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

OFFICE USE ONLY
APPLICATION #: OPM-0059-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

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

Manufacturer Information

Manufacturer: Maquet Medical Systems, USA

Manufacturer's Technical Representative: Rick McDaniel

Mailing Address: 45 Barbour Pond Drive, Wayne, NJ 07470

Telephone: (973) 709-7934 Email: rick.mcdaniel@maquet.com

Product Information

Product Name: LED Concealed Lighting System

Product Type: Surgical Lights

Product Model Number: USPWD300CLS

General Description: *Anchorage of various lights and booms from the Maquet medical equipment product line, including the Lucea, Satelite and Modutec models.*

Applicant Information

Applicant Company Name: Dynamic Certification Laboratories (DCL)

Contact Person: Joseph L La Brie

Mailing Address: 11467 SE Cascade View Ct. Portland, OR 97086

Telephone: (626) 445-0366 Email: labrie@makeitright.net

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: October 2, 2013

Title: Managing Partner Company Name: Dynamic Certification Laboratories (DCL)

Registered Design Professional Preparing Engineering Recommendations

Company Name: Dynamic Certification Laboratories

Name: Joseph La Brie California License Number: SE 3566

Mailing Address: 11467 SE Cascade View Ct. Portland, OR 97086

Telephone: 626-445-0366 Email: labrie@makeitright.net

OSHPD Special Seismic Certification Preapproval (OSP)

☒ Special Seismic Certification is preapproved under OSP-0350-10
(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): AC-156 testing for Special Seismic Certification and analysis for anchorage.

List of Attachments Supporting the Manufacturer's Certification

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

☐ Other(s) (Please Specify):

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Signature: Date: April 10, 2014

Print Name: William Staehlin

Title: Senior Structural Engineer

Condition of Approval (if applicable):

MAQUET

CONCEALED LIGHT SYSTEM
(Model no. USPWD300CLS)

OPM-0059-13

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GENERAL NOTES

1.) THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2013 CALIFORNIA BUILDING CODE (CBC). THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE 2013 CALIFORNIA BUILDING CODE (CBC).

2.) SITE VERIFICATION IS REQUIRED. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE AREA(S) OF WORK PRIOR TO THE BEGINNING OF THE PROJECT. DO NOT SCALE THE DRAWINGS; ALL DIMENSIONS MUST BE VERIFIED IN THE FIELD. THE STRUCTURAL ENGINEER SHALL BE NOTIFIED, IMMEDIATELY, IF ANY DISCREPANCIES ARE FOUND.

3.) DESIGN CRITERIA:

a.) Sds = 2.5 ; I = 1.5
z/h <= 1 (UPPER FLOOR) & z/h = 0 (GROUND/SLAB ON GRADE)

b.) PER ASCE 7-10 INCLUDING SUPPLEMENT 1&2 AND TABLE 13.6-1:
Ap = 1.0 ; Rp = 1.5 ; Ω_o = 1.5 (APPLY Ω_o FACTOR FOR ANCHORAGE TO CONCRETE)

REGISTERED PROFESSIONAL ENGINEER JOSEPH L. LA BRIE No. 3566 EXP. 6-30-2016 STRUCTURAL STATE OF CALIFORNIA 04/11/2014

4.) CENTER OF GRAVITY (C.G.) WEIGHT IS A MAXIMUM.

5.) STRUCTURAL ENGINEER OF RECORD FOR THE BUILDING SHALL :
a.) CHECK THAT THE EXISTING/NEW STRUCTURE WILL BE ABLE TO SUPPORT THE MAXIMUM WEIGHTS/FORCES SHOWN IN ADDITION TO ANY OTHER LOADS TO THE STRUCTURE. PROVIDE STRENGTENING OF STRUCTURE AS REQUIRED.
b.) CHECK THAT THE FLOOR OR DECK ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY NEW OR EXISTING ANCHORS. ALL MINIMUM EDGE DISTANCE AND SPACING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS GIVEN IN THE ICC REPORT FOR THE SPECIFIC ANCHORS USED ON THIS OPM. (SEE TABLE ON NEXT PAGE FOR ANCHOR BOLT MINIMUM SPACING & EDGE DISTANCE REQUIREMENTS)
c.) CHECK THAT THE INSTALLATION, SUPPORT AND ATTACHMENTS OF THE UNIT COMPLIES WITH THE 2013 CALIFORNIA BUILDING CODE AND WITH THE DETAILS SHOWN IN THIS PREAPPROVAL.
d.) VERIFY THAT THE ACTUAL EQUIPMENT'S MODEL NUMBER, OPERATING WEIGHT, CENTER OF GRAVITY (C.G.) LOCATION, ANCHOR LAYOUT, MATERIAL & ASTM GRADE OF THE EQUIPMENT IS THE SAME SHOWN ON THIS OPM PREAPPROVAL.

