A successful project requires every trade in the design and construction journey to deliver with the highest standards and precision. As part of our drive to deliver sustainable light gauge steel materials and energy efficient buildings, we have endeavoured to share best practice and provide a complete set of Load bearing structures standard details for use primarily by installers.

Good projects start with good designs, and a good design is one that is matched to the client’s expectations, both in terms of cost and performance. This Guide presents best practice site checks to deliver optimum build quality for LBS [load bearing structure] schemes. The Guide is aimed to assist:

• Project Managers
• LBS Erectors
• Site Managers
• Site Inspectors
• Trade Trainers
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**FIX**  
Standard Fixings Table
SYSTEM OVERVIEW

EOS load bearing structures (LBS), are a total building frame supplied in pre-assembled ‘offsite’ panelised cassettes for erection on-site.

Loading factors including: overall stability; imposed, dead & wind loads; and disproportionate collapse are all taken into consideration during the design & engineering phase, as well as co-ordination with MEP services, fenestration and access requirements.

The system is commonly used for side and roof-top extensions of existing buildings, but equally suited to full multi-storey new build. This system offers a truly robust and lightweight alternative to traditional build methods.

All load bearing external / internal walls can be supplied as lightweight panels.

All floors / roofs are either supplied in C-Section or lattice beam cassette form, or as individual lattice beams for site installation.

All ancillary components, such as bracing, packing and fixings are included within the scope of supply.
DELIVERY

All EOS wall panels and floor elements are sent to site after pre-assembly in the EOS factory to highly accurate tolerances of +0mm / -2mm.

Delivered frames include:

- Individual labels with section size and part marking
- Inkjet marked with panel number and phase
- Colour-coded by floor or to suit agreed phasing
- Safely laid flat and strapped securely
- Options for safety handrails, blue ropes to aid slinging, and Moffett / Hi-Ab off-loading.

Frames should be off-loaded via crane, or suitable powered lifting machine with 2m extended forks.

DOCUMENTATION

With every delivery, the frames will include stillage sheets and delivery notes as a record copy for site and also to assist with logistics and frame allocation.

With the first delivery, site will be issued with a full set of project drawings, including:

- Plan drawings for each floor in order to set out walls
- Plan drawings of all floor frames and roof frames
- Elevations showing wall orientation and framing requirements.
- Marking plans showing frame numbers / positions.

TECHNICAL EXPERTISE

With every project, EOS operatives are available to attend site to offer technical advice, design assistance and installation training.

Installer teams can benefit from day one ‘Tool box talks’, as well as phased site visits to offer independent quality checks on the installation. Our team of dedicated technical managers are available as direct points of contact for site installation teams, with project designers also on hand to discuss any aspect without hesitation.

EOS prides itself in having a fully inclusive service from conception to completion, ensuring simple and rapid construction of our load bearing structures.
PRE-START REQUIREMENTS
The following information may be taken as useful guidance on pre-start requirements for installers and main contractors. [Source: SCI technical Information Sheet ED028]

- The main contractor must be aware that the surface of the foundation slab, or support grid, must be constructed to accurate levels for the EOS load bearing structure (LBS).

- The foundation slab must be provided with gridlines to correct datum, as agreed between the site manager and the installer of the LBS.

- There should be no high-spots in the level of the slab/transfer structure and should be checked by an engineer. Minimal low-spots are overcome by the use of EOS supplied packing and shimming systems.

- The foundation slab or transfer structure and perimeter must be provided clear of materials, standing water and debris.

- Arrangements for site access, unloading and site egress should be agreed in advance between the main contractor, LBS installer, and EOS. Any information regarding these elements must be provided to EOS prior to start on site. Typical information requirements consist of but not restricted to:
  - Are there any delivery systems to book on to?
  - Are there any delivery time restrictions?
  - Can the site handle articulated wagons?
  - What lifting facilities are on site?
  - Precise address for wagon ingress.

- The delivery schedule and sequence of works should be agreed in advance by all parties.

- The contractor should ensure that there is a hardstanding area available for storage of EOS materials during erection.

- Typically two lifts of scaffolding should be installed around the perimeter of the foundation slab or transfer structure, to enable safe installation / levelling of initial walls.

- Scaffolding should be set back the correct distance from the edge of the slab, completed to the agreed level and signed-off as ready for use.
**LIFTING**

Installation of EOS load bearing frames may require use of a crane. Responsibility for provision of craneage should be agreed in advance and form part of the contract.

Taller multi-storey structures will require more extensive use of a crane. Best practice is to utilise the crane to lift, position, and hold the wall or floor element whilst it is propped or fixed into position.

The lifting plan, including crane set area, should be agreed in advance. The main contractor should ensure the crane set area is free from materials and debris.

EOS will work with the installers and main contractor to accommodate lifting provision where possible.

**SAFETY & RISK**

The Safety Plan should be prepared by the main contractor with input from the frame installer.

A risk assessment and method statement should be produced that satisfies the requirements of the Construction Health & Safety Plan, as well as the Construction (Design & Management) Regulations [CDM2015]. These should be site and design specific and therefore should be developed for each individual project.

EOS endeavour to eliminate hazards throughout the design process, and will highlight risks where appropriate.

**EDGE PROTECTION**

In most cases, [external] edge protection should be provided by scaffolding around the perimeter of the building.

If scaffolding is not present, or part of the installation scope, then an alternative form of edge protection or installation methodology should be used.

**IMPORTANT:** No edge protection should be fixed off the EOS wall or floor frames.
WALL INSTALLATION

1) Ensure that the substrate is positioned correctly and provides full bearing support to all wall panels.
   **IMPORTANT**: EOS wall panels must have 100% bearing, with no overhang.

2) Make an assessment of slab tolerance and identify areas where packing may be required.

3) Offer up the first corner wall panel and fix to the substrate in accordance with the standard details and project specific drawings.

4) Align the panel and temporarily prop. Spare EOS sections or timber may be used. Temporary props should be installed at max. 3m centres along the walls.

5) Keep any factory installed door / window temporary braces in place until structure is fully erected as this aids with panel alignment at key areas, i.e. openings.

6) The next panel to be erected must be perpendicular in order to assist with initial stability and alignment. Proceed at either a corner or to an internal junction.

7) Offer up the next panel and fix to the substrate in accordance with the standard details and project specific drawings.

8) Fix the two panels at the intersecting ladder frame using the horizontal noggins built into the panel.

9) Keep temporary props in place until at least 3 sides of the local room and the floor have been erected.

10) Continue to erect the wall frames ensuring that adequate props are used as progression is made.

11) Floors may be begin to be installed once a room has had a minimum of 2 end walls and 1 side wall installed, giving flexibility to sequencing of works, i.e. multiple storeys may be erected before an entire floor is completed.
DESIGN TOLERANCES

• A +2mm tolerance gap between all EOS wall panels is included in the design.

• A +10mm tolerance gap (both ends) between EOS floors and walls is included in the design to allow for zed plate thickness, fixing heads and general alignment.

• Refer to the standard details for guidance.

