



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY

APPLICATION #: OPM-0297

HCAI Preapproval of Manufacturer's Certification (OPM)

Type: [] New [X] Renewal/Update

Manufacturer Information

Manufacturer: BD Integrated Solutions

Manufacturer's Technical Representative: Matthew Mellarkey

Mailing Address: 7 Loveton Circle, Sparks, MD 21152

Telephone: (410) 316-4810

Email: Matthew.Mellarkey@bd.com

Product Information

Product Name: BD BACTECTM FX

Product Type: Blood Analyzer Unit Mounted on Stand or Stacked on Second Unit

Product Model Number: Bactec FX

General Description: Blood Culture Instrumentation

Applicant Information

Applicant Company Name:

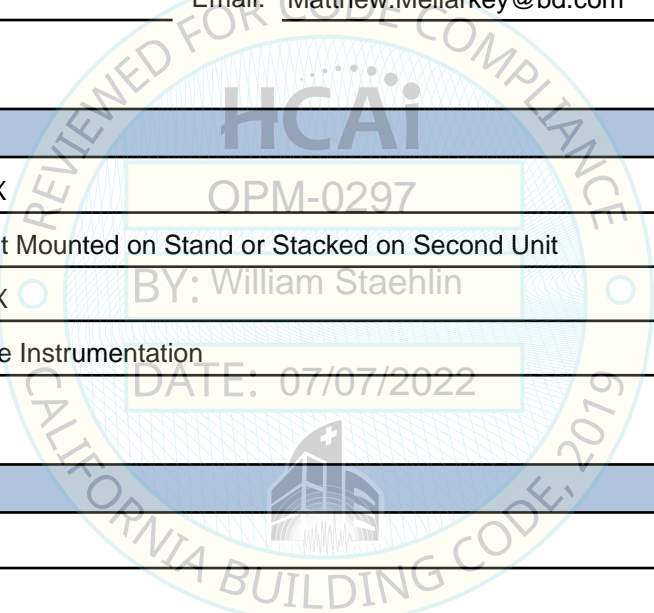
Contact Person: Dieter Siebald

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

Telephone: (916) 920-2020

Email: dieters@cyseng.com

Title: Structural Engineer



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

STATE OF CALIFORNIA - HEALTH AND HUMAN SERVICES AGENCY





**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
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

HCAI Special Seismic Certification Preapproval (OSP)

Special Seismic Certification is preapproved under OSP OSP Number: _____

Certification Method

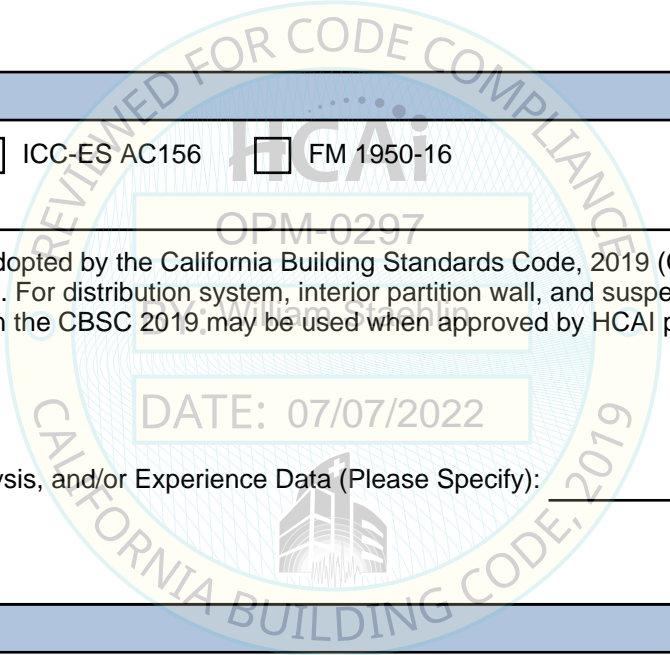
Testing in accordance with: ICC-ES AC156 FM 1950-16
 Other(s) (Please Specify): _____

*Use of criteria other than those adopted by the California Building Standards Code, 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 HCAI prior to testing.

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

HCAI Approval

Date: 7/7/2022
Name: William Staehlin Title: Senior Structural Engineer
Condition of Approval (if applicable): _____



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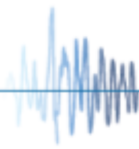




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- NOTES:**
1. THESE DRAWINGS ARE PREPARED FOR BD INTEGRATED DIAGNOSTIC SOLUTIONS, SPARKS, MARYLAND.
 2. THE CONTRACTOR & INSPECTOR OF RECORD SHALL OBTAIN A COPY OF THIS PRE-APPROVAL FROM THE CALIFORNIA DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION (HCAI) PRE-APPROVAL PROGRAMS WEBSITE.
 3. THIS PRE-APPROVAL COVERS THE SUPPORTS AND ATTACHMENTS OF THE EQUIPMENT TO THE SUPPORTING STRUCTURE. THE EQUIPMENT, STAND & ATTACHMENT HARDWARE ARE SUPPLIED BY THE MANUFACTURER. THE EXPANSION ANCHORS, THRU-BOLTS & STRUT PLATES SHOWN IN THIS OPM SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR.



SHEET TITLE: TABLE OF CONTENTS



CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

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

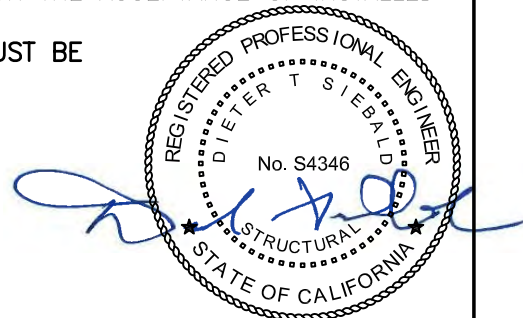
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GENERAL NOTES:

1. THIS HCAI PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2019. THE DEMAND (DESIGN FORCES) FOR USE W/ THIS OPM SHALL BE BASED ON THE CBC 2019.
2. IT IS THE RESPONSIBILITY OF THE SEOR FOR A SITE SPECIFIC PROJECT TO VERIFY:
 - A. THE ADEQUACY OF THE NEW OR EXISTING STRUCTURE TO RESIST THE FORCES & WT SPECIFIED FOR EA EQUIP IN ADDITION TO ALL OTHER LOADS. PROVIDE & DESIGN SUPPLEMENTARY MEMBERS AS REQ.
 - B. THAT THE FLR ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY SLAB EDGES OR OPGS.
 - C. THAT THE FLR ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY NEW OR EXISTING ANCHORS. THE SPCG SHOWN IN THE TEST TORQUE TABLE BLW IS THE REQ MIN SPCG OF THE GIVEN DIA ANCHORS. THE REQ SPCG FROM ANCHORS OF OTHER DIAMETERS & EMBEDMENTS MAY VARY & SHALL BE EVALUATED BY THE SEOR.
 - D. THAT THE INSTALLATION IS IN CONFORMANCE W/ THE CBC 2019 & W/ THE DETAILS SHOWN IN THIS PRE-APPROVAL.
 - E. THAT THE ACTUAL EQUIP'S WT, CENTER OF GRAVITY (CG) LOCATION, ANCHOR LOCATIONS, ANCHOR DETAILS, & THE MATERIAL & GAUGE OF THE EQUIP WHERE ATTACHMENTS ARE MADE, AGREE W/ THE INFO SHOWN ON THE PRE-APPROVAL DOCUMENTS.
 - F. THAT THE PROJECT SPECIFIC VALUES OF S_{DS} & z/h RESULT IN SEISMIC FORCES THAT DO NOT EXCEED THE VALUES IN THE DESIGN CRITERIA.
3. EXPANSION ANCHORS INSTALLED IN NWC OR SLWC SHALL BE CARBON STL HILTI KB-TZ OR HILTI KB-TZ2 EXPANSION ANCHORS AS NOTED COMPLYING W/ ESR-1917 REISSUED MAY 2021 OR ESR-4266 REVISED DECEMBER 17, 2021 RESPECTIVELY.
 - A. INSTALLATION: INSTALL THE EXPANSION ANCHORS IN ACCORDANCE W/ THE REQUIREMENTS GIVEN IN THE ICC EVALUATION REPORT FOR THE SPECIFIC ANCHOR & THE PARAMETERS GIVEN IN THE TABLE BLW.
 - B. JOB TESTING: FOR VERIFYING SATISFACTORY INSTALLATION WORKMANSHIP, PERFORM JOBSITE TESTING IN ACCORDANCE W/ THE TEST LOAD TABLE PROVIDED IN THIS DOCUMENT. TORQUE TEST 50% OF THE INSTALLED ANCHORS. ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE SPECIAL INSPECTOR & REPORT OF TEST RESULTS SHALL BE SUBMITTED TO HCAI. 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 EQUIP INSTALLATION, HOWEVER NUT SHALL BE RETORQUED TO INSTALLATION TORQUE AFTER EQUIP INSTALL. ALSO REFER TO CBC 1910A.5 "TESTS FOR POST-INSTALLED ANCHORS IN CONCRETE". REPORT OF TEST RESULTS SHALL BE SUBMITTED TO HCAI. TESTING SHALL BE PERFORMED BY AN APPROVED TESTING AGENCY EMPLOYED BY THE FACILITY OWNER. TEST REPORTS SHALL BE SUBMITTED TO THE IOR, OWNER & THE ARCHITECT OR ENGINEER IN RESPONSIBLE CHARGE. (CAC 7-149)
 - C. FAILURE/ACCEPTANCE CRITERIA: THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
 - TORQUE WRENCH METHOD: THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN THE FOLLOWING LIMITS:
WEDGE TYPE: ONE-HALF (½) TURN OF THE NUT.
 - D. AVOID DAMAGING (E) STL REINF IN CONC SLAB WHEN INSTALLING CONC EXPANSION ANCHORS.
 - E. PROVIDE FOR FULL THRD ENGAGEMENT OF NUT & WASHER.



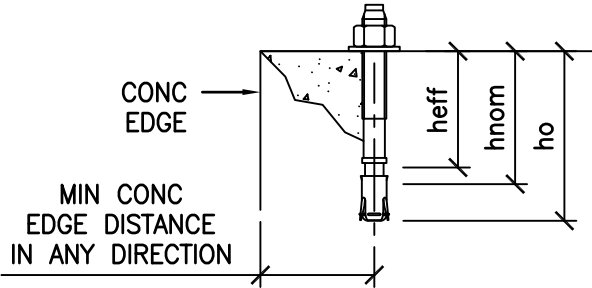
SHEET TITLE: GENERAL NOTES

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GENERAL NOTES CONTINUED:

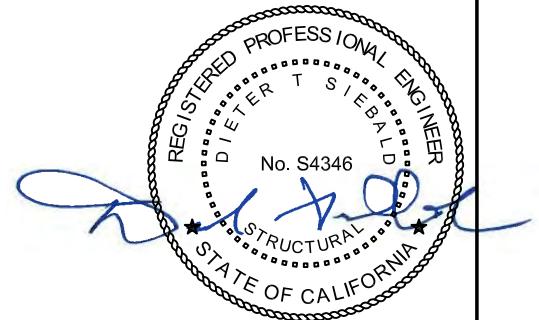
3F. EXPANSION ANCHOR TABLE FOR HILTI KB-TZ & KB-TZ2 ANCHORS:



CONDITION OF ANCHORAGE	ANCHOR DIA (INCH)	INSTALLATION EMBED (INCH) hnom	EFFECTIVE EMBED (INCH) hef	HOLE DEPTH (INCH) ho	MIN CONC THK (INCH) h	MIN CONC EDGE DISTANCE (INCH)	MIN ANCHOR SPCG (INCH)	TEST TORQUE (FT-LBS)
CASE 1 STRUT P'S	3/8	1 3/16" (1 1/8")	1 1/2	2	3/4	6	5	25 (30)
CASE 2	1/2	3 5/8 (3 3/4)	3 1/4	4 (4 1/4)	6	12	5.66	40 (50)
CASE 3	1/2	2 3/8" (2 1/2")	2	2 5/8 (2 3/4)	4	12	5.66	40 (50)

NOTES:

1. VALUES IN PARENTHESES ARE FOR HILTI KB-TZ2.
2. VALUES ARE THE SAME FOR BOTH ANCHORS WHERE ONLY ONE NUMBER IS REPORTED.
3. BOLTS THROUGH 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 REQ TO BRING THE CONNECTED PLIES INTO FIRM CONTACT) CONDITION IS ACHIEVED, UNO.
 - B. THRU-BOLT HOLES SHALL BE 1/16" LARGER THAN BOLT SIZE (HOLE SIZE = BOLT SIZE + 1/16")
 - 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.



