



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY
APPLICATION #: OPM-0119-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: [X] 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: Net-Access N-Type Cabinets

Product Type: Network equipment cabinet OPM-0119-13

Product Model Number: All N8 model numbers as listed on OPM drawings.

General Description: Data center network equipment cabinet.

Applicant Information

Applicant Company Name: Panduit Corporation

Contact Person: Robert Fritz

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

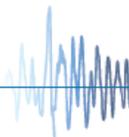
Telephone: 708-532-1800 x84346 Email: RLFR@panduit.com

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: [Handwritten Signature] 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





**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
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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, 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 1950-10
- 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: 04-10-2015

Print Name: Jeffrey Kikumoto

Title: SSE

Condition of Approval (if applicable): _____

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





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OPM - 0119 - 13**

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San Francisco, CA 94104
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415.981.3157 Fax
www.degenkolb.com

PANDUIT NET-ACCESS N-TYPE CABINETS



MODELS (* DENOTES COLOR "B" = BLACK, "W" = WHITE)
N8222*, N8522*, N8822*, N8229*, N8529*, N8829*, N8229*C, N8529*C, N8829*C, N8222*C, N8522*C, N8822*C, N8222*E, N8522*E, N8822*E, N8229*E, N8529*E, N8829*E, N8222*S, N8522*S, N8822*S, N8229*S, N8529*S, N8829*S, N8222*U, N8522*U, N8822*U, N8229*U, N8529*U, N8829*U, N8222*J, N8522*J, N8822*J, 8229*J, N8529*J, N8829*J, N8222*M, N8522*M, N8822*M, N8229*M, N8529*M, N8829*M, N8212B, N8512B, N8812B, N8219B, N8519B, N8819B, N8212BC, N8512BC, N8812BC, N8219BC, N8519BC, N8819BC, N8212BE, N8512BE, N8812BE, N8219BG, N8519BG, N8819BG, N8219BS, N8519BS, N8819BS, N8219BQ, N8519BQ, N8819BQ, N8219BL, N8519BL, N8819BL

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. 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 2013 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 = 12" | 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 $z/h \leq 1$

- $F_p = 1.35 W_p$
- $E_v = 0.36 W_p$
- $\Omega_o F_p = 3.375 W_p$

WHERE $z/h = 0$

- $F_p = 0.81 W_p$
- $E_v = 0.36 W_p$
- $\Omega_o F_p = 2.025 W_p$ (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:

- VERIFY THAT THE ATTACHMENTS ARE A MINIMUM 12" FROM ANY OPENINGS OR EDGES.
- VERIFY THAT THE ATTACHMENTS ARE 12" MINIMUM DISTANCE FROM ANY NEW OR EXISTING ANCHORS.
- 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.
- 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.
- THE ATTACHMENTS TO THE ELEVATED AND ON GRADE SLABS HAVE 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:

- 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.
- 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" | 3,035 | 60 | NORMAL WEIGHT | 26" | 8.78" |
| 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 12" 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

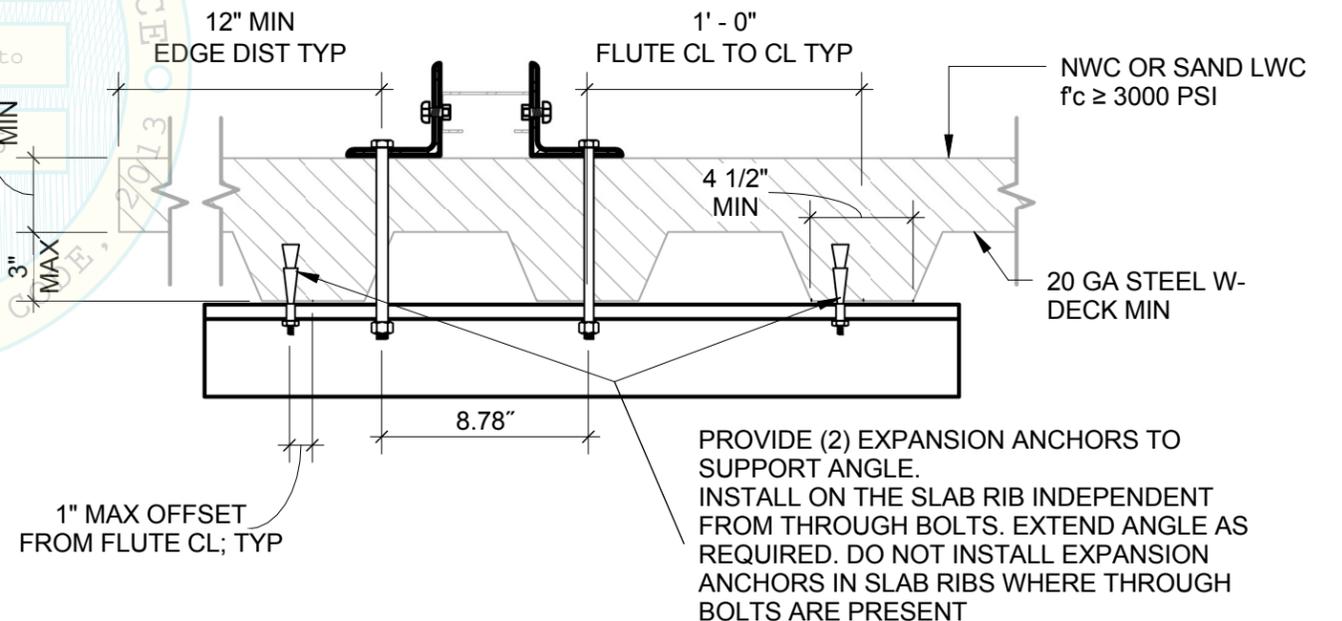
16. THE TABLE ON PAGE 4 SHOWS THE PROPERTIES OF THE DIFFERENT MODELS CONSIDERED IN THIS SUBMITTAL.

