



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY
APPLICATION #: OPM-0427-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: [X] New [] Renewal [] Update to Pre-CBC 2013 OPA Number:

Manufacturer Information

Manufacturer: Ortho Clinical Diagnostics
Manufacturer's Technical Representative: Michael LaCourt
Mailing Address: 100 Indigo Creek Drive, Rochester, NY 14626
Telephone: 1-585-453-3669 Email: Michael.lacourt@orthoclinicaldiagnostics.com

Product Information

Product Name: Vitros XT 3400
Product Type: Medical Analyzer
Product Model Number: Vitros XT 3400
General Description: Chemistry & Immunodiagnostics System

Applicant Information

Applicant Company Name: Ortho Clinical Diagnostics
Contact Person: Michael LaCourt
Mailing Address: 100 Indigo Creek Drive, Rochester, NY 14626
Telephone: 1-585-453-3669 Email: Michael.lacourt@orthoclinicaldiagnostics.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: [Signature] Date: 28 APR 2017
Title: Principal Engineer, Systems R&D Company Name: Ortho Clinical Diagnostics





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

Registered Design Professional Preparing Engineering Recommendations

Company Name: CYS Structural Engineers, Inc.

Name: Dieter T. Siebald California License Number: SE #4346

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

Telephone: 1-916-920-2020 Email: dieters@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): _____

OPM-0427-13

*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): _____

DATE: 09/05/2017

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: *William Staehlin* Date: 09-05-2017

Print Name: William Staehlin

Title: SSE

Condition of Approval (if applicable): _____

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



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OPM-0427-13

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NOTES:

1. THESE DRAWINGS ARE PREPARED FOR ORTHO CLINICAL DIAGNOSTICS, ROCHESTER, NEW YORK.
2. THE CONTRACTOR & INSPECTOR OF RECORD SHALL OBTAIN A COPY OF THIS PRE-APPROVAL FROM THE OFFICE OF STATEWIDE HEALTH PLANNING & DEVELOPMENT (OSHPD) PRE-APPROVAL PROGRAMS WEBSITE.
3. THIS PRE-APPROVAL COVERS THE SUPPORTS & ATTACHMENTS OF THE EQUIPMENT TO THE SUPPORTING STRUCTURE. THE EQUIPMENT & 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

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GENERAL NOTES:

1. THIS OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2016. THE DEMAND (DESIGN FORCES) FOR USE W/ THIS OPM SHALL BE BASED ON THE CBC 2016.
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 LOADS TABLE ON PG 3 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 2016 & 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 & GAGE OF THE EQUIP WHERE ATTACHMENTS ARE MADE, AGREE W/ THE INFO SHOWN ON THE PRE-APPROVAL DOCUMENTS.
3. EXPANSION ANCHORS INSTALLED IN NWC OR SLWC SHALL BE CARBON OR STAINLESS STEEL HILTI KB-TZ EXPANSION ANCHORS AS NOTED COMPLYING W/ ESR-1917 REISSUED MAY 2015 & REVISED SEPTEMBER 2016.
 - 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 ON PG 3.
 - B. JOB TESTING: FOR VERIFYING SATISFACTORY INSTALLATION WORKMANSHIP, PERFORM JOBSITE TESTING IN ACCORDANCE W/ THE TEST LOAD TABLE PROVIDED IN THIS DOCUMENT. TEST 50% OF THE INSTALLED ANCHORS. THE TEST LOAD MAY BE APPLIED BY ANY METHOD THAT WILL EFFECTIVELY MEASURE THE TORQUE IN THE ANCHOR SUCH AS CALIBRATED TORQUE WRENCH METHOD. ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE INSPECTOR OF RECORD (IOR). 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 EQUIPMENT INSTALL. ALSO REFER TO CBC 1910A.5 "TESTS FOR POST-INSTALLED ANCHORS IN CONCRETE". REPORT OF TEST RESULTS SHALL BE SUBMITTED TO OSHPD.
 - 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.
4. BOLTS THRU CONC ON MTL DECK:
 - A. BOLTS SHALL BE TORQUED BY 3/4 TURN OF THE NUT AFTER SNUG TIGHT CONDITION IS ACHIEVED, UNO. THE SNUG TIGHT CONDITION IS DEFINED AS THE TIGHTNESS REQ TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.
 - 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 IN ACCORDANCE W/ REQUIREMENTS FOR POST-INSTALLED ANCHORS. THRU-BOLTS W/ STL TO STL CONNECTION IN TENSION DO NOT REQUIRE TESTING.

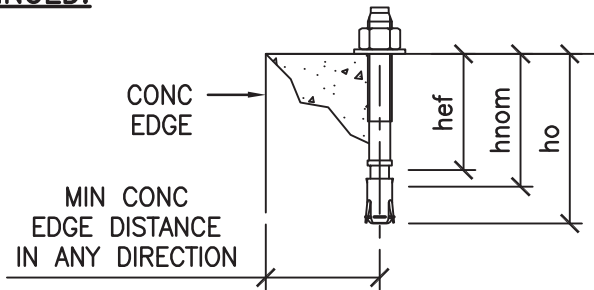


SHEET TITLE: GENERAL NOTES

 <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: 16117 Date: 08-28-2017 Page: 2 of 19</p>
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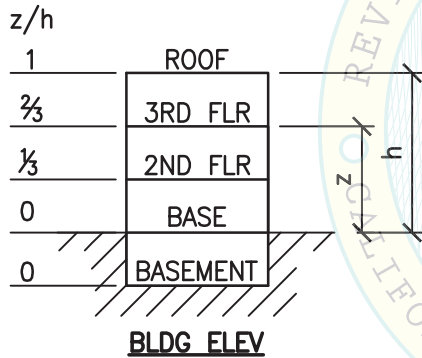
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GENERAL NOTES CONTINUED:



ANCHOR DIA & TYPE (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)	CONDITION OF ANCHORAGE
3/8 KB-TZ	1 13/16	1 1/2	2	3/4	6	9.00	25	CASE 1
5/8 KB-TZ	3 9/16	3 3/8	3 3/4	5	12	6.00	60	CASE 2

5. TWO (2) CASES OF ATTACHMENT ARE SPECIFIED & 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 3" DEEP MIN 20 GA MTL DECK ($f'c = 3000$ PSI, MIN).

CASE 2: ATTACHMENT DETAILS LOCATED AT OR BLW THE BASE OF A BLDG. THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 5" NWC SLAB ($f'c = 3000$ PSI, MIN). ANCHORS SHALL BE STAINLESS STEEL.



SHEET TITLE: GENERAL NOTES (CONTINUED)



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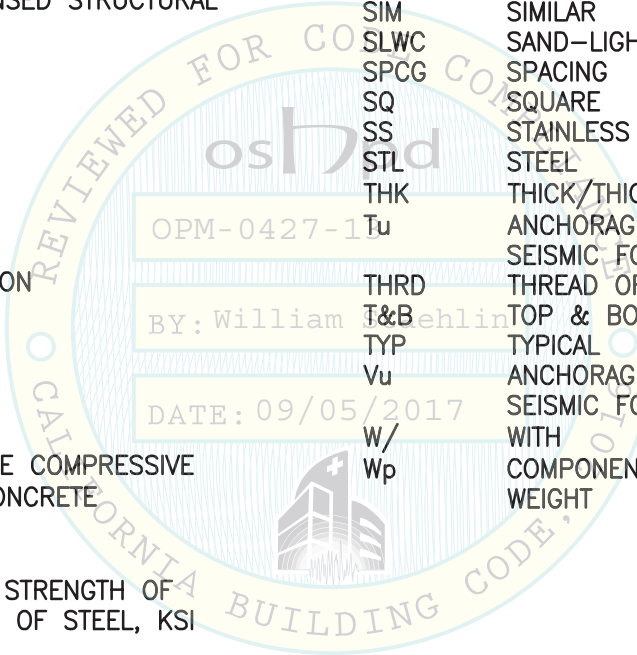
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ABBREVIATIONS:

@	AT	NO. (#)	NUMBER OR POUNDS
AB	ANCHOR BOLT	NWC	NORMAL WEIGHT CONCRETE
ABV	ABOVE	OC	ON CENTER
ADJ	ADJACENT	OCD	ORTHO CLINICAL DIAGNOSTICS
AISI	AMERICAN IRON & STEEL INSTITUTE	OP	OPERATING
ALUM	ALUMINUM	OPG	OPENING
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	OPM	OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS	OSHPD	OFFICE OF STATEWIDE HEALTH PLANNING & DEVELOPMENT
BLDG	BUILDING	PG	PAGE
BLW	BELOW	⌞	PLATE
BOTT	BOTTOM	PSI	POUNDS PER SQUARE INCH
BYD	BEYOND	REQ	REQUIRED
CBC	CALIFORNIA BUILDING CODE	SEOR	STRUCTURAL ENGINEER OF RECORD
CG	CENTER OF GRAVITY	SIM	SIMILAR
CLSE	CALIFORNIA LICENSED STRUCTURAL ENGINEER	SLWC	SAND-LIGHTWEIGHT CONCRETE
Ⓞ	CENTERLINE	SPCG	SPACING
CONC	CONCRETE	SQ	SQUARE
CONN	CONNECTION	SS	STAINLESS STEEL
COORD	COORDINATE	STL	STEEL
DBL	DOUBLE	THK	THICK/THICKNESS
DTL(S)	DETAIL(S)	Tu	ANCHORAGE TENSION REACTION DUE TO SEISMIC FORCE AT LRFD
DIA (∅)	DIAMETER	THRD	THREAD OR THREADED
(E)	EXISTING CONDITION	T&B	TOP & BOTTOM
EA	EACH	TYP	TYPICAL
EE	EACH END	Vu	ANCHORAGE SHEAR REACTION DUE TO SEISMIC FORCE AT LRFD
ELEV	ELEVATION	W/	WITH
EQ	EQUAL	Wp	COMPONENT OPERATING WEIGHT
EQUIP	EQUIPMENT		
f'c	MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE		
FLR	FLOOR		
FT (')	FOOT/FEET		
Fy	SPECIFIED YIELD STRENGTH OF REINFORCING, PS OF STEEL, KSI		
GA	GAUGE		
ICC	INTERNATIONAL CODE COUNCIL		
IN (")	INCH		
INFO	INFORMATION		
KSI	KIPS PER SQUARE INCH		
LBS	POUNDS		
LRFD	LOAD AND RESISTANCE FACTOR DESIGN		
MAX	MAXIMUM		
MFR	MANUFACTURER		
MIN	MINIMUM		
MTL	METAL		



