Utilizing Wood in Construction Supports Healthy Forests and Rural Economies

Janelle Leafblad, PE | Regional Director, WoodWorks | November 2020
Timber
Processing Chain
Engineered Timber

Source: The Wood from the Trees: The Use of Timber in Construction
Small Diameter Trees

Photos: WoodWorks
Mass Timber Products

Glue Laminated Timber (GLT)

Cross-Laminated Timber (CLT)
Solid sawn laminations

Cross-Laminated Timber (CLT)
SCL laminations

Photo: StructureCraft

Photo: LendLease

Photo: LEVER Architecture
Dowel-Laminated Timber (DLT)

Nail-Laminated Timber (NLT)

Decking

Photo: StructureCraft

Photo: Think Wood

Photo: Ema Peter

Photo: Bernard André Photography
Large Pre-fabricated Mass Timber Panels
Mass Timber Buildings
Tall Mass Timber Buildings

<table>
<thead>
<tr>
<th>Type</th>
<th>Stories</th>
<th>Building Height</th>
<th>Allowable Building Area</th>
<th>Average Area Per Story</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type IV-A</td>
<td>18</td>
<td>270'</td>
<td>972,000 SF</td>
<td>54,000 SF</td>
</tr>
<tr>
<td>Type IV-B</td>
<td>12</td>
<td>180 FT</td>
<td>648,000 SF</td>
<td>54,000 SF</td>
</tr>
<tr>
<td>Type IV-C</td>
<td>9</td>
<td>85'</td>
<td>405,000 SF</td>
<td>45,000 SF</td>
</tr>
</tbody>
</table>

IBC 2021
Forest-to-Cities Climate Challenge
A Systemic Solution in Action

www.ForesttoCities.org
Circular Economy
Renewable Resource

Source: Government of the Netherlands
World Growth in Consumption of Raw Materials
1961-2017

Demand Has Multiplied ‘x’ Times (1961-2017)

- Steel: 4.9
- Cement: 12.7
- Aluminum: 12.7
- Plastics: 25.8
- Wood: 1.6

Population Growth: 2.45

Demand for wood has only increased 1.6 times! That’s less than the population growth of 2.45 times.

Source: An Introduction To The Circular Economy, Dovetail Partners, Inc.
https://dovetailinc.org/portfolioDetail.php?id=5ee4e5ff904ebf2b3
Extractivism and its impacts

Source: Timber City Research Initiative, Organski Architecture
Forest Supply: Growth vs. Removals

(Billions of cubic feet per year)

Source: The Forest History Society
Wood Products
Increase Forest Value & Support Rural Economies

United States         Jobs       Annual Payroll
Wood Products          434,900       $ 21 Billion
Forestry & Logging    145,900       $ 3 Billion
Total Employment      580,800       $ 24 Billion

Download State info:
https://www.awc.org/publicpolicy/statefactsheets
Private Working Forests

Privately Owned Timberland by State

Download State info: https://nafoalliance.org/
Wildland Urban Interface (WUI)
International WUI Code

- Check w/ local AHJ for adoptions and modifications of WUI codes
- Defensible space
- Exterior Building Envelope
- Exterior Walls
Fire Performance

Combustibility

Fire Protection Systems

Fire Resistance

Flame Spread Classification
Questions?

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