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 NOTES ON SHEET 6 OF 6 FOR ADDITIONAL INFORMATION

MINIMUM STEEL DECK REQUIREMENTS



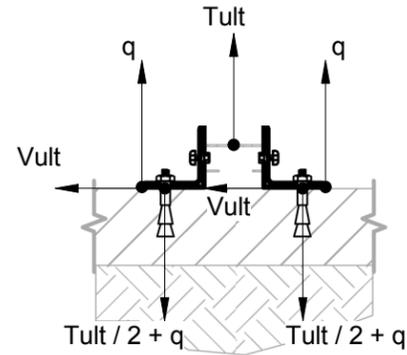
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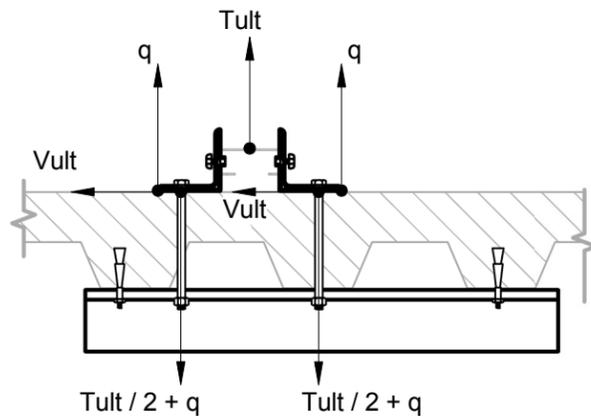
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CABINET ON SLAB ON GRADE



CONCRETE ON ELEVATED SLAB

| PART NUMBER | z / h = 0 | | | | | | z / h ≤ 1 | | | | | | |
|-------------------|-----------------|------------|-----------------------|-------|---------------------------|-----------------------|-----------------|------------|-----------------------|-------|---------------------------|-----------------------|-----|
| | LOAD RATING LBS | Wp MAX LBS | Tult ⁴ LBS | q LBS | Tult + q ⁴ LBS | Vult ⁴ LBS | LOAD RATING LBS | Wp MAX LBS | Tult ⁴ LBS | q LBS | Tult + q ⁴ LBS | Vult ⁴ LBS | |
| 800 X 1070 FAMILY | N821XX | 1730 | 2,050 | 1,900 | 0 | 1,900 | 208 | 1,135 | 1,455 | 2,000 | 0 | 2,000 | 246 |
| | N851XX | 1,550 | 1,885 | 1,900 | 0 | 1,900 | 190 | 1,025 | 1,360 | 2,000 | 0 | 2,000 | 230 |
| | N881XX | 1,415 | 1,765 | 1,900 | 0 | 1,900 | 180 | 965 | 1,265 | 2,000 | 0 | 2,000 | 213 |
| 800 X 1200 FAMILY | N822XX | 1,755 | 2,130 | 1,900 | 0 | 1,900 | 216 | 1,155 | 1,533 | 2,000 | 0 | 2,000 | 260 |
| | N852XX | 1,590 | 1,990 | 1,900 | 0 | 1,900 | 201 | 1,030 | 1,430 | 2,000 | 0 | 2,000 | 240 |
| | N882XX | 1,450 | 1,865 | 1,900 | 0 | 1,900 | 190 | 915 | 1,330 | 2,000 | 0 | 2,000 | 225 |

