



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY
APPLICATION #: OPM-0181-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

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

Manufacturer Information

Manufacturer: Labconco Corporation

Manufacturer's Technical Representative: Kevin Gilkison

Mailing Address: 8811 Prospect Avenue Kansas City, MO 64132

Telephone: (800) 821-5525 Email: KGilkison@labconco.com

Product Information

Product Name: Purifier Logic+ Class II Biosafety Cabinets

Product Type: Type A2 and Type B2 OPM-0181-13

Product Model Number: Series 3023, 3024, 3025, 3026, 3034, 3036

General Description: Biological Safety Cabinets on base stands

Applicant Information

Applicant Company Name: Labconco Corporation

Contact Person: Kevin Gilkison

Mailing Address: 8811 Prospect Avenue Kansas City, MO 64132

Telephone: (800) 821-5525 Email: KGilkison@labconco.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: [Signature] Date: 01/07/2015

Title: VP - President - Sales Engineering Company Name: Labconco Corporation

\*Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dvnamic Needs\*





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

**Registered Design Professional Preparing Engineering Recommendations**

Company Name: Eclipse Engineering, Inc.

Name: Chad Taylor, S.E. California License Number: S5479

Mailing Address: 113 W Main, Ste. B Missoula, MT 59802

Telephone: (406) 721-5733 Email: ctaylor@eeimt.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: *William Staehlin* Date: 01/25/2016

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"





# LABCONCO LOGIC+ SERIES CLASS II BIOLOGICAL SAFETY CABINET; SERIES 3023, 3024, 3025, 3026, 3034, AND 3036 OPM-0181-13



LABCONCO LOGIC+  
BIOLOGICAL SAFETY  
CABINETS  
OPM-0181-13

PROJECT LOCATION:  
CALIFORNIA, USA

DATE:  
12/18/15

SHEET TITLE  
COVER & GENERAL  
NOTES

SHEET  
1 OF 5

**GENERAL NOTES – LABCONCO BIO CABINETS OPM**

**I. GENERAL REQUIREMENTS:**

1. THIS OSHPD PRE APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2013 CALIFORNIA BUILDING CODE (CBC). THE DEMAND (DESIGN FORCES) FOR USE WITH THE OPM SHALL BE BASED ON THE 2013 CBC.
2. DESIGN CRITERIA AND LIMITATIONS:
  - A.  $S_{Ds} \leq 1.5$  AND  $\leq 2.5$
  - B.  $a_p = 1.0$
  - C.  $R_p = 2.5$
  - D.  $z/h \leq 1.0, \leq 0.5, \text{ AND } 0$
  - E.  $\Omega_0 = 2.5$  (CONCRETE ANCHORAGE PER ASCE 7-10 SUPPLEMENT NO. 1, TABLE 13.6-1)
3. THE DESIGN OF THE SUPPORTS AND ATTACHMENTS DEPICTED IN THIS PREAPPROVAL ARE ADEQUATE FOR SAND LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE SUBSTRATE WITH  $f_c \geq 3000$  PSI

**II. RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD:**

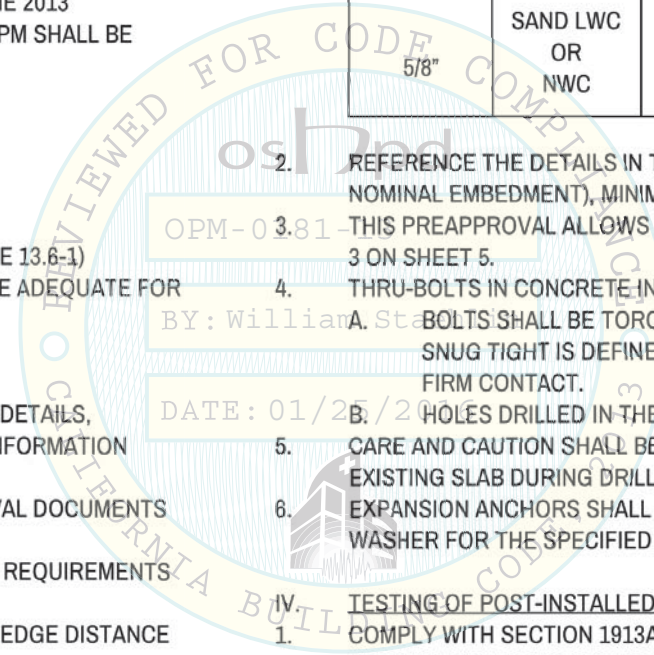
1. VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH THE 2013 CBC AND WITH THE DETAILS, MATERIAL, AND GAGE OF THE UNIT WHERE ATTACHMENTS ARE MADE AGREE WITH THE INFORMATION SHOWN ON THE PREAPPROVAL DOCUMENTS.
2. VERIFY THAT THE PROJECT SPECIFIC VALUES OF  $S_{Ds}$  AND  $z/h$  FOUND ON THE PREAPPROVAL DOCUMENTS ARE NOT EXCEEDED.
3. VERIFY THAT THE CONCRETE SLAB TO WHICH THE EQUIPMENT IS ANCHORED MEETS THE REQUIREMENTS OF THE APPLICABLE POST-INSTALLED ANCHOR ICC-ES EVALUATION REPORT.
4. VERIFY THAT THE POST-INSTALLED ANCHORS COMPLY WITH THE MINIMUM SPACING AND EDGE DISTANCE REQUIREMENTS DEFINED IN THE PREAPPROVAL DOCUMENTS.
5. VERIFY THAT ALL NEW OR EXISTING ANCHORS ARE AN ADEQUATE DISTANCE FROM THE UNIT ATTACHMENTS AND CHECK FOR INTERACTION WHERE OTHER ANCHORS ARE WITHIN 18" OR  $6 \times H_{ef}$  FROM THIS UNIT'S ANCHORS.
6. PROVIDE SUPPORT STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN IN ADDITION TO ALL OTHER LOADS. VERIFY THE ADEQUACY OF THE STRUCTURE THAT SUPPORTS THE EQUIPMENT FOR THE LOADS IMPOSED ON THEM BY THE EQUIPMENT IN ADDITION TO ALL OTHER LOADS.

