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

OFFICE USE ONLY
APPLICATION #: OPM-0259-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

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

Manufacturer Information

Manufacturer: Grifols Diagnostic Solutions, Inc.

Manufacturer's Technical Representative: Adam Ostergren

Mailing Address: 4560 Horton Street, Emeryville, CA 94608

Telephone: 510-923-5412 Email: Adam.ostergren@grifols.com

Product Information

Product Name: Erytra Analyzer

Product Type: Blood Analyzer for Immunohematology testing

Product Model Number: None

General Description: Instrument for performing pre-transfusion compatibility tests

Applicant Information

Applicant Company Name: Grifols Diagnostic Solutions, Inc.

Contact Person: Adam Ostergren

Mailing Address: 4560 Horton Street, Emeryville, CA 94608

Telephone: 510-923-5412 Email: Adam.ostergren@grifols.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: 24 AUG 15

Title: Assc. Dir. North America Company Name: GRIFOLS

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: S4346

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: 12-14-2015

Print Name: Jeffrey Kikumoto

Title: SSE

Condition of Approval (if applicable):

GRIFOLS

TABLE OF CONTENTS
OPM–0259–13

NOTES:

1. THESE DRAWINGS ARE PREPARED FOR GRIFOLS DIAGNOSTIC SOLUTIONS, INC., EMERYVILLE, CALIFORNIA.
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 SUPPORTS & ATTACHMENTS OF THE UNIT TO THE SUPPORTING STRUCTURE. THE UNIT, ANCHORAGE BRACKETS & CONNECTION HARDWARE TO UNIT IS SUPPLIED & INSTALLED BY GRIFOLS. THRU–BOLTS, STRUT HARDWARE & ATTACHMENTS AT SOFFIT UNDER METAL DECK & EXPANSION BOLTS SHOWN ON PAGES 12 TO 15 SHALL BE SUPPLIED & 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.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
www.cyseng.com

Job No:	15077
Date:	12/10/2015
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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 & WEIGHT SPECIFIED FOR EACH EQUIPMENT IN ADDITION TO ALL OTHER LOADS. PROVIDE & 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 GIVEN DIAMETER ANCHORS. THE REQUIRED SPACING FROM ANCHORS OF OTHER DIAMETERS & EMBEDMENTS MAY VARY & SHALL BE EVALUATED BY THE SEOR.
   D. THAT THE INSTALLATION IS IN CONFORMANCE WITH THE CBC 2013 & WITH THE DETAILS SHOWN IN THIS PRE-APPROVAL.
   E. THAT THE ACTUAL EQUIPMENT'S WEIGHT, CENTER OF GRAVITY (CG) LOCATION, ANCHOR LOCATIONS, ANCHOR DETAILS, & THE MATERIAL & GAGE OF THE EQUIPMENT WHERE ATTACHMENTS ARE MADE, AGREE WITH THE INFORMATION SHOWN ON THE PRE-APPROVAL DOCUMENTS.
3. EXPANSION ANCHORS INSTALLED IN NORMAL WEIGHT OR SAND-LIGHTWEIGHT CONCRETE SHALL BE CARBON STEEL HILTI KB-TZ EXPANSION ANCHORS COMPLYING WITH ESR-1917 REISSUED MAY 2015.
   A. INSTALLATION: INSTALL THE EXPANSION ANCHORS IN ACCORDANCE WITH THE REQUIREMENTS GIVEN IN THE ICC EVALUATION REPORT FOR THE SPECIFIC ANCHOR & THE PARAMETERS GIVEN IN THE TABLE ON PAGE 3. PROVIDE FULL THREAD ENGAGEMENT FOR NUT & WASHER.
   B. 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. THE TEST LOAD MAY BE APPLIED BY ANY METHOD THAT WILL EFFECTIVELY MEASURE THE TENSION OR TORQUE 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 (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 EQUIPMENT INSTALLATION. ALSO REFER TO CBC 1913A.7 "FIELD TESTS FOR POST-INSTALLED ANCHORS IN CONCRETE".
   C. FAILURE/ACCEPTANCE CRITERIA: THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
      - HYDRAULIC RAM METHOD: APPLY & 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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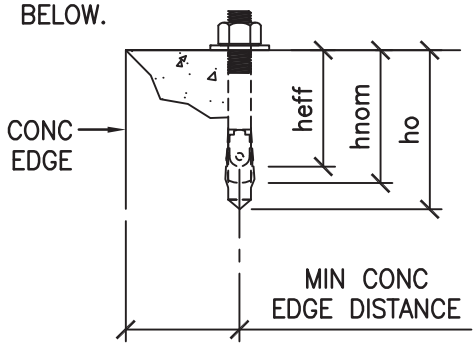
GENERAL NOTES CONTINUED:

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

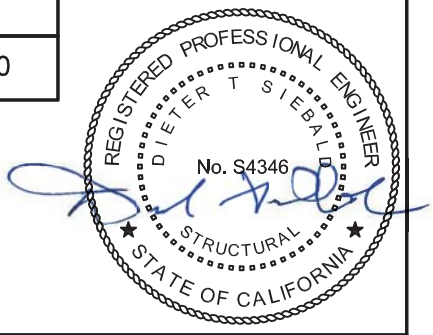


ANCHOR DIA (INCH) da	INSTALLATION EMBED (INCH) hnom	EFFECTIVE EMBED (INCH) hef	HOLE DEPTH (INCH) ho	MIN CONC THICKNESS (INCH) h_{min}	MIN CONC EDGE DISTANCE (INCH)	MIN AB SPACING (INCH)	TEST LOAD		CONDITION OF ANCHORAGE
							TENSION LOAD (LBS)	TORQUE (FT-LBS)	
½	2⅜	2	2⅝	4	12	4	1660	40	CASE 2

4. BOLTS THROUGH CONC ON MTL DECK:
   A. BOLTS SHALL BE TORQUED BY ¾ TURN OF THE NUT AFTER SNUG TIGHT CONDITION IS ACHIEVED, UNO. THE SNUG TIGHT CONDITION IS DEFINED AS THE TIGHTNESS REQUIRED 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 CONCRETE SHALL RECEIVE SPECIAL INSPECTION & TESTING IN ACCORDANCE WITH REQUIREMENTS FOR POST-INSTALLED ANCHORS. THRU-BOLTS WITH STEEL TO STEEL CONNECTION IN TENSION DO NOT REQUIRE TESTING.
5. SCREW ANCHORS TO BOTT OF CONC FILL OVER MTL 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 PG 13 IN THIS OPM & FOOTNOTE 2, TABLE 2 IN ESR-3027



