



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION  
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT

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

OFFICE USE ONLY

APPLICATION #: OPM-0398

HCAI Preapproval of Manufacturer's Certification (OPM)

Type: ☐ New ☒ Renewal/Update

Manufacturer Information

Manufacturer: Baxter Medical Systems, GmbH Co. + KG

Manufacturer's Technical Representative: Christoph Gneupel

Mailing Address: Carl-Zeiss-Straße 7-9, 07318 Saalfeld, Germany

Telephone: +49 170 6154168

Email: christoh\_gneupel@baxter.com

Product Information

Product Name: TRUSYSTEM 7500 SERIES SURGICAL TABLES

Product Type: MOTORIZED SURGICAL TABLES

Product Model Number: U14 HVU, U24 HVU, U26 HVU, ST26 HVU, CARBON X-TRA 7500 UV, CARBON FLOATLINE U, MR-NEURO U, CARBON SPINE, PTS COMI SUITE U, PEDIATRICS UT, SQ 14 X-TRA UT

General Description: MOTORIZED OPERATING TABLES

Applicant Information

Applicant Company Name: Baxter Medical Systems, GmbH Co. +KG

Contact Person: Christoph Gneupel

Mailing Address: Carl-Zeiss-Straße 7-9, 07318 Saalfeld, Germany

Telephone: +49 170 6154168

Email: christoph\_gneupel@baxter.com

Title: Project Leader R&D Sustaining Engineering Precision Positioning

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STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY





DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION  
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Registered Design Professional Preparing Engineering Recommendations

Company Name: CYS STRUCTURAL ENGINEERS, INC.

Name: Dieter Siebald

California License Number: S4346

Mailing Address: 2710 Gateway Oaks Drive, Suite 190N, Sacramento, CA 95833

Telephone: (916) 920-2020

Email: dieters@cyseng.com

HCAI Special Seismic Certification Preapproval (OSP)

☒ Special Seismic Certification is preapproved under OSP

OSP Number: 0828

Certification Method

Testing in accordance with: ☐ ICC-ES AC156 ☐ FM 1950 ☐ ASHRAE 171 ☐ FEMA 461

☐ Other(s) (Please Specify): \_\_\_\_\_

\*Use of criteria other than those adopted by the California Building Standards Code, 2022 (CBSC 2022) 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 2022 may be used when approved by HCAI prior to testing.

☒ Analysis

☐ Experience Data

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

HCAI Approval

Date: 11/20/2025

Name: Timothy Piland

Title: Senior Structural Engineer

Condition of Approval (if applicable): \_\_\_\_\_

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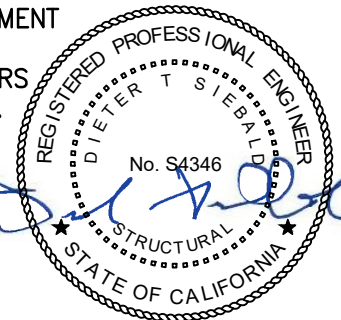


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OPM-0398

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**NOTES:**

1. THESE DRAWINGS ARE PREPARED FOR BAXTER HEALTHCARE CORPORATION, ONE BAXTER PARKWAY, DEERFIELD, IL 60015.
2. THE CONTRACTOR & INSPECTOR OF RECORD SHALL OBTAIN A COPY OF THIS PRE-APPROVAL FROM THE CALIFORNIA DEPARTMENT OF HEALTHCARE ACCESS AND INFORMATION (HCAI) 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 BAXTER AND IMRIS. STRUT PLATES & STRUT PLATE ANCHORS SHOWN IN THIS OPM SHALL BE SUPPLIED & INSTALLED BY THE CONTRACTOR.
4. ALL MOTORIZED OPERATING TABLES AND POWER PACK IN THIS OPM HAVE SPECIAL SEISMIC CERTIFICATION AS PER OSP-0828.



SHEET TITLE: TABLE OF CONTENTS



**CYS STRUCTURAL ENGINEERS, INC.**

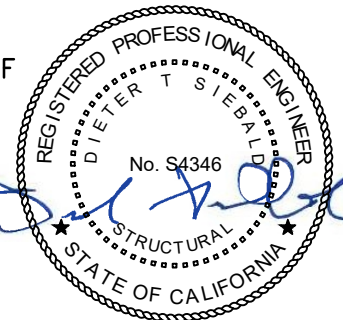
2710 GATEWAY OAKS DRIVE, SUITE 190N  
SACRAMENTO, CA 95833

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

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**GENERAL NOTES:**

1. THIS HCAI OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2022. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2022.
2. IT IS THE RESPONSIBILITY OF THE STRUCTURAL ENGINEER OF RECORD (SEOR) FOR A SITE SPECIFIC PROJECT TO VERIFY:
  - A. THE ADEQUACY OF THE NEW OR EXISTING STRUCTURE TO RESIST THE FORCES & WEIGHT SPECIFIED FOR EACH COMPONENT IN ADDITION TO ALL OTHER LOADS. PROVIDE & DESIGN SUPPLEMENTARY MEMBERS AS REQUIRED.
  - B. THAT THE NEW FLOOR ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY SLAB EDGES OR OPENINGS. SEE TABLE 1 ON PG 3.
  - C. THAT THE NEW FLOOR ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY NEW OR EXISTING ANCHORS. THE SPACING SHOWN IN TABLE 1 ON PAGE 3 IS THE REQUIRED MINIMUM SPACING OF THE GIVEN DIAMETER ANCHORS. THE REQUIRED SPACING FROM ANCHORS OF OTHER DIAMETERS & EMBEDMENTS WILL VARY & SHALL BE EVALUATED BY THE SEOR.
  - D. THAT THE INSTALLATION IS IN CONFORMANCE WITH THE CBC 2022 & WITH THE DETAILS SHOWN IN THIS PRE-APPROVAL.
  - E. THAT THE ACTUAL COMPONENT'S WEIGHT, CENTER OF GRAVITY (CG) LOCATION, ANCHOR LOCATIONS, ANCHOR DETAILS, & THE MATERIAL & GAUGE OF THE COMPONENT WHERE ATTACHMENTS ARE MADE, AGREE WITH THE INFORMATION SHOWN ON THIS PRE-APPROVAL DOCUMENTS.
3. EPOXY ANCHORS INSTALLED IN NORMAL WEIGHT CONCRETE SHALL BE HILTI HIT-RE 500 V3 WITH HIS-RN INSERTS ADHESIVE ANCHORING SYSTEM COMPLYING WITH ICC ESR-3814 LATEST ISSUE. EXPANSION ANCHORS INSTALLED IN NWC OR SLWC SHALL BE CARBON STEEL HILTI KWIK BOLT-TZ2 EXPANSION ANCHORS COMPLYING W/ ICC ESR-4266 LATEST ISSUE.
  - A. INSTALLATION: INSTALL THE ADHESIVE 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.
  - 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 IN THE ANCHOR SUCH AS DIRECT PULL WITH A HYDRAULIC JACK OR CALIBRATED SPRING LOADING DEVICES. 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 COMPONENT INSTALLATION. ALSO REFER TO CBC 1910A.5 "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 AND HOLD TEST LOAD FOR A MINIMUM OF 15 SECONDS. THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD, E.G., AS EVIDENCED BY LOOSENING OF THE WASHER UNDER THE NUT.
    - TORQUE WRENCH METHOD: THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN THE FOLLOWING LIMITS: WEDGE TYPE; ONE-HALF ( $\frac{1}{2}$ ) TURN OF THE NUT.



SHEET TITLE: GENERAL NOTES



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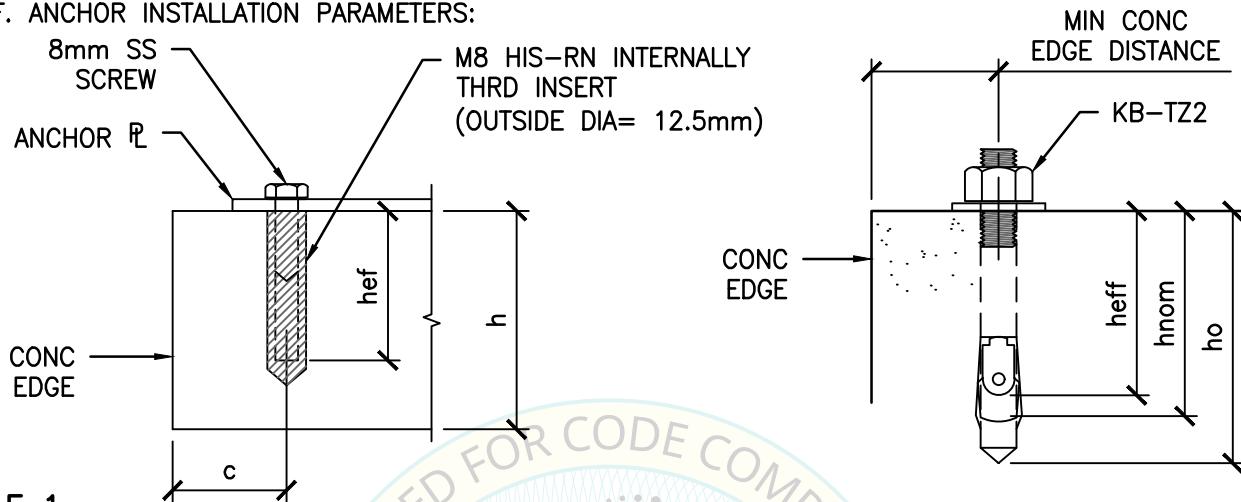
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**GENERAL NOTES CONTINUED:**

3. D. AVOID DAMAGING (E) STL REINFORCING IN CONC SLAB WHEN INSTALLING THE CONCRETE ANCHOR BOLTS.  
E. PROVIDE FOR FULL THRD ENGAGEMENT OF NUT & WASHER.  
F. ANCHOR INSTALLATION PARAMETERS:

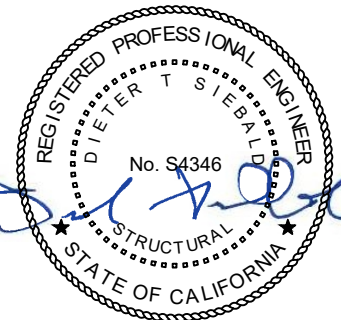


**TABLE 1**

CONDITION OF ANCHORAGE	ANCHOR DIA	INSTALLATION EMBED (INCH) hnom	EFFECTIVE EMBED (INCH) heff	HOLE DEPTH (INCH) ho	MIN CONC THK (INCH) h	MIN CONC EDGE DISTANCE (INCH)	MIN ANCHOR SPACING (INCH)	TEST TORQUE (FT-LBS) OR TENSION TEST (LBS)
CASE 1 STRUT PL'S	3/8" KB-TZ2	11 3/16	1 1/2	2	3/4	SEE PG 9	SEE PG 9	25 FT-LBS
CASE 2&3 BAXTER PL	8mm HIS-RN W/ HILTI HIT-RE 500 V3 ADHESIVE	3.54	3.54	3.75	4.75	16	5.28	2408 LBS
CASE 2&3 IMRIS PL	5/8" KB-TZ2 SS 316	4 1/2	4	4 3/4	6	16	19	60 FT-LBS

4. BOLTS THROUGH 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.

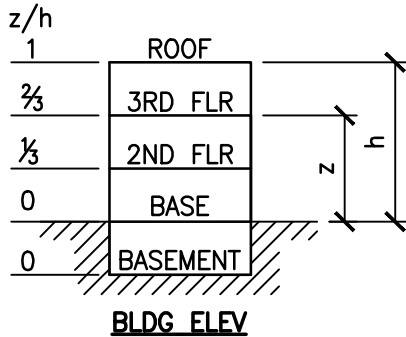


SHEET TITLE: GENERAL NOTES (CONTINUED)

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**GENERAL NOTES CONTINUED:**

5. THREE (3) 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 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 NWC SLAB ( $f'_c = 3000$  PSI, MIN)

**CASE 3:** ATTACHMENT DETAILS LOCATED AT UPPER FLRS ABV THE BASE OF A BLDG. THE FLRS ARE ASSUMED TO BE BUILT OF A NWC SLAB ( $f'_c = 3000$  PSI, MIN).

