CROSS SECTION THRU ABUTMENT  
at MSE WALL  

**DESIGNER NOTES**

Due to maintenance concerns, MSE walls should not be used for the singular purpose of reducing span lengths. If the grade line cannot be raised, then MSE walls may be used to maintain the superstructure height. Other circumstances may also justify the use of MSE walls at abutments.

**FALL PROTECTION**

Semi-expansion MSE walls are used for fall protection. The option provided should be based on the preference of the bridge maintenance and region project staff. If pipe railing is used, see Section 30.26 for applicable notes. (Note: 30.26 is still under development.) "SLOPE PAVING CONCRETE" items to be shown as part of bridge plan. Bid item shall be "Abutment Anchorage" under development.

**NOTES**

- Superstructure lateral loads transferred to MSE walls are taken to be 15% of the load length. The loads are to be used for the design of the MSE wall. The loads shall be used for the MSE wall, and the following values are noted on plans:
  - 15% of the superstructure lateral loads transferred to the MSE wall.
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**GROUND CONSTRUCTION**

- The design of the MSE wall shall include the horizontal earth loads and 240 psf live load surcharge acting on the back of the MSE wall or abutment
- Expansion anchors to be secured to a minimum of the beam seat elevation prior to placing concrete.

**REINFORCEMENT**

- All MSE walls shall include reinforcement as shown on the plans and standards.

**MSE WALL AT ABUTMENT**

Approved: Bill Oliva  
Date: 1-18

**STANDARD 14.04**

**PARTIAL ELEVATION OF F.F. ABUTMENT**

**SHOWING EYE BOLT FALL PROTECTION OPTION**

RETURN WALL NOT SHOWN

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**CROSS SECTION THRU ABUTMENT**

**AT MSE WALL**

**EXPANSION ANCHOR**

**SAND CEMENT MORTAR**

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**CROSS SECTION THRU ABUTMENT**

**AT MSE WALL SHOWING BOTH EYE BOLT AND RAILING FALL PROTECTION OPTIONS**

**TYPE A1 SEMI-EXPANSION ABUTMENT**
**MSE WALL WIRE FACING 1**

**BUREAU OF STRUCTURES**

**Approved:** Bill Oliva

**Date:** 1-19

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**WALL PANEL ANCHOR DETAIL**

CAST-IN-PLACE CONCRETE COPING SHOWN

CAST-IN-PLACE CONCRETE TRAFFIC BARRIER SIMILAR

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**TYPICAL WALL SECTION WITH CAST-IN-PLACE CONCRETE COPING**

SEE TYPICAL WALL SECTION WITH CAST-IN-PLACE CONCRETE TRAFFIC BARRIER FOR ADDITIONAL INFORMATION

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**MSE WALL WIRE FACING I**

**FRP METAL SCREEN**

CONCRETE

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**LEGEND**

- CONTRACTOR TO DESIGN LAYOUT TO PROVIDE REQUIRED HORIZONTAL CLEARANCE OF WORKER ACCESS, MOUNT OF POSTS, AND PLACING OF REINFORCEMENT APPLIED TO THE DEADMAN ANCHOR MUST BE ACCOUNTED FOR WITHIN THE DESIGNER NO. TO FACILITATE SETTLEMENT OF THE WIRE FACING MSE WALL.
- ALL ASSOCIATED REINFORCEMENT ARE INCLUDED IN THE BID ITEM

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**NOTES**

- CLEARLY SHOW ALL WIRE FACING BARS AND CONNECTIONS TO PROVIDE CLEAR VIEW OF MOUNT OF POSTS AND DESIGNER NOTATION.
- CLEAR TO BE INSTALLED TOWARDS THE TOP OF THE SLOTTED HOLE, 1" ROD TO BE 2'-0" BELOW TOP OF REINFORCED SOIL ZONE.
- CAPACITY OF ANCHOR ASSEMBLY. MINIMUM OF 3'-0" OF COMPACTED MSE BACKFILL TO BE PROVIDED FOR HORizontAL ALIGNMENT AT THE CONNECTION.
- TURNBUCKLE TO BE CORROSION RESISTANT AND DEVELOP 125% OF CAPACITY OF ANCHOR ASSEMBLY.

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**DESIGNER NOTES**

- APROVED WALL PANEL APPROVAL

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**MATERIAL PROPERTIES**

CONCRETE MASONRY RETAINING WALLS:

- PRESTRESSED PRECAST CONCRETE WALL PANEL
  - PC = 3,500 PSI
  - PC = 5,000 PSI

BAR STEEL REINFORCEMENT:

- GRADE 60
  - fy = 60,000 PSI
  - f'c = 3,500 PSI

- GRADE 60
  - fy = 36,000 PSI
  - f'c = 5,000 PSI

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**CONTRACTOR'S NOTES**

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