

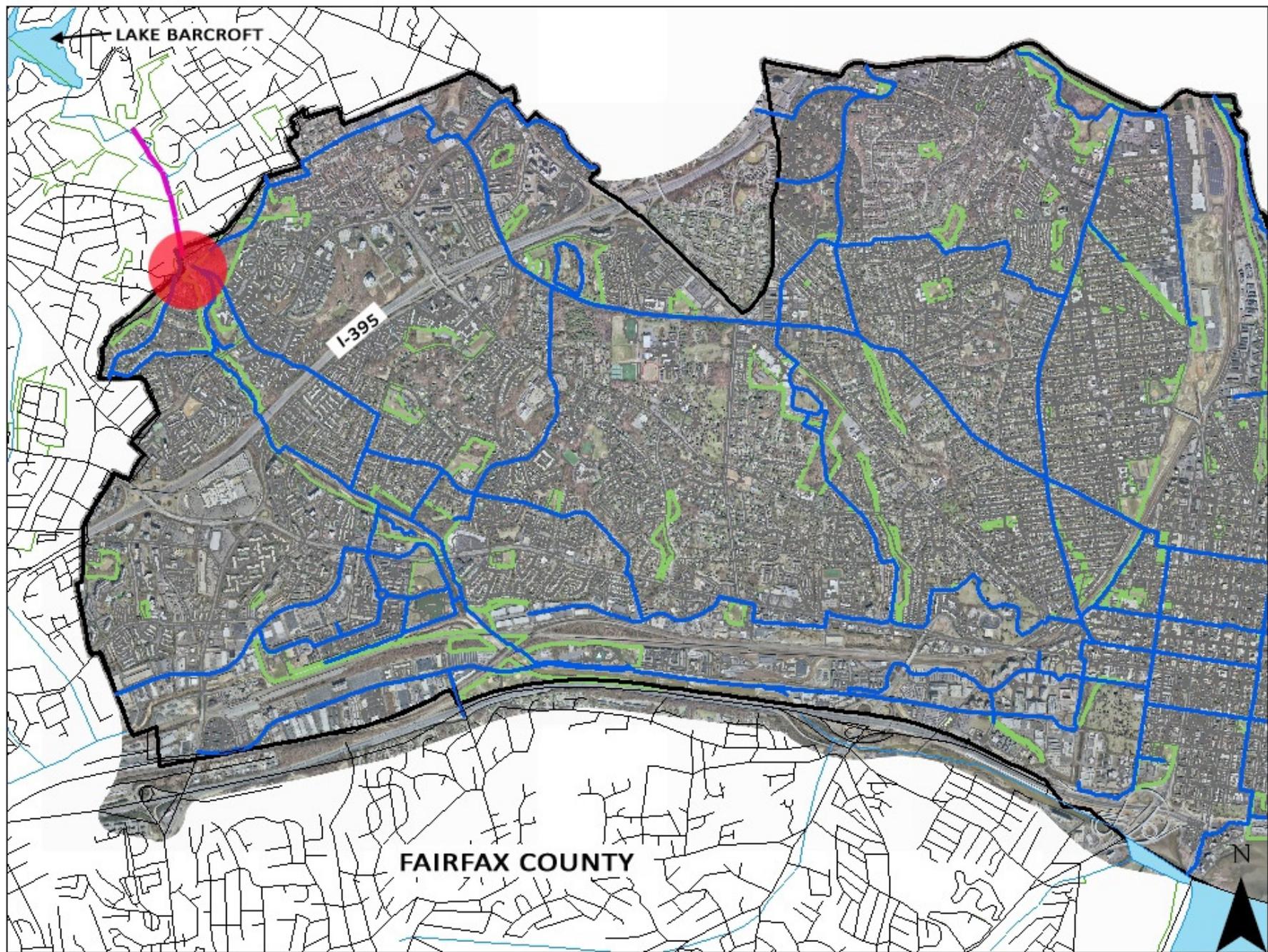
Holmes Run/ Chambliss
Crossing Study &
Streambank Stabilization/
Restoration Project
**Public Information
Session**

