



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY

APPLICATION #: OPM-0494

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: ☐ New ☒ Renewal/Update

Manufacturer Information

Manufacturer: Abbott

Manufacturer's Technical Representative: Claudia Moreno

Mailing Address: 1921 Hurd Dr., MS 2-33, Irving, TX 75038

Telephone: (972) 518-7691

Email: claudia.moreno@abbott.com

Product Information

Product Name: Accelerator® a 3600 Automation Track Interfaces

Product Type: Interfaces for Alinity i and c unified automated diagnostic processing laboratory instruments

Product Model Number: N/A

General Description: The Accelerator® a3600 is a modular system designed to automate pre/post-analytical

Applicant Information

Applicant Company Name: Abbott

Contact Person: Claudia Moreno

Mailing Address: 1921 Hurd Dr., MS 2-33, Irving, TX 75038

Telephone: (972) 518-7691

Email: claudia.moreno@abbott.com

Title: Engineering Supervisor

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

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY

OSHPD



**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
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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

OSHDP 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 OSHDP prior to testing.

☒ Analysis

☐ Experience Data

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

OSHDP Approval

Date: 10/29/2020

Name: Jeffrey Kikumoto

Title: Senior Structural Engineer

Condition of Approval (if applicable): _____

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ABBOTT LABORATORIES
ALINITY i & c INSTRUMENTS
OPM-0494-19

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TYPICAL TRACK MODULE & INTERFACE MODULE

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INTERFACE MODULE

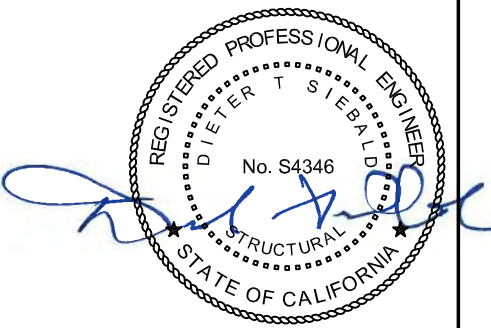
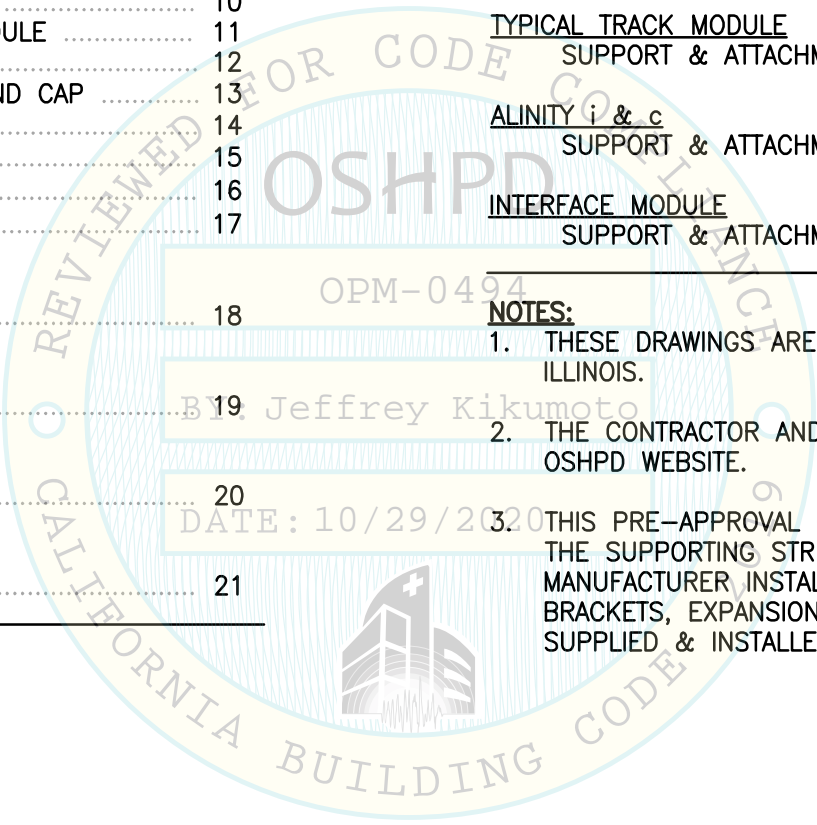
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NOTES:

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

2. THE CONTRACTOR AND THE INSPECTOR SHALL OBTAIN A COPY OF THIS PRE-APPROVAL FROM THE OSHPD WEBSITE.

3. THIS PRE-APPROVAL COVERS THE SUPPORTS AND ATTACHMENTS OF THE LABORATORY EQUIPMENT TO THE SUPPORTING STRUCTURE. THE EQUIPMENT IS SUPPLIED BY THE MANUFACTURER. THE MANUFACTURER INSTALLS THE BRACKETS THAT ATTACH TO THE EQUIPMENT CHASSIS. THE SEISMIC BRACKETS, EXPANSION ANCHORS, THROUGH-BOLTS & STRUT PLATES SHOWN IN THIS OPM SHALL BE SUPPLIED & INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.



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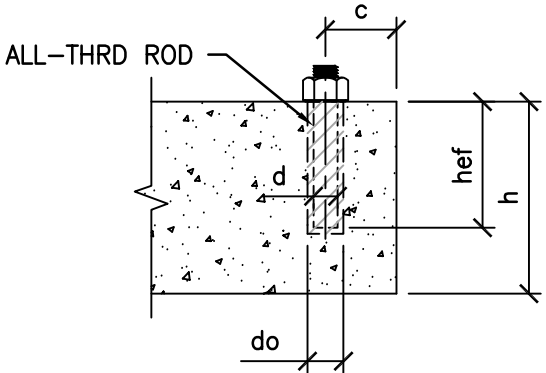


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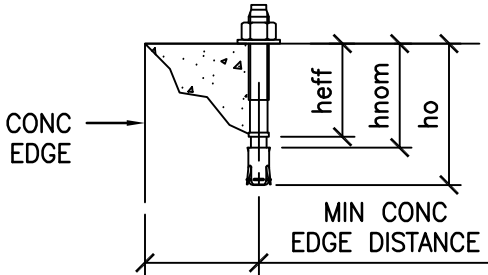
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GENERAL NOTES:

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 (½) TURN OF THE NUT.
- D. TEST VALUES: APPLY TEST LOADS TO ANCHORS WITHOUT REMOVING THE NUT.



ADHESIVE ANCHOR
(THRD ROD / REINFORCING BAR)



MECHANICAL ANCHOR

POST-INSTALLED <u>ADHESIVE</u> ANCHOR SCHED							
CONDITION OF ANCHORAGE	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 SPCG UNO (INCH)	TENSION TEST LOAD (LBS)
CASE 2	½"Ø HILTI HAS-R (ASTM F593 CW1 316 SS) ALL-THRD ROD	0.5625	2.75	4	12	6.75	2590

POST-INSTALLED <u>MECHANICAL</u> ANCHOR SCHED									
CONDITION OF ANCHORAGE	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 SPCG UNO (INCH)	TEST LOAD	
								TENSION LOAD (LBS)	TORQUE (FT-LBS)
CASE 1	KB-TZ 304 SS 0.375"Ø	2.3125	2.00	2.625	SEE DTLS	12	6.75 PARALLEL TO MTL DECK FLUTES	N/A	25
CASE 2	KB-TZ 304 SS 0.50"Ø	2.375	2.00	2.625	4	12	6.00 PARALLEL TO MTL DECK FLUTES	1550	40



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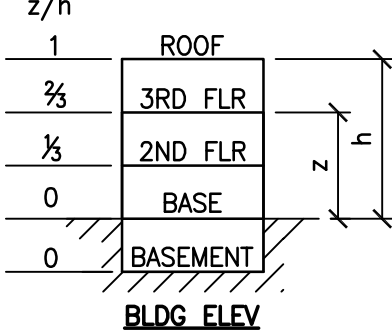
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GENERAL NOTES CONTINUED:

4. TWO (2) CONDITIONS OF SUPPORTS & ATTACHMENTS ARE SPECIFIED & 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 3/4" 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).

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. COORD THE AB LAYOUT W/ THE COMPONENT IN THE FIELD PRIOR TO SETTING AB'S.
7. ANCHOR BRACKETS SHALL BE PAINTED W/ 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 & ASSOCIATED HARDWARE SHALL BE FIELD PAINTED TO MATCH BRACKETS AFTER INSTALLATION IS COMPLETE.
9. STRUCTURAL STEEL SHAPES & 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 & INSTALL THE SEISMIC SUPPORTS & ATTACHMENTS (INCLUDING SEISMIC BRACKETS, EXPANSION ANCHORS, THRU-BOLTS, STRUT PLATES BLW SLABS, HIGH-STRENGTH BOLTS, ETC) IN CONJUNCTION W/ 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 EQUIP SPECIFIED. THE REPRESENTATIONS OF THE EQUIP ARE ONLY INTENDED TO SHOW THE COORD W/ THE SEISMIC BRACKETS.
12. BOLTS THRU CONC ON MTL DECK:
- A. BOLTS SHALL BE TORQUED BY 3/4 TURN OF THE NUTS AFTER SNUG TIGHT (THE SNUG TIGHT CONDITION IS DEFINED AS THE TIGHTNESS REQU TO BRING THE CONNECTED PLIES INTO FIRM CONTACT) CONDITION IS ACHIEVED, UNO.
 - B. THRU-BOLT HOLES SHALL BE 1/8" LARGER THAN BOLT SIZE (HOLE SIZE = BOLT SIZE + 1/8")
 - C. THRU-BOLTS IN CONC SHALL RECEIVE SPECIAL INSPECTION & TESTING (THRU-BOLTS W/ STL-TO-STL CONN IN TENSION DO NOT REQUIRE TESTING) IN ACCORDANCE W/ REQUIREMENTS FOR POST-INSTALLED ANCHORS.
13. TAKE CARE TO AVOID DAMAGING REBAR OR POST-TENSIONING TENDONS WHEN INSTALLING ANCHORS TO CONC.

GENERAL NOTES CONTINUED:

14. DRY BOLT & NUT INSTALLATION TORQUES SHALL BE AS FOLLOWS:

BOLT OR NUT DIA	TORQUE (FT-LBS)
M5	5
M8	8
M10	15
M16	67
M20	136
0.25"	10
0.50"	40

THESE VALUES DO NOT APPLY TO POST-INSTALLED CONC ANCHORS.

15. FUTURE ALTERATIONS TO TRACK SYSTEMS, INCLUSIVE OF BUT NOT LIMITED TO TRACK & TRACK COMPONENTS, TRACK MODULES & OTHER INSTRUMENTS ATTACHED TO THE TRACK SYSTEM MUST BE REVIEWED BY OSHPD.

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 W/ THE STRUCTURAL WELDING CODE-STEEL OF THE AMERICAN WELDING SOCIETY (AWS D1.1-15). SUBMIT WELDING PROCEDURES & SPECIFICATIONS TO OWNER'S TESTING LABORATORY FOR REVIEW & APPROVAL PRIOR TO BEGINNING SEISMIC BRACKET FABRICATION.
2. WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTH REQ. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINSIZE 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

$S_{ps} = 2.5$

$I_p = 1.5$

$a_p = 1.0$

$R_p = 1.5$

$\Omega_o = 1.5$

W_p AS NOTED ON COMPONENT BASE PLAN & ELEVS

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)

$F_p = 1.12 W_p$

$F_v = 0.50 W_p$

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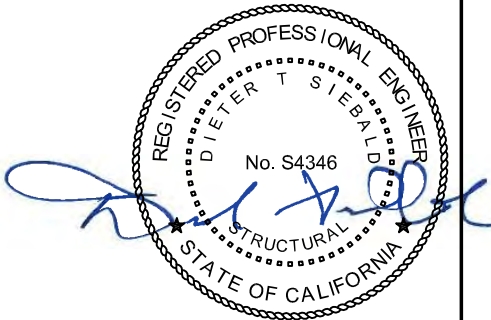


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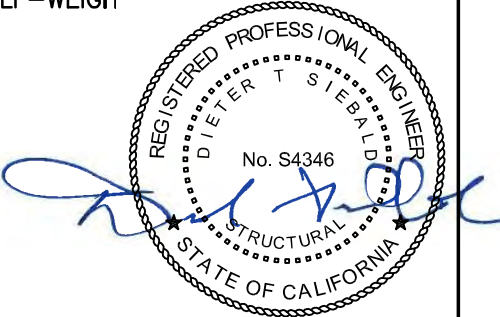
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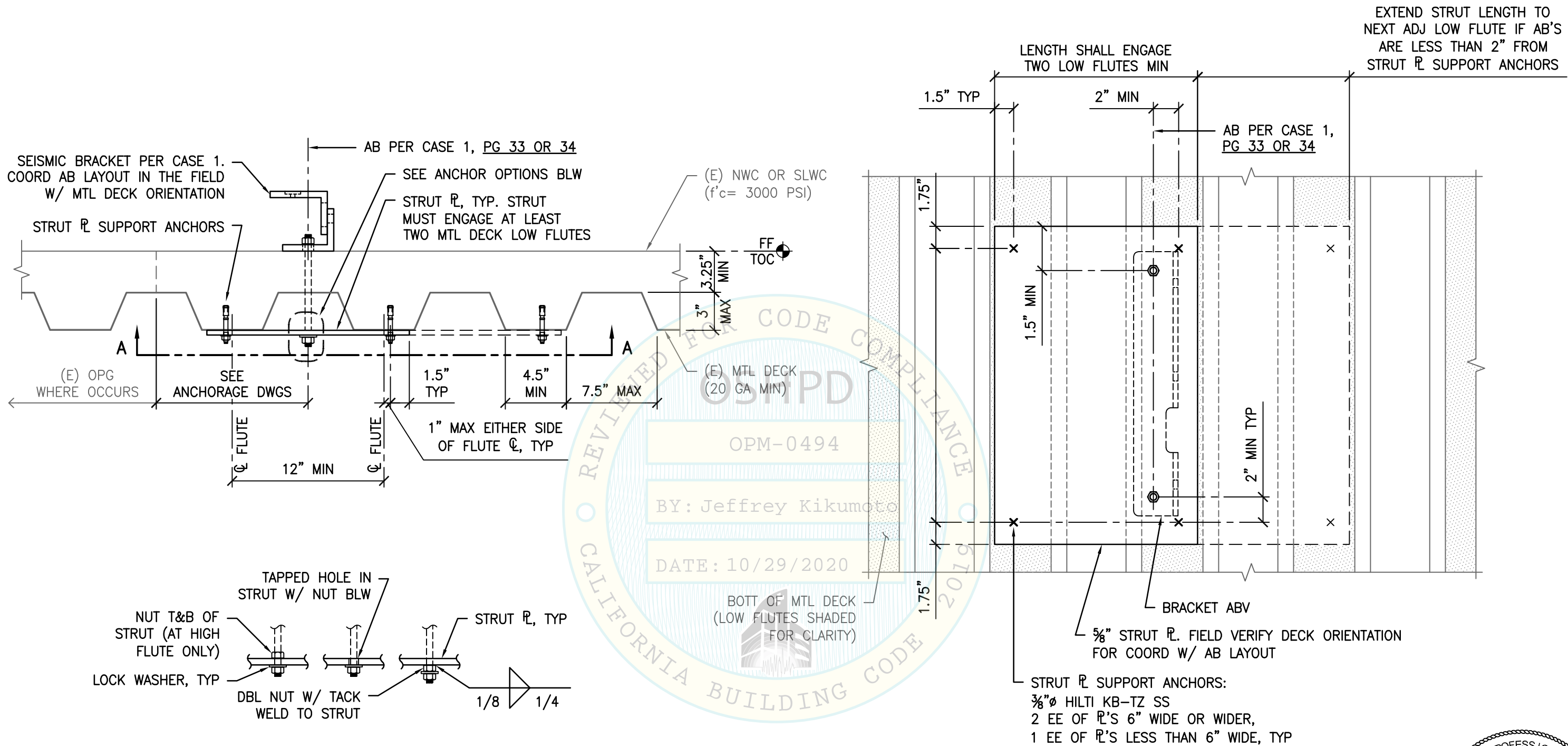
ABBREVIATIONS:

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



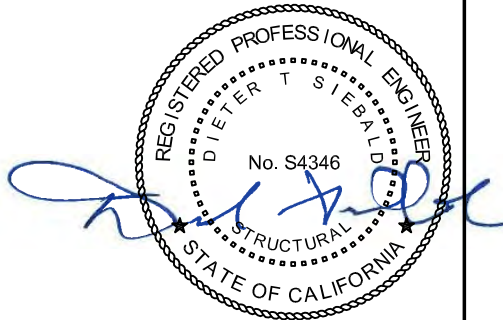
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ANCHOR OPTIONS

SECTION A-A



SHEET TITLE: TYPICAL STRUT DETAILS



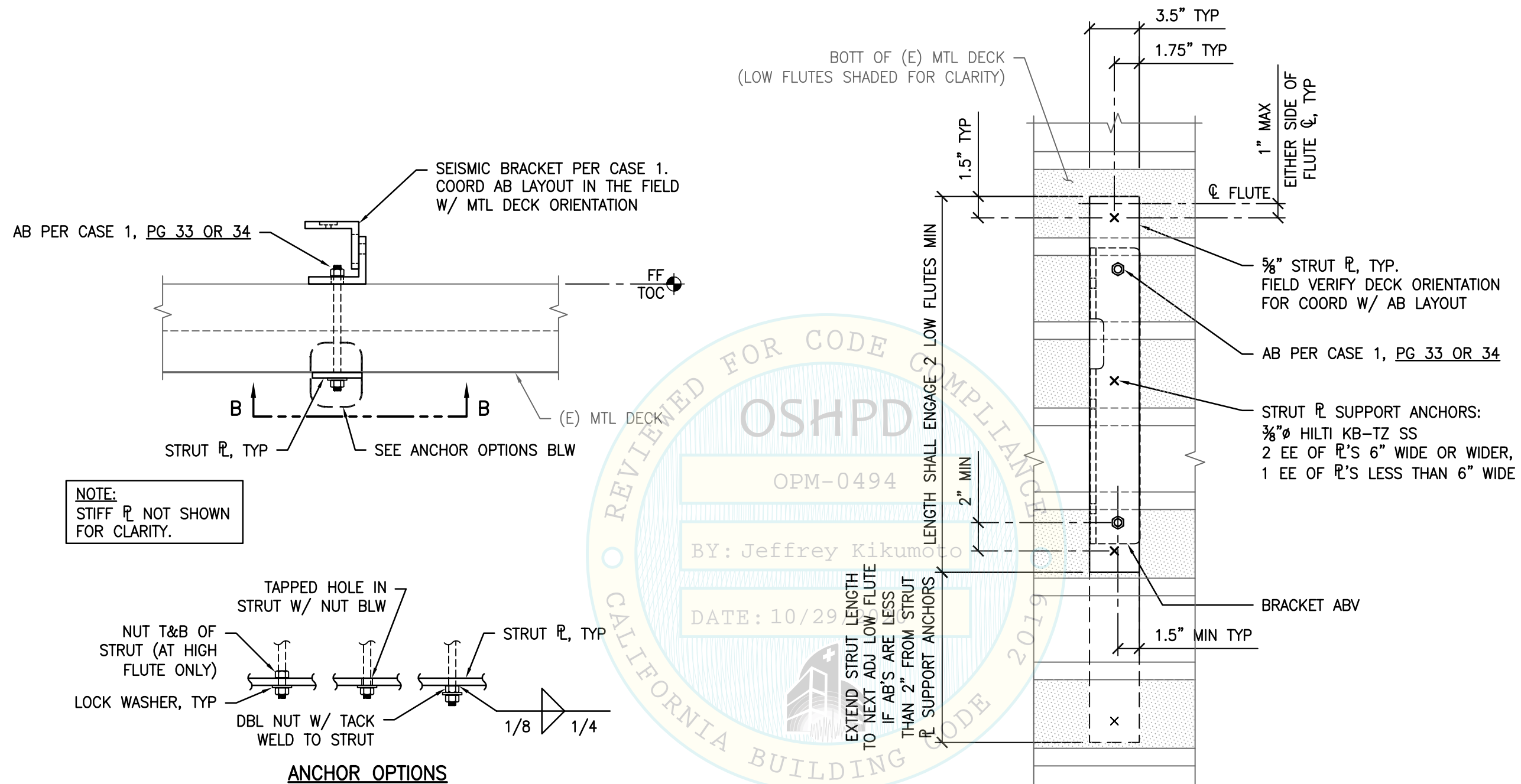
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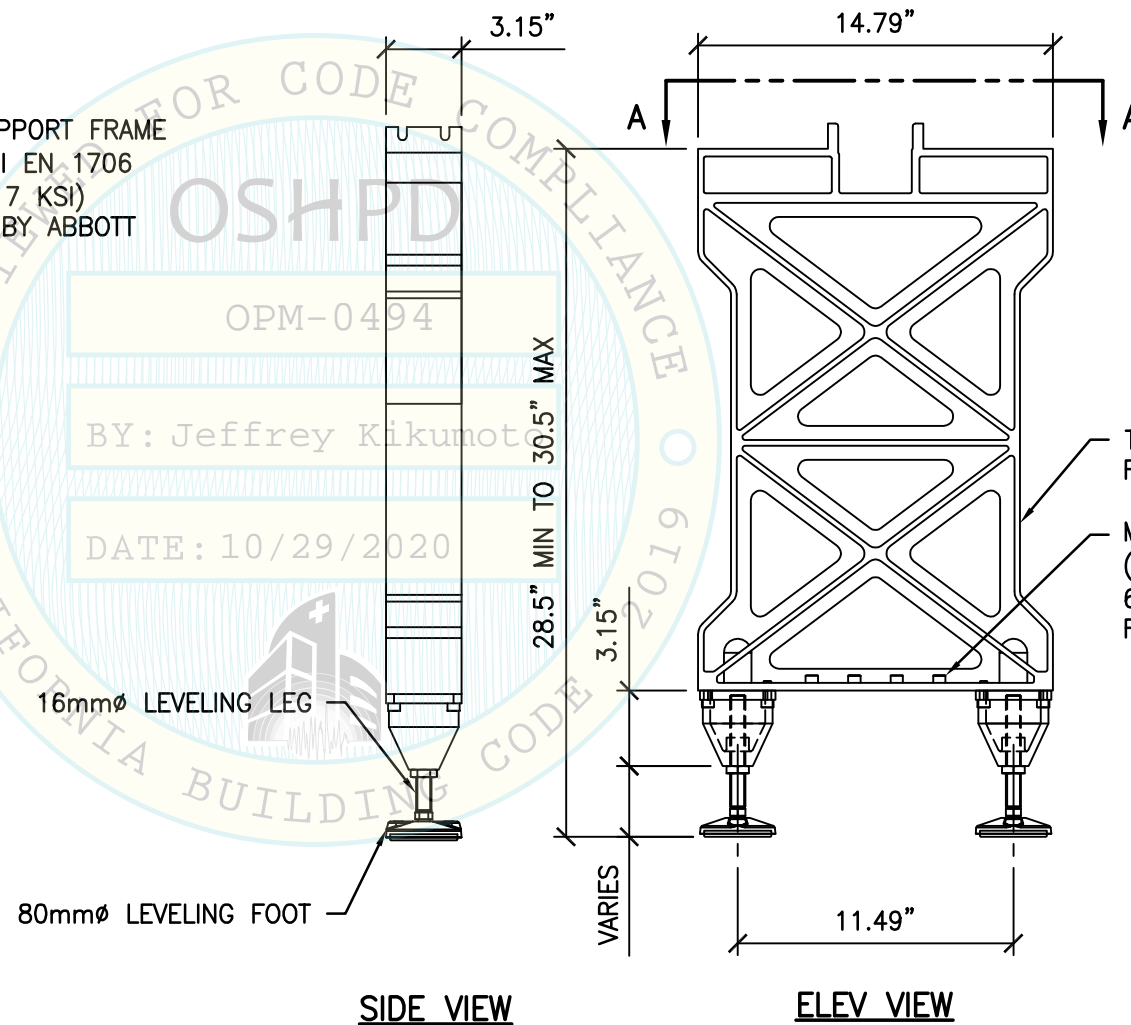
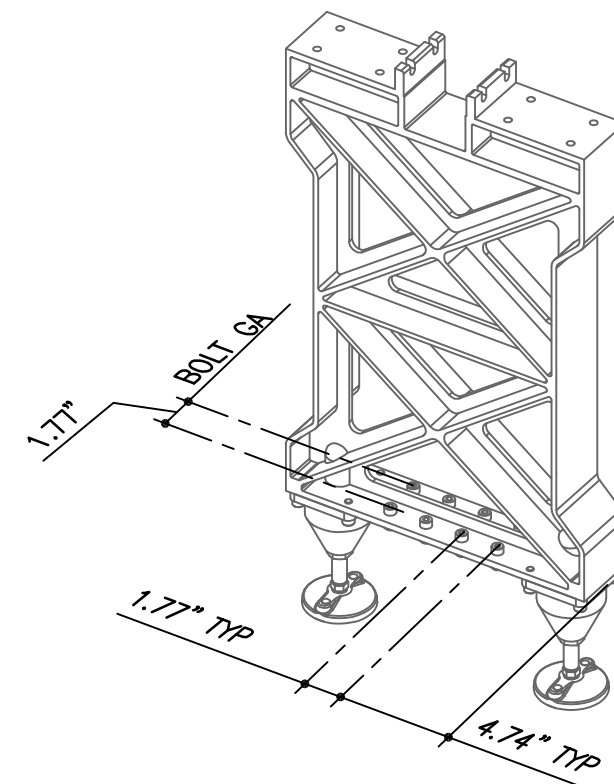
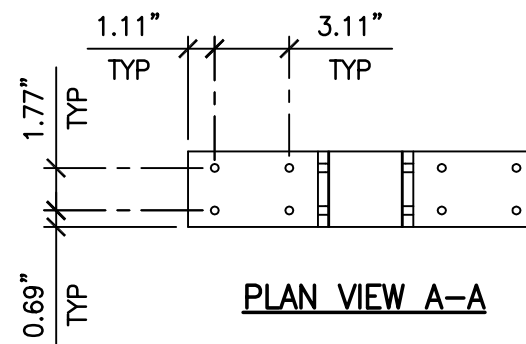
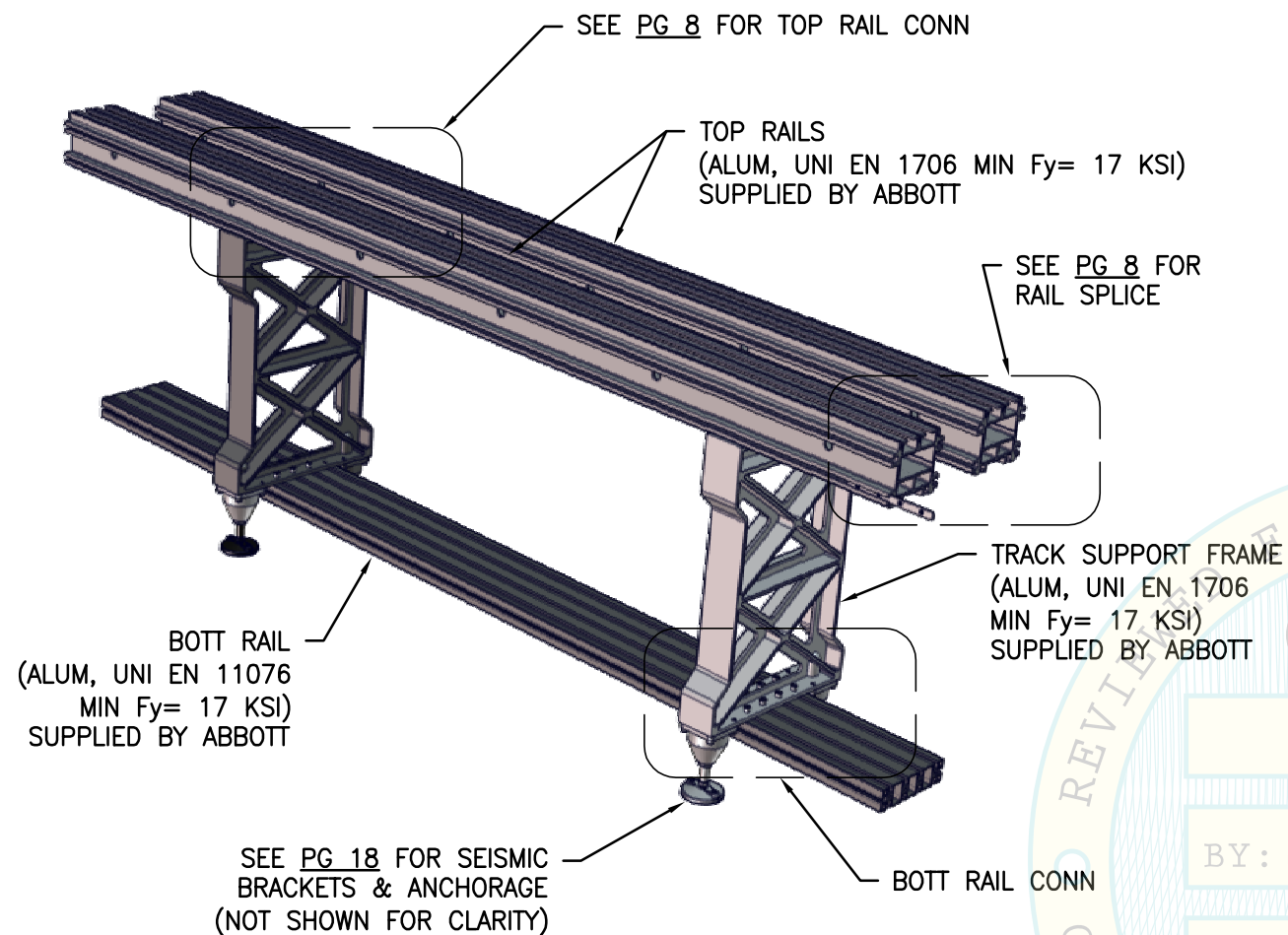
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TRACK SUPPORT FRAME

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

TRACK SUPPORT FRAME

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.
3. SEISMIC BRACKETS ARE REQ AT ALL TRACK FRAMES.
4. FUTURE ALTERATIONS TO TRACK SYSTEMS, INCLUSIVE OF BUT NOT LIMITED TO TRACK & TRACK COMPONENTS, TRACK MODULES & OTHER INSTRUMENTS ATTACHED TO THE TRACK SYSTEM MUST BE REVIEWED BY OSHPD.



SHEET TITLE: MODULE SUB-ASSEMBLY DETAILS
TYPICAL TRACK MODULE



ABBOTT
ALINITY i & c INSTRUMENTS
EQUIPMENT SUPPORTS & ATTACHMENTS



CYS STRUCTURAL ENGINEERS, INC.

