

SHEET

A3

SUB-FLOOR BRACING													
190 SQUARE	PIERS	390 SQUARE PIERS											
PIER HEIGHT	CROSSED BRACING REQUIRED (32x0.8 H.I. STRAP)	PIER HEIGHT	CROSSED BRACING REQUIRED (32x0.8 H.I. STRAP)										
500 max	N/A	700 max	N/A										
700 max	'a' AS SH0WN	900 max	′α′ AS SH0WN										
900 max	'a' & 'b' AS SHOWN	1100 max	'α' & 'b' AS SHOWN										

DRAWING STATUS UNLESS THERE IS AN AUTHORISED SKCE SIGNATURE BELOW, THIS DRAWING IS NOT VERIFIED AND IS NOT P. Kennard B.E.(Hons), Grad Dip.Struct.Eng. MIEAust., NER

DENOTES HOLD DOWN LOCATION
32x0.8 GALV HOOD 1001 32x0.8 GALV. HOOP IRON STRAP - REFER DETAILS

NOTE:

- 1. APPROVAL TO INTERPOLATE BRACING REQUIREMENTS & HEIGHTS FOR SAME PIER SIZES.
- 2. APPROVAL TO USE 390 SQ. PIERS TO MAXIMUM HEIGHT, WHERE MAXIMUM PIER HEIGHT FOR 190 SQ. PIERS IS EXCEEDED.

VERANDAH NOTE:

VERANDAH IMPROVES RESISTANCE TO OVERTURNING DUE TO ADDITIONAL PIERS. UPLIFT TO BE RESISTED BY HOLDING DOWN STRAPS AS NOTED - REFER DETAILS. VERANDAH FLOOR & ROOF FRAMING TO BE FIXED TO HOUSE FRAMING.

PRECAST SOLE PLATES:

PRECAST SOLE PLATES ARE SUITABLE FOR APPROVED, NATURAL SITES ONLY, DEVOID OF FILL (OTHER THAN TESTED & CERTIFIED STRUCTURAL FILL). SOLE PLATES MUST BEAR BELOW TOPSOIL, ONTO FIRM, CONSISTENT NATURAL MATERIAL WITH SBV 100kPa.

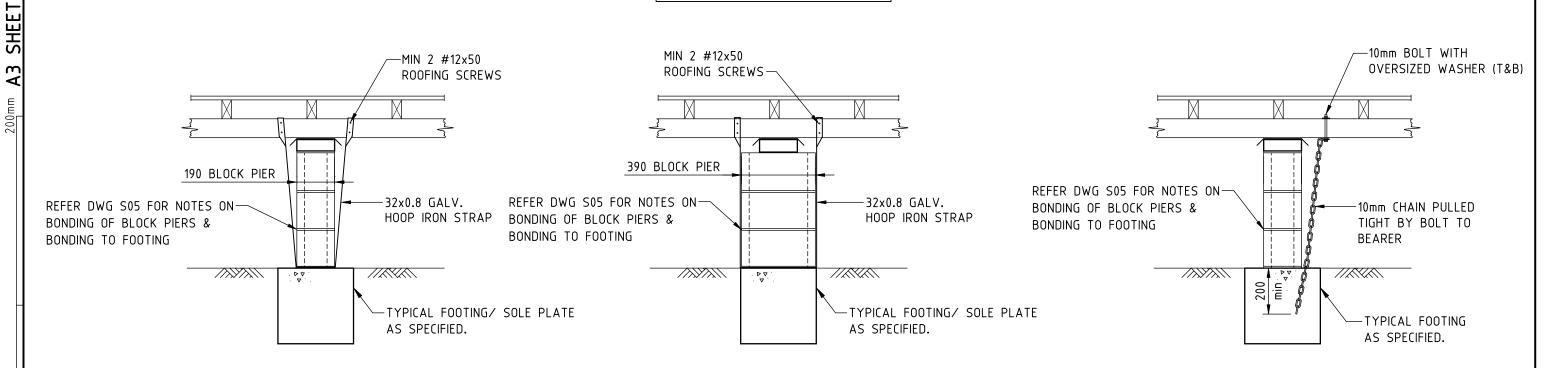
PIER FOOTINGS:

REFER TABLES ON SHEETS S04 & S05 FOR FOOTING DEPTHS TO SUIT SITE CONDITIONS IN ACCORDANCE WITH AS2870.