6. THIS PRE-APPROVAL MAY BE USED AT ANY GEOGRAPHICAL LOCATION IN THE STATE OF CALIFORNIA WHERE  $S_{ps}$ ,  $z/h$ , OR  $F_p$  IS LESS THAN OR EQ TO THE VALUE SPECIFIED IN THE DESIGN CRITERIA ON PG 5.

**ABBREVIATIONS:**

ABV	ABOVE	GA	GAUGE	SIM	SIMILAR
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	HCAI	CALIFORNIA DEPARTMENT OF HEALTHCARE ACCESS AND INFORMATION	SLWC	SAND-LIGHTWEIGHT CONCRETE
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS	ICC	INTERNATIONAL CODE COUNCIL	SS	STAINLESS STEEL
BLDG	BUILDING	IN (")	INCH	STL	STEEL
BLW	BELOW	LBS	POUNDS	THK	THICK/THICKNESS
BOTT	BOTTOM	LRFD	LOAD AND RESISTANCE FACTOR DESIGN	THRD	THREAD/THEADED
BRG	BEARING	MAX	MAXIMUM	TRAN	TRANSVERSE
CBC	CALIFORNIA BUILDING CODE	MFR	MANUFACTURER	Tu	ANCHORAGE TENSION REACTION DUE TO SEISMIC FORCE
CG	CENTER OF GRAVITY	MIN	MINIMUM	TYP	TYPICAL
C	CENTERLINE	mm	MILLIMETER	T&B	TOP & BOTTOM
COL	COLUMN	MTL	METAL	UNO	UNLESS NOTED OTHERWISE
CONC	CONCRETE	NO. (#)	NUMBER OR POUNDS	Vu	ANCHORAGE SHEAR REACTION DUE TO SEISMIC FORCE
COORD	COORDINATE	NWC	NORMAL WEIGHT CONCRETE	W/	WITH
DIA (Ø)	DIAMETER	OP	OPERATING	Wp	OPERATING WEIGHT
(E)	EXISTING CONDITION	OPG	OPENING	WT	WEIGHT
EA	EACH	OPM	OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION		
ELEV	ELEVATION	OSHPD	OFFICE OF STATEWIDE HEALTH PLANNING & DEVELOPMENT		
EQ	EQUAL	PG	PAGE		
$f'_c$	MIN ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE	PL	PLATE		
FLR	FLOOR	PSI	POUNDS PER SQUARE INCH		
FT (')	FOOT/FEET	REQ	REQUIRED		
$F_p$	HORIZONTAL SEISMIC FORCE PER ASCE 7-10 SEISMIC FORCE REQUIREMENTS	SEOR	STRUCTURAL ENGINEER OF RECORD		
$F_y$	SPECIFIED MINIMUM YIELD STRESS OF STEEL				



SHEET TITLE: GENERAL NOTES (CONTINUED)  
ABBREVIATIONS



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**DESIGN CRITERIA:**

SUPPORT & ATTACHMENT DESIGN IS PER CBC 2022 AT LRFD LEVEL FORCES.

OTHER MECHANICAL OR ELECTRICAL COMPONENTS PER TABLE 13.6-1 OF  
ASCE/SEI 7-16 SUPPLEMENT #1:

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

$$W_p = \text{SEE PG 6}$$

$$\text{MIN } F_p = 0.3 S_{DS} I_p W_p$$

$$\text{MAX } F_p = 1.6 S_{DS} I_p W_p$$

$$F_p = [0.4 a_p S_{DS} / (R_p / I_p)] (1 + 2z/h) W_p$$

**LOAD COMBINATIONS**

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

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

**FOR INSTALLATIONS WITH BAXTER PLATE:**

UPPER FLRS ABV THE BASE OF BLDG

$$\text{CASE 1: } z/h = 0.75 \quad S_{DS} = 2.000 \quad F_p = 2.000 W_p$$

$$z/h = 0.95 \quad S_{DS} = 1.724 \quad F_p = 2.000 W_p$$

FLRS AT OR BLW THE BASE OF BLDG

$$\text{CASE 2: } z/h = 0.00 \quad S_{DS} = 1.880 \quad F_p = 0.846 W_p$$

UPPER FLRS ABV THE BASE OF BLDG

$$\text{CASE 3: } z/h = 0.75 \quad S_{DS} = 0.846 \quad F_p = 0.846 W_p$$

$$z/h = 0.95 \quad S_{DS} = 0.730 \quad F_p = 0.846 W_p$$

**FOR INSTALLATIONS WITH IMRIS PLATE:**

UPPER FLRS ABV THE BASE OF BLDG

$$\text{CASE 1: } z/h = 0.75 \quad S_{DS} = 2.320 \quad F_p = 2.320 W_p$$

$$z/h = 0.95 \quad S_{DS} = 2.000 \quad F_p = 2.320 W_p$$

FLRS AT OR BLW THE BASE OF BLDG

$$\text{CASE 2: } z/h = 0.00 \quad S_{DS} = 2.500 \quad F_p = 1.125 W_p$$

UPPER FLRS ABV THE BASE OF BLDG

$$\text{CASE 3: } z/h = 0.75 \quad S_{DS} = 1.125 \quad F_p = 1.125 W_p$$

$$z/h = 0.95 \quad S_{DS} = 0.970 \quad F_p = 1.125 W_p$$



SHEET TITLE: DESIGN CRITERIA



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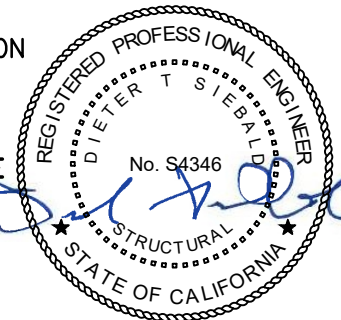
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**CENTER OF GRAVITY:**

OR TABLETOP: (11)	Wp <sup>(5)</sup> LBS	X <sub>t</sub> <sup>(1)</sup> , IN	X <sub>LONG</sub> <sup>(4)</sup> , IN	Hcg <sup>(3)</sup> , IN	PATIENT WT <sup>(7)</sup> LBS	MAX TESTED SYSTEM WT <sup>(10)</sup> LBS
U14 HVU	174	-0.98	+6.3 -11.8	46.14	705 <sup>(9)</sup>	-
U24 HVU	187	-3.35	±7.87	46.14	297 <sup>(9)</sup>	796
U26 HVU	202	-3.35	±7.87	49.05	705 <sup>(9)</sup>	1242
ST26 HVU	247	-2.64	±7.87	46.14	396 <sup>(8)</sup>	962
CARBON X-TRA 7500 UV	254	-1.57	+17.9	51.61	317 <sup>(8)</sup>	-
CARBON FLOATLINE U	344	-9.45	+31.5	49.56	317 <sup>(8)</sup>	941
MR-NEURO U	426	-11.47	+18.6	51.69	317 <sup>(9)</sup>	1054
CARBON SPINE	209	+5.04	+31.5	47.24	317 <sup>(8)</sup>	-
PTS COMBI SUITE U	412	+5.7	+17.9	52.14	282 <sup>(8)</sup>	-
PEDIATRICS UT	154	+4.72	+23.6	45.07	141 <sup>(8)</sup>	-
SQ 14 X-TRA UT	278	+0.98	+13.8	48.47	282 <sup>(8)</sup>	-
COLUMN TRUSYSTEM 7500						
U	280	0	0	21.06	N/A	N/A
HYBRID PLUS	280	0	0	21.06	N/A	N/A
HYBRID MR IMRIS	277	0	0	21.06	N/A	N/A

**NOTES:**

- UNADJUSTED CG LOCATION BASED ON DISTANCE FROM  $\phi$  OF COL.
- MAX TRAN SHIFT = 4.9". SEE PG 7.
- FOR COLS Hcg= (HT OF COL)/2; FOR TABLES Hcg= HEIGHT OF COL+ HEIGHT OF TABLETOP.
- X<sub>LONG</sub> IS THE ALLOWABLE LONGITUDINAL SHIFT OF THE SHIFTABLE SEGMENTS OF THE TABLE. IT IS NOT THE CG, WHICH WILL BE LESS. HOWEVER, FOR EASE OF CALCULATIONS, IT IS CONSERVATIVELY USED FOR THE CG LOCATION. SEE PG 7 FOR DIAGRAM.
- Wp OF TABLE DOES NOT INCLUDE PATIENT WT.
- ALL COLS ARE COMPATIBLE W/ ALL OPERATING TABLETOPS.
- PATIENT WEIGHT IS 80% OF MAX APPROVED PATIENT WT.
- APPROVED PATIENT WT FOR MAX TABLE EXTENSION.
- MAX APPROVED PATIENT WT AT MIDDLE TABLE POSITION.
- MAX SYSTEM WT TESTED INCLUDES 80% OF MAX APPROVED PATIENT WT. CELLS WITHOUT VALUE MEANS THAT THE OR TABLETOP WAS CERTIFIED BY INTERPOLATION OR EXTRAPOLATION.
- MAXIMUM DESIGN VALUE FOR THE BASE PLATE ANCHORAGE IS CONTROLLED BY THE CARBON FLOATLINE U. IT ENVELOPES ALL OTHER OR TABLETOPS. THE CG FOR THE CARBON FLOATLINE U IS LOCATED AT 20.6 IN FROM THE CENTER LINE OF THE COLUMN FOR THE 317 LBS PATIENT WT.



