APPLICATION FOR HCAI PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM)

OFFICE USE ONLY

APPLICATION #: OPM-0627

HCAI Preapproval of Manufacturer's Certification (OPM)

Type: ☐ New ☒ Renewal/Update

Manufacturer Information

Manufacturer: Hospital Systems, Inc.

Manufacturer's Technical Representative: Becca Teutle

Mailing Address: 750 Garcia Ave., Pittsburg, CA 94565

Telephone: (925) 427-7800 Email: bteutle@hsiheadwalls.com

Product Information

Product Name: HSI AXIOM & ELOQUENCE HEADWALLS

Product Type: Hospital Patient Headwalls

Product Model Number: AXIOM; ELOQUENCE

General Description: Patient Headwalls

Applicant Information

Applicant Company Name: Hospital Systems, Inc.

Contact Person: Becca Teutle

Mailing Address: 750 Garcia Ave., Pittsburg, CA 94565

Telephone: (925) 427-7800 Email: bteutle@hsiheadwalls.com

Title: President

Registered Design Professonal Preparing Engineering Recommendations

Company Name: CYS STRUCTURAL ENGINEERS, INC.

Name: Dieter Siebald California License Number: S4346

Mailing Address: 2710 Gateway Oaks Drive, Suite 190N, Sacramento, CA 95833

Telephone: (916) 920-2020 Email: dieters@cyseng.com

HCAI Special Seismic Certification Preapproval (OSP)

☐ Special Seismic Certification is preapproved under OSP OSP Number:

Certification Method

Testing in accordance with: ☐ ICC-ES AC156 ☐ FM 1950-16

☐ Other(s) (Please Specify):

*Use of criteria other than those adopted by the California Building Standards Code, 2022 (CBSC 2022) for component supports and attachments are not permitted. For distribution system, interior partition wall, and suspended ceiling seismic bracings, test criteria other than those adopted in the CBSC 2022 may be used when approved by HCAI prior to testing.

☒ Analysis

☐ Experience Data

☐ Combination of Testing, Analysis, and/or Experience Data (Please Specify):

HCAI Approval

Date: 2/7/2025

Name: Timothy Piland Title: Senior Structural Engineer

Condition of Approval (if applicable):

AXIOM & ELOQUENCE HEADWALLS

HSI Hospital Systems, Inc. The Headwall Experts

TABLE OF CONTENTS
OPM–0627

NOTES:

1. THESE DRAWINGS ARE PREPARED FOR HOSPITAL SYSTEM, INC., PITTSBURG, CA
2. THE CONTRACTOR AND INSPECTOR OF RECORD SHALL OBTAIN A COPY OF THIS PRE–APPROVAL FROM THE OFFICE OF STATEWIDE HEALTH PLANNING & DEVELOPMENT (OSHPD) PRE–APPROVAL PROGRAMS WEBSITE.
3. THIS PRE–APPROVAL COVERS THE SUPPORTS AND ATTACHMENTS OF THE EQUIPMENT TO THE SUPPORTING STRUCTURE. THE EQUIPMENT IS SUPPLIED BY THE MANUFACTURER. THE SCREWS & BACKING PLATES SHOWN IN THIS OPM SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR.

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

SHEET TITLE: TABLE OF CONTENTS

CYS STRUCTURAL ENGINEERS, INC.
2710 GATEWAY OAKS DRIVE, SUITE 190N
SACRAMENTO, CA 95833
TEL (916) 920-2020
www.cyseng.com

Job No:	24070
Date:	01-08-2025
Page:	1 of 10

AXIOM & ELOQUENCE HEADWALLS

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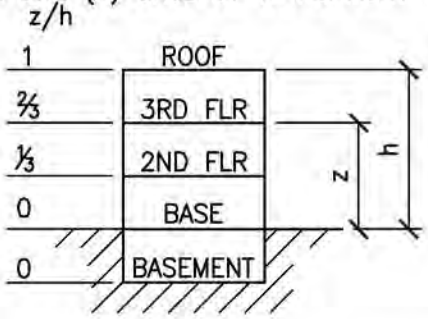
GENERAL NOTES:

1. THIS OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2022. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM MUST BE BASED ON THE CBC 2022.
2. IT IS THE RESPONSIBILITY OF THE STRUCTURAL ENGINEER OF RECORD FOR A SITE SPECIFIC PROJECT TO VERIFY:
   A. THE ADEQUACY OF THE NEW OR (E) STRUCTURE TO RESIST THE FORCES & WT SPECIFIED FOR EA EQUIP IN ADDITION TO ALL OTHER LOADS. PROVIDE & DESIGN SUPPLEMENTARY MEMBERS AS REQ.
   B. THAT THE INSTALLATION IS IN CONFORMANCE W/ THE CBC 2022 & W/ THE DETAILS SHOWN IN THIS PRE-APPROVAL.
   C. THAT THE ACTUAL EQUIP'S WT, CENTER OF GRAVITY (CG) LOCATION, ATTACHMENT LOCATIONS, ATTACHMENT DETAILS, & THE MATERIAL & GA OF THE EQUIP WHERE ATTACHMENTS ARE MADE, AGREE W/ THE INFO SHOWN ON THE PRE-APPROVAL DOCUMENTS.
   D. THAT THE PROJECT SPECIFIC VALUES OF S_{DS} & z/h RESULT IN SEISMIC FORCES THAT DO NOT EXCEED THE VALUES PROVIDED IN THE DESIGN CRITERIA.
3. ONE (1) CASE OF ATTACHMENT IS SPECIFIED & PRESENTED IN THIS PRE-APPROVAL:



BLDG ELEV

CASE 1: ATTACHMENT DETAILS LOCATED AT FLRS AT OR ABV THE BASE OF A BLDG (z/h<=1.0), IT IS ASSUMED THAT THE WALLS ARE BUILT OF 5/8" THK GWB OVER 20 GA MIN STUD WALLS. MAY BE USED AT ANY GEOGRAPHICAL LOCATION IN THE STATE OF CALIFORNIA WHERE S_{DS} IS LESS THAN OR EQ TO 2.5.

4. SHEET METAL SCREWS SHALL BE HILTI SELF-DRILLING & SELF-PIERCING SCREWS PER ICC-ES ESR-2196.
5. SHEET METAL SCREWS SHOWN TO PROJECT THROUGH FRAMING MEMBERS SHALL PROJECT BEYOND THE MEMBER BY 3 FULL THREADS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING THE PROPER SHEET METAL SCREW FEATURES UNLESS NOTED:
   A. WAFER HEAD FASTENERS SHALL BE USED AT FRAMING CONNECTIONS COVERED WITH PLYWOOD, GYPSUM BOARD OR OTHER MATERIAL THAT MAY BE IMPEDED BY THE PROJECTION OF THE FASTENER HEAD.
   B. HEX WASHER HEAD FASTENERS SHALL BE USED AT ALL OTHER CONDITIONS.
   C. THREAD PITCH SHALL BE COMPATIBLE WITH THE THICKNESS OF THE PARTS BEING CONNECTED. THINNER GAUGE PARTS REQUIRE COARSER THREADS COMPARED TO THICKER GAUGE PARTS.

SHEET TITLE: GENERAL NOTES

CYS STRUCTURAL ENGINEERS, INC.
2710 GATEWAY OAKS DRIVE, SUITE 190N
SACRAMENTO, CA 95833
TEL (916) 920-2020
www.cyseng.com

Job No:	24070
Date:	01-08-2025
Page:	2 of 10

AXIOM & ELOQUENCE HEADWALLS

HSI Headwall Systems, Inc. The Headwall Experts

ABBREVIATIONS:

Ω_o	SEISMIC OVERSTRENGTH FACTOR
@	AT
ABV	ABOVE
ALUM	ALUMININUM
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASD	ALLOWABLE STRESS DESIGN
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
BLDG	BUILDING
BLW	BELOW
CBC	CALIFORNIA BUILDING CODE
CG	CENTER OF GRAVITY
℄	CENTERLINE
CLR	CLEAR
CONC	CONCRETE
CONT	CONTINUOUS
DF	DOUG FIR
DIA (ø)	DIAMETER
DL	DEAD LOAD
(E)	EXISTING
EA	EACH
ELEV	ELEVATION
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EACH SIDE
f'c	MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE
FLG	FLANGE
FLR	FLOOR
FT (')	FOOT/FEET
Fp	HORIZONTAL SEISMIC FORCE PER ASCE 7-16 SEISMIC FORCE REQUIREMENTS
Fv	VERTICAL SEISMIC DESIGN FORCE PER ASCE 7-16 SECTION 12.4-4 SEISMIC DESIGN FORCE REQUIREMENTS
Fy	SPECIFIED MINIMUM YIELD STRESS OF STEEL
GA	GAUGE
GR	GRADE
GWB	GYPSUM WALLBOARD
HORIZ	HORIZONTAL
HT	HEIGHT
ICC	INTERNATIONAL CODE COUNCIL
IN (")	INCH
INFO	INFORMATION
JT	JOINT
KSI	KIPS PER SQUARE INCH
LBS	POUNDS
LL	LIVE LOAD
LRFD	LOAD AND RESISTANCE FACTOR DESIGN
MAX	MAXIMUM
MFR	MANUFACTURER
MIN	MINIMUM
MTL	METAL
NO. (#)	NUMBER OR POUNDS
NWC	NORMAL WEIGHT CONCRETE
OPM	OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION
OSHPD	OFFICE OF STATEWIDE HEALTH PLANNING & DEVELOPMENT
PCF	POUNDS PER CUBIC FOOT
PERP	PERPENDICULAR
PG	PAGE
ℙ	PLATE
PSI	POUNDS PER SQUARE INCH
PSF	POUNDS PER SQUARE FOOT
REQ	REQUIRED
SEOR	STRUCTURAL ENGINEER OF RECORD
SLWC	SAND-LIGHTWEIGHT CONCRETE
SMS	SHEET METAL SCREW
SPCG	SPACING
STL	STEEL
T	TENSION
THK	THICK/THICKNESS
Tu	ANCHORAGE TENSION REACTION DUE TO SEISMIC FORCE
TYP	TYPICAL
V	SHEAR
Vu	ANCHORAGE SHEAR REACTION DUE TO SEISMIC FORCE
W/	WITH
Wp	OPERATING WEIGHT
WS	WOOD SCREW
WT	WEIGHT

