



INtouch
WITH TIMBER
2010



A Wave of Wood

Paul Fast
P.Eng., Struct. Eng., P.E.
Fast + Epp
structural engineers



INtouch
WITH TIMBER
2010

**Vancouver 2010
Winter Olympics**





INtouch
WITH TIMBER
2010

**Previous Ovals:
Lillehammer**



INtouch
WITH TIMBER
2010

Salt Lake City




INtouch
WITH TIMBER
2010

Calgary



INtouch
WITH TIMBER
2010

Erfurt



INtouch WITH TIMBER 2010

Initial Concept

INtouch WITH TIMBER 2010

Arch Section at Midspan

1320

2120

1700

- TYP. ROOF PANEL
- W150 STEEL BEAM
- STEEL CROSS BRACING
- MECHANICAL DUCT
- 175 THICK DFIR GLULAM
- 10mm CONT STEEL NOSING PLATE

INtouch WITH TIMBER 2010

Arch Section at North and South Ends

VARIES

VARIES

2725

- TYP. ROOF PANEL
- WOOD STEEL BEAM
- 141 Ø STEEL POSTS
- BRACING
- MECHANICAL DUCT
- 175 THICK DFIR GLULAM
- 10mm CONT STEEL NOSING PLATE

INtouch WITH TIMBER 2010

Snow Loads

LOAD CASE 1

LOAD CASE 4

1.25kPa

1.25kPa

1.25kPa

2.25kPa

0.5kPa

1.25kPa

INtouch WITH TIMBER 2010

Wave Panel

TYPICAL WAVE PANEL PERIODIC VIEW (PLYWOOD REMOVED, SEE LEFT AS SHOWN)

INtouch WITH TIMBER 2010

Wave Panel Section

3000

615 TYP

203 TYP

1028 TYP

83 TYP

SLOT IN PLYWOOD BEARING FOR DIMENSIONAL TYP

2 LAYERS PLYWOOD (15mm / 12mm)

FIELD APPLIED PLYWOOD LAYER

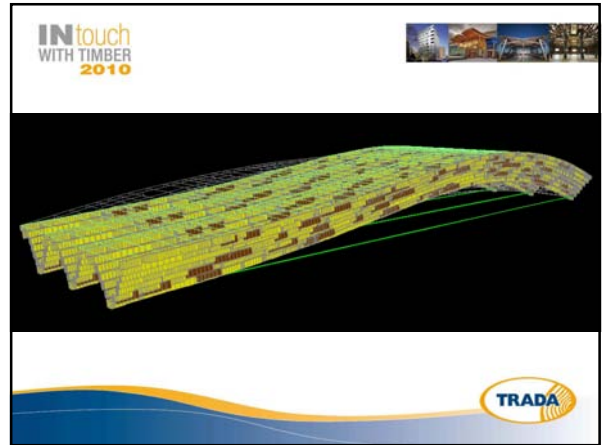
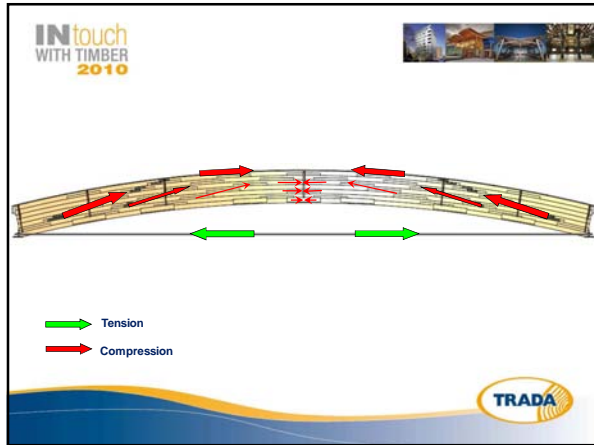
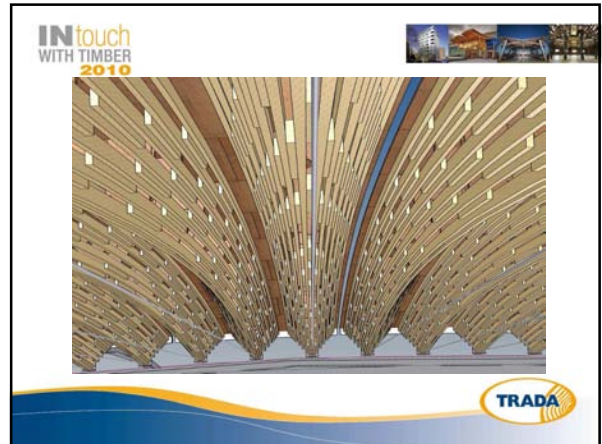
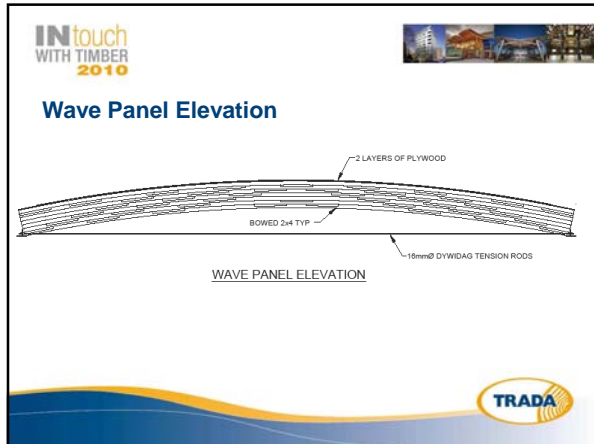
ERECTOR LIFT HOLES

