We believe that design has the power to positively transform people and the planet.
WE’VE BEEN DOING THIS A WHILE

1995
District of North Vancouver Municipal Hall

2002
Brentwood SkyTrain Station

2011
VanDusen Botanical Garden Visitor’s Centre

2016
University of British Columbia Orchard Commons
1 GROWTH & DENSITY

7 BILLION (AND COUNTING...)
2 TIPPING POINT

- 25% GLOBAL WATER
- 40% GLOBAL RESOURCES
- 33% GHG EMISSIONS
do less harm
do more good
4 INNOVATION INCENTIVE
ECONOMIC BENEFITS

- SHORTER CONSTRUCTION SCHEDULE
- COST COMPARABLE + SHORTER FINANCING SCHEDULE
- LESS WEATHER EXPOSURE
- LOWER MATERIAL WEIGHT
ENVIRONMENTAL BENEFITS

LONG-TERM CARBON SEQUESTRATION
REDUCED GHG (GREENHOUSE GAS) EMISSIONS
SMALLER ENERGY FOOTPRINT
SHIFT TO RENEWABLE RESOURCES
SOCIO-CULTURAL BENEFITS

SUPPORT REGIONAL ECONOMY

MARKET DIFFERENTIATOR

SUSTAINABLE GROWTH + DENSITY

CELEBRATE BEAUTY + QUALITY OF LIFE
WHAT IS MASS TIMBER?

LIGHT
WOOD FRAME

SOLID
SAWN TIMBER

ENGINEERED
MASS TIMBER
MASS TIMBER TYPES

CLT
CROSS LAMINATED TIMBER

NLT
NAIL LAMINATED TIMBER

GLULAM
GLUE LAMINATED TIMBER

LVL
LAMINATED VENEER LUMBER

LSL
LAMINATED STRAND LUMBER

PSL
PARALLEL STRAND LUMBER

FUTURE
INNOVATIONS
GENERAL CHARACTERISTICS

MATERIAL
• Light weight
• Predictable fire-resistance
• Better thermal resistance

DESIGN
• Prefabricated structure
• Integrated process
• Resource footprint

CONSTRUCTION
• Regional variance
• Adhesive / nail-laminated
• Composite materials
FABRICATING
HOW IS THE WOOD PROCESSED?

• **Prefabrication** reduces onsite work
• North American adhesives are **formaldehyde free**
• **Factory checked** for quality, strength
• Service openings – **factory cut**
• **Integrated** design process
• Support **local manufacturing** economy through value-added products
CONNECTING – THE PAST

- **Exposed** connections
- Reduced quality control
- Require **fire proofing** for non-combustible construction
- Poor fit
CONNECTING – PRESENT & FUTURE

- **Concealed** – eliminates need for fire proofing
- **Strong** and **reliable**
- Often **proprietary** – can be more costly than custom steel connectors
- Continued innovation
CONNECTORS

- Beam-column
- Column-floor
- Deck
wood is a viable option
NICOLA VALLEY INSTITUTE OF TECHNOLOGY

LOCATION Merritt, BC

DATE COMPLETED 2001

CONSTRUCTION COST $7.7 million

SIZE 4,520 SM
CENTRE FOR INTERACTIVE RESEARCH ON SUSTAINABILITY (CIRS)

LOCATION  Vancouver, BC

DATE COMPLETED  2011

CONSTRUCTION COST  $23 million

SIZE  5,675 SM
EARTH SCIENCES BUILDING
LOCATION Vancouver, BC
DATE COMPLETED 2012
CONSTRUCTION COST $58.6 million
SIZE 15,794 SM
BRIGHOUSE ELEMENTARY SCHOOL

LOCATION Richmond, BC

DATE COMPLETED 2011

CONSTRUCTION COST $12.6 million

SIZE 4,700 SM
PITT RIVER MIDDLE SCHOOL

LOCATION Coquitlam, BC
DATE COMPLETED 2014
CONSTRUCTION COST $15.8 million
SIZE 5,580 SM
VanDusen Botanical Garden Visitor Centre

LOCATION Vancouver, BC

CLIENT Vancouver Board of Parks and Recreation

DATE COMPLETED 2011

CONSTRUCTION COST $14.4 million

PROJECT BUDGET $21.9 million

SIZE 1,765 SM

CERTIFICATIONS
- LEED Canada Platinum
- Living Building Challenge Petal Certified
VANDUSEN BOTANICAL GARDEN
VISITOR CENTRE

Construction Innovation

Developed with Rhino and Revit software, the roof includes more than 50 different pre-fabricated roof panels composed of unique curved glulam beams.
BRENTWOOD SKYTRAIN STATION

LOCATION Burnaby, BC

CLIENT Rapid Transit Project Office

DATE COMPLETED 2002

CONSTRUCTION COST $8.1 million

SIZE 2,100 SM
DILLY CREEK WORKFORCE ACCOMMODATION PROJECT

LOCATION Dilly Creek, BC

CONSTRUCTION COST $55.5 million

SIZE 26,625 SM
TYPICAL PREFABRICATED CLT ROOM MODULE
TYPICAL PREFABRICATED CLT ROOM MODULE

MECHANICAL AND ELECTRICAL SYSTEMS

- Lighting
- Exhaust duct
- Modular services
- Sink
- Supply air
- Sprinkler system
- Heating system
ON-SITE ASSEMBLY

NEXEN
NEXEN HOUSING MODULE

LOCATION Mobile
DATE COMPLETED 2015
CONSTRUCTION COST $117,000
SIZE 29 SM