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

OFFICE USE ONLY
APPLICATION #: OPM-0109-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: ☒ New ☐ Renewal ☒ Update to Pre-CBC 2013 OPA Number: OPA-1581

Manufacturer Information

Manufacturer: Ortho Clinical Diagnostics Part of the Johnson & Johnson Family of Companies

Manufacturer's Technical Representative: Frank Koetter

Mailing Address: 100 Indigo Creek Drive, MC00891, Rochester, NY 14626-5101

Telephone: 1-585-453-4003 Email: FKoetter@its.jnj.com

Product Information

Product Name: Vitros ECi and Vitros ECiQ

Product Type: Immunodiagnostic System

Product Model Number: Vitros ECi and Vitros ECiQ

General Description: Immunodiagnostic Blood Analyzer

Applicant Information

Applicant Company Name: Ortho Clinical Diagnostics Part of Johnson & Johnson Family of Companies

Contact Person: Frank Koetter

Mailing Address: 100 Indigo Creek Drive, MC00891, Rochester, NY 14626-5101

Telephone: 1-585-453-4003 Email: FKoetter@its.jnj.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2013.

Signature of Applicant: Date: 5/9/14

Title: Group Director, Systems Development & LCM Company Name: Ortho Clinical Diagnostics

Registered Design Professional Preparing Engineering Recommendations

Company Name: CYS Structural Engineers, Inc.

Name: Dieter T. Siebald California License Number: S.E. #4346

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

Telephone: 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 1950-10

☐ Other* (Please Specify):

*Use of criteria other than those adopted by the California Building Standards Code, 2013 (CBSC 2013) 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 2013 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 2013 ONLY

Signature: Date: October 24, 2014

Print Name: William Staehlin

Title: Senior Structural Engineer

Condition of Approval (if applicable):

OPM–0109–13
TABLE OF CONTENTS

NOTES:

1. THESE DRAWINGS ARE PREPARED FOR ORTHO CLINICAL DIAGNOSTICS, ROCHESTER, NEW YORK.
2. THE CONTRACTOR AND INSPECTOR OF RECORD SHALL OBTAIN A COPY OF THIS PRE–APPROVAL FROM THE OSHPD PRE–APPROVAL PROGRAMS WEBSITE.
3. THIS PRE–APPROVAL COVERS THE ATTACHMENTS OF THE COMPONENT (EQUIPMENT) TO THE SUPPORTING STRUCTURE. THE COMPONENT AND ATTACHMENT HARDWARE ARE SUPPLIED BY ORTHO CLINICAL DIAGNOSTICS (OCD). THROUGH BOLTS, UNDER FLOOR HARDWARE AND ATTACHMENTS AT SOFFIT UNDER METAL DECK AND EXPANSION BOLTS SHOWN ON PAGES 10, 11 & 12 SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR.

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

SHEET TITLE: TABLE OF CONTENTS

CYS STRUCTURAL ENGINEERS, INC.
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SACRAMENTO, CA 95833
TEL (916) 920-2020
www.cyseng.com

Job No:	13072.06
Date:	9/19/2014
Page:	1 of 12

GENERAL NOTES:

1. THIS OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2013. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2013.
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 EQUIPMENT IN ADDITION TO ALL OTHER LOADS. PROVIDE AND DESIGN SUPPLEMENTARY MEMBERS AS REQUIRED.
   - B. THAT THE FLOOR ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY SLAB EDGES OR OPENINGS.
   - C. THAT THE FLOOR ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY NEW OR EXISTING ANCHORS. THE SPACING SHOWN IN THE TEST LOADS TABLE ON PAGE 3 IS THE REQUIRED MINIMUM SPACING OF THE ½" DIAMETER ANCHOR BOLTS. THE REQUIRED SPACING FROM ANCHORS OF OTHER DIAMETERS AND EMBEDMENTS MAY VARY AND SHALL BE EVALUATED BY THE SEOR.
   - D. THAT THE INSTALLATION IS IN CONFORMANCE WITH THE CBC 2013 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.
   - F. THAT THE PROPER SPECIFIC VALUES OF S_{DS} & z/h RESULT IN SEISMIC FORCES (Eh, Ev) THAT DO NOT EXCEED THE VALUES IN THE DETAILS.
3. A. EXPANSION ANCHORS INSTALLED IN NORMAL WEIGHT OR SAND-LIGHTWEIGHT CONCRETE SHALL BE STAINLESS STEEL HILTI KB-TZ EXPANSION ANCHORS COMPLYING WITH ESR-1917 REISSUED MAY 1, 2013.
   - B. INSTALLATION: INSTALL THE EXPANSION ANCHORS IN ACCORDANCE WITH THE REQUIREMENTS GIVEN IN THE ICC EVALUATION REPORT FOR THE SPECIFIC ANCHOR AND THE PARAMETERS GIVEN IN THE TABLE ON PAGE 3.
   - C. JOB TESTING: FOR VERIFYING SATISFACTORY INSTALLATION WORKMANSHIP, PERFORM JOB SITE TESTING IN ACCORDANCE WITH THE TENSION 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 TENSION IN THE ANCHOR SUCH AS DIRECT PULL WITH A HYDRAULIC JACK OR CALIBRATED SPRING LOADING DEVICES OR CALIBRATED TORQUE WRENCH METHOD. ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE INSPECTOR OF RECORD. REPORT OF TEST RESULTS TO BE SUBMITTED TO OSHPD. 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 1913A.7 "FIELD TESTS FOR POST-INSTALLED ANCHORS IN CONCRETE".
   - D. 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. FOR WEDGE TYPE ANCHORS, SUCH AS HILTI KB-TZ,
       A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE.
     - TORQUE WRENCH METHOD: THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN THE FOLLOWING LIMITS: WEDGE TYPE:
       ONE-HALF (½) TURN OF THE NUT.

