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GENERAL NOTES:

1. IF THIS SHEET IS NOT 24"x36," USE GRAPHICAL SCALE ACCORDINGLY.
2. THIS SHEET IS FOR USE WITH EQUIPMENT FROM 100 LBS TO 190 LBS.
3. IF THIS SHEET IS NOT 24"x36," USE GRAPHICAL SCALE ACCORDINGLY.
4. THIS SHEET IS FOR USE WITH EQUIPMENT LESS THAN 100 LBS.

CFS STUDS

5. EACH SELF-DRILLING SCREW MUST PENETRATE EXISTING STUD WITH A MIN. OF THREE THREADS PROTRUDING PAST THE BACK SIDE OF THE SUPPORTING STEEL.

WOOD STUDS

6. EACH LAG SCREW MUST PENETRATE AT LEAST 1.5" INTO STUD.

CONCRETE WALL

7. POST-INSTALLED ANCHORS SHALL NOT DAMAGE EXISTING CONCRETE REBAR.

MASONRY

8. PRE-DRILL MASONRY WITH A 7/16" DIA. HOLE FOR THRU-BOLT.
9. THRU-BOLTS AND SCREW ANCHORS SHALL NOT DAMAGE EXISTING MASONRY REINFORCEMENT.

NOTES FOR EOR:

(DO NOT INCLUDE ON CONSTRUCTION DRAWINGS)

ALL WALL TYPES

1. MIN. REQUIRED HEX BOLT SIZE IS ϕ 1/4". LARGER DIAMETERS ARE PERMISSIBLE TO ACCOUNT FOR LARGER MOUNTING HOLE DIAMETER.
2. EMBEDMENT DEPTHS, FASTENER DIAMETERS, AND NUMBER OF FASTENERS ARE MINIMUMS AND MAY BE INCREASED.

WOOD STUD

1. MIN. REQUIRED SCREW PENETRATION INTO STUD IS 1.5".

CONCRETE WALL

1. MIN. REQUIRED EMBEDMENT DEPTH IS 2".
2. MIN. REQUIRED SPACING BETWEEN ANCHOR IS 8".
3. MIN. REQUIRED WALL THICKNESS IS 4".

MASONRY WALL

1. THRU-BOLTING REQUIRED UNLESS MASONRY IS PROVEN TO BE UNCRACKED UNDER SERVICE LOADS.
 - A. THRU-BOLT WASHER:

| WASHER O.D. (in.) | ENCL. WT. (LBS.) |
|-------------------|------------------|
| 4 | \geq 145 LBS |
| 3 | < 145 LBS |

- B. MIN. REQUIRED THRU-BOLT SPACING IS 2.5".
2. POST-INSTALLED ANCHOR IN UNCRACKED MASONRY CONDITION.
 - A. MIN. REQUIRED EMBEDMENT FOR SCREW ANCHORS IS 1-5/8".
 - B. MIN. REQUIRED SPACING BETWEEN SCREW ANCHORS IS 4". SCREW ANCHORS CAN BE STAGGERED TO SATISFY THIS REQUIREMENT.

DRAWING DEVELOPED FOR ML-3/ML-4 PROJECTS. FOR ML-1/ML-2, ADDITIONAL REQUIREMENTS AND QA REVIEWS ARE REQUIRED. (REMOVE THIS NOTE WHEN INSERTED INTO A DRAWING PACKAGE)

| NO | DATE | UNCLASS CLASS REV | DC | DESCRIPTION | DWN | DSGN | CHKD | SUB | APP |
|----|----------|-------------------|----|----------------------------------------------------------------------------------------------|-----|------|------|-----|-----|
| 1 | 12/19/17 | UNCLASS | DY | UPDATED TO COMPLY W/ ESM CH. 5 REV. 10 & CAD STDS MANUAL REV 5. CHANGED SHEET # FROM S-5002. | BW | BW | GP | GP | TO |

