



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY

APPLICATION #: OPM-0045

HCAI Preapproval of Manufacturer's Certification (OPM)

Type: New Renewal/Update

Manufacturer Information

Manufacturer: BD Integrated Diagnostic 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: Viper LT

Product Type: Medical Diagnostic Automation Instrument

Product Model Number: 442839

General Description: The Viper LT is an instrument that automates the steps involved in molecular medical diagnostics.

Applicant Information

Applicant Company Name: BD Integrated Diagnostic Solutions

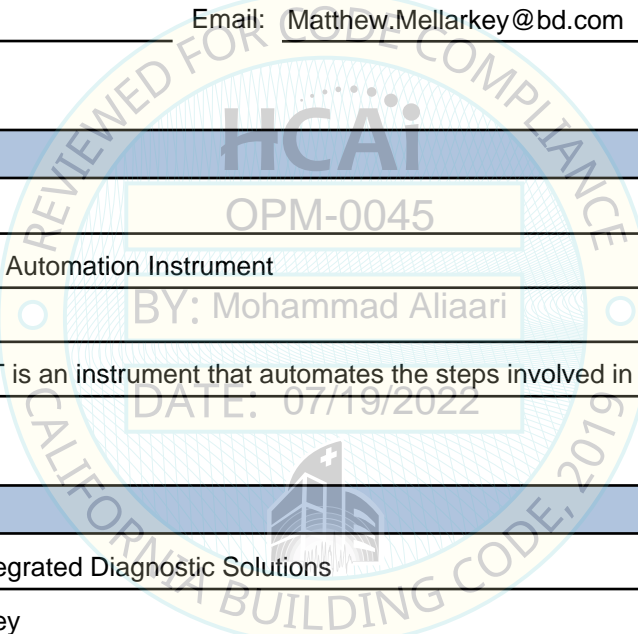
Contact Person: Matthew Mellarkey

Mailing Address: 7 Loveton Circle, Sparks, MD 21152

Telephone: (410) 316-4810

Email: Matthew.Mellarkey@bd.com

Title: Engineer II



"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: 7/19/2022

Name: Mohammad Aliaari

Title: Senior Structural Engineer

Condition of Approval (if applicable): _____

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

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY





TABLE OF CONTENTS
OPM-0045

	PAGE
GENERAL NOTES	2
ABBREVIATIONS	4
DESIGN CRITERIA	5
VIPER LT	
PLAN	6
ELEVATIONS	7
LEVELING LEGS	8
ATTACHMENT SCHEME	9
SEISMIC BRACKETS	10
SEISMIC TABLE	
PLAN	11
ELEVATIONS	12
ATTACHMENT SCHEME	14
ATTACHMENT DETAILS	
STAND TO CONC FILL OVER METAL DECK (CASE 1)	15
STAND TO SLAB ON GRADE (CASE 2)	18

- 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 & ATTACHMENTS OF THE EQUIPMENT TO THE SUPPORTING STRUCTURE. THE EQUIPMENT, SEISMIC TABLE, SEISMIC BRACKETS & ATTACHMENT HARDWARE ARE SUPPLIED BY THE MANUFACTURER. THE EXPANSION ANCHORS, THRU-BOLTS & STRUT PLATES SHOWN IN THIS OPM SHALL BE SUPPLIED & 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

Job No:	22018.01
Date:	06/29/2022
Page:	1 of 18



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 (1/2) 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.



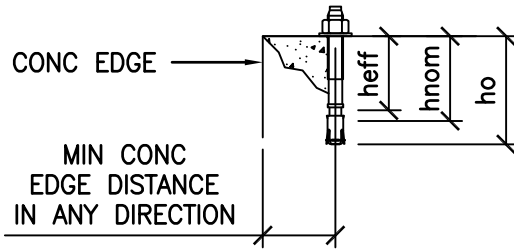
SHEET TITLE: GENERAL NOTES

<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	<p>TEL (916) 920-2020 www.cyseng.com</p>	<p>Job No: 22018.01 Date: 06/29/2022 Page: 2 of 18</p>
--	--	--

\\cys-fs\jobs\jobs22\22018 BD - Five OPM KBTZ2 Amendments\22018.01 OPM-0045-13\ACAD\STRU\ST_TASK 01.dwg Time:Jun29,2022-10:06am Login:mayerhoferm DimScale:1 LScale:6

GENERAL NOTES CONTINUED:

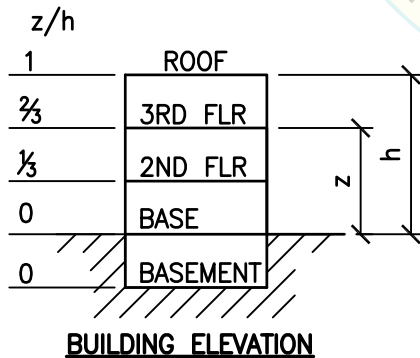
3F. EXPANSION ANCHOR TABLE FOR HILTI KB-TZ & KZ-TZ2 ANCHORS:



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 13/16" (1 7/8")	1 1/2	2	3/4	6	5	25 (30)
CASE 2	1/2	2 3/8" (2 1/2")	2	2 5/8" (2 3/4")	4	12	4 1/4	40 (50)

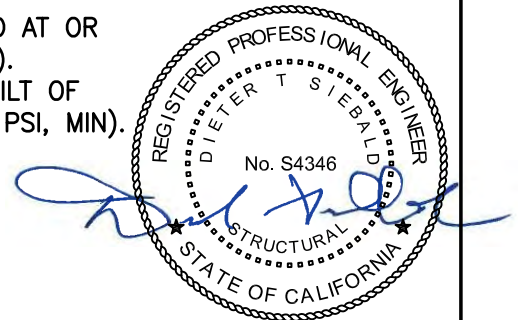
NOTES:

- VALUES IN PARENTHESES ARE FOR HILTI KB-TZ2.
- VALUES ARE THE SAME FOR BOTH ANCHORS WHERE ONLY ONE NUMBER IS REPORTED.
- BOLTS THROUGH CONC ON MTL DECK:
 - 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.
 - THRU-BOLT HOLES SHALL BE 1/16" LARGER THAN BOLT SIZE (HOLE SIZE = BOLT SIZE + 1/16")
 - THRU-BOLTS IN CONC SHALL RECEIVE SPECIAL INSPECTION & TESTING (THRU-BOLTS W/ STL-TO-STL CONN IN TENSION DO NOT REQ TESTING) IN ACCORDANCE W/ REQUIREMENTS FOR POST-INSTALLED ANCHORS.
- TWO (2) CASES OF ATTACHMENT ARE SPECIFIED AND PRESENTED IN THIS PRE-APPROVAL:



CASE 1: ATTACHMENT 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" SLWC TOPPING OVER MTL DECK ($f'c = 3000$ PSI, MIN).

CASE 2: ATTACHMENT 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).



SHEET TITLE: GENERAL NOTES (CONTINUED)



CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

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

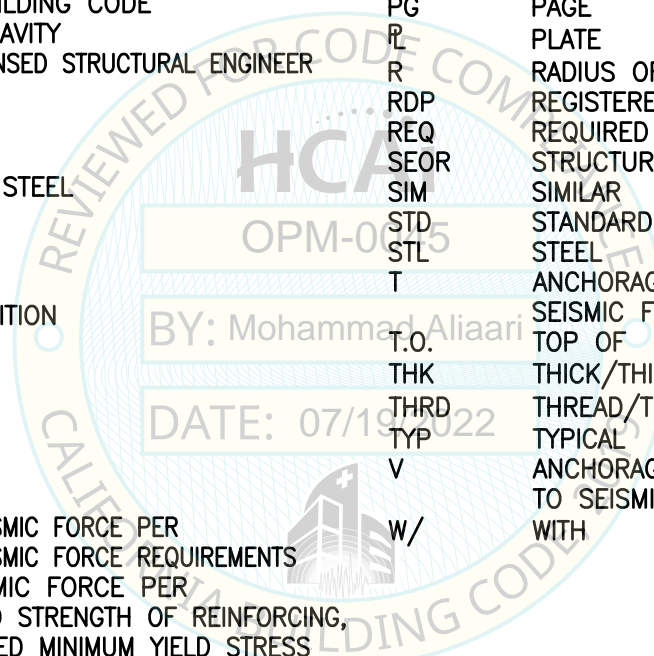
Job No:	22018.01
Date:	06/29/2022
Page:	3 of 18

\\cys-fs\jobs\jobs22\22018 BD - Five OPM KBTZ2 Amendments\22018.01 OPM-0045-13\ACAD\STRU\S1_TASK 01.dwg Time:Jun29,2022 - 10:07am Login:mayerhoferm DimScale:1 LTScale:6



ABBREVIATIONS:

