

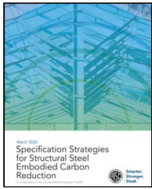
Design Manuals/Design Guides



[Optimizing Sustainable Structures With HSS: A Comprehensive Guide](#)

Cathleen Jacinto, PE, SE, and Holly Schaubert, PE, November 2023

- Covers sustainability fundamentals, case study insights, and practical HSS design considerations.



[Specification Strategies for Structural Steel Embodied Carbon Reduction](#)

AISC, March 2025

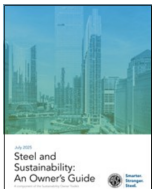
- Presents embodied carbon reduction strategies for specifiers to reduce the embodied carbon structural steel, including HSS.



[Sustainable Steel Design Strategies and Rules of Thumb](#)

AISC, April 2025

- Presents strategies for optimizing the sustainability performance of a structure.



[Steel and Sustainability: An Owner's Guide](#)

AISC, July 2025

- Presents strategies for building owners to develop sustainable buildings using structural steel.



[HSS and WF Column Selection Guide](#)

STI, February 2024

- Enables the selection of the most efficient shape, both in tonnage and perimeter, while meeting capacity requirements, which reduces tonnage and finishes and the resulting embodied carbon.

Steel Tube Institute Articles



[Practical Guide to HSS Sustainability Documentation and Submittals](#)

January 2026

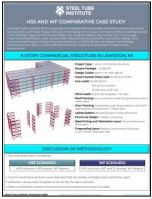
- A concise, task-oriented reference to help teams accurately respond to HSS sustainability documentation requests, compare EPDs correctly, and avoid common submittal mistakes



[HSS Sustainability for Procurement and Supply Chain Decisions](#)

February 2026

- A procurement-focused overview explaining how HSS manufacturing, supply chain choices, and EPD interpretation affect embodied carbon compliance and sourcing decisions



HSS and WF Comparative Case Study

STI, November 2024

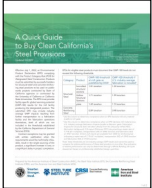
- Presents the cost and Global Warming Potential (GWP) results of a comparative study of multi-story commercial structures designed using HSS and wide flange (WF) steel.



EPD: Achieving Green Goals with HSS

Cathleen Jacinto, PE, SE and Joseph Anderson, September 2022

- Includes the fundamentals of HSS EPDs and green procurement policies in the U.S.



A Quick Guide to Buy Clean California's Steel Provisions

STI, AISC, Concrete Reinforcing Steel Institute (CRSI), American Iron and Steel Institute (AISI), March 2022

Steel Tube Institute Interviews



Navigating Sustainability in Structural Engineering

Interview with Michael Gryniuk, PE
STI HSS Insider, November 2023, Issue 23

- Provides insights on sustainability trends and practices in the architecture, engineering and construction (AEC) industry.



Two Experts on Environmental Product Declarations and Sustainability in Steel

Interview with Max Puchtel and John Cross
STI HSS Insider, June 2021, Issue 6

- Covers the role of EPDs in the construction market and common misconceptions.



Leaning on HSS and Cross-Company Collaboration to Achieve Innovative Designs

Interview with Matthew Aquino, PE, SE
STI HSS Insider, July 2023, Issue 20

- Addresses sustainability strategies of an architectural design firm.

Environmental Product Declaration



Environmental Product Declaration: Hollow Structural Sections

STI, July 2021

- Presents industry-average, cradle-to-gate environmental impacts of unfabricated HSS produced in the U.S.



EPD Background Report: Hollow Structural Sections

STI, July 2021

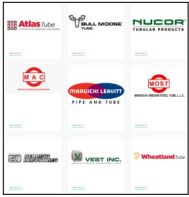
- Presents methodology, data, and insights for STI's industry-average HSS-EPD.



Environmental Product Declarations: Fabricated Hollow Structural Sections

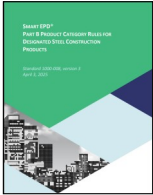
AISC and STI, February 2022

- Presents industry-average, cradle-to-gate environmental impacts of fabricated HSS produced in the U.S.



Environmental Product Declarations: Facility-specific HSS EPDs

- Website that provides links to facility-specific HSS EPDs published by STI members.



Smart EPD® Part B Product Category Rules for Designated Steel Construction Products, Standard1000-008, Version 3.0

Smart EPD, April 2025

- Rules for Conducting life cycle assessments (LCAs) and developing EPDs for steel construction products. HSS is considered a “manufactured product” per Option 2 in Table 4.



Global Warming Potential Impacts of Domestic Steel Construction Products: Methodologies, Assumptions, and Results, for Use by and in Support of the Federal Highway Administration’s Low Carbon Transportation Materials Program

AISC, CRSI, Steel Deck Institute, Steel Manufacturers Association, and STI, revised December 2024

- Presents industry-average and quintile embodied carbon data based on EPDs for domestically produced HSS (Section D, pg. 33) and other steel construction products.

Steel Tube Institute Recorded Webinars



HSS and WF Comparative Case Study

Beth Suminski, September 2024



Building Greener Part I: Addressing Climate Change with Structural Steel

Michael Gryniuk, October 2023



Building Greener Part 2: An HSS and WF Comparative Case Study

Michael Gryniuk and Cathleen Jacinto, October 2023



HSS & Sustainability: Removing the Myths

Cathleen Jacinto, November 2022



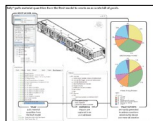
Revised Buy Clean California and the Steel Supply Chain

Presented by Joseph Anderson, Steel Tube Institute; John Cross, PE, Crosswind Consulting; and Max Puchtel, SE, PE, American Institute of Steel Construction, May 2022



HSS Production Capability Tool

- Tool to assist designers in confirming availability of HSS with specified sustainability characteristics, such as domestic sourcing. Tool also indicates whether selected sections are on the regular rolling schedule or are produced on demand.



TallyLCA (V1.0)

Building Transparency, Version 2025.06.24.01, July 2025

- A whole building life cycle assessment tool, compatible with Autodesk Revit 2025 and 2026, enables the modeling of building designs using HSS and competing materials.



Athena Impact Estimator

Athena Sustainable Materials Institute, Version 5.5 Build 0113.04, April 2025

- A whole building LCA tool that assigns potential environmental impact to a building design Bill of Materials (BOM), inclusive of HSS and competing materials.