KINGSLEY PARK

PUBLIC MEETING #2

DRAINAGE AND CIRCULATION IMPROVEMENTS

April 12, 2012

Bioengineering GROUP
Building Sustainable Communities on an Ecological Foundation

CAMBRIDGE WATER DEPARTMENT

Agenda

- Introductions / Housekeeping
- Public Meeting #1 Overview
- Existing Conditions – Circulation and Drainage
- Design Opportunities (Improvements)
- Public Input

Housekeeping Items

Sign-in Sheet

Public Input Sheet:

- Comments due May 11, 2012
- fpr@cambridgema.gov

Project Webpage:

- www.cambridgema.gov/CWD/Kingsley.cfm

Overview – Presentation #1

- Master Plan Goals
- Cultural and Geological History
- Vegetation Inventory
- Erosion and Compaction
- Inventory of Site Amenities
- Shared Use Overview

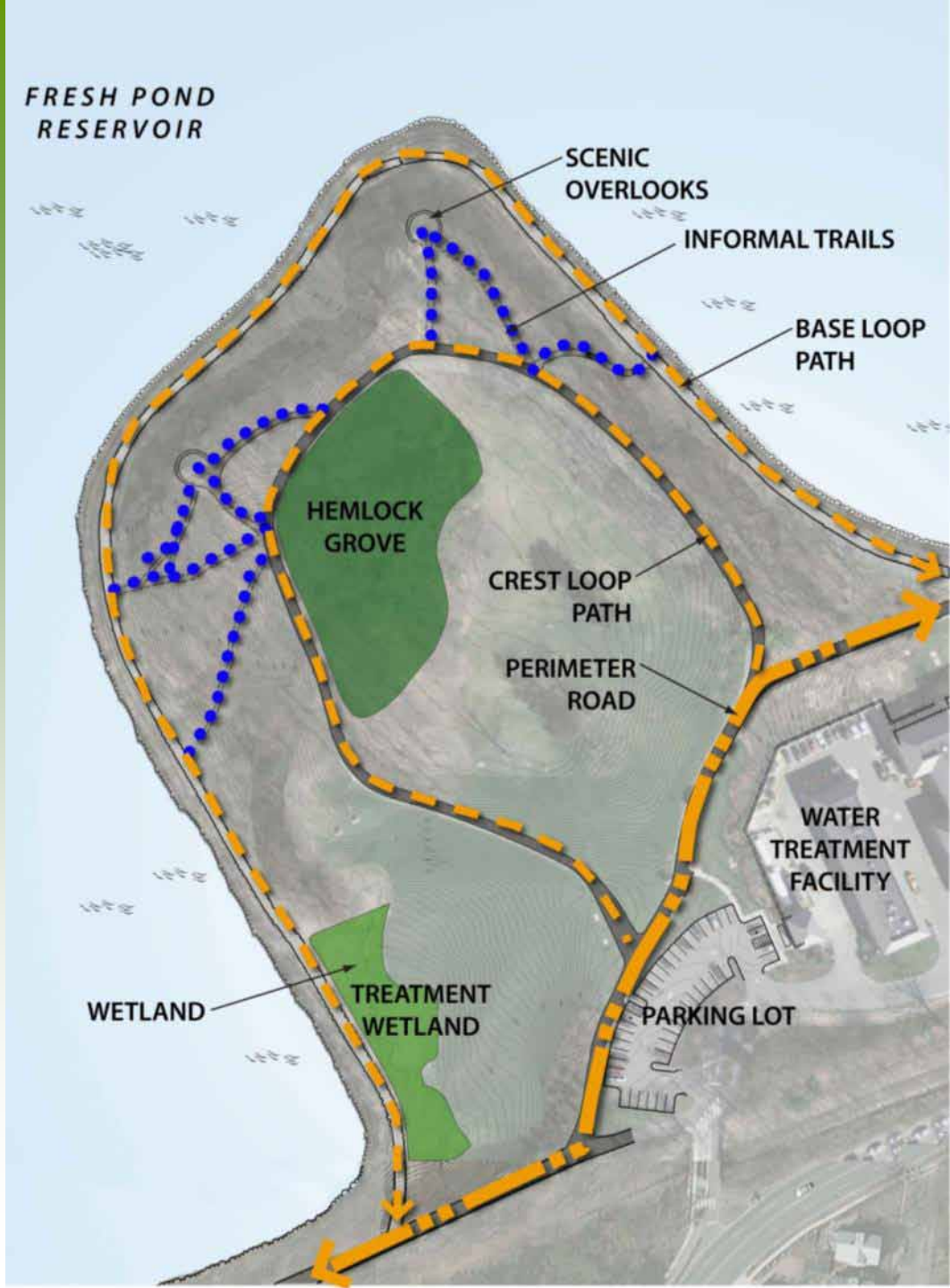
Presentation Overview

- ADA Compliance for Pathways
- Stormwater Management
- Drainage Improvements

Next Public Meeting
June 2012

- Restoration
- Historic Interpretation
- Play Features
- Shared Use

Existing Site Features



Circulation Hierarchy

Primary:
Perimeter Road

Secondary:
Crest and Base Loop Paths

Informal:
Connector Trails

ADA Standards for Accessible Design

Three important criteria for Compliance:

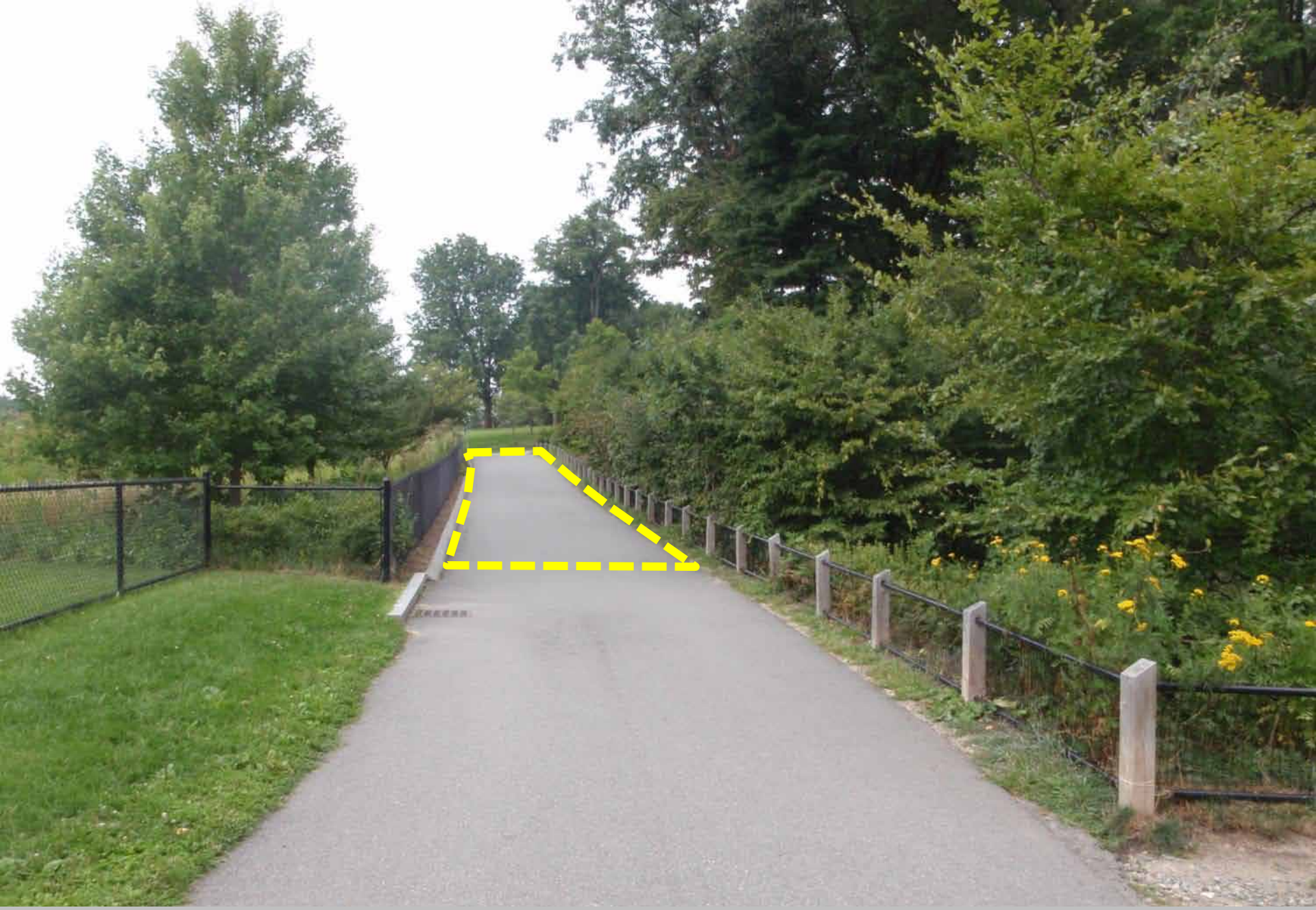
- Gradient (Slope)
- Width
- Surface Condition

