Environmental Standards Procurement Task Force

Meeting #10 - Task Force Recommendations - Legislative Report

October 8, 2025

Agenda

Meeting #10 - Task Force Recommendations - Legislative Report

10:00a to 10:10a: Introduction

- Timeline & Schedule
- Announcements & Updates

10:10a to 10:50: Outstanding Items & Decision Points

- General: Program Implementation & Recommendations
- Material Specific

10:50a to 11:00a: Next Steps

11:00a to 11:15a: *Member Discussion and Questions*

11:15a to 11:30a: *Public Comments and Questions*

Task Force Timeline

2023 October 1 - Task Force established

2024

- February - EC Context: Concrete and Asphalt
- March - EC Context: Steel, Rebar and Other Materials
- April and May - Bidding and Procurement
- July 1 - Pilot Program to estimate Global Warming Potential (GWP) from vendors on projects
- Summer/Fall - Material WGs and Pilot Program WG
- Oct 23 - ESPTF Mtg#6: Concrete and Asphalt WG Report Outs
- Nov 20 - ESPTF Mtg#7: Steel and Rebar WG Report Out
- Dec 18 - ESPTF Mtg#8: Pilot Program and Other Materials WG

2025

- March 19, 2025 - Mtg#9: Task Force Recommendations
- May 8, 2025 - Draft Report sent to Task Force for comment
- Spring - Draft Report, Select Grant Awardees & Distribute Funds
- Summer/Fall - Draft Report Staff Reviews and Revisions
- October 8 - Mtg#10: Task Force Recommendations & Legislative Report Discussion
- December 1 - Report to the Legislature

2026

- January 15 (no later than) - Establish a maximum Global Warming Potential (GWP) for concrete used in buildings
- Spring - Potential Task Force Meeting (TBD)
- December 1 - Report to the Legislature

2027

- December 1 - Report to the Legislature

2028

- January 15 (no later than) - Establish a maximum Global Warming Potential (GWP) for carbon steel rebar and structural steel and, after conferring with the commissioner of transportation, for asphalt paving mixtures and concrete pavement
- December 1 - Report to the Legislature

2029

- January 1 - Task Force ends

MN EPD Grant Program Update

DEPARTMENT OF ADMINISTRATION

DEPARTMENT OF TRANSPORTATION

UNIVERSITY OF MINNESOTA
CSBR
Center for Sustainable Building Research

- Grant work active April 2025
- Grantees announced in a press release published August:
  - Aggregate and Ready Mix Association of Minnesota (ARM of Minnesota)
  - Minnesota Asphalt Pavement Association (MAPA)
  - McNamara Contracting Inc.
- Progress reports from Grantees October 31, 2025
- Grant ends April 30, 2026

mn.gov/admin/media/news/#/detail/appId/1/id/700464

Minnesota's Buy Clean Grant Program Accelerates Transparent, Low-Carbon Construction Materials

The Minnesota Departments of Administration and Transportation announce grant awardees for the State of Minnesota's Buy Clean EPD (Environmental Product Declaration) Grant Program.

August 1, 2025

Saint Paul — The Minnesota Departments of Administration and Transportation announce grant awardees for the State of Minnesota's Buy Clean EPD (Environmental Product Declaration) Grant Program. The grants will assist in the development of Environmental Product Declarations (EPDs) for manufacturers of eligible materials utilized in Minnesota construction, such as concrete and asphalt.

The three grantees are the Aggregate and Ready Mix Association of Minnesota (ARM of Minnesota) - a non-profit industry organization representing producers with over 166 concrete plants in Minnesota, the Minnesota Asphalt Pavement Association (MAPA) which includes over 43 asphalt producer/contractor members, and McNamara Contracting which produces asphalt at their Rosemount plant. Over $260,000 in grant funding has been allocated to the grantees to support the development of robust, third-party verified Environmental Product Declarations (EPDs)

Outstanding Items

Program Implementation

- Implementation Timeline
  - **Jan. 15, 2026** - Commissioner sets GWP limits/EPD disclosure requirements
  - **July 15, 2026** - Projects letting on or after this date must submit EPDs

