IMPLEMENTATION OF GREEN STREETS POLICY

PRINCE GEORGE'S COUNTY

DEPARTMENT
OF
PUBLIC WORKS AND TRANSPORTATION

Presentation Overview

- Elements of a green street
- MDE design criteria
- Combining green street design with complete street design
- Green street lessons learned

GREEN STREETS POLICY

Legislation CB-83-2012

Green Street means a street or road that safely and adequately accommodates and incorporates best management practices of environmental site design for addressing stormwater runoff, including using small scale stormwater management practices, nonstructural techniques, and better site planning to minimize the impact of road and sidewalk development on water resources

Additional Green Street Elements

- Pavement Narrowing to Reduce Impervious Area
- LED Street Lighting - Unless Existing Lighting is New

MDE APPROVED ESD PRACTICES

- M-2. Submerged Gravel Wetlands — Biological Uptake
- M-3. Landscape Infiltration — Infiltration
- M-4. Infiltration Berms — Infiltration
- M-5. Dry Wells — Infiltration
- M-6. Micro-Bioretention — Infiltration or Filtering
- M-M-1. Rainwater Harvesting — Runoff Storage for Later Use
- 7. Rain Gardens — Infiltration
- M-8. Swales — Infiltration or Filtering
- M-9. Enhanced Filters — Filtering
- A-1. Green Roofs — N/A
- A-2. Permeable Pavements — Infiltration or Filtering
- A-3. Reinforced Turf — Infiltration or Filtering
- N-1. Disconnection of Rooftop Runoff — N/A
- N-2. Disconnection of Non-Rooftop Runoff — Infiltration
- N-3. Sheet flow to Conservation Areas — Infiltration

Green Street Design Criteria

- Use MDE Redevelopment Design Standards
  - Applies if 40 % existing impervious area
  - Structural practices can be used
  - Treat 50% of existing impervious area and 100 % of new impervious area
- Start Concept Plan preparation early