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SHEET TITLE: GENERAL NOTES

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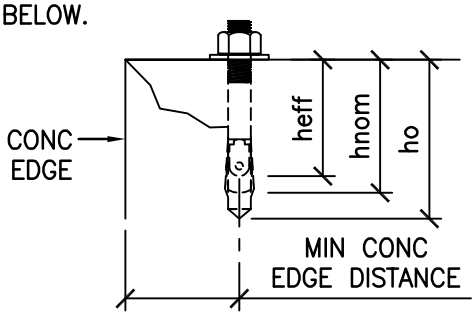
Job No:	13072.06
Date:	9/19/2014
Page:	2 of 12

GENERAL NOTES CONTINUED:

3E. TEST VALUES: APPLY TEST LOADS TO ANCHORS WITHOUT REMOVING THE NUT IF POSSIBLE, SEE TABLE BELOW.



ANCHOR 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 (INCH)	TEST LOAD		CONDITION OF ANCHORAGE
							TENSION LOAD (LBS)	TORQUE (FT-LBS)	
½	2⅜	2	2⅝	4	12	4	1713	40	CASE 2

F. WHEN INSTALLING DRILLED-IN ANCHORS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO EXISTING PRESTRESSED CONCRETE (PRE- OR POST-TENSIONED) LOCATE THE PRESTRESSED TENDONS BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR.

4. 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, UNLESS NOTED OTHERWISE.
   B. THROUGH BOLT HOLES SHALL BE 1/16" LARGER THAN BOLT SIZE (HOLE SIZE = BOLT SIZE + 1/16")
   C. THROUGH 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.
5. SCREW ANCHORS TO BOTTOM OF CONCRETE FILL OVER METAL DECK:
   A. HILTI KH-EZ (ICC ESR-3027) TENSION TEST LOAD FOR CASE 1.

ANCHOR DIA (INCH) da	INSTALLATION EMBED (INCH) hnom	EFFECTIVE EMBED (INCH) hef	HOLE DEPTH (INCH) ho	MIN CONC THICKNESS (INCH) h_{min}	MIN CONC EDGE DISTANCE (INCH)	MIN AB SPACING (INCH)	TENSION TEST LOAD (LBS)
¼	1⅝	1.18	2	3¼	1¼*	10*	400

* SEE PAGE 10 OF 12 IN THIS OPM.

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SHEET TITLE: GENERAL NOTES (CONTINUED)

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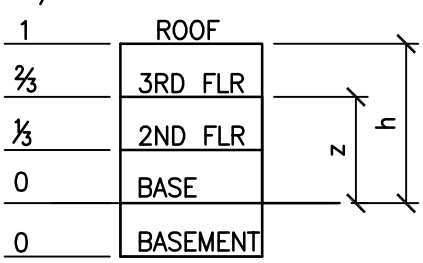
Job No:	13072.06
Date:	9/19/2014
Page:	3 of 12

GENERAL NOTES CONTINUED:

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



CASE 1: ANCHORAGE DETAILS LOCATED AT UPPER FLOORS ABOVE THE BASE OF A BUILDING (z/h<=1.0), IT IS ASSUMED THAT THE FLOORS ARE BUILT OF A MINIMUM 3¼" SAND-LIGHTWEIGHT CONCRETE TOPPING OVER METAL DECK (f'c = 3000 PSI, MINIMUM).
CASE 2: ANCHORAGE DETAILS LOCATED AT OR BELOW THE BASE OF A BUILDING (z/h=0). THE FLOORS ARE ASSUMED TO BE BUILT OF A MINIMUM 4" NORMAL-WEIGHT CONCRETE SLAB. (f'c = 3000 PSI, MINIMUM).

BUILDING ELEVATION

7. 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.