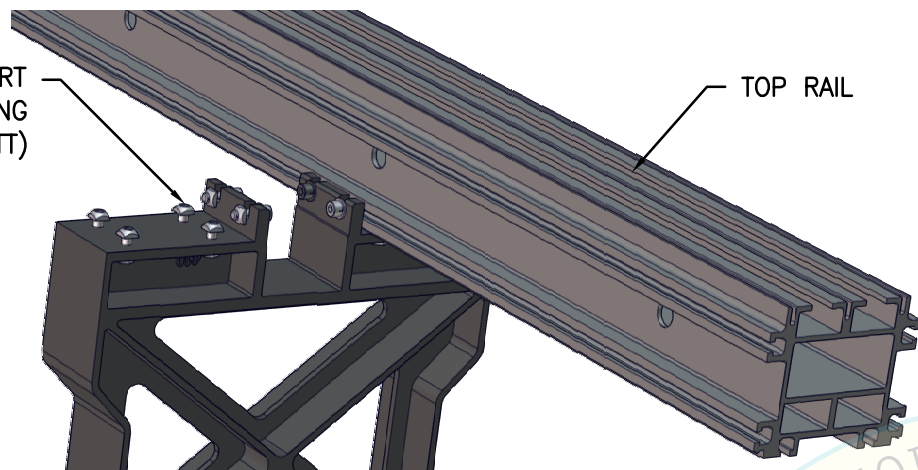
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

TEL (916) 920-2020
www.cyseng.com

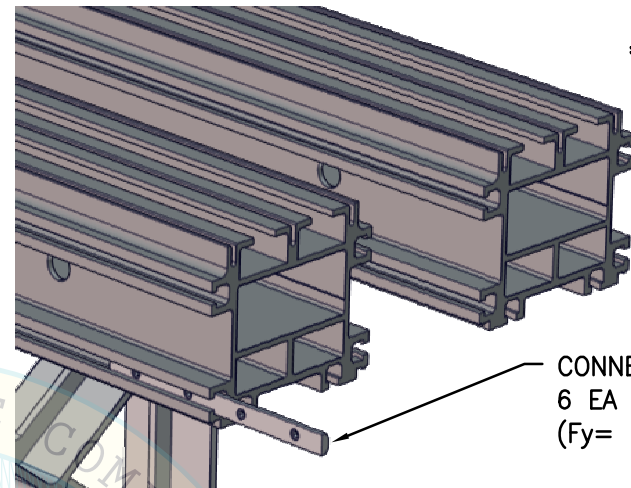
Rev	Description	Date	Job No:	19091
			Date:	10/22/2020
			By:	MTC
			Page:	7 of

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



TOP RAIL



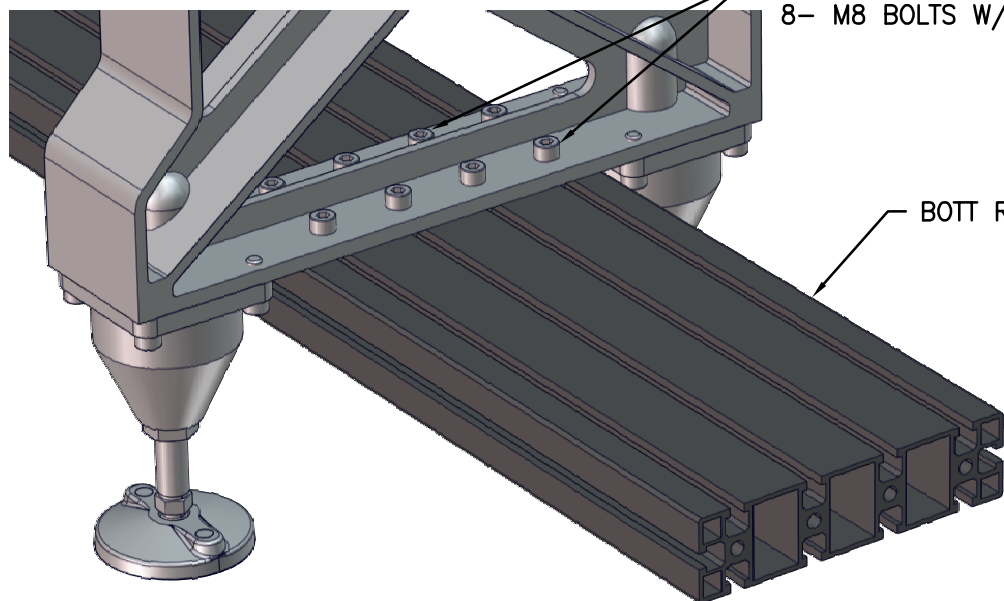
CONNECTOR PL W/ 4- M8 SET SCREWS. CTR ON RAIL SPLICE.
6 EA TOP RAIL & 4 AT BOTT RAIL (16 TOTAL)
(Fy= 96 KSI MIN) (CONN BY ABBOTT)

CONNECTOR PL
ISOMETRIC VIEW

RAIL SPLICE

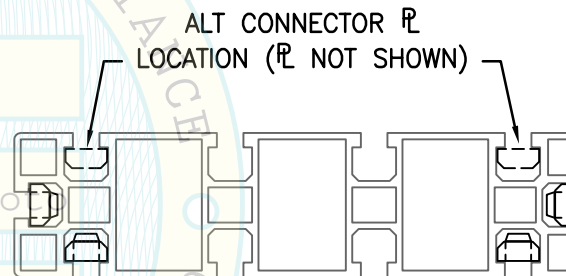
TOP RAIL CONN

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



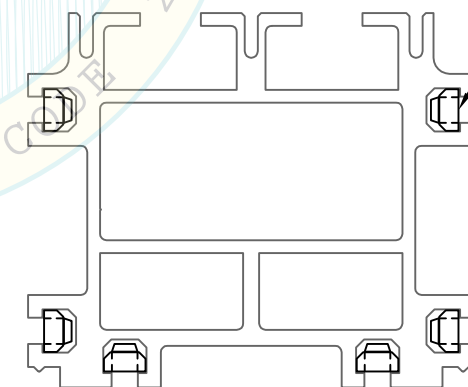
BOTT RAIL

BOTT RAIL CONN



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= 37 KSI),
TYP OF 6 AT TOP RAIL
SECTION PROPERTIES:
A= 0.1070 IN²; S= 0.00353 IN³;
I= 0.000454 IN⁴

TOP RAIL SPLICE



SHEET TITLE: MODULE SUB-ASSEMBLY DETAILS
TYPICAL TRACK MODULE

ABBOTT
ALINITY i & c INSTRUMENTS
EQUIPMENT SUPPORTS & ATTACHMENTS



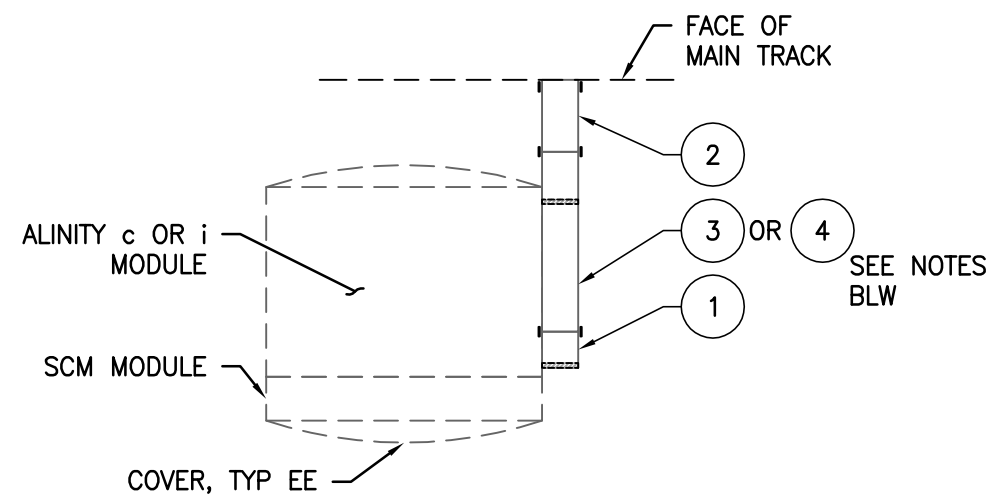
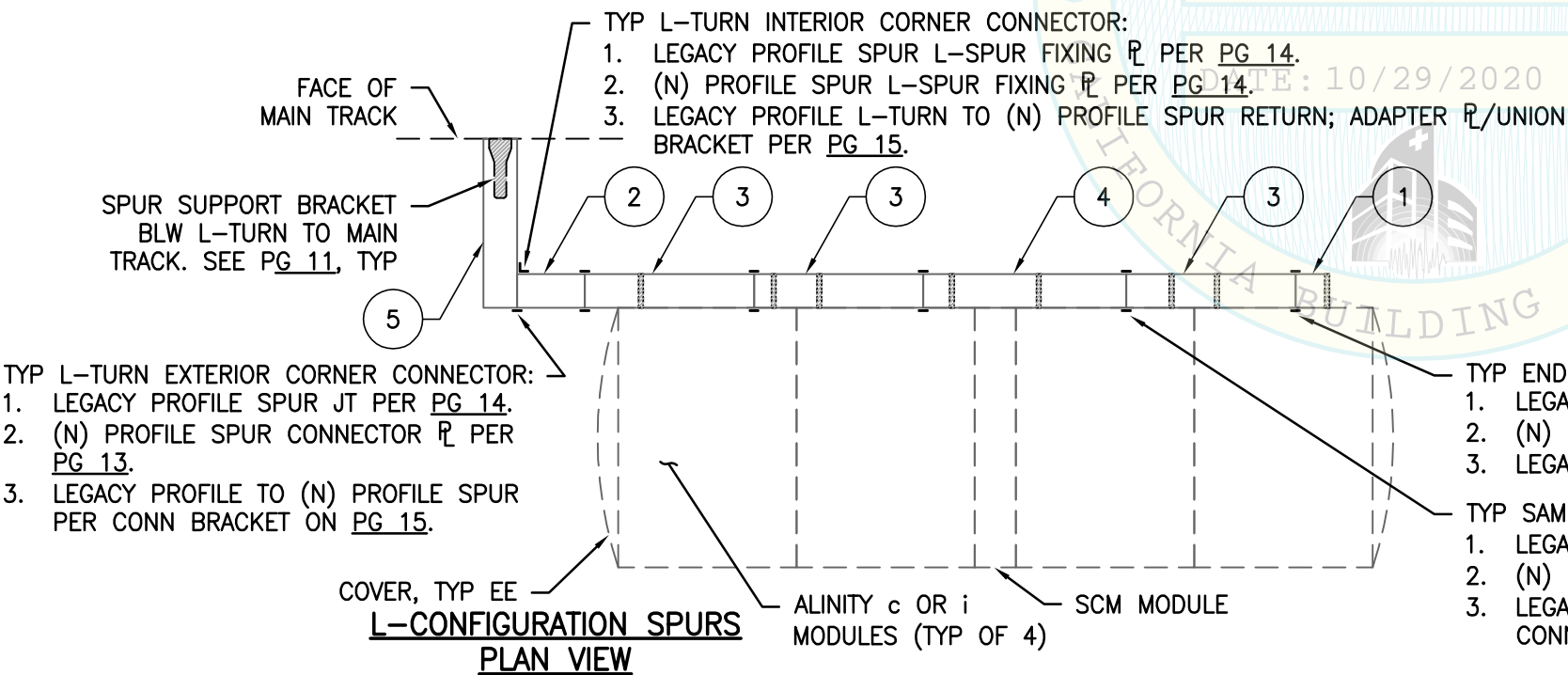
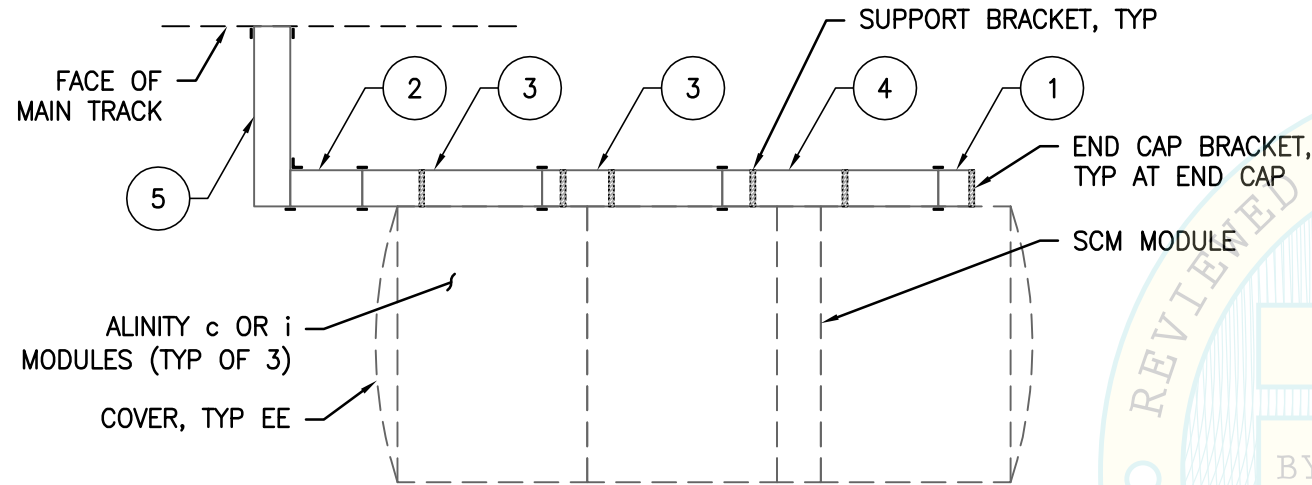
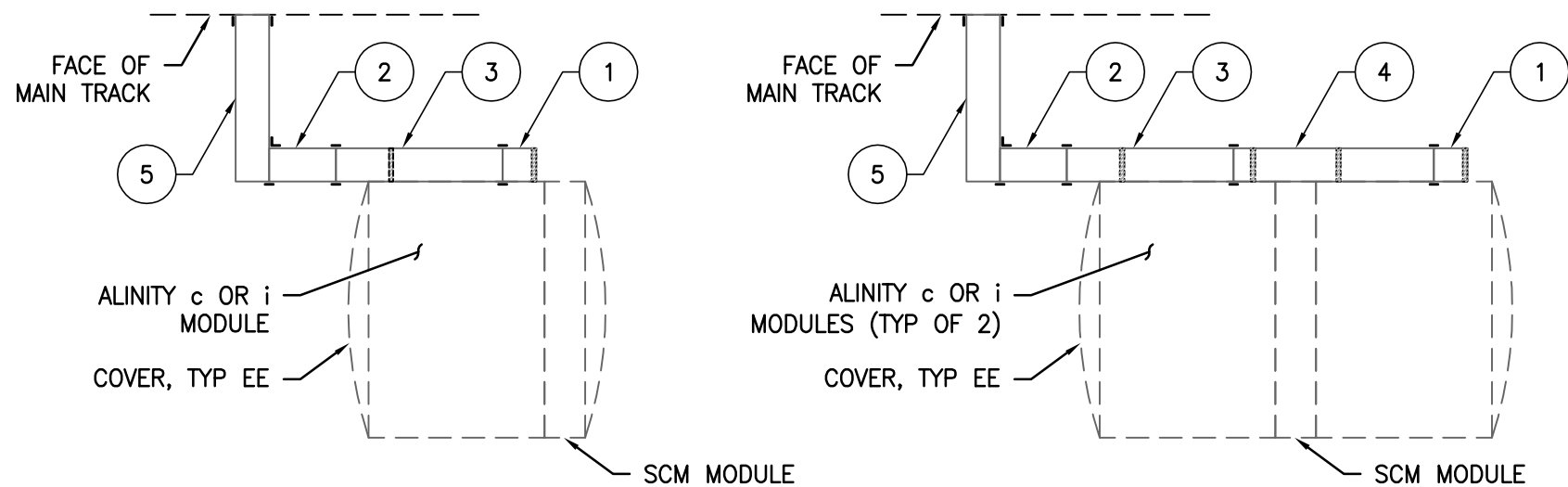
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			Date:	10/22/2020
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NOTE:
FOR CONFIGURATIONS W/ MULTIPLE ALINITY MODULE, SEE L-CONFIGURATIONS. NOTE THAT STRAIGHT CONFIGURATIONS DO NOT USE COMPONENT #5

**STRAIGHT CONFIGURATION SPUR
PLAN VIEW**

COMPONENT	DESCRIPTION OF SPUR COMPONENTS	WT Wp(LBS)	PG
1	LEGACY PROFILE SPUR END CAP (N) PROFILE SPUR END CAP	18	10
2	LEGACY PROFILE SPUR RETURN & INTERFACE MODULE BLW (N) PROFILE SPUR RETURN & INTERFACE MODULE BLW	44	11
3	LEGACY PROFILE SAMPLING BAY (SHORT) (N) PROFILE SAMPLING BAY (SHORT)	26	12
4	LEGACY PROFILE SAMPLING BAY (LONG) (N) PROFILE SAMPLING BAY (LONG)	31	12
5	LEGACY PROFILE L-TURN (N) PROFILE L-TURN	27	14

NOTE:
CONFIGURING OF THE SPURS & ASSEMBLY OF SUBCOMPONENTS & THEIR INTERFACE MODULE FOR MULTIPLE CONFIGURATIONS W/ CONNECTORS (SUPPORTS, BRACKETS & PLATES) BY MFR



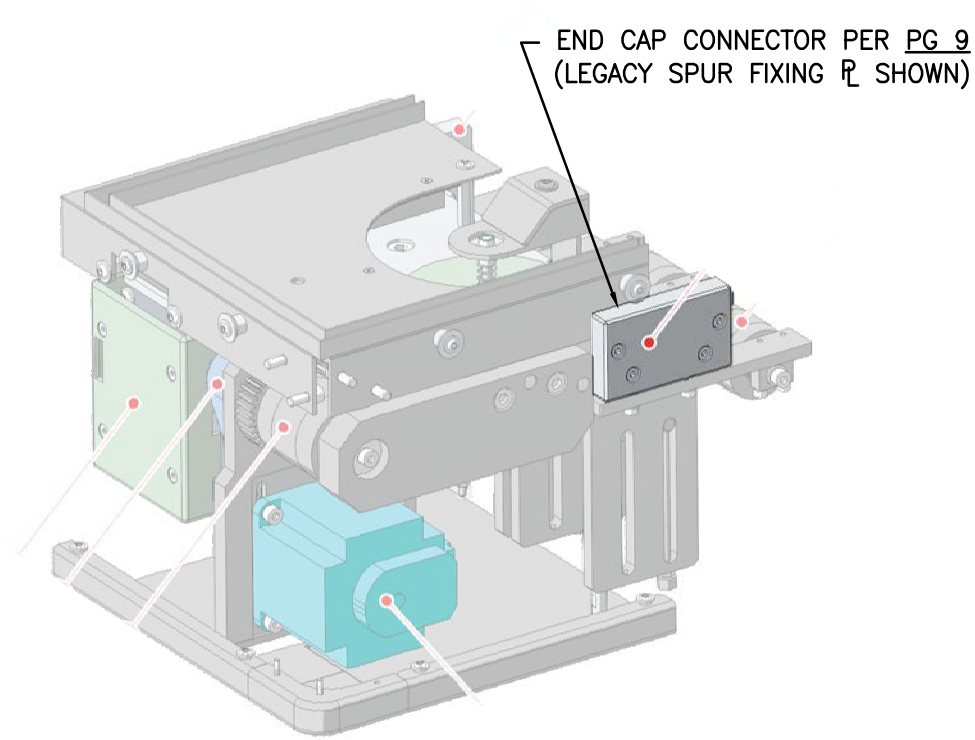
SHEET TITLE: a3600 ALINITY SPUR MODULE SUB-ASSEMBLY DETAILS
SPUR CONFIGURATIONS

ABBOTT
ALINITY i & c INSTRUMENTS
EQUIPMENT SUPPORTS & ATTACHMENTS

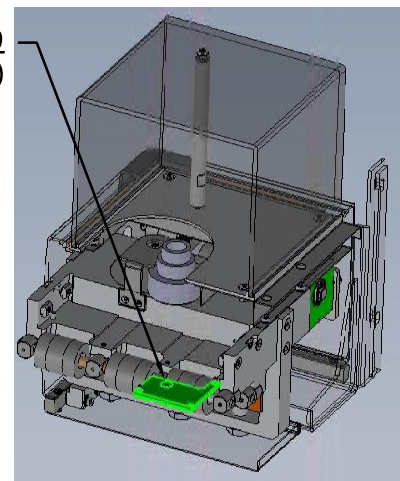
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Rev	Description	Date	Job No: 19091
			Date: 10/22/2020
			By: MTC
			Page: 9 of

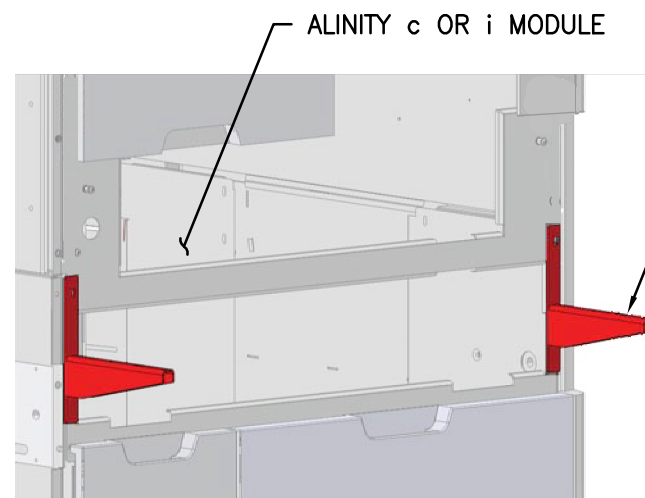
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LEGACY SPUR END CAP
COMPONENT 1a

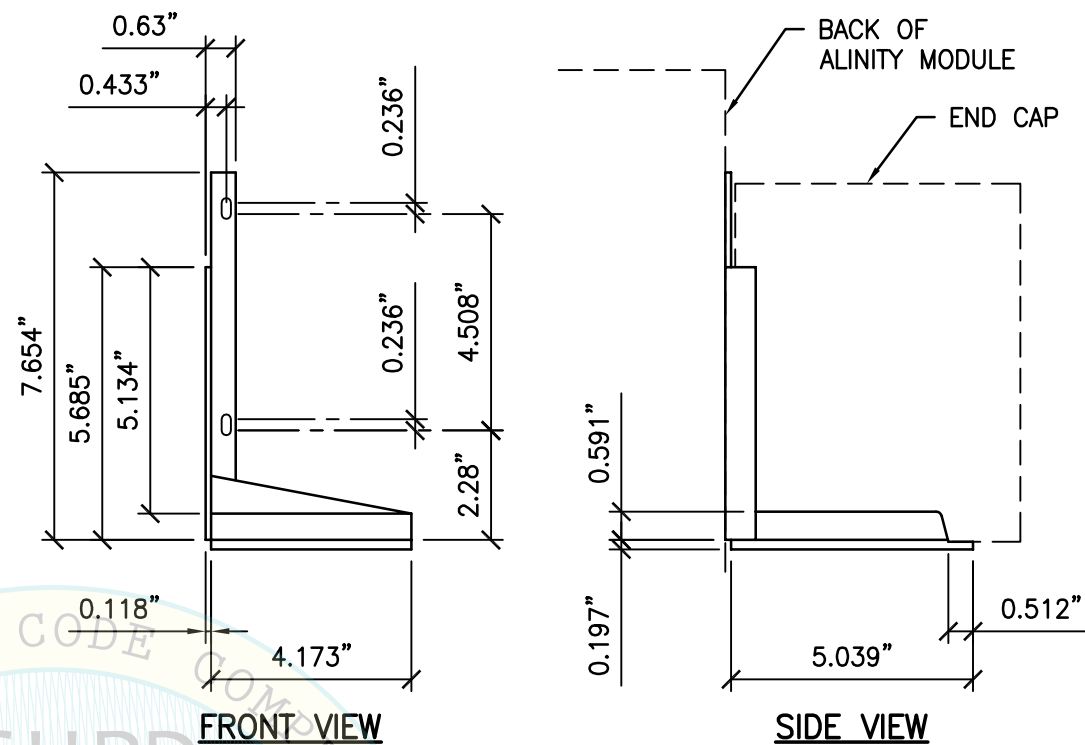


(N) SPUR END CAP
COMPONENT 1b



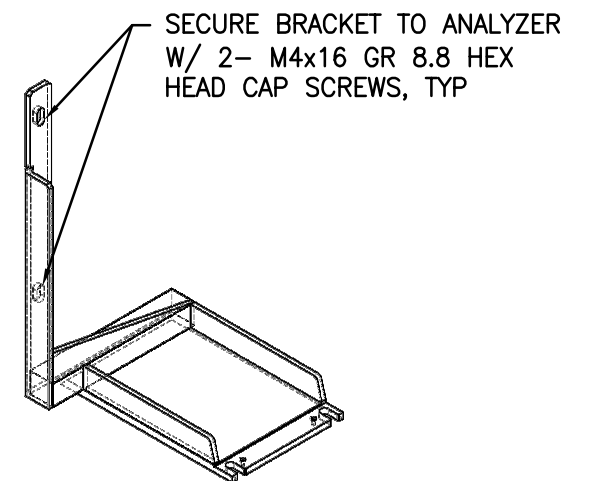
ANALYZER SUPPORT BRACKETS FOR SPURS

GRADE 1040 STL SPUR SUPPORT
BRACKET. SEE PG 11

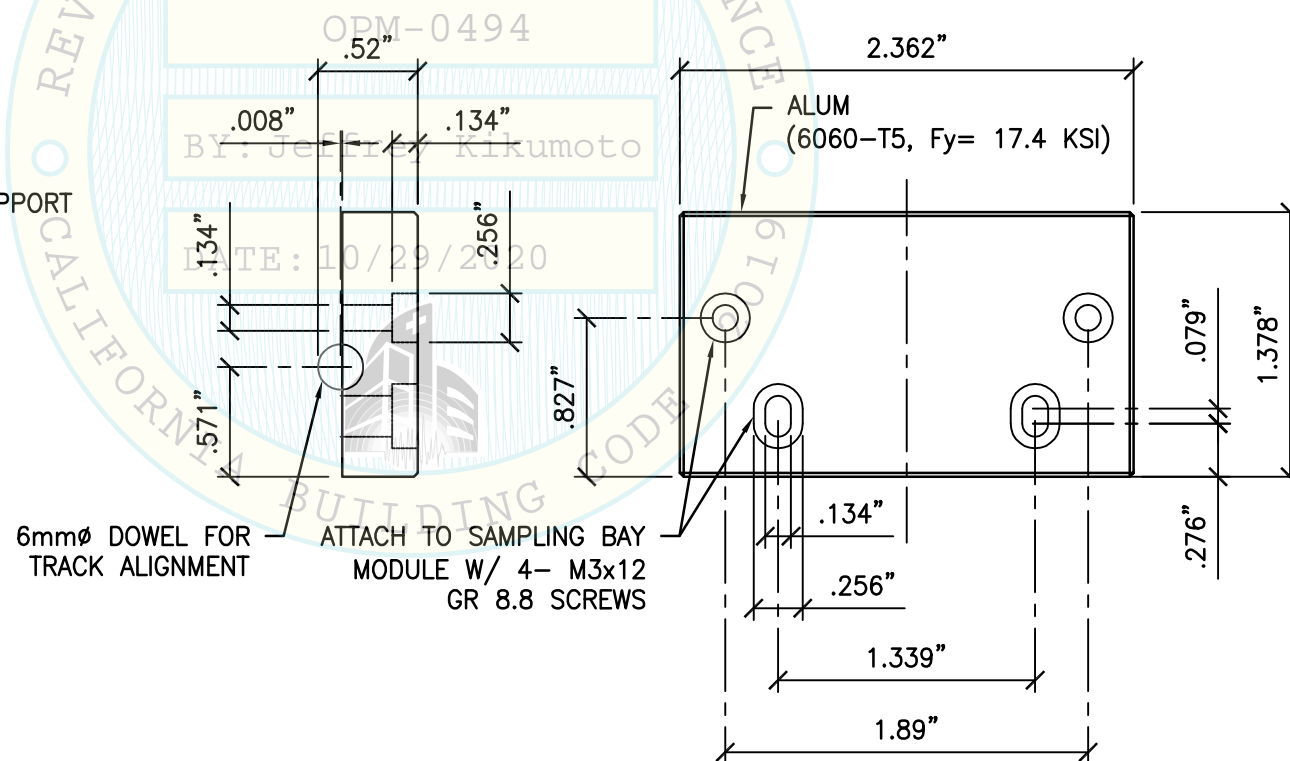


LEGACY END CAP BRACKET DETAIL

NOTE:
BRACKET IS FABRICATED FROM
EN C40 STL (Fy= 30 KSI)



LEGACY END CAP BRACKET
ISOMETRIC VIEW



LEGACY SPUR FIXING PLATE DETAIL

6mmØ DOWEL FOR
TRACK ALIGNMENT

ATTACH TO SAMPLING BAY
MODULE W/ 4- M3x12
GR 8.8 SCREWS

ALUM
(6060-T5, Fy= 17.4 KSI)



SHEET TITLE: a3600 ALINITY SPUR MODULE SUB-ASSEMBLY DETAILS
COMPONENT 1: a3600 ALINITY ci SPUR END CAP & TYPICAL CONNECTIONS

ABBOTT
ALINITY i & c INSTRUMENTS
EQUIPMENT SUPPORTS & ATTACHMENTS

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SPUR FIXING PLUG, END OF SPUR.
ATTACH W/ 4- M3x12 GR 8.8 SCREWS.
SEE SPUR FIXING PLUG DETAIL ON PG 10

TENSIONING SCREW

RETURN MODULE
(LEGACY PROFILE
SHOWN)

MAIN TRACK

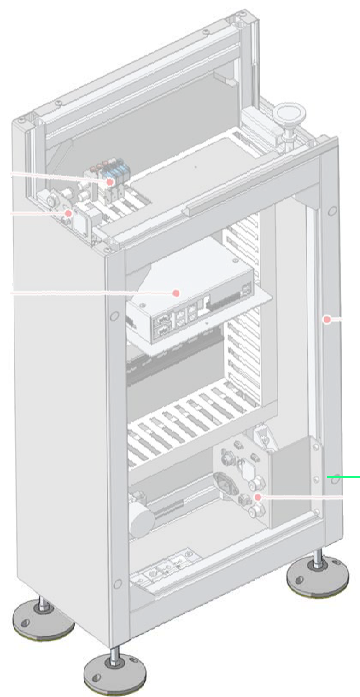
RETURN MODULE
(LEGACY PROFILE
SHOWN)

ATTACH RETURN MODULE TO MAIN
TRACK W/ M8 CLASS 8.8 BOLTS
& SPRING NUTS (TYP OF 4)
INSTALL TORQUE= 6.8 LB-FT

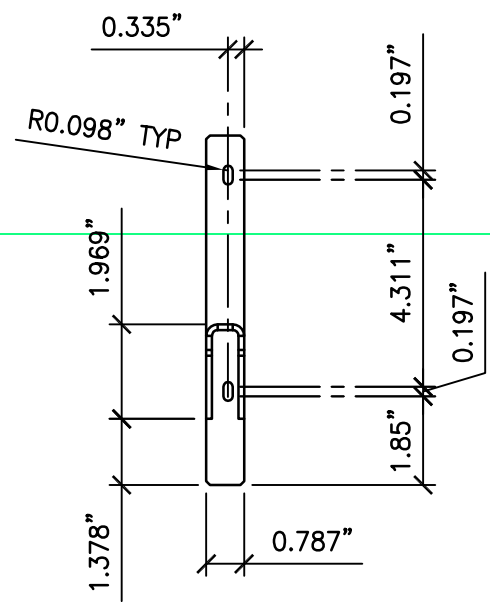
MAIN TRACK

L-TURN SPUR (COMPONENT 5) CONN TO MAIN TRACK
BRACKET TO L-TURN SPUR

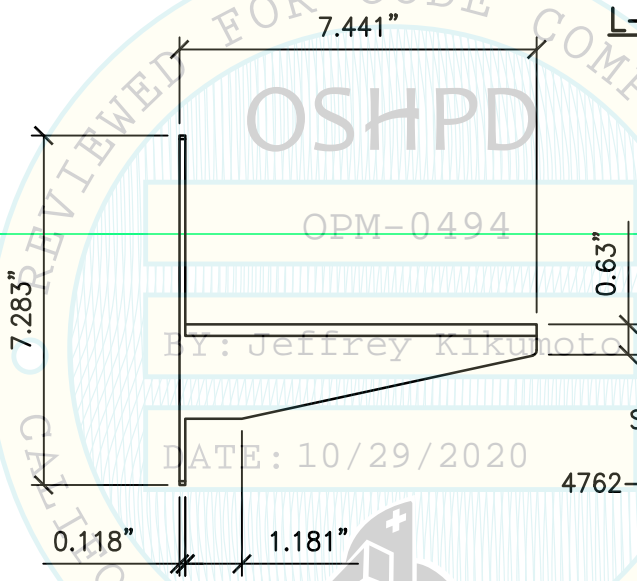
L-TURN SPUR (COMPONENT 5) CONN TO MAIN TRACK
BRACKET TO MAIN TRACK



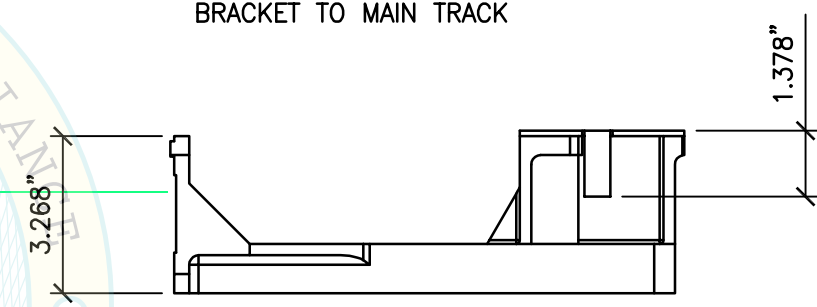
INTERFACE MODULE



FRONT VIEW



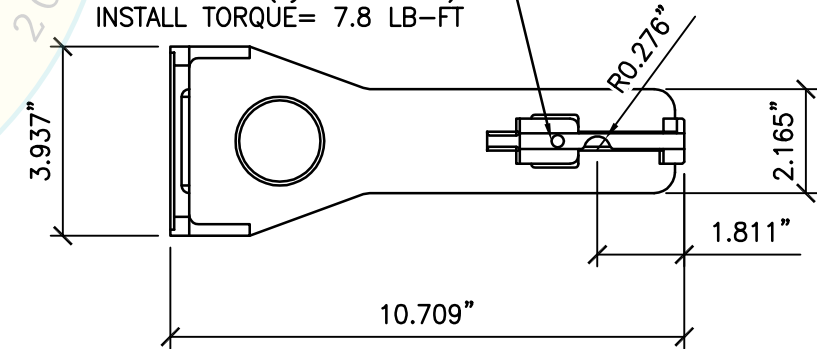
SIDE VIEW



SIDE VIEW

SECURE SPUR TO BRACKET W/ HEXAGON
SOCKET HEAD CAP SCREW UNI EN ISO
4762-M6x20-8.8 WHITE ZINC (Fy= 92.8 KSI).
INSTALL TORQUE= 7.8 LB-FT