**III. POST-INSTALLED ANCHORS:**

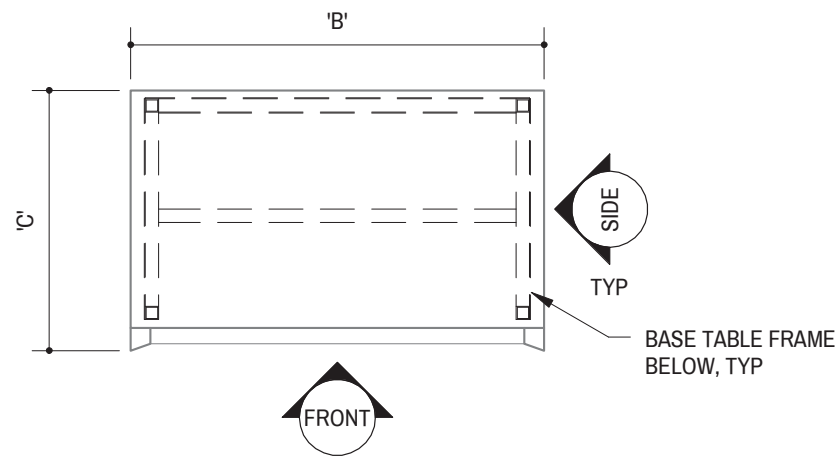
1. POST-INSTALLED ANCHORS FOR ATTACHING THE EQUIPMENT SUPPORT TO THE STRUCTURE SHALL BE KWIK BOLT TZ (ICC-ES ESR-1917; REISSUED MAY, 2015) BY HILTI AND SHALL COMPLY WITH THE FOLLOWING. REFERENCE THE PRODUCT ICC-ES EVALUATION REPORT FOR MANUFACTURER'S INSTALLATION INSTRUCTIONS.

ANCHOR DIAMETER	CONCRETE TYPE	CONCRETE $f_c$	MIN SLAB THICKNESS	TORQUE TEST LOAD
5/8"	SAND LWC OR NWC	3000 psi	5" SLAB OR 3 1/4" CONC FILL OVER 2", MIN, 20GA METAL DECK PER FIGURE 5A OF ESR-1917	60 ft-lb

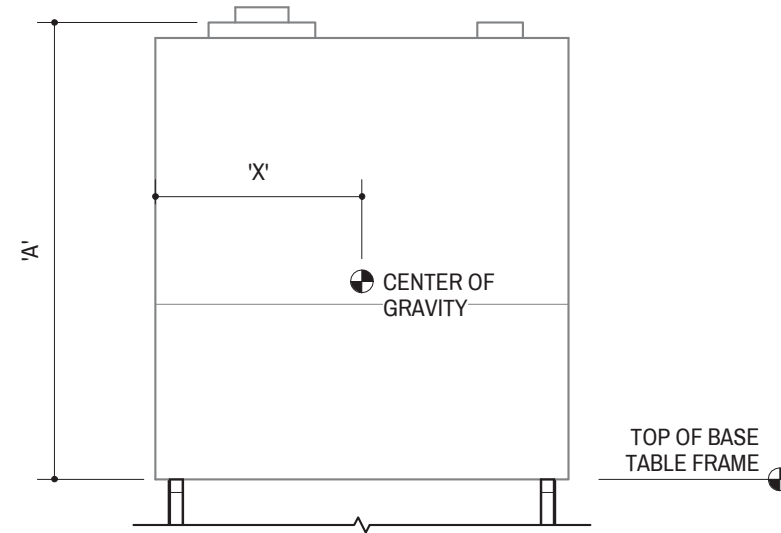
2. REFERENCE THE DETAILS IN THE DRAWINGS FOR ANCHOR MINIMUM EFFECTIVE EMBEDMENT ( $h_{ef}$ , NOT NOMINAL EMBEDMENT), MINIMUM SPACING, AND MINIMUM EDGE DISTANCE.
  3. THIS PREAPPROVAL ALLOWS FOR UP TO A MAXIMUM OF 2 ADJACENT CONCRETE SLAB EDGES, SEE DETAIL 3 ON SHEET 5.
  4. THRU-BOLTS IN CONCRETE IN ELEVATED CONCRETE SLABS:
    - A. STEEL BOLTS SHALL BE TORQUED BY 3/4 TURN OF THE NUT AFTER SNUG TIGHT CONDITION IS ACHIEVED; SNUG TIGHT IS DEFINED AS THE TIGHTNESS REQUIRED TO BRING THE CONNECTED ELEMENTS INTO FIRM CONTACT.
    - B. HOLES DRILLED IN THE CONCRETE SLAB SHALL BE 1/16" LARGER THAN THE BOLT DIAMETER.
  5. CARE AND CAUTION SHALL BE EXERCISED TO AVOID DAMAGING REINFORCING OR TENDONS IN THE EXISTING SLAB DURING DRILLING FOR ANCHORS.
  6. EXPANSION ANCHORS SHALL BE LONG ENOUGH TO PROVIDE FULL ENGAGEMENT OF THE NUT AND WASHER FOR THE SPECIFIED EMBEDMENT DEPTH.
- IV. TESTING OF POST-INSTALLED CONCRETE ANCHORS:**
1. COMPLY WITH SECTION 1913A.7 OF THE 2013 CBC. AFTER A MINIMUM OF 24 HOURS HAVE ELAPSED SINCE INSTALLATION, TORQUE TESTING OF AT LEAST 50% OF THE POST-INSTALLED ANCHORS SHALL BE PERFORMED IN THE PRESENCE OF THE SPECIAL INSPECTOR AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO OSHPD.
  2. ACCEPTANCE CRITERIA: TORQUE WRENCH METHOD. ANCHORS TESTED WITH A CALIBRATED TORQUE WRENCH MUST ATTAIN THE SPECIFIED TORQUE WITHIN 1/2 TURN OF THE NUT.
- V. COMPONENT, SUPPORT, AND ATTACHMENT MATERIALS**
1. BASE TABLE SUPPORT FRAME TUBING: ASTM A513, TYPE 2;  $F_y = 32$  KSI
  2. THREADED RODS AND STRUCTURAL STEEL ANGLES: ASTM A36;  $F_y = 36$  KSI
  3. BOLTS: ASTM A307
  4. NUTS: ASTM A563
  5. HARDENED PLAIN WASHERS: ASTM F436
  6. SHEET METAL SCREWS: TEKS BY ITW BUILDEX, ICC-ES ESR-1976. SCREWS SHALL HAVE TEKS/5 DRILL POINT WITH DRILLING CAPACITY OF 0.125" OF MATERIAL, MINIMUM, AND 0.500", MAXIMUM. SCREWS ARE SPECIFIED THUS: 12-24 x 1 1/4" IS A #12 DIAMETER SCREW WITH 24 THREADS PER INCH AND 1 1/4" LONG.
  7. SHEET STEEL PLATES AND BENT PLATES (12GA THICKNESS OR LESS): ASTM A568;  $F_y = 33$  KSI, MIN
  8. BIO CABINET WALL/FLANGE AT INTERFACE WITH BASE TABLE SUPPORT FRAME: ASTM A276;  $F_y = 30$  KSI



