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

OFFICE USE ONLY
APPLICATION #: OPM-0402-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: ☐ New ☒ Renewal ☐ Update to Pre-CBC 2013 OPA Number: _____

Manufacturer Information

Manufacturer: bioMérieux, Inc.

Manufacturer's Technical Representative: Zack Blair

Mailing Address: 595 Anglum Road, Hazelwood, MO 63042

Telephone: (314) 791-2736 Email: Zack.BLAIR@biomerieux.com

Product Information

Product Name: VITEK MS (mass spectrometer)

Product Type: Mass spectrometer classified as other mechanical or electrical components per ASCE 7-10 Table 13.6-1

Product Model Number: 410895

General Description: VITEK® MS is an automated mass spectrometry microbial identification system that uses Matrix Assisted Laser Desorption Ionization Time-of-Flight technology (MALDI-TOF) to detect and identify bacteria and fungi. The component is roughly 76"H x 30"W x 34"D and weighs approximately 805 lbs.

Applicant Information

Applicant Company Name: CYS STRUCTURAL ENGINEERS, INC.

Contact Person: David Calia

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

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

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.

Signature of Applicant: David M. Calia Date: 2019-08-29

Title: V.P. of Bus. Dev. & Marketing Company Name: CYS STRUCTURAL ENGINEERS, INC.

OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

Registered Design Professional Preparing Engineering Recommendations

Company Name: CYS STRUCTURAL ENGINEERS, INC.

Name: David M. Calia California License Number: SE5614

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

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

OSHPD Special Seismic Certification Preapproval (OSP)

☐ Special Seismic Certification is preapproved under OSP-
(Separate application for OSP is required)

☐ Special Seismic Certification is not preapproved

Certification Method(s)

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

☒ Other* (Please Specify): Calculations in accordance with the 2016 CBC.

*Use of criteria other than those adopted by the California Building Standards Code, 2016 (CBSC 2016) 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 2016 may be used when approved by OSHPD prior to testing.

☒ Analysis

☐ Experience Data

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

List of Attachments Supporting the Manufacturer's Certification

☐ Test Report ☒ Drawings ☒ Calculations ☐ Manufacturer's Catalog

☐ Other(s) (Please Specify):

OFFICE USE ONLY – OSHPD APPROVAL VALID FOR CBC 2016 & ALL PRE-2016 CODE BASED PROJECTS

Signature: Date: 10/2/2019

Print Name: Jeffrey Kikumoto

Title: Structural Engineer

Condition of Approval (if applicable):

bioMérieux
VITEK MASS SPECTROMETER MODEL 410895
OPM–0402–13

NOTES: THESE DRAWINGS ARE PREPARED FOR bioMérieux, INC., A COMPANY DULY ORGANIZED UNDER THE LAWS OF MISSOURI, HAVING ITS PRINCIPAL PLACE OF BUSINESS AT 100 RODOLPHE STREET, DURHAM, NC 27712

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

REGISTERED PROFESSIONAL ENGINEER
DAVID MATTHEW CALIA
No. S5614
STRUCTURAL
STATE OF CALIFORNIA

2018-08-29 NOT SEOR

SHEET TITLE: SHEET INDEX

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bioMérieux
VITEK MASS SPECTROMETER (MODEL 410895)
EQUIPMENT SUPPORTS & ATTACHMENTS

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

GENERAL NOTES:

1. THIS OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2016. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2016.
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 2016 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.

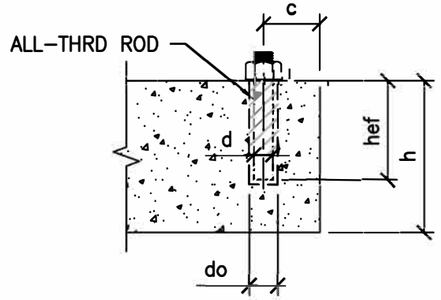
3A. EXPANSION ANCHORS INSTALLED IN NORMAL WEIGHT OR SAND-LIGHTWEIGHT CONCRETE SHALL BE STAINLESS STEEL HILTI KB-TZ EXPANSION ANCHORS COMPLYING WITH ICC-ES ESR-1917 REISSUED MAY 2019. ADHESIVE ANCHORS INSTALLED IN NORMAL WEIGHT CONCRETE SHALL BE ASTM F593 CW1 (316) INSTALLED USING HILTI HIT-RE 500 V3 ADHESIVE COMPLYING WITH ICC-ES ESR-3814 REISSUED JANUARY 2019, REVISED APRIL 2019.

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.

3D. TEST VALUES: APPLY TEST LOADS TO ANCHORS WITHOUT REMOVING THE NUT.



ADHESIVE ANCHOR
(THRD ROD / REINFORCING BAR)

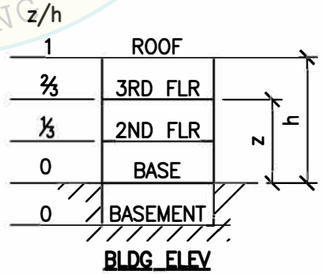
POST-INSTALLED ADHESIVE ANCHOR SCHEDULE

ANCHOR TYPE & DIA (INCH) d	HOLE DIA (INCH) do	EFFECTIVE EMBED (INCH) hef	MIN CONC THICKNESS (INCH) h	MIN CONC EDGE DISTANCE (INCH) c	MIN AB SPACING UNO (INCH)	TENSION TEST LOAD (LBS)	CONDITION OF ANCHORAGE
½"ø HILTI HAS-R (ASTM F593 CW1 316 SS) ALL THRD ROD	0.5625	2.75	4	12	6.75	2200	CASE 2

POST-INSTALLED MECHANICAL ANCHOR SCHEDULE

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

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



BLDG ELEV

CASE 1: ANCHORAGE DTLS LOCATED AT UPPER FLRS ABV THE BASE OF A BLDG (z/h <= 1.0), IT IS ASSUMED THAT THE FLRS ARE BUILT OF A MIN 3¼" NWC OR SLWC TOPPING OVER MTL DECK (f'c = 3000 PSI, MIN).

