

Lower Mill Creek Partial Remedy

Hamilton County
Board of County
Commissioners
Public Hearing

October 10, 2012



Today's Agenda

- MSD's Recommended Alternative
- Valley Conveyance System Components
- Regulator Feedback

Recommended Alternative

| Sub-Basin | MG CSO Reduction | Capital Cost (2006\$) | Cost/Gallon | No. of CSOs | CSOs |
|-----------------|------------------|-----------------------|-------------|-------------|---------------|
| Lick Run | 726 | \$200,492,000 | \$0.28 | 1 | 5 |
| Wooden Shoe | 156 | \$ 27,534,000 | \$0.17 | 2 | 217, 483 |
| West Fork | | | | | |
| Bloody Run | 93 | \$10,651,000 | \$0.04 | 1 | 181 |
| CSO 488 Storage | 47 | \$3,421,000 | \$0.23 | 1 | 488 |
| 4 RTCs | 737 | -- | -- | 2 | 5,125,482,485 |
| Total | 1,759 | \$242,098,000 | | 6 | |

Sustainable Alternative

From April 2, 2012 LMCPR Preliminary Findings Report

| Real Time Control Facilities (CSOs) | 5,125, 181, 482, 485/487 |
|---|--------------------------|
| West Fork Channel Grate Modifications | YES |
| New Storm Sewers (ft) | 104,400 |
| Relocated Combined Sewers (ft) | 21,500 |
| Naturalized Channels (ft) | 5,500 |
| Valley Conveyance System (ft) | 8,100 |
| Natural Conveyance/Stream Separation (ft) | 20,000 |
| Non-Tunnel Storage Capacity (mg) | 5 |
| Additional EHRT Capacity (mgd) | 20 |
| Stormwater Detention Basins (acre - ft) | 80 |

Phase 1 Highlights

- Kings Run Source Control & Storage
- Bloody Run, Mitchell, Ross Run RTC
- Storage at CSO 488
- West Fork Source Control, Storage & RTC
- Lick Run Source Control & RTC