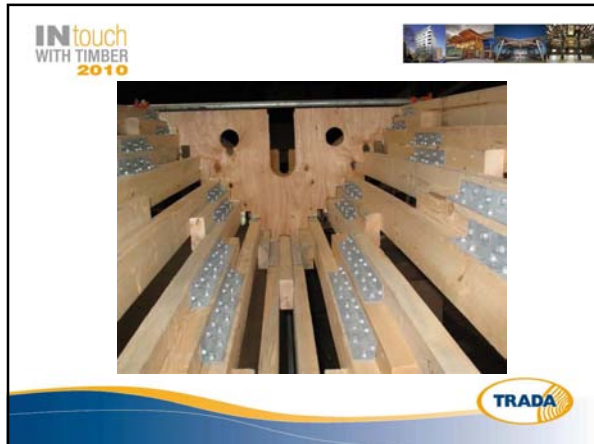
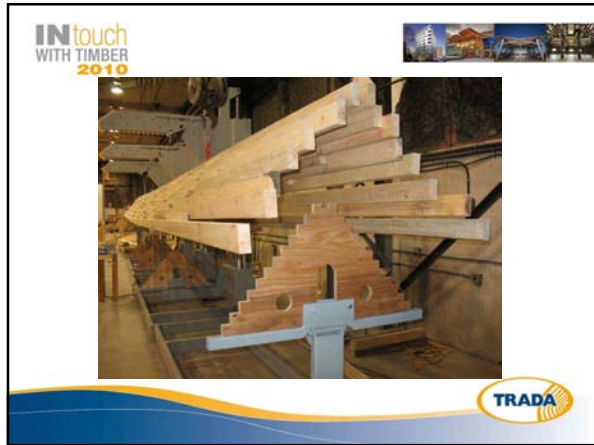
1332 TYP