SHEET TITLE: ABBREVIATIONS

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DESIGN CRITERIA:

1. SUPPORT & ATTACHMENT DESIGN IS PER 2016 CBC AT LRFD LEVEL FORCES.

OTHER MECHANICAL OR ELECTRICAL COMPONENTS PER TABLE 13.6-1 OF ASCE 7-10 SUPPLEMENT #1:

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

W_p AS NOTED ON DRAWINGS

UPPER FLRS ABV THE BASE OF BUILDING, $z/h \leq 0.75$

CASE 1: $S_{DS} \leq 2.50 \quad F_p = 2.50 W_p$

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

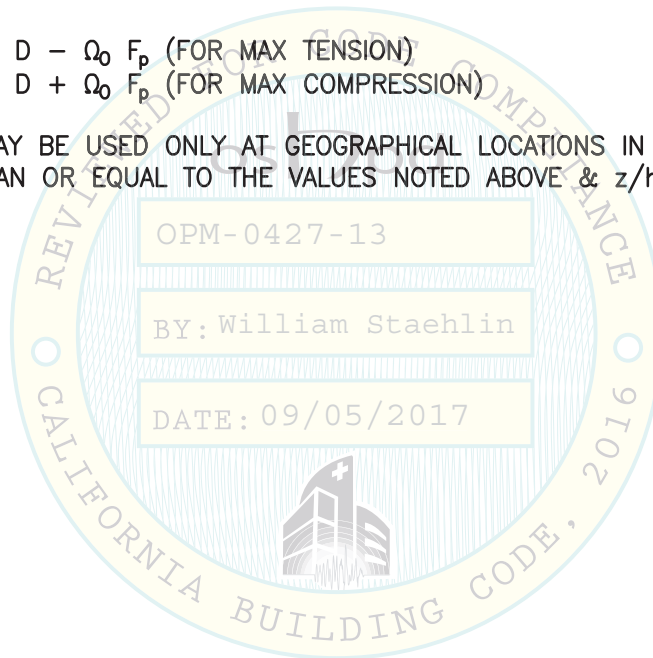
CASE 2: $S_{DS} \leq 2.50 \quad F_p = 1.13 W_p$

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)

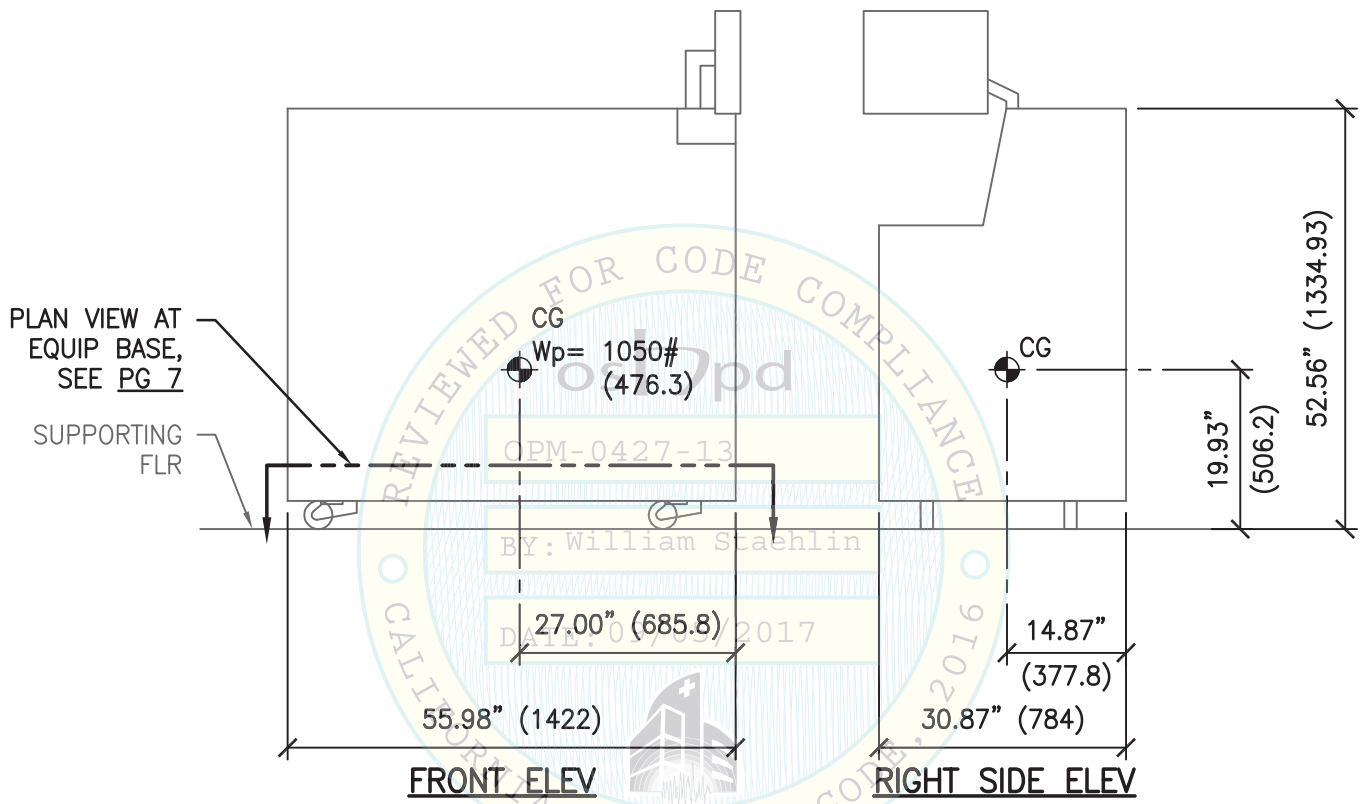
2. THIS PRE-APPROVAL MAY BE USED ONLY AT GEOGRAPHICAL LOCATIONS IN THE STATE OF CALIFORNIA WHERE S_{DS} IS LESS THAN OR EQUAL TO THE VALUES NOTED ABOVE & $z/h \leq 0.75$.



SHEET TITLE: SYSTEM OVERVIEW & DESIGN CRITERIA

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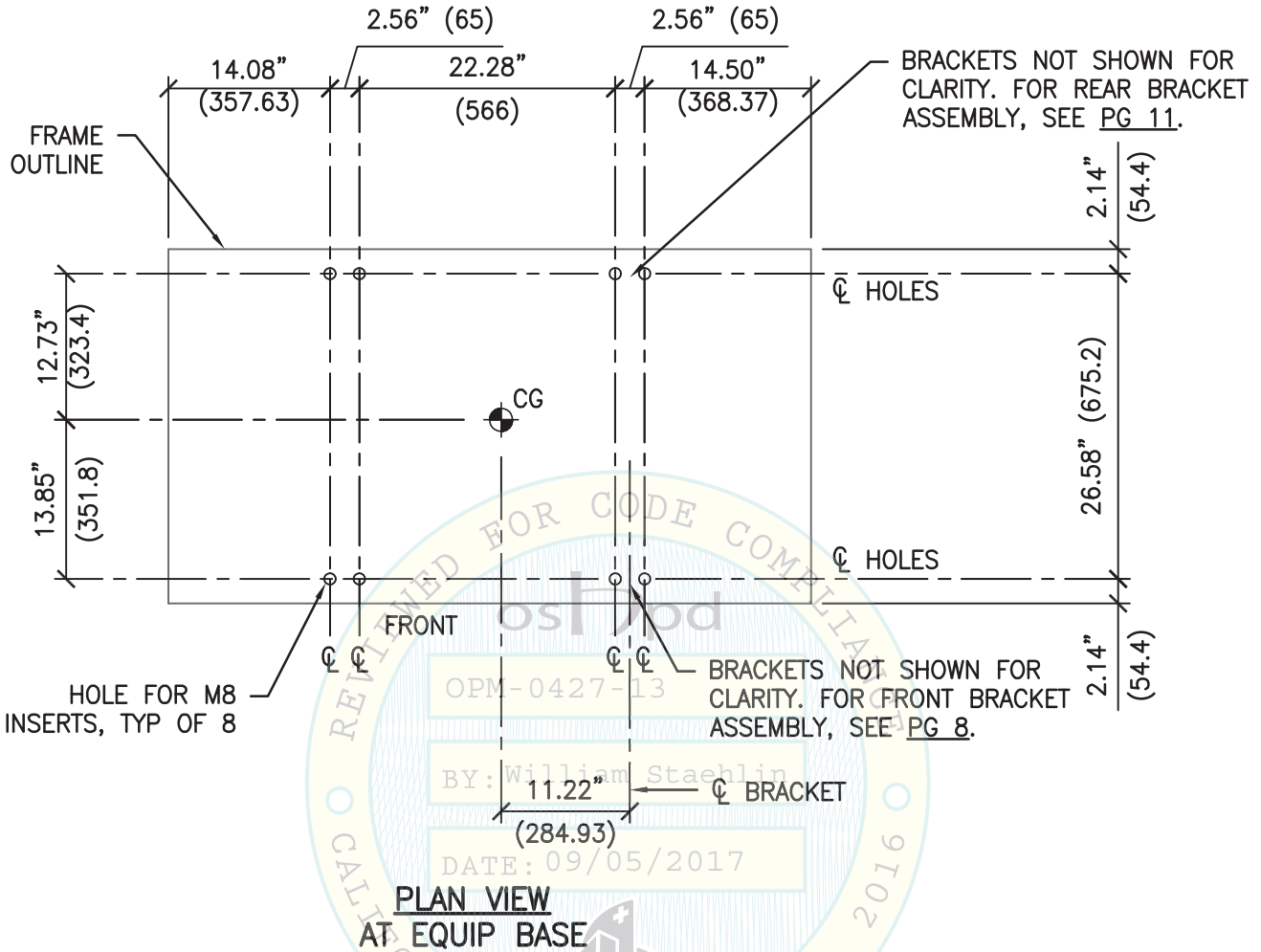