Utility Coordination

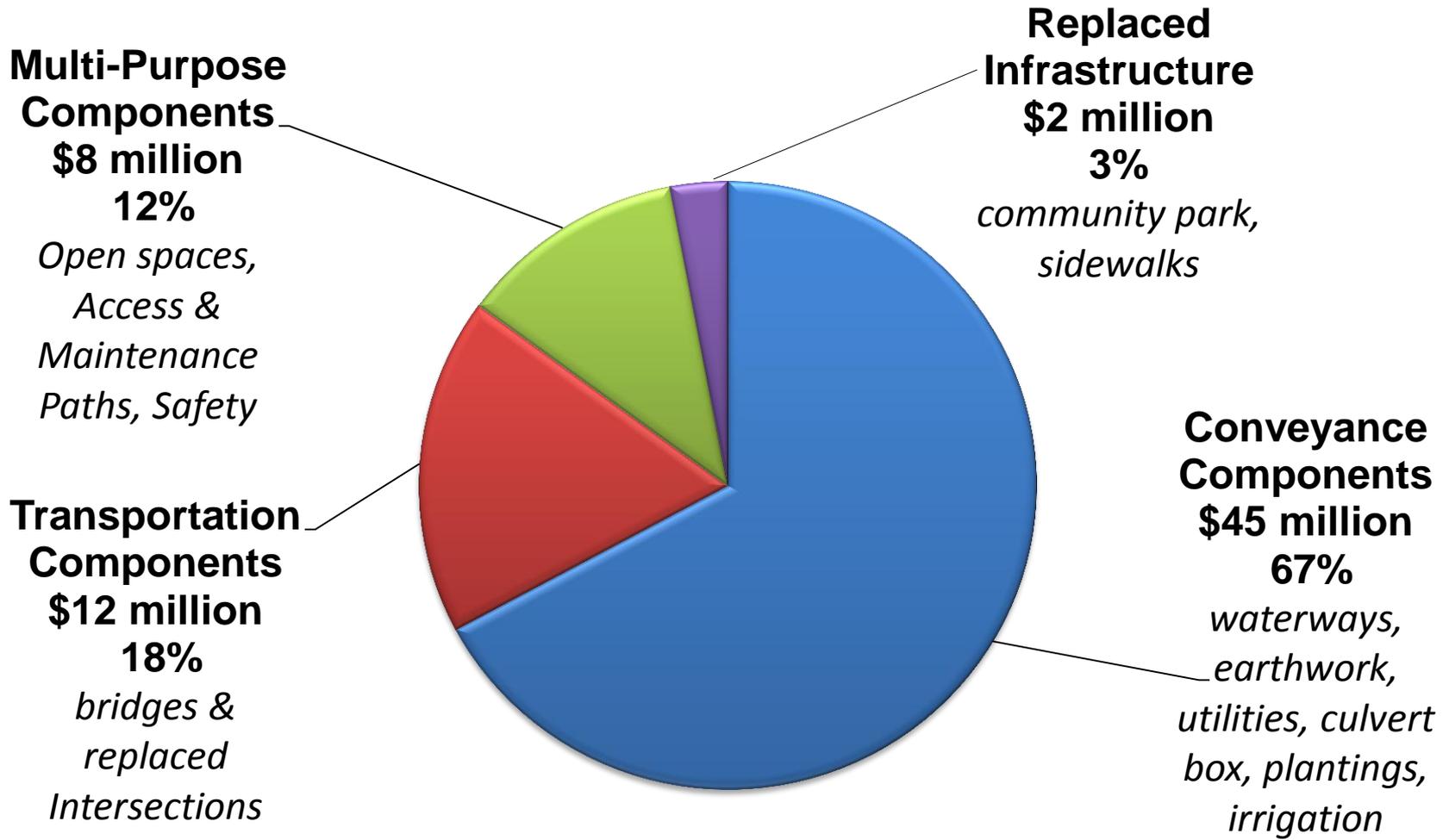
31 Coordination Meetings

Costs included in Base Project is AFTER coordination efforts.

- **CDOTE** *(projects sequencing/phasing plan)*
- **Hamilton County Planning** *(public engagement coordination)*
- **Duke Energy** *(\$400,000 avoided cost for 6,000 feet gas mains)*
- **Time Warner Cable** *(no utility impact)*
- **Cincinnati Bell** *(no utility impact)*
- **Greater Cincinnati Water Works** *(construction coordination for water main, hydrants, and valve vault improvements)*

