

Project Information

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|----------------------|-------------------|-----------------------|---------------------------|
| Project Name: | 0002_042_ditching | Project Location: | Route 2 (Chamberlayne Rd) |
| Project Coordinator: | B. Seargent | Project Jurisdiction: | Hanover County |
| Project Start Date: | 2/4/2013 | Project End Date: | 2/22/2013 |
| ESC Plan Date: | 11/27/2012 | Project Residency: | Ashland |
| ESC Plan By: | J. Lemmerman | ESC Plan Checked By: | A. Smith |

Project Narrative:

This project is located at (the) Route 2 (Chamberlayne Rd) in the Ashland Residency. The overall project is 2.25 miles, of which 152,840 SF will be disturbed. It involves 3 tasks including:

1. Ditching along Rte. 2 beginning at (the) Hanover County Line & ending at (the) Shady Grove Rd. in the median.
2. Disposal Site¹ at (the) 3 Farm Fields owned by M. Johnson beginning at (the) Rte. 643 & Rte. 2.
3. Slope Repair (Cut) along Rte. 2 beginning at (the) 0.15 miles SW of Shady Grove Rd. on the northwest side of the road.

There are no critical or sensitive areas, and there is no work in a live watercourse.

The Plan Reviewer assigned to this project is A. Smith. The Responsible Land Disturber for this project is R. Smith and can be reached at (804) 555-1212. The RLD or other qualified personnel shall inspect the site at least once per week and 48 hours after any runoff producing rain event.

Additional Project Information:

The farm fields owned by M. Johnson can be accessed from Rte 2 and Rte. 643. The sediment removed shall be used to fill low spots and/or provide soil stockpiles for future use by the owner of the parcel. No Disposal Area shall exceed 2,500 SF.

Fill for the slope repair in task 3 is available at the AHQ, therefore no borrow site will be necessary.

Task Specific Erosion and Sediment Control Measures:

| Maintenance Task 1: Ditching - Erosion and Sediment Control Measures | | | |
|--|-----------------------|-------------------------------|-------------------|
| ESC Measure* | Reference(s) | Section in VDOT Field Guide** | M.S. Addressed |
| Check Dams - Gravel Bag | R&B Std.'s: 113.06(A) | 6.3 | MS-4, 11 |
| EC-2 Matting | R&B Std.'s: 113.02 | 6.3 | MS-1, 3, 11 |
| Seeding & Mulching | Spec. Book: S-244 | 6.2 | MS-1, 2, 3, 5, 11 |
| Maintenance Task 2: Disposal Site ¹ - Erosion and Sediment Control Measures | | | |
| ESC Measure* | Reference(s) | Section in VDOT Field Guide** | M.S. Addressed |
| Construction Entrance | R&B Std.'s: 113.15 | 6.1 | MS-4, 10 |
| Silt Fence (no wire support) | R&B Std.'s: 113.07 | 6.1 | MS-4 |
| Seeding & Mulching | Spec. Book: S-244 | 6.2 | MS-1, 2, 3, 5, 11 |
| Maintenance Task 3: Slope Repair (Cut) - Erosion and Sediment Control Measures | | | |
| ESC Measure* | Reference(s) | Section in VDOT Field Guide** | M.S. Addressed |
| Silt Fence (no wire support) | R&B Std.'s: 113.07 | 6.1 | MS-4 |
| EC-3 Slope Stabilization | R&B Std.'s: 113.05 | 6.4 | MS-7 |
| Seeding & Mulching | Spec. Book: S-244 | 6.2 | MS-1, 2, 3, 5, 11 |

* : When an ESC Measure name ends with an asterisk (*), using this ESC Measure will require a variance.

** : When a section number is in parenthesis, the specific measure is not in the guide, but is still associated with the section.

¹ : Any Borrow or Disposal Site that disturbs 2,500 sf or more requires VSMP Permit Coverage!

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|-----------------------|--------------|-----------|------|
| ESC Plan approved by: | | | |
| | Printed Name | Signature | Date |

Disclaimer and Limitation of Use:

- *This ESC Plan - consisting of this narrative, typical sketches for each activity, and any required site-specific sketches (critical areas, wetlands, etc.) - must be used in conjunction with the most up-to-date version of the VDOT Road and Bridge Standards and/or Specifications to constitute a complete and compliant ESC Plan as allowed by VDOT's approved ESC and SWM program.*
- *Typical Sketches generated by this program are NOT to be used as the final sketch for obtaining Water Quality Permits.*
- *This ESC Plan cannot be used as an approved ESC Plan for any bridge renovation work, new construction or other activity that does not meet the definition of Routine Maintenance.*
- *No work will be conducted within wetlands, live waterways or other aquatic resources without review & approval from the Residency Environmental Specialist; ALL WORK TO BE CONDUCTED IN THE DRY.*
- *All Erosion & Sediment controls will be in place prior to commencement of work or installed as soon as an area to be disturbed is made accessible.*

Maintenance Task 1: Ditching along Rte. 2 beginning at (the) Hanover County Line & ending at (the) Shady Grove Rd. in the median.