SHEET TITLE: GENERAL NOTES (CONTINUED)



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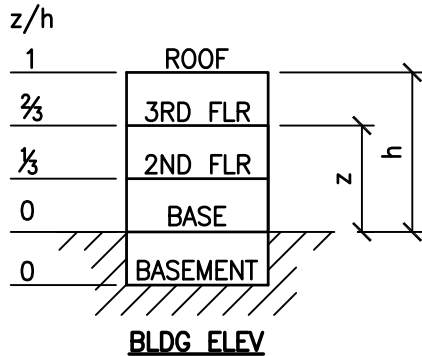
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GENERAL NOTES CONTINUED:

5. THREE (3) CASES OF ATTACHMENT ARE SPECIFIED AND PRESENTED IN THIS PRE-APPROVAL:



CASE 1: ATTACHMENT DETAILS LOCATED AT UPPER FLRS ABV THE BASE OF A BLDG. THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 3/4" SLWC TOPPING OVER MIN 20 GA MTL DECK (f'c = 3000 PSI, MIN).

FOR CASE 1A (STAND): $z/h \leq 1$ & $S_{ps} \leq 2.50$
 FOR CASE 1B (STACKED): $z/h \leq 1$ & $S_{ps} \leq 1.90$
 OR $z/h \leq 0.75$ & $S_{ps} \leq 2.20$
 OR $z/h \leq 0.60$ & $S_{ps} \leq 2.50$

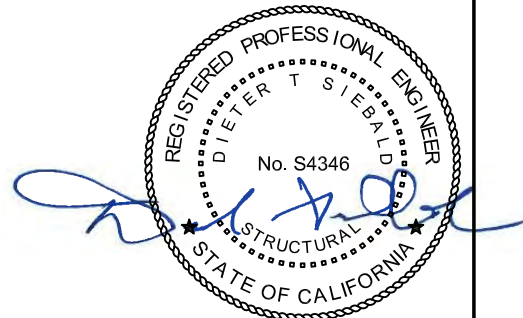
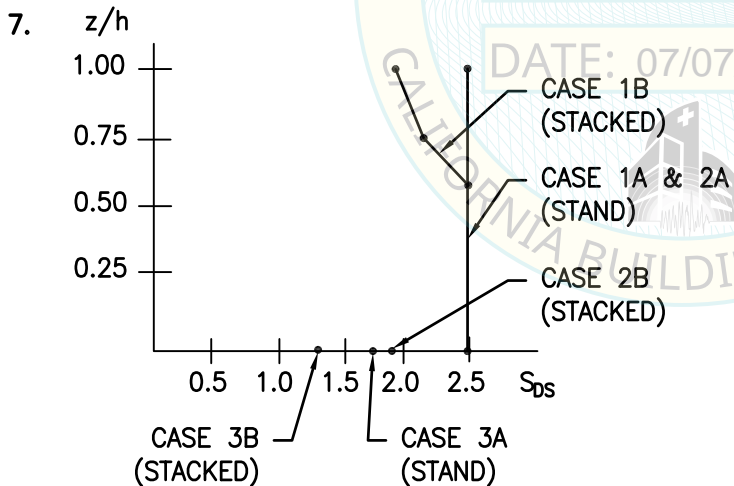
CASE 2: ATTACHMENT DETAILS LOCATED AT OR BLW THE BASE OF A BLDG. THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 6" NWC SLAB (f'c = 3000 PSI, MIN).

FOR CASE 2A (STAND): $z/h = 0$ & $S_{ps} \leq 2.50$
 FOR CASE 2B (STACKED): $z/h = 0$ & $S_{ps} \leq 1.90$

CASE 3: ATTACHMENT DETAILS LOCATED AT OR BLW THE BASE OF A BLDG. THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 4" NWC SLAB (f'c = 3000 PSI, MIN).

FOR CASE 3A (STAND): $z/h = 0$ & $S_{ps} \leq 1.75$
 FOR CASE 3B (STACKED): $z/h = 0$ & $S_{ps} \leq 1.30$

6. THIS PRE-APPROVAL MAY BE USED ONLY AT GEOGRAPHICAL LOCATIONS IN THE STATE OF CALIFORNIA WHERE S_{ps} IS LESS THAN OR EQUAL TO THE VALUES NOTED ABOVE.



SHEET TITLE: GENERAL NOTES (CONTINUED)

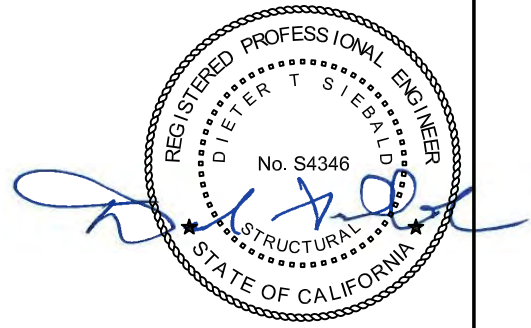
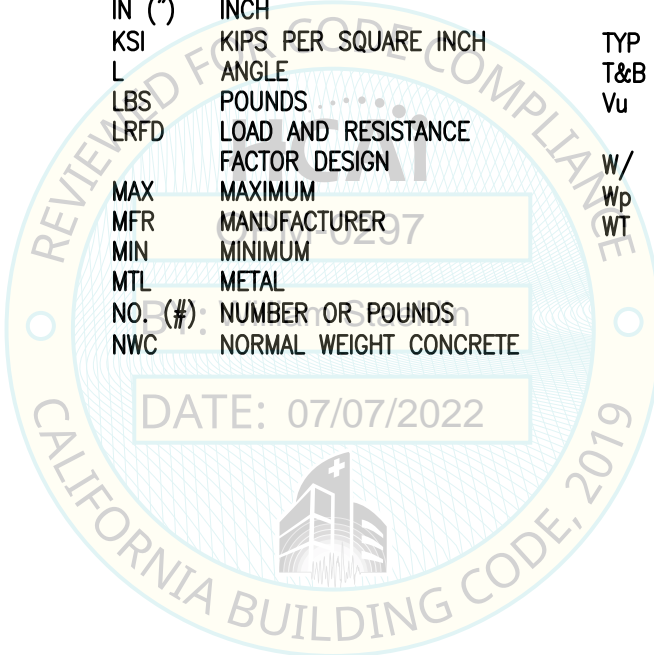
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ABBREVIATIONS:

@	AT	f'c	MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE	OPG	OPENING
AB	ANCHOR BOLT			OPM	HCAI PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION
ABV	ABOVE	FLR	FLOOR		
ADJ	ADJACENT	FT (')	FOOT/FEET	PERP	PERPENDICULAR
ALUM	ALUMINUM	F _p	HORIZONTAL SEISMIC FORCE PER ASCE 7-16 SEISMIC FORCE REQUIREMENTS	PG(S)	PAGE(S)
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS			PL	PLATE
BLDG	BUILDING	F _y	SPECIFIED MINIMUM YIELD STRESS OF STEEL	PSI	POUNDS PER SQUARE INCH
BLW	BELOW			RECT	RECTANGULAR
BOTT	BOTTOM	GA	GAUGE	SEOR	STRUCTURAL ENGINEER OF RECORD
CBC	CALIFORNIA BUILDING CODE	HCAI	CALIFORNIA DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION	SLWC	SAND-LIGHTWEIGHT CONCRETE
CG	CENTER OF GRAVITY			SS	STAINLESS STEEL
CL	CENTERLINE	ICC	INTERNATIONAL CODE COUNCIL	STL	STEEL
CONC	CONCRETE			THRD	THREAD OR THREADED
COORD	COORDINATE	IN (")	INCH	Tu	ANCHORAGE TENSION REACTION DUE TO SEISMIC FORCE
CRS	COLD ROLLED STEEL	KSI	KIPS PER SQUARE INCH	TYP	TYPICAL
DIA (ø)	DIAMETER	L	ANGLE	T&B	TOP & BOTTOM
(E)	EXISTING CONDITION	LBS	POUNDS	Vu	ANCHORAGE SHEAR REACTION DUE TO SEISMIC FORCE
EA	EACH	LRFD	LOAD AND RESISTANCE FACTOR DESIGN	W/	WITH
EE	EACH END	MAX	MAXIMUM	Wp	OPERATING WEIGHT
ELEV	ELEVATION	MFR	MANUFACTURER	WT	WEIGHT
EQ	EQUAL	MIN	MINIMUM		
EQUIP	EQUIPMENT	MTL	METAL		
ES	EACH SIDE	NO. (#)	NUMBER OR POUNDS		
		NWC	NORMAL WEIGHT CONCRETE		



SHEET TITLE: ABBREVIATIONS



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SYSTEM OVERVIEW & DESIGN CRITERIA:

- TWO (2) INSTALLATION CONFIGURATIONS OF THE BACTEC FX INSTRUMENT ARE COVERED BY THIS OPM, THE STAND CONFIGURATION AND THE STACKED CONFIGURATION. PLEASE NOTE, THE MAX S_{DS} AND MAX z/h RATIO IS DIFFERENT FOR EA CONFIGURATION DUE TO THE DIFFERENCE IN TOTAL EQUIP WT.
- SUPPORT & ATTACHMENT DESIGN IS PER 2019 CBC AT LRFD LEVEL FORCES.

OTHER MECHANICAL OR ELECTRICAL COMPONENTS PER TABLE 13.6-1 OF ASCE 7-16 SUPPLEMENT #1:

$a_p = 1.0$ $R_p = 1.5$ $I_p = 1.5$ $\Omega_0 = 1.5$ (FOR CONC ANCHORS ONLY)

W_p AS NOTED ON DRAWINGS ON PGS 7 & 8

UPPER FLRS ABV THE BASE OF BLDG, $z/h = 1$

CASE 1A: $S_{DS} = 2.50$ $F_p = 3.00 W_p$
 CASE 1B: $S_{DS} = 1.90$ $F_p = 2.28 W_p$

OTHER POSSIBLE z/h AND S_{DS} COMBINATIONS FOR CASE 1B:

$z/h = 0.75$ $S_{DS} = 2.20$ $F_p = 2.20 W_p$
 $z/h = 0.60$ $S_{DS} = 2.50$ $F_p = 2.20 W_p$

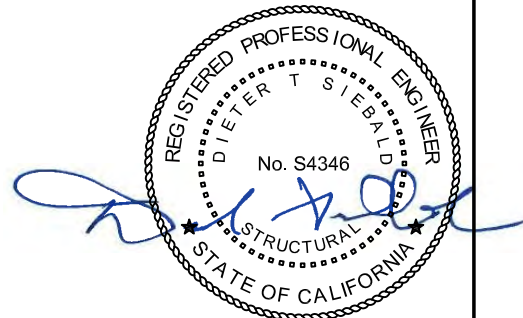
FLRS AT OR BLW THE BASE OF BLDG, $z/h = 0$

CASE 2A: $S_{DS} = 2.50$ $F_p = 1.13 W_p$
 CASE 2B: $S_{DS} = 1.90$ $F_p = 0.86 W_p$
 CASE 3A: $S_{DS} = 1.75$ $F_p = 0.79 W_p$
 CASE 3B: $S_{DS} = 1.30$ $F_p = 0.59 W_p$

LOAD COMBINATIONS

$(0.9 - 0.2 S_{DS}) D - \Omega_0 F_p$ (FOR MAX TENSION)
 $(1.2 + 0.2 S_{DS}) D + \Omega_0 F_p$ (FOR MAX COMPRESSION)

