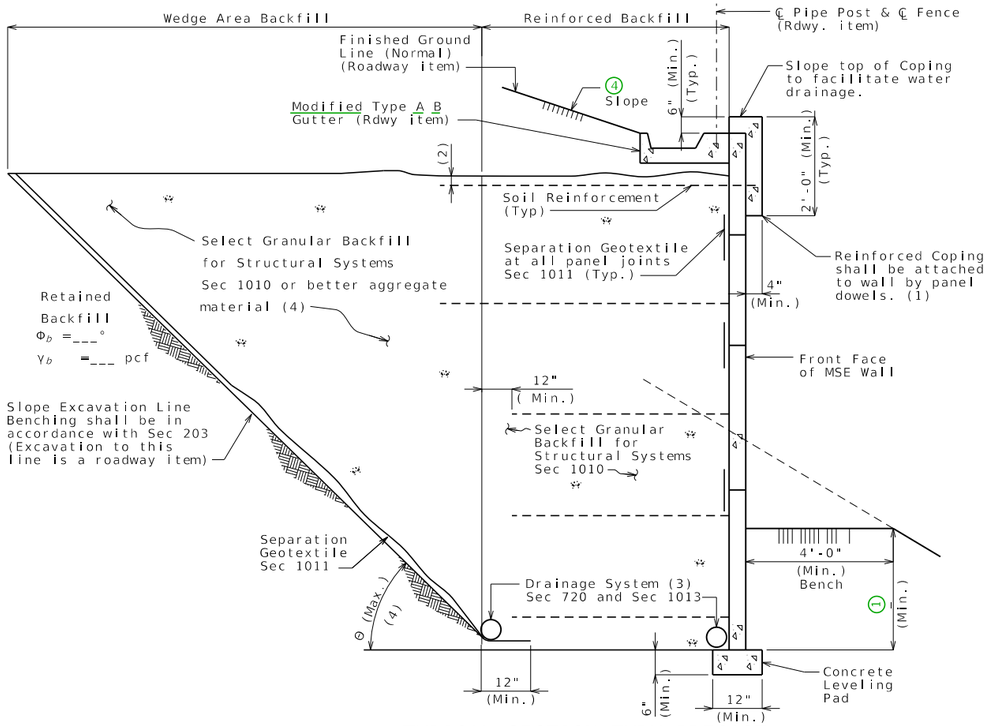
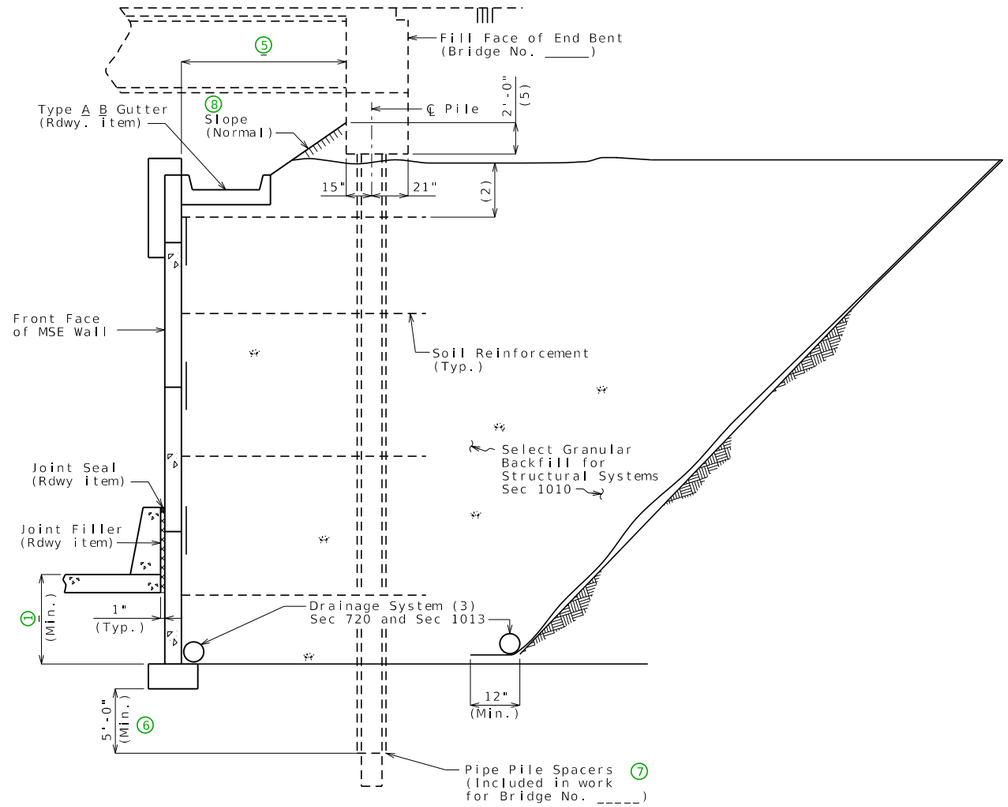
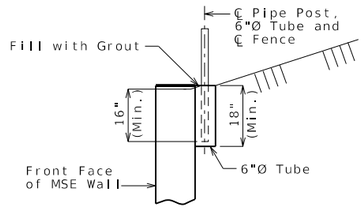