INSTALLATION TOLERANCES

• Straightness of walls +/- 5mm (over any given 3m length)

• Verticality (plumbness) of wall +/- 5mm up to 3m height. H/600 for walls >3m.

SAFETY

• 5 Point PPE is recommend (Hi-Vis, Safety Boots, Hard Hat, Gloves and Glasses).

• As panels are pre-assembled, cutting will be restricted to an absolute minimum (cross bracing, temporary props), however cutting should be conducted in a cordoned off area with appropriate cutting station.
FLOOR INSTALLATION

1) Ensure that at least 3 sides of local walls have been installed before lifting and offering up any floor elements.

2) Ensure that walls are aligned within tolerance and that sufficient propping is in place. Offer up the first floor element according to the agreed lifting procedure.

3) Ensure that the floor is fixed to a minimum of three 3 sides (at both ends and along the side wall, in order to ensure local stability).

4) Propping may be removed locally, although it is recommended to keep in place until a few cassettes are in place.

5) Continue to erect walls and install floor elements according to the sequence of works.

6) IMPORTANT: Safe working-at-height practices should be employed such as: fall arrest man-safe systems; crash decking / air bags; working from below; working off scaffold / podiums.

7) Optional pre-boarded EOS Floor cassettes offer a safe working platform (in conjunction with suitable edge protection) eliminating need to install flooring after the frame is erected.

8) Once a suitable amount of ground floor progress has been made, the first floor walls may begin to be erected.

RECOMMENDED SITE PRACTICE

- Erect scaffold around perimeter of building to act as edge protection.

- Use crane to lift EOS wall panels and floor cassettes - working from below in all conditions.

- Use pre-boarded floors and fall arrest systems to avoid unsafe operations whilst floors are installed.
ANCILLARY INSTALLATION

1) BRACING: Prior to boarding ensure that all cross bracing elements are installed as indicated on the design specific drawings. Bracing may be formed by integral ‘K’ bracing panels, therefore will be installed during wall frame construction.

2) HEAVY DUTY ANCHORS: Along with the concrete base fixings at stud positions, areas of cross or ‘K’ bracing should be fixed down to the substrate using EOS supplied heavy duty anchor brackets. These must be placed at the studs which intersect with the ends of the bracing. Refer to standard details for more information.

NOTE: IN ALL CONDITIONS REFER TO THE PROJECT SPECIFIC DRAWINGS AND STANDARD DETAILS FOR DETAILS ON FULL FRAMING REQUIREMENTS.

FOLLOW ON TRADES

When the EOS frame has been sufficiently erected and the required bracing, anchors and any additional requirements have been installed, then the external sheathing board, insulation and cladding systems can be installed.

EOS are part of ETEX Building Performance, a division of the ETEX Group. We combine the solutions of three prominent manufacturers and are uniquely placed to develop opportunities for innovative specifications to meet today’s challenging projects.

- Siniat: Drywall products to create systems for partitions, ceilings, wall linings and external sheathing purposes. Including the award-winning ‘Weather Defence’ board.

- Promat: Passive fire protection specialists with a complete portfolio of boards, sprays, sealants and adhesives to protect structural steel, concrete structures, partitions, wall linings, floors, ceilings and roofs.

- EOS: Leading innovators in light gauge steel construction, EOS specialise in the design, manufacture and supply of a wide range of bespoke steel solutions for the SFS, Load-bearing, modular and offsite industry.
Packers to be located beneath studs. Packing height not to exceed 10mm without the introduction of a mortar bed. If packing exceeds 20mm, please consult EOS.

Depending on packing requirements, longer fixings may need to be specified to ensure sufficient embedment.

EOS frame securely fixed to concrete floor using 1 No. EOS-1021 or similar approved @ centres to suit vertical studs.

For 100mm frames use the TFLS bracket in the orientation as shown above with the TFLSPK99 packer (89x40mm).

For 150mm frames use the TFLS bracket in the other orientation with the TFLSPK140 packer (140x40mm)

For other wall depths, please consult EOS.

TYPICAL SECTION

NOTES

1. Fixing provided at every vertical stud location.

2. Base track to be laid on a mortar bed if the gap between the top of concrete and the base track exceeds 10mm. Maximum allowed packing is 20mm, consult EOS if the mortar bed packing exceeds 20mm.

3. Each frame to have pack 100mm from end of frame, except at corners

4. See fixing literature for tools required & installation method.
EOS wall frames securely fixed to concrete floor using 1 No. EOS-T021 or similar approved @ centres to suit vertical studs.

See below for corner packing arrangement.

Depending on packing requirements, longer fixings may need to be specified to ensure sufficient embedment.

---

**TOLERANCES**

**CONSTRUCTION TOLERANCES BETWEEN FRAMES**

8. 3.5mm / -2mm. FRAMES ARE MANUFACTURED AND ASSEMBLED TO ±0.5mm / ±2.5mm.

**GENERAL NOTES**

THIS DRAWING IS COPYRIGHT. DO NOT SCALE THIS DRAWING. CONTRACTORS MUST CHECK ALL DIMENSIONS ON SITE. ONLY FIGURED DIMENSIONS TO BE WORKED FROM. ALL ERRORS AND DISCREPANCES MUST BE IMMEDIATELY REPORTED TO THE DESIGN OFFICE OF EOS FACADES LTD.

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**PLAN**

**NOTES**

1. Refer to typical base fixing details - see detail LBS-A001

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**TYPICAL BASE CORNER FIXING FOR WALL FRAMES**

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**LOAD BEARING STRUCTURES: WALL FRAMES**

Drawn By: EOS  
Series: NTS  
Detail No: LBS-A002  
Revisions: -  
Approved By: AH  
Date: FEB 2018  

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TYPICAL HEAD FIXING

Head rail fixed to vertical stud both sides using 5.5 x 19mm Tek screws (EOS-1001 or similar approved)

TYPICAL NOGGIN FIXING

Horizontal members fixed to vertical stud both sides using 5.5 x 19mm Tek screws (EOS-1001 or similar approved)

TYPICAL BASE FIXING

Base rail fixed to vertical stud both sides using 5.5 x 19mm Tek screws (EOS-1001 or similar approved)
TYPICAL WALL FRAME TO WALL FRAME CONNECTION DETAIL

LOAD BEARING STRUCTURES: WALL FRAMES

- 2 No. 5.5 x 25mm Tek screws (EOS 1002 or similar approved) fixed @ 600c/c (vertical)
- 600mm vertical centres (max.)
- Pocking installed at frame join

3D VIEW

PLAN
Ladder noggings required on corners to allow ease of double fixing. Extra stud also provides vertical fixing point for internal wall finishes.

2 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) fixed into corner stud and to each ladder noggins @ 600 vertical c/c’s.

Min. 300mm to allow install access (*or stud punched with access holes)

2 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) fixed into corner stud and each noggins @ 600 c/c’s

TYPICAL WALL FRAME CORNER FIXING DETAIL

LOAD BEARING STRUCTURES: WALL FRAMES

Drawn By: EOS
Scale: NTS
Detail No: LBS-A005
Revision: -
Approved By: AH
Date: FEB 2018
TOLERANCES
CONSTRUCTION TOLERANCES BETWEEN FRAMES
8.0mm / 7.7mm. FRAMES ARE MANUFACTURED
AND ASSEMBLED TO +/-6mm / +/-3mm.

