



**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION**

**APPLICATION FOR OSHPD PREAPPROVAL OF
MANUFACTURER'S CERTIFICATION (OPM)**

OFFICE USE ONLY

APPLICATION #: OPM-0576

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: New Renewal/Update

Manufacturer Information

Manufacturer: ABBOTT

Manufacturer's Technical Representative: Scott Hansen

Mailing Address: 1921 Hurd Drive, Irving, TX 75038

Telephone: (972) 518-6658

Email: scott.hansen@abbott.com

Product Information

Product Name: Medical Analyzer

Product Type: Automated Laboratory Blood and Plasma Analyzer

Product Model Number: Alinity s

General Description: The Alinity s is an automated instrument used for blood and plasma screening. The instrument can be installed in stand-alone or integrated configurations. The instrument can be interfaced with an Abbott a3600 Accelerator Automation Track to automate sample delivery to the instrument.

Applicant Information

Applicant Company Name: ABBOTT

Contact Person: Scott Hansen

Mailing Address: 1921 Hurd Drive, Irving, TX 75038

Telephone: (972) 518-6658

Email: scott.hansen@abbott.com

Title: Mechanical Engineering Manager

Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY





**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION**

Registered Design Professional Preparing Engineering Recommendations

Company Name: CYS STRUCTURAL ENGINEERS, INC.

Name: Dieter Siebald

California License Number: S4346

Mailing Address: 2495 Natomas Park Drive, Suite 650, Sacramento, CA 95833

Telephone: (916) 920-2020

Email: dieters@cyseng.com

OSHPD 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, 2019 (CBSC 2019) 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 2019 may be used when approved by OSHPD prior to testing.

Analysis

Experience Data

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

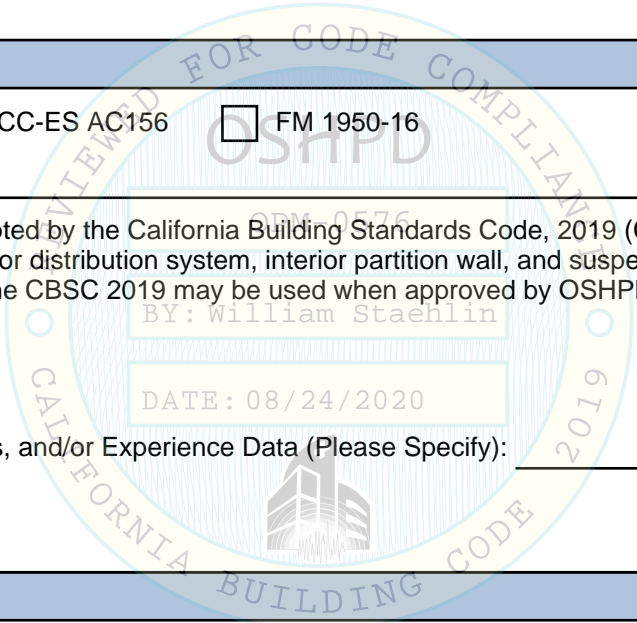
OSHPD Approval

Date: 8/24/2020

Name: William Staehlin

Title: Senior Structural Engineer

Condition of Approval (if applicable): _____

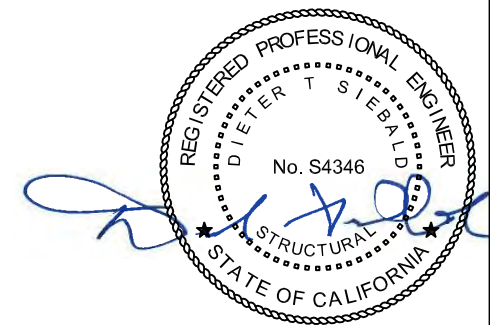
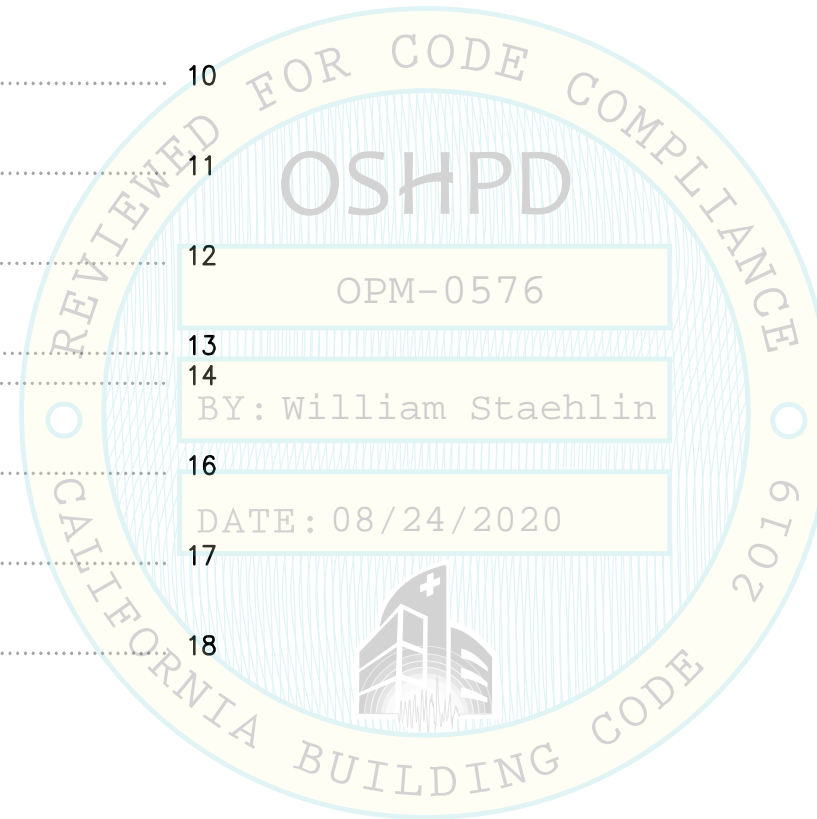


ABBOTT LABORATORIES
ALINITY s Interface INSTRUMENTS
OPM-0576-19

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NOTES: THESE DRAWINGS ARE PREPARED FOR ABBOTT LABORATORIES, AN ILLINOIS CORPORATION, ABBOTT PARK, ILLINOIS.

1. THE CONTRACTOR AND THE INSPECTOR SHALL OBTAIN A COPY OF THIS PRE-APPROVAL FROM THE OSHPD WEBSITE.
2. THIS PRE-APPROVAL COVERS THE SUPPORTS AND ATTACHMENTS OF THE LABORATORY EQUIPMENT TO THE STRUCTURE.

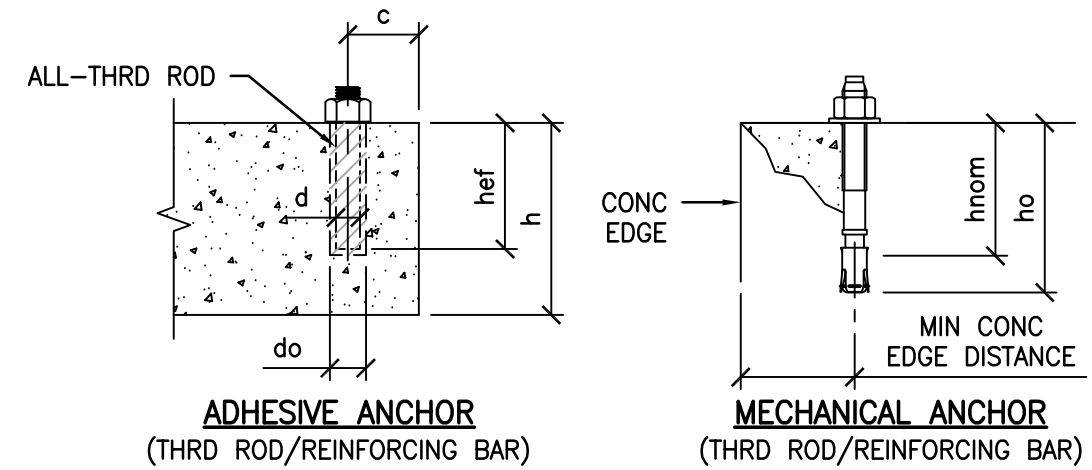


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SHEET TITLE: SHEET INDEX				Rev	Description	Date	Job No: 18156
ABBOTT ALINITY s Interface INSTRUMENTS EQUIPMENT SUPPORTS & ATTACHMENTS							Date: 7/21/2020
CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833				TEL (916) 920-2020	www.cyseng.com		By: MTC
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GENERAL NOTES:

1. THIS OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2019. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2019.
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 EXISTING STRUCTURE TO RESIST THE FORCES AND WEIGHT SPECIFIED FOR EACH COMPONENT IN ADDITION TO ALL OTHER LOADS. PROVIDE AND DESIGN SUPPLEMENTARY MEMBERS AS REQUIRED.
 - B. THAT THE ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY SLAB EDGES OR OPENINGS.
 - C. THAT THE ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY NEW OR EXISTING ANCHORS. THE SPACING SHOWN IN THE TEST VALUES TABLE ON THIS PAGE IS THE REQUIRED SPACING FROM ANCHORS OF OTHER DIAMETERS AND EMBEDMENTS WILL VARY.
 - D. THAT THE INSTALLATION IS IN CONFORMANCE WITH THE 2019 CBC AND WITH THE DETAILS SHOWN IN THIS PRE-APPROVAL.
 - E. THAT THE ACTUAL EQUIPMENT'S WEIGHT, CENTER OF GRAVITY (CG) LOCATION, ANCHOR LOCATIONS, ANCHOR DETAILS, AND THE MATERIAL AND GAGE OF THE EQUIPMENT WHERE ATTACHMENTS ARE MADE, AGREE WITH THE INFORMATION SHOWN ON THE PRE-APPROVAL DOCUMENTS.
- 3A. EXPANSION ANCHORS INSTALLED IN NORMAL WEIGHT OR SAND-LIGHTWEIGHT CONCRETE SHALL BE STAINLESS STEEL HILTI KB-TZ EXPANSION ANCHORS COMPLYING WITH ICC-ES ESR-1917 REVISED JANUARY 2020. ADHESIVE ANCHORS INSTALLED IN NORMAL WEIGHT CONCRETE SHALL BE ASTM F593 CW1 (316) INSTALLED USING HILTI HIT-RE 500 V3 ADHESIVE COMPLYING WITH ICC-ES ESR-3814 REVISED JANUARY 2020.
- B. INSTALLATION: INSTALL THE POST-INSTALLED DRILLED-IN CONCRETE ANCHORS IN ACCORDANCE WITH THE REQUIREMENTS GIVEN IN THE ICC EVALUATION REPORT FOR THE SPECIFIC ANCHOR AND THE PARAMETERS GIVEN IN THE TABLES ON THIS PAGE.
- C. TESTING:
 - JOB TESTING: FOR VERIFYING SATISFACTORY INSTALLATION WORKMANSHIP, PERFORM JOB SITE TESTING IN ACCORDANCE WITH THE TEST LOAD TABLE PROVIDED IN THIS DOCUMENT. TEST 50% OF THE INSTALLED ANCHORS. FOR TENSION TESTING, THE TEST LOAD MAY BE APPLIED BY ANY METHOD THAT WILL EFFECTIVELY MEASURE THE TENSION IN THE ANCHOR SUCH AS DIRECT PULL WITH A HYDRAULIC JACK OR CALIBRATED SPRING LOADING DEVICES. FOR TORQUE TESTING, THE TEST LOAD SHALL BE APPLIED WITH A CALIBRATED TORQUE WRENCH. ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE INSPECTOR OF RECORD. IF ANY ANCHOR FAILS THE TEST, TEST ALL ANCHORS. THE TEST SHALL BE PERFORMED 24 HOURS OR MORE AFTER INSTALLATION. TESTING MAY BE DONE PRIOR TO EQUIPMENT INSTALLATION. ALSO REFER TO CBC 1910A.5.5 "TESTS FOR POST-INSTALLED ANCHORS IN CONCRETE".
 - FAILURE/ACCEPTANCE CRITERIA: THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
 - HYDRAULIC RAM METHOD: APPLY AND HOLD TEST LOAD FOR A MINIMUM OF 15 SECONDS. THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD WHERE WASHERS ARE USED. A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE OR BY A CONTINUOUS LOSS OF JACKING PRESSURE.
 - TORQUE WRENCH METHOD (EXPANSION ANCHORS ONLY): THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN THE FOLLOWING LIMITS: WEDGE TYPE: ONE-HALF (1/2) TURN OF THE NUT.
- D. TEST VALUES: APPLY TEST LOADS TO ANCHORS WITHOUT REMOVING THE NUT.



POST-INSTALLED <u>ADHESIVE</u> ANCHOR SCHEDULE							
ANCHOR TYPE & DIA (INCH) d	HOLE DIA (INCH) do	EFFECTIVE EMBED (INCH) hef	MIN CONC THICKNESS (INCH) h	MIN CONC EDGE DISTANCE (INCH) c	MIN AB SPACING UNO (INCH)	TENSION TEST LOAD (LBS)	CONDITION OF ANCHORAGE
1/2" HILTI HAS-R (ASTM F593 CW1 316 SS) ALL THRD ROD	0.5625	2.75	4	12	6.75	2360	CASE 2

POST-INSTALLED <u>MECHANICAL</u> ANCHOR SCHEDULE									
ANCHOR TYPE & DIA (INCH)	INSTALLATION EMBED (INCH) hnom	EFFECTIVE EMBED (INCH) heff	HOLE DEPTH (INCH) ho	MIN CONC THICKNESS (INCH) h	MIN CONC EDGE DISTANCE (INCH)	MIN AB SPACING UNO (INCH)	TEST LOAD		CONDITION OF ANCHORAGE
							TENSION LOAD (LBS)	TORQUE (FT-LBS)	
KB-TZ 304 SS 0.375"φ	2.3125	2.00	2.625	SEE DTLs	12	6.75 PARALLEL TO MTL DECK FLUTES	1350	25	CASE 1

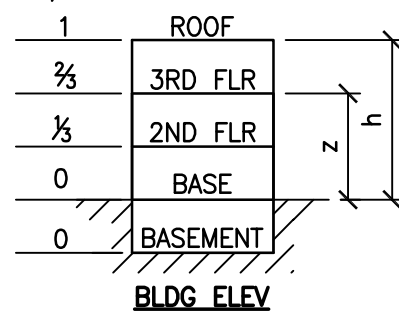


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GENERAL NOTES CONTINUED:

4. TWO (2) CONDITIONS OF SUPPORTS & ATTACHMENTS ARE SPECIFIED AND PRESENTED IN THIS PRE-APPROVAL:



CASE 1: SUPPORTS & ATTACHMENTS DTLS LOCATED AT UPPER FLRS ABV THE BASE OF A BLDG ($z/h \leq 1.0$), IT IS ASSUMED THAT THE FLRS ARE BUILT OF A MIN $3\frac{1}{4}$ " NWC OR SLWC TOPPING OVER MTL DECK ($f'c = 3000$ PSI, MIN).

CASE 2: SUPPORTS & ATTACHMENTS DTLS LOCATED AT OR BLW THE BASE OF A BLDG ($z/h = 0$). THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 4" NWC SLAB ($f'c = 3000$ PSI, MIN).

WELDING NOTES:

1. WELDING OF SEISMIC BRACKETS SHALL BE PERFORMED BY CERTIFIED WELDERS USING E70XX ELECTRODES (UNO). THE USE OF E70-T4 WELDING WIRE IS NOT ALLOWED FOR ANY APPLICATION. WELDS SHALL BE IN CONFORMITY WITH THE STRUCTURAL WELDING CODE-STEEL OF THE AMERICAN WELDING SOCIETY (AWS D1.1-15). SUBMIT WELDING PROCEDURES AND SPECIFICATIONS TO OWNER'S TESTING LABORATORY FOR REVIEW AND APPROVAL PRIOR TO BEGINNING SEISMIC BRACKET FABRICATION.
2. WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM SIZE WELDS AS SPECIFIED IN AISC 360-16, SECTION J2.2b.

DESIGN CRITERIA

DESIGN OF SUPPORTS & ATTACHMENTS FOR ALL EQUIP COMPONENTS IS PER 2019 CBC

ASCE 7-16 TABLE 13.6-1
OTHER MECHANICAL OR ELECTRICAL COMPONENTS

$S_{ps} = 2.5$

$I_p = 1.5$

$\alpha_p = 1.0$

$R_p = 1.5$

$\Omega_o = 1.5$

W_p AS NOTED ON COMPONENT BASE PLANS & ELEV

SEISMIC LOADS FOR CASE 1 - UPPER FLRS ABV THE BASE, $z/h \leq 1.0$ (LRFD)

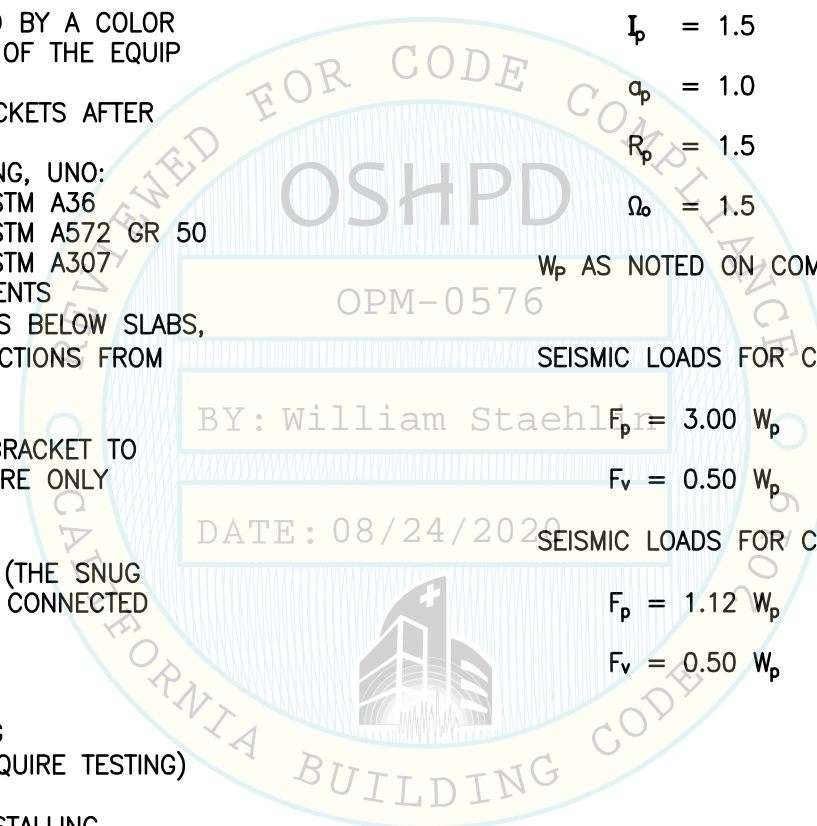
$F_p = 3.00 W_p$

$F_v = 0.50 W_p$

SEISMIC LOADS FOR CASE 2 - SLAB AT OR BLW BASE, $z/h = 0$ (LRFD)