NOTES:

1. WHEN z = 0, THE DESIGN IS GOVERNED BY THE CAPACITY OF THE EXPANSION ANCHORS INTO CONCRETE.
2. WHEN z ≤ 1, THE DESIGN IS GOVERNED BY THE CAPACITY OF THE BOLTS CONNECTING THE ANGLES TO THE CROSS BRACE
3. THE LOAD RATING IS IN ADDITION OF THE SELF-WEIGHT SHOWN ON PAGE 4; **Wp = LOAD RATING + SELF-WEIGHT**
4. Tult, q AND Vult SHOWN ON THE TABLE ARE THE DESIGN FORCES AT STRENGTH LEVEL AND HAVE NOT BEEN AMPLIFIED BY Ω_o. FOR ANCHORAGE TO CONCRETE FORCES ARE REQUIRED TO BE AMPLIFIED BY Ω_o.
5. PER FORCE DIAGRAM ON THIS SHEET, NOTE THAT Tult IS THE TENSION FORCE APPLIED TO TWO ANCHORS AND Vult IS THE SHEAR FORCE APPLIED TO EACH ANCHOR.
6. PROVIDE A STEEL PLATE ATTACHED TO THE CABINET THAT CLEARLY SHOWS THE DESIGN LOAD RATING THAT THE SUPPORT AND ATTACHMENT IS DESIGNED TO.
7. SEE NOTE 5 ON PAGE 4 OF 6



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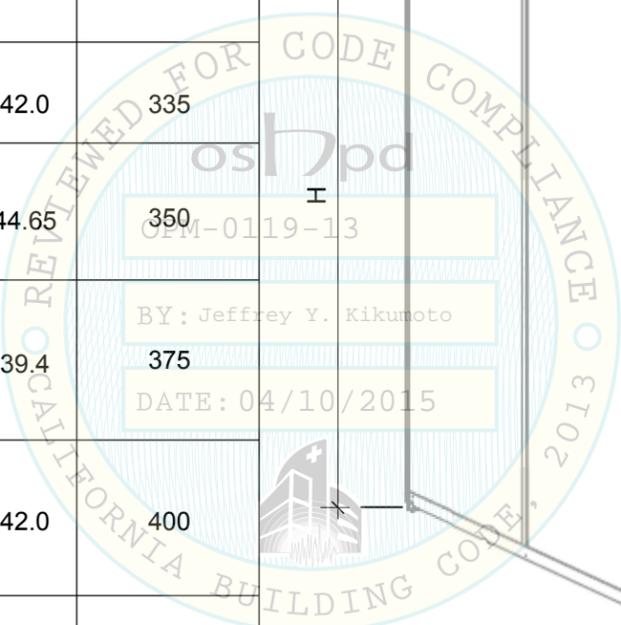
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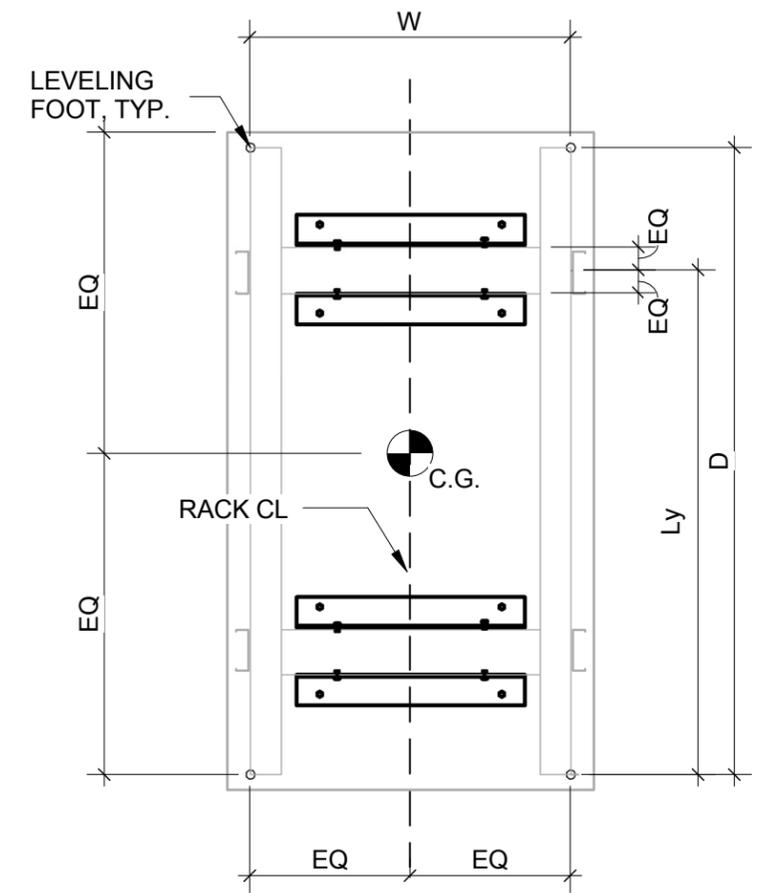


