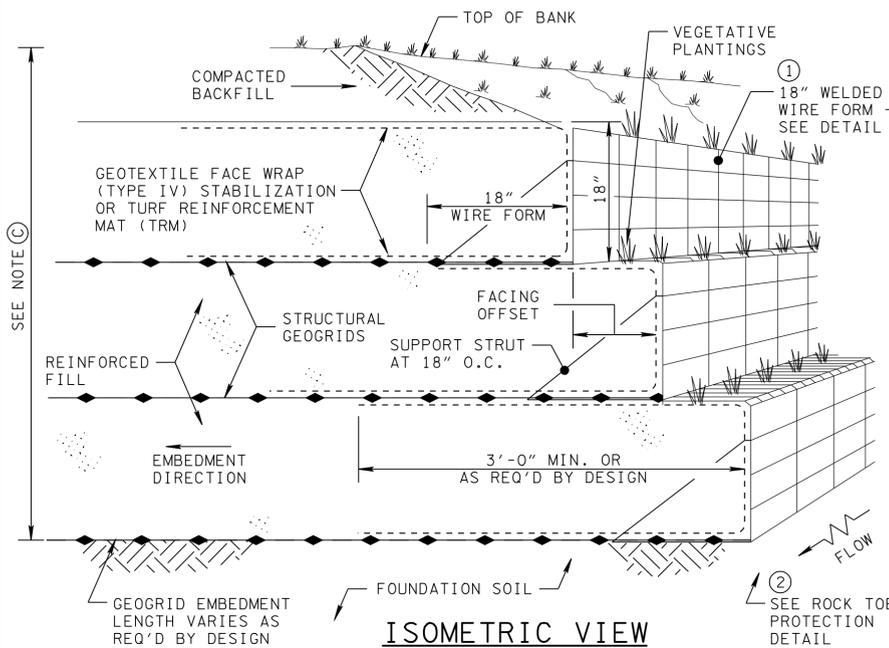


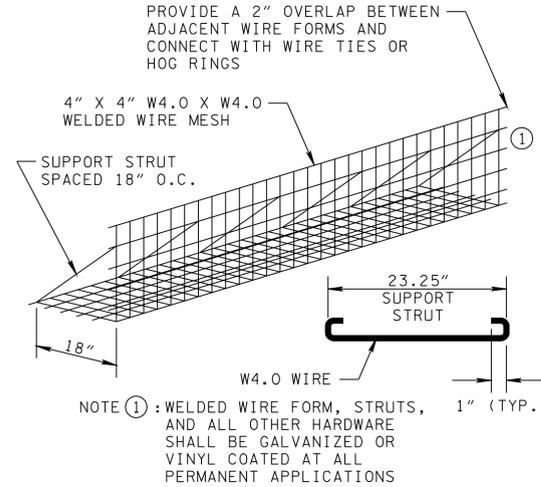
**SECTION VIEW
WRAPPED SOIL GEOTEXTILE WALL**



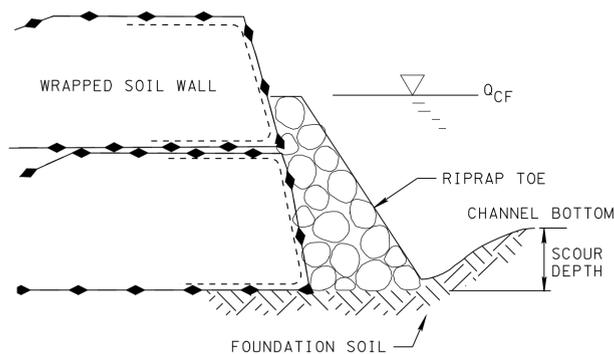
**ISOMETRIC VIEW
WRAPPED SOIL WELDED WIRE WALL
STEP FACE EXAMPLE**

NOTE: STEPPED WALL SHOWN - MAY BE STEPPED, VERTICAL OR SLOPING FACE. MATERIALS AND DIMENSIONS TYPICAL AND MAY VARY PER INDIVIDUAL DESIGNS.

