USING RESPONSIBLY SOURCED MASS TIMBER IN INDUSTRIAL BUILDING TYPES

SUSTAINABLE FORESTRY INITIATIVE
SFI-00001

ADVANCING SOCIAL IMPACT

These are the highlights from an analysis of the social impacts that exist across the mass timber value chain, from a responsibly managed forest to a completed light industrial building, as supported by a USDA Forest Service Wood Innovation Grant.

PROJECTED SOCIAL IMPACTS

$2.1 MILLION

OVER THE LIFETIME OF THE CASE STUDY BUILDING

THIS LIGHT INDUSTRIAL MASS TIMBER BUILDING HAS **88% LOWER** EMBODIED CARBON, AVOIDING $133,000* IN SOCIAL COSTS OF CARBON (LHB LCA results, 2024).

CASE STUDY BUILDING

PROJECTED IMPACTS ARE BASED ON THE FOLLOWING BUILDING CHARACTERISTICS

- Light industrial building
- 26,000 sq ft
- 23 workers in completed building
- Impacts are in comparison to concrete tilt-up building of the same size

The projected social, environmental, and economic impacts from a mass timber building using responsibly sourced wood compared to a concrete tilt-up can reach into the millions of dollars over the lifetime of the building.

* Impact projection based on specific case study building with 30 year lifespan.

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FOREST

INCREASED ECOSYSTEM SERVICES

$850,000* in sustainable forestry benefits of air and water quality, water supply, erosion control, recreation, aesthetic value, and stormwater damage mitigation (FEMA, 2022) – ecosystem services supported by requirements within the SFI Forest Management Standards.

EDUCATIONAL IMPACT TO LANDOWNER, LOGGERS, AND COMMUNITIES

Environmental education can boost environmental behaviors (Van de Wetering et al., 2022). An average of 10,000 harvesting professionals are trained each year due to requirements within the SFI standards.

REDUCED WILDFIRE RISK

Mass timber products can be manufactured from smaller-diameter trees which, when harvested, helps prevent wildfires (Manke, 2021). SFI Forest Management Objective 10 requires certifed organizations mitigate the undesirable impacts of wildfire and raise community awareness.

PROCESSOR/ SAWMILL

INCREASED RURAL ECONOMIC ACTIVITY

35% - Available capacity of sawmills in the U.S. in 2024 (U.S. Census Bureau, 2024).

MASS TIMBER MANUFACTURER

INCREASED DIVERSITY OF JOBS

Factories require a wider range of skill sets than construction sites, supporting a more diverse workforce *(Anderson et al., 2020)*.

SAFER WORK ENVIRONMENT

$4,100* in avoided injuries - Mass timber involves more prefabrication and less on site construction, reducing rate of injury by half *(Smith, 2010)*.

CONSTRUCTION

FASTER CONSTRUCTION

25% faster to construct than concrete buildings and require 90% less construction traffic *(Think Wood, 2023)*.

REDUCED NOISE POLLUTION

$6,000* in avoided disruption to neighboring residents from faster construction *(Weinhold, 2012)*.

BUILDING USE

IMPROVED EMPLOYEE WELL-BEING

$700,000* in improved comfort and reduced stress over 30 years (Wlson, *1984)*.

ATTRACTING AND RETAINING TALENT

$225,000* in reduced hiring and onboarding costs due to up to 25% increase in employee retention from biophilia *(Ryan et al., 2023)*.

For more information on the claims and statements visit, www.forests.org/EcotoneJourneyMap

Disclaimer: This assessment addresses the estimated impact measurement and management systems, practices, and metrics employed by the impact assessment consultants. It does not address financial performance and is not a recommendation to invest in these practices. These estimated social impacts are drawn from an impact analysis calculated by Ecotone Analytics and are not guaranteed.