Valley Conveyance System

\$67 million



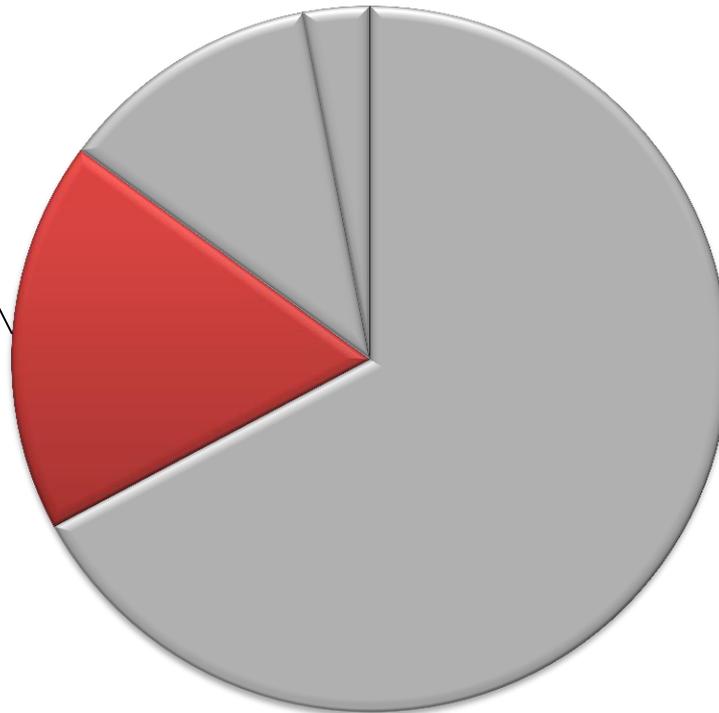
Transportation Components

Transportation

\$12 million

18% of VCS
Cost

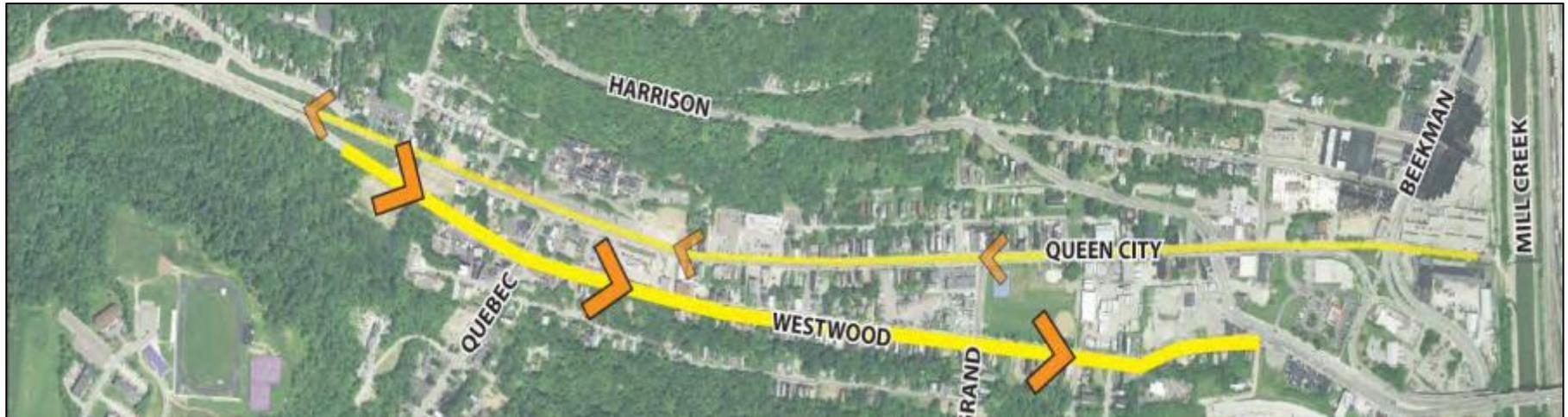
3.8% Base
Project Cost



- Connectivity Bridges
- Intersection Replacements
- Pedestrian Safety

Transportation Components

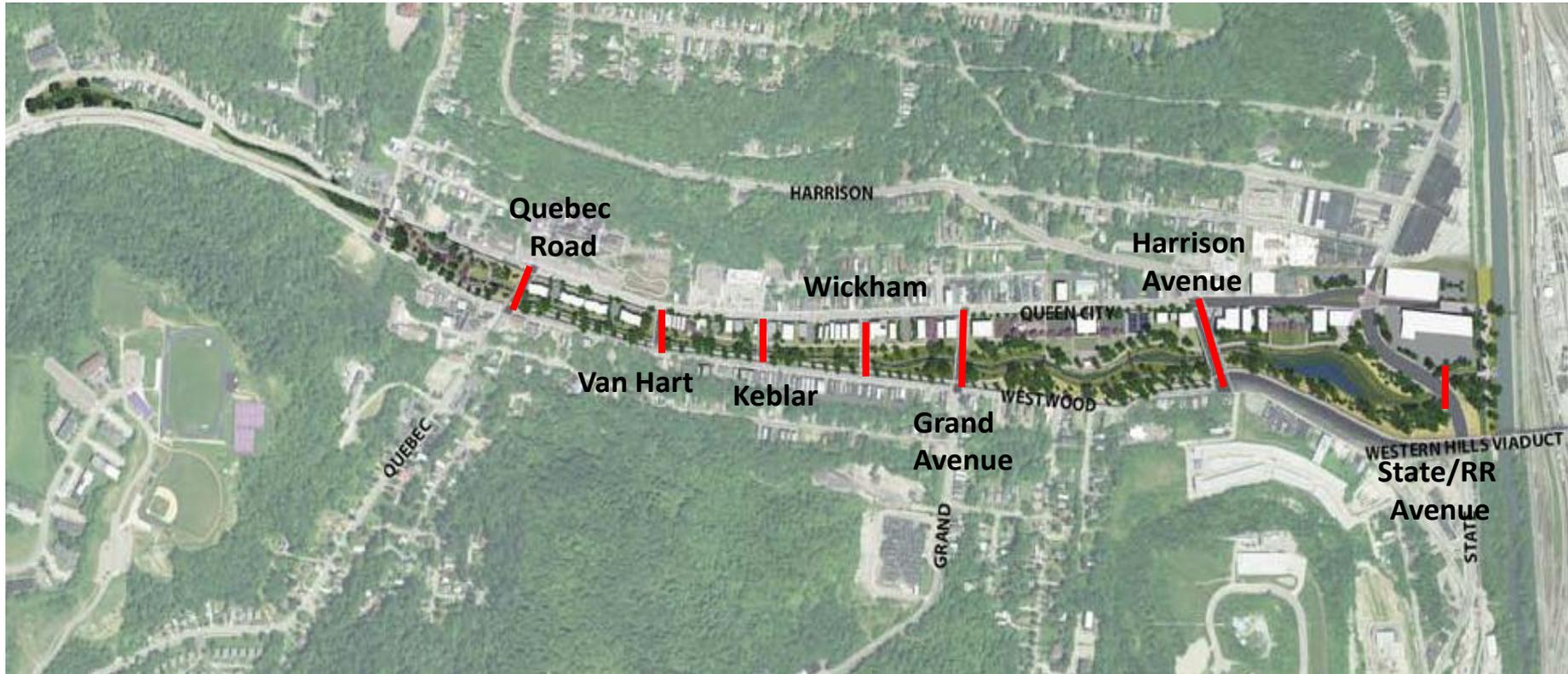
Existing Roadways



| Component | Cost | Description |
|----------------------------|----------------|---|
| Bridges | \$5.6 million | 8 crossings of urban waterway between Queen City & Westwood Avenues |
| Intersection Reconnections | \$5.2 million | Elimination of Beekman Avenue between Queen City and Westwood, pavement markings, traffic signals |
| Streetscape & Safety | \$1.9 million | Highly visible crosswalks, signals, signage, trash receptacles, street trees & lights |
| Total | \$12.7 million | |

Bridges for Connectivity

Transportation Components



- 8 crossings to maintain north-south connectivity
- Cost in base project = \$5.6 million

Transportation Related Components

Westwood Avenue



- One-way traffic remains with 3 wider lanes
- Pedestrian safety improvements (sidewalks, crosswalks & lighting)
- Vetted with CDOTE
- Average right-of-way: 58 feet
- Traffic Volume: 23,000 vehicles per day

