



# Montgomery Parks



## Rock Creek Trail Facility Plan

Presentation to Parkwood Residents Association

M-NCPPC Park Development Division

LSG Landscape Architecture

Nobis Engineering, Inc.

Straughan Environmental, Inc.



December 9, 2014



# Tonight's Meeting Agenda



- Introductions
- Project Timeline
- Project Description & Study Area
- Project Goals & Objectives
- Existing Conditions Assessment
- Trail Alignment Concepts
- Trail Renovation Strategies
- Next Steps
- Discussion



# Project Timeline

- ✓ December 2012: Project Start
- ✓ July 2013: Existing Conditions Assessment
- ✓ August 2013: Develop Preliminary Alignment
- ✓ November 2013: Community Meeting
- ✓ Spring 2014: Project – On Hold
- ✓ Summer 2014: Develop Trail Renovation Plans (Draft 30%)
- Fall 2014: Regulatory Agency Coordination
- Winter 2015: Final Facility Plan Submission (30% Design)
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- FY 2017-2022 C.I.P. Final Design & Construction



# Study Area

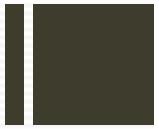


Study Area = 7 miles

- ❖ 36,000 feet (7 miles) of shared-use path
- ❖ District line to underpass north of Knowles Avenue
- ❖ Trail parallels Rock Creek within Stream Valley Units (SVU) 1-3
- ❖ Trail is adjacent to Beach Drive



# Project Goals & Objectives



Identify opportunities to:

- ❖ Improve safety & accessibility:
  - ✓ Americans with Disabilities Act (ADA)
  - ✓ American Association of State Highway and Transportation Officials (AASHTO) publication of *Guide for the Development of Bicycle Facilities, 4<sup>th</sup> Edition* (2012).
- ❖ Reduce trail maintenance needs
- ❖ Improve drainage
- ❖ Improve pavement conditions
- ❖ Enhance the natural environment along the trail
- ❖ Maintain and enhance the trail user's experience



# What is a Facility Plan?

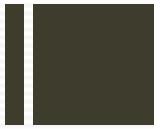
- This project will develop a facility plan, which includes a 30% level of design, detailed cost estimate, and determination of regulatory feasibility.
- If approved by the Montgomery County Planning Board, the project will be included in the Department of Parks Capital Improvements Program (CIP) for final design and construction.



# Existing Conditions Assessment



# Existing Conditions Assessment



## Assessment Criteria Categories:

- Accessibility (ADA Standards)
- Drainage Conditions
- Pavement Conditions\*
- Shoulder Conditions\*
- Protective Barriers, Bridges, and Lighting\*
- Environmental Conditions

\* Based on AASHTO Hard Surface Trail Standards (2012)



# Existing Conditions Assessment



**ROCK CREEK TRAIL**  
MONTGOMERY COUNTY, MD  
STREAM VALLEY UNIT 1-3

## EXISTING CONDITIONS ASSESSMENT REPORT

PREPARED FOR



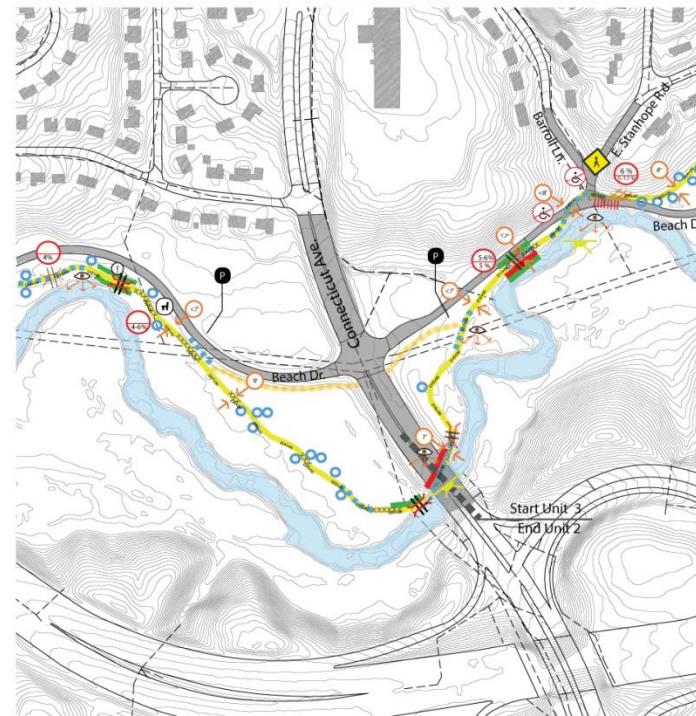
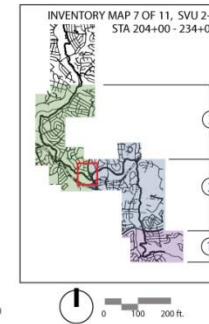
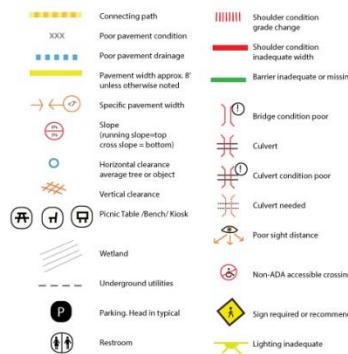
THE MARYLAND-NATIONAL CAPITAL PARK & PLANNING COMMISSION  
MONTGOMERY COUNTY DEPARTMENT OF PARKS  
9500 BRUNETT AVENUE  
SILVER SPRING, MD 20901

BY



LSG LANDSCAPE ARCHITECTURE, INC.  
1919 GALLONS ROAD, SUITE 110  
TYSONS CORNER, VA 22182

08.16.2013





# Existing Conditions Assessment

**ROCK CREEK TRAIL**  
STREAM VALLEY UNIT 2-3

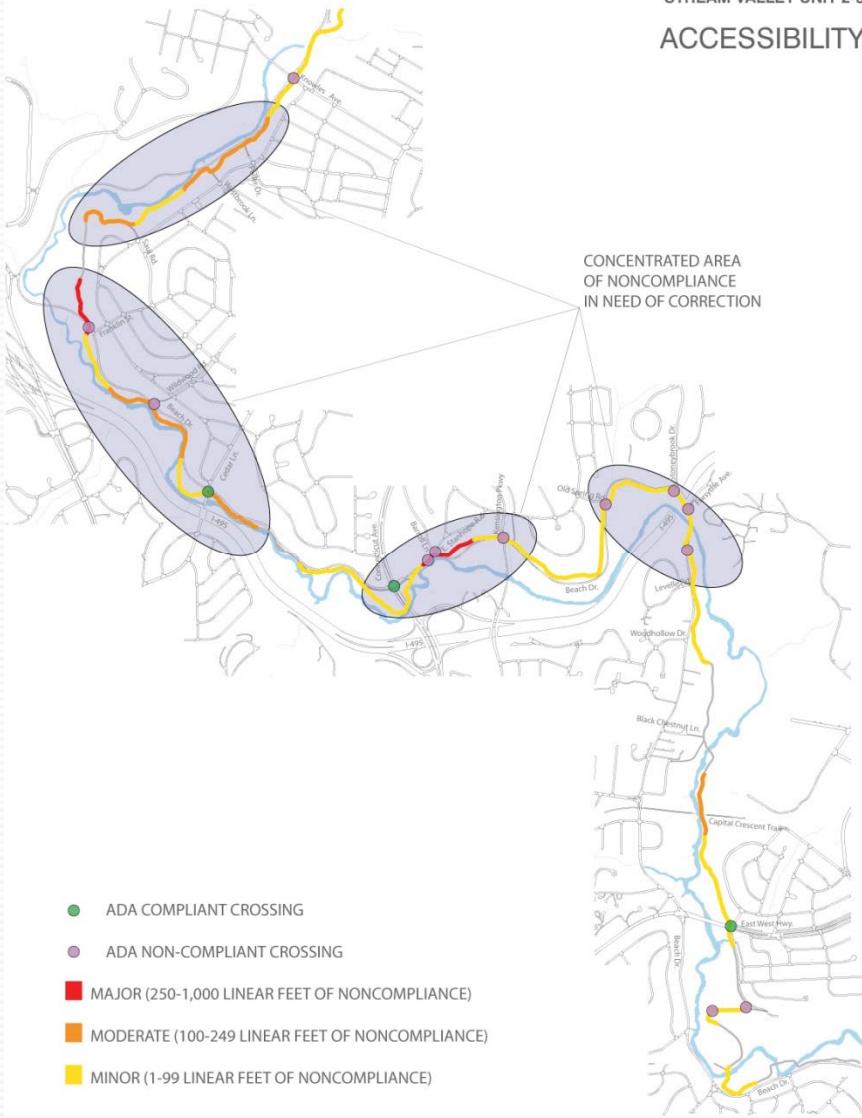
ACCESSIBILITY	INSTANCES	LINEAR FEET
Longitudinal slope exceeding 5%	44	1510
Cross slope exceeding 2%	29	895
Lacking ADA compliant crossing with detectable warning	11	110
DRAINAGE	INSTANCES	LINEAR FEET
Poor pavement drainage	56	3755
Culvert needed	14	140
Culvert repair needed	11	110
PAVEMENT CONDITIONS	INSTANCES	LINEAR FEET
Poor pavement condition	49	3255
Inadequate pavement width	35	590
Inadequate pavement width at bridges & underpasses	12	210
SHOULDER CONDITIONS	INSTANCES	LINEAR FEET
Horizontal obstructions within path shoulder	122	2515
Abrupt grade change at path edge	33	2730
Inadequate shoulder width	16	2715
Inadequate width between road and path	10	2070
Inadequate width between path & steep slopes or water bodies	9	475
Vertical obstructions within path and shoulder	9	180
PROTECTIVE BARRIERS, BRIDGES, & LIGHTING	INSTANCES	LINEAR FEET
Inadequate protective railing	22	500
Inadequate sight distance	14	140
Inadequate lighting at underpasses or road crossings	4	430
Unsafe or undesirable conditions at bridges	3	30
Inadequate protective bridge railing	2	60
ENVIRONMENTAL FACTORS	INSTANCES	LINEAR FEET
Path in 100 year flood plain	CONTINUOUS	35,300
Trail within a 100' stream buffer	CONTINUOUS	10,800
Trail in Wetland	CONTINUOUS	2,370