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

SHEET TITLE: ABBREVIATIONS

CYS STRUCTURAL ENGINEERS, INC.
2710 GATEWAY OAKS DRIVE, SUITE 190N
SACRAMENTO, CA 95833
TEL (916) 920-2020
www.cyseng.com

Job No:	24070
Date:	01-08-2025
Page:	3 of 10

AXIOM & ELOQUENCE HEADWALLS

DESIGN CRITERIA

SUPPORT & ATTACHMENT DESIGN IS PER 2022 CBC AT ASD LEVEL FORCES. OTHER RIGID COMPONENTS LOW DEFORMABILITY ELEMENTS & ATTACHMENTS.. PER TABLE 13.5-1 OF ASCE 7-16 SUPPLEMENT #1

$a_p = 1.0$ $R_p = 1.5$ $I_p = 1.5$

MAX W_p AS SHOWN ON PG 5.

FOR CASE 1 – UPPER FLRS ABV THE BASE, z/h <= 1.0

$S_{DS} = 2.5$

$0.7\ F_p = \frac{(0.7)\ 0.4 a_p\ S_{DS}}{(Rp/Ip)}\ W_p\ (1+2\ z/h) = 2.1\ W_p$ ASCE 7-16 (13.3-1)

$0.7\ F_p\ (MAX) = (0.7)\ 1.6\ S_{DS}\ IpW_p = 4.2\ W_p$ ASCE 7-16 (13.3-2)

$0.7\ F_p\ (MIN) = (0.7)\ 0.3\ S_{DS}\ IpW_p = 0.7875\ W_p$ ASCE 7-16 (13.3-3)

$0.7\ (E_v+F_v) = (0.7)\ \pm 0.2\ S_{DS}\ W_p = 0.35\ W_p$ ASCE 7-16 (12.4-4)

LOAD COMBINATIONS

$(1.0+0.14\ S_{DS})\ D+0.7E$ ASD

LOAD COMBINATIONS WERE RUN FOR 100% OF HORIZ FORCE IN ONE DIRECTION & 30% OF HORIZ FORCE IN THE PERP DIRECTION.

SHEET TITLE: DESIGN CRITERIA & LOAD COMBINATIONS

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SACRAMENTO, CA 95833
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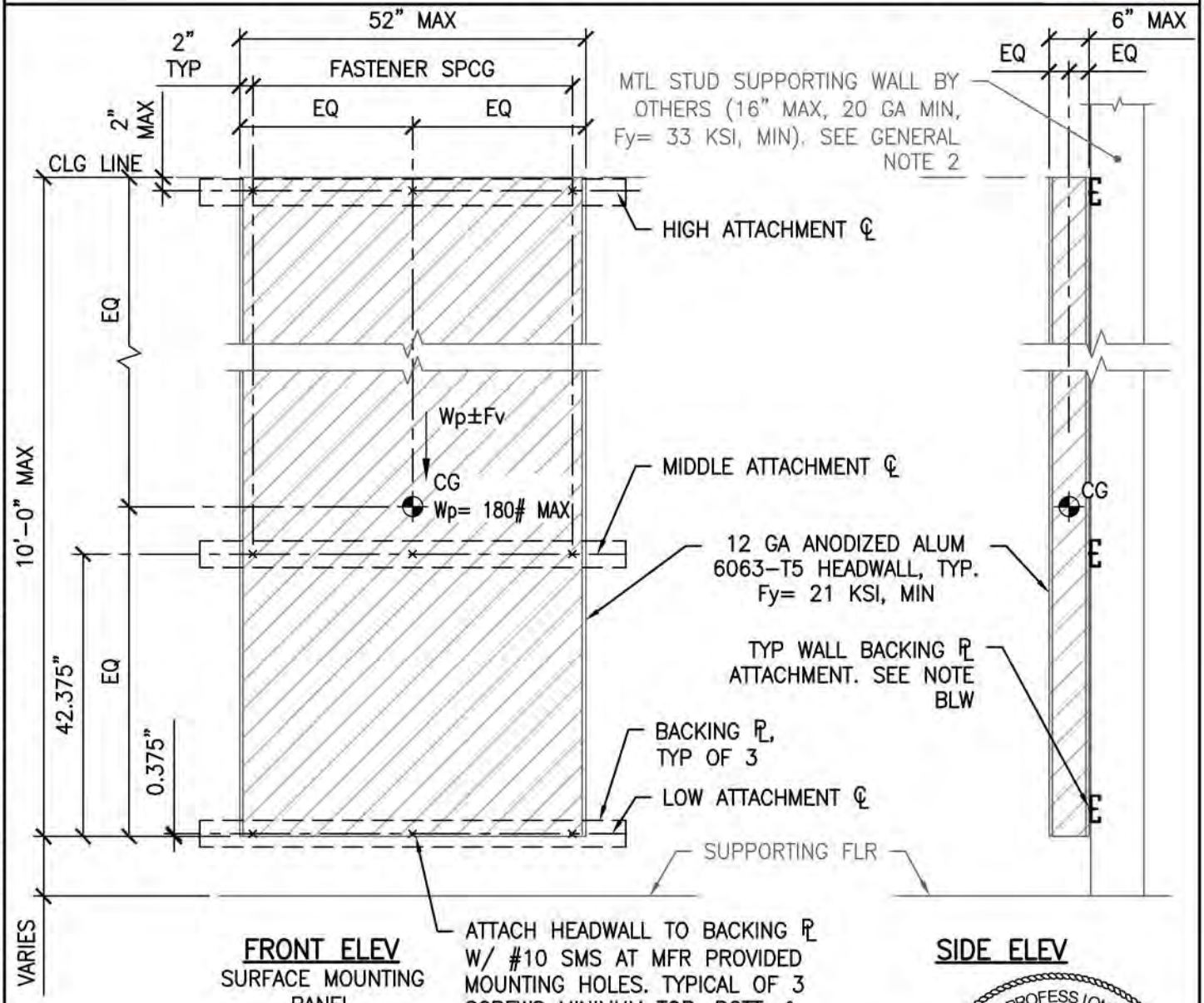
Job No:	24070
Date:	01-08-2025
Page:	4 of 10