GENERAL NOTES
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DIMENSIONS TO BE WORKED FROM. ALL ERRORS
AND DISCREPANCIES MUST BE IMMEDIATELY
REPORTED TO THE DESIGN OFFICE OF EOS
PACKAGES LTD.

STANDARD DETAILS

Ladder noggins required on internal load
bearing wall junctions to allow ease of
double fixing. Studs provide vertical fixing
points for internal wall finishes

LADDER FRAME
WITH HORIZONTAL
NOGGINS

EOS WALL FRAME A

2mm Tol.

2 No. 5.5 x 25mm Tek screws
(EOs-1002 or similar approved)
fixed into corner stud and to
each ladder noggins @ 600
vertical c/c's.

EOS WALL FRAME B

Min. 300mm to allow install access
(*) or stud punched with access holes

PLAN

2 No. 5.5 x 25mm Tek screws
(EOs-1002 or similar approved)
fixed into corner stud and each
noggins @ 600 c/c's

ELEVATION 1-1

EXTERNAL ISOMETRIC

TYPICAL WALL FRAME INTERSECTION FIXING DETAIL (AT PERPENDICULAR JUNCTION)

LOAD BEARING STRUCTURES: WALL FRAMES

Drawn By: EOS
Series: NTS
Detail No.: LBS-A006
Revisions: -
Approved By: AH
Date: FEB 2018

EOS FACADES LTD, part of ETEK BUILDING PERFORMANCE | HEIGHINGTON LANE, AYCLIFFE INDUSTRIAL PARK, NEWTON AYCLIFFE, CO. DURHAM, DL5 6QS | TEL: 01325 303030 | www.eos-facades.co.uk
### TOLERANCES

CONSTRUCTION TOLERANCES BETWEEN FRAMES 6.0mm / -3.0mm. FRAMES ARE MANUFACTURED AND ASSEMBLED TO 4.0mm / -2.0mm.

### GENERAL NOTES

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### TYPICAL LOAD BEARING WALL TO NON-LOAD BEARING PARTITION DETAIL

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**EXTERNAL ISOMETRIC**

- **NON-LOAD BEARING GTEC PARTITION** (or similar approved)
- GTEC Partition System (or similar approved) faced to EOS Wall Frame according to manufacturer’s requirements.
- Additional EOS Wall Frame Stud provided at internal partition positions.
EXTERNAL ISOMETRIC
(One leaf only shown for clarity)

Additional EOS Wall Frame Stud provided at internal partition positions.

NON-LOAD BEARING GTEC PARTITION
(or similar approved)

GTEC Partition System (or similar approved) fixed to EOS Wall Frame according to manufacturer's requirements.

Frames fixed at the head with a Simpson PWT200 party wall tie @ 1200mm max horz. c/c's. Fixed with 2 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) into each stud. If studs do not line up then fix into mid noggin restraint.
**STANDARD DETAILS**

**TOLERANCES**

CONSTRUCTION TOLERANCES BETWEEN FRAMES 8.0mm / -3.0mm. FRAMES ARE MANUFACTURED AND ASSEMBLED TO ±6mm / ±3mm.

**GENERAL NOTES**

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---

**Ladder noggin required on corners to allow ease of double fixing. Extra stud also provides vertical fixing point for internal wall finishes.**

**CORNER LADDER FRAME WITH HORIZONTAL NOGGINS**

**EOS WALL FRAME A**

2 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) fixed into corner stud and to each ladder noggin @ 600 vertical c/c's.

**EOS WALL FRAME B**

**EOS WALL FRAME C**

**EOS WALL FRAME D**

Min. 300mm to allow install access (* or stud punched with access holes)

Frames fixed at the head with a Simpson PW7220 party wall tie @ 1200mm max horiz. c/c's. Fixed with 2 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) into each stud. If studs do not line up then fix into mid noggin restraint.

---

**ELEVATION 1-1**

**PLAN**

2 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) fixed into corner stud and each noggin @ 600c/c's.

---

**TYPICAL SEPARATING WALL FRAME INTERSECTION FIXING DETAIL (AT PERPENDICULAR JUNCTION)**

**LOAD BEARING STRUCTURES: WALL FRAMES**

Drawn By: EOS  
Scale: NTS  
Detail No: LBS-A009  
Revision: -  
Approved By: AH  
Date: FEB 2018
PRE-FIXED ZED PLATES

2 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) fixed through Z plate into floor cassette at 600mm c/c's. NOTE: Z Plate pre-fixed to cassette prior to installation.

Z plate support to engineer specification. Depths to suit joist cassettes. Bearing width to suit wall frame thickness.

Frames fixed at the head with a Simpson PW T200 party wall tie at 1200mm max. horiz. c/c's. Fixed with 2 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) into each stud. If studs do not line up then fix into mid noggin restraint.

Plasterboard finishes & insulation omitted for clarity.

NOTES

1. All EOS floor cassettes are manufactured with 10mm tolerance each end between the floor / wall frames.

2. Z Plate pre-fixed to floor cassettes prior to lifting / installation.

3. If difficulties are experienced drilling fixings through multiple layers of material, use Hitti S-MD05GZ 5.5x40mm hex head (EOS-1020) in lieu of EOS-1002/1004; and Hitti S-MD05WZ 5.5x40mm washer head in lieu of EOS-1005.

TYPICAL PARTY WALL TO FLOOR CONNECTION (PRE-FIXED ZED PLATE)
ZED PLATES SUPPLIED LOOSE

NOTE: Appropriate boarding and rubber membranes (or similar) may be required for sufficient fire/acoustic rating at interface. Please check with the architectural specification regarding specifics.

2 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) @ 600mm c/c’s to be securely fixed through Zed into the head of the frame below.

2 No. 5.5 x 25mm Low Profile Tek screws (EOS-1005 or similar approved) fixed through underside of Z plate into bottom rail of each lattice.

Plasterboard finishes & insulation omitted for clarity.

NOTES

1. All EOS floor cassettes are manufactured with 10mm tolerance each end between the floor / wall frames to allow for zed plate thickness, fixing heads and general alignment tolerances.

2. Z Plate site fixed to wall before cassette offered up.

3. If difficulties are experienced drilling fixings through multiple layers of material, use Hilti S-MD05GZ 5.5x40mm hex head (EOS-1020) in lieu of EOS 1002/1004; and Hilti S-MD35WZ 5.5x40mm washer head in lieu of EOS 1005.

SECTION

TYPICAL PARTY WALL TO FLOOR CONNECTION (Z PLATE SUPPLIED LOOSE)
ALL LOAD BEARING EOS WALL FRAMES REQUIRE STRUCTURAL SUPPORT BELOW.

2 No. 5.5 x 40mm Tek screws (EOS.1010 or similar approved) @ 600mm c/c's to be securely fixed into the Hot Rolled Support grid.

EOS wall may sit on suitable decking. Pilot Hole required through decking.

