ø DIAGONAL BRACE**  
 SCALE: N.T.S. SF121

COLUMN LINE F.5 DEPICTED IN DETAIL. OTHER STAYS AND DIAGONAL BRACES ARE SIMILAR.



**3 STRENGTHENING REPAIR DETAIL AT 12"Ø STAY**  
 SCALE: N.T.S. SF121

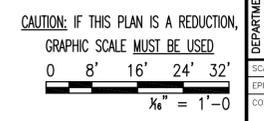
1. COLUMN LINE B DEPICTED IN DETAIL. OTHER STAYS ARE SIMILAR.
2. THE CONTRACTOR MUST NOT ORDER MATERIALS OR PERFORM ANY WORK ASSOCIATED WITH STRENGTHENING REPAIR DETAIL UNLESS THE REPAIR MATERIALS AND LOCATIONS ARE APPROVED AND AUTHORIZED BY CONTRACTING OFFICER.
3. THE CONTRACTOR MUST INCLUDE ALL COST ASSOCIATED WITH THE PERFORMING OF STRENGTHENING REPAIRS FOR ALL (50)-12"Ø PIPE. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED MUST BE IDENTIFIED BY THE STRUCTURAL INSPECTOR AND AT THE DISCRETION OF THE CONTRACTING OFFICER.
4. EXTEND GLASS FIBER WRAP BEYOND CARBON FIBER WRAP BY A MINIMUM OF 6 INCHES MEASURED ALONG THE STAY AT EACH END OF THE REPAIR.



**A DETAIL A**  
 SCALE: N.T.S. SF121  
 SEE NOTE #3 FOR ADDITIONAL INFORMATION

**KEY**

- INDICATES EXISTING EXTERIOR STRUCTURAL STEEL WITH HIGH PERFORMANCE 3 COAT PAINT. SEE NOTE #1
- INDICATES EXISTING EXTERIOR STRUCTURAL STEEL WITH STRENGTHENING REPAIR



DATE	5/12/2016
DATE	5/2/2016
DESCRIPTION	ADD DETAIL 3 NOTE 4
SYN	1
FINAL SUBMISSION	

COMMONWEALTH OF VIRGINIA  
 DENNIS MATTHEW STUART  
 Lic. No. 029761  
 PROFESSIONAL ENGINEER

the PROTECTION ENGINEERING GROUP  
 14555 Avon Parkway, Suite 150  
 Chantilly, Virginia 20151  
 703-488-9999  
 www.PEGroup-inc.com

PENNONI ASSOCIATES INC.  
 349 Southport Circle, Suite 100  
 Virginia Beach, Virginia 23452  
 T 757.497.7472 F 757.497.0250

APPROVED: \_\_\_\_\_  
 FIR COMMANDER NAVFAC

SATISFACTORY TO: \_\_\_\_\_

DES: JLD  
 DRAW: KPL/IAS  
 BRANCH MANAGER: KPL/IAS  
 CHIEF ENGR/ARCH: Mark J. Araghi, PE  
 FIRE PROTECTION: \_\_\_\_\_

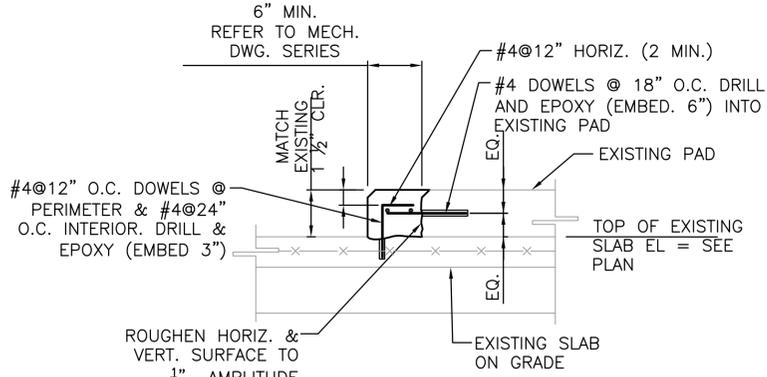
NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
 VIRGINIA BEACH, VIRGINIA

