



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT  
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY

APPLICATION #: OPM-0118-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

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

Manufacturer Information

Manufacturer: Panduit Corporation

Manufacturer's Technical Representative: Nathan Gleghorn

Mailing Address: 412 Rockwell Court, Burr Ridge, Illinois 60527

Telephone: 708-532-1800 x84249

Email: NAGL@panduit.com

Product Information

Product Name: PanZone In-Ceiling Enclosure

Product Type: Equipment enclosure.

OPM-0118-13

Product Model Number: PZICE, PZICEA

General Description: Ceiling mounted enclosure for equipment.

Applicant Information

Applicant Company Name: Panduit Corporation

Contact Person: Robert Fritz

Mailing Address: 412 Rockwell Court, Burr Ridge, Illinois 60527

Telephone: 708-532-1800 x84346

Email: RLFR@panduit.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:

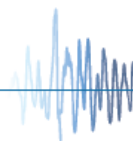
Date: 06/04/2014

Title: Senior Manager Engineering

Company Name: Panduit Corporation

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY  
OSH-FD-700 (REV 3/13/14)



osHPD

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**Registered Design Professional Preparing Engineering Recommendations**

Company Name: Degenkolb Engineers

Name: Adrian M. Nacamuli California License Number: S 4857

Mailing Address: 1300 Clay Street, 9<sup>th</sup> Floor, Oakland, California 94612

Telephone: 510-250-1216 Email: nacamuli@degenkolb.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: 12/30/2014

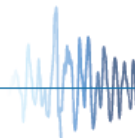
Print Name: Jeffrey Kikumoto

Title: SSE

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

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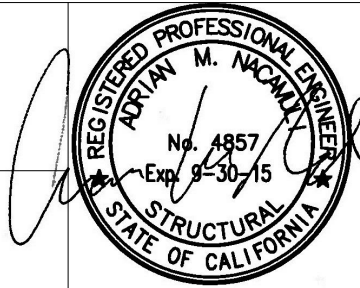
**oshpd**

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OSHPD PRE-APPROVAL OF  
MANUFACTURER'S CERTIFICATION (OPM)  
**OPM 0118 - 13**

**DEGENKOLB ENGINEERS**  
235 Montgomery Street, Suite 500  
San Francisco, CA 94104  
415.392.6952 Phone  
415.981.3157 Fax  
www.degenkolb.com



**PANDUIT PANZONE IN-CEILING ENCLOSURE**  
MODELS PZICE AND PZICEA

GENERAL NOTES

1. THIS OSHPD PREAPPROVAL 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. PRE-APPROVED DESIGN AND MATERIALS CONFORM WITH THE 2013 EDITION OF THE CALIFORNIA BUILDING CODE 2013. DETAILS WITHIN THIS APPROVAL MAY BE USED ANYWHERE IN THE STATE OF CALIFORNIA WHERE  $S_{DS} \leq 2.5$ .

3. SEISMIC FORCES ON EQUIPMENT DETERMINED PER THE 2013 CBC & ASCE 7-10. ALL LOADS BELOW ARE FACTORED LOADS THAT SHALL BE USED FOR STRENGTH DESIGN.

4. EQUIPMENT MAY BE MOUNTED AT ANY FLOOR TO ANY ELEVATED SLAB WITH THE FOLLOWING PROPERTIES:

ELEVATED SLAB MINIMUM REQUIREMENTS	
CONCRETE ON METAL DECK $f_c \geq 3000$ PSI NORMAL OR SAND LIGHT-WEIGHT CONCRETE SEE PAGE 4 FOR MINIMUM STEEL DECK REQUIREMENTS	CONCRETE SLAB THICKNESS $\geq 4"$ $f_c \geq 3000$ PSI NORMAL OR SAND LIGHT-WEIGHT CONCRETE PROVIDE 12" MIN DISTANCE TO ANY OPENINGS, THE EDGE OF SLAB OR OTHER ATTACHMENTS TO SLAB