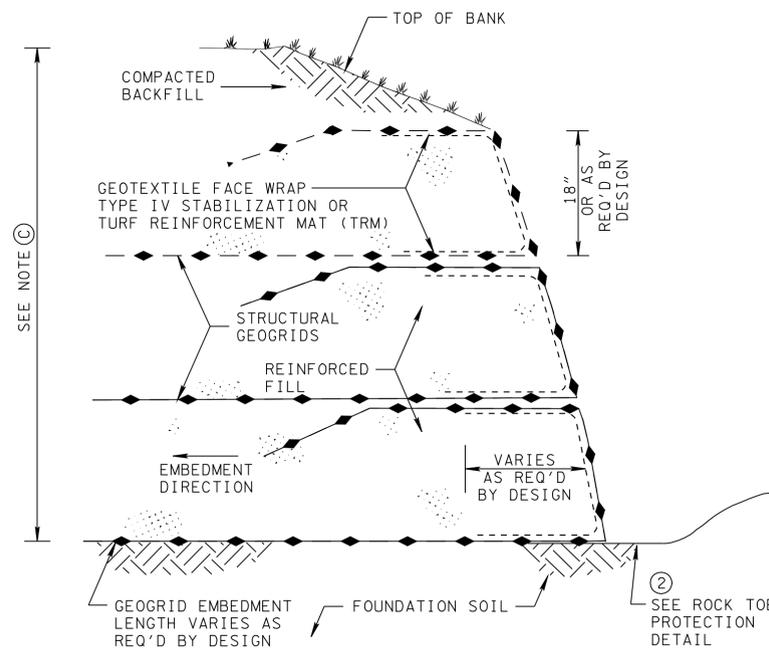
STREAM MITIGATION PLAN LEGEND: — VMSE — VMSE — VMSE —



WELDED WIRE FORM DETAIL

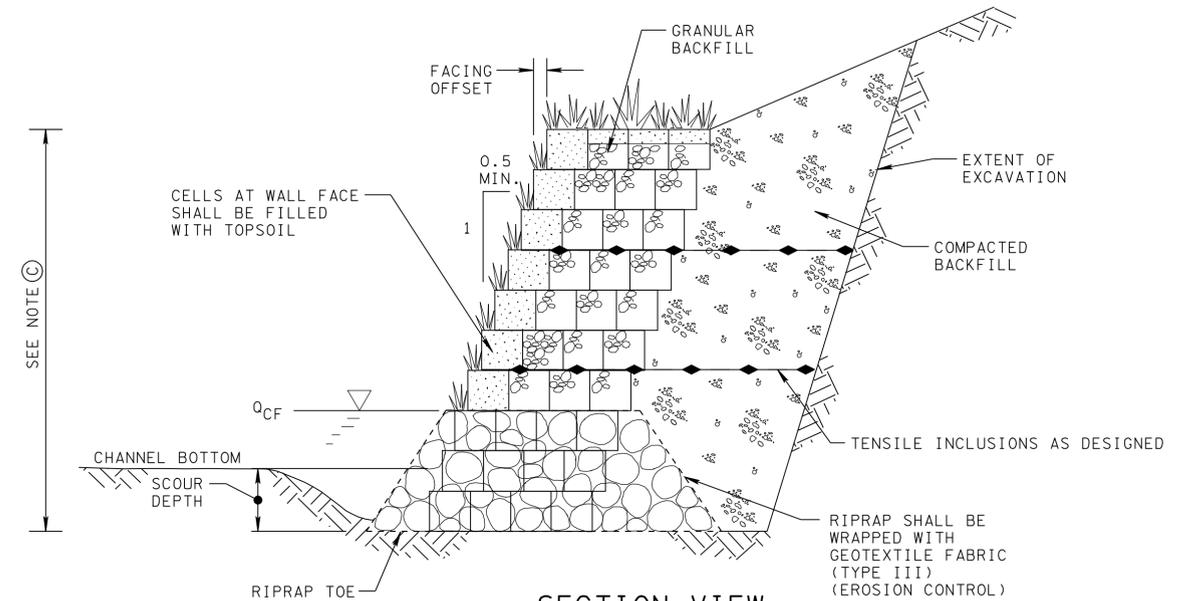


ROCK TOE PROTECTION DETAIL



**SECTION VIEW
WRAPPED SOIL GEOGRID WALL
SLOPING FACE EXAMPLE**

NOTE: SLOPING WALL SHOWN - MAY BE STEPPED, OR SLOPING FACE. MATERIALS AND DIMENSIONS TYPICAL AND MAY VARY PER INDIVIDUAL DESIGNS.



**SECTION VIEW
SOIL REINFORCED GEOCELLULAR WALL**

NOTE: MATERIALS AND DIMENSIONS TYPICAL AND MAY VARY PER INDIVIDUAL DESIGNS.