SHEET TITLE: GENERAL NOTES (CONTINUED)

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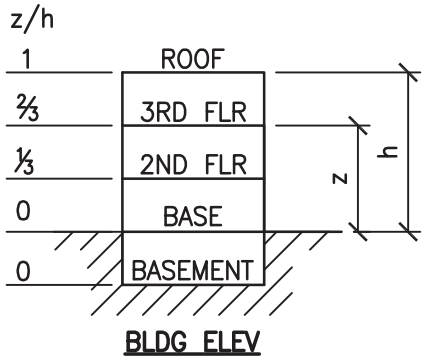
GENERAL NOTES CONTINUED:

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



BLDG ELEV

CASE 1: ATTACHMENT DETAILS LOCATED AT UPPER FLRS ABV THE BASE OF A BLDG ($z/h \leq 1$). THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 3¼" SLWC TOPPING OVER 20 GA MTL DECK ($f'c$ = 3000 PSI, MIN).

CASE 2: ATTACHMENT DETAILS 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).

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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SHEET TITLE: GENERAL NOTES (CONTINUED)

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ABBREVIATIONS:

@	AT
ABV	ABOVE
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
BLDG	BUILDING
BLW	BELOW
CBC	CALIFORNIA BUILDING CODE
CG	CENTER OF GRAVITY
℄	CENTERLINE
CONC	CONCRETE
COORD	COORDINATE
DBL	DOUBLE
DIA (ø)	DIAMETER
(E)	EXISTING CONDITION
ELEV	ELEVATION
EQUIP	EQUIPMENT
f'c	MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE
FLR	FLOOR
FT (')	FOOT/FEET
Fy	SPECIFIED MINIMUM YIELD STRESS OF STEEL
GA	GAUGE
IN (")	INCH
KSI	KIPS PER SQUARE INCH
LBS	POUNDS
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LRFD	LOAD AND RESISTANCE FACTOR DESIGN
MAX	MAXIMUM
MFR	MANUFACTURER
MIN	MINIMUM
MTL	METAL
NO. (#)	NUMBER OR POUNDS
NWC	NORMAL WEIGHT CONCRETE
OSHPD	OFFICE OF STATEWIDE HEALTH PLANNING & DEVELOPMENT
PSI	POUNDS PER SQUARE INCH
SLWC	SAND-LIGHTWEIGHT CONCRETE
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
Tu	ANCHORAGE TENSION REACTION DUE TO SEISMIC FORCE AT LRFD
THRD	THREAD OR THREADED
TYP	TYPICAL
Vu	ANCHORAGE SHEAR REACTION DUE TO SEISMIC FORCE AT LRFD
W/	WITH
Wp	OPERATING WEIGHT
WT	WEIGHT

DESIGN CRITERIA

SUPPORT & ATTACHMENT DESIGN IS PER 2013 CBC AT LRFD LEVEL FORCES.

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

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

W_P AS NOTED ON EQUIP DRAWING SHOWN ON PG 6

FOR CASE 1 – UPPER FLRS ABV THE BASE, z/h = 1

$S_{DS} = 2.50$ $F_p = 3.00\ W_p$

FOR CASE 2 – SLAB AT OR BLW BASE, z/h = 0

$S_{DS} = 2.50$ $F_p = 1.13\ W_p$

LOAD COMBINATIONS

$(0.9 - 0.2\ S_{DS})\ D - \Omega_0\ F_p$ (FOR MAXIMUM TENSION)

$(1.2 + 0.2\ S_{DS})\ D + \Omega_0\ F_p$ (FOR MAXIMUM COMPRESSION)

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SHEET TITLE: ABBREVIATIONS & DESIGN CRITERIA

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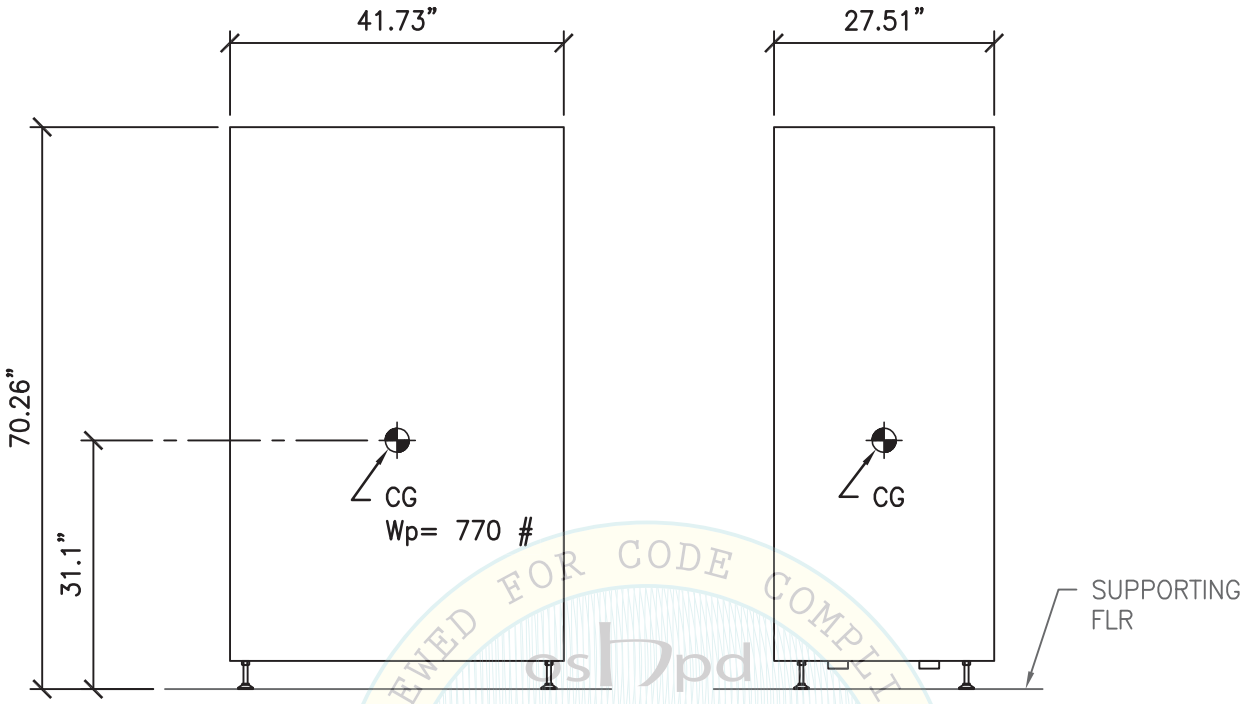
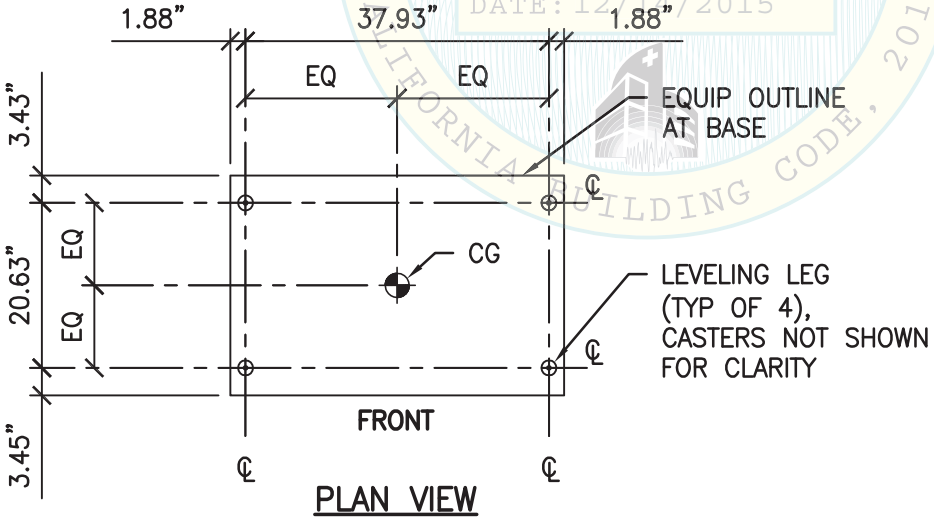
GRIFOLS DIAGNOSTIC SOLUTIONS, INC.
ERYTRA ANALYZER