CASE 2: ANCHORAGE 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).

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2018-08-29 NOT SEOR

SHEET TITLE: GENERAL NOTES

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bioMérieux
VITEK MASS SPECTROMETER (MODEL 410895)
EQUIPMENT SUPPORTS & ATTACHMENTS

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GENERAL NOTES CONTINUED:

5. THIS PRE-APPROVAL MAY BE USED AT ANY GEOGRAPHICAL LOCATION IN THE STATE OF CALIFORNIA WHERE S_{DS} IS LESS THAN OR EQUAL TO 2.50.
6. COORDINATE THE ANCHOR BOLT LAYOUT WITH THE COMPONENT IN THE FIELD PRIOR TO SETTING ANCHOR BOLTS.
7. ANCHOR BRACKETS SHALL BE PAINTED WITH A RUST INHIBITIVE PRIMER FOLLOWED BY A COLOR COAT SELECTED BY THE HOSPITAL FACILITY OR MATCH THE COLOR OF THE BASE OF THE EQUIPMENT IF A COLOR IS NOT SPECIFIED BY THE HOSPITAL.
8. FASTENERS AND ASSOCIATED HARDWARE SHALL BE FIELD PAINTED TO MATCH BRACKETS AFTER INSTALLATION IS COMPLETE.
9. STRUCTURAL STEEL SHAPES AND CONNECTORS SHALL CONFORM TO THE FOLLOWING, UNO:
   A. PLATES, ANGLES, BARS & MISCELLANEOUS SHAPES ..... ASTM A36
   B. PLATES AS NOTED ..... ASTM A572 GR 50
   C. MACHINE BOLTS ..... ASTM A307
10. THE SEISMIC BRACKETS SHALL BE FABRICATED AND FURNISHED BY EITHER THE GENERAL CONTRACTOR OR bioMérieux AS SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE OF THE PROJECT. CONTRACTOR SHALL INSTALL THE SEISMIC SUPPORTS AND ATTACHMENTS (INCLUDING SEISMIC BRACKETS, EXPANSION ANCHORS, THRU-BOLTS, STRUT PLATES BELOW SLABS, HIGH STRENGTH BOLTS, ETC.) IN CONJUNCTION WITH COMPONENT SETTING INSTRUCTIONS FROM bioMérieux FIELD INSTALLATION PERSONNEL.
11. DRAWING SCALES ARE NOT PROVIDED. DO NOT SCALE OFF OF THESE DRAWINGS. THE INTENT OF THESE DRAWINGS IS TO SHOW HOW TO FABRICATE THE SEISMIC BRACKET TO ANCHOR THE EQUIPMENT SPECIFIED. THE REPRESENTATIONS OF THE EQUIPMENT ARE ONLY INTENDED TO SHOW THE COORDINATION WITH THE SEISMIC BRACKETS.
12. BOLTS THROUGH CONCRETE ON METAL DECK:
   A. BOLTS SHALL BE TORQUED BY ¾ TURN OF THE NUTS AFTER SNUG TIGHT (THE SNUG TIGHT CONDITION IS DEFINED AS THE TIGHTNESS REQUIRED TO BRING THE CONNECTED PLIES INTO FIRM CONTACT) CONDITION IS ACHIEVED, UNO.
   B. THRU BOLT HOLES SHALL BE 1/16" LARGER THAN BOLT SIZE (HOLE SIZE = BOLT SIZE + 1/16")
   C. THRU BOLTS IN CONCRETE SHALL RECEIVE SPECIAL INSPECTION & TESTING (THROUGH BOLTS WITH STEEL TO STEEL CONNECTION IN TENSION DO NOT REQUIRE TESTING) IN ACCORDANCE WITH REQUIREMENTS FOR POST-INSTALLED ANCHORS.
13. TAKE CARE TO AVOID DAMAGING REBAR OR POST-TENSIONING TENDONS WHEN INSTALLING ANCHORS TO CONCRETE.

WELDING NOTES:

1. WELDING OF SEISMIC BRACKETS SHALL BE PERFORMED BY CERTIFIED WELDERS USING E70XX ELECTRODES (UNO). THE USE OF E70-T4 WELDING WIRE IS NOT ALLOWED FOR ANY APPLICATION. WELDS SHALL BE IN CONFORMITY WITH THE PROJECT SPECIFICATIONS AND STRUCTURAL WELDING CODE-STEEL OF THE AMERICAN WELDING SOCIETY (AWS D1.1-10). SEE SPECIAL INSPECTIONS SECTION FOR WELDING INSPECTION REQUIREMENT. SUBMIT WELDING PROCEDURES AND SPECIFICATIONS TO OWNER'S TESTING LABORATORY FOR REVIEW AND APPROVAL PRIOR TO BEGINNING SEISMIC BRACKET FABRICATION.
2. WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM SIZE WELDS AS SPECIFIED IN AISC 360-10, SECTION J2.2b.

DESIGN CRITERIA

DESIGN OF SUPPORTS & ATTACHMENTS FOR ALL EQUIP COMPONENTS IS PER 2016 CBC

ASCE 7-10 TABLE 13.6-1
OTHER MECHANICAL OR ELECTRICAL COMPONENTS

S_{DS} = 2.5

I_p = 1.5

a_p = 1.0

R_p = 1.5

Ω_o = 1.5

W_P AS NOTED ON COMPONENT BASE PLAN & ELEVATION. SEE PG 6.