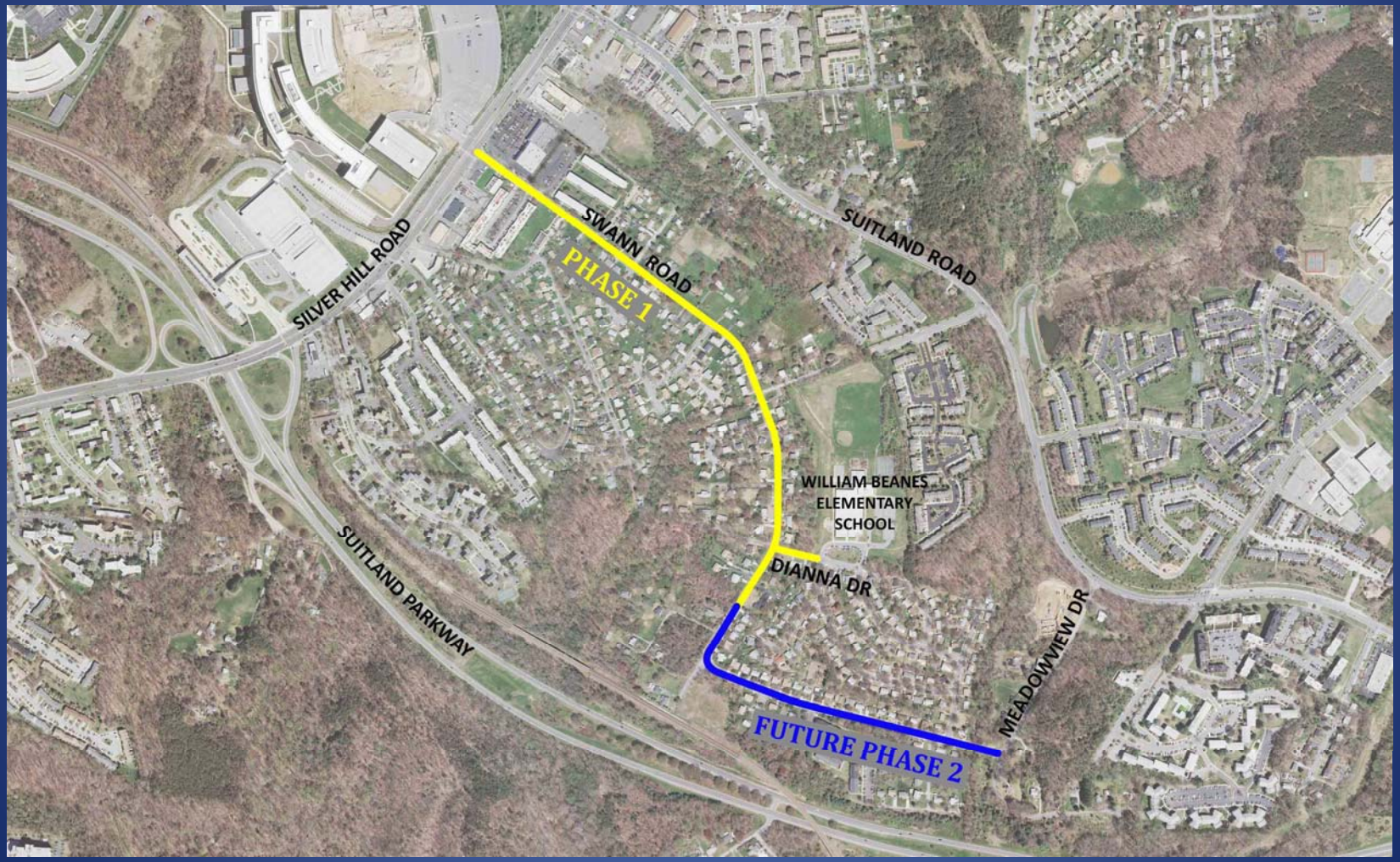
Public Involvement

Maintenance of plantings in practices – desire for grass

No permanent standing water in practices

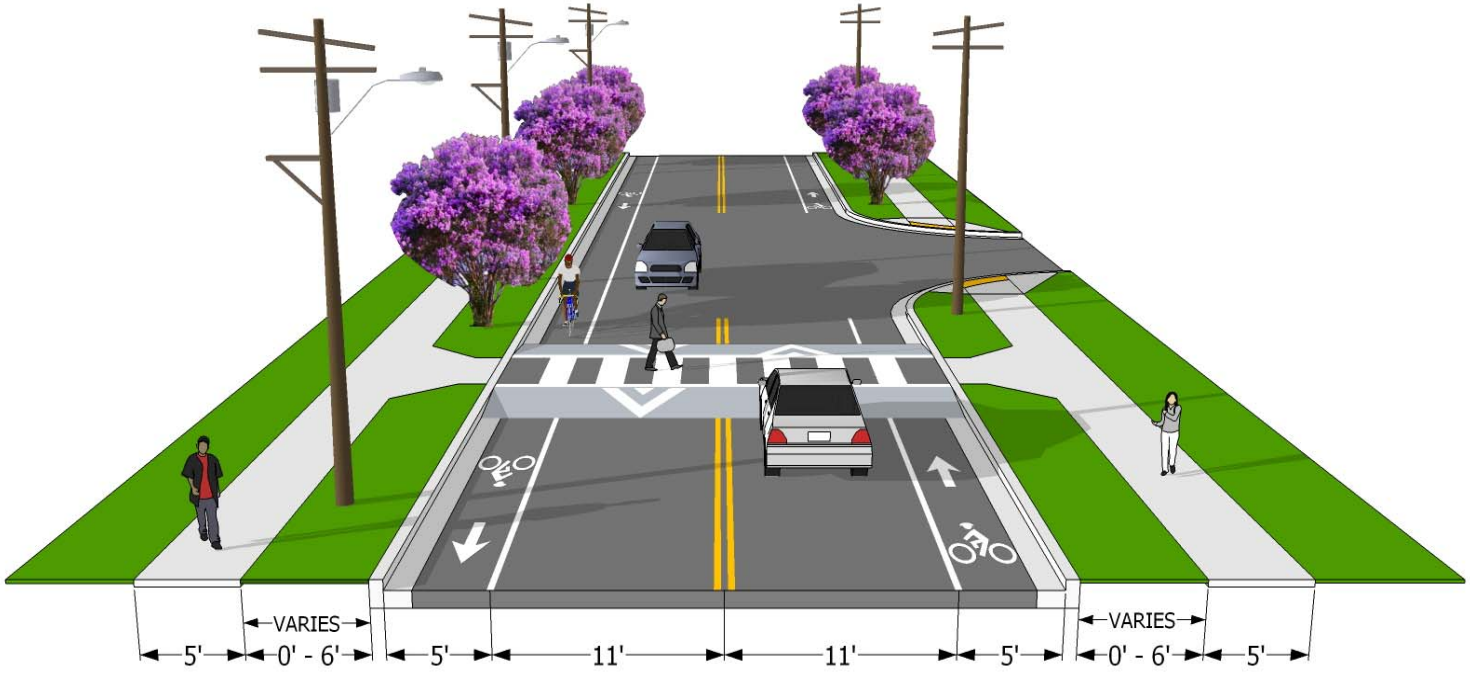
Stress water quality benefits to public

Green/Complete Street
Swann Road



Citizen Request
No Practices in Street – At Adjacent School

- Filtering practices below grass between curb and sidewalk
- Practices are concave with surface grass specified
- Pervious poured concrete sidewalk



Original Proposal
Environmental Improvements on School Property

- Project revised to put practices in street
- Objection to practices located at school

Complete Streets Policy

Legislation CB-83-2012

Complete Street means a public street that safely and adequately accommodates motorized and non-motorized users, including pedestrians, bicycles, motor, freight, emergency and transit vehicles, in a manner appropriate to the function and context of the facility.

DPW&T GREEN COMPLETE STREETS PROGRAM

Project	Length	Start	Currently	Construction Start
*Ager Road	7,000 ft	April 2012	Design	July 2015
*Swann Road	4,000 ft	December 2012	Design	September 2015
Edmonston Road	4,200 ft	April 2014	Concept	March 2018
*H. S. Truman Dr.	20,000 ft	December 2012	Concept	June 2017
*Paint Branch PW	4,000 ft	February 2013	Concept	April 2017
Montpelier Drive	7,000 ft	November 2014	Staff Evaluation	May 2018