GRIFOLS



FRONT ELEV SIDE ELEV



PLAN VIEW

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

SHEET TITLE: EQUIPMENT DIMENSIONS

CYS STRUCTURAL ENGINEERS, INC.
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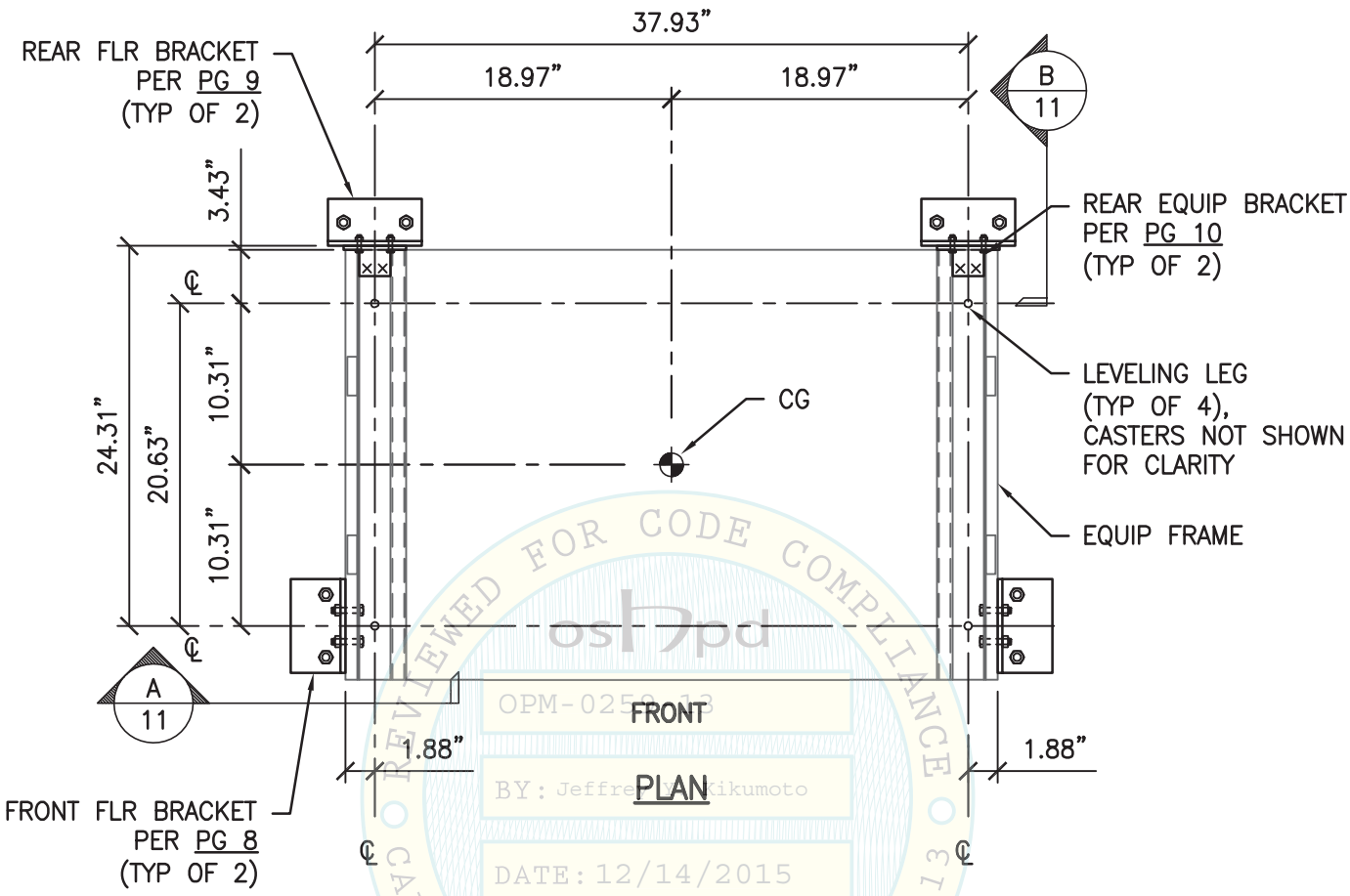
GRIFOLS DIAGNOSTIC SOLUTIONS, INC.
ERYTRA ANALYZER

GRIFOLS



NOTE:
SEE PG 11 FOR ATTACHMENT DETAILS TO EQUIP FRAME.
SEE PGS 12 & 15 FOR ANCHORAGE DETAILS TO SUPPORTING FLR.