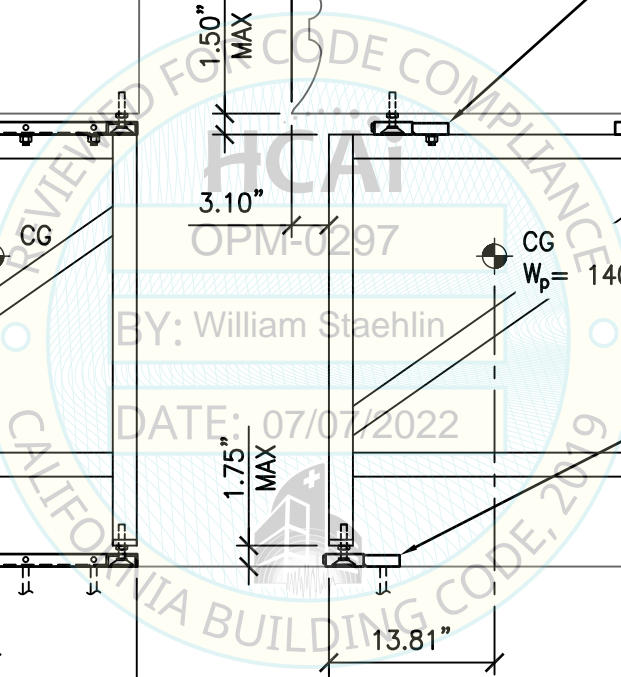
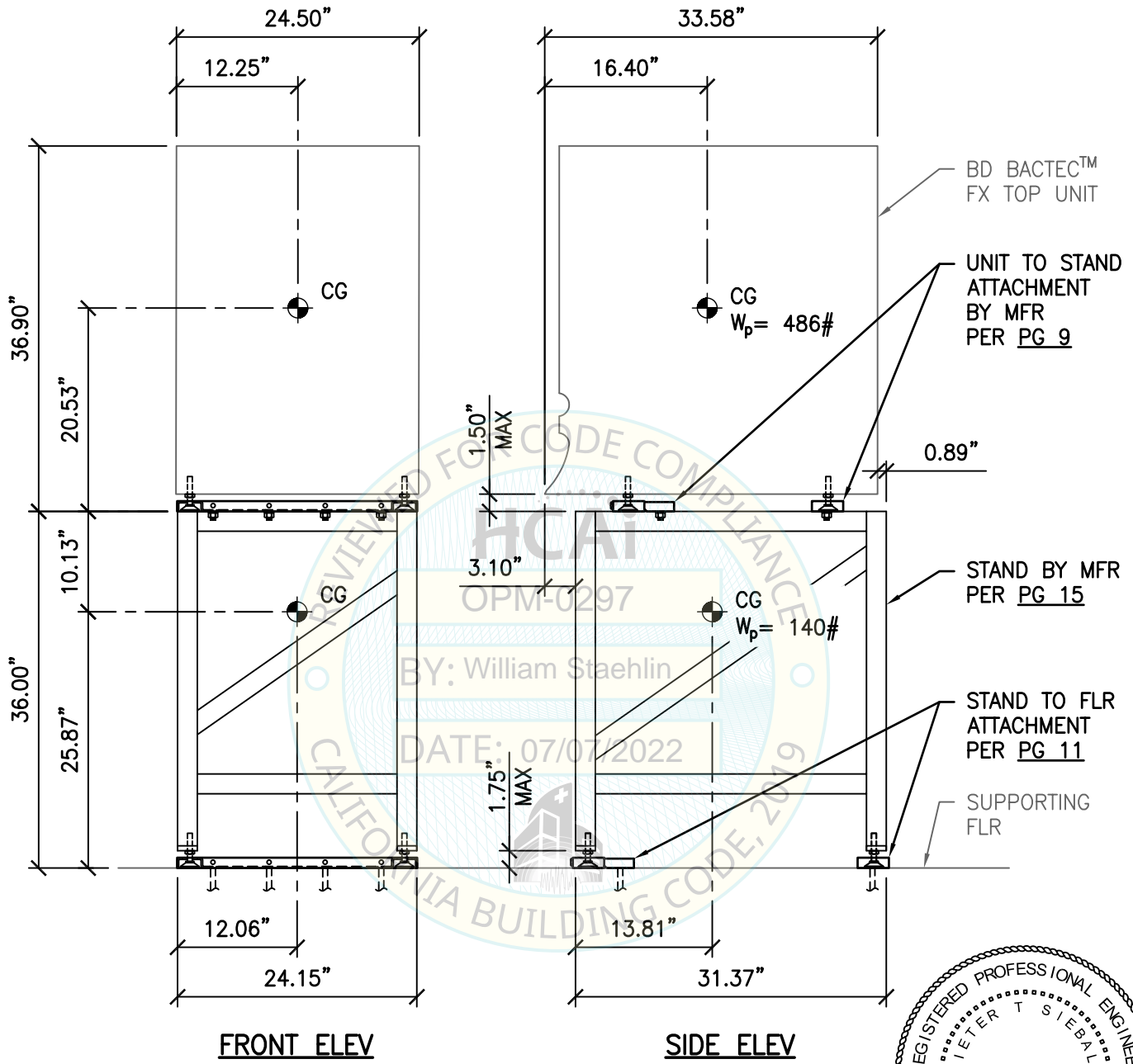
- THIS PRE-APPROVAL MAY BE USED AT ANY GEOGRAPHICAL LOCATIONS IN THE STATE OF CALIFORNIA WHERE S_{DS} & z/h COMPLY W/ VALUES SHOWN ABV. OTHER COMBINATIONS OF S_{DS} & z/h ARE ACCEPTABLE PROVIDED THAT SEOR DEMONSTRATES THAT THE CORRESPONDING F_p VALUE IS LESS THAN OR EQ TO VALUE SHOWN ABV.



SHEET TITLE: SYSTEM OVERVIEW & DESIGN CRITERIA

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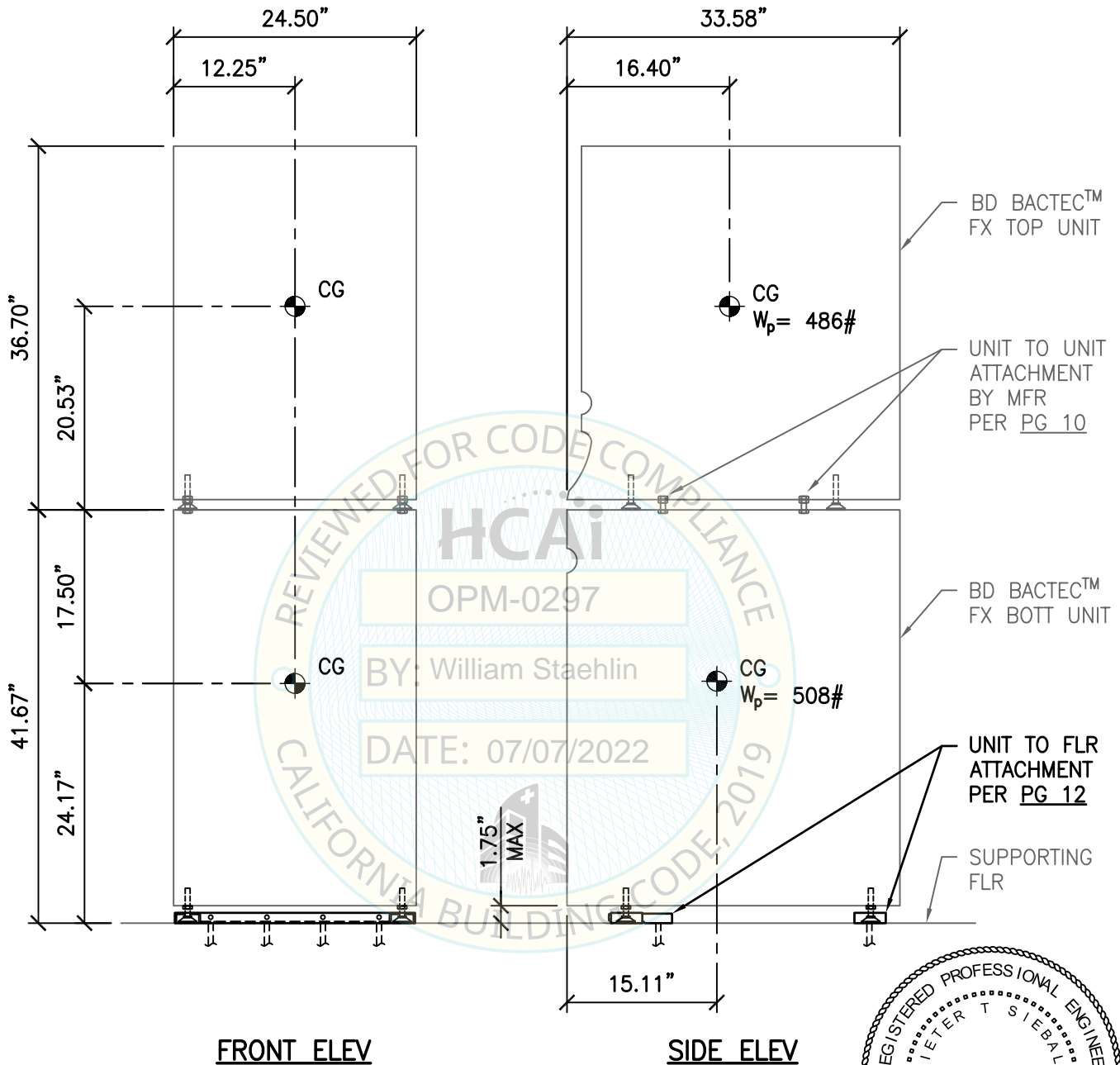


REGISTERED PROFESSIONAL ENGINEER
DIETER T. SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

SHEET TITLE: STAND CONFIGURATION
ELEVATIONS

<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 22018.03 Date: 06-28-2022 Page: 7 of 20
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FRONT ELEV

SIDE ELEV

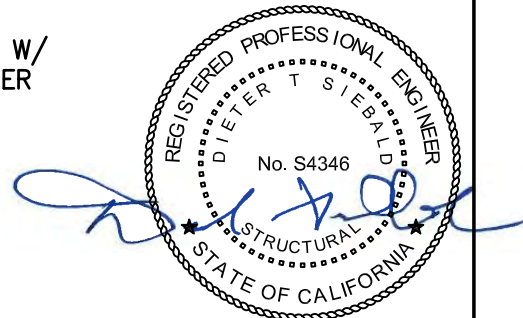
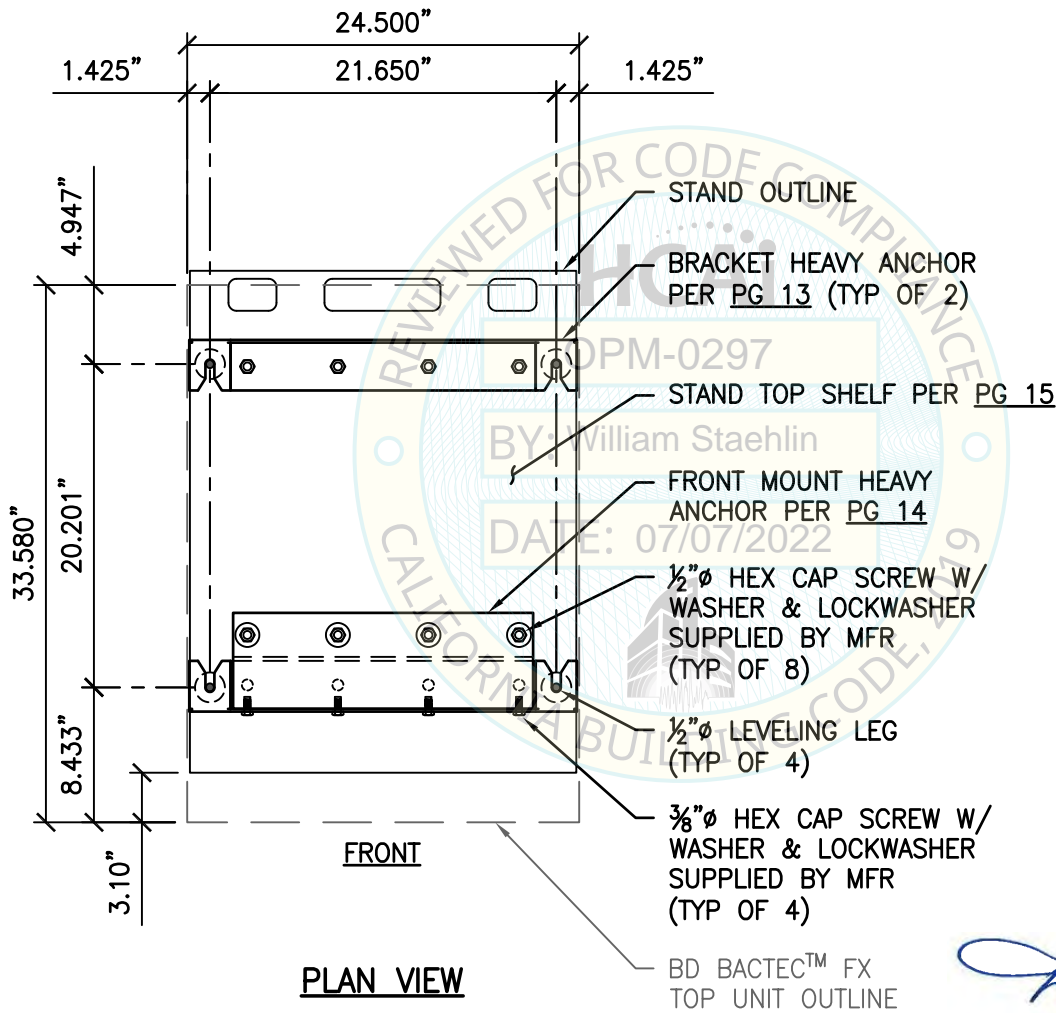