⊙	AT	GA	GAUGE
AB	ANCHOR BOLT	HCA1	DEPARTMENT OF HEALTH CARE ACCESS & INFORMATION
ABV	ABOVE	ICC	INTERNATIONAL CODE COUNCIL
ADJ	ADJACENT	IN (")	INCH
ALT	ALTERNATE	IOR	INSPECTOR OF RECORD
ALUM	ALUMINUM	KSI	KIPS PER SQUARE INCH
ASD	ALLOWABLE STRENGTH DESIGN	L	LENGTH
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS	LRFD	LOAD & RESISTANCE FACTOR DESIGN
BD	BECTON, DICKINSON AND COMPANY	LWC	LIGHT WEIGHT CONCRETE
BLDG	BUILDING	MAX	MAXIMUM
BLW	BELOW	MFR	MANUFACTURER
BOTT	BOTTOM	MIN	MINIMUM
BRCG	BRACING	MTL	METAL
BTW	BETWEEN	NWC	NORMAL WEIGHT CONCRETE
BYD	BEYOND	PG	PAGE
CBC	CALIFORNIA BUILDING CODE	PL	PLATE
CG	CENTER OF GRAVITY	R	RADIUS OF GYRATION
CLSE	CALIFORNIA LICENSED STRUCTURAL ENGINEER	RDP	REGISTERED DESIGN PROFESSIONAL
☐	CENTERLINE	REQ	REQUIRED
CONC	CONCRETE	SEOR	STRUCTURAL ENGINEER OF RECORD
CONN	CONNECTION	SIM	SIMILAR
CRS	COLD-ROLLED STEEL	STD	STANDARD
DBL	DOUBLE	STL	STEEL
DTL(S)	DETAIL(S)	T	ANCHORAGE TENSION REACTION DUE TO SEISMIC FORCE
DIA (φ)	DIAMETER	T.O.	TOP OF
(E)	EXISTING CONDITION	THK	THICK/THICKNESS
EA	EACH	THRD	THREAD/THREADED
EE	EACH END	TYP	TYPICAL
ELEV	ELEVATION	V	ANCHORAGE SHEAR REACTION DUE TO SEISMIC FORCE
EQUIP	EQUIPMENT	W/	WITH
ES	EACH SIDE		
FLR	FLOOR		
Fp	HORIZONTAL SEISMIC FORCE PER ASCE 7-16 SEISMIC FORCE REQUIREMENTS		
Fv	VERTICAL SEISMIC FORCE PER		
Fy	SPECIFIED YIELD STRENGTH OF REINFORCING, PSI OR SPECIFIED MINIMUM YIELD STRESS OF STEEL, KSI		



SHEET TITLE: ABBREVIATIONS

<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 22018.01 Date: 06/29/2022 Page: 4 of 18
--	--------------------------------------	---

\\cys-fs\jobs\jobs22\22018 BD - Five OPM KBTZ2 Amendments\22018.01 OPM-0045-13\ACAD\STRU\S1_TASK 01.dwg Time: Jun 29, 2022 - 10:07am Login: mayerhoferm DimScale: 1 LScale: 6



DESIGN CRITERIA:

1. 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:

$$a_p = 1.0 \quad R_p = 1.5 \quad I_p = 1.5 \quad \Omega_0 = 1.5 \text{ (FOR CONC ANCHORS ONLY)}$$

UPPER FLRS ABV THE BASE OF BLDG

CASE 1: $S_{DS} \leq 2.50 \quad F_p = 3.0 W_p \quad z/h \leq 1.0$

FLRS AT OR BLW THE BASE OF BLDG

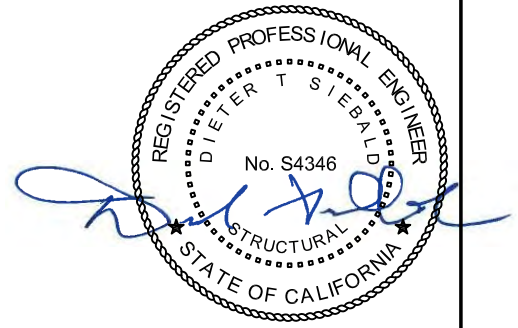
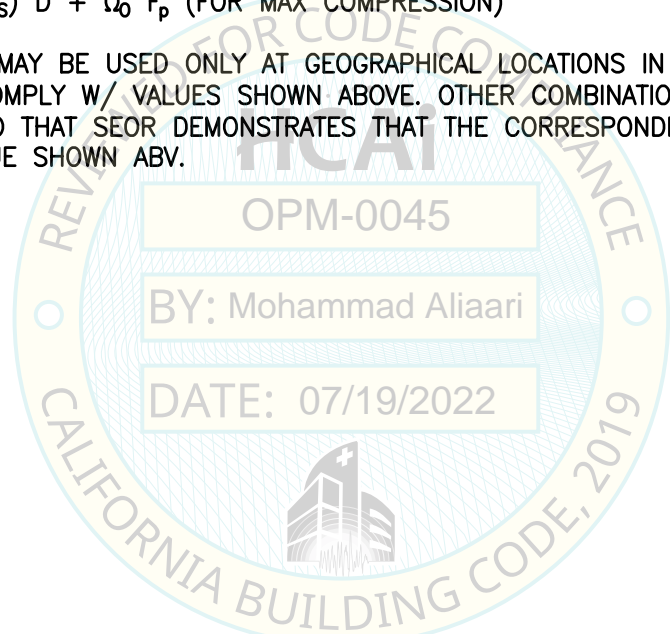
CASE 2: $S_{DS} \leq 2.50 \quad F_p = 1.13 W_p \quad z/h = 0$

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)

2. THIS PRE-APPROVAL MAY BE USED ONLY AT GEOGRAPHICAL LOCATIONS IN THE STATE OF CALIFORNIA WHERE S_{DS} & z/h COMPLY W/ VALUES SHOWN ABOVE. 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: DESIGN CRITERIA



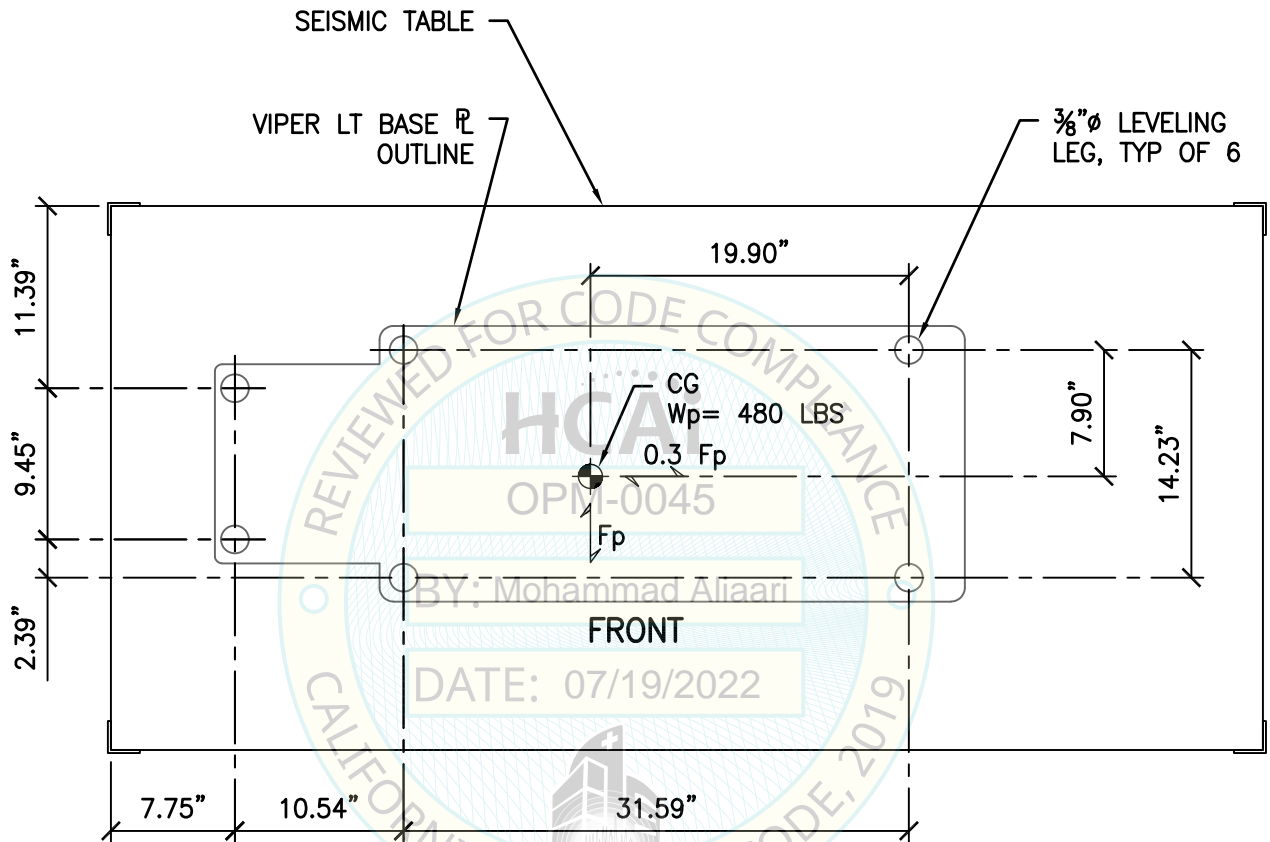
CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

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

Job No:	22018.01
Date:	06/29/2022
Page:	5 of 18

\\cys-fs\jobs\jobs22\22018 BD - Five OPM KBTZ2 Amendments\22018.01 OPM-0045-13\ACAD\STRU\S1_TASK 01.dwg Time:Jun29,2022-10:08am Login:mayerhoferm Dim:scale:1 LTR:scale:6