SEISMIC LOADS FOR CASE 1 - UPPER FLRS ABV THE BASE, z/h <= 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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2018-08-29 NOT SEOR

SHEET TITLE: GENERAL NOTES & DESIGN CRITERIA

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bioMérieux
VITEK MASS SPECTROMETER (MODEL 410895)
EQUIPMENT SUPPORTS & ATTACHMENTS

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ABBREVIATIONS:

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

REGISTERED PROFESSIONAL ENGINEER
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2018-08-29 NOT SEOR

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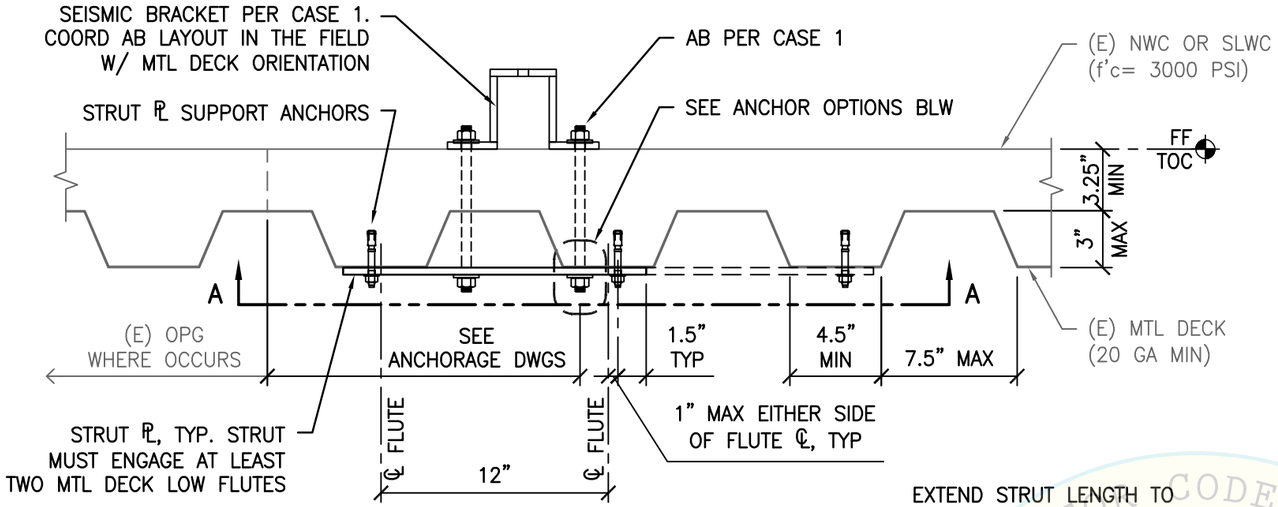
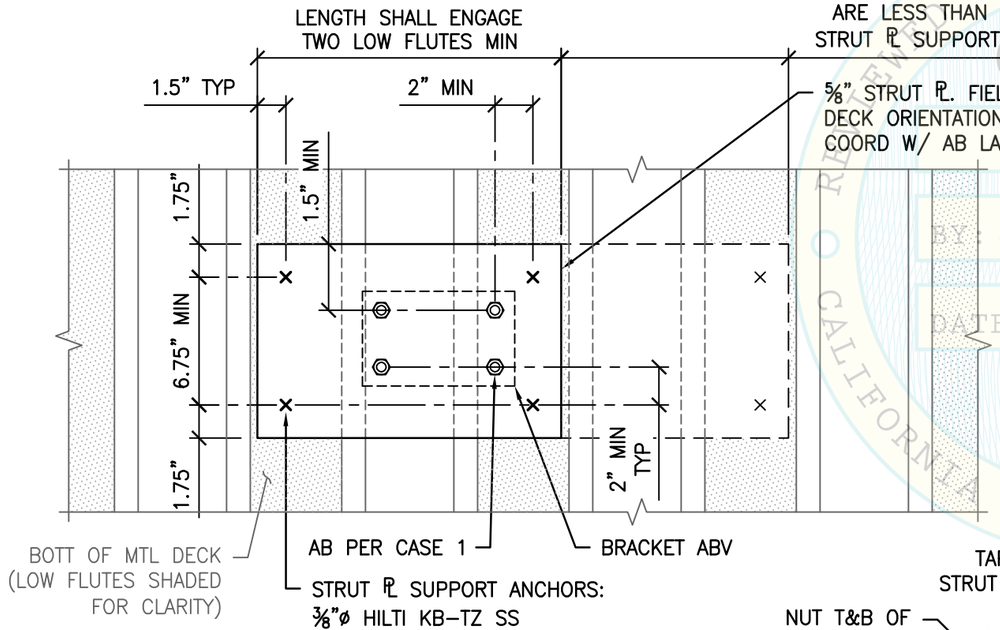
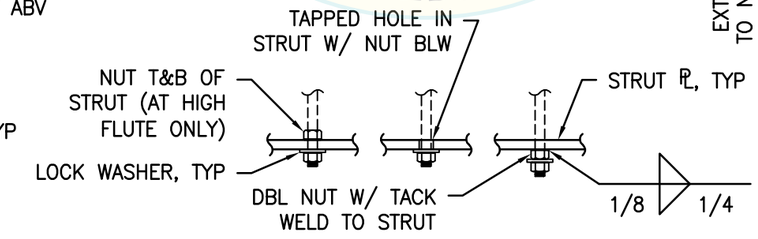
L:\Jobs16\16143 Vitek Mass Spectrometer OPM\ACAD\STRU_OPM\S1_OPM.dwg Time:Aug29,2019-11:18am Login:camachom Dimscale:1 LTScale:6