Program Implementation

- Cadence for setting and adjusting limits? 2026, 2027, 2028 legislative report recommendations
    - Anticipated lag time from when new benchmarks are published in Industry-wide EPDs until new GWP limits are adopted?
    - Different time frames for each material category?
- **2026,** January 15 (no later than) - Establish a maximum Global Warming Potential (GWP) for concrete used in buildings. GWP limit recommendations for structural steel, and rebar; Collect EPDs for all Tier 1 and Tier 2 materials.
- **2028,** January 15 (no later than) - Establish a maximum Global Warming Potential (GWP) for carbon steel rebar and structural steel and, after conferring with the commissioner of transportation, for asphalt paving mixtures and concrete pavement

Task Force Timeline

2023 October 1 - Task Force established

2024

- February - EC Context: Concrete and Asphalt
- March - EC Context: Steel, Rebar and Other Materials
- April and May - Bidding and Procurement
- July 1 - Pilot Program to estimate Global Warming Potential (GWP) from vendors on projects
- Summer/Fall - Material WGs and Pilot Program WG
- Oct 23 - ESPTF Mtg#6: Concrete and Asphalt WG Report Outs
- Nov 20 - ESPTF Mtg#7: Steel and Rebar WG Report Out
- Dec 18 - ESPTF Mtg#8: Pilot Program and Other Materials WG

2025

- March 19, 2025 - Mtg#9: Task Force Recommendations
- May 8, 2025 - Draft Report sent to Task Force for comment
- Spring - Draft Report, Select Grant Awardees & Distribute Funds
- Summer/Fall - Draft Report Staff Reviews and Revisions
- October 8 - Mtg#10: Task Force Recommendations & Legislative Report Discussion
- December 1 - Report to the Legislature

2026

- January 15 (no later than) - Establish a maximum Global Warming Potential (GWP) for concrete used in buildings
- Spring - Potential Task Force Meeting (TBD)
- December 1 - Report to the Legislature

2027

- December 1 - Report to the Legislature

2028

- January 15 (no later than) - Establish a maximum Global Warming Potential (GWP) for carbon steel rebar and structural steel and, after conferring with the commissioner of transportation, for asphalt paving mixtures and concrete pavement
- December 1 - Report to the Legislature

2029

- January 1 - Task Force ends

Program Implementation

Year / Tier 1 Product Categories	2026	2027	2028	2029
Concrete Used in Buildings	• GWP Limits: Ready Mix • EPD Disclosure: CMU, Precast	?	?	Adjust/Update?
Structural Steel (in buildings)	• GWP Limits: HRS, HSS, Plate, OWSJ, Steel Deck • EPD Disclosure: CF Steel Framing	?	?	Adjust/Update?
Rebar (in buildings)	• GWP Limits	?	?	Adjust/Update?
Concrete Pavement	• EPD Disclosure	• Review proposed GWP Limits	• GWP Limits	?
Asphalt Pavement	• EPD Disclosure	• Review proposed GWP Limits	• GWP Limits	?

Program Implementation

- Legislation allows for limits to be adjusted downward…

16B.312 ***Subd. 2.***

(e) Not later than three years after establishing the maximum global warming potential for an eligible material under paragraph (a), and not longer than every three years thereafter, the commissioner, after conferring with the commissioner of transportation with respect to asphalt paving mixtures and concrete pavement, shall review the maximum acceptable global warming potential for each eligible material and for specific eligible material products. ***The commissioner may adjust any of the values downward to reflect industry improvements if, based on the process described in paragraph (b), the commissioner determines the industry average has declined.***

Program Implementation

- Potential ability to give incentives for Admin projects in the future?
- Definitions outlining specific justifications/requirements for Waivers
    1. Technically Infeasible
    2. Significant Increase in Project Cost
    3. Significant Delay
    4. Results in Sole-Source of Material
    5. Emergency or Director’s Order
- Early 2026 - draft guidance documents
- Format/process for issuing limits (specification language, AIA front end documents, dissemination)
- Spring 2026 - potential TF meeting (TBD), issue guidance documents, training/education

Focus Materials

- Concrete
- Asphalt
- Steel
- Other Materials

Concrete

Concrete GWP Limits

Please note: materials/products for which GWP limits are not set per this table still require EPDs but are not bound by GWP limits at this time.