REGISTERED PROFESSIONAL ENGINEER
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SHEET TITLE: ANCHORAGE BRACKET LOCATIONS

CYS STRUCTURAL ENGINEERS, INC.
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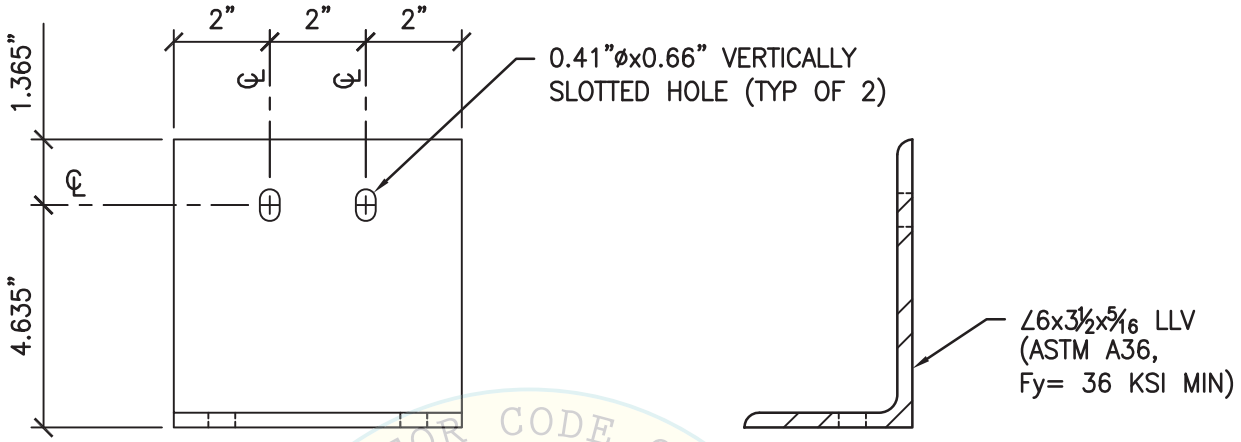
GRIFOLS



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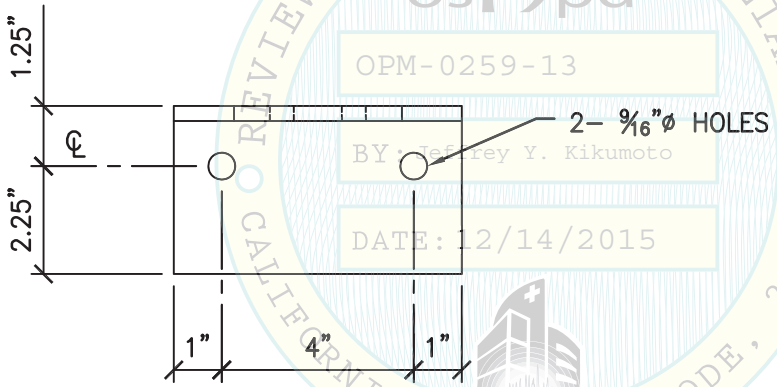

PLAN VIEW

SHEET TITLE: FRONT FLOOR BRACKET DETAIL

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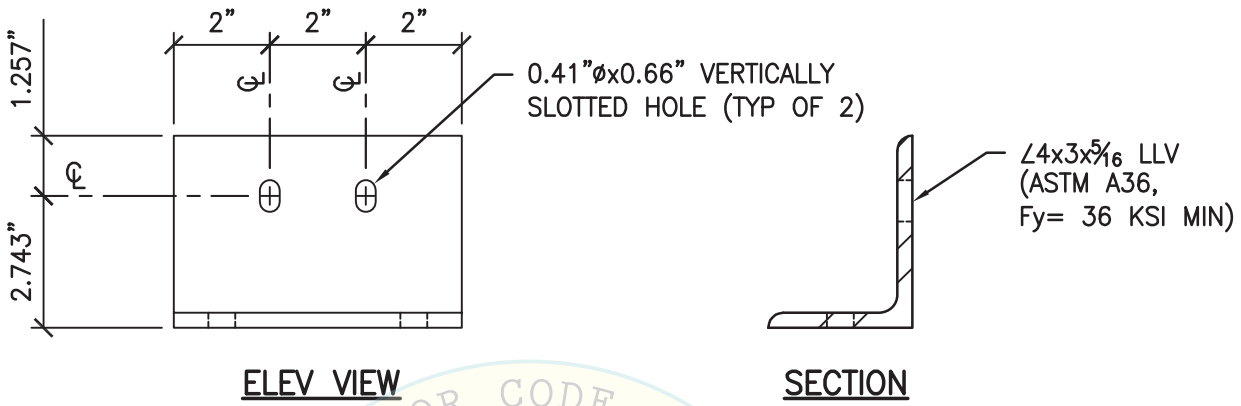

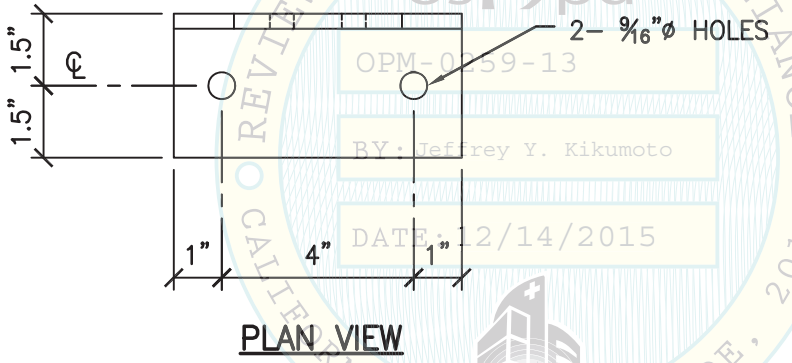

SHEET TITLE: REAR FLOOR BRACKET DETAIL

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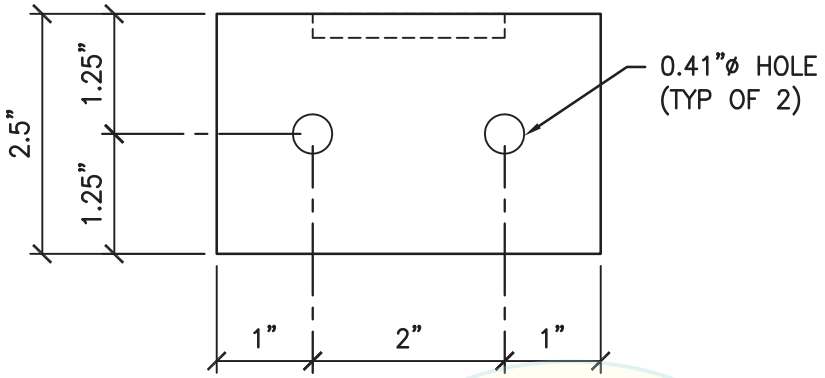