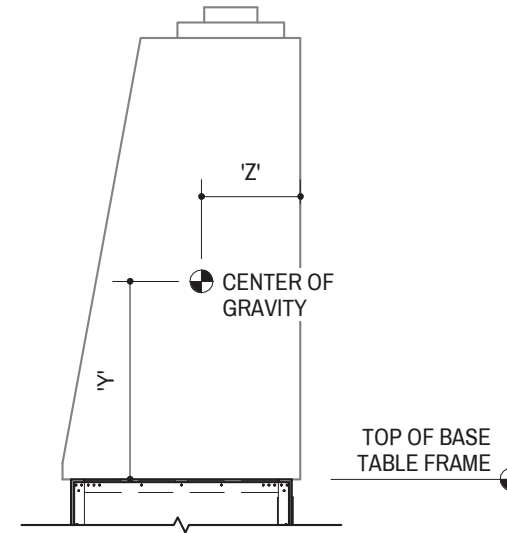




PLAN VIEW OF CABINET (COMPONENT)



ELEVATION VIEW: FRONT



ELEVATION VIEW: SIDE

1

CABINET DIMENSIONS

1/2" = 1'-0"

CABINET SERIES	TYPE	CABINET DIMENSIONS AND CENTER OF GRAVITY						MAX CABINET WEIGHT (LBS)	BASE TABLE			TOTAL WEIGHT (LBS)	CONNECTION DETAIL (AND NUMBER OF EXPANSION ANCHORS, IF APPLICABLE) ON SHEET 5		
		A	B	C	X	Y	Z		MODEL	LENGTH	WEIGHT (LBS)		z/h = 0 S <sub>Ds</sub> ≤ 1.5	z/h = 0 S <sub>Ds</sub> ≤ 2.5	z/h ≤ 1.0 S <sub>Ds</sub> ≤ 2.5
3023	A2	61.7"	42.3"	31.2"	20.5"	25.1"	12.9"	420	3401003	38.5"	117	537	1; (2) ANCHORS	1; (4) ANCHORS	2
3024	A2	61.7"	54.3"	31.2"	26.3"	25.1"	12.9"	510	3401004	50.5"	125	635	1; (2) ANCHORS	1; (4) ANCHORS	2
3025	A2	61.7"	66.3"	31.2"	32.1"	25.1"	12.9"	600	3401005	62.5"	133	733	1; (2) ANCHORS	1; (4) ANCHORS	2
3026	A2	61.7"	78.3"	31.2"	37.9"	25.1"	12.9"	690	3401006	74.5"	150	839	1; (2) ANCHORS	1; (6) ANCHORS	2
3034	B2	61.6"	54.3"	31.2"	26.8"	34.9"	13.9"	540	3401004	50.5"	125	665	1; (2) ANCHORS	1; (4) ANCHORS	2
3036	B2	61.6"	78.3"	31.2"	38.6"	34.9"	13.9"	720	3401006	74.5"	150	869	1; (2) ANCHORS	1; (6) ANCHORS	2

SCHEDULE NOTE:

CENTER OF GRAVITY AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PRE-APPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHTS SHOWN.