6.) NEW DRILLED-IN ANCHOR BOLTS SHALL BE HILTI KB-TZ (PER ICC ESR-1917 DATED MAY 2015) AND INSTALLED IN NORMAL WEIGHT OR SAND LIGHTWEIGHT CONCRETE. CARBON STEEL FOR INDOOR APPLICATIONS. MINIMUM EMBEDMENT OF ALL BOLTS AND TEST LOADS (UNLESS NOTED OTHERWISE ON DETAIL) SHALL BE SHOWN ON THE NEXT PAGE:

MAQUET - LED CONCEALED LIGHT SYSTEM (Model No. USPWD300CLS)	DCL Dynamic Certification Laboratories JOSEPH L. LA BRIE Structural Engineer No. SE 3566	MAQUET GETINGE GROUP 45 BARBOUR POND DRIVE WAYNE, NJ 07470
	DATE 04/11/14 | PAGE GN-1	

TEST LOAD HILTI KB-TZ (WEDGE ANCHORS) ICC-ESR-1917
(f'c = 3000 PSI MIN.) - INSTALLED UNDERSIDE OF CONCRETE OVER METAL DECK

BOLT DIAMETER (IN.)	MINIMUM EFFECTIVE EMBEDMENT (INS.)	TORQUE TEST (FT.-LBS.)	DIRECT TENSION (LBS.)	MINIMUM ANCHOR SPACING (INS)	MINIMUM EDGE DISTANCE (INS.)
1/2"	3 1/4"	40	2,333	6	6

a.) WHEN INSTALLING DRILLED-IN ANCHORS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR.

b.) ALL CONCRETE EXPANSION TYPE ANCHOR BOLTS (LOADED IN EITHER PULL OUT OR SHEAR) SHALL BE PROOF TESTED EITHER IN TENSION TO TWICE THE ALLOWABLE TENSION LOAD OR 1 ¼ TIMES THE MAXIMUM DESIGN STRENGTH OR TORQUE TESTED UNTIL THE TORQUE VALUE SPECIFIED ABOVE IS REACHED . WHEN POST-INSTALLED ANCHORS ARE USED FOR NON STRUCTURAL APPLICATIONS SUCH AS EQUIPMENT ANCHORAGE, 50% OR ALTERNATE BOLTS IN A GROUP, INCLUDING AT LEAST ONE-HALF THE ANCHORS IN EACH GROUP SHALL BE TESTED EITHER IN TENSION OR BY TORQUE WRENCH. IF THERE ARE ANY FAILURES, THE IMMEDIATELY ADJACENT BOLTS MUST THEN ALSO BE TESTED.

c.) THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:

HYDRAULIC RAM METHOD: THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD. FOR WEDGE AND SLEEVE TYPE ANCHORS, A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE. FOR ADHESIVE ANCHORS, WHERE OTHER THAN BOND IS BEING TESTED, THE DEVICE SHALL NOT RESTRICT THE CONCRETE SHEAR CONE TYPE FAILURE MECHANISM FROM OCCURING

TORQUE WRENCH METHOD: THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN THE FOLLOWING LIMITS: WEDGE OR SLEEVE TYPE: ONE-HALF (1/2) TURN OF THE NUT ONE-QUARTER (1/4) TURN OF THE NUT FOR 3/8" SLEEVE ANCHOR ONLY.