Max HR Flange Thickness = 15mm using EOS-1020.

Hot Rolled support grid to be designed and supplied by others.

NOTE: ZED BAR DETAIL MAY BE EMPLOYED IF HOT ROLLED BEAMS ARE TREATED WITH INTUMESCENT PAINT. SPECIFIC DETAIL TO BE REVIEWED DUE TO LOADING REQUIREMENTS.
STANDARD DETAILS

CONSTRUCTION TOLERANCES BETWEEN FRAMES
8.2mm / 7.2mm. FRAMES ARE MANUFACTURED AND ASSEMBLED TO 8.2mm / 7.2mm.

TOOLRAILS

GENERAL NOTES

THE DRAWING IS COPYRIGHT. DO NOT SCALE THE DRAWING. CONTRACTORS MUST CHECK ALL DIMENSIONS ON SITE. CRUZY RIGOURS DIMENSIONS TO BE WORKED FROM ALL ERRORS AND DEVIATIONS MUST BE IMMEDIATELY REPORTED TO THE DESIGN OFFICE OF EOS FACADES LTD.

ISOMETRIC

16mm HILTI ANCHORS U.N.O.

FIX BRACED FRAME TO BASE USING SIMPSON STRONG TIE HTTS, FIXED TO SUBSTRATE USING 16mm HILTI ANCHORS U.N.O. AND FIXED TO STUD USING MIN. 6 NO 5.5 x 25mm TEK SCREWS (EOS-1002 OR SIMILAR APPROVED) INTO VERTICAL STUD. AN ALTERNATIVE BRACKET WILL BE SPECIFIED FOR 65mm DEEP WALL FRAMES.

ELEVATION

NOTES

1. See Hilti (or similar approved fixing) literature for installation method of anchor fixings.

TYPICAL INTEGRAL 'K' BRACING BASE FIXING DETAILS

LOAD BEARING STRUCTURES: WALL FRAMES

Drawn By: EOS

Scale: NTS

Detail No: LBS-A013

Revision: -

Approved By: AH

Date: FEB 2018

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TOLERANCES

CONSTRUCTION TOLERANCES BETWEEN FRAMES
+/- 5mm / -2mm. FRAMES ARE MANUFACTURED
AND ASSEMBLED TO +/- 1mm / 1.5mm.

GENERAL NOTES

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DIMENSIONS TO BE WORKED FROM. ALL ERRORS
AND DISCREPANCIES MUST BE IMMEDIATELY
REPORTED TO THE DESIGN OFFICE OF EOS
FACADES LTD.

16mm HILTI
ANCHORS U.N.O.

16mm HILTI
ANCHORS U.N.O.

ISOMETRIC

'K' BRACING

MIN. 300mm TO
ALLOW INSTALL ACCESS
(*) OR STAIR PUNCHED
WITH ACCESS HOLES

ECW WALL FRAME A

ADDITIONAL 6 NO 5.5 x
25mm TEK SCREWS
(EOS-1002 OR SIMILAR
APPROVED) TO CONNECT
BRACING TO LADDER
NOGGIN

ECW WALL FRAME B

FIX BRACED FRAME TO BASE USING SIMPSON STRONG TIE HTTS, FIXED TO SUBSTRATE
USING 16mm HILTI ANCHORS U.N.O. AND FIXED TO STUD USING MIN. 6 NO 3.5 x 25mm TEK
SCREWS (EOS-1002 OR SIMILAR APPROVED) INTO VERTICAL STUD. AN ALTERNATIVE
BRACKET WILL BE SPECIFIED FOR 60mm DEEP WALL FRAMES.

ADDITIONAL 6 NO 5.5 x 25mm TEK
SCREWS (EOS-1002 OR SIMILAR
APPROVED) TO CONNECT
BRACING TO LADDER NOGGIN

LADDER
FRAME

ELEVATION

PLAN

TYPICAL INTEGRAL 'K' BRACING CORNER BASE FIXING DETAIL

LOAD BEARING STRUCTURES: WALL FRAMES

Drawn By: EOS
Series: NTS
Detail No: LBS-A014
Revisions: -
Approved By: AH
Date: FEB 2018
TOLERANCES
CONSTRUCTION TOLERANCES BETWEEN FRAMES
6.0mm / -3mm. FRAMES ARE MANUFACTURED
AND ASSEMBLED TO ±0.5mm / ±2mm.

5.5 x 25mm Tek Screws (EOS-1005 or similar
approved) to fix ends of bracing to walls at
stud position.

NOTE: Quantity to be determined by EOS
Engineer.

NOTE: Use Wafer Head Fixings

EXTERNAL ISOMETRIC

2 No. 5.5 x 25mm Tek Screws
(EOS-1005 or similar approved)
at each intermediate contact
between stud and brace.

NOTE: Use wafer head fixings.

Flat strap bracing,
supplied by EOS

5.5 x 25mm Tek Screws (EOS-1005 or similar
approved) to fix ends of bracing to walls at
stud position.

NOTE: Quantity to be determined by EOS
Engineer.

NOTE: Use Wafer Head Fixings

SEE DETAILS LBS-A013 & A014 FOR
PRE-ASSEMBLED ‘K’ BRACING ALTERNATIVE
TO SITE FIXED CROSS BRACING

NOTES
1. Bracing fixed to external side

TYPICAL FLAT STRAP BRACING TO LOAD BEARING WALLS DETAIL

LOAD BEARING STRUCTURES: WALL FRAMES

Drawn By: EOS
Scale: NTS
Detail No: LBS-A015
Revisions: -
Approved By: AH
Date: FEB 2018

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FOR LATTICE LINTELS ≥400mm
Lattice lintel fixed to bearing plinth using 2 No. 5.5 x 25mm Tek Screws (EOS-1002 or similar approved).

Lattice lintel fixed to double stud jamb using angle (sizing and fixings to be determined by EOS). NOTE: Use water head fixings.

ISOMETRIC

Lattice lintel height ≥400mm

LOAD BEARING STRUCTURES: WALL FRAMES

TYPICAL LATTICE LINTEL
PRE-FIXED ZED PLATES

2 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) @ 600mm c/c’s to be securely fixed through the zed plate into the head of the frame below.

2 No. 5.5 x 50mm Tek screws (EOS-1004 or similar approved) fixed through Z plate into studs in each of the 4 corners of the lattice floor cassette.

NOTE: Fixed once cassette + Z plate are in position and aligned.

NOTE: Appropriate boarding and rubber membranes (or similar) may be required for sufficient fire/ acoustic rating at interface.

Please check with the architectural specification regarding specifics.

2 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) fixed through Z plate into floor cassette at 600mm c/c’s.

NOTE: Z Plate Pre-fixed to cassette prior to installation.

Z plate support to engineer specification. Depth to C-Section cassette. Bearing width to suit wall frame thickness.

NOTES

1. All EOS floor cassettes are manufactured with +10mm tolerance each end between the floor / wall frames to allow for zed plate thickness, fixing heads and general alignment tolerances.