TABLE FRAME POST VERTICAL (UPLIFT, T<sub>U</sub>) AND HORIZONTAL (V<sub>U</sub>) REACTIONS AT INTERFACE WITH CONCRETE STRUCTURE (1.0 x E, STRENGTH DESIGN)

CABINET SERIES	z/h = 0 S <sub>Ds</sub> ≤ 1.5		z/h = 0 S <sub>Ds</sub> ≤ 2.5		z/h ≤ 0.5 S <sub>Ds</sub> ≤ 2.5		z/h ≤ 1.0 S <sub>Ds</sub> ≤ 2.5	
	T <sub>U</sub> / POST (LBS)	V <sub>U</sub> / POST (LBS)	T <sub>U</sub> / POST (LBS)	V <sub>U</sub> / POST (LBS)	T <sub>U</sub> / POST (LBS)	V <sub>U</sub> / POST (LBS)	T <sub>U</sub> / POST (LBS)	V <sub>U</sub> / POST (LBS)
3023	1200 *	310 *	2170 *	520 *	940	550 *	1400	830 *
3024	1360 *	340 *	2470 *	570 *	1070	610 *	1590	910 *
3025	1540 *	380 *	2780 *	630 *	1210	670 *	1790	1000 *
3026	1720 *	418 *	3130 *	700 *	1360	740 *	2020	1120 *
3034	1430 *	360 *	2580 *	590 *	1120	630 *	1660	950 *
3036	1790 *	430 *	3240 *	720 *	1410	770 *	2090	1160 *

SCHEDULE NOTE:

REACTION VALUES SUFFIXED WITH AN ASTERISK (\*) INCLUDE THE OVERSTRENGTH FACTOR, Ω<sub>o</sub>.



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CABINETS  
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SHEET TITLE  
CABINET  
DIMENSIONS &  
SCHEDULES