NOTE - APPLICABLE FOR CONCRETE PIER FOOTINGS, AND PRECAST CONCRETE SOLE PLATES - REFER SHEETS SO4 & S05.

B A	BEARER SPACING ENTENDED TO 2100 MAX ISSUED FOR CONSTRUCTION ISSUED FOR APPROVAL	13.9.23	C.A.	P.J.K.	X	4	ABN 28 648 242 988	Client BETTERLOOK/LLOYDS HOMES	FOR N3 WIND CLASSIFICATION Scales 1:100	Client Project No.	
- Rev.	ISSUED FOR APPROVAL Amendment or reason for issue	11.8.22 Date	C.A. Drawn	P.J.K. Designed	X Verified	Authorised (*)	ABN 28 648 242 988 52 Johnston Street, WAGGA WAGGA NSW 2650 T 02 6921 1877 E admin@skce.com.au	Architect / Project Manager BETTERLOOK/LLOYDS HOMES	Drawing No. 22S005-ST-S01 (N3)		evision B

HOLD DOWN HOOP IRON STRAPS, AS SPECIFIRED, TO BE INSTALLED UNDER BLOCK PIERS & FIXED TO BEARER



TYPICAL HOLDING DOWN DETAIL

190×190 BLOCK PIER

TYPICAL HOLDING DOWN DETAIL
390x390 BLOCK PIER

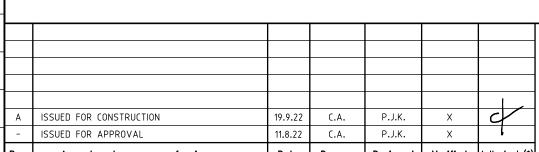
HOLDING DOWN CHAIN DETAIL

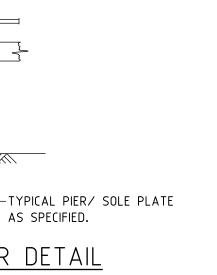
N4 WIND CLASSIFICATION

DESIGN CRITERIA

REFER TO STANDARD BUILDING REQUIREMENTS & AS4055. WIND CLASSIFICATION TO BE PROVIDED BY APPROVED AUTHORITY.

							SHUTTE & KENNARD CONSULTING ENGINEERS	Project TYPICAL FOOTING & PIER DETAILS FOR TRANSPORTABLE HOMES	Drawing Title HOLDING DOWN DETAILS		
	ISSUED FOR CONSTRUCTION	19.9.22	C.A.	P.J.K.	X		ABN 28 648 242 988	BETTERLOOK/LLOYDS HOMES	Scales 1:20	Client Project No.	
Re	ISSUED FOR APPROVAL Amendment or reason	or issue Date	C.A. Drawn	P.J.K. Designed	X Verified	Authorised (*)	52 Johnston Street, WAGGA WAGGA NSW 2650	Architect / Project Manager BETTERLOOK/LLOYDS HOMES	Drawing No. 22S005-ST-S02	Sheet 2 Of 6	Revision A





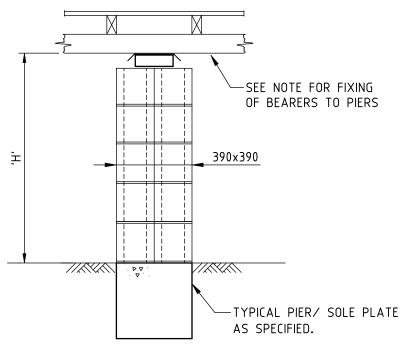
TYPICAL BLOCK PIER DETAIL 190x190 BLOCK PIER

190x190

ALLOWABLE HEIGHT TABLE 1 - 190x190 BLOCK PIERS

AS SPECIFIED.

WIND CLASSIFICATION & CROSSED BRACING	ALLOWABLE HEIGHT 'H'(mm)
N2 - NO BRACING	900
N2 - BRACED	1100
N3 - NO BRACING	500
N3 - BRACED	900
N4 - BRACED	900



TYPICAL BLOCK PIER DETAIL 390x390 BLOCK PIER

ALLOWABLE HEIGHT TABLE 2 - 390x390 PIERS

WIND CLASSIFICATION & CROSSED BRACING	ALLOWABLE HEIGHT 'H'(mm)
N2 - NO BRACING	1100
N2 - BRACED	1500
N3 - NO BRACING	700
N3 - BRACED	1100
N4 - BRACED	1100

SLOPING SITE NOTES:

ALLOWABLE HEIGHTS REFER TO MAXIMUM AVERAGE HEIGHT OF PIERS ON SLOPING SITES WITH VARIATIONS FROM AVERAGE NOT EXCEEDING

DRAWING STATUS

P. Kennard

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PROVIDE SUB-FLOOR CROSS BRACING AS REQUIRED TO SUIT WIND CLASSIFICATION & MAXIMUM ALLOWABLE HEIGHTS.