d.) TESTING SHALL OCCUR A MINIMUM OF 24 HOURS AFTER INSTALLATION OF THE SUBJECT ANCHORS.

e.) IF THE MANUFACTURER'S RECOMMENDED INSTALLATION TORQUE IS LESS THAN THE TEST TORQUE NOTED IN THE TABLE, THE MANUFACTURER'S RECOMMENDED INSTALLATION TORQUE SHALL BE USED IN LIEU OF THE TABULATED VALUES.

f.) OWNER'S REPRESENTATIVE IS RESPONSIBLE FOR ALL ANCHOR TESTING.

g.) ALL TESTS SHALL BE PERFORMED IN THE PRESENCE OF THE INSPECTOR OF RECORD AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO THE ENFORCEMENT AGENCY.

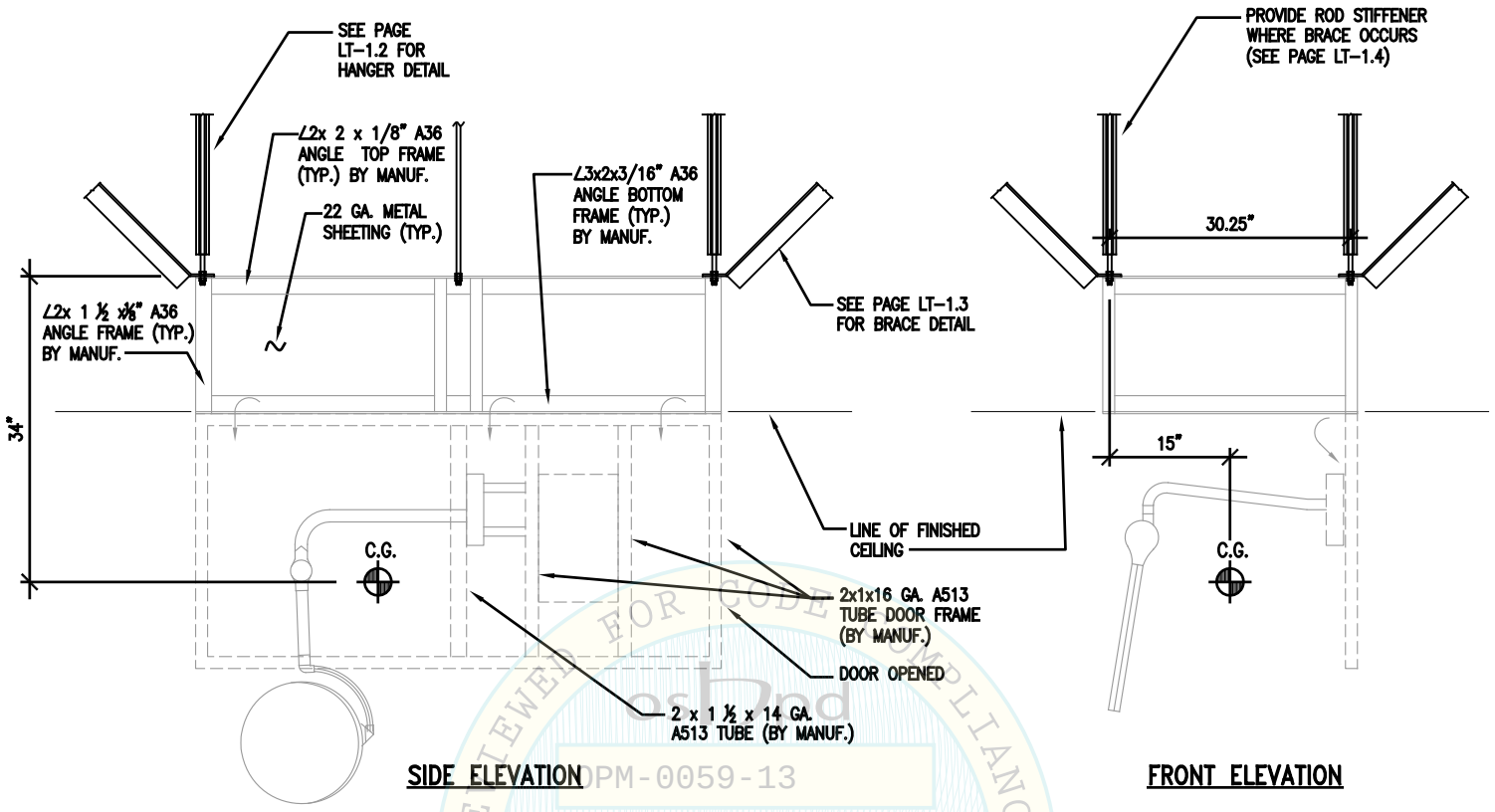
MAQUET - LED CONCEALED LIGHT SYSTEM
(Model No. USPWD300CLS)