May 28, 2009



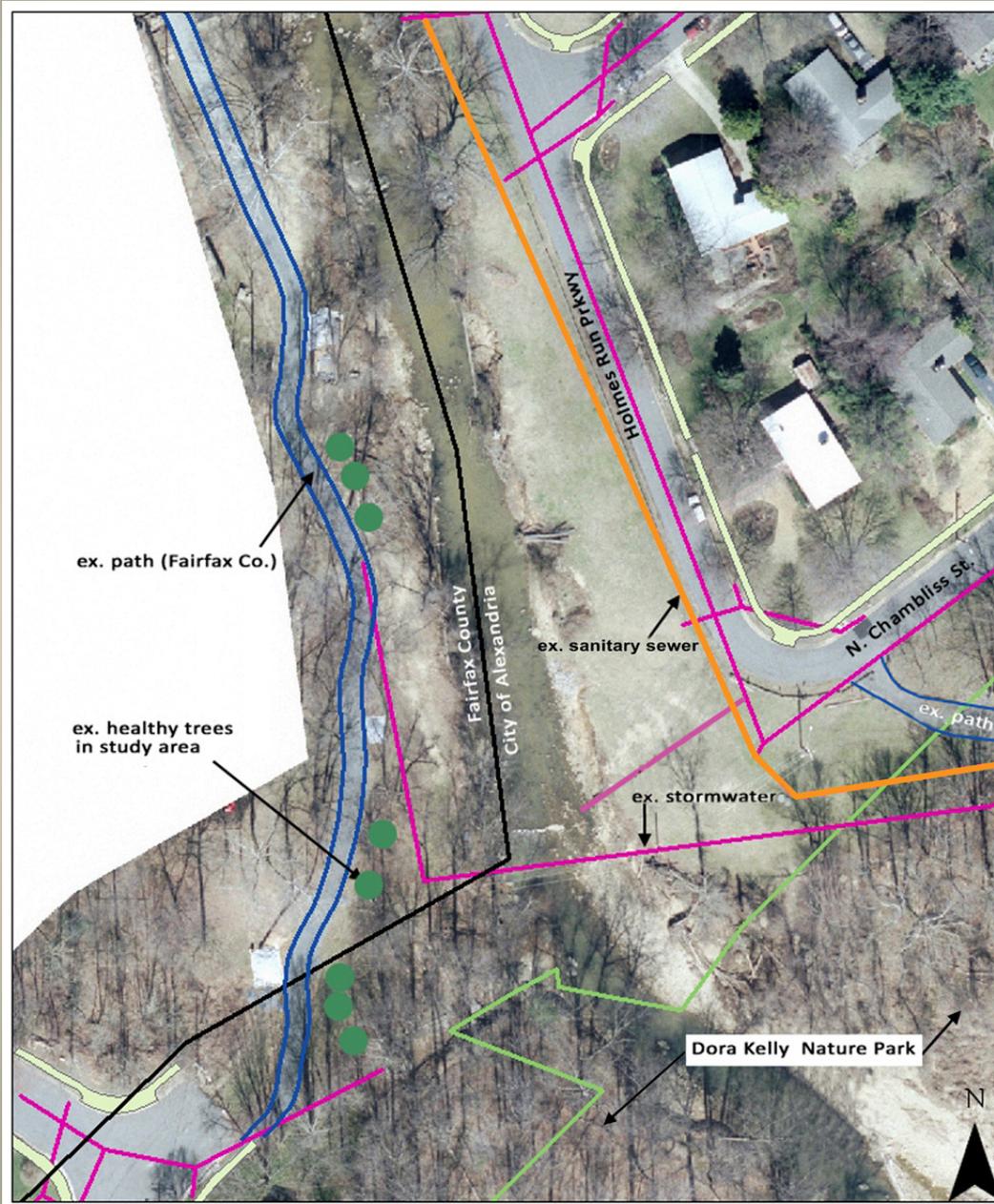
Purpose of This Meeting

- Provide information on project updates and expand project scope
- Discuss the viable crossing options
- Provide an engineer's recommendation for a crossing
- Gather input from the public
- Discuss the May 30th site visit and briefing



— CITY BOUNDARY — BICYCLE NETWORK — PARK BOUNDARY ● LOCATION OF STUDY AREA

Study Boundaries



Project Recap

- **During the March 18th meeting we discussed:**

- The intent of the project –

“To explore a possible bike/ pedestrian crossing”

