

ALDOT-402
MSE Wall Systems
Procedure for Approval

1. SCOPE

1.1 This procedure establishes the guidelines by which the manufacturer of a Mechanically Stabilized Earth (MSE) Wall System shall submit his product to Alabama Department of Transportation (ALDOT) for approval of the wall system.

- This wall system shall be a permanent wall. No temporary wall systems will be allowed.
- No MSE wall systems will be allowed for bridge loading situations.
- This wall system shall have a design life of 75 years

1.2 The approved MSE Wall System will be included into the Department's Materials, Sources, and Devices with Special Acceptance Requirements (MSDSAR List II-22) found on the Department's website at www.dot.state.al.us. The wall system will need to be approved by ALDOT prior to being used on ALDOT projects. Approval of one wall system does not constitute approval of another wall system being marketed by the same proprietor. Placement of the wall system on the MSDSAR list does not constitute a commitment or agreement by ALDOT to use the wall system on any ALDOT project.

1.3 A proprietor whose name and/or product does not appear on the current MSDSAR List II-22 may not bid on a project being advertised where construction includes a MSE Wall System.

2. DEFINITION

2.1 A MSE Wall System is defined as a soil-retaining system, employing either strip or grid-type, metallic, or polymeric tensile reinforcements in the soil mass, and a facing element that is either vertical or nearly vertical; as defined by *AASHTO LRFD Bridge Design Specifications, 8th Edition, November 2017*.

3. SYSTEM APPROVAL PROCESS

3.1 The MSE Wall System proprietor shall furnish their submittal to ALDOT by choosing one of the following two options:

- Option I:

A system evaluation final report prepared by Federal Highway Administration's (FHWA) Highway Innovations, Developments, Enhancements, and Advancements (IDEA) program. Contact Daniel Alzamora at daniel.alzamora@dot.gov for information on the IDEA process. Submittal of a IDEA report does not release the proprietor from further submittals as deemed necessary by ALDOT.

- Option II:

Submittal of all documentation of approvals and reviews from two other State DOT offices which have equivalent approval procedures as Option I described above.

Regardless of the option the Proprietor chooses for a wall system submittal, ALDOT reserves the right to request additional information regarding both technical and/or non-technical aspects of the wall system as deemed necessary for review and approval. Any third-party reviewer may also require additional information for their review and approval.

The Department shall have 90 days after receipt of all documents to review and provide written notification of approval or disapproval. In some instances, a wall system may be given conditional approval.

4. APPLICABLE DOCUMENTS

4.1 The MSE Wall System shall meet the design and construction requirements of the following specifications and manuals, where applicable:

- *AASHTO LRFD Bridge Design Specifications, latest edition, with interims*
- *FHWA-NHI-05-046, Earth Retaining Structures*
- *FHWA-SA-96-038 GEC 2, Earth Retaining Systems*
- *FHWA-NHI-10-024 GEC 011 – Volume I*
- *FHWA-NHI-10-025 GEC 011 – Volume II*
- *ALDOT Standard Specifications for Highway Construction, Section 529 Retaining Wall, latest edition*
- *ALDOT MSDSAR List I-8: Precast Concrete Items*
- *ALDOT MSDSAR List II-3: Geotextiles*

5. RENEWAL AND TIME LIMITATIONS

- 5.1 Upon any changes in the approved wall system materials, design, construction specifications, or technology; it shall be the responsibility of the Proprietor to submit these changes to IDEA and the Department for review and approval. The Department shall have 30 days after receipt of all documents to review and provide written notification of approval or disapproval. In some instances, a wall system may be given conditional approval.

6. STEPS FOR SUBMITTAL

1. Submit a “New Product Evaluation Application Form” found at <https://www.dot.state.al.us/rdweb/pdf/NewProductEvaluationForm.pdf>.
2. Attach to the above application the documentation required from Option I or Option II.
 - i. Submit the above two items to Ernest Colvin, P.E. – Assistant Research and Development Engineer. Mr. Ernest’s contact information can be found on the form listed in item 1 above.
3. The Department will conduct their review.
4. A letter of approval or disapproval will be delivered to the Proprietor.