DCL Dynamic Certification Laboratories

JOSEPH L. LA BRIE
Structural Engineer
No. SE 3566

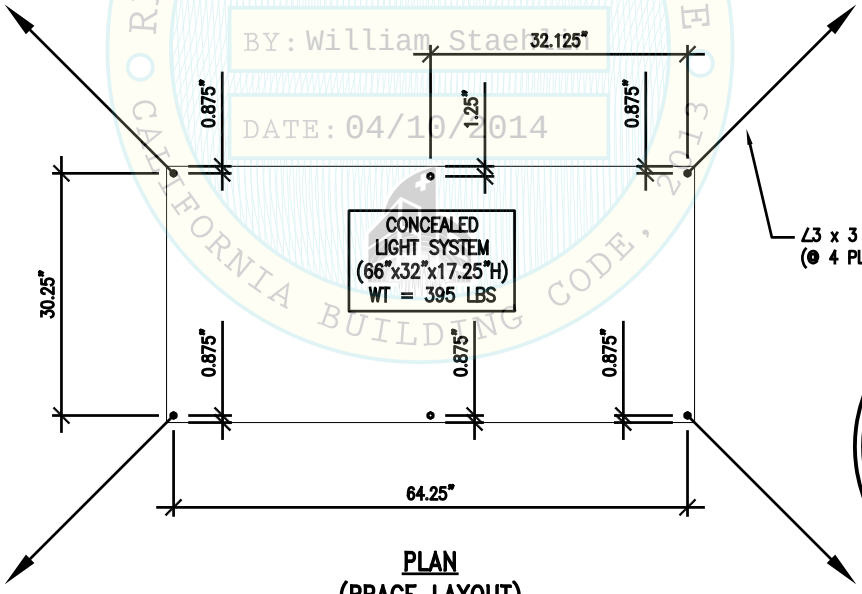
DATE 04/11/14 | PAGE GN-2

MAQUET
GETINGE GROUP
45 BARBOUR POND DRIVE
WAYNE, NJ 07470



SIDE ELEVATION

FRONT ELEVATION



PLAN
(BRACE LAYOUT)

REGISTERED PROFESSIONAL ENGINEER
JOSEPH L. LA BRIE
No. 3566
EXP. 3-31-2016
STRUCTURAL
STATE OF CALIFORNIA
04/11/2014

MAQUET - LED CONCEALED LIGHT SYSTEM
(Model No. USPWD300CLS)