AXIOM & ELOQUENCE HEADWALLS



FRONT ELEV
SURFACE MOUNTING PANEL

SIDE ELEV

NOTE:
FOR HEADWALL ATTACHMENT TO BACKING ℄ & BACKING ℄ ATTACHMENT TO STUD WALLS, SEE PGS 9 & 10.

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

SHEET TITLE: VERTICAL SURFACE MOUNTED HEADWALL ELEVATIONS & DETAILS

CYS STRUCTURAL ENGINEERS, INC.
2710 GATEWAY OAKS DRIVE, SUITE 190N
SACRAMENTO, CA 95833
TEL (916) 920-2020
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Job No:	24070
Date:	01-08-2025
Page:	5 of 10

AXIOM & ELOQUENCE HEADWALLS

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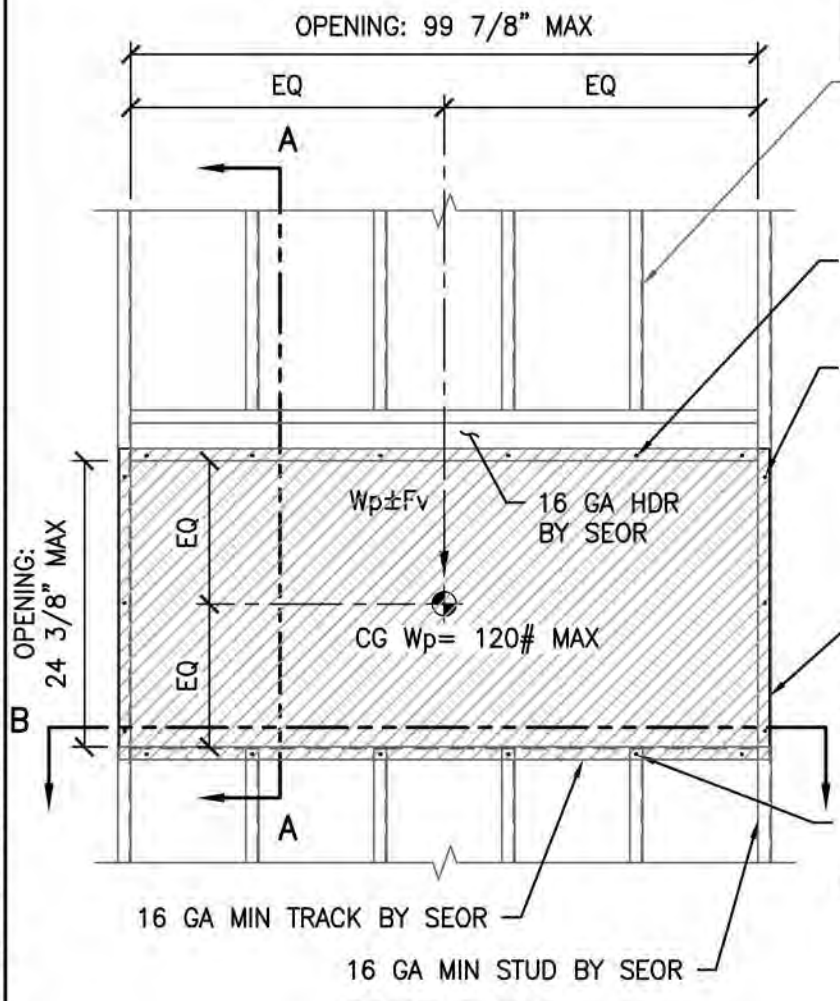
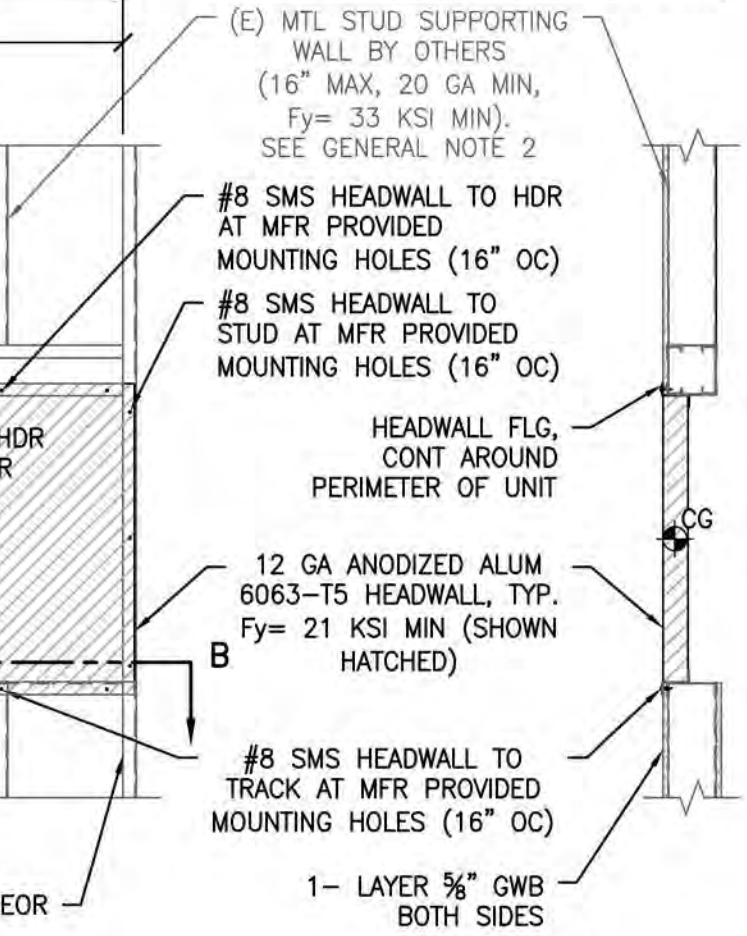
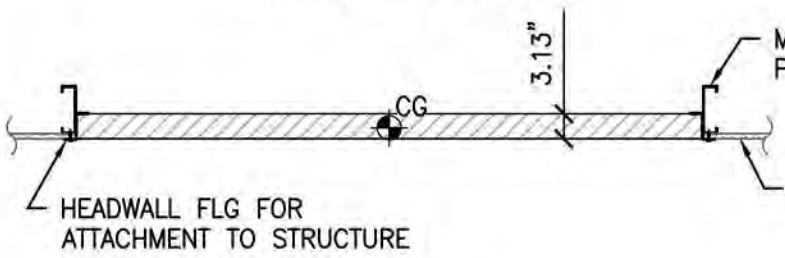
NOTE:
COORDINATE OPENING SIZE W/ HEADWALL MFR PRIOR TO INSTALLATION