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| | PART NUMBER | DEPTH "D" (IN) | WIDTH "W" (IN) | Ly MIN (IN) | HEIGHT "H" (IN) | C.G. HEIGHT "H" (IN) | MAX. SELF-WEIGHT (LBS) |
|-------------------|--|----------------|----------------|-------------|-----------------|----------------------|------------------------|
| 800 X 1070 FAMILY | N8212B, N8219B, N8212BC, N8219BC, N8212BE, N8219BG, N8219BS, N8219BQ, N8219BL | 38.9 | 20.5 | 30.9 | 78.8 | 39.4 | 320 |
| | N8512B, N8519B, N8512BC, N8519BC, N8512BE, N8519BG, N8519BS, N8519BQ, N8519BL | 38.9 | 20.5 | 30.9 | 84.0 | 42.0 | 335 |
| | N8812B, N8819B, N8812BC, N8819BC, N8812BE, N8819BG, N8819BS, N8819BQ, N8819BL | 38.9 | 20.5 | 30.9 | 89.3 | 44.65 | 350 |
| 800 X 1200 FAMILY | N8222*, N8229*, N8229*C, N8222*C, N8222*E, N8229*E, N8222*S, N8229*S, N8222*U, N8229*U, N8222*J, N8229*J, N8222*M, N8229*M | 47.1 | 20.5 | 39.1 | 78.8 | 39.4 | 375 |
| | N8522*, N8529*, N8529*C, N8522*C, N8522*E, N8529*E, N8522*S, N8529*S, N8522*U, N8529*U, N8522*J, N8529*J, N8522*M, N8529*M | 47.1 | 20.5 | 39.1 | 84.0 | 42.0 | 400 |
| | N8822*, N8829*, N8829*C, N8822*C, N8822*E, N8829*E, N8822*S, N8829*S, N8822*U, N8829*U, N8822*J, N8829*J, N8822*M, N8829*M | 47.1 | 20.5 | 39.1 | 89.3 | 44.65 | 415 |



CABINET ISOMETRIC VIEW



CABINET BASE FRAME PLAN

NOTES

- * DENOTES COLOR "B" = BLACK, "W" = WHITE
- Ly DENOTES THE DISTANCE FROM THE LEVELING LEG TO THE ANCHOR BOLT CENTER OF GRAVITY
- W AND D REPRESENT THE WIDTH AND DEPTH DISTANCE BETWEEN LEVELING LEGS
- 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.
- BOLTS THROUGH CONCRETE ON METAL DECK
 - BOLTS SHALL BE TORQUED BY 3/4 TURN OF THE NUTS AFTER THE SNUG TIGHT (THE SNUG TIGHT CONDITION IS DEFINED AS THE TIGHTNESS REQUIRED TO BRING THE CONNECTED PLIES INTO FIRM CONTACT) CONDITION IS ACHIEVED.
 - THROUGH BOLTS IN CONCRETE SHALL RECEIVE SPECIAL INSPECTION AND TESTING IN ACCORDANCE WITH REQUIREMENTS FOR POST-INSTALLED ANCHORS.