DCL Dynamic Certification Laboratories

JOSEPH L. LA BRIE
Structural Engineer
No. SE 3566

DATE 04/11/14

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MAQUET
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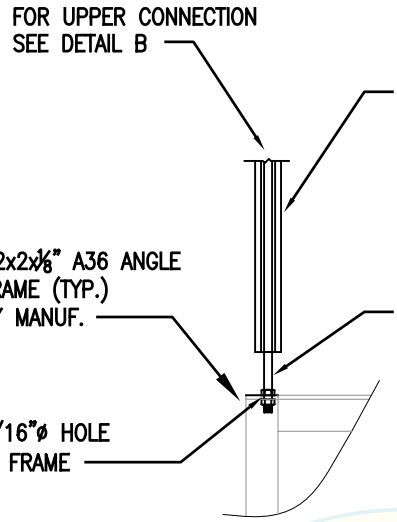
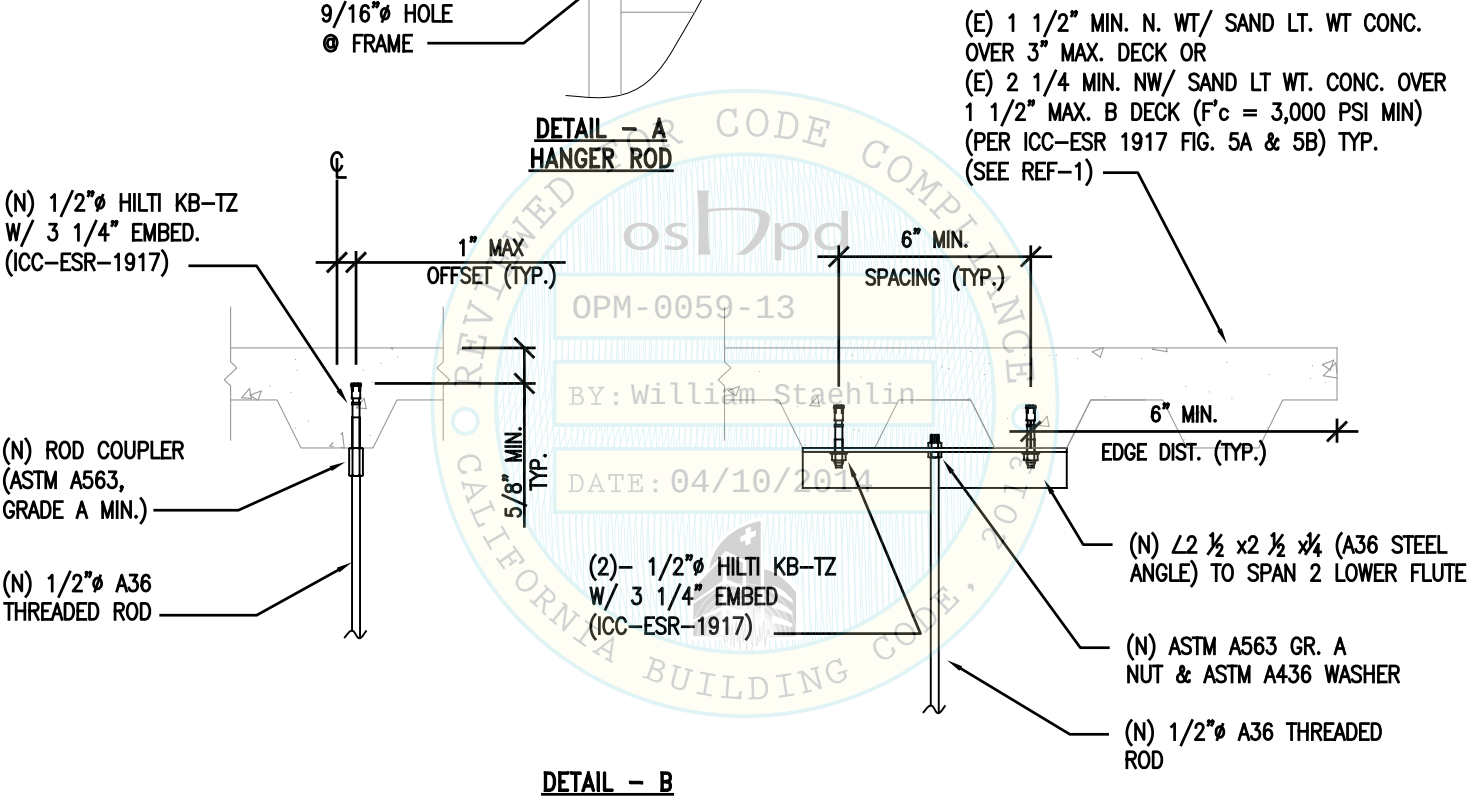