NOTE:
BRACKET IS FABRICATED FROM CAST
ALUM ISO G-AISI 12 (Fy= 18.9 KSI)



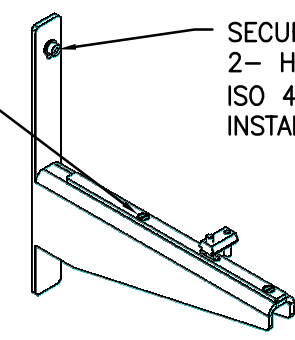
TOP VIEW
L-TURN SPUR TO MAIN TRACK
SUPPORT BRACKET DETAIL

NOTE:
ALINITY MODULE(S) ARE NOT SHOWN

SECURE TO TRACK SLOT W/ PLASTIC
FIXING NUT/SCREW OR ALUM BLOCK
HEX HEAD SCREW/SLOT NUT PER MFR

SECURE BRACKET TO ANALYZER W/
2- HEXAGON SOCKET HEAD CAP SCREWS UNI EN
ISO 4762-M4x12-A2-50 INOX (Fy= 72.5 KSI).
INSTALL TORQUE= 2.2 LB-FT

NOTE:
BRACKET IS FABRICATED FROM
EN C40 STL (Fy= 30.4 KSI MIN)



ISOMETRIC VIEW

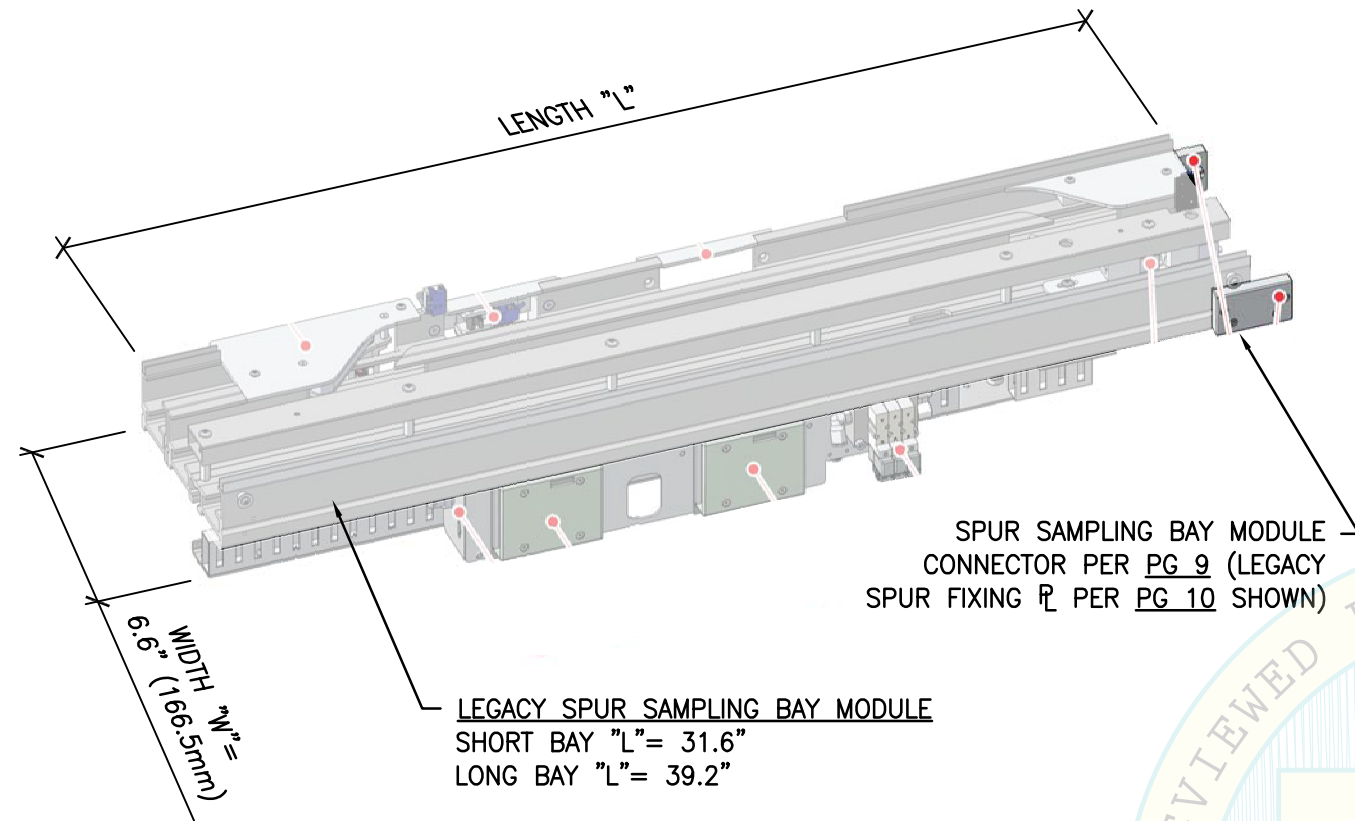
ANALYZER TRACK TO SPUR SUPPORT BRACKET DETAIL



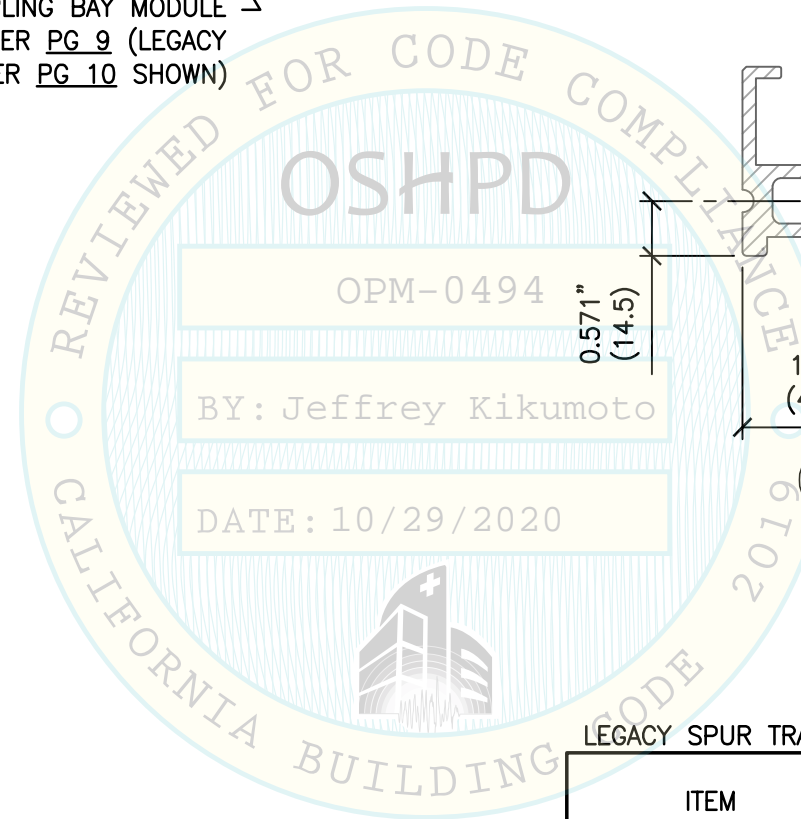
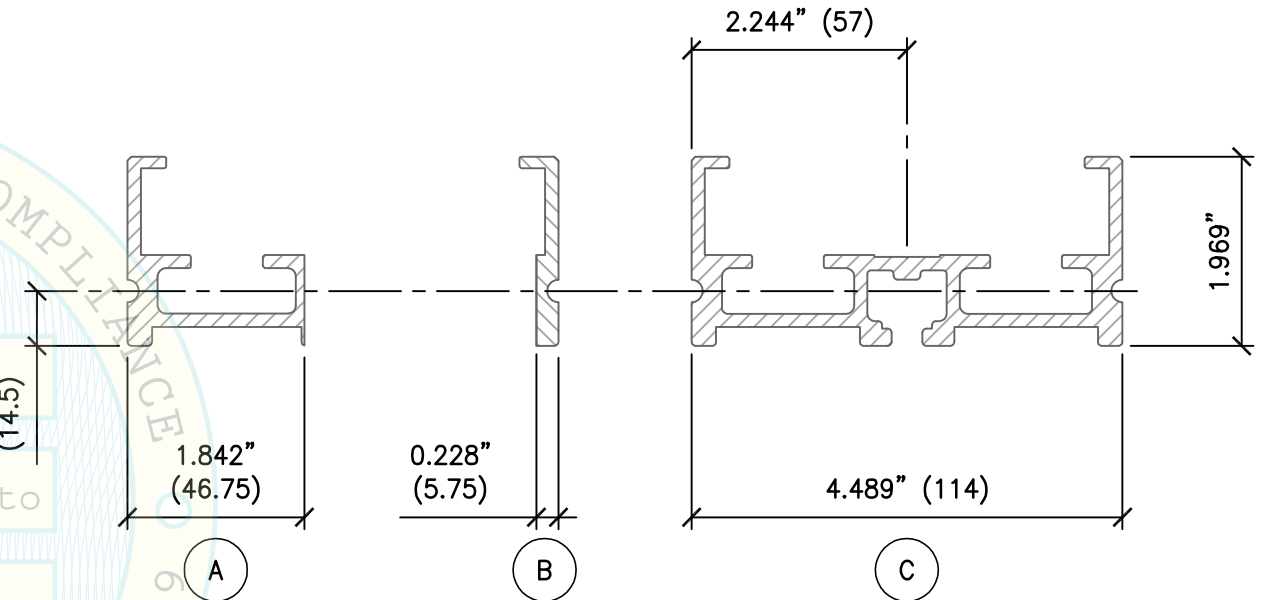
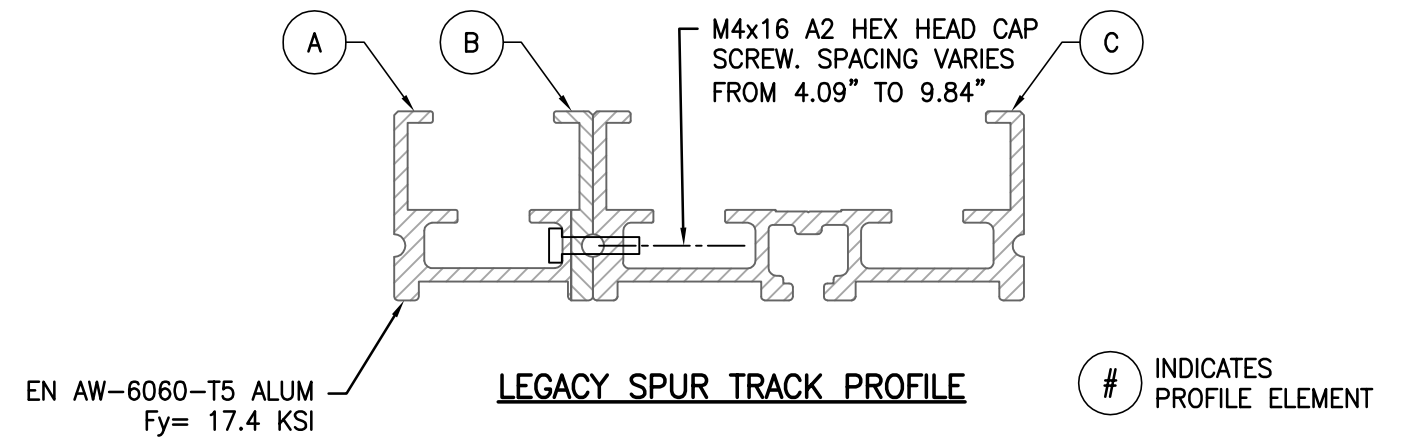
SHEET TITLE: a3600 ALINITY SPUR MODULE SUB-ASSEMBLY DETAILS COMPONENT 2: a3600 ALINITY ci SPUR RETURN MODULE & INTERFACE MODULE				Rev	Description	Date	Job No: 19091
ABBOTT ALINITY i & c INSTRUMENTS EQUIPMENT SUPPORTS & ATTACHMENTS							Date: 10/22/2020
							By: MTC
							Page: 11 of
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LEGACY SPUR SAMPLING BAY MODULE
SHORT BAY "L"= 31.6"
LONG BAY "L"= 39.2"



LEGACY SPUR TRACK SUBCOMPONENT & SECTION PROPERTIES

ITEM	A (IN ²)	S _x (IN ³)	S _y (IN ³)	I _x (IN ⁴)	I _y (IN ⁴)
ELEMENT A	0.81	0.18	0.29	0.21	0.33
ELEMENT B	0.38	0.15	0.00	0.14	0.00
ELEMENT C	1.84	0.36	2.05	0.47	4.60
ASSEMBLED PROFILE	3.03	0.69	3.88	0.85	13.39



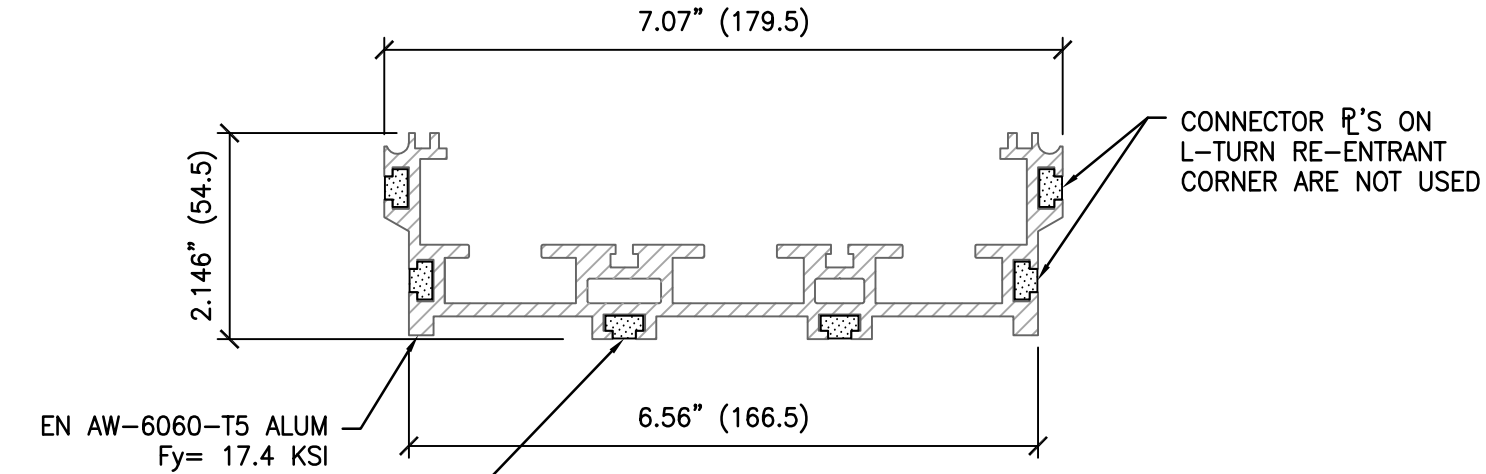
SHEET TITLE: a3600 ALINITY SPUR MODULE SUB-ASSEMBLY DETAILS
COMPONENTS 3&4: a3600 ALINITY ci LEGACY SPUR SAMPLING BAY MODULE

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EQUIPMENT SUPPORTS & ATTACHMENTS

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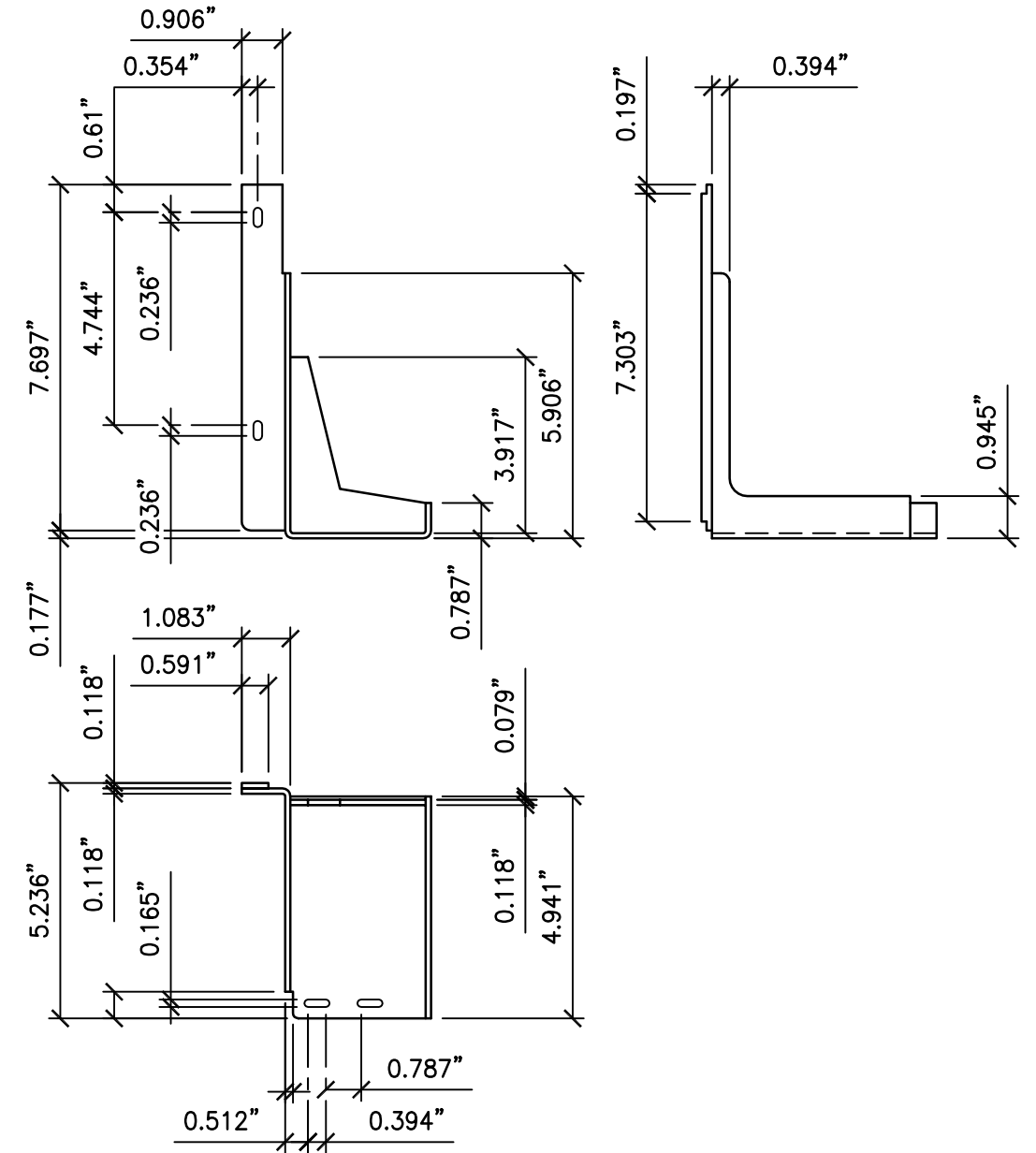
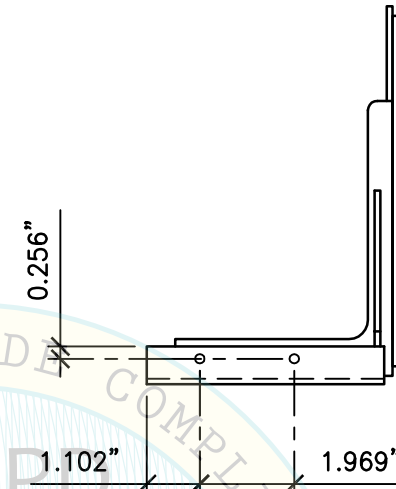
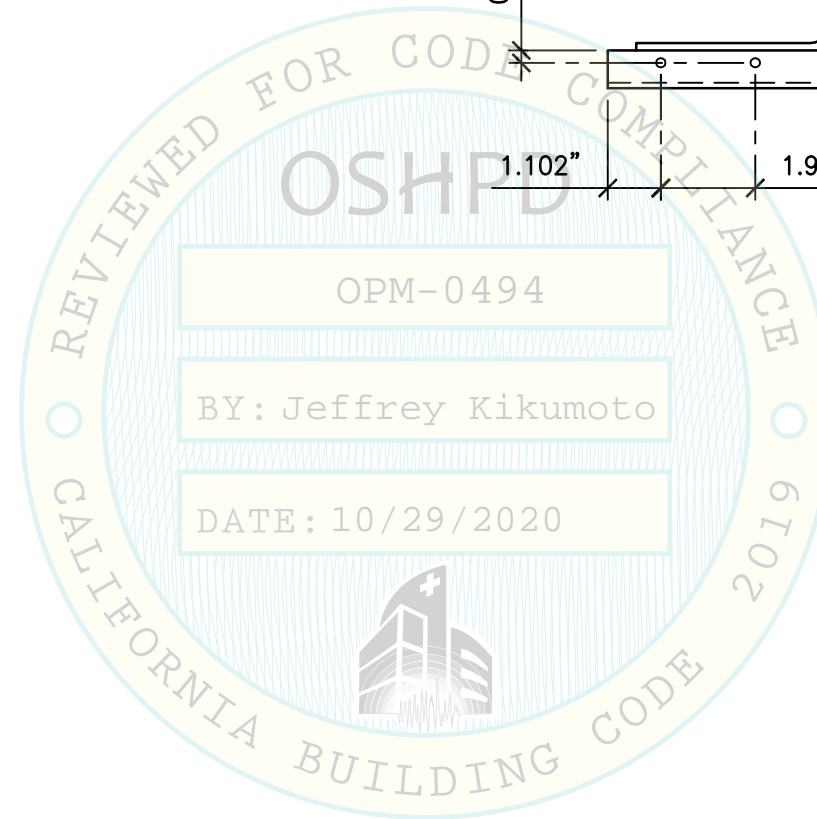
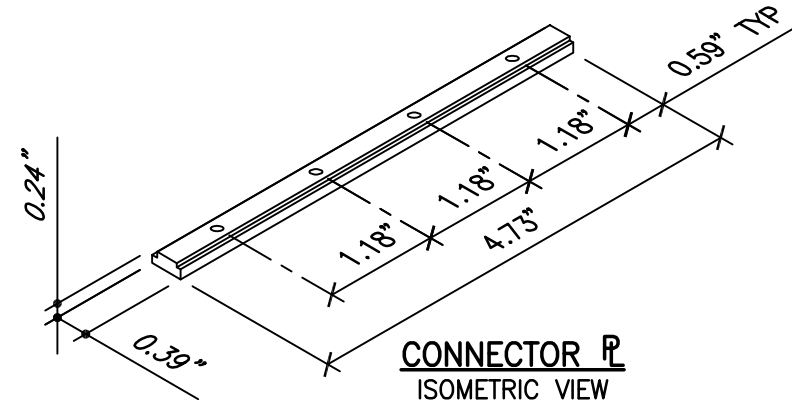


S235JR STL CONNECTOR R W/
4- M8 SET SCREWS. CTR ON
SPUR TRACK PROFILE SPLICE.
6- EA. Fy= 235 Mpa MIN.
CONN BY ABBOTT. 6- TOTAL
FOR CONN TO STRAIGHT
SEGMENTS, 4- TOTAL FOR CONN
TO L-TURN

(N) PROFILE SPUR TRACK PROFILE

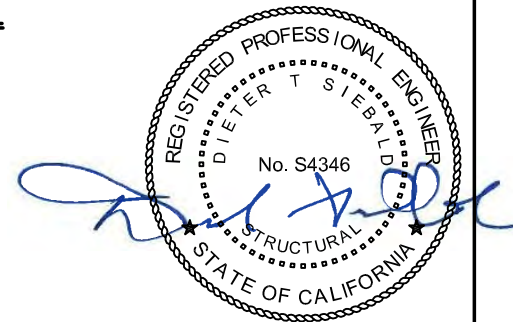
(N) PROFILE SPUR TRACK SECTION PROPERTIES

A (IN ²)	S _x (IN ³)	S _y (IN ³)	I _x (IN ⁴)	I _y (IN ⁴)
2.821	0.555	4.074	0.782	14.440



(N) PROFILE END CAP BRACKET DETAIL

MATERIAL: AISI 304



SHEET TITLE: a3600 ALINITY SPUR MODULE SUB-ASSEMBLY DETAILS
COMPONENTS 3&4: a3600 ALINITY ci (N) SPUR SAMPLING BAY MODULE & END CAP



ABBOTT
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EQUIPMENT SUPPORTS & ATTACHMENTS



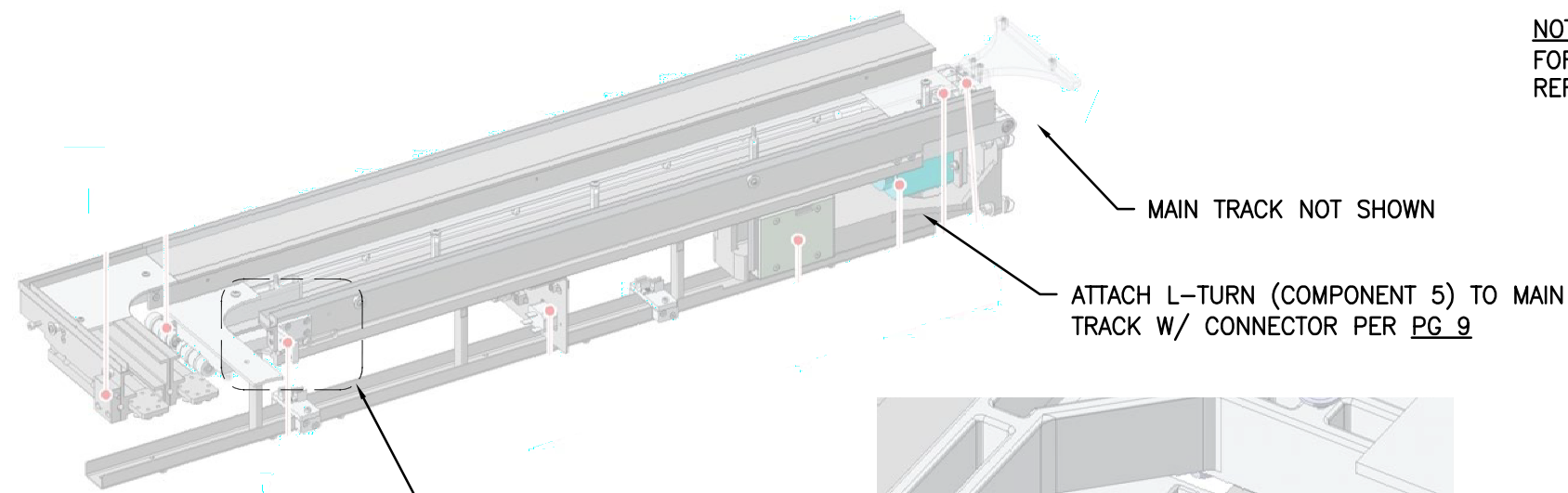
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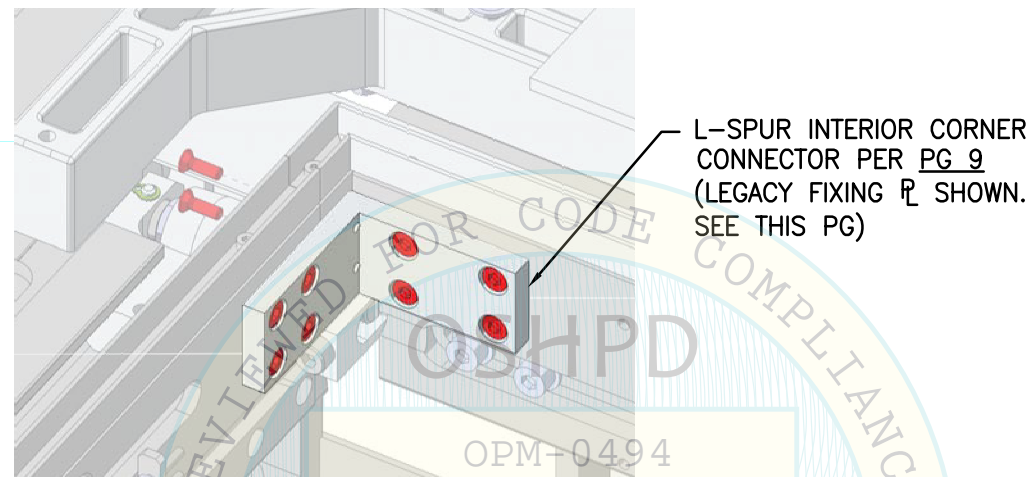
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SEE ENLARGED DETAIL



