



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY
APPLICATION #: OPM-0114-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

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

Manufacturer Information

Manufacturer: Panduit Corporation

Manufacturer's Technical Representative: Bruce Appino

Mailing Address: 17301 Ridgeland Ave, Tinley Park, IL 60477

Telephone: 630-455-6500 ext. 84325 Email: Bruce.Appino@panduit.com

Product Information

Product Name: Net-Access S-Type Cabinet

Product Type: Network equipment cabinet.

Product Model Number: All S6, S7 and S8 model numbers as listed on OPM drawings.

General Description: Data center network equipment cabinet.

Applicant Information

Applicant Company Name: Panduit Corporation

Contact Person: Bruce Appino

Mailing Address: 17301 Ridgeland Ave, Tinley Park, IL 60477

Telephone: 630-455-6500 ext. 84325 Email: Bruce.Appino@panduit.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.

Signature of Applicant: [Signature] Date: July 31, 2017

Title: Engineering Manager Company Name: Panduit Corporation

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





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

Registered Design Professional Preparing Engineering Recommendations

Company Name: Degenkolb Engineers

Name: Adrian M. Nacamuli California License Number: S4857

Mailing Address: 1300 Clay Street, 9th 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 1950-16
- Other* (Please Specify): _____

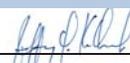
*Use of criteria other than those adopted by the California Building Standards Code, 2016 (CBSC 2016) for component supports and attachments are not permitted. For distribution system, interior partition wall, and suspended ceiling seismic bracings, test criteria other than those adopted in the CBSC 2016 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 2016 & ALL PRE-2016 CODE BASED PROJECTS

Signature:  Date: 08-14-2017

Print Name: Jeffrey Kikumoto

Title: SSE

Condition of Approval (if applicable): _____

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PANDUIT NET-ACCESS S-TYPE CABINETS



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GENERAL NOTES

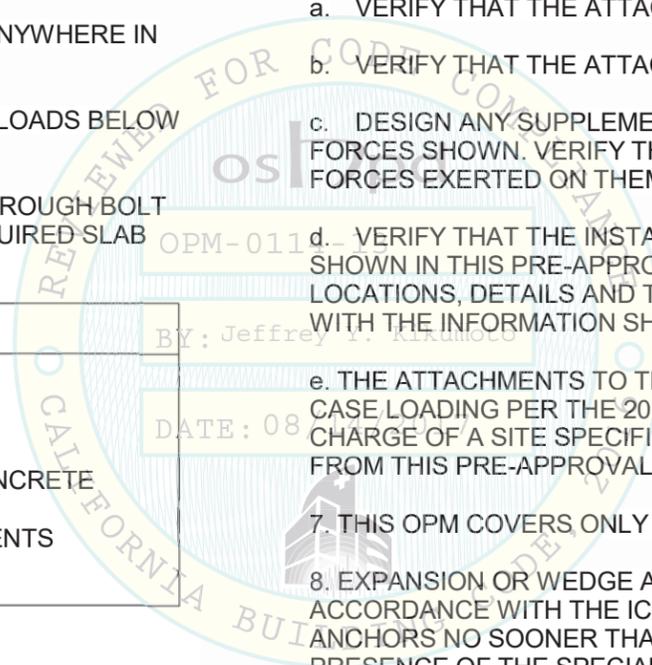
1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2016. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2016.
2. PRE-APPROVED DESIGN AND MATERIALS CONFORM WITH THE 2016 EDITION OF THE CALIFORNIA BUILDING CODE. DETAILS WITHIN THIS APPROVAL MAY BE USED ANYWHERE IN THE STATE OF CALIFORNIA WHERE $S_{DS} \leq 1.8$
3. SEISMIC FORCES ON EQUIPMENT DETERMINED PER THE 2016 CBC & ASCE 7-10. ALL LOADS BELOW ARE FACTORED LOADS THAT SHALL BE USED FOR STRENGTH DESIGN.
4. EQUIPMENT MAY BE MOUNTED TO AN ELEVATED SLAB AT ANY FLOOR USING THE THROUGH BOLT CONDITION OR TO A NORMAL WEIGHT CONCRETE SLAB ON GRADE. THE MINIMUM REQUIRED SLAB PROPERTIES ARE AS FOLLOWS:

SLAB ON GRADE	ELEVATED SLAB
THICKNESS $\geq 5"$ $f_c \geq 3000$ PSI NORMAL WEIGHT CONCRETE PROVIDE 12" MIN DISTANCE TO OPENINGS OR THE EDGE OF SLAB MINIMUM SPACING = 11"	CONCRETE ON METAL DECK $f_c \geq 3000$ PSI NORMAL OR SAND LIGHT-WEIGHT CONCRETE SEE FIGURE ON PAGE 2 FOR MINIMUM STEEL DECK REQUIREMENTS

5. THE FACTORS USED TO CALCULATE THE SEISMIC DEMANDS ARE THE FOLLOWING:
 - a. $S_{DS} = 1.8$, $a_p = 2.5$, $R_p = 6.0$, $I_p = 1.5$, $\Omega_o = 2.5$,

WHERE $z/h \leq 1$	WHERE $z/h > 1$
i. $F_p = 1.35 W_p$	i. $F_p = 0.81 W_p$
ii. $E_v = 0.36 W_p$	ii. $E_v = 0.36 W_p$
iii. $\Omega_o F_p = 3.37 W_p$	iii. $\Omega_o F_p = 2.02 W_p$ (FOR ANCHORAGE TO CONCRETE)

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 ATTACHMENTS ARE A MINIMUM 12" FROM ANY OPENINGS OR EDGES.
 - b. VERIFY THAT THE ATTACHMENTS ARE 12" MINIMUM 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 2016 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 ATTACHMENTS TO THE ELEVATED AND ON GRADE SLABS HAVE BEEN EVALUATED FOR THE WORST CASE LOADING PER THE 2016 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 ON THE FOLLOWING PAGE. 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 ON THE FOLLOWING PAGE WITHIN THE LIMIT OF ONE-HALF TURN OF THE NUT.





