

EARTHQUAKE RESISTANT BRACING SYSTEM (ERBS) C.P. SEISMIC PIER™

FOR: CENTRAL PIERS, INC.
284 N. THORNE AVE.
FRESNO, CA 93706
559-268-0828

BY: ROCK SOLID ENGINEERING, INC.
1100 MAIN STREET, SUITE A
WATSONVILLE, CA 95076
831-724-5868



Signed: 12-14-2020

STATE APPROVAL

MOBILEHOME EARTHQUAKE BRACING SYSTEM CERTIFICATION

THIS SYSTEM IS CERTIFIED AS BEING LISTED & APPROVED BY A DEPARTMENT APPROVED LISTING OR TESTING AGENCY PURSUANT TO THE C.A.C. TITLE 25 CHAPTER 2. CERTIFICATION DOES NOT AUTHORIZE OF APPROVE ANY OMISSION OF DEVIATION FROM REQUIREMENTS OF APPLICABLE STATE LAWS OR REGULATIONS.

STATE OF CALIFORNIA
DEPARTMENT OF HOUSING & COMMUNITY DEVELOPMENT
DIVISION OF CODES & STANDARDS

BY: *[Signature]*
DATE: 12/28/20
EXPIRES: 1/14/23

REV.	DATE	BY	COMMENTS
△			
②	12/11/20	YW	MINOR TEXT EDITS
①	12/08/16	YW	MINOR TEXT EDITS
①	12/11/14	YW	FORMAT TO 8.5"x11" FOR RENEWAL

GENERAL NOTES:

REFERENCE: CALIFORNIA CODE OF REGULATIONS, TITLE 25, SEC 1371

1. DESIGN LOADS SHALL BE CONSISTENT WITH LOCAL REQUIREMENTS WHERE INSTALLED.
2. ALL FOOTINGS TO BE SUPPORTED BY EITHER FIRM, UNSATURATED, UNDISTURBED SOIL, COMPACTED FILL, ASPHALT OR CONCRETE. FOOTINGS ARE DESIGNED FOR 1500 PSF BEARING CAPACITY AND SHALL BE COMPATIBLE WITH LOCAL SOIL CONDITIONS. ALL FOOTINGS SHALL BE FOUNDED IN ACCORDANCE WITH H.C.D. GUIDELINES AND TITLE 25.
3. STRUCTURAL STEEL
 - 3.a. SHALL CONFORM TO ASTM A36 $F_y = 36$ KSI MINIMUM
 - 3.b. SHALL BE FABRICATED ACCORDING TO AISC SPECIFICATIONS
 - 3.c. SHALL BE WELDED ACCORDING TO AWS SPECIFICATIONS:
 - 3.c.1. ELECTRODES: E70
 - 3.c.2. PLATES: ASTM A36
 - 3.c.3. BOLTS: STANDARD ASTM A307
 - 3.c.4. THREADED ROD: COLD DRAWN LOW CARBON WELDABLE
 - 3.d. ALL METAL COMPONENTS INCLUDING NAILS & SCREWS, ETC. ARE TO BE PROTECTIVE COATED.
4. THE C.P. SEISMIC PIER SHALL BE LISTED & LABELED BY BSK ASSOCIATES FOR THESE ALLOWABLE LOADS: TESTED LOAD x $\frac{2}{3}$.
 - A. 7 THRU 18 INCH PIERS: 3203 LBS. (STRONG DIR), 2273 (WEAK DIR)
 - B. 19 INCH X-LARGE PIER: 1553 LBS. (STRONG DIR.) 1462 (WEAK DIR)
 - C. 16,000 VERTICAL
5. THIS BRACING SYSTEM IS FOR PLACING MANUFACTURED HOME CONSTRUCTED WITH LONGITUDINAL OR CROSS JOINTS.
6. THIS BRACING SYSTEM PLAN IS DESIGNED TO BE CONSTRUCTED ON A FAIRLY LEVEL SITE WITH NO EXISTING SOIL PROBLEMS. SEE TITLE 25, SECTION 1334(d).
7. STANDARD CHASSIS, MARRIAGE & PERIMETER PIERS SHALL BE INSTALLED PER THE HOME MANUFACTURER'S INSTALLATION MANUAL. WITHOUT MANUAL, STANDARD PIERS TO BE DETERMINED BY TITLE 25, SECTION 1335.5.