Material Category[1]			Maximum Allowable GWP Limit (kgCO2e per unit)
Ready-Mix Concrete[2] (kgCO2e/m3) based on concrete compressive strength	Normal-Weight concrete (NW)	≤2500 psi	241
		3000 psi	264
		4000 psi	312
		5000 psi	372
		6000 psi	394
		8000 psi	460
	Lightweight concrete (LW)	3000 psi	487
		4000 psi	537
		5000 psi	591
	Add 30% to these GWP limits where high early strength[3] concrete mixes are required for technical reasons.		
Concrete Masonry Units (CMU)			TBD[4]
Precast / Prestressed Concrete			TBD[4]

1. Only permanently installed materials must be considered.
2. **(a)** GWP values shown are categorized by 28-day concrete compressive strengths (psi) and based on NRMCA's North Central Regional Baseline published in NRMCA's National and Regional LCA Benchmark Report v3.2 (2022).

   (b) Limits shown **do not apply to concrete pavement mix designs**. GWP limits specific to concrete pavement applications will be developed at a later date, taking into account other factors, aside from concrete compressive strength, including but not limited to permeability, workability, smoothness, and functional application which may warrant creation of additional concrete subclassifications unique to pavement.

   (c) Portable/mobile batch plants need not meet the GWP limits shown, but are encouraged to submit material EPD data following the recommendations included in the current PCR "NSF PCR for Concrete v2.3 – 2024 Extension" (NSF 1112-19 with 2024 deviation). Portable batch plant requirements may be revised to align with future PCR or industry updates.
3. "High early strength" is concrete that, through the use of additional cement, high-early-strength cement, or admixtures, has accelerated early-age strength development. High early strength concrete produced using additional cement should be avoided where possible, due to its higher embodied carbon. An affected project delivery team must submit documentation from the Structural Engineer of Record (SEOR) on whether high early strength concrete is necessary for technical reasons, and obtain written approval from the Department of Administration or Department of Transportation prior to procurement. This 30% allowance reflects input from building sustainability experts, general contractors, engineers, and ready-mix or cement producers.
4. Lack of data at this time. It is anticipated that limits will be set for these materials once data availability and accuracy improve. Please note: Items (mixtures, materials, products) for which GWP limits are not set per this table still require EPDs but are not bound by GWP limits at this time.

For concrete strengths between the stated values, use linear interpolation to determine GWP limits, rounded to the nearest whole number.

Concrete GWP Limits - High Strength Concrete

2025 CLF North American Material Baselines

Table ES.2. CLF baseline values for USA ready-mixed concrete. All values are A1–A3 in units of kg CO_2e / m^3. Aligning with the industry benchmark report, product types are organized by region, compressive strength (in psi), and weight classification. ("LW" refers to lightweight mixes. All others are normal-weight mixes.)

	2500 psi	3000 psi	4000 psi	5000 psi	6000 psi	8000 psi	9000 psi	10000 psi	12000 psi	3000 psi LW	4000 psi LW	5000 psi LW
Pacific Southwest	257	279	323	378	401	456	437	471	--	500	546	594
Pacific Northwest	235	261	316	386	408	487	378	470	--	518	575	632
Rocky Mountains	232	255	301	358	379	440	--	387	--	484	532	580
South Central	226	245	286	336	356	409	--	--	--	468	510	555
North Central	241	264	312	372	394	460	--	--	--	487	537	591
Southeastern	247	268	309	360	382	435	534	609	593	478	521	562
Great Lakes	232	255	303	363	383	452	--	--	--	499	551	603
Eastern	240	264	314	378	399	472	410	429	353	517	573	628
National	240	262	308	365	385	446	--	--	--	492	540	588

Based on the unweighted average of the collection of applicable product EPDs, by strength and region.

revisit with TF in 2026 and beyond?