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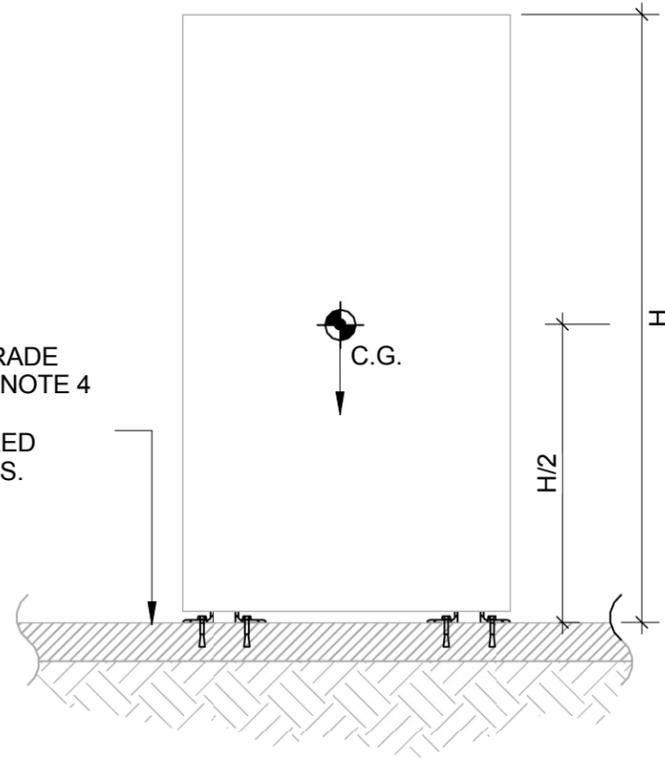
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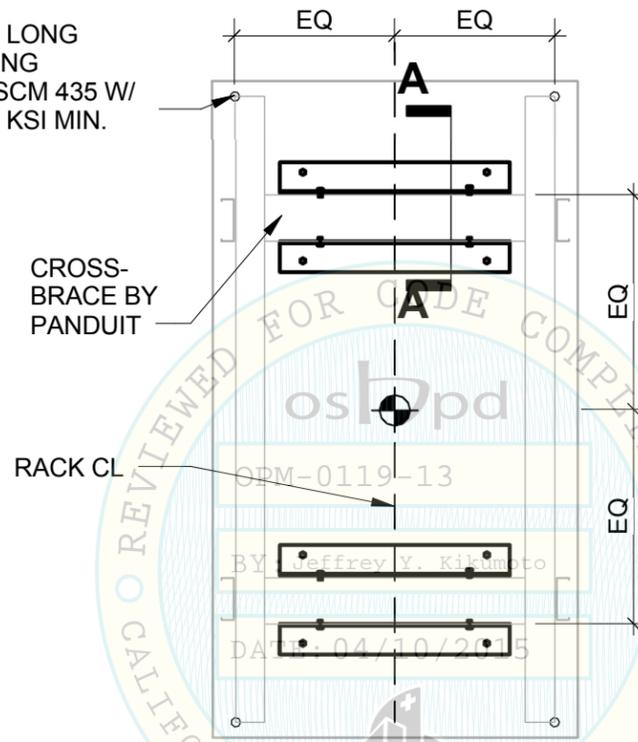
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NWC SLAB-ON-GRADE
BY OTHERS. SEE NOTE 4
ON PAGE 1 FOR
MINIMUM REQUIRED
SLAB PROPERTIES.
 $f_c \geq 3000\text{psi}$

FRONT ELEVATION

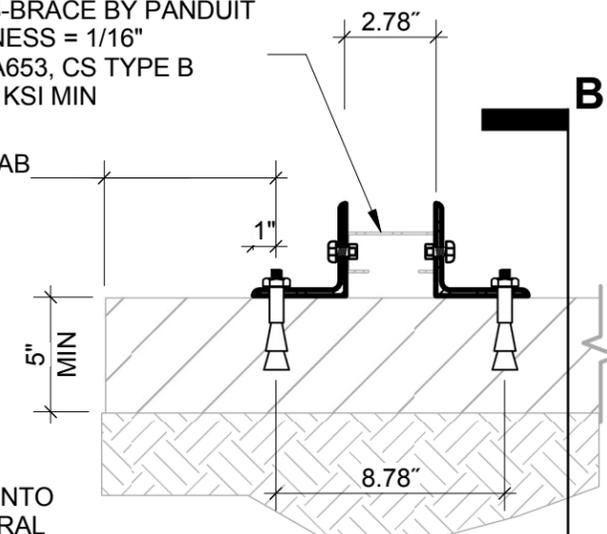
M14x3" LONG
LEVELING
FOOT SCM 435 W/
 $F_y = 50\text{ KSI MIN.}$
TYP.