- Discussed possible crossing types

- Community Groups and Residents

- City of Alexandria Departments -
(Transportation and Environmental Services, Planning and Zoning, Recreation, Parks and Cultural Activities)
- City of Alexandria Police Department
- Lake Barcroft Water Improvement District
- Fairfax County Department
- US Army Corps of Engineers
- VA Department of Environmental Protection
- VA Department of Transportation

- Brief Discussion on Streambank Stabilization

Project Updates

- **We have incorporated the comments from the March 18th meeting into the focus of this project...**
- The project scope has been expanded to include streambank stabilization and restoration for the project area.
- The consultants have developed crossing options that consider five criteria: aesthetics, environmental impact, hydraulic impacts, accessibility, and cost.
- The project team is currently coordinating with Fairfax County to conduct streambank stabilization/ restoration project in this area.

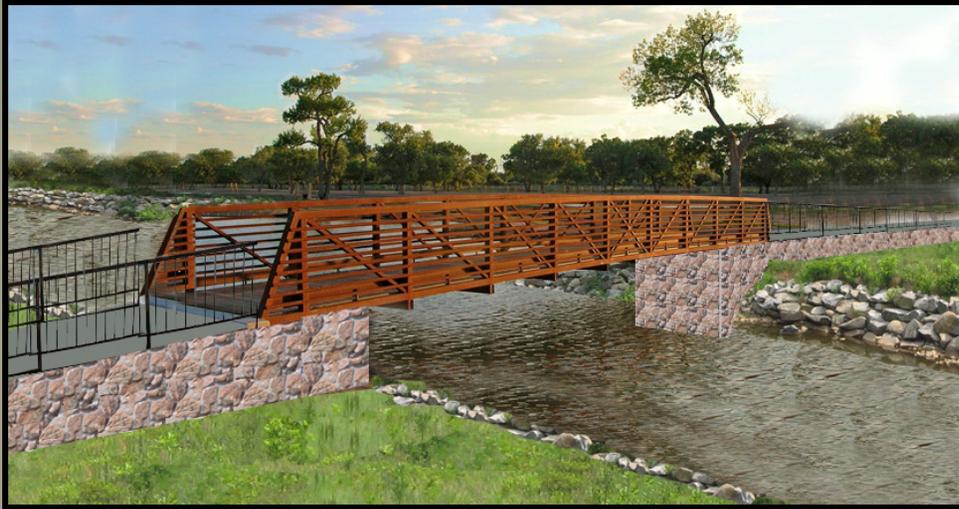
Expanded Scope

- The project now includes an expanded streambank stabilization and restoration component.
- Funded by portions of BRAC mitigation fund.
- Focused on 350 linear feet along Alexandria and Fairfax from Dora Kelly Park to City Boundary.

Crossing Options

- The consultants studied several options for a crossing including:
 - Fair-weather crossing
 - Low Profile crossing
 - Bridge crossing
- Using a criteria-based approach, we have determined the most feasible and appropriate structure for a crossing.
- The crossing will be designed and built in conjunction with streambank stabilization and restoration in the study area.