NAVAL AIR STATION OCEANA  
 HANGAR 111 FIRE PROTECTION AND STRUCTURAL REPAIRS  
 EXTERIOR TRUSS ELEVATIONS AND DETAILS

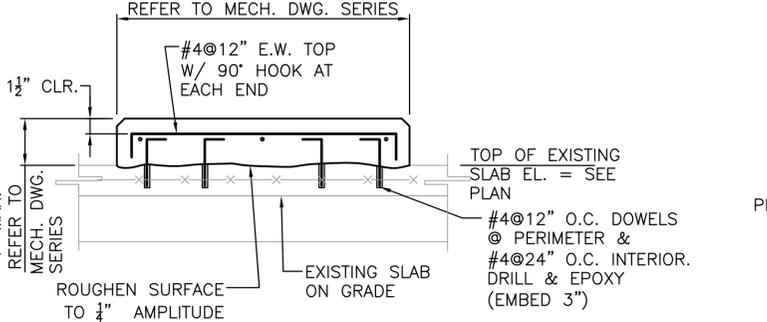
SCALE: NO SCALE  
 PROJECT NO.: 1372146  
 CONSTR. CONTR. NO.: \_\_\_\_\_  
 NAVFAC DRAWING NO.: 12716262  
 SHEET 40 OF 170  
**SE201**  
 DRAWING REVISION: 10 MAY 2014

FILE NAME: P:\Projects\CHDC\1501-NAVFAC\_Hanger 111\DESIGN\1372146\_SE201.dwg LAYOUT NAME: SE201 PLOTTED: Wednesday, May 11, 2016 - 8:41 am USER: mkusser



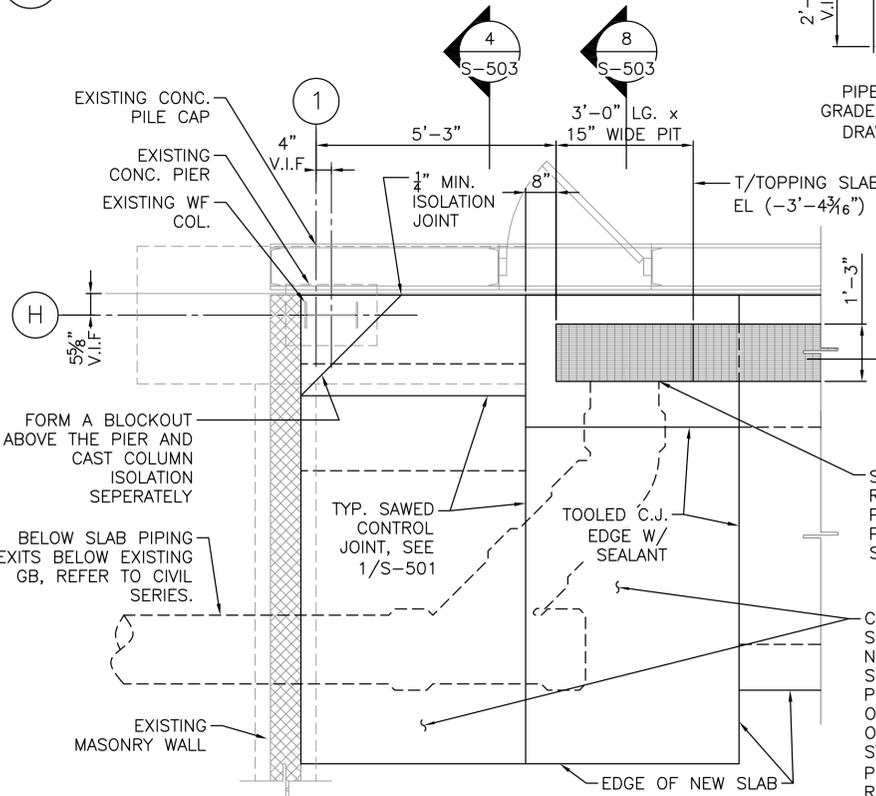


**NEW EXTENSION TO EXISTING EQUIPMENT PAD**

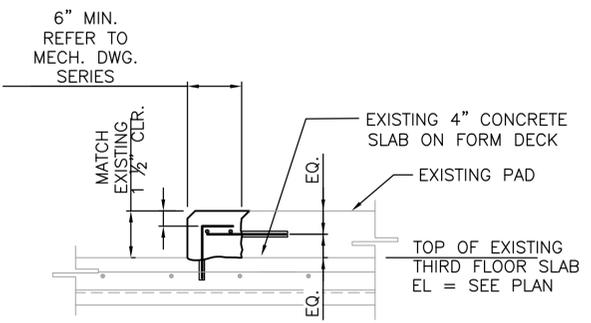


- COORDINATE PAD SIZE, HEIGHT, EMBEDDED UTILITIES, ANCHOR BOLTS & PAD LOCATIONS WITH FINAL EQUIPMENT REQUIREMENTS AND MANUFACTURER'S RECOMMENDATIONS.
- ALL PADS TO HAVE 3/4\"/>