SHEET TITLE: VIPER LT PLAN

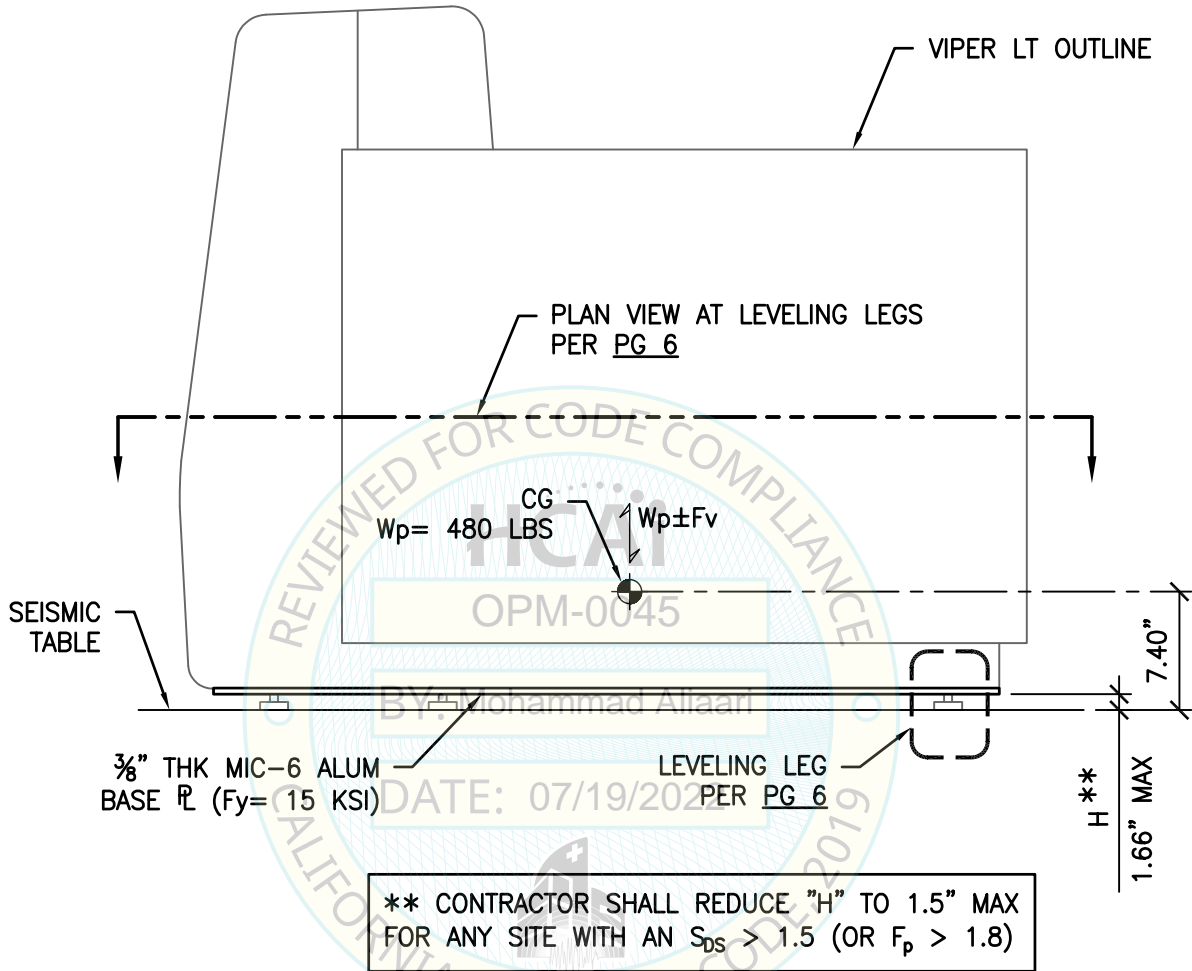


CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

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

Job No:	22018.01
Date:	06/29/2022
Page:	6 of 18



SHEET TITLE: VIPER LT ELEVATION

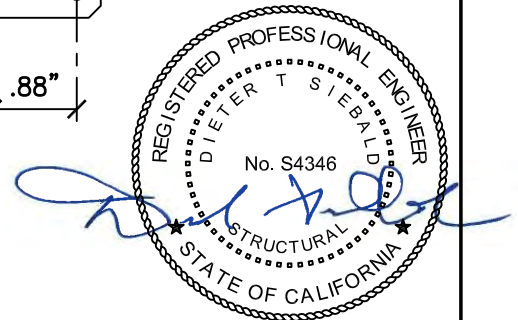
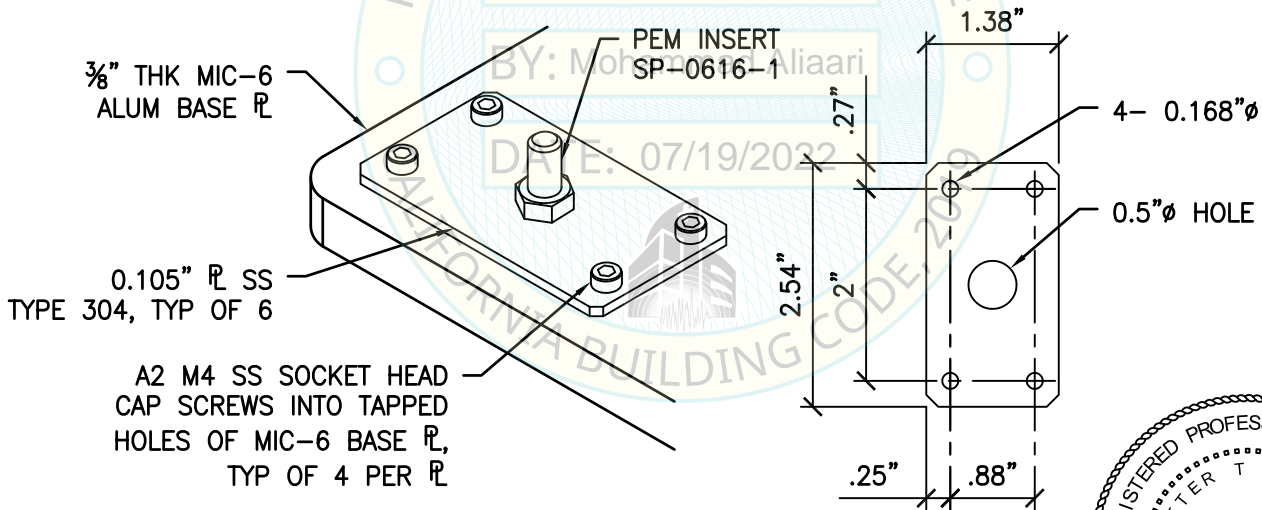
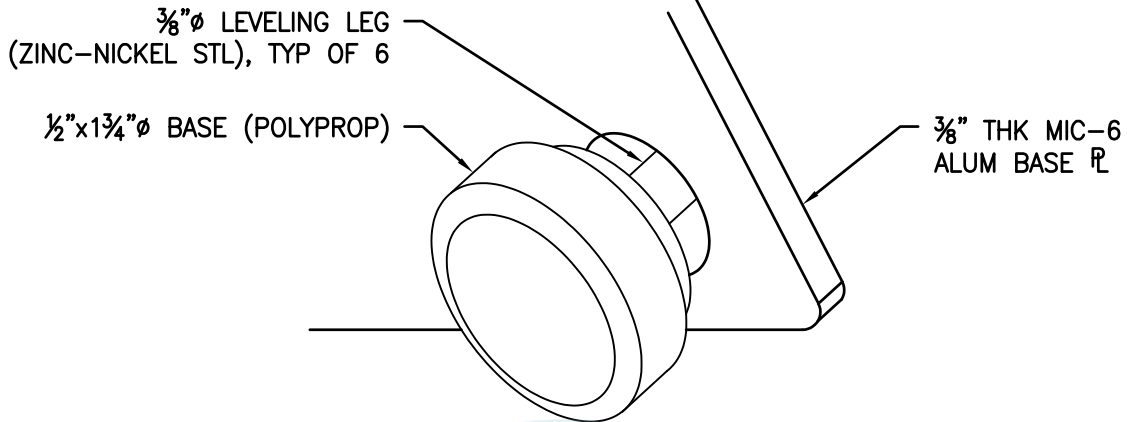


CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

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

Job No:	22018.01
Date:	06/29/2022
Page:	7 of 18



SHEET TITLE: LEVELING LEGS DETAILS



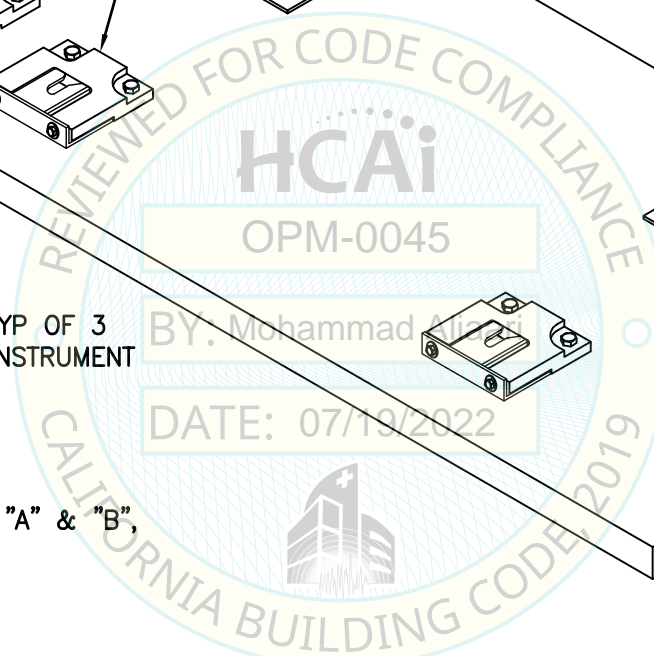
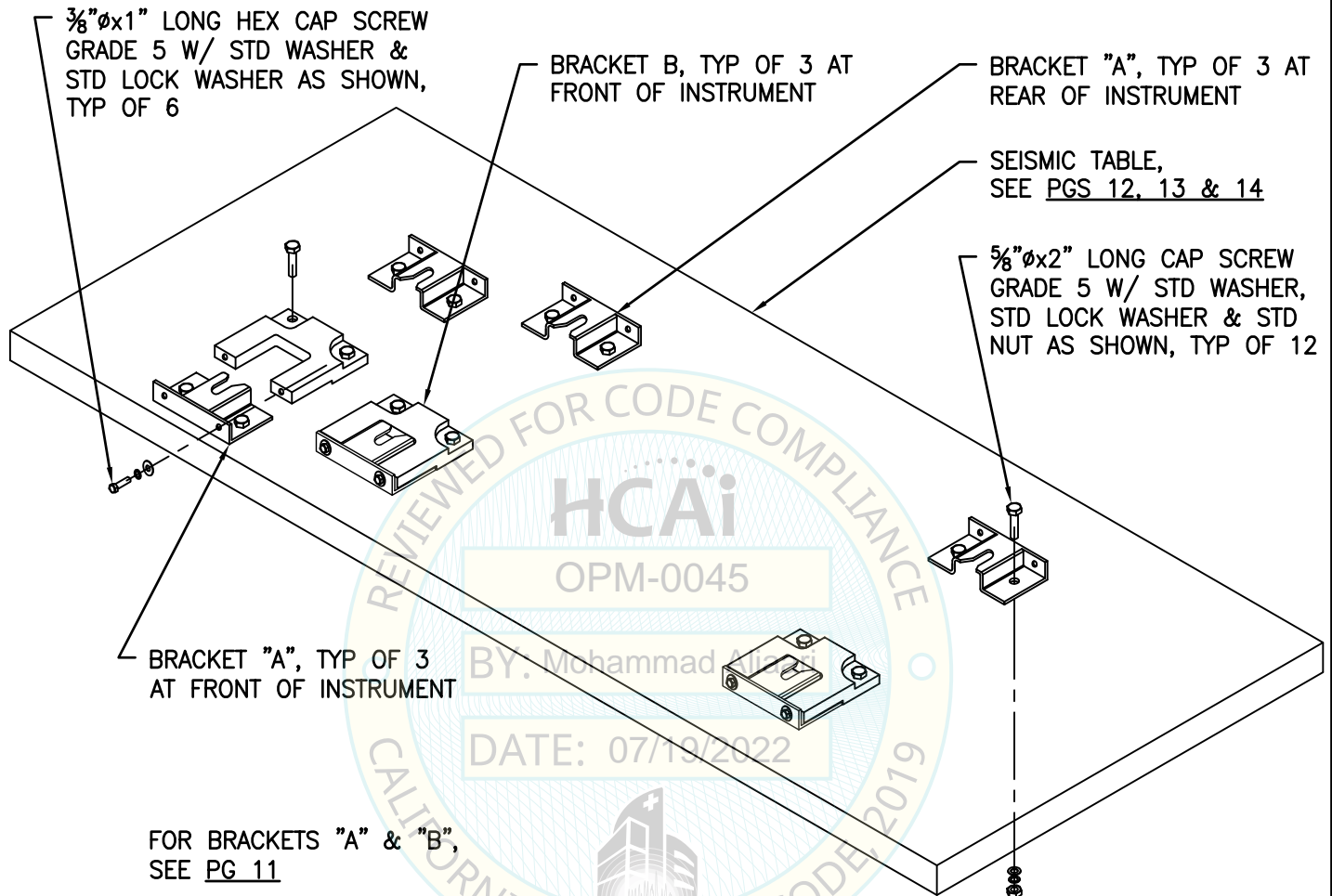
CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

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

Job No:	22018.01
Date:	06/29/2022
Page:	8 of 18

\\cys-fs\jobs\jobs22\22018 BD - Five OPM KBTZ2 Amendments\22018.01 OPM-0045-13\ACAD\STRU\S1_TASK 01.dwg Time:Jun29,2022-10:11am Login:mayerhoferm DimScale:1 LTScale:6



SHEET TITLE: VIPER LT ATTACHMENT SCHEME

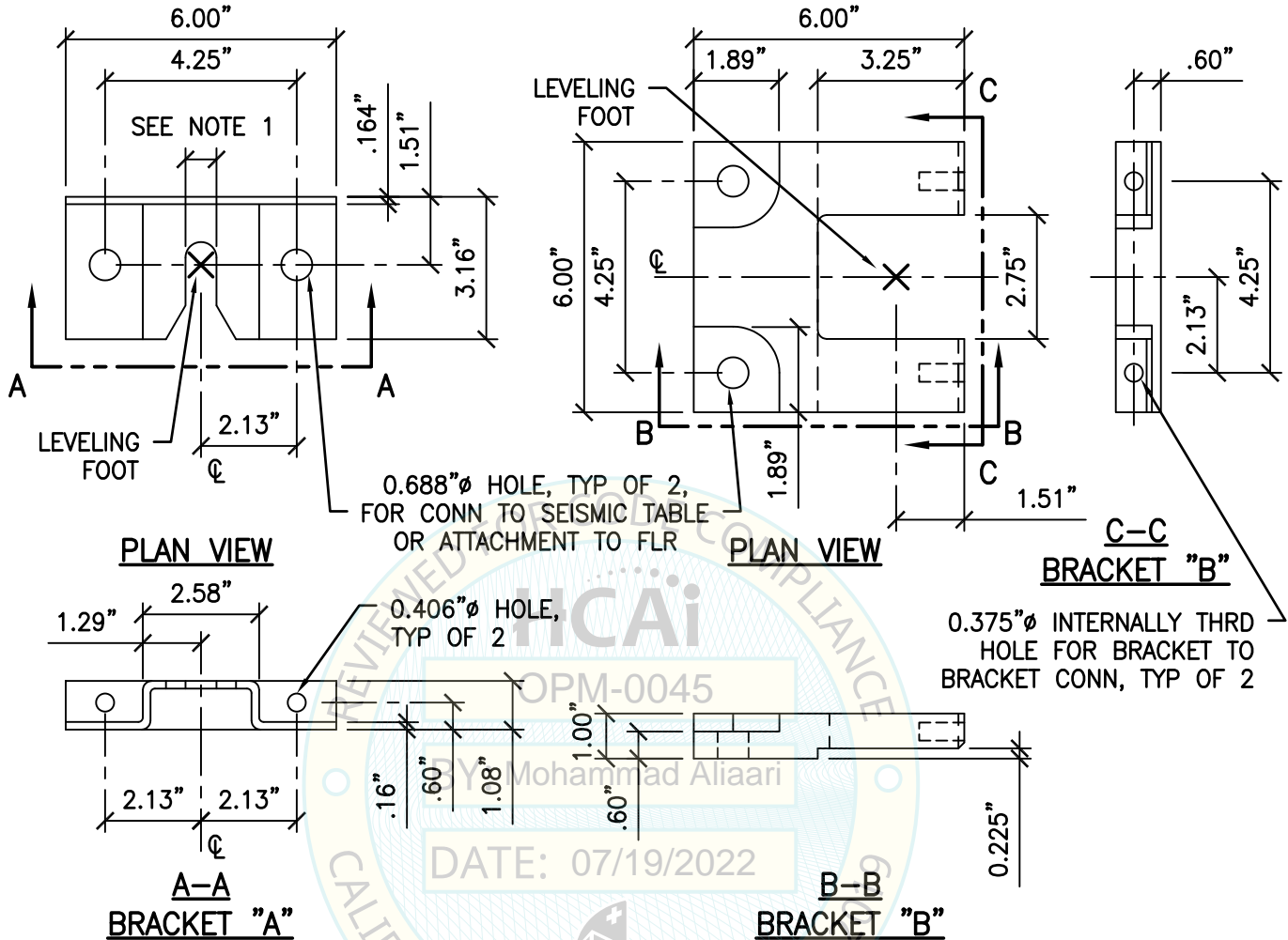


CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

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

Job No:	22018.01
Date:	06/29/2022
Page:	9 of 18



NOTES:

1. SLOT WIDTH IS 0.422" FOR $\frac{3}{8}$ " ϕ LEVELING FOOT & 0.562" FOR $\frac{1}{2}$ " ϕ LEVELING FOOT.
2. BRACKET MATERIAL IS ASTM A1011 CS GRADE 30.
3. BRACKET IS 8 GA STL, TYP