SHEET TITLE: CENTER OF GRAVITY



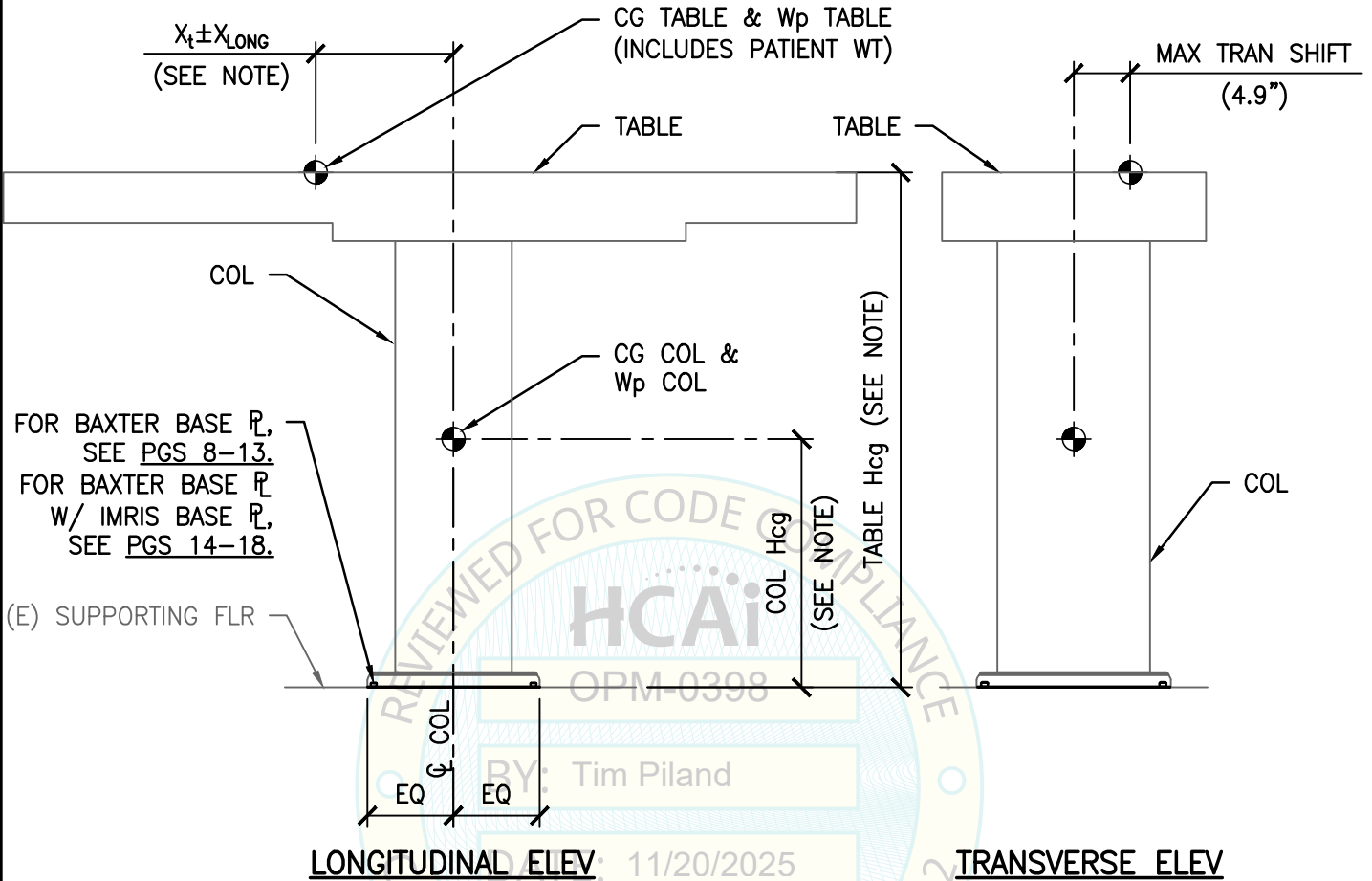
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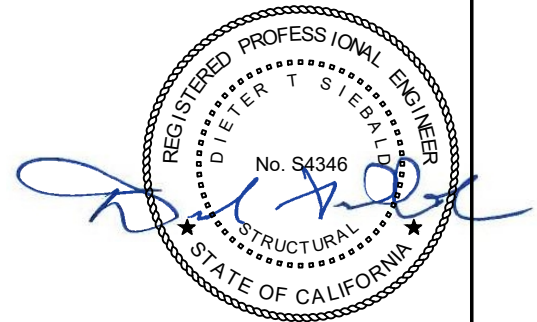
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**NOTES:**

1. REFERENCE TABLES ON PG 6 FOR Wp, Hcg,  $X_t$  &  $X_{LONG}$ .
2. THIS ELEVATION WITH CG LOCATIONS IS PROVIDED FOR REFERENCE ONLY. MAXIMUM DESIGN VALUE FOR THE BASE PLATE ANCHORAGE IS CONTROLLED BY THE CARBON FLOATLINE U.



SHEET TITLE: OPERATING TABLE ELEVATION

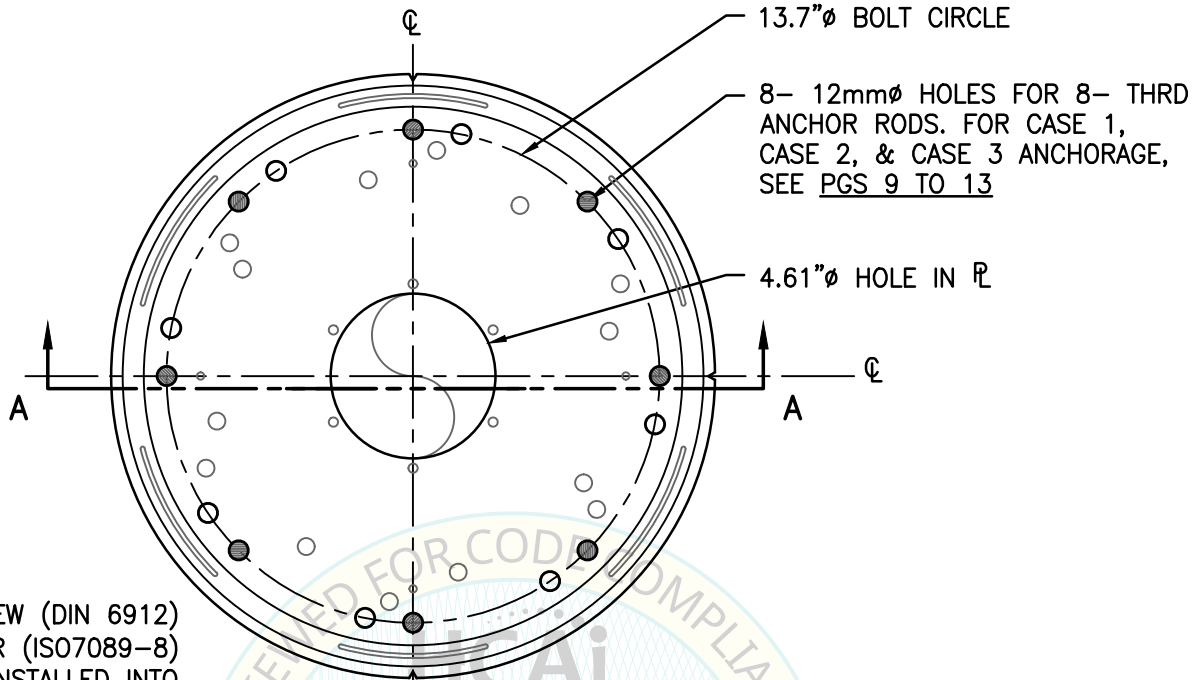


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M8x30 SCREW (DIN 6912)  
& WASHER (ISO7089-8)  
INSTALLED INTO  
M8 INTERNALLY THRD SLEEVE  
W/ M12 THRD ROD  
ASSEMBLY SUPPLIED BY  
BAXTER, TORQUE TO  
13.3 FT-LBS. TYP OF 8

**BASE PL PLAN VIEW**

BY: Tim Piland

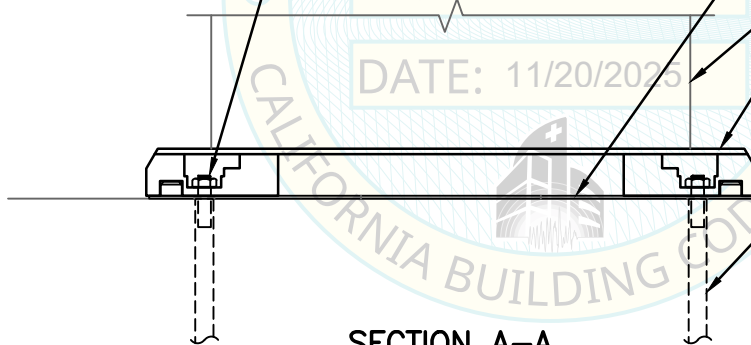
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BASE  $\bar{P}$ , PROVIDED BY BAXTER

COL, PROVIDED BY BAXTER

COL BASE  $\bar{P}$ , PROVIDED BY  
BAXTER. FOR USE W/ IMRIS  
BASE  $\bar{P}$ , SEE PG 14

M8 INTERNALLY THREADED SLEEVE W/  
M12 THREADED ROD ASSEMBLY  
SUPPLIED BY BAXTER, SEE PG 11



**NOTES:**

1.  $\bar{P}$  MATERIAL IS EN 10088-2:2014 (#1.4301)  
(ASTM A240 TYPE 304 SS,  $F_y = 30$  KSI)
2. M8x30 SCREW MATERIAL IS A2-70 SS:  
 $F_y = 65.3$  KSI (450 N/mm<sup>2</sup>)  
 $F_u = 101.5$  KSI (700 N/mm<sup>2</sup>)



SHEET TITLE: BAXTER BASE PLATE DETAIL



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M8x30 SCREW & WASHER  
FOR M8 INTERNALLY THREADED SLEEVE  
WITH M12 THREADED ROD ASSEMBLY  
SUPPLIED BY BAXTER, TYP OF 8.  
SEE PG 11 FOR DETAILS

FOR DESIGN  
CRITERIA  
SEE PG 5

MAX LRFD FORCES  
AT EA ANCHOR (LBS)