Crossing Options



•Bridge

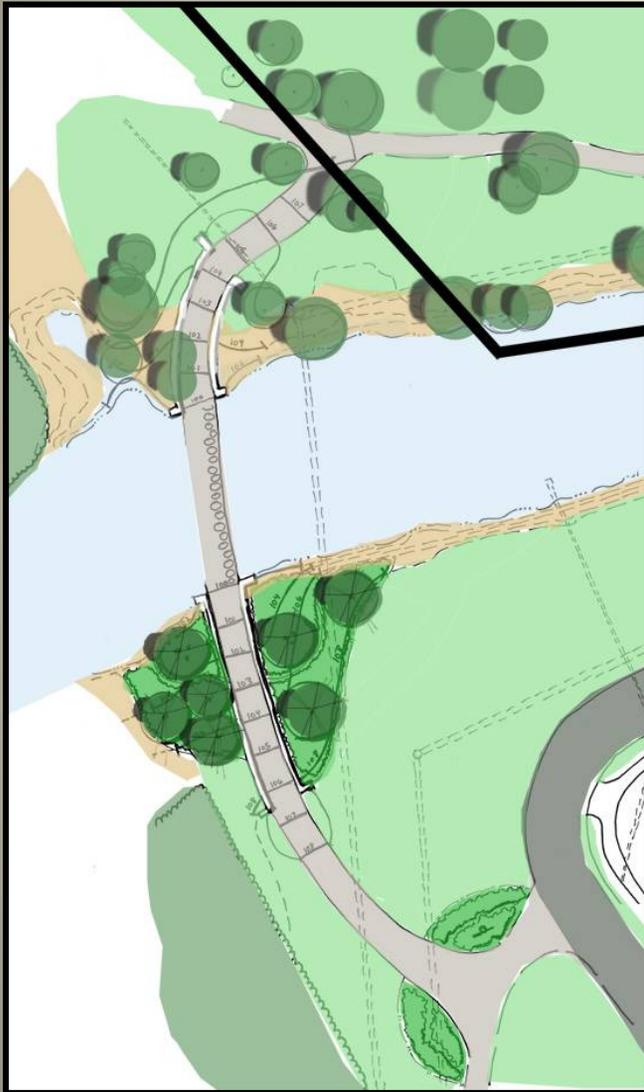


•Low Profile Crossing



•Fair Weather Crossing

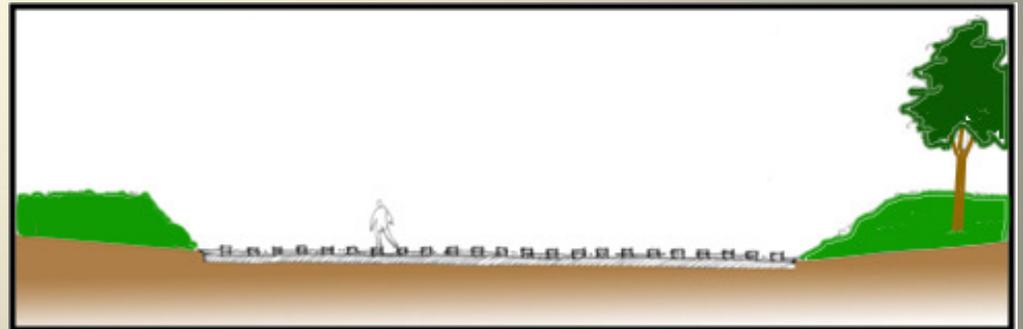
Fair-weather Crossing



Conceptual Plan

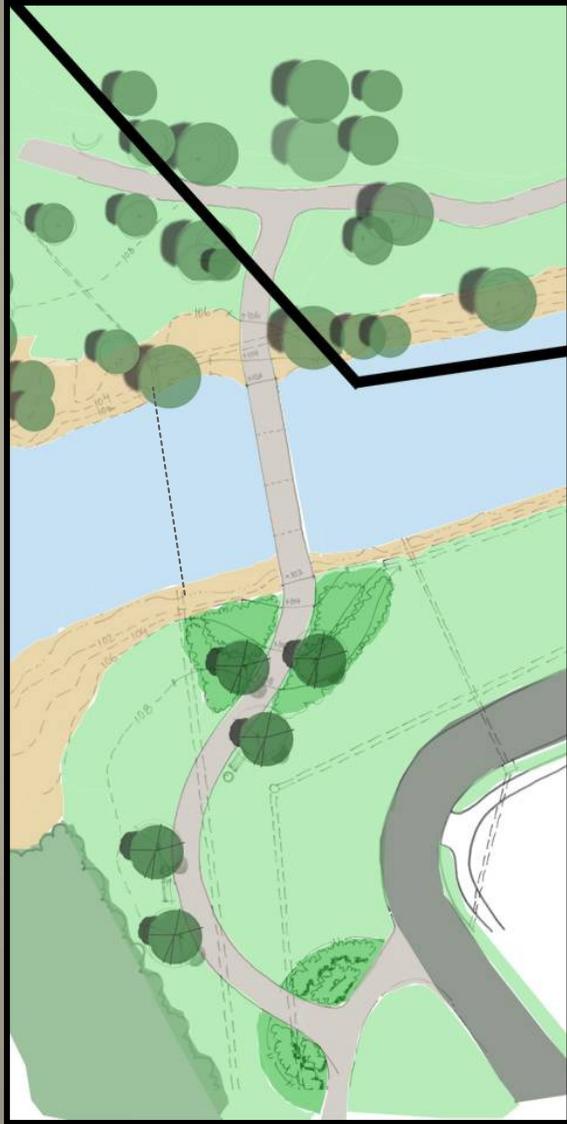


Image



Cross Section

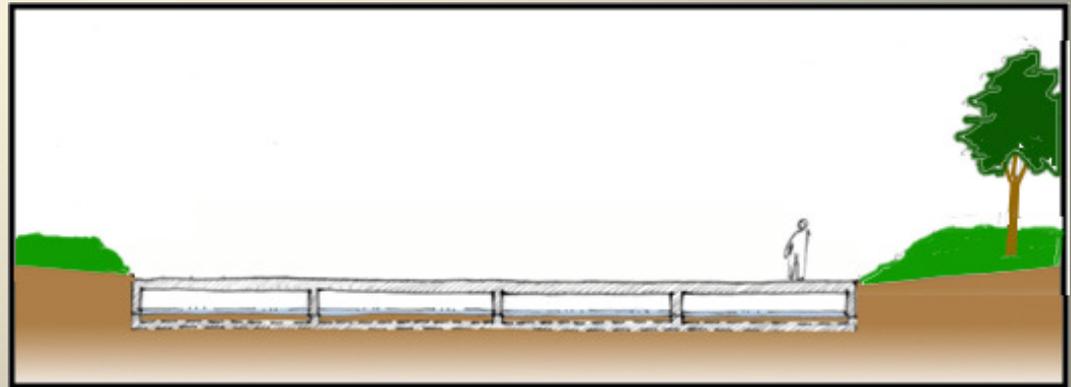
Low Profile Crossing



Conceptual Plan

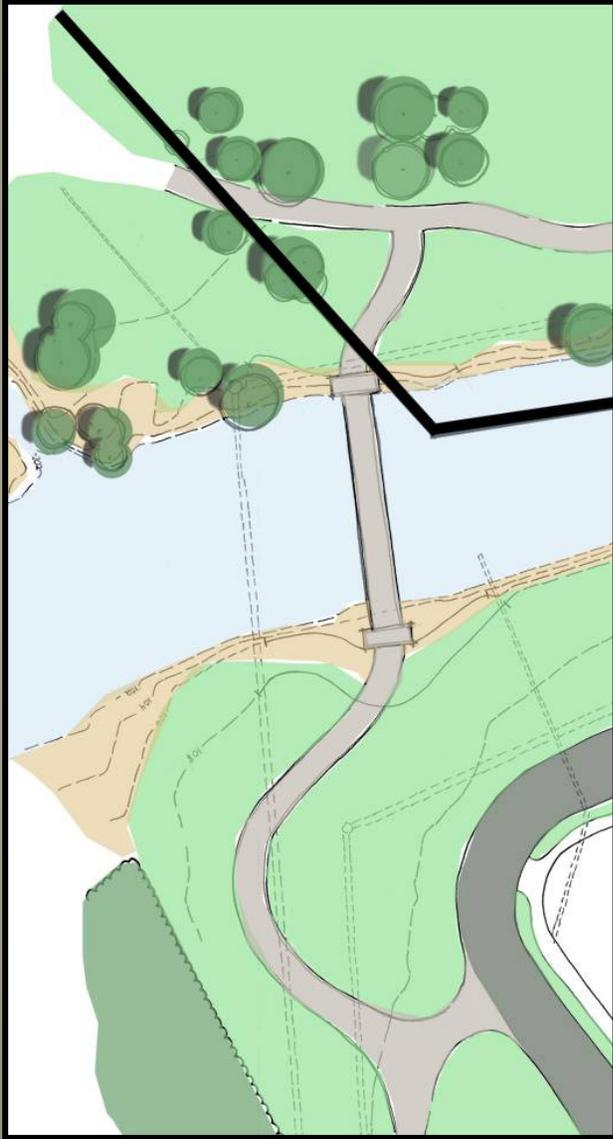


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Cross Section

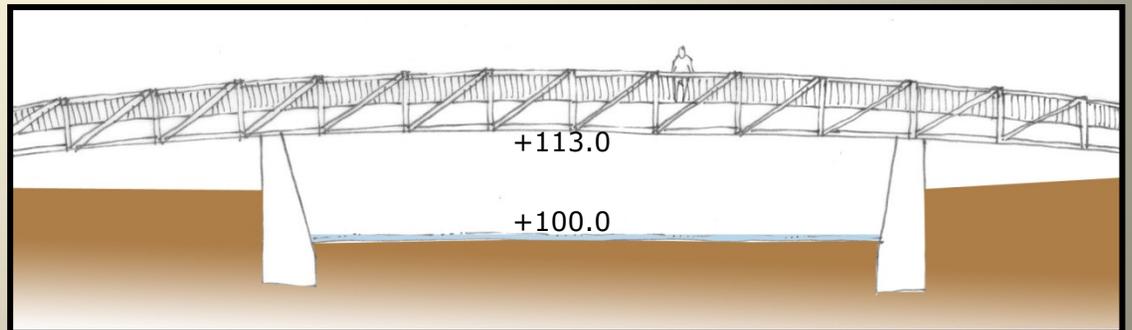
Bridge Crossing



Conceptual Plan



Image



Cross Section

Matrix Criteria

| CRITERIA | | |
|----------------------|--|---------------------|
| HYDRAULIC IMPACT | Does the structure cause a rise to the current flood plain elevation? | SCREENING CRITERIA |
| ENVIRONMENTAL IMPACT | Level of impact to natural stream flow and stream bed | EVALUATIVE CRITERIA |
| ACCESSIBILITY | Level of access to various user groups (including persons with mobility impairments) at various times of the year. | EVALUATIVE CRITERIA |