$F_p = 1.12 W_p$

$F_v = 0.50 W_p$



5. THIS PRE-APPROVAL MAY BE USED AT ANY GEOGRAPHICAL LOCATION IN THE STATE OF CALIFORNIA WHERE S_{ps} IS LESS THAN OR EQ TO 2.50.
6. COORDINATE THE ANCHOR BOLT LAYOUT WITH THE COMPONENT IN THE FIELD PRIOR TO SETTING ANCHOR BOLTS.
7. ANCHOR BRACKETS SHALL BE PAINTED WITH A RUST INHIBITIVE PRIMER FOLLOWED BY A COLOR COAT SELECTED BY THE HOSPITAL FACILITY OR MATCH THE COLOR OF THE BASE OF THE EQUIP IF A COLOR IS NOT SPECIFIED BY THE HOSPITAL.
8. FASTENERS AND ASSOCIATED HARDWARE SHALL BE FIELD PAINTED TO MATCH BRACKETS AFTER INSTALLATION IS COMPLETE.
9. STRUCTURAL STEEL SHAPES AND CONNECTORS SHALL CONFORM TO THE FOLLOWING, UNO:
 - A. PLATES, ANGLES, BARS & MISCELLANEOUS SHAPES ASTM A36
 - B. PLATES AS NOTED ASTM A572 GR 50
 - C. MACHINE BOLTS ASTM A307
10. CONTRACTOR SHALL FURNISH AND INSTALL THE SEISMIC SUPPORTS AND ATTACHMENTS (INCLUDING SEISMIC BRACKETS, EXPANSION ANCHORS, THRU-BOLTS, STRUT PLATES BELOW SLABS, HIGH STRENGTH BOLTS, ETC.) IN CONJUNCTION WITH COMPONENT SETTING INSTRUCTIONS FROM ABBOTT FIELD INSTALLATION PERSONNEL.
11. DRAWING SCALES ARE NOT PROVIDED. DO NOT SCALE OFF OF THESE DRAWINGS. THE INTENT OF THESE DRAWINGS IS TO SHOW HOW TO FABRICATE THE SEISMIC BRACKET TO ANCHOR THE EQUIPMENT SPECIFIED. THE REPRESENTATIONS OF THE EQUIPMENT ARE ONLY INTENDED TO SHOW THE COORDINATION WITH THE SEISMIC BRACKETS.
12. BOLTS THROUGH CONCRETE ON METAL DECK:
 - A. BOLTS SHALL BE TORQUED BY $\frac{3}{4}$ TURN OF THE NUTS AFTER SNUG TIGHT (THE SNUG TIGHT CONDITION IS DEFINED AS THE TIGHTNESS REQUIRED TO BRING THE CONNECTED PLIES INTO FIRM CONTACT) CONDITION IS ACHIEVED, UNO.
 - B. THRU BOLT HOLES SHALL BE $\frac{1}{16}$ " LARGER THAN BOLT SIZE (HOLE SIZE = BOLT SIZE + $\frac{1}{16}$ ")
 - C. THRU BOLTS IN CONCRETE SHALL RECEIVE SPECIAL INSPECTION & TESTING (THRU BOLTS WITH STEEL-TO-STEEL CONNECTION IN TENSION DO NOT REQUIRE TESTING) IN ACCORDANCE WITH REQUIREMENTS FOR POST-INSTALLED ANCHORS.
13. TAKE CARE TO AVOID DAMAGING REBAR OR POST-TENSIONING TENDONS WHEN INSTALLING ANCHORS TO CONCRETE.



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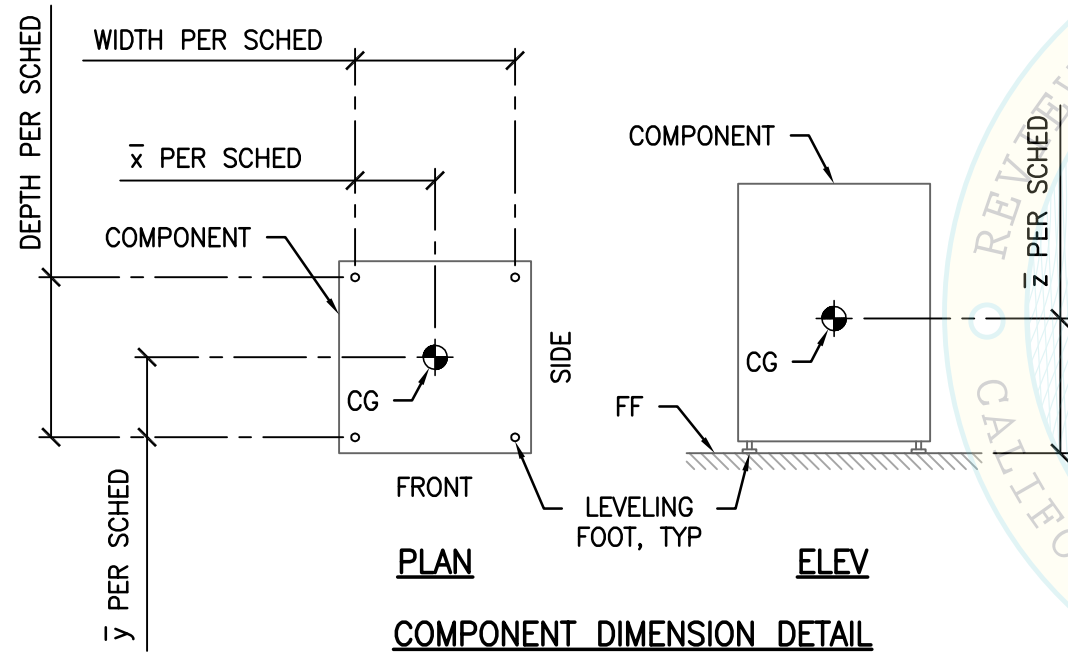
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COMPONENT DIMENSIONS SCHED:

NO.	COMPONENT	LEVELING FOOT DIMS		CG LOCATION			OP WT (W _p)	PG
		WIDTH	DEPTH	\bar{x}	\bar{y}	\bar{z}		
1.	TYPICAL TRACK MODULE ⁽²⁾	90" MAX	11.50"	MIDSPAN	5.75"	26.9"	165#	7,8
2.	ALINITY s	71.30"	31.30"	34.9"	16.5"	35.5"	1749#	10
3.	INTERFACE MODULE	13.01"	5.85"	7.65"	3.50"	20.39"	44#	11

NOTES:

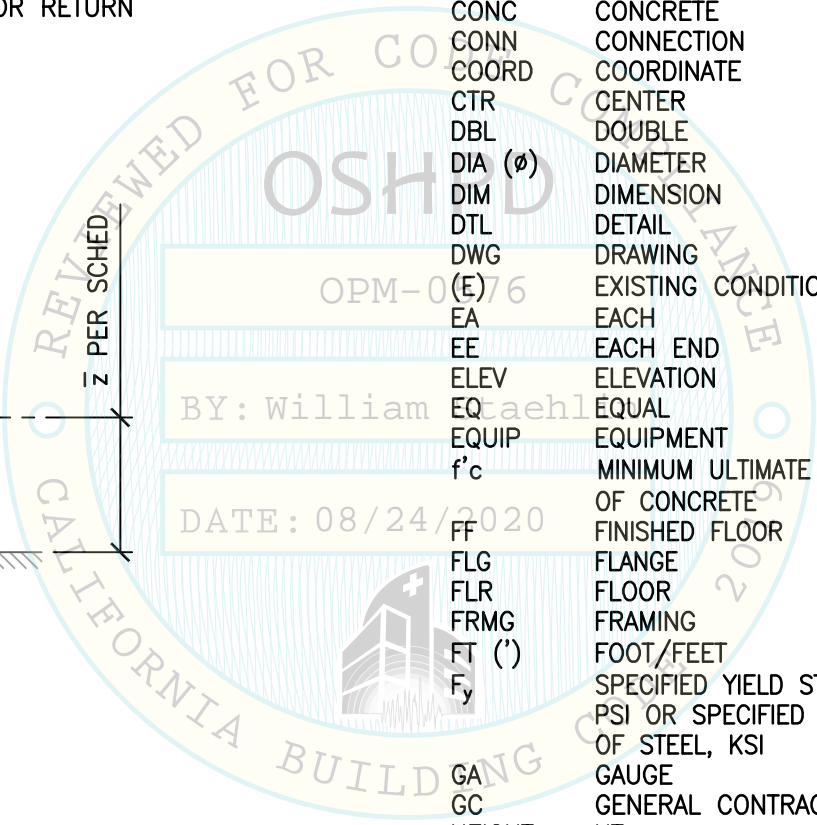
- SEE COMPONENT DIMENSION DTL FOR MORE INFO.
- COMPONENT OP WT (W_p) INCLUDES WT OF TWO TOP TRACKS, BOTT TRACK, & TWO SUPPORT FRAMES AS SHOWN ON PG 7.
- THE DIMS FURNISHED ABV ARE NOT INTENDED TO BE USED TO LAYOUT THE COMPONENTS. THIS INFORMATION IS BEING FURNISHED FOR USE BY THE SEOR.
- FRAMES FOR RETURN LANE WEIGH APPROXIMATELY 7 LBS EA. WT IN TABLE IS FOR RETURN LANE ONLY.



COMPONENT DIMENSION DETAIL

ABBREVIATIONS:

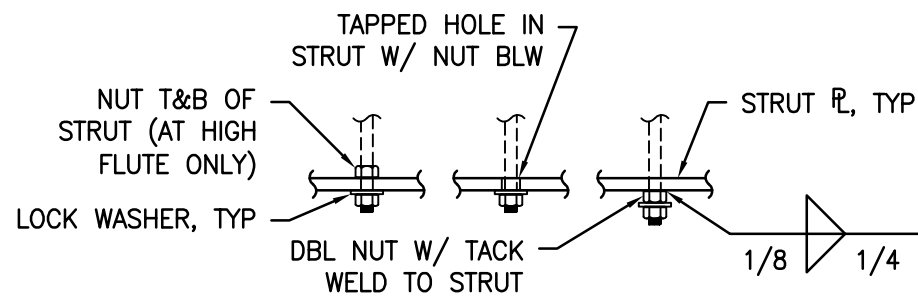
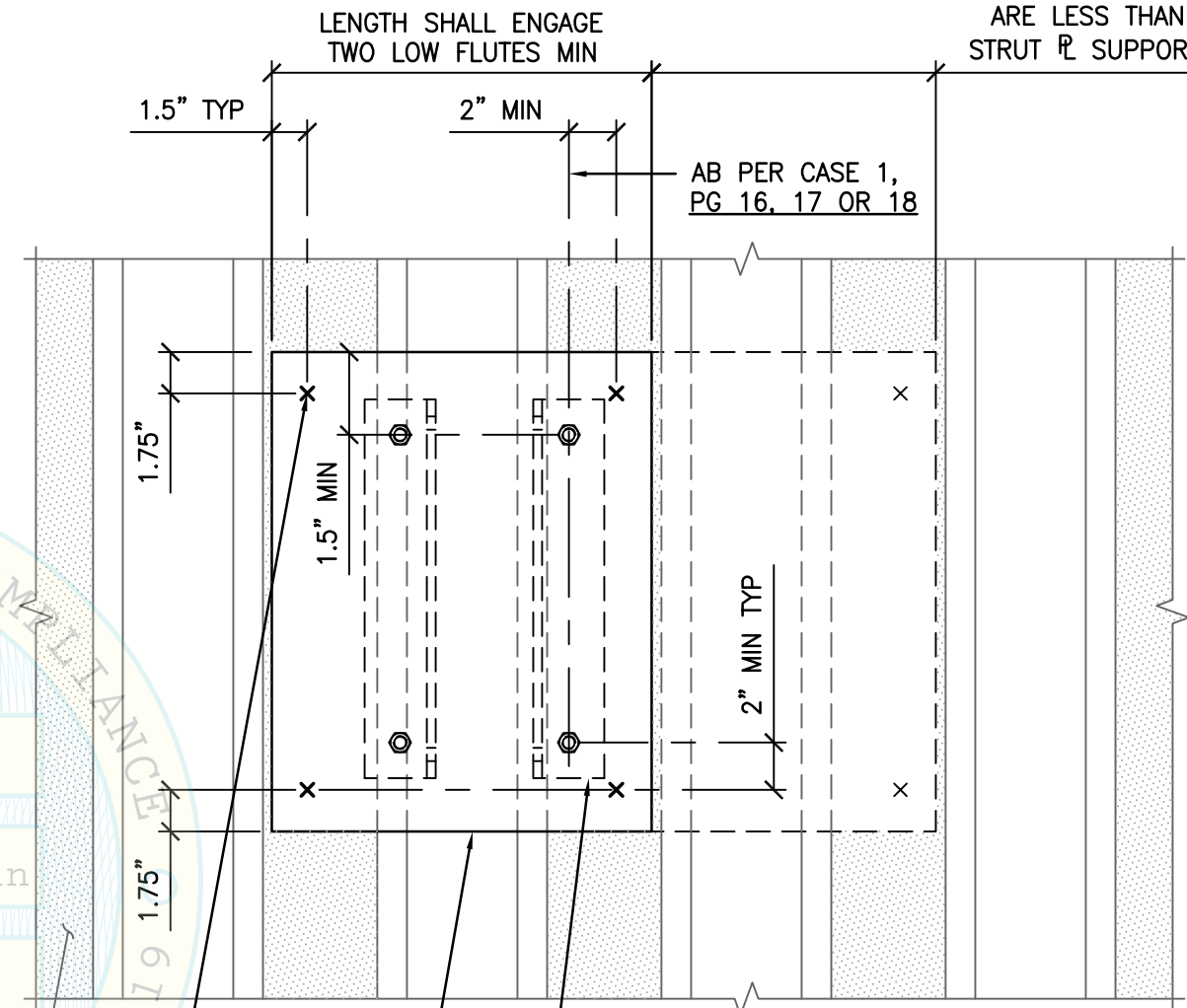
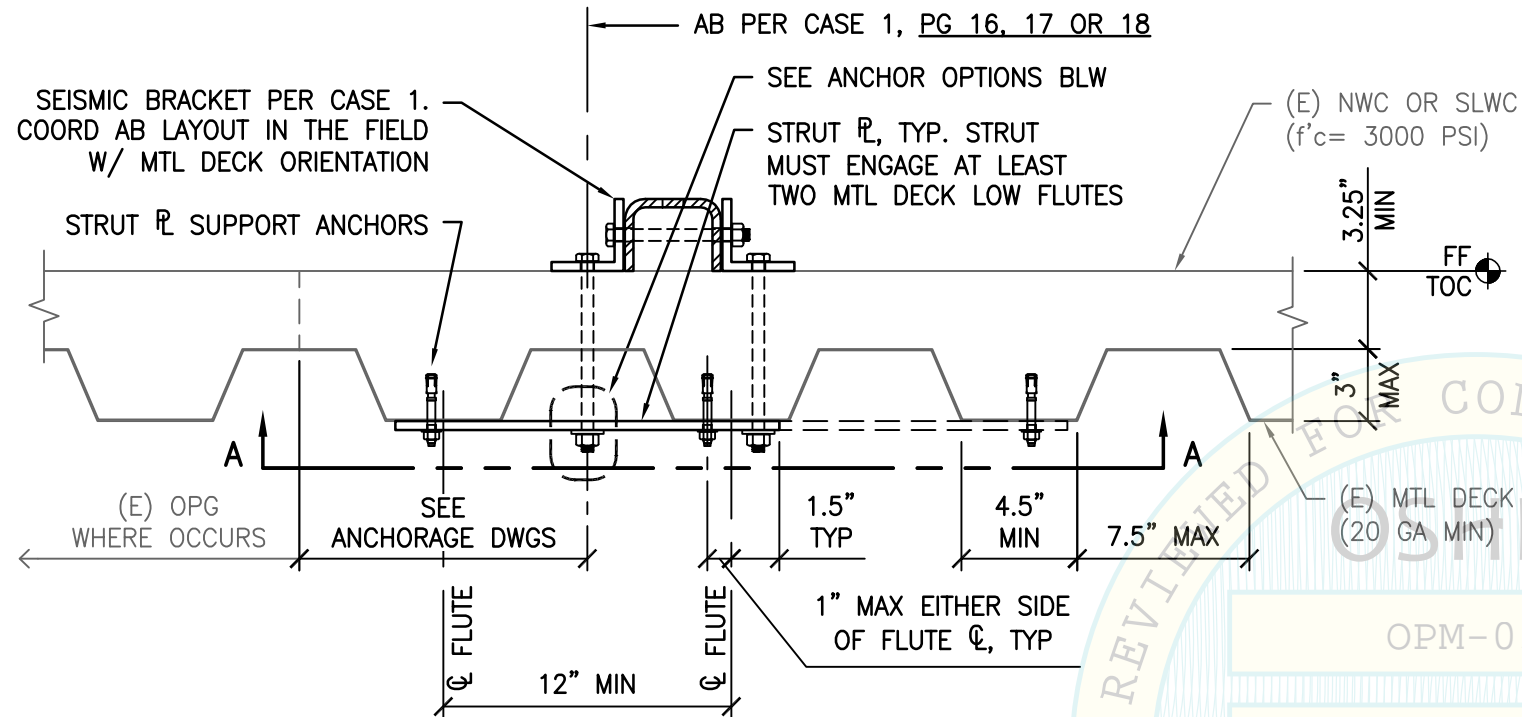
@	AT	L	LENGTH
AB	ANCHOR BOLT	LBS	POUNDS
ABV	ABOVE	LRFD	LOAD & RESISTANCE FACTOR DESIGN
ADJ	ADJACENT	LFRS	LATERAL FORCE RESISTING SYSTEM
AISC	AMERICAN INSTITUTE FOR STEEL CONSTRUCTION	MAX	MAXIMUM
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	MFR	MANUFACTURER
ASD	ALLOWABLE STRENGTH DESIGN	MIN	MINIMUM
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS	MTL	METAL
AWS	AMERICAN WELDING SOCIETY	NO. (#)	NUMBER OR POUNDS
BLDG	BUILDING	NTS	NOT TO SCALE
BLW	BELOW	NS&FS	NEAR SIDE & FAR SIDE
BOTT	BOTTOM	NWC	NORMAL WEIGHT CONCRETE
CBC	CALIFORNIA BUILDING CODE	OPG	OPENING
CG	CENTER OF GRAVITY	OSHPD	OFFICE OF STATEWIDE HEALTH PLANNING & DEVELOPMENT
CJP	COMPLETE JOINT PENETRATION	PG(S)	PAGE(S)
CLR	CLEAR OR CLEARANCE	P	PLATE
CLSE	CALIFORNIA LICENSED STRUCTURAL ENGINEER	PSI	POUNDS PER SQUARE INCH
CL	CENTERLINE	R	RADIUS
CONC	CONCRETE	REQ	REQUIRED
CONN	CONNECTION	SEOR	STRUCTURAL ENGINEER OF RECORD
COORD	COORDINATE	SIM	SIMILAR
CTR	CENTER	SLWC	SAND LIGHT WEIGHT CONCRETE
DBL	DOUBLE	SOG	SLAB ON GRADE
DIA (φ)	DIAMETER	SQ	SQUARE
DIM	DIMENSION	SS	STAINLESS STEEL
DTL	DETAIL	STL	STEEL
DWG	DRAWING	T&B	TOP & BOTTOM
EA	EACH	TEMP	TEMPORARY
EE	EACH END	THRD	THREAD OR THREADED
ELEV	ELEVATION	TOC	TOP OF CONCRETE
EQ	EQUAL	Tu	ANCHORAGE TENSION REACTION DUE TO SEISMIC FORCE
EQUIP	EQUIPMENT	TYP	TYPICAL
f'c	MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE	UNO	UNLESS NOTED OTHERWISE
FF	FINISHED FLOOR	V	ANCHORAGE SHEAR REAC
FLG	FLANGE	VERT	VERTICAL
FLR	FLOOR	Vu	ANCHORAGE SHEAR REACTION DUE TO SEISMIC FORCE
FRMG	FRAMING	W/	WITH
FT (')	FOOT/FEET	W _p	COMPONENT SELF-WEIGHT
F _y	SPECIFIED YIELD STRENGTH OF REINFORCING, PSI OR SPECIFIED MINIMUM YIELD STRESS OF STEEL, KSI		
GA	GAUGE		
GC	GENERAL CONTRACTOR		
HEIGHT	HT		
ICC	INTERNATIONAL CODE COUNCIL		
IN (")	INCH		
KSI	KIPS PER SQUARE INCH		