Precast Concrete - Regionalized Industry Avg. EPD

PCI
Precast/Prestressed Concrete Institute

published May 2025

- Architectural Precast Concrete
- Insulated Precast Concrete
- Structural Precast Concrete

Table 2A.2: Cradle to Gate GWP ($kgCO_2e$ per metric tonne**) of Structural Precast Concrete [A1-A3]**

FPCA	PCI Gulf South / GCPCI	PCI Central	PCI-IW	PCI Midwest	PCI Mountain	PCI West	PCINE / PCIMA	PCMA
317	273	263	248	276	297	255	240	261

revisit with TF in 2026?

Asphalt

MN Benchmarking Data

NAPA Minnesota-specific Data → 20 plants, 8 unique companies

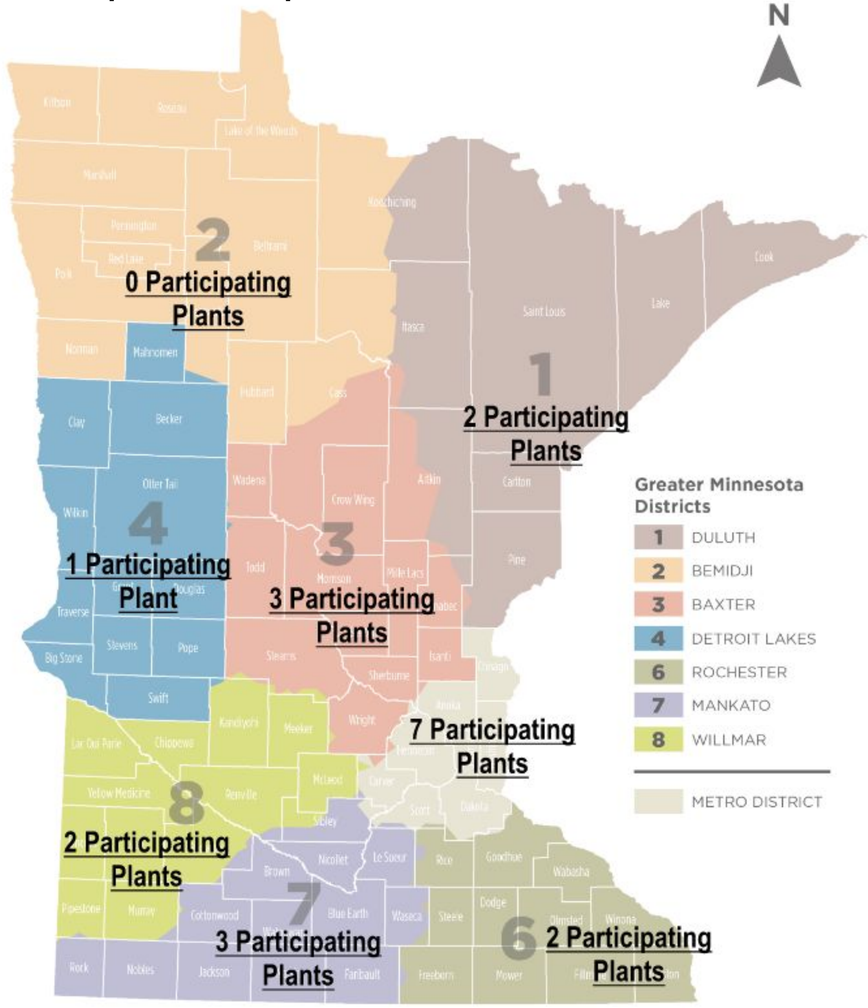
- (15) stationary and (5) portable plants
- (10) urban and (10) rural plants
- (11) Parallel flow, (9) Counter flow, (0) Batch

Table 21. A2 GWP Reference Values by State using Benchmarking Data

A2 GWP RV by State					
State	N	20%	40%	50%	Avg
MI	7	2.97	4.94	4.97	5.57
MN	21	0.99	2.66	3.06	4.76
NC	27	1.47	3.75	4.30	4.78
ND	6	10.74	13.40	13.44	12.48