SHEET TITLE: STACKED CONFIGURATION
ELEVATIONS

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SHEET TITLE: ATTACHMENT PLAN
UNIT TO STAND



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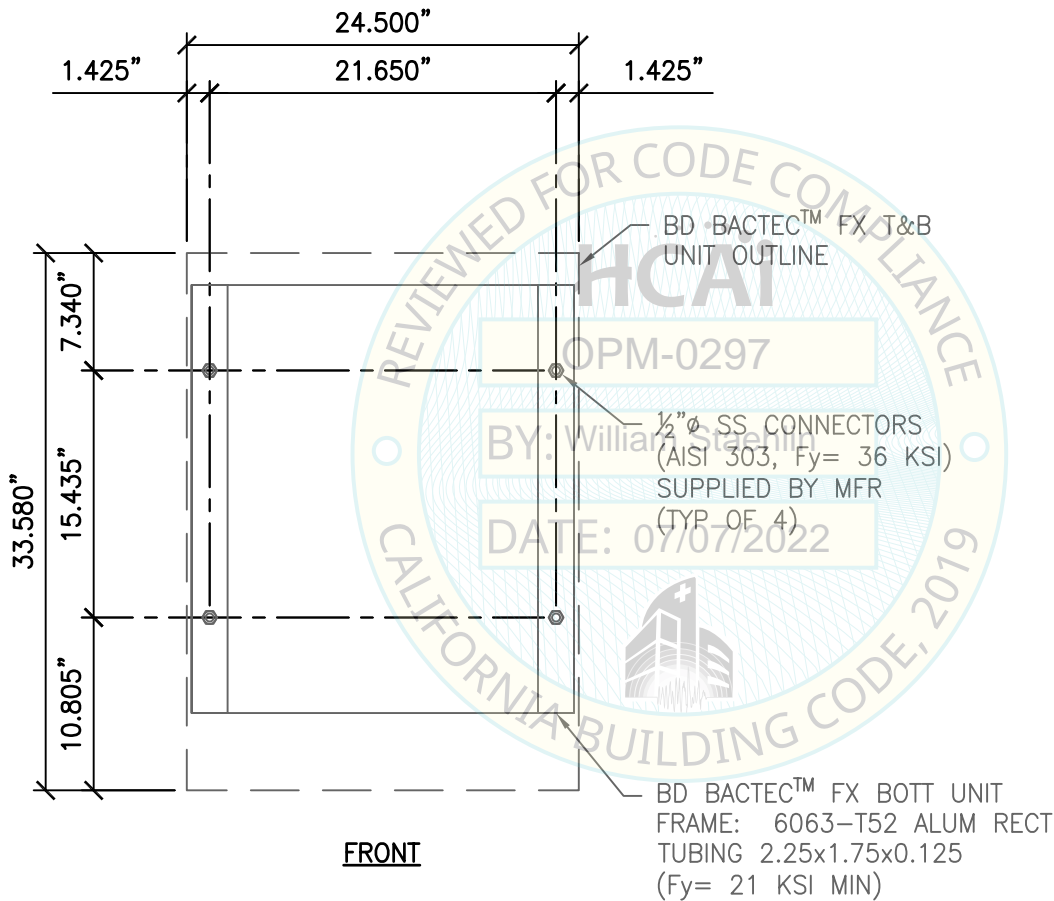
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BD INTEGRATED DIAGNOSTIC SOLUTIONS
BD BACTEC™ FX

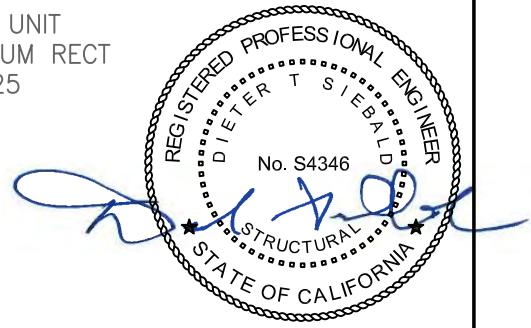
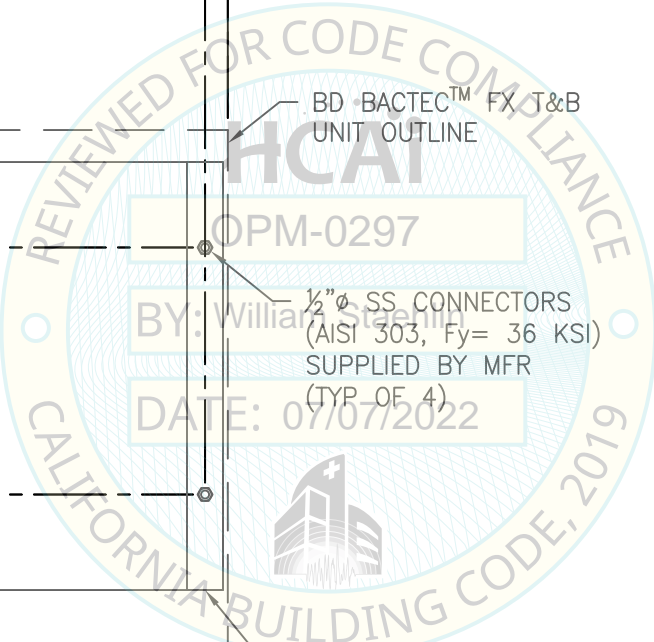


NOTE:
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NOT PART OF OPM.



FRONT

PLAN VIEW



SHEET TITLE: ATTACHMENT PLAN
UNIT TO UNIT



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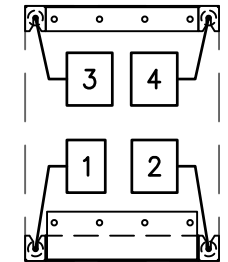
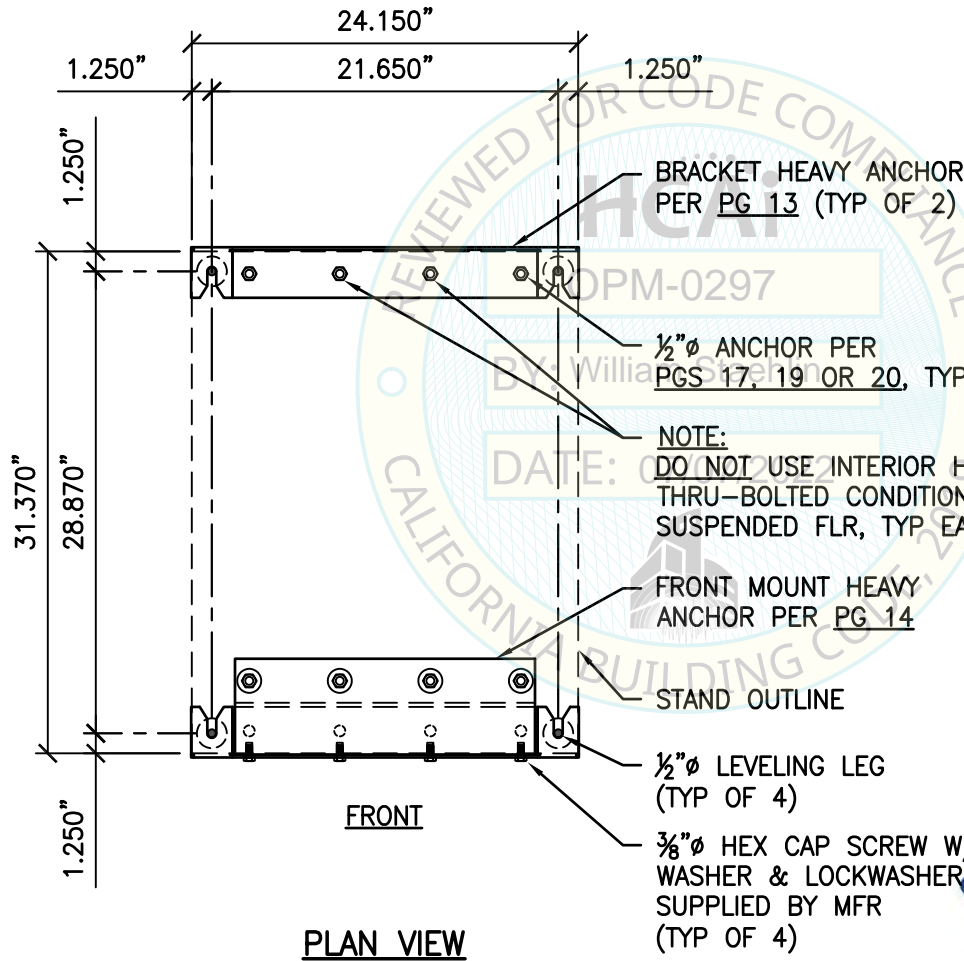
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L:\Jobs22\22018 BD - Five OPM KBTZ2 Amendments\22018.03 OPM-0297-13\ACAD\STRU\S1_TASK 03.dwg Time:Jun28,2022-12:03pm Login:moyerhoferm Dimscale:1 LTScale:6

	MAX LRFD FORCES AT LEVELING LEGS ¹ (LBS)							
	FRONT BRACKET				REAR BRACKET			
	LEG 1		LEG 2		LEG 3		LEG 4	
	T _u	Ω _o V _{ux}	T _u	Ω _o V _{ux}	T _u	Ω _o V _{ux}	T _u	Ω _o V _{ux}
CASE 1A	1480	180	1240	310	0	270	4030	1020
	Ω _o T _u	Ω _o V _{ux}	Ω _o T _u	Ω _o V _{ux}	Ω _o T _u	Ω _o V _{ux}	Ω _o T _u	Ω _o V _{ux}
CASE 2A	800	70	660	120	0	100	2230	380
CASE 3A	500	50	410	80	0	70	1520	270

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE BRACKET CONFIGURATION.
2. OVERSTRENGTH FACTOR (Ω_o) INCLUDED WHERE NOTED.



LEG KEY PLAN

NOTE:
SEE PG 7 FOR CG LOCATION & WT.