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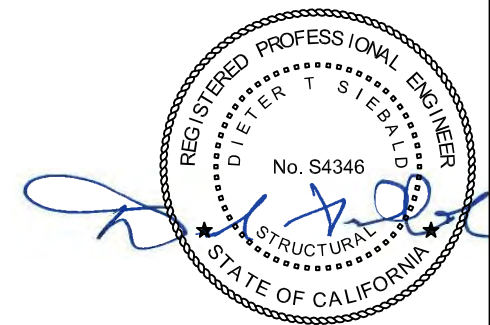
EXTEND STRUT LENGTH TO NEXT ADJ LOW FLUTE IF AB'S ARE LESS THAN 2" FROM STRUT R SUPPORT ANCHORS



ANCHOR OPTIONS

OPM-0576
 BY: William Staehlin
 DATE: 08/24/2020
 BOTT OF MTL DECK (LOW FLUTES SHADED FOR CLARITY)
 STRUT R SUPPORT ANCHORS:
 3/8" HILTI KB-TZ SS
 2 EE OF R'S 6" WIDE OR WIDER,
 1 EE OF R'S LESS THAN 6" WIDE, TYP

SECTION A-A



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SHEET TITLE: TYPICAL STRUT DETAILS

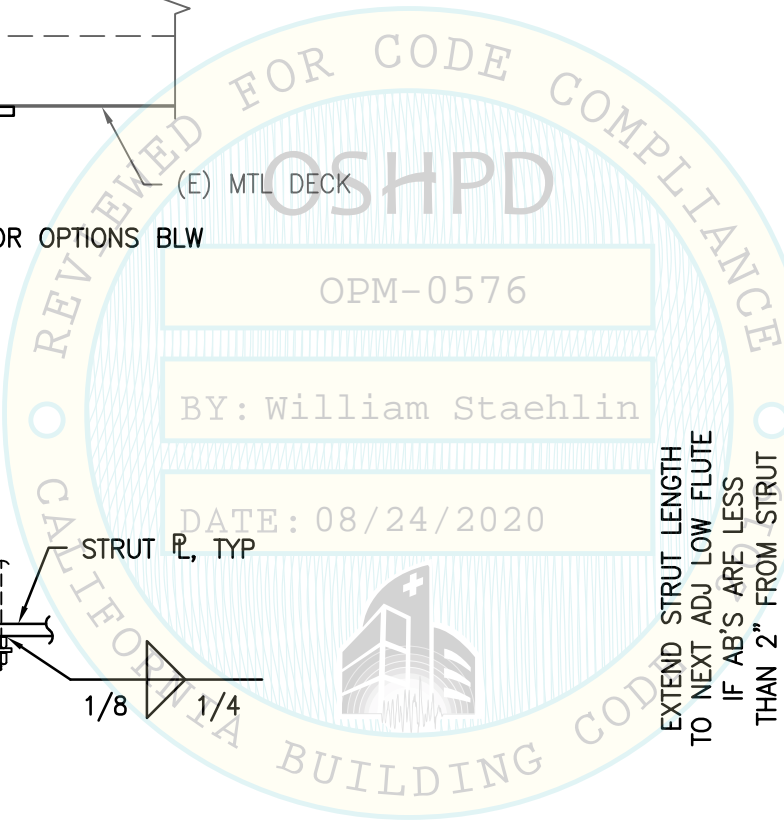
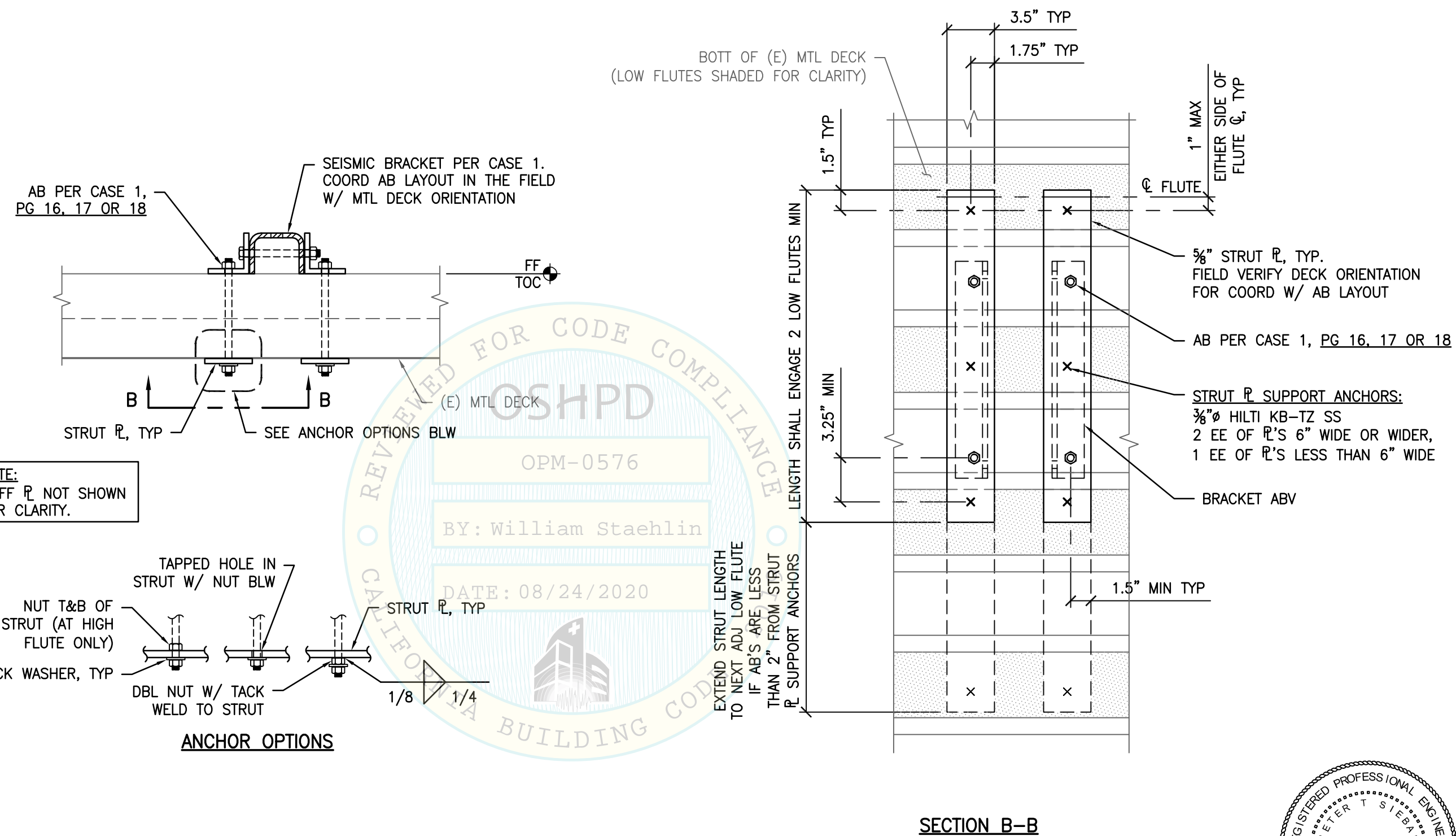
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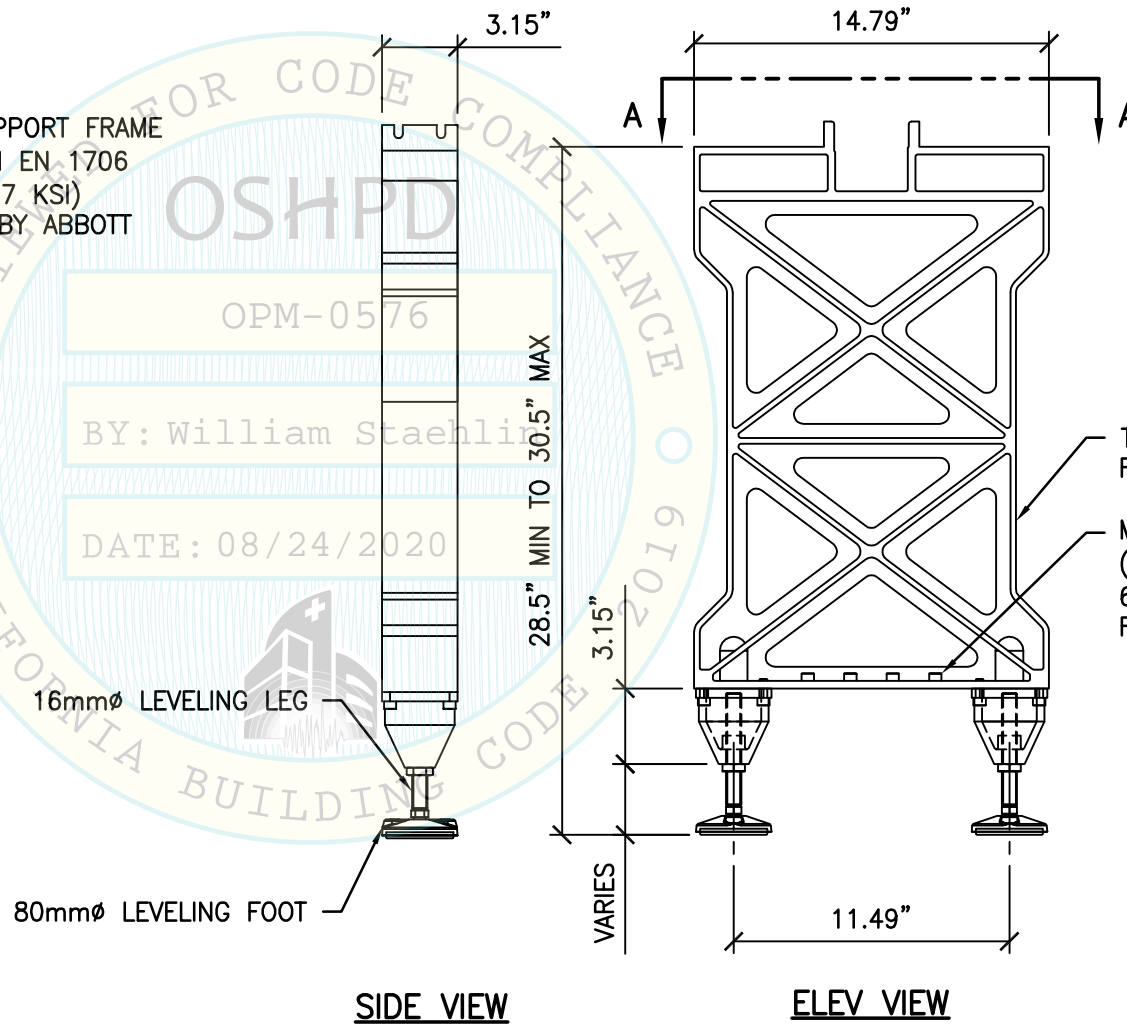
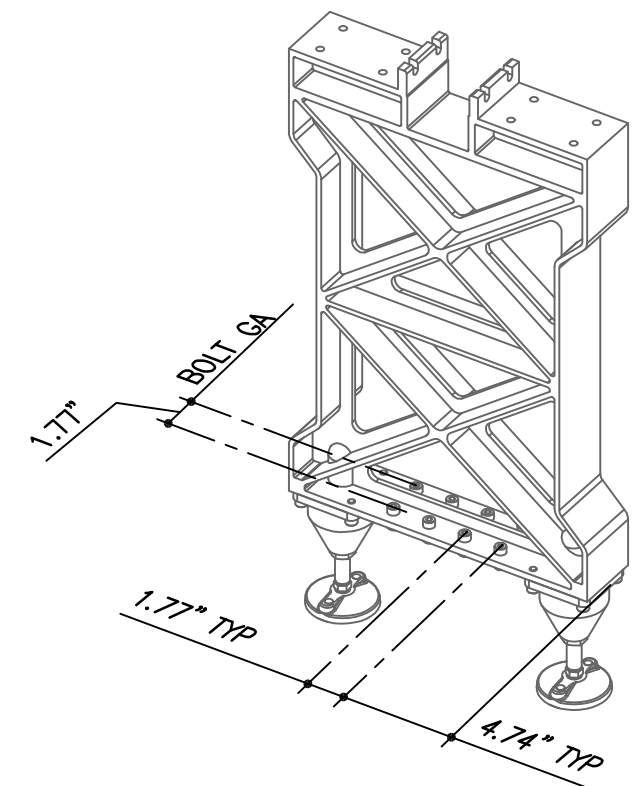
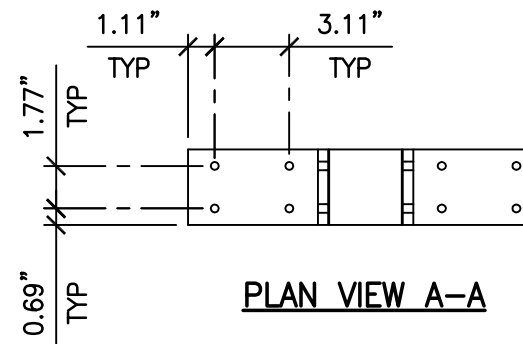
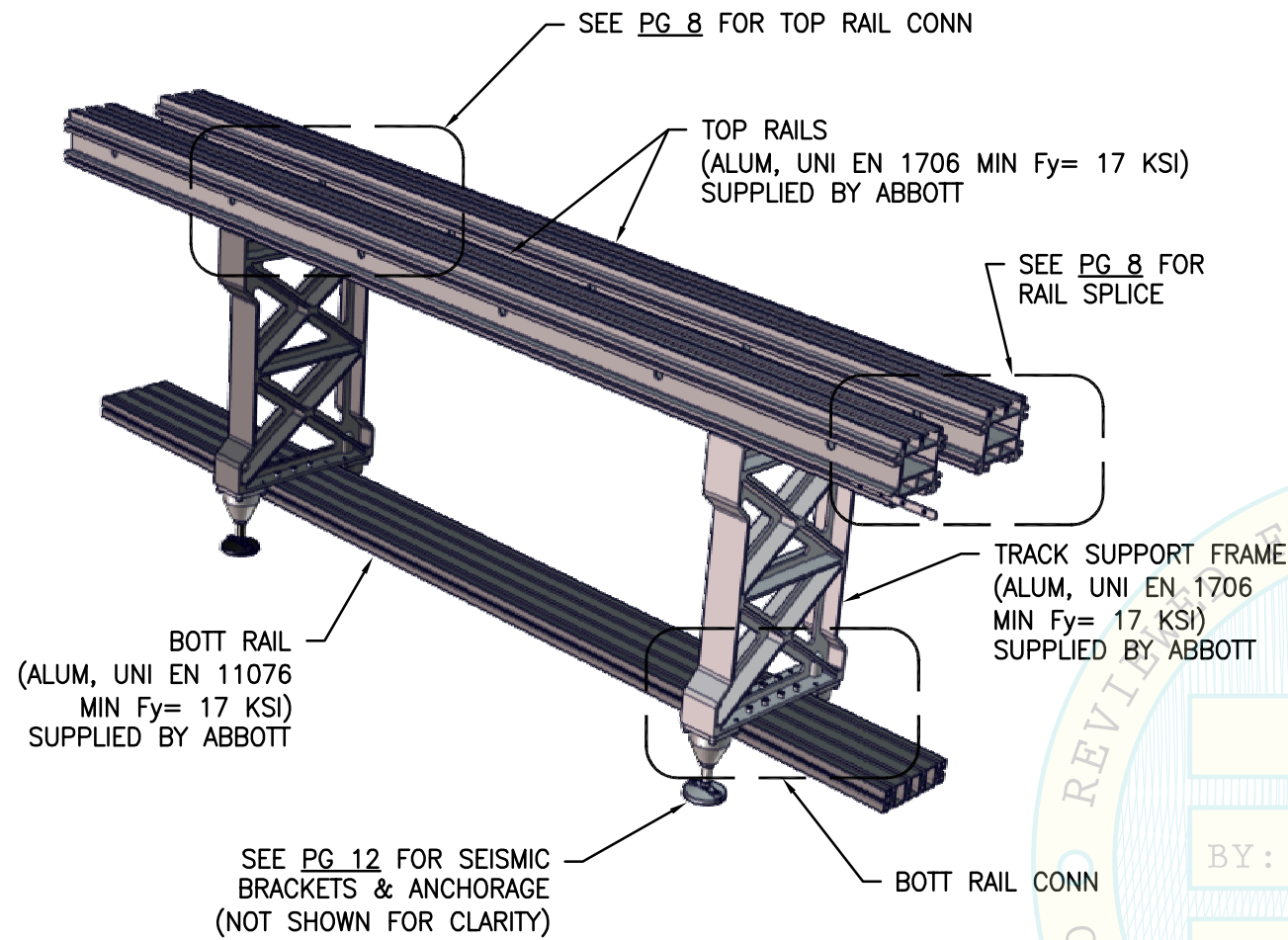


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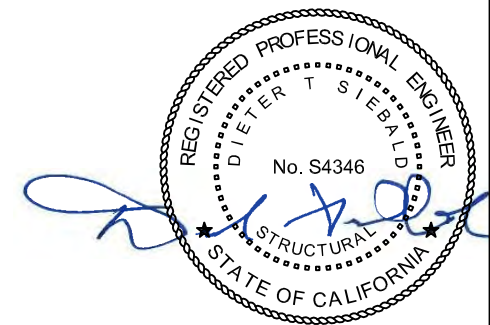
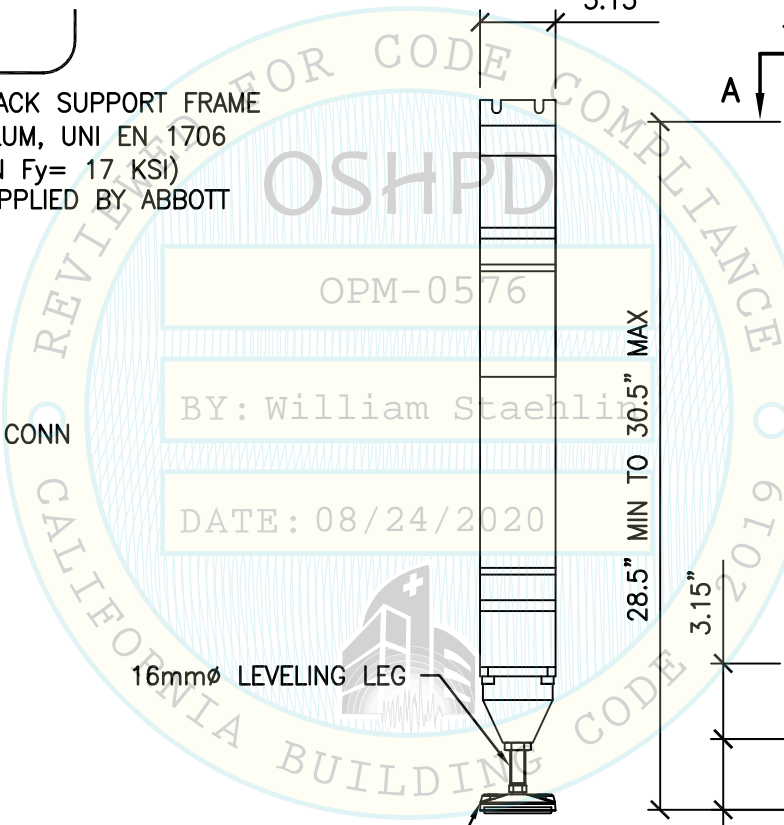
Rev	Description	Date	Job No:	18156
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TRACK SUPPORT FRAME

M8x20 UNI 5931-8.8, TYP
(8 TOTAL AT BOTT RAIL, NOT SHOWN,
6 TOTAL AT EA TOP RAIL, NOT SHOWN)
Fy= 96 KSI.