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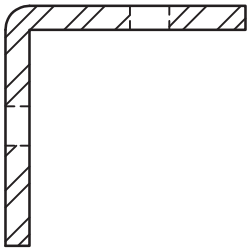

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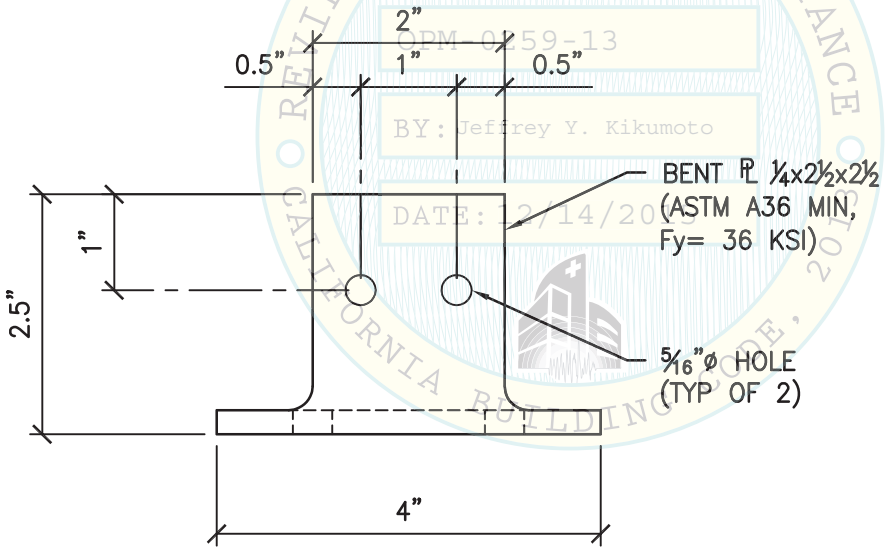

PLAN VIEW

SHEET TITLE: REAR EQUIPMENT BRACKET DETAIL

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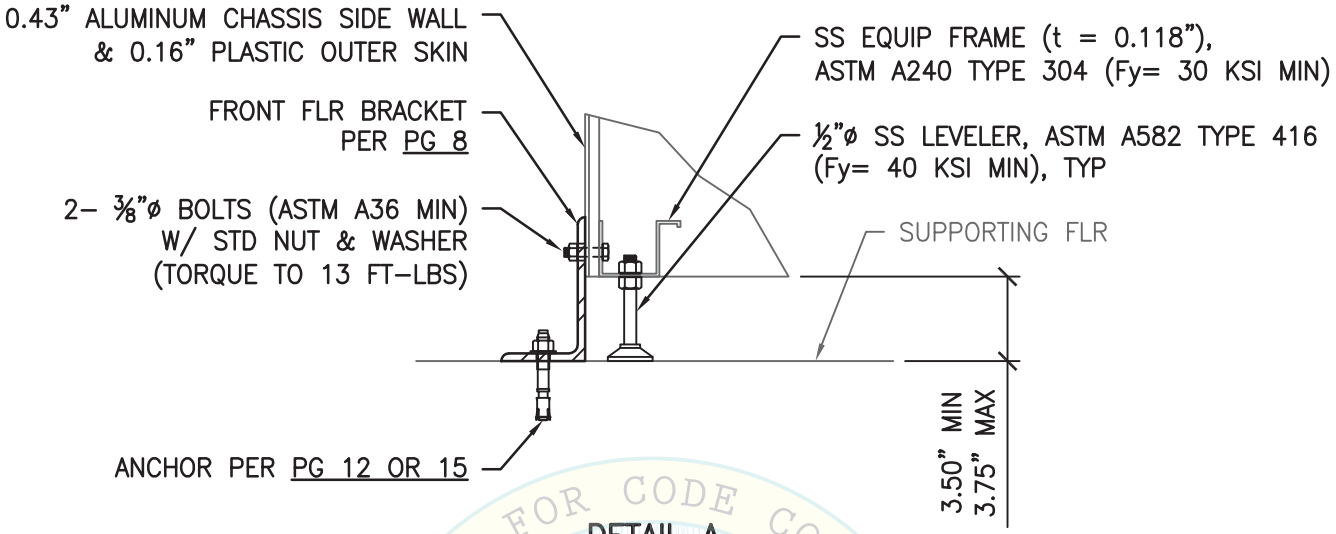
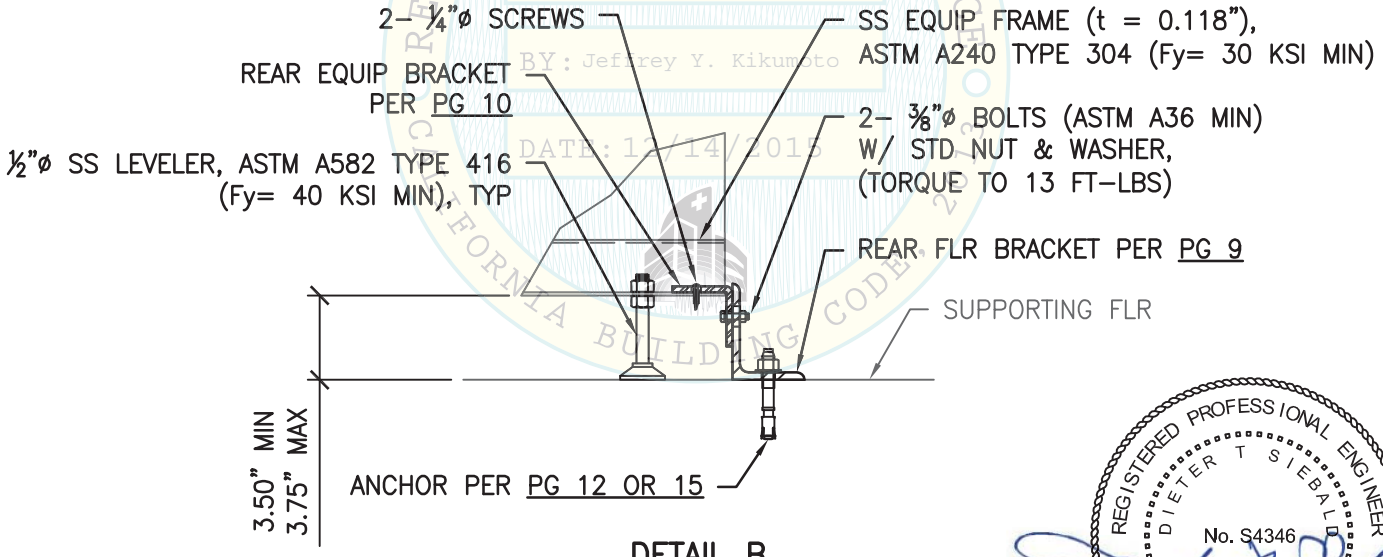