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Job No:	13072.06
Date:	9/19/2014
Page:	4 of 12

ABBREVIATIONS:

AB	ANCHOR BOLTS
ABV	ABOVE
ADJ	ADJACENT
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
BLW	BELOW
BOTT	BOTTOM
CBC	CALIFORNIA BUILDING CODE
CG	CENTER OF GRAVITY
℄	CENTERLINE
COORD	COORDINATE
CONC	CONCRETE
DBL	DOUBLE
DIA (ø)	DIAMETER
(E)	EXISTING CONDITION
EA	EACH
ELEV	ELEVATION
EMBED	EMBEDMENT
EQUIP	EQUIPMENT
f'c	MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE
FLR	FLOOR
Fp	HORIZONTAL SEISMIC FORCE PER ASCE 7-10 SEISMIC FORCE REQUIREMENTS
Fv	VERTICAL SEISMIC FORCE PER ASCE 7-10 SEISMIC FORCE REQUIREMENTS
Fy	SPECIFIED YIELD STRENGTH OF STEEL, KSI
GA	GAUGE
IN (")	INCH
KSI	KIPS PER SQUARE INCH
LRFD	LOAD AND RESISTANCE FACTOR DESIGN
LWC	LIGHT WEIGHT CONCRETE
MAX	MAXIMUM
MFR	MANUFACTURER
MIN	MINIMUM
MTL	METAL
NO. (#)	NUMBER OR POUNDS
NWC	NORMAL WEIGHT CONCRETE
OSHPD	OFFICE OF STATEWIDE HEALTH PLANNING & DEVELOPMENT
PG(S)	PAGE(S)
PL	PLATE
PSI	POUNDS PER SQUARE INCH
SEOR	STRUCTURAL ENGINEER OF RECORD
STL	STEEL
T&B	TOP & BOTTOM
Tu	ANCHORAGE TENSION REACTION DUE TO SEISMIC FORCE AT LRFD
THRD	THREAD OR THREADED
TYP	TYPICAL
VERT	VERTICAL
Vu	ANCHORAGE SHEAR REACTION DUE TO SEISMIC FORCE AT LRFD
W/	WITH
W/O	WITHOUT
Wp	OPERATING WEIGHT

DESIGN CRITERIA

ANCHORAGE DESIGN FOR ALL MECHANICAL EQUIP IS PER 2013 CBC AT LRFD LEVEL FORCES

a_p = 1.0 R_p = 1.5 S_{DS} = 2.50 I_p = 1.5 Ω_0= 1.5 (CONC ANCHORS)

VITROS ECi/ECiq: W_P = 807#

FOR CASE 1 – UPPER FLRS ABV THE BASE, z/h = 1.0
F_p = 3.0 W_p F_v = 0.50 W_p

FOR CASE 2 – SLAB AT OR BLW BASE, z/h = 0
F_p = 1.125 W_p F_v = 0.50 W_p

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SHEET TITLE: ABBREVIATIONS & DESIGN CRITERIA

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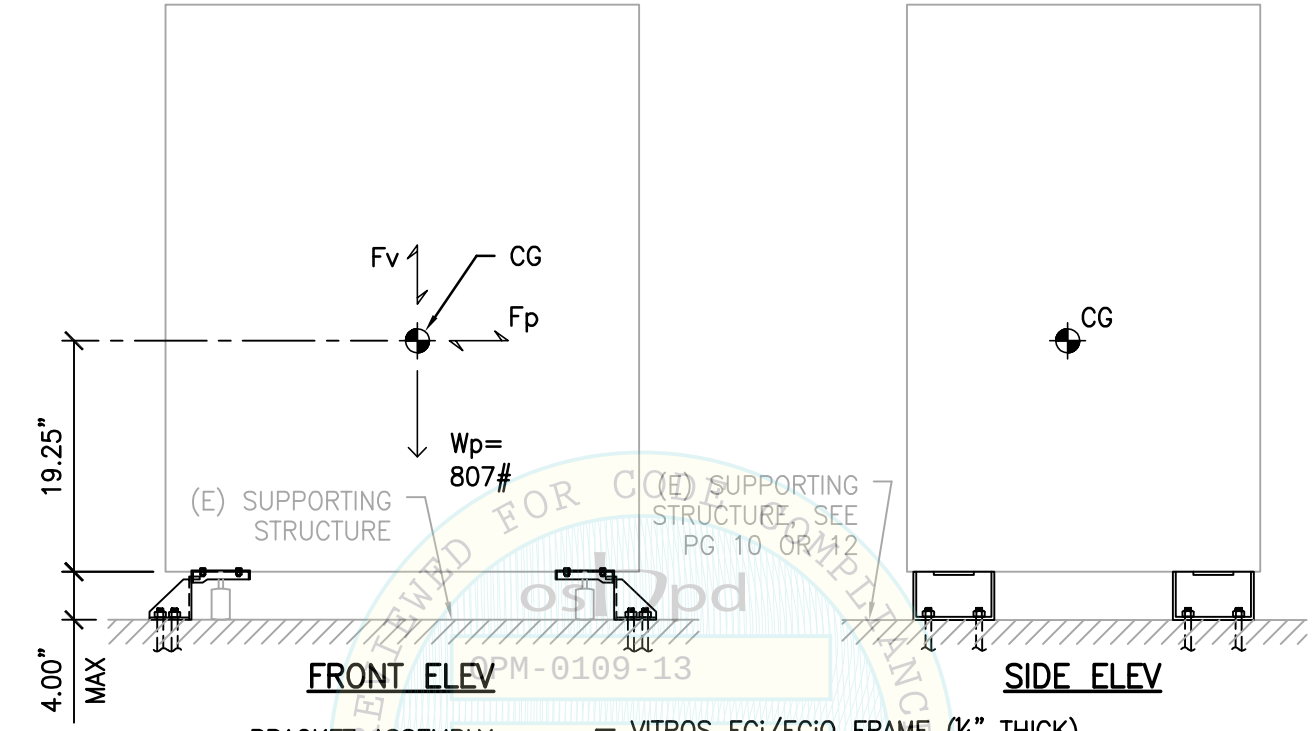
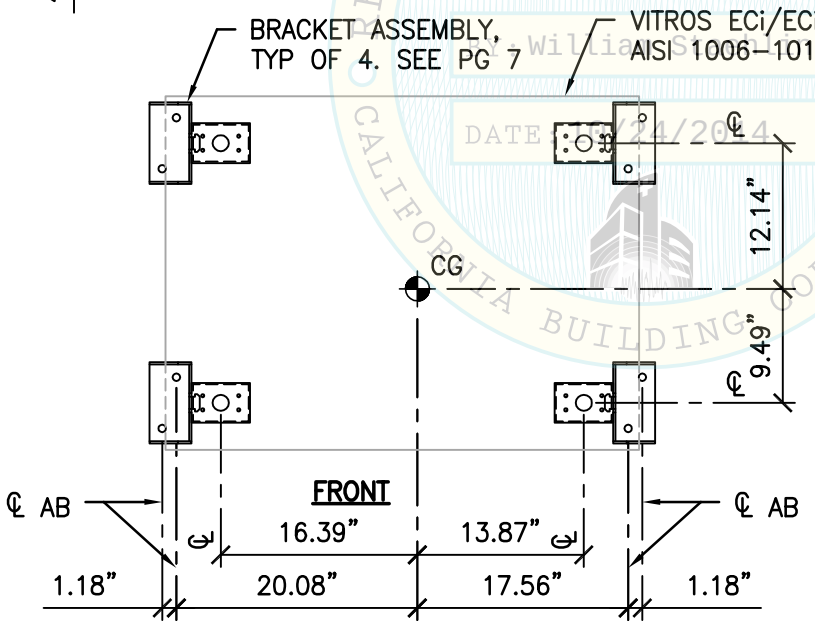
Job No:	13072.06
Date:	9/19/2014
Page:	5 of 12