* Indicates a project that will connect to or near a Metro Station

QUICKEST WAY TO DO A GREEN STREET PROJECT

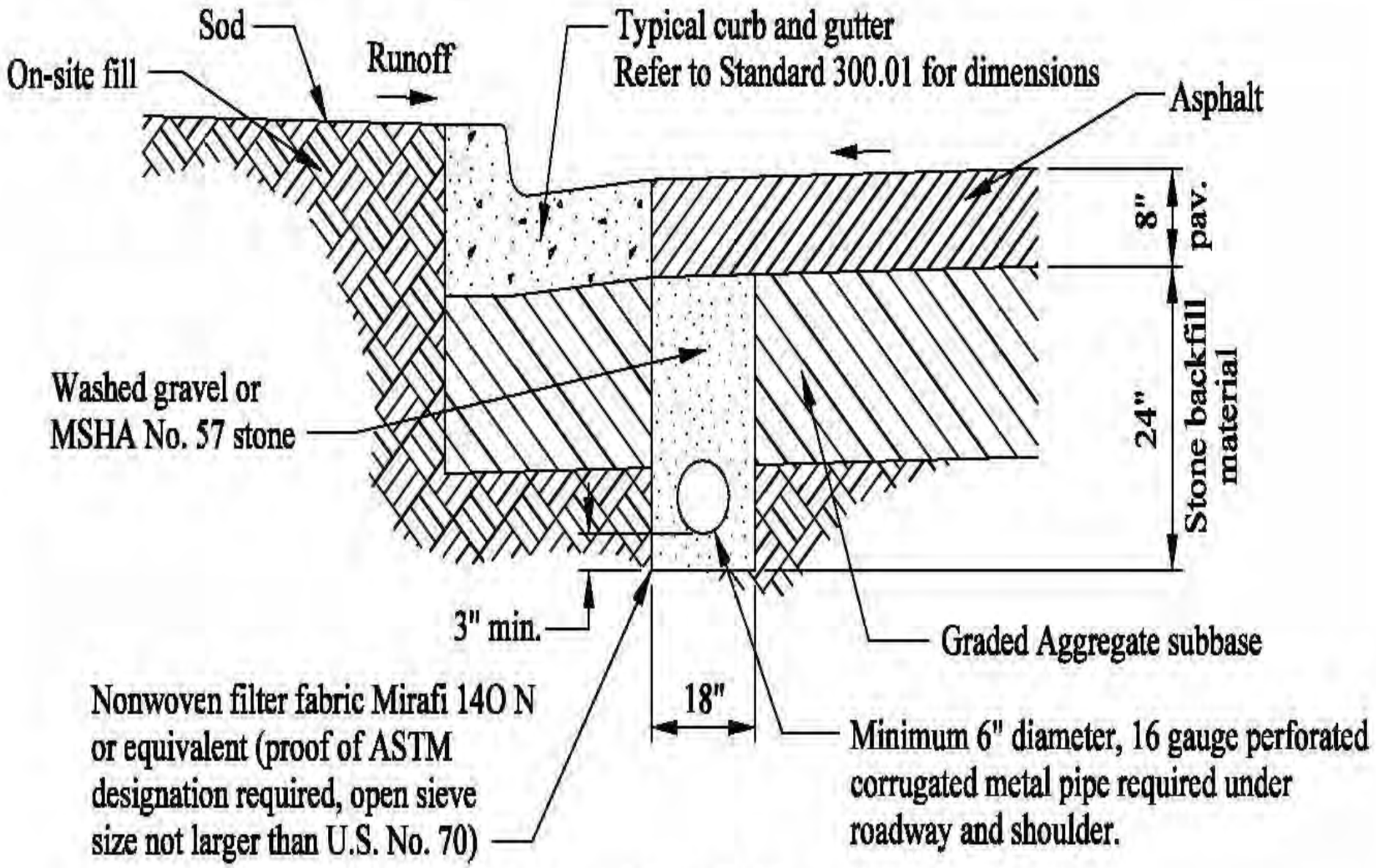
- Existing Complete Street – Only ESD Improvements Needed
- Sandy Soil – HSG “A” Soil Survey
- Deep Ground Water Table
- Deep Existing Storm Drain – Inlets 4 feet Deep
- Small Project – Two Blocks