FRONT ELEV
FLUSH MOUNTED PANEL



SECTION A-A



PLAN VIEW B-B

SHEET TITLE: AXIOM ELOQUENCE HORIZONTAL FLUSH MOUNTED HEADWALL ELEVATION & DETAIL

CYS STRUCTURAL ENGINEERS, INC.
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SACRAMENTO, CA 95833
TEL (916) 920-2020
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Job No:	24070
Date:	01-08-2025
Page:	6 of 10

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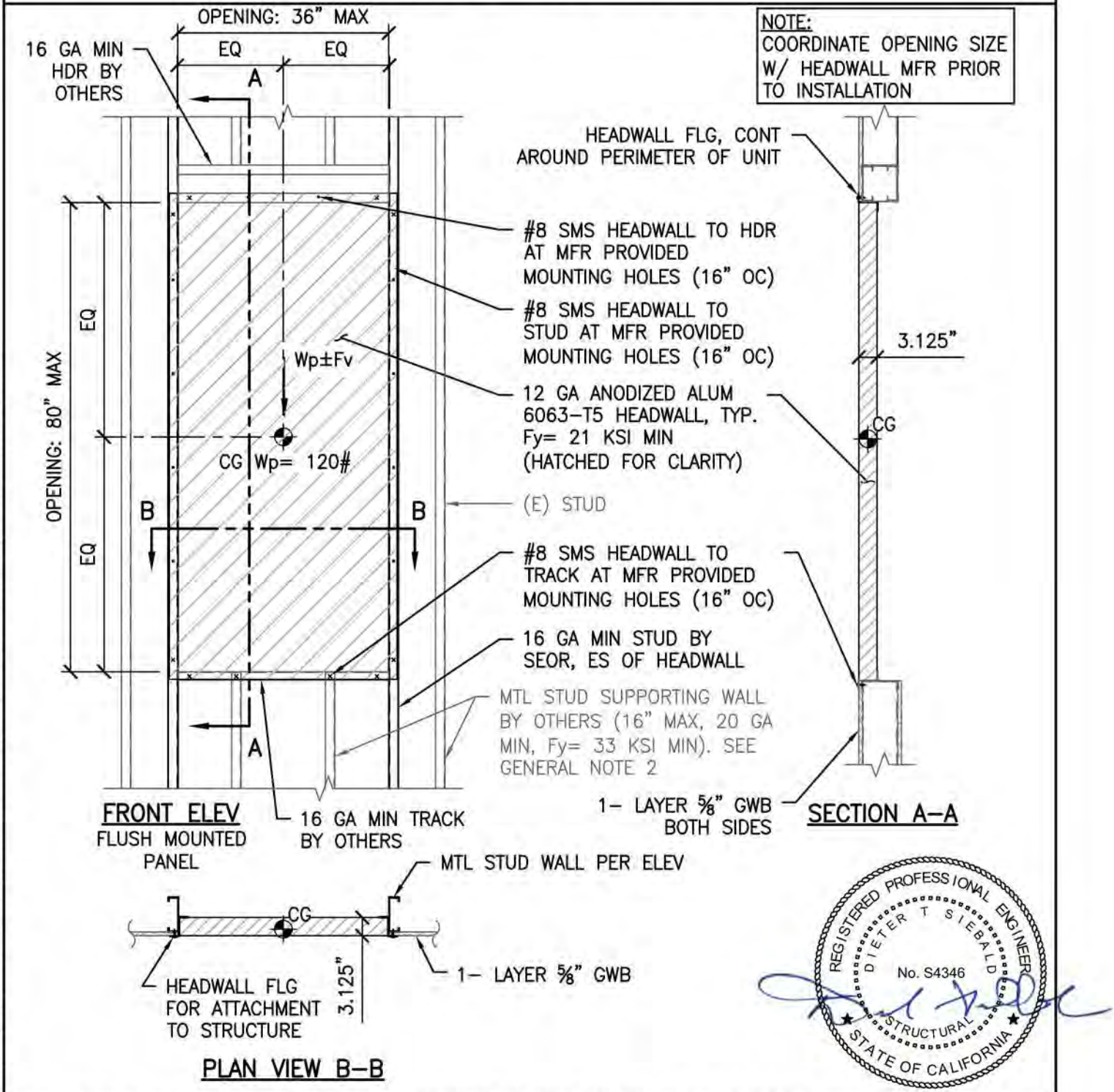