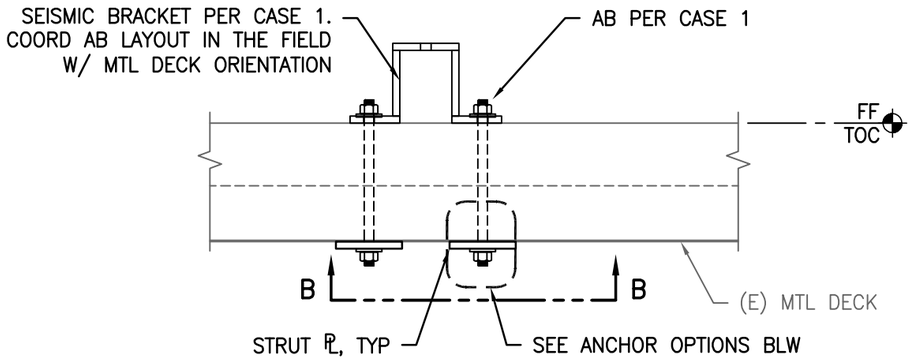


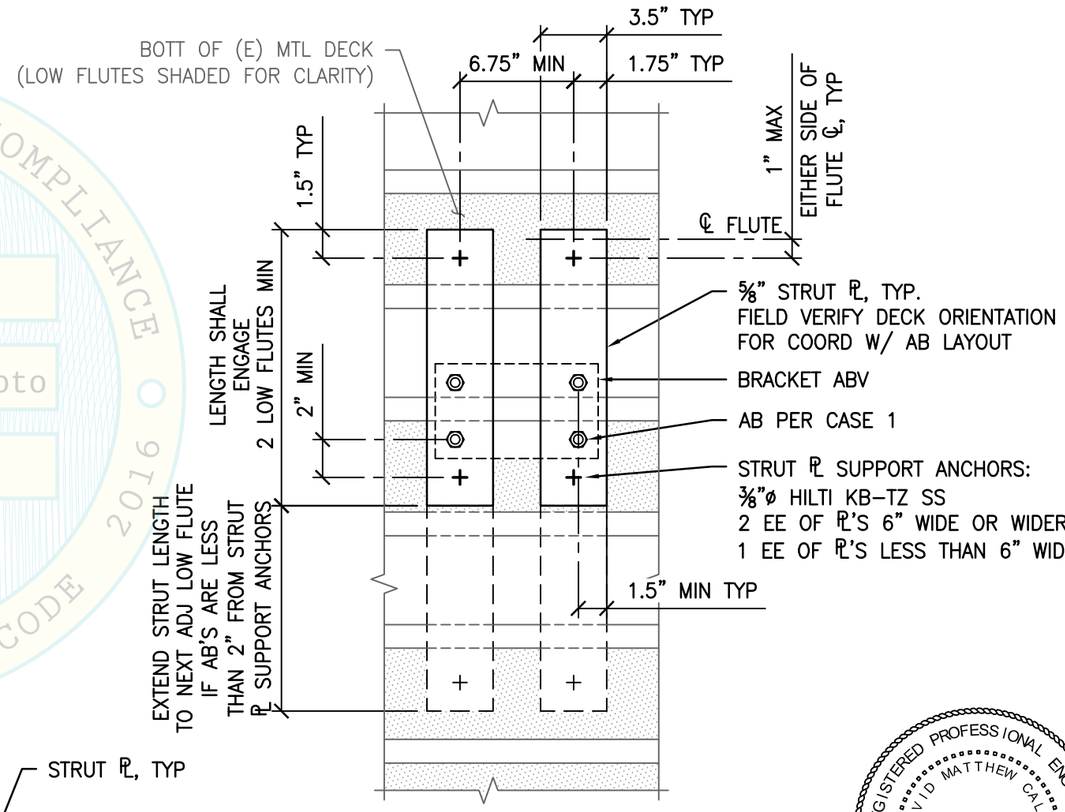


SECTION A–A

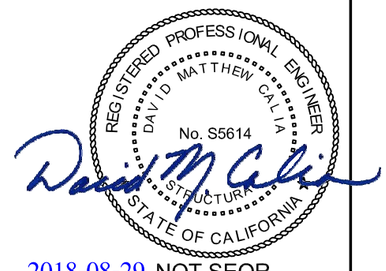


ANCHOR OPTIONS





SECTION B–B



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SHEET TITLE: TYPICAL STRUT DETAILS

