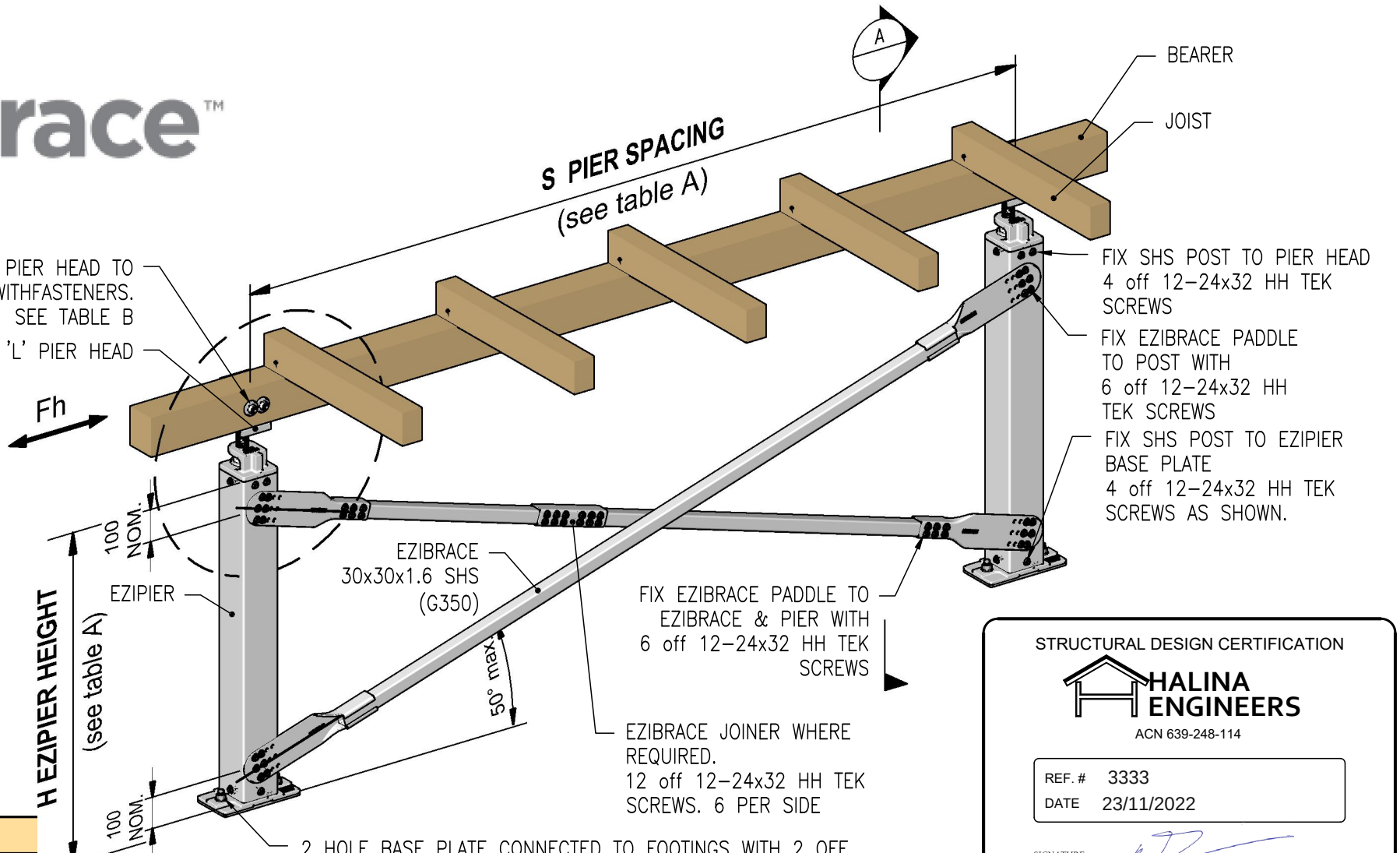
ezibrace™



SECTION A
NTS

STRUCTURAL DESIGN CERTIFICATION

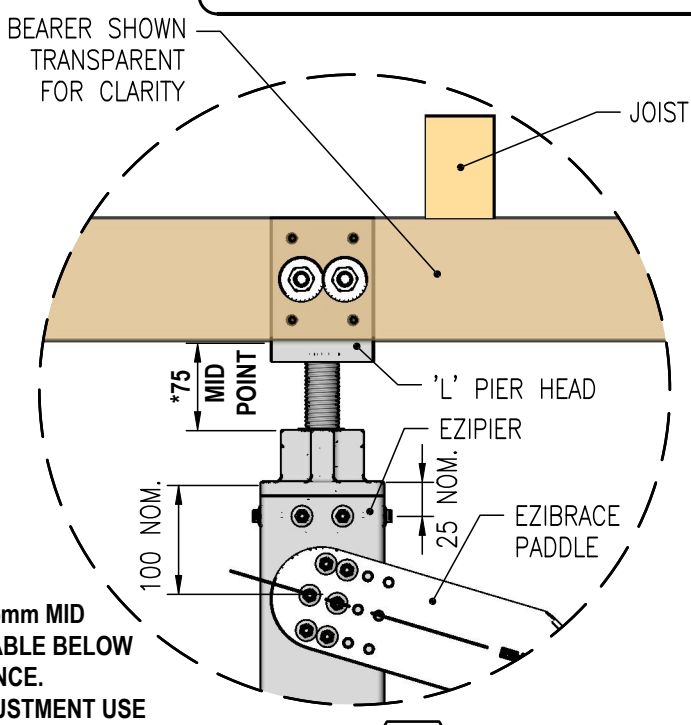
HALINA ENGINEERS
ACN 639-248-114

REF. # 3333
DATE 23/11/2022

SIGNATURE
HA NGUYEN
BE(Hons) PhD MIEAust CPEng NER 4188792
PE0001349 (VIC), RPEQ24385 (QLD), TAS 727649808

Table B	BEARER to 'L' PIER HEAD - FASTENERS			
Bearer Type	Min. Beam Size	Bolts M12	Timber tek 14g -10x45	Metal tek 14g -14x22
LVL - JD4	90 x 45	2	6	0
Hardwood - JD3	90 x 70	2	4	0
RHS	150 x 50 x 2.0 RHS	1 2	0 0	2 0
Cee section	C15019	1 2	0 0	2 0

NOTE: All fasteners in a row for each bearer type should be used



DETAIL 01

*** FOR UP TO / INCLUDING 75mm MID POINT ADJUSTMENT SEE TABLE BELOW FOR HORIZONTAL RESISTANCE.**
NOTE: AT 102mm MAX. ADJUSTMENT USE 12kN HORIZONTAL RESISTANCE FOR BRACE ANGLES 1-50°.