- NOTES:**
1. MAX OPERATING WT $W_p = 165$ LBS INCLUDING SUPPORT FRAMES, T&B RAIL, TRACK, COVERS, ETC.
 2. COMPONENT SUB-ASSEMBLY CONNS SHALL BE PERFORMED BY ABBOTT, NOT BY THE GENERAL CONTRACTOR.



TRACK SUPPORT FRAME

SHEET TITLE: MODULE SUB-ASSEMBLY DETAILS
TYPICAL TRACK MODULE

ABBOTT
ALINITY s Interface INSTRUMENTS
EQUIPMENT SUPPORTS & ATTACHMENTS

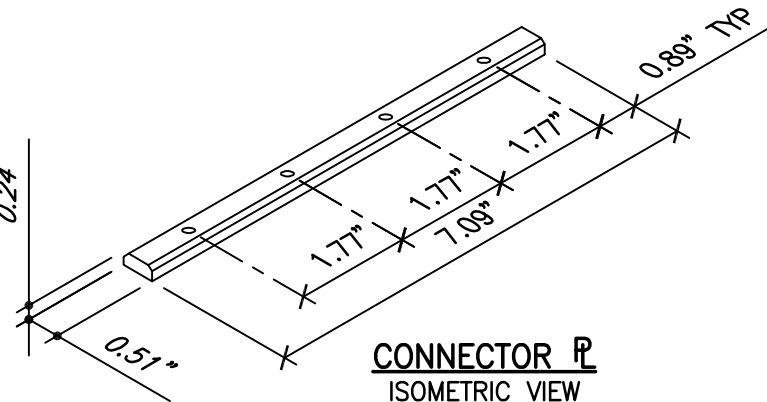
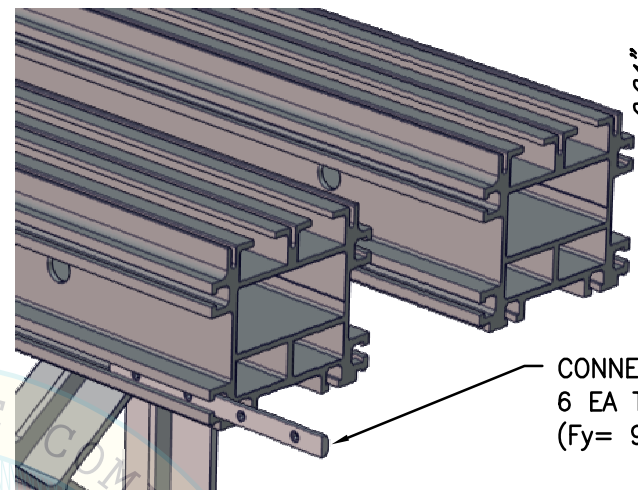
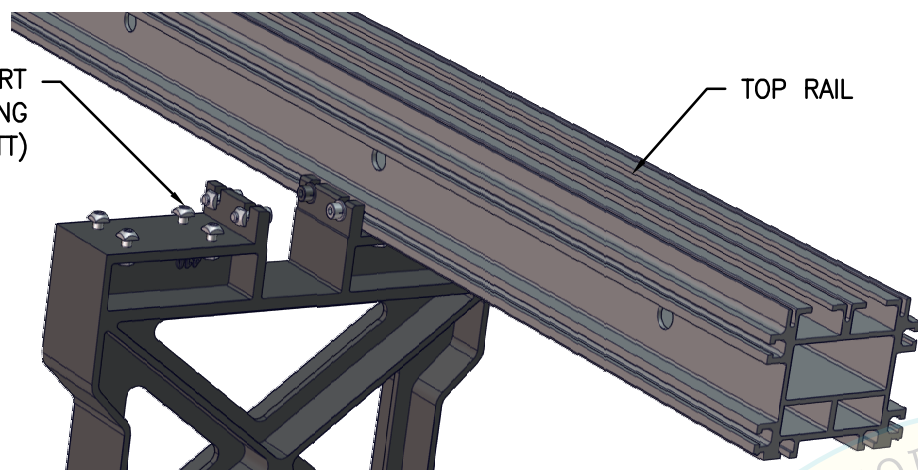


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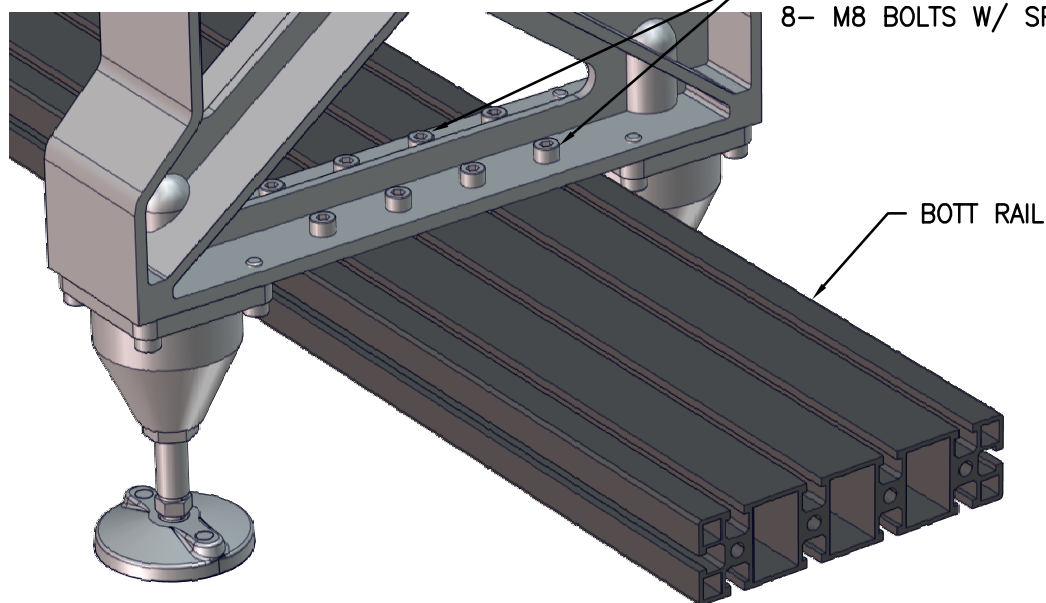
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CONNECT TOP RAILS TO SUPPORT FRAME W/ 6- M8 BOLTS W/ SPRING NUTS EA RAIL (CONN BY ABBOTT)



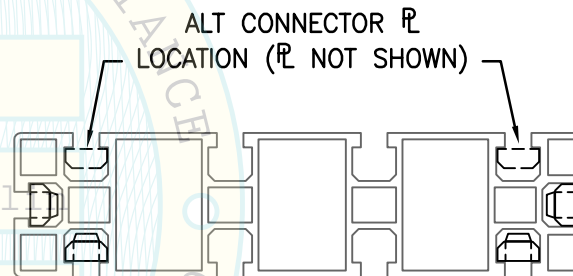
CONNECTOR PL W/ 4- M8 SET SCREWS. CTR ON RAIL SPLICE. 6 EA TOP RAIL & 4 AT BOTT RAIL (16 TOTAL) (Fy= 96 KSI MIN) (CONN BY ABBOTT)

TOP RAIL CONN



CONNECT BOTT RAIL TO SUPPORT FRAME W/ 8- M8 BOLTS W/ SPRING NUTS EA RAIL

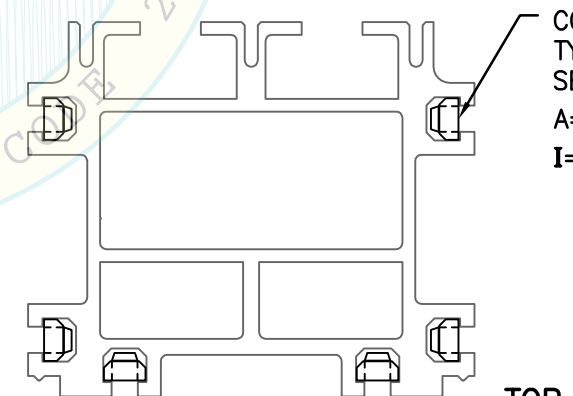
BOTT RAIL CONN



RAIL SPLICE

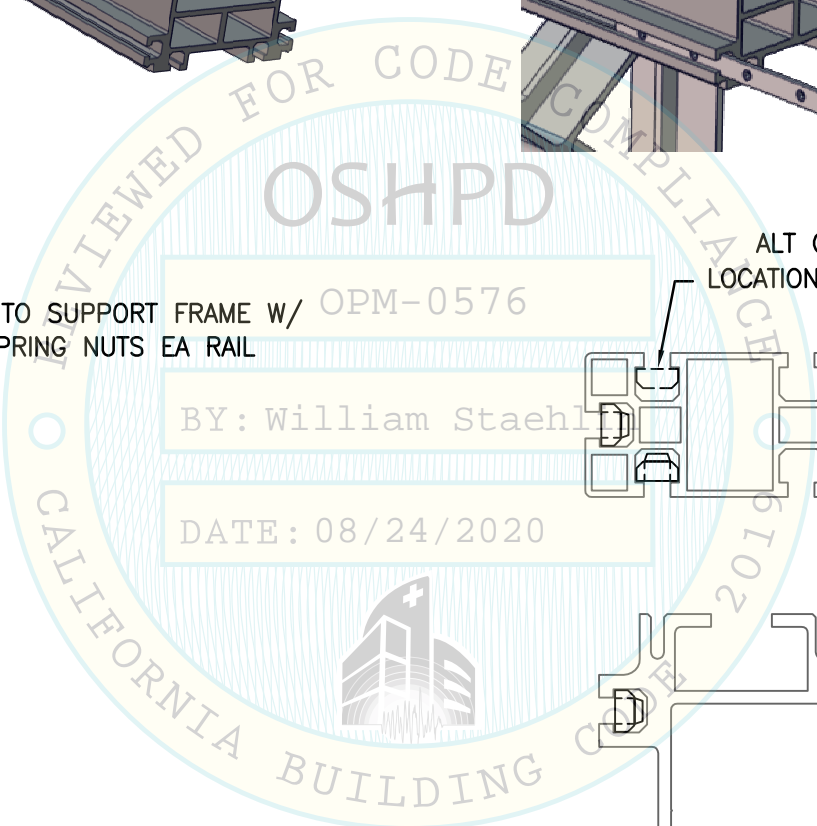
CONNECTOR PL (STL, Fe 37 GALV MIN Fy= 37 KSI), TYP OF 4 AT BOTT RAIL
SECTION PROPERTIES:
A= 0.1070 IN²; S= 0.00353 IN³; I= 0.000454 IN⁴
TWO CONNECTOR PL'S ARE REQ AT ES OF THE RAIL IN ANY OF THE 3 LOCATIONS.

BOTT RAIL SPLICE



CONNECTOR PL (STL, Fe 37 GALV MIN Fy= 36 KSI), TYP OF 6 AT TOP RAIL
SECTION PROPERTIES:
A= 0.1070 IN²; S= 0.00353 IN³; I= 0.000454 IN⁴

TOP RAIL SPLICE



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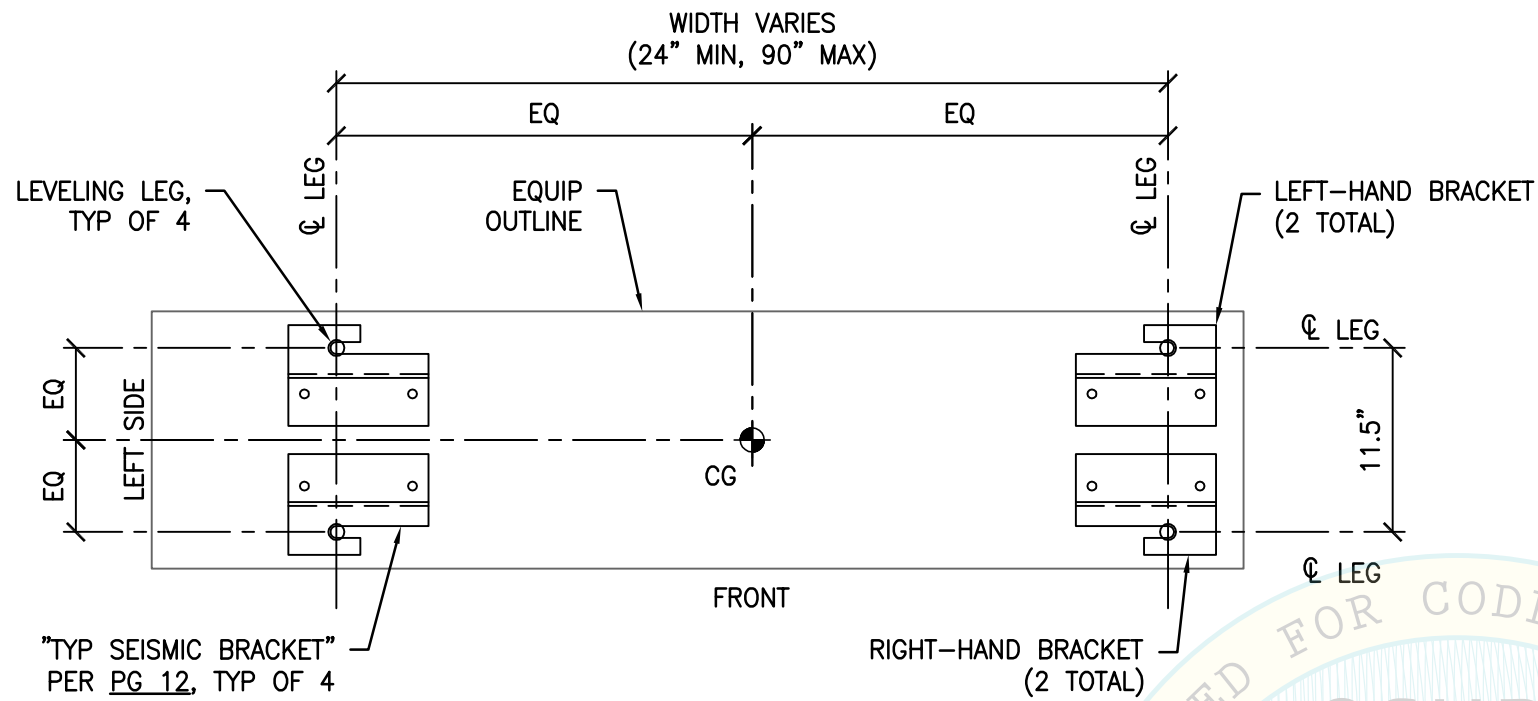
SHEET TITLE: MODULE SUB-ASSEMBLY DETAILS
TYPICAL TRACK MODULE

ABBOTT
ALINITY s Interface INSTRUMENTS
EQUIPMENT SUPPORTS & ATTACHMENTS

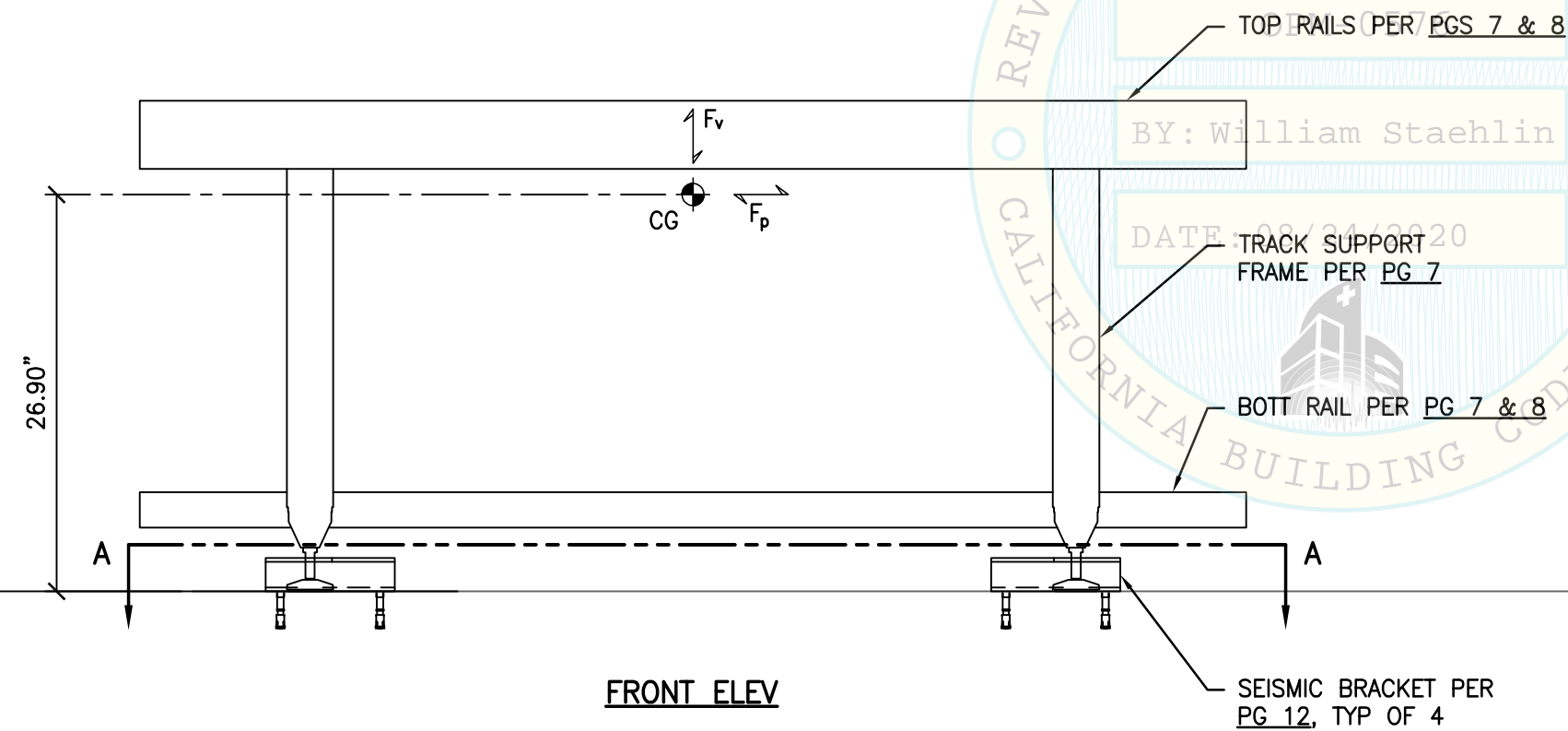


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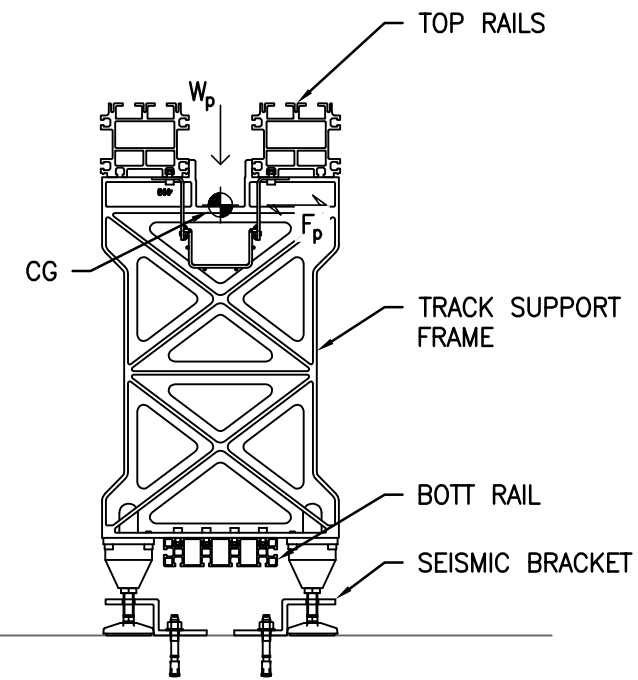
Rev	Description	Date	Job No:	18156
			Date:	7/21/2020
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BASE PLAN A-A