RACK BASE FRAME PLAN

CROSS-BRACE BY PANDUIT
THICKNESS = 1/16"
ASTM A653, CS TYPE B
 $F_y = 30\text{ KSI MIN}$

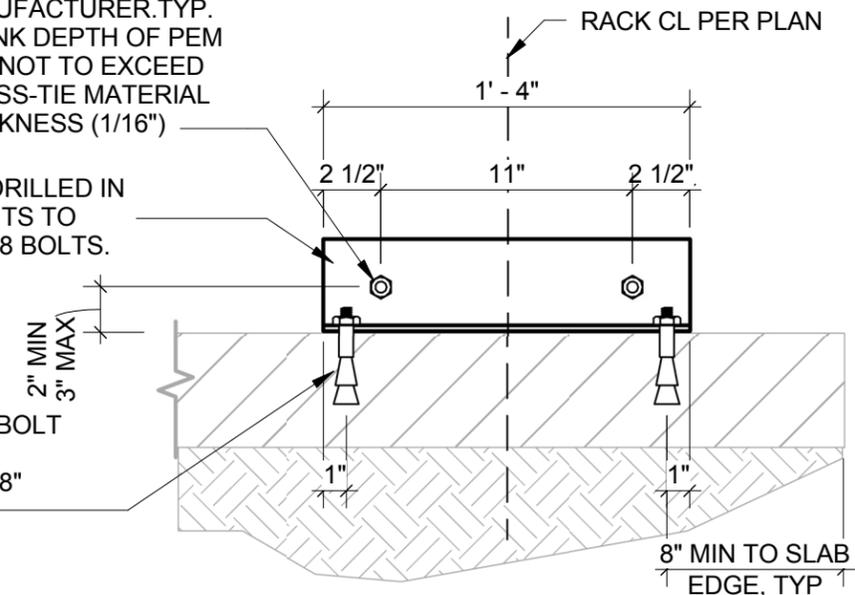
26" MIN TO SLAB
EDGE TYP



SECTION A-A

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 (1/16")

L4x4x1/4" W/ (2) STD SIZE HOLES, DRILLED IN
FIELD TO ALLOW FOR ADJUSTMENTS TO
LEVELING FOOT, FOR (2) M8 GR. 8.8 BOLTS.



SECTION B-B

NOTES:

1. SUPPORT AND ATTACHMENT DESIGN CONFORMS TO CBC 2013. FORCES GIVEN ARE AT STRENGTH LEVEL.
2. SEE GENERAL NOTES SECTION ON PAGES 1 AND 2.
3. S.E.O.R. MAY RECALCULATE MAX. ANCHOR FORCES V_u AND T_u AT THEIR DISCRETION BASED ON PROJECT SPECIFIC DEMANDS
4. ALL HOLES THROUGH STEEL FOR BOLTS SHALL BE STANDARD SIZE HOLES PER AISC 14TH EDITION, TABLE J3.3
5. SEE RESULTANT FORCES AND GEOMETRIC PROPERTIES OF THE CABINETS ON PAGES 3 AND 4



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

OPM - 0119 - 13

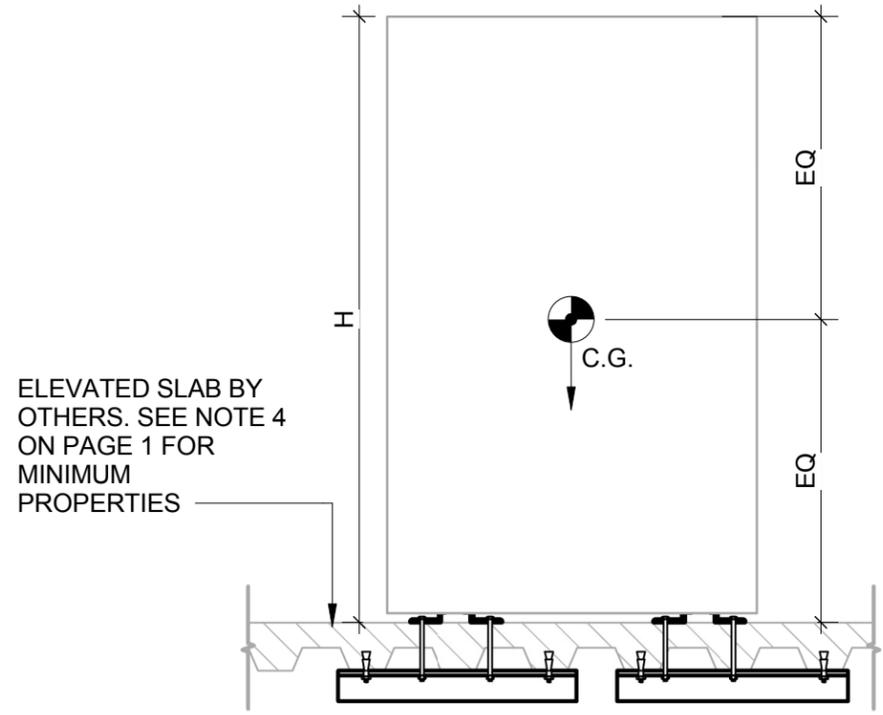
DEGENKOLB ENGINEERS
235 Montgomery Street, Suite 500
San Francisco, CA 94104
415.392.6952 Phone
415.981.3157 Fax
www.degenkolb.com