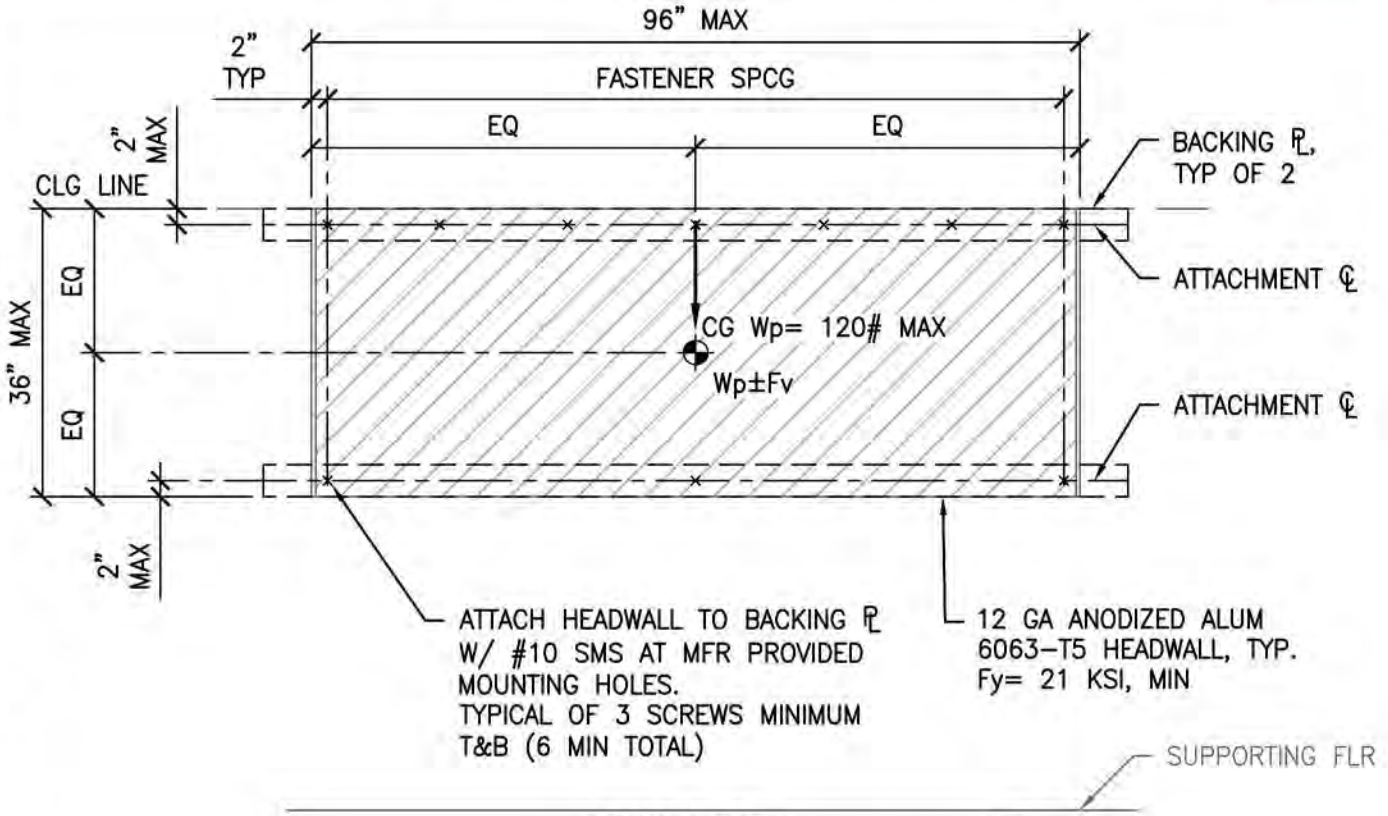
REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

SHEET TITLE: AXIOM ELOQUENCE VERTICAL FLUSH MOUNTED HEADWALL ELEVATIONS & DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2710 GATEWAY OAKS DRIVE, SUITE 190N
SACRAMENTO, CA 95833
TEL (916) 920-2020
www.cyseng.com