5. THE FACTORS USED TO CALCULATE THE SEISMIC DEMANDS ARE THE FOLLOWING:

- a.  $S_{DS} = 2.5$ ,  $a_p = 1.0$ ,  $R_p = 2.5$ ,  $I_p = 1.5$ ,  $\Omega_o = 2.5$ ,  $z/h \leq 1$
- i.  $F_p = 1.80 W_p$   
ii.  $E_v = 0.50 W_p$   
iii.  $\Omega_o F_p = 4.45 W_p$  (FOR ANCHORAGE TO CONCRETE ONLY)

6. THE STRUCTURAL ENGINEER-OF-RECORD (S.E.O.R.) OR PRINCIPAL-IN-CHARGE OF A PROJECT SPECIFIC SITE IS RESPONSIBLE FOR THE FOLLOWING:

- a. VERIFY THAT THE ANCHORS ARE A MINIMUM 12" FROM ANY OPENINGS OR EDGES.
- b. VERIFY THAT THE ANCHORS ARE AN ADEQUATE DISTANCE FROM ANY NEW OR EXISTING ANCHORS.

c. DESIGN ANY SUPPLEMENTARY MEMBERS TO WHICH THE UNIT IS ATTACHED, TO SUPPORT WEIGHTS AND FORCES SHOWN. VERIFY THE ADEQUACY OF ANY EXISTING MEMBERS AND THEIR ATTACHMENTS FOR THE FORCES EXERTED ON THEM BY THE UNIT IN ADDITION TO ALL OTHER LOADS AND FORCES.

d. VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH THE 2013 CBC AND WITH THE DETAILS SHOWN IN THIS PRE-APPROVAL. VERIFY THAT THE EQUIPMENT'S ACTUAL WEIGHT, CG LOCATION, ANCHOR LOCATIONS, DETAILS AND THE MATERIAL AND GAGE OF THE UNIT WHERE ATTACHMENTS ARE MADE AGREE WITH THE INFORMATION SHOWN IN THIS PRE-APPROVAL.

e. THE ANCHORAGE TO THE ELEVATED SLABS HAS BEEN EVALUATED FOR THE WORST CASE LOADING PER THE 2013 CBC. STRUCTURAL ENGINEER-OF-RECORD (S.E.O.R.) OR PRINCIPAL-IN-CHARGE OF A SITE SPECIFIC PROJECT SHALL EVALUATE THE ATTACHMENT FOR CONDITIONS THAT VARY FROM THIS PRE-APPROVAL.

7. THIS OPM COVERS ONLY THE SUPPORTS AND ATTACHMENTS OF THE UNIT TO THE STRUCTURE.

8. EXPANSION OR WEDGE ANCHORS INTO CONCRETE: HILTI KB-TZ (ICC ESR-1917). INSTALL ANCHORS IN ACCORDANCE WITH THE ICC REPORT AND MANUFACTURER'S RECOMMENDATIONS. TEST AT LEAST 50% OF ANCHORS NO SOONER THAN 24 HOURS AFTER INSTALLATIONS. TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE SPECIAL INSPECTOR AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO OSHPD. TEST PER ONE OF THE FOLLOWING METHODS:

a. DIRECT PULL TENSION TEST. ANCHOR IS ACCEPTABLE IF NO MOVEMENT IS OBSERVED FOR A MINIMUM OF 15 SECONDS AT THE TEST LOAD GIVEN IN TABLE BELOW. MOVEMENT MAY BE DETERMINED WHEN THE WASHER UNDER THE NUT BECOMES LOOSE.

b. TORQUE WRENCH TEST: TEST ANCHORS TO THE REQUIRED TORQUE LOAD GIVEN IN TABLE BELOW WITHIN THE LIMIT OF ONE-HALF TURN OF THE NUT.

