



COLORADO
Department of Transportation

HB 21-1303 - CDOT Status Update

EPD Workshop
August 16, 2022



Introduction

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 - Initial Focus bid items
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Key Team Members

- CDOT Members

- Keith Stefanik
- Andy Karsian
- Craig Wieden
- Hailey Goodale



- Consultant/SME

- Bill Schiebel - Rocksol
- Joep Meijer - The Right Environment Ltd.



- FHWA

- Brian Dabling

- Academia/Research

- Christopher Senseney/Michael Seamon - CU Boulder





HB 21-1303 Recap

- HB 21-1303 was passed in July 2021 and incorporated into CRS Statutes 24-91-117/118. <https://leg.colorado.gov/bills/hb21-1303>
- Section 118 requires CDOT to begin collecting Environmental Product Declarations (EPD's) on eligible materials including:
 - Asphalt and Asphalt Mixtures; Cement and Concrete; Steel
- EPD Data collection to begin for eligible materials on eligible projects advertised after July 1, 2022
 - Projects requiring EPD collection will contain the Standard Special Provision - Revision of Sections 101 and 106 - Environmental Product Declarations
- CDOT will then use these EPDs to develop a policy by January 1, 2025, that will establish a maximum Global Warming Potential (GWP) for each eligible material, with an overall intent of reducing GWP in the future.



Key Terms

The Guidelines

Product Category Rule (PCR)

“Set of specific rules, requirements, and guidelines for developing Type III environmental product declarations for one or more categories” (ISO 14025)



The Analysis

Life Cycle Assessment (LCA)

“A compilation and evaluation of the inputs, outputs, and potential environmental impacts of a product system throughout its life cycle.” (ISO 14040)



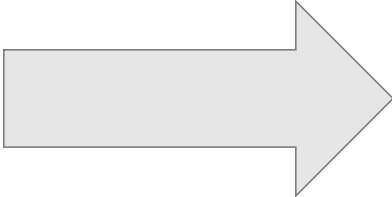
The Communication

Environmental Product Declaration (EPD)

“Providing quantified environmental data using predetermined parameters and, where relevant, additional environmental information” (ISO 14025)



Analyses Process Overview/Results

- Eligible CDOT Bid Items
 - 95th Percentile Item Expenditure Analysis
 - Project Level Expenditure Analysis
 - Five Major Items Analysis
 - Focus EPD Bid Item Collection Items
 - Project Cost Limit Evaluation
 - Item Quantity / Cost Limits Evaluation
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- 13 Focus Bid Items
 - Projects > \$3M
 - Quantity Exceptions



What are the 13 Focus Bid Items?

- 13 Focus Bid Items include:
 - Item 206 - Structure Backfill
 - Item 310 - Hydraulic Cement
 - Item 403 - Asphalt Mixtures (HMA/SMA/WMA)
 - Item 412 - Portland Cement Concrete Pavement
 - Item 503 - Drilled Shafts
 - Item 504 - Retaining Walls*
 - Item 601 - Structural Concrete (all classes)
 - Item 602 - Reinforcing Steel
 - Item 604 - Inlets / Drainage Structures*
 - Item 606 - Guardrail/Bridgerail*
 - Item 608 - Sidewalk/Bikeway (concrete/asphalt)
 - Item 609 - Curb and Gutter (concrete)
 - Item 610 - Median Cover Material (concrete/asphalt)

*Initial EPD collection on cast-in-place elements (concrete and reinforcing steel) only.



Industry Readiness / Iterative Growth

- Most North American EPD processes to date have centered around Buildings/LEED
- Current Industry PCR/EPD Readiness
 - Focus initial collection with July 1 Specification on those ready to go now
 - Hot Mix Asphalt Producers/Suppliers
 - Concrete - Ready Mix Suppliers and Concrete Paving Companies
 - Steel - Reinforcing Steel
- Iterative Growth - Year 2 and Year 3 EPD's
 - Outreach and Education to Industry Stakeholders
 - Local and National Level



Current Progress/Next Steps

- Specification Development - complete - on several eligible projects.
- Protocol Document (Appendix O in the Field Materials Manual) - complete, and published in the 2023 FMM.
- Initial Industry Stakeholder Coordination - complete, meetings held with asphalt, concrete, steel and CCA.
- EPD Submittal Form - complete, initial submittals - google form while we work with OIT to develop a process for submittal/storage using OnBase.
- Reporting - Initial EPD data will be stored in a spreadsheet and will require manual reporting. OnBase has customizable reporting functions that we plan to use in the future.
- Construction Bulletin, EPD Bid Item Tool, EPD website - Complete



Other completed elements

- Update to PDAC on the new EPD requirement June 8th.
- Construction Bulletin to be issued with link to relevant items.
- CDOT EPD Website Development



DRAFT Specification/Protocol Document

- Specification

Specification

- Protocol Document - Appendix O - 2023 Field Materials Manual

Protocol Document



Planned EPD Growth

- PCR/Industry Readiness
- Planned Iterative Growth
 - Precast concrete
 - drainage
 - structural/prestress
 - Structural Steel
 - Cold rolled steel
 - guardrail
 - corrugated metal pipe



Summary/Questions

- Initial EPD Collection to start on projects advertised after July 1, 2022 will include:
 - Projects over \$3 Million Total Cost (engineers estimate of bid items only)
 - Asphalt
 - Concrete
 - Reinforcing Steel
 - Small quantity limits
- Future Iterative program growth with industry development and maturity (July 2023)
- Questions on Initial EPD Data Collection Plan?