# Accessibility

## ROCK CREEK TRAIL STREAM VALLEY UNIT 2-3 ACCESSIBILITY

- Running slope > 5%
- Cross slope > 2%
- ADA compliant road crossing





# Drainage

ROCK CREEK TRAIL  
STREAM VALLEY UNIT 2-3

## DRAINAGE

CONCENTRATED AREA  
OF NONCOMPLIANCE  
IN NEED OF CORRECTION

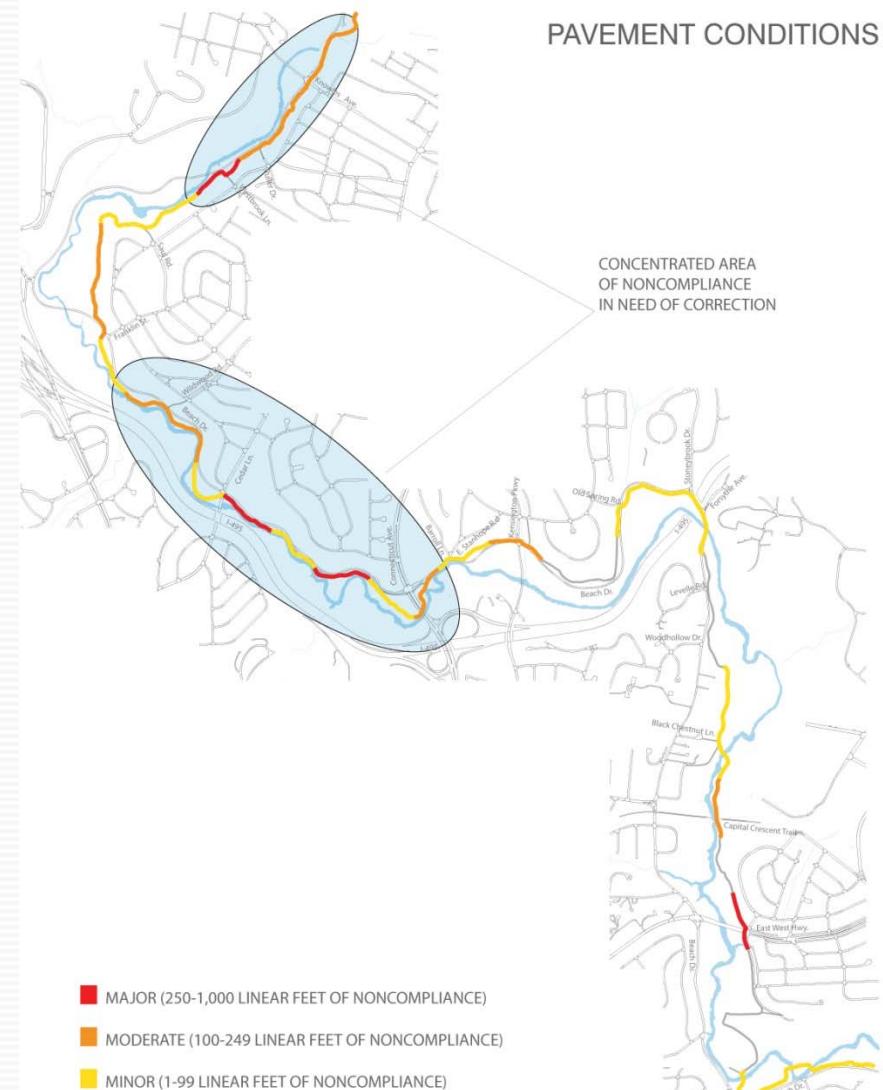
- CULVERT REPAIR NEEDED
- CULVERT NEEDED
- MAJOR (250-1,000 LINEAR FEET OF NONCOMPLIANCE)
- MODERATE (100-249 LINEAR FEET OF NONCOMPLIANCE)
- MINOR (1-99 LINEAR FEET OF NONCOMPLIANCE)

- Poor pavement drainage
- Culvert needed
- Culvert repair needed





# Pavement Conditions

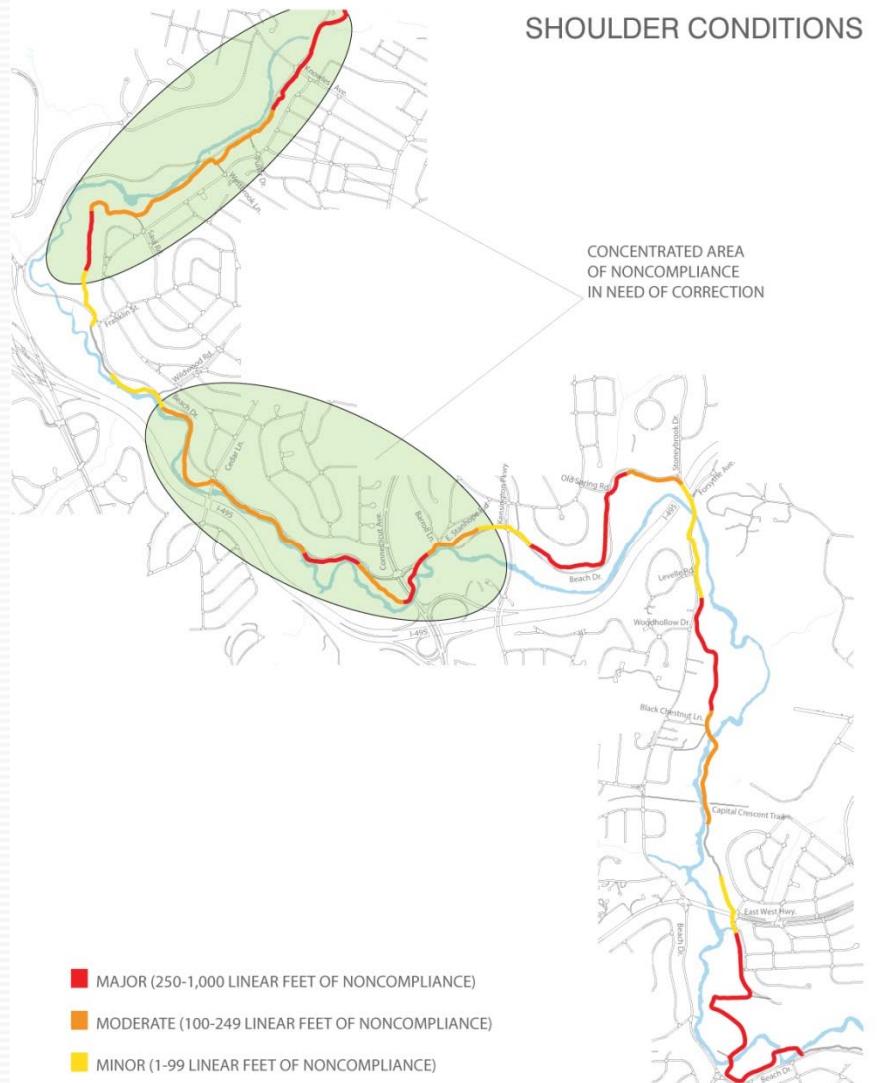


- Poor pavement condition
- Inadequate path width (including bridges & underpasses)