EZIBRACE ULTIMATE HORIZONTAL RESISTANCE
TABLE A
2 HOLE BASE PLATE
Fh - Horizontal Force (Wind Shear) - kN

Ezipier Height	S Ezipier Spacing - m									
H - m	1.5	1.8	2.1	2.4	2.7	3.0	3.3	3.6	3.9	4.2
0.6	15.6	15.9	16.1	16.3	16.4	16.4	16.5	16.5	16.6	16.6
0.9	14.4	15.0	15.4	15.7	15.9	16.1	16.2	16.3	16.3	16.4
1.2	13.1	14.0	14.6	15.0	15.3	15.6	15.8	15.9	16.0	16.1
1.5	11.9	12.9	13.6	14.2	14.7	15.0	15.3	15.5	15.7	15.8
1.8	10.7	11.9	12.7	13.4	14.0	14.4	14.7	15.0	15.2	15.4
2.1		10.9	11.9	12.6	13.2	13.7	14.2	14.5	14.8	15.0
2.4			11.0	11.9	12.5	13.1	13.6	14.0	14.3	14.6
2.7				11.1	11.9	12.5	13.0	13.4	13.8	14.1
3.0					11.2	11.9	12.4	12.9	13.3	13.6
3.3						11.3	11.9	12.4	12.8	13.2
3.6						10.7	11.3	11.9	12.3	12.7
3.9							10.8	11.4	11.9	12.3
4.2								10.9	11.4	11.9