SHEET TITLE: ATTACHMENT PLAN
STAND TO FLOOR



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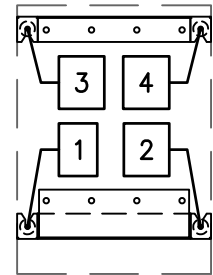
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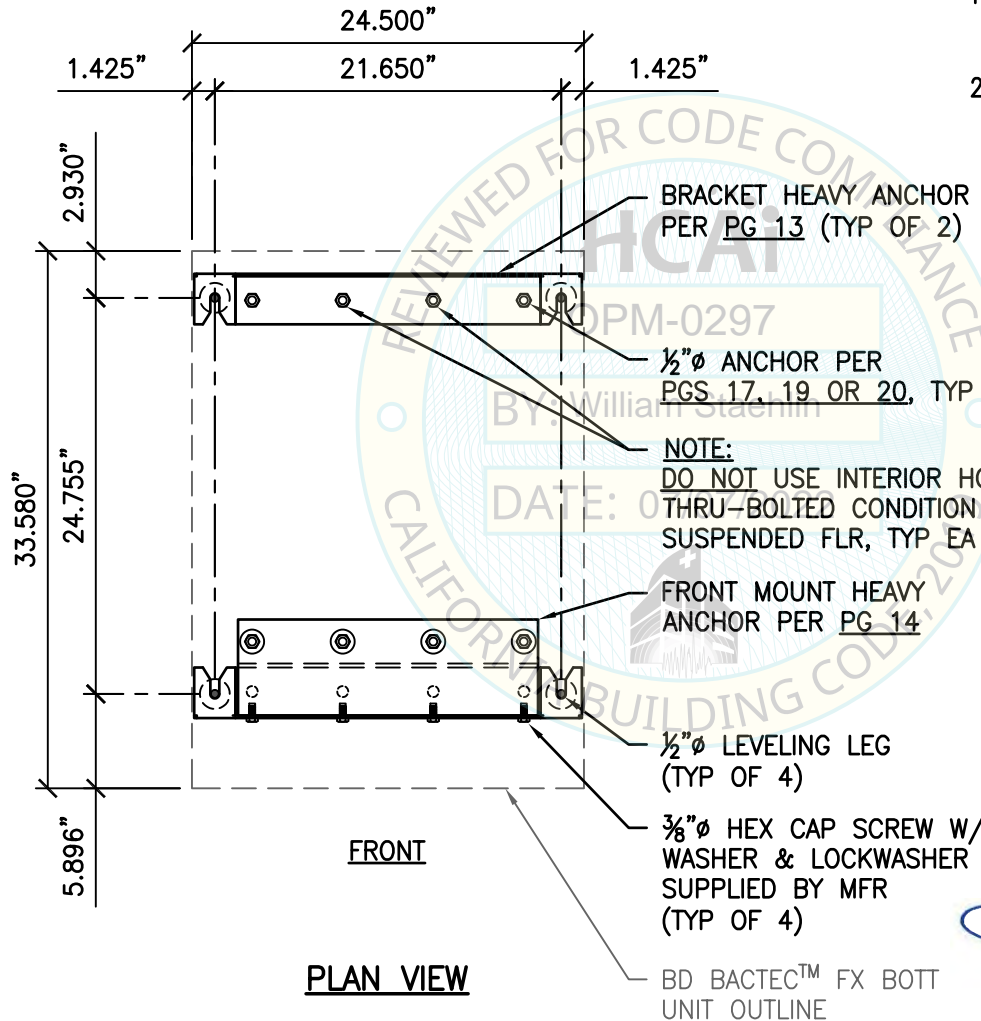
	MAX LRFD FORCES AT LEVELING LEGS ¹ (LBS)							
	FRONT BRACKET				REAR BRACKET			
	LEG 1		LEG 2		LEG 3		LEG 4	
	T _u	Ω _o V _{ux}	T _u	Ω _o V _{ux}	T _u	Ω _o V _{ux}	T _u	Ω _o V _{ux}
CASE 1B	2470	290	1130	220	2720	730	0	980
	Ω _o T _u	Ω _o V _{ux}	Ω _o T _u	Ω _o V _{ux}	Ω _o T _u	Ω _o V _{ux}	Ω _o T _u	Ω _o V _{ux}
CASE 2B	1320	110	570	80	1490	280	0	370
CASE 3B	820	80	300	60	960	190	0	250

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE BRACKET CONFIGURATION.
2. OVERSTRENGTH FACTOR (Ω_o) INCLUDED WHERE NOTED.



LEG KEY PLAN

NOTE:
SEE PG 8 FOR CG LOCATION & WT.

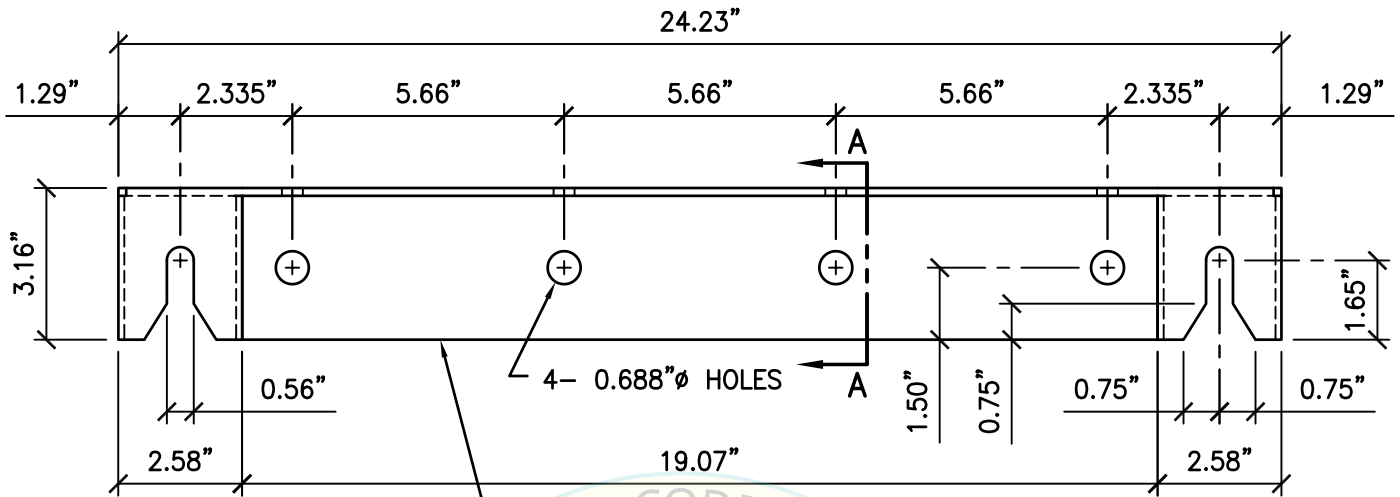


SHEET TITLE: ATTACHMENT PLAN
UNIT TO FLOOR

<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 22018.03 Date: 06-28-2022 Page: 12 of 20
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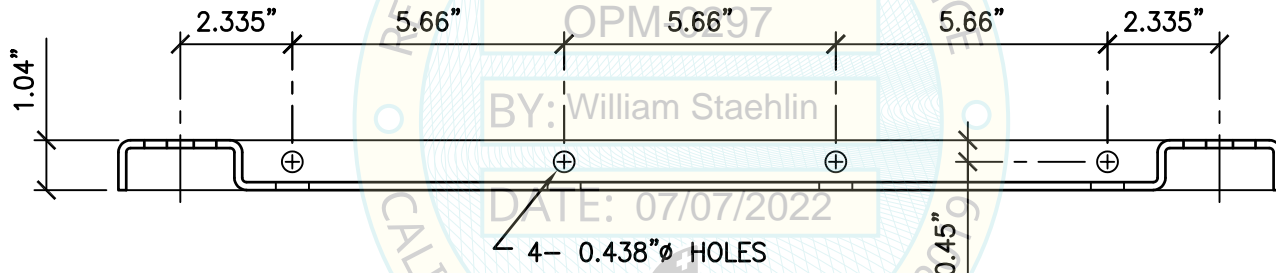
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L:\Jobs22\22018 BD - Five OPM KBTZ2 Amendments\22018.03 OPM-0297-13\ACAD\STRU\S1_TASK 03.dwg Time:Jun28,2022-12:08pm Login:meyerhoferm Dimscale:1 LTScale:6

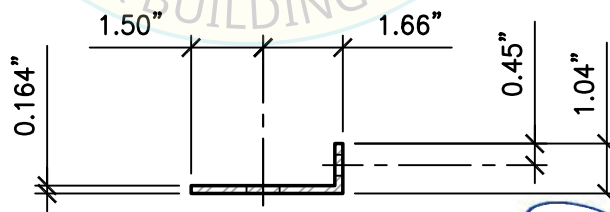


BRACKET HEAVY ANCHOR:
8 GA HOT ROLLED STL ASTM A569
($F_y = 38$ KSI MIN)

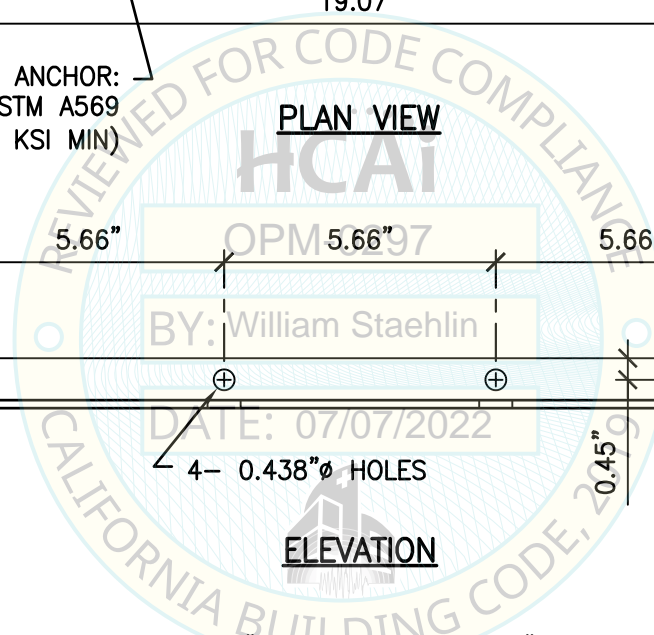
PLAN VIEW



ELEVATION



SECTION A-A



SHEET TITLE: BRACKET HEAVY ANCHOR DETAIL



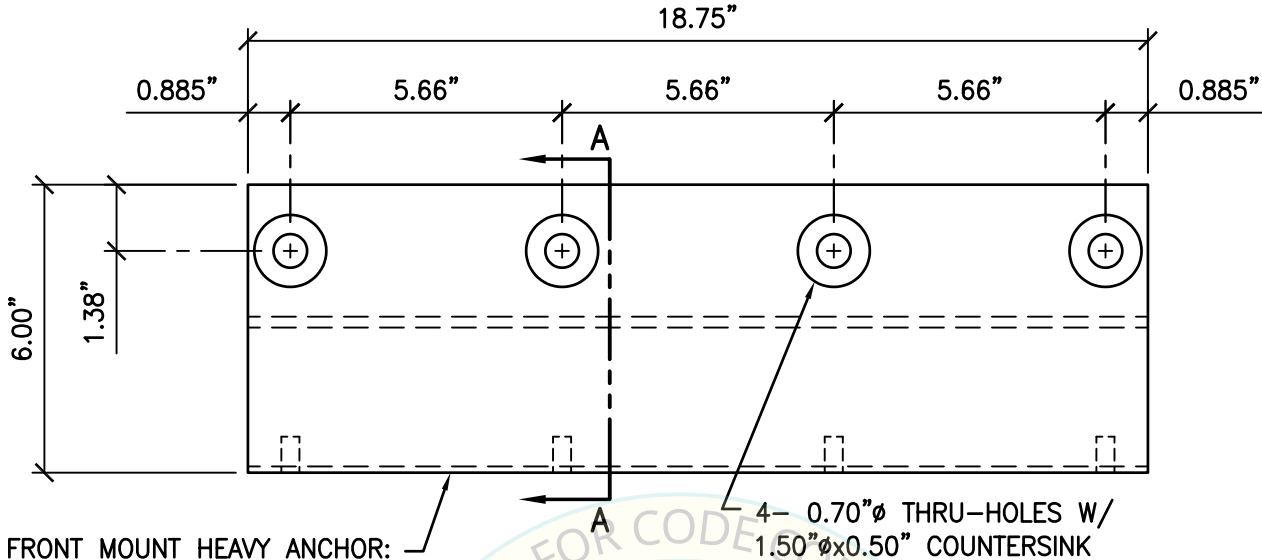
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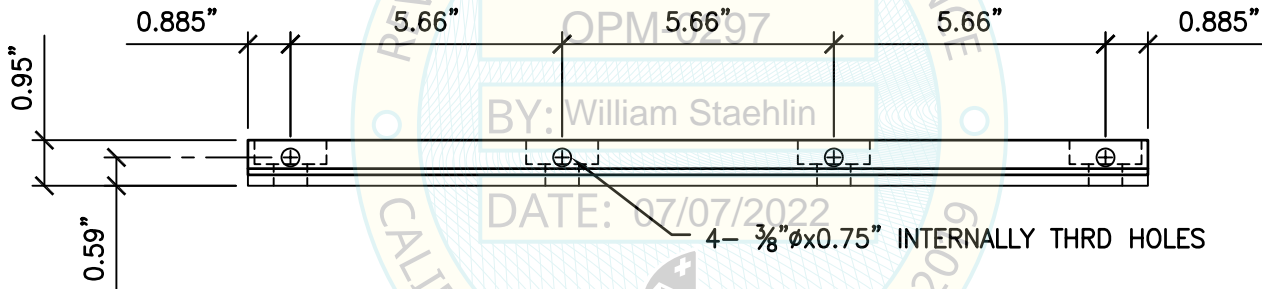
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FRONT MOUNT HEAVY ANCHOR:
HOT ROLLED STL ASTM A36
($F_y = 36$ KSI MIN)