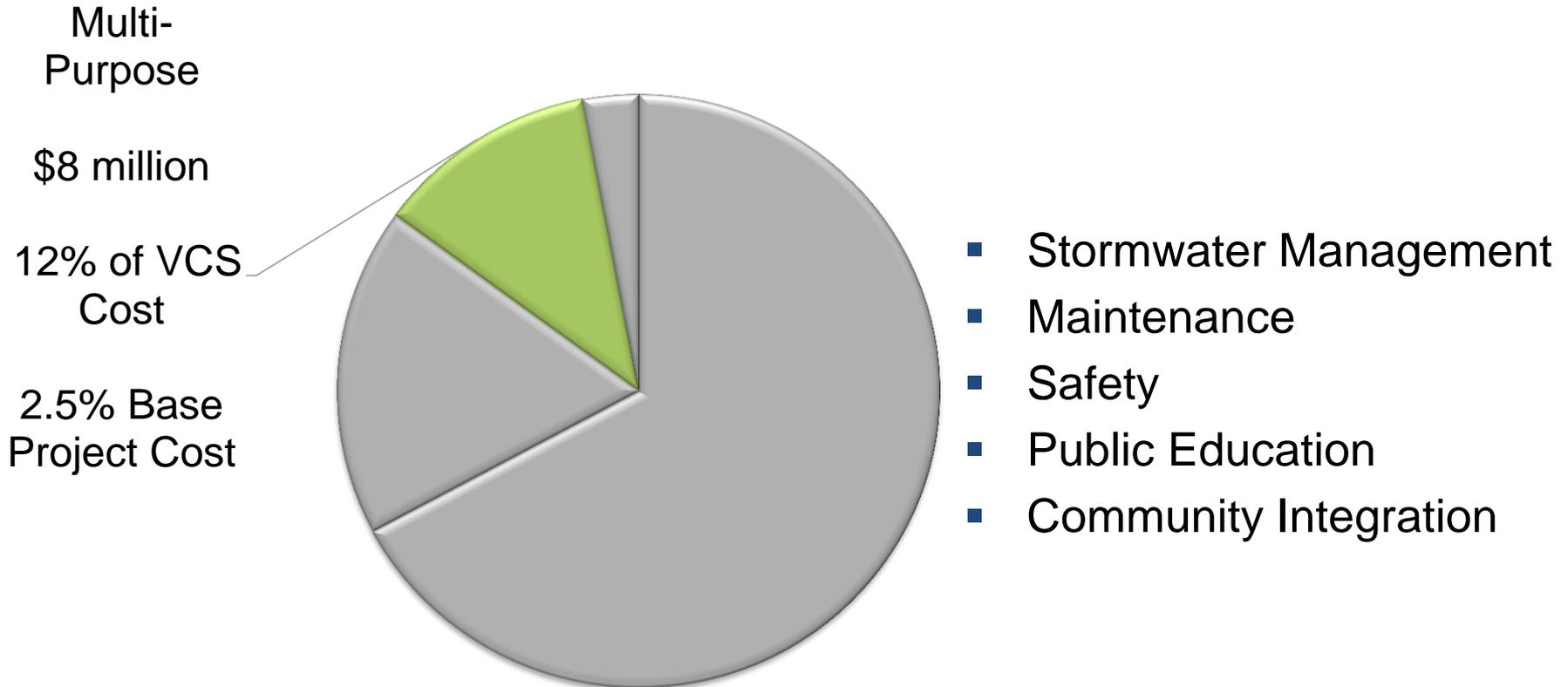
Transportation Related Components

Queen City Avenue



- One-way traffic remains with 3 wider lanes
- Pedestrian safety improvements (sidewalks, crosswalks & lighting)
- Vetted with CDOTE
- Average Right-of-Way: 60 feet
- Traffic Volume: 16,000 vehicles per day

Multi-Purpose Features



Multi-Purpose Features

Stormwater Management

- **Stormwater Management = \$4.3 million**
 - open spaces, roadside planters**
- Maintenance Components (irrigation, access)= \$2.1 million
- Safety (lighting, railings, crosswalks) = \$1 million
- Public Education (interpretive signage) = \$230,000
- Community Integration = \$620,000
 - bike racks, benches, paver plazas, off-street parking