SHEET TITLE: ELEVATIONS

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VITROS XT 3400
MEDICAL ANALYZER

Ortho Clinical Diagnostics



SHEET TITLE: PLAN VIEW



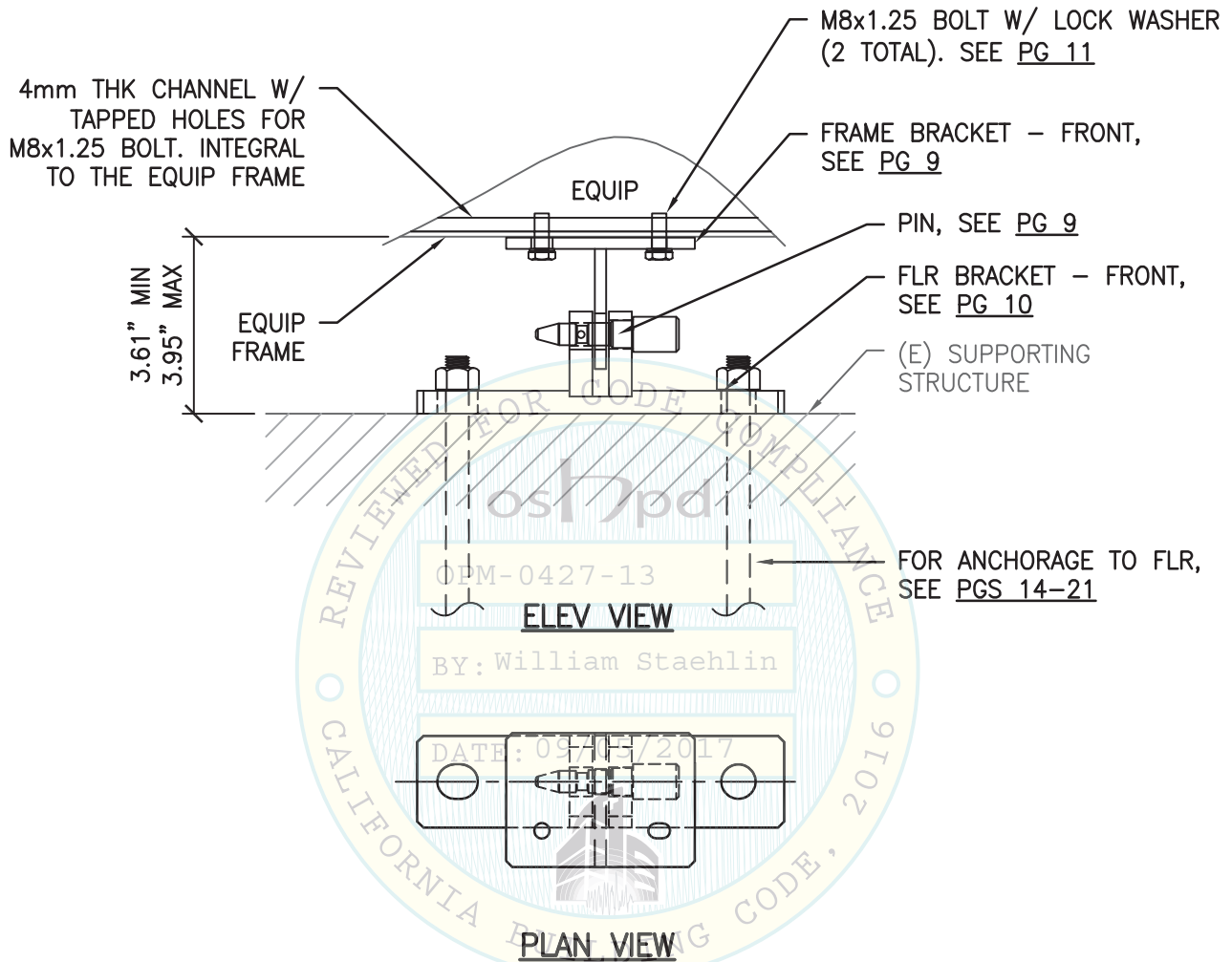
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SHEET TITLE: FRONT BRACKET ASSEMBLY

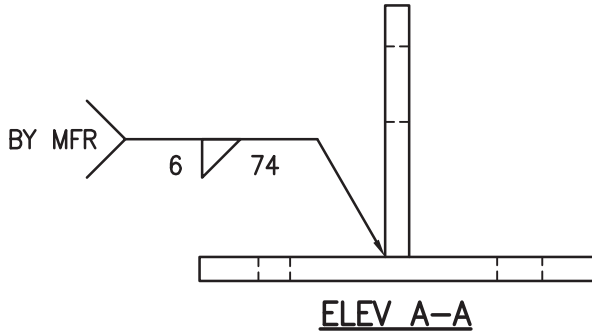


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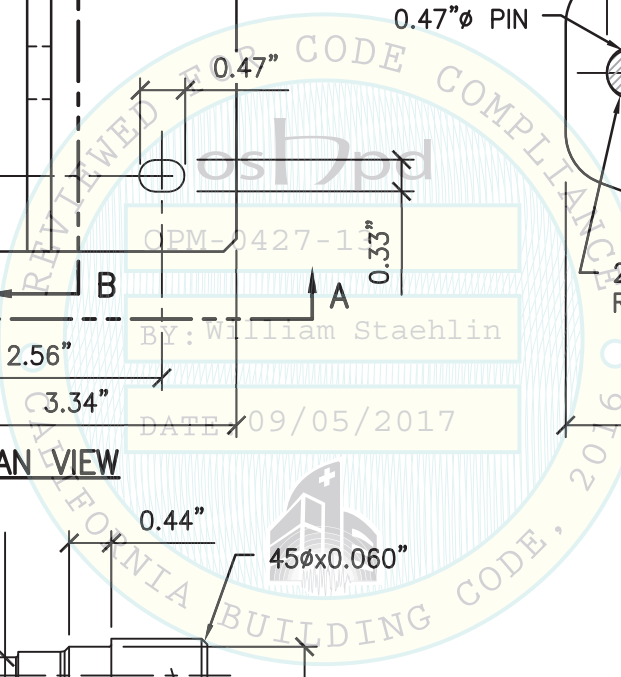
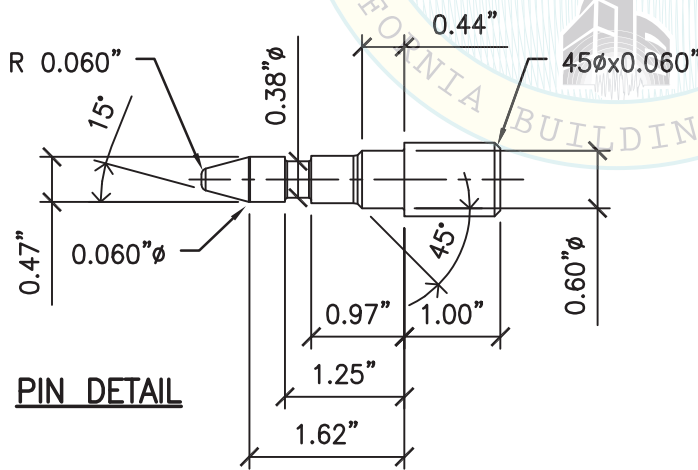
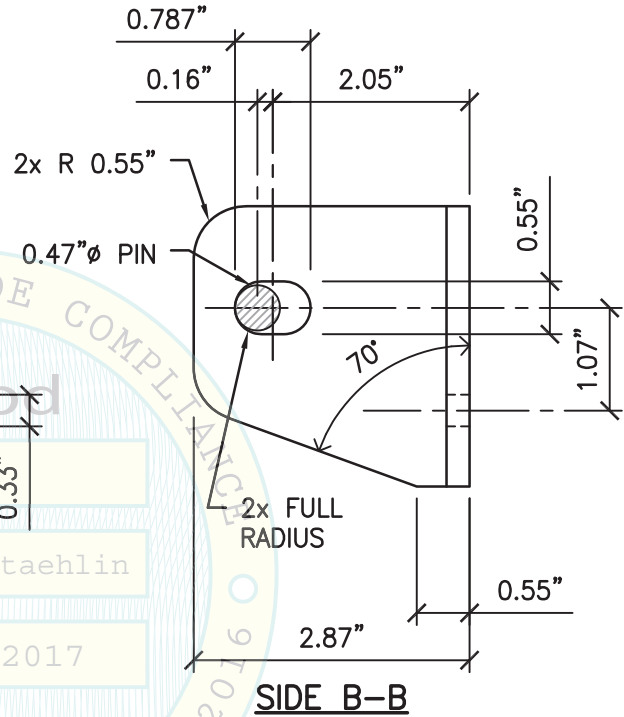
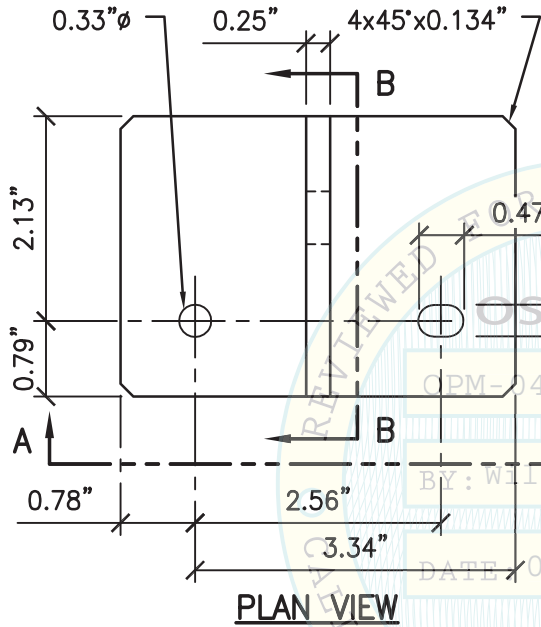
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- NOTES:**
- BRACKET MATERIAL IS AISI 1018 PER ASTM A400 (MIN Fy= 50 KSI).
 - PIN MATERIAL IS AISI 1018 PER ASTM A400 (MIN Fy= 50 KSI).