CASE 1

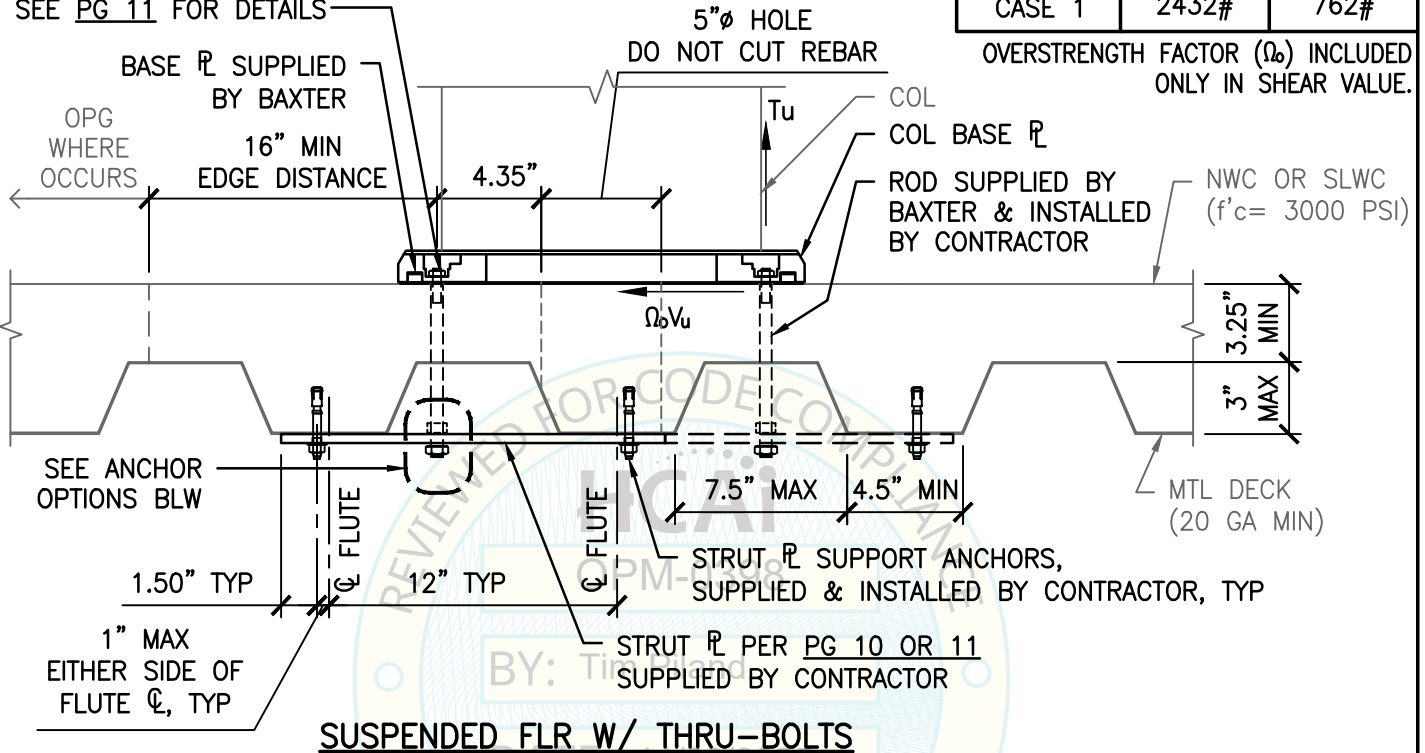
$T_u$

$\Omega_o V_u$

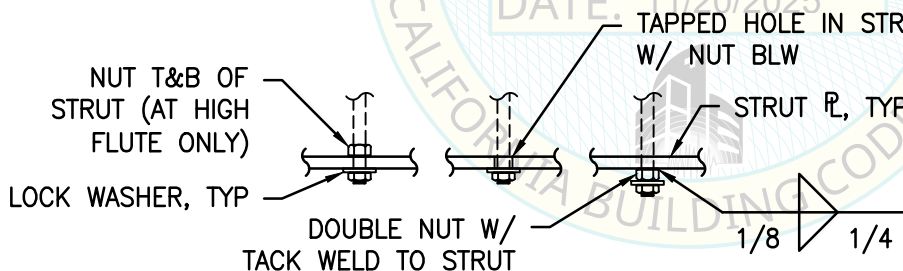
2432#

762#

OVERSTRENGTH FACTOR ( $\Omega_o$ ) INCLUDED  
ONLY IN SHEAR VALUE.



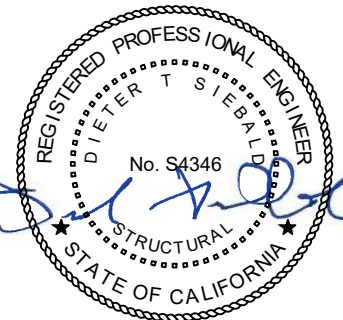
### SUSPENDED FLR W/ THRU-BOLTS



### ANCHOR OPTIONS

#### INSTALLATION NOTES:

1. CONTRACTOR DRILLS HOLES FOR THE ANCHOR RODS.
2. RODS ARE INSTALLED BY CONTRACTOR. SCREWS ARE INSTALLED BY BAXTER.
3. CONTRACTOR MUST COORDINATE WITH BAXTER PRIOR TO DRILLING ANY HOLES.
4. DO NOT CUT REBAR UNLESS WRITTEN AUTHORIZATION IS RECEIVED FROM PROJECT SEOR.



SHEET TITLE: BAXTER SANDWICH MOUNTED FLOOR ATTACHMENT  
CASE 1 - UPPER FLOORS



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Job No: 24027.06

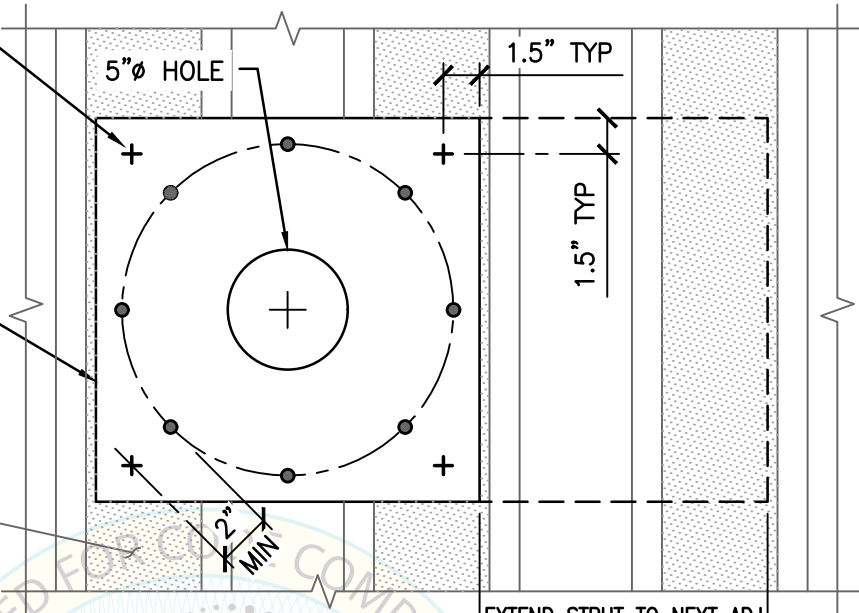
Date: 11-10-2025

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STRUT  $\bar{r}$  SUPPORT ANCHORS  
SUPPLIED & INSTALLED  
BY CONTRACTOR:  
HILTI KB-TZ2  $\frac{3}{8}"\phi \times 2"$  EMBED  
(ICC ESR-4266), TYP OF 4.  
(TORQUE TEST 25 FT-LBS)

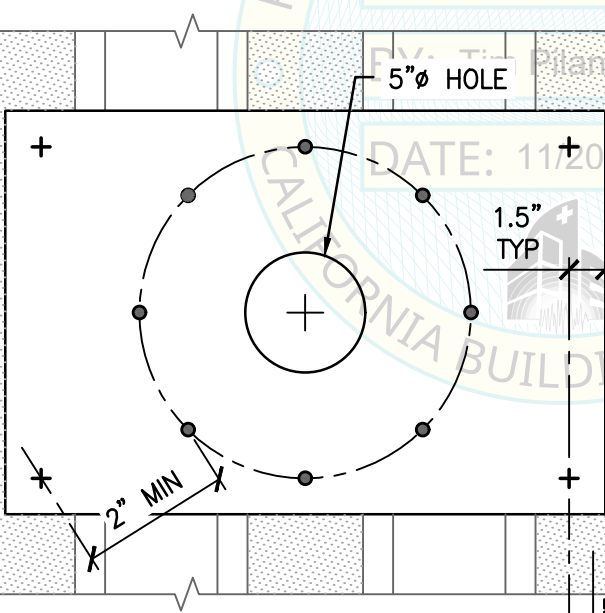
$\frac{3}{8}"$  STRUT  $\bar{r}$  (ASTM A36),  
SUPPLIED BY CONTRACTOR. FIELD  
VERIFY DECK ORIENTATION FOR  
COORD W/ ANCHOR LAYOUT.  
FOR ALTERNATE SEE BELOW

BOTT OF MTL DECK  
(LOW FLUTES SHADED  
FOR CLARITY)



**REFLECTED CEILING PLAN  
AT METAL DECK**

EXTEND STRUT TO NEXT ADJ  
LOW FLUTE IF THRU-BOLTS  
ARE LESS THAN 2" FROM  
STRUT  $\bar{r}$  SUPPORT ANCHORS  
(SIM TO DTL BELOW)



**REFLECTED CEILING PLAN  
AT METAL DECK**

BOTT OF MTL DECK  
(LOW FLUTES SHADED  
FOR CLARITY)