Table 22. A3 GWP Reference Values by State using Benchmarking Data

A3 GWP RV by State					
State	N	20%	40%	50%	Avg
MI	7	24.57	25.37	25.56	26.11
MN	21	22.20	22.92	23.56	24.42
NC	27	20.91	23.31	24.80	24.96



NAPA NATIONAL ASPHALT PAVEMENT ASSOCIATION

EPD BENCHMARK FOR NATIONAL ASPHALT PAVEMENT ASSOCIATION

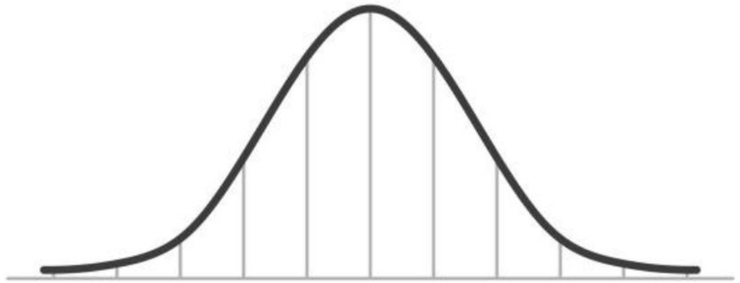
Version 2.0: Including Round 2 of Data Collection

Authors: Lianna Miller, Benjamin Ciavola, Amlan Mukherjee

Version 2 - Revised 8/2/2024

Benchmarking Data - Next Steps

- Establish and Refine Minnesota Benchmarks / Limit Recommendations (using the NAPA Method)
  - Independently reviewed by third party
  - Benchmark pay items
  - Develop a public procurement plan including QC



- Continued coordinate with ongoing MnDOT data collection and analysis efforts for A1-A5

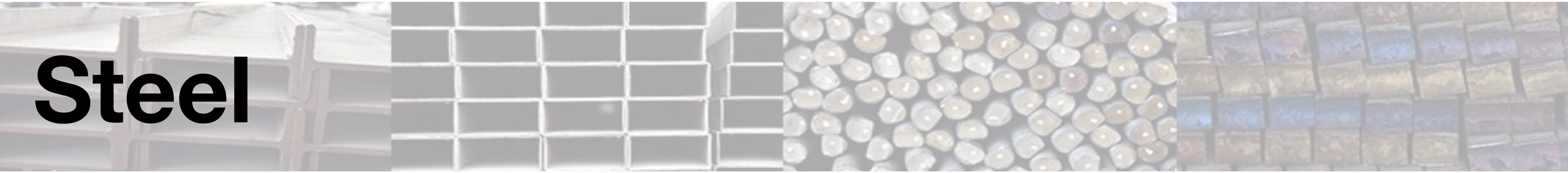
NAPA
NATIONAL ASPHALT PAVEMENT ASSOCIATION

- Coordinate MnDOT research and database development, submittal requirements, specification updates, guidance documents, and education/training plans