VITROS ECi / ECiQ IMMUNO-DIAGNOSTIC SYSTEM
EQUIPMENT ATTACHMENT

Ortho Clinical Diagnostics
PART OF THE Johnson & Johnson FAMILY OF COMPANIES





SHEET TITLE: PLAN & ELEVATIONS

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Job No:	13072.06
Date:	9/19/2014
Page:	6 of 12

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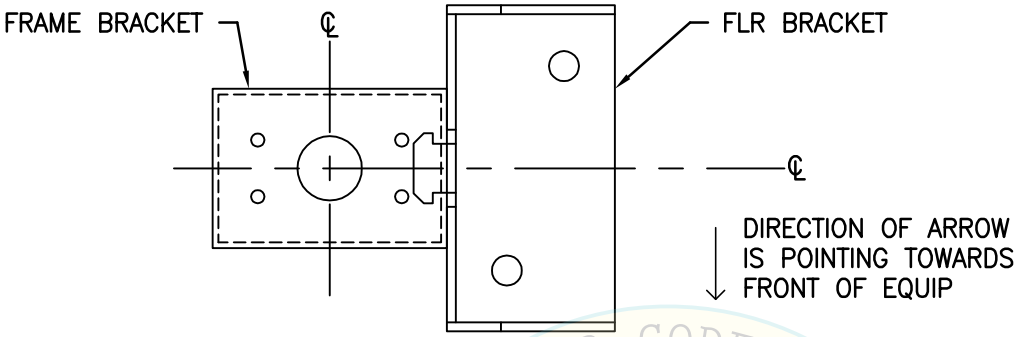
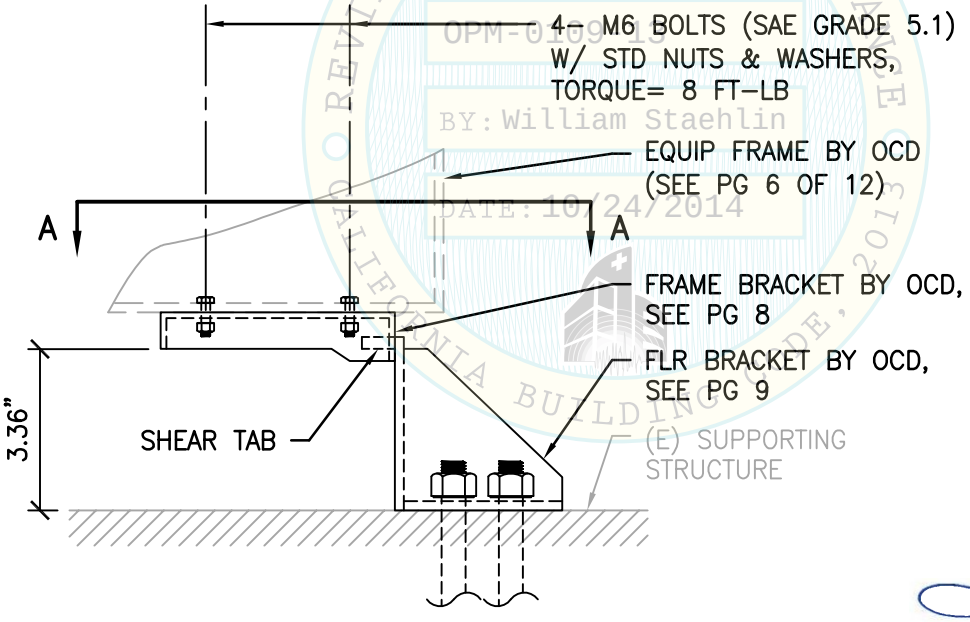