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GENERAL NOTES

ANCHOR TEST LOAD VALUES						
ANCHOR DIAMETER (IN)	EMBED hef (IN)	TENSION LOAD (LBS)	TORQUE LOAD (FT-LB)	CONCRETE TYPE	MINIMUM EDGE DISTANCE	MINIMUM SPACING
5/8"	3-1/8"	3,134	60	NORMAL WEIGHT	12"	11"
3/8"	2"	SEE NOTE a	25	SAND LIGHT-WEIGHT	12"	11"

a. TEST 3/8" EXPANSION ANCHORS USING THE TORQUE WRENCH TEST METHOD PER MANUFACTURER'S RECOMMENDATION AND AS DESCRIBED IN PAGE 1 OF 6

9. IF ANY ANCHOR FAILS DURING TESTING, UNIT MUST BE MOVED SO THAT NO ANCHOR IS WITHIN 11" OF AN ABANDONED ANCHOR.

10. CONTRACTOR OR SEOR 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:

THROUGH BOLTS A307 GR. A.
STEEL ANGLES A36

12. THE TABLE ON PAGE 3 SHOWS THE MOST CRITICAL FORCES CALCULATED FOR THE SUPPORT AND ATTACHMENT DESIGN.

13. FOR THE SUPPORT AND ATTACHMENT DESIGN, THE MOST CRITICAL LOAD COMBINATION IS (0.9 - 0.2Sds) D + E.

14. WHEN z / h = 0, THE DESIGN FORCES FOR THE EXPANSION ANCHORS INTO CONCRETE WERE SCALED UP BY Ω_o AS REQUIRED BY ASCE 7-10, SUPPLEMENT NO. 1, TABLE 13.6-1.

15. $T_{ult} + q$ IS THE FORCE DEMAND IN THE ANCHOR INCLUDING EFFECTS OF PRYING

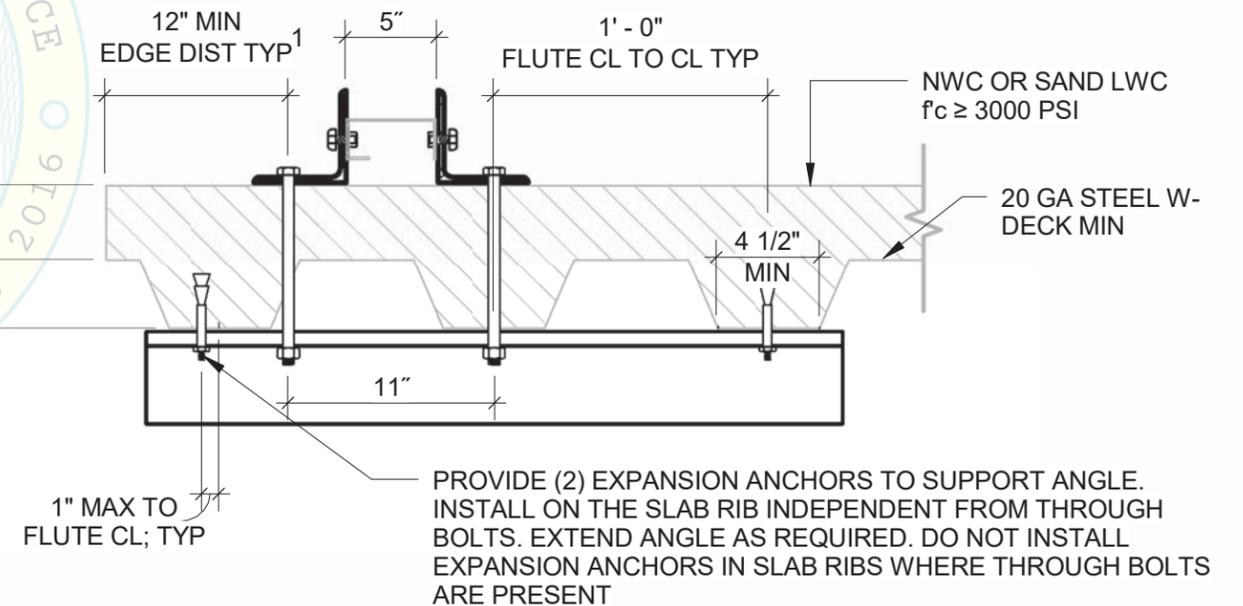
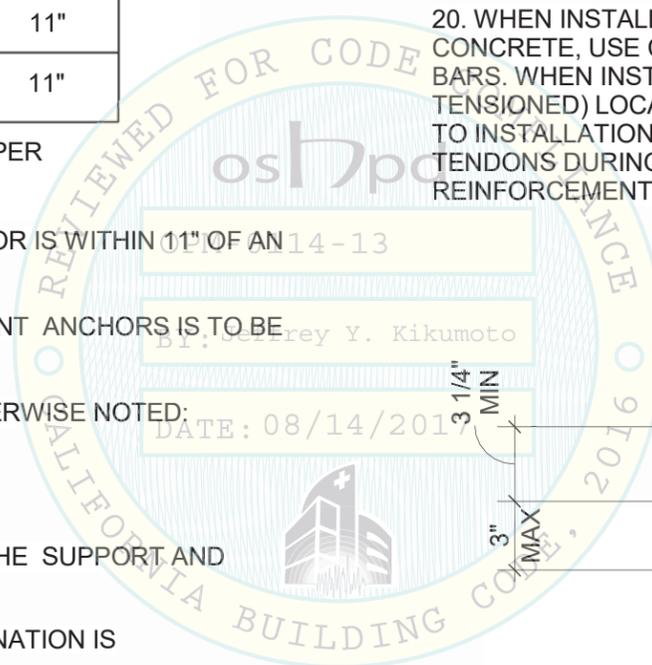
16. THE TABLE ON PAGE 4 SHOWS THE PROPERTIES OF THE DIFFERENT MODELS CONSIDERED IN THIS SUBMITTAL.