# Shoulder Conditions

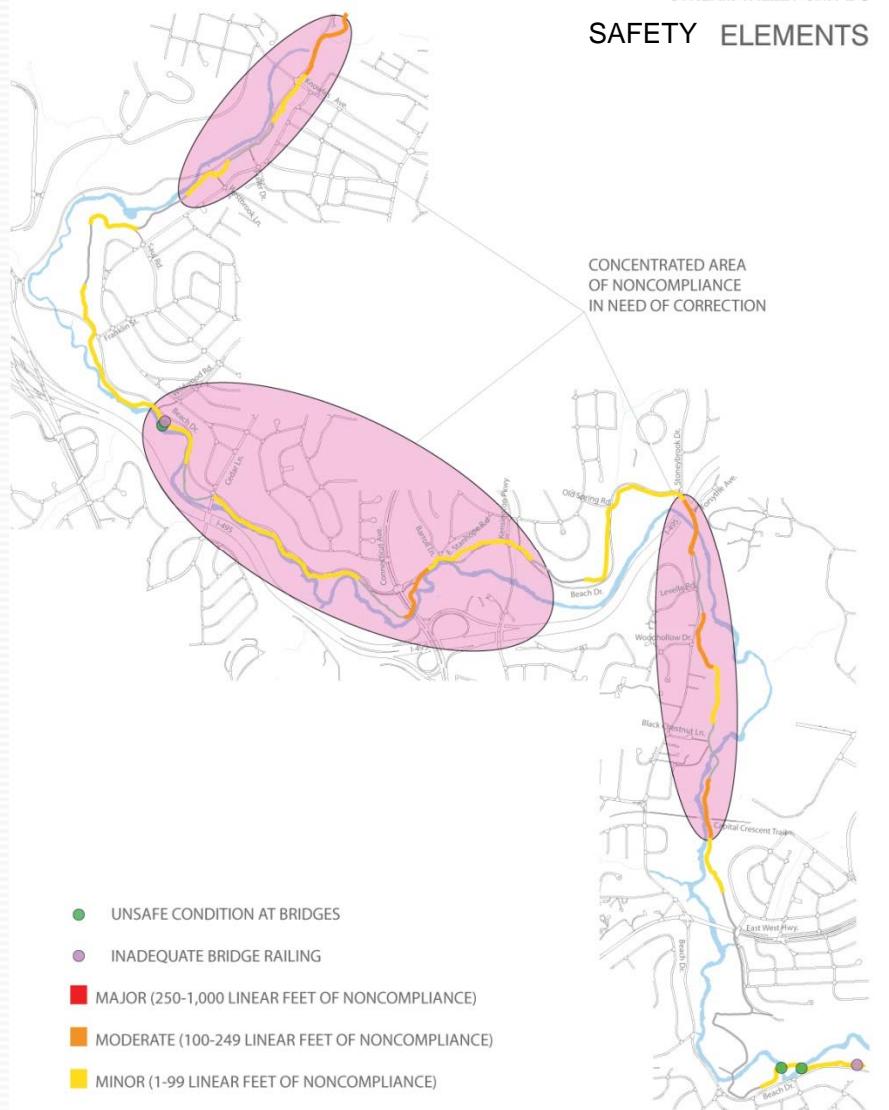


- Obstructions in shoulder area
- Abrupt grade transition
- Inadequate shoulder width
- Inadequate width between trail, road, or streambank





# Safety Conditions

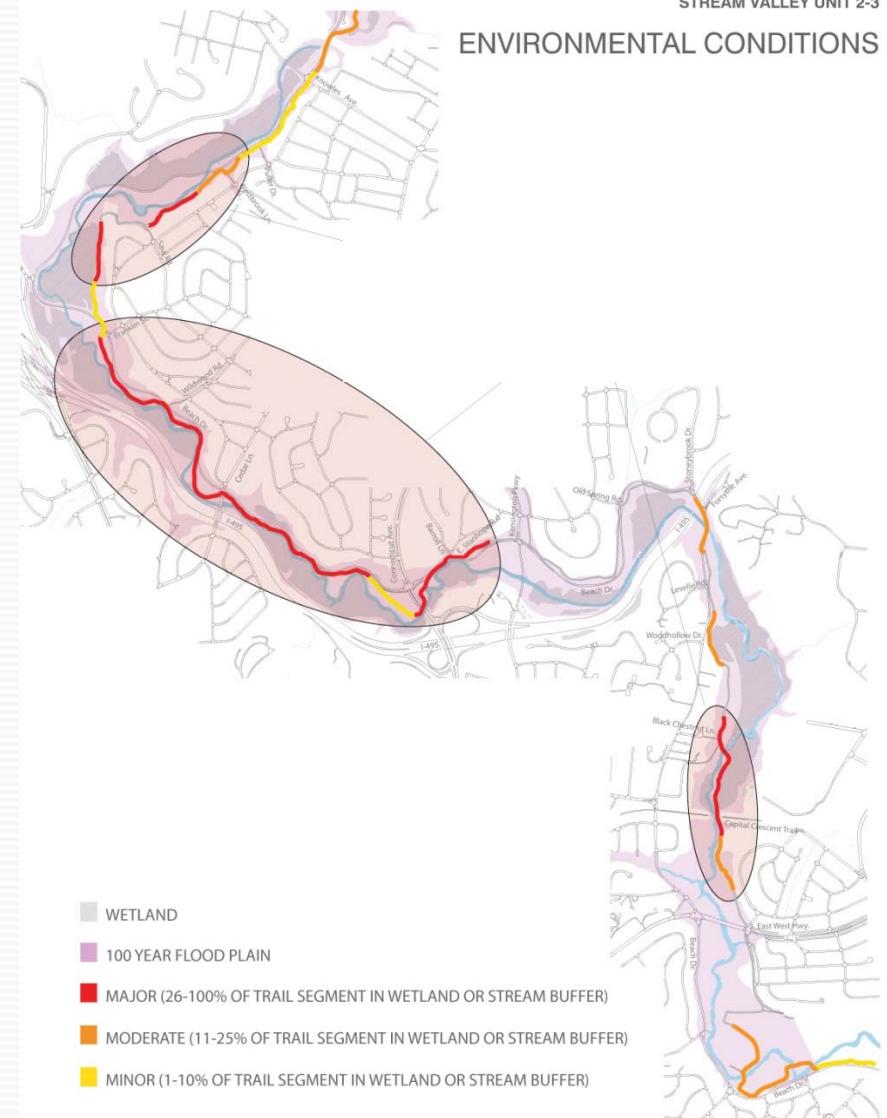


- Inadequate:
  - Railing, Sight Distance, or Bridge Lighting
- Bridge element needs repair
- Crime Prevention Through Environmental Design (CPTED)





# Environmental Conditions

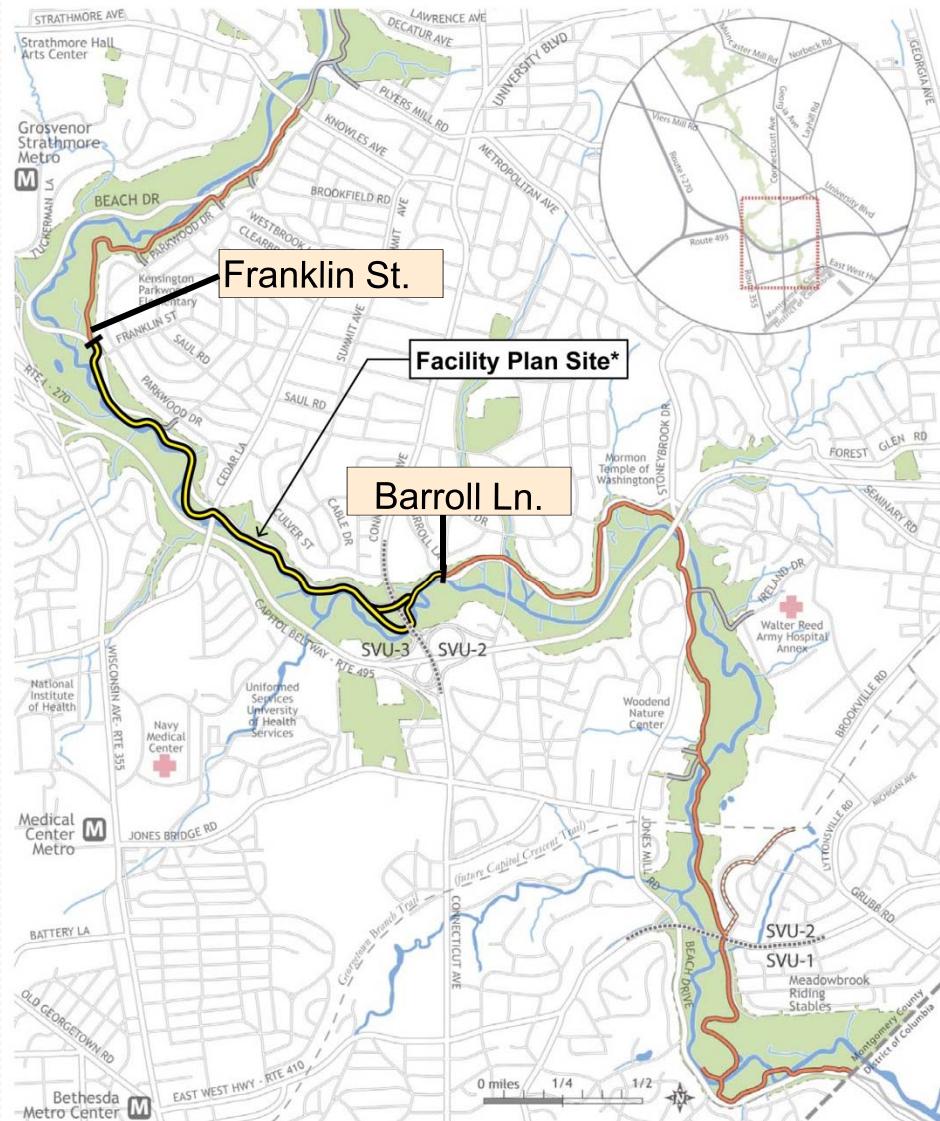


- Path in 100-year floodplain
- Trail within 100' stream buffer
- Trail within wetland