ADA Compliance - Requirements

- Walkway: 5 % max. longitudinal slope
- Ramp: 8% max. slope with handrails
- Cross-pitch: 2 % max. cross slope
- Width: 5 feet min. (unless passing spaces have been provided every 200’)
- Surfacing: Stable, firm, and slip-resistant

Accessibility

- Non-Compliant Walkways (>5%)



PERIMETER ROAD – 6.0% SLOPE

CREST LOOP TRAIL – 8.5% SLOPE

Accessibility

- Non-Compliant Slopes (>5%)
- Non-Compliant Materials

CREST LOOP PATH – NON-COMPLIANT

BASE LOOP TRAIL – MULCH (NON-COMPLIANT)

BASE LOOP TRAIL – COMPACT EARTH/GRAVEL

OVERLOOK – COMPACT EARTH/GRAVEL

Circulation Improvements

- Crest Loop Path Realignment

Option 1: Base Loop Path Connection

- Restore Riparian Buffer Area
- Eliminate Ramps
- Drier Conditions
- Bisects Kingsley Bowl

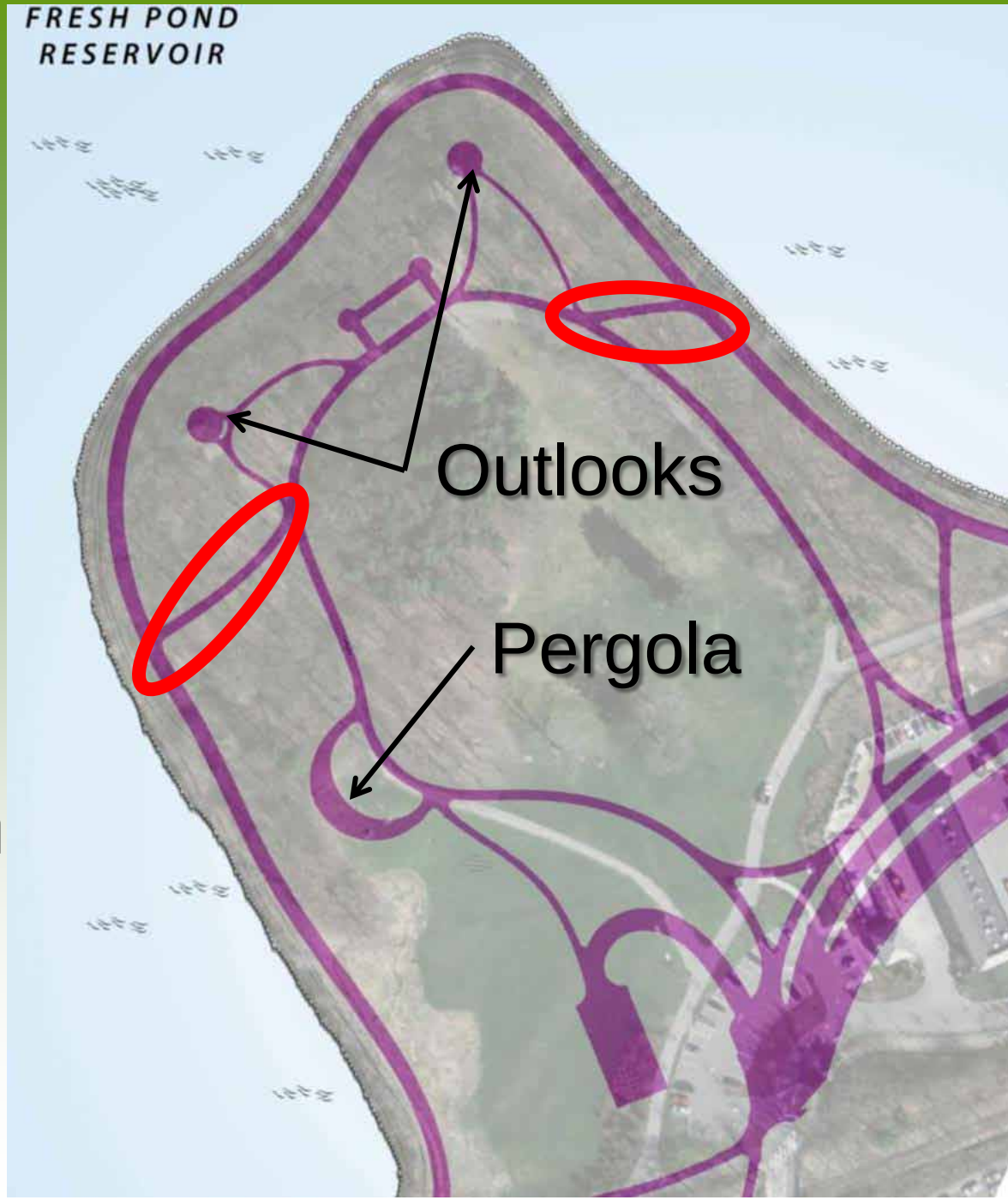
Option 1

Option 2: Base Loop Path Connection

- Uses Existing Alignment
- Maintain Kingsley Bowl
- Requires Switchback Ramps/Walls