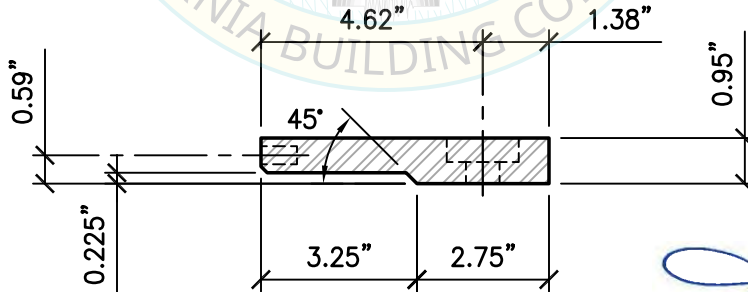
4- 0.70" ϕ THRU-HOLES W/
1.50" ϕ x 0.50" COUNTERSINK

PLAN VIEW



4- $\frac{3}{8}$ " ϕ x 0.75" INTERNALLY THRD HOLES

ELEVATION



SECTION A-A



SHEET TITLE: FRONT MOUNT HEAVY ANCHOR DETAIL



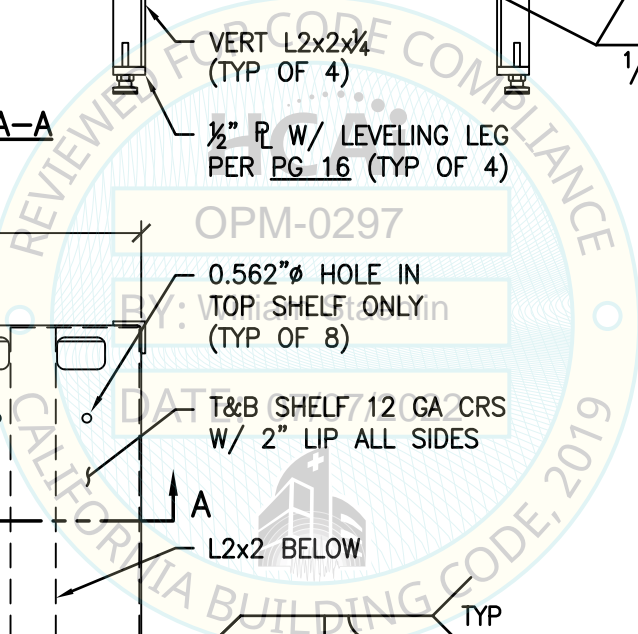
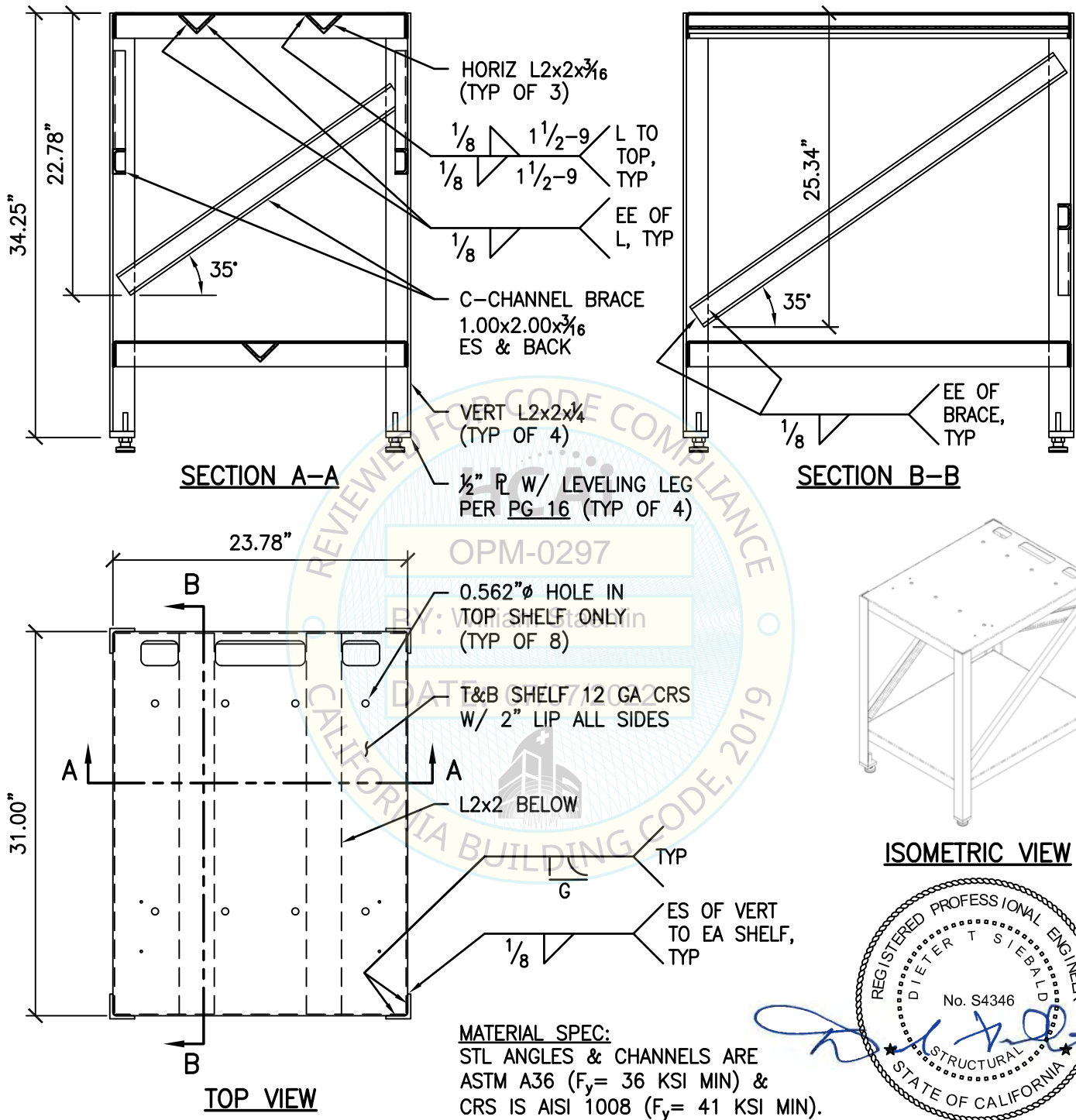
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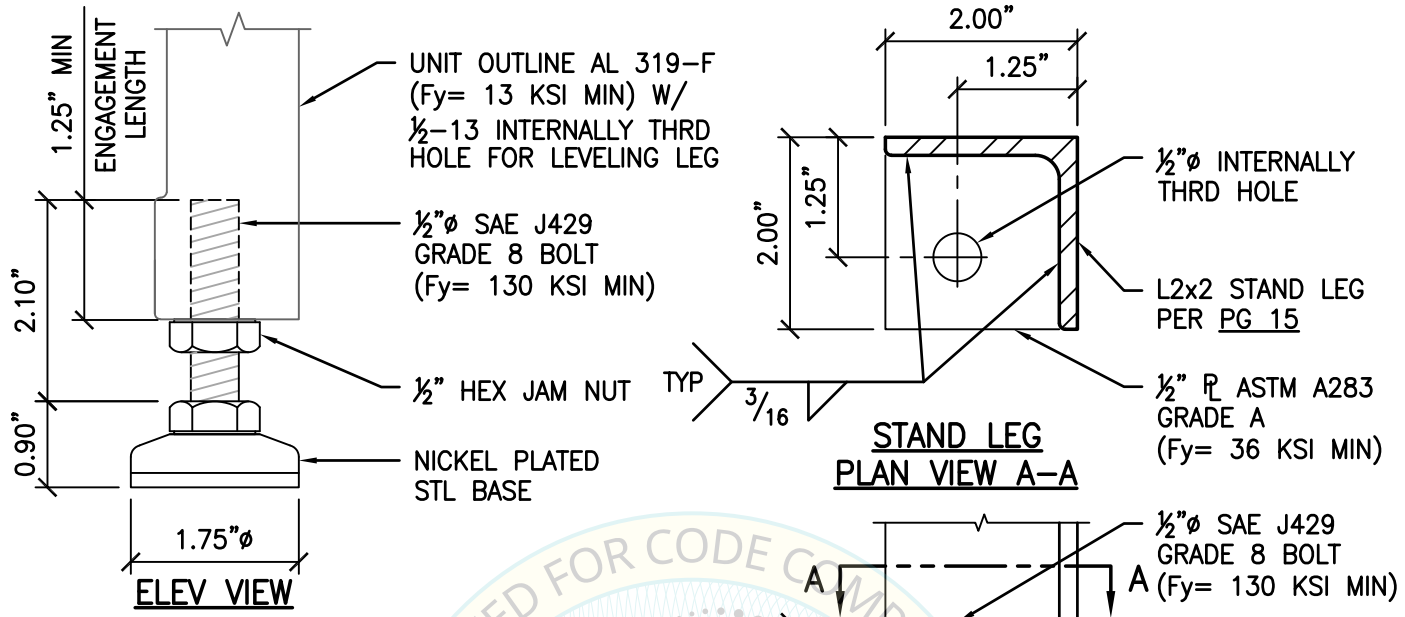
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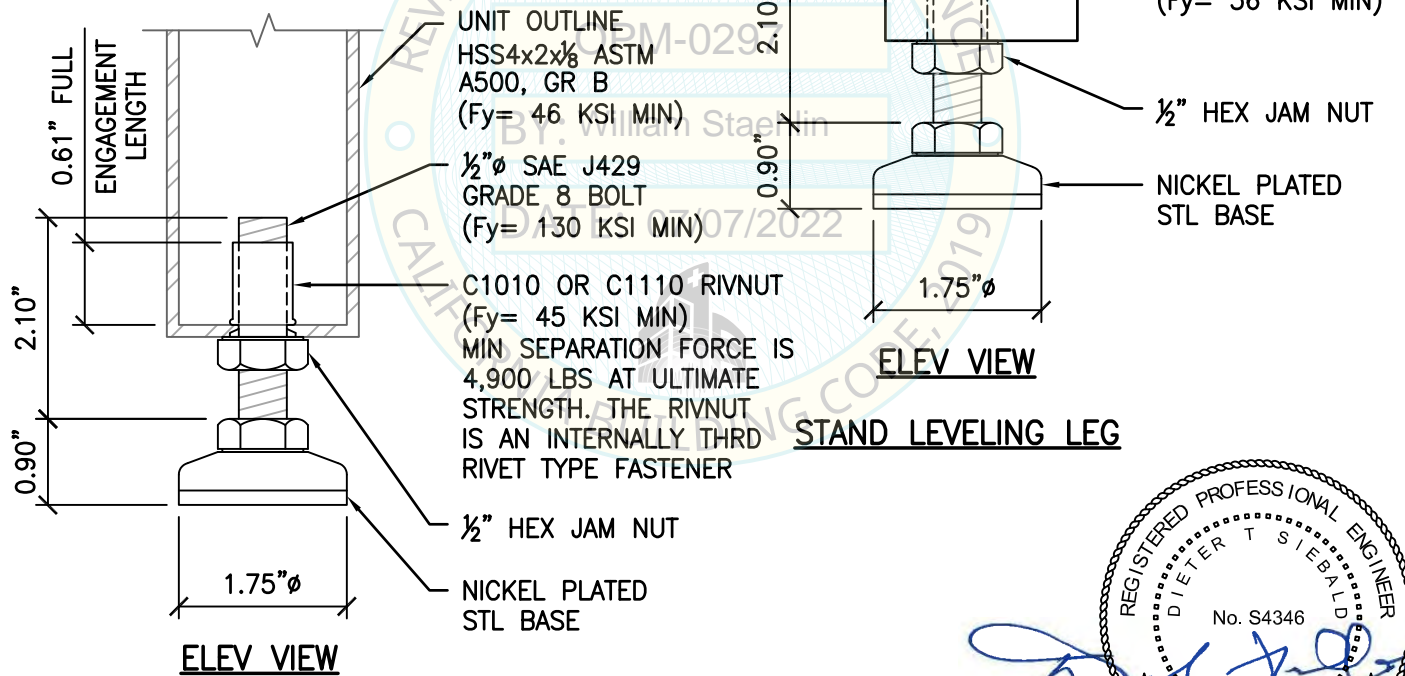