PANDUIT NET-ACCESS N-TYPE CABINETS

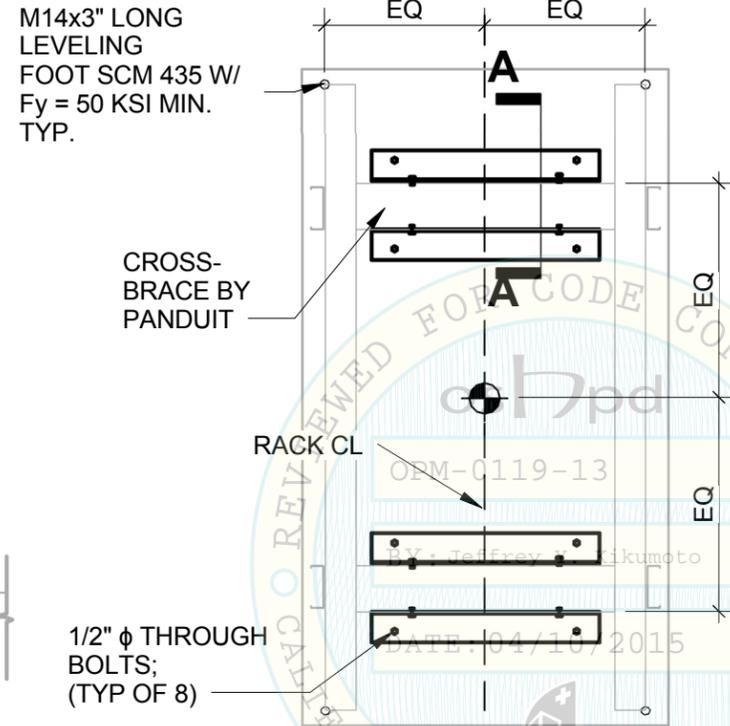


MODELS (* DENOTES COLOR "B" = BLACK, "W" = WHITE)

N8222*, N8522*, N8822*, N8229*, N8529*, N8829*, N8229*C, N8529*C, N8829*C, N8222*C, N8522*C, N8822*C, N8222*E, N8522*E, N8822*E, N8229*E, N8529*E, N8829*E, N8222*S, N8522*S, N8822*S, N8229*S, N8529*S, N8829*S, N8222*U, N8522*U, N8822*U, N8229*U, N8529*U, N8829*U, N8222*J, N8522*J, N8822*J, 8229*J, N8529*J, N8829*J, N8222*M, N8522*M, N8822*M, N8229*M, N8529*M, N8829*M, N8212B, N8512B, N8812B, N8219B, N8519B, N8819B, N8212BC, N8512BC, N8812BC, N8219BC, N8519BC, N8819BC, N8212BE, N8512BE, N8812BE, N8219BG, N8519BG, N8819BG, N8219BS, N8519BS, N8819BS, N8219BQ, N8519BQ, N8819BQ, N8219BL, N8519BL, N8819BL