17. WHERE $q = 0$ AS INDICATED ON THE TABLE OF PAGE 3, EITHER THE SUPPORT AND ATTACHMENT MECHANISM IS GOVERNED BY THE CAPACITY OF THE BASE BRACKET OR THE FITTING HAS SUFFICIENT STIFFNESS AND STRENGTH TO DEVELOP THE FULL BOLT AVAILABLE TENSILE STRENGTH AND ELIMINATE PRYING ACTION AS DESCRIBED IN THE FOURTEENTH EDITION OF THE AISC STEEL CONSTRUCTION MANUAL

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

19. EQUIPMENT MANUFACTURER MUST DESIGN UNIT TO MAKE C.G. EQUAL OR LESS THAN THE C.G. HEIGHT DIMENSION SHOWN ON THE TABLE ON PGE 4 OF 6

20. 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.



NOTES:

1. PROVIDE 12" MINIMUM DISTANCE TO EDGE OF SLAB, OPENINGS OR OTHER ATTACHMENTS
2. REFER TO SHEET 6 OF 6 FOR ADDITIONAL NOTES

MINIMUM STEEL DECK REQUIREMENTS



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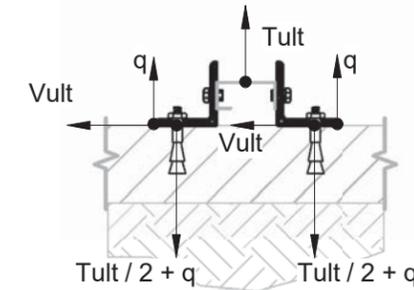


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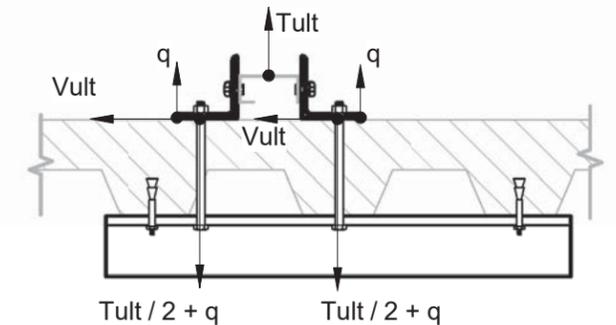
	PART NUMBER	z / h = 0						z / h ≤ 1					
		Wp MAX (LBS)	LOAD RATING (LBS)	Tult ⁴ (LBS)	q (LBS)	Tult + q ⁴ (LBS)	Vult ⁴ (LBS)	Wp MAX (LBS)	LOAD RATING (LBS)	Tult ⁴ (LBS)	q (LBS)	Tult + q ⁴ (LBS)	Vult ⁴ (LBS)
600x1070 FAMILY	S6212B, S6212BP	1,950	1,680	1,900	0	1,900	198	1,480	1,215	2,540	0	2,540	250
	S6512B, S6512BP	1,823	1,540	1,900	0	1,900	185	1,390	1,110	2,540	0	2,540	235
	S6812B, S6812BP	1,710	1,420	1,900	0	1,900	173	1,305	1,015	2,540	0	2,540	221
600x1200 FAMILY	S6222B, S6222BP	2,000	1,715	1,900	0	1,900	203	1,520	1,230	2,540	0	2,540	257
	S6522B, S6522BP	1,850	1,570	1,900	0	1,900	189	1,420	1,125	2,540	0	2,540	240
	S6822B, S6822BP	1,750	1,440	1,900	0	1,900	178	1,335	1,030	2,540	0	2,540	226
700x1070 FAMILY	S7212B, S7219B	2,170	1,885	1,900	0	1,900	220	1,640	1,355	2,540	0	2,540	277
	S7512B, S7519B	2,030	1,725	1,900	0	1,900	205	1,535	1,235	2,540	0	2,540	260
	S7812B, S7819B	1,900	1,580	1,900	0	1,900	193	1,445	1,125	2,540	0	2,540	244
700x1200 FAMILY	S7222B, S7229B	2,240	1,925	1,900	0	1,900	227	1,690	1,370	2,540	0	2,540	286
	S7522B, S7529B	2,090	1,760	1,900	0	1,900	212	1,585	1,255	2,540	0	2,540	268
	S7822B, S7829B	1,960	1,615	1,900	0	1,900	199	1,490	1,145	2,540	0	2,540	251
800x1070 FAMILY	S8212B, S8219B, S8212BF, S8219BF, S8219BS	2,395	2,050	1,900	0	1,900	243	1,800	1,475	2,540	0	2,540	304
	S8512B, S8519B, S8512BF, S8519BF, S8519BS	2,230	1,890	1,900	0	1,900	226	1,685	1,345	2,540	0	2,540	284
	S8812B, S8819B, S8812BF, S8819BF, S8819BS	2,090	1,735	1,900	0	1,900	212	1,580	1,225	2,540	0	2,540	267
800x1200 FAMILY	S8222B, S8229B	2,485	2,140	1,900	0	1,900	252	1,860	1,520	2,540	0	2,540	314
	S8522B, S8529B	2,315	1,925	1,900	0	1,900	235	1,740	1,350	2,540	0	2,540	294
	S8822B, S8829B	2,165	1,725	1,900	0	1,900	220	1,635	1,640	2,540	0	2,540	276

NOTES:

- WHERE $z/h = 0$, THE DESIGN IS GOVERNED BY THE CAPACITY OF THE EXPANSION ANCHORS INTO CONCRETE.
- WHERE $z/h \leq 1$, THE DESIGN IS GOVERNED BY THE CAPACITY OF THE BOLTS CONNECTING THE ANGLES TO THE BUILT-UP HORIZONTAL MEMBER
- THE LOAD RATING IS IN ADDITION OF THE SELF-WEIGHT SHOWN ON PAGE 4; $W_p = \text{LOAD RATING} + \text{SELF-WEIGHT}$
- Tult, q AND Vult SHOWN ON THE TABLE ARE THE MAXIMUM FORCES AT THE STRENGTH LEVEL AND HAVE NOT BEEN AMPLIFIED BY Ω_0 . FOR ANCHORAGE TO CONCRETE, LOADS ARE REQUIRED TO BE AMPLIFIED BY Ω_0 .
- PER DIAGRAM BELOW, NOTE THAT Tult IS THE TENSION FORCE APPLIED TO TWO ANCHORS AND Vult IS THE SHEAR FORCE APPLIED TO EACH ANCHOR
- PROVIDE A STEEL PLATE ATTACHED TO THE CABINET THAT CLEARLY SHOWS THE DESIGN LOAD RATING THAT THE SUPPORT AND ATTACHMENT IS DESIGNED TO.
- BOLTS THROUGH CONCRETE ON METAL DECK
 - BOLTS SHALL BE TORQUED BY 3/4 TURN OF THE NUTS AFTER THE SNUG TIGHT CONDITION (THE SNUG TIGHT CONDITION IS DEFINED AS THE TIGHTNESS REQUIRED TO BRING THE CONNECTED PLIES INTO FIRM CONTACT) IS ACHIEVED.
 - THROUGH BOLTS IN CONCRETE SHALL RECEIVE SPECIAL INSPECTION AND TESTING IN ACCORDANCE WITH REQUIREMENTS FOR POST-INSTALLED ANCHORS.



**CABINET ON SLAB
ON GRADE**



**CONCRETE ON
ELEVATED SLAB**



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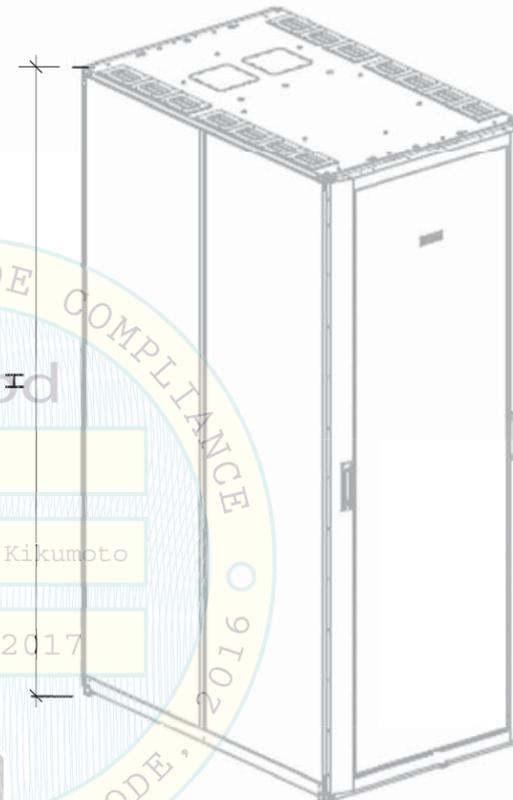
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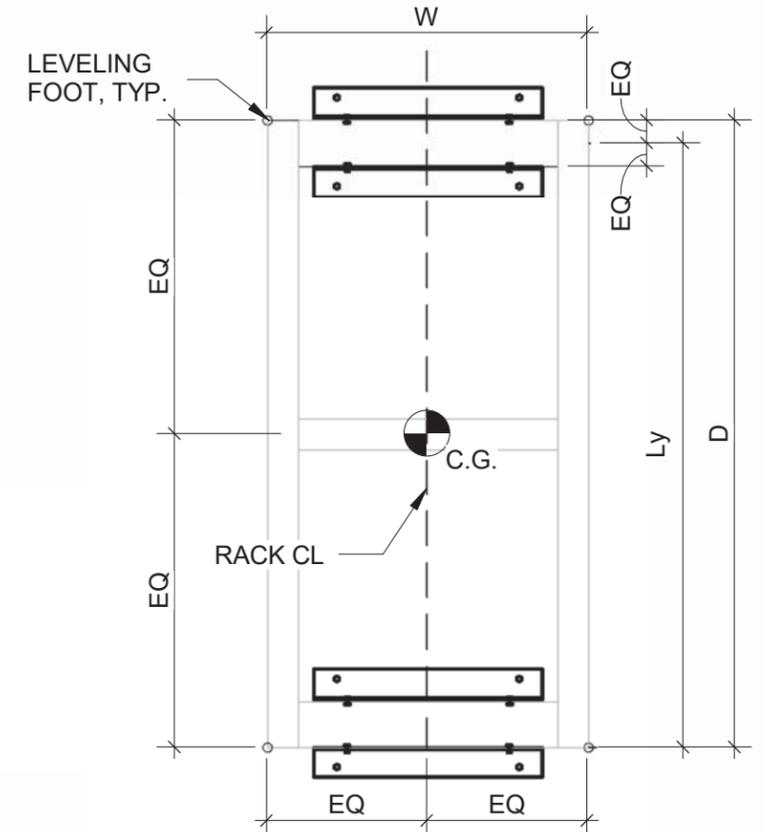