INCLUDE MAINTENANCE IN DESIGN DECISIONS

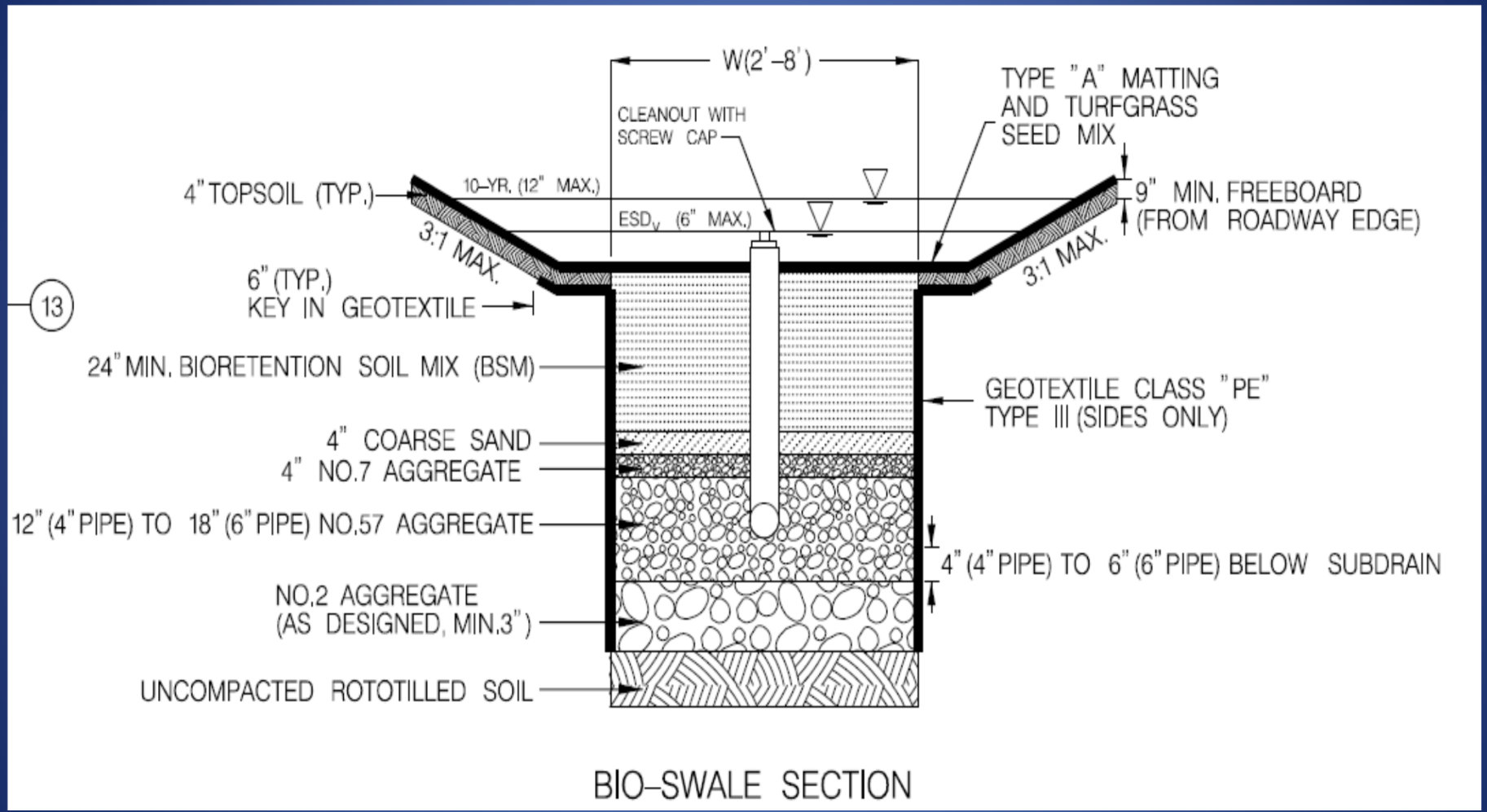
- Strive for design review from maintenance staff
- Available equipment and staff should help drive practice selection
- Maintenance costs are difficult to quantify
- Prince George's County consultant to quantify ESD maintenance costs

DO NO HARM

- Underdrain below all practices next to pavement – even if sandy soil (0.52 in/hr. infiltration rate)
- Pavement underdrain near practices
- Shallow practices near pavement – Pavement Stability
- Evaluate tripping hazards- ADA compliance
- Assess impact to existing trees - underdrain