NOTES:
1. THE LOADS ARE THE ULTIMATE LIMIT CAPACITIES BASED ON THESE STANDARDS: AS1170.1, AS4055, AS4100, AS4600, AS5216. AS1720.1 ALL LOADS ARE IN kN AND DIMENSIONS ARE mm.
2. TABLE 'A' GIVES THE MAXIMUM HORIZONTAL WIND FORCE THAT EZIBRACE CAN RESIST TOGETHER WITH THE ACCOMPANYING UPLIFT FOR THE EZIBRACE, THE 'L' SHAPE PIER HEAD AND EZIPIER WITH A 2 HOLE BASE PLATE. THE SYSTEM IS SUITABLE FOR ANY NORMAL WIND. THE EZIPIER SOLUTION SHOULD BE CHECKED FOR ANY ADDITIONAL LOADS, ESPECIALLY UPLIFT BY A COMPETENT PERSON. CYCLONIC AND EARTHQUAKE LOADS REQUIRE SPECIFIC DESIGNS.
3. TABLE 'B' GIVES THE FASTENERS TO FIX THE VARIOUS BEARER TO THE PIER HEAD. WHERE THE BEARER IS AN LVL TIMBER BEAM THE 2 EXTRA TEKS CAN BE DRILLED INTO THE MIDDLE OR THE UNDERSIDE OF THE 'L'.
4. THE EZIBRACE IS SELECTED BASED ON THE ULTIMATE DESIGN LOADS CARRIED TO THE FOOTINGS. THE LOADS IN THE TABLE ARE BASED ON THE STRENGTH OF THE EZIBRACE AND THE BEARER. THE ULTIMATE TENSION FORCE FOR EZIBRACE IS 18.5kN. THE EZIBRACE IS A SQ STEEL TUBE 30x1.6 SHS TO AS1163 – C350LO.
5. BASE PLATES ARE CONNECTED TO THE FOOTING BY 4/M12x100 GALV. WEDGE ANCHORS INTO N25 CONCRETE.
6. ULTIMATE MOMENT FOR BASE PLATES:
   THE BASE PLATE IS SUFFICIENTLY STRONG SO IT IS NOT THE GOVERNING LIMIT. THE BASE PLATE CONNECTION CAN CARRY THE MOMENTS TRANSFERRED BY THE BRACING INTO THE CONCRETE FOOTING. THE SUPPORTING FOOTING SHOULD BE DESIGNED BY A ENGINEER BASED ON THE LOADS AND SOIL TYPE.
7. THE EZIPIER CAN BE 90x2 SHS OR 89x3.5 SHS TO AS1163 – C350LO. THE PIER SHOULD BE CHECKED FOR STRENGTH BY AN ENGINEER.
8. FOR PROTECTIVE COATING SYSTEMS REFER TO: NCC VOLUME 2, NASH STANDARD RESIDENTIAL AND LOW–RISE STEEL FRAMING PART 2: DESIGN SOLUTIONS, AS/NZS 4680 HOT–DIP ZINC COATINGS ON FABRICATED FERROUS ARTICLES, AS/NZS 4792 HOLLOW SECTIONS PRODUCED BY WELDING PRE–GALVANIZED STEEL STRIP.
9. THE PIER HEAD SHALL BE 90 WIDE FOR ANY BEARER CARRYING THE HORIZONTAL WIND SHEAR.
10. THE BASE PLATES CAN BE UPGRADED TO 4 HOLE BASE PLATES.
11. SEE DRAWING P04–03 FOR THE EZIPIER WITH 'L' SHAPE PIER HEAD.
    SEE DRAWING P14 FOR THE 2 AND 4 HOLE BASE PLATES.

REV.	DESCRIPTION	DRN.	DATE
B	CERTIFICATION STAMP CHANGED	MR	18/11/22
A	PROTECTIVE COATING NOTE ADDED	MR	11/05/22

SPANTEC™
17 Drapers Road, Braemar, NSW, 2575
PO Box 81, Mittagong, NSW, 2575, Australia
Phone: 02 4860 1000 Fax: 02 4872 1616
SPANTEC SYSTEMS Pty Ltd ABN 56 053 584 384
www.spantec.com.au

DESCRIPTION
EZIBRACE SUBFLOOR BRACING SYSTEM
CONNECTION TO EZIPIER WITH TIMBER BEARER
'L' PIER HEAD & 2 HOLE BASE PLATE
(1XL–2–T)

DRAWING NO. BR09–06
REVISION B
SCALE @ A3 NTS
DRAWN MR
DATE DRAWN 27/10/21