FOR NOTES AND  
INFO NOT SHOWN,  
SEE DETAIL ABOVE



1" MAX EITHER SIDE  
OF FLUTE  $\bar{c}$ , TYP

SHEET TITLE: BAXTER STRUT PLATE DETAIL (SUPPLIED BY CONTRACTOR)  
CASE 1 - UPPER FLOORS



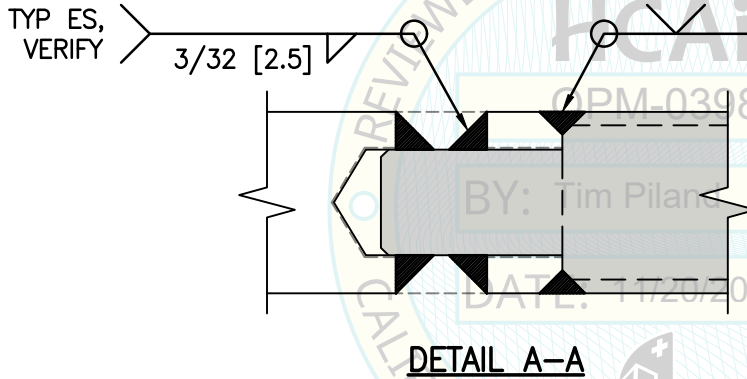
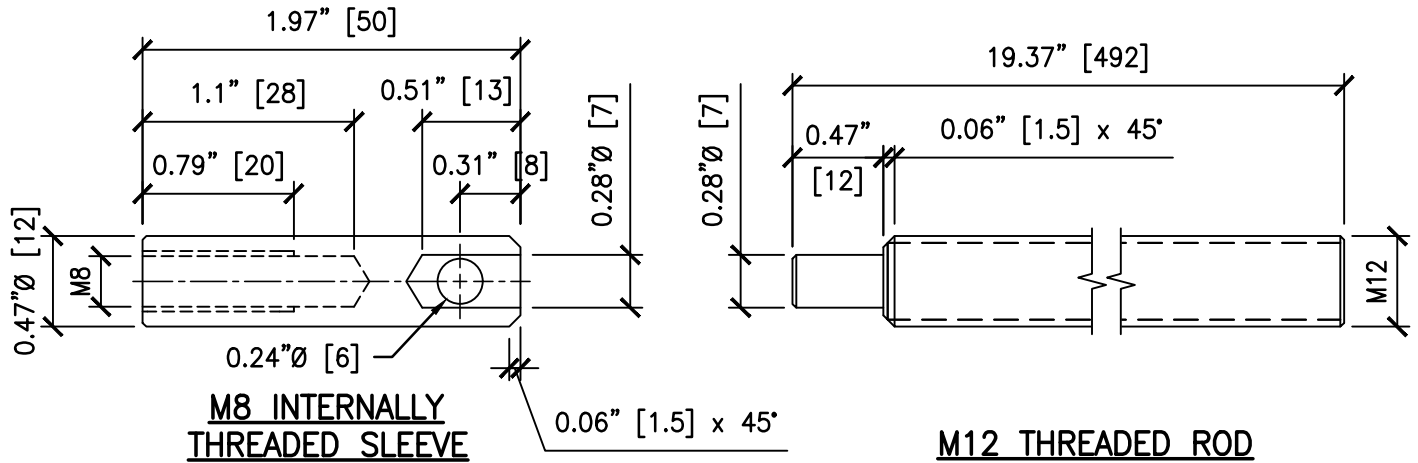
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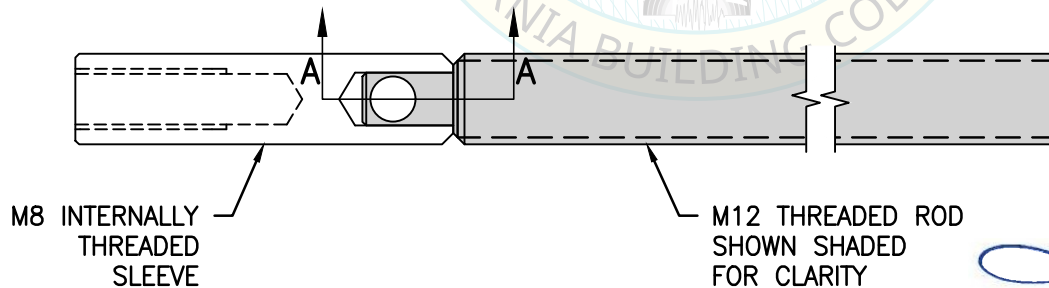
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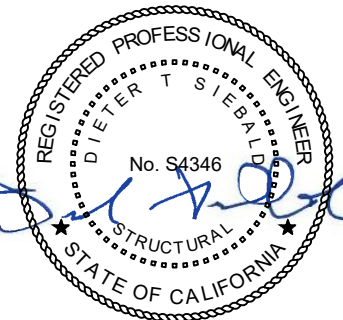


**NOTE:**  
MATERIAL FOR THREADED ROD  
AND SLEEVE IS 1.4301 STEEL:  
 $F_y = 29.0 \text{ KSI (200 N/mm}^2\text{)}$   
 $F_u = 101.5 \text{ KSI (700 N/mm}^2\text{)}$



**M8 SLEEVE TO M12 ROD ASSEMBLY**

SCALE: 12" = 1'-0"



**SHEET TITLE: M8 INTERNALLY THREADED SLEEVE  
WITH M12 THREADED ROD ASSEMBLY**



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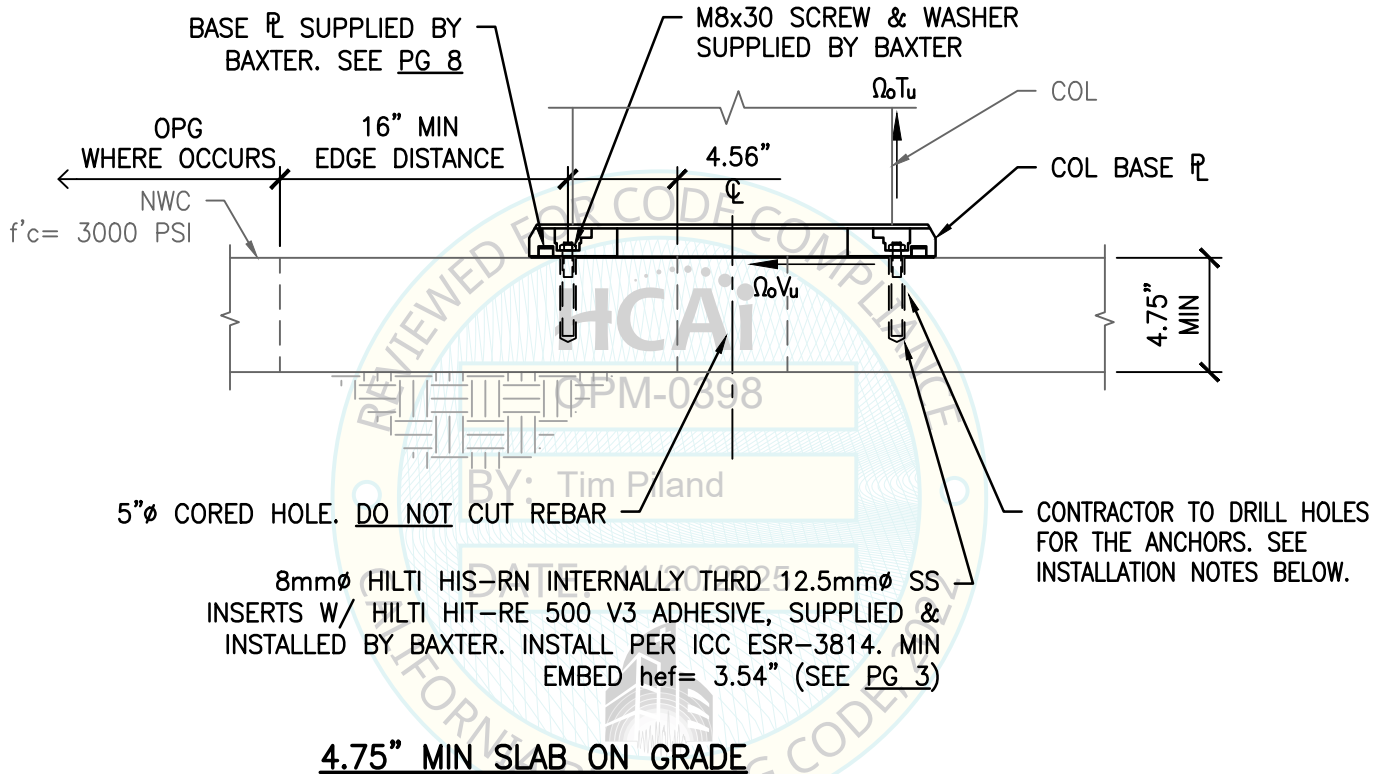
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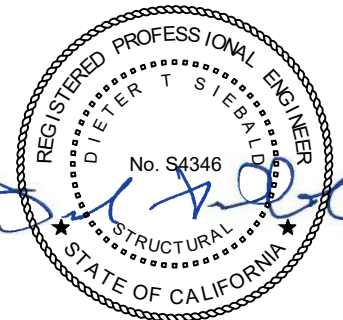
FOR DESIGN CRITERIA SEE PG 5	MAX LRFD FORCES AT EA ANCHOR (LBS)	
	$T_u$	$V_u$
CASE 2	1669#	333#

OVERSTRENGTH FACTOR ( $\Omega_o$ ) INCLUDED.



**INSTALLATION NOTES:**

1. CONTRACTOR DRILLS HOLES FOR THE ANCHORS.
2. SCREW & INSERTS ARE INSTALLED BY BAXTER.
3. CONTRACTOR MUST COORDINATE WITH BAXTER PRIOR TO DRILLING ANY HOLES.
4. DO NOT CUT REBAR UNLESS WRITTEN AUTHORIZATION IS RECEIVED FROM PROJECT SEOR.



**SHEET TITLE: BAXTER SURFACE MOUNTED FLOOR ATTACHMENT**  
**CASE 2 - AT OR BELOW BASE**



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Date: 11-10-2025  
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FOR DESIGN  
CRITERIA  
SEE PG 5

MAX LRFD FORCES  
AT EA ANCHOR (LBS)

CASE 3

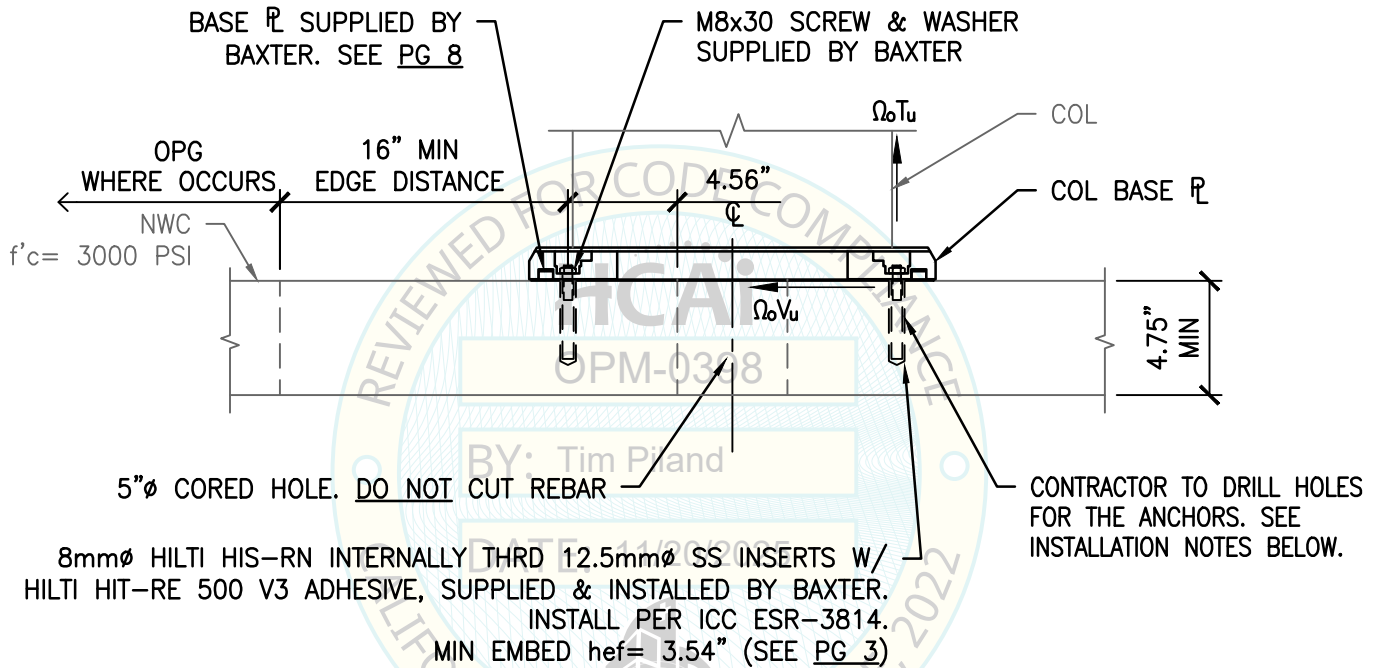
$T_u$

1669#

$V_u$

333#

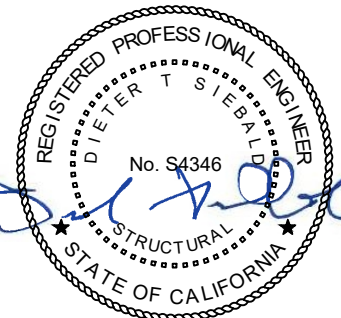
OVERSTRENGTH FACTOR ( $\Omega_o$ ) INCLUDED.