FRONT ELEV

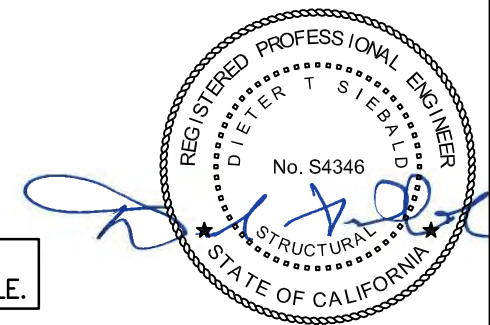
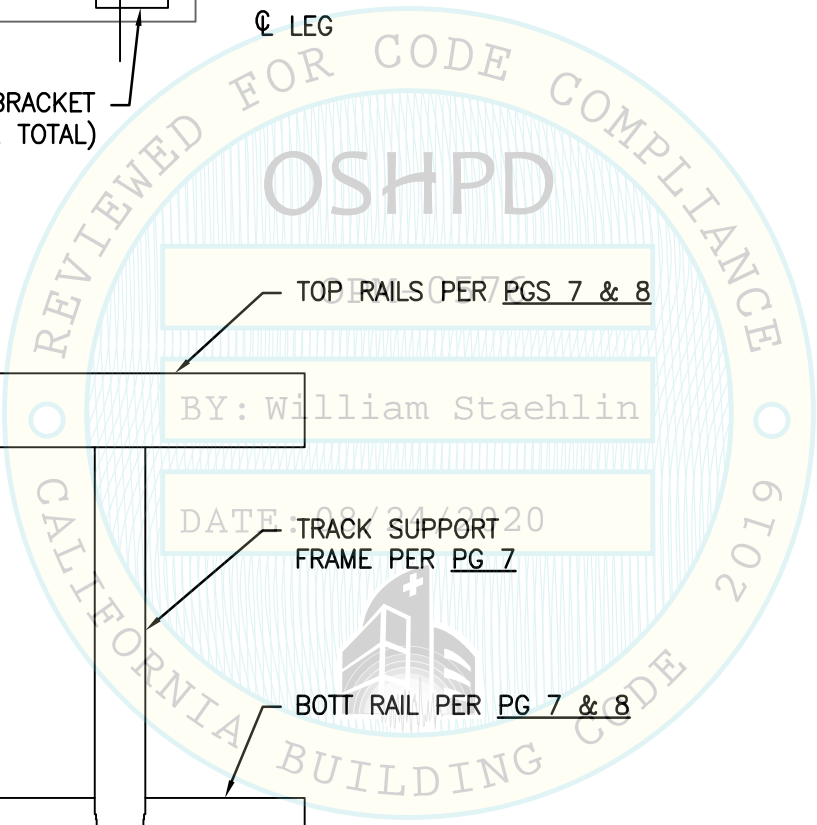


RIGHT SIDE ELEV

NOTE:
A DISTANCE OF 5.5" BTW AB OF ADJ BRACKETS IS ACCEPTABLE.

MAX ANCHOR FORCES AT LRFD AT LEVELING LEG ¹			
	T _{max}	C _{max}	V _{max}
CASE 1 ³	1362#	1584#	508#
CASE 2 ²	748#	969#	286#

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES OVERSTRENGTH FACTOR (Ω_0).
3. OVERSTRENGTH FACTOR (Ω_0) MUST BE APPLIED FOR ANCHORAGE TO CONC.



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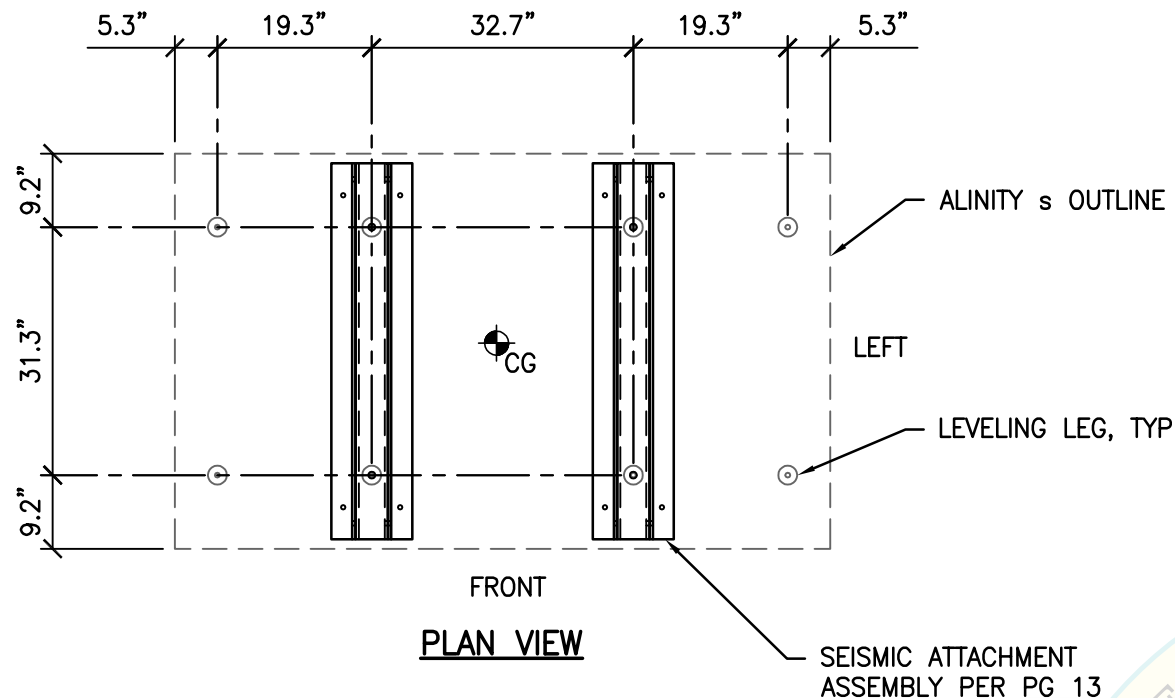
SHEET TITLE: ASSEMBLY DETAIL (CONNECTION BY ABBOTT)
INTERFACE MODULE

ABBOTT
ALINITY s Interface INSTRUMENTS
EQUIPMENT SUPPORTS & ATTACHMENTS

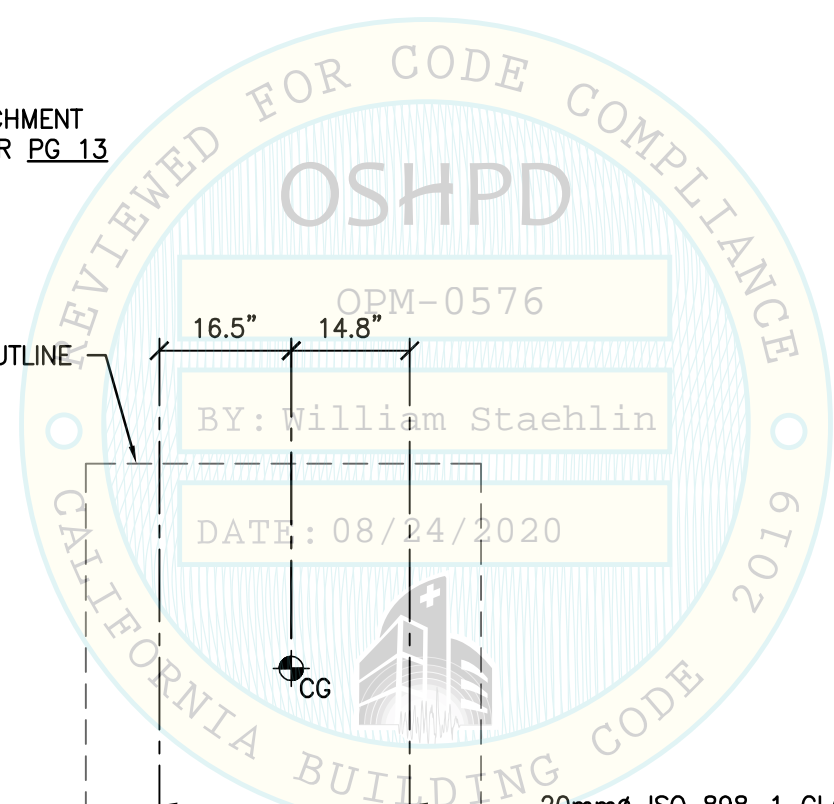
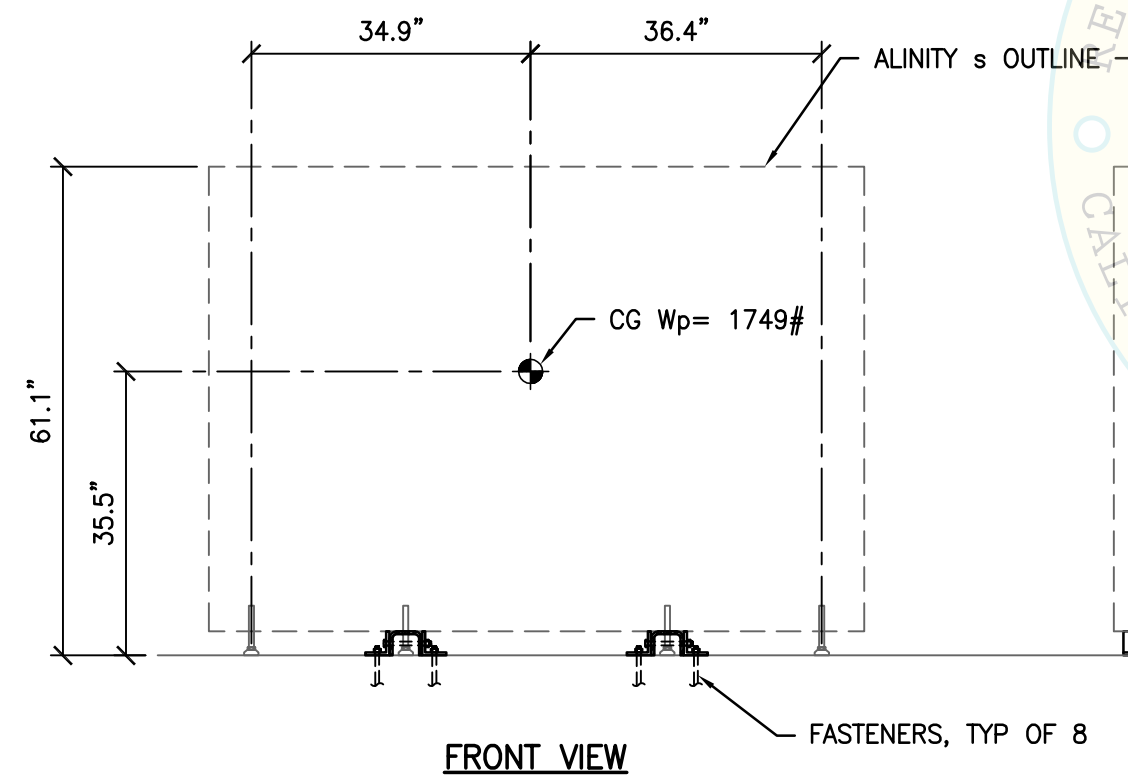


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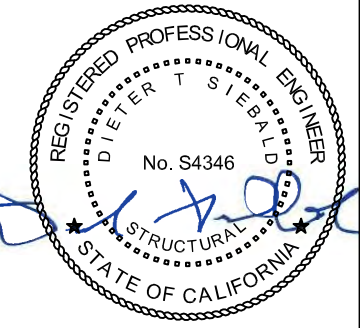
Rev	Description	Date	Job No:	18156
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MAX ANCHOR FORCES AT LRFD AT EA COMPONENT ATTACHMENT TO SUPPORT			
	T _{max}	C _{max}	V _{max}
CASE 1	2976#	2273#	1377#
CASE 2	1064#	1089#	516#



NOTE:
 1. SEISMIC BRACKET & HARDWARE SHALL BE FURNISHED & INSTALLED BY THE GENERAL CONTRACTOR, UNO.



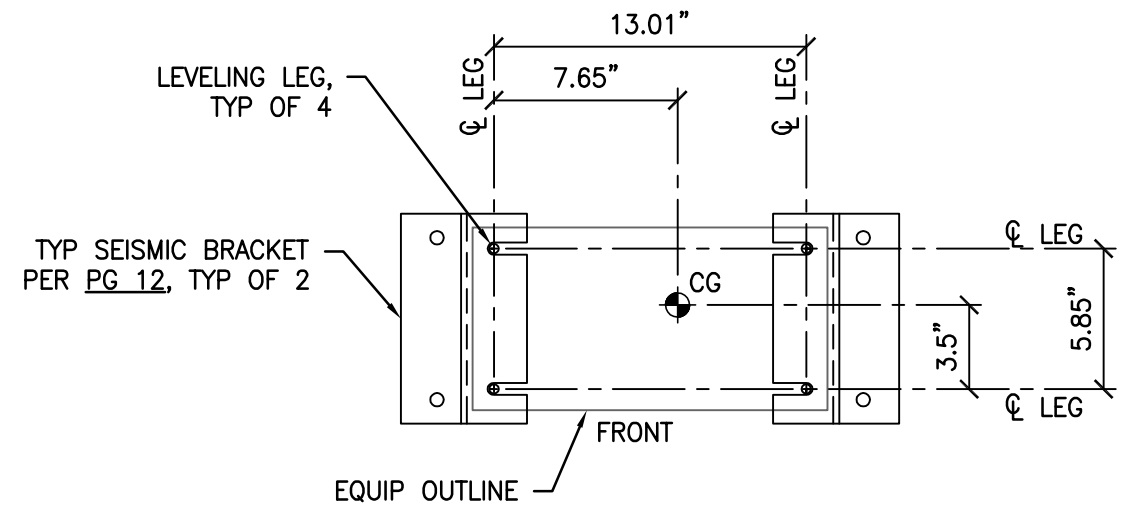
SHEET TITLE: ALINITY s MODULE BASE PLAN & ELEVATIONS	Rev	Description	Date	Job No: 18156
				Date: 7/21/2020
ABBOTT ALINITY s Interface INSTRUMENTS EQUIPMENT SUPPORTS & ATTACHMENTS				By: MTC
				Page: 10 of 18
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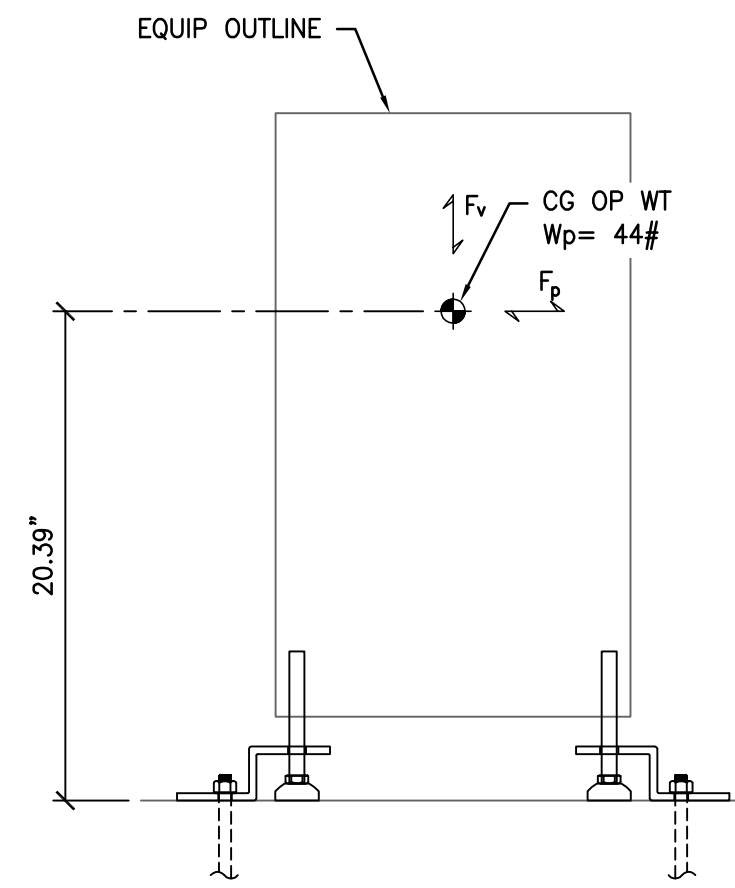
MAX ANCHOR FORCES AT LRFD AT LEVELING LEG¹

	T _{max}	C _{max}	V _{max}
CASE 1 ³	394#	436#	104#
CASE 2 ²	218#	261#	59#

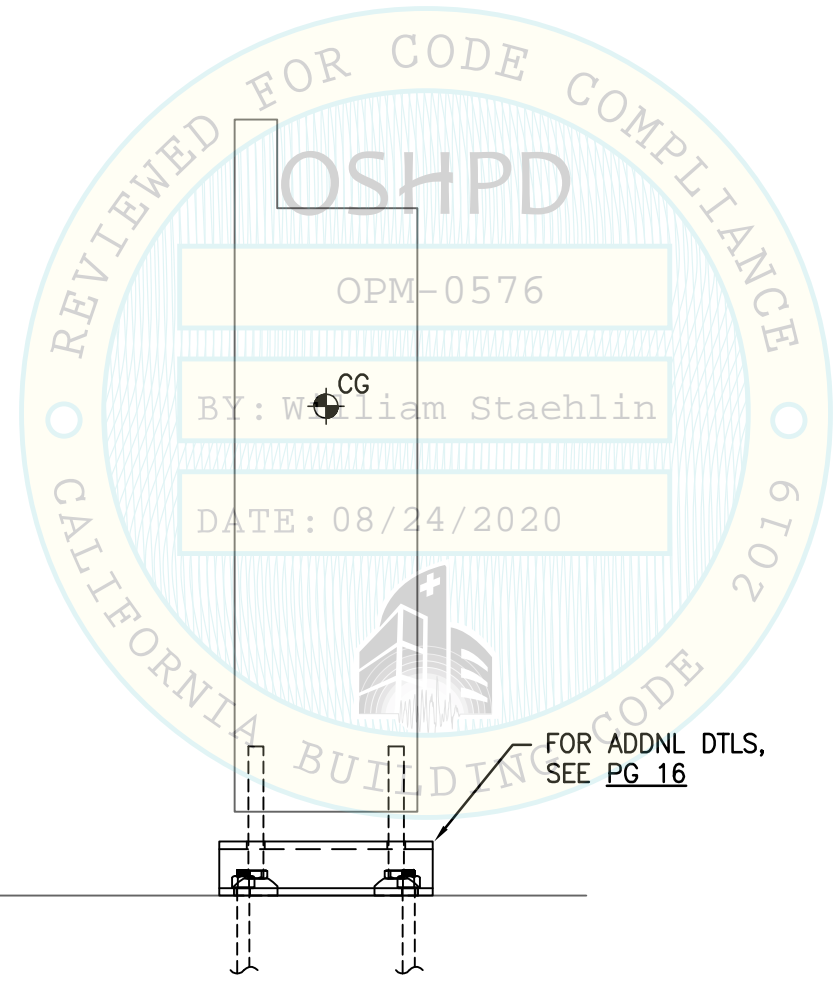
1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
3. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.