PLAN VIEW A–A



ELEV VIEW

SHEET TITLE: BRACKET ASSEMBLY DETAIL

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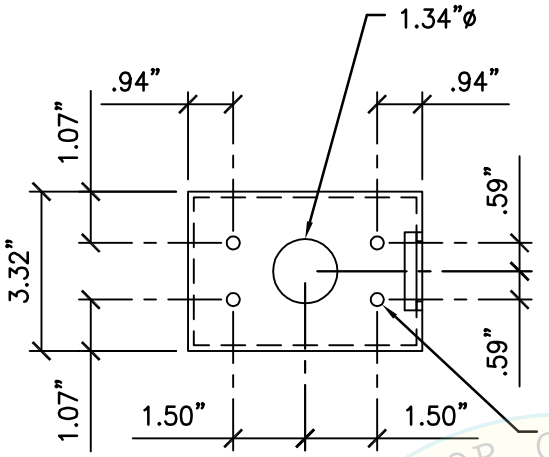
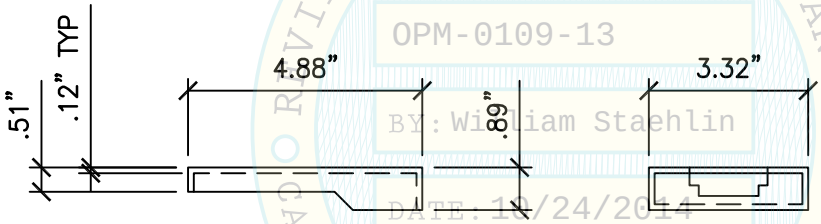
Job No:	13072.06
Date:	9/19/2014
Page:	7 of 12



BRACKET MATERIAL AISI 1006/1012,
LOW CARBON STL, Fy= 44 KSI MIN

PLAN VIEW



ELEV VIEW SIDE VIEW

SHEET TITLE: FRAME BRACKET DETAIL

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Job No:	13072.06
Date:	9/19/2014
Page:	8 of 12

VITROS ECi / ECiQ IMMUNO-DIAGNOSTIC SYSTEM
EQUIPMENT ATTACHMENT

Ortho Clinical Diagnostics
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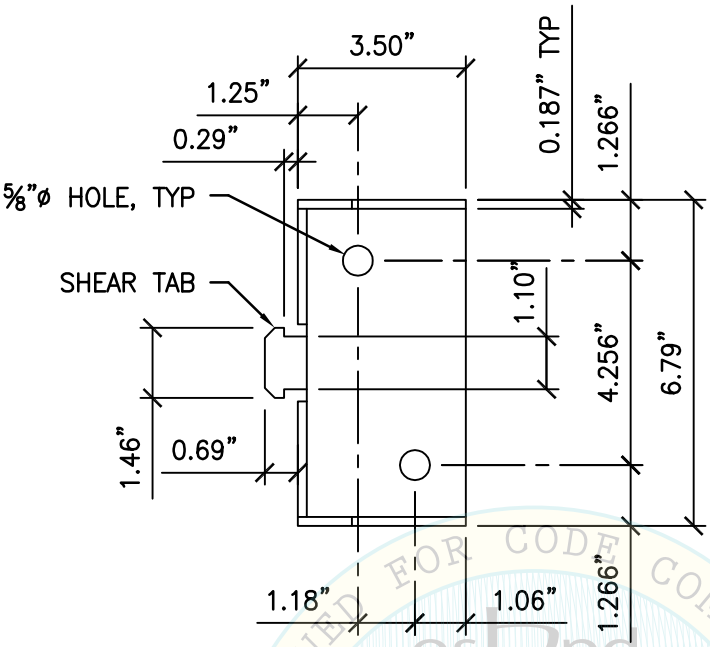
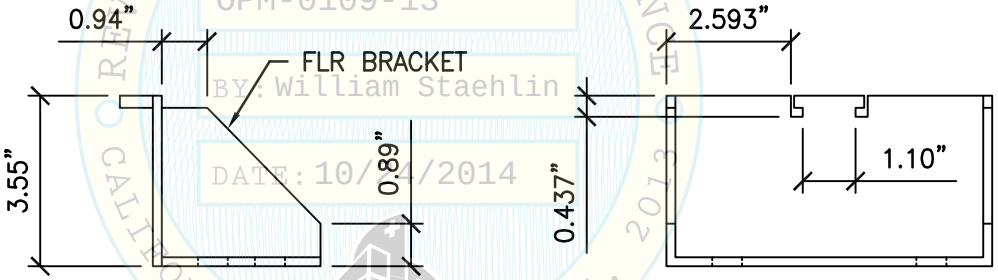