FOUNDATION PAD NOTES:

1. TWO FOUNDATION PADS ARE AVAILABLE FOR USE WITH THIS SYSTEM. THE CUSTOMER MAY CHOOSE ONE OF THE PADS FOR THEIR HOME. SEE DETAIL 3, SHEET F6.
2. FOUNDATION PADS SHALL BE PLACED ON FIRM, LEVEL UNDISTURBED SOIL (SEE GEN. NOTE 2)
3. THE FOUNDATION PADS SHALL BE ORIENTED AS SHOWN ON THE PLAN VIEW, SHEETS F3 & F4, WITH THE BOLT HOLES PERPENDICULAR TO THE CHASSIS BEAM.
4. CONCRETE FOUNDATION PADS: 2500 PSI AT 28 DAYS AS TESTED AND MANUF. BY STARLITE WEIGHT CONCRETE.
5. PRESSURE TREATED FOUNDATION PAD: $\frac{3}{4}$ " A.P.A. 48/24 EXTERIOR P.S.I.-83 CC. PLUGGED. NER-QA397, PRP-108.
6. ATTACHMENT TO EXISTING CONCRETE SLAB
THE C.P. SEISMIC PIER MAY BE ATTACHED TO AN EXISTING COMPETENT CONCRETE SLAB OR FOOTING ACCORDING TO THE FOLLOWING CRITERIA:

- 6.a. ATTACH WITH TWO $\frac{3}{8}$ INCH REDHEAD WEDGE ANCHORS, OR EQUIVALENT
- 6.b. MINIMUM EMBEDMENT = 2.5 INCHES
- 6.c. MINIMUM CONCRETE THICKNESS = $3\frac{3}{4}$ INCHES
- 6.d. MINIMUM EDGE DISTANCE = 2 INCHES



HOME SIZE NOTES

1. UNLESS APPROVED BY ROCK SOLID ENGINEERING, INC., THE ROOF PITCH SHOULD NOT EXCEED 4:12 (H:V).
2. THIS PLAN IS ONLY TO BE USED FOR THE HOME SIZES LISTED ON TABLE, SHEET F5. OTHER HOME SIZES MAY REQUIRE CUSTOM ENGINEERING. CONTACT ROCK SOLID ENGINEERING.

INSPECTION REQUIREMENTS

1. THE DESIGN OF THIS SYSTEM IS BASED ON STANDARD MANUFACTURED HOMES AS BUILT BY THE MANUFACTURER. SITE BUILT ADDITIONS SUCH AS GARAGES AND SECONDARY ROOFS HAVE NOT BEEN INCLUDED IN THIS DESIGN.
2. ALL DIMENSIONS INCLUDED ON THIS PLAN, INCLUDING HOME SIZE, ROOF HEIGHT AND PIER HEIGHT, SHOULD BE FIELD VERIFIED BY THE LOCAL BUILDING OFFICIAL. ANY DISCREPANCIES SHOULD BE IMMEDIATELY BROUGHT TO THE ENGINEER'S ATTENTION.
3. THE BUILDING PAD SHOULD BE INSPECTED TO ENSURE THAT PROPER PAD PREPARATION AND DRAINAGE PATTERNS HAVE BEEN ESTABLISHED IN ACCORDANCE WITH TITLE 25 & HOME MANUFACTURER INSTRUCTIONS.

INSPECTION REQUIREMENTS

1. MARK CHASSIS BEAM ACCORDING TO REQUIRED SPACING.
2. FOUNDATION FOR CHASSIS BEAM SUPPORTS SHALL BE LOCATED AND SIZED FOR THE LOADS AS SHOWN IN THE MANUFACTURED HOME INSTALLATION INSTRUCTIONS.
3. ALL MANUFACTURED REQUIRED PADS AND PIERS, EXCEPT MASONRY BLOCKS, MUST BE ATTACHED TO THE CHASSIS BEAM & FOOTING PAD.
4. LEVEL THE SOIL AND FOUNDATION PAD BELOW MARKING AS PER LAYOUT, SHEETS F3 & F4, AND MANUFACTURER'S INSTALLATION MANUAL.
5. ASSEMBLE CP SEISMIC PIER TO ITS LOWEST SETTING: PLACE IT ON THE FOUNDATION PAD AND ATTACH IT PER THE CORRESPONDING DETAIL, SHEET F6.
6. RAISE TOP SECTION OF C.P. SEISMIC PIER UNTIL IT TOUCHES BOTTOM OF CHASSIS BEAM BY TURNING PIPE (4 TIMES EQUALS 1 INCH CHANGE IN HEIGHT). TIGHTEN FOUR CLAMP BOLTS FIRMLY.
7. CLAMP UPPER PLATE TO BOTTOM OF CHASSIS BEAM AS PER DETAIL, SHEET F6.