DEPARTMENT OF TRANSPORTATION

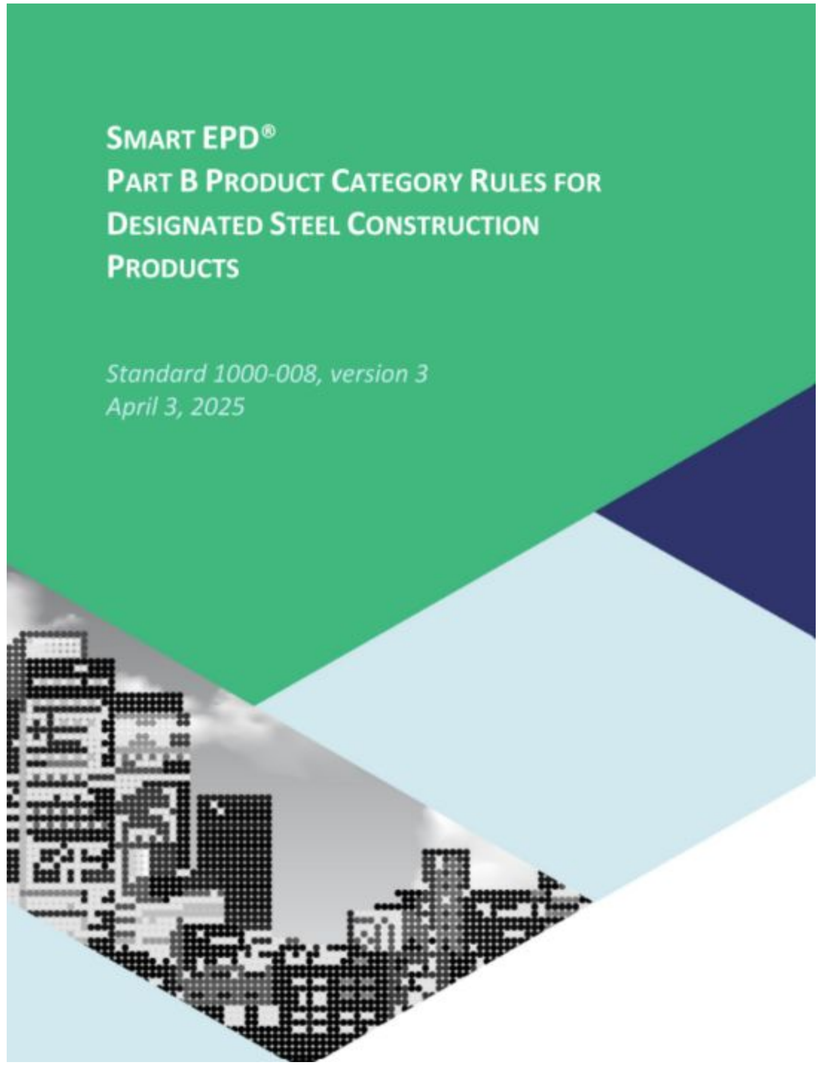
Minnesota Asphalt Pavement Association

Steel



PCR & EPD Updates

- <u>PCR Updated:</u>
  - SmartEPD PCR Part B: Steel Construction Products (otherwise known as v3.0) → April 3, 2025
- <u>Industry-Wide EPDs:</u>
  - Hot-Rolled Sections (HRS) - AISC - Update in progress (anticipated late 2025)
  - Hollow Structural Sections (HSS) - Steel Tube Institute - Update in progress (anticipated late 2025)



CF Steel Framing - Industry-Wide EPD

SFIA
STEEL FRAMING INDUSTRY ASSOCIATION

version Sept. 15, 2025, valid through May 27, 2025
(previous version Jan. 2022)

CEMCO Expanding Your Solutions
ClarkDietrich
Delineate, LLC.
FT FRAMETEK
MILL STEEL FRAMING
MiTek
MRI STEEL FRAMING LLC
BUILDSMART.
PANEL REY Drywall Solutions
RAM STEEL FRAMING SUPERIOR ROLL FORMING & STEEL MANUFACTURING
SBP State Building Products
STEELER CONSTRUCTION SUPPLY
Super Stud | Metal US STRONGER TOGETHER
TELLING BUILDSTRONG
The Steel Network

Table 6. *Life Cycle Impact Assessment (LCIA) results for one (1) metric ton of industry-average CFS framing products. Results reported in MJ are calculated using lower heating values. All values are rounded to three significant digits.*

Impact Category	Life cycle stage			
	A1	A2	A3	Total (A1-A3)
TRACI 2.1				
GWP (kg CO_2 eq)	2,220	84.4	135	2,440
	91.0%	3.46%	5.55%	100%

Table 7. *Life Cycle Impact Assessment (LCIA) results for one (1) metric ton of CFS framing products across manufacturers. Results reported in MJ are calculated using lower heating values. All values are rounded to three significant digits.*

Impact Category	Average	Median	Minimum	Maximum
TRACI 2.1				
GWP (kg CO_2 eq)	2,380	2,380	2,250	2,610

Steel Recommendations

Please note: materials/products for which GWP limits are not set per this table still require EPDs but are not bound by GWP limits at this time.