PLAN VIEW

BRACKET MATERIAL AISI 1006/1012
LOW CARBON STL, Fy= 44 KSI MIN



ELEV VIEW

SIDE VIEW

SHEET TITLE: FLOOR BRACKET DETAIL

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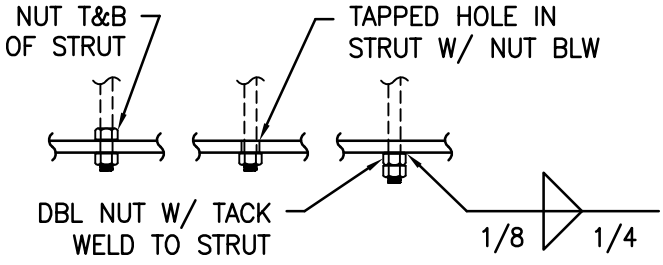
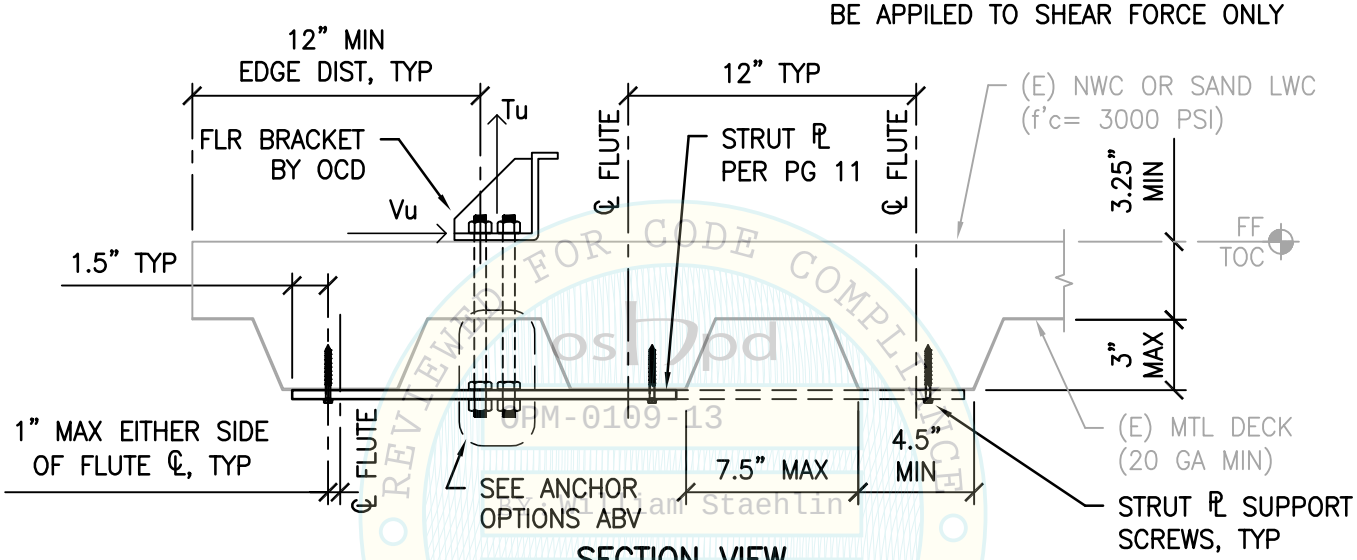
Job No:	13072.06
Date:	9/19/2014
Page:	9 of 12