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	PART NUMBER	DEPTH "D" (IN)	WIDTH "W" (IN)	Ly MIN (IN)	HEIGHT "H" (IN)	CG HEIGHT "Hcg" (IN)	MAX. UNIT SELF- WEIGHT (LBS)
600x1070 FAMILY	S6212B, S6212BP	39.5	18.0	35.0	79.8	39.9	270
	S6512B, S6512BP	39.5	18.0	35.0	85.0	42.5	280
	S6812B, S6812BP	39.5	18.0	35.0	90.2	45.1	290
600x1200 FAMILY	S6222B, S6222BP	45.5	18.0	41.0	79.8	39.9	290
	S6522B, S6522BP	45.5	18.0	41.0	85.0	42.5	300
	S6822B, S6822BP	45.5	18.0	41.0	90.2	45.1	310
700x1070 FAMILY	S7212B, S7219B	39.5	21.9	35.0	79.8	39.9	290
	S7512B, S7519B	39.5	21.9	35.0	85.0	42.5	305
	S7812B, S7819B	39.5	21.9	35.0	90.2	45.1	320
700x1200 FAMILY	S7222B, S7229B	45.5	21.9	41.0	79.8	39.9	320
	S7522B, S7529B	45.5	21.9	41.0	85.0	42.5	330
	S7822B, S7829B	45.5	21.9	41.0	90.2	45.1	345
800x1070 FAMILY	S8212B, S8219B, S8212BF, S8219BF, S8219BS	39.5	25.9	35.0	79.8	39.9	325
	S8512B, S8519B, S8512BF, S8519BF, S8519BS	39.5	25.9	35.0	85.0	42.5	340
	S8812B, S8819B, S8812BF, S8819BF, S8819BS	39.5	25.9	35.0	90.2	45.1	355
800x1200 FAMILY	S8222B, S8229B	45.5	25.9	41.0	79.8	39.9	340
	S8522B, S8529B	45.5	25.9	41.0	85.0	42.5	390
	S8822B, S8829B	45.5	25.9	41.0	90.2	45.1	440



CABINET ISOMETRIC VIEW

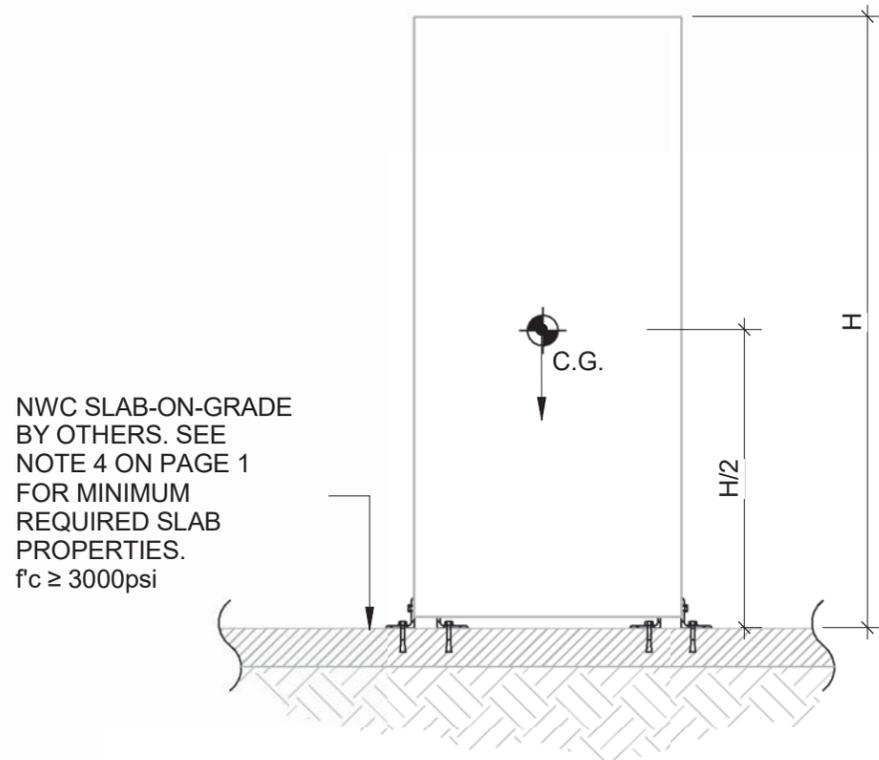


CABINET BASE FRAME PLAN

NOTES

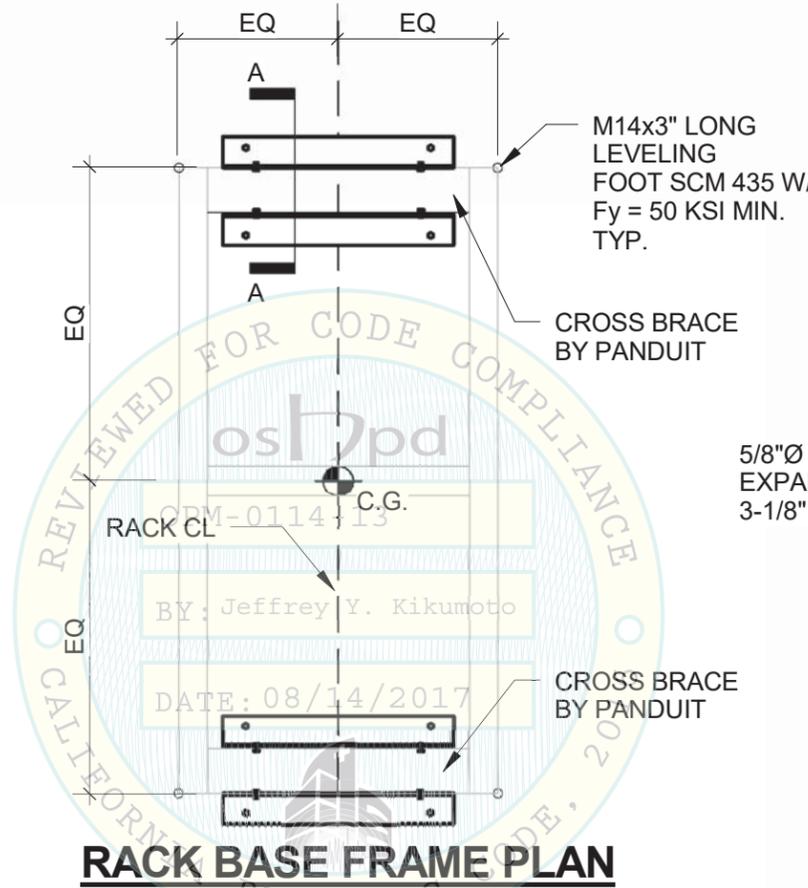
1. Ly DENOTES THE DISTANCE FROM THE LEVELING LEG TO THE ANCHOR BOLT CENTER OF GRAVITY
2. W AND D REPRESENT THE WIDTH AND DEPTH DISTANCE BETWEEN LEVELING LEGS
3. H IS THE HEIGHT FROM THE TOP OF THE STRUCTURAL SLAB TO THE TOP OF THE CABINET. IT CAN VARY BY ± 1" DUE TO ADJUSTMENTS TO LEVELING LEGS.