DETAIL A
ATTACHMENT AT FRONT OF EQUIP



DETAIL B
ATTACHMENT AT REAR OF EQUIP

SHEET TITLE: ATTACHMENT DETAILS
TO EQUIPMENT FRAME

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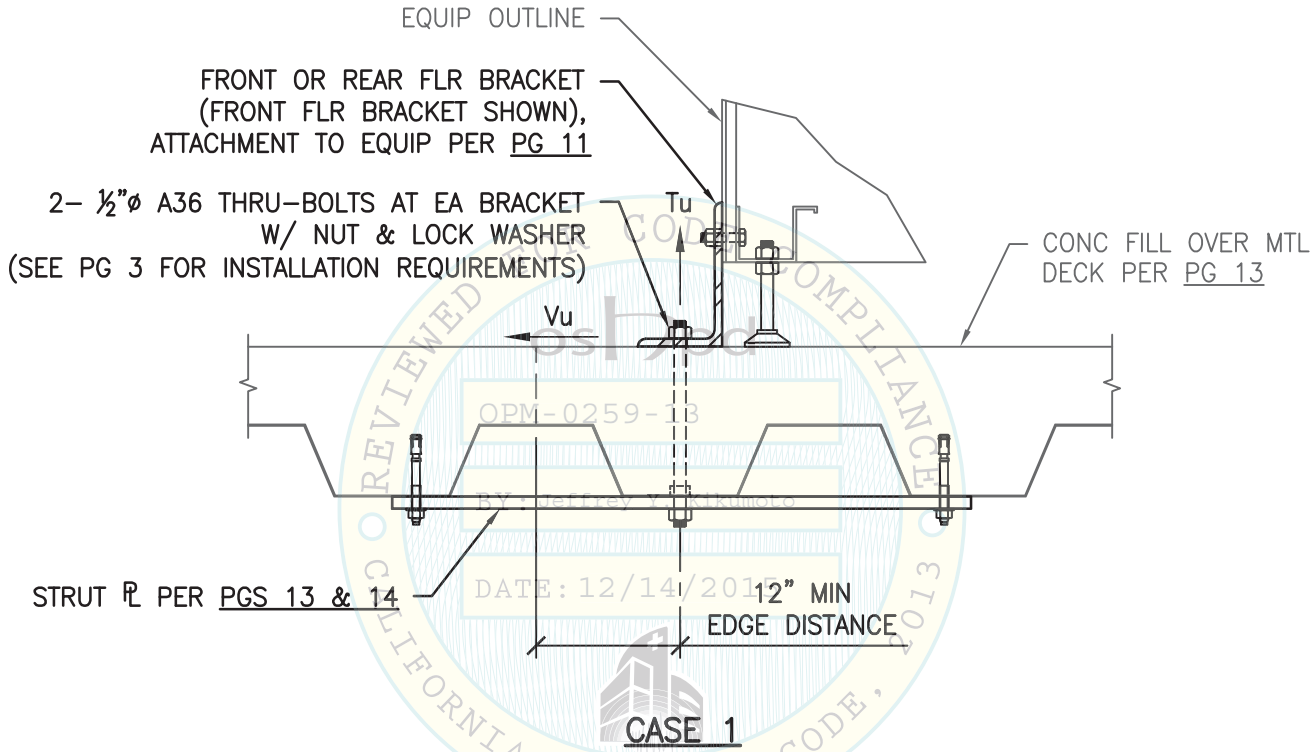
GRIFOLS DIAGNOSTIC SOLUTIONS, INC.
ERYTRA ANALYZER

GRIFOLS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Ωo Vu
CASE 1 z/h ≤ 1	1545#	594#

OVERSTRENGTH FACTOR (Ωo) INCLUDED WHERE NOTED.



CASE 1

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

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

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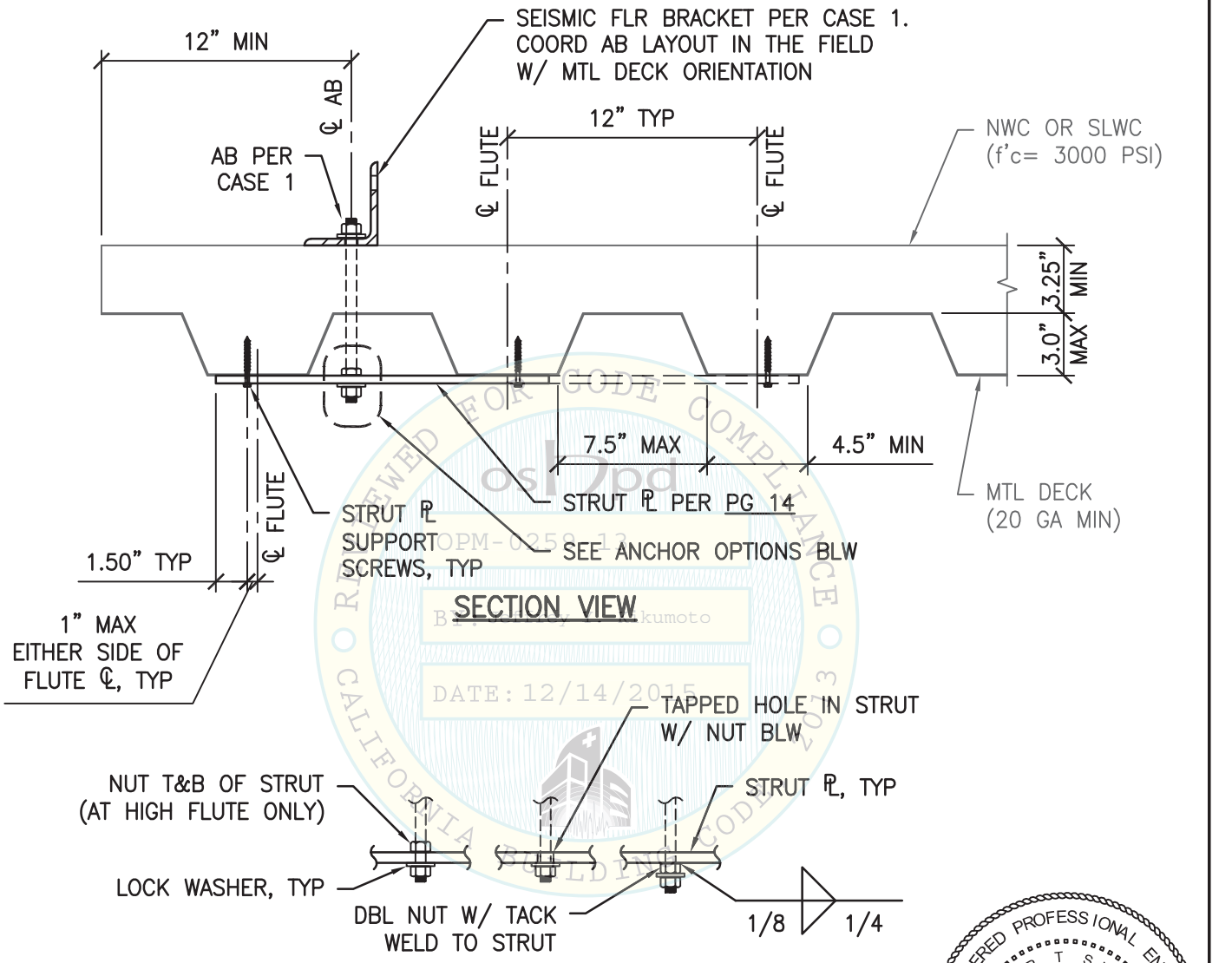