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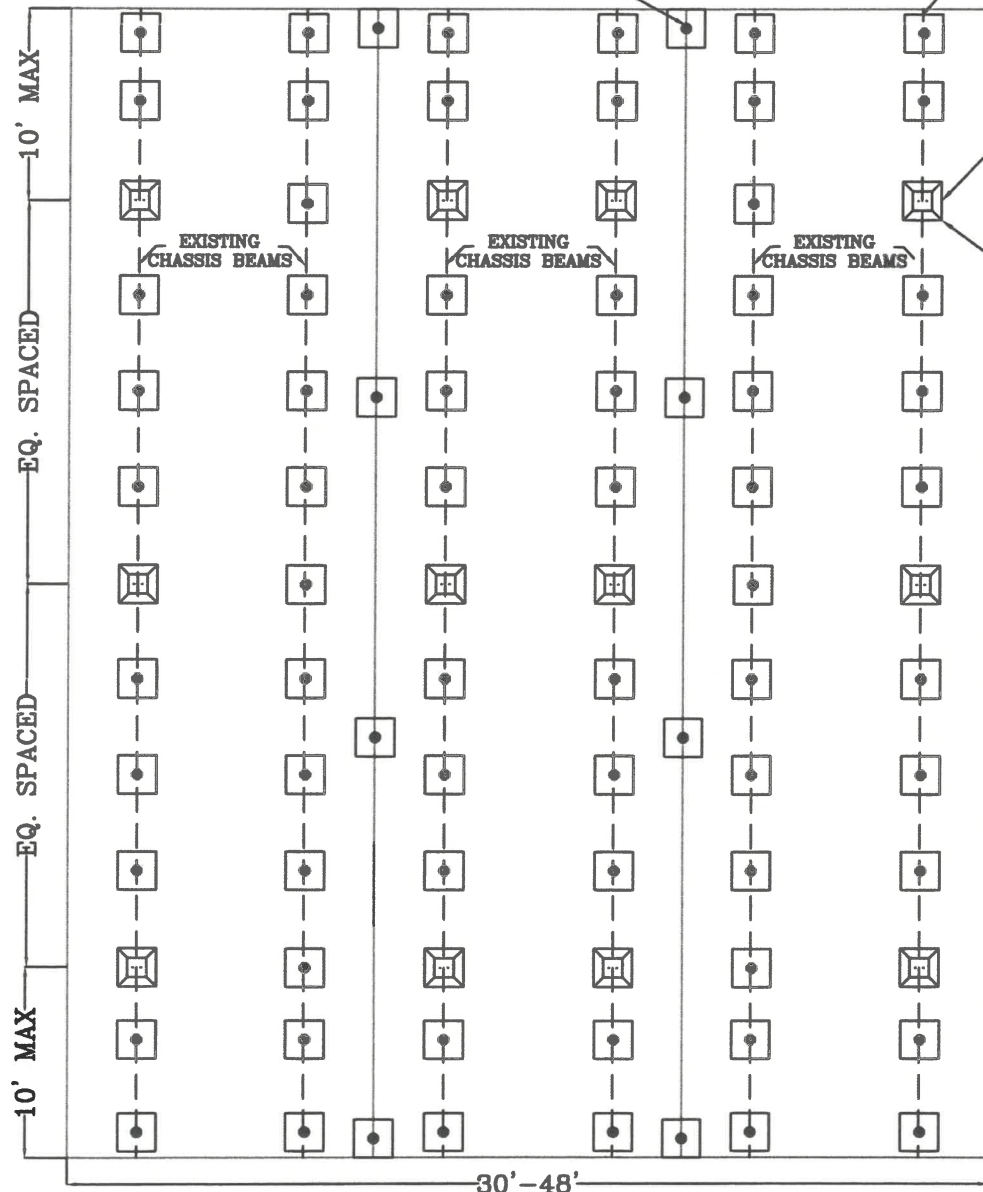
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EARTHQUAKE RESISTANT BRACING SYSTEM
CENTRAL PIERS - C.P. SEISMIC PIER ERBS