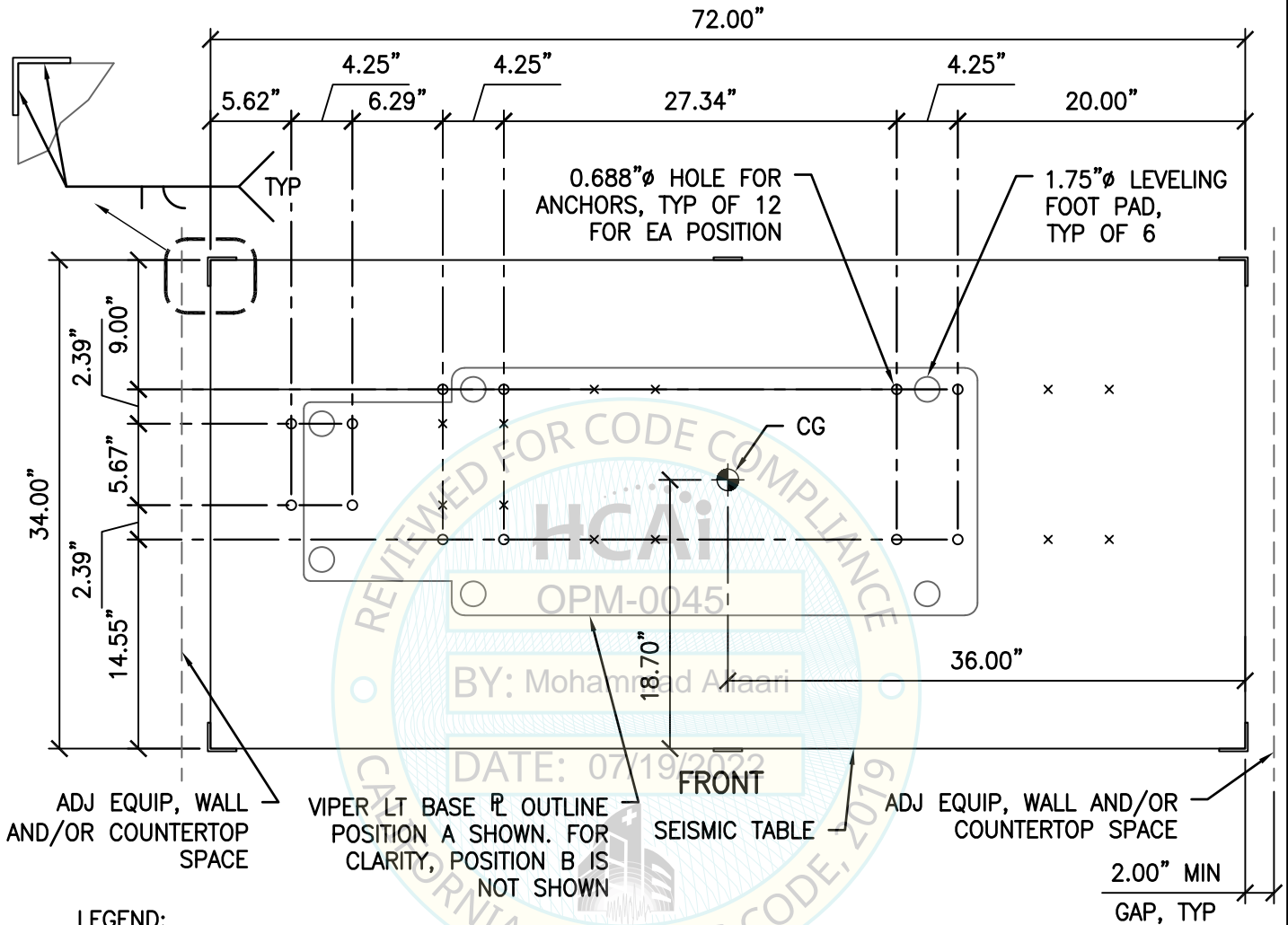


SHEET TITLE: SEISMIC BRACKETS

	CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833	Job No: 22018.01
		Date: 06/29/2022
TEL (916) 920-2020 www.cyseng.com	Page: 10 of 18	

\\cys-fs\jobs\jobs22\22018 BD - Five OPM KBTZ2 Amendments\22018.01 OPM-0045-13\ACAD\STRU\S1_TASK 01.dwg Time: Jun 29, 2022 - 10:18am Login: mayrhoferm DimScale: 1 LScale: 6

\\cys-fs\jobs\jobs22\22018 BD - Five OPM KBTZ2 Amendments\22018.01 OPM-0045-13\ACAD\STRU\S1_TASK 01.dwg Time:Jun29,2022-10:18am Login:mayerhoferm DimScale:1 LScale:6



LEGEND:

- o = BOLT HOLE LOCATIONS FOR VIPER LT AT POSITION A.
- x = BOLT HOLE LOCATIONS FOR VIPER LT AT POSITION B.

NOTE: POSITION A BOLT HOLES ARE 10.54" TO THE LEFT OF POSITION B BOLT HOLES.



SHEET TITLE: SEISMIC TABLE PLAN



CYS STRUCTURAL ENGINEERS, INC.

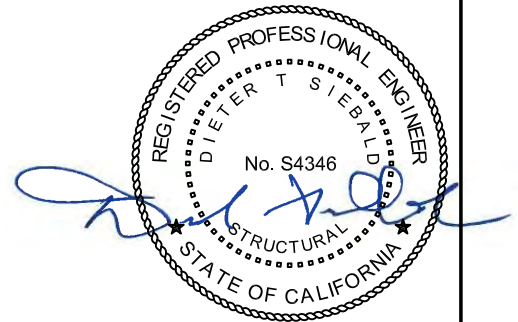
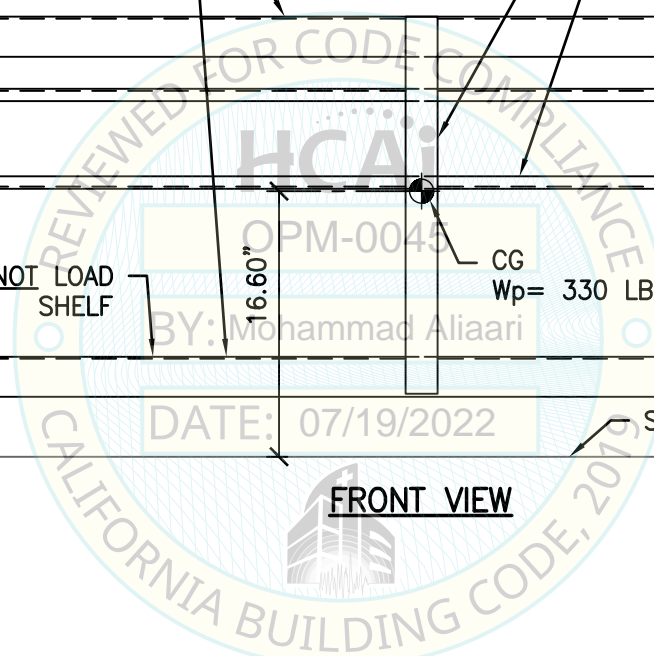
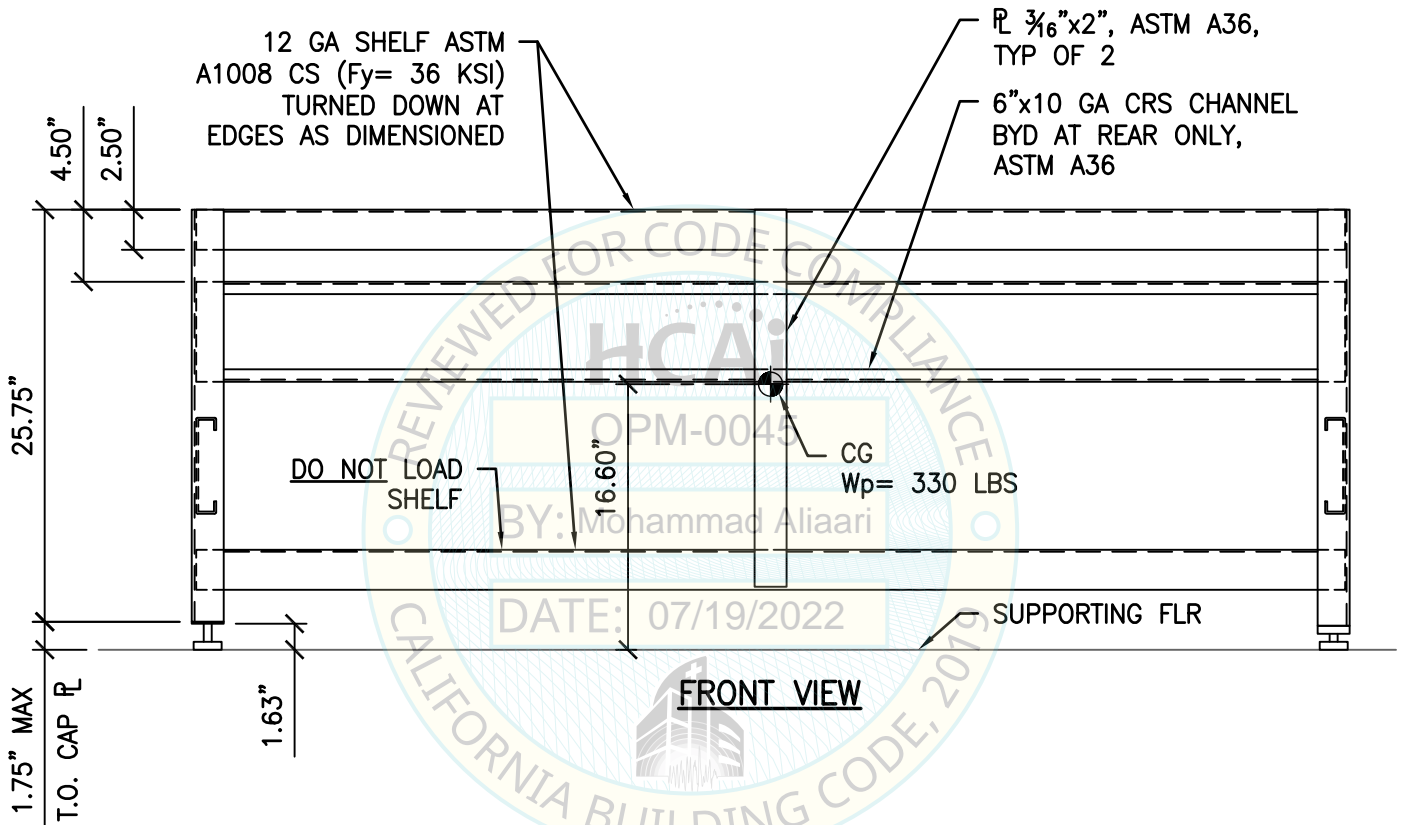
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

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

Job No:	22018.01
Date:	06/29/2022
Page:	11 of 18



NOTE:
COMPLETE TABLE ASSEMBLY
IS PROVIDED BY BD



SHEET TITLE: SEISMIC TABLE ELEVATIONS



CYS STRUCTURAL ENGINEERS, INC.