2. Z Plate pre-fixed to floor cassettes prior to lifting / installation.

3. If difficulties are experienced drilling fixings through multiple layers of material, use Hilti S-MD05GZ 5.5x40mm hex head (EOS-1020) in lieu of EOS-1002/1004; and Hilti S-MD05WZ 5.5x40mm wafer head in lieu of EOS-1005.

SECTION

Plasterboard finishes, insulation & external cladding omitted for clarity.

LOAD BEARING STRUCTURES: FLOOR / ROOF FRAMES

Drawn By: EOS
Scale: NTS
Detail No: LBS-B001
Revisions: -
Approved By: AH
Date: FEB 2018

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PRE-FIXED ZED PLATES

2 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) @ 600mm c/c’s to be securely fixed through the zed plate into the head of the frame below.

Third fixing only in end (last) lattices within a cassette.

2 No. 5.5 x 50mm Tek screws (EOS-1004 or similar approved) fixed through Z plate into studs in each of the 4 corners of the lattice floor cassette. NOTE: Fixed once cassette + Z plate are in position and aligned.

Z plate support to engineer specification. Depth to suit lattices. Bearing width to suit wall trume thickness.

Plasterboard finishes, insulation & external cladding omitted for clarity.

SECTION

NOTES

1. All EOS floor cassettes are manufactured with 10mm tolerance each end between the floor / wall frames to allow for zed plate thickness, fixing heads and general alignment tolerances.

2. Z Plate pre-fixed to floor cassettes prior to lifting / installation.

3. If difficulties are experienced drilling fixings through multiple layers of material, use Hilti S-MD05GZ 5.5x40mm hex head (EOS-1020) in lieu of EOS-1002/1004 and Hilti S-MD01WZ 5.5x40mm wafer head in lieu of EOS-1005.

EXTERNAL WALL TO PRE-ASSEMBLED LATTICE FLOOR CASSETTE (PRE-FIXED ZED PLATE)

LOAD BEARING STRUCTURES: FLOOR / ROOF FRAMES

<table>
<thead>
<tr>
<th>Drawn By</th>
<th>Scale</th>
<th>Detail No.</th>
<th>Revisions</th>
<th>Approved By</th>
<th>Date</th>
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<tbody>
<tr>
<td>EOS</td>
<td>NTS</td>
<td>LBS-B002</td>
<td>-</td>
<td>AH</td>
<td>FEB 2018</td>
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PRE-FIXED ZED PLATES

2 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) @ 600mm c/c's to be securely fixed through the zed plate into the head of the frame below.

2 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) fixed through Z plate into floor cassette at 600mm c/c's.

NOTE: Z Plate Pre-fixed to cassette prior to installation.

2 No. 5.5 x 50mm Tek screws (EOS-1004 or similar approved) fixed through Z plate into studs in each of the 4 corners of the lattice floor cassette.

NOTE: Fixed once cassette + Z plate are in position and aligned.

NOTE: Appropriate boarding and rubber membranes (or similar) may be required for sufficient fire/acoustic rating at interface. Please check with the architectural specification regarding specifics.

NOTE: Use 3 No. fixings in the end lattices of the cassette.

NOTE: Z Plate Pre-fixed to cassette prior to installation.

NOTES

1. All EOS floor cassettes are manufactured with 10mm tolerance each end between the floor / wall frames to allow for zed plate thickness, fixing heads and general alignment tolerances.

2. Z Plate pre-fixed to floor cassettes prior to lifting / installation.

3. Also applicable to either: a) C-Section cassettes both sides; or b) Lattice cassettes both sides.

4. If difficulties are experienced drilling fixings through multiple layers of material, use Hilti S-MD05GZ 5.5x40mm hex head (EOS-1020) in lieu of EOS-1002/1004; and Hilti S-M055WZ 5.5x40mm washer head in lieu of EOS-1005.

INTERNAL LOAD BEARING WALL TO PRE-ASSEMBLED FLOOR CASSETTES (PRE-FIXED ZED PLATE)

LOAD BEARING STRUCTURES: FLOOR / ROOF FRAMES

Drawn By: EOS  
Scale: NTS  
Detail No: LBS-B003  
Review: -  
Approved By: AH  
Date: FEB 2018

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PRE-FIXED ZED PLATES

2 No. 5.5 x 50mm Tek screws (EOS-1004 or similar approved) @ 600mm c/c to be securely fixed through the OSB into the head of the frame below. Note: pilot hole required to prevent burn out of tek screws.

NOTE: Appropriate boarding and rubber membranes (or similar) may be required for sufficient fire/acoustic rating at interface. Please check with the architectural specification regarding specifics.

NOTE: This detail may be used if the system is not supplied pre-boarded, but where a thermal break is required between floors.

FLOOR / ROOF ELEMENTS SHOWN INDICATIVELY. FOR FLOOR / ROOF INTERFACE ARRANGEMENTS, PLEASE REFER TO DETAILS LBS-B001 to LBS-B003

EOS FLOOR / ROOF ELEMENT (CASSETTE OR LOOSE LATTICES)

Z plate support to engineer specification. Depth to EOS floor/roof element. Bearing width to suit wall frame thickness.

SECTION

NOTES

1. All EOS floor elements are manufactured with 10mm tolerance each end between the floor/wall frames to allow for zed plate thickness, fixing heads and general alignment tolerances.

2. Z Place pre-fixed to floor cassettes prior to lifting/installation.

3. If difficulties are experienced drilling fixings through multiple layers of material, use Hilti S-MD05GZ 5.5x40mm hex head (EOS-1020) in lieu of EOS-1002/1004, and Hilti S-MD05WZ 5.5x40mm wafer head in lieu of EOS-1005.

TYPICAL BOARDING DETAIL (PRE-FIXED ZED PLATE)

LOAD BEARING STRUCTURES: FLOOR / ROOF FRAMES

Drilled By: EOS
Series: NTS
Detail No: LBS-B004
Revision: -
Approved By: AH
Date: FEB 2018
ZED PLATES SUPPLIED LOOSE

2 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) @ 400mm c/c's to be securely fixed through the zed plate into the head of the frame below.

2 No. 5.5 x 25mm Low profile Tek screws (EOS-1005 or similar approved) fixed through underside of Z plate into bottom rail of each lattice.

2 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) fixed through Z plate into studs in each of the 4 corners of the lattice floor cassette.

Note: Fixed once cassette + Z plate are in position and aligned.

Plasterboard finishes, insulation & external cladding omitted for clarity.

SECTION

NOTES

1. All EOS floor cassettes are manufactured with 10mm tolerance each end between the floor / wall frames to allow for zed plate thickness, fixing heads and general alignment tolerances.

2. If difficulties are experienced drilling fixings through multiple layers of material, use Hilti S-MD05GZ 5.5x40mm hex head (EOS-1010) in lieu of EOS-1002/1004; and Hilti S-MD05WZ 5.5x40mm washer head in lieu of EOS-1005.