Historic Alignment

- 1896 Olmsted Bros. Layout Plan
- Historic Connector Path Rehabilitation



CONNECTOR TRAIL

Circulation Improvements

- Material Replacement

Materials: Primary and Secondary Paths

Porous Pavements

Benefits:

- ADA compliant
- Highly porous
- Longevity (25 plus years)

Drawbacks:

- Requires Underdrain
- High Groundwater
- Increased Maintenance

Materials:
Connector Paths

Stabilized Aggregate

Stabilized Aggregate

Benefits:

- ADA – compliant
- Softer surface
- Color/texture blends well with natural environment

Drawbacks:

- Requires frequent maintenance
- Less stable on steep slopes and shaded environments

Existing Drainage Patterns

Uncontrolled Runoff

BASE LOOP TRAIL

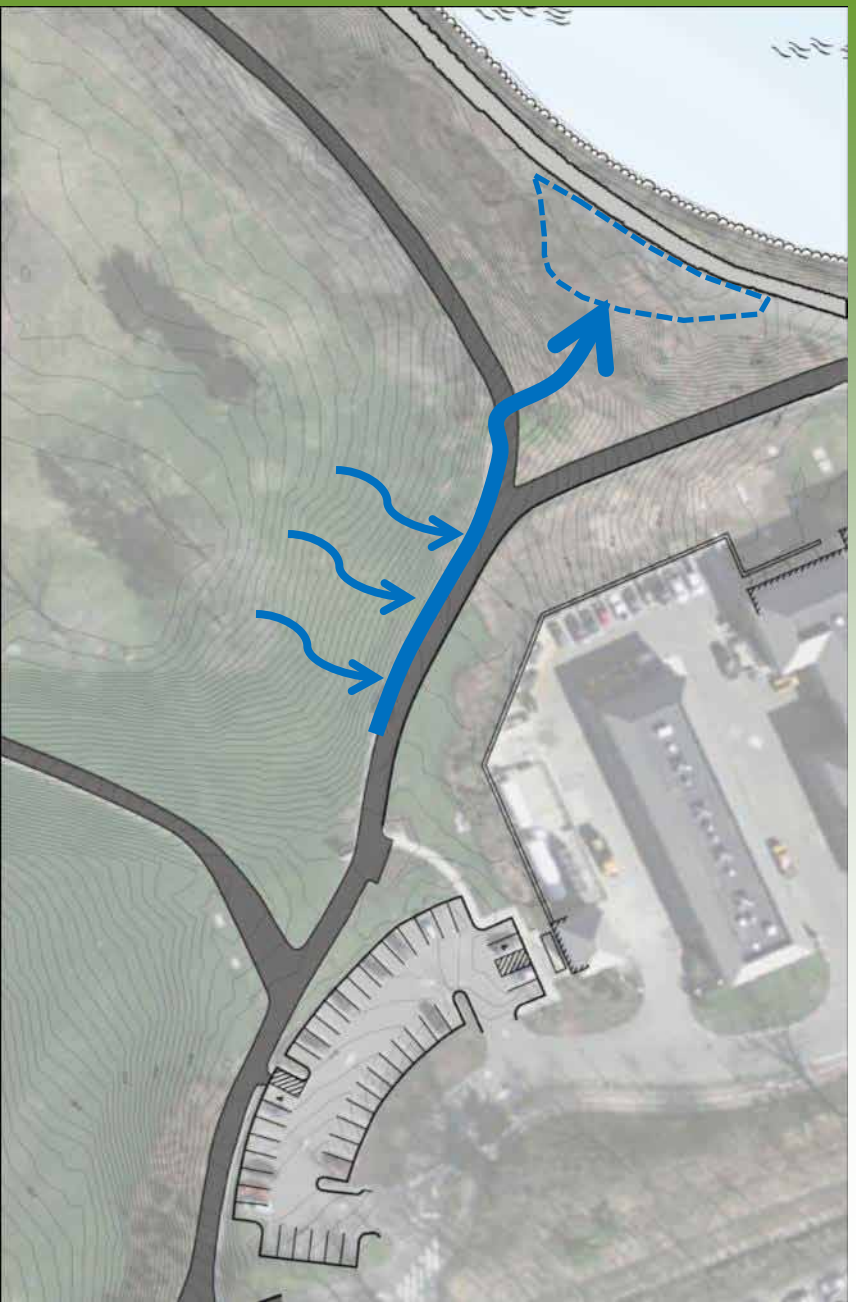
Drainage Improvements

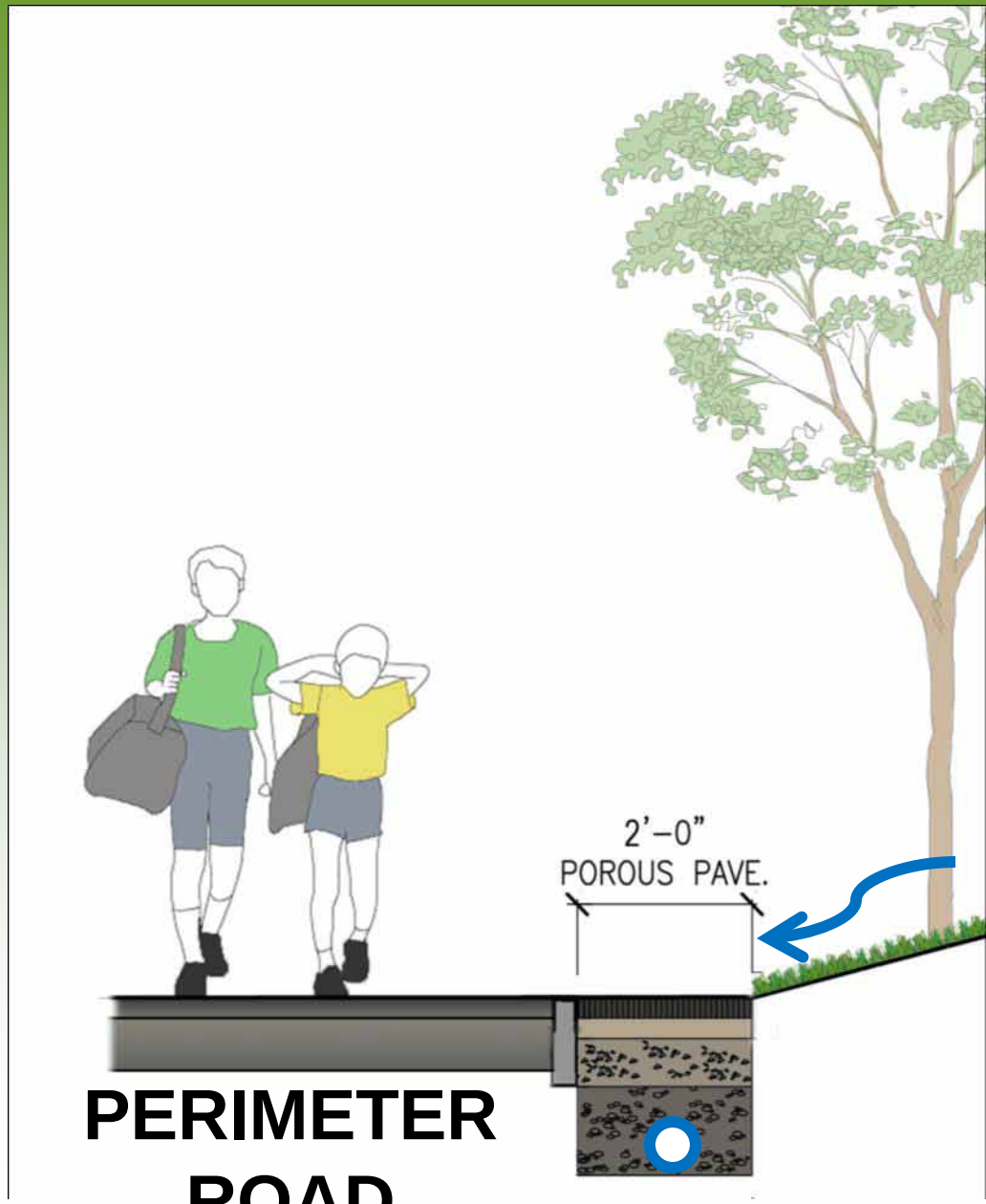
- Bioretention/ Rain Garden
- Infiltration Trenches
- Porous Pavement Section

INFILTRATION TRENCH

BIORETENTION/RAIN GARDEN

Porous Pavement Retrofit





Public Input