# Bellmawr Waterfront Development

BDA & Steering Committee Meeting

April 28, 2016

# Bellmawr Waterfront Development



View: Route 42 Sideslopes adjacent to Beaver Brook

# REMEDIATION 2015 – PRESENT



View: Phase I Facing Big Timber Creek

## Phase I

- Cap
  - Scale House Relocated
  - Fill to Subgrade 100% Complete
  - 1 Foot Residential Cap 70% Complete
  - ❖ Vertical Extension of Cutoff Wall 100% Complete



#### Phase I



Swales/Berms



#### Stormwater Management

- Upgradient Pipe:
  - 100% Complete Feb 2016
  - Entire Length Phase I & II
- Drainage Sideslopes 80% :
  - Riprap channels and Geodrain Conveyances
  - Swales/Berms In Progress
  - Directs Stormwater from top of plateau, prevents ponding and erosion

#### Phase I Modification

#### Gas Collection System

- Methane Yield Gas Test June 2014
  - Results indicated methane production volume not high enough or consistent enough to warrant active collection
  - DEP Approved Change to a Passive Collection System

#### Benefits:

- Promotes Development- No Active Flares
- Reduces Remedial and Post Closure Costs





### Phase I



View: Slopes Facing Big Timber Creek



View: Top of Grade, Capped



View: Top of Grade, Capped



View: Slopes Facing Phase II

#### Phase II

- Cap
  - Sideslopes 100%
  - Subgrade 95%
  - Bulkhead Tidal Overflow Impervious Cap 100%
  - Cutoff Wall Vertical Extension 100%
- New Location of Scale House
- Upgradient Stormwater Pipe 100%



Capped Slopes



**Bulkhead Cap** 

### Phase II Modifications

#### Cap Elevations

- Grade Raised in area between BWD and Adjacent Property
  - Enhance Engineering Controls
  - Optimize Developable Land
- Updated County E & S Plans
- Updated Stormwater Pipe Plan
  - Pipe Extension and Inlet
  - Revised Contours to Direct Stormwater to Inlets





Stormwater Inlet

# Phase II



View: New Scalehouse Location



View: Top From Phase I Facing NW



View: Top Facing Creek Road/NW



View: Bulkhead Cap

#### Phase III

#### Cap

- Wetlands Impervious 2 Foot Cap Layer 100%
- North-West (Rt 295 side)
   Sideslopes filled to Subgrade
   100%
- South (Big Timber Creek side)
   Sideslopes to Subgrade 80%
- Rt 295 Ditch Subgrade 100%

#### Stormwater Pipe

95% Construction Complete





#### Phase III Modifications

#### Shallow Cutoff Wall

- Review 8 years worth of Groundwater Monitoring Data
  - Leachate Mound Declined
  - Leachate Constituents Declined
- Releases to Creek No Concern
- Eliminated Need for Cutoff Wall



Area Proposed Cutoff Wall

#### Cap Elevations

- Grade Raised West Corner
- Increased Residential Area



West Corner Sideslopes

## Phase III



View: Top Slope Facing Rt 295 N



View: Stormwater Pipe Headwall



View: Sideslopes Facing Rt 295 S



View: Stormwater Pipe Installation

# PROJECTED REMEDIATION



View: Foreground Phase I Sideslopes, Background Phase II Sideslopes

# Projected Remediation

#### Spring 2016:

- Phase I Stormwater Controls
- Phase III StormwaterPipe
- Deep Dynamic Compaction

#### ❖ Summer 2016:

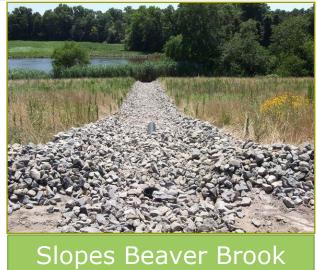
- Phase I Final Cap & Seed
- Phase I Gas Vents (Test Shown)
- Submit Closure Certification





# Projected Remediation

- \* 2016 Year
  - Raise Phase II & III to Final Grade
  - Phase III Drainage Down Chutes
  - Cap Phase III sideslopes





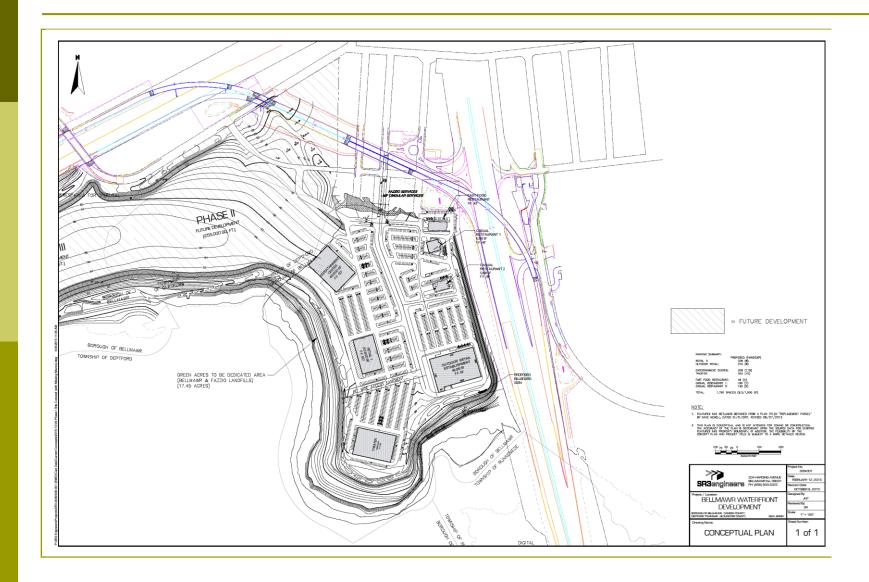
Phase III Sideslopes

# FUTURE USE



View: Foreground Phase II Slopes, Background Phase III Slopes

# Future Use



# Geotechnical Analysis Phase I

- Subsurface Investigation and Settlement Monitoring
  - 30 Shallow Borings
  - 6 Deep Borings
  - Below Ground Surface Monitors
  - 6 Settlement Plate Surcharge Areas

# Geotechnical Analysis Phase I



# QUESTIONS & COMMENTS



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