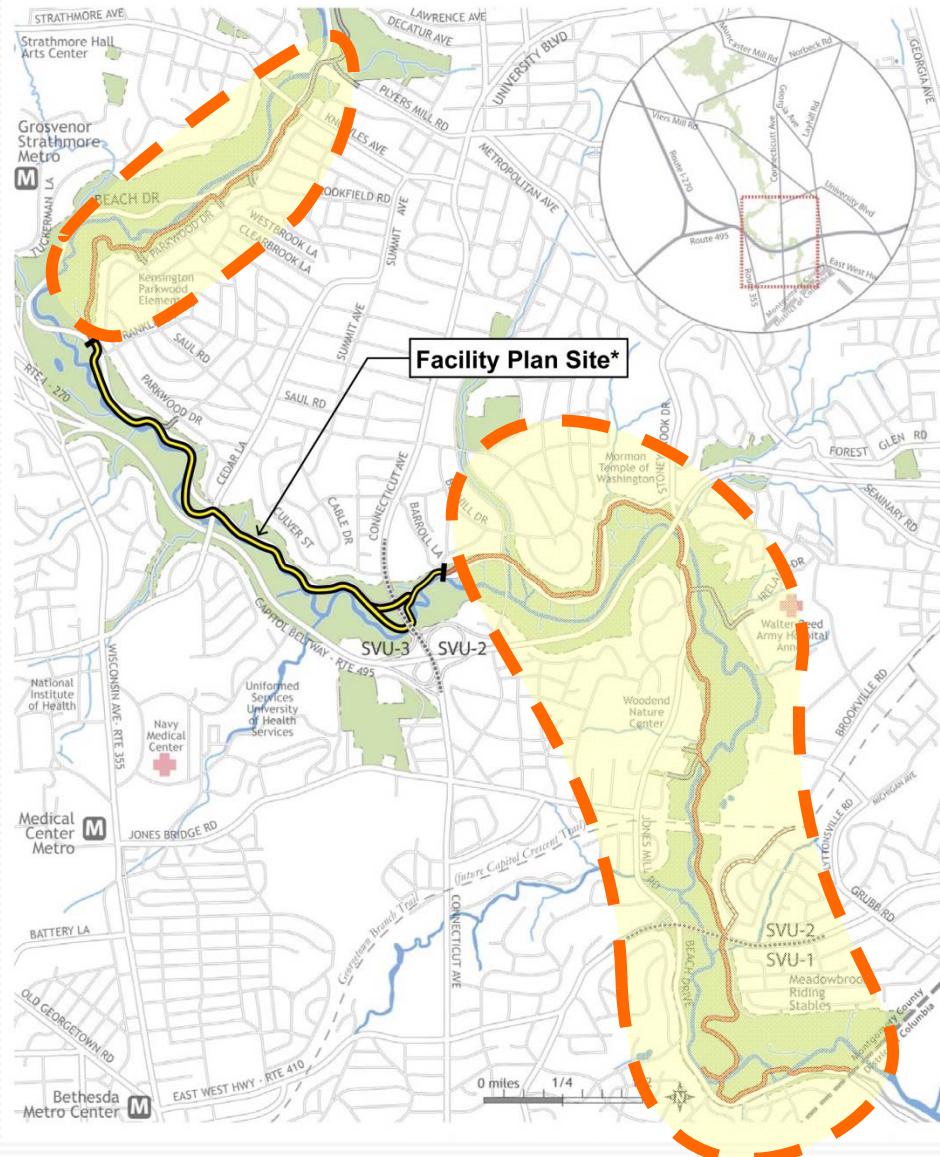
# Facility Plan Project Area



\*Facility Plan Site = 2 Miles of Trail (10,000 Linear Feet)



# Improvements Beyond the Facility Plan



- Trail segments needing renovation outside the Facility Plan Project Area will be organized into separate projects.
- Once funding becomes available, trail renovation will be completed based on cost and priority.
- M-NCPPC has requested an increase in CIP funding to renovate the Rock Creek Trail.



# Preliminary Trail Alignment Concepts



# Rock Creek Today





# Existing Conditions...



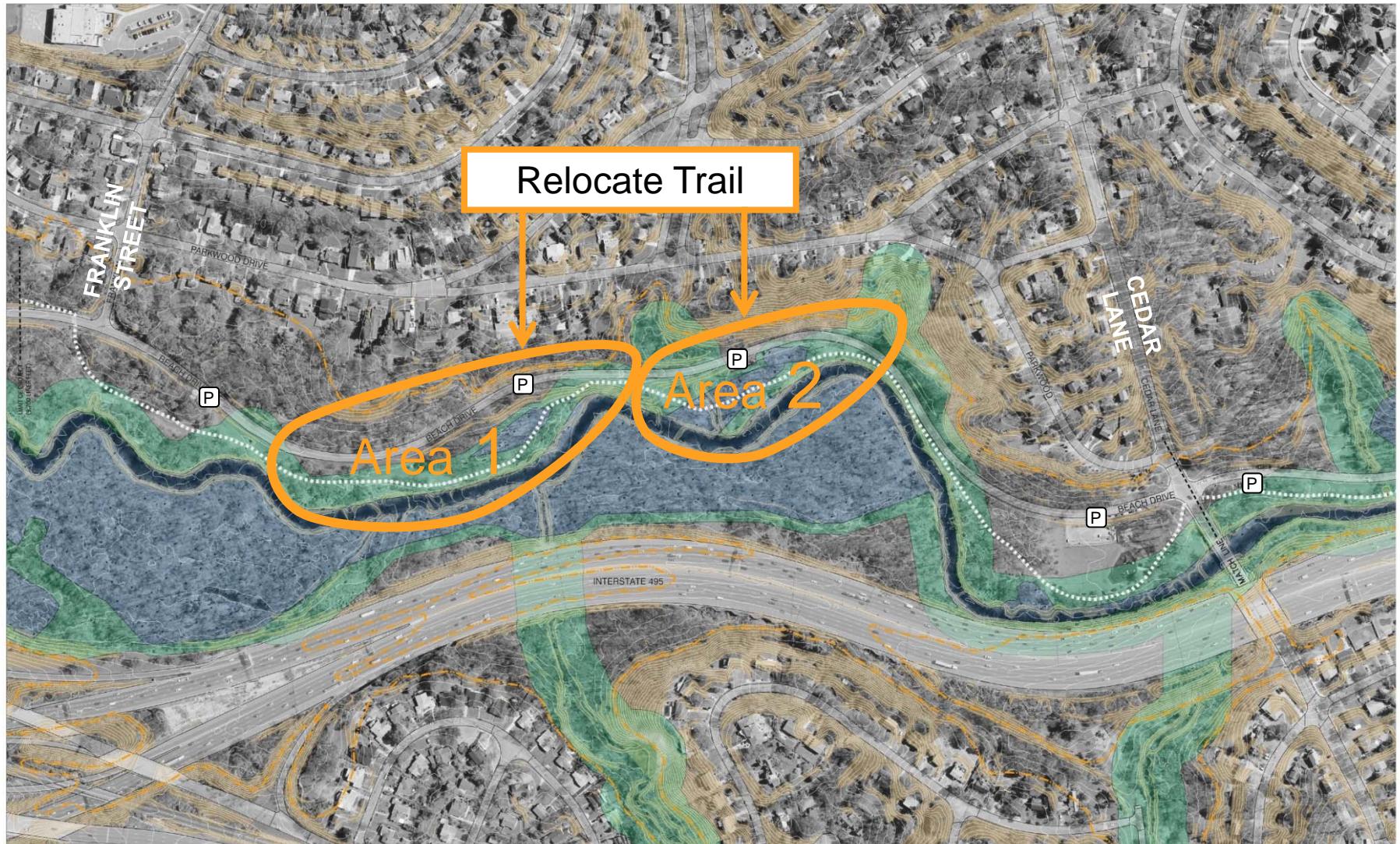


# Existing Conditions...





# Trail Re-alignment Areas (West)



■■■ EXISTING TRAIL ALIGNMENT ■ PREFERRED PRELIMINARY TRAIL ALIGNMENT — ss — EXISTING SANITARY SEWER ■■■ EXISTING WETLAND  
STREAM & WETLAND BUFFER ■■■ EXISTING STORM DRAIN ■■■ 212 EXISTING CONTOUR ELEVATION  
— 100 YEAR FLOOD PLAIN ■■■ STEEP SLOPES