ENGINEERING STANDARDS

STRUCTURAL

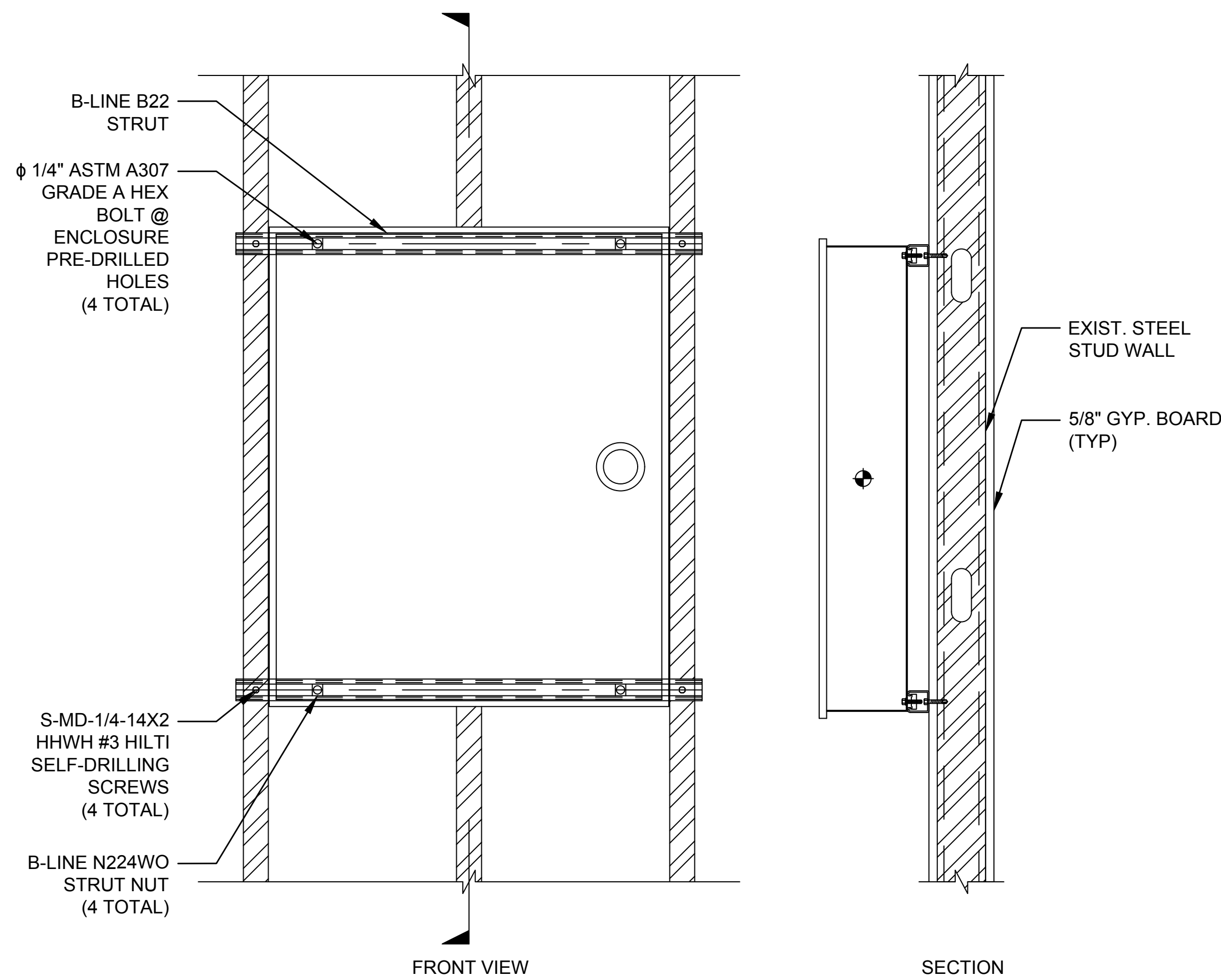
WALL-MOUNTED EQUIPMENT DETAILS LARGE

| | |
|---------|------------|
| DRAWN | K.SOUZA |
| DESIGN | K.SOUZA |
| CHECKED | A.MOSIMANN |
| DATE | 06-04-14 |

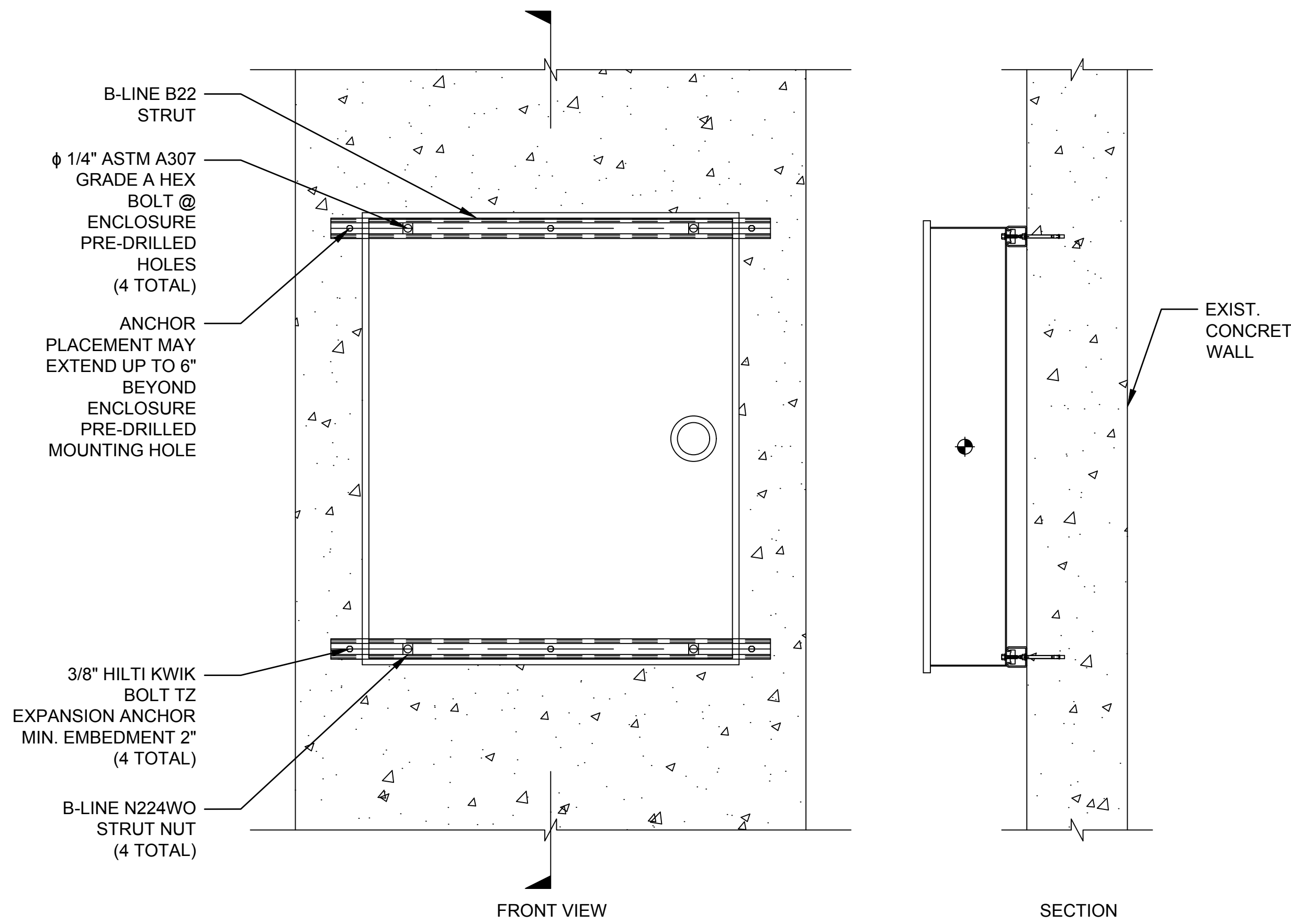
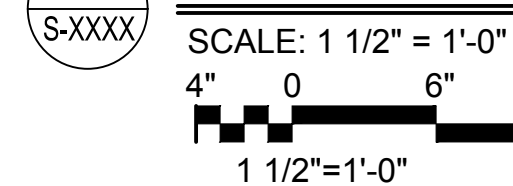
| | |
|--------------------------|----------------------------|
| TA-XX | BLDG XXXX |
| SUBMITTED FOR RELEASE | APPROVED FOR RELEASE |
| DISCIPLINE POC: J.WEAMER | STANDARDS MANAGER: T.ORUCH |

| | | | |
|--------------------------------|---------------------------------------------|-------|----------|
| Los Alamos NATIONAL LABORATORY | PO Box 1663 Los Alamos, New Mexico 87545 | SHEET | 4 |
| D.C.: UNCLASSIFIED | REVIEWER: E.SEWALT | DATE: | 06-02-14 |

