ILLINOIS AGENCY OF TRANSPORTATION
SUPPLEMENTAL REQUIREMENTS[i]

Introduction

The Illinois Department of Transportation (IDOT) maintains qualified products lists (QPL) of approved proprietary retaining wall systems. There are three prequalifed lists: Mechanically Stabilized Earth Retaining Wall Systems; Precast Modular Retaining Wall Systems; and Temporary Mechanically Stabilized Earth Retaining Wall Systems. These lists are available on the IDOT website, under Bureau of Bridges and Structures, at https://idot.illinois.gov/Assets/uploads/files/Doing-Business/Specialty-Lists/Highways/Materials/Materials-&-Physical-Research/indexQPLs.pdf. Retaining wall vendor submittal requirements for requesting approval are stated, in each of these three documents, following the prequalified list. The submittal requirements are similar for all three types of wall systems.

The bulk of the items listed under the respective IDOT Submittal Requirement for Evaluation and Pre-Qualification are contained in an IDEA wall system evaluation report. However, there are some additional requested, which are not listed on the IDEA protocols (available at https://www.geoinstitute.org/special-projects/idea). A retaining wall supplier with an IDEA report should supplement their report with the additional, specific items that IDOT requires listed below; in an evaluation and pre-qualification submittal.

IDOT should contact the IDEA webmaster and update their report when their policies, etc. change. This supplemental requirements report is readily updateable, and a revision number and date should be noted.

Information that is identical to, and therefore redundant to, IDEA protocol listed items is not listed in this supplemental requirements report. However, items under a topic that the agency requests which are more specific or detailed than the IDEA protocol are listed. The wall system supplier submittal may address this in their supplemental information or, if fully addressed in their IDEA submittal, refer to their IDEA report.

Supplement Items

- A set of example typical shop drawing, notes, and plan details.
- Example design computations for the wall design and the soil reinforcement embed/facing connections, sealed by an Illinois Licensed Structural Engineer and in accordance with the latest AASHTO LRFD Bridge Design Specifications and applicable (to system type) subsections of Section 522 Retaining Walls of the IDOT Standard Specifications. As a minimum, the following should be addressed.
    - For Mechanically Stabilized Earth Retaining Wall Systems:
        - Corrosion reduction calculations or Geosynthetic reductions.
        - Pullout capacity calculations for all soil reinforcement types.

        - If a computer program will be provided as calculations, explanation of how each value is determined must be provided with an example computer printout.
        - Reinforcement maximum stress calculations.
        - Seismic design.
        - Bearing pressure calculations.
        - All materials design stress assumptions.
        - Any design limitations such as maximum wall height, etc.
    - For Temporary Mechanically Stabilized Earth Retaining Wall Systems:
        - Corrosion reduction calculations or geosynthetic reductions.
        - Pullout capacity calculations for all soil reinforcement types.
        - If a computer program will be provided as calculations, explanation of how each value is determined must be provided with an example computer printout.
        - Reinforcement maximum stress calculations.
        - Bearing pressure calculations.
        - All materials design stress assumptions.
        - Any design limitations such as maximum wall height, etc.
    - For Precast Modular Retaining Wall Systems:
        - Corrosion reduction calculations or geosynthetic reductions (if applicable).
        - Pullout capacity calculations for all soil reinforcement types (if applicable).
        - If a computer program will be provided as calculations, explanation of how each value is determined must be provided with an example computer printout.
        - Reinforcement maximum stress calculations (if applicable).
        - Seismic design.
        - Overturning and eccentricity calculations at each level.
        - Bearing pressure calculations.
        - Any design limitations such as maximum wall height, maximum unit size, etc.

- A signed Acknowledgement by Company, BMPR 101 form (https://idot.illinois.gov/home/resources/Forms-Folder/m).

Also note that to complete your pre-qualification process the fabrication plant(s) you propose to utilize to supply your precast product needs to be approved by the Bureau of Materials.

[i] Report Ver 1, June 2021.