ENLARGED DETAIL

BY: Jeffrey Kikumoto

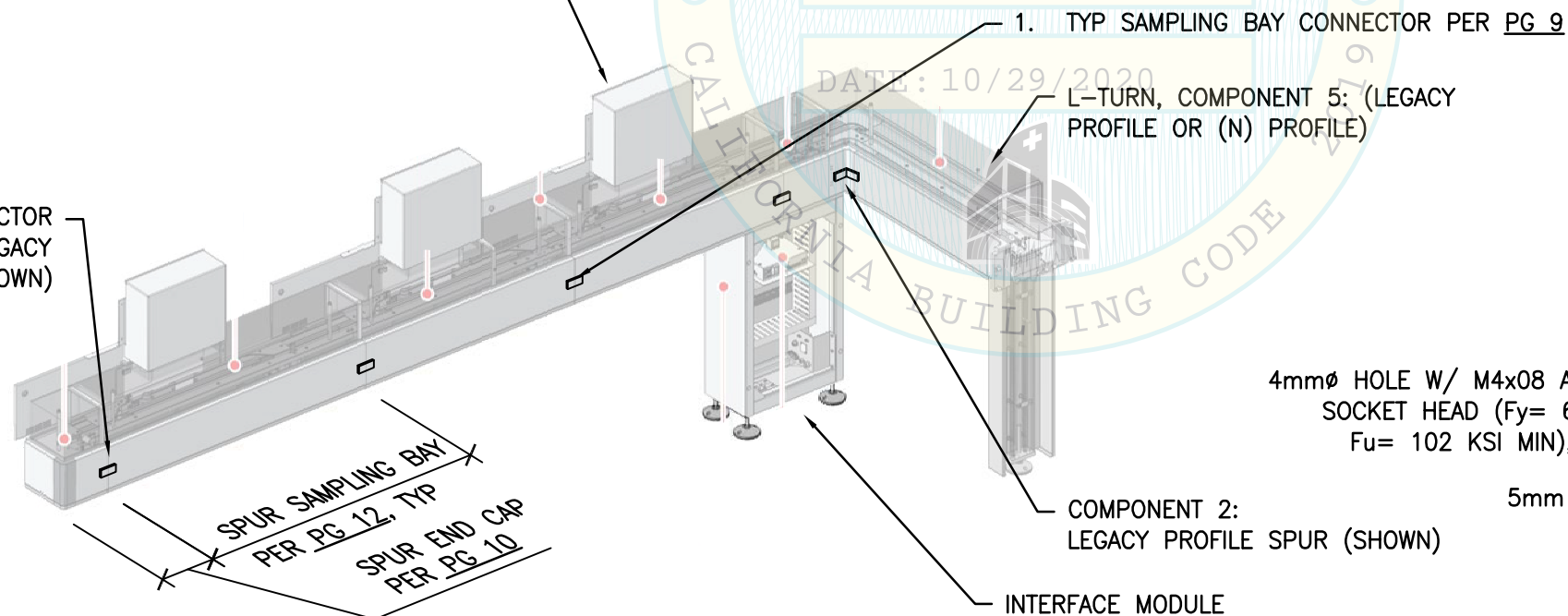
DATE: 10/29/2020

REVIEWED FOR CODE COMPLIANCE

BUILDING CODE

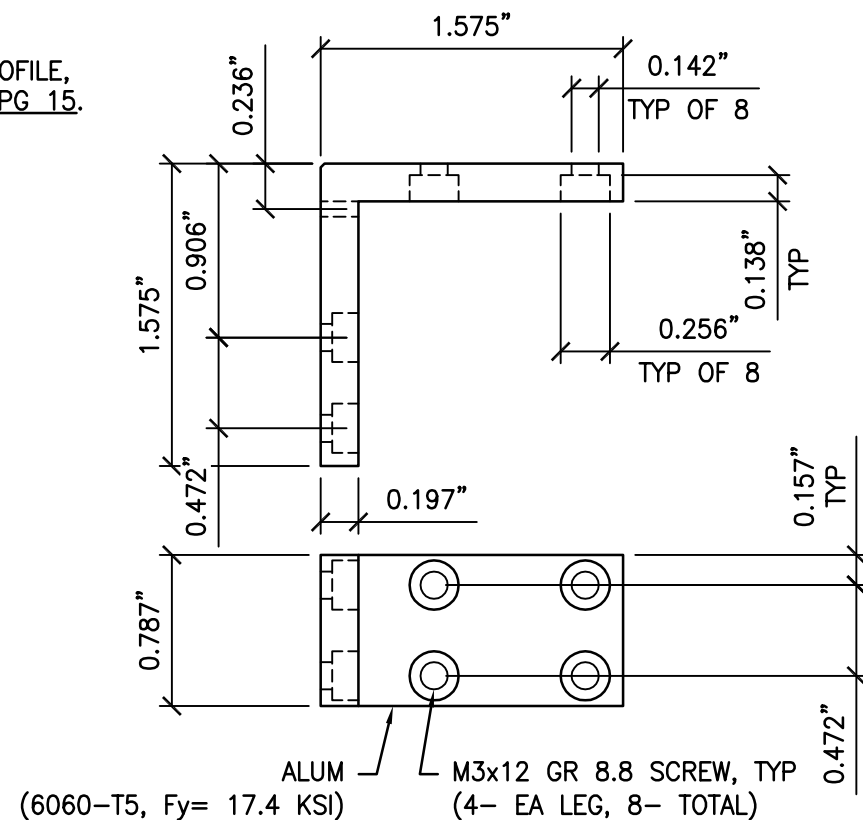
ALINITY COVER PLATE (ALINITY INSTRUMENT BYD NOT SHOWN), TYP

END CAP CONNECTOR PER PG 9 (LEGACY SPUR FIXING PLATE SHOWN)

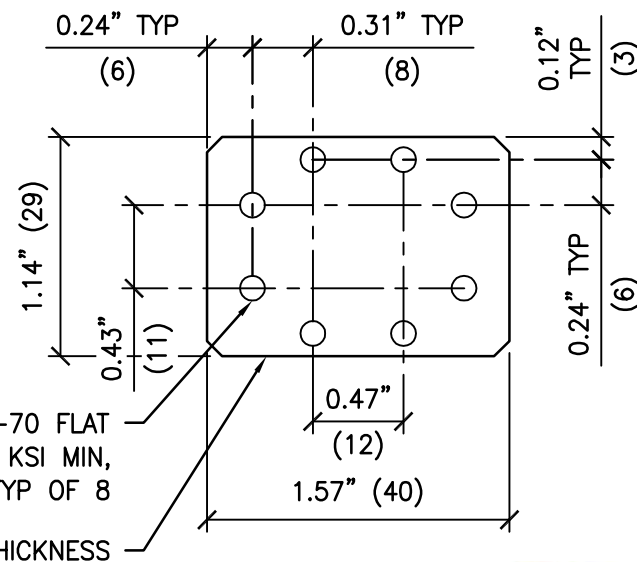


ASSEMBLED L-TURN SPUR

NOTE:
FOR LEGACY PROFILE TO (N) PROFILE,
REFER TO UNION BRACKET PER PG 15.

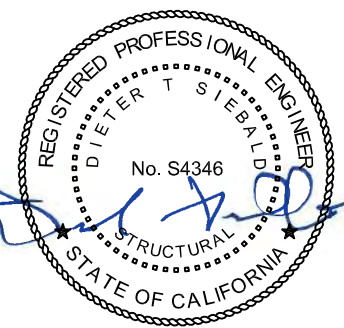


LEGACY PROFILE TO LEGACY PROFILE OR (N) PROFILE TO (N) PROFILE L-SPUR FIXING PLATE DETAIL



MATERIAL:
P-A1Mg 0.5 Si 0.4 Fe (6060-T5)
Fy= 17.4 KSI

ASSEMBLED L-TURN SPUR



SHEET TITLE: a3600 ALINITY SPUR MODULE SUB-ASSEMBLY DETAILS
COMPONENT 4: a3600 ALINITY ci L-TURN MODULE



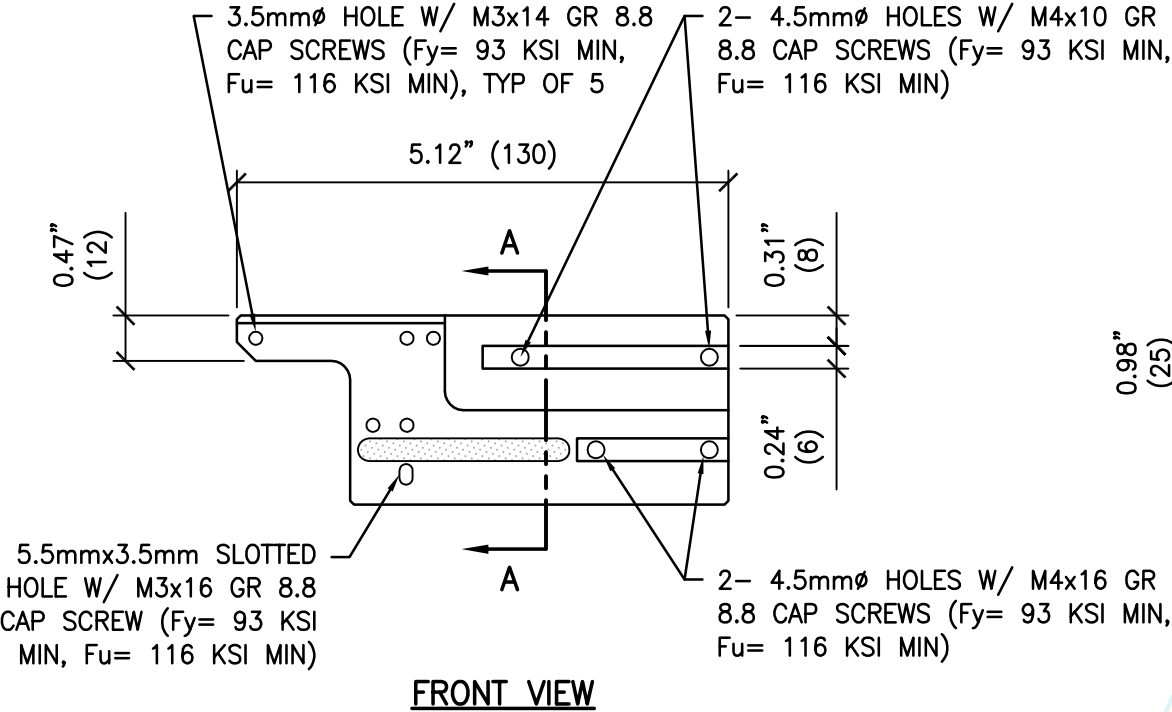
ABBOTT
ALINITY i & c INSTRUMENTS
EQUIPMENT SUPPORTS & ATTACHMENTS



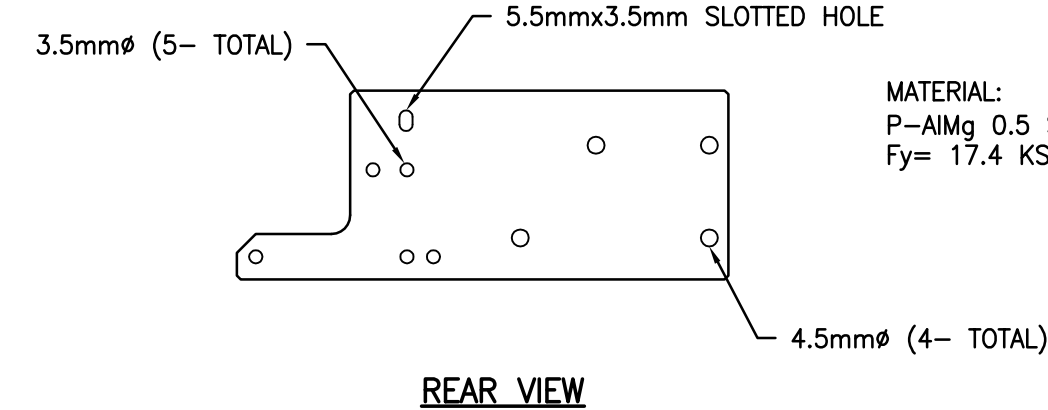
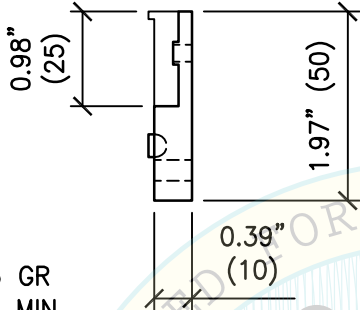
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CONNECTION BRACKET:

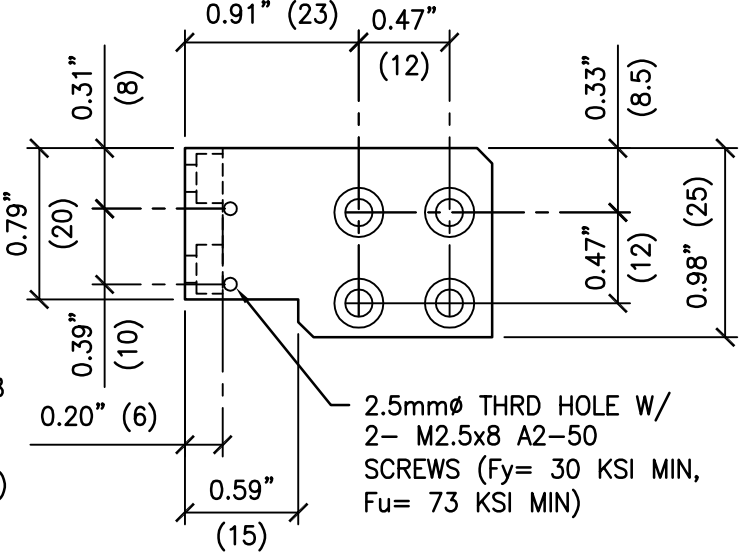
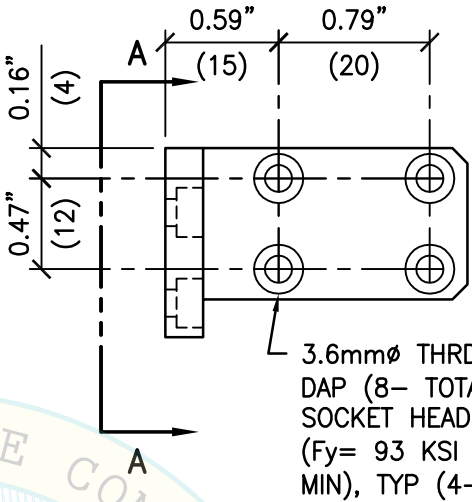


SECTION A-A



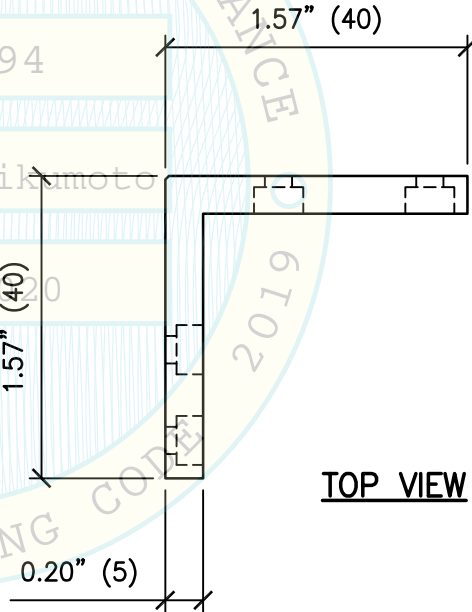
MATERIAL:
P-ALMg 0.5 Si 0.4 Fe (6060-T5)
Fy= 17.4 KSI

UNION BRACKET:



VIEW A-A

MATERIAL:
P-ALMg 0.5 Si 0.4 Fe (6060-T5)
Fy= 17.4 KSI



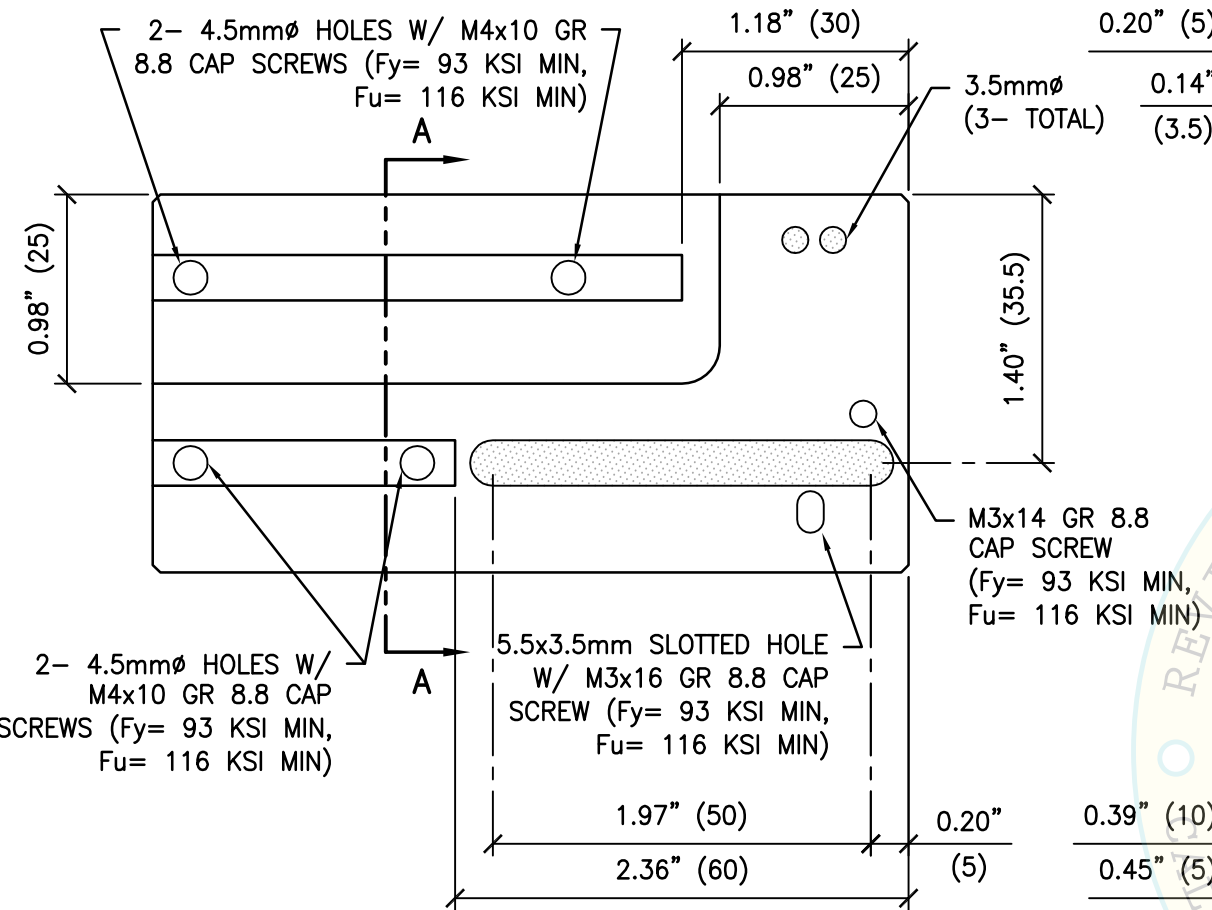
SHEET TITLE: LEGACY PROFILE TO (N) PROFILE SPUR ADAPTER BRACKETS

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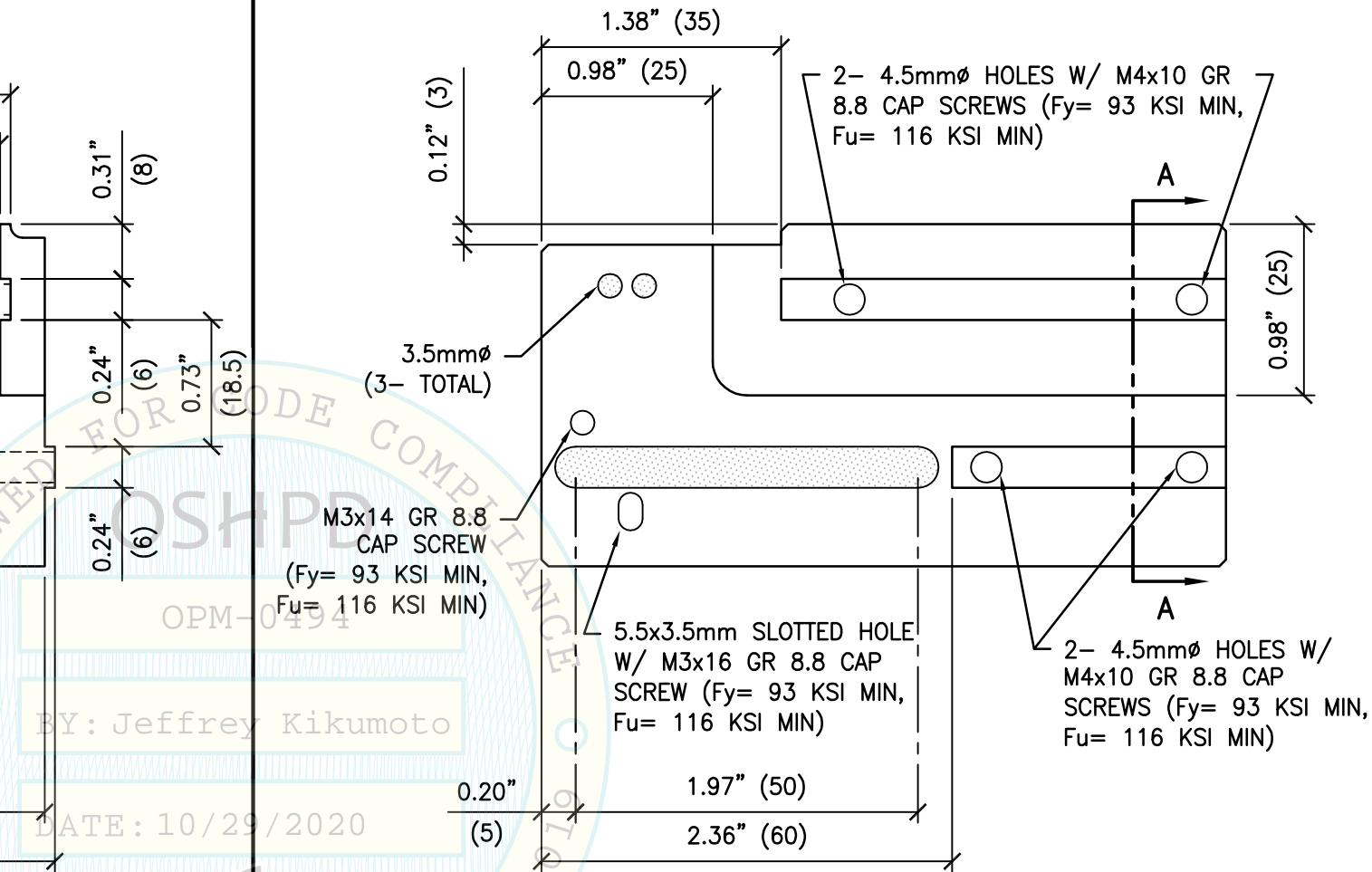
Rev	Description	Date	Job No:	19091
			Date:	10/22/2020
			By:	MTC
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CONNECTION BRACKETS:



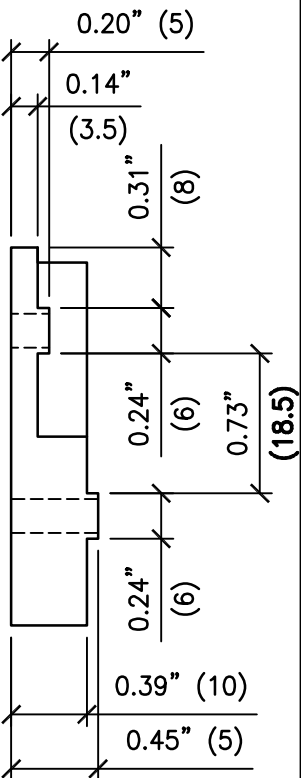
FRONT VIEW

MATERIAL:
P- AlMg 0.5 Si 0.4 Fe (6060-T5)
 $F_y = 17.4$ KSI

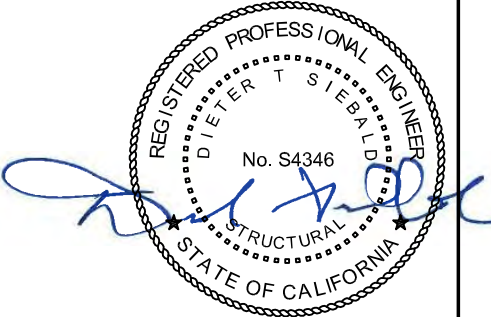


FRONT VIEW

MATERIAL:
P- AlMg 0.5 Si 0.4 Fe (6060-T5)
 $F_y = 17.4$ KSI



SECTION A-A



SHEET TITLE: LEGACY PROFILE TO (N) PROFILE SPUR ADAPTER BRACKETS



ABBOTT
ALINITY i & c INSTRUMENTS
EQUIPMENT SUPPORTS & ATTACHMENTS

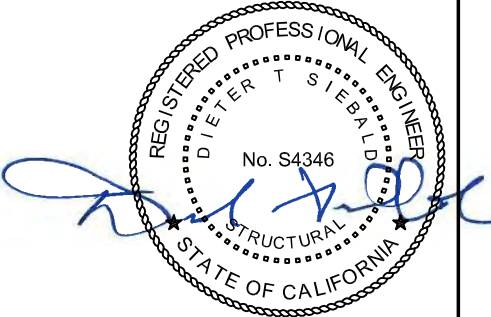
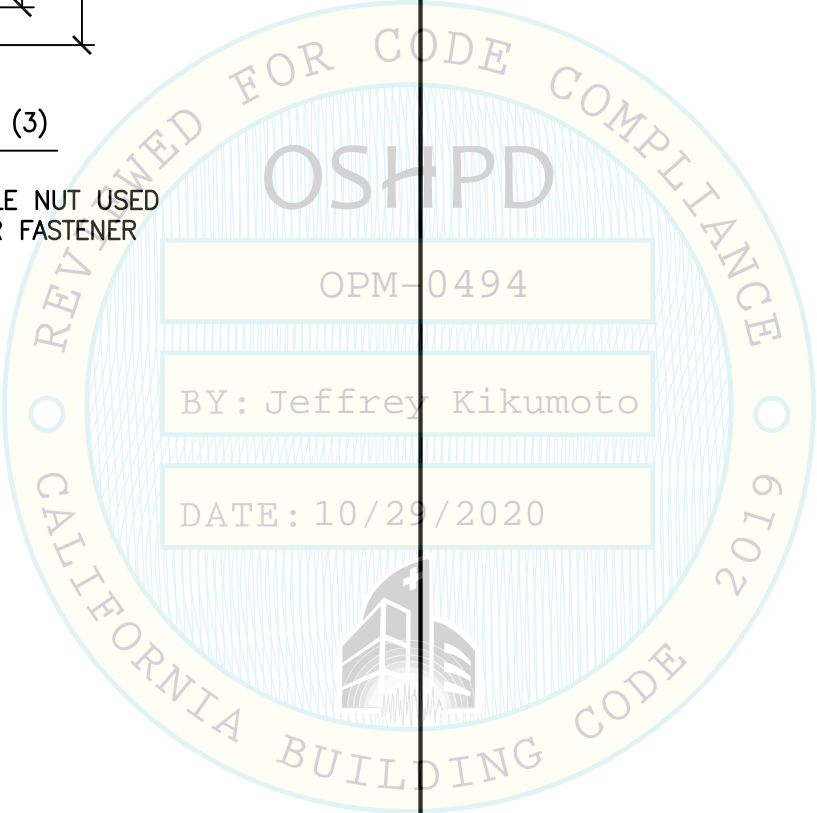
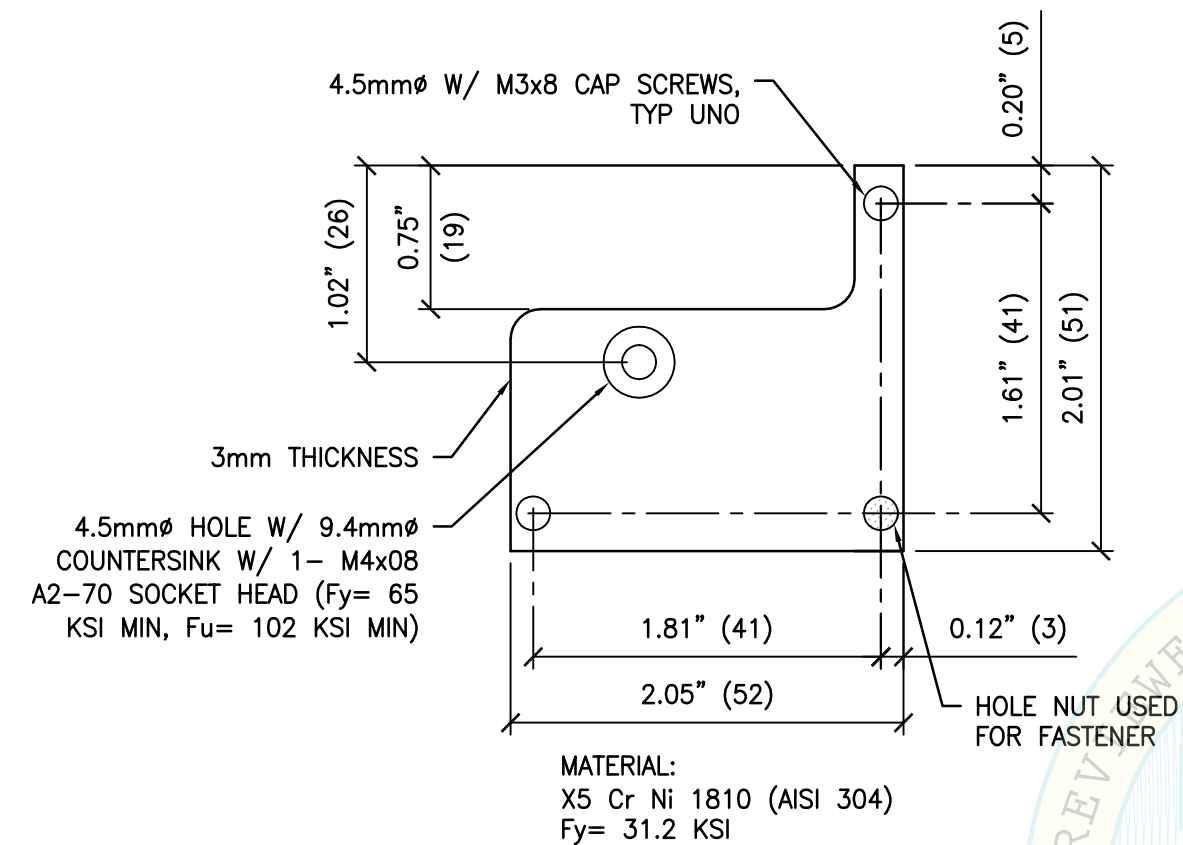


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PLATE:



SHEET TITLE: LEGACY PROFILE TO (N) PROFILE SPUR ADAPTER PLATE



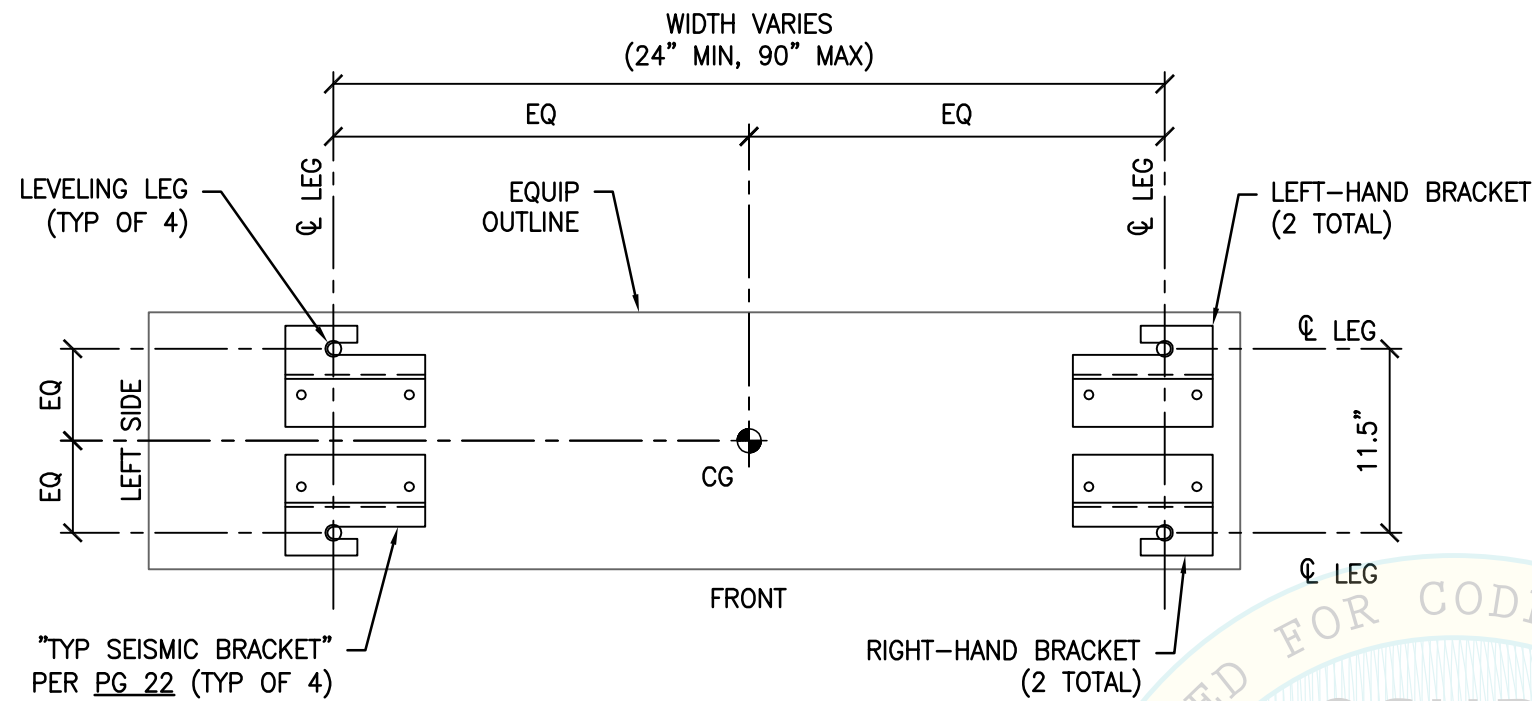
ABBOTT
ALINITY i & c INSTRUMENTS
EQUIPMENT SUPPORTS & ATTACHMENTS



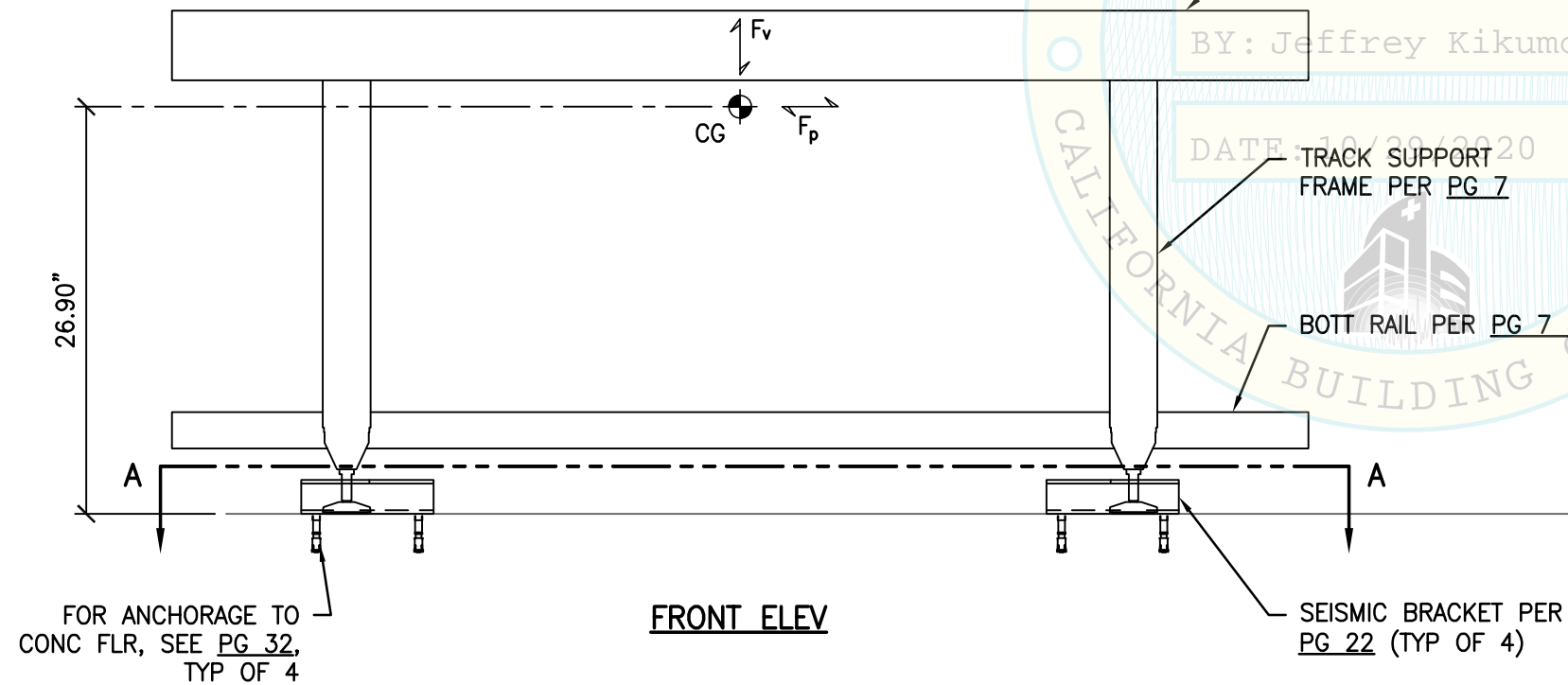
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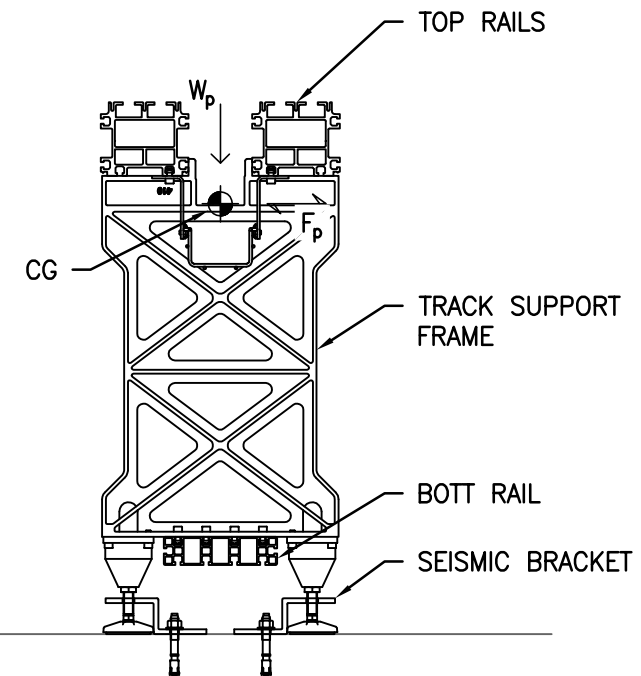
Rev	Description	Date	Job No:	19091
			Date:	10/22/2020
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BASE PLAN A-A



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 LEG¹

	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_o).
3. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.



SHEET TITLE: TYPICAL TRACK MODULE
BASE PLAN & ELEVATIONS



ABBOTT
ALINITY i & c INSTRUMENTS
EQUIPMENT SUPPORTS & ATTACHMENTS



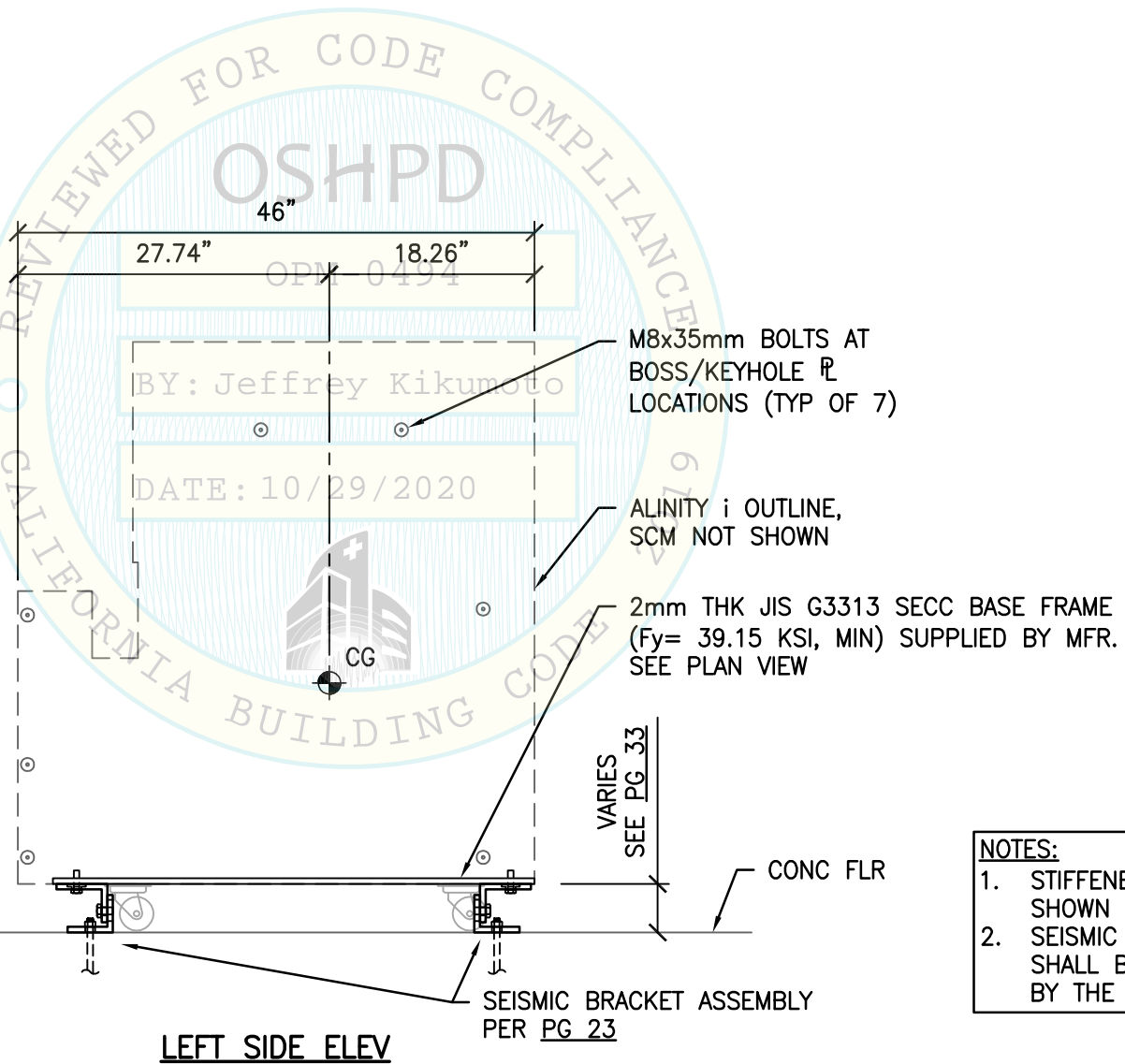
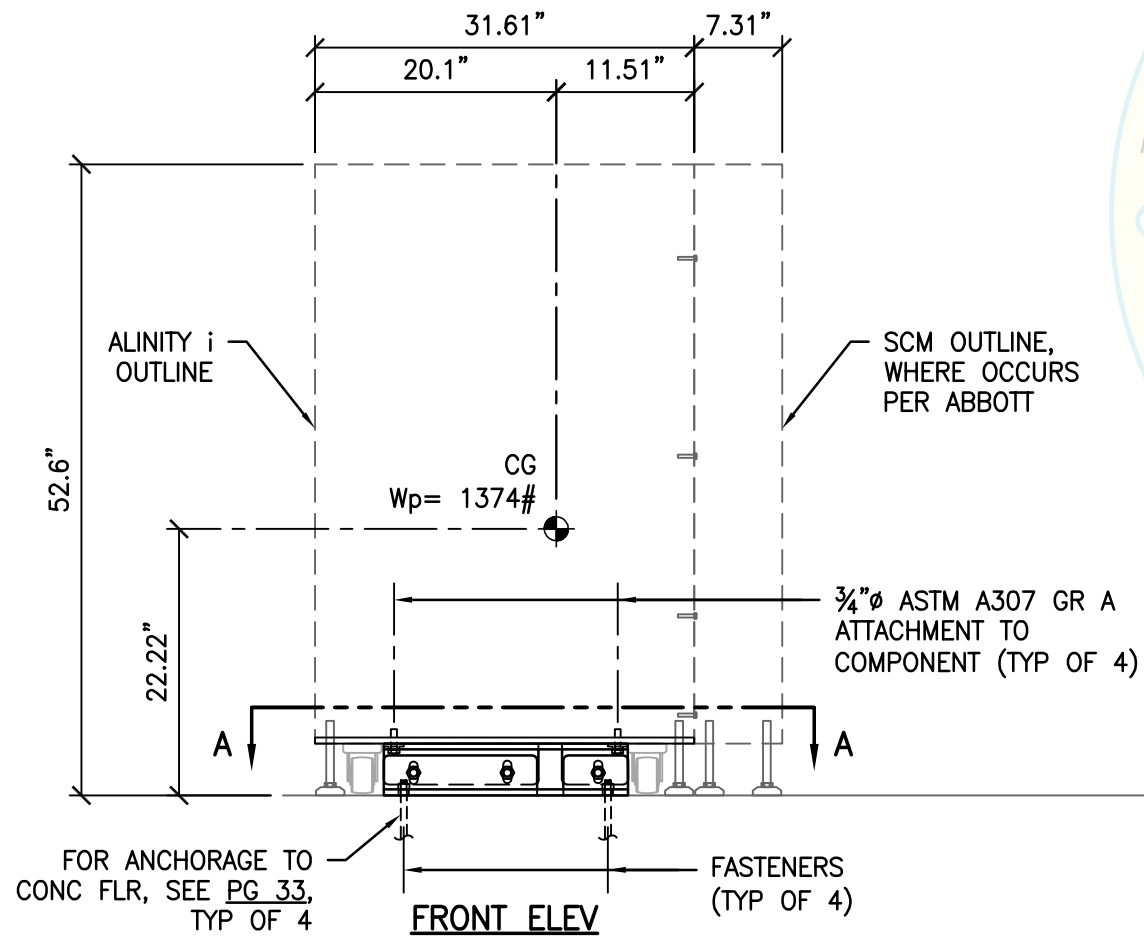
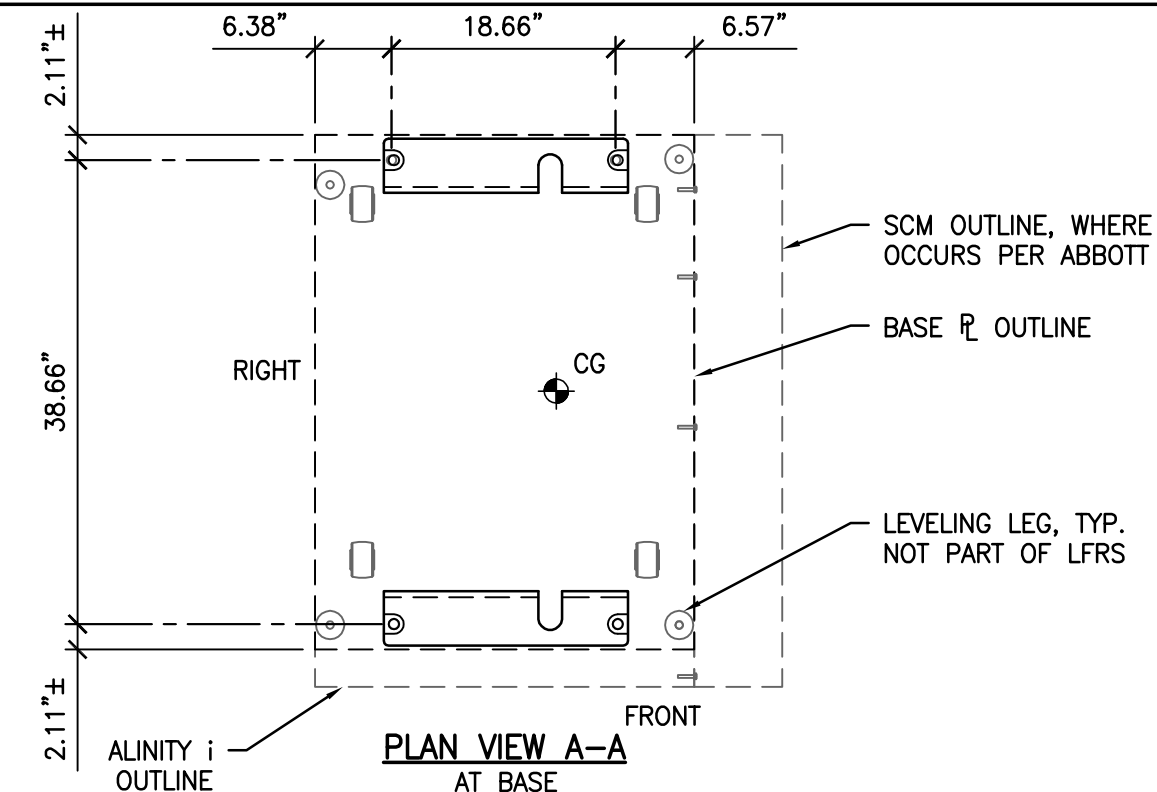
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- NOTES:
1. STIFFENER \mathbb{R} & LEVELING LEGS NOT SHOWN IN ALL VIEWS FOR CLARITY.
 2. SEISMIC BRACKET & HARDWARE SHALL BE FURNISHED & INSTALLED BY THE GENERAL CONTRACTOR, UNO.

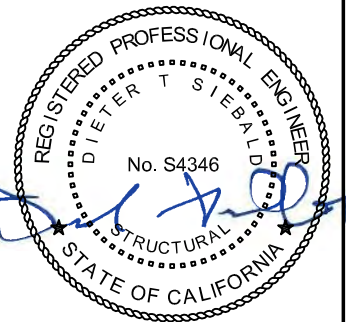
	MAX ANCHOR FORCES AT LRFD AT EA COMPONENT ATTACHMENT TO SUPPORT		
	T _{max}	C _{max}	V _{max}
CASE 1	2192#	3199#	1169#
CASE 2	791#	1798#	438#

SHEET TITLE: ALINITY i MODULE
BASE PLAN & ELEVATIONS

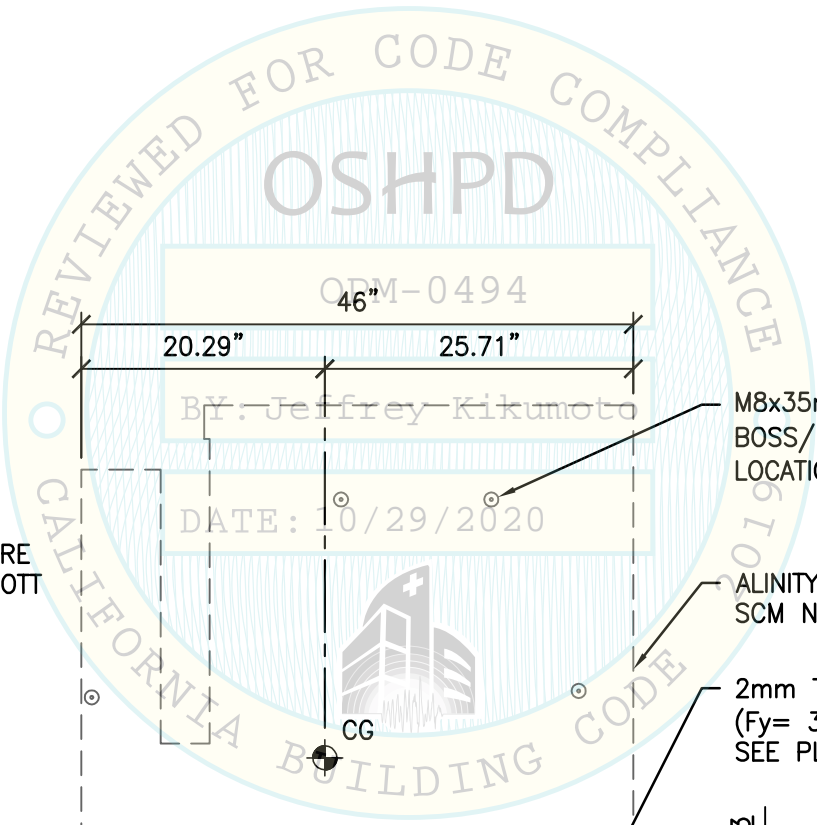
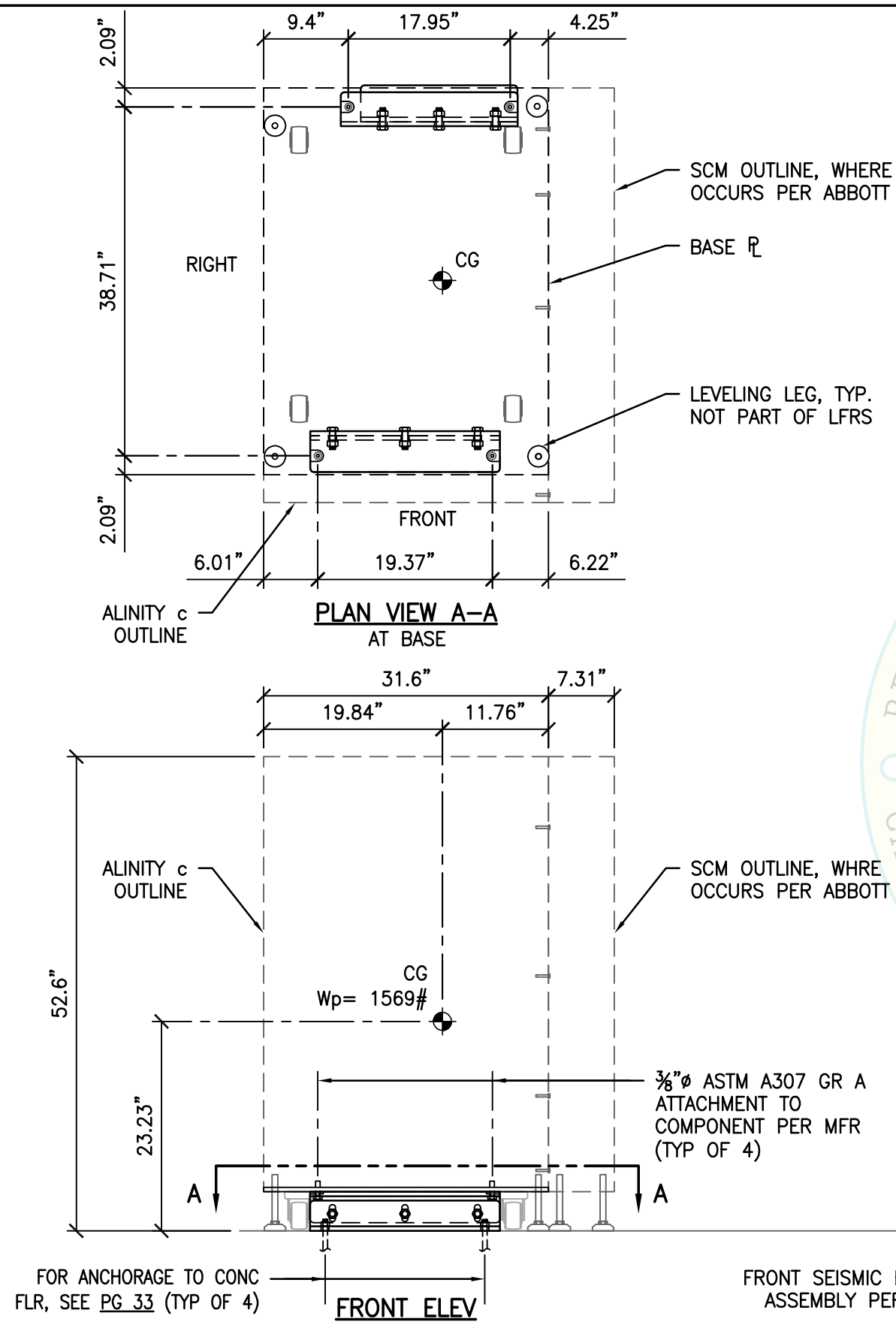
ABBOTT
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MAX ANCHOR FORCES AT LRFD AT EA COMPONENT ATTACHMENT TO SUPPORT			
	T _{max}	C _{max}	V _{max}
CASE 1	2578#	3299#	1448#
CASE 2	881#	1833#	543#

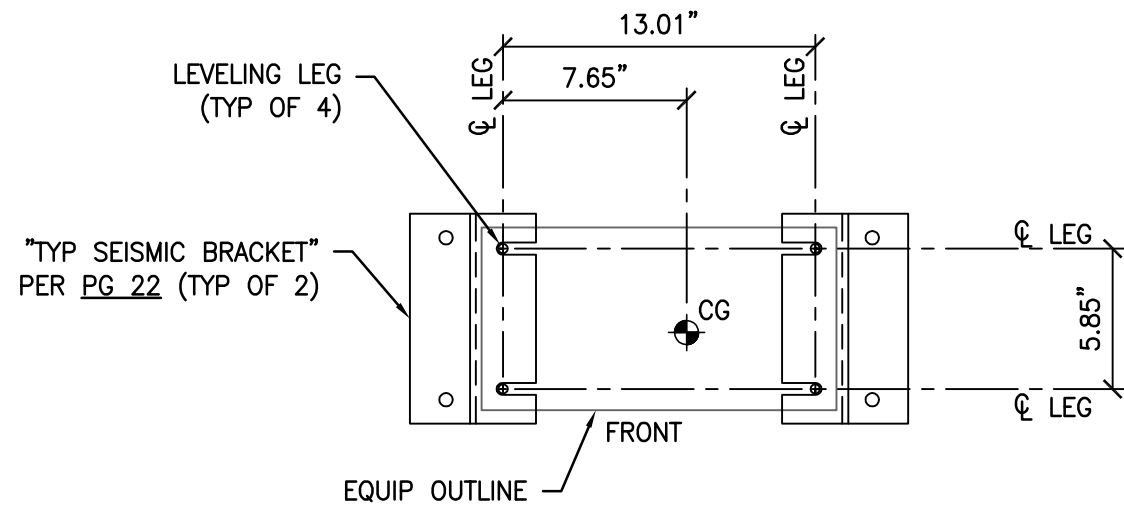
- NOTES:
1. STIFFENER PL & LEVELING LEGS NOT SHOWN IN ALL VIEWS FOR CLARITY.
 2. SEISMIC BRACKET & HARDWARE SHALL BE FURNISHED & INSTALLED BY THE GENERAL CONTRACTOR, UNO. SEE NOTE 3 ON PG 1.



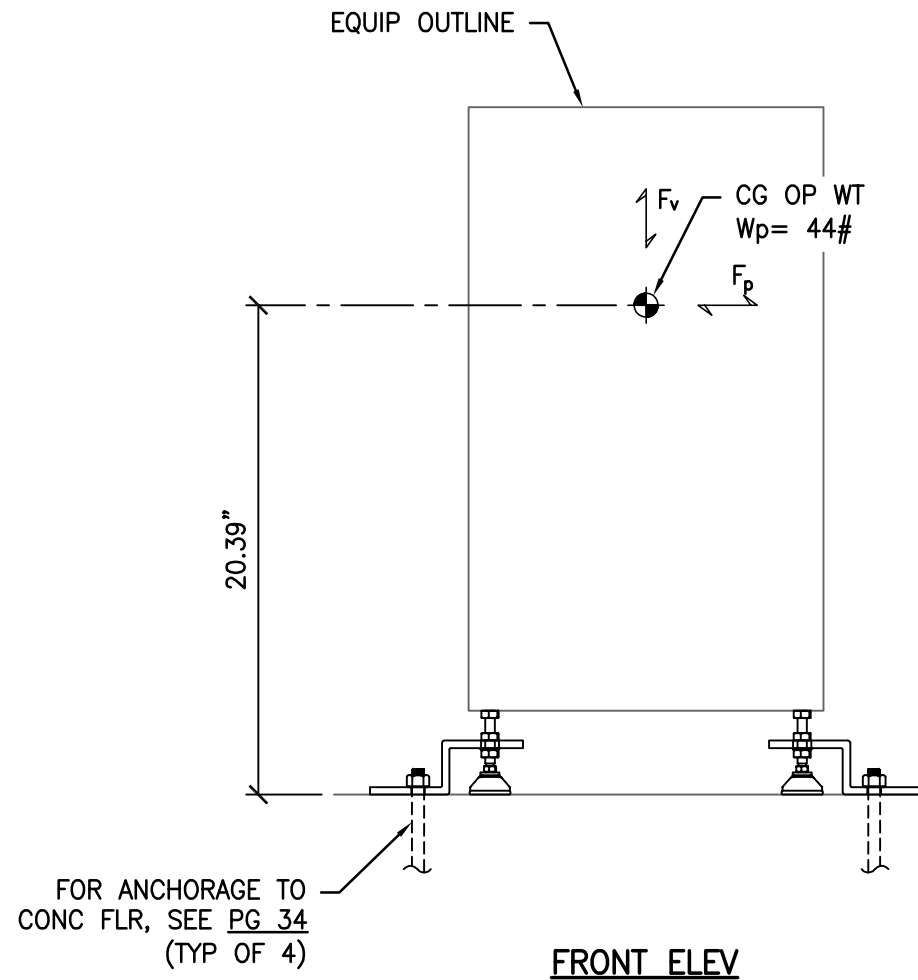
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 ABBOTT ALINITY i & c INSTRUMENTS EQUIPMENT SUPPORTS & ATTACHMENTS							Date: 10/22/2020
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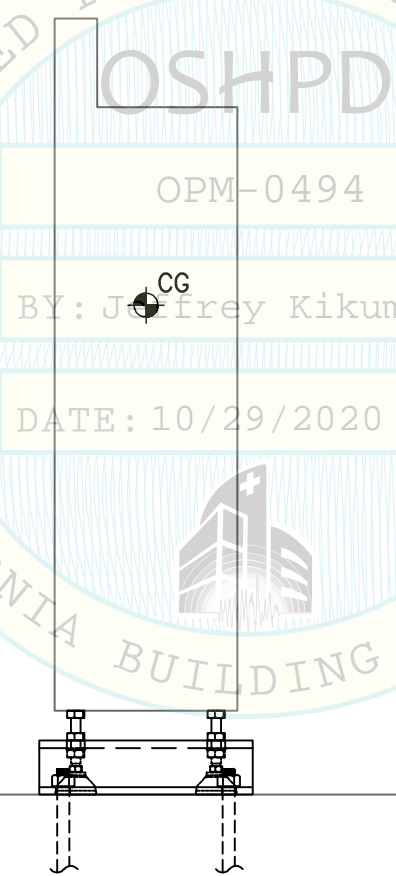
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BASE PLAN VIEW



FRONT ELEV

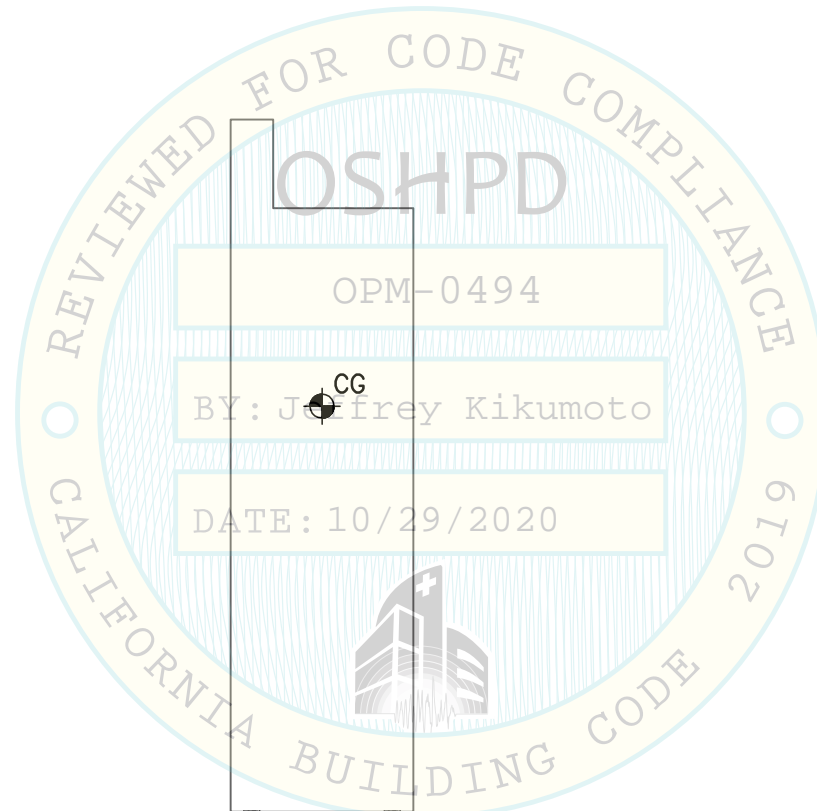


RIGHT SIDE ELEV

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.