DETAIL – A
HANGER ROD



DETAIL – B
UPPER CONNECTION DETAILS

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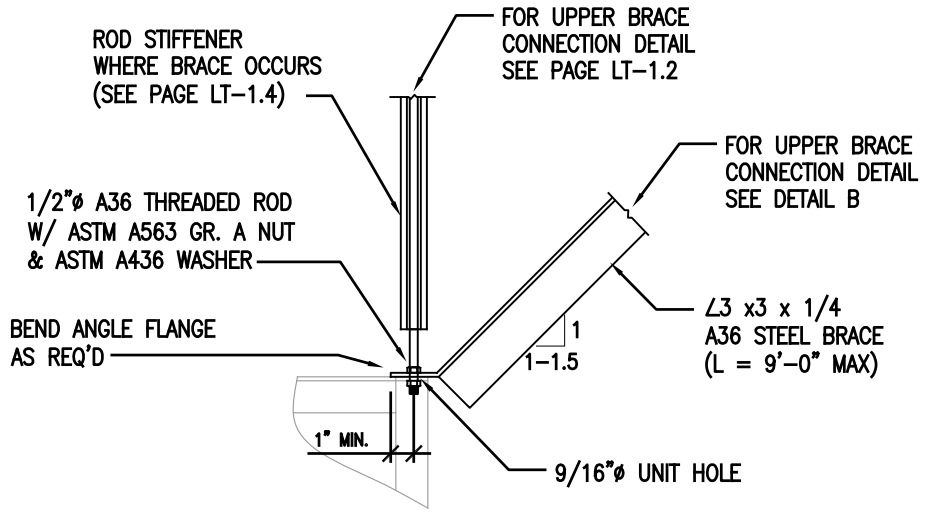
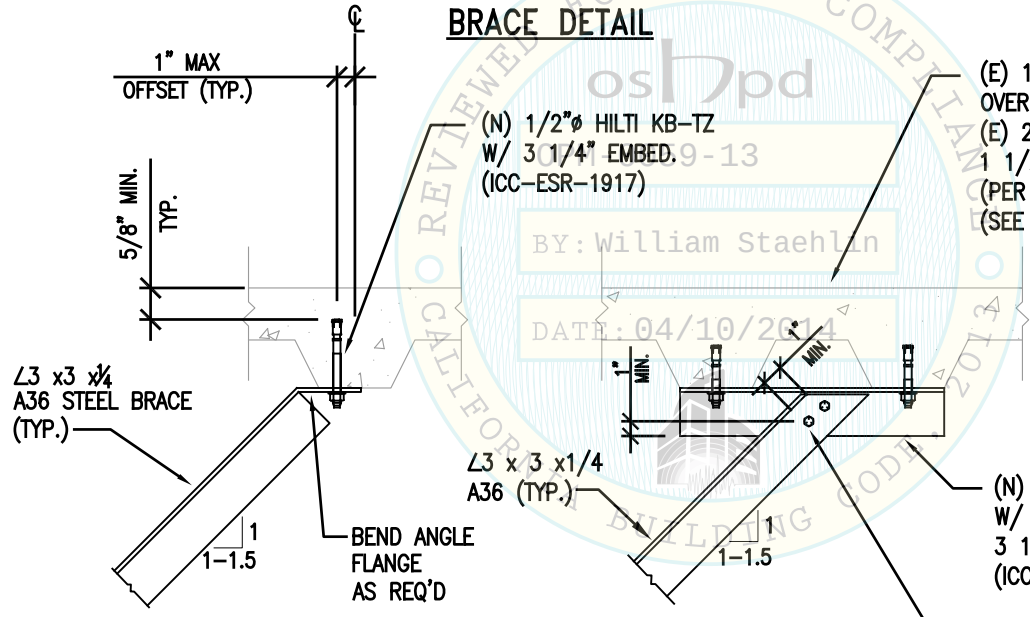


DETAIL – A
BRACE DETAIL



DETAIL – B
BRACE UPPER CONNECTION DETAIL

REGISTERED PROFESSIONAL ENGINEER
JOSEPH L LA BRIE
No. SE 3566
EXP. 12-31-2016
STRUCTURAL
STATE OF CALIFORNIA
04/11/2014

MAQUET - LED CONCEALED LIGHT SYSTEM
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JOSEPH L. LA BRIE
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No. SE 3566