SHEET  
2 OF 5



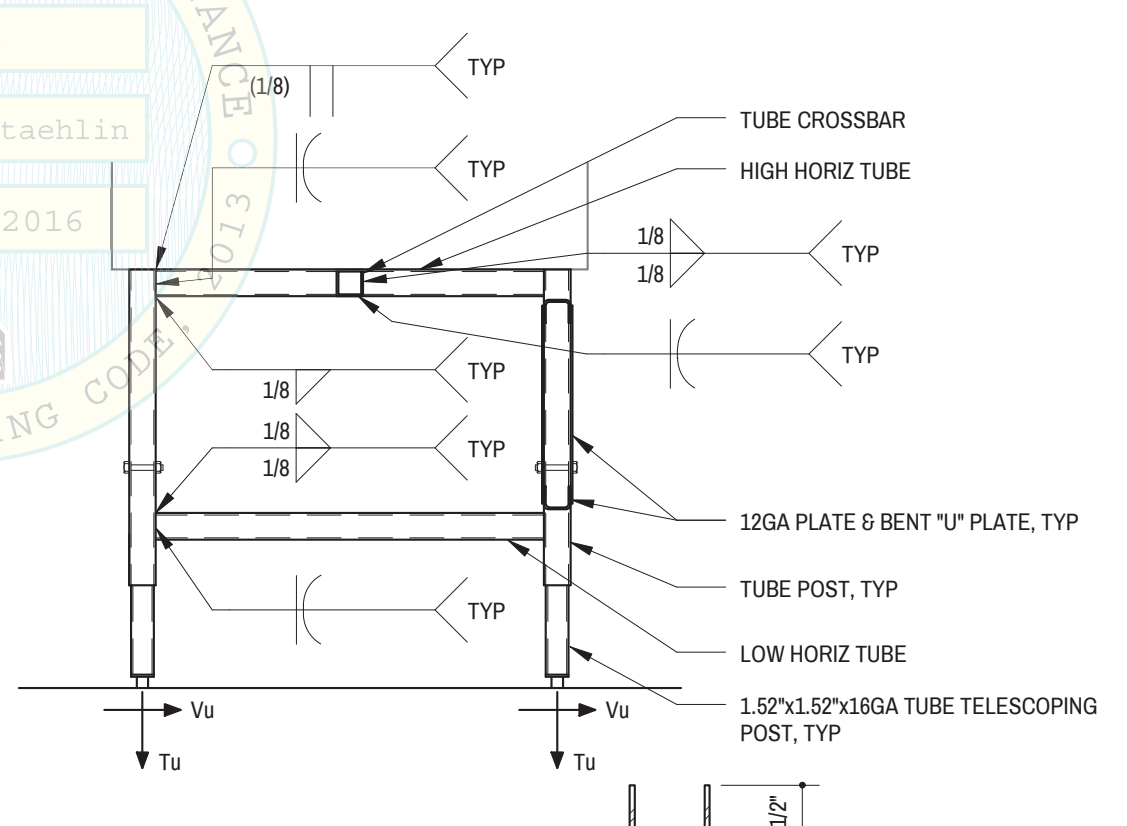
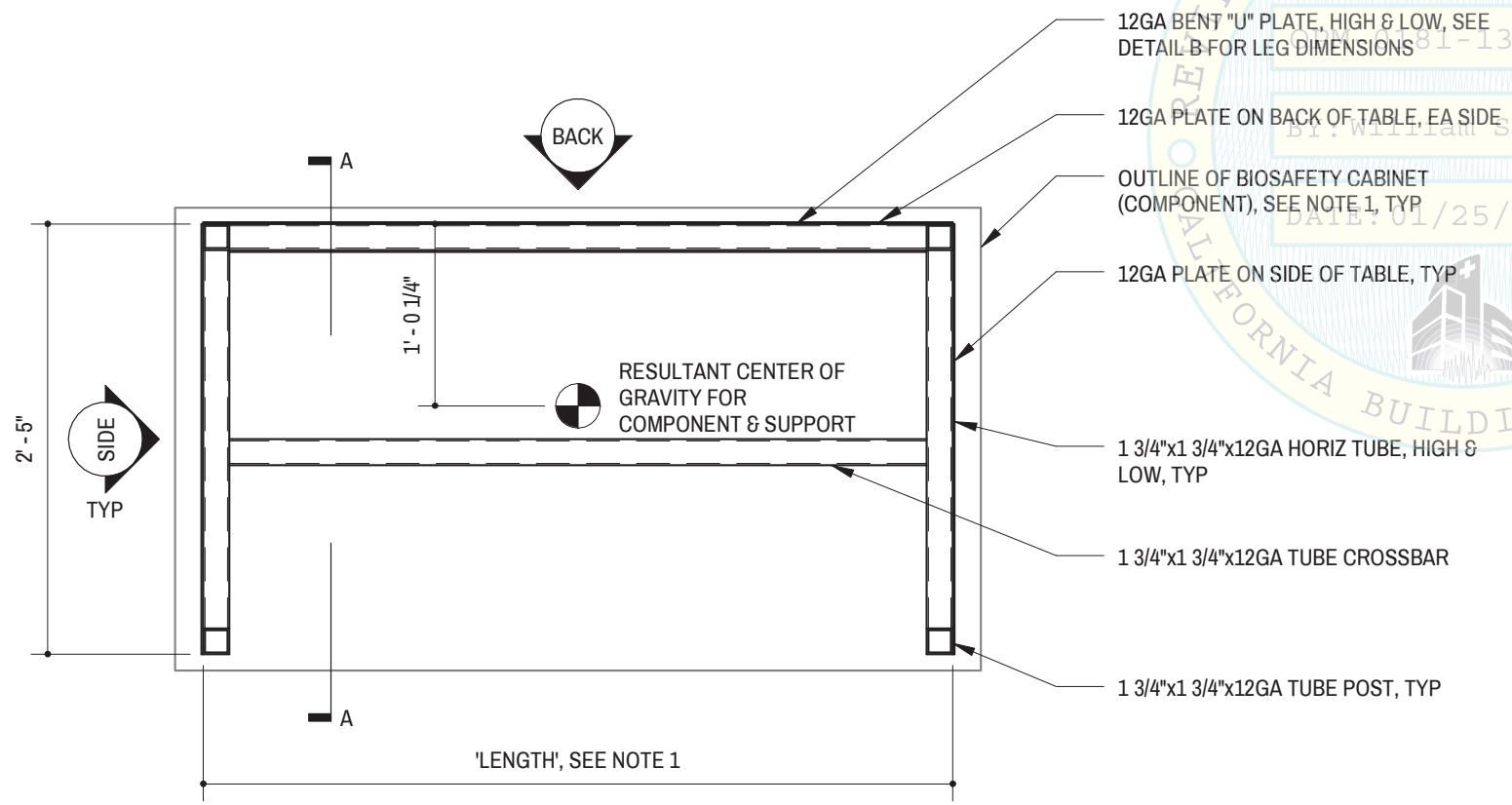
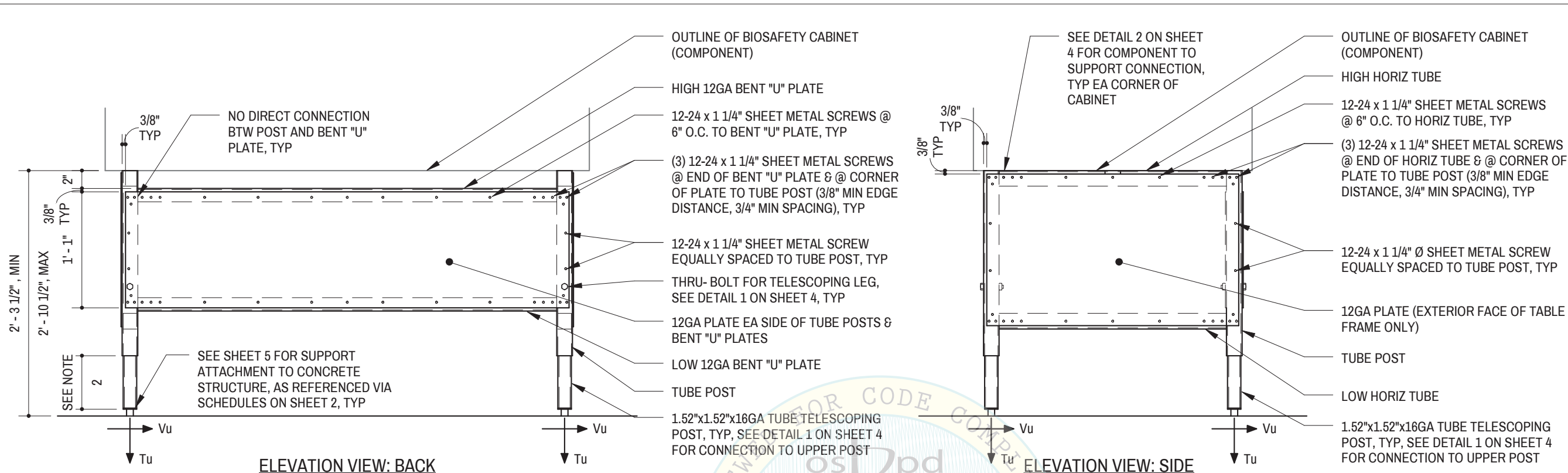
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SHEET TITLE  
TABLE FRAME  
SUPPORT DETAILS

SHEET  
3 OF 5



**1** BASE TABLE FRAME  
1" = 1'-0"

- NOTES:**
1. SEE SCHEDULE ON SHEET 2 FOR BASE TABLE LENGTHS AND WEIGHTS.
  2. SEE DETAIL 1 ON SHEET 4 FOR MAXIMUM LEG EXTENSION DIMENSIONS.
  3. SEE SCHEDULE ON SHEET 2 FOR TABLE POST BASE REACTIONS,  $T_u$  AND  $V_u$ .