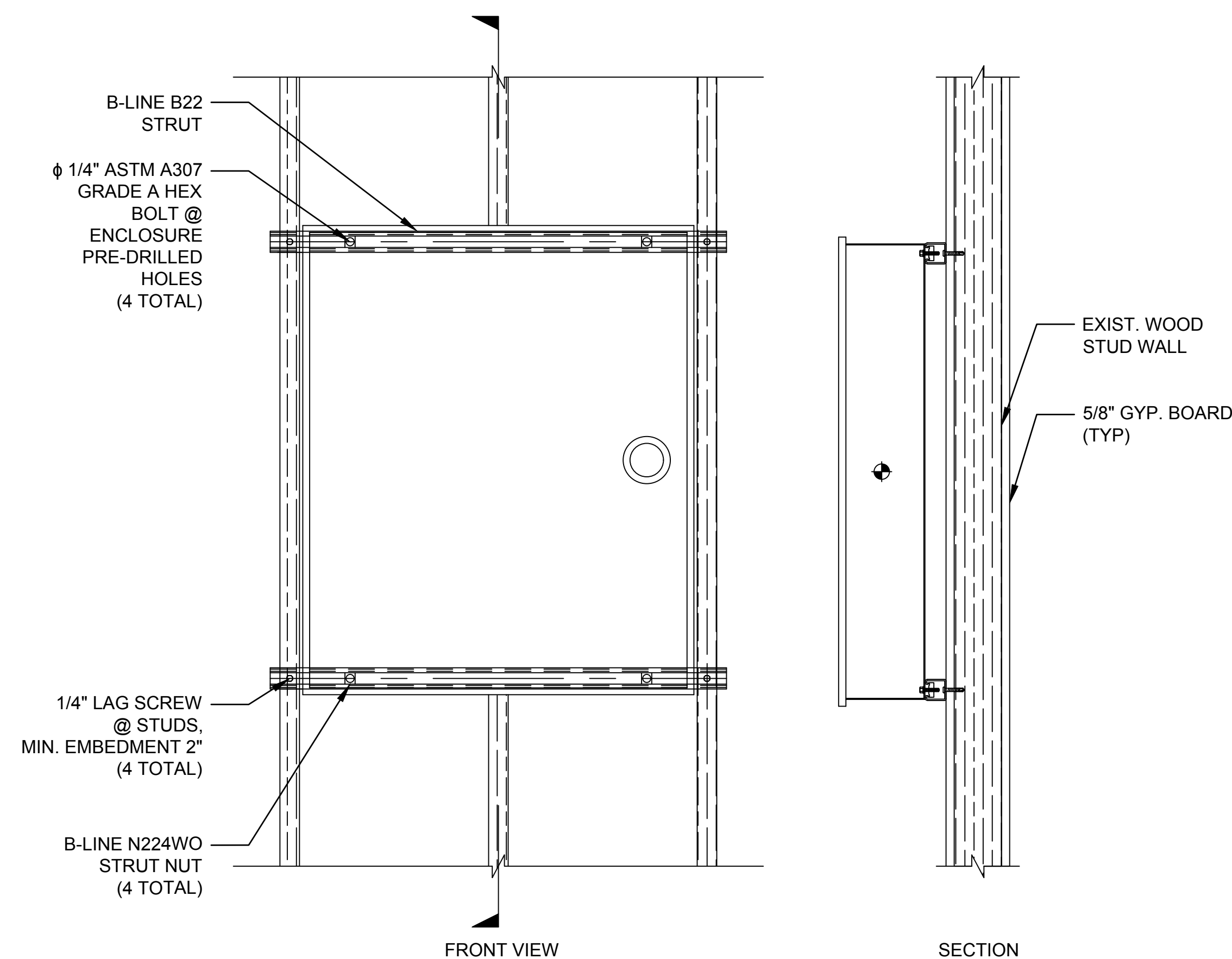
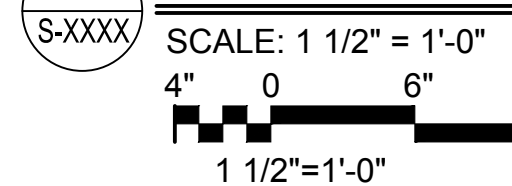
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| PROJECT ID | DRAWING NO | REV |
| CHAPTER 5 | ST-F1033-4 | 1 |