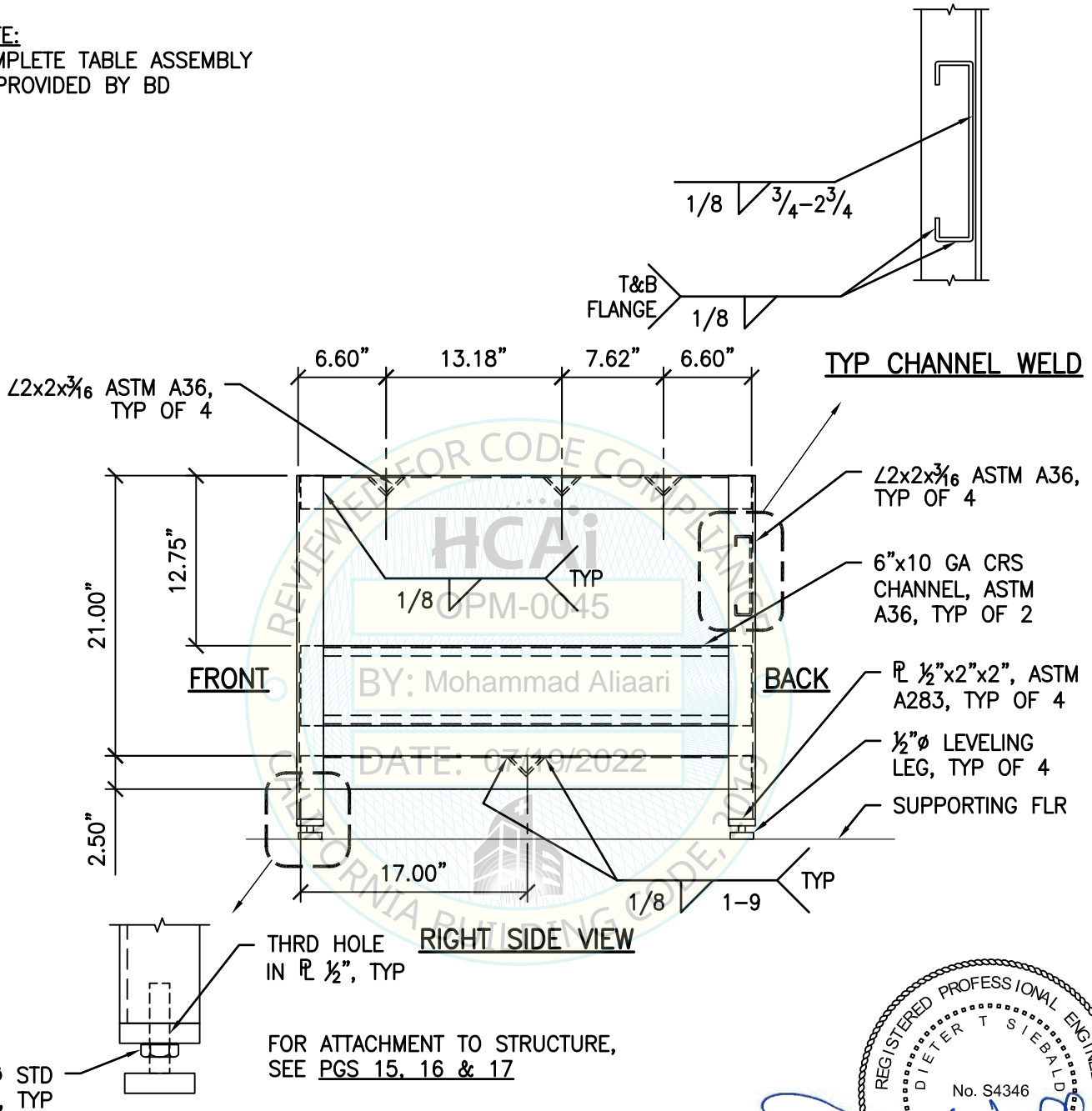
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

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

Job No:	22018.01
Date:	06/29/2022
Page:	12 of 18

\\cys-fs\jobs\jobs22\22018 BD - Five OPM KBTZ2 Amendments\22018.01 OPM-0045-13\ACAD\STRU\S1_TASK 01.dwg Time:Jun29,2022-10:19am Login:mayerhoferm DimScale:1 LScale:6

NOTE:
COMPLETE TABLE ASSEMBLY
IS PROVIDED BY BD



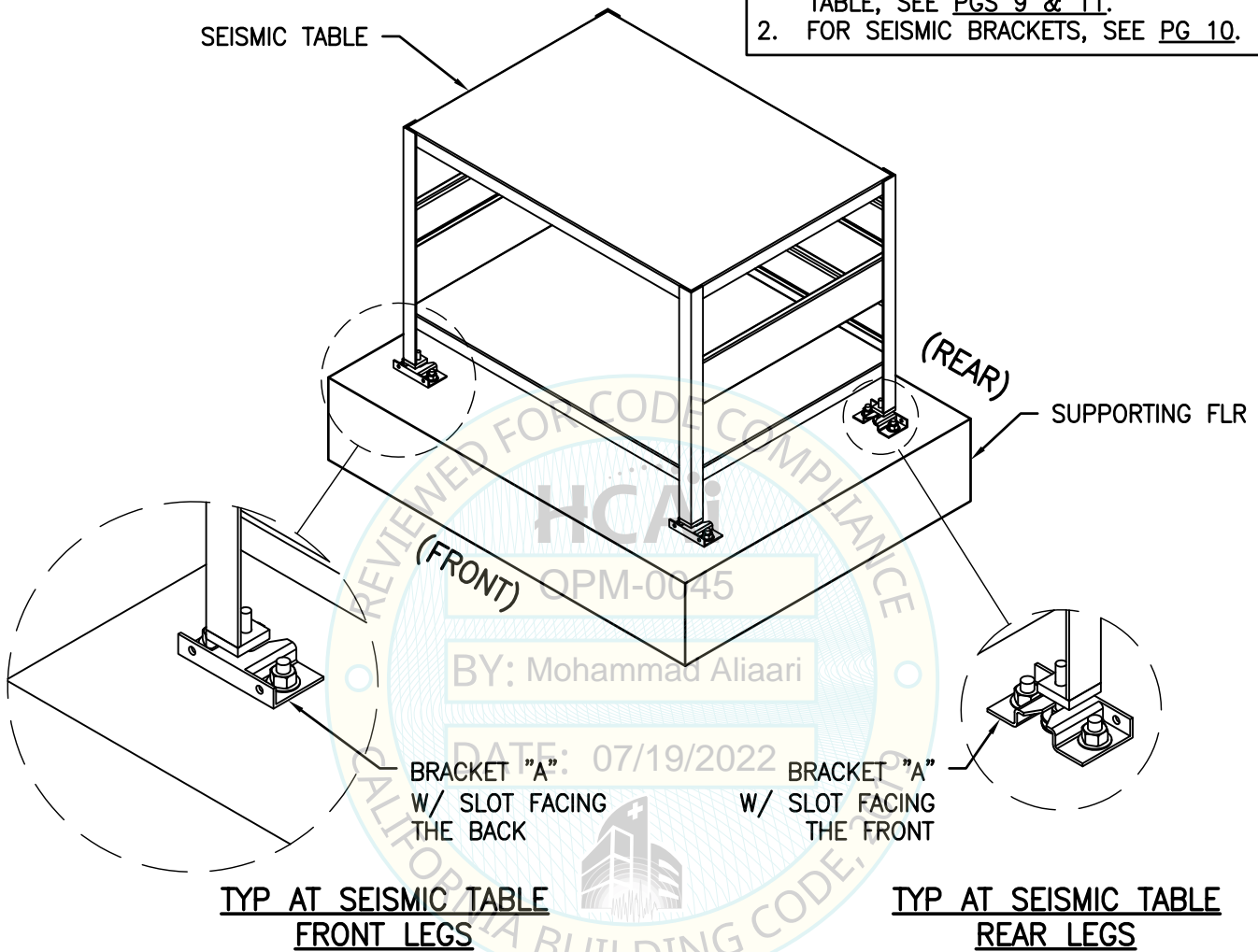
SHEET TITLE: SEISMIC TABLE ELEVATION

<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 22018.01 Date: 06/29/2022 Page: 13 of 18

\\cys-fs\jobs\jobs22\22018 BD - Five OPM KBTZ2 Amendments\22018.01 OPM-0045-13\ACAD\STRU\S1_TASK 01.dwg Time:Jun29,2022-10:20am Login:mayerhoferm Dimscale:1 LScale:6

NOTES:

1. FOR VIPER LT & CONN TO SEISMIC TABLE, SEE PGS 9 & 11.
2. FOR SEISMIC BRACKETS, SEE PG 10.



SHEET TITLE: SEISMIC TABLE ATTACHMENT SCHEME



CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

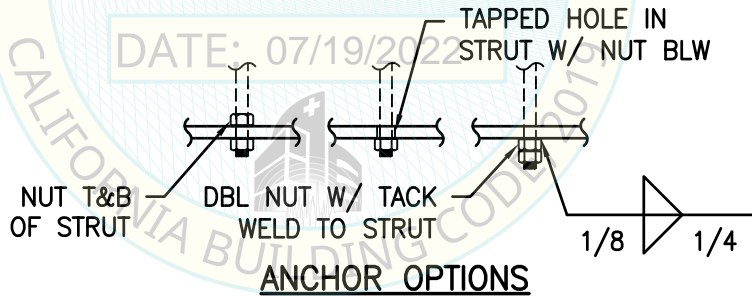
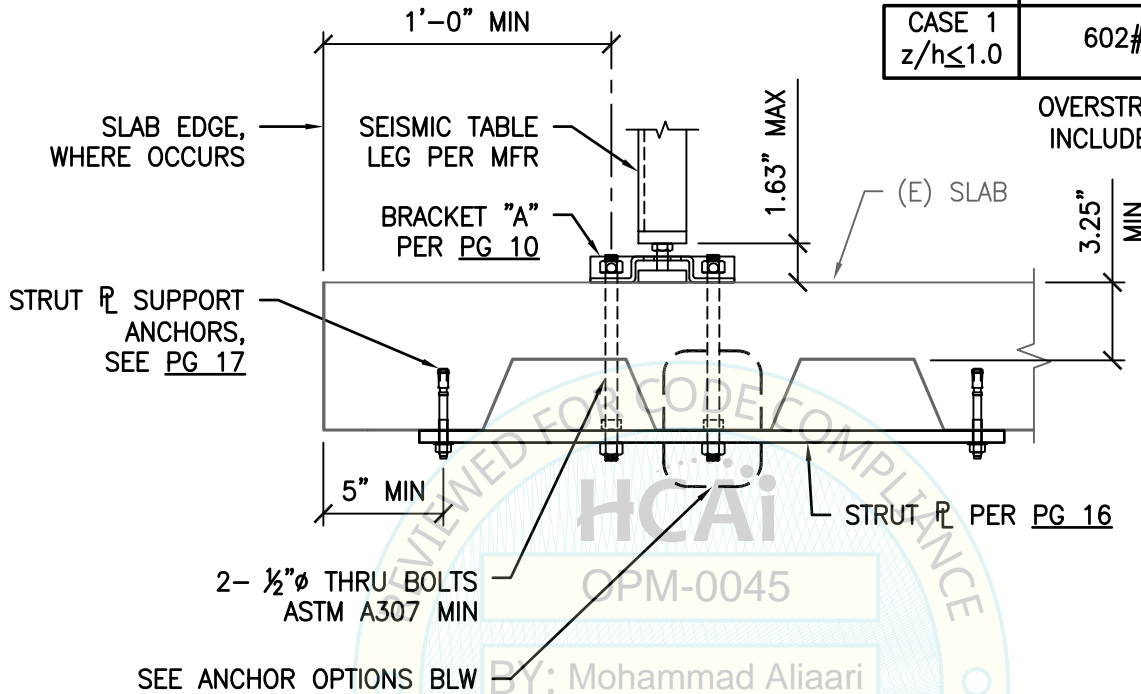
TEL (916) 920-2020
www.cyseng.com

Job No:	22018.01
Date:	06/29/2022
Page:	14 of 18



MAXIMUM ANCHOR FORCES AT LRFD AT EACH ANCHOR BOLT	
Tu	$\Omega_0 V_u$
CASE 1 $z/h \leq 1.0$	602# 1014#

OVERSTRENGTH FACTOR (Ω_0)
INCLUDED IN SHEAR ONLY



SHEET TITLE: ATTACHMENT DETAILS
STAND TO CONC FILL OVER MDETAL DECK (CASE 1)



CYS STRUCTURAL ENGINEERS, INC.

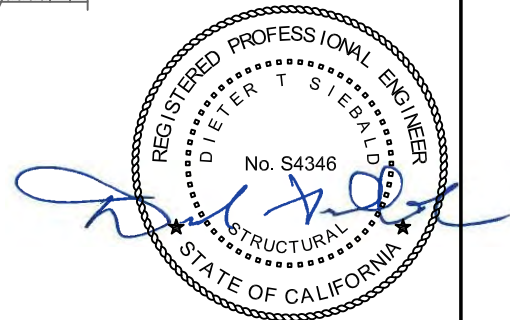
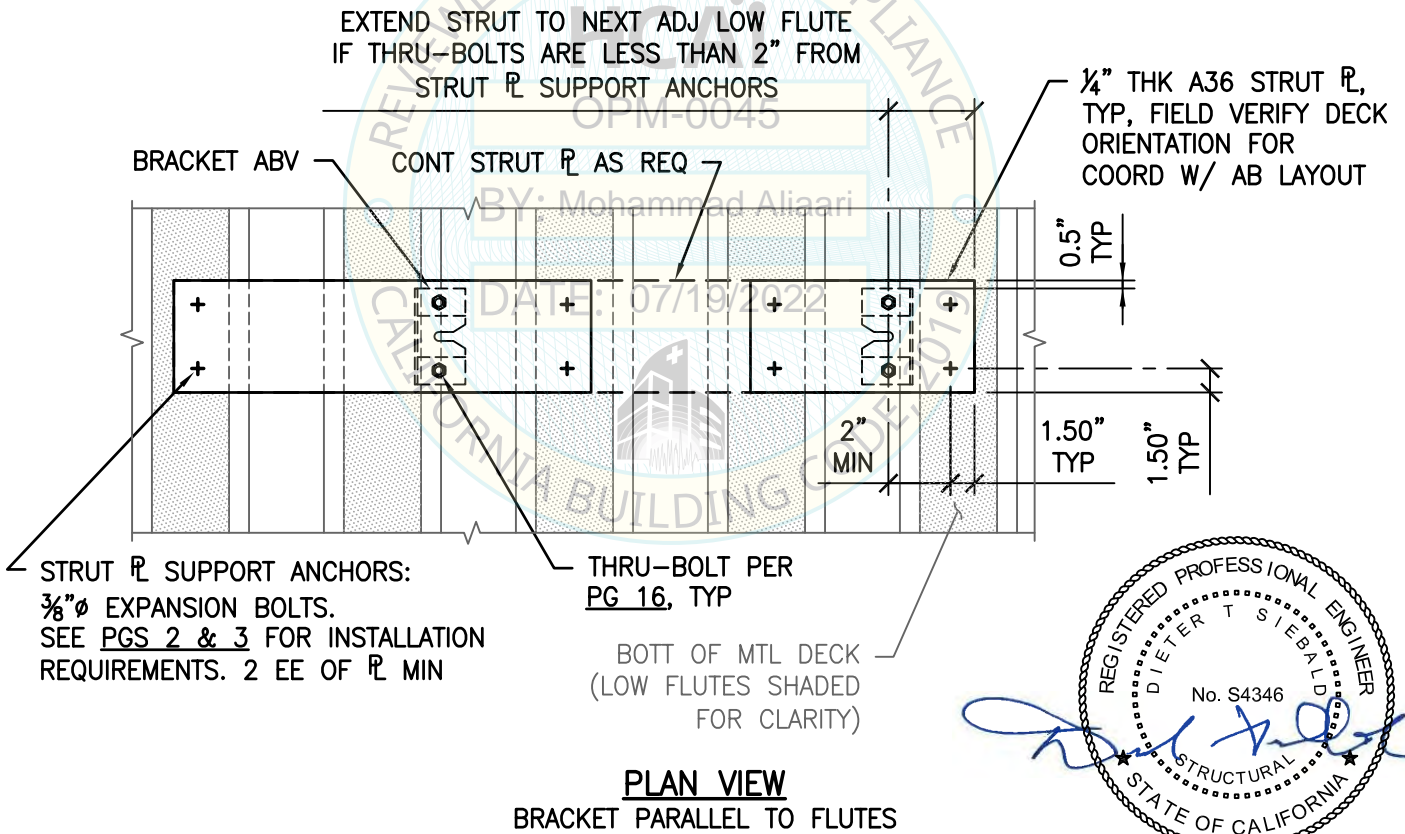
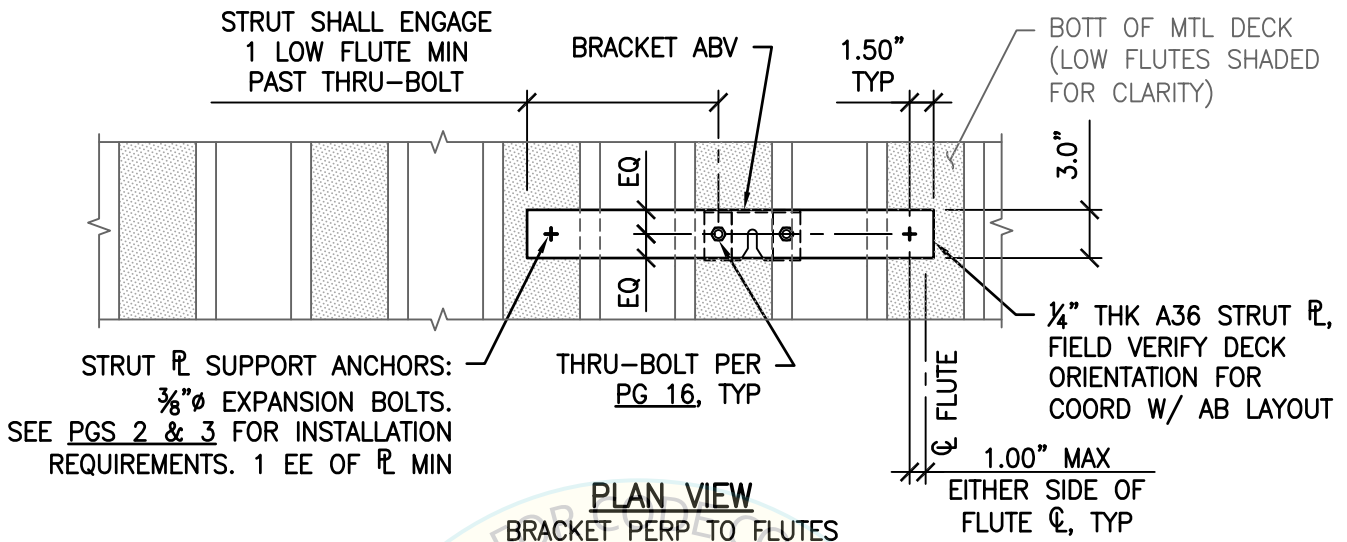
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