**4.75" MIN SUSPENDED SLAB**

**INSTALLATION NOTES:**

1. CONTRACTOR DRILLS HOLES FOR THE ANCHORS.
2. SCREW & INSERTS ARE INSTALLED BY BAXTER.
3. CONTRACTOR MUST COORDINATE WITH BAXTER PRIOR TO DRILLING ANY HOLES.
4. DO NOT CUT REBAR UNLESS WRITTEN AUTHORIZATION IS RECEIVED FROM PROJECT SEOR.



SHEET TITLE: BAXTER SURFACE MOUNTED FLOOR ATTACHMENT  
CASE 3 - UPPER FLOORS



**CYS STRUCTURAL ENGINEERS, INC.**

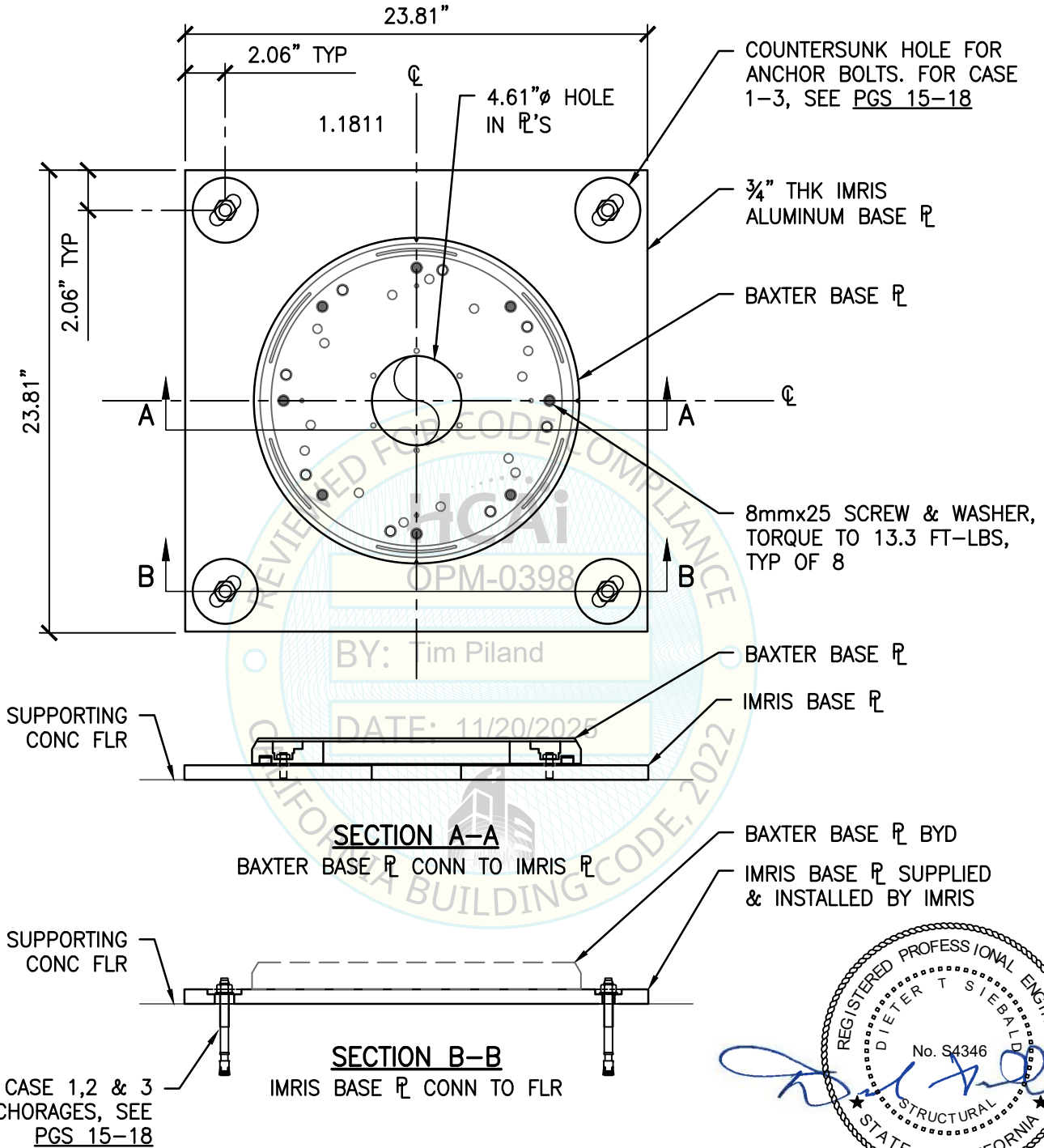
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SHEET TITLE: IMRIS BASE PLATE DETAIL



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FOR DESIGN  
CRITERIA  
SEE PG 5

MAX LRFD FORCES  
AT EA ANCHOR (LBS)

CASE 1

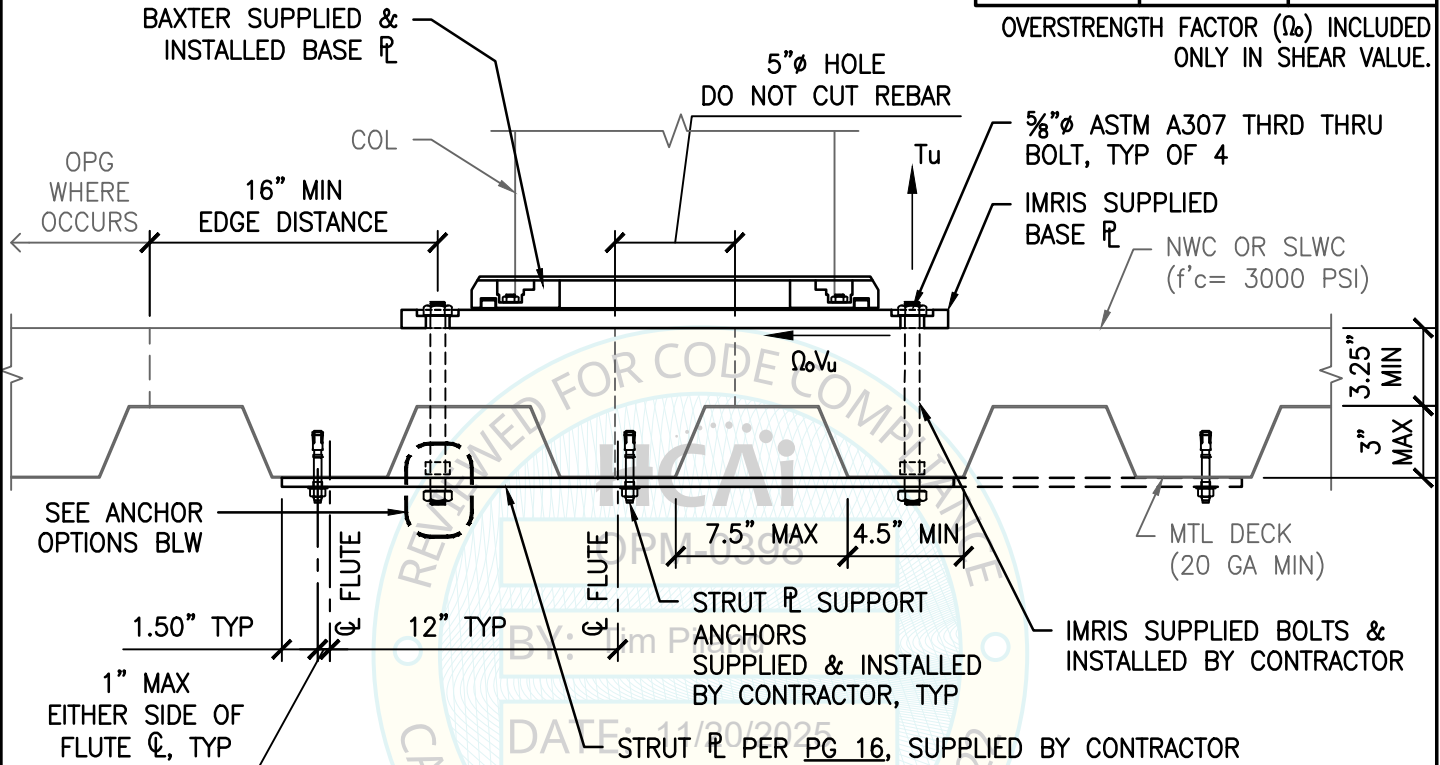
$T_u$

$\Omega_o V_u$

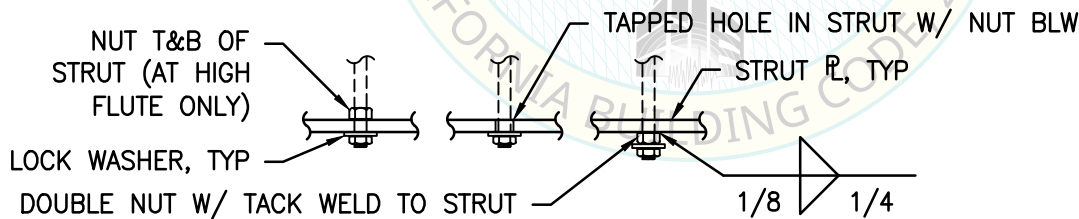
2403#

1277#

OVERSTRENGTH FACTOR ( $\Omega_o$ ) INCLUDED  
ONLY IN SHEAR VALUE.



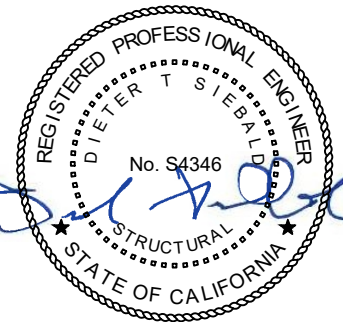
### SUSPENDED FLR W/ THRU-BOLTS



### ANCHOR OPTIONS

#### INSTALLATION NOTES:

1. CONTRACTOR DRILLS HOLES FOR THE ANCHOR BOLTS.
2. BOLTS ARE INSTALLED BY CONTRACTOR.
3. CONTRACTOR MUST COORDINATE WITH IMRIS PRIOR TO DRILLING ANY HOLES.
4. DO NOT CUT REBAR UNLESS WRITTEN AUTHORIZATION IS RECEIVED FROM PROJECT SEOR.