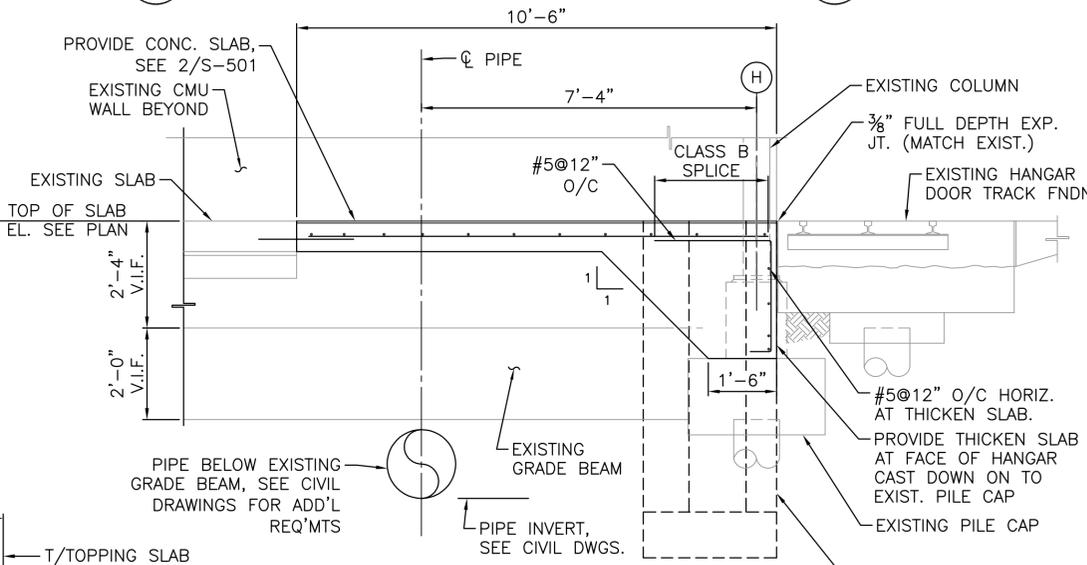
**NEW EQUIPMENT PAD ON EXISTING SLAB ON GRADE DETAIL**



**6 PLAN DETAIL AT END OF TRENCH**

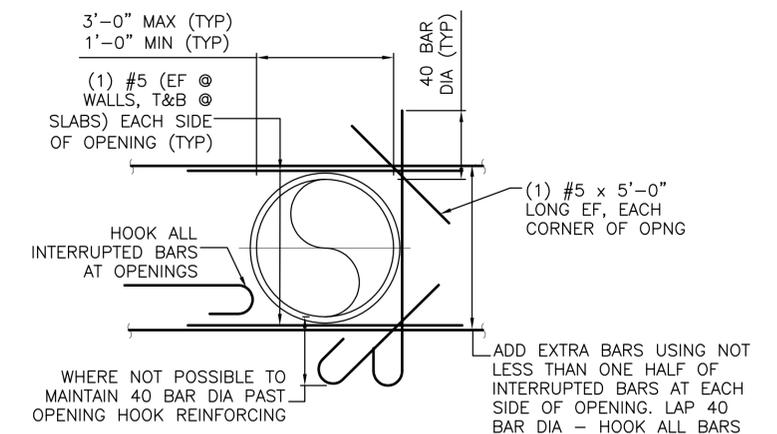


**2 NEW EQUIPMENT PAD EXTENSION AT EXISTING ELEVATED SLAB DETAIL**



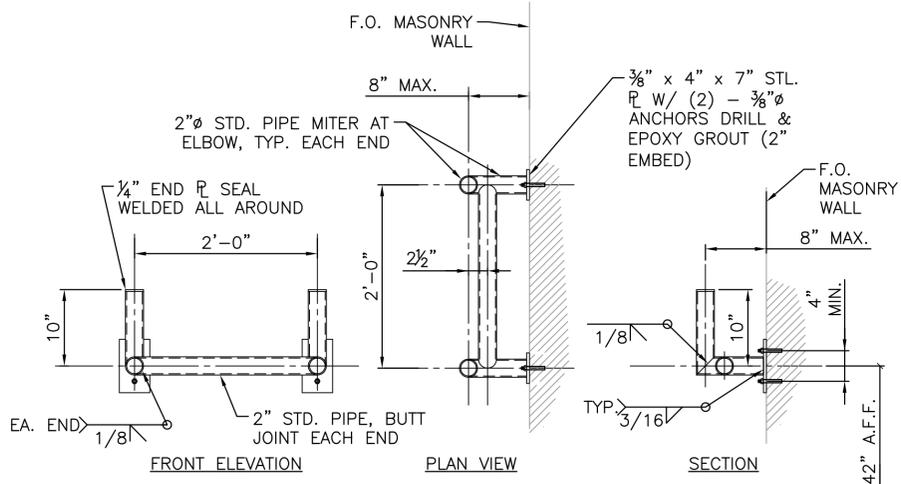
- DO NOT DAMAGE OR CUT EXISTING GRADE BEAM, PIER, OR PILE CAP

**4 SECTION AT BELOW SLAB PIPING**



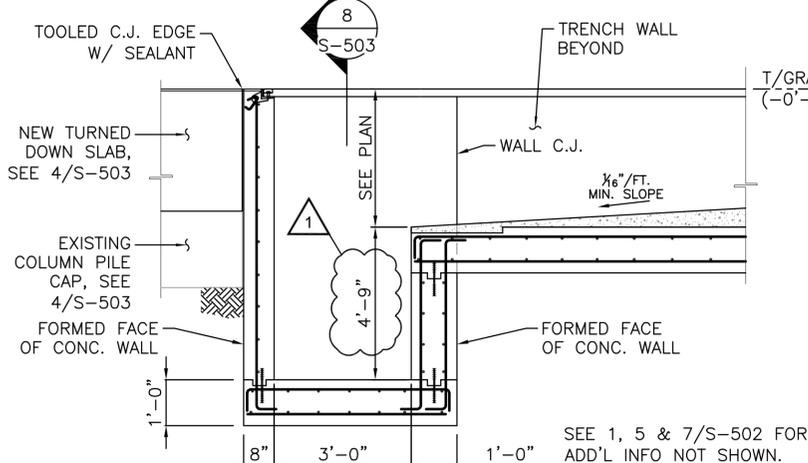
- NOT ALL BARS ARE SHOWN FOR CLARITY. INFORMATION NOTED APPLIES TO ALL SIDES OF OPENING.

**3 REINFORCING AT PIPE PENETRATION DETAIL**

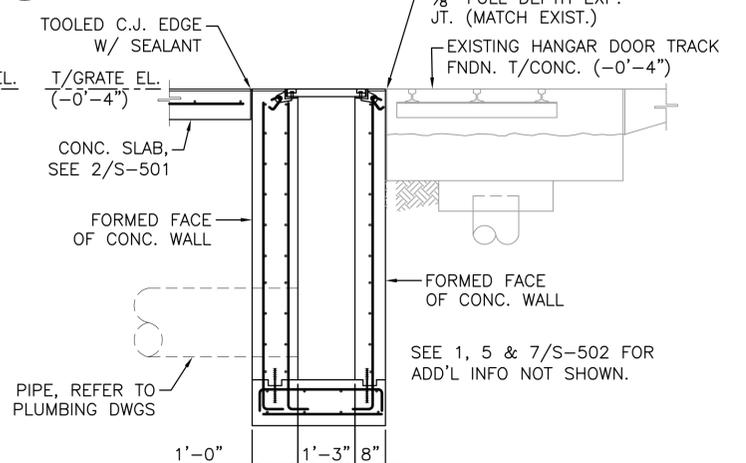


- NOTE:  
1. REFER TO ELECTRICAL DRAWINGS FOR CABLE HOOK LOCATIONS.

**5 CABLE HOOK DETAIL**



**7 SECTION**



**8 SECTION**

FILE NAME: P:\Projects\GHD\1501-NAVFAC\Hanger 111\DESIGN\1372146\_S-503.dwg LAYOUT NAME: S-503 PLOTTED: Tuesday, May 24, 2016 - 2:35pm USER: KJLuser

DATE	5/2/2016	DATE	5/2/2016
DESCRIPTION	FINAL SUBMISSION	DESCRIPTION	FINAL SUBMISSION