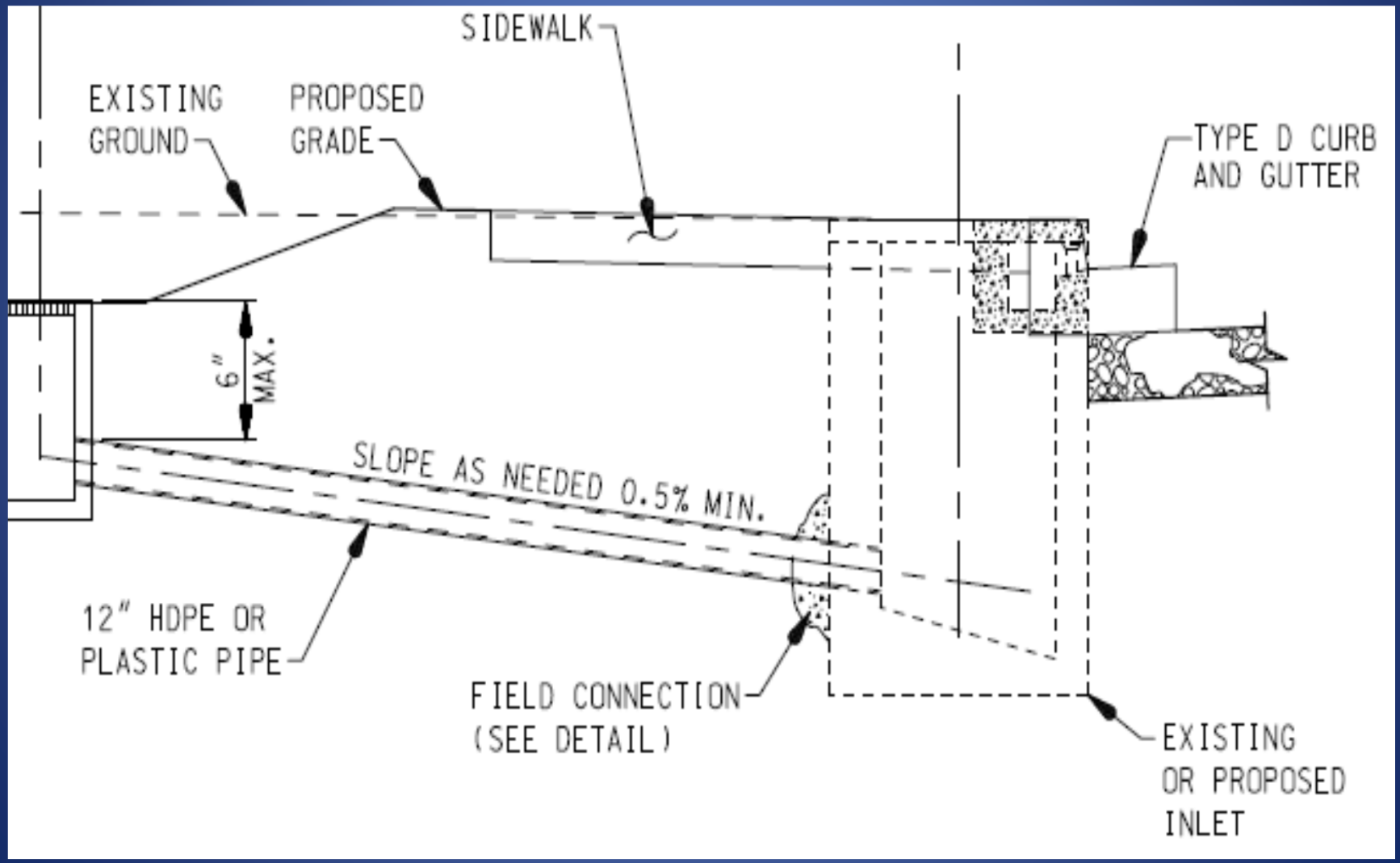


Roadway Section with Underdrain

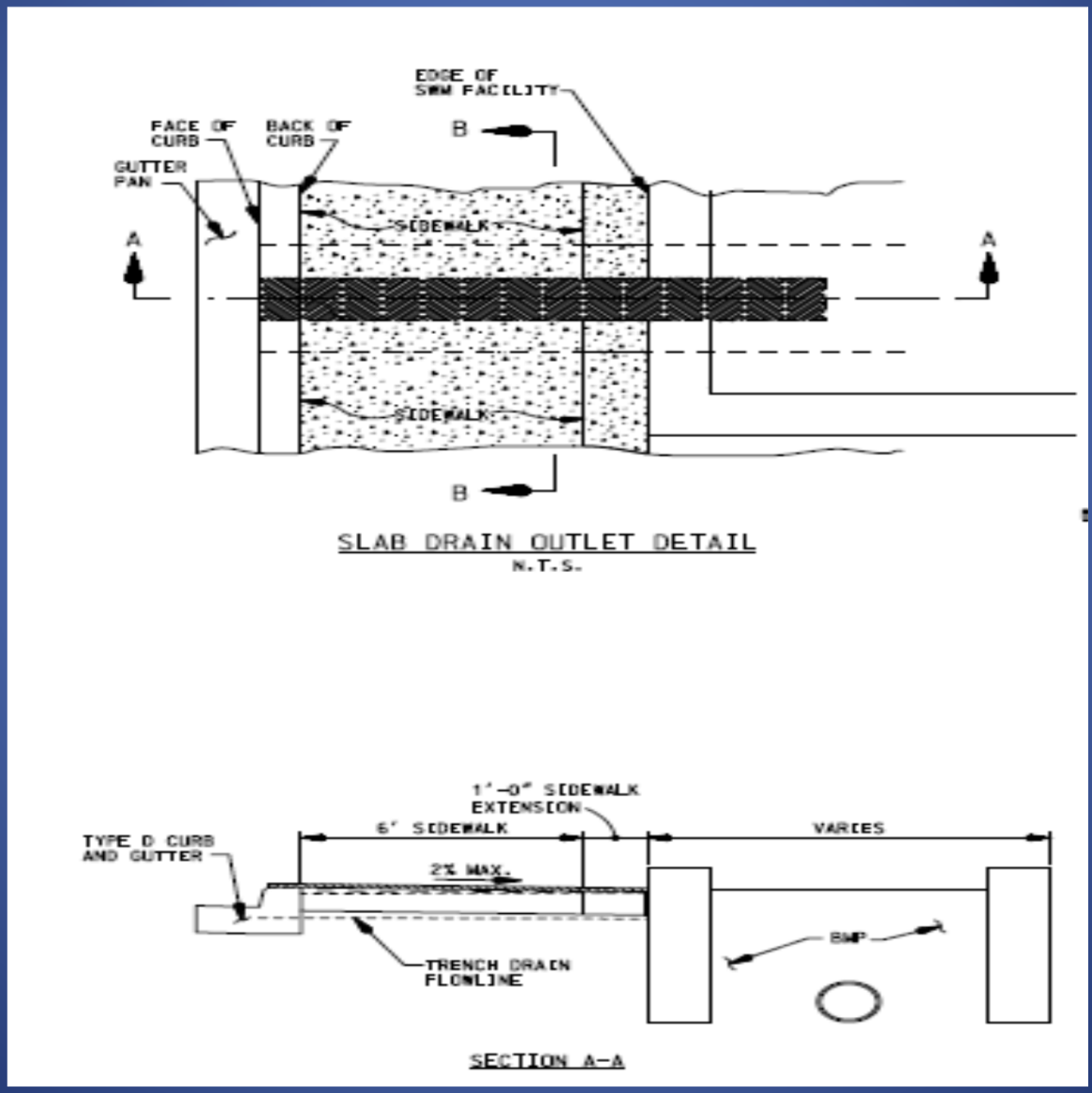


BIO-SWALE SECTION

Curb Inlets Need to be 4 Feet Deep to Accept Underdrain from Practices



Deep Practices May Need Walls



Green Street Standards

- Green Street Design by County Consultant Involves Alternative Evaluations
- Design for Developer Permits Requires Quicker Design – Standards
- County Contract to Update Road and Bridge Standards to Include Green Street Standards
- County Stormwater Management Design Manual to Include Green Streets Standards

Conclusions and Recommendations

- Small projects addressing green elements only are quicker to construct
- Citizens will need to hear importance of green elements in street
- Strive for maintenance input
- Pavement underdrain
- Underdrain for all practices
- Inlets 4 feet deep to accept practice underdrain
- Standards for development community - permits