SHEET TITLE: STAND ASSEMBLY DETAIL

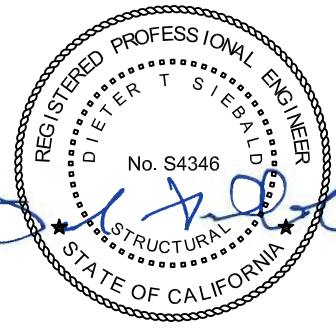
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TOP BACTEC UNIT LEVELING LEG



STACKED BOTT BACTEC UNIT LEVELING LEG



SHEET TITLE: LEVELING LEG DETAILS

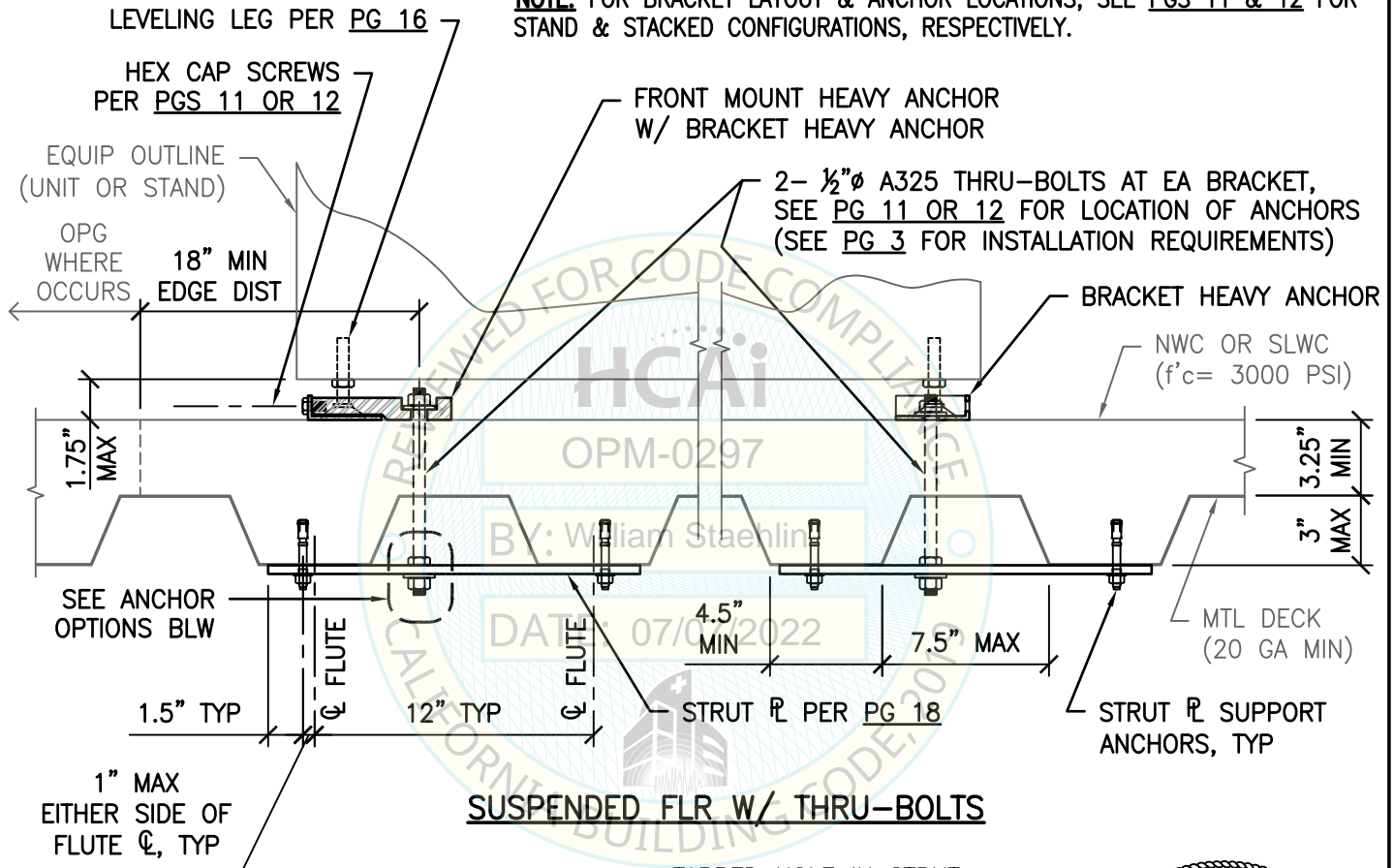
<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 22018.03 Date: 06-28-2022 Page: 16 of 20
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L:\Jobs22\22018 BD - Five OPM KBTZ2 Amendments\22018.03 OPM-0297-13\ACAD\STRU\S1_TASK 03.dwg Time:Jun28,2022-12:12pm Login:moyerhoferm Dimscale:1 LTScale:6

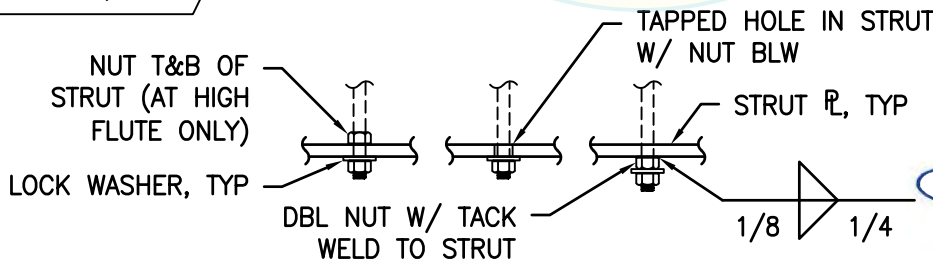
DETAIL APPLICABILITY

CASE 1A	STAND CONFIGURATION	$S_{DS} \leq 2.50$	$z/h \leq 1$
CASE 1B	STACKED CONFIGURATION	$S_{DS} \leq 1.90$ $S_{DS} \leq 2.20$ $S_{DS} \leq 2.50$	$z/h \leq 1$ $z/h \leq 0.75$ $z/h \leq 0.60$

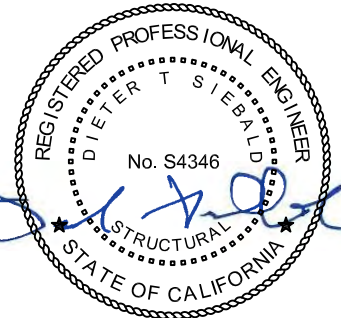
NOTE: FOR BRACKET LAYOUT & ANCHOR LOCATIONS, SEE PGS 11 & 12 FOR STAND & STACKED CONFIGURATIONS, RESPECTIVELY.



SUSPENDED FLR W/ THRU-BOLTS



ANCHOR OPTIONS



SHEET TITLE: ATTACHMENT DETAIL
STAND OR UNIT TO CONCRETE FILL OVER METAL DECK (CASE 1)



CYS STRUCTURAL ENGINEERS, INC.

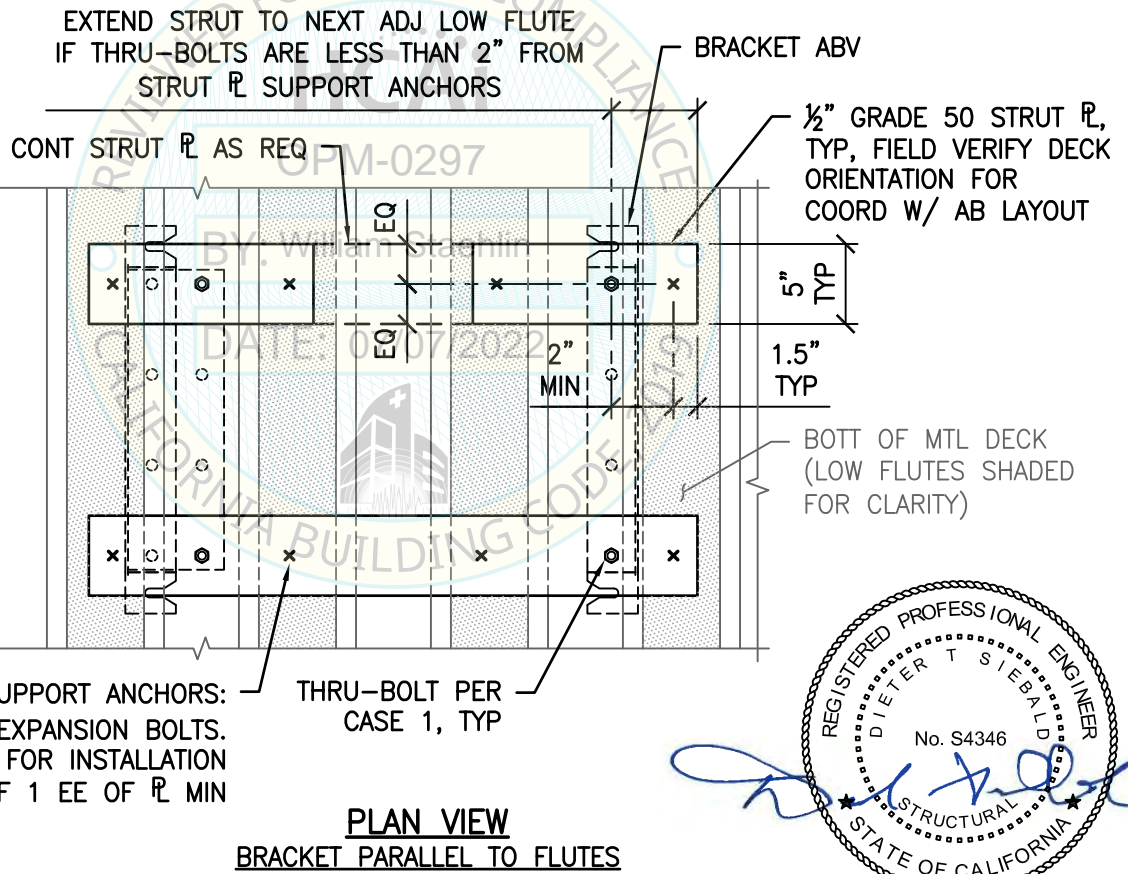
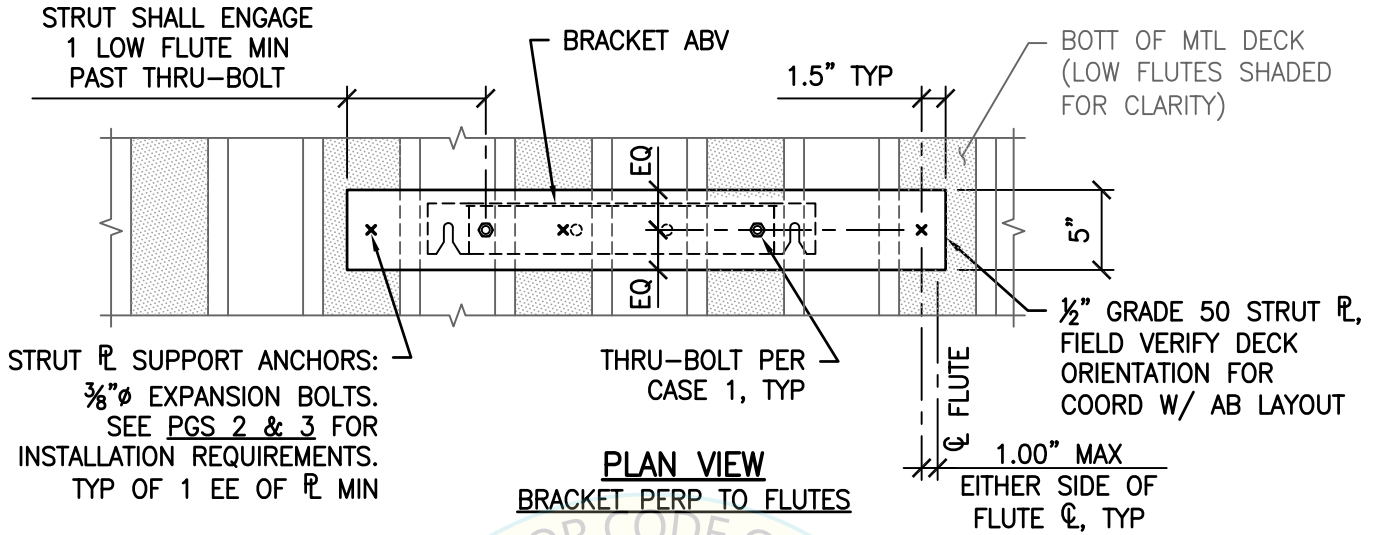
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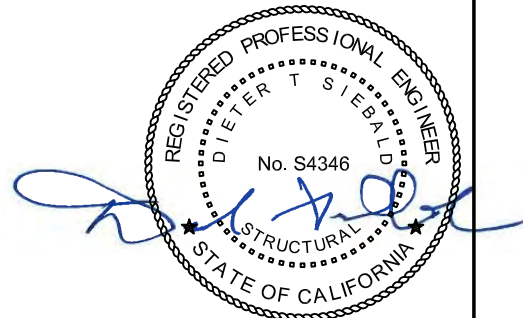
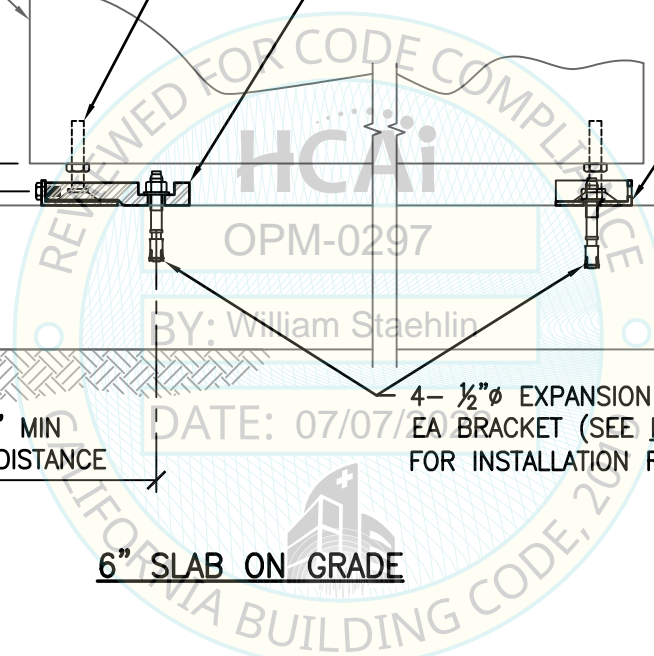
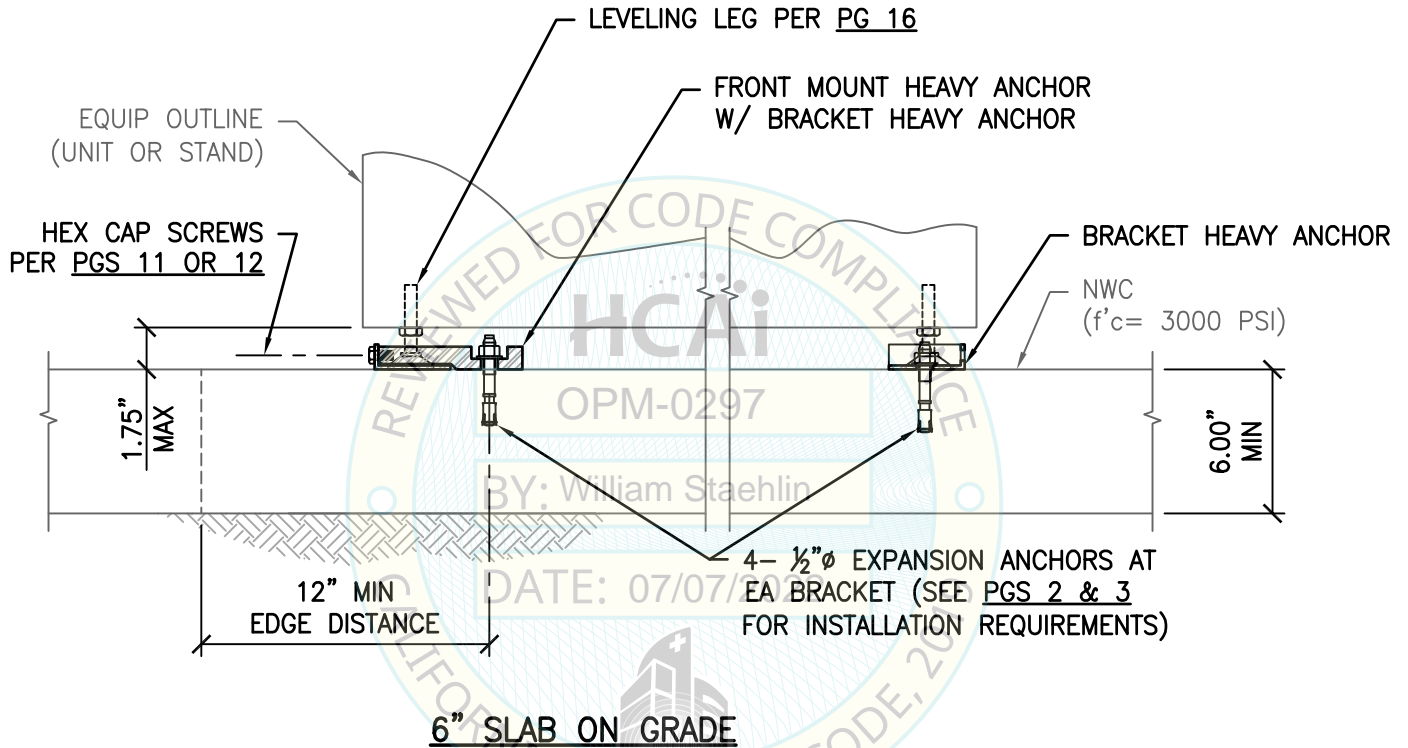
SHEET TITLE: STRUT PLATE DETAIL