# Trail Re-alignment: Area 1



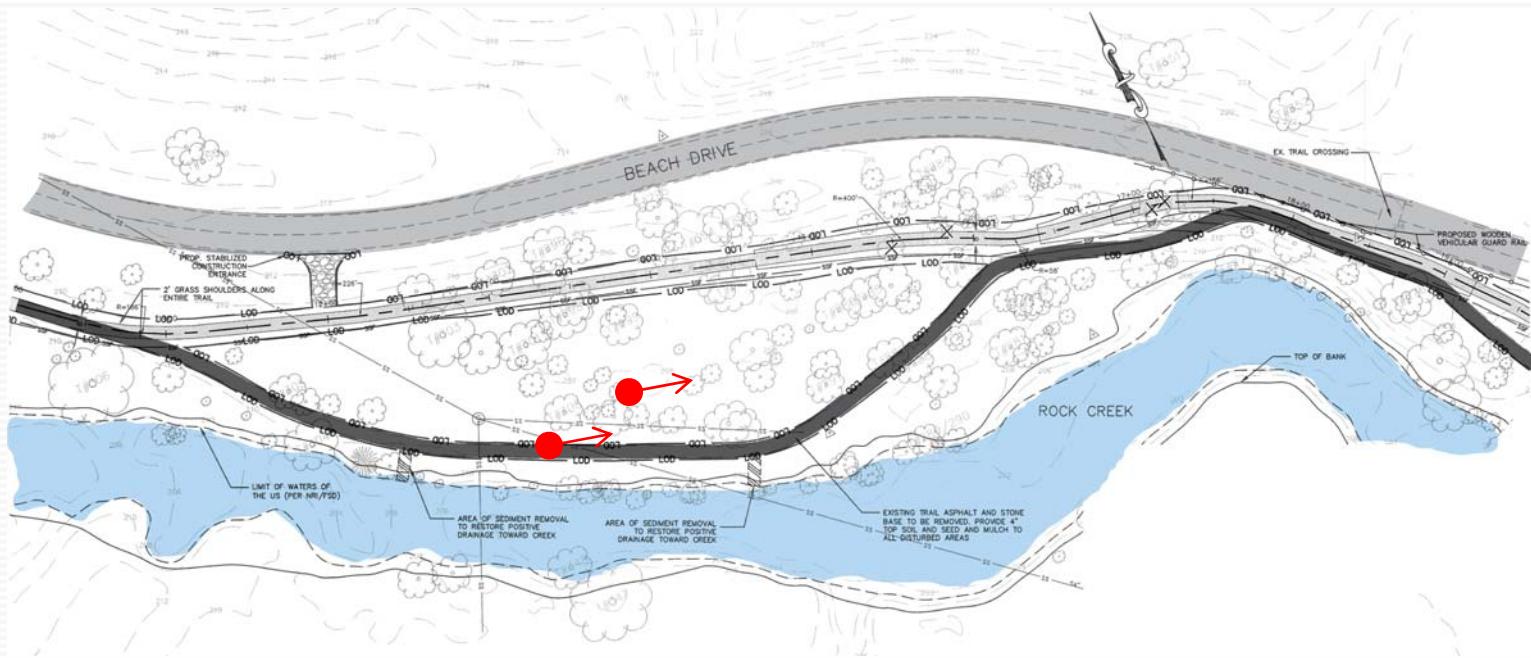


# Trail Re-alignment: Area 1



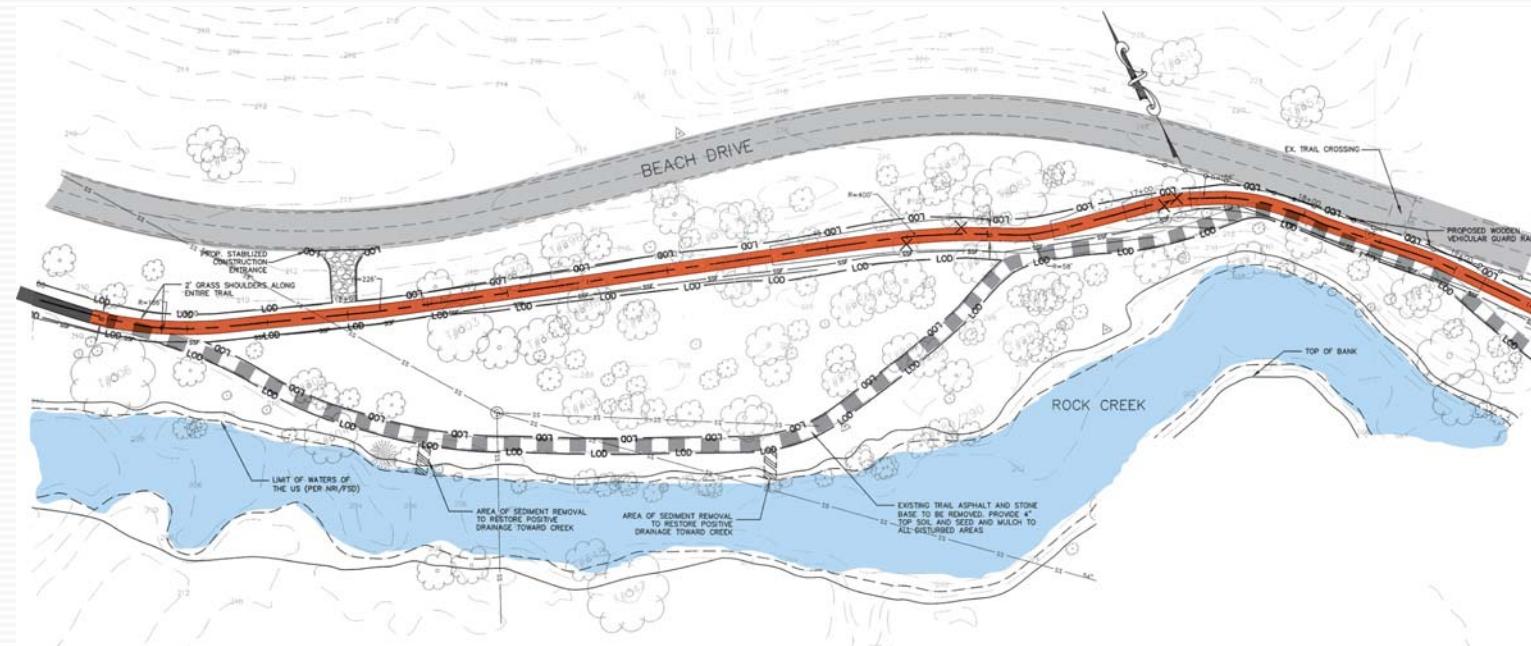


# Trail Re-alignment: Area 1





# Trail Re-alignment: Area 1





# Trail Re-alignment: Area 1



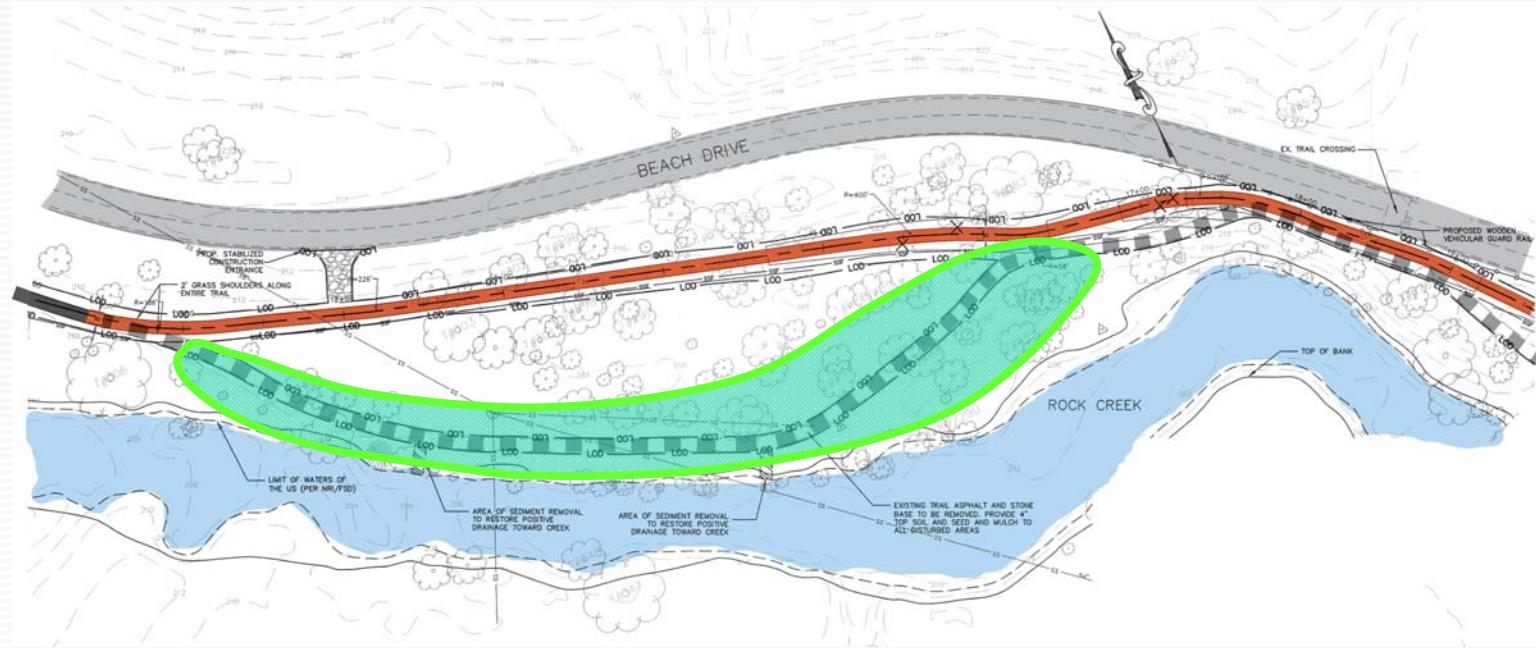


# Trail Re-alignment: Area 1





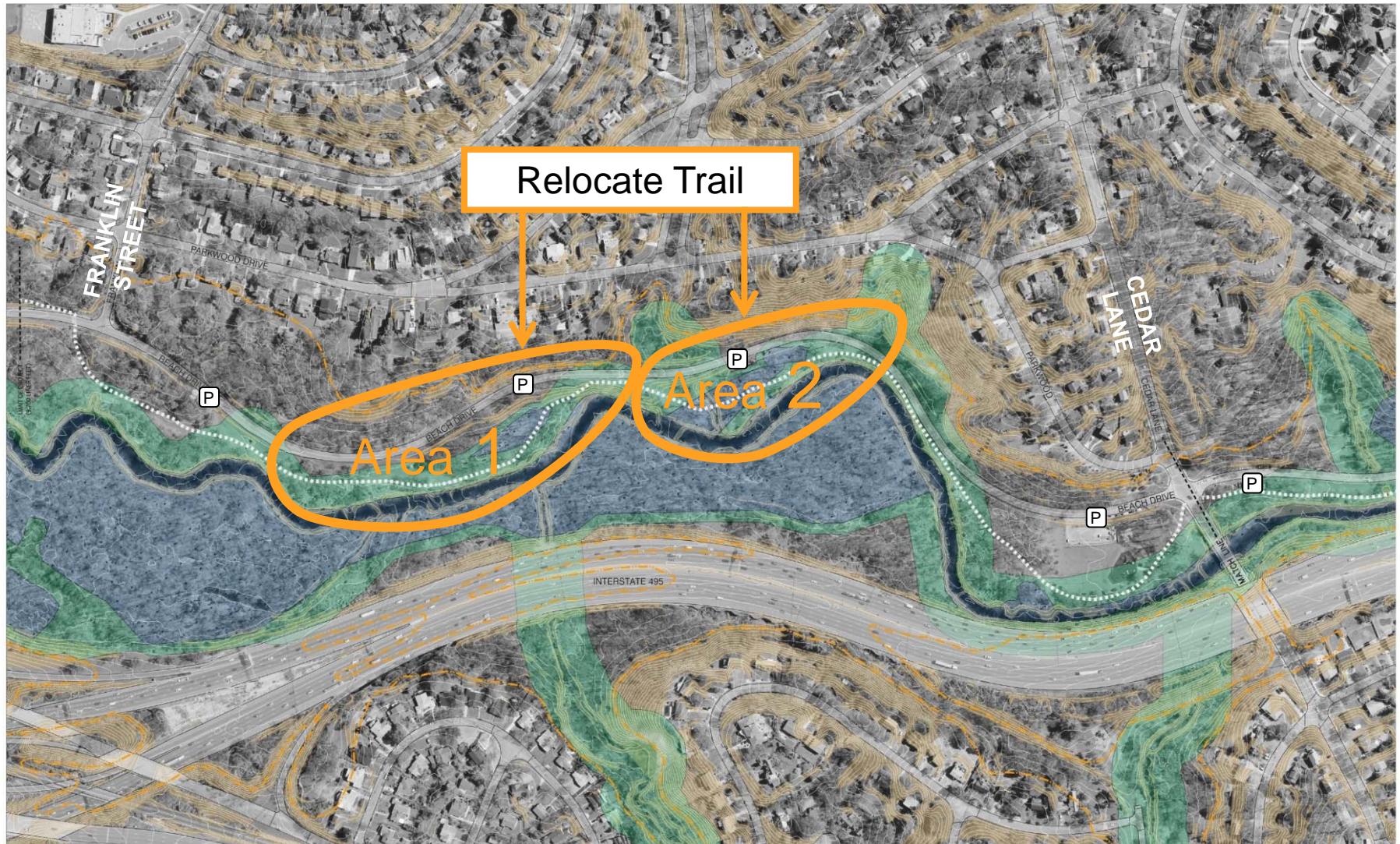
