

# NEW CONSTRUCTION AND MAINTENANCE EROSION CONTROL ON OVER 22,000 CENTER LANE MILES







#### **PROGRAM OVERVIEW**

#### NEW CONSTRUCTION AND MAINTENANCE EROSION CONTROL







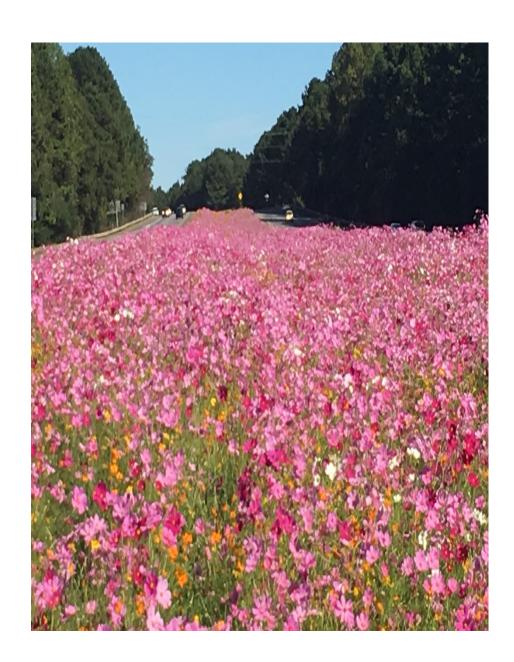






# OFFICE OF LANDSCAPE MAINTENANCE

Richard Littleton
State Agronomist Manager
Architecture Unit
404.519.92841852 office
rlittleton@dot.ga.gov





# WHY SPEND THE MONEY ON EROSION CONTROL?

# WHY PLACE THE EMPHASIS ON EROSION CONTROL AND PREVENTION?





# Here's Why!

- Protect the natural resource of Georgia
- Provide safe and supporting highways for traveling public
- Manage expenses by avoiding costly fines and repetitive work
- To be a good steward while managing a dynamic highway system



#### WHO WE ARE MONITORED BY:

- 1. Army Corps of Engineers
- 2. EPA/EPD
- 3. US Fish and Wildlife
- 4. Georgia Conservancy
- 5. Sierra Club
- 6. River Keepers
- 7. Concerned Citizens Like You
- 8. Ourselves



# **New Construction**































## **BMP INSTALLATION**



## **INSTALLATION OF SILT FENCE**



















## **GRASSING**



#### GRASSING

- IS APPLYING A VEGETATIVE GROUND COVER
- CAN BE TEMPORARY OR PERMANENT
- TEMPORARY GRASSING USES FASTEST GROWING SEEDING FOR AREAS THAT MUST BE PROTECTED FOR MORE THAN 60 DAYS
- PERMANENT GRASSING IS A VEGETATIVE GROUND COVER PLANTED AFTER ALL LAND DISTURBING ACTIVITIES ARE COMPLETE IN ANY AREAIS
- THE MOST EFFECTIVE AND LEAST COSTLY BMP AVAILABLE
- IT IS EXTREMELY IMPORTANT TO OBTAIN A GROUND COVER, EITHER MULCH OR GRASS
- IT REDUCUES RUNOFF EROSION AND SEDIMENTATION
- IMPROVES STABILITY OF SLOPES AND IMPROVES AESTHETICS



## **TEMPORARYGRASSING**













### PERMANENT GRASSING























#### **Erosion Control Mats**

#### **Description**

 Protective covering (blanket) or soil stabilization mat used to establish permanent vegetation on slopes, and channels.

#### **Purpose**

- Reinforce turf
- Promote plant growth
- Reduce erosion







## **MULCH**



#### **MULCH**

- WHAT IS MULCH? A protective ground cover applied to soils in an area that has been disturbed by construction. Straw, hay, compost, etc.
- WHEN IS MULCH APPLIED? At a minimum of weekly and may be used for 60 calendar days or less.
- WHY DOES GDOT REQUIRE MULCH? It prevents the initial movement of soil to lessen impact from rain drops until vegetation is established.
- HOW IS MULCH APPLIED? Applied by hand or mechanical methods.
- MULCH INSPECTION GUIDE















#### MULCH INSPECTION GUIDE

#### Installation

- Install all other BMPs first
- Apply disturbed areas weekly
- Apply at the rate of 2 to 4 inches loose
- Imbed the mulch with a tracked vehicle
- Add mulch as needed to maintain depth















#### **GRASSING INSTALLATION GUIDE**

- ✓ ENSURE APPROPRIATE GRASS PLANTED IN THE PROPER SEASON
- ✓ COLLECT THE INVOICES AND GRASS SEED TICKETS TO DOCUMENT THE SEED
- ✓ ENSURE THE CORRECT NUMBER OF POUNDS OF SEED ARE USED