| AESTHETICS | Level of visual impact to the immediate surrounding. | EVALUATIVE CRITERIA |
| COST | Is this project under the cost threshold given the project's budget? | SCREENING CRITERIA |

Matrix

| DESIGN MATRIX FOR CROSSING OPTIONS | | | |
|------------------------------------|---|--|--|
| CRITERIA | FAIR WEATHER CROSSING | LOW PROFILE CROSSING | BRIDGE CROSSING |
| HYDRAULIC IMPACT | Has no impact to flood elevations. Least amount of stream flow impact. | Has no impact to flood elevations. Has slightly more impact to stream flow than fair-weather crossing. Also has more potential to gather debris. | A bridge set at the bank elevation causes a rise in the flood plain which is not permissible per FEMA and local regulations. |
| ENVIRONMENTAL IMPACT | Creates the most environmental impact since slab is directly on stream bed. Requires the most significant grading along the approaches to the crossing. | Creates moderate impact since piers are exposed. The base is covered by 1 ft of natural material. Requires moderate grading on the approaches. | Least environmental impact. Avoids stream all together. Bridge footings can be placed along streambanks. Requires minor grading along streambanks. |
| ACCESSIBILITY | Least accessible. Only allows limited crossing during non event times. Will be slippery due to buildup of algae over time. | Moderate accessibility. Will be designed to stay dry for one year events. Will flood during larger events. | Most accessible. Designed to span flood zone. |
| AESTHETICS | Will have the least visual impact along the stream, but moderate visual impact along the approaches. | Will have moderate visual impact along the stream. Can be kept low to hide most of the structure from houses. | Is the most visual option due to height and size of structure. |
| COST | Least expensive. | Moderately expensive. Construction will involve pre-cast concrete pieces. | Most expensive due to high elevation. Cost is not feasible for this project |

