LSL10 + LVL11 LINTELS

Description and Substitution

Release 2.0 March 2020

LumberworX ENGINEERED WOOD PRODUCTS

Lintels	A Lintel is a horizontal beam contained within a loadbearing wall over openings in the wall frame; generally the openings contain windows and doorways. This common lintel beam assumes that all the roof rafters or trusses supported have the same overhang and span, and therefore apply the same loads at equal spacings across the lintel span. Lintels have tighter design deflections than other members to ensure the opening members below the lintel are not compromised.
LSL10 + LVL11 x90mm	90mm LSL is a strand-based product created in a steam injection press. 90mm LVL is a veneered product glued with structural grade adhesives. The resulting products are long length laminated timber based billets with consistent and predictable properties. The billets are then ripped making ideal products for load carrying beam and lintel applications matched to a common timber framing size of 90mm. Using a 90mm lintel product avoids common remediation problems associated with nail laminating, saves time and reduces the risk of occupational accidents.
Quality	LSL is manufactured in a modern plant in the USA under stringent quality control procedures. APA- The Engineered Wood Association (North America) is the plant auditor who operates the Quality Management System for all client plants throughout USA and Canada. This is an important consideration for designers' confidence and where consistent performance and reliability is required.
Verification	LSL has been verified as meeting the New Zealand Building Code by CodeMark Certificate of Conformity. LVL is manufactured in New Zealand in accordance with AS/NZS4357
CodeMark	CodeMark is a product certification scheme demonstrating conformance with the New Zealand Building Code. The product must be accepted by consenting authorities when specified within the approved use and scope. CODEMARK™ CM70039
Timber Protection	LSL is treated "in-process" with Zinc Borate (ZB) and has been independently laboratory tested during the CodeMark assessment to confirm compliance with the H1.2 hazard class. LVL is treated "in-process" by Glueline + Face method as prescribed in NZS3640
Substitution	The following table has been developed using sound engineering practices and in accordance with NZS3603; the table has been approved by a Certified Professional Engineer.

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LSL 10 90mm Lintel Substitution for Sawn Timber

Specified Member SG8	Specified Member SG10	LSL10 Permitted Substitution
2/140x45 SG8	-	1/120x90 LSL10 or 1/120x90 LVL11 ✓
2/190x45 SG8	2/140x45 SG10	1/150x90 LSL10 or 1/150x90 LVL11 ✓
2/240x45 SG8	2/190x45 SG10	1/200x90 LSL10 or 1/200x90 LVL11 ✓
2/290x45 SG8	2/240x45 SG10	1/240x90 LSL10 or 1/240x90 LVL11 ✓
2/290x45 SG8	2/290x45 SG10	1/300x90 LSL10 or 1/300x90 LVL11 ✓

Substitution or other Engineered Wood Products

LSL 10 and LVL 11 may be used as a direct substitute for other engineered wood products (such as Glulam and other brands of LVL) provided the substituting member is of the same finished size (or larger) as the member to be substituted and that the strength and stiffness properties of the substituting member are no less than the strength and stiffness properties of the product to be substituted.

See Lumberworx website for strength and stiffness properties of LSL10 and LVL11.

LSL 10 Garage Lintel

Load Conditions for 4.8m Maximum Span		Lintel Size
Wind Load	Up to Very High	**315x90 LSL 10 or 300x90 LVL 11**
Snow Load	All regions to 100m altitude (sg 0.90 kPa)	
Roof Load	Up to 40kg/m^2 roof +ceiling	
Roof Pitch	Up to 35^o	
Roof Span	6m truss + 0.6m O/H (=3.6m loaded dimension)	
Maximum Deflection	<10mm	

constructure structural engineering

I have checked the above table using sound structural engineering practices and with reference to NZS 3603 and certify the table above may be used for buildings within scope of NZS3604.

Cory John Bedford _____ CPEng #238134

Date: 06/08/2020