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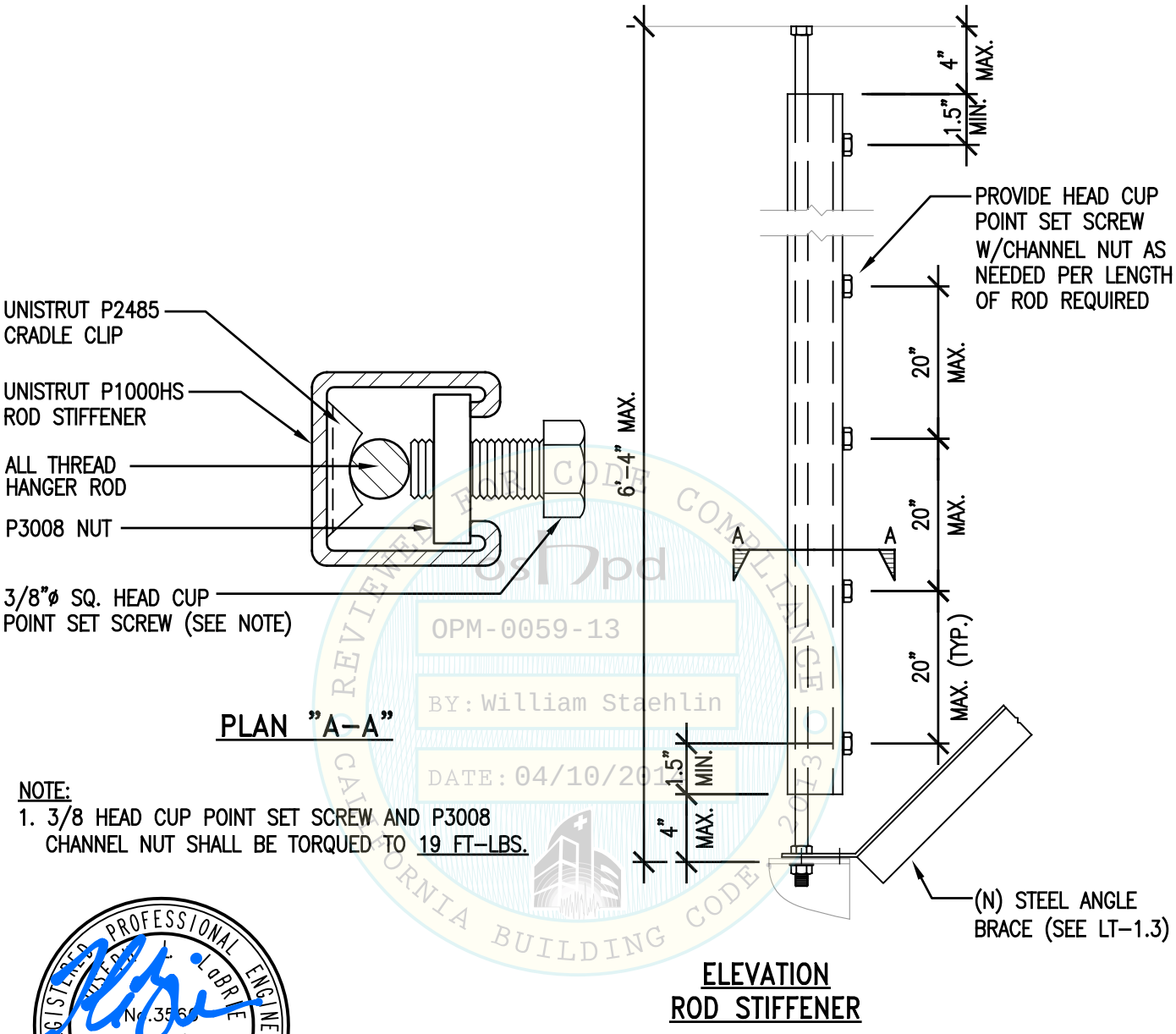

PLAN "A-A"

ELEVATION
ROD STIFFENER

NOTE:
1. 3/8 HEAD CUP POINT SET SCREW AND P3008 CHANNEL NUT SHALL BE TORQUED TO 19 FT-LBS.