SHEET TITLE: FRAME BRACKET - FRONT



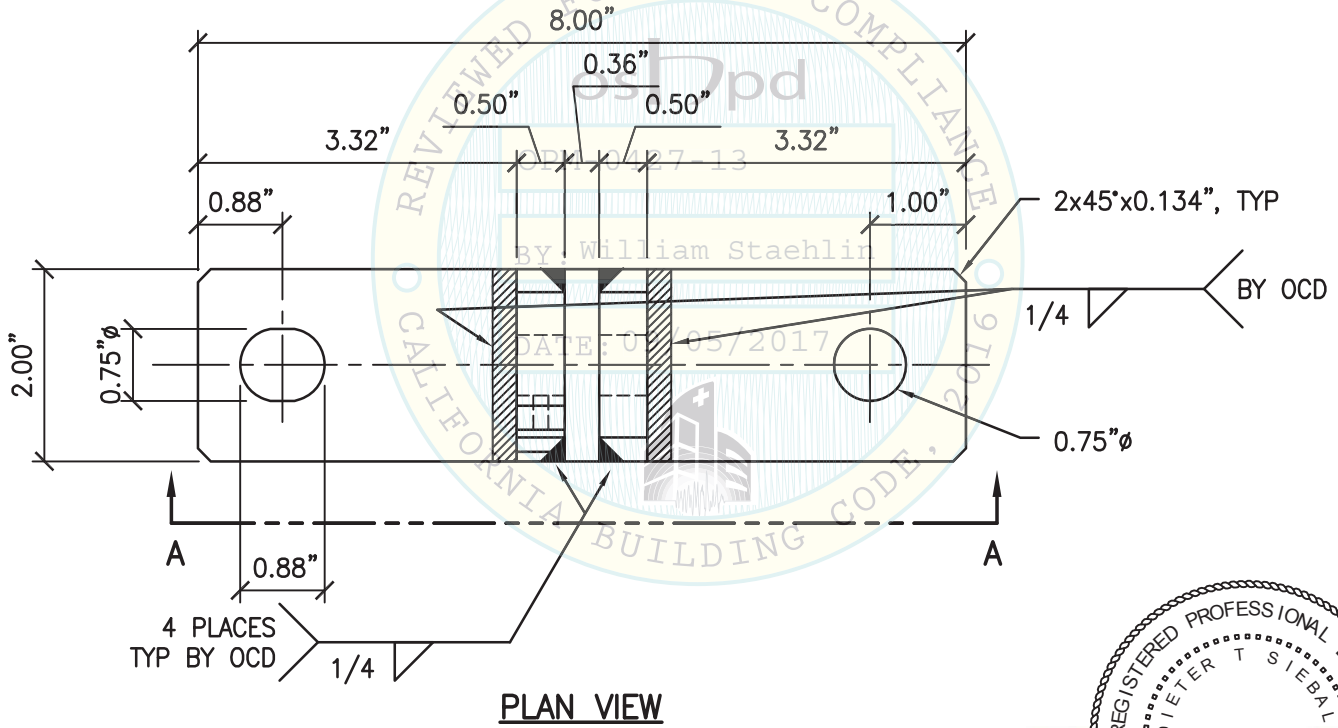
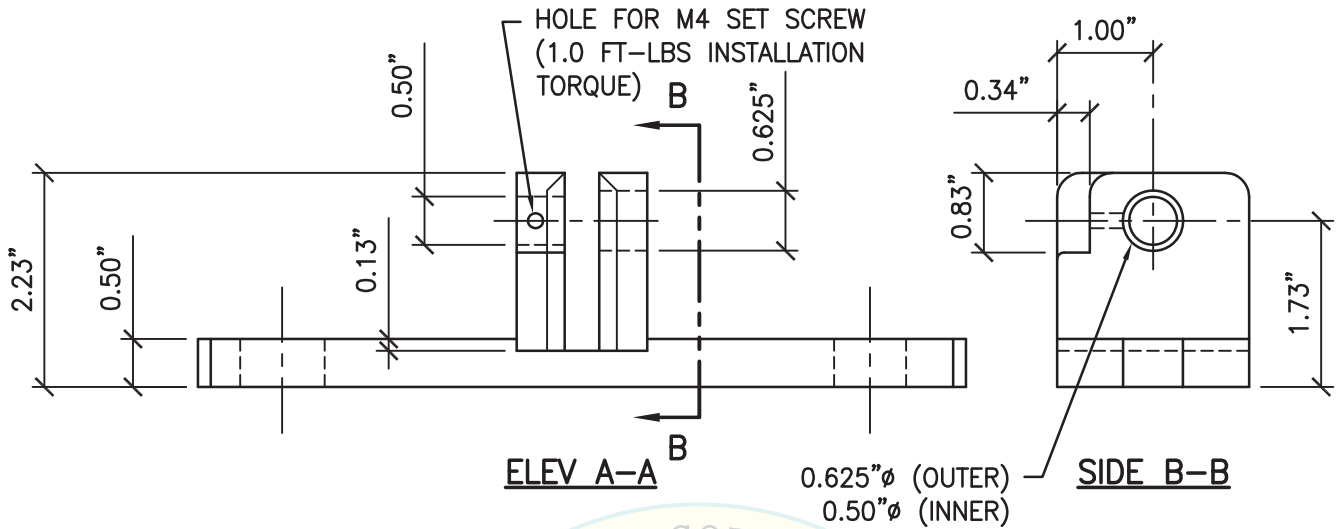
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PLAN VIEW

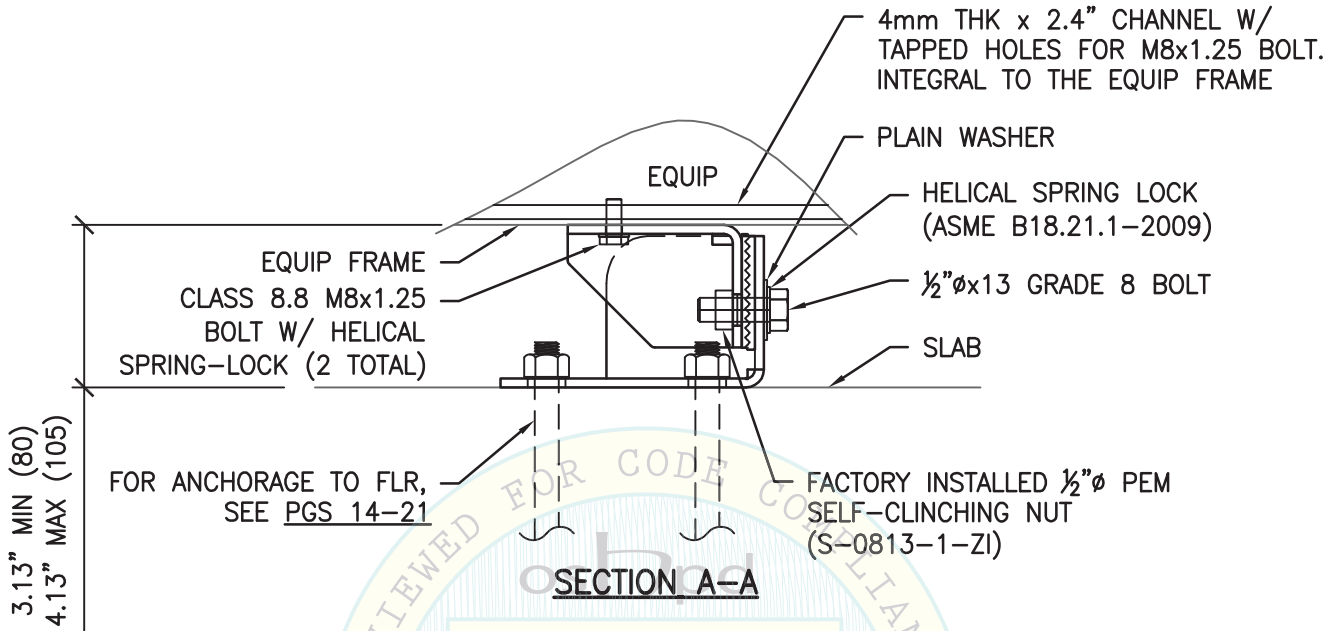
NOTE:
BRACKET MATERIAL IS ASTM 1018/1020
GRADE 30 SS



SHEET TITLE: FLOOR BRACKET - FRONT

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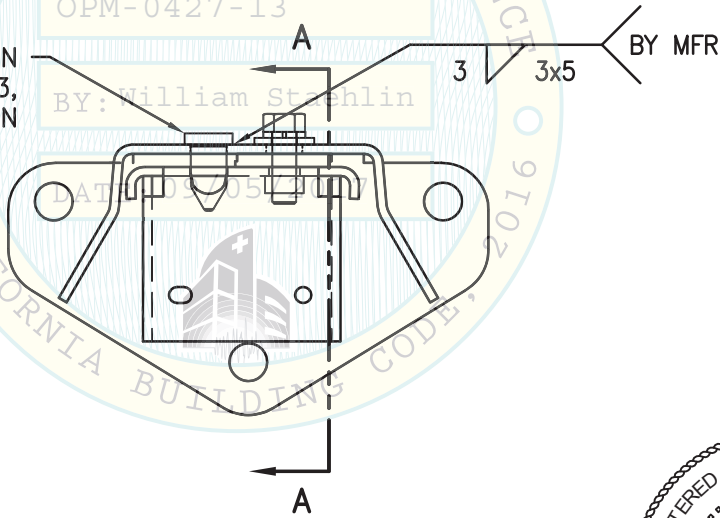


3.13" MIN (80)
4.13" MAX (105)

FOR ANCHORAGE TO FLR,
SEE PGS 14-21

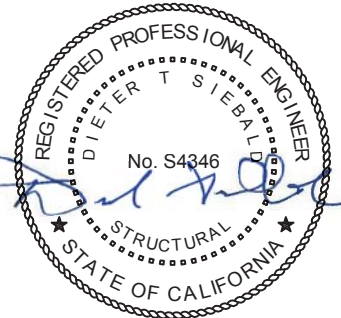
SECTION A-A

0.748"Ø ALIGNMENT PIN
PER ASTM A582 TYPE 303,
Fy= 30 KSI MIN



PLAN VIEW

NOTE:
CHANNEL MATERIAL IS EN 10250-2:2000 GR S235JRG2
(Fy= 29.7 KSI).