MODELS S6212B, S6212BP, S6512B, S6512BP, S6812B, S6812BP, S6222B, S6222BP, S6522B, S6522BP, S6822B, S6822BP, S7212B, S7219B, S7512B, S7519B, S7812B, S7819B, S7222B, S7229B, S7522B, S7529B, S7822B, S7829B, SS8212B, S8219B, S8212BF, S8219BF, S8219BS, S8512B, S8219B, S8212BF, S8219BF, S8219BS, S8512B, S8519B, S8512BF, S8519BF, S8519BS, S8812B, S8819B, S8512BF, S8519BF, S8519BS, S8222B, S8229B, S85222B, S8529B, S8822B, S829B



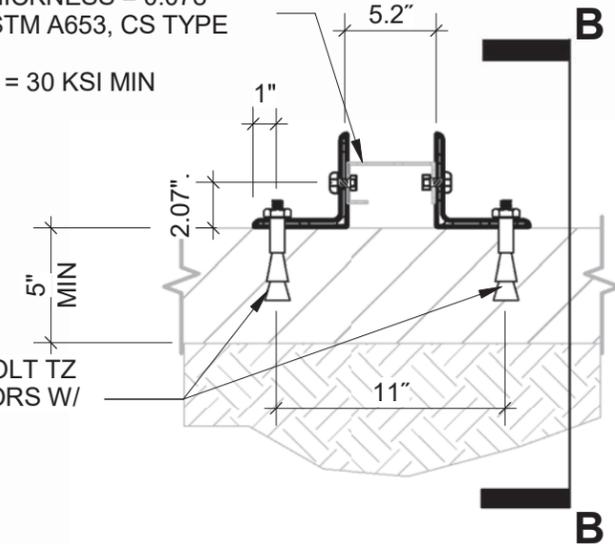
NWC SLAB-ON-GRADE
BY OTHERS. SEE
NOTE 4 ON PAGE 1
FOR MINIMUM
REQUIRED SLAB
PROPERTIES.
 $f_c \geq 3000\text{psi}$

FRONT ELEVATION

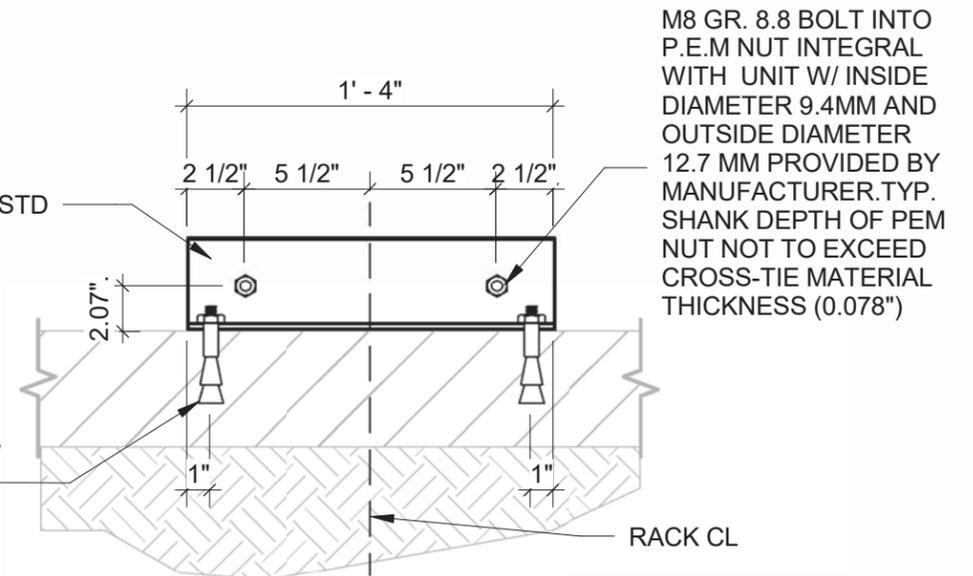


RACK BASE FRAME PLAN

CROSS-BRACE BY
PANDUIT
THICKNESS = 0.078"
ASTM A653, CS TYPE
B
 $F_y = 30\text{ KSI MIN}$



SECTION A-A



SECTION B-B

NOTES:

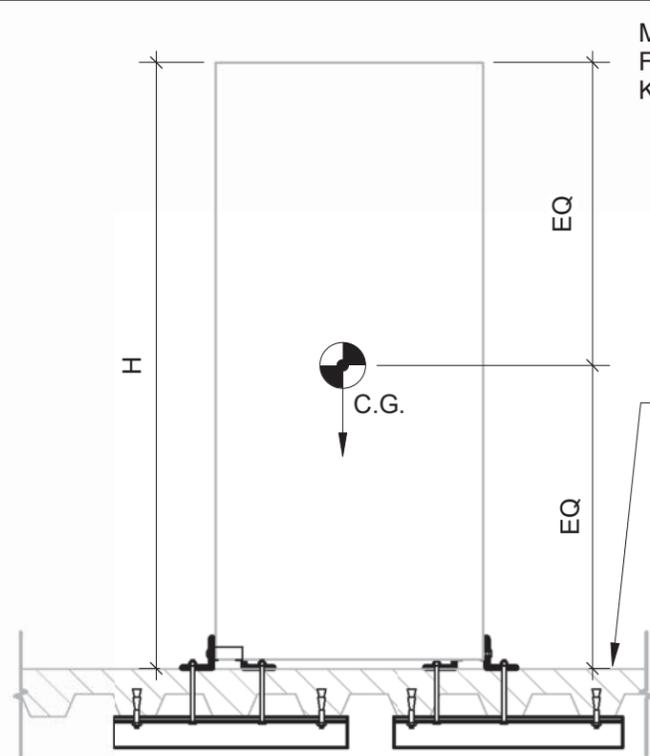
1. DESIGN CONFORMS TO CBC 2016. FORCES GIVEN ARE AT STRENGTH LEVEL
2. SEE GENERAL NOTES SECTION ON PAGES 1 AND 2
3. SEE RESULTANT FORCES AND GEOMETRIC PROPERTIES OF THE CABINETS ON PAGES 3 AND 4
4. S.E.O.R. MAY RECALCULATE MAX. ANCHOR FORCES V_u AND T_u AT THEIR DISCRETION BASED ON PROJECT SPECIFIC DEMANDS
5. ALL HOLES THROUGH STEEL FOR BOLTS SHALL BE STANDARD SIZE HOLES PER AISC 14TH EDITION, TABLE J3.3

L4x4x1/4" W/ (2) M8 GR. 8.8 BOLTS IN STD
SIZE HOLES.

5/8"Ø HILTI KWIK BOLT TZ
EXPANSION ANCHORS W/
3-1/8" EMBED

M8 GR. 8.8 BOLT INTO
P.E.M NUT INTEGRAL
WITH UNIT W/ INSIDE
DIAMETER 9.4MM AND
OUTSIDE DIAMETER
12.7 MM PROVIDED BY
MANUFACTURER.TYP.
SHANK DEPTH OF PEM
NUT NOT TO EXCEED
CROSS-TIE MATERIAL
THICKNESS (0.078")

MODELS S6212B, S6212BP, S6512B, S6512BP, S6812B, S6812BP, S6222B, S6222BP, S6522B, S6522BP, S6822B, S6822BP, S7212B, S7219B, S7512B, S7519B, S7812B, S7819B, S7222B, S7229B, S7522B, S7529B, S7822B, S7829B, SS8212B, S8219B, S8212BF, S8219BF, S8219BS, S8512B, S8219B, S8212BF, S8219BF, S8219BS, S8512B, S8519B, S8512BF, S8519BF, S8519BS, S8812B, S8819B, S8512BF, S8519BF, S8519BS, S8222B, S8229B, S85222B, S8529B, S8822B, S829B

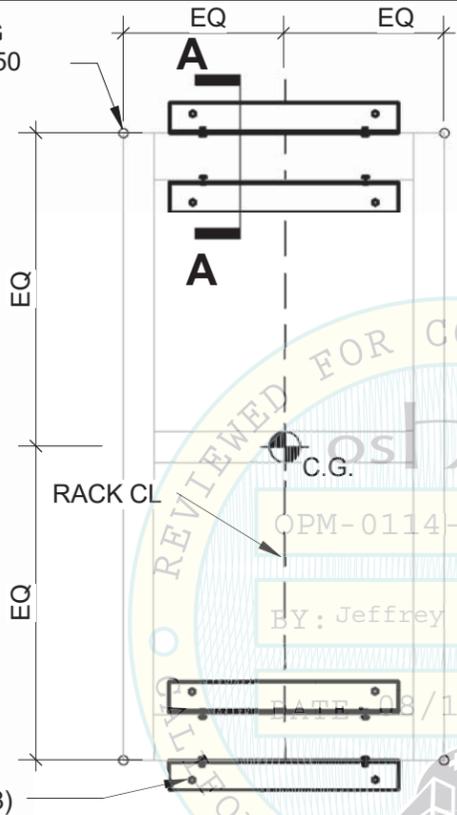


SIDE ELEVATION

M14x3" LONG LEVELING
FOOT SCM 435 W/ Fy = 50
KSI MIN. TYP.

ELEVATED SLAB BY OTHERS.
SEE NOTE 4 ON PAGE
1 FOR MINIMUM
PROPERTIES

1/2" ϕ THROUGH
BOLTS; (TYP OF 8)