SIZE, TYPE AND LOCATION OF MARRIAGE LINE SUPPORT PIERS MUST BE INSTALLED AS SPECIFIED IN THE HOME INSTALLATION MANUAL.

STANDARD PIER: SIZE, TYPE AND LOCATION MUST BE INSTALLED AS SPECIFIED IN HOME INSTALLATION MANUAL.



PLACE C.P. SEISMIC PIERS™[△] IN ROWS OF 4 (AS SHOWN) OR IN ROWS OF 6 (FOR 18 OR 24 TOTAL PIERS) TOTAL NUMBER REQUIRED PER TABLE, SHEET F5
NOTE: ONE SEISMIC PIER MAY REPLACE ONE STD SUPPORT



PAD ORIENTATION PAD MUST BE PLACED AS SHOWN WITH BOLT HOLES PERPENDICULAR TO CHASSIS BEAM

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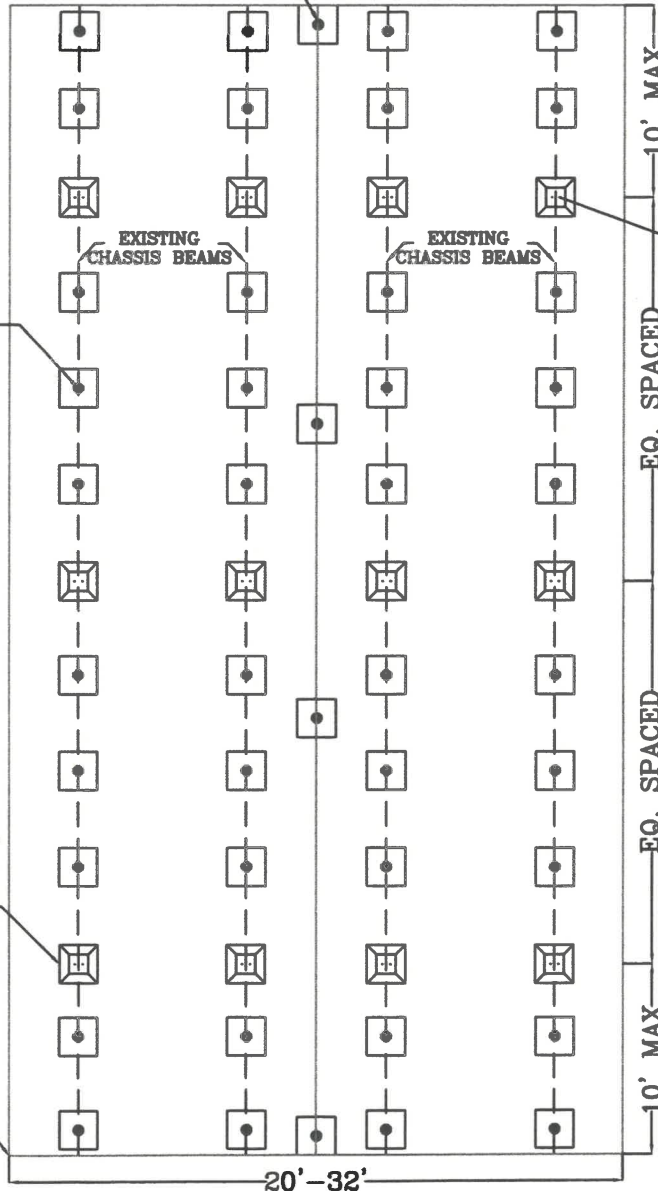
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PLAN Scale: 1" = 10'
TRIPLE WIDE HOME

SIZE, TYPE AND LOCATION OF MARRIAGE LINE SUPPORT PIERS MUST BE INSTALLED AS SPECIFIED IN THE HOME INSTALLATION MANUAL.