SHEET TITLE: REAR BRACKET ASSEMBLY



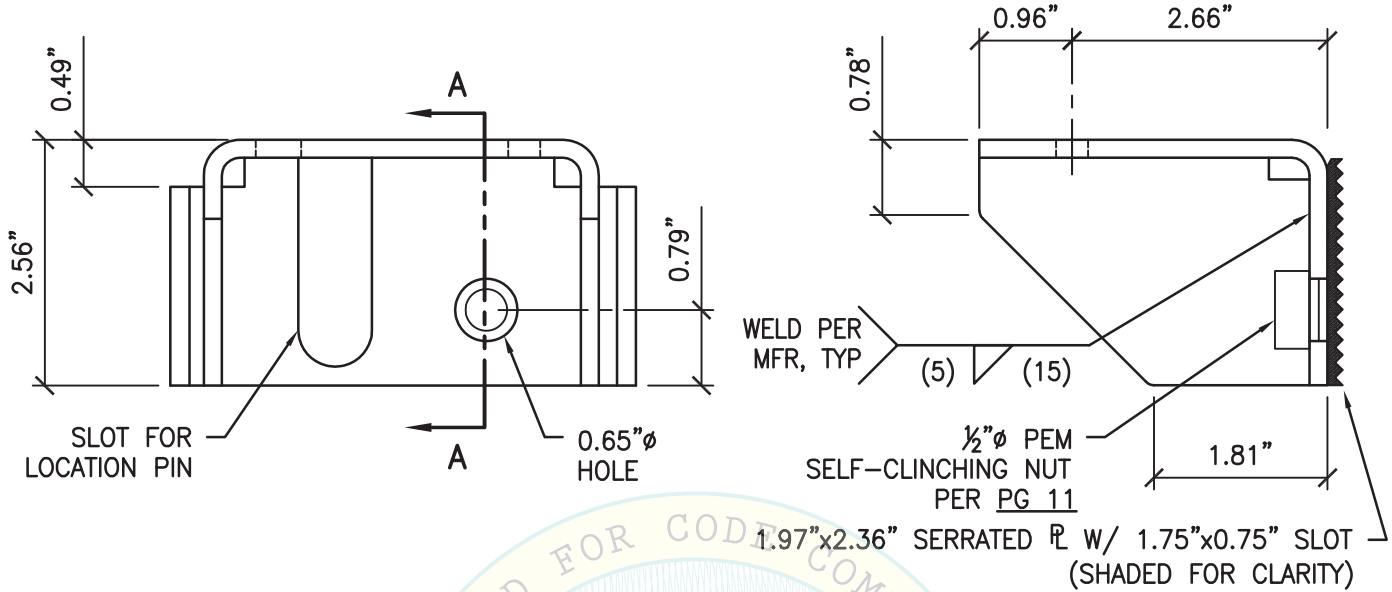
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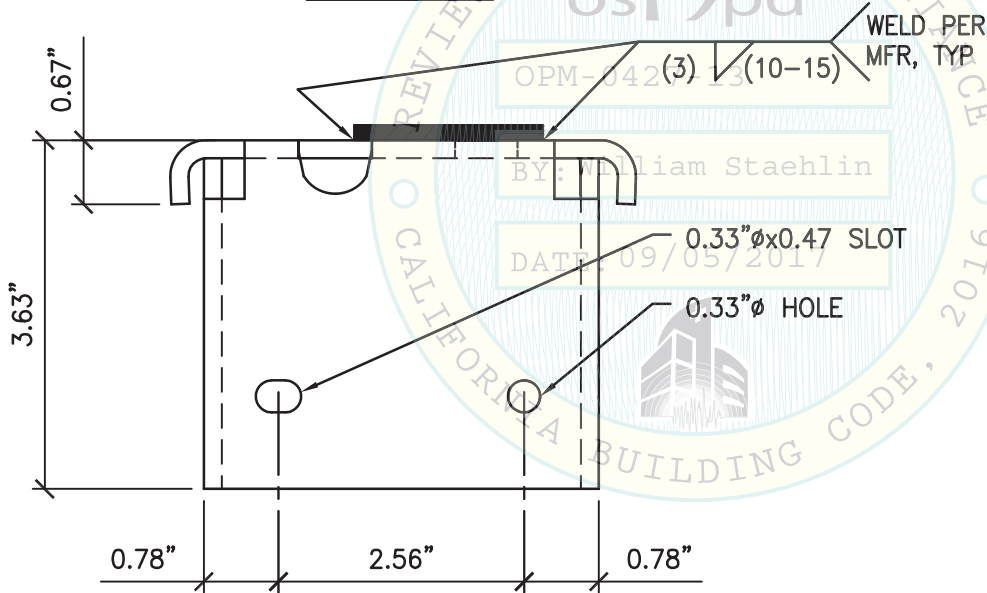
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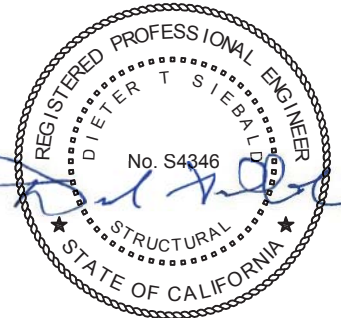
FRONT ELEV



PLAN VIEW

SECTION A-A

NOTE:
BRACKET & SERRATED \bar{r} MATERIAL IS 0.16" THK AISI 304 OR 316 SS
PER ASTM A240 (MIN $F_y = 30$ KSI).



SHEET TITLE: FRAME BRACKET - REAR



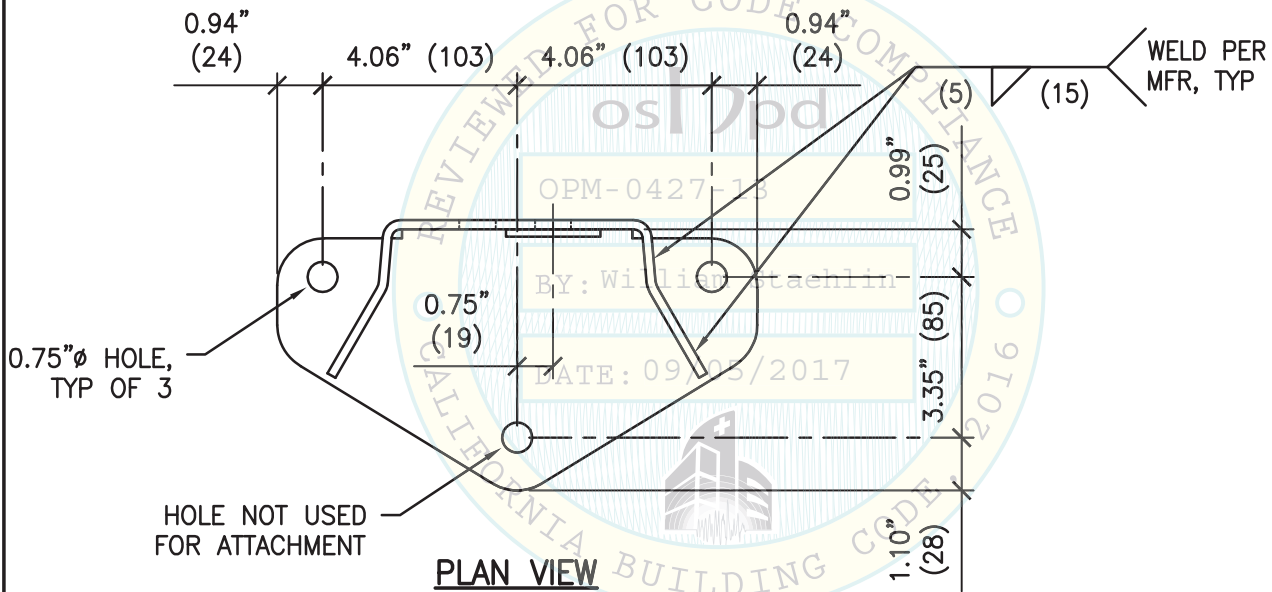
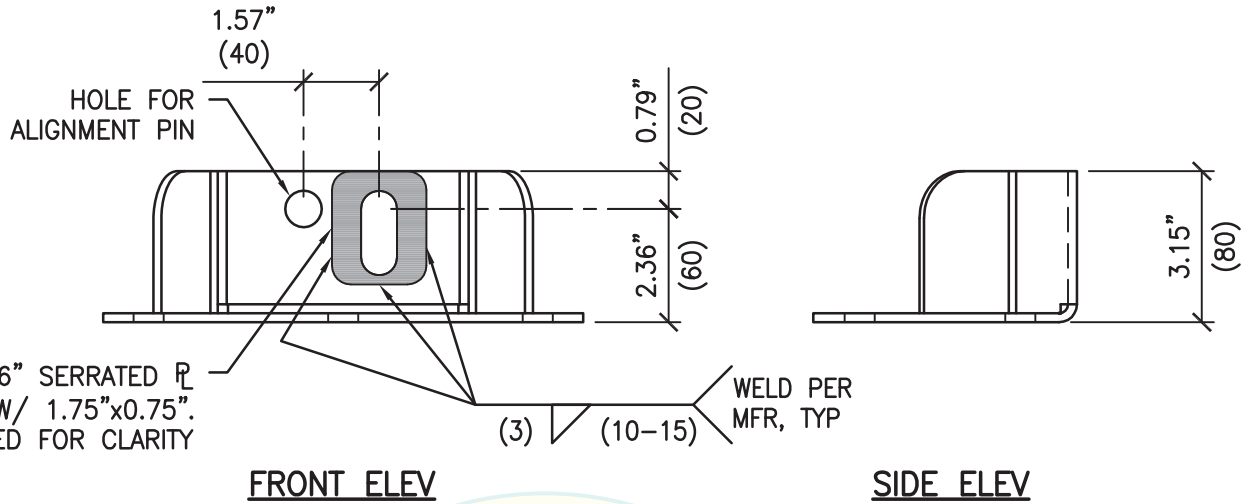
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NOTE:
BRACKET & SERRATED \bar{R} MATERIAL IS 0.16" THK AISI 304 OR 316 SS PER ASTM A240 (MIN $F_y = 30$ KSI).