Steel Product Category		Maximum GWP[1] Limit at Mill or Manufacturer Gate	Equivalent GWP[1] Limit Converted for use with Fabricated[2] Product EPD
Structural Steel	**Hot-Rolled Sections** (W-, S-, C-, M-, MC- shapes, angles, and tees)	1.00	1.22
	HSS (Hollow Structural Sections)[3] (EAF/BOF blended)	1.71	1.99
	HSS from Secondary Steel Production (EAF)[4]	*TBD*	*TBD*
	HSS from Integrated Steel Production (BOF)[4]	*TBD*	*TBD*
	Plate (EAF/BOF blended)	1.47	1.73
	Plate from Secondary Steel Production (EAF)[4]	*TBD*	*TBD*
	Plate from Integrated Steel Production (BOF)[4]	*TBD*	*TBD*
Reinforcing Steel Bar (Rebar)[5]		0.755	0.854
Open Web Steel Joists		1.43	n/a
Steel Deck (EAF/BOF blended)		2.32	n/a
Steel Deck from Secondary Steel Production (EAF)[4]		*TBD*	*TBD*
Steel Deck from Integrated Steel Production (BOF)[4]		*TBD*	*TBD*
Cold-Formed Steel Framing (CFS Framing)[6]		*TBD*	*TBD*
CFS Framing from Secondary Steel Production (EAF)[4]		*TBD*	*TBD*
CFS Framing from Integrated Steel Production (BOF)[4]		*TBD*	*TBD*

For fabricated members:
Requirements apply to the primary elements and exclude the member's "piece parts", such as connection material and stiffening elements, which typically constitute less than 10% of the overall fabricated member's weight.

see next slide for table notes

Steel Recommendations

1. GWP limits shown are in dimensionless standard units (ton CO2e/ton steel or kg CO2e/kg steel). GWP limits are based on a 100-year lifetime impact (GWP-100) in accordance with the *Product Category Rule (PCR) for Designated Steel Construction Products*. **GWP limits shown are based on production-weighted averages published in industry-wide EPDs for each of the respective product categories.**

2. GWP Limits are based on cradle-to-mill-gate or cradle-to-manufacturer-gate LCA scopes, as appropriate for the particular steel product. When interpreting individual steel product EPDs, care should be taken to identify the GWP value that corresponds to the correct LCA scope. Guidance is provided at www.aisc.org/epd. When multiple scope values are present in an EPD, preference shall be given to the cradle-to-mill-gate or cradle-to-manufacturer-gate LCA scopes when evaluating compliance with the above table.

   When the cradle-to-mill-gate or cradle-to-manufacturer-gate LCA scopes are not listed explicitly in individual steel product EPDs, this is likely due to the values being reported as cradle-to-fabricator-gate LCA scopes. In that case, one may use the values listed in the column, Equivalent GWP limit converted for fabricated product. The values in this column include the effects of scrap rates, transportation to fabrication, and fabrication. Impacts for structural products are taken directly from the 3rd-party verified AISC fabrication background LCA report (February 2021) documenting a scrap rate of 7.71% (A1 multiplier), transportation (A2) of .0446 tons/ton, and fabrication (A3) of .0967 tons/ton. Impacts from reinforcing bars are from the CRSI industry-wide EPD (2022) and indicate a scrap rate of 3.0% (A1 multiplier), transportation (A2) of 0.0490 tons/ton, and fabrication (A3) of 0.0270 tons/ton.

3. HSS (Hollow Structural Sections) consisting of carbon or low-alloy steel that is cold-formed and welded (ASTM A500, A847 or A1085) in round, square and rectangular configurations.

4. The Task Force recognizes merit in separate GWP limits for secondary steel production (EAF) and integrated steel production(BOF) methods in these product categories. Once adequate data is available to accurately report GWP impacts distinguishing between EAF and BOF methods for the product category, the Task Force may develop recommendations to update one or more GWP limits for products made via secondary steel production, integrated steel production, or some combination thereof.