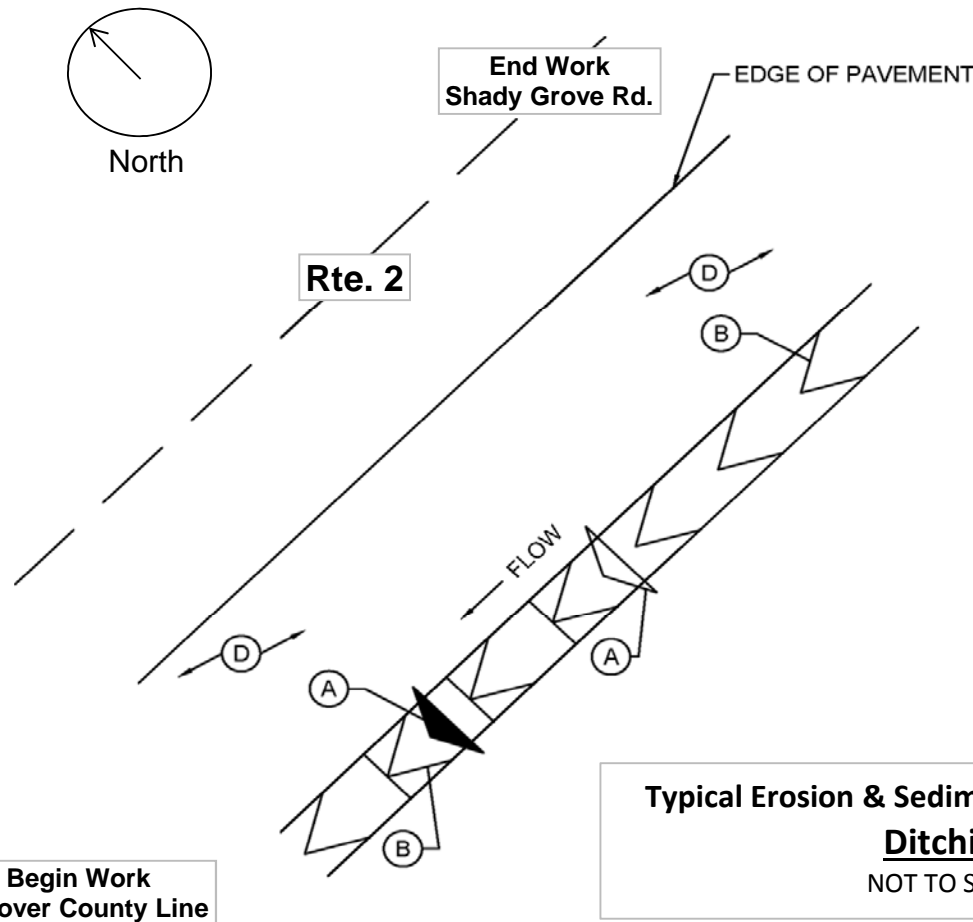
ESC Measures selected for this task & how they apply to the drawing:

| Measure | Dwg Label |
|-------------------------|-----------|
| Seeding & Mulching | D |
| EC-2 Matting | B |
| Check Dams - Gravel Bag | A |

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NOTES:

Sketch below shows typical installations only; critical areas require separate sketches.
This sketch is NOT to be used as the final sketch for obtaining Water Quality Permits.



GENERAL NOTES:

1. THIS METHOD APPLIES ONLY TO DITCHES THAT DO NOT CONTAIN FLOWING WATER AND ARE NOT CONSIDERED A WATERCOURSE.
2. ALL WORK TO BE DONE IN THE DRY.
3. WORK CAN BE DONE IN SEQUENCE PROVIDED THAT THE PIPE LEFT FLOWING IS ADEQUATELY SIZED TO ACCOMMODATE THE CURRENT FLOW OF THE WATERCOURSE AND WORK IS COORDINATED & APPROVED BY HYDRAULICS.