SHEET TITLE: IMRIS SANDWICH MOUNTED FLOOR ATTACHMENT  
CASE 1 - UPPER FLOORS



**CYS STRUCTURAL ENGINEERS, INC.**

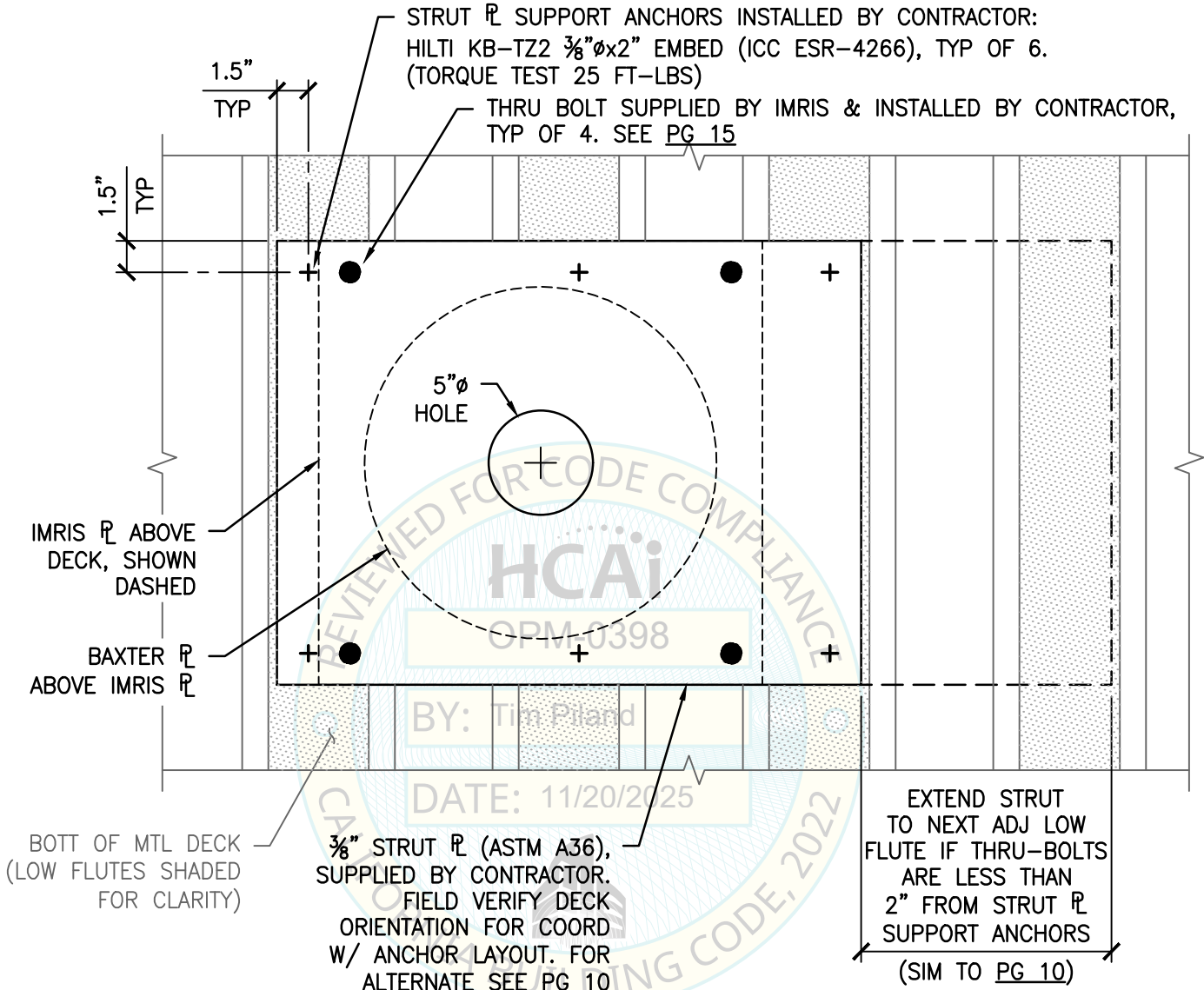
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**REFLECTED CEILING PLAN  
AT METAL DECK**



SHEET TITLE: IMRIS STRUT PLATE DETAIL



**CYS STRUCTURAL ENGINEERS, INC.**

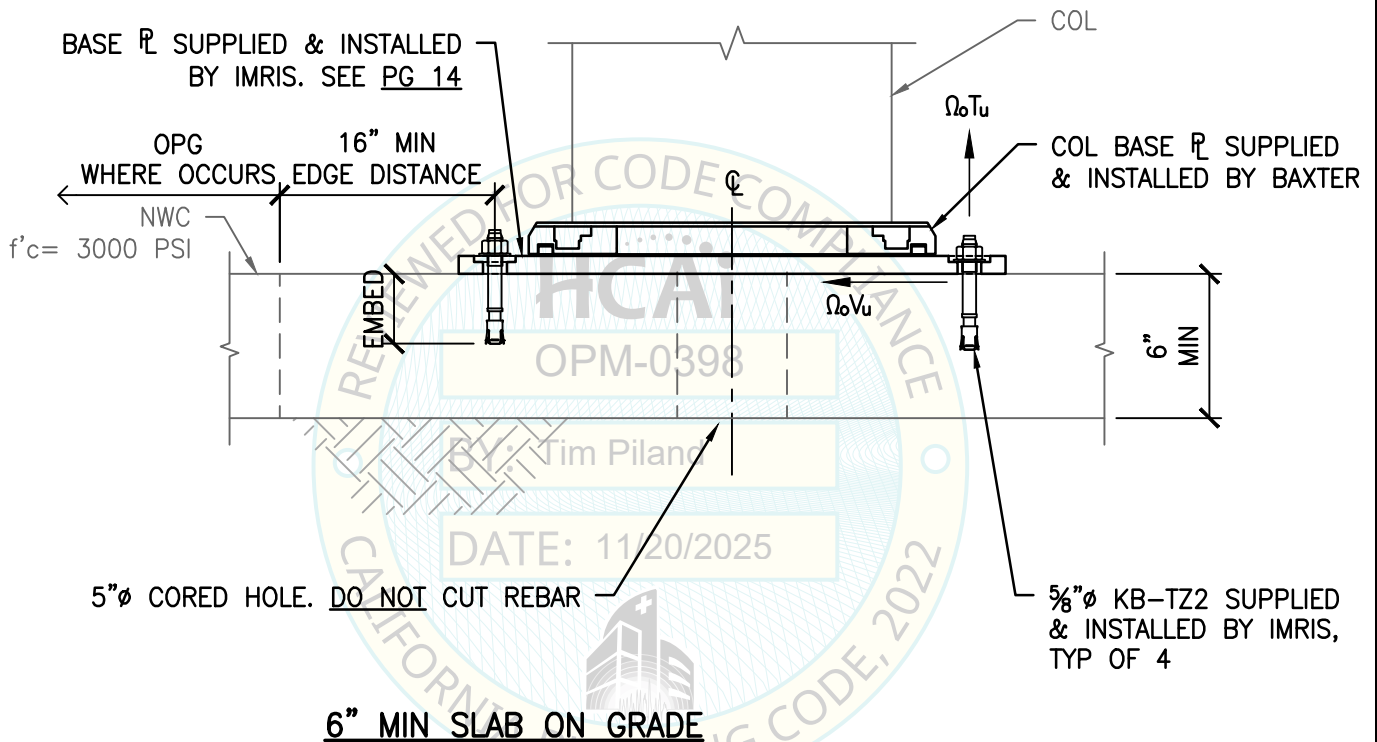
2710 GATEWAY OAKS DRIVE, SUITE 190N  
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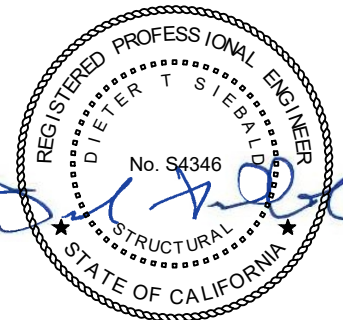
FOR DESIGN CRITERIA SEE PG 5	MAX LRFD FORCES AT EA ANCHOR (LBS)	
	$T_u$	$V_u$
CASE 2	1792#	619#

OVERSTRENGTH FACTOR ( $\Omega_o$ ) INCLUDED.



**INSTALLATION NOTES:**

- DO NOT CUT REBAR UNLESS WRITTEN AUTHORIZATION IS RECEIVED FROM PROJECT SEOR.



SHEET TITLE: IMRIS SURFACE MOUNTED FLOOR ATTACHMENT  
CASE 2 - AT OR BELOW BASE



**CYS STRUCTURAL ENGINEERS, INC.**

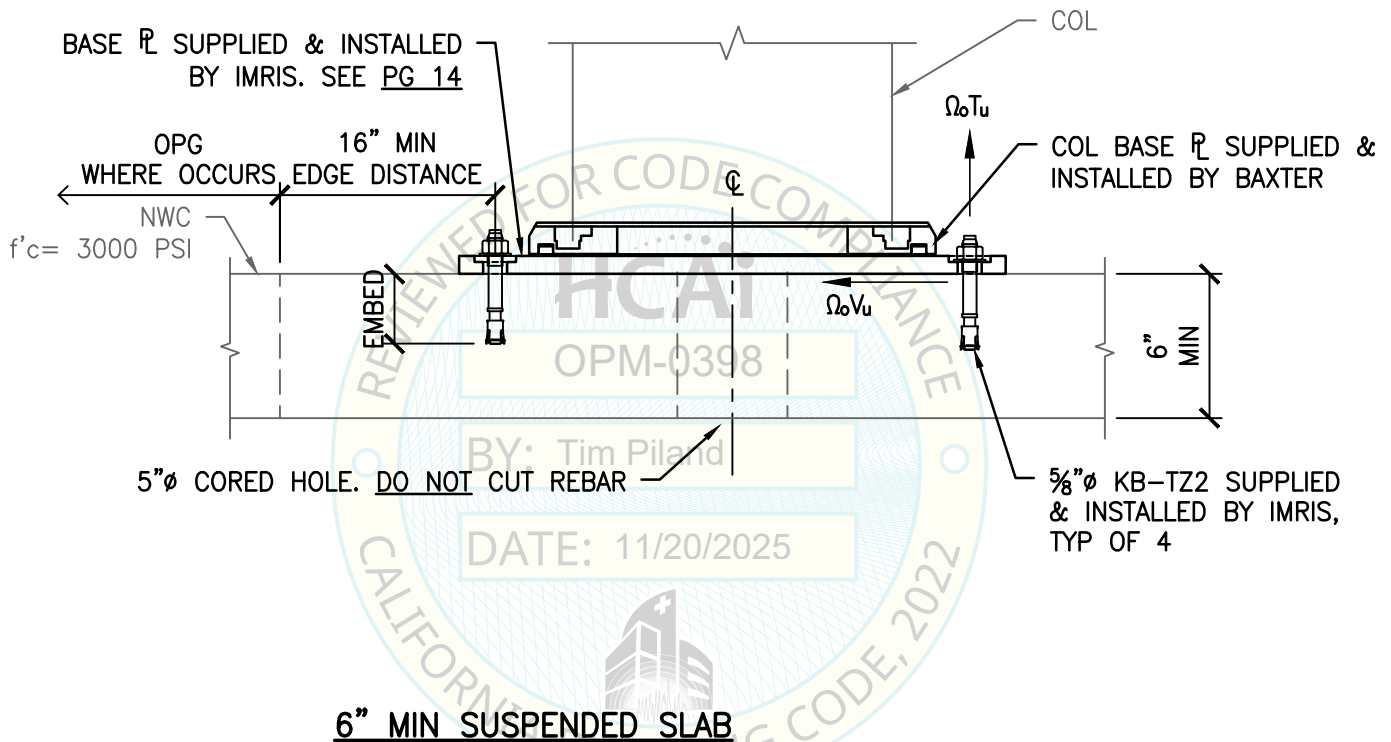
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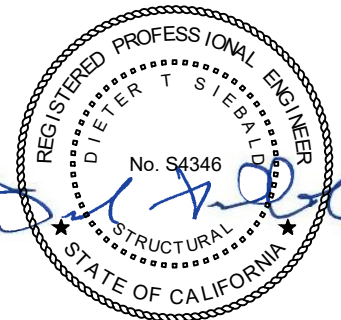
FOR DESIGN CRITERIA SEE PG 5	MAX LRFD FORCES AT EA ANCHOR (LBS)	
	$T_u$	$V_u$
CASE 3	1792#	619#

OVERSTRENGTH FACTOR ( $\Omega_o$ ) INCLUDED.