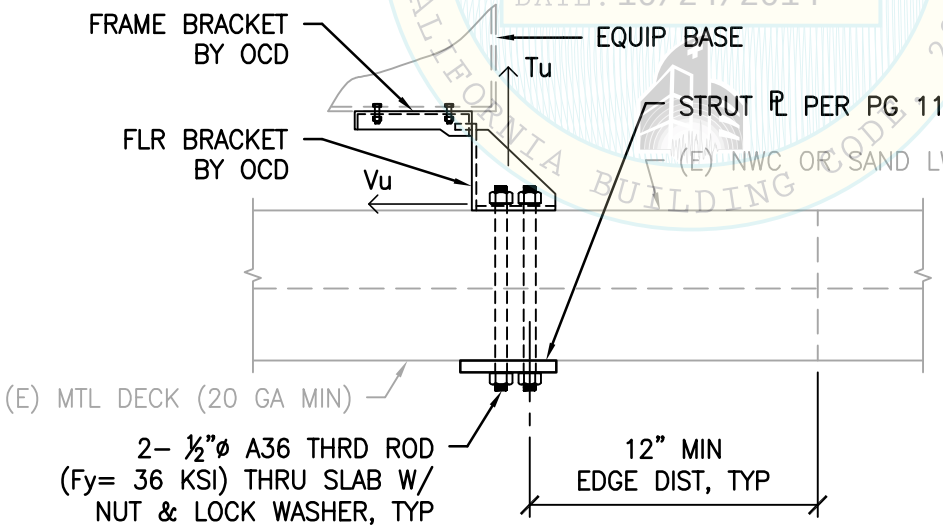
ANCHOR OPTIONS

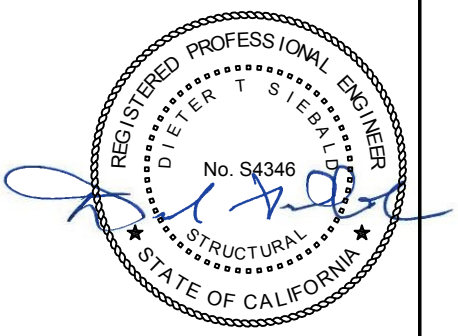
	MAXIMUM ANCHOR FORCES AT LRFD AT EACH THRU BOLT	
	Tu	Vu
CASE 1 $z/h \leq 1.0$ W/O Ω_0	2378#	778#
CASE 1 $z/h \leq 1.0$ W/ Ω_0	2378#	1167#

(Ω_0= 1.5) OVERSTRENGTH FACTOR MUST BE APPILED TO SHEAR FORCE ONLY



SECTION VIEW





SHEET TITLE: BRACKET ANCHORAGE DETAILS

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Date:	9/19/2014
Page:	10 of 12

VITROS ECi / ECiQ IMMUNO-DIAGNOSTIC SYSTEM
EQUIPMENT ATTACHMENT

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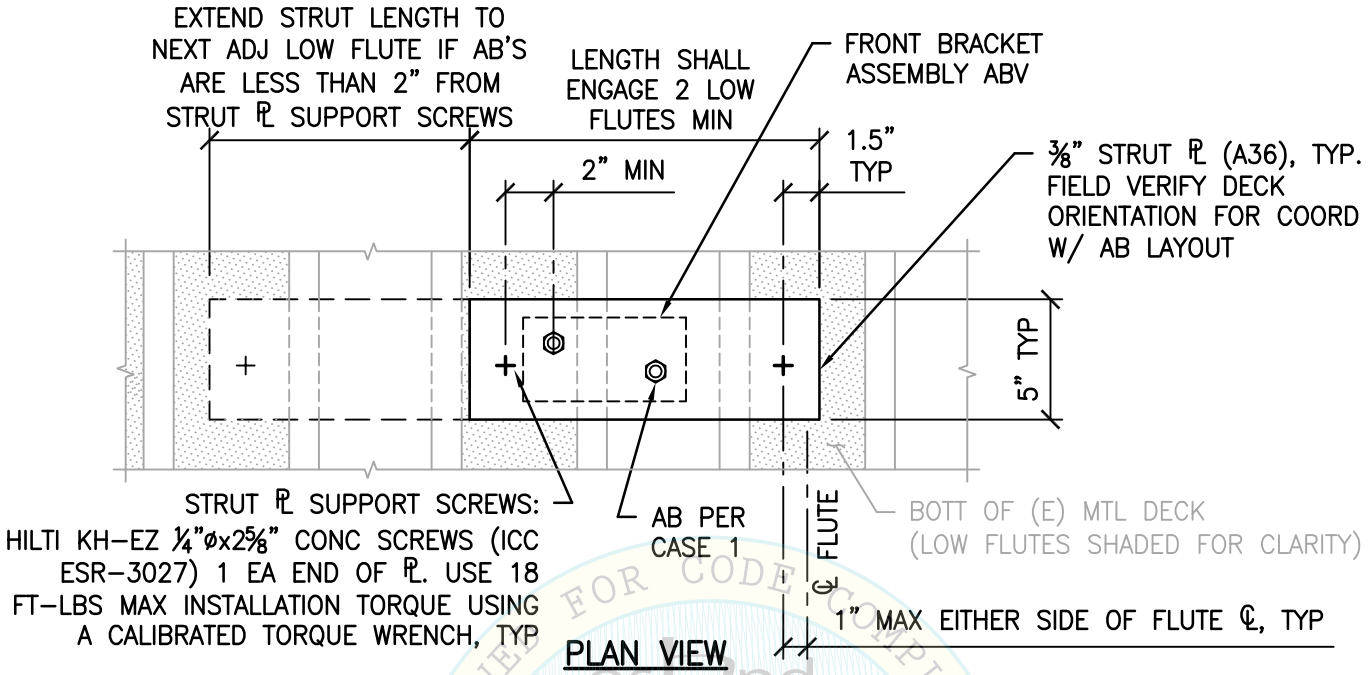
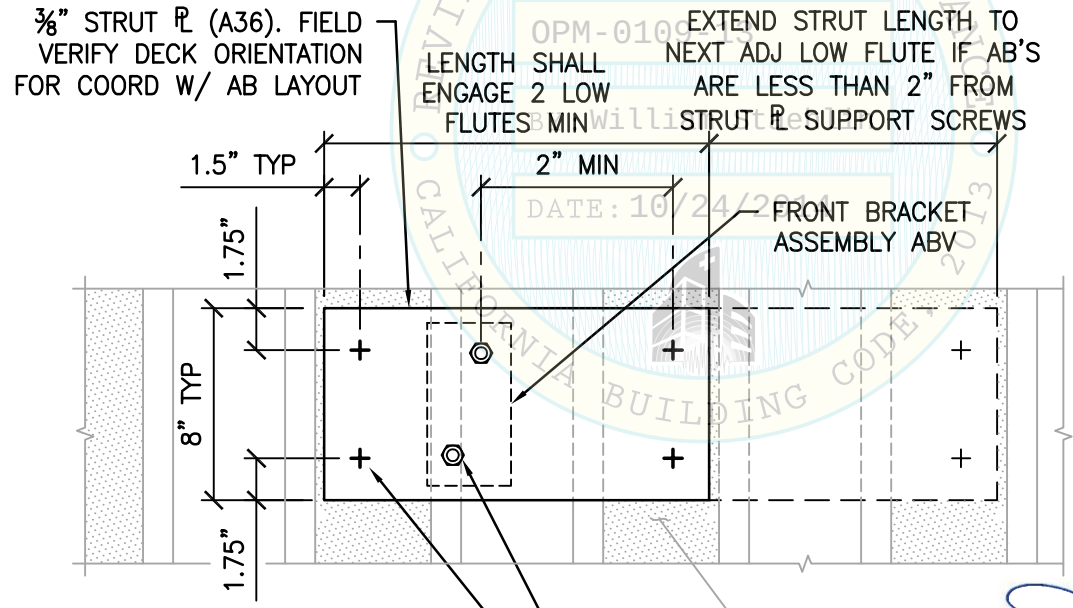