 <p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 22018.03 Date: 06-28-2022 Page: 18 of 20
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DETAIL APPLICABILITY

CASE 2A	STAND CONFIGURATION	$S_{DS} \leq 2.50$	$z/h = 0$
CASE 2B	STACKED CONFIGURATION	$S_{DS} \leq 1.90$	$z/h = 0$

NOTE: FOR BRACKET LAYOUT & ANCHOR LOCATIONS, SEE PGS 11 & 12 FOR STAND & STACKED CONFIGURATIONS, RESPECTIVELY.



SHEET TITLE: ATTACHMENT DETAIL
STAND OR UNIT TO 6" SLAB ON GRADE (CASE 2)



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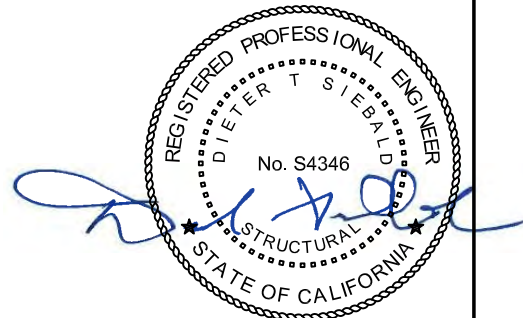
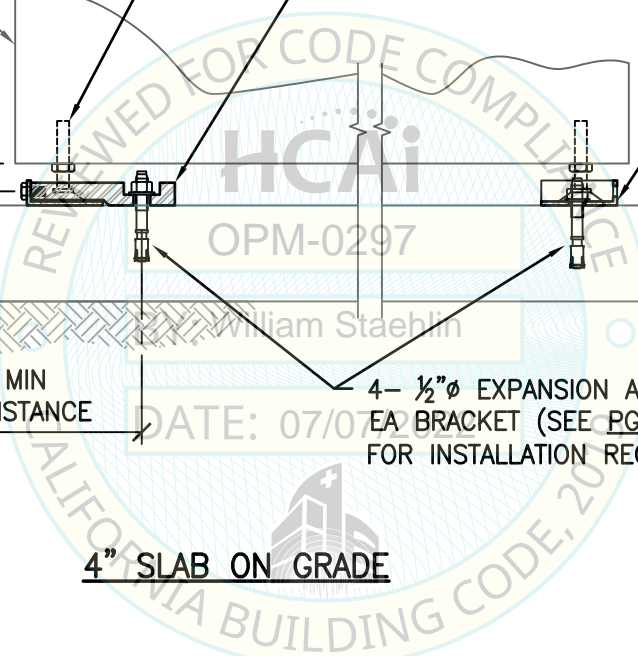
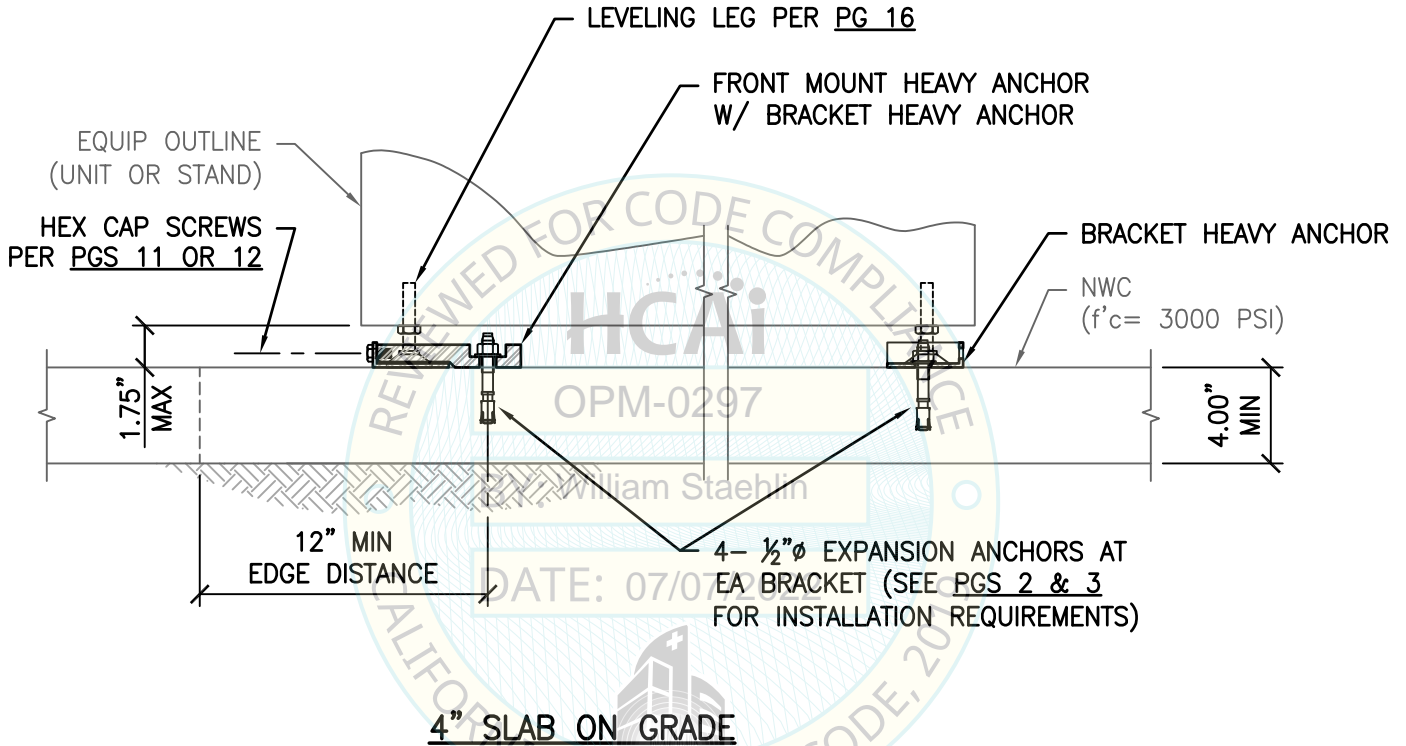
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L:\Jobs22\22018 BD - Five OPM KBTZ2 Amendments\22018.03 OPM-0297-13\ACAD\STRU\S1_TASK 03.dwg Time:Jun28,2022-12:16pm Login:moyerhoferm Dimscale:1 LTScale:6

DETAIL APPLICABILITY

CASE 3A	STAND CONFIGURATION	$S_{DS} \leq 1.75$	$z/h = 0$
CASE 3B	STACKED CONFIGURATION	$S_{DS} \leq 1.30$	$z/h = 0$

NOTE: FOR BRACKET LAYOUT & ANCHOR LOCATIONS, SEE PGS 11 & 12 FOR STAND & STACKED CONFIGURATIONS, RESPECTIVELY.



SHEET TITLE: ATTACHMENT DETAIL
STAND OR UNIT TO 4" SLAB ON GRADE (CASE 3)

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L:\Jobs22\22018 BD - Five OPM KBTZ2 Amendments\22018.03 OPM-0297-13\ACAD\STRU\S1_TASK 03.dwg Time:Jun28,2022-12:17pm Login:mcyerhoferm Dimscale:1 LTScale:6