**Special Note for Polypropylene Barrier Wall**

1. **DESCRIPTION**

Except as specified herein, perform all work in accordance with the Department's Standard and Supplemental Specifications and Standard and Sepia Drawings, current editions. Article references are to the Standard Specifications. Furnish all equipment, labor, materials, and incidentals for the following work items:

(1) Site preparation; (2) Furnish and install a polypropylene barrier system filled with concrete to create a retaining wall; (3) Backfill the area behind the polypropylene barrier wall; (4) Reconstruct shoulder area and any necessary grading to ensure positive drainage; (5) Install guardrail, if required; (6) Maintain and Control Traffic; and (7) any other work as specified by this contract.

Repairs using a polypropylene barrier system are to occur at locations indicated elsewhere in the Proposal. Begin and End limits at each area are to be field verified with final approval from the Engineer.

1. **MATERIALS**

All materials shall be sampled and tested in accordance with the Department’s Sampling Manual and the materials shall be available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these Notes.

1. **Polypropylene Barriers.** Polypropylene barriers shall be made of 8 oz. polypropylene and shall be waterproof or plastic coated. All sizes of polypropylene barrier shall have a 2 ft opening at the top that is centered over the base of the barrier. The base of the barrier shall be 2 ft wider than the height of the barrier. The barrier shall be baffled every 2 ft. Barriers shall be capable of being connected together in order to make a continuous barrier wall. The barrier must be of sufficient strength to hold in place the needed amount of concrete until the concrete cures. Minimum barrier length shall be 50 ft and additional length shall be accommodated in 50 ft increments.
2. **Concrete – Class B.** See Section 601.
3. **Fill Material behind Polypropylene Barrier Wall.** Material used for backfill behind the polypropylene barrier wall shall be 6” minus stone. If guardrail will be installed behind the top run of polypropylene barrier wall, the backfill material behind the top run shall be Crushed Aggregate Size No. 2; otherwise, 6” minus stone may be used. All backfill material shall meet the requirements of Section 805. The Engineer will use visual inspection and/or material testing, as applicable, to determine acceptability.
4. **DGA.** When shown on the Typical Section and/or listed as a bid item, furnish DGA as per Section 805.
5. **Final Dressing, Seed and Protection.** Use seed mixture(s) according to Section 212.
6. **Erosion Control.** See Special Note for Erosion Control.
7. **CONSTRUCTION METHODS**
8. **Maintain and Control Traffic.** See Traffic Control Plan.
9. **On-Site Technical Support.** An experienced technical representative shall be on-site to provide technical support covering all aspects of layout, site preparation, and installation of polypropylene barrier wall.
10. **Staking.** Review the proposed polypropylene barrier wall construction site(s) with the Engineer to determine the exact limits and height of polypropylene barrier wall needed at each site. Once the limits and height are established, be responsible for field layout. Establish wall footing and top of wall elevations, shoulder widths, existing ditch profile, and final ditch profile to insure positive drainage. Positive drainage is required upon completion of the project and is the responsibility of the Contractor.
11. **Site Preparation.** Be responsible for preparing polypropylene sites according to the established layout and elevations. This includes clearing and grubbing, if necessary. The area to be cleared has not been measured by the Department and the bidder must draw his/her own conclusions. Remove all obstructions, as necessary. Excavate for roadway ditches, as necessary for slope, shoulder, and pavement drainage. Sweep and remove debris, as necessary. Construct silt checks, temporary silt fence, or other erosion control devices, as necessary to satisfy the BMP, at locations directed by the Engineer. The Engineer shall approve all site preparation. The Department will not make direct payment for site preparation.
12. **Installation of Polypropylene Barriers.** Excavate each repair area to provide a working platform and/or key for installing the bottom run of polypropylene barriers. Place the first 50 ft section of polypropylene barrier system, hold in place before and during filling with concrete, and if necessary, connect additional 50 ft sections, hold in place, and fill with concrete to form a continuous wall that satisfies the established layout. Once the concrete for a run has cured to a sufficient strength, backfill behind the wall and, if necessary, prepare the site for the next run of polypropylene barriers. NOTE: The Contractor shall ensure the polypropylene barrier system is secured prior to filling with concrete to ensure stability of the system so that excessive concrete is not spilled into adjacent streams.
13. **Final Backfill.** Once the concrete within the top run of polypropylene barrier system has sufficiently cured, reconstruct the fill slope and shoulder area. Grade the shoulder flush with the edge of pavement and to the width and slope as shown on the Typical Section. If a Typical Section is not provided, match the surround typical section. If the surrounding typical section has a shoulder width that is less than 2 ft, then the minimum width of graded shoulder shall be 2 ft. Ensure that the newly graded shoulder and slope does not allow water to pond on the shoulder area or at the shoulder edge. Reconstruct the shoulder to the satisfaction of the Engineer before installing guardrail.