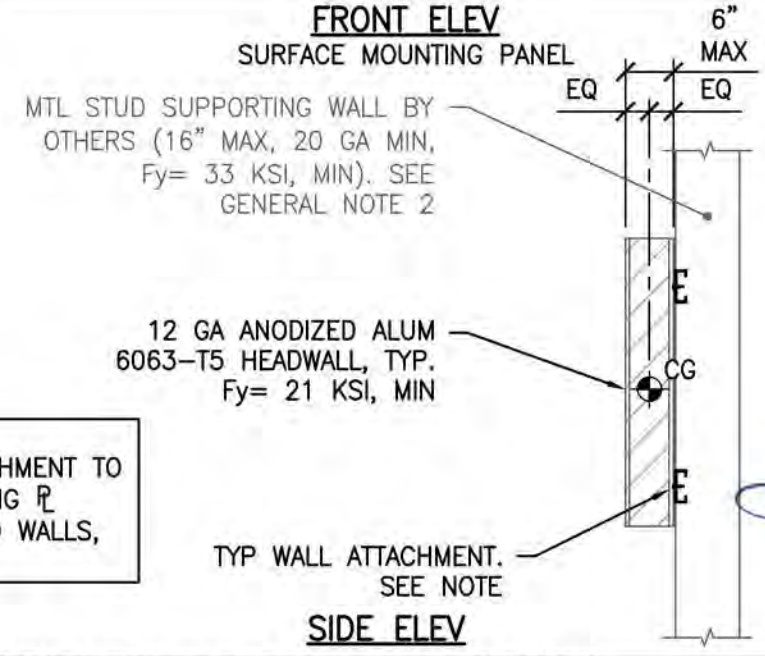
Job No:	24070
Date:	01-08-2025
Page:	7 of 10

AXIOM & ELOQUENCE HEADWALLS



FRONT ELEV

SURFACE MOUNTING PANEL



SIDE ELEV

NOTE:
FOR HEADWALL ATTACHMENT TO BACKING PL & BACKING PL ATTACHMENT TO STUD WALLS, SEE PGS 9 & 10.

SHEET TITLE: HORIZONTAL SURFACE MOUNTED HEADWALL ELEVATIONS & DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2710 GATEWAY OAKS DRIVE, SUITE 190N
SACRAMENTO, CA 95833
TEL (916) 920-2020
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Date:	01-08-2025
Page:	8 of 10

AXIOM & ELOQUENCE HEADWALLS

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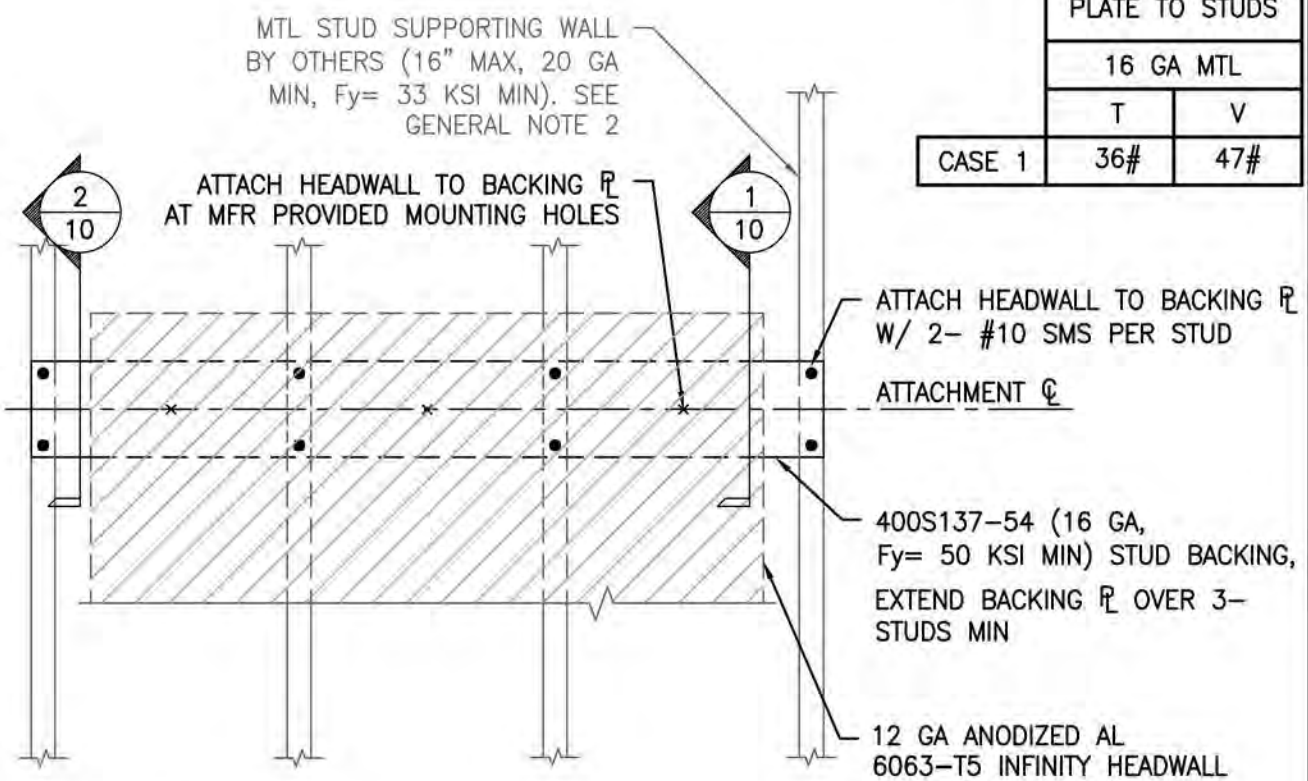
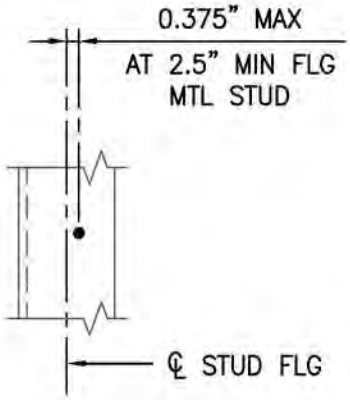
	MAX **ASD** FORCES AT EA SCREW (LBS) PLATE TO STUDS	
	16 GA MTL	
	T	V
CASE 1	36#	47#