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

Job No:	22018.01
Date:	06/29/2022
Page:	15 of 18

\\cys-fs\jobs\jobs22\22018 BD - Five OPM KBTZ2 Amendments\22018.01 OPM-0045-13\ACAD\STRU\S1_TASK 01.dwg Time: Jun 29, 2022 - 10:21 am Login: mayerhoferrm DimScale: 1 LScale: 6

\\cys-fs\jobs\jobs22\22018 BD - Five OPM KBTZ2 Amendments\22018.01 OPM-0045-13\ACAD\STRU\S1_TASK 01.dwg Time:Jun29,2022--10:21am Login:mayerhoferm DimScale:1 LScale:6



SHEET TITLE: ATTACHMENT DETAILS
STAND TO CONC FILL OVER METAL DECK (CASE 1)



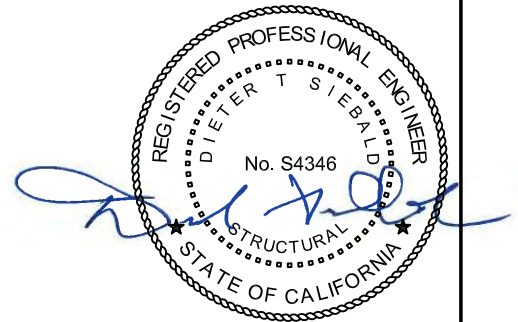
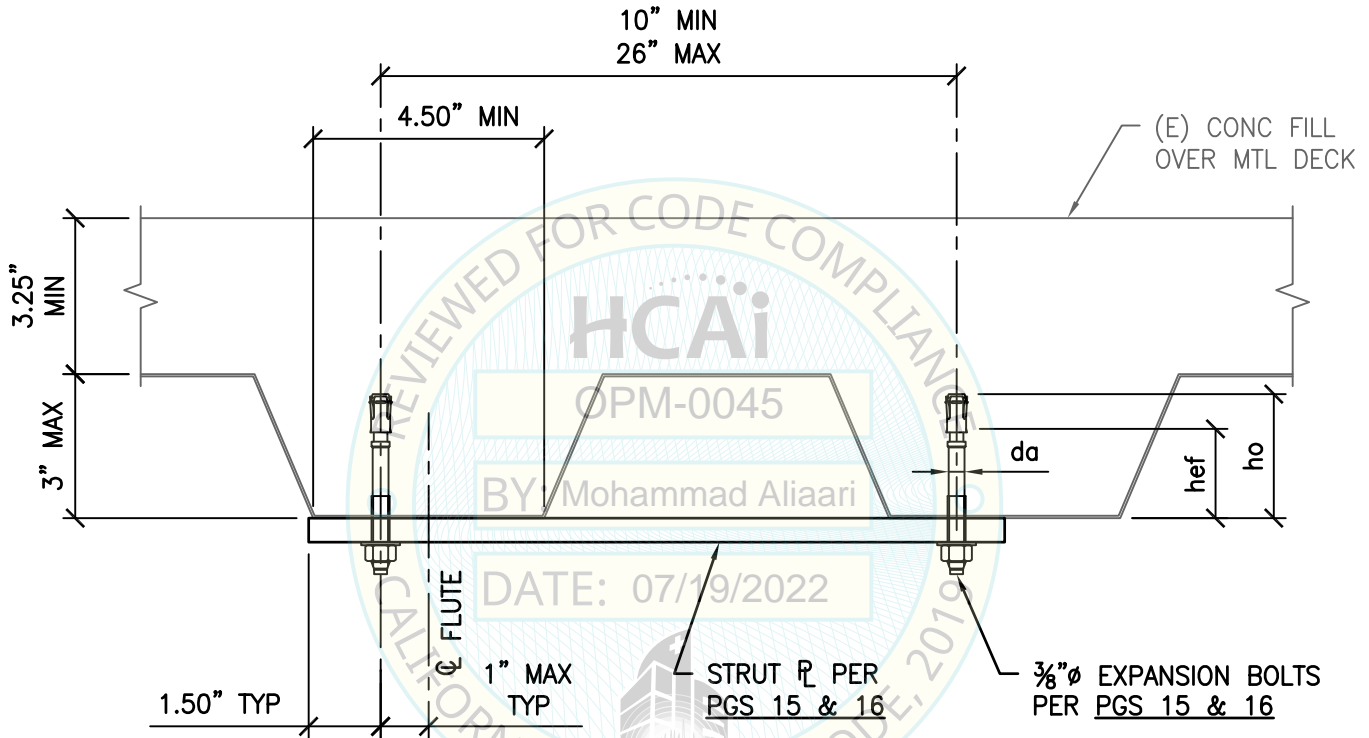
CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

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

Job No:	22018.01
Date:	06/29/2022
Page:	16 of 18

\\cys-fs\jobs\jobs22\22018 BD - Five OPM KBTZ2 Amendments\22018.01 OPM-0045-13\ACAD\STRU\S1_TASK 01.dwg Time:Jun29,2022-10:23am Login:mayerhoferm Dimscale:1 LTScale:6



SHEET TITLE: ATTACHMENT DETAILS
STAND TO CONC FILL OVER METAL DECK (CASE 1)



CYS STRUCTURAL ENGINEERS, INC.

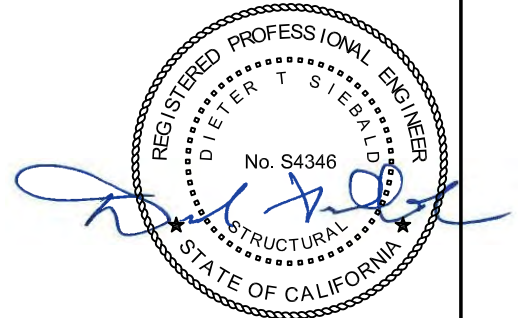
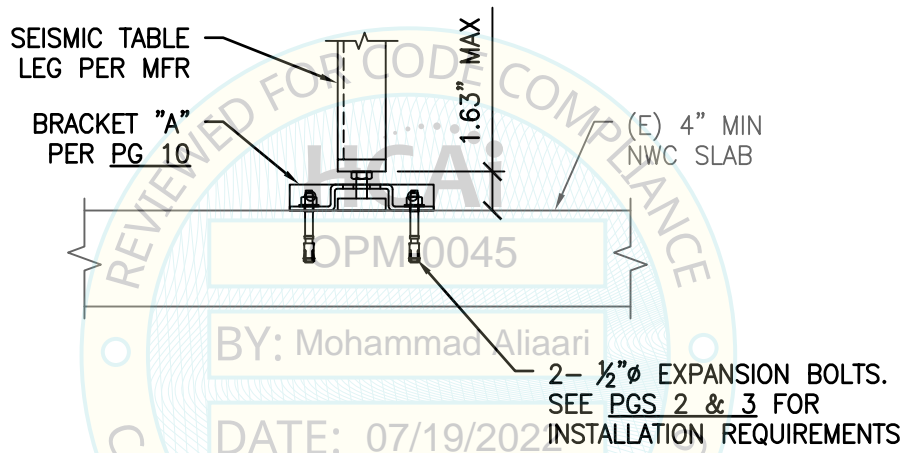
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

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

Job No:	22018.01
Date:	06/29/2022
Page:	17 of 18



MAXIMUM ANCHOR FORCES AT LRFD AT EACH ANCHOR BOLT (W/ $\Omega_0 = 1.5$)		
	Tu	Vu
CASE 2 z/h=0	319#	380#



SHEET TITLE: ATTACHMENT DETAILS
STAND TO SLAB ON GRADE (CASE 2)



CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

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

Job No:	22018.01
Date:	06/29/2022
Page:	18 of 18

\\cys-fs\jobs\jobs22\22018 BD - Five OPM KBTZ2 Amendments\22018.01 OPM-0045-13\ACAD\STRU\S1_TASK 01.dwg Time:Jun29,2022-10:23am Login:mayerhoferm Dimscale:1 LScale:6