TYPICAL SECTION THRU PRECAST MODULAR PANEL WALL (GENERAL)



TYPICAL SECTION THRU PRECAST MODULAR PANEL WALL UNDER BRIDGE

Note: For additional information, see Typical Section Thru Precast Modular Panel Wall (General).



FENCE POST CONNECTION BEHIND WALL (WITHOUT GUTTER)

(4) Select granular backfill shall extend a minimum of 12" beyond the end of all soil reinforcement. Where the angle, Θ, between the retained backfill excavation/fill line and the horizontal is less than 90°, the wedge area backfill between Θ and 90° shall be filled with select granular backfill for structural systems meeting the requirements of Section 1010.

- For 45° < Θ ≤ 90°, properties for retained backfill shall be used for active force computations.

- For Θ ≤ 45°, contractor shall have the option to use select granular backfill, Φ_r, or better aggregate material for active force computations in the wedge area backfill. For active force computations, the angle of internal friction for wedge area backfill material, Φ_r, shall be limited to 34° unless determined otherwise in accordance with Section 1010. If Φ_r > 34° is desired for wedge area backfill then test report shall be submitted with manufacturer's design plans. Φ_r shall not be greater than 40°. Final configuration of this option shall be sent to Geotechnical Section for a new overall global stability analysis. Design Φ_r° shall be shown on manufacturer's plans if used.

The slope excavation line shall be benched and separation geotextile shall be placed between the retained backfill and either select granular backfill or better aggregate material, and between the select granular backfill and better aggregate material.

Show range of acceptable theta (Θ) angle on shop drawings which must be consistent with design computations and proposed construction of wall. Show active force computation properties ($\Phi° = \Phi_r°$ and $\gamma = \gamma_r$ or $\Phi° = \Phi_b°$ and $\gamma = \gamma_b$) on shop drawings and in design computations. Coordination between wall designer (manufacturer) and contractor is required before shop drawing submittal.

3

Material Properties Used in Design						
Reinf. Fill/Select Granular Backfill			Active Force Computations			Foundation
Φ_r°	γ_r (pcf)		Φ°	γ (pcf)		Φ_r°

MSE Wall designer shall include table on shop drawings and provide values used in the design computations. Effects of cohesion shall be ignored unless approved by the engineer.

(1) Inverted U-shape reinforced capstone may be used in lieu of coping. Panel dowels for level-up concrete shall be required, and provided by manufacturer. The dowels shall be field trimmed to clear the capstone by a minumum of 1 1/2 inches and a maximum of 2 1/2 inches.

(2) Topmost layer of reinforcement shall be fully covered with select granular backfill for structural systems, as approved by the wall manufacturer, before placement of the Separation Geotextile.

(3) Minimum 2 diameter perforated PVC or PE pipe.

Manufacturer shall show drain details on design plans to be submitted as shown on MoDOT MSE wall plans and/or roadway plans.

Contractor shall modify the drain details as shown if it will improve flow as may be the case for stepped leveling pad, and for an uneven ground line (approval of the engineer required).

(5) See bridge plans.

DETAILS FOR GENERIC MSE WALL

Detailed
Checked

Note: This drawing is not to scale. Follow dimensions.