ANCHOR TEST LOAD VALUES (IN NORMAL OR SAND LIGHT WEIGHT CONCRETE)			
ANCHOR DIAMETER (IN)	TENSION LOAD (LBS)	TORQUE LOAD (FT-LB)	MINIMUM EDGE DISTANCE
3/8"	600	25	12"



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**PANDUIT PANZONE IN-CEILING ENCLOSURE**  
MODELS PZICE AND PZICEA

GENERAL NOTES

9. IF ANY ANCHOR FAILS DURING TESTING, UNIT MUST BE MOVED SO THAT NO ANCHOR IS WITHIN 12" OF AN ABANDONED ANCHOR.

10. CONTRACTOR MUST VERIFY ANCHOR SPACING TO ADJACENT EQUIPMENT ANCHORS IS TO BE GREATER THAN 12".

11. ALL MISCELLANEOUS STEEL SHALL CONFORM TO THE FOLLOWING, UNLESS OTHERWISE NOTED:

THREADED HANGER ROD	ASTM A36 GR36 OR GREATER
WIRE	SOFT ANNEALED MILD STEEL WIRE ASTM A641 (CLASS 1 COATING)
LIGHT GAGE STEEL	ASTM 568 FY ≥ 33 KSI

12. THE TABLE BELOW SHOWS THE MOST CRITICAL FORCES USED FOR THE DESIGN OF SUPPORTS AND ATTACHMENTS..

13. FOR THE DESIGN OF THE SUPPORTS AND ATTACHMENTS, THE MOST CRITICAL LOAD COMBINATION IS  $(1.2 + 0.2Sds) D + E$ .

14. THE LOAD RATING SHOWN IN THE TABLE BELOW IS IN ADDITION TO THE SELF-WEIGHT OF THE EQUIPMENT.

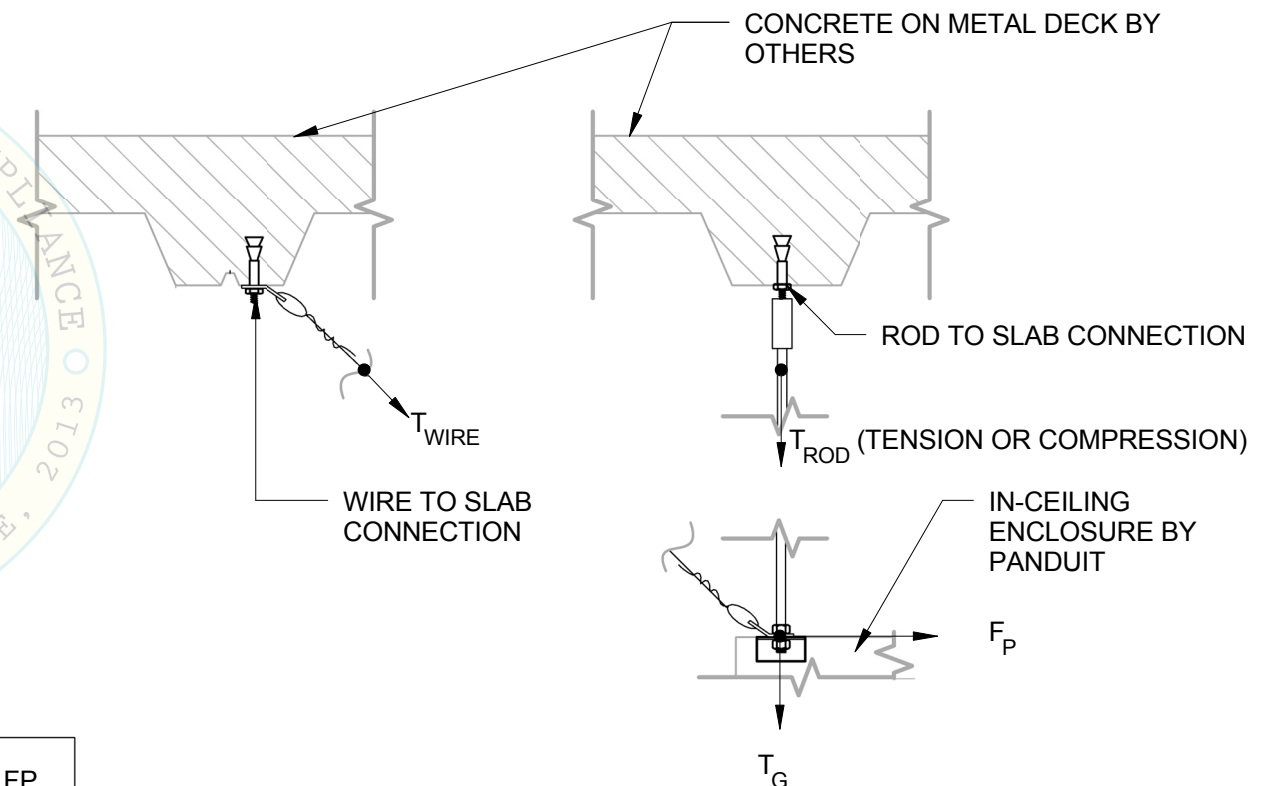
15. THE LOAD RATING IS IN ADDITION TO THE SELF-WEIGHT AT THE CONDITION UNDER CONSIDERATION;  
( $W_p$  = SELF-WEIGHT + LOAD RATING)