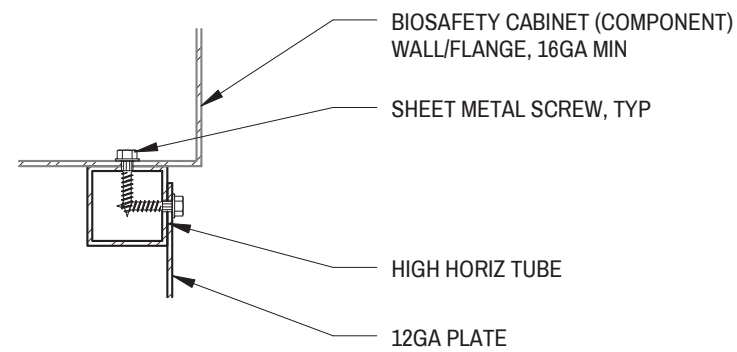
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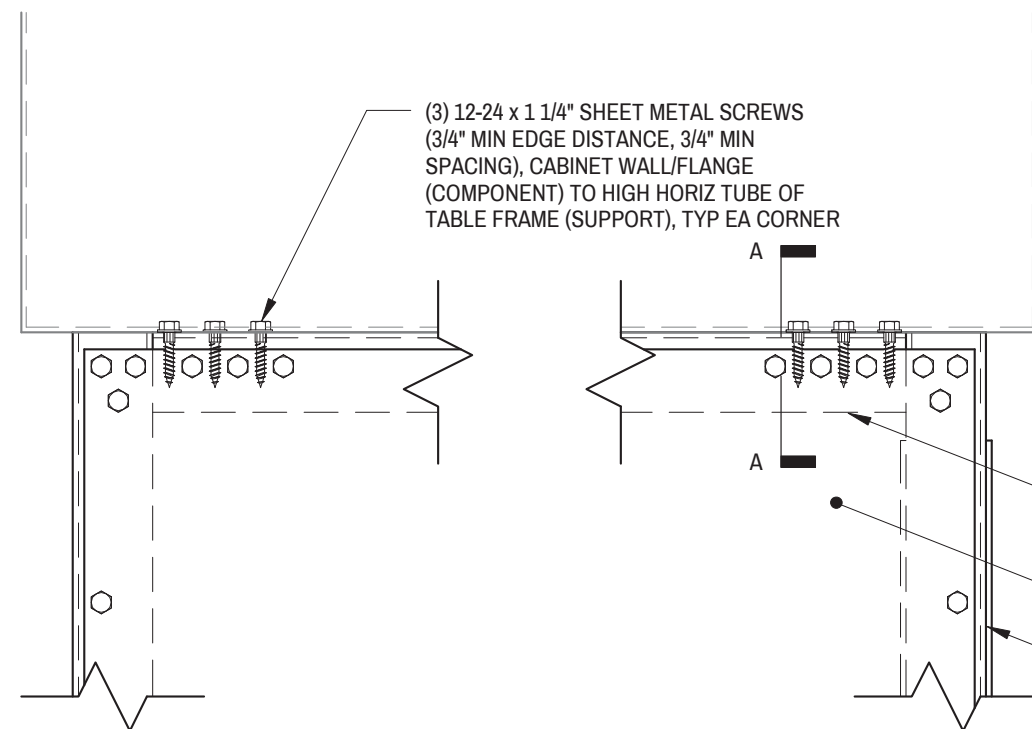
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12/18/15

SHEET TITLE  
TABLE FRAME  
SUPPORT DETAILS

SHEET  
4 OF 5



SECTION A-A



ELEVATION: SIDE OF BIOSAFETY CABINET AND TABLE

12GA PLATE NOT SHOWN FOR BREVITY; REFERENCE DETAIL 1 ON SHEET 3 FOR INFORMATION

1 3/4"x1 3/4"x12GA TUBE POST, TYP

3/8" Ø BOLT THRU POSTS AND, WHERE PRESENT, 12GA PLATE; PROVIDE WASHER AND LOCKNUT

OUTLINE OF BIOSAFETY CABINET (COMPONENT) 5/2016

1.52"x1.52"x16GA TUBE TELESCOPING POST

CAP PLATE

THREADED ADJUSTABLE LEVELING FOOT

10 7/8" MAX, FOR z/h = 0.5, OR LESS

6 7/8" MAX, OTHERWISE

1" MAX

1' - 11 1/2"

2" MIN

6" MAX

LOW HORIZ TUBE (WHERE PRESENT)

CONCRETE STRUCTURE

INNER TELESCOPING LEG

NOTE:  
SEE SHEET 5 FOR SUPPORT ATTACHMENT TO CONCRETE STRUCTURE, AS REFERENCED VIA SCHEDULES ON SHEET 2.