# Area 1: Stream Buffer Improvements



- Enhance existing riparian zone and wet areas through native re-vegetation.
- Naturalize restoration zone with plantings and implementation of best practices to support a viable riparian stream buffer.



# Trail Re-alignment Areas (West)



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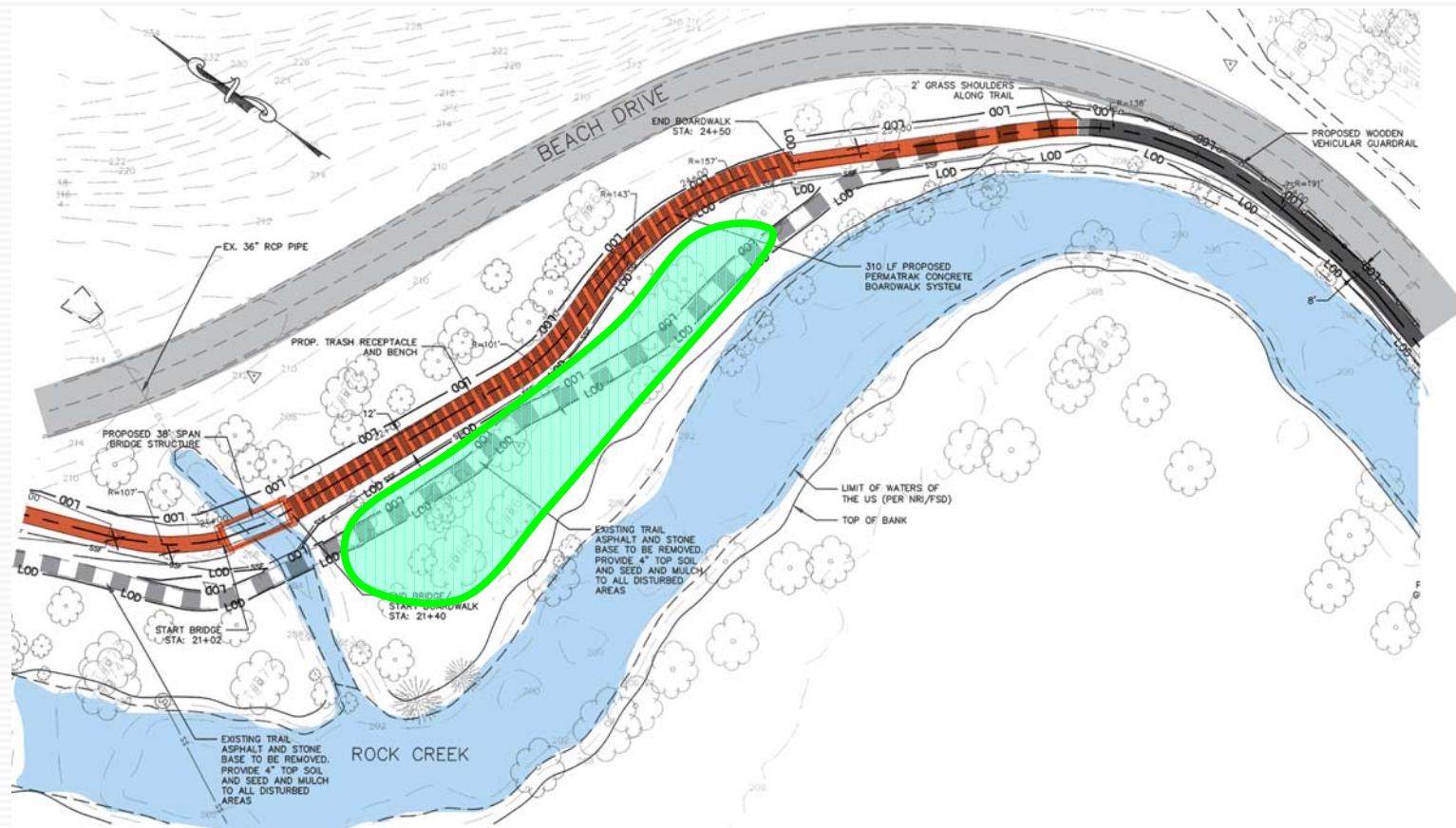