16. THE DESIGN FORCES  $T_G$ ,  $T_{ROD}$ ,  $T_{WIRE}$  AND  $F_P$  ON THE TABLE BELOW ARE AT STRENGTH LEVEL AND ARE NOT AMPLIFIED BY  $\Omega_0$

17. CENTER OF GRAVITY (C.G.) WEIGHT IS A MAXIMUM. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM SHOWN.

18. 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.

PART NUMBER	SELF-WEIGHT	LOAD RATING	CONNECTION BRACKET PROPERTIES	IN-CEILING ENCLOSURE MATERIAL THICKNESS	$T_G$	$T_{ROD}$	$T_{WIRE}$	$F_P$
	(LBS)	(LBS)		(IN)	(LBS)	(LBS)	(LBS)	(LBS)
PZICE AND PCICEA	35	50	5052 ALUMINUM, ASTM B209 THICKNESS = 0.125" fy = 28,000 PSI	ALUMINUM, ASTM B209 THICKNESS = 0.063" fy = 28,000 PSI	36	178	280	151



**EQUIPMENT ATTACHMENT FORCE DIAGRAM**



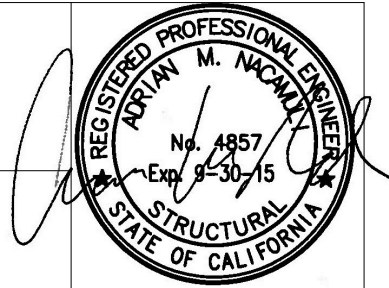


A circular professional engineer seal for the State of California. The outer ring contains the text "REGISTERED PROFESSIONAL ENGINEER" at the top and "STATE OF CALIFORNIA" at the bottom, separated by two stars. The center of the seal contains the name "ADRIAN M. NACALL", the number "No. 4857", and the expiration date "Exp. 9-30-15". The word "STRUCTURAL" is written in a curved path below the expiration date. A handwritten signature is scrawled across the seal, and a large handwritten "2" is visible to the left of the seal.