## **INSPECTOR**



# MAINTENANCE EROSION CONTROL SUPERVISOR (MECS)

- PERSON WITH OPERATIONAL CONTROL OF A MAINTENANCE SITE
- HAS PROPER TRAINING FOR INSTALLATION, MAINTENANCE & REPORTING OF BMP'S
- HAS THE AUTHORITY TO PERFORM THE DUTIES OF THE POSITION
- ABLE TO RECOGNIZE AREAS OF POTENTIAL EROSION AND TAKES INITIATIVE TO ADDRESS BEFORE BECOMING A PROBLEM
- THE SUPERVISOR OF THE SITE FOR EROSION & SEDIMENT CONTROL MEASURES AT ITEMS OPTIMUM LEVELS
- A PERSON THAT THINKS AHEAD AND PLANS AHEAD



#### **MECS DUTIES**

- INSTALLATION
- MAINTENANCE
- PERFORMING REQUIRED INSPECTIONS
- BMP'S REPORTING
- SUBMISSION OF REPORTS
- SELF-REPORT WHEN REQUIRED



#### WHY DOES GDOT REQUIRE A MECS?

- ➤ A GDOT DECISION TO IMPROVE ENFORCEMENT AND COMPLIANCE OF EROSION & SEDIMENTATION LAWS, RULES AND REGULATIONS
- ➤ IN ORDER TO PERFORM LAND DISTURBING ACTIVITIES (LDA) GDOT MUST COMPLY WITH APPLICABLE LAWS & PERMITS - i.e.-INSPECTIONS, RAINFALL DATA, WATER QUALITY MONITORING



## **INSPECTIONS**



## What is an Inspection?

The Review or Comparisons of BMP's against the Established Standards and Details







## Where are Inspections Performed?

Inspections are performed on the Project







## When to Perform Inspections?

Inspections are to Conducted at the following Frequencies:

**DAILY** 

**WEEKLY** 

AFTER RAINFALL ≥ 1 Inch

**MONTHLY** 



#### **DAILY INSPECTIONS**

- All locations where vehicles Enter & Exit the Site
- Locations where Petroleum products are stored, used, and handled.

\*See General Notes in ESPCP and NPDES Permit for Proper On-Site Containment\*

Record Rainfall at the Active Phase of the Site.











## **WEEKLY & AFTER RAINFALL**

- Disturbed Areas not Permanently Stabilized
- Material Storage Areas
- All Structural Controls BMP's
- Water Quality Monitoring Locations & Equipment



## **MONTHLY INSPECTIONS**

- All areas that have undergone final stabilization
- All permanent Erosion Control BMP's











## **VIOLATIONS**









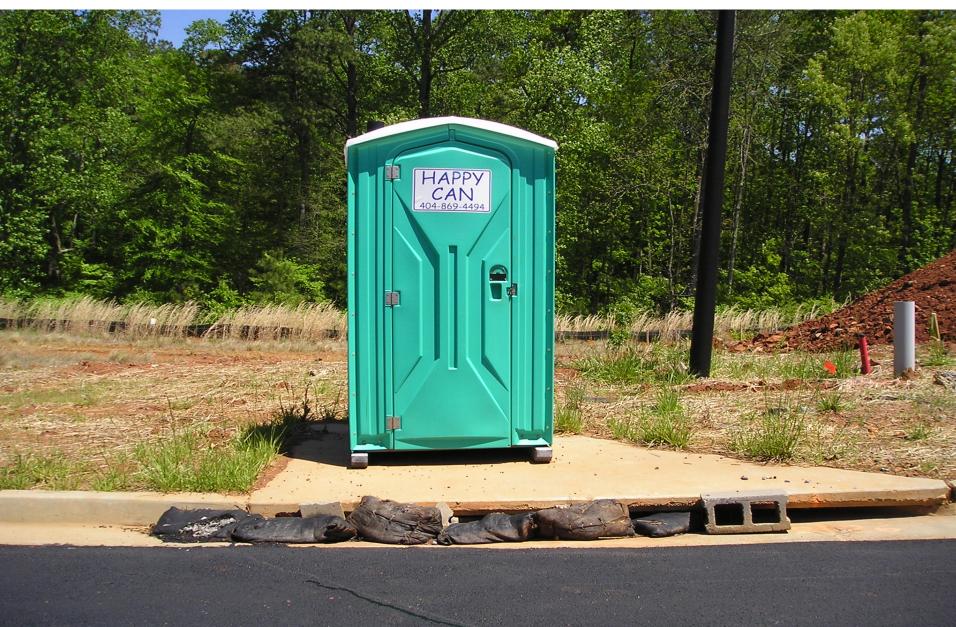






























### SITE CONDITIONS CHANGE FOR 2 REASONS

- 1. RESULT OF THE WORK
- 2. RESULT OF THE WEATHER

# WE CONTROL ONE REASON AND SHOULD ALWAYS BE PREPARED FOR THE OTHER



# **Erosion & Sedimentation**















# **EROSION FACTORS**

- 1. Soil Type
  - Sand
  - Silt
  - Clay
- 2. Topography
- 3. Vegetative cover
- 4. Climate

Which do we have control over?