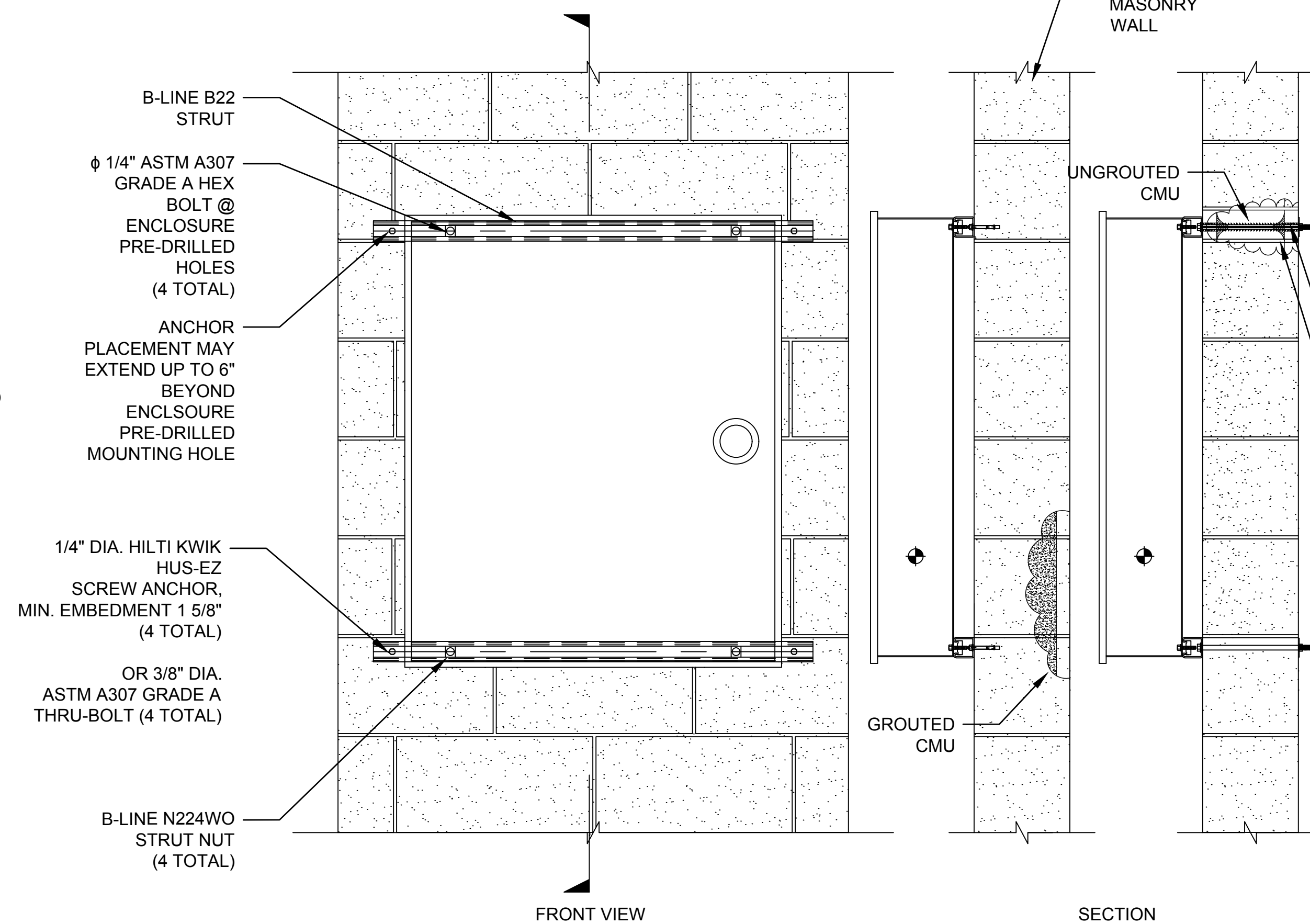
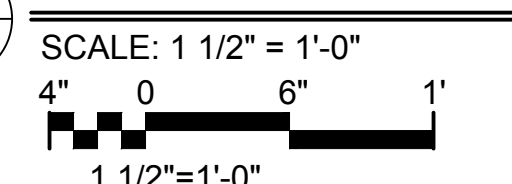
CFS STUD WALL DETAIL



CONCRETE WALL DETAIL



WOOD STUD WALL DETAIL



MASONRY WALL DETAIL