# Trail Re-alignment: Area 2



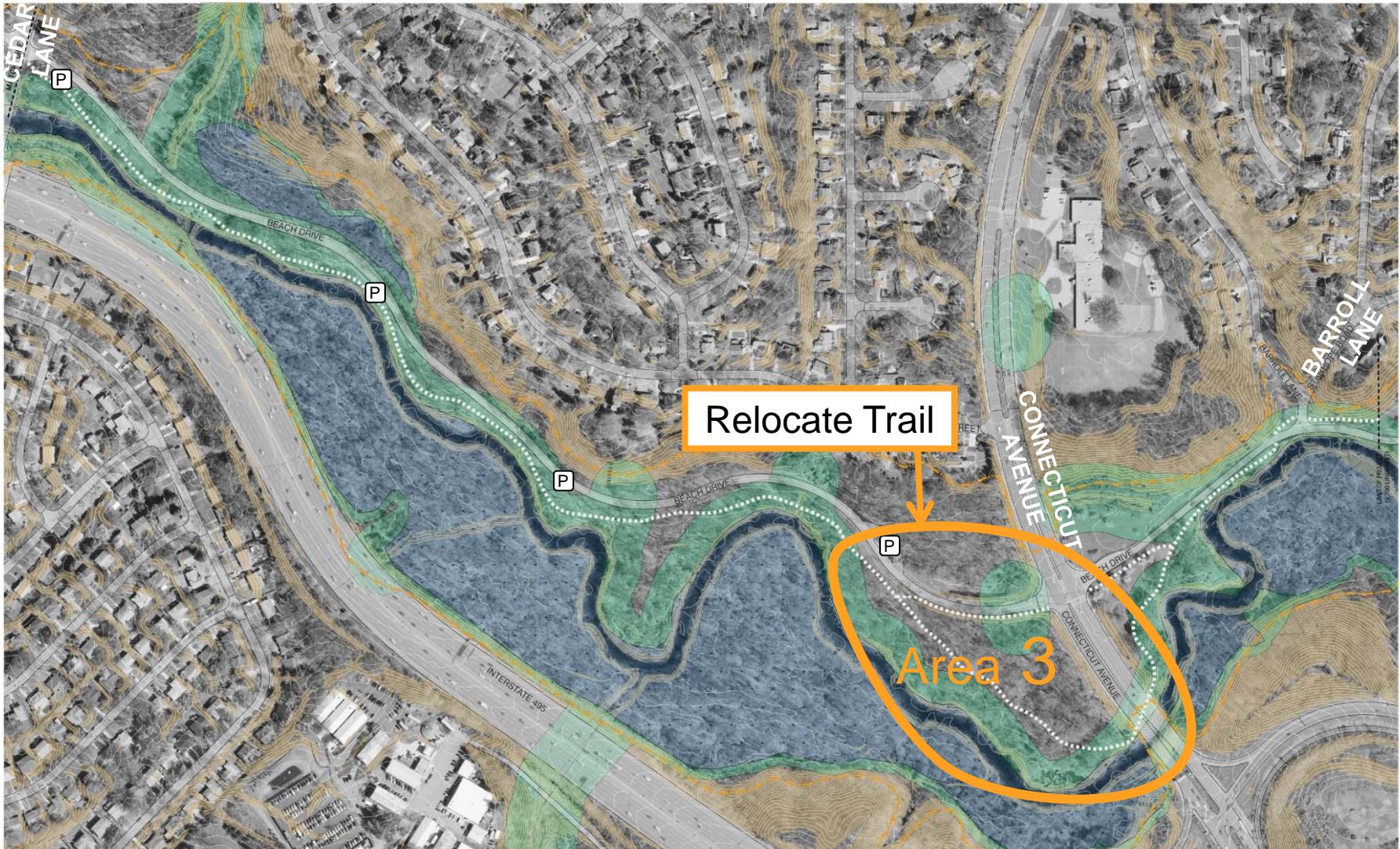


# Area 2: Stream Buffer Improvements





# Trail Re-alignment Areas (East)





# Trail Re-alignment: Area 3





## Trail Re-alignment: Area 3



To Connecticut Avenue  
crosswalk



To Connecticut Avenue  
underpass



# Trail Re-alignment: Area 3



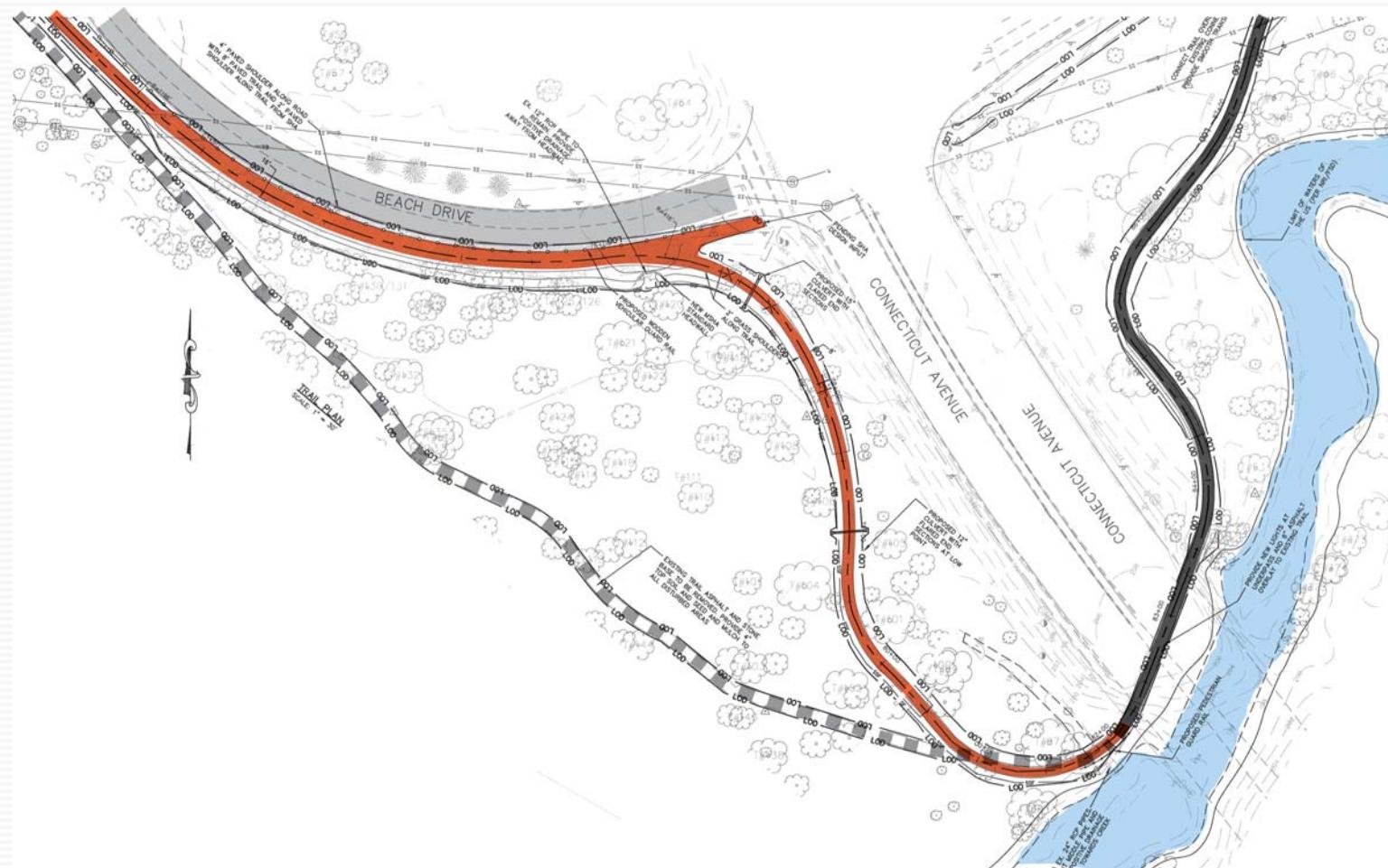
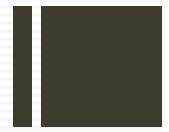
To Connecticut Avenue  
crosswalk