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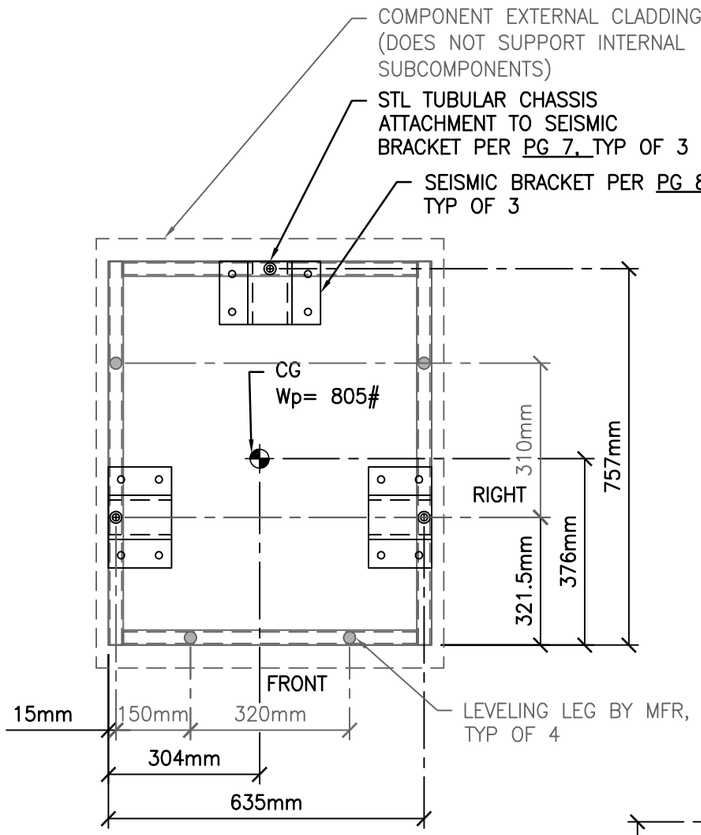
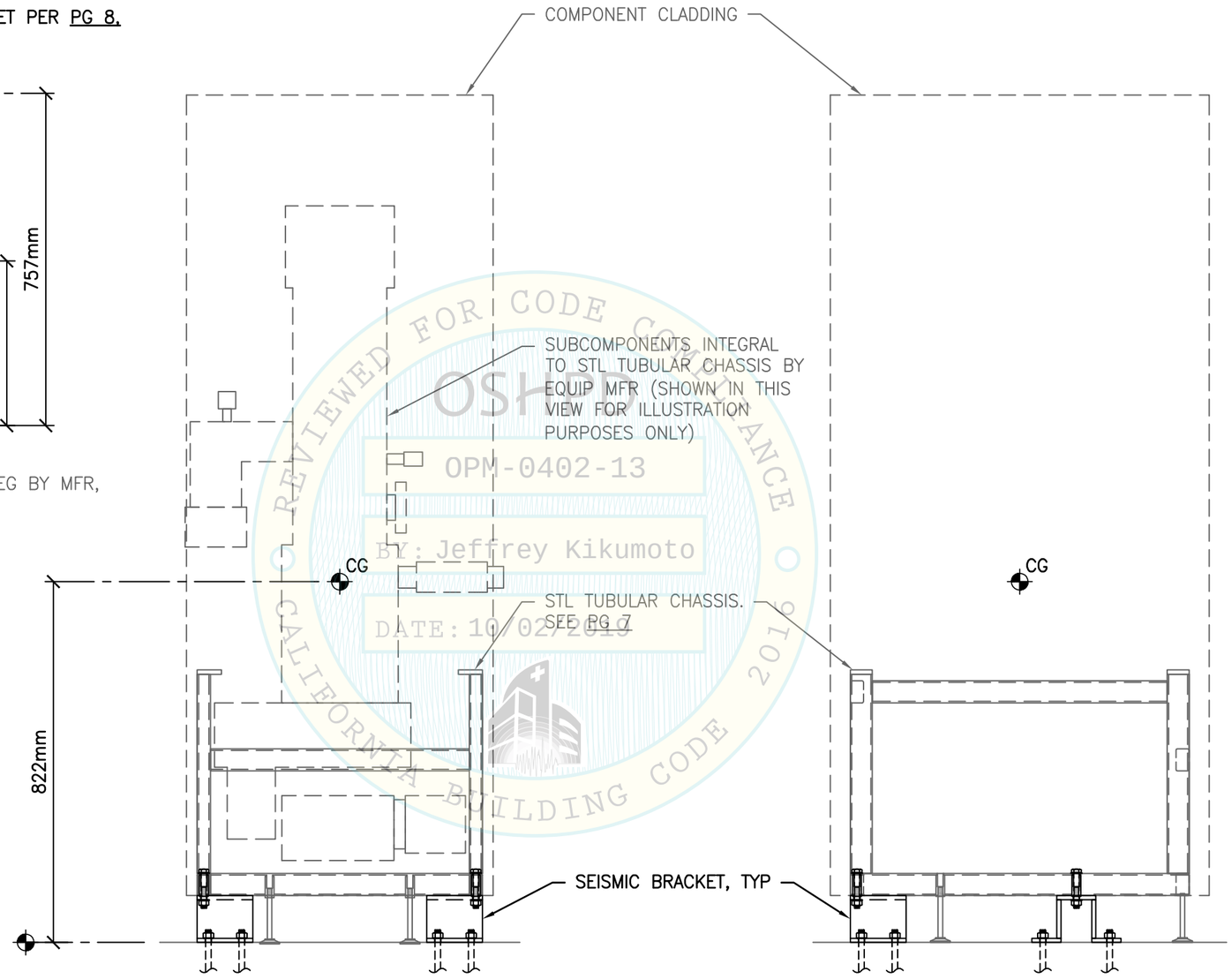


PLAN VIEW
AT BASE



FRONT ELEV

LEFT ELEV

	MAX ANCHOR FORCES AT LRFD AT EA AB		
	T_{max}	C_{max}	V_{max}
CASE 1	3878#	4362#	$1259\#^2$
CASE 2	$2142\#^2$	$2625\#^2$	$472\#^2$

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES MATERIAL OVERSTRENGTH FACTOR (Ω_o) 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.
3. SEE PGS 8 & 9 FOR THE FABRICATION & INSTALLATION REQUIREMENTS OF THE SEISMIC BRACKET.