### LOCATION I-285 Southbound @ Powers Ferry Rd

Fulton Co.

**EXHIBIT A** 

Significant amount of debris/tree logs accumulated from the flood of 2009.

It extends over 200 yards underneath both the I-285 and Powers Ferry bridges.





## LOCATION I-285 Southbound @ Powers Ferry Rd

Fulton Co.

**EXHIBIT A** 

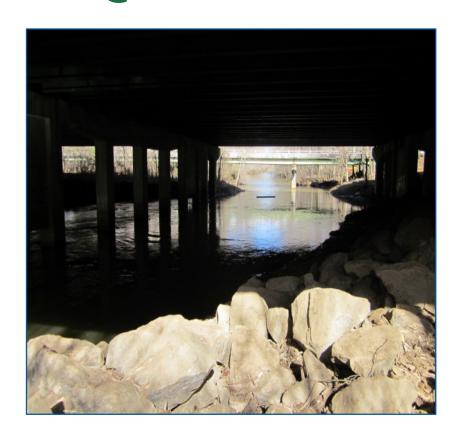


Continued



## LOCATION I-285 @ Powers Island







**Aftermath of Cleanup Activities** 



# LOCATION Underneath I-285 Bridge @ Riverview Rd

Cobb Co.

#### **EXHIBIT B**

Significant washout as a result of the flood of 2009.

It extends over 200 yards underneath the I-285 by Riverview Road.

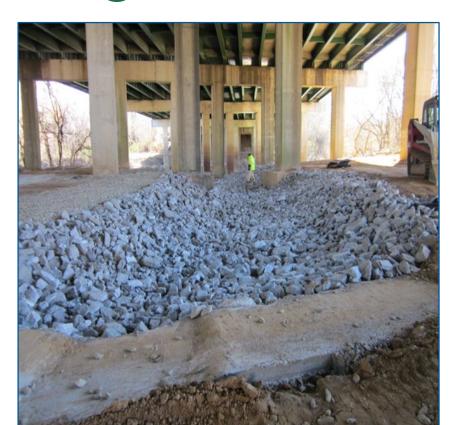
It has already established a natural water path connecting the main river and the over flow.

The bridge structure/footing is already being compromised.





# LOCATION I-285 @ Riverview Rd



Cobb Co.



Aftermath of Cleanup Activities



# ISSUE Damaged Sewer Line @ OEM - EXHIBIT C





BEFORE PICTURES SHOWING TEMPORARY REPAIRS



# ISSUE Damaged Sewer Line @ OEM





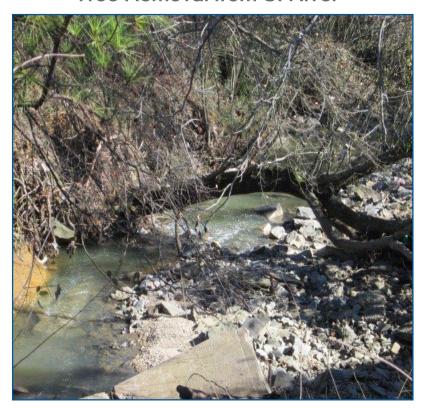
AFTER PICTURES SHOWING PERMANENT REPAIRS



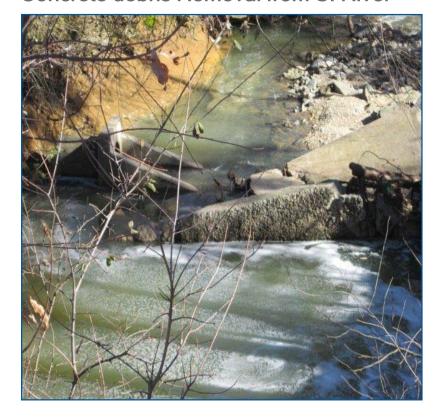
# LOCATION I-85 SB @ Metropolitan Pkwy Exit Ramp

Fulton Co.

Tree Removal from S. River



Concrete debris Removal from S. River





## LOCATION I-85 SB @ Metropolitan Pkwy Exit Ramp

Fulton Co.

#### **AFTER COMPLETION**