EXTERNAL WALL TO PRE-ASSEMBLED C-SECTION FLOOR CASSETTE (ZED PLATE SUPPLIED LOOSE)

LOAD BEARING STRUCTURES: FLOOR / ROOF FRAMES

Drawn By: EOS  Scale: NTS  Detail No: LBS-B005  Revised: -  Approved By: AH  Date: FEB 2018

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ZED PLATES SUPPLIED LOOSE

2 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) @ 600mm c/c to be securely fixed through the zed plate into the head of the frame below.

NOTE: Appropriate boarding and rubber membranes (or similar) may be required for sufficient fire/acoustic rating at interface. Please check with the architectural specification regarding specifics.

4 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) fixed through Simpson ES10/40 bracket. Each lattice beam to have 2 brackets each end, 1 bracket fixed to each vertical face.

2 No. 5.5 x 25mm Low Profile Tek screws (EOS-1005 or similar approved) fixed through underside of Z plate into bottom rail of each lattice.

Z place fixed to each vertical stud using 1 No. 5.5 x 25mm Tek screw (EOS-1002 or similar approved) prior to installation of Lattice beams.

Z place support to engineer specification. Depth to suit lattices. Bearing width to suit wall frame thickness.

NOTES

1. All EOS floor lattices are manufactured with 10mm tolerance each end between the floor / wall frames to allow for zed plate thickness, fixing heads and general alignment tolerances.

2. Z Place site fixed to wall first, individual lattices then installed, not contained in a cassette.

3. If difficulties are experienced drilling fixings through multiple layers of material, use Hiti S-MD05GZ 5.5x40mm hex head (EOS-1020) in lieu of EOS-1002/1004; and Hiti S-MD05WZ 5.5x40mm wafer head in lieu of EOS-1005.

EXTERNAL WALL TO INDIVIDUAL LATTICE FLOOR (ZED PLATE SUPPLIED LOOSE)

LOAD BEARING STRUCTURES: FLOOR / ROOF FRAMES

Drawn By: EOS  Series: NTS  Detail No: LBS-B006  Revisions: -  Approved By: AH  Date: FEB 2018
**ZED PLATES SUPPLIED LOOSE**

2 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) @ 300mm c/c's to be securely fixed through the zed plate into the head of the frame below.

**IMPORTANT: USE FIXINGS AT 300mm c/c's, WHEN ZED PLATES SHARE WALL HEAD.**

2 No. 5.5 x 25mm Low Profile Tek screws (EOS-1065 or similar approved) fixed through underside of Z plate into bottom rail of each lattice.

**STANDARD DETAILS**

**TOLERANCES**
CONSTRUCTION TOLERANCES BETWEEN FRAMES
6.0mm / 3.5mm, FRAMES ARE MANUFACTURED AND ASSEMBLED TO ±0.5mm / ±2mm.

**GENERAL NOTES**

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**FOR FLOOR BOARDED OPTIONS SEE DETAILS LBS-8004 & 8008**

**NOTE:** Appropriate boarding and rubber membranes (or similar) may be required for sufficient fire acoustic rating at interface. Please check with the architectural specification regarding specifics.

4 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) fixed through Simpson E10/40 bracket. Each lattice beam to have 2 brackets each end & 1 bracket fixed to each vertical face.

Z plate fixed to each vertical stud using 1 No. 5.5 x 25mm Tek screw (EOS-1002 or similar approved) prior to installation of Lattice beams.

**INTERNAL LBS WALL TO C-SECTION CASSETTES / INDIVIDUAL LATTICES (ZED PLATE SUPPLIED LOOSE)**

**NOTES**

1. All EOS floor lattices are manufactured with 10mm tolerance each end between the floor / wall frames to allow for zed plate thickness, fixing heads and general alignment tolerances.

2. Z Plates site fixed to wall first, cassettes / lattices then installed.

3. Also applicable to either: a) C-Section cassettes both sides; or b) Lattice cassettes both sides.

4. If difficulties are experienced drilling fixings through multiple layers of material, use Hilti S-MD05GZ 5.5x40mm hex head (EOS-1020) in lieu of EOS-1062/1064; and Hilti S-MD05WZ 5.5x40mm washer head in lieu of EOS-1065.

**SECTION**

Z plate support to engineer specification. Depth to suit C-Section cassette. Bearing width to suit wall frame thickness.

Z plate fixed to each vertical stud using 1 No. 5.5 x 25mm Tek screw (EOS-1002 or similar approved) prior to installation of Lattice beams.

**LOAD BEARING STRUCTURES: FLOOR / ROOF FRAMES**

<table>
<thead>
<tr>
<th>Internal LBS Wall to C-Section Cassette</th>
<th>Individual Lattices (Zed Plate Supplied Loose)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3.5mm</strong></td>
<td><strong>5.0mm</strong></td>
</tr>
<tr>
<td><strong>5.5mm</strong></td>
<td><strong>7.0mm</strong></td>
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<tr>
<td><strong>8.0mm</strong></td>
<td><strong>10.0mm</strong></td>
</tr>
<tr>
<td><strong>12.0mm</strong></td>
<td><strong>15.0mm</strong></td>
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<tr>
<td><strong>17.0mm</strong></td>
<td><strong>20.0mm</strong></td>
</tr>
<tr>
<td><strong>22.0mm</strong></td>
<td><strong>25.0mm</strong></td>
</tr>
</tbody>
</table>

**Phaserboard finishes, insulation & external cladding omitted for clarity.**

---

**EOS STRUCTURAL**

**INTEGRAL LBS WALL TO C-SECTION CASSETTES / INDIVIDUAL LATTICES (ZED PLATE SUPPLIED LOOSE)**

**LOAD BEARING STRUCTURES: FLOOR / ROOF FRAMES**

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ZED PLATES SUPPLIED LOOSE

NOTE: Appropriate boarding and rubber membranes (or similar) may be required for sufficient fire/ acoustic rating at interface. Please check with the architectural specification regarding specifics.

NOTE: This detail shows general boarding interface applicable to the following:
- PRE-BOARDED C-SECTION CASSETTES (WHERE ZEDS SUPPLIED LOOSE, NO THERMAL BREAK)
- NO PRE-BOARDING TO C-SECTION CASSETTES (WHERE ZEDS SUPPLIED LOOSE, NO THERMAL BREAK)
- INDIVIDUAL LATTICES (NOTE: CANNOT BE PRE-BOARDED, & WHERE NO THERMAL BREAK IS REQUIRED)

1. All EOS floor elements are manufactured with 10mm tolerance each end between the floor / wall frames to allow for zed plate thickness, fixing heads and general alignment tolerances.
2. Z Places site fixed to wall first, cassettes / lattices then installed.
3. If difficulties are experienced drilling fixings through multiple layers of material, use Hitit S-MD05GZ 5.5x40mm hex head (EOS-1020) in lieu of EOS-1002/1004; and Hitit S-MD05WZ 5.5x40mm wafer head in lieu of EOS-1005.

TYPICAL BOARDING DETAIL (ZED PLATES SUPPLIED LOOSE)

LOAD BEARING STRUCTURES: FLOOR / ROOF FRAMES

Drawn By: EOS  Date: FEB 2018
Sheet: NTS  Detail No: LBS-B008
Revisions: -  Approved By: AH

Plasterboard finishes, insulation & external cladding omitted for clarity.
NOTES

1. All EOS floor cassettes are manufactured with 10mm tolerance each end between the floor / wall frames to allow for zed plate thickness, fixing heads and general alignment tolerances.