BASE PLAN VIEW



FRONT ELEV



RIGHT SIDE ELEV

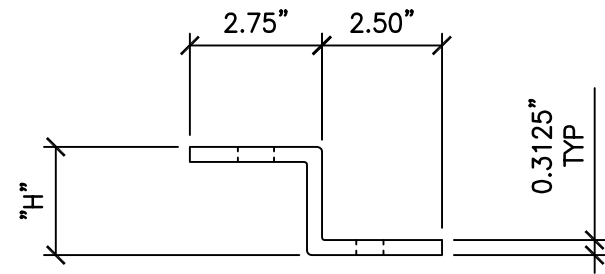


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SHEET TITLE: INTERFACE MODULE BASE PLAN & ELEVATIONS	Rev	Description	Date	Job No: 18156
				Date: 7/21/2020
ABBOTT ALINITY s Interface INSTRUMENTS EQUIPMENT SUPPORTS & ATTACHMENTS				By: MTC
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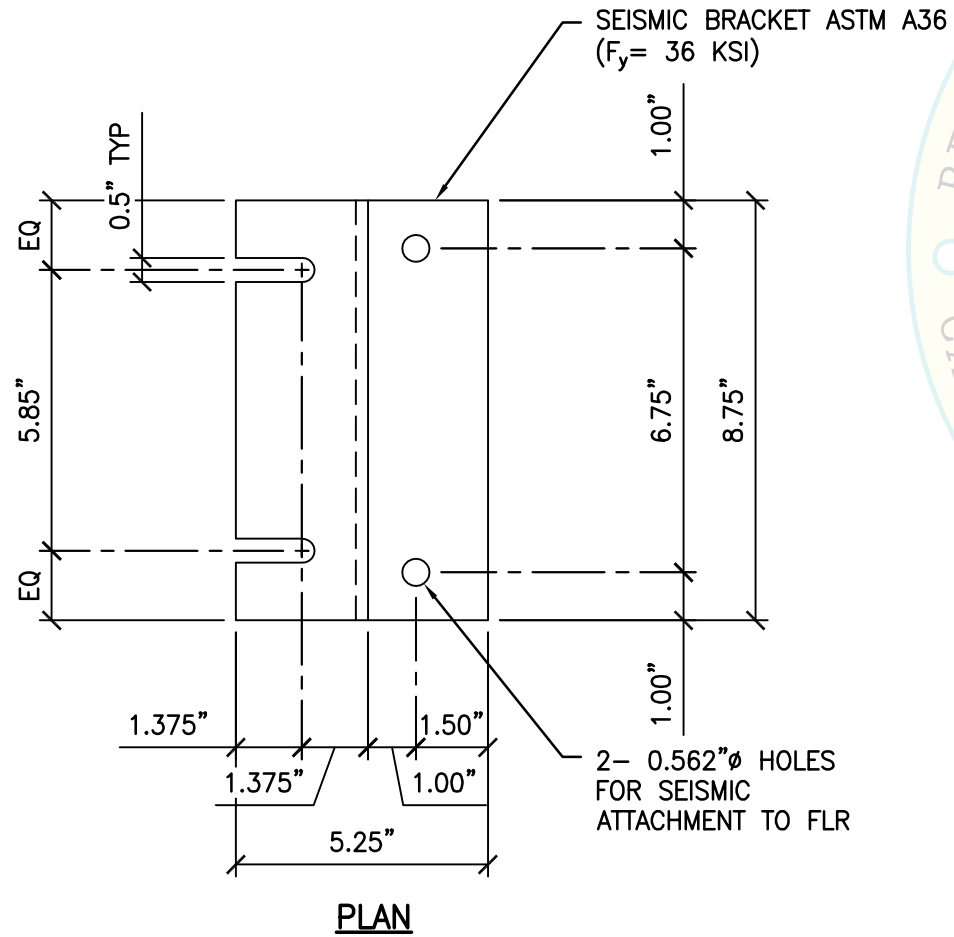
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INTERFACE MODULE SEISMIC BRACKET:



ELEV

NOTE:
FOR INFO NOT SHOWN OR NOTED,
SEE TYP SEISMIC BRACKET DTL



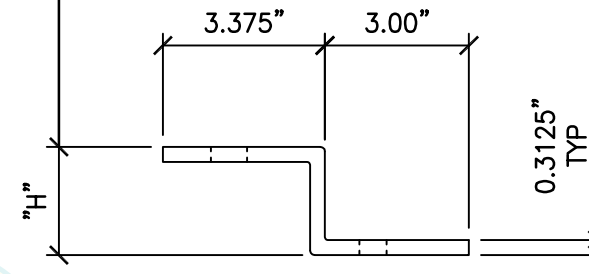
PLAN

TYP SEISMIC BRACKET DETAIL:

"H" VARIES TO ACCOMMODATE VERT ADJUSTMENT OF THE COMPONENT FOR LEVELING PURPOSES AS MEASURED FROM THE FLR TO THE BOTT OF THE COMPONENT PER THE CASE 1 & CASE 2 FLR TO COMPONENT CLEARANCES AS FOLLOWS:

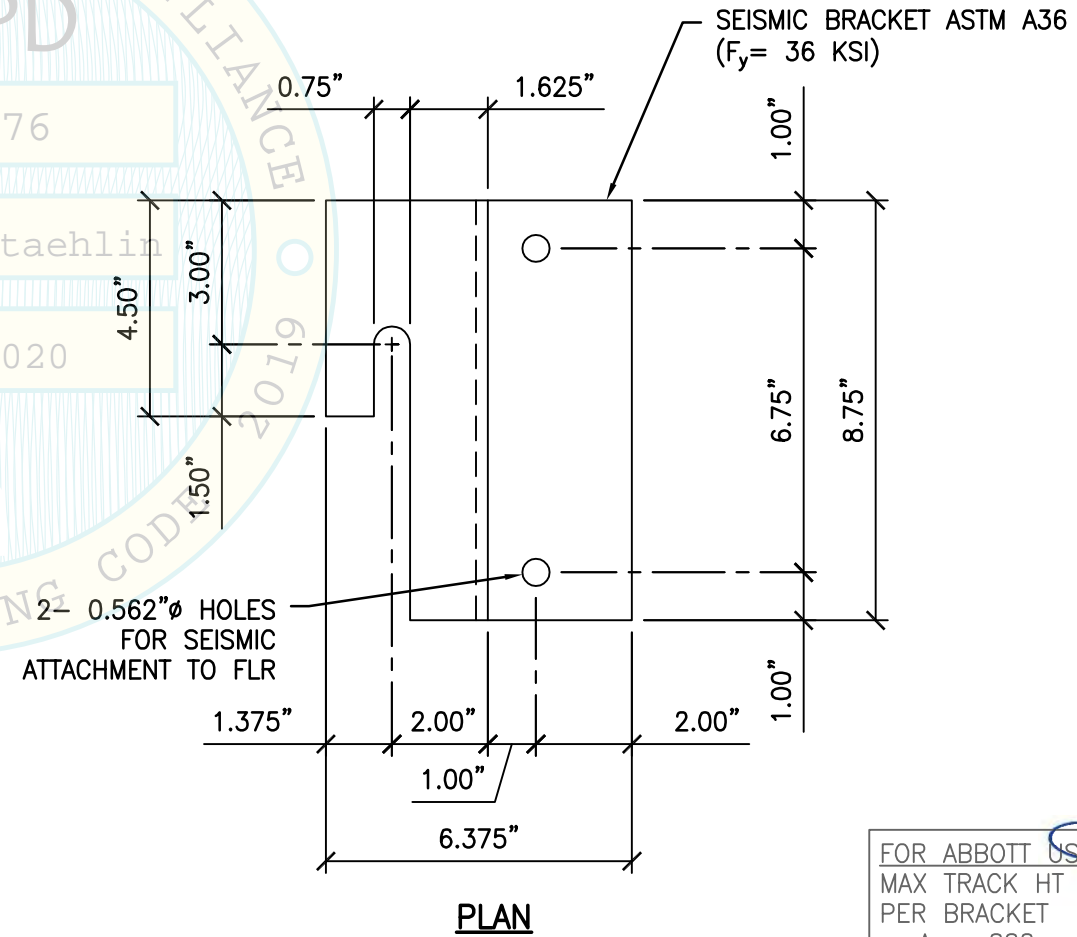
BRACKET A: "H" = 2.25" FOR
2.25" ≤ CLR ≤ 3.50"

BRACKET B: "H" = 3.50" FOR
3.50" ≤ CLR ≤ 4.25"

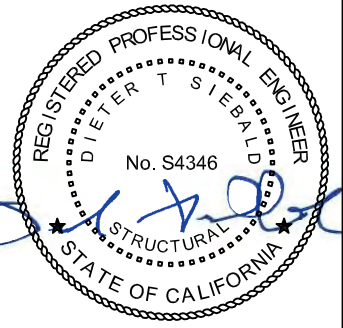
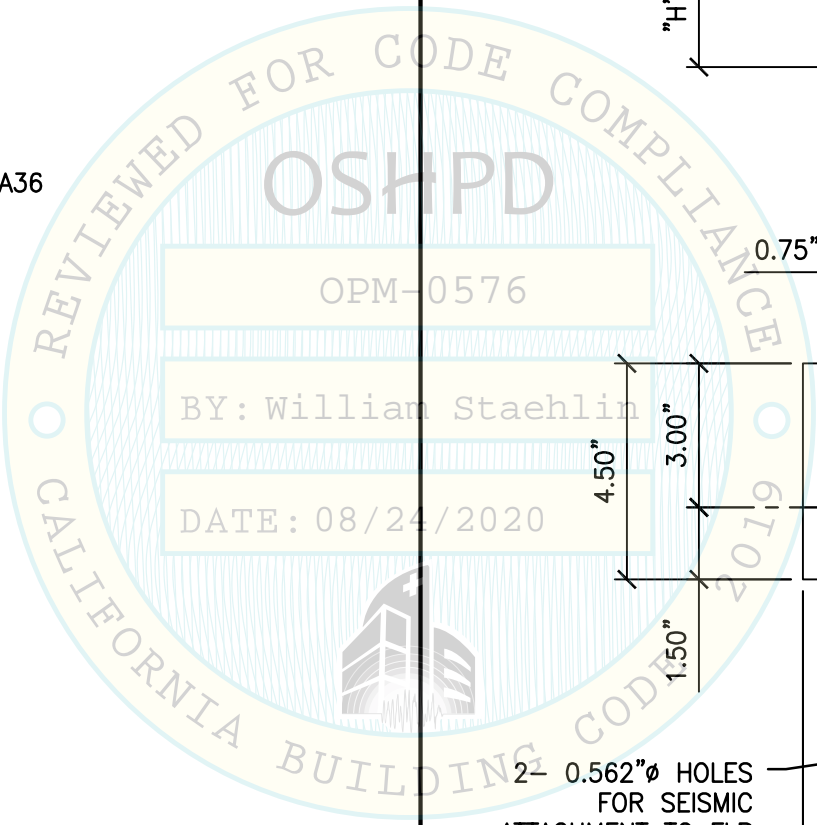


ELEV

- NOTES:**
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 16 & 18 FOR THE TYP TRACK MODULE & INTERFACE MODULE RESPECTIVELY.
 2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 9.
 3. LEFT-HAND BRACKET SHOWN. SEE BASE PLAN A-A ON PG 9 FOR RIGHT-HAND BRACKET CONFIGURATION.
 4. GENERAL CONTRACTOR SHALL PROVIDE & INSTALL SEISMIC BRACKET.



PLAN



FOR ABBOTT USE:
MAX TRACK HT
PER BRACKET
A = 888mm
B = 920mm

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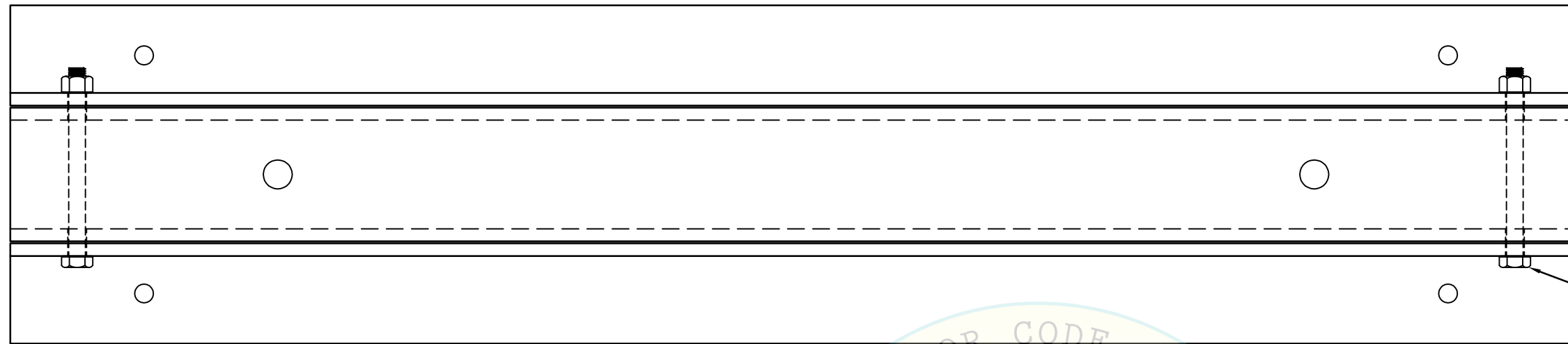
SHEET TITLE: TYPICAL TRACK MODULE & INTERFACE MODULE
SEISMIC BRACKET FABRICATION DETAIL

ABBOTT
ALINITY s Interface INSTRUMENTS
EQUIPMENT SUPPORTS & ATTACHMENTS

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SEISMIC BRACKET ASSEMBLY:



∠3x3x³/₈x3'-11" ES,
TYP OF 2. SEE PG 15

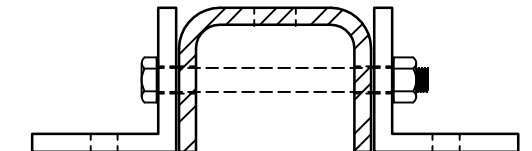
HSS6x4x³/₈ CUT IN HALF.
SEE PG 14

1/2"∅ A307 THRU BOLT, TYP

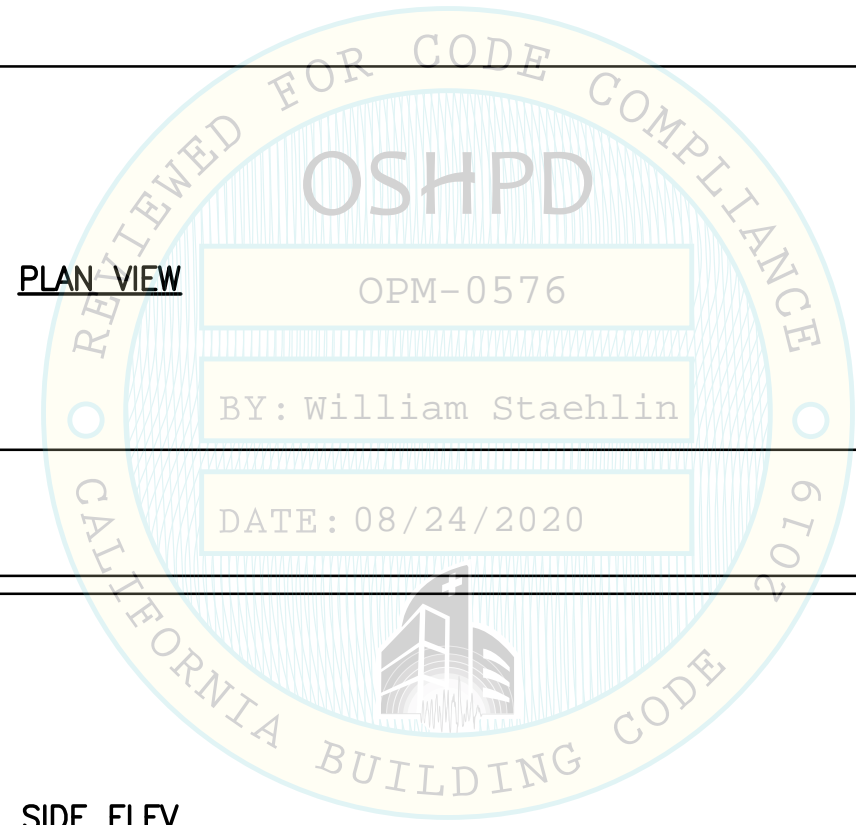
PLAN VIEW



SIDE ELEV



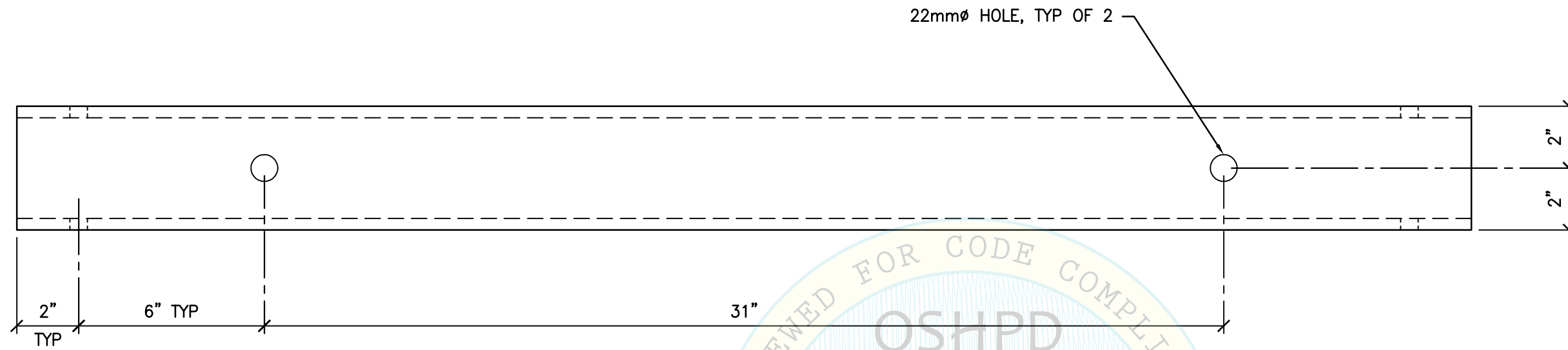
FRONT ELEV



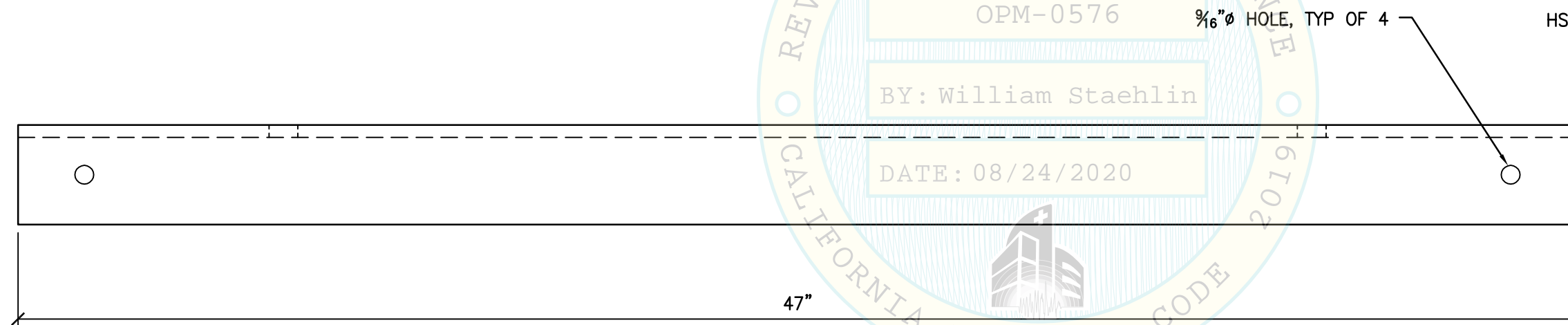
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SHEET TITLE: ALINITY s SEISMIC BRACKET ASSEMBLY DETAIL ABBOTT ALINITY s Interface INSTRUMENTS EQUIPMENT SUPPORTS & ATTACHMENTS	CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833 TEL (916) 920-2020 www.cyseng.com	Rev	Description	Date	Job No: 18156
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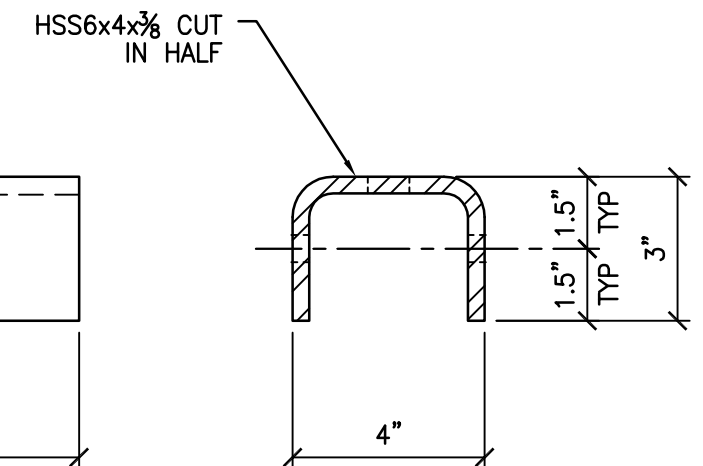
BOTTOM BRACKET DETAIL:



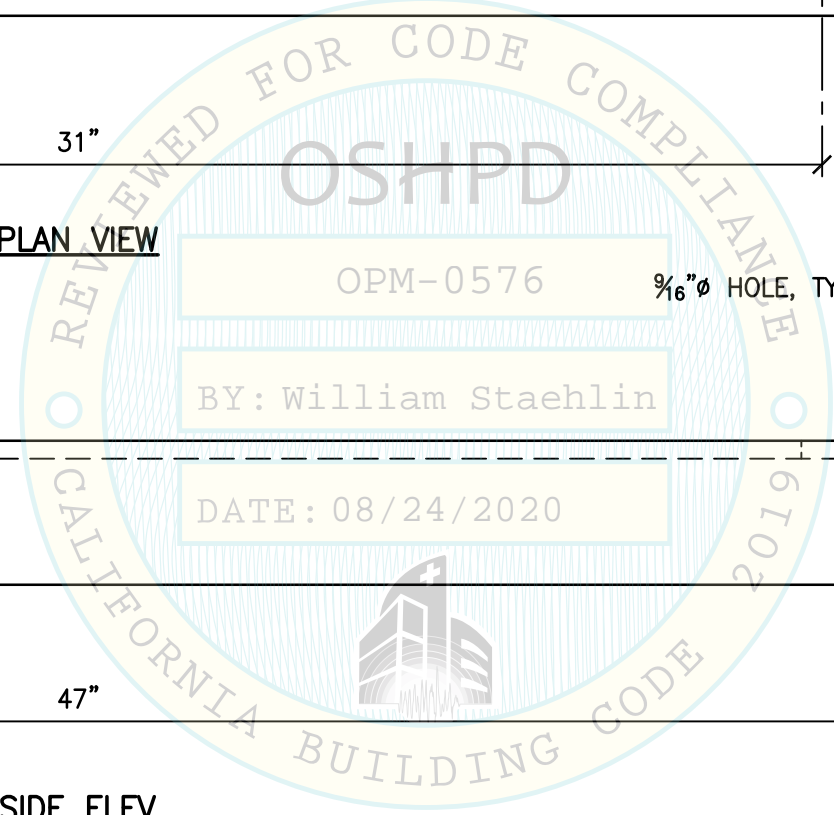
PLAN VIEW



SIDE ELEV



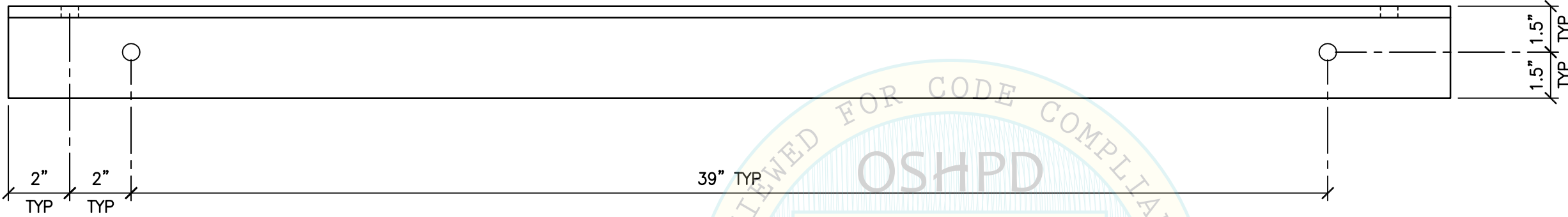
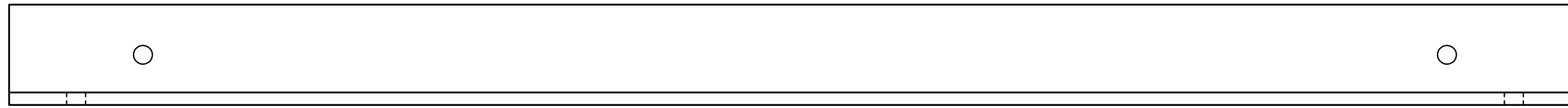
FRONT ELEV



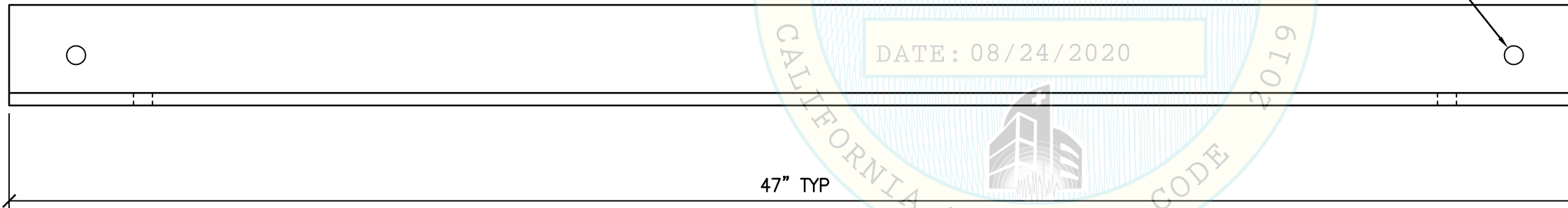
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SHEET TITLE: ALINITY s HSS SECTION DETAIL		CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833 TEL (916) 920-2020 www.cyseng.com	Rev	Description	Date	Job No: 18156
ABBOTT ALINITY s Interface INSTRUMENTS EQUIPMENT SUPPORTS & ATTACHMENTS						Date: 7/21/2020
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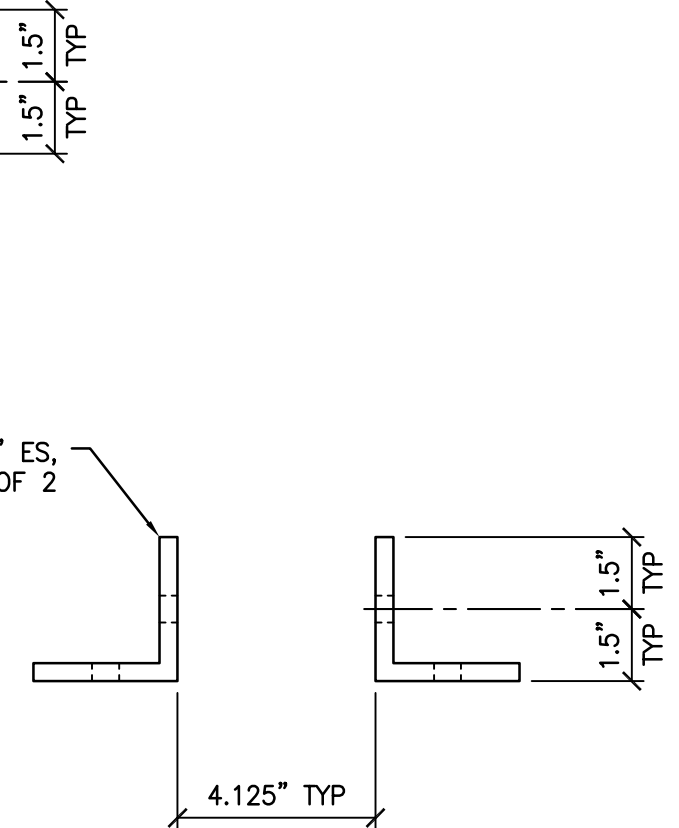
TOP BRACKET DETAIL:



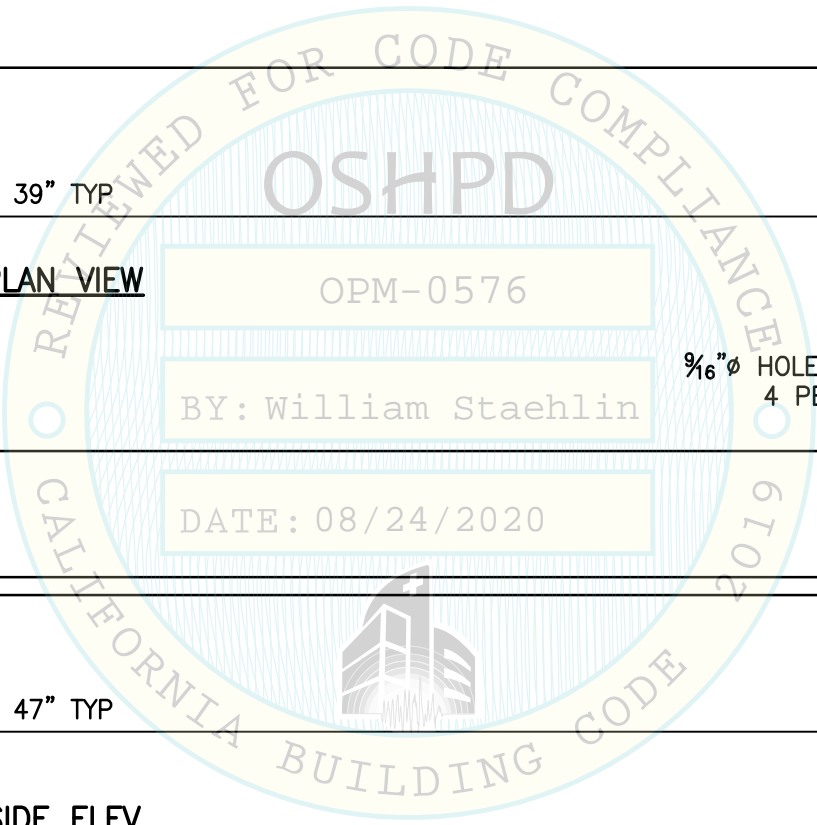
PLAN VIEW



SIDE ELEV



FRONT ELEV



$\frac{9}{16}$ " ϕ HOLE, TYP OF 4 PER ANGLE

$\angle 3 \times 3 \times \frac{3}{8} \times 3'-11"$ ES, TYP OF 2



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SHEET TITLE: ALINITY s ANGLE SECTION DETAILS	Rev	Description	Date	Job No: 18156
				Date: 7/21/2020
ABBOTT ALINITY s Interface INSTRUMENTS EQUIPMENT SUPPORTS & ATTACHMENTS				By: MTC
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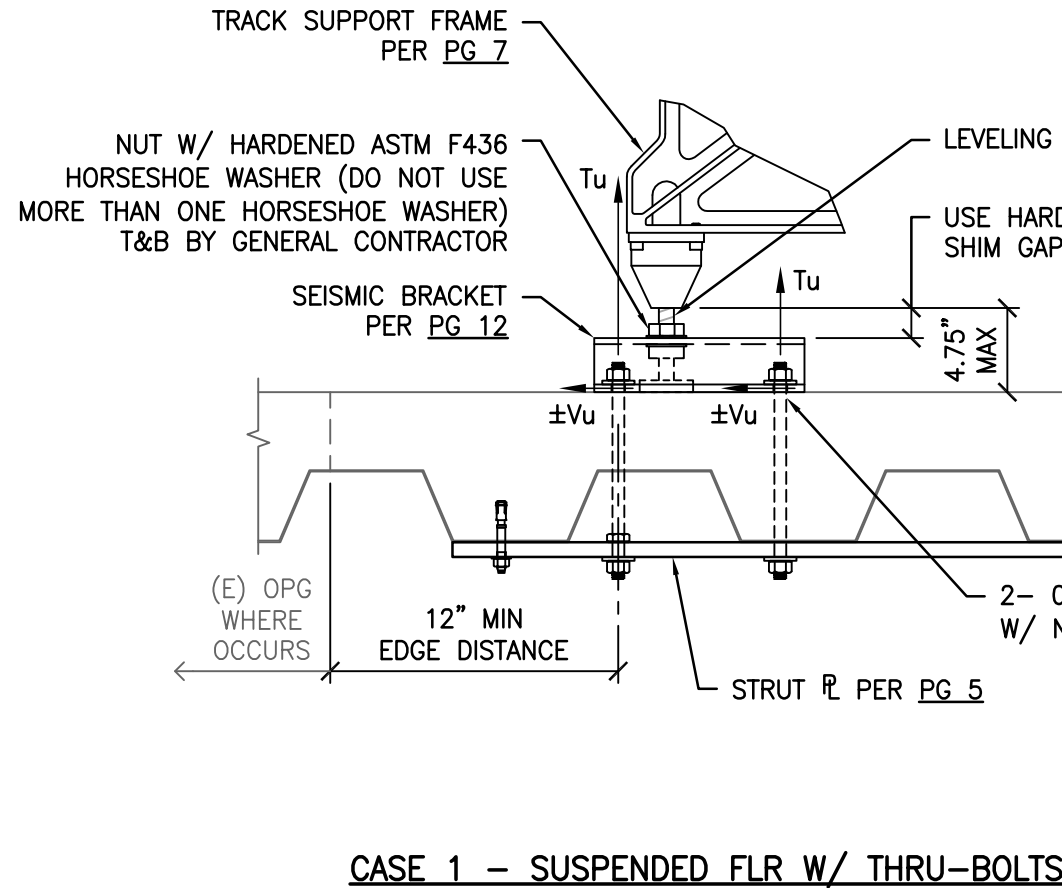
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	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 z/h ≤ 1.0	2808#	364#

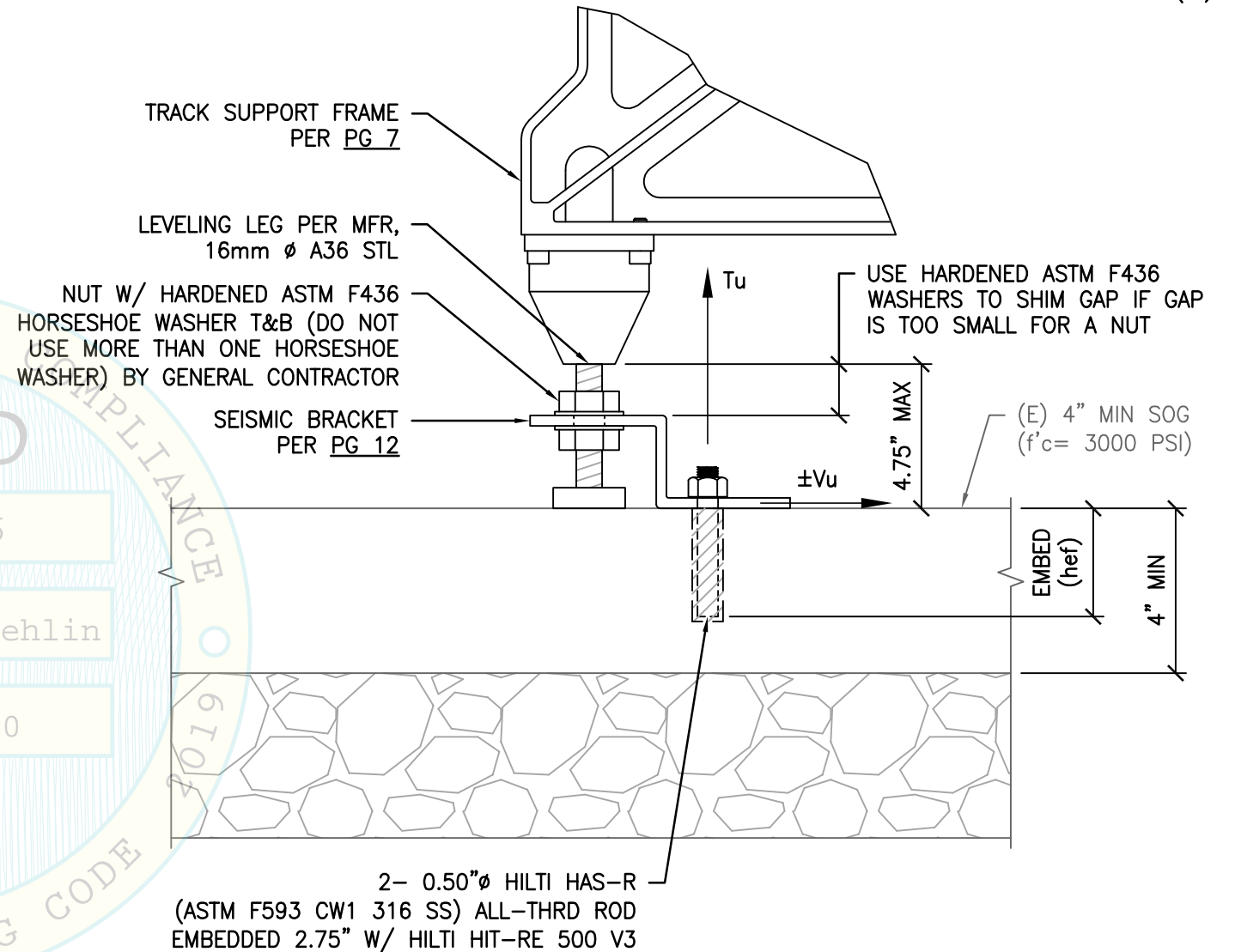
OVERSTRENGTH FACTOR (Ω_b) MUST BE APPLIED TO V_u FOR ANCHORAGE TO CONC.