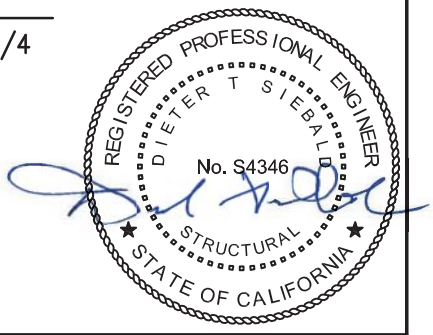

SHEET TITLE: STRUT PLATE DETAIL

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2495 NATOMAS PARK DRIVE, SUITE 650
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GRIFOLS DIAGNOSTIC SOLUTIONS, INC.
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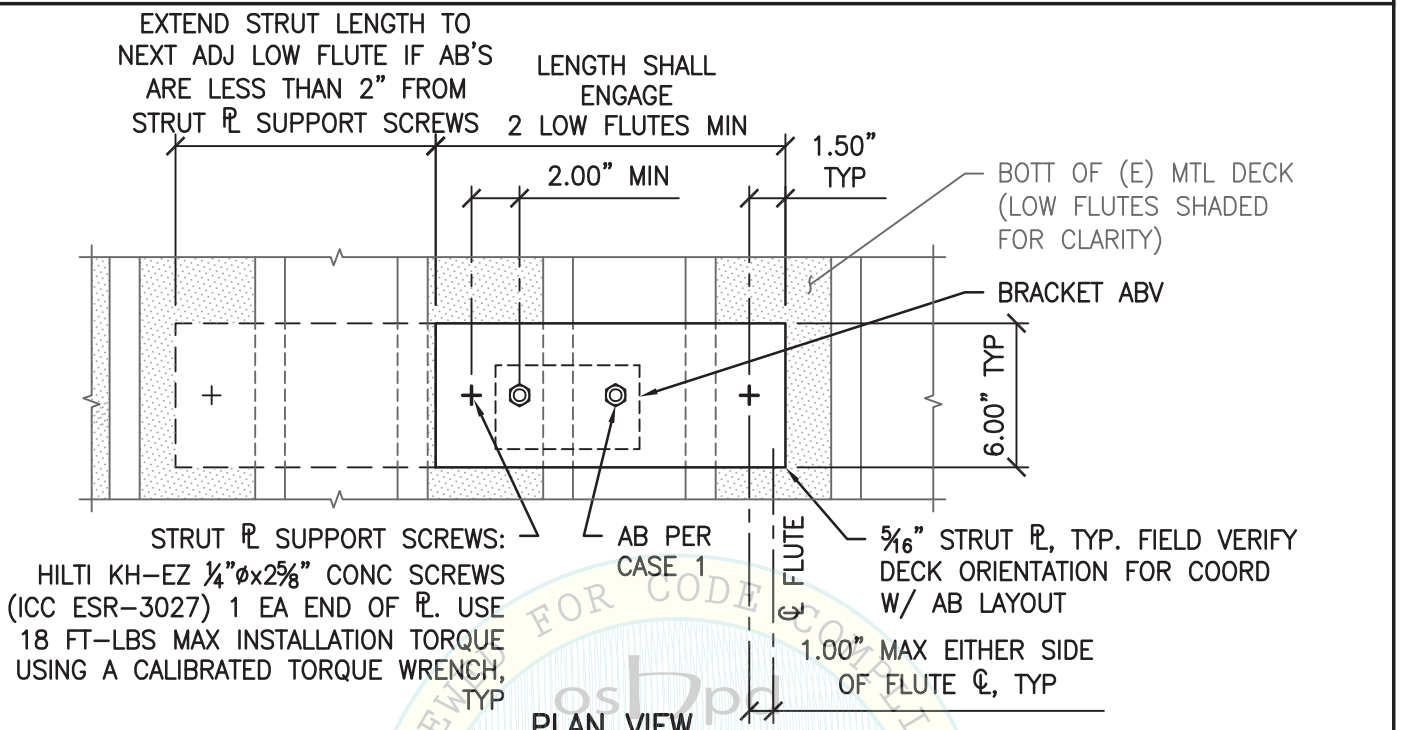
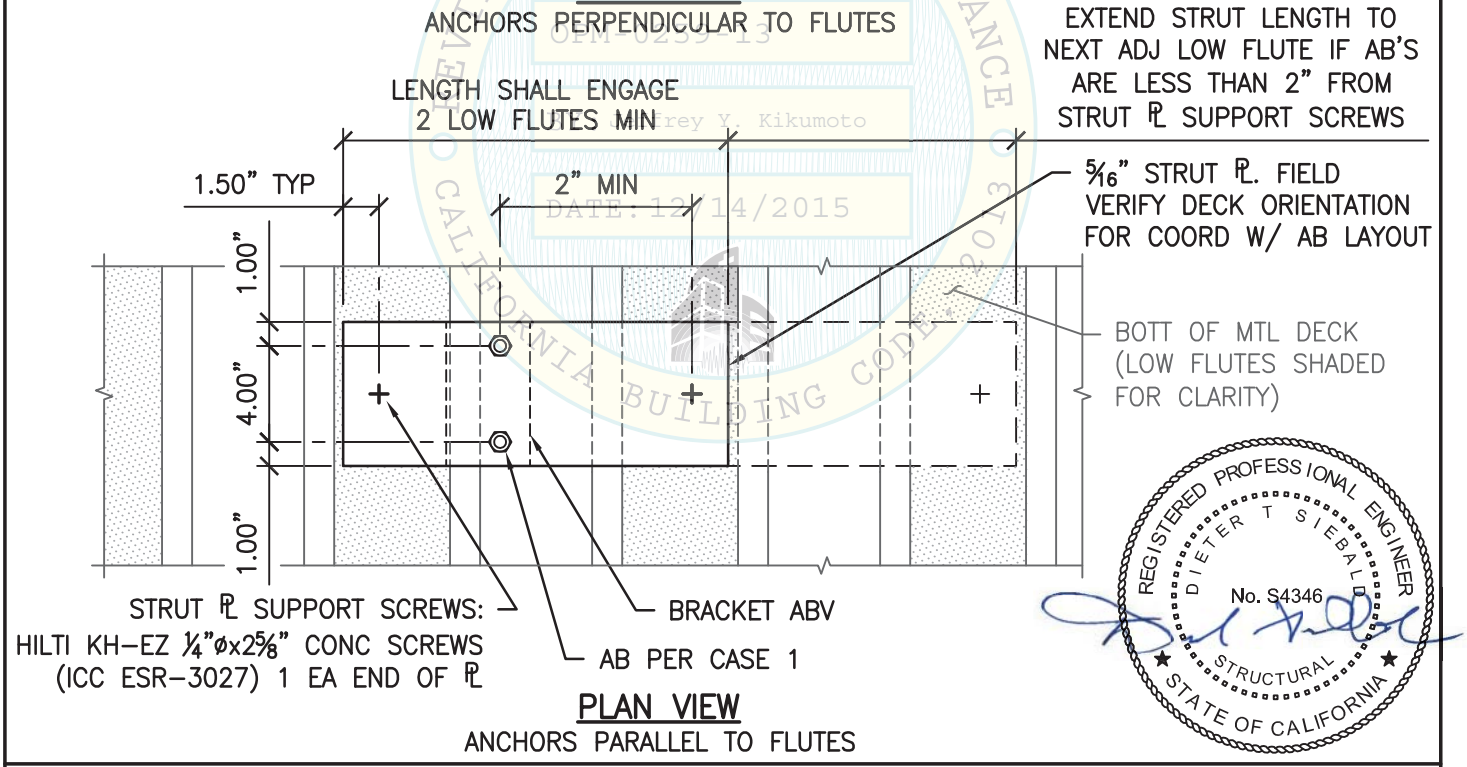
GRIFOLS