2. If difficulties are experienced drilling fixings through multiple layers of material, use Hitit S-MD45GZ 5.5x40mm hex head (EOS-1020) in lieu of EOS-1002/1004; and Hitit S-MD45VZ 5.5x40mm wafer head in lieu of EOS-1065.

SECTION

FOR PRE-BORDDED OPTIONS SEE DETAILS LBS-B004 & B008

Plasterboard finishes, insulation & external cladding omitted for clarity.

PERPENDICULAR WALL TO C-SECTION FLOOR CASSETTE RESTRAINT

Drawn By: EOS
Scale: NTS
Detail No: LBS-B009
Revisions: -
Approved By: AH
Date: FEB 2018
Simpson ES10/40 Brackets at maximum 1200mm c/c fixed into lattice with 2 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) and fixed into vertical stud with 4 No. 5.5 x 25mm Tek Screws (EOS-1002 or similar approved).

Plasterboard finishes, insulation & external cladding omitted for clarity.

PERPENDICULAR WALL TO LATTICE BEAM RESTRAINT

LOAD BEARING STRUCTURES: FLOOR / ROOF FRAMES
Box noggins fixed to lattices using 4 No. Simpson ES10/40 brackets per noggin (1 No. each end, both sides). Fixed with 2 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) in each leg of the bracket.

2 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) fixed through head of frame into bottom rail of each lattice.

Plasterboard finishes, insulation & external cladding omitted for clarity.

FOR FLOOR BOARDED OPTIONS SEE DETAILS LBS-8004 & 8008
For floor boarded options see details LBS-B014 & B008

Plate detail required to prevent differential movement between adjacent lattice floor cassettes over 3m.

LATTICE FLOOR CASSETTE PLATE CONNECTION

Simpson PWT200 tie fixed to underside of each lattice at max 1200mm c/c, using 4 No. 5.5 x 25mm Wafer head Tek screws (EOS-100S or similar approved). (2 No. fixings in each joint).

Plasterboard finishes, insulation & external cladding omitted for clarity.

EOS Structural

LATTICE FLOOR CASSETTE PLATE CONNECTION

LOAD BEARING STRUCTURES: FLOOR / ROOF FRAMES

Drawn By: EOS  Series: NTS  Detail No: LBS-B012  Revisions: -  Approved By: AH  Date: FEB 2018
NOTES

1. For alternative SVP arrangements, please consult EOS.

TYPICAL CORNER SERVICE RISER DETAIL THROUGH C-SECTION FLOOR CASSETTE (100mm dia. SVP)

LOAD BEARING STRUCTURES: FLOOR / ROOF FRAMES

Drawn By: EOS  Scale: NTS  Detail No: LBS-B013  Revision: -  Approved By: AH  Date: FEB 2018

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PRE-FIXED ZED PLATES

2 No. 5.5 x 25mm Low Profile Tek screws (EOS-1005 or similar approved) @ 600mm c/c's to be securely fixed through the Zed plate into the head of the frame below.

2 No. 5.5 x 50mm Tek screws (EOS-1004 or similar approved) fixed through Z plate into C-section floor cassette at 600mm c/c's. NOTE: Z Plate Pre-fixed to cassette prior to installation.

Z plate support to engineered specification. Depth to suit C-section roof cassette. Bearing width to suit wall frame thickness.

NOTES

1. All EOS floor cassettes are manufactured with 10mm tolerance each and between the floor / wall frames to allow for zed plate thickness, fixing heads and general alignment tolerances.

2. Z Plate pre-fixed to floor cassettes prior to lifting / installation.

3. If difficulties are experienced drilling fixings through multiple layers of material, use Hilti S-MD05GZ 5.5x40mm hex head (EOS-1020) in lieu of EOS-1002/1004 and Hilti S-MD05WZ 5.5x10mm wafer head in lieu of EOS-1005.

EXTERNAL WALL TO PRE-ASSEMBLED C-SECTION ROOF CASSETTE (PRE-FIXED ZED PLATE)

LOAD BEARING STRUCTURES: FLOOR / ROOF FRAMES

Drawn By: EOS  Scale: NTS  Detail No: LBS-B014  Revision: -  Approved By: AH  Date: FEB 2018

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PRE-FIXED ZED PLATES

2 No. 5.5 x 25mm Low profile Tek screws (EOS-1005 or similar approved) @ 600mm c/c’s to be securely fixed through the Zed plate into the head of the frame below.

2 No. 5.5 x 50mm Tek screws (EOS-1004 or similar approved) fixed through Z plate into floor at a distance of 600mm c/c’s.

NOTE: Appropriate boarding and rubber membranes (or similar) may be required for sufficient fire/acoustic rating at interface. Please check with the architectural specification regarding specifics.

NOTE: Use 3 No. fixings in the end lattices of the cassette.

NOTE: Z Plate Pre-fixed to cassette prior to installation.

Plasterboard finishes, insulation & external cladding omitted for clarity.

NOTES

1. All EOS floor cassettes are manufactured with 10mm tolerance each end between the floor / wall frames to allow for zed plate thickness, fixing heads and general alignment tolerances.

2. Z Plate pre-fixed to floor cassettes prior to lifting / installation.

3. If difficulties are experienced drilling fixings through multiple layers of material, use Hilti S-MD05GZ 5.5x40mm hex head (EOS-1020) in lieu of EOS-1002/1004; and Hilti S-MD05WZ 5.5x40mm wafer head in lieu of EOS-1005.

EXTERNAL WALL TO PRE-ASSEMBLED LATTICE ROOF CASSETTE (PRE-FIXED ZED PLATE)

LOAD BEARING STRUCTURES: FLOOR / ROOF FRAMES

Drawn By: EOS
Scale: NTS
Detail No: LBS-B015
Revision: -
Approved By: AH
Date: FEB 2018

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1. All EOS floor lattices are manufactured with 10mm tolerance each end between the floor / wall frames to allow for zed plate thickness, fixing heads and general alignment tolerances.

2. Z Plate size fixed to wall. Individual lattices installed, not contained in a cassette.

3. If difficulties are experienced drilling fixings through multiple layers of material use Hilti S-MD05GZ 5.5x40mm hex head (EOS-1020) in lieu of EOS-1002/1004 and Hilti S-MD05WZ 5.5x40mm wafer head in lieu of EOS-1005.

**NOTES**

**SECTION**

1. All EOS floor lattices are manufactured with 10mm tolerance each end between the floor / wall frames to allow for zed plate thickness, fixing heads and general alignment tolerances.

2. Z Plate size fixed to wall. Individual lattices installed, not contained in a cassette.

3. If difficulties are experienced drilling fixings through multiple layers of material use Hilti S-MD05GZ 5.5x40mm hex head (EOS-1020) in lieu of EOS-1002/1004 and Hilti S-MD05WZ 5.5x40mm wafer head in lieu of EOS-1005.