VEGETATED MSE WALLS GENERAL NOTES

- (A) VEGETATED MECHANICAL STABILIZED EARTH (MSE) WALLS MAY BE USED FOR STREAM SLOPE STABILIZATION WHERE HORIZONTAL CONSTRAINTS SUCH AS THE ROADWAY ITSELF OR RIGHT-OF-WAY LIMITS LEAVE LITTLE ROOM FOR A SLOPING CHANNEL BANK. VEGETATED MSE WALLS INCORPORATE VEGETATION TO PROVIDE HABITAT VALUES SUCH AS SHADING AND TO PROVIDE A MORE NATURAL AESTHETIC. THE VEGETATION CAN ALSO ASSIST IN PREVENTING EROSION AT THE FACE OF THE WALL.
- (B) A VEGETATED MSE WALL IS A COMPLEX STRUCTURE WHICH WILL REQUIRE SPECIALIZED DESIGN. VEGETATED MSE WALLS SHALL BE DESIGNED IN ACCORDANCE WITH TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE CURRENT AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES WITH INTERIMS. EXAMPLES DEPICTED ON THIS SHEET ARE REPRESENTATIVE OF TYPICAL APPLICATIONS. VEGETATED MSE WALLS SHALL BE INDIVIDUALLY DESIGNED ON A CASE-BY-CASE BASIS.
- (C) MSE WALL DESIGN INCLUDING WALL HEIGHT AND LENGTH AND SPACING OF TENSILE INCLUSIONS SHALL BE COORDINATED WITH THE GEOTECHNICAL ENGINEERING SECTION. TYPICAL WALL HEIGHTS ARE UP TO 10 FT. WALL HEIGHTS OF UP TO 20 FEET ARE ALLOWABLE IF ECONOMICALLY JUSTIFIED. THE SLOPE OF THE WALL FACE MAY VARY FROM 0.5H:1V TO 1H:1V. PROPRIETARY DESIGN SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
- (D) ROCK FILL SHALL BE KEYED INTO THE STREAM BED TO AN ELEVATION BELOW THE COMPUTED SCOUR DEPTH TO AVOID UNDERMINING AT THE TOE OF SLOPE.
- (E) THE WIDTH AT THE BASE OF A WRAPPED SOIL WALL (B) SHALL BE BASED ON SITE CONDITIONS AND AS RECOMMENDED BY THE GEOTECHNICAL ENGINEERING SECTION, BUT NOT LESS THAN 3 FEET.
- (F) LIVE DORMANT CUTTINGS MAY BE INSTALLED BETWEEN HORIZONTAL LAYERS OF A WRAPPED SOIL MSE WALL. PLANTING OF CUTTINGS DURING THE DORMANT SEASON IS PREFERRED. THE LIVE BRANCHES SHALL BE BETWEEN 0.5 INCHES TO 1.5 INCHES. IN DIAMETER AND A MINIMUM OF 4 FEET LONG WITH SIDE BRANCHES CLEANLY REMOVED AND SHALL BE IN CONTACT WITH THE SOIL A MINIMUM OF 12 INCHES. THE BOTTOM (BASAL) ENDS OF LIVE CUTTINGS SHALL BE CLEANLY CUT AT A 45 DEGREE ANGLE AND THE TOPS SHALL BE CUT SQUARE (FLAT). ALL PLANTINGS SHALL BE INSTALLED PERPENDICULAR TO THE SLOPE. LIVE CUTTINGS MAY NOT BE REQUIRED FOR FLATTER SLOPES AND SHORT WALL HEIGHTS.
- (G) WRAPPED SOIL MSE WALLS SHALL BE PROVIDED WITH CHIMNEY DRAINS SUFFICIENT TO RELIEVE PORE PRESSURE AT THE BOUNDARY BETWEEN NATIVE SOIL AND THE MSE WALL MATERIALS. THESE DRAINS WILL TYPICALLY BE COMPOSED OF COARSE AGGREGATE, BUT OTHER MATERIALS ARE ALLOWABLE WHERE LIVE DORMANT CUTTINGS ARE NOT INCORPORATED INTO THE WALL.
- (H) THE GEOCELLS USED FOR A STACKED GEOCELL MSE WALLS SHALL BE PERFORATED EXCEPT AT THE FRONT FACE WHICH SHALL BE SOLID. THE GEOCELLS SHALL BE BACK FILLED WITH SOIL SUITABLE TO SUPPORT THE ESTABLISHMENT OF VEGETATION AND BE SEEDED WITH SMALL PLANTS, VINES, AND GRASSES. THE EXPOSED FACE OF THE WALL SHALL BE PROTECTED FROM EROSION BY MEANS OF AN HYDRAULICALLY APPLIED MULCH COMPOSED OF NATURAL FIBERS AND ORGANIC TACKIFIERS.
- (I) ONLY GEOTEXTILE FABRIC (TYPE III) AND (TYPE IV) LISTED ON THE QUALIFIED PRODUCTS LIST SHALL BE USED. ONLY TRM'S LISTED ON THE QUALIFIED PRODUCTS LIST SHALL BE USED.
- (J) VEGETATED MSE WALLS SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBER:
209-03.49 STREAM MITIGATION - VEGETATED MSE WALLS (DESCRIPTION) PER SQUARE FOOT
PAYMENT FOR VEGETATED MSE WALLS SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR THE CONSTRUCTION OF THE WALL AND VEGETATION.