LOCATION MUST BE INSTALLED AS SPECIFIED IN HOME INSTALLATION MANUAL.

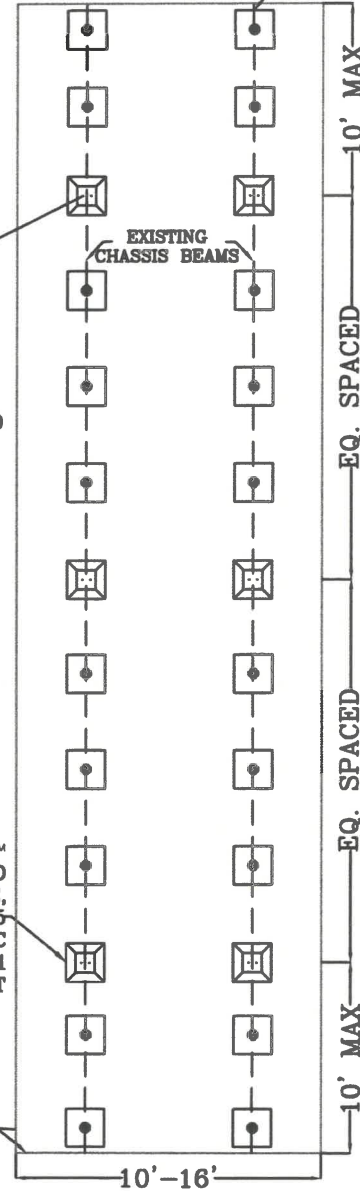
STANDARD PIERS SIZE, TYPE AND LOCATION MUST BE INSTALLED AS SPECIFIED IN HOME INSTALLATION MANUAL.



PLAN Scale: 1" = 10'
DOUBLE WIDE HOME

PAD ORIENTATION PAD MUST BE PLACED AS SHOWN WITH BOLT HOLES PERPENDICULAR TO CHASSIS BEAM

C.P. SEISMIC PIER™ & FOUNDATION PAD TOTAL # PER TABLE, SHEET F5
NOTE: ONE SEISMIC PIER MAY REPLACE 1 STANDARD SUPPORT



PLAN Scale: 1" = 10'
SINGLE WIDE HOME

FOR DOUBLE WIDE PLACE C.P. SEISMIC PIERS™ IN ROWS OF 4 TOTAL NUMBER REQUIRED PER TABLE, SHEET F5
NOTE: ONE SEISMIC PIER MAY REPLACE ONE STANDARD SUPPORT

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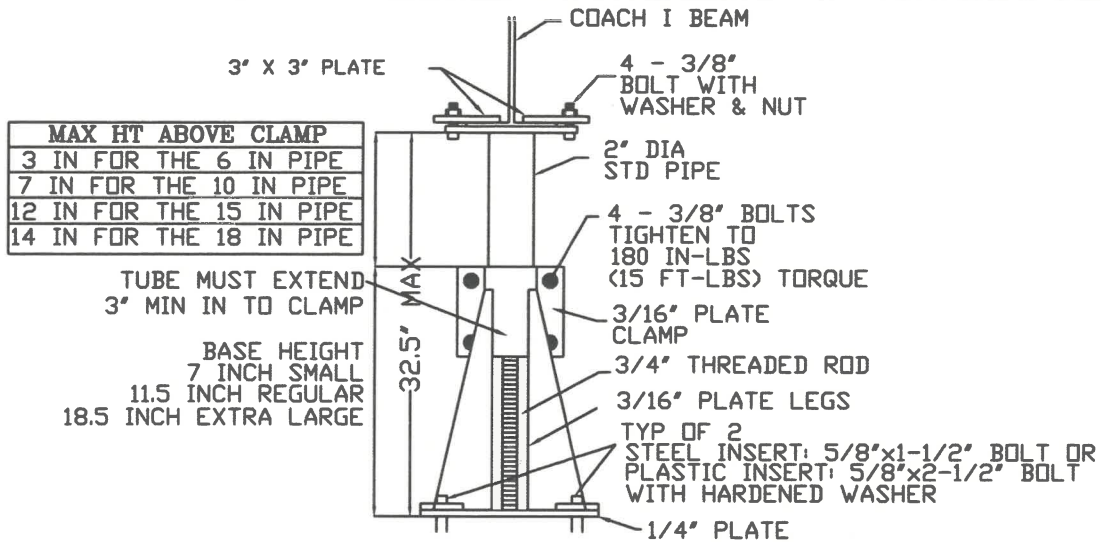
		SEISMIC ZONE	3 & 4	3	3 & 4
		MAX. SNOW LOAD	30 psf	60 psf	80 psf
	WIDTH	LENGTH	# OF SEISMIC PIERS	# OF SEISMIC PIERS	# OF SEISMIC PIERS
SINGLE WIDES	10'-14'	UP TO 44 FT	4	4	6
		44.5 to 60 FT	6	6	8
		60.5 TO 78 FT	8	8	10
	14.5'-16'	UP TO 44 FT	4	6	6
		44.5 to 60 FT	6	6	8
		60.5 TO 78 FT	8	8	10