LIGHT–TONED COMPONENTS NOT IN SCOPE OF WORK

REGISTERED PROFESSIONAL ENGINEER
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2018-08-29 NOT SEOR

SHEET TITLE: VITEK MASS SPECTROMETER BASE PLAN & ELEVATIONS

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VITEK MASS SPECTROMETER (MODEL 410895)
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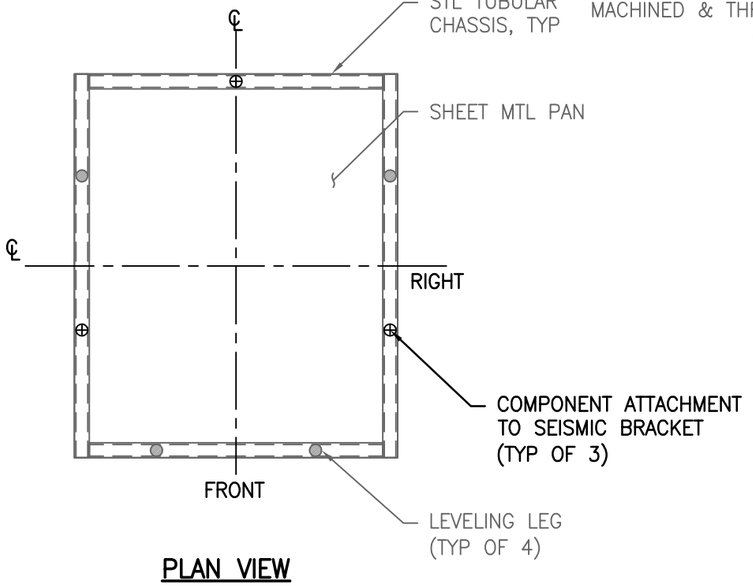
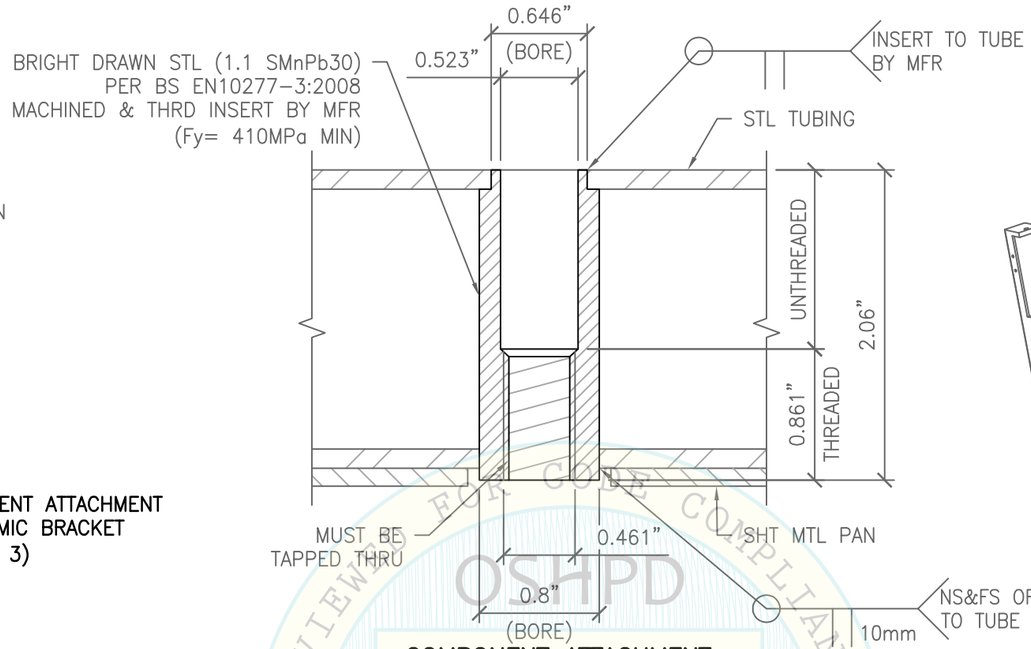
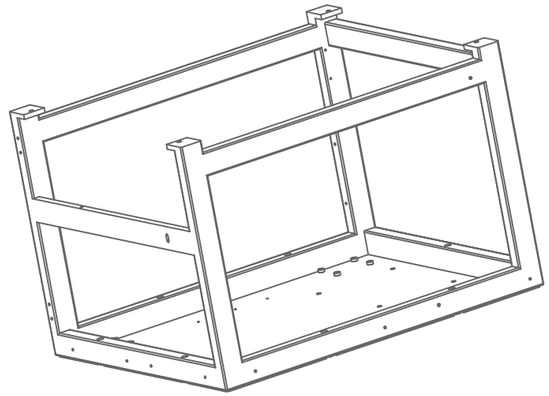