2

COMPONENT TO SUPPORT CONNECTION

3" = 1'-0"

1

TELESCOPING POST CONNECTION

3" = 1'-0"





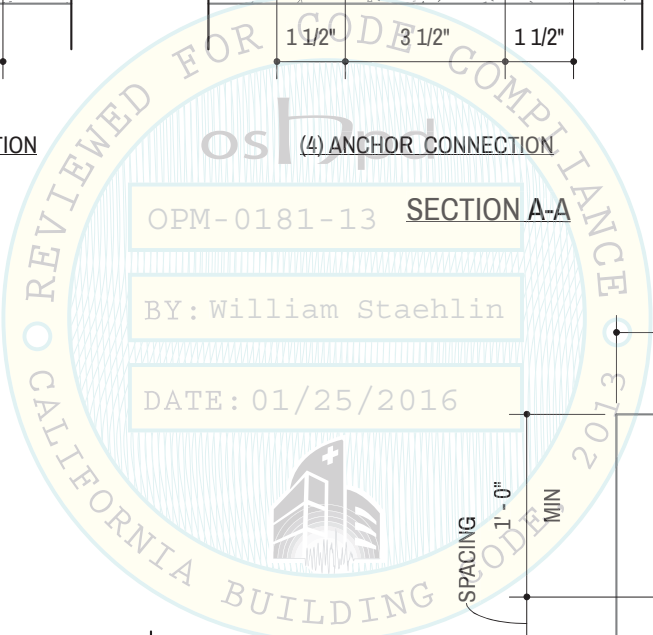
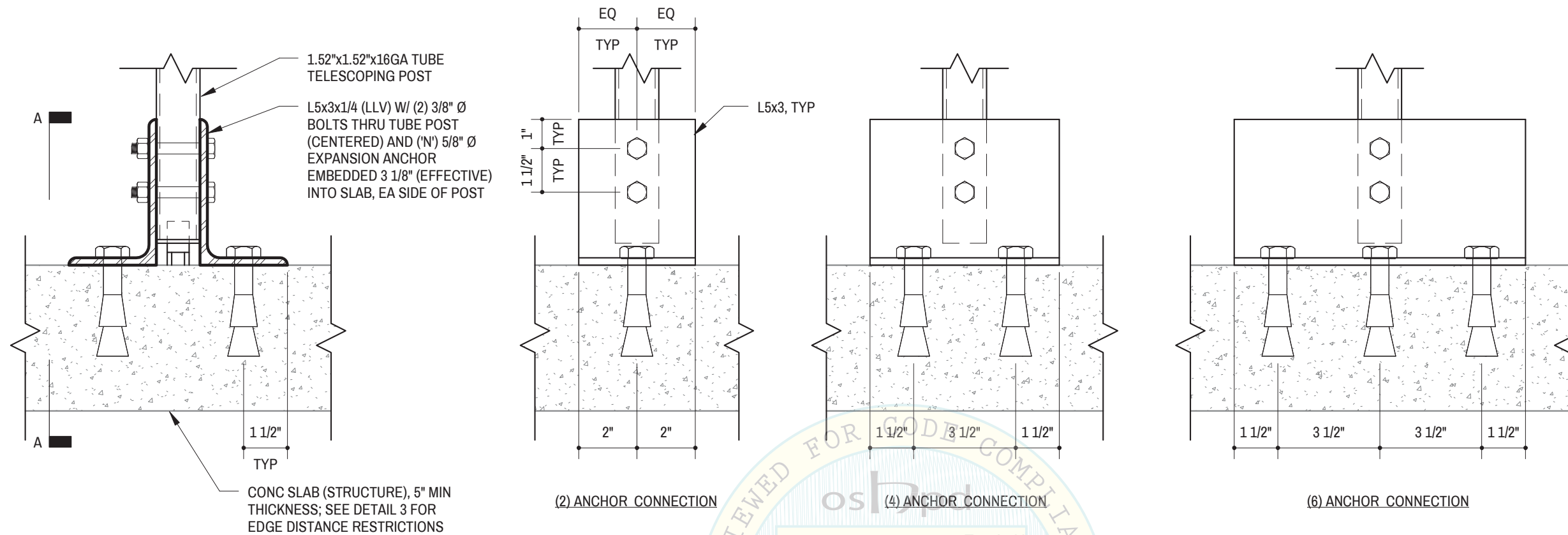
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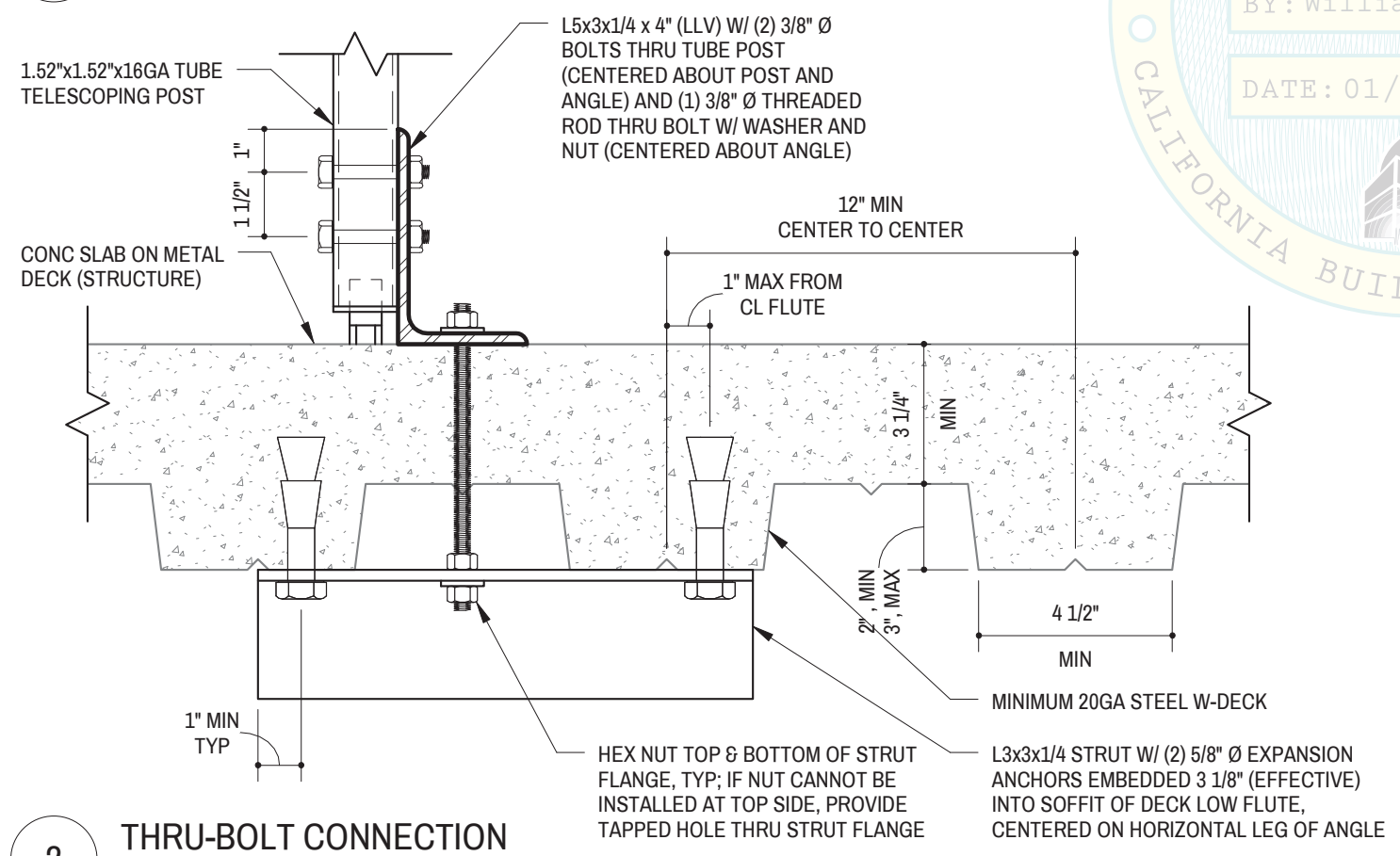
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SHEET TITLE  
SUPPORT  
ATTACHMENT  
DETAILS