5. The Reinforcing Steel Bar product category includes all rebar grade ASTM A615(M), ASTM A706(M).

6. Cold-formed steel framing, also called cold-formed metal framing, includes stud, track, U-channel, furring channel, L-headers, and built-up sections using one or more of these shapes

Other Materials

Material Prioritization and Recommendations

Priority	Description	Recommendations
Tier 1	Tier 1 includes materials that are high-impact with established EPD data ecosystems. For these materials, adequate GWP data/EPDs are either available to set a limit now or it is anticipated there will be adequate data in the near future as more EPDs become available on the market.	These materials should be prioritized and included in the policy now. <u>Tier 1:</u> ● Concrete (including prefabricated products) ● Steel (including structural and rebar) ● Asphalt
Tier 2	Tier 2 includes materials that are impactful, but cannot feasibly be integrated into program requirements due to one or more of the following reasons: ● Lack of representative EPD/GWP data: ○ Not enough plant/facility-specific EPDs ○ EPDs not geographically representative ○ Data quality/variability issues ○ Underlying PCRs are currently being updated/refined or will need to be in order to produce robust, high quality EPDs ● Market-readiness, supply-chain feasibility ● Complexity in categorizing products to set limits and/or report ● Additional stakeholder/industry engagement needed ● Other roadblocks (e.g. political or industry-driven)	These materials should be actively tracked and added to the policy once all of the feasibility items listed in the Tier 2 description have been addressed. <u>Tier 2:</u> ● Glass ● Aluminum ● Insulation
Tier 3	Tier 3 includes materials that might be impactful, but more market/industry development is needed and/or additional research must be conducted to assess the potential carbon reduction impacts relative to higher priority materials.	These materials should be tracked and moved to Tier 2 once there is more market development or research to demonstrate significant carbon reduction potential. <u>Tier 3:</u> ● Wood (including dimensional lumber and engineered wood) ● Gypsum board ● Membranes (including but not limited to roofing materials) ● Sealants, Emulsions, Paints ● Plastics (HDPE/pipe)

Next Steps

Next Steps

- Final 2025 Legislative Report due Dec. 1, 2025
- Jan. 15, 2026 - Commissioner sets limits
- Spring 2026 - Task Force Meeting TBD - stay tuned
- 2026 and beyond…
  - Re-evaluate EPD data and limit-setting for Tier 1 materials
    - Precast Concrete, CMU, Concrete Paving
    - Asphalt Paving
    - CFMF, Structural Steel
  - Re-evaluate Tier 2 materials
    - Glass
    - Insulation
    - Aluminum

Task Force Timeline

2023 October 1 - Task Force established

2024

- February - EC Context: Concrete and Asphalt
- March - EC Context: Steel, Rebar and Other Materials
- April and May - Bidding and Procurement
- July 1 - Pilot Program to estimate Global Warming Potential (GWP) from vendors on projects
- Summer/Fall - Material WGs and Pilot Program WG
- Oct 23 - ESPTF Mtg#6: Concrete and Asphalt WG Report Outs
- Nov 20 - ESPTF Mtg#7: Steel and Rebar WG Report Out
- Dec 18 - ESPTF Mtg#8: Pilot Program and Other Materials WG

2025

- March 19, 2025 - Mtg#9: Task Force Recommendations
- May 8, 2025 - Draft Report sent to Task Force for comment
- Spring - Draft Report, Select Grant Awardees & Distribute Funds
- Summer/Fall - Draft Report Staff Reviews and Revisions
- October 8 - Mtg#10: Task Force Recommendations & Legislative Report Discussion
- December 1 - Report to the Legislature

2026

- January 15 (no later than) - Establish a maximum Global Warming Potential (GWP) for concrete used in buildings
- Spring - Potential Task Force Meeting (TBD)
- December 1 - Report to the Legislature

2027

- December 1 - Report to the Legislature

2028

- January 15 (no later than) - Establish a maximum Global Warming Potential (GWP) for carbon steel rebar and structural steel and, after conferring with the commissioner of transportation, for asphalt paving mixtures and concrete pavement
- December 1 - Report to the Legislature

2029

- January 1 - Task Force ends

Member Discussion and Questions

Public Comments and Questions