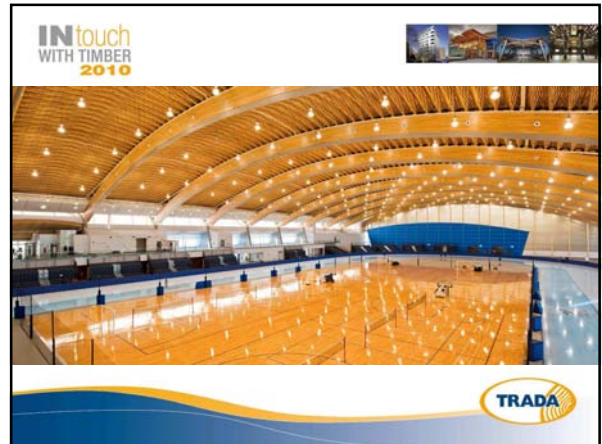
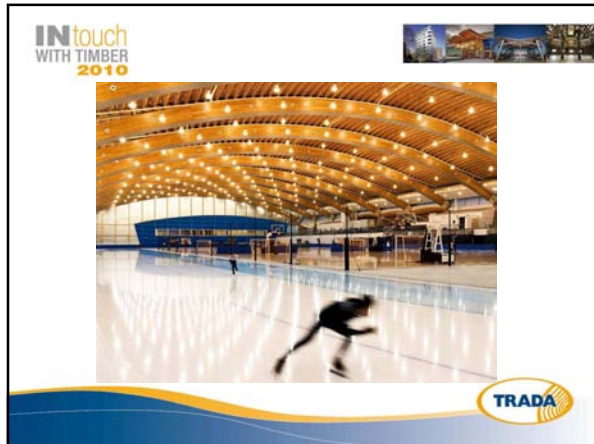
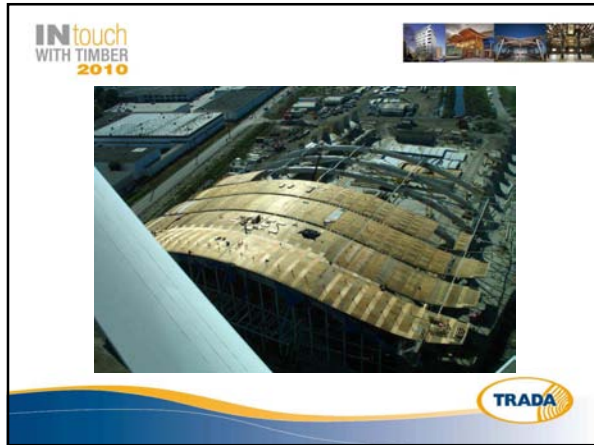
TYP. BONDED DATA

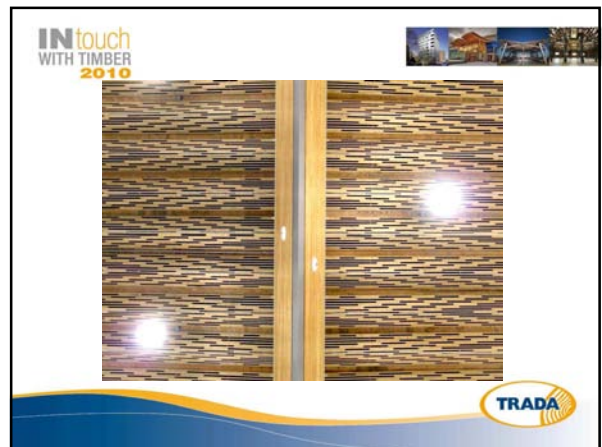
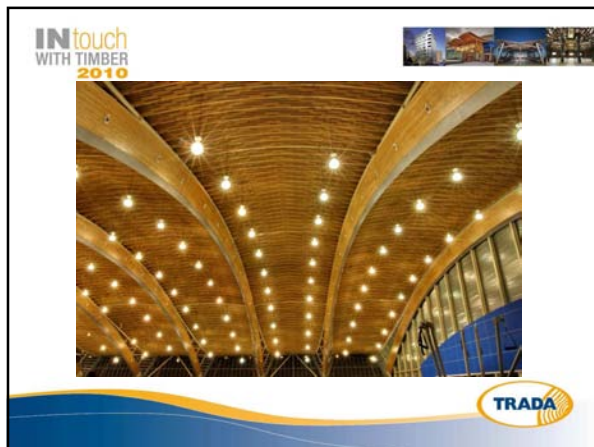
TYP. DIMENSION TENSION NEEDS

SECTION AT WAVE PANEL












INtouch
WITH TIMBER
2010

A Wave of Wood

Paul Fast
P.Eng., Struct. Eng., P.E.
Fast + Epp
structural engineers



TRADA