SHEET TITLE: INTERFACE MODULE
BASE PLAN & ELEVATIONS



ABBOTT
ALINITY i & c INSTRUMENTS
EQUIPMENT SUPPORTS & ATTACHMENTS



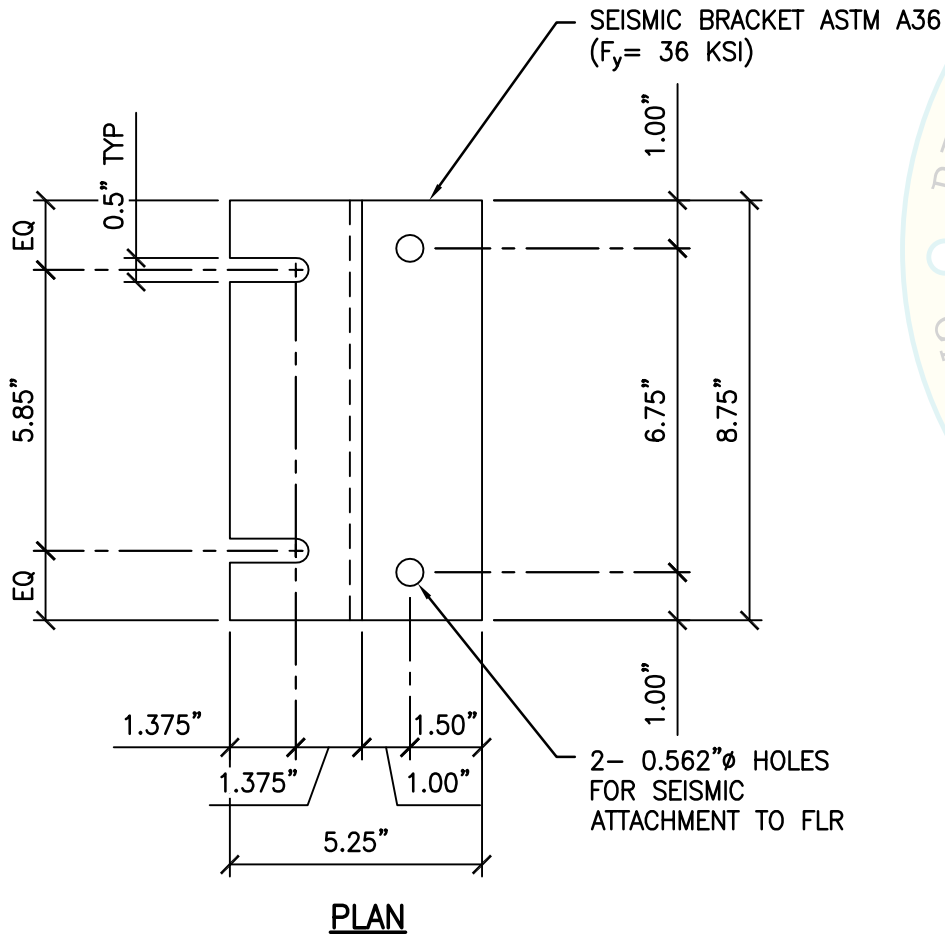
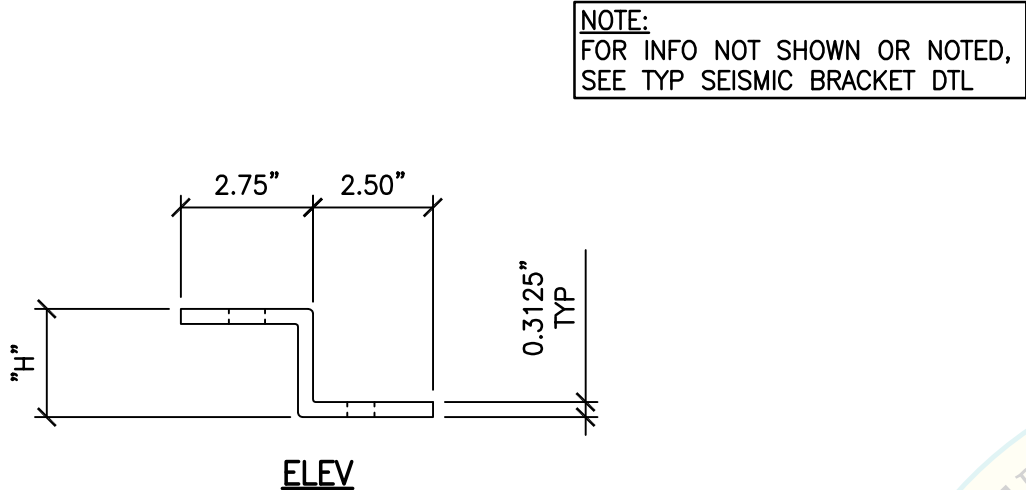
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INTERFACE MODULE SEISMIC BRACKET:



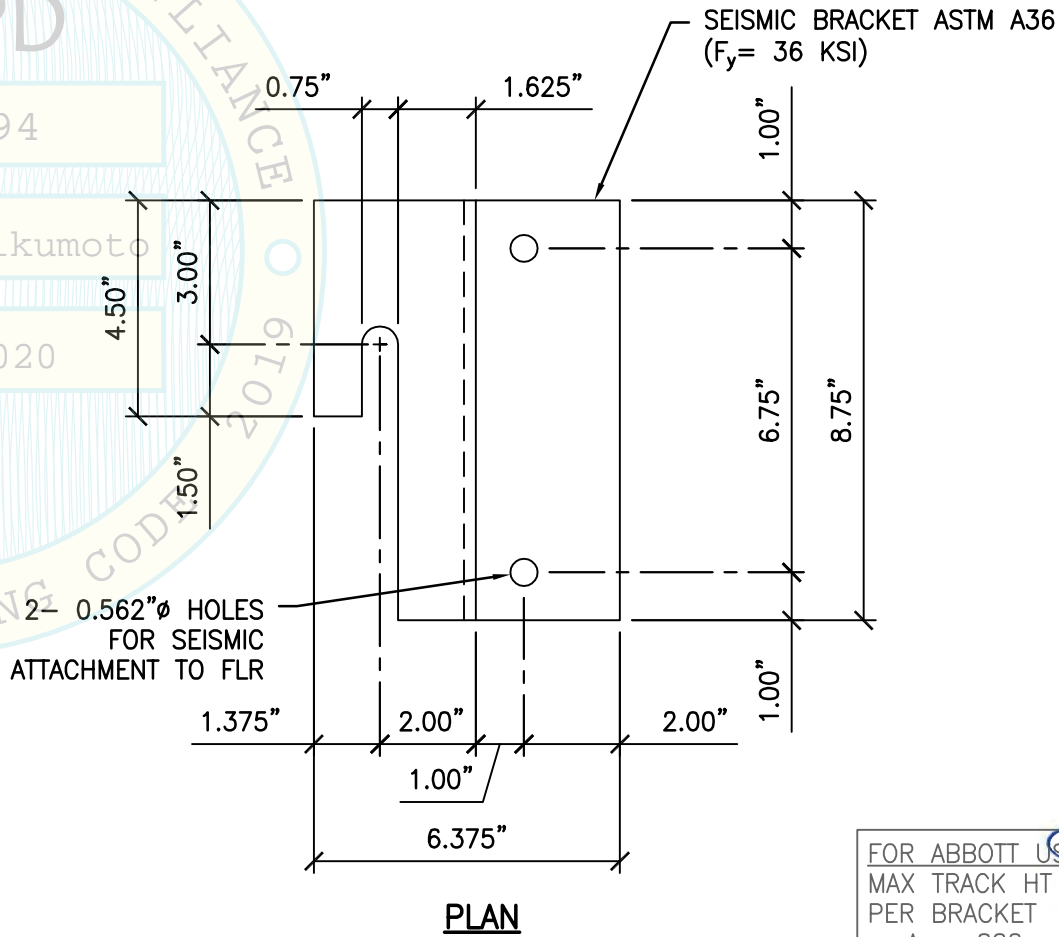
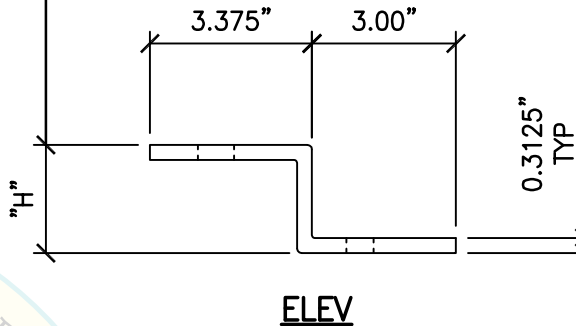
TYP TRACK SEISMIC BRACKET DETAIL:

"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:

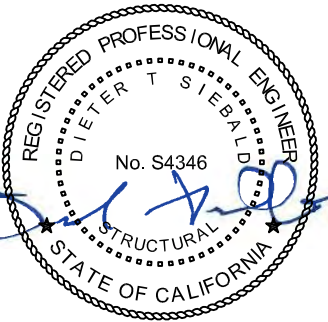
BRACKET A: "H" = 2.25" FOR
 $2.25" \leq \text{CLR} \leq 3.50"$

BRACKET B: "H" = 3.50" FOR
 $3.50" \leq \text{CLR} \leq 4.25"$

- NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 32 & 33 FOR THE TYP TRACK MODULE & INTERFACE MODULE RESPECTIVELY.
 2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 18.
 3. LEFT-HAND BRACKET SHOWN. SEE BASE PLAN A-A ON PG 18 FOR RIGHT-HAND BRACKET CONFIGURATION.
 4. GENERAL CONTRACTOR SHALL PROVIDE & INSTALL SEISMIC BRACKET.



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



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

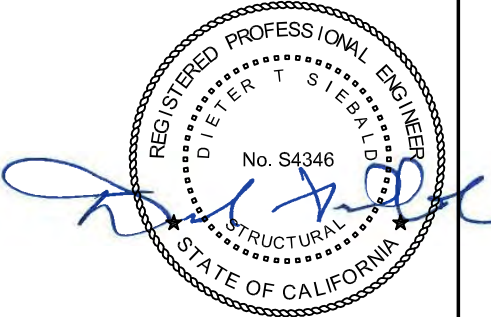
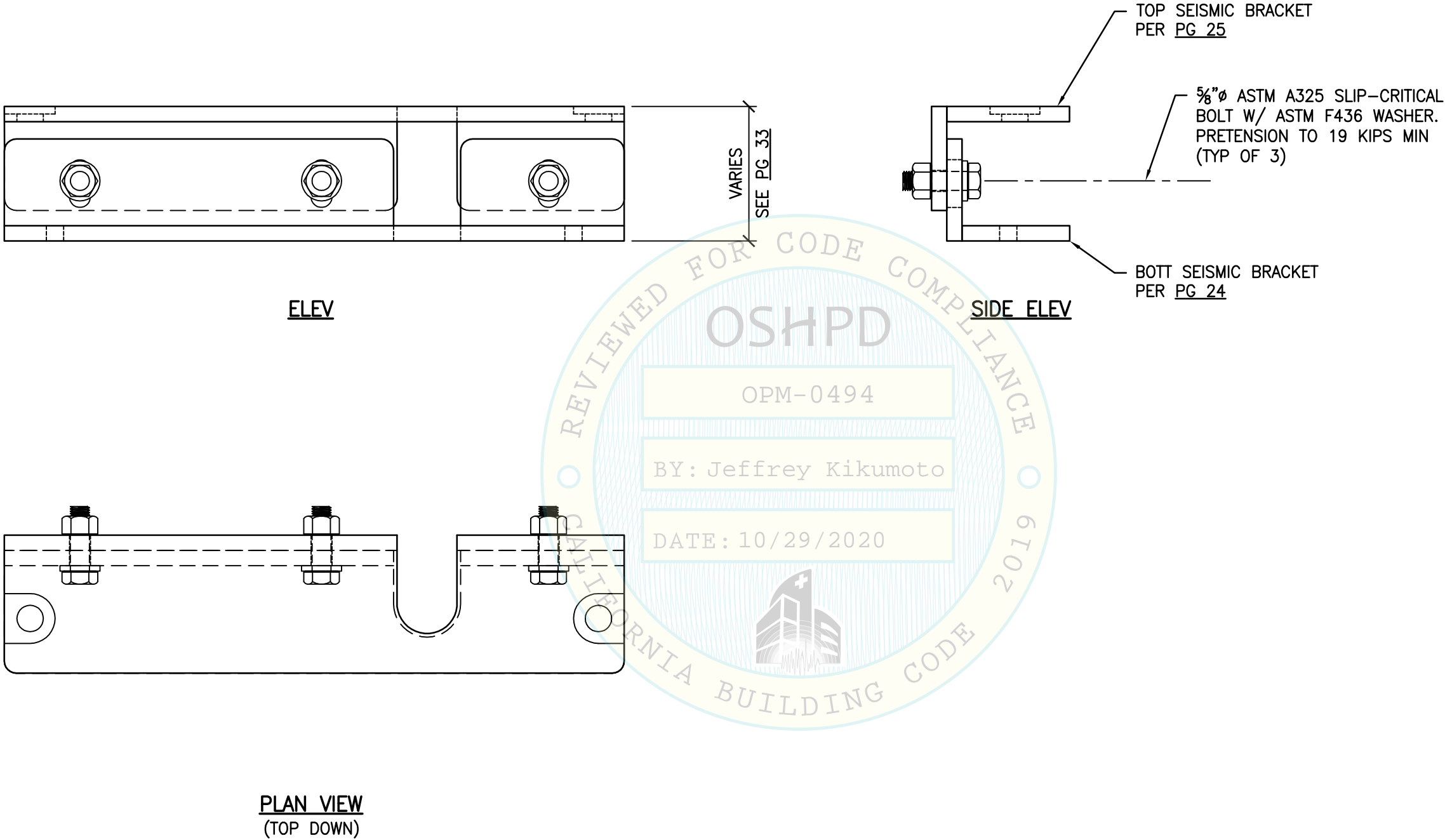
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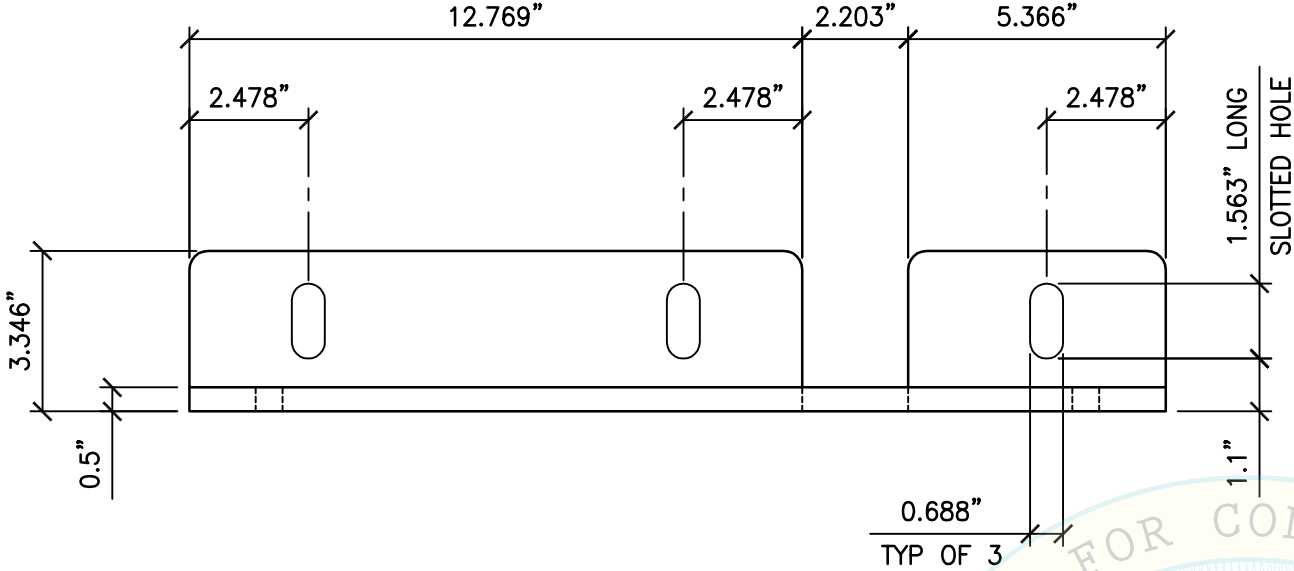
Rev	Description	Date	Job No:	19091
			Date:	10/22/2020
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SEISMIC BRACKET ASSEMBLY:

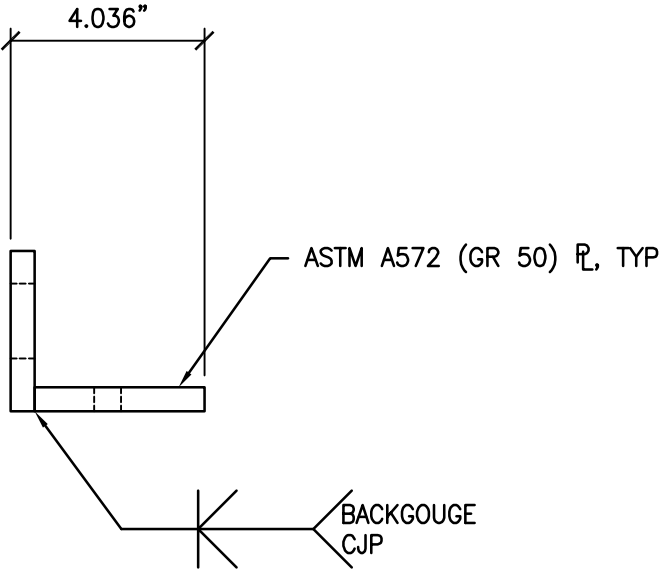


SHEET TITLE: ALINITY i MODULE				Rev	Description	Date	Job No: 19091
SEISMIC BRACKET ASSEMBLY DETAIL							Date: 10/22/2020
 Abbott	ABBOTT ALINITY i & c INSTRUMENTS EQUIPMENT SUPPORTS & ATTACHMENTS		 CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833	TEL (916) 920-2020 www.cyseng.com			By: MTC
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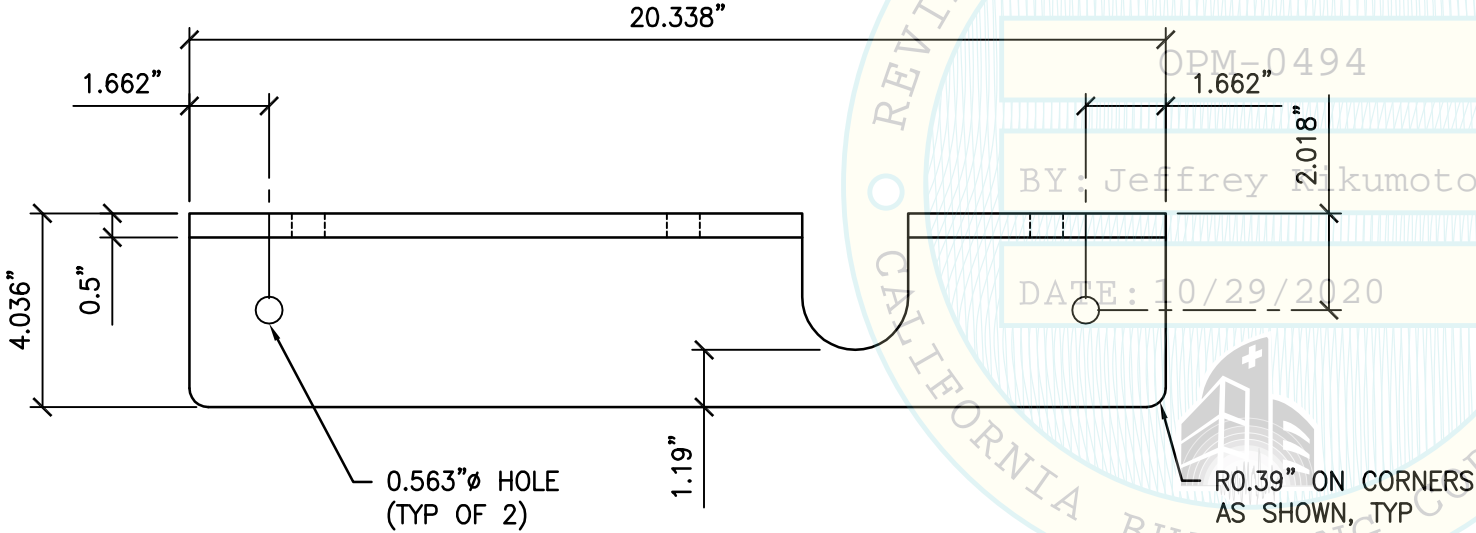
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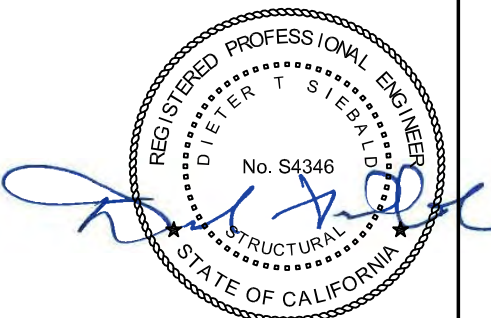
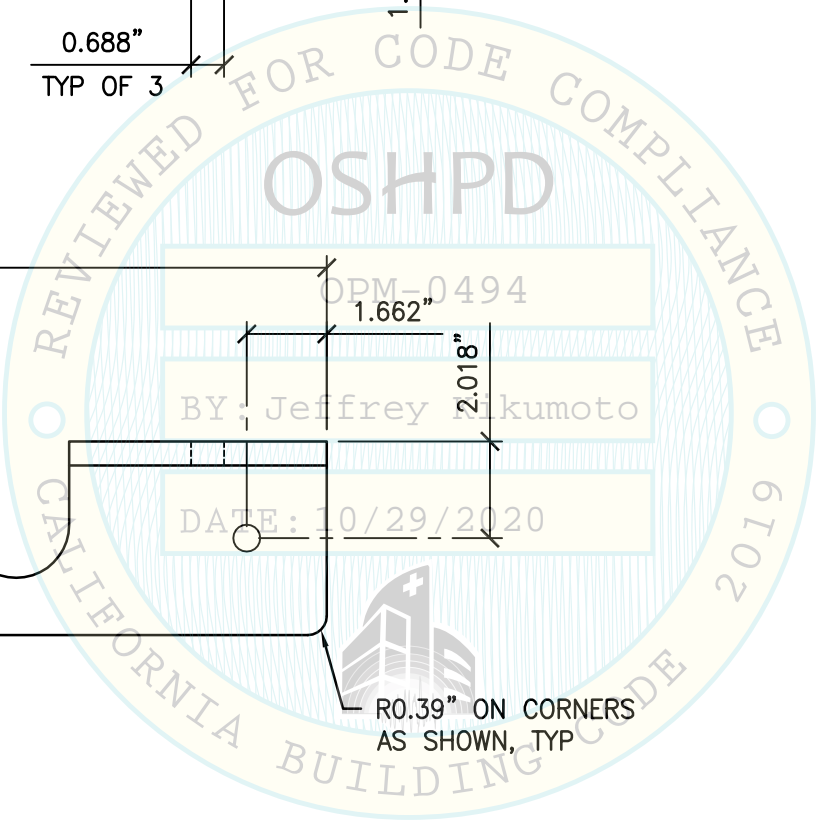
ELEV



SIDE ELEV



PLAN VIEW
(TOP DOWN)

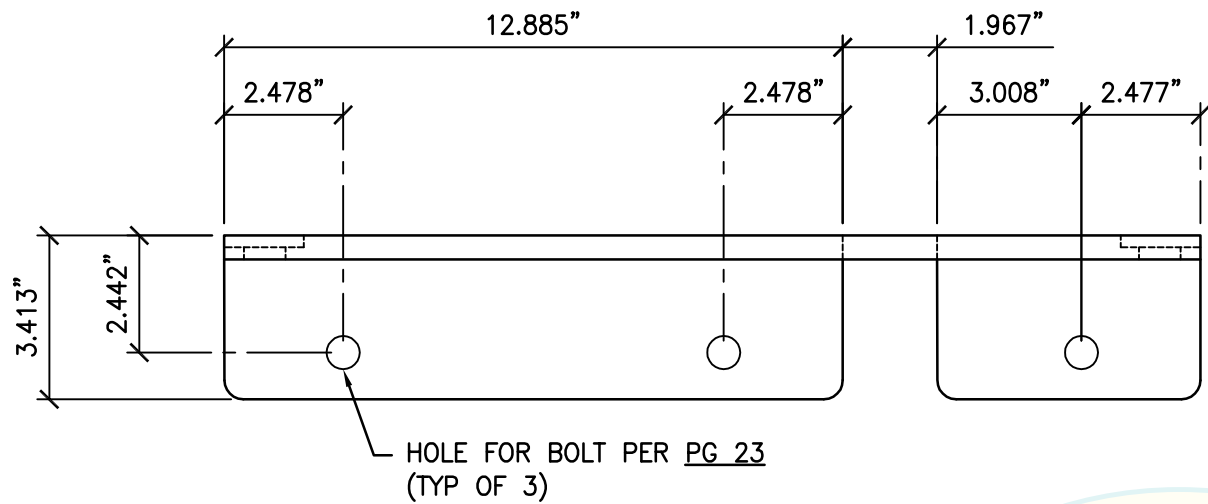


SHEET TITLE: ALINITY i MODULE BOTTOM SEISMIC BRACKET FABRICATION DETAIL				Rev	Description	Date	Job No: 19091
ABBOTT ALINITY i & c INSTRUMENTS EQUIPMENT SUPPORTS & ATTACHMENTS							Date: 10/22/2020
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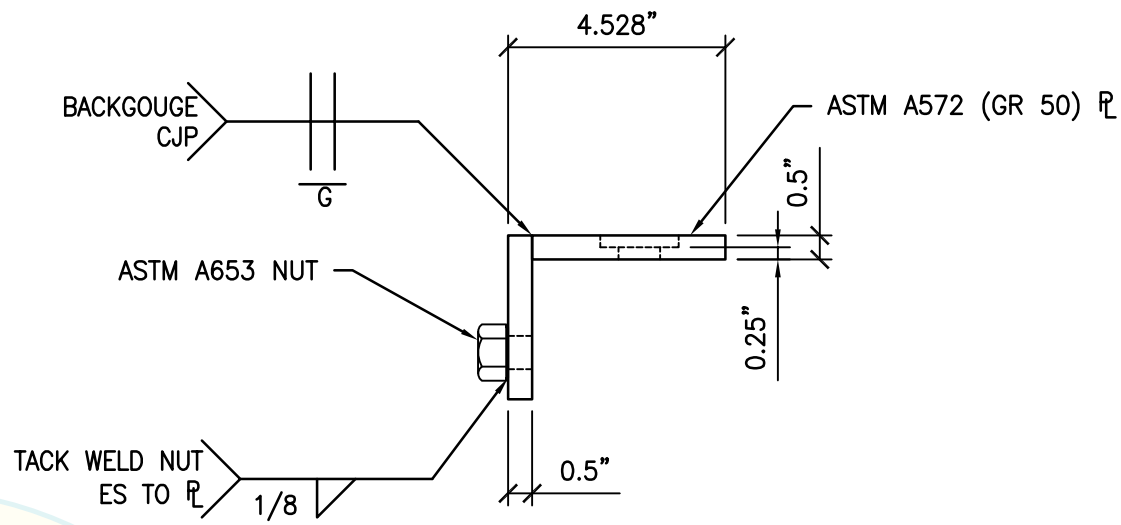


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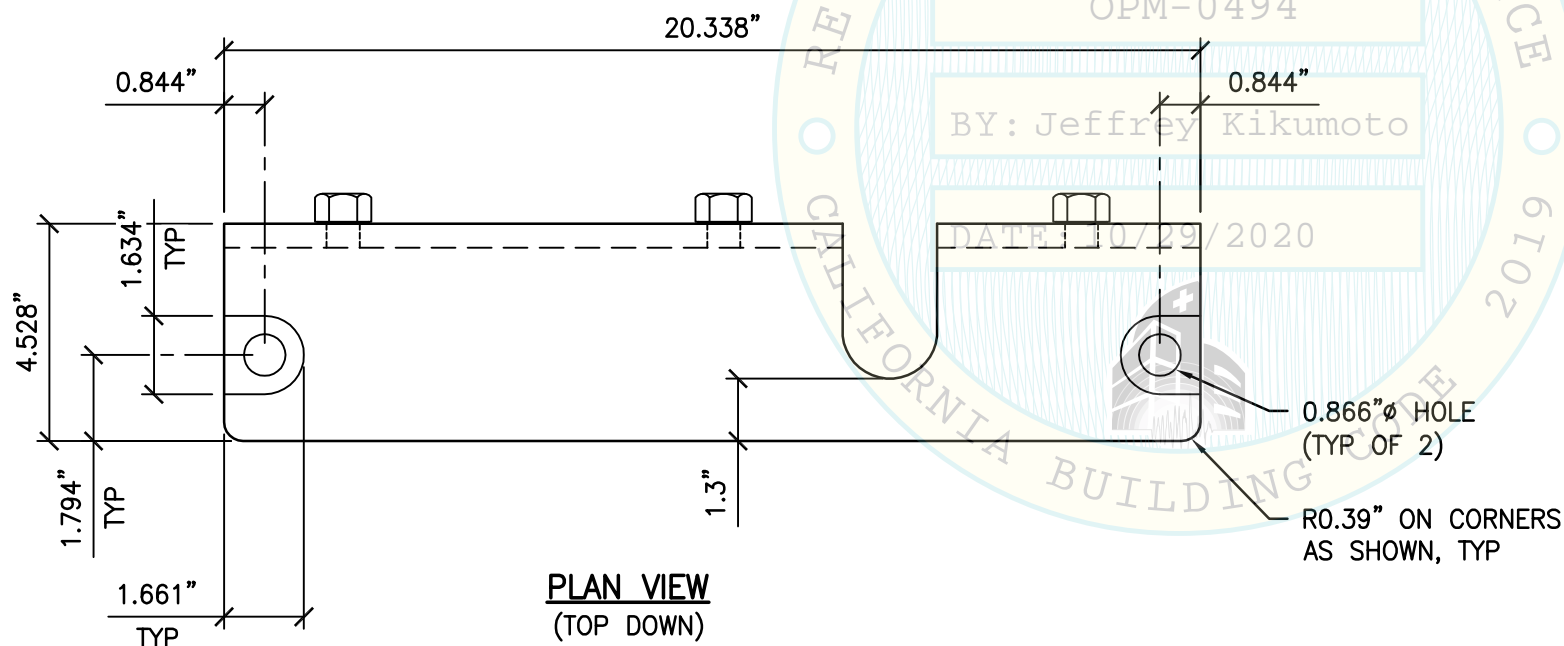
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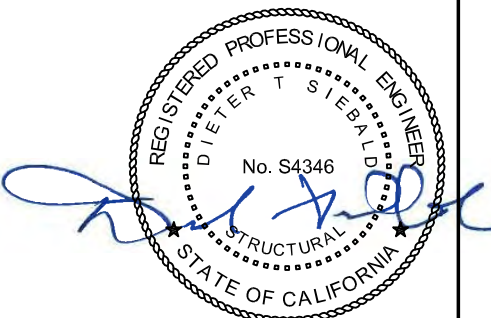
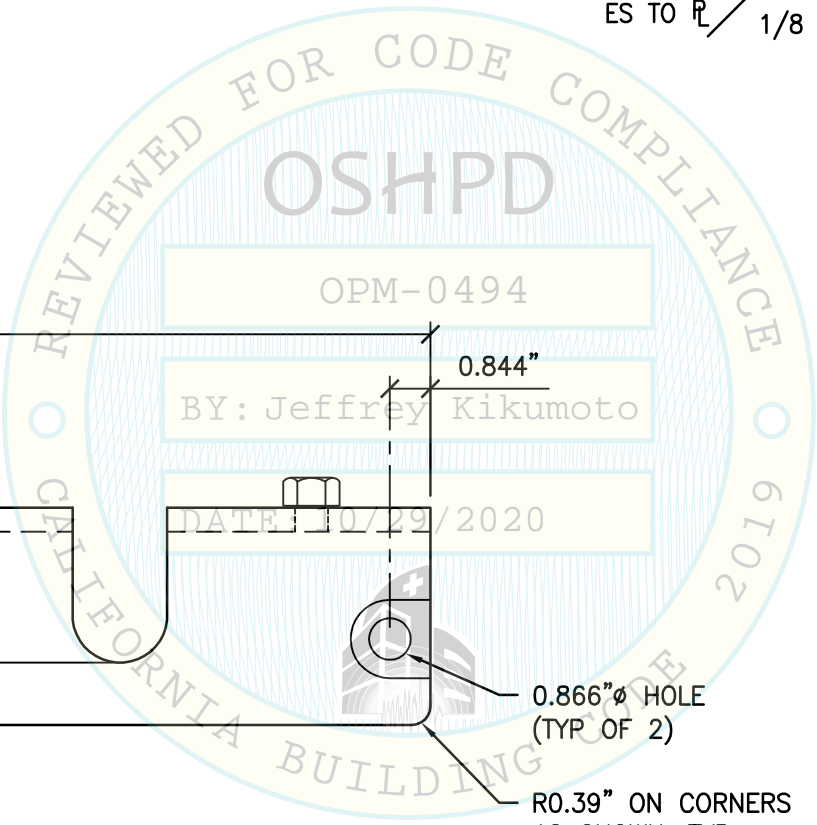
ELEV