REGISTERED PROFESSIONAL ENGINEER
JOSEPH L. LA BRIE
No. 3566
EXP. 03-31-2016
STRUCTURAL
STATE OF CALIFORNIA
04/29/2014

MAQUET - LED CONCEALED LIGHT SYSTEM
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JOSEPH L. LA BRIE
Structural Engineer
No. SE 3566

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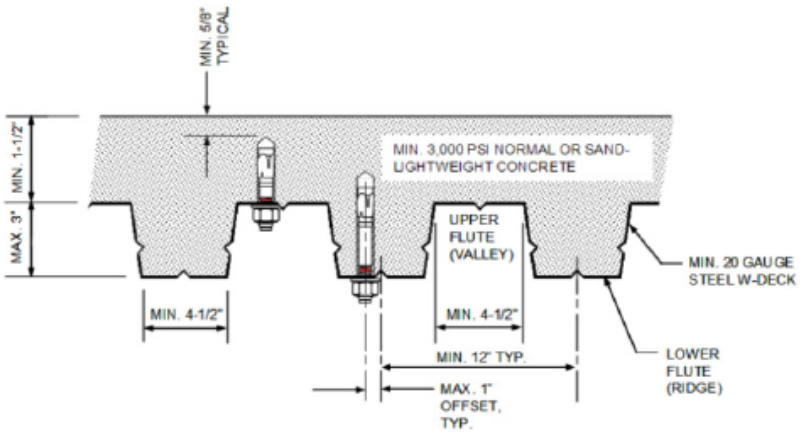

FIGURE 5A—INSTALLATION IN THE SOFFIT OF CONCRETE OVER METAL DECK FLOOR AND ROOF ASSEMBLIES[1]

[1]Anchors may be placed in the upper or lower flute of the steel deck profile provided the minimum hole clearance is satisfied. Anchors in the lower flute may be installed with a maximum 1-inch offset in either direction from the center of the flute.

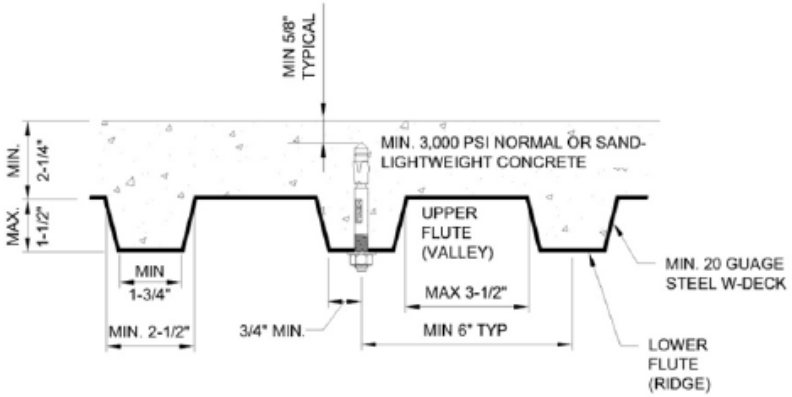

FIGURE 5B—INSTALLATION IN THE SOFFIT OF CONCRETE OVER METAL DECK FLOOR AND ROOF ASSEMBLIES – B DECK[1,2]

[1]Anchors may be placed in the upper or lower flute of the steel deck profile provided the minimum hole clearance is satisfied. Anchors in the lower flute may be installed with a maximum $^1/_8$-inch offset in either direction from the center of the flute. The offset distance may be increased proportionally for profiles with lower flute widths greater than those shown provided the minimum lower flute edge distance is also satisfied.
[2]Anchors may be placed in the upper flute of the steel deck profiles in accordance with Figure 5B provided the concrete thickness above the upper flute is minimum $3^1/_4$-inch and the minimum hole clearance of $^5/_8$-inch is satisfied.

FIGURE 5A & 5B FROM ICC-ESR-1917
DATED MAY 2015 (FOR REFERENCE ONLY)

REF -1 (FOR REFERENCE ONLY)
(HILTI KB-TZ FIGURE 5A & FIGURE 5B)