EROSION CONTROL MEASURES LEGEND:

- (A) BARRIER TO REDUCE VELOCITY IN DITCH; EXAMPLES INCLUDE: ROCK CHECK DAMS TYPE 1 OR 2 (EC-4), GRAVEL BAG CHECK DAMS (EC-4), TEMPORARY SILT FENCE (EC-5) OR WIRE BACKED SILT FENCE (EC-5)
- (B) DITCH LINING AS NECESSARY; EXAMPLES INCLUDE SOIL RETENTION MAT OR JUTE MESH (EC-2), SOIL STABILIZATION MAT (EC-3), AND RIP-RAP
- (C) BARRIER TO PREVENT SEDIMENT TRANSPORT OUTSIDE OF THE RIGHT OF WAY OR EASEMENT
- (D) SEED & MULCH ALL DISTURBED AREAS PER REFERENCES LISTED IN NARRATIVE.

Check Dam Spacing Guidelines

| Ditch Grade (%) | Spacing (feet) |
|--|----------------|
| 1 | 200 |
| 2 | 100 |
| 4 | 50 |
| 6 | 33 |
| <i>**Ditch grades above 6% are not recommended**</i> | |
| 8 | 25 |
| 10 | 20 |

Maintenance Task 2: Disposal Site¹ at (the) 3 Farm Fields owned by M. Johnson beginning at (the) Rte. 643 & Rte. 2.



ESC Measures selected for this task & how they apply to the drawing:

| Measure | Dwg Label |
|------------------------------|-----------|
| Silt Fence (no wire support) | C |
| Seeding & Mulching | D |
| Construction Entrance | A |

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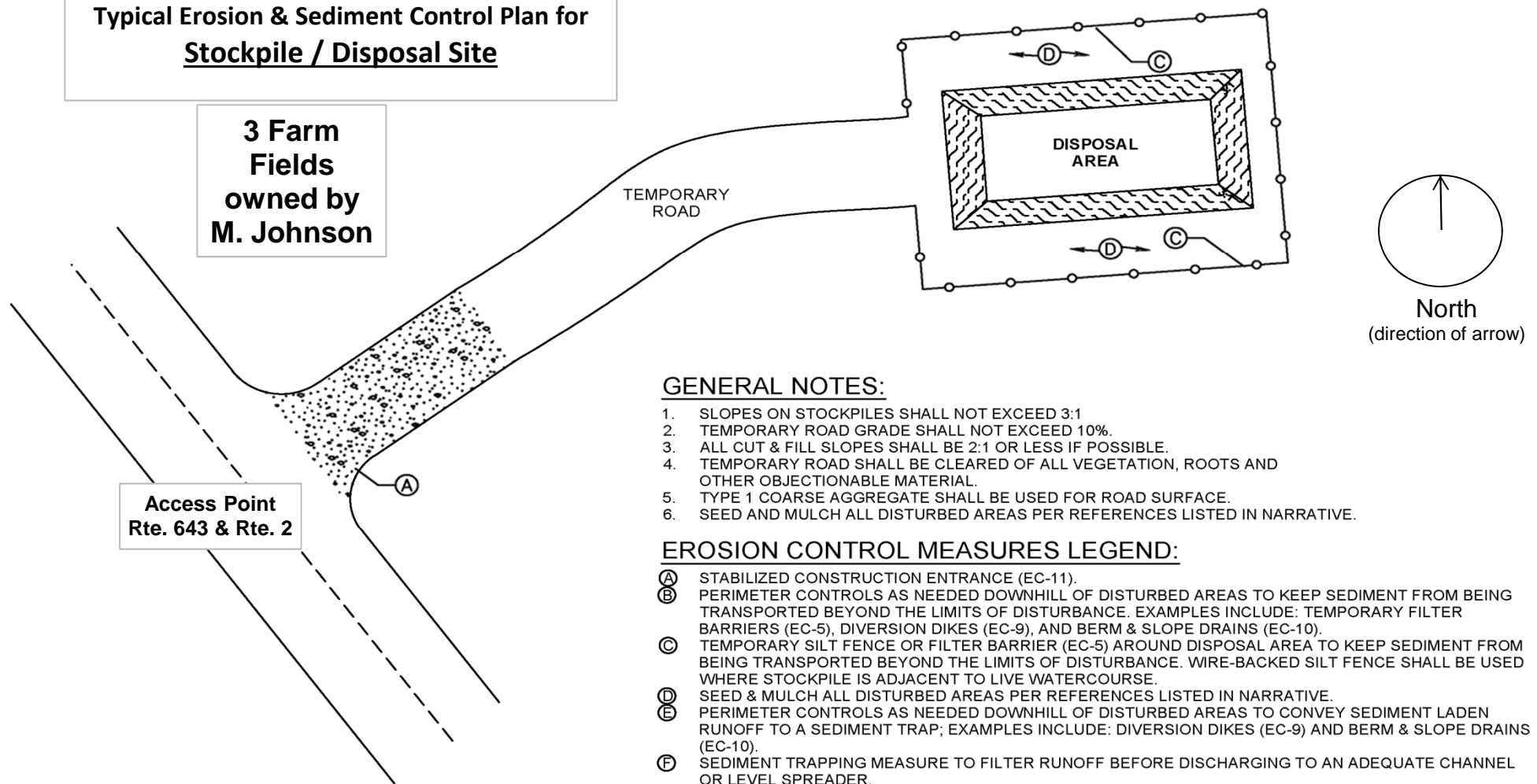
NOTES:

Sketch below shows typical installations only; critical areas require separate sketches.
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**Typical Erosion & Sediment Control Plan for
Stockpile / Disposal Site**

**3 Farm
Fields
owned by
M. Johnson**

**Access Point
Rte. 643 & Rte. 2**



GENERAL NOTES:

1. SLOPES ON STOCKPILES SHALL NOT EXCEED 3:1
2. TEMPORARY ROAD GRADE SHALL NOT EXCEED 10%.
3. ALL CUT & FILL SLOPES SHALL BE 2:1 OR LESS IF POSSIBLE.
4. TEMPORARY ROAD SHALL BE CLEARED OF ALL VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
5. TYPE 1 COARSE AGGREGATE SHALL BE USED FOR ROAD SURFACE.
6. SEED AND MULCH ALL DISTURBED AREAS PER REFERENCES LISTED IN NARRATIVE.

EROSION CONTROL MEASURES LEGEND:

- (A) STABILIZED CONSTRUCTION ENTRANCE (EC-11).
- (B) PERIMETER CONTROLS AS NEEDED DOWNHILLS OF DISTURBED AREAS TO KEEP SEDIMENT FROM BEING TRANSPORTED BEYOND THE LIMITS OF DISTURBANCE. EXAMPLES INCLUDE: TEMPORARY FILTER BARRIERS (EC-5), DIVERSION DIKES (EC-9), AND BERM & SLOPE DRAINS (EC-10).
- (C) TEMPORARY SILT FENCE OR FILTER BARRIER (EC-5) AROUND DISPOSAL AREA TO KEEP SEDIMENT FROM BEING TRANSPORTED BEYOND THE LIMITS OF DISTURBANCE. WIRE-BACKED SILT FENCE SHALL BE USED WHERE STOCKPILE IS ADJACENT TO LIVE WATERCOURSE.
- (D) SEED & MULCH ALL DISTURBED AREAS PER REFERENCES LISTED IN NARRATIVE.
- (E) PERIMETER CONTROLS AS NEEDED DOWNHILLS OF DISTURBED AREAS TO CONVEY SEDIMENT LADEN RUNOFF TO A SEDIMENT TRAP; EXAMPLES INCLUDE: DIVERSION DIKES (EC-9) AND BERM & SLOPE DRAINS (EC-10).
- (F) SEDIMENT TRAPPING MEASURE TO FILTER RUNOFF BEFORE DISCHARGING TO AN ADEQUATE CHANNEL OR LEVEL SPREADER.

Maintenance Task 3: Slope Repair (Cut) along Rte. 2 beginning at (the) 0.15 miles SW of Shady Grove Rd. on the northwest side of the road.