BLOCK PIER NOTES:

- PROVIDE PIERS AT 1800 CTS MAX.
- DESIGNED FOR HOLLOW CONCRETE BLOCKS.
- ALL BLOCK TO BLOCK JOINTS & BLOCK PIER TO FOOTING JOINT TO BE BONDED WITH FULLER MAX BOND OR APPROVED EQUIVALENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. BONDING AGENT TO HAVE MINIMUM TENSILE/ SHEAR STRESS OF 2.2MPa ULTIMATE & 1.1MPa WORKING.

FIXING OF BEARERS TO PIERS:

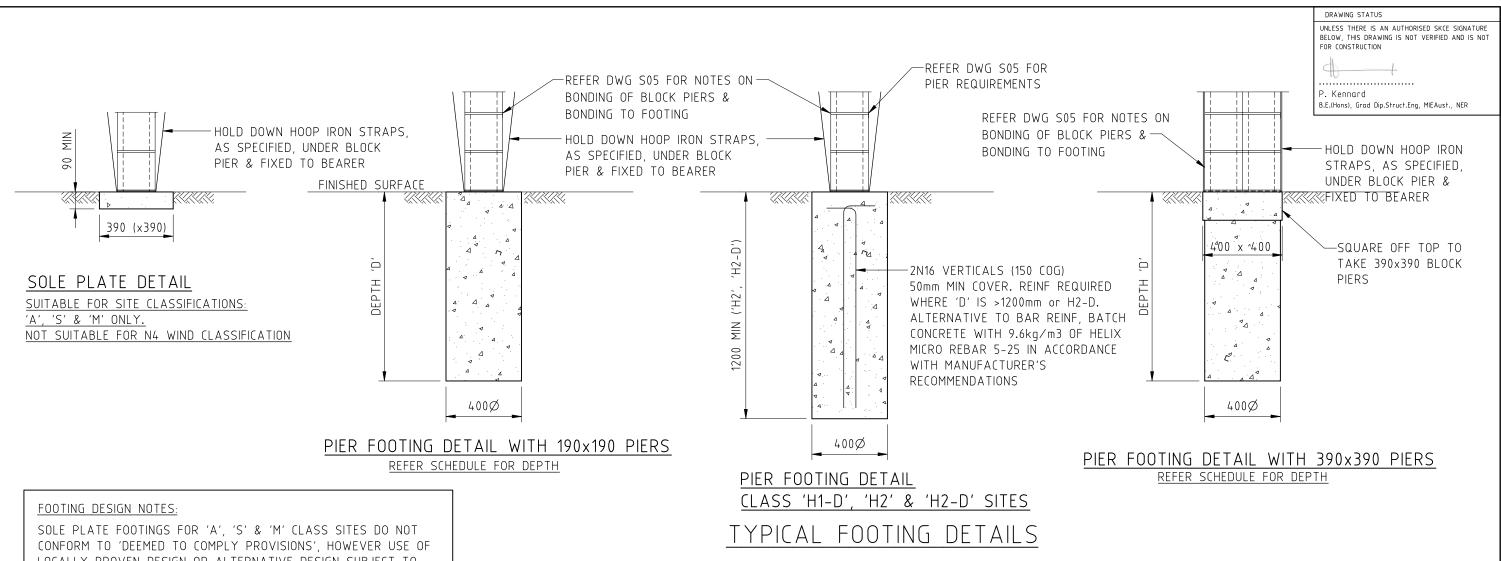
FIXING OF BEARERS TO PIERS IN ACCORDANCE WITH AS1684-2010, PART 2, IS NOT REQUIRED FOR THESE WIND CONDITIONS ON THE BASIS THAT:

- 1. COMPUTATIONS BY SKCE INDICATE THAT LATERAL MOVEMENT OF A COMPLETED TRANSPORTABLE HOME BY BETTERLOOK/LLOYDS PLACED ON PIERS IS UNLIKELY.
- 2. THERE IS NO LOCAL EVIDENCE TO SUGGEST THAT A COMPLETED TRANSPORTABLE HOME BY BETTERLOOK/LLOYDS HAS SLIPPED ON ITS PIER SUPPORTS DUE TO ANY WIND LOAD EVENT.
- 3. TRANSPORTABLE HOMES BY BETTERLOOK/LLOYDS ARRIVE ON SITE COMPLETE AND THERE IS NO NECESSITY FOR FIXING TO ENSURE STABILITY DURING CONSTRUCTION.