SHEET TITLE: FLOOR BRACKET - REAR



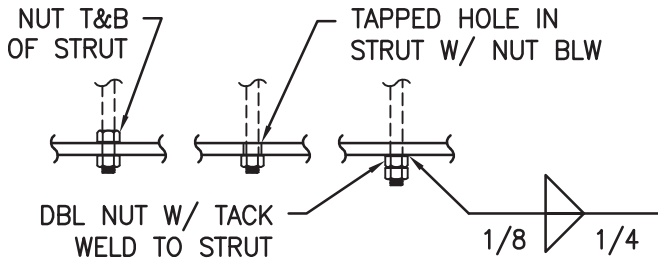
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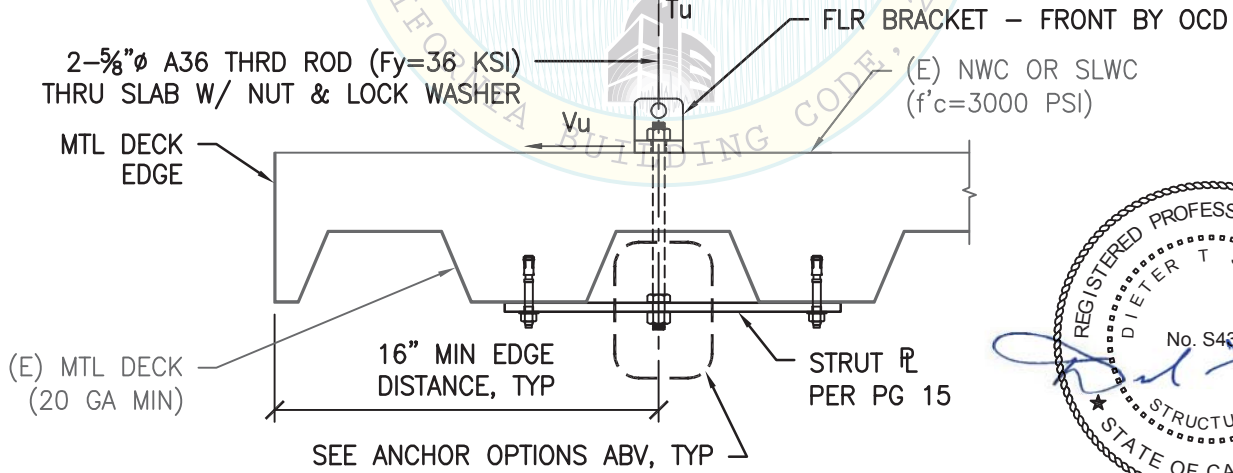
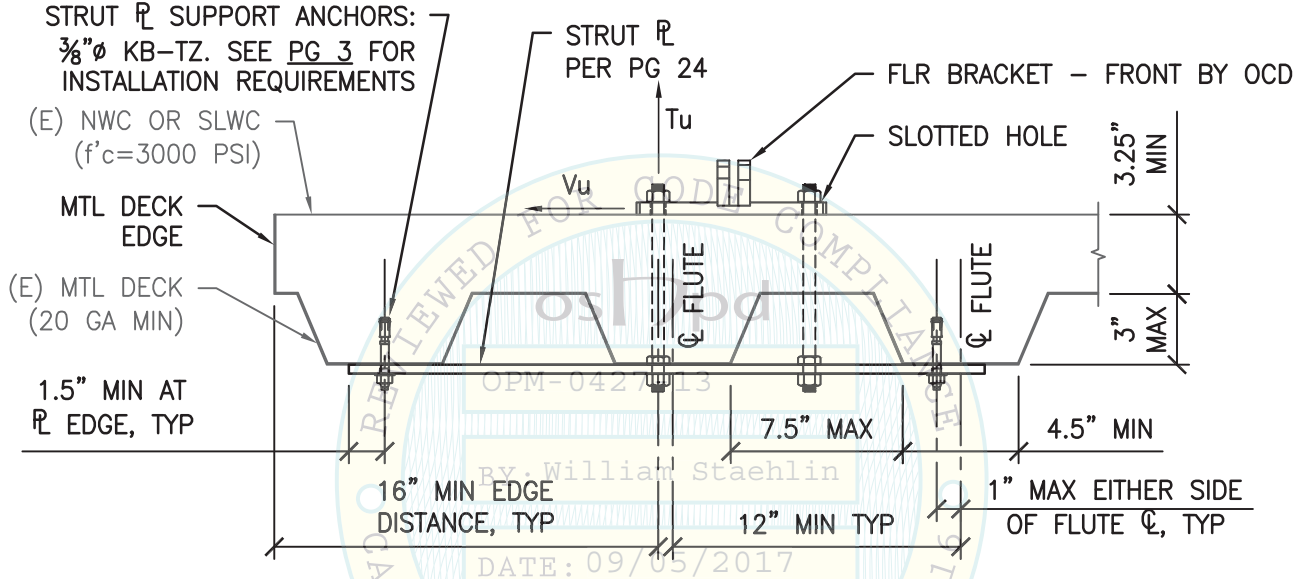


MAX ANCHOR FORCES AT LRFD AT EA ANCHOR BOLT

	Tu	Vu
CASE 1 z/h ≤ 0.75 W/O Ω _b	1050#	407#
CASE 1 z/h ≤ 0.75 W/ Ω _b	1050#	611#

ANCHOR OPTIONS

(Ω_b = 1.5) OVERSTRENGTH FACTOR MUST BE APPLIED TO SHEAR FORCE ONLY



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



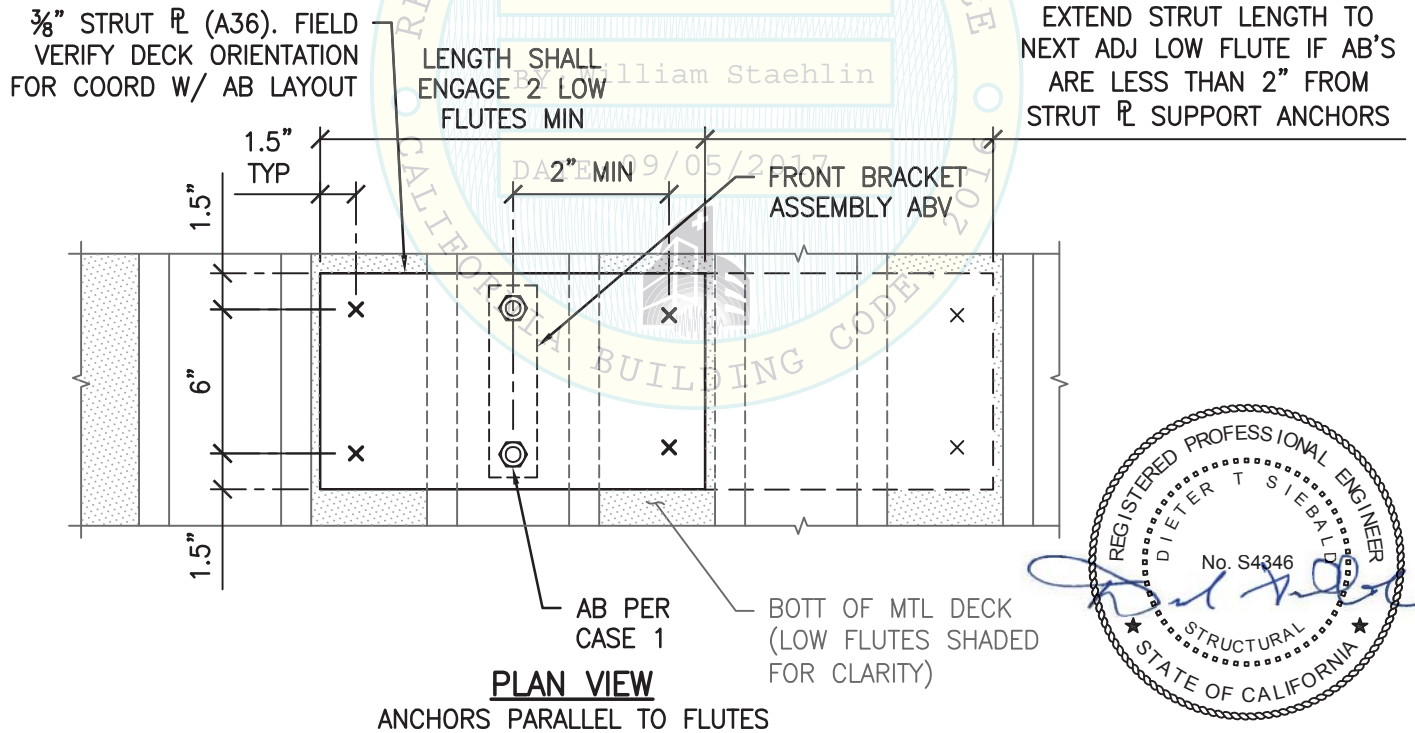
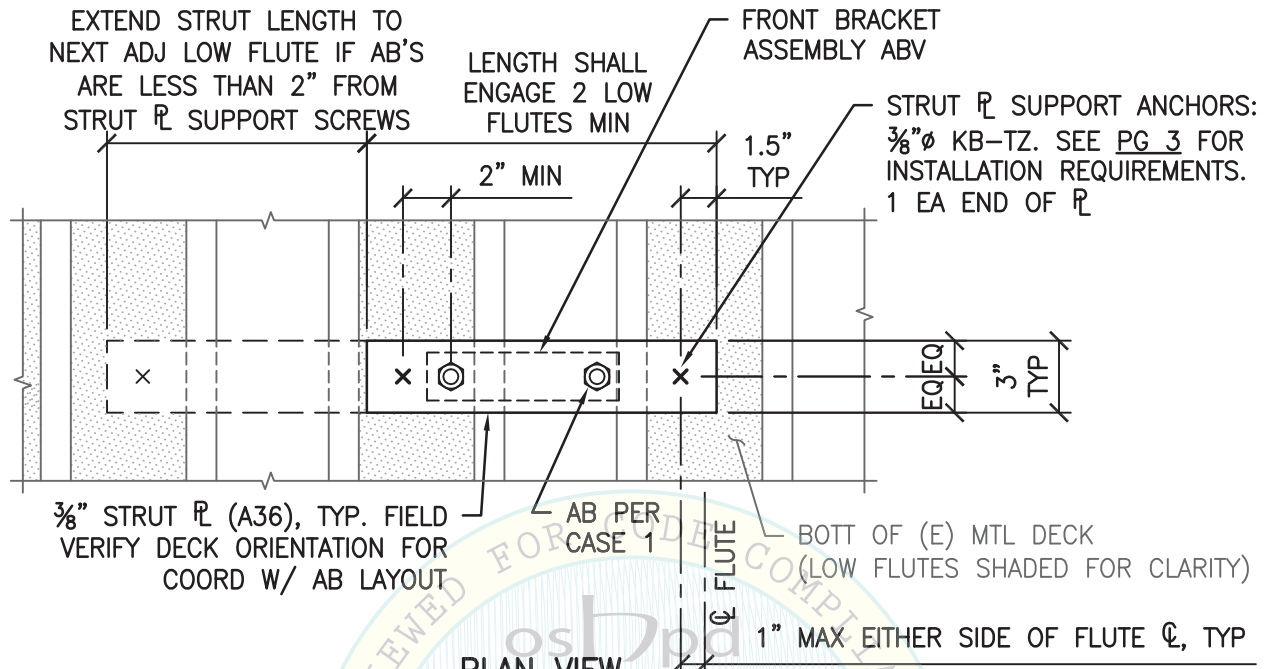
CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