**EXTERNAL WALL TO INDIVIDUAL LATTICE ROOF (ZED PLATE SUPPLIED LOOSE)**

**LOAD BEARING STRUCTURES: FLOOR / ROOF FRAMES**

- **Drawn By:** EOS
- **Series:** NTS
- **Detail No.:** LBS-B016
- **Revisions:** -
- **Approved By:** AH
- **Date:** FEB 2018

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4 No. 5.5 x 25mm Tek screws (EOS-1002 or similar approved) fixed through Simpson ES10400 bracket. Each lattice beam to have 2 brackets; 1 bracket fixed to each vertical face.

1 No. 5.5 x 25mm Tek screw (EOS-1002 or similar approved) fixed through head rail of wall frame into bottom rail of each lattice beam.

Lattice beams manufactured with vertical stads at support points.

LATTICE OVER-HANG
(Max. overhang to be determined by EOS)

Plasterboard finish, insulation & external cladding omitted for clarity.
NOTES

1. Additional holding down straps and truss clips may be required to suit roof design (by others).

Plasterboard finishes, insulation & wall cladding omitted for clarity.
5.5 x 25mm Tek Screws (EOS-1005 or similar approved) to fix ends of bracing to walls at stud position.

NOTE: Quantity to be determined by EOS Engineer.

NOTE: Use Wafer Head Fixings

Flat strap bracing, supplied by EOS

2 No. 5.5 x 25mm Tek Screws (EOS-1005 or similar approved) at each intermediate contact between stud and brace.

NOTE: Use wafer head fixings.

EXTERNAL ISOMETRIC

NOTES
1. Bracing fixed to external side
2. Only applicable to frames supplied without pre-boarded OSB

TYPICAL FLAT STRAP BRACING TO LOAD BEARING FLOORS / ROOFS
TOLERANCES
CONSTRUCTION TOLERANCES BETWEEN FRAMES 8.0mm / 3mm. FRAMES ARE MANUFACTURED AND ASSEMBLED TO 4.0mm / 2mm.

GENERAL NOTES
THIS DRAWING IS COPYRIGHT. DO NOT SCALE THIS DRAWING. CONTRACTORS MUST CHECK ALL DIMENSIONS ON SITE. ONLY INCREDIBLE DIMENSIONS TO BE WORKED FROM. ALL ERRORS AND DISCREpancies MUST BE IMMEDIATELY REPORTED TO THE DESIGN OFFICE OF EOS FACADES LTD.

22mm OSB/3 Floor / Roof (horizontal diaphragm) carries loads to end walls

Boarding fixed to EOS Floor / Roof elements at every joint / lattice with fixings @ max. 150mm c/c to the perimeter and 200mm c/c at intermediate positions as per SCI Guidance

Boards to be restrained at all corners as per board manufacturer’s requirements

EOS Floor / Roof Element

END (SHEAR) WALL

SIDE WALL

End wall (vertical diaphragm or shear wall) carries loads to foundation

Side wall carries load to roof / floor diaphragm at top and to foundation at bottom

NOTES
1. Additional angles or restrain to pick up board edge to be supplied and fitted by board installer, in accordance with board manufacturer’s requirements
2. Boarding assumed to be 22mm thick OSB/3 structural board

DIAPHRAGM ACTION

LOAD BEARING STRUCTURES: FLOOR / ROOF FRAMES

Drawn By: EOS
Series: NTS
Detail No.: LBS-B020
Revisions: -
Approved By: AH
Date: FEB 2018

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<table>
<thead>
<tr>
<th>PART #</th>
<th>APPLICATION</th>
<th>SIZE</th>
<th>PRODUCT TYPE</th>
<th>SUPPLIER</th>
<th>UNITS</th>
<th>IMAGES (NOT TO SCALE)</th>
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<tr>
<td>EOS-1001</td>
<td>FACTORY FIXING FRAME-TO-FRAME</td>
<td>5.5x19mm</td>
<td>PAN HEAD #2 LOX DRIVE</td>
<td>GRABBER CFP10187LYZ</td>
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<td>EOS-1002</td>
<td>SITE FIXING FRAME-TO-FRAME</td>
<td>5.5x25mm</td>
<td>HEX HEAD SELF DRILL S-MD03Z</td>
<td>HILTI 413417</td>
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<td>EOS-1003</td>
<td>SITE FIXING FRAME-TO-SLOTTED CONNECTION</td>
<td>5.5x25mm</td>
<td>HEX HEAD (LARGE WASHER) SELF DRILL S-MD03Z</td>
<td>HILTI 413432</td>
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<td>EOS-1004</td>
<td>SITE FIXING FRAME THROUGH FLOOR</td>
<td>5.5x50mm</td>
<td>HEX HEAD SELF DRILL S-MD03Z</td>
<td>HILTI 414293</td>
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<td>EOS-1005</td>
<td>SITE FIXING FRAME-TO-FRAME (LOW PROFILE)</td>
<td>5.5x25mm</td>
<td>PAN HEAD SELF DRILL S-MD03ZW</td>
<td>HILTI 408762</td>
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<td>EOS-1006</td>
<td>SITE FIXING WIND POST-TO-CONCRETE</td>
<td>10x100mm</td>
<td>HEX HEAD SCREW ANCHOR HUS3-H (10mm Ø)</td>
<td>HILTI 2079915</td>
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<td>EOS-1007</td>
<td>SITE FIXING SIMPSON BRACKETS-TO-CONCRETE</td>
<td>6.4x45mm</td>
<td>HEX HEAD SIMPSON TITEN CONCRETE SCREW</td>
<td>SIMPSON TTN25134H</td>
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<td>EOS-1008</td>
<td>SITE FIXING FRAME-TO-BLOCKWORK</td>
<td>7.5x72mm</td>
<td>CYLINDER HEAD R-WHO-75072</td>
<td>RAWL R-WHO-75072</td>
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<td>EOS-1020</td>
<td>SITE FIXING FRAME-TO-HOT ROLLED</td>
<td>5.5x40mm</td>
<td>HEX HEAD SELF DRILL S-MD05GZ</td>
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<td>EOS-1021</td>
<td>SITE FIXING FRAME-TO-CONCRETE</td>
<td>6.0x60mm</td>
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<td>EOS-1022</td>
<td>APPLICATOR DRIVE BIT FOR EOS-1021</td>
<td>13mm SOCKET</td>
<td>S-NS 13 C 50/2” NUT SETTER</td>
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<td>EOS-1026</td>
<td>DRILL BIT FOR EOS-1006</td>
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NOTES
1) USE 8mm HEX SOCKET FOR EOS-1002, 1003, 1004, 1007 & 1020
2) USE TX35 BIT FOR EOS-1008
3) USE 4.8mm DRILL BIT DIA. FOR EOS-1007
4) REFER TO PROJECT SPECIFIC DRAWINGS FOR DETAILS OF NON-STANDARD FIXINGS. ALWAYS FOLLOW THE MANUFACTURER’S TECHNICAL GUIDANCE.
For detailed up to date information, to book a CPD session or to arrange a meeting please contact:

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