REV	1	REV	1
BY	SM	BY	SM

COMMONWEALTH OF VIRGINIA  
DENNIS MATTHEW STUART  
Lic. No. 029761  
PROFESSIONAL ENGINEER

the PROTECTION ENGINEERING GROUP  
14555 Avon Parkway, Suite 150  
Chantilly, Virginia 20151  
703-488-9999  
www.PEGroup-nc.com

PENNONI ASSOCIATES INC.  
349 Southport Circle, Suite 100  
Virginia Beach, Virginia 23452  
T 757.497.7472 F 757.497.0250

APPROVED: \_\_\_\_\_  
FIR COMMANDER NAVFAC

ACTIVITY: \_\_\_\_\_

SATISFACTORY TO: \_\_\_\_\_

DES: JKL/DRW KJM/CHK DMS

BRANCH MANAGER: KPL/IAS

CHIEF ENGR/ARCH: Mark J. Araghi, PE

FIRE PROTECTION: \_\_\_\_\_

NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
HAMPDEN ROAD BPT  
VIRGINIA BEACH, VIRGINIA

NAVAL AIR STATION OCEANA  
HANGER 111 FIRE PROTECTION AND STRUCTURAL REPAIRS

DETAILS - STRUCTURAL

SCALE: NO SCALE  
EPROJCT NO.: 1372146  
CONSTR. CONTR. NO.: \_\_\_\_\_

NAVFAC DRAWING NO.: 12716267  
SHEET 45 OF 170  
**S-503**  
DRAWING REVISION: 10 MAY 2014