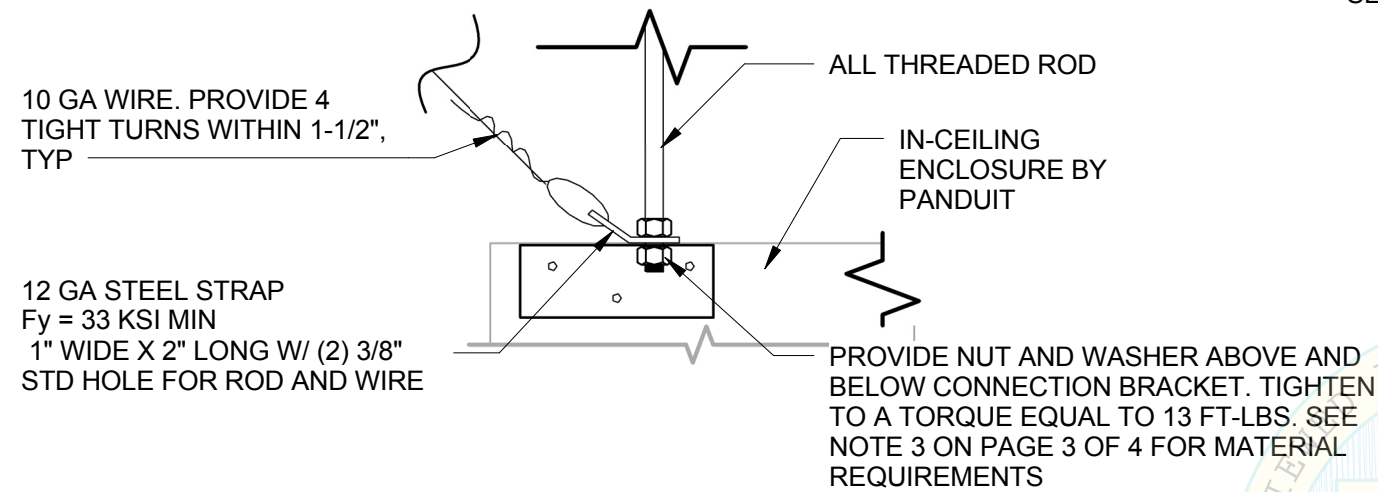


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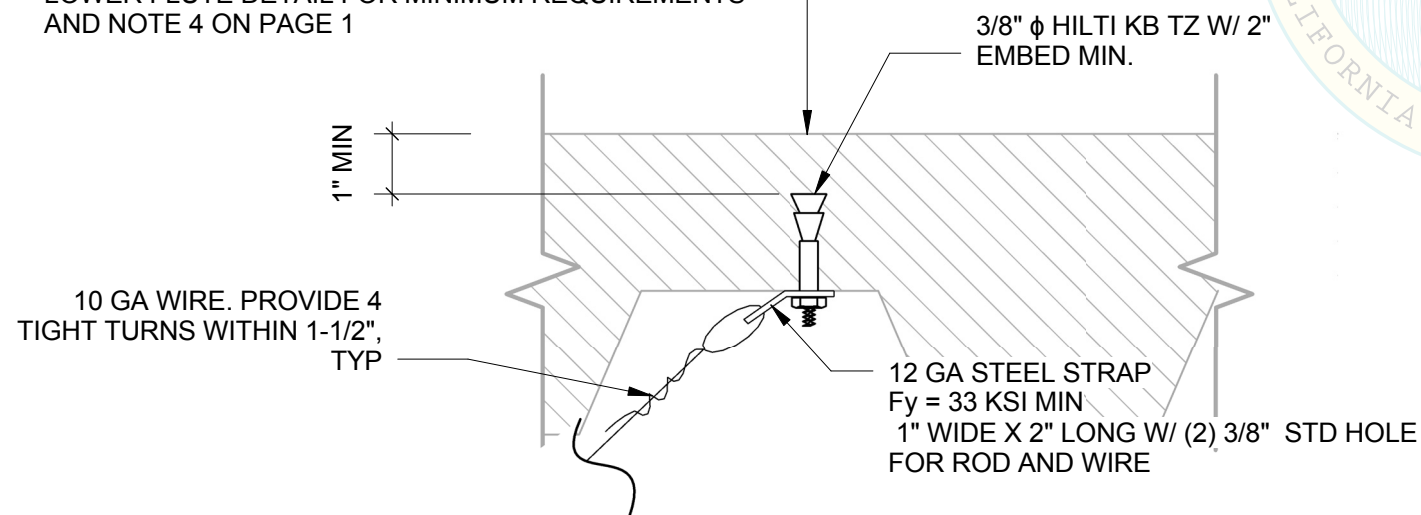