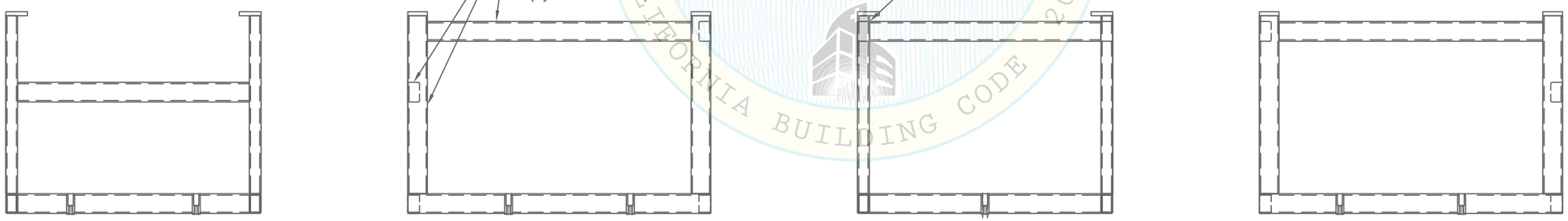
PLAN VIEW



COMPONENT ATTACHMENT
FABRICATION BY MFR



STEEL TUBULAR CHASSIS
ISOMETRIC VIEW



FRONT ELEV | RIGHT ELEV | REAR ELEV | LEFT ELEV

REGISTERED PROFESSIONAL ENGINEER
DAVID MATTHEW CALIA
No. S5614
STRUCTURAL
STATE OF CALIFORNIA

2018-08-29 NOT SEOR

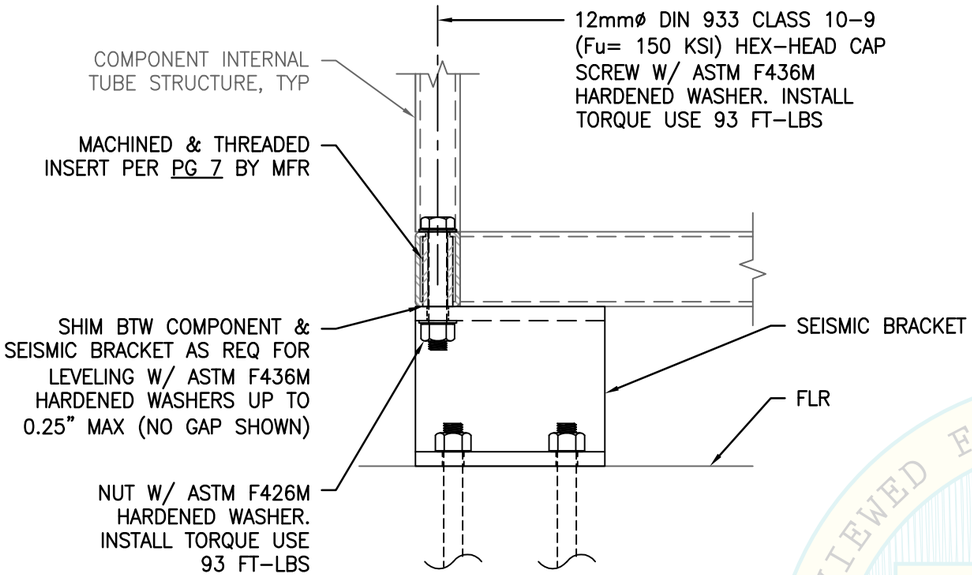
SHEET TITLE: VITEK MASS SPECTROMETER
STEEL TUBULAR CHASSIS PLAN & ELEVATIONS

bioMérieux
VITEK MASS SPECTROMETER (MODEL 410895)
EQUIPMENT SUPPORTS & ATTACHMENTS

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

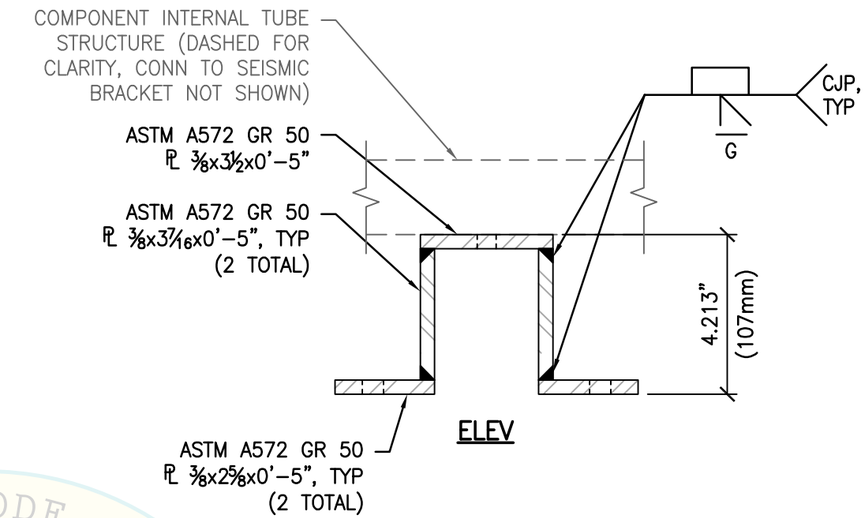
Rev	Description	Date

Job No: 16143
Date: 8/29/2019
By: MTC
Page: 7 of 9

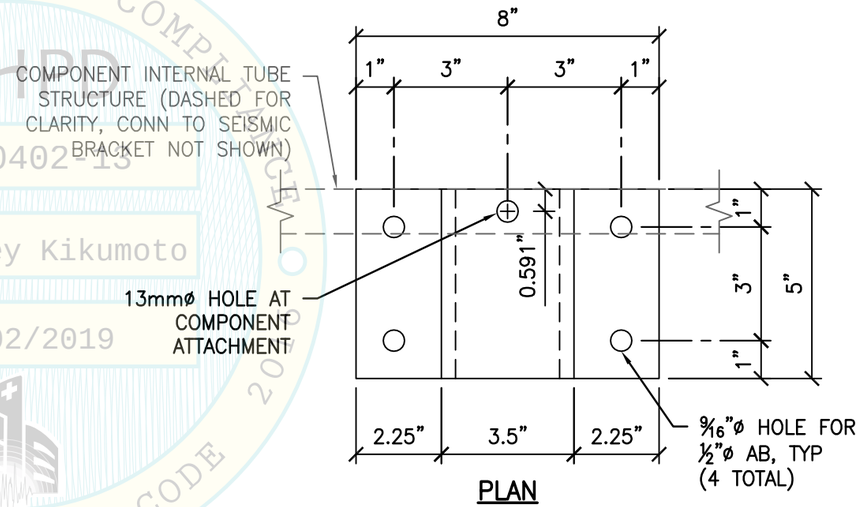


COMPONENT ATTACHMENT TO SEISMIC BRACKET

NOTE:
CONN TO COMPONENT BY CONTRACTOR



ELEV



PLAN

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PG 9.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 6.
3. SEE PG 3 FOR WELDING NOTES.
4. BRACKET FABRICATION BY CONTRACTOR.