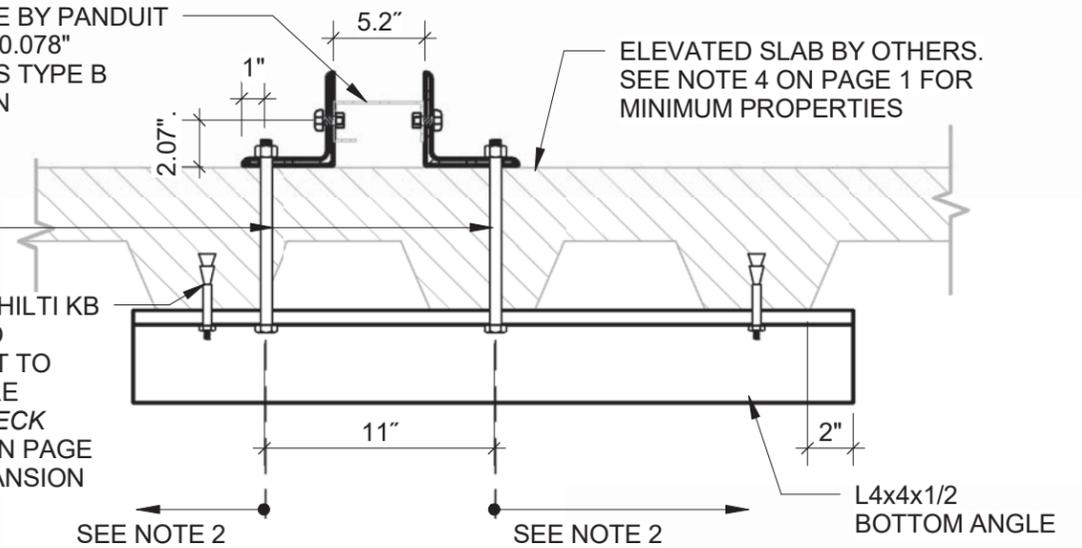


RACK BASE FRAME PLAN

CROSS-BRACE BY PANDUIT
THICKNESS = 0.078"
ASTM A653, CS TYPE B
Fy = 30 KSI MIN

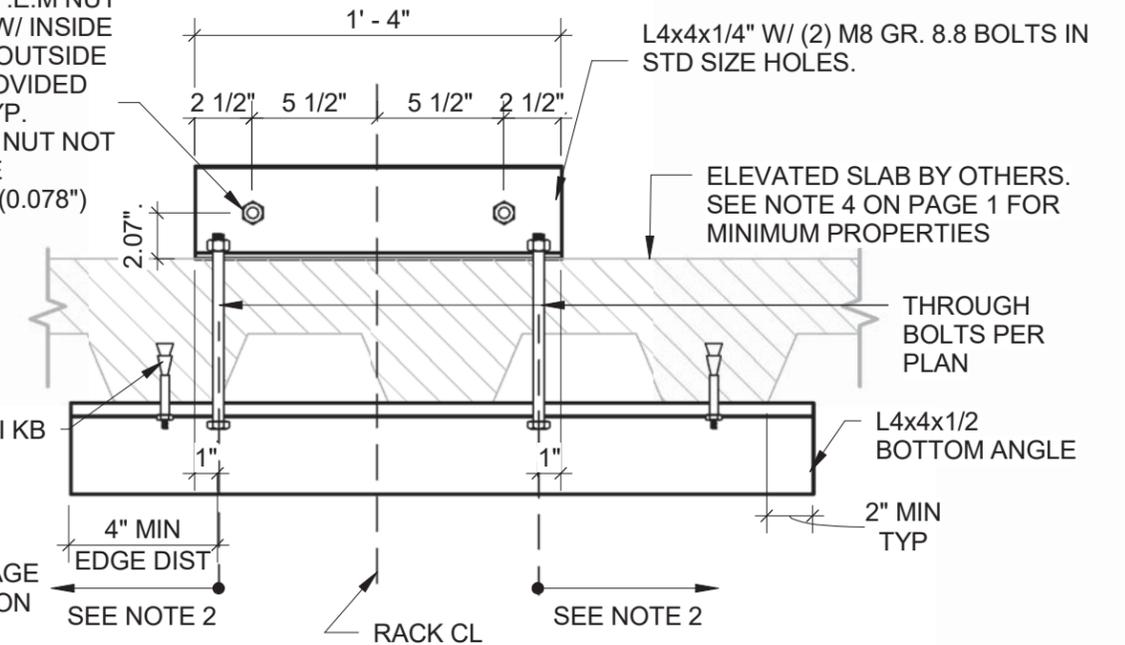
THROUGH
BOLTS PER
PLAN

PROVIDE (2) 3/8" ϕ HILTI KB
TZ W/ 2" EMBED TO
PROVIDE SUPPORT TO
ANGLE. SEE FIGURE
MINIMUM STEEL DECK
REQUIREMENTS ON PAGE
2 TO LOCATE EXPANSION
ANCHOR



TOP ANGLES PARALLEL TO METAL DECK FLUTES

M8 GR. 8.8 BOLT INTO P.E.M NUT
INTEGRAL WITH UNIT W/ INSIDE
DIAMETER 9.4MM AND OUTSIDE
DIAMETER 12.7 MM PROVIDED
BY MANUFACTURER.TYP.
SHANK DEPTH OF PEM NUT NOT
TO EXCEED CROSS-TIE
MATERIAL THICKNESS (0.078")



TOP ANGLES PERPENDICULAR TO METAL DECK FLUTES PAGE 6 OF 6

NOTES:

1. PROVIDE HEX NUT AT TOP AND BOTTOM OF BOTTOM ANGLE FLANGE, TYP. U.O.N. AT CONDITIONS WHERE NUT CANNOT BE PROVIDED AT TOP SIDE OF ANGLE FLANGE, PROVIDE TAPPED HOLE IN ANGLE
2. EXTEND THE BOTTOM ANGLE 2" PAST THE EDGE OF THE SLAB RIB TO INSTALL EXPANSION ANCHOR. DO NOT INSTALL EXPANSION ANCHOR IN THE SAME RIB AS THE THROUGH BOLT
3. ANCHORAGE DESIGN CONFORMS TO CBC 2016. FORCES GIVEN ARE AT STRENGTH LEVEL.
4. SEE GENERAL NOTES SECTION ON PAGES 1 AND 2.
5. SEE RESULTANT FORCES AND GEOMETRIC PROPERTIES OF THE CABINETS ON PAGES 3 AND 4
6. S.E.O.R. MAY RECALCULATE MAX. ANCHOR FORCES V_u AND T_u AT THEIR DISCRETION BASED ON PROJECT SPECIFIC DEMANDS.
7. ALL HOLES THROUGH STEEL FOR BOLTS SHALL BE STANDARD SIZE HOLES PER AISC 14TH EDITION, TABLE J3.3
8. FOR CONCRETE ELEVATED SLAB, PROVIDE BOTTOM ANGLE SIMILAR TO TOP ANGLE PARALLEL TO METAL DECK FLUTES