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 2 z/h = 0	1098#	92#

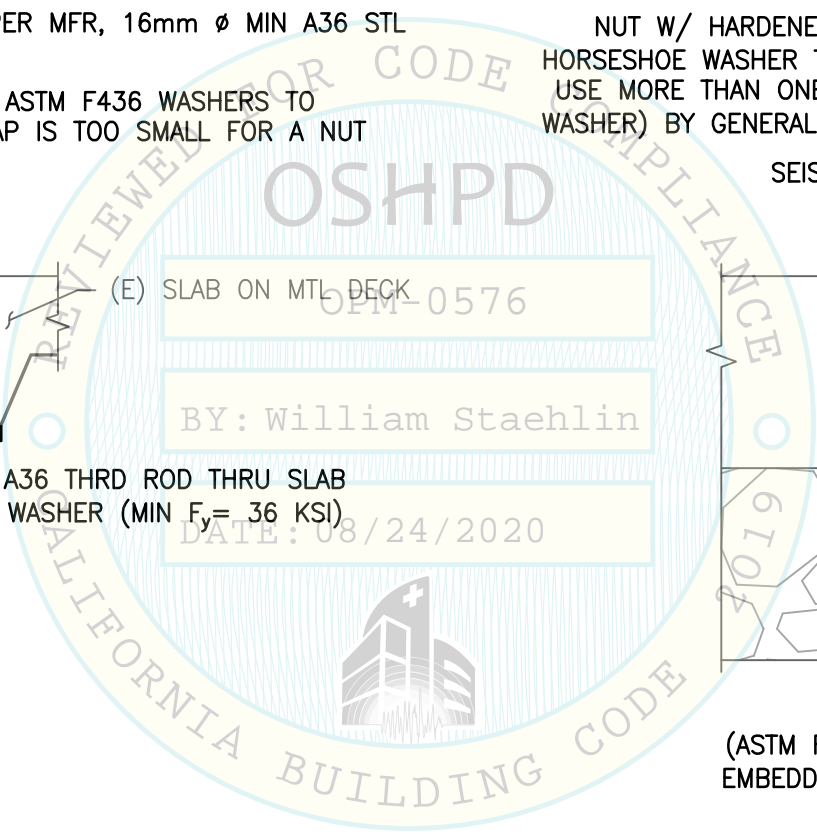
INCLUDES OVERSTRENGTH FACTOR (Ω_b)



CASE 1 - SUSPENDED FLR W/ THRU-BOLTS



**CASE 2 - SOG
(SLAB AT OR BLW GRADE)**

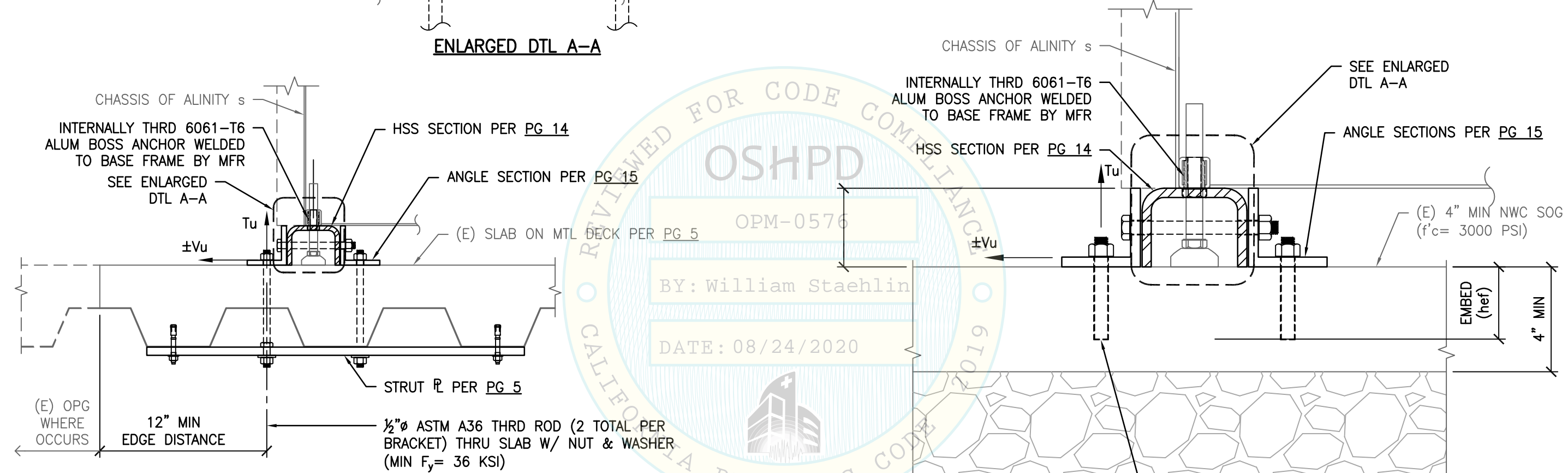
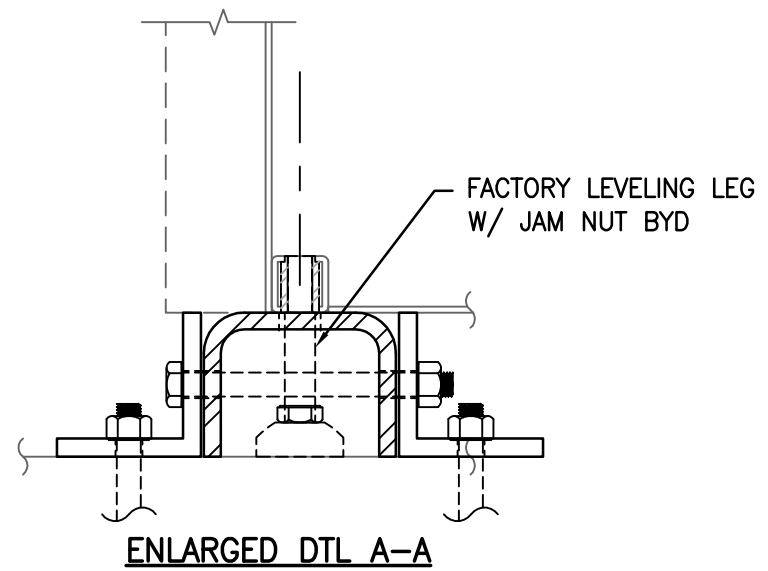


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SHEET TITLE: TYPICAL TRACK MODULE SUPPORT & ATTACHMENT DETAILS		Rev	Description	Date	Job No: 18156
ABBOTT ALINITY s Interface INSTRUMENTS EQUIPMENT SUPPORTS & ATTACHMENTS					Date: 7/21/2020
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	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 z/h ≤ 1.0	3449#	2066# ¹
CASE 2 z/h = 0	1903# ¹	775# ¹

1. INCLUDES MATERIAL OVERSTRENGTH FACTOR (ϕ_b) IN ACCORDANCE W/ ACI 318-14 SECTION 17.2.3.4.3(d) FOR TENSION OR SECTION 17.2.3.5.3(c) FOR SHEAR.



CASE 1 - SUSPENDED FLR W/ THRU-BOLTS

CASE 2 - SOG (SLAB AT OR BLW GRADE)

NOTES:
 1. SUPPORTS & ATTACHMENTS INSTALLATION BY CONTRACTOR.
 2. LEVELING LEGS & BOLTS CONNECTING BRACKETS NOT SHOWN FOR CLARITY.



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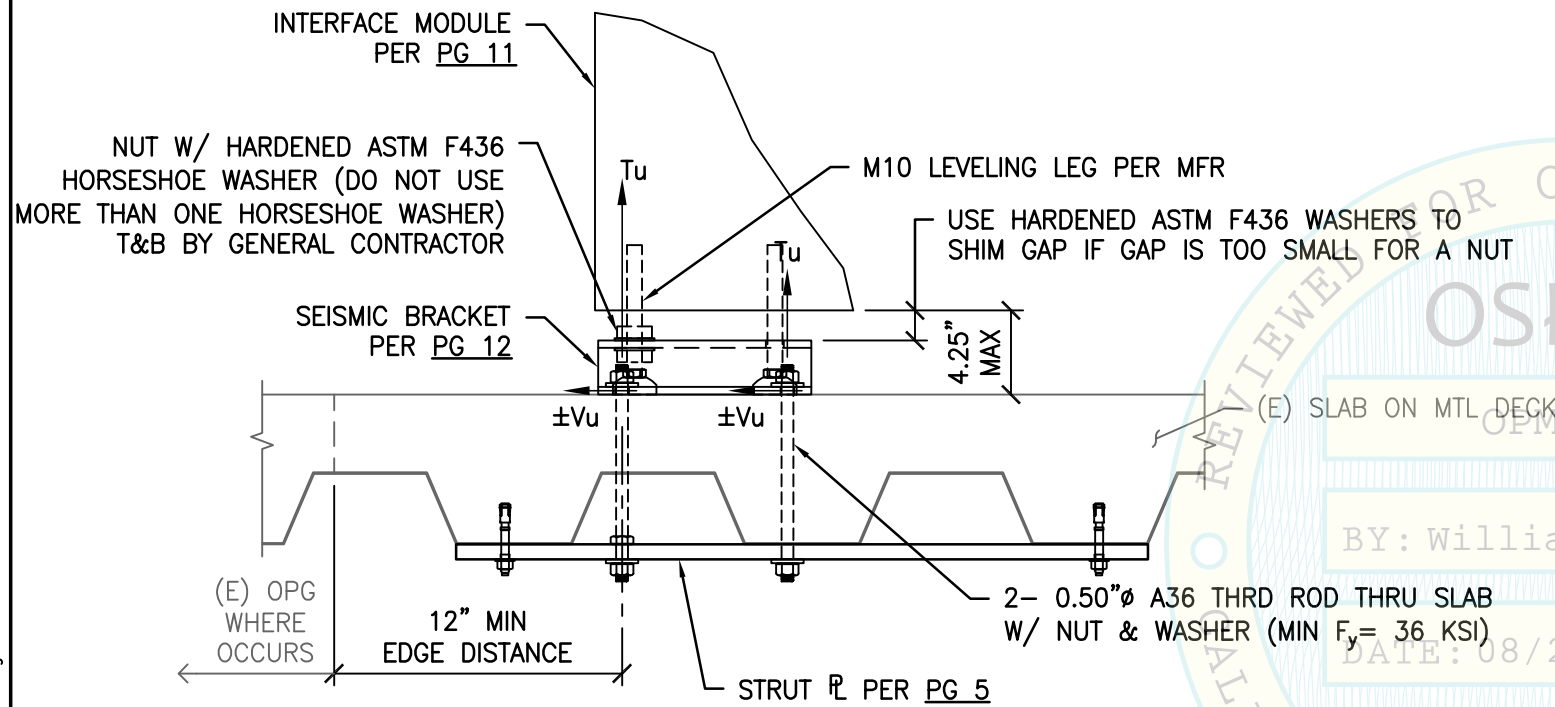
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ABBOTT ALINITY s Interface INSTRUMENTS EQUIPMENT SUPPORTS & ATTACHMENTS							Date: 7/21/2020
				CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833			
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	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 z/h ≤ 1.0	1138#	72#

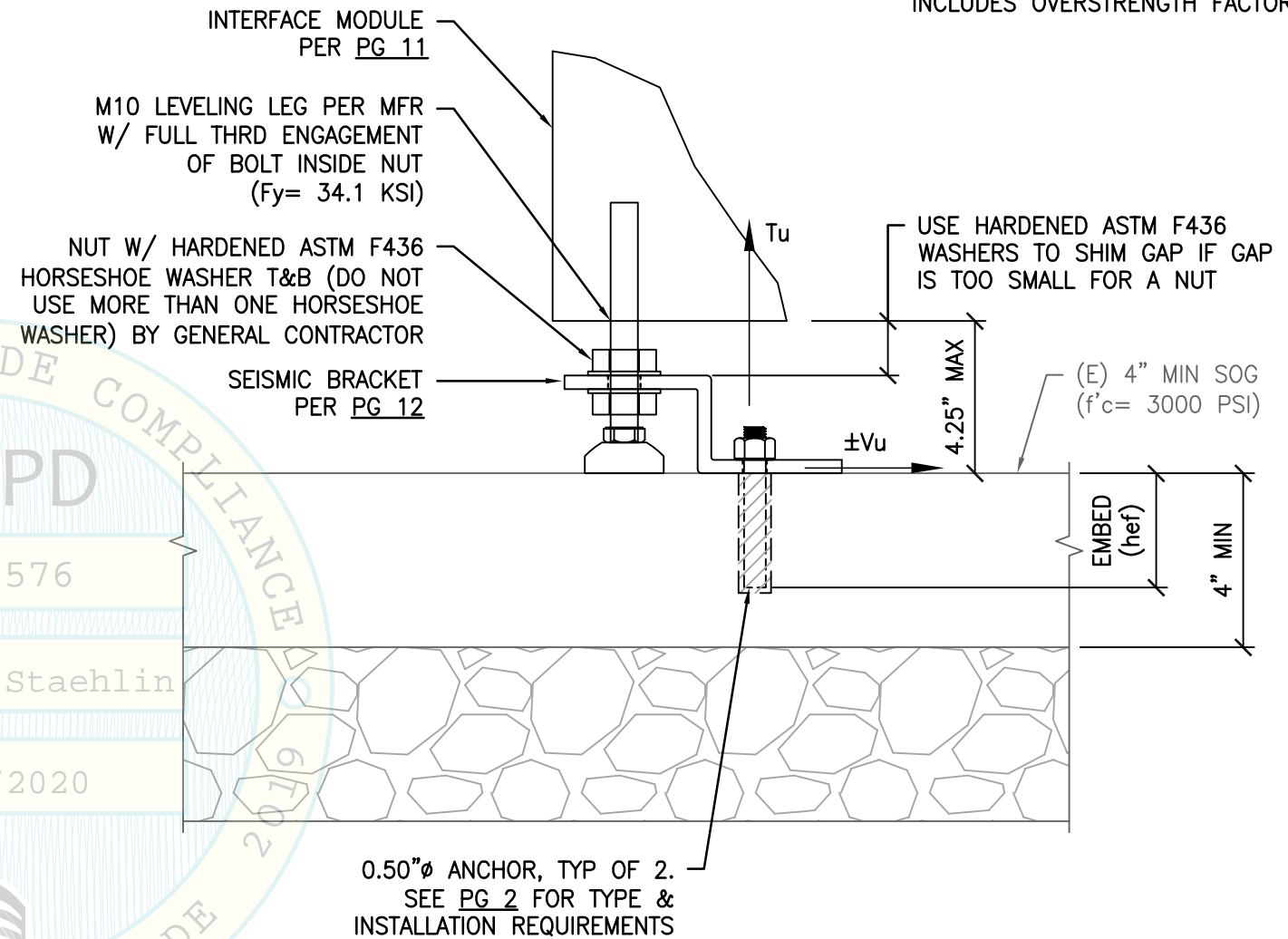
OVERSTRENGTH FACTOR (Ω_b) MUST BE APPLIED TO V_u FOR ANCHORAGE TO CONC.

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 2 z/h = 0	632#	41#

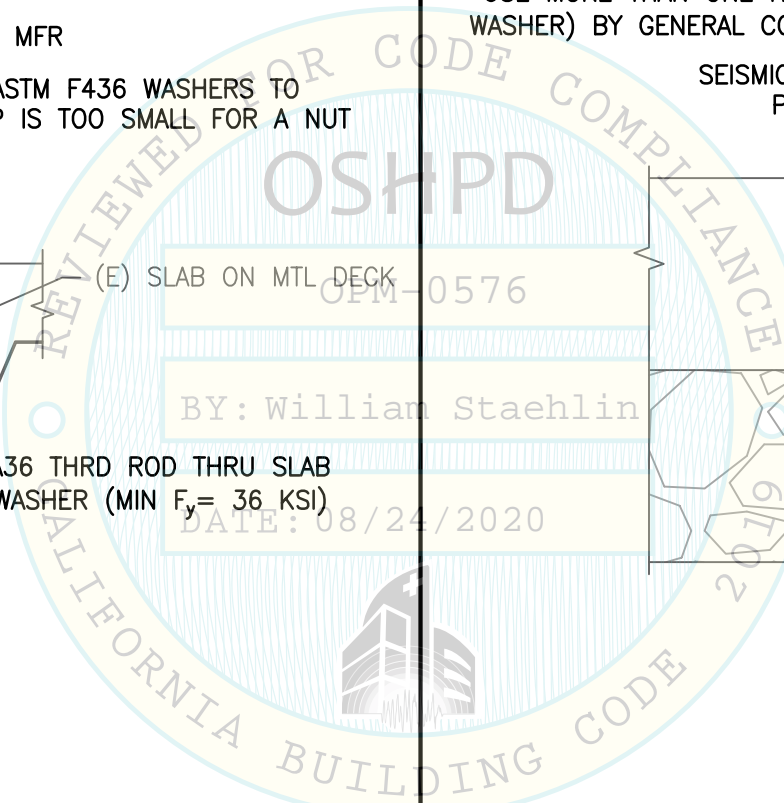
INCLUDES OVERSTRENGTH FACTOR (Ω_b)



CASE 1 - SUSPENDED FLR W/ THRU-BOLTS



**CASE 2 - SOG
(SLAB AT OR BLW GRADE)**



SHEET TITLE: INTERFACE MODULE
SUPPORT & ATTACHMENT DETAILS

ABBOTT
ALINITY s Interface INSTRUMENTS
EQUIPMENT SUPPORTS & ATTACHMENTS



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