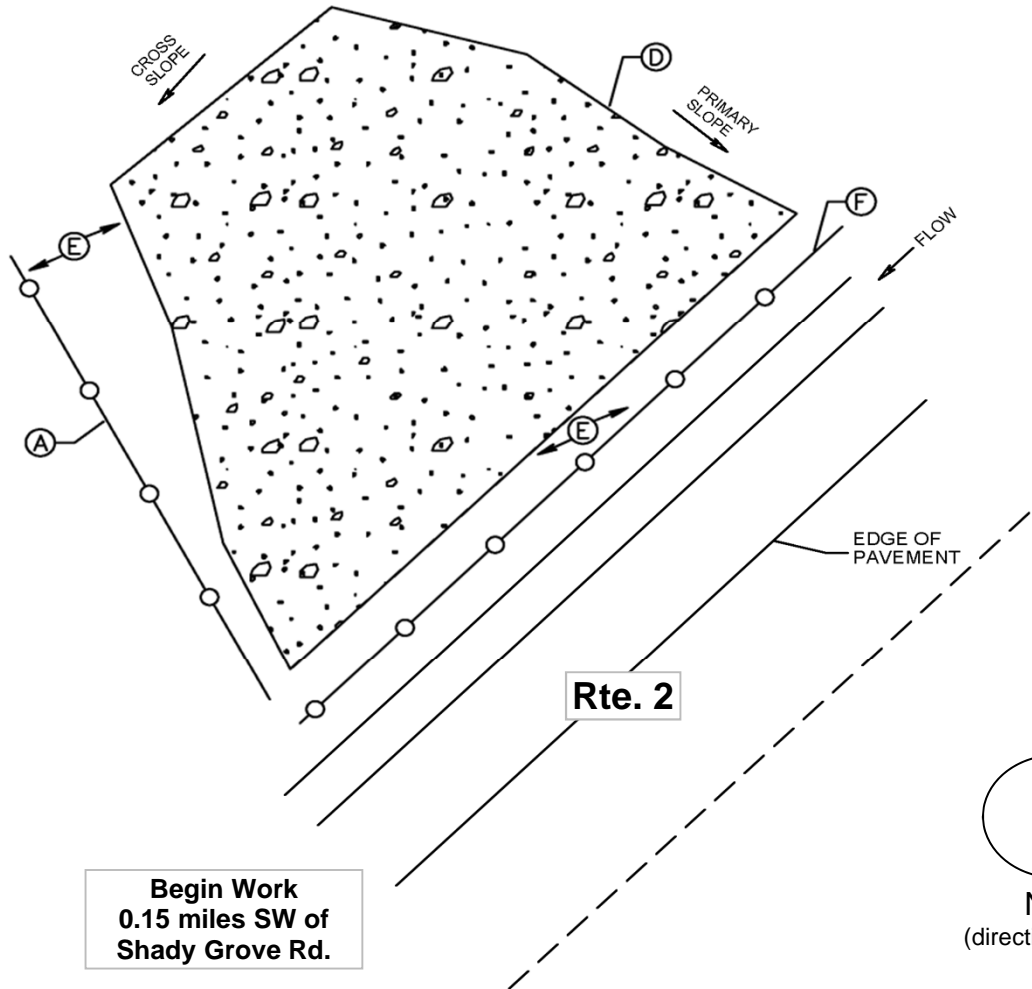
ESC Measures selected for this task & how they apply to the drawing:

| Measure | Dwg Label |
|------------------------------|-----------|
| Silt Fence (no wire support) | A & F |
| Seeding & Mulching | E |
| EC-3 Slope Stabilization | D |

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GENERAL NOTES:

1. PLACEMENT OF RIPRAP IN STREAM OR WETLAND IS PROHIBITED.
2. PLACE CONTAINMENT TARPS OR BARRIER TO PREVENT MATERIAL FROM ENTERING STREAM OR DITCH.
3. SEED & MULCH ALL DISTURBED AREAS PER REFERENCES LISTED IN NARRATIVE.
4. CLASS I AND II STONE ONLY
5. RIPRAP LINER OR GEOTEXTILE BEDDING MATERIAL SHALL BE INSTALLED.

EROSION CONTROL MEASURE LEGEND:

- (A) BARRIER TO KEEP SEDIMENT FROM BEING TRANSPORTED BEYOND THE LIMITS OF DISTURBANCE AS NECESSARY; EXAMPLES INCLUDE: FILTER BARRIER, SILT FENCE, AND WIRE BACKED SILT FENCE (EC-5).
- (B) DITCH LINING AS NECESSARY; EXAMPLES INCLUDE: SOIL RETENTION MAT OR JUTE MESH (EC-2), SOIL STABILIZATION MAT (EC-3), AND RIPRAP.
- (C) BARRIER TO REDUCE VELOCITY IN DITCH; EXAMPLES INCLUDE: ROCK CHECK DAMS (EC-4), GRAVEL BAG CHECK DAMS (EC-4), TEMPORARY SILT FENCE (EC-5), AND WIRE-BACKED SILT FENCE (EC-5).
- (D) MATERIAL TO STABILIZE ERODED SLOPE; EXAMPLES INCLUDE: RIPRAP (CLASS I OR II) AND SOIL STABILIZATION MAT (EC-3).
- (E) SEED & MULCH ALL DISTURBED AREAS PER REFERENCES LISTED IN NARRATIVE.
- (F) BARRIER TO KEEP SEDIMENT FROM BEING TRANSPORTED INTO THE DITCH AS NECESSARY; EXAMPLES INCLUDE: FILTER BARRIER, SILT FENCE, OR WIRE BACKED SILT FENCE (EC-5).

**Typical Erosion & Sediment Control Plan for
Cut Slope Erosion Repairs**

NOT TO SCALE