FRONT ELEVATION



RACK BASE FRAME PLAN

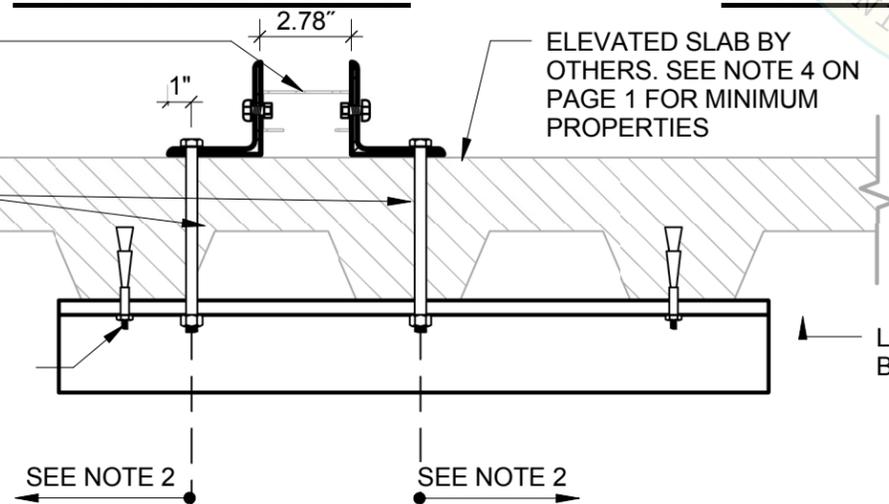
NOTES:

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. SUPPORT AND ATTACHMENT DESIGN CONFORMS TO CBC 2013. FORCES GIVEN ARE AT STRENGTH LEVEL.
4. SEE GENERAL NOTES SECTION ON PAGES 1 AND 2.
5. S.E.O.R. MAY RECALCULATE MAX. ANCHOR FORCES V_u AND T_u AT THEIR DISCRETION BASED ON PROJECT SPECIFIC DEMANDS.
6. ALL HOLES THROUGH STEEL FOR BOLTS SHALL BE STANDARD SIZE HOLES PER AISC 14TH EDITION, TABLE J3.3
7. FOR CONCRETE ELEVATED SLAB, PROVIDE BOTTOM ANGLE SIMILAR TO TOP ANGLE PARALLEL TO METAL DECK FLUTES
8. SEE RESULTANT FORCES AND GEOMETRIC PROPERTIES OF THE CABINETS ON PAGES 3 AND 4

CROSS-BRACE BY PANDUIT
THICKNESS = 1/16"
ASTM A653, CS TYPE B
 $F_y = 30$ KSI MIN.

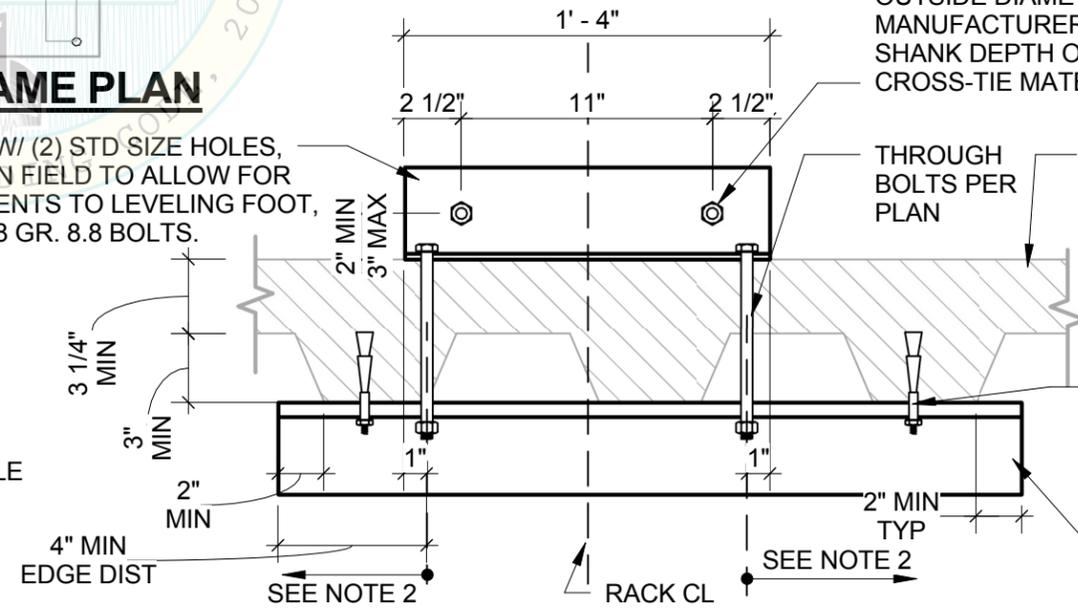
THROUGH BOLTS
PER PLAN

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

L4x4x1/4" W/ (2) STD SIZE HOLES,
DRILLED IN FIELD TO ALLOW FOR
ADJUSTMENTS TO LEVELING FOOT,
FOR (2) M8 GR. 8.8 BOLTS.



TOP ANGLES PERPENDICULAR TO METAL DECK FLUTES PAGE 6 OF 6

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 (1/16")

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

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