SIDE ELEV



PLAN VIEW
(TOP DOWN)



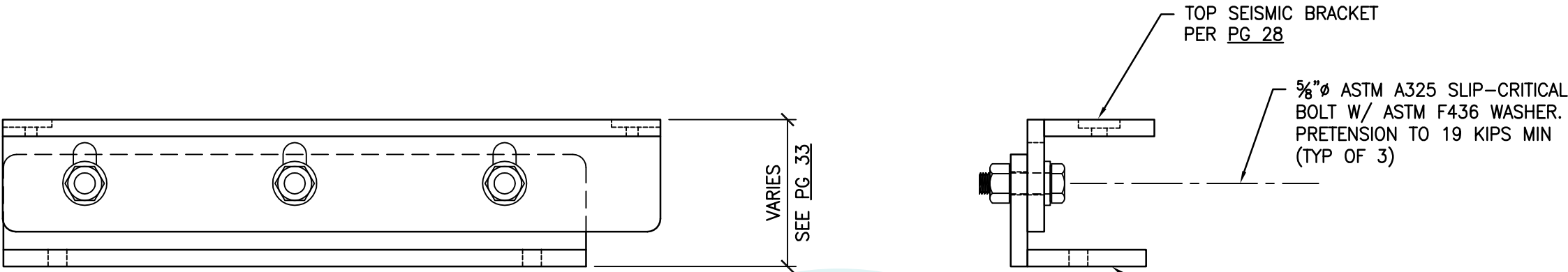
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ABBOTT ALINITY i & c INSTRUMENTS EQUIPMENT SUPPORTS & ATTACHMENTS							Date: 10/22/2020
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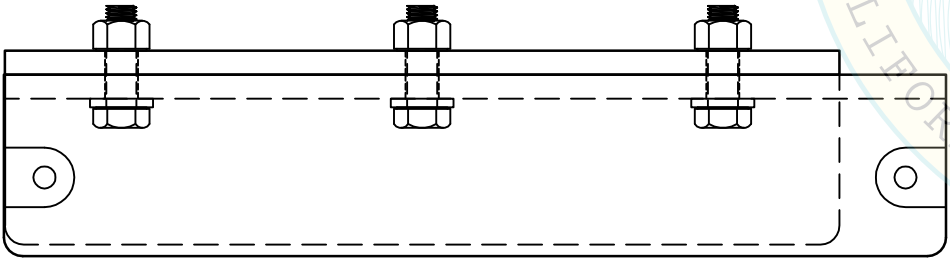
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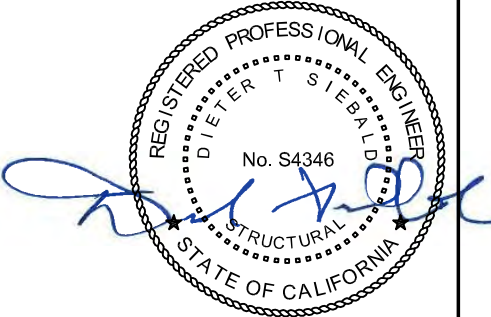
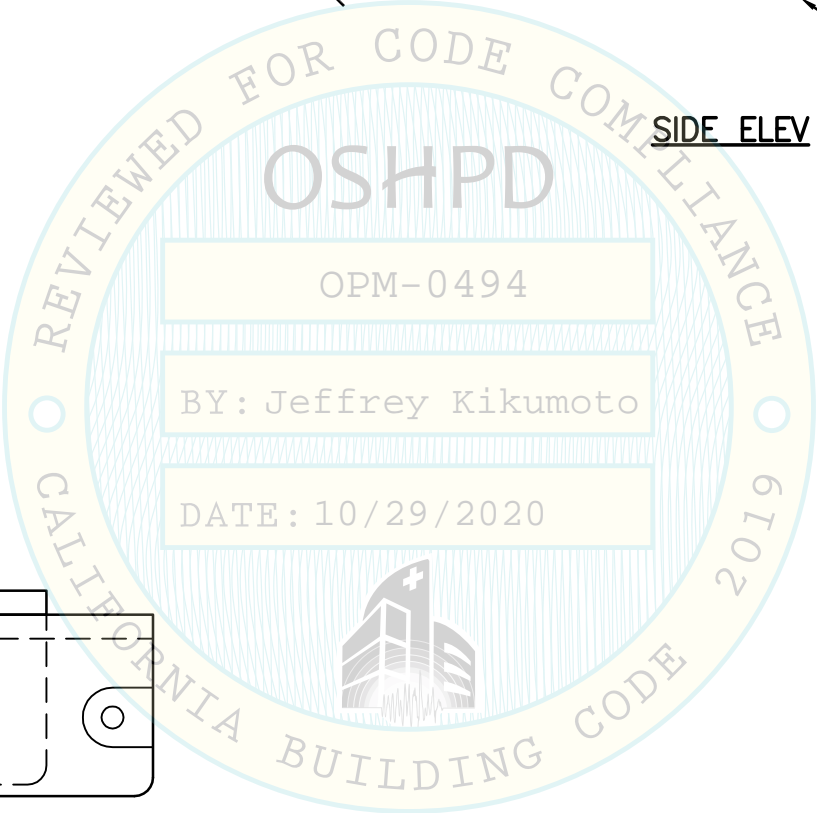


ELEV

SIDE ELEV



PLAN VIEW
(TOP DOWN)

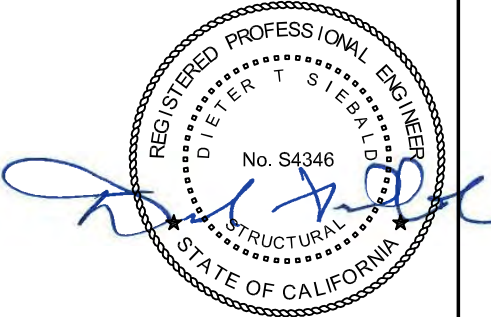
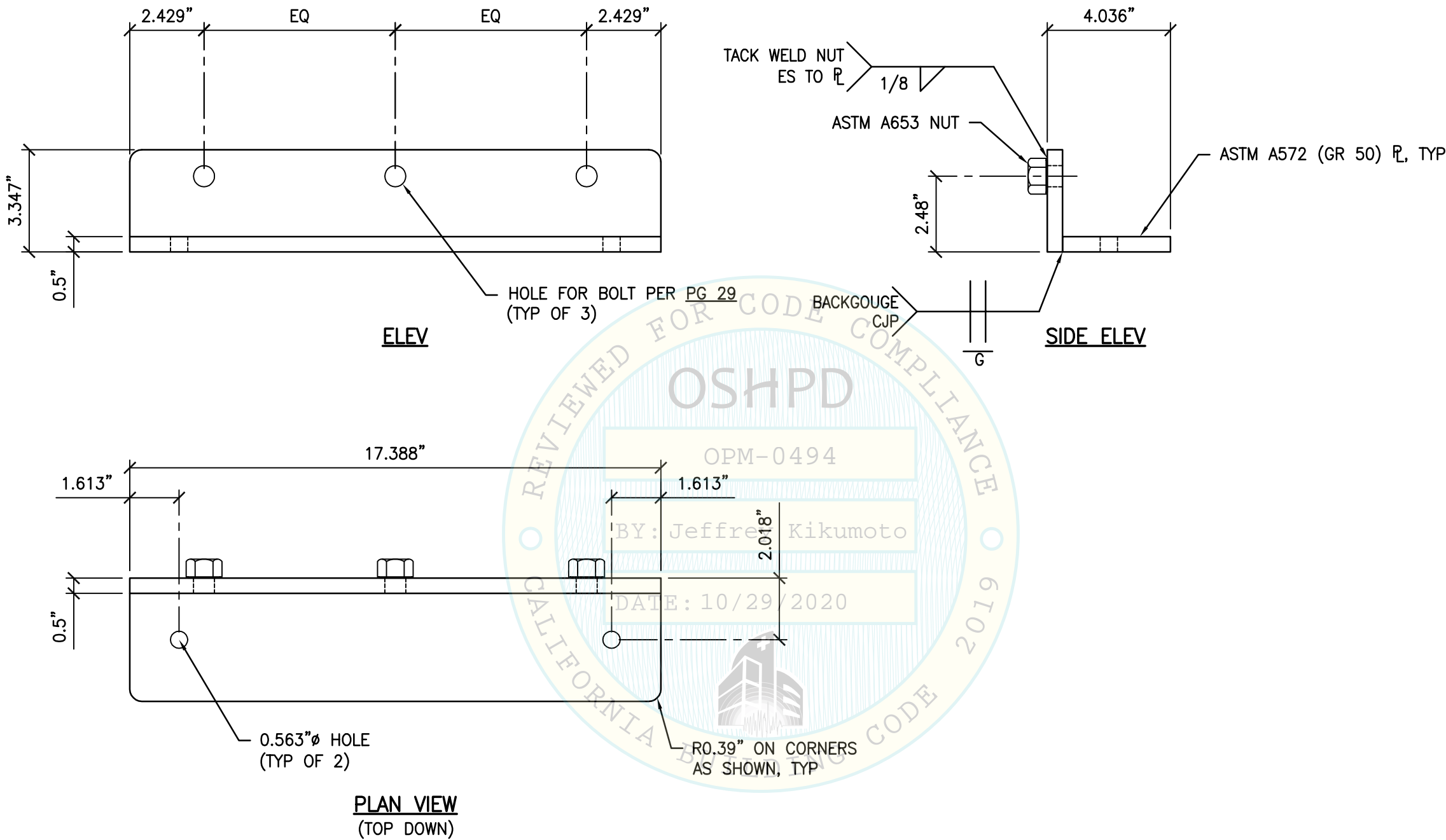


SHEET TITLE: ALINITY c MODULE REAR SEISMIC BRACKET ASSEMBLY DETAIL				Rev	Description	Date	Job No: 19091
 ABBOTT ALINITY i & c INSTRUMENTS EQUIPMENT SUPPORTS & ATTACHMENTS							Date: 10/22/2020
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BOTTOM BRACKET DETAIL:

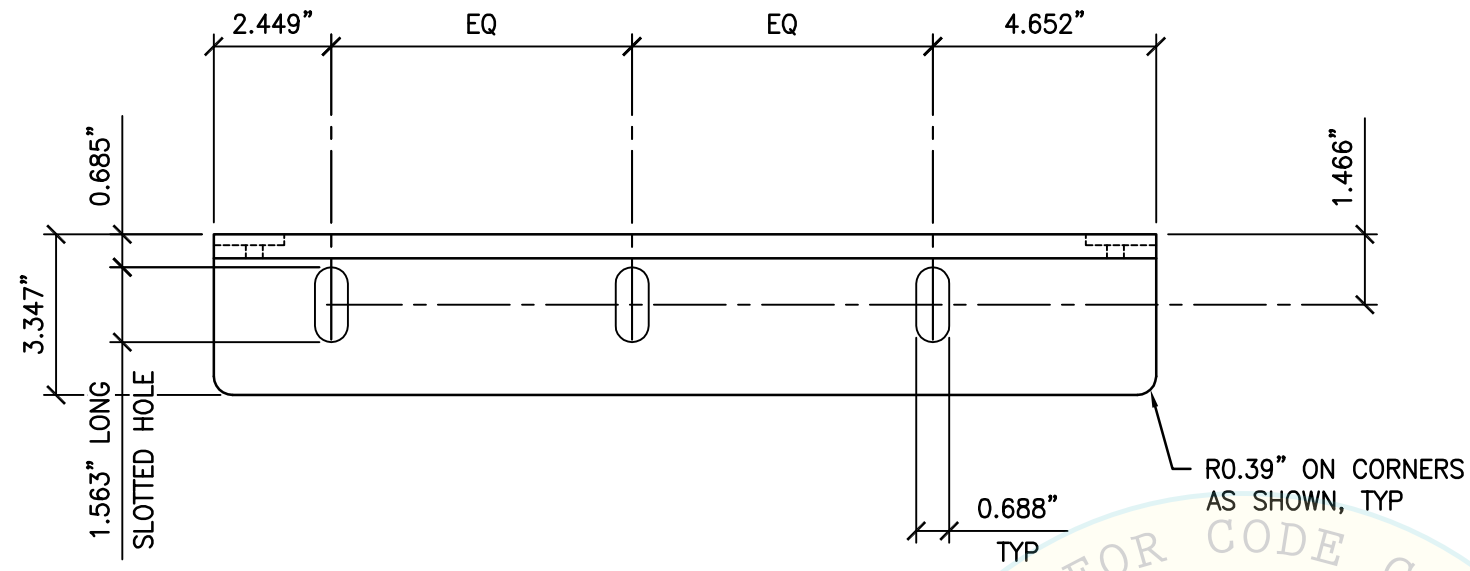


SHEET TITLE: ALINITY c MODULE				Rev	Description	Date	Job No: 19091
REAR BOTTOM SEISMIC BRACKET FABRICATION DETAIL							Date: 10/22/2020
ABBOTT							By: MTC
ALINITY i & c INSTRUMENTS							
EQUIPMENT SUPPORTS & ATTACHMENTS							Page: 27 of

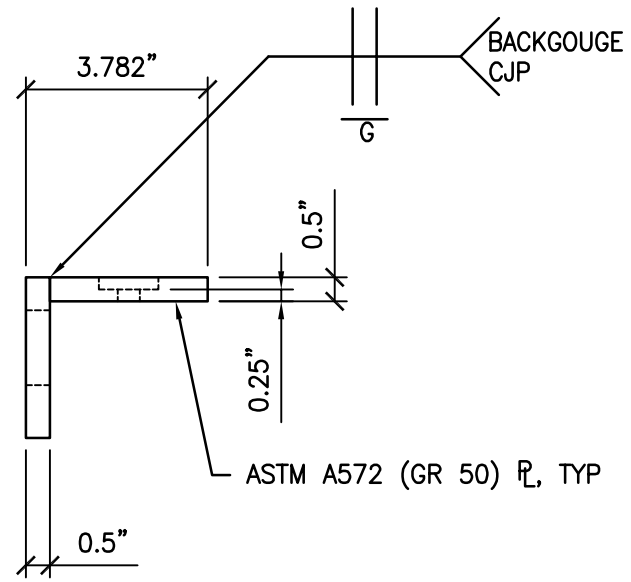


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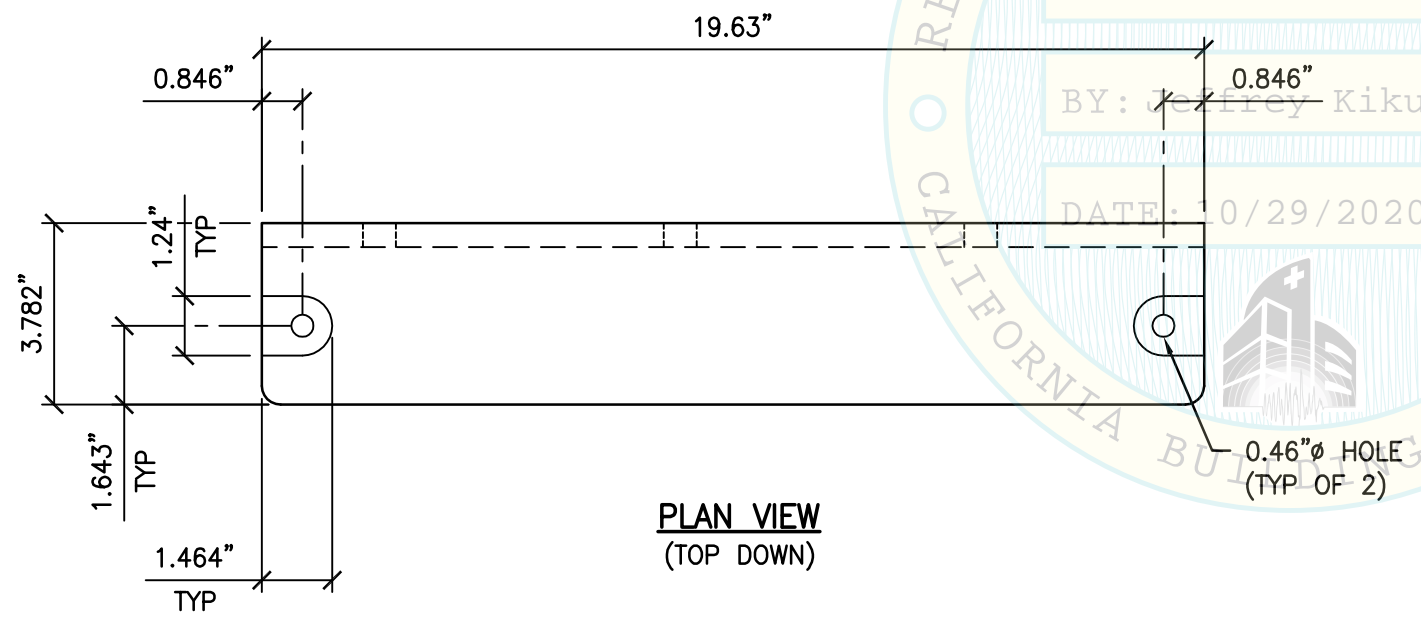
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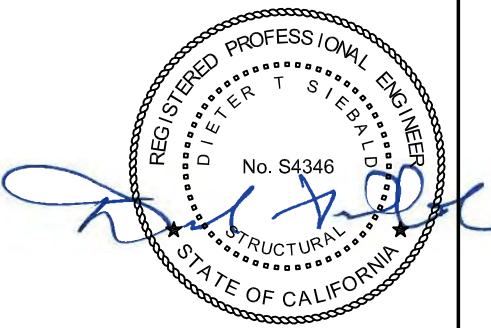
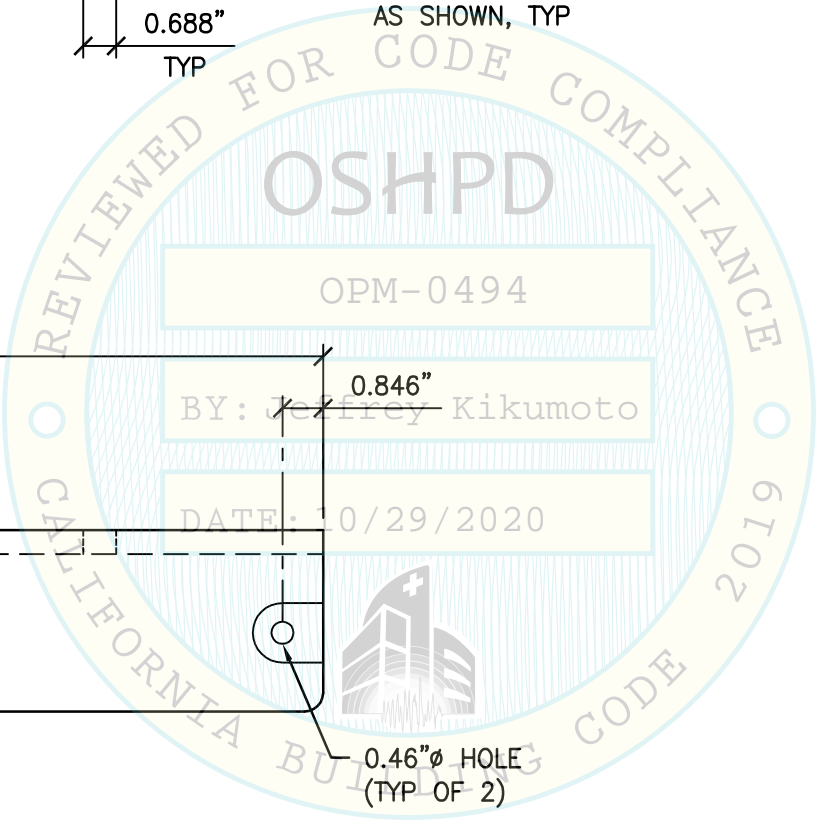
ELEV



SIDE ELEV



PLAN VIEW
(TOP DOWN)



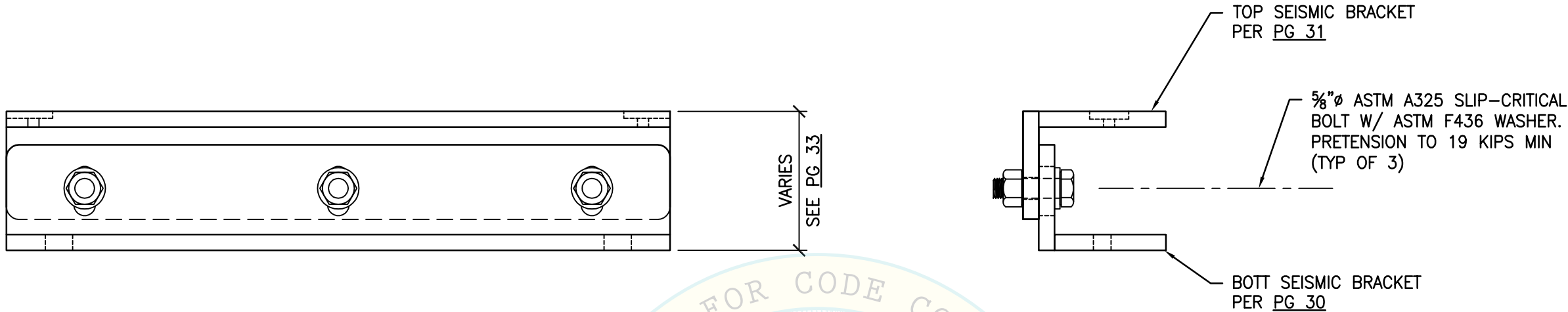
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 ABBOTT ALINITY i & c INSTRUMENTS EQUIPMENT SUPPORTS & ATTACHMENTS							Date: 10/22/2020
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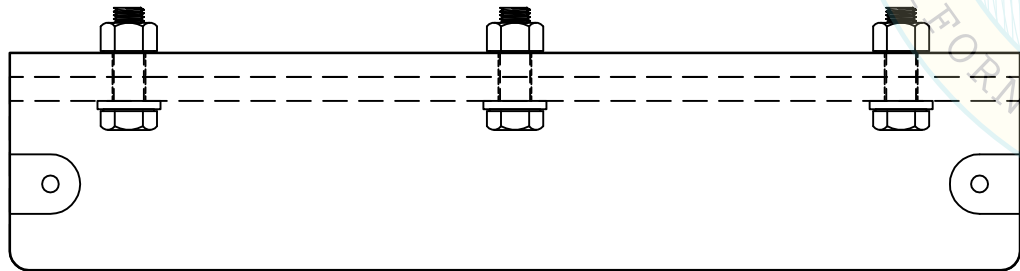
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FRONT BRACKET ASSEMBLY:

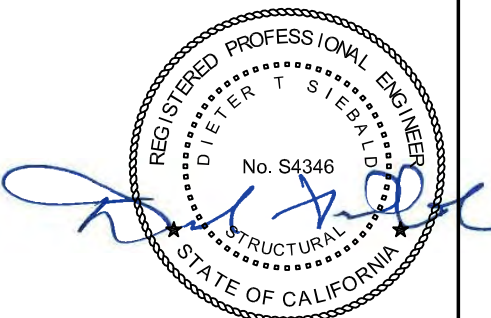
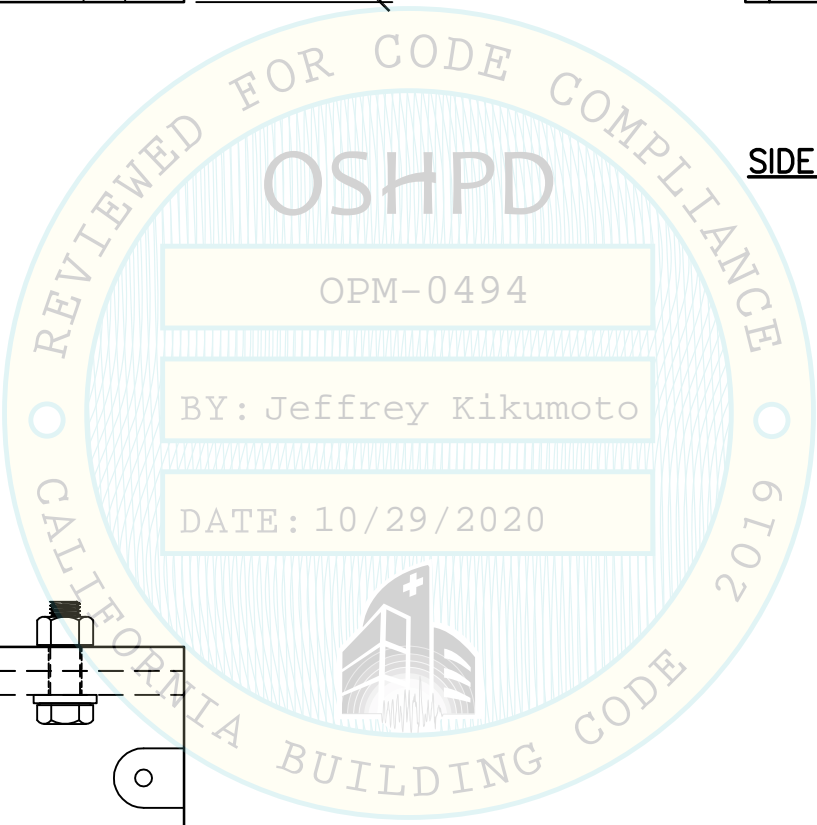


ELEV

SIDE ELEV

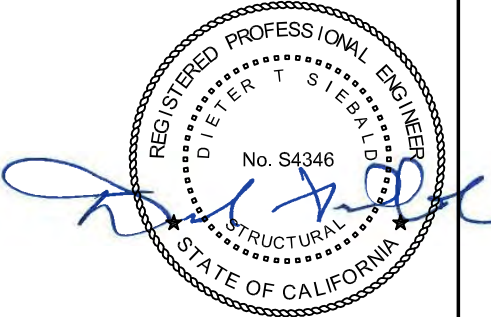
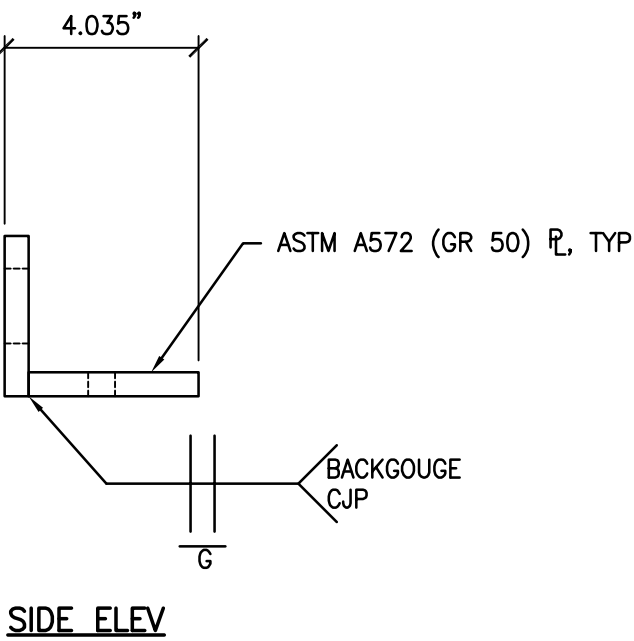
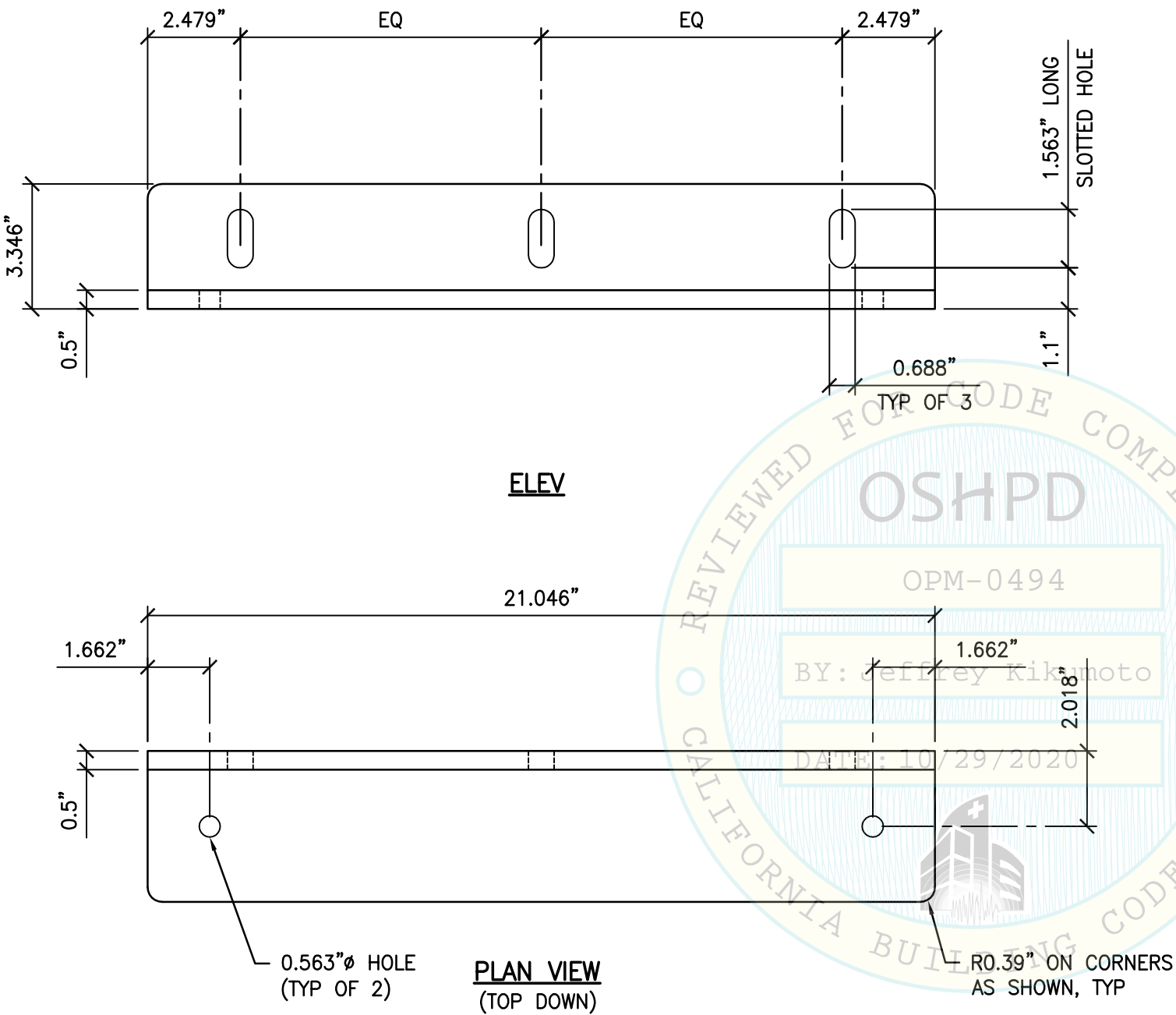