**INSTALLATION NOTES:**

- DO NOT CUT REBAR UNLESS WRITTEN AUTHORIZATION IS RECEIVED FROM PROJECT SEOR.



SHEET TITLE: IMRIS SURFACE MOUNTED FLOOR ATTACHMENT  
CASE 3 - UPPER FLOORS



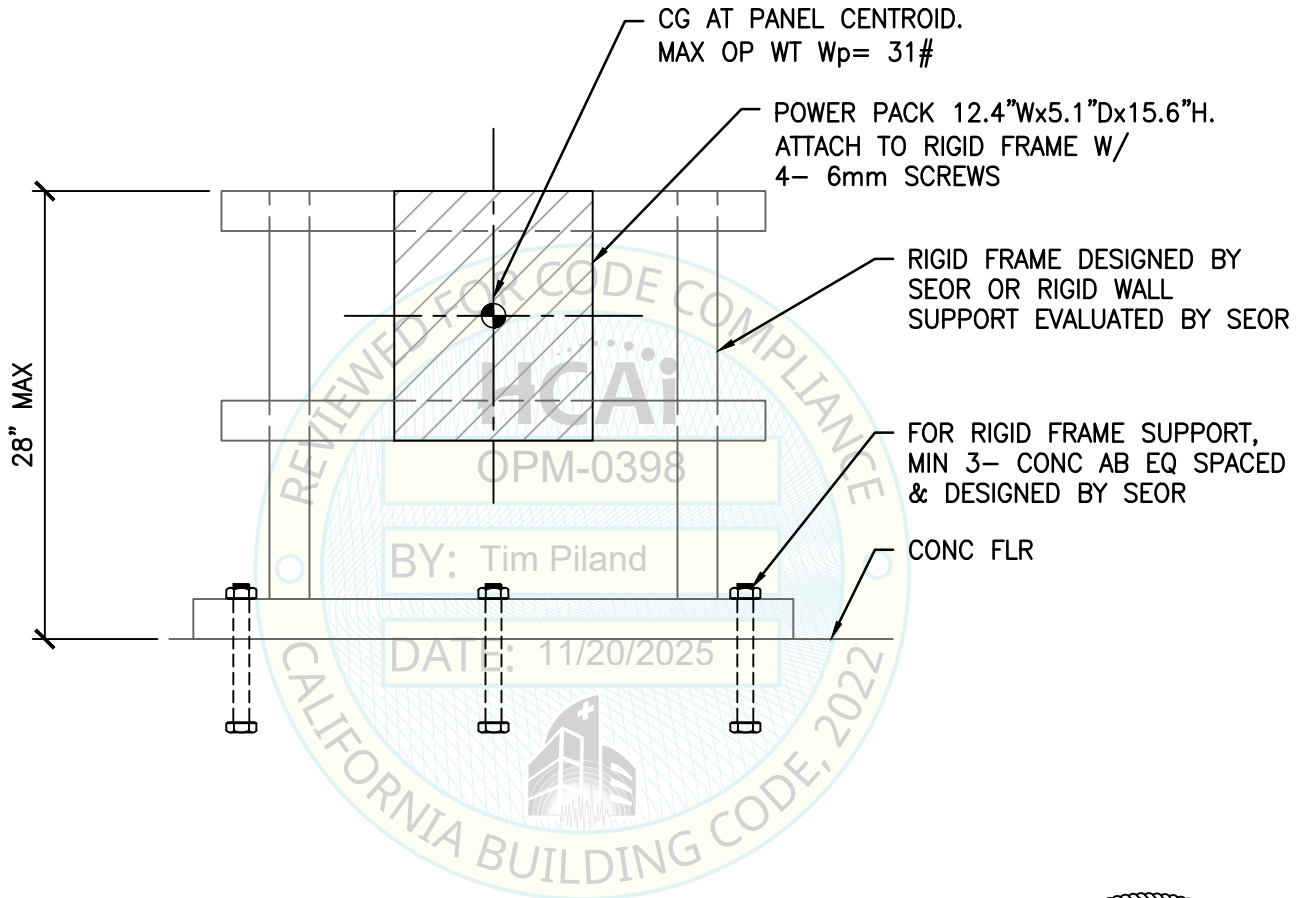
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**NOTE:**  
POWER PACK ONLY WHEN NEEDED  
FOR SYSTEM INSTALLATION



SHEET TITLE: POWER PACK DETAIL



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**NOTES FOR ASCE 7-22 CHAPTER 13 SUMMARY & COMMENTS & COMPARISON:**

MIN $F_p = 0.3S_{DS} I_p W_p$	SAME AS FOR ASCE 7-16
MAX $F_p = 1.6S_{DS} I_p W_p$	SAME AS FOR ASCE 7-16
$E_v = 0.2S_{DS} D$	SAME AS FOR ASCE 7-16
$F_p = 0.4S_{DS} I_p W_p (H_z/R_\mu)(C_{AR}/R_{po})$	
$H_{f_{MIN}} = 1.0$	AT OR BELOW GRADE PLANE
$H_{f_{MAX}} = 1+2.5 (z/h) = 3.375$	ABOVE GRADE $z/h = 0.95$
$H_{f_{MAX}} = 1+2.5 (z/h) = 2.875$	ABOVE GRADE $z/h = 0.75$
$R_{\mu_{MIN}} = 1.0$	AT OR BELOW GRADE PLANE
$R_{\mu_{MIN}} = 1.3$	ABOVE GRADE FOR UNSPECIFIED BUILDING SFRS
$[H_f/R_\mu]_{MAX} = 2.60$	ABOVE GRADE $z/h = 0.95$
$[H_f/R_\mu]_{MIN} = 1.00$	AT OR BELOW GRADE PLANE
$C_{AR} = 1.0$	OTHER MECH OR ELEC COMPONENT AT OR BELOW OR ABOVE GRADE
$R_{po} = 1.5$	OTHER MECH OR ELEC COMPONENT AT OR BELOW OR ABOVE GRADE
$\Omega_0 = 2.0$	OVER-STRENGTH FACTOR
THEREFORE,	
$F_p = 0.4S_{DS} 1.5W_p (1.0/1.0)(1.0/1.5) = 0.4S_{DS}W_p$	AT OR BELOW GRADE PLANE
MIN $F_p = 0.3S_{DS} 1.5W_p = 0.45S_{DS}W_p$	GOVERNS AT OR BELOW GRADE PLANE
$F_p = 0.4S_{DS} 1.5W_p (3.375/1.3)(1.0/1.5) = 1.04S_{DS}W_p$	AT $z/h = 0.95$
$F_p = 0.4S_{DS} 1.5W_p (2.875/1.3)(1.0/1.5) = 0.885S_{DS}W_p$	AT $z/h = 0.75$

**COMPARISON:**

FOR INSTALLATIONS WITH BAXTER PLATE:

	ASCE 7-16	ASCE 7-22
CASE 1: UPPER FLRS ABV THE BASE OF BLDG		
$z/h = 0.75$	$S_{DS} = 2.000 F_p = 2.000 W_p$	$S_{DS} = 2.260 F_p = 2.000 W_p$
$z/h = 0.95$	$S_{DS} = 1.724 F_p = 2.000 W_p$	$S_{DS} = 1.923 F_p = 2.000 W_p$
CASE 2: FLRS AT OR BLW THE BASE OF BLDG		
$z/h = 0.00$	$S_{DS} = 1.880 F_p = 0.846 W_p$	$S_{DS} = 1.410 F_p = 0.635 W_p$
CASE 3: UPPER FLRS ABV THE BASE OF BLDG		
$z/h = 0.75$	$S_{DS} = 0.846 F_p = 0.846 W_p$	$S_{DS} = 0.718 F_p = 0.635 W_p$
$z/h = 0.95$	$S_{DS} = 0.730 F_p = 0.846 W_p$	$S_{DS} = 0.611 F_p = 0.635 W_p$

**NOTE:**

THE  $F_p$  FORCE LEVELS FOR CASES 2 & 3 UNDER THE 2025 CBC ARE LOWER SINCE  $\Omega_0$  IS NOW 2.0

FOR INSTALLATIONS WITH IMRIS PLATE:

	ASCE 7-16	ASCE 7-22
CASE 1: UPPER FLRS ABV THE BASE OF BLDG		
$z/h = 0.75$	$S_{DS} = 2.320 F_p = 2.320 W_p$	$S_{DS} = 2.623 F_p = 2.320 W_p$
$z/h = 0.95$	$S_{DS} = 2.000 F_p = 2.320 W_p$	$S_{DS} = 2.234 F_p = 2.320 W_p$
CASE 2: FLRS AT OR BLW THE BASE OF BLDG		
$z/h = 0.00$	$S_{DS} = 2.500 F_p = 1.125 W_p$	$S_{DS} = 1.875 F_p = 0.844 W_p$
CASE 3: UPPER FLRS ABV THE BASE OF BLDG		
$z/h = 0.75$	$S_{DS} = 1.125 F_p = 1.125 W_p$	$S_{DS} = 0.954 F_p = 0.844 W_p$
$z/h = 0.95$	$S_{DS} = 0.970 F_p = 1.125 W_p$	$S_{DS} = 0.812 F_p = 0.844 W_p$

**CONCLUSION:**

OPM CAN BE USED FOR 2022 CBC (ASCE 7-16) & 2025 CBC (ASCE 7-22).

SHEET TITLE: APPENDIX A - ASCE 7-22 VERSION



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