**Mechanically Stabilized Earth (MSE) Retaining Wall System**

- **Top of Wall**: The top of the wall shall be adjusted as necessary to fit the ground slope and the top of the wall shall be shown on the plans.

- **Coping Joints**: Coping shall be required on this structure. When CIP coping sections extend beyond the limits of the design, the contractor shall determine the maximum dry density (relative density) in accordance with ASTM D4252 (T99) and AASHTO and assume percent passing the 200 mesh for optimum water content.

- **Allowable Bearing Pressure**: The maximum applied bearing pressure for the controlling design case at the foundation level shall be shown on the shop drawings and shall be less than the allowable bearing pressure for foundation ground provided herein. For seismic design the maximum applied bearing pressure shall be less than 1.5 times the allowable bearing pressure for foundation ground provided herein.

- **Design Loading**: The design loading includes the dead load of the wall system and any soil loading. The design loading is given to the subsurface data and investigations depicted on the plan sheets than those available from the district or any other factual records of conditions to be encountered in basing its bid and contract price for constructing this project. A schedule of work accurately depicts the subsurface data and investigations performed by the department for the design of the project on which the construction or performance of the project. Soil reinforcement shall be performed by the department for the design of the project, are warranted, which the contractor documentation not expressly warranted by virtue of the contract documents.

- **Design Specifications**: The MSE wall system shall be built in accordance with Sec 720. For improved foundation ground, the allowable bearing pressure is__ ksf. Allowable bearing pressure and limits of improved foundation ground shall not be adjusted from that as shown on the plans.

**General Notes**:

- **Design Loadings**: For seismic design the factor of safety shall be 1.5 for overturning and 1.5 for sliding.

**Boring Data Notice and Disclaimer**: The contractor shall be solely responsible for coordinating construction of the MSE wall system in accordance with the shop drawings. The boring data shall be adjusted as necessary to fit the ground slope and the top of the wall shall be adjusted as necessary to fit the ground slope and the top of the wall shall be shown on Sheet(s) No. _ and may be shown on the shop drawings. When backfill material is too coarse to develop a proctor curve, the contractor shall determine the maximum dry density (relative density) in accordance with ASTM D4253 and AASHTO and assume percent passing the 200 mesh for optimum water content.

**MSE Wall Systems Data Table**:

- **Manufacturer**: The MSE wall system shall be built in accordance with Sec 720.

**Ground Improvements**:

- **Gravel Base**: The gravel base shall be constructed of gradation as described in the shop drawings. When backfill material is too coarse to develop a proctor curve, the contractor shall determine the maximum dry density (relative density) in accordance with ASTM D4253 and AASHTO and assume percent passing the 200 mesh for optimum water content.

**Locating Sketch**:

- **Concrete Lining Pad**: Concrete lining pad not shown for clarity.

- **Proprietary Wall Systems**:

- **Manufacturer**: The MSE wall system shall be built in accordance with Sec 720.

**Estimated Quantities**:

- **Materials**: The MSE wall system shall be built in accordance with Sec 720.

**MSE Wall Systems Data Table**:

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSE Wall Systems Data Table</td>
<td>2002 AASHTO (1st Ed.) Standard Specifications (Section 5 ASD Design)</td>
</tr>
<tr>
<td>Section</td>
<td>Type</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>System</td>
</tr>
</tbody>
</table>

**Note**: This drawing is not to scale. Follow dimensions.
NOTES TO ROADWAY AND BRIDGE DESIGNERS:

Excavation classes, quantities and pay items are the responsibility of District Design Division for including on the roadway 2B quantity sheets which is noted on the MSEW plans and required in accordance with Sec 720. All other quantities are the responsibility of the division responsible for the MSE wall plans.

If rock is not known to exist from a geotechnical report or study, place the following note on the plans:

"If rock is encountered in the proposed reinforced backfill area or wedge area of the MSE wall before or during excavation, the contractor shall immediately cease excavating and notify the engineer."

Otherwise, if rock is known to exist and it is to be excavated, then do not place above note on plans and determine the excavation class and estimate a rock quantity. Per all Bridge Division MSE walls, Bridge Division and District Design Division shall coordinate in estimating excavation quantities when rock is known to exist from the geotechnical report.

Excavation shall be used as part of the wall backfill or excavated for MSE wall construction.

Standard Drawing Guidance (do not shown on plans):

Revise notes and details per project as necessary.

Proposed grade & theoretical top of leveling pad elevation shall be shown in constant slope. Slope line shall be adjusted per project. The wall or coping elevation & stationing shall be shown in the developed elevation per project. Sample wall shown. Draw actual wall in elevation and plan per project.

Show the minimum embedment = maximum (2 feet; embedment required) based on Geotechnical Report and geotechnical design requirements.

Show the theoretical top of leveling pad elevation on the plan based on minimum embedment requirements. Minimum embedment shall be provided in accordance with FHWA-NHI-10-024, Table 2-2.

The allowable bearing pressure and an angle of internal friction, $\phi$, for unimproved and improved ground where rock is to be used as part of the wall backfill or excavated for MSE wall construction.

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