PLAN VIEW
(TOP DOWN)



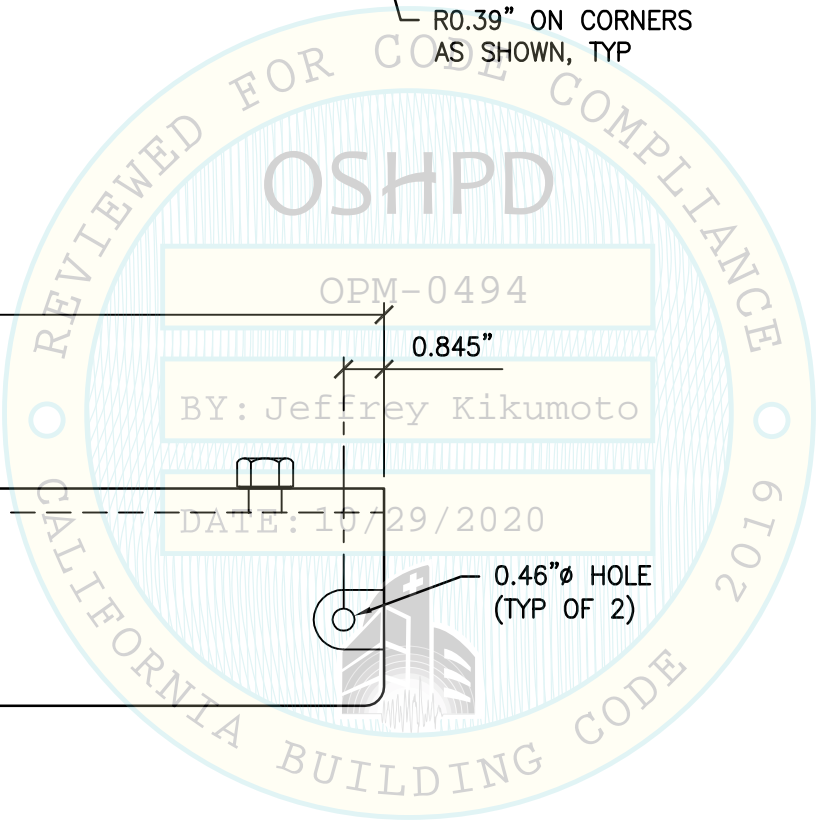
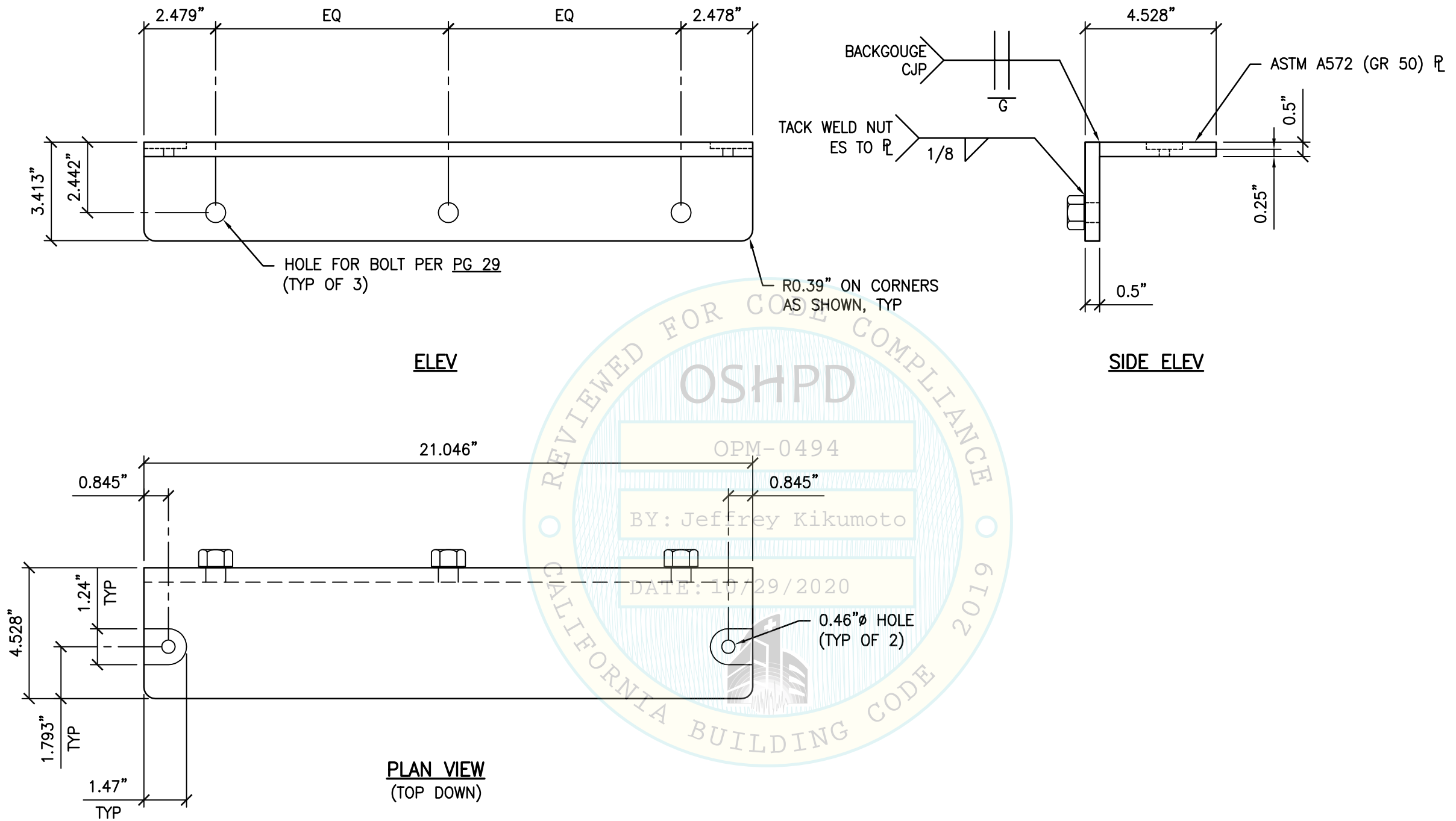
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ABBOTT ALINITY i & c INSTRUMENTS EQUIPMENT SUPPORTS & ATTACHMENTS							Date: 10/22/2020
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		CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833		TEL (916) 920-2020 www.cyseng.com			

BOTTOM BRACKET DETAIL:



SHEET TITLE: ALINITY c MODULE FRONT BOTTOM SEISMIC BRACKET FABRICATION DETAIL				Rev	Description	Date	Job No: 19091
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TOP BRACKET DETAIL:



SHEET TITLE: ALINITY c MODULE FRONT TOP SEISMIC BRACKET FABRICATION DETAIL				Rev	Description	Date	Job No: 19091
 ABBOTT ALINITY i & c INSTRUMENTS EQUIPMENT SUPPORTS & ATTACHMENTS							Date: 10/22/2020
							By: MTC
							Page: 31 of

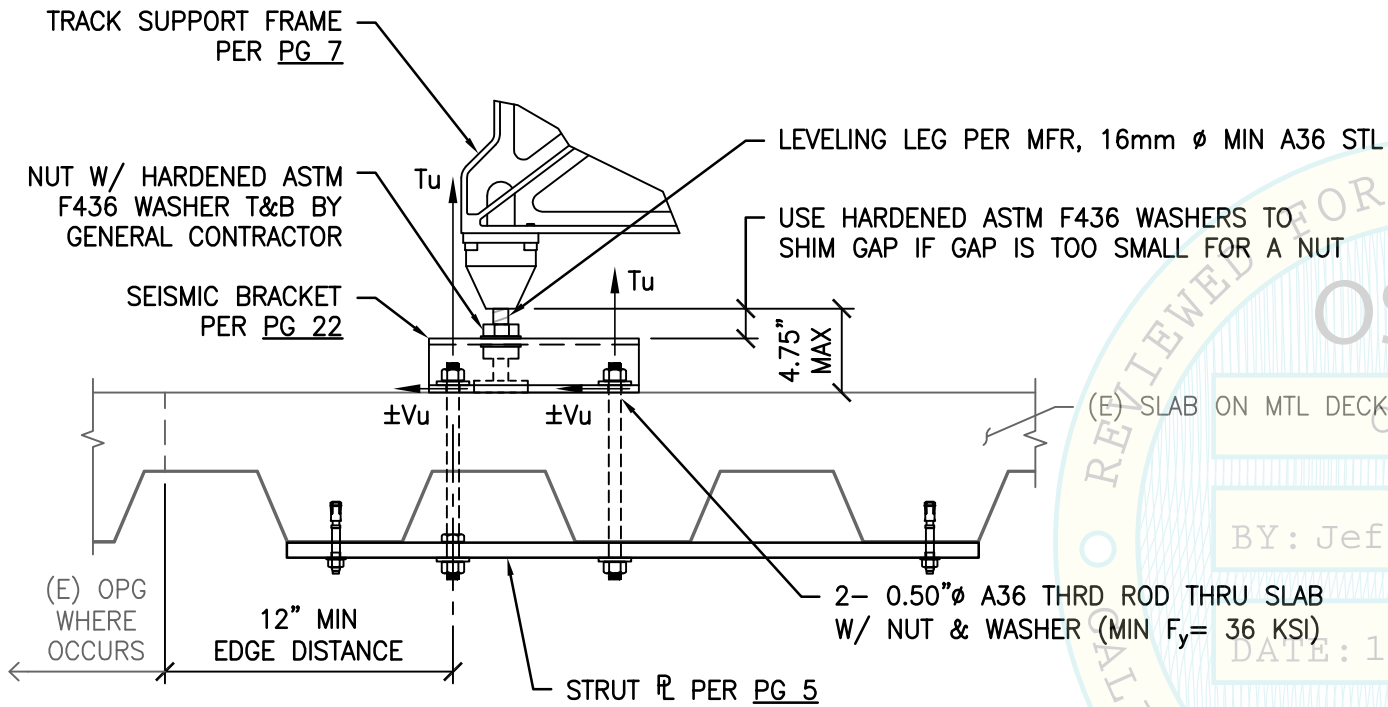
 **CYS STRUCTURAL ENGINEERS, INC.**
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
www.cyseng.com

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 $z/h \leq 1.0$	2808#	364#

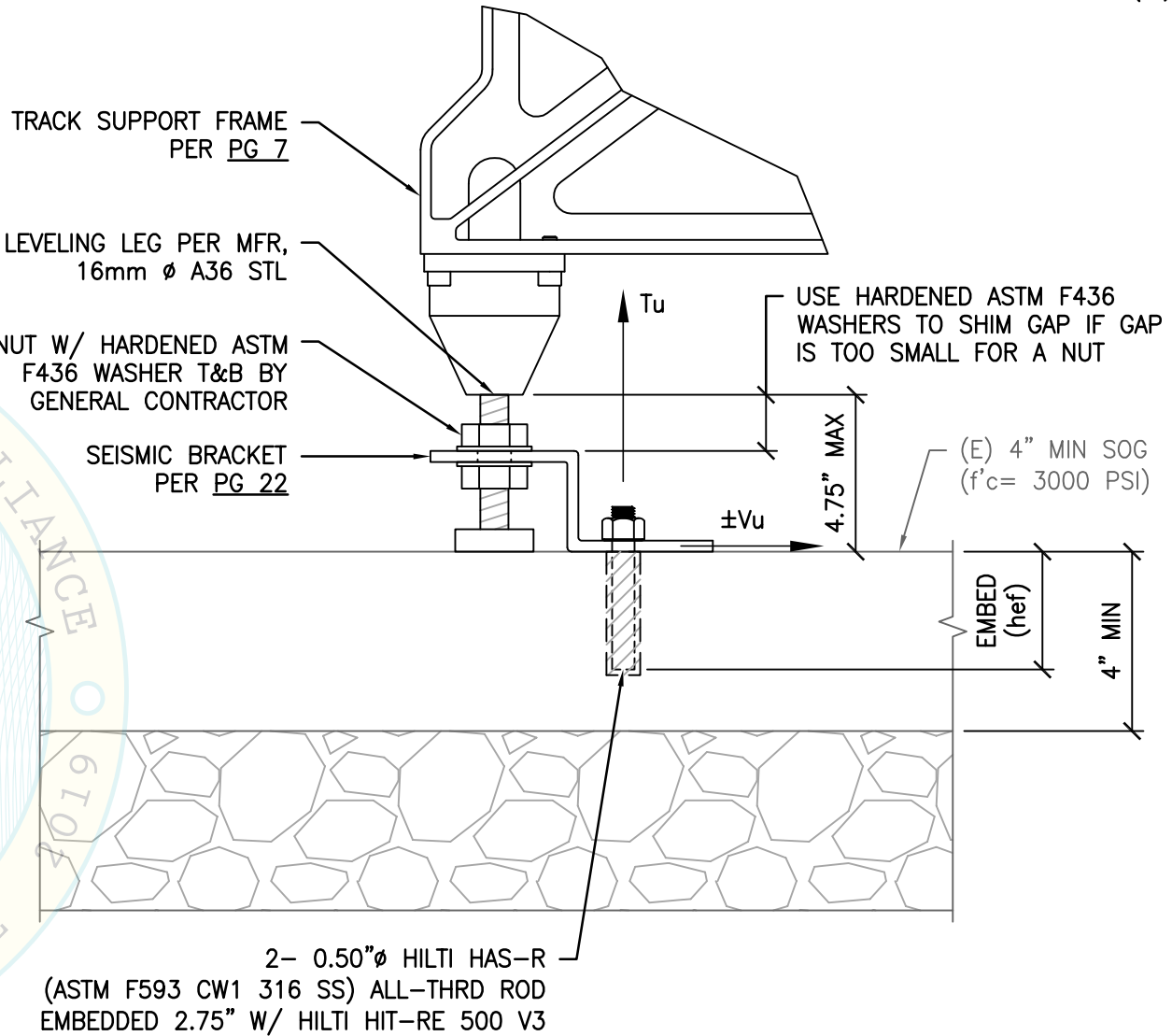
OVERSTRENGTH FACTOR (Ω_o) MUST BE
APPLIED TO V_u FOR ANCHORAGE TO CONC.

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

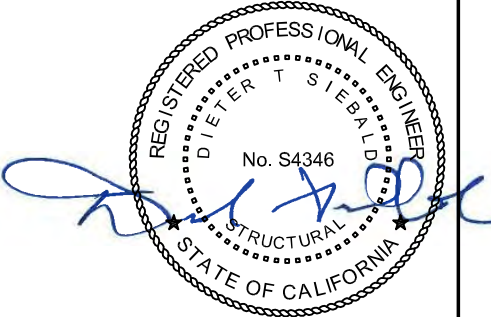
INCLUDES OVERSTRENGTH FACTOR (Ω_o)



CASE 1 – SUSPENDED FLR W/ THRU-BOLTS



CASE 2 – SOG
(SLAB AT OR BLW GRADE)



SHEET TITLE: TYPICAL TRACK MODULE SUPPORT & ATTACHMENT DETAILS				Rev	Description	Date	Job No: 19091
ABBOTT ALINITY i & c INSTRUMENTS EQUIPMENT SUPPORTS & ATTACHMENTS							Date: 10/22/2020
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ABBOTT
ALINITY i & c INSTRUMENTS
EQUIPMENT SUPPORTS & ATTACHMENTS

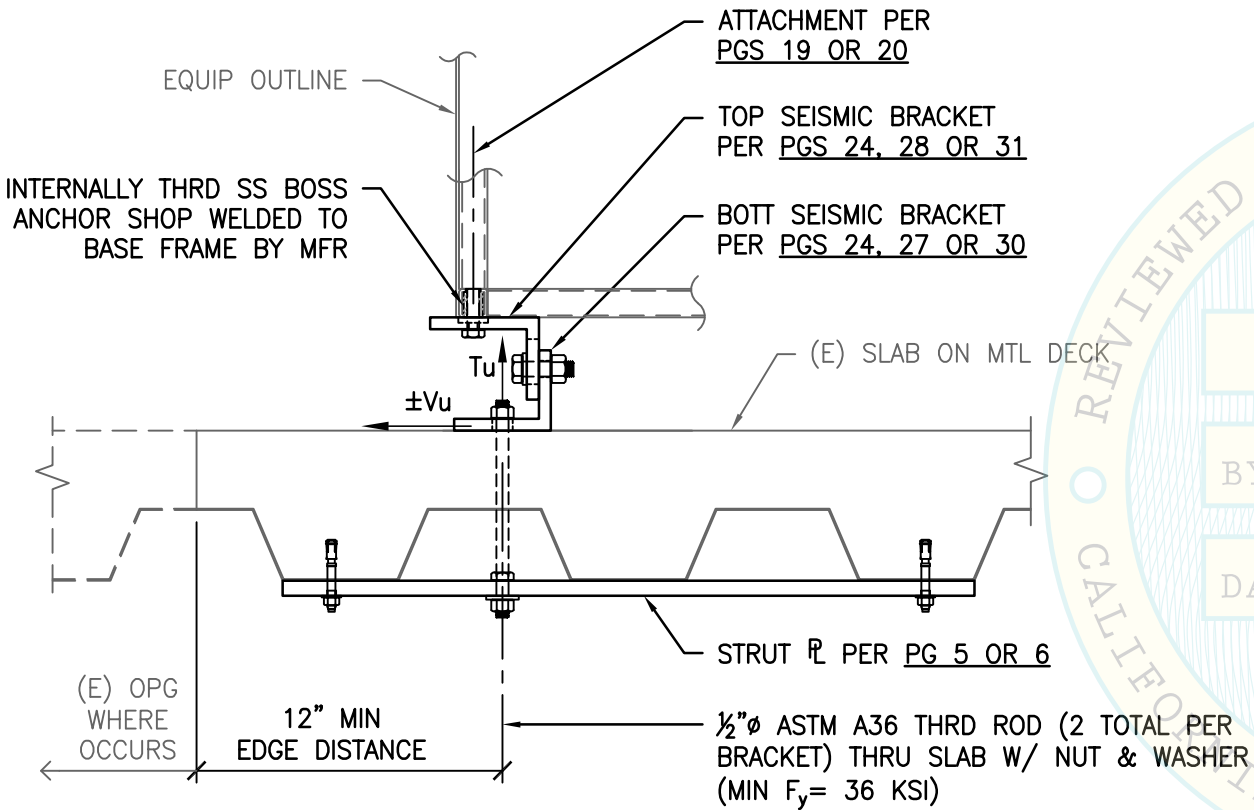


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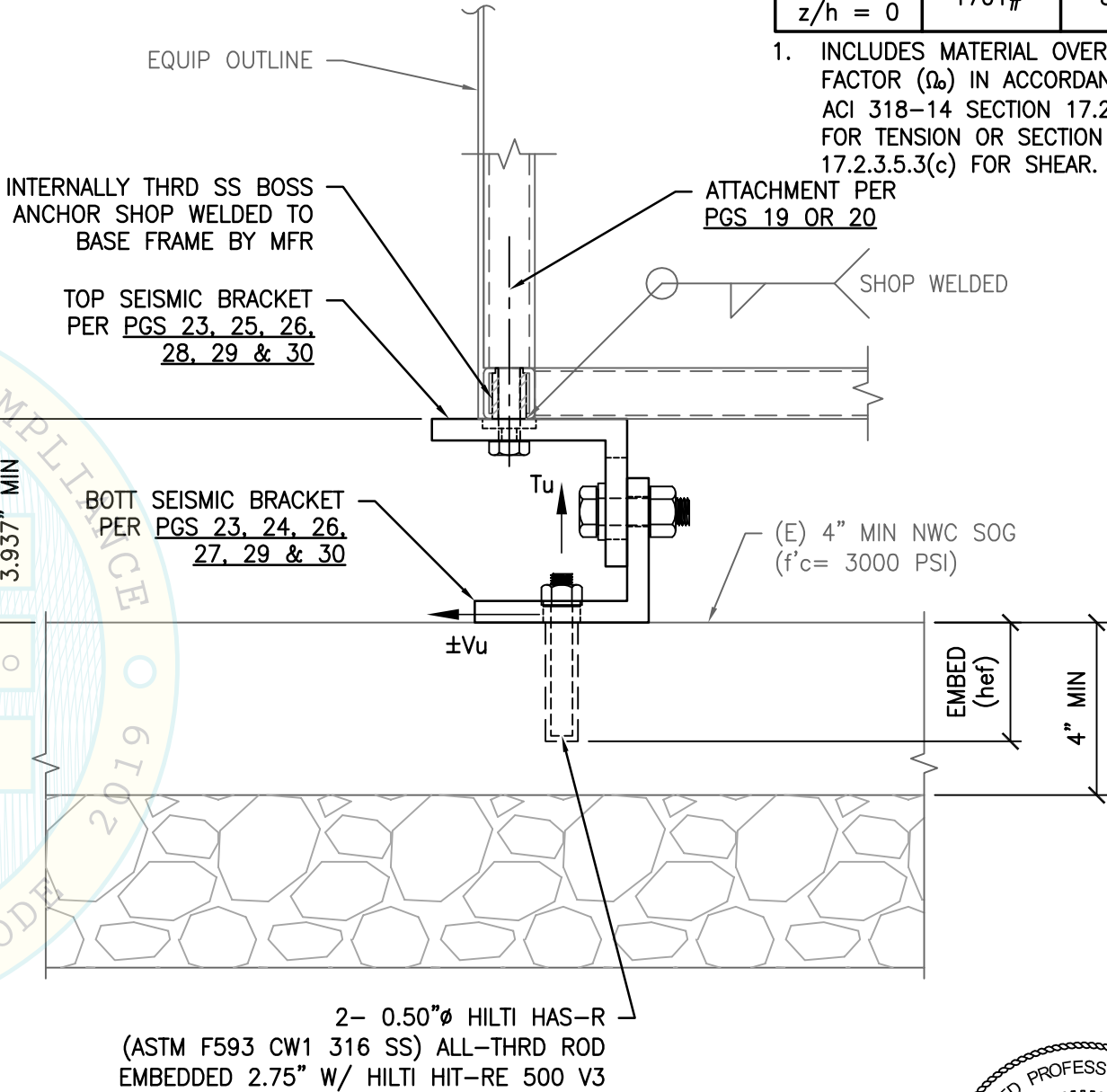
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MAX ANCHOR FORCES AT LRFD AT EA AB		
	Tu	Vu
CASE 1 z/h ≤ 1.0	3131#	2173# ¹
CASE 2 z/h = 0	1701# ¹	815# ¹

1. INCLUDES MATERIAL OVERSTRENGTH FACTOR (ϕ) 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.

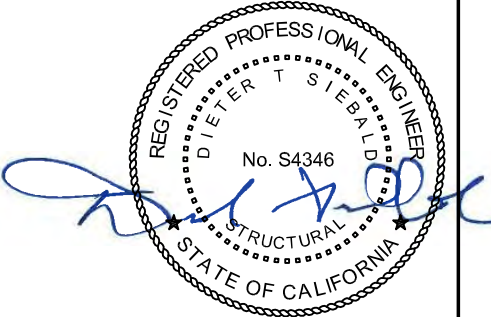


CASE 1 – SUSPENDED FLR W/ THRU-BOLTS



CASE 2 – SOG
(SLAB AT OR BLW GRADE)

NOTE:
SUPPORTS & ATTACHMENTS INSTALLATION
BY GENERAL CONTRACTOR.



SHEET TITLE: ALINITY i & c MODULE SUPPORT & ATTACHMENT DETAILS				Rev	Description	Date	Job No: 19091
ABBOTT ALINITY i & c INSTRUMENTS EQUIPMENT SUPPORTS & ATTACHMENTS							Date: 10/22/2020
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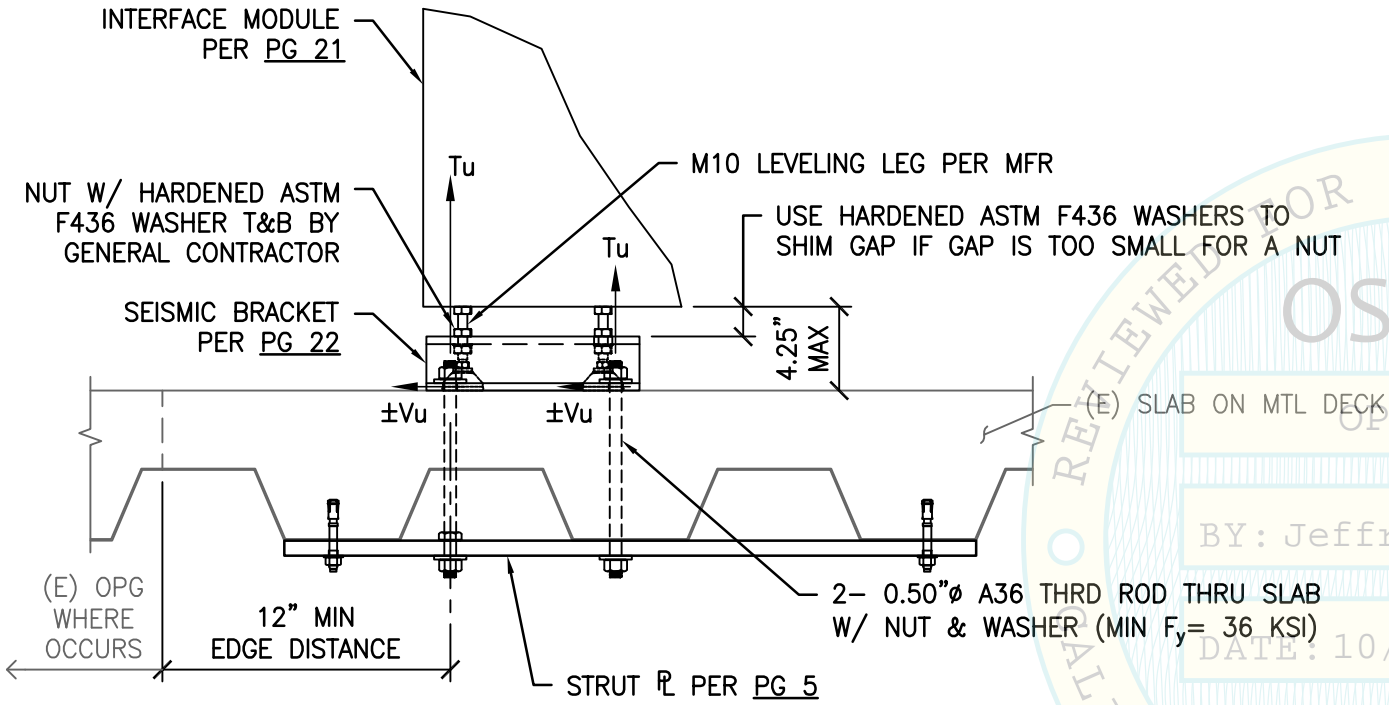
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	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 $z/h \leq 1.0$	1138#	72#

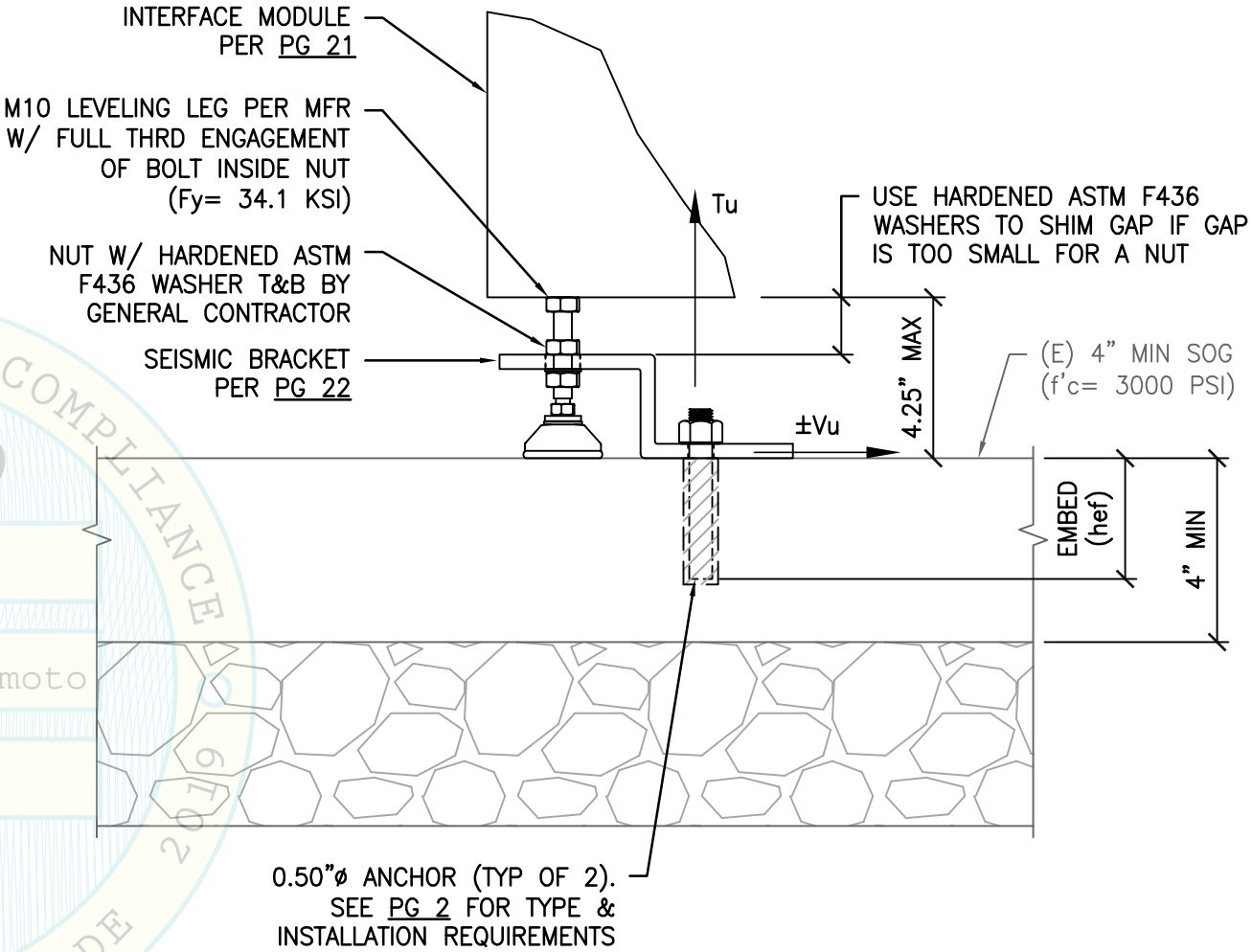
OVERSTRENGTH FACTOR (Ω_o) MUST BE
APPLIED TO V_u FOR ANCHORAGE TO CONC.

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

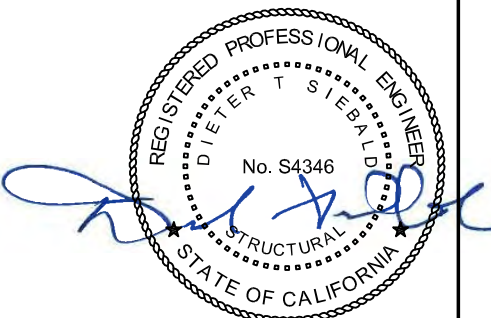
INCLUDES OVERSTRENGTH FACTOR (Ω_o)



CASE 1 – SUSPENDED FLR W/ THRU-BOLTS



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



SHEET TITLE: INTERFACE MODULE SUPPORT & ATTACHMENT DETAILS				Rev	Description	Date	Job No: 19091
ABBOTT ALINITY i & c INSTRUMENTS EQUIPMENT SUPPORTS & ATTACHMENTS							Date: 10/22/2020
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CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833		TEL (916) 920-2020 www.cyseng.com					

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