**PANDUIT PANZONE IN-CEILING ENCLOSURE**  
MODELS PZICE AND PZICEA



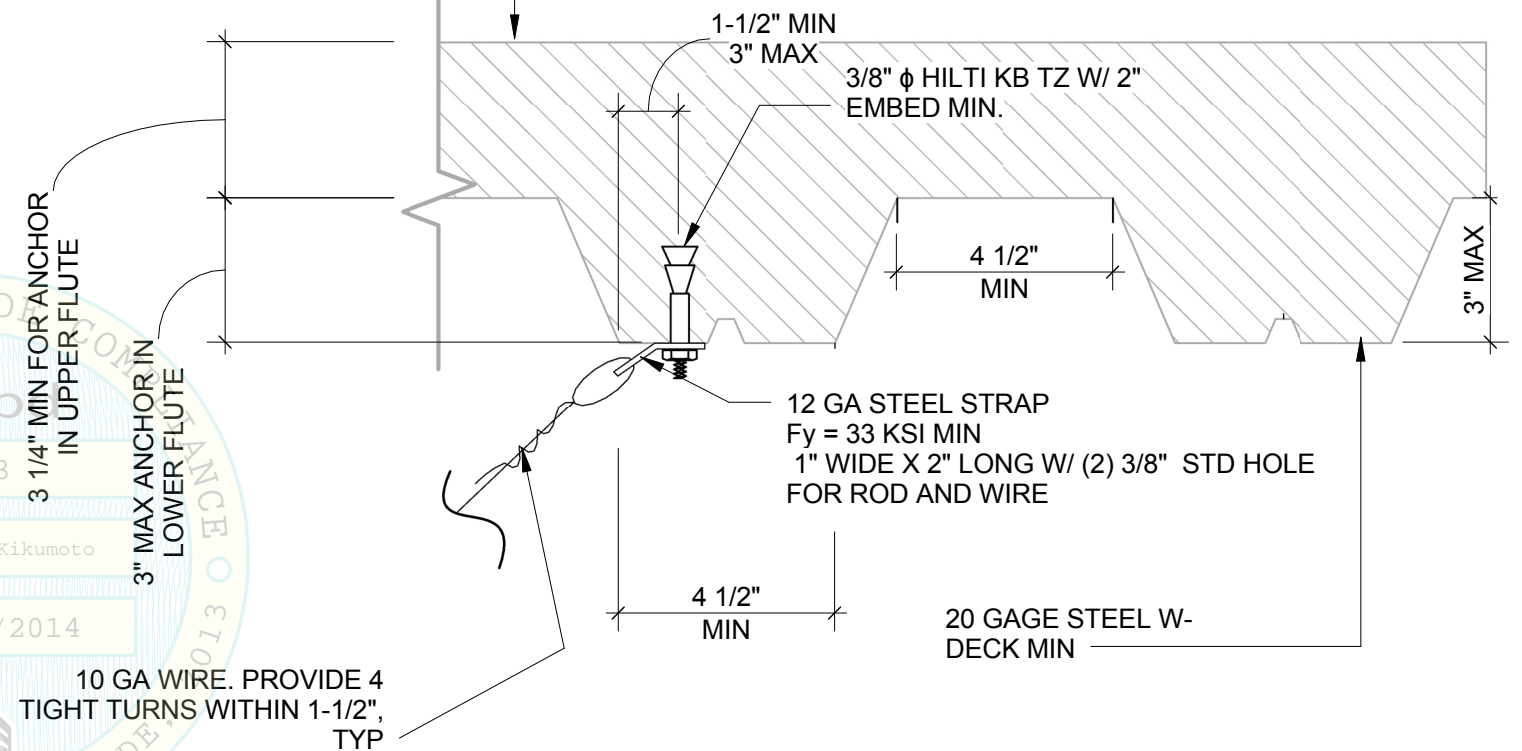
**WIRE CONNECTION TO IN-CEILING ENCLOSURE**

CONCRETE ON METAL DECK ELEVATED SLAB;  
SEE WIRE CONNECTION TO ELEVATED SLAB IN LOWER FLUTE DETAIL FOR MINIMUM REQUIREMENTS AND NOTE 4 ON PAGE 1



**WIRE CONNECTION TO ELEVATED SLAB IN UPPER FLUTE**

CONCRETE ON METAL DECK ELEVATED SLAB;  
SEE NOTE 4 ON PAGE 1 FOR MINIMUM REQUIREMENTS



**WIRE CONNECTION TO ELEVATED SLAB IN LOWER FLUTE**

NOTES:

1. FOR MINIMUM CONCRETE ON METAL DECK PROPERTIES SEE WIRE CONNECTION TO ELEVATED SLAB IN LOWER FLUTE DETAIL AND NOTE 4 ON PAGE 1
2. PROVIDE EXPANSION ANCHORS WITH 12" MINIMUM DISTANCE TO EDGE OF SLAB, OPENINGS OR OTHER ATTACHMENTS