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

Job No: 16117
Date: 08-28-2017
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SHEET TITLE: ATTACHMENT DETAIL TO
CONCRETE FILL OVER METAL DECK (CASE 1)



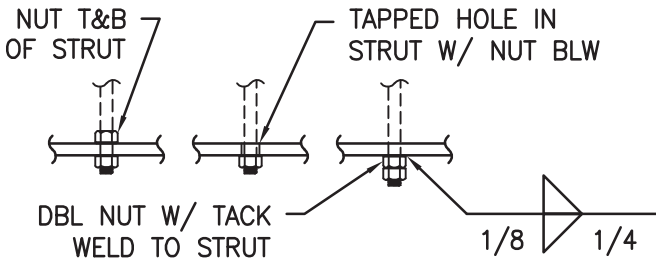
CYS STRUCTURAL ENGINEERS, INC.

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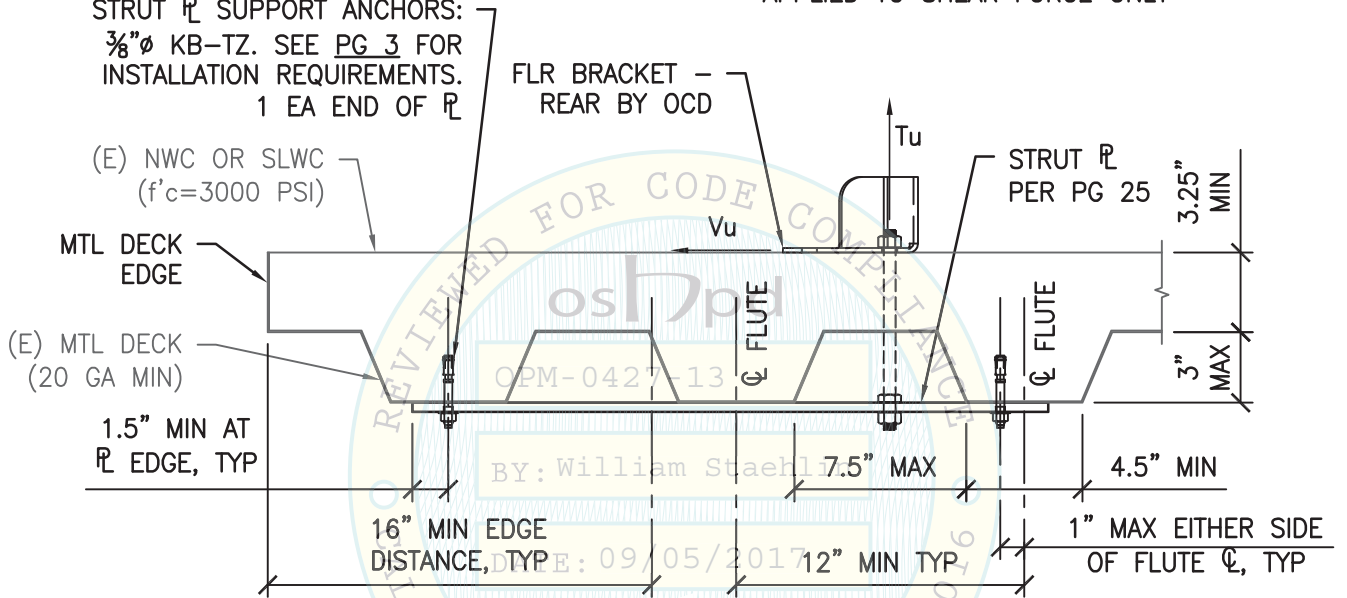
ANCHOR OPTIONS

STRUT \perp SUPPORT ANCHORS:
 $\frac{3}{8}$ " ϕ KB-TZ. SEE PG 3 FOR
INSTALLATION REQUIREMENTS.
1 EA END OF \perp

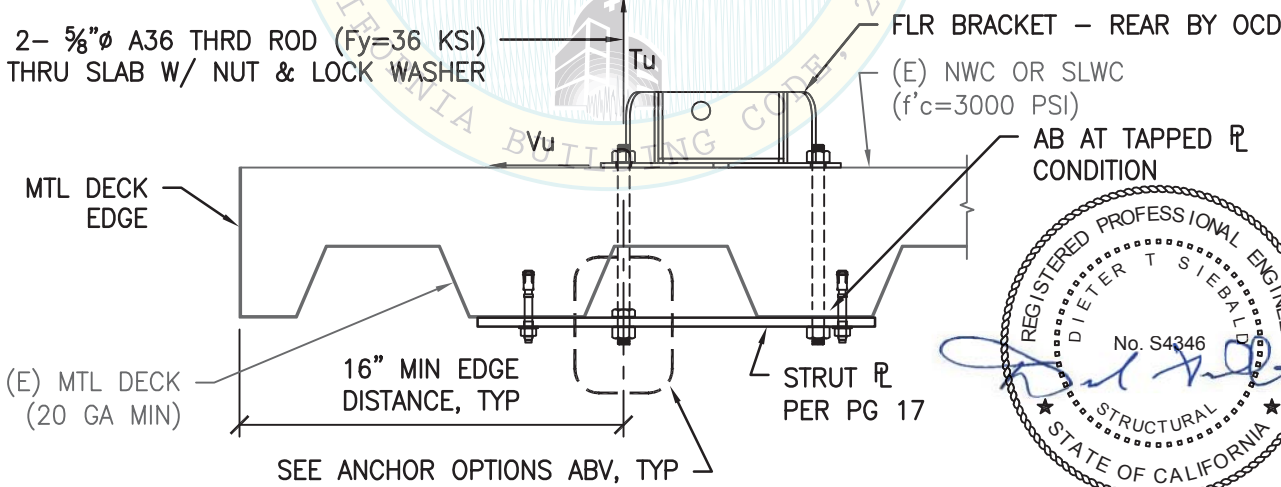
MAX ANCHOR FORCES AT
LRFD AT EA ANCHOR BOLT

	Tu	Vu
CASE 1 z/h \leq 0.75 W/O Ω_o	1190#	511#
CASE 1 z/h \leq 0.75 W/ Ω_o	1190#	767#

($\Omega_o = 1.5$) OVERSTRENGTH FACTOR MUST BE
APPLIED TO SHEAR FORCE ONLY



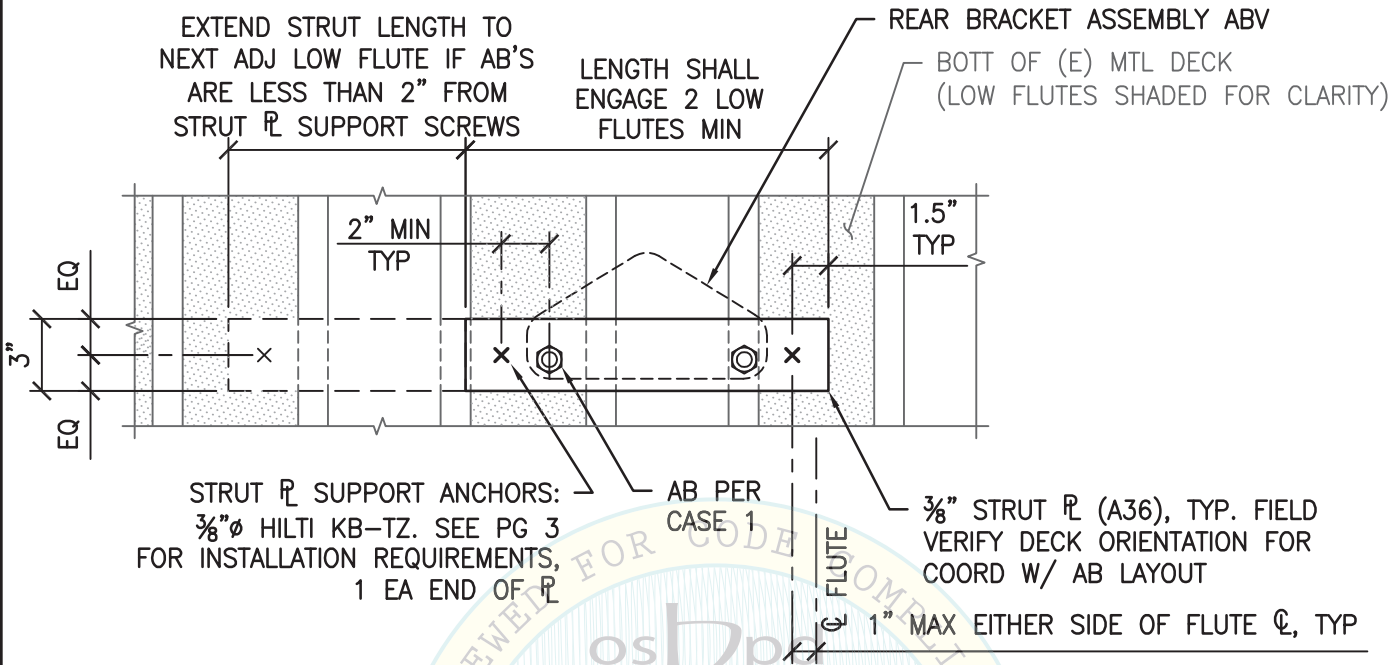
2- $\frac{5}{8}$ " ϕ A36 THRD ROD ($F_y = 36$ KSI)
THRU SLAB W/ NUT & LOCK WASHER