COLOR "GRADING" CHART

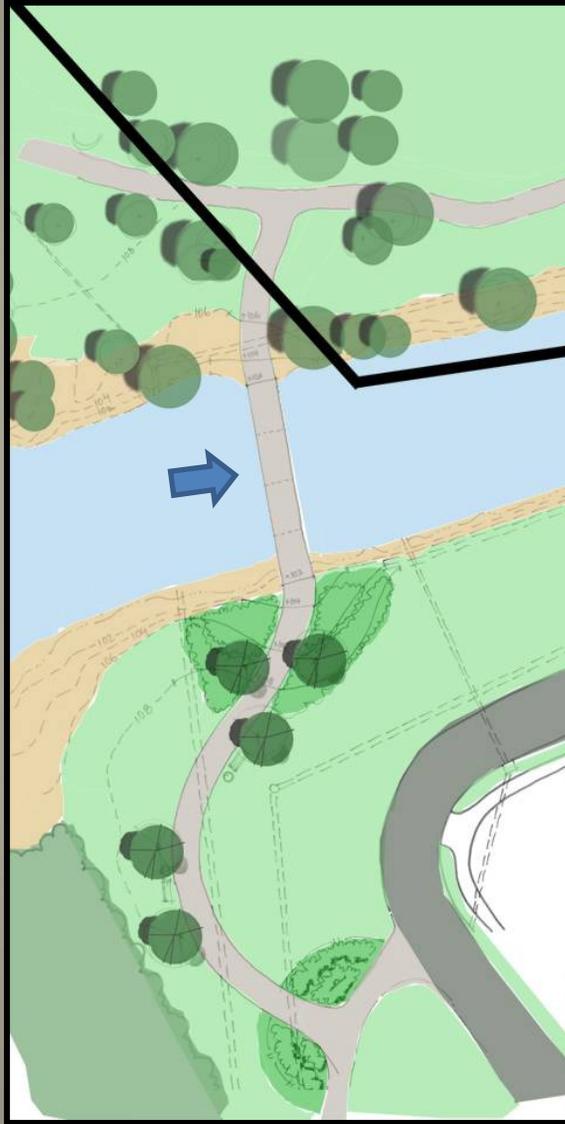
| | | | |
|--------------|---------------------|------------------------|---------------------------------|
| Green = Good | Yellow = Acceptable | Orange = Not Desirable | Red = Not Permissible/ Feasible |
|--------------|---------------------|------------------------|---------------------------------|

Engineer's Recommended Crossing

- It is KHA's professional recommendation to proceed forward with a **Low Profile** crossing.



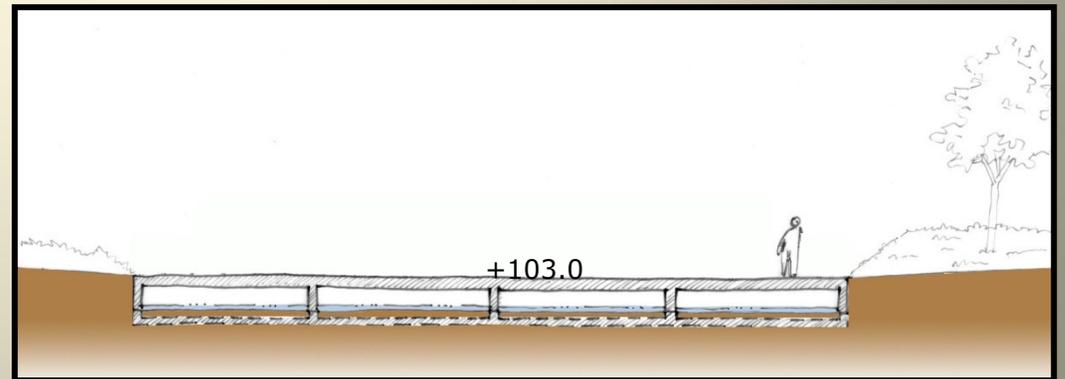
Low Profile Crossing



Conceptual Plan



Image



Cross Section

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Steambank Stabilization/ Restoration

Erosive Unstable Stream Banks

- Water Quality and Habitat
 - Loss of Property
 - Infrastructure
 - Trees
 - Safety
 - Aesthetics
- Problem Is Getting Worse



How Do We Fix It?

Potential Solutions

-Bank Stabilization

-Hard Engineering

- Rock

- Concrete block

-Bio-engineering

- Stabilize with Vegetation

- Some Rock Usually Incorporated

-Stream Restoration

- Natural Channel Design

- In-Stream Structures

- “Reference Reach” approach



Rivers and Streams 101

What to expect Saturday...



Project Schedule...Next Steps

- **March 18, 2009** – First Public Information Session
- **April - May** – Study hydrology, stream bank stabilization and crossing alternatives.
- **May 28th & May 30th**– Second Public Information Sessions
- **June**– Proceed forward with streambank stabilization/ restoration design and preferred crossing design.
- **August/ September**– 3rd Public Information Session
(present final designs)
- **Fall 2009** – Permitting of designs through agencies