DESIGN CRITERIA

REFER TO STANDARD BUILDING REQUIREMENTS & AS4055. WIND CLASSIFICATION TO BE PROVIDED BY APPROVED AUTHORITY.

							SHUTTE & KENNARD CONSULTING ENGINEERS	TYPICAL FOOTING & PIER DETAILS FOR TRANSPORTABLE HOMES	BLOCK PIER DETAILS	
Α	ISSUED FOR CONSTRUCTION	19.9.22	C.A.	P.J.K.	X		ABN 28 648 242 988	BETTERLOOK/LLOYDS HOMES	Scales 1:20	Client Project No.
- Rev.	ISSUED FOR APPROVAL Amendment or reason for issue	11.8.22 Date	Drawn	P.J.K. Designed	X Verified	Authorised (*)	52 Johnston Street, WAGGA WAGGA NSW 2650 T 02 6921 1877 E admin@skce.com.au	Architect / Project Manager BETTERLOOK/LLOYDS HOMES	Drawing No. 22S005-ST-S03	Sheet Revisi



SOLE PLATE FOOTINGS FOR 'A', 'S' & 'M' CLASS SITES DO NOT CONFORM TO 'DEEMED TO COMPLY PROVISIONS', HOWEVER USE OF LOCALLY PROVEN DESIGN OR ALTERNATIVE DESIGN SUBJECT TO SATISFYING PERFORMANCE REQUIREMENTS IS ALLOWABLE BY:

1. BUILDING CODE OF AUSTRALIA VOLUME 2 -2019, NCC PROVISIONS A1 & A2

CLAUSES - APPLICATION A2.2

PERFORMANCE REQUIREMENTS P2.1

ACCEPTABLE CONSTRUCTION P3.0 & 3.2

2. AS2870-2011 CLAUSES 1.1 & 1.2. WE THEREFORE CERTIFY THAT THE SOLE PLATE FOOTING DESIGN COMPLIES WITH THE PERFORMANCE REQUIREMENTS FOR SITES CLASSIFIED UP TO 'M' MODERATELY REACTIVE WHERE THE SITE CLASSIFICATION & AVAILABILTY OF NATURAL FOUNDATION MATERIAL WITH ADEQUATE BEARING CAPACITY HAS BEEN CONFIRMED BY SEPERATE GEOTECHNICAL INVESTIGATION. FOR SITES CLASSIFIED AS 'M-D' TO 'H2-D', REFER SEPARATE FOOTING DETAILS THIS SHEET.

DESIGN CRITERIA

SHEE.

A3

REFER TO STANDARD BUILDING REQUIREMENTS & AS4055.
WIND CLASSIFICATION TO BE PROVIDED BY APPROVED AUTHORITY.

FOOTING SCHEDULE	PIER OPTION	SOLE PLATE OPTION
SITE CLASSIFICATION	PIER DEPTH 'D'	ALLOWABLE
A & S	400 MIN	YES (N1, N2, N3 ONLY)
М	500 MIN	YES (N1, N2, N3 ONLY)
M-D	800 MIN	NO NO
H1	1000 MIN	NO
H1-D	1200 MIN	NO
H2	1200 MIN	NO
H2-D	1200 MIN	NO

CONCRETE STRENGTH TO BE 25MPa AT 28 DAYS.

NOTE: FOR SITE CLASSIFICATION 'P' REFER TO ENGINEER.

IF 'P' REFERS TO SITE FILL OVER NATURAL SOILS,

REFER TO DRAWING S05 FOR DETAILS.

PIER FOOTING NOTES:

- PROVIDE PIERS AT 1800 CTS MAX. AS DETAILED
- PIERS & PADS TO BEAR ON UNIFORM NATURAL SOUND SOILS WITHOUT VEGETATION OR ORGANIC MATTER HAVING A S.B.V. OF 100kPa.
- DESIGN IS IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTINGS.