CONNECTION PATTERN

SCREW INSTALL VARIANCE

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

SHEET TITLE: SURFACE MOUNTED HEADWALL ATTACHMENT TO STUD WALLS

CYS STRUCTURAL ENGINEERS, INC.
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SACRAMENTO, CA 95833
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Job No:	24070
Date:	01-08-2025
Page:	9 of 10

C:\Users\FalkR\AppData\Local\Temp\AcPublish_10664\S1_Axiom Headwall.dwg Time:Jan27,2025-02:37pm Login:FalkR Dimscale:1 LTScale:6

AXIOM & ELOQUENCE HEADWALLS

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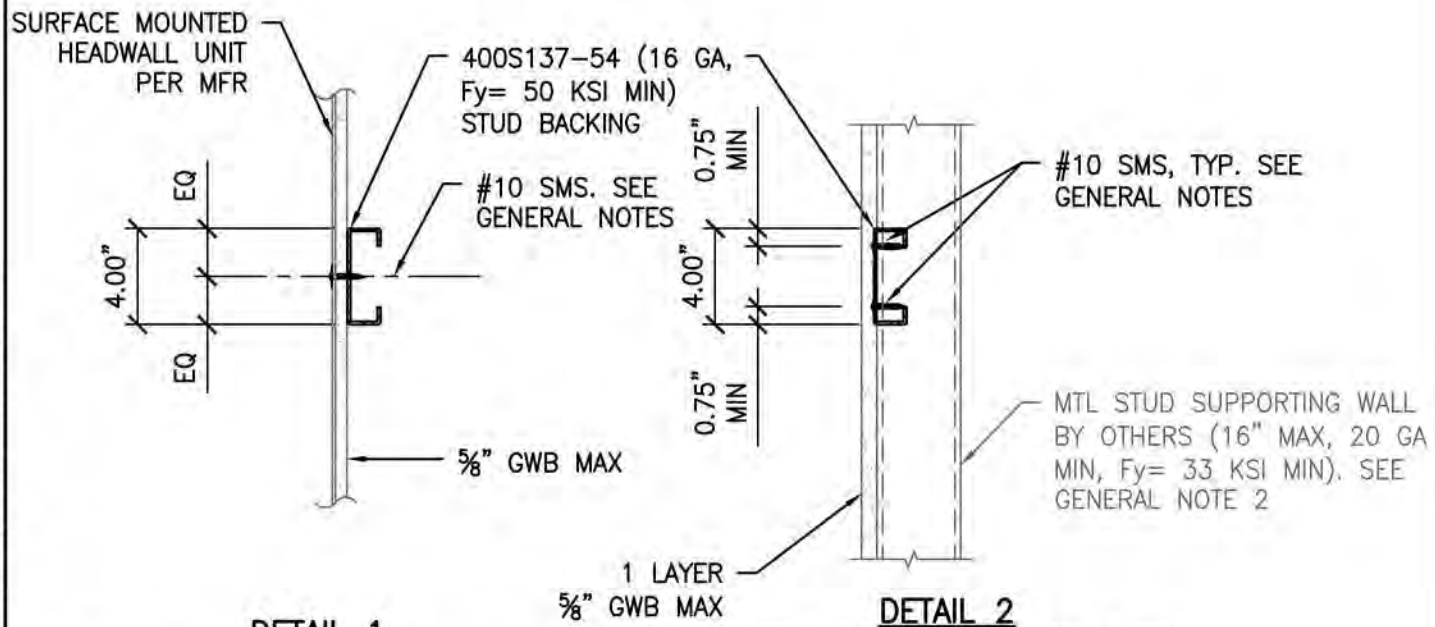
The Headwall Experts

NOTE:
HEADWALL UNIT NOT SHOWN IN SECTION B–B FOR CLARITY.



DETAIL 1
AT HEADWALL UNIT TO WALL BACKING ℄

DETAIL 2
AT WALL BACKING ℄ TO WALL STUD (DIRECT TO FRMG)

SHEET TITLE: SURFACE MOUNTED HEADWALL ATTACHMENT TO STUD WALLS

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Job No:	24070
Date:	01-08-2025
Page:	10 of 10