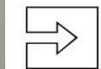
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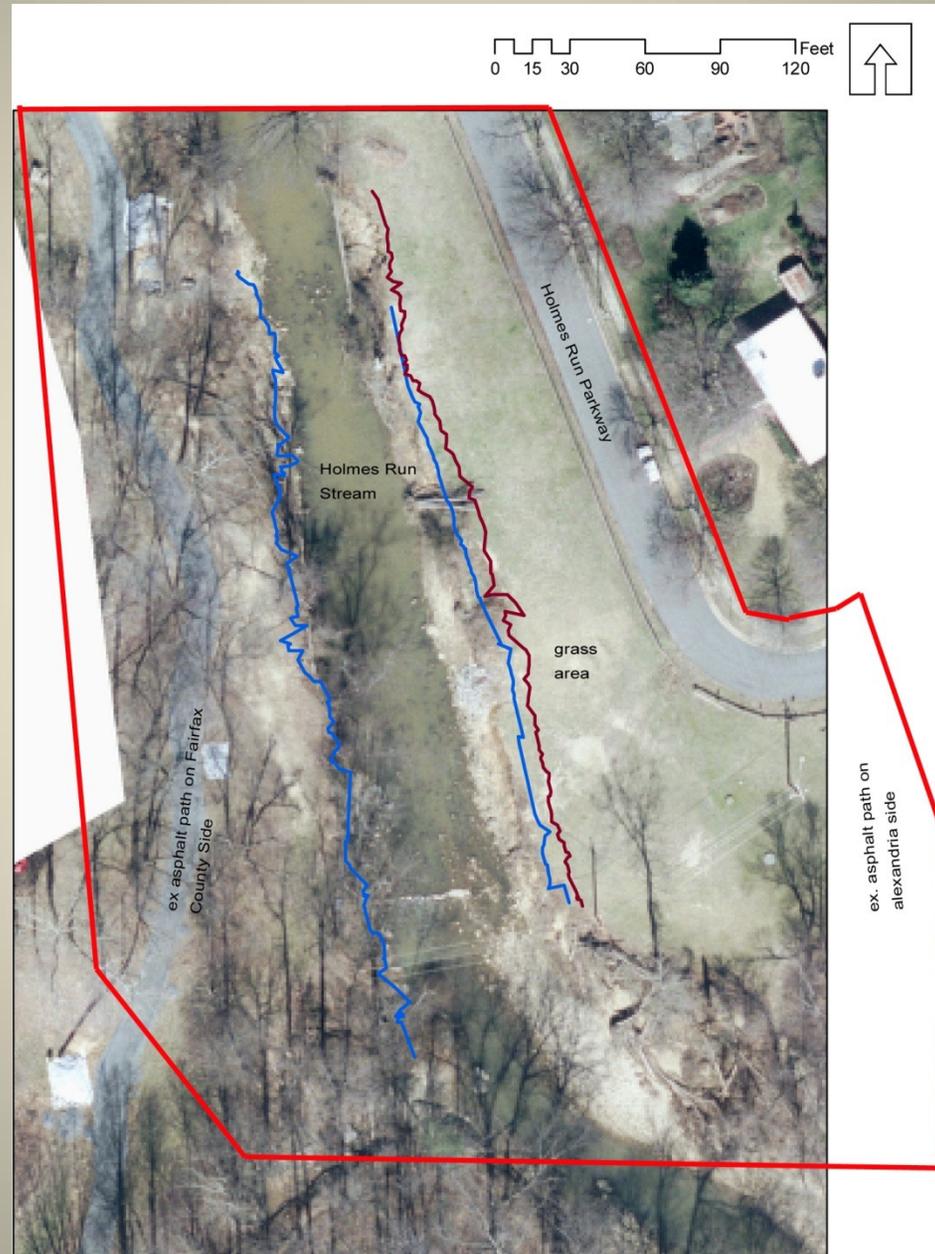


Existing Conditions

•Flood Plain Boundary



Stream bank Erosion



Crime Statistics

| Crime Type | 2006 | 2007* |
|--|-------------|--------------|
| Destruction of Property/Graffiti | 2 | 1 |
| Trespassing | 4 | 8 |
| Drug Offenses Marijuana Possession | 1 | 2 |
| Drunkenness | 1 | 6 |
| Contributing to Delinquency of a Minor | 0 | 1 |
| Weapon Offense Concealed Weapon | 1 | 0 |
| Liquor Law Violations | 4 | 2 |
| Warrant Service | 1 | 0 |
| GLA Recovery Out of Town | 2 | 0 |
| Other Criminal Offenses | 0 | 1 |
| Total | 16 | 21 |

* January 1 - November 30, 2007