-ALLOWANCE SHOULD BE MADE TO ADJUST/ PACK BEARERS DURING EXTREME SEASONAL CONDITIONS

								SHUTTE & KENNARD	Project TYPICAL FOOTING & PIER DETAILS FOR TRANSPORTABLE HOMES	TYPICAL FOOTING DETAILS	
E		MICRO REBAR ALTERNATIVE ADDED	13.9.23	C.A.	P.J.K.	X		CONSULTING ENGINEERS	Client	Scales	Client Project No.
	-+	ISSUED FOR CONSTRUCTION	19.9.22	C.A.	P.J.K.	X	•	ABN 28 648 242 988	BETTERLOOK/LLOYDS HOMES	1:20	,
Re	ev.	Amendment or reason for issue	11.8.22 Date	Drawn	Designed	Verified	Authorised (*)	52 Johnston Street, WAGGA WAGGA NSW 2650 T 02 6921 1877 E admin@skce.com.au	Architect / Project Manager BETTERLOOK/LLOYDS HOMES	Drawing No. 22S005-ST-S04	Sheet Revision 4 of 6 B

TYPICAL PIER FOOTING DETAIL

REINFORCEMENT NOT REQUIRED FOR PIERS < 1200mm DEEP

PIER FOOTING NOTES:

SHEE.

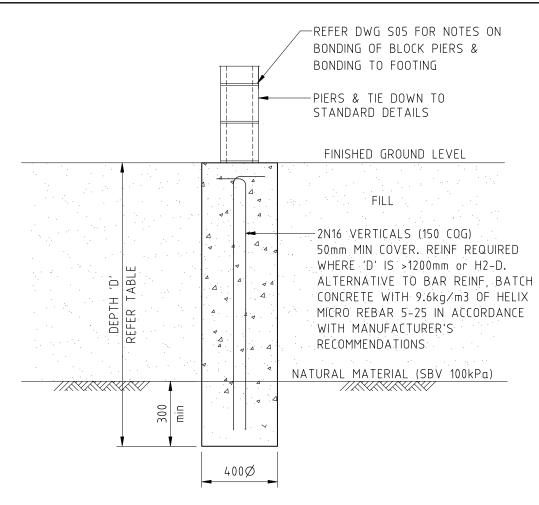
A3

200mm

- PROVIDE FOOTINGS AT 2100 CTS MAX (1800 CTS MAX FOR N4) WHEREVER FILL IS PRESENT.
- ALL PIERS TO BE 400Ø UNLESS NOTED OTHERWISE.
- FOOTINGS TO BEAR BELOW ANY FILL MATERIAL & 300 MIN INTO UNIFORM NATURAL SOUND SOILS (WITHOUT VEGETATION OR ORGANIC MATTER) HAVING A S.B.V. OF 100KPa.
- MINIMUM BEARING DEPTH FOR FOOTINGS TO BE IN ACCORDANCE WITH FOOTING DEPTH SCHEDULE & DETAILS.
- CONCRETE STRENGTH TO BE 25MPa AT 28 DAYS.

DESIGN CRITERIA

REFER TO STANDARD BUILDING REQUIREMENTS & AS4055.
WIND CLASSIFICATION TO BE PROVIDED BY APPROVED AUTHORITY.



REINFORCED PIER FOOTING DETAIL

REQUIRED FOR ALL SITE CLASSIFICATIONS FOR FOOTING DEPTH OF 1200mm OR GREATER

TYPICAL PIER FOOTING DETAILS FOR FILLED SITES

(ALL FILL, OTHER THAN TESTED & CERTIFIED STRUCTURAL FILL)

FOOTING DEPTH SCHEDUL	E
SITE CLASSIFICATION	FOOTING FOUNDING DEPTH 'D'* (MIN DEPTH BELOW FGL)
A & S	400 MIN
М	500 MIN
M-D	800 MIN
H1	1000 MIN
H1-D	1200 MIN
H2	1200 MIN
H2-D	1200 MIN

* FOOTING DEPTH MUST EQUAL OR EXCEED DEPTH GIVEN IN TABLE FOR RELEVANT SITE CLASSIFICATION & BEAR 300mm MIN INTO NATURAL MATERIAL WITH SBV 100 kPa.