SHEET TITLE: ATTACHMENT DETAIL
CONCRETE FILL OVER METAL DECK (CASE 1)

<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 16117 Date: 08-28-2017 Page: 16 of 19
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L:\Jobs\16117 OCD Vitros XT 3400 OPM-0427-13\STRU\S1.DWG Time: Aug 28, 2017 - 12:30pm Login: camachom DimScale: 1 L1Scale: 6



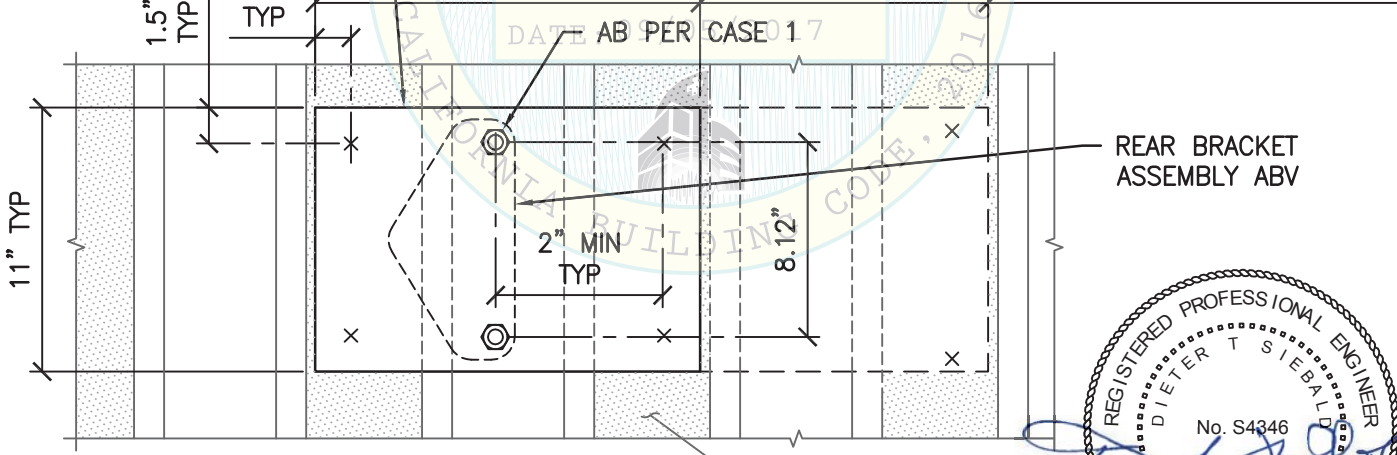
PLAN VIEW

ANCHORS PERPENDICULAR TO FLUTES

$\frac{3}{8}$ " STRUT (A36). FIELD VERIFY DECK ORIENTATION FOR COORD W/ AB LAYOUT

LENGTH SHALL ENGAGE 2 LOW FLUTES MIN

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



PLAN VIEW

ANCHORS PARALLEL TO FLUTES



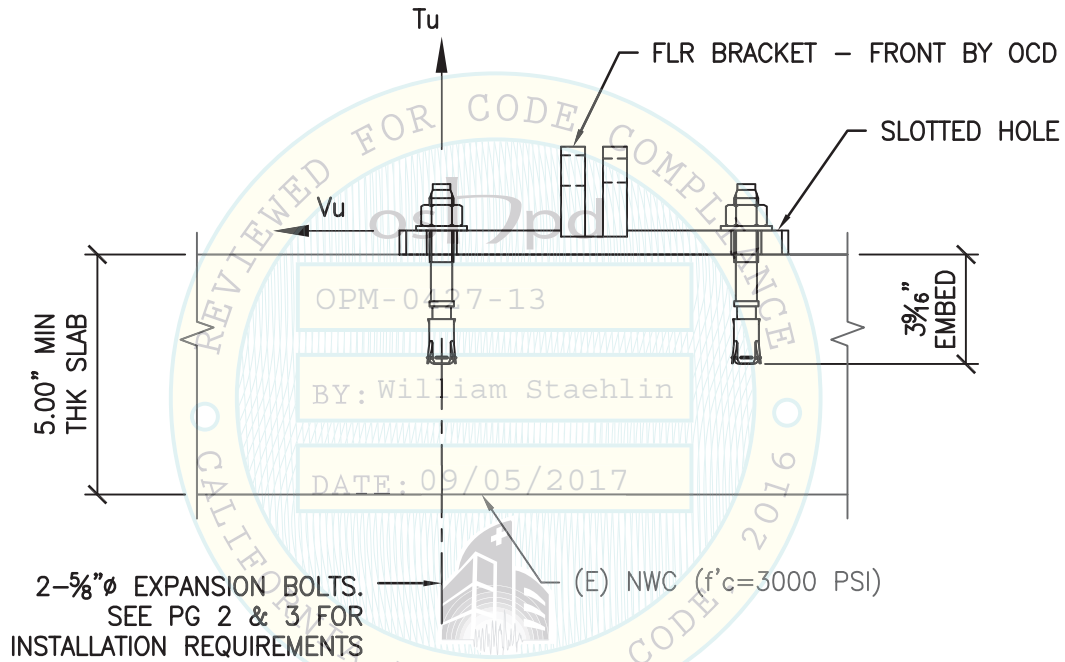
SHEET TITLE: ATTACHMENT DETAIL TO
CONCRETE FILL OVER MDETAL DECK (CASE 1)

 <p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 16117 Date: 08-28-2017 Page: 17 of 19
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MAX ANCHOR FORCES AT LRFD AT EA ANCHOR BOLT		
	Tu	Vu x,y
CASE 2 z/h=0	692#	468#

INCLUDES OVERSTRENGTH FACTOR ($\Omega_0=1.5$)



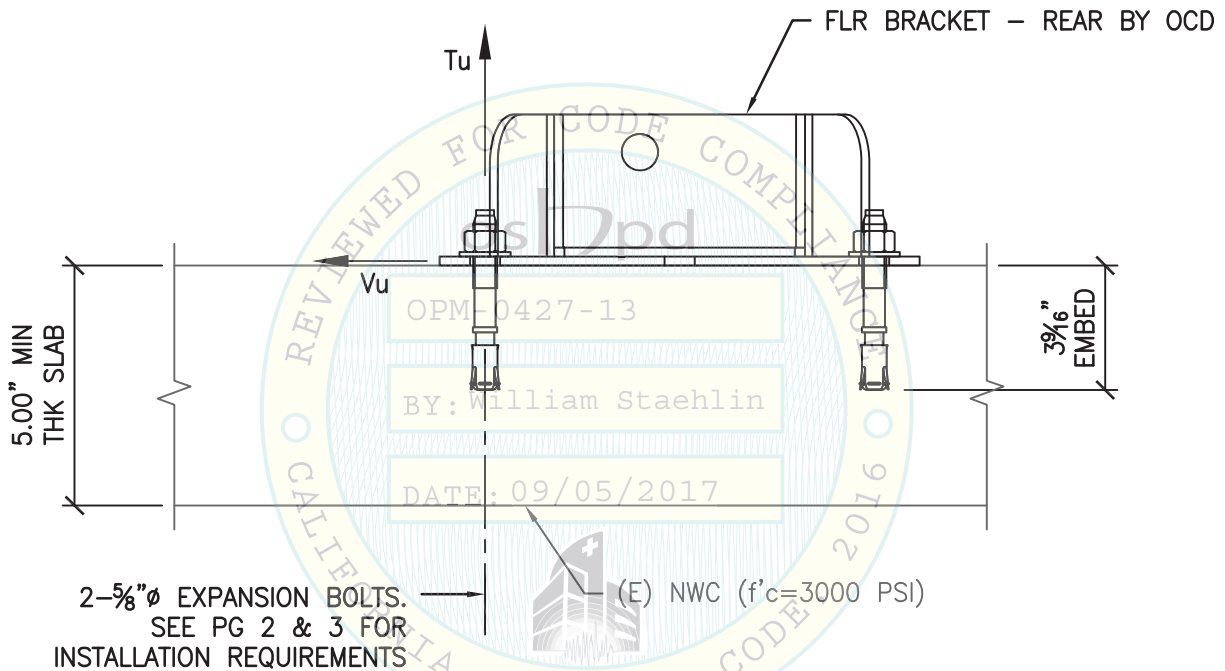
SHEET TITLE: ATTACHMENT DETAIL TO
5" CONCRETE SLAB ON GRADE (CASE 2)

 <p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 16117 Date: 08-28-2017 Page: 18 of 19
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MAX ANCHOR FORCES AT LRFD AT EA ANCHOR BOLT	
Tu	Vu
CASE 2 z/h=0	782#
	272#

INCLUDES OVERSTRENGTH FACTOR ($\Omega_0=1.5$)



SHEET TITLE: ATTACHMENT DETAIL TO
5" CONCRETE SLAB ON GRADE (CASE 2)

 <p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 16117 Date: 08-28-2017 Page: 19 of 19
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L:\Jobs\16\16117 OCD Vitros XT 3400 OPM-0427-13\STRU\S1.DWG Time: Aug 28, 2017 - 12:30pm Login: camachom DimScale: 1 LScale: 6