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

SHEET TITLE: STRUT PLATE DETAIL

CYS STRUCTURAL ENGINEERS, INC.
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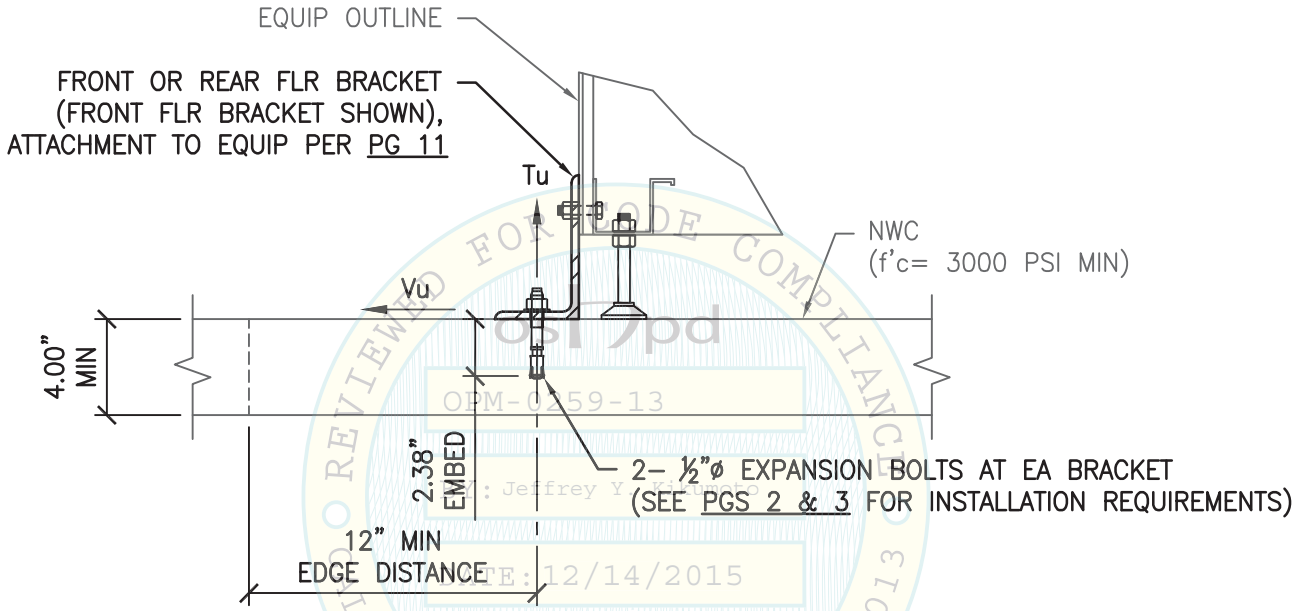
GRIFOLS DIAGNOSTIC SOLUTIONS, INC.
ERYTRA ANALYZER

GRIFOLS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Ωo Tu	Ωo Vu
CASE 2 z/h = 0	1331#	359#

OVERSTRENGTH FACTOR (Ωo) INCLUDED WHERE NOTED.



CASE 2

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

SHEET TITLE: ANCHORAGE DETAIL TO CONCRETE SLAB (CASE 2)

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