PLAN VIEW
ANCHORS PERPENDICULAR TO FLUTES



PLAN VIEW
ANCHORS PARALLEL TO FLUTES

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SHEET TITLE: ATTACHMENT DETAIL
TO CONCRETE FILL OVER METAL DECK

CYS STRUCTURAL ENGINEERS, INC.
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Job No:	13072.06
Date:	9/19/2014
Page:	11 of 12

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VITROS ECi / ECiQ IMMUNO-DIAGNOSTIC SYSTEM
EQUIPMENT ATTACHMENT

Ortho Clinical Diagnostics
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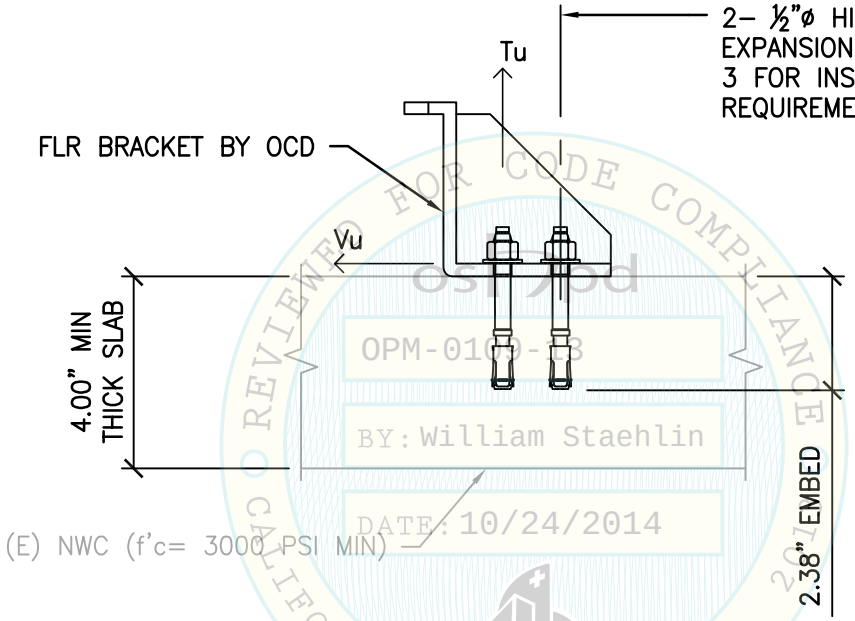
	MAXIMUM ANCHOR FORCES AT LRFD AT EACH ANCHOR BOLT	
	Tu	Vu
CASE 2 z/h=0	1126#	442#

INCLUDES OVERSTRENGTH FACTOR (Ω_0)



SHEET TITLE: BRACKET ANCHORAGE DETAIL

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

Job No:	13072.06
Date:	9/19/2014
Page:	12 of 12

L:\Jobs13\13072 OCDUS – Six OPMs\Task 06 – OPM-0109-13 Vitros ECi-ECiQ\STRU\S1_TASK 06.dwg Time:Jul29,2014-02:54pm Login:camachom Dimscale:1 LTScale:6