-ALLOWANCE SHOULD BE MADE TO ADJUST/ PACK BEARERS DURING EXTREME SEASONAL CONDITIONS

CONCRETE STRENGTH TO BE 25MPa AT 28 DAYS.

FOR CONSTRUCTION

DRAWING STATUS

FOR CONSTRUCTION

P. Kennard

400 x 400

FOOTING TOP FOR 390 SQ. PIER

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-SQUARE OFF TOP TO TAKE 390x390 BLOCK PIERS

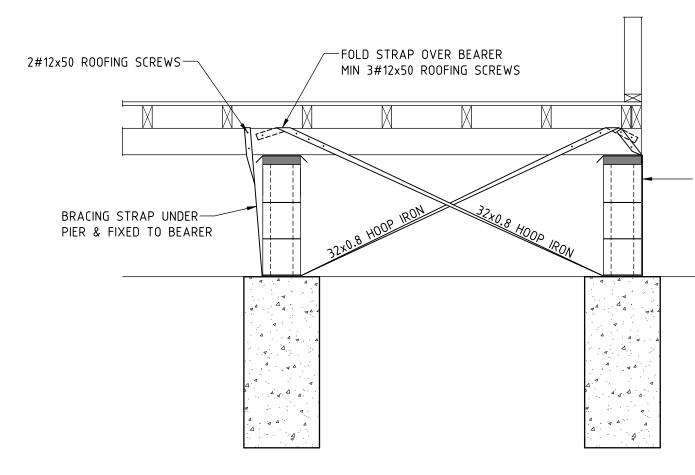
	Rev.	Amendment or reason for issue	Date	Drawn	Designed	Verified	Authorised (*)	
		ISSUED FOR APPROVAL	11.8.22	C.A.	P.J.K.	X		
	А	ISSUED FOR CONSTRUCTION	19.9.22	C.A.	P.J.K.	X		
	В	MICRO REBAR ALTERNATIVE ADDED	13.9.23	C.A.	P.J.K.	X		ĺ
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L								

SHUTTE & KENNARD
CONSULTING ENGINEERS

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Project	Drawing Title	
TYPICAL FOOTING & PIER DETAILS	TYPICAL FOOTING DETAILS FO	R FILLED SITES
FOR TRANSPORTABLE HOMES		
Client BETTERLOOK/LLOYDS HOMES	Scales 1:20	Client Project No.
Architect / Project Manager BETTERLOOK/LLOYDS HOMES	Drawing No. 22S005-ST-S05	Sheet Revision 5 Of 6 B

(*) Unless there is an authorised signature at *, this drawing is not authorised for issue. / Copyright: This drawing is not authorised use of this drawing is prohibited.



A3 SHEET

200mm

-BRACING STRAP UNDER PIER & FIXED TO BEARER. NO ADDITIONAL HOLD DOWN STRAPS REQUIRED AT THESE LOCATIONS (FOR N2 & N3) IF BRACING IS INSTALLED AS SHOWN. FOR N4 HOLD DOWN CHAINS STILL REQUIRED.

SUBFLOOR CROSS BRACING DETAIL NOTE - HD STRAPS/ CHAINS NOT SHOWN FOR CLARITY.

REFER PLAN FOR HD LOCATIONS.

							SHUTTE & KENNARD CONSULTING ENGINEERS	Project TYPICAL FOOTING & PIER DETAILS FOR TRANSPORTABLE HOMES	TYPICAL SUBFLOOR BRACING [DETAIL	
A -	ISSUED FOR CONSTRUCTION ISSUED FOR APPROVAL	19.9.22	C.A. C.A.	P.J.K.	X		7-2-7-2-7-1-2-7-1-2-7-1-2-7-1-2-7-1-2-7-1-2-7-1-2-7-1-2-7-1-2-7-1-2-7-1-2-7-1-2-7-1-2-7-1-2-7-1-2-7-1-2-7-1-2-7	BETTERLOOK/LLOYDS HOMES	Scales 1:20	Client Project No.	
Rev	Amendment or reason for issue	Date	Drawn	Designed	Verified	Authorised (*)	52 Johnston Street, WAGGA WAGGA NSW 2650 T 02 6921 1877 E admin@skce.com.au	Architect / Project Manager BETTERLOOK/LLOYDS HOMES	22S005-ST-S06	Sheet R	Revision A