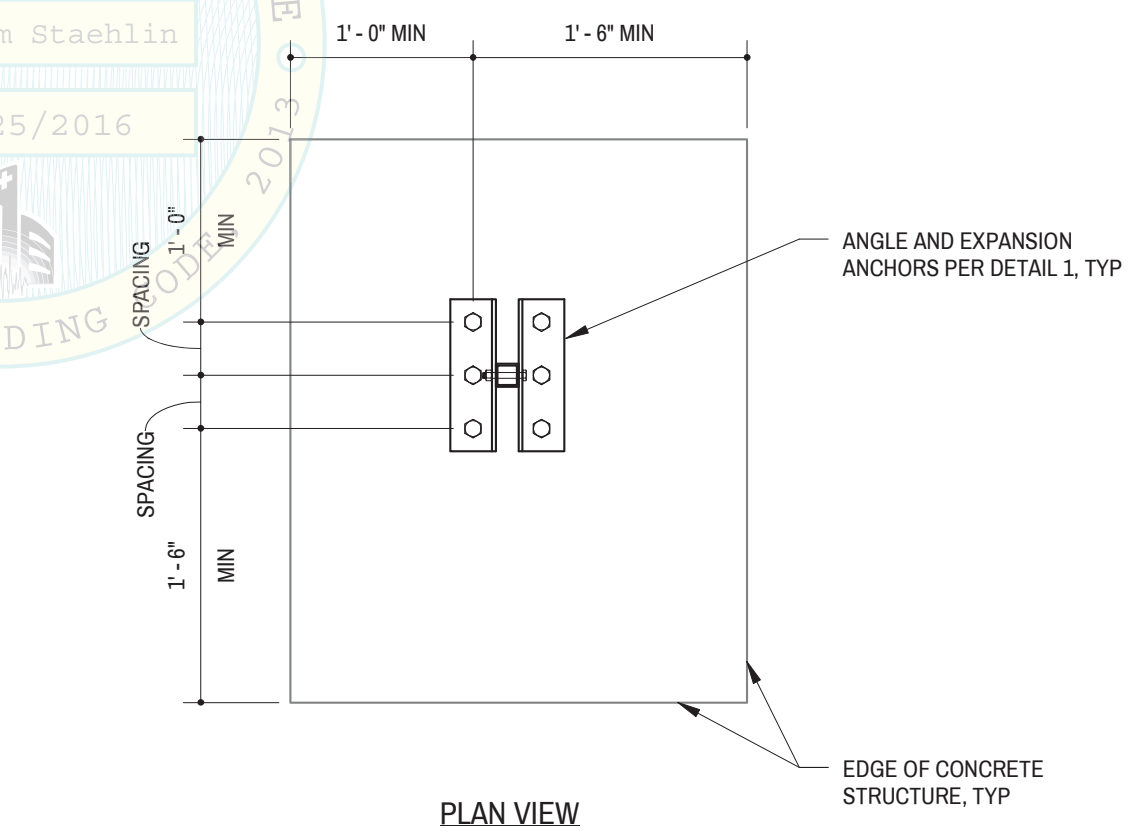
SHEET  
5 OF 5



**1** EXPANSION ANCHOR CONNECTION  
3" = 1'-0"



**2** THRU-BOLT CONNECTION  
3" = 1'-0"



**3** ANCHOR EDGE DISTANCES  
1" = 1'-0"