		SEISMIC ZONE	3 & 4	3	3 & 4
		MAX. SNOW LOAD	30 psf	60 psf	80 psf
		LENGTH	# OF SEISMIC PIERS	# OF SEISMIC PIERS	# OF SEISMIC PIERS
DOUBLE WIDES		UP TO 44 FT	8	8	12
		44.5 to 60 FT	12	12	16
		60.5 TO 78 FT	16	16	20
TRIPLE WIDES		UP TO 44 FT	12	12	18
		44.5 to 60 FT	12	16	18
		60.5 TO 78 FT	12	18	24

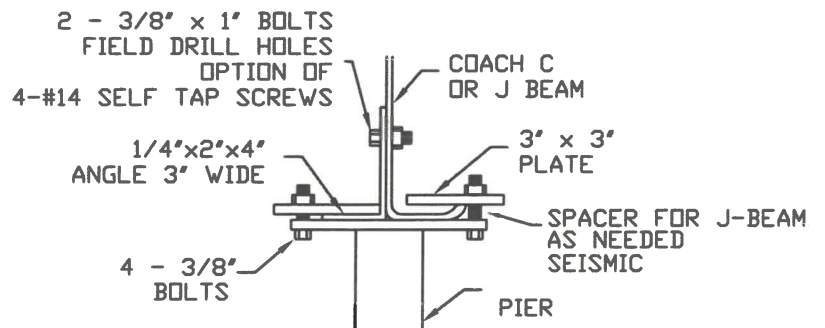
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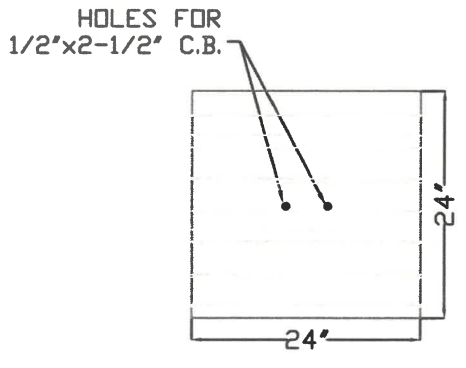


MAX HT ABOVE CLAMP
3 IN FOR THE 6 IN PIPE
7 IN FOR THE 10 IN PIPE
12 IN FOR THE 15 IN PIPE
14 IN FOR THE 18 IN PIPE

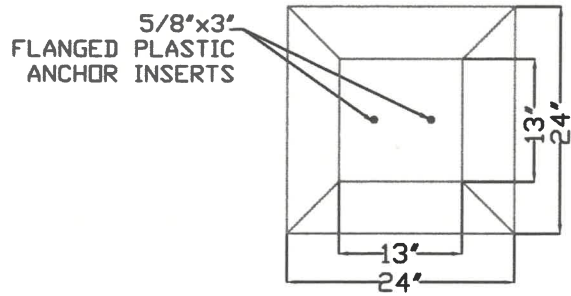


1 SEISMIC PIER™ Not to Scale
 C.P. SEISMIC PIER#1
 LISTING #C03-044-60F BY BSK

2 TYP BEAM CONNECTION
 Not to Scale



Q PAD SEE
 BP# 35-01
 PLYWOOD PAD



5/8"x3"
 FLANGED PLASTIC
 ANCHOR INSERTS
 4x4-4x4 WWF
 C.P. PRO PAD

3 FOUNDATION PADS
 Not to scale

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