**DO NOT USE EXCAVATED MATERIAL FROM THE SITE AS FILL MATERIAL, UNLESS OTHERWISE APPROVED BY THE ENGINEER.**

1. **Clean Up, Disposal of Waste.** Clean up the project area as work progresses. Dispose of all removed excess material, debris, and other waste at approved sites off the Right of Way obtained by the Contractor at no additional cost to the Department. See the Special Provision for Waste and Borrow Sites.
2. **Final Dressing, Seeding and Protection.** Grade all disturbed areas to blend with the adjacent roadway features and to provide a suitable seed bed. Apply Class A Final Dressing to all disturbed areas. Sow all disturbed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.
3. **On-Site Inspection.** Each Contractor submitting a bid for this work shall make a thorough inspection of the site prior to submitting his/her bid and shall thoroughly familiarize themselves with the existing conditions so that the work can be expeditiously performed after a contract is awarded. Submission of a bid will be considered evidence of this inspection having been made.
4. **Right-of-Way Limits.** The Department has not established exact limits of the Right-of-Way. Unless a consent and release form is obtained from the adjoining property owner, limit work activities to the obvious Right-of-Way and staging areas secured by the Contractor at no additional cost to the Department. In the event that private improvements (i.e. fences, buildings, etc.) encroach upon the Right-of-Way, the contractor shall notify the Engineer and limit work activities in order to NOT disturb the improvements. If they become necessary, the Department will secure consent and releases from property owners through the Engineer. Be responsible for all encroachments onto private lands.
5. **Property Damage.** The Contractor shall be responsible for all damage to public and/or private property resulting from the Contractor’s activities. Repair or replace damaged roadway features in like kind materials and design as directed by the Engineer at no additional cost to the Department. Repair or replace damaged private property in like kind materials and design to the satisfaction of the owner and the Engineer at no additional cost to the Department.
6. **Erosion Control.** See Special Note for Erosion Control.
7. **METHOD OF MEASUREMENT**
8. **Maintain and Control Traffic.** See Traffic Control Plan.
9. **Erosion Control.** See Special Note for Erosion Control.
10. **Staking.** See Special Note for Staking.
11. **Site Preparation.** Other than the bid items listed, site preparation will NOT be measured for payment, but shall be incidental to the project bid items.
12. **Polypropylene Barrier Wall.** The Department will measure the finished in-place area of this item in Square Feet.
13. **Excavation and Backfill.** The Department will measure this item in cubic yards. The Department will measure the quantity in the field as per Section 204 (Roadway Excavation) or other accepted methods of measurement as directed by the Engineer.
14. **DGA.** When listed as a bid item, DGA will be measured according to Section 302.04.
15. **Clean Up, Disposal of Waste, Final Dressing, Seeding and Protection**. The Department will NOT measure for payment the following activities: Clean Up, Disposal of Waste, and Final Dressing. These activities shall be incidental to the project bid items. Seeding and Protection shall be measured according to Section 212.
16. **BASIS OF PAYMENT**
17. **Maintain and Control Traffic.** See Traffic Control Plan.
18. **Erosion Control.** See Special Note for Erosion Control.
19. **Staking.** See Special Note for Staking.
20. **Polypropylene Barrier Wall.** The Department will make payment for the completed and accepted quantities under the bid item: RETAINING WALL (POLYPROPYLENE BARRIER WALL). The Department will consider payment full compensation for furnishing all labor, materials, Class B Concrete, equipment, and incidentals necessary to construct a polypropylene barrier wall filled with concrete, as required by these notes, at the locations indicated on the summary sheets, plans, and/or as directed by the Engineer.
21. **Excavation and Backfill.** The Department will make payment for the completed and accepted quantities under the bid item: Excavation and Backfill. Payment will be based on quantity measured in the field. The Department will consider payment full compensation for all labor, materials, equipment, and incidentals necessary to excavate and/or backfill the areas indicated on the summary sheets, plans, and/or as directed by the Engineer.
22. **DGA.** When listed as a bid item, DGA will be paid according to Section 302.05.