To Connecticut Avenue  
underpass

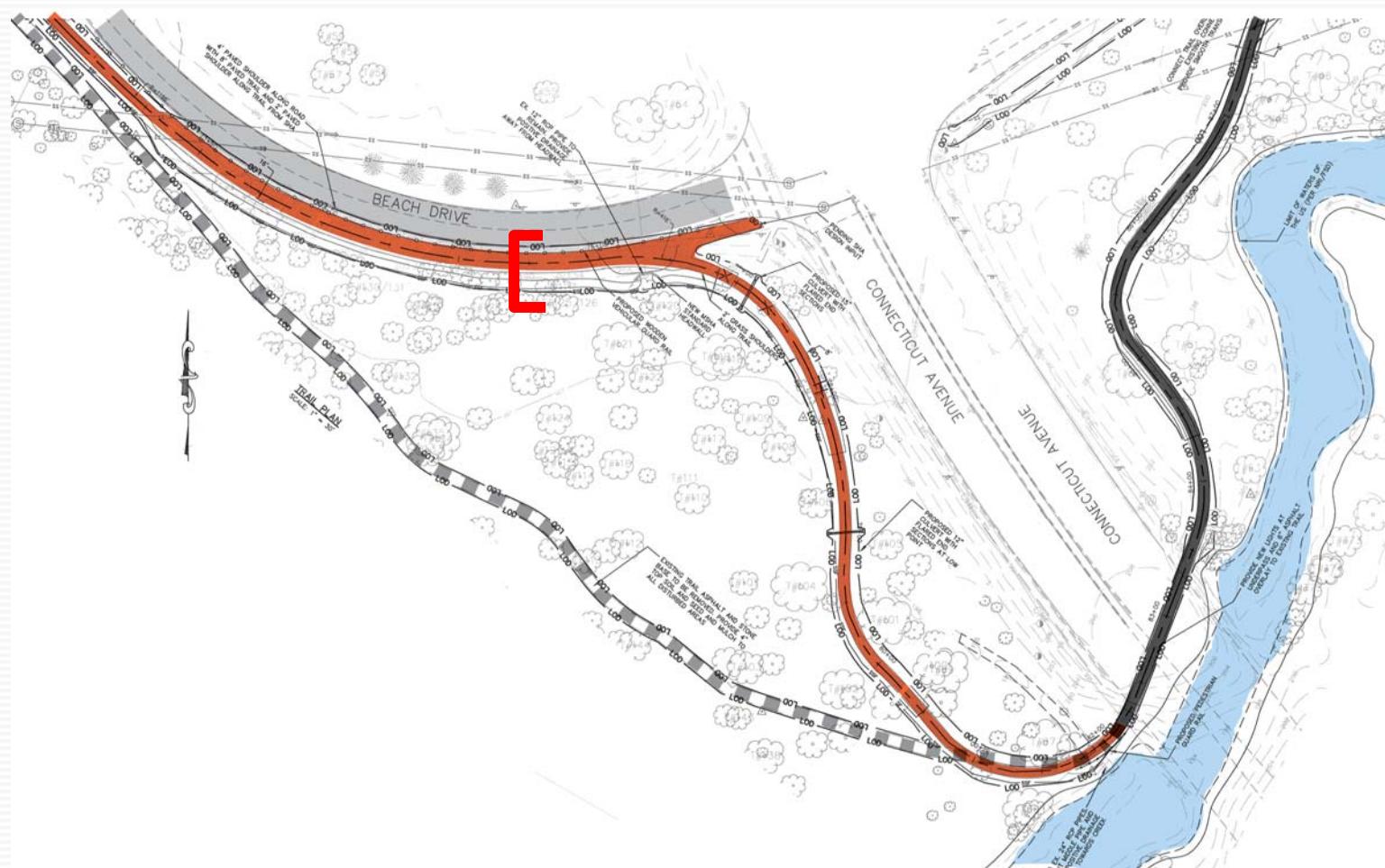


# Trail Re-alignment: Area 3

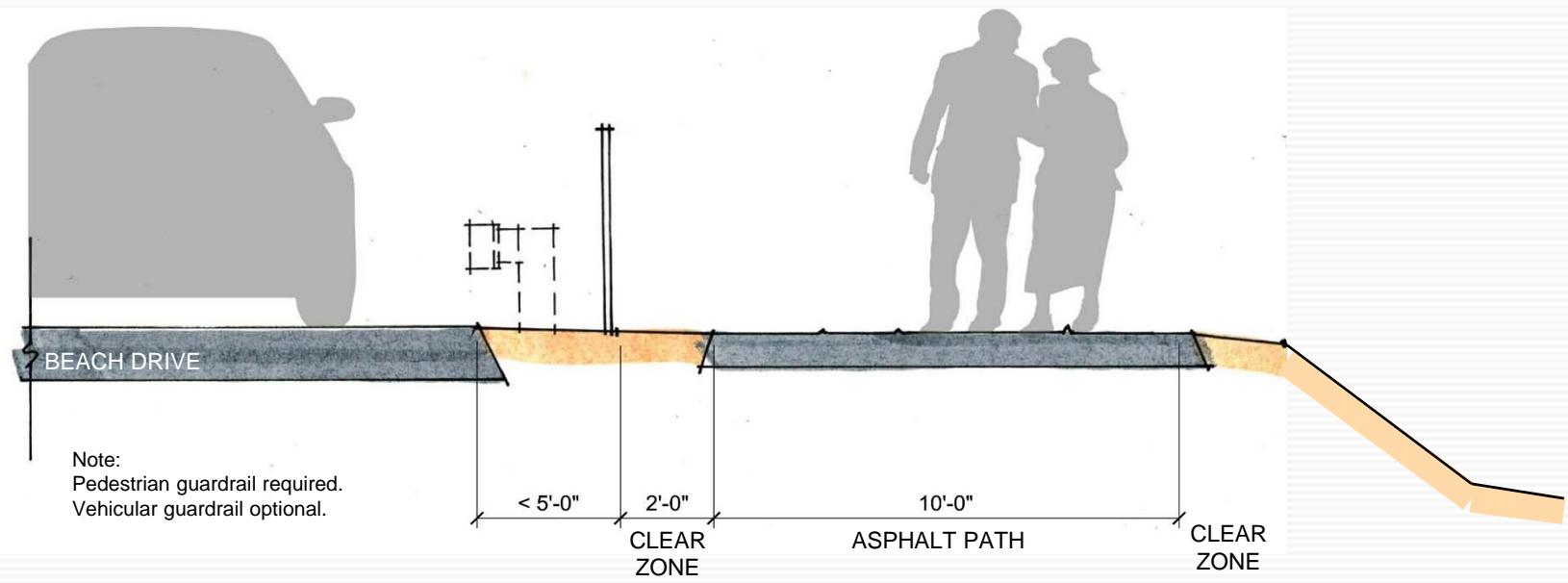




## Trail Re-alignment: Area 3



# Area 3: Cross-section along Beach Drive

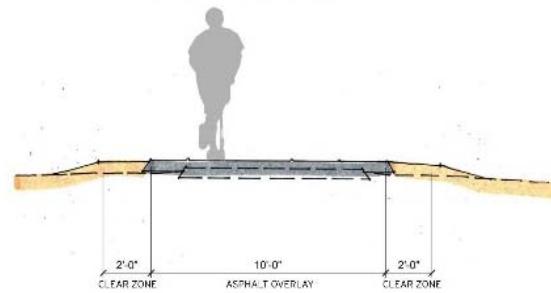




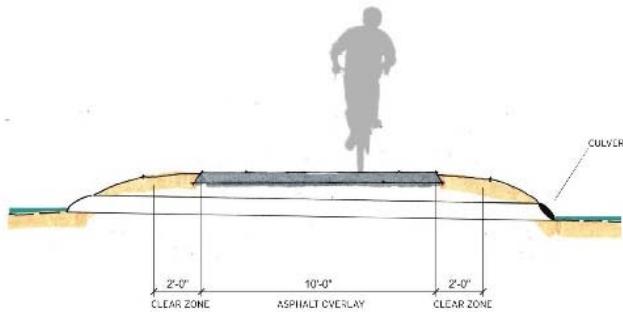
# Trail Renovation Strategies



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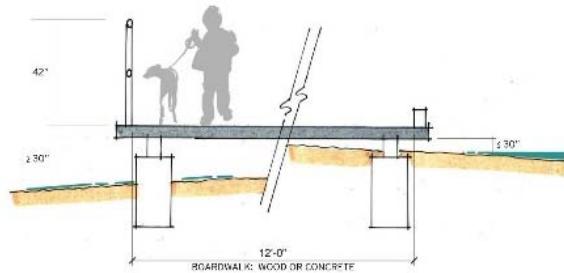
BASIC TRAIL OVERLAY



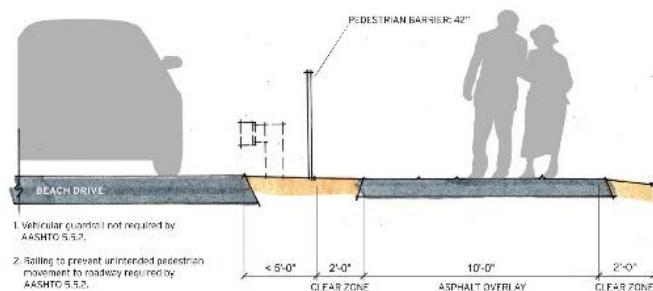
TRAIL OVER CULVERT



# Trail Renovation Strategies



TRAIL ON BOARDWALK



TRAIL ALONG ROAD - BARRIER



## Next Steps

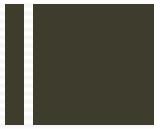
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