Sheet No. of

DATE PREPARED 7/26/2024
ROUTE STATE MO
DISTRICT BR SHEET NO. 000
COUNTY
JOB NO.
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
(1-888-275-6636)
1-888-ASK-MODOT (1-888-275-6636)

Standard Drawing Guidance (do not show on plans):

Revise notes and details per project as necessary.

For Modified Type A and Type B Gutter and Fence Post Connection details, see Missouri Standard Plans No. 607.11.

For Type A & Type B Gutter information, see Missouri Standard Plans No. 609.00.

See EPG 751.24.2.1 for drainage guidance.

1. Show the minimum embedment = maximum (2 feet; embedment based on Geotechnical Report and global stability requirements; and FHWA-NHI-10-024, Table 2-2); or according to Geotechnical Report if it shows that rock is known to exist.

2. District Design Division to verify 6" diameter pipe or increase diameter. Minimum pipe diameter shall be 6".

3. Do not show values in the plan details. MSE wall designer shall include this table on shop drawings and provide values used in the design computations.

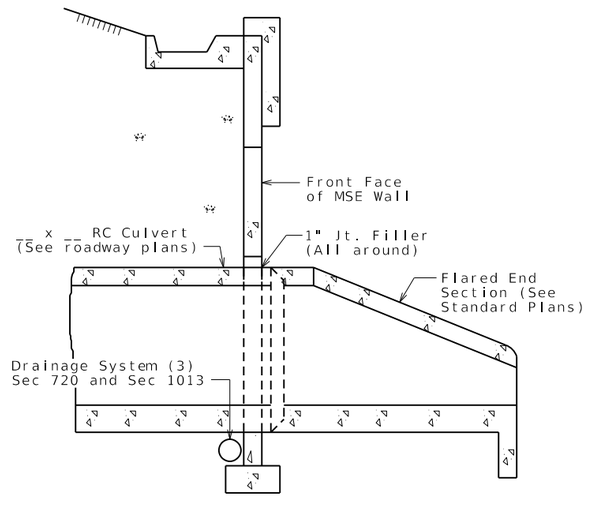
4. Show H:V fill slope or "Varies"

5. For bridge lengths less than or equal to 200 feet, use 4'-6" minimum setback which is based on the use of 18" inside diameter pipe pile spacers and FHWA-NHI-10-024, Figure 5-17C. For larger than 18" diameter pipe pile spacers, increase clear space between MSE wall & front face of the end bent beam such that no soil reinforcement is skewed more than 15°.
   For bridge lengths greater than 200 feet, use 5'-6" minimum setback which is based on the use of 24" inside diameter pipe pile spacers.

6. When rock is anticipated within 5 feet below the MSE wall leveling pad, embed pipe pile spacers at least 12" into rock and bear pile on the rock.

7. For bridge length less than or equal to 200 feet, add "(See special provisions)".
   For bridge length greater than 200 feet, add pipe diameter.

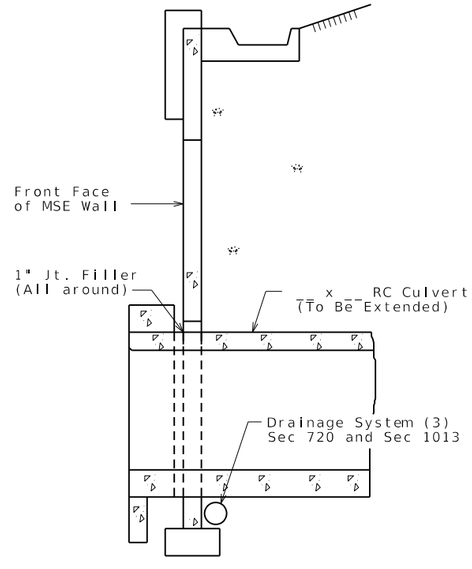
8. For walls parallel to abutment, provide actual slope H:V. Otherwise, replace leadered note with "Varies (5)".



TYPICAL SECTION THRU PRECAST MODULAR PANEL WALL AT CULVERT

Vertical joint in MSE wall shall be located at each exterior culvert wall.

(New Culvert)



TYPICAL SECTION THRU PRECAST MODULAR PANEL WALL AT CULVERT

Note: Vertical joint in MSE wall shall be located at each exterior culvert wall.

(Culvert Extension)