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SHEET TITLE: VITEK MASS SPECTROMETER SEISMIC BRACKET DETAIL	Rev	Description	Date
bioMérieux VITEK MASS SPECTROMETER (MODEL 410895) EQUIPMENT SUPPORTS & ATTACHMENTS			

Job No:	16143	
Date:	8/29/2019	
By:	MTC	
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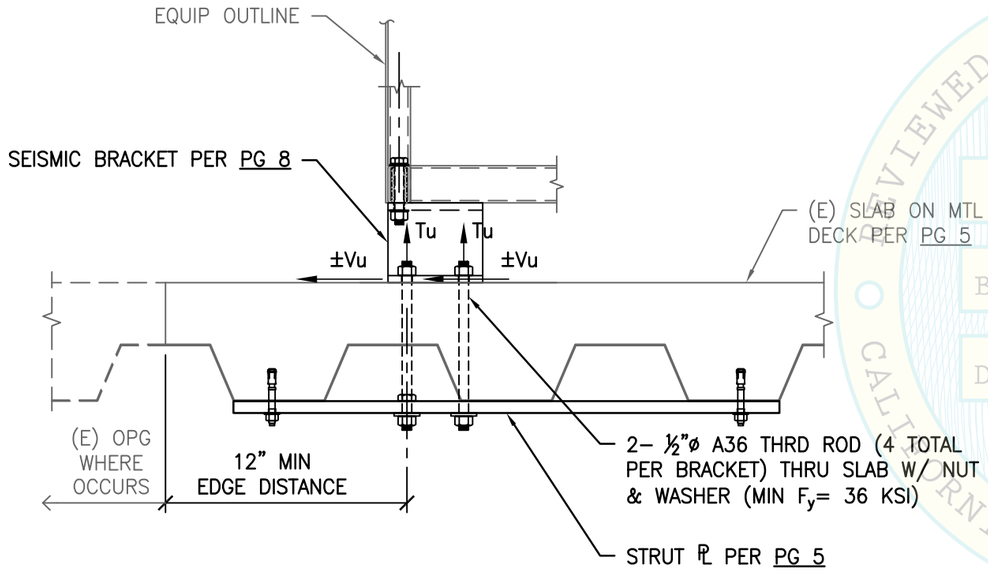
SACRAMENTO, CA 95833 www.cyseng.com

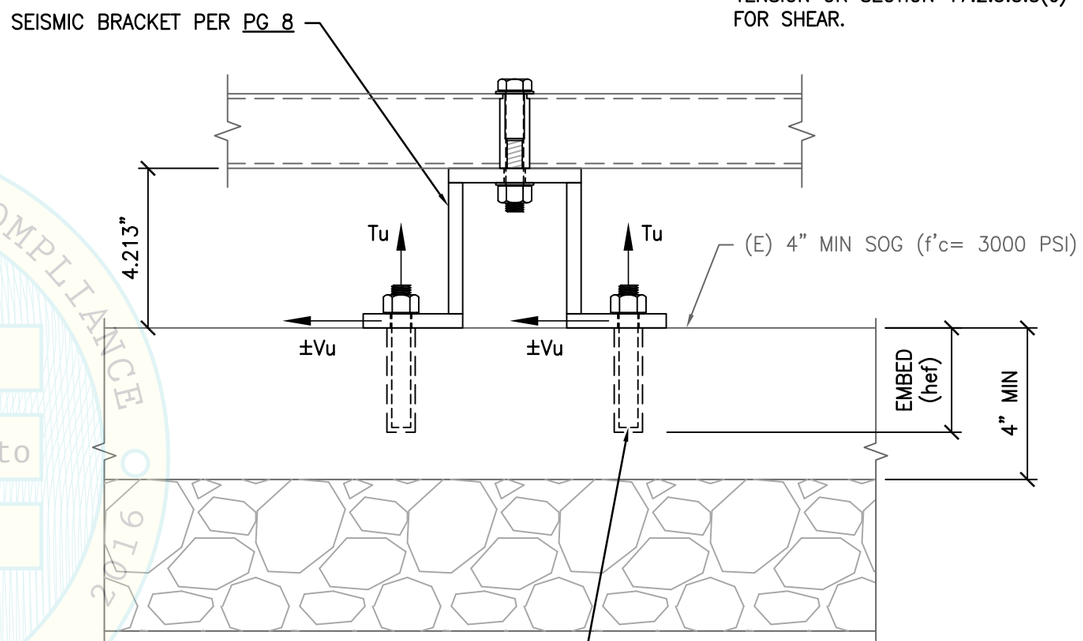
	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 $z/h \leq 1.0$	3023#	726#[1]
CASE 2 $z/h = 0$	1675#[1]	272#[1]

1. INCLUDES MATERIAL OVERSTRENGTH FACTOR (Ω_o) 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

NOTE:
ANCHORAGE INSTALLATION BY CONTRACTOR



CASE 2 – SLAB ON GRADE
(SLAB AT OR BELOW GRADE)

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SHEET TITLE: VITEK MASS SPECTROMETER SUPPORT & ATTACHMENT DETAILS

bioMérieux
VITEK MASS SPECTROMETER (MODEL 410895)
EQUIPMENT SUPPORTS & ATTACHMENTS

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L:\Jobs16\16143 Vitek Mass Spectrometer OPM\ACAD\STRU_OPM\S1_OPM.dwg Time:Aug29,2019–11:19am Login:camachom Dimscale:1 LTScale:6