Open Spaces for Flood Control

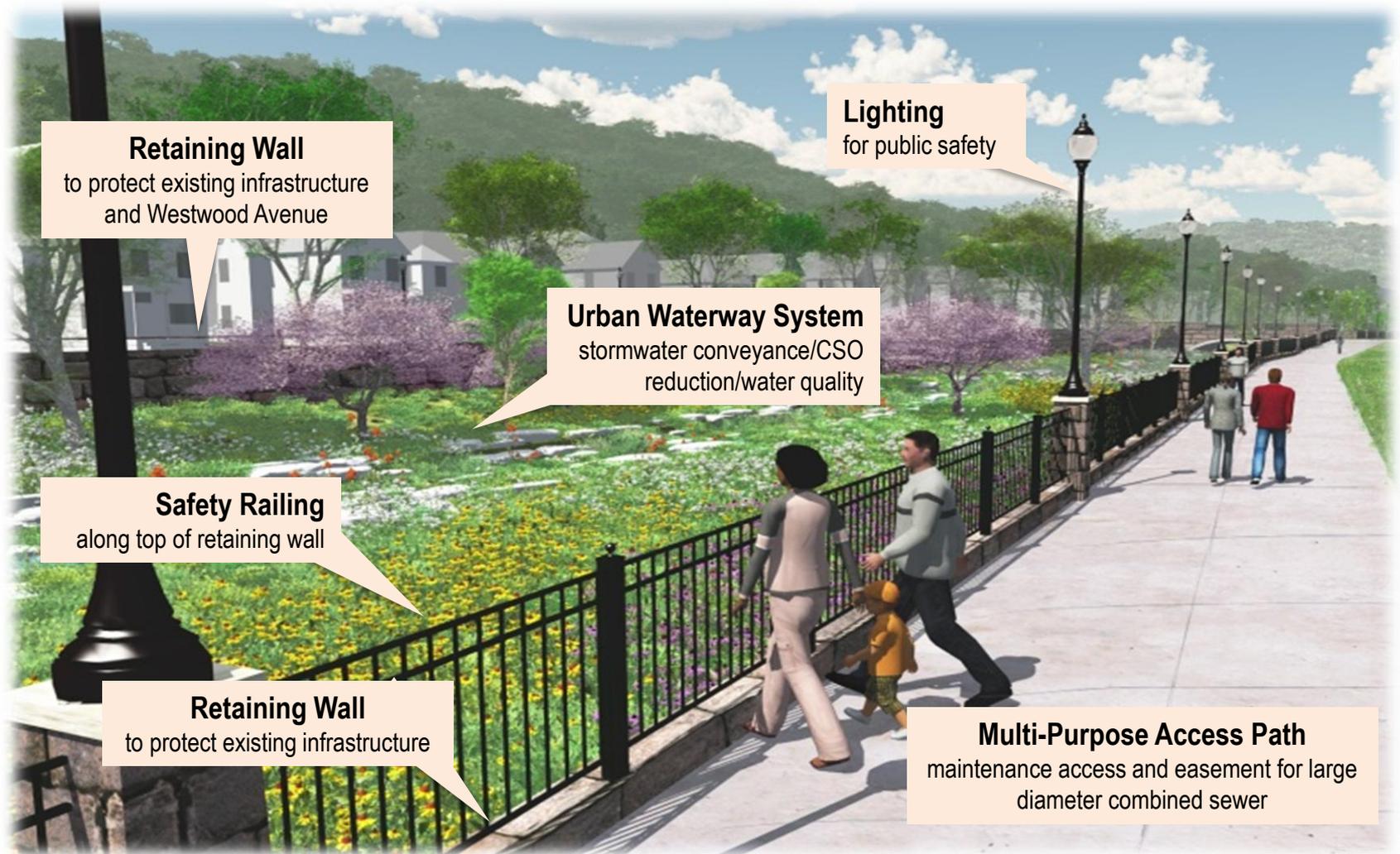


Typical Stormwater Planters

Multi-Purpose Features

Safety & Maintenance

Narrow Channel Zone



Retaining Wall
to protect existing infrastructure
and Westwood Avenue

Lighting
for public safety

Urban Waterway System
stormwater conveyance/CSO
reduction/water quality

Safety Railing
along top of retaining wall

Retaining Wall
to protect existing infrastructure

Multi-Purpose Access Path
maintenance access and easement for large
diameter combined sewer

Looking south towards Westwood Avenue

Multi-Purpose Features

Community Integration

- Stormwater Management = \$4.3 million
open spaces, retaining wall, roadside planters
- Maintenance (irrigation, access) = \$2.1 million
- Safety (lighting, railings, crosswalks) = \$1 million
- Public Education (interpretive signage) = \$230,000
- **Community Integration = \$620,000**

bike racks, benches, paver plazas, off-street parking



Benches



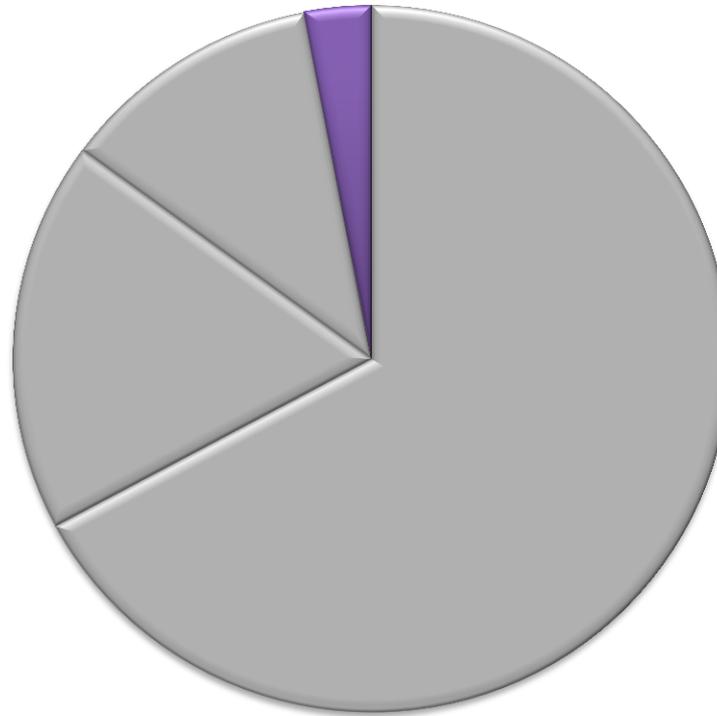
Picnic Areas

bike racks and benches to promote public involvement, six permeable paver plazas to provide access to maintenance path from the street and to aid in slowing water down and level of peak flows, and three off-street parking lots.

“Make Lick Run beautiful and exciting and bring it into a very urban setting, where many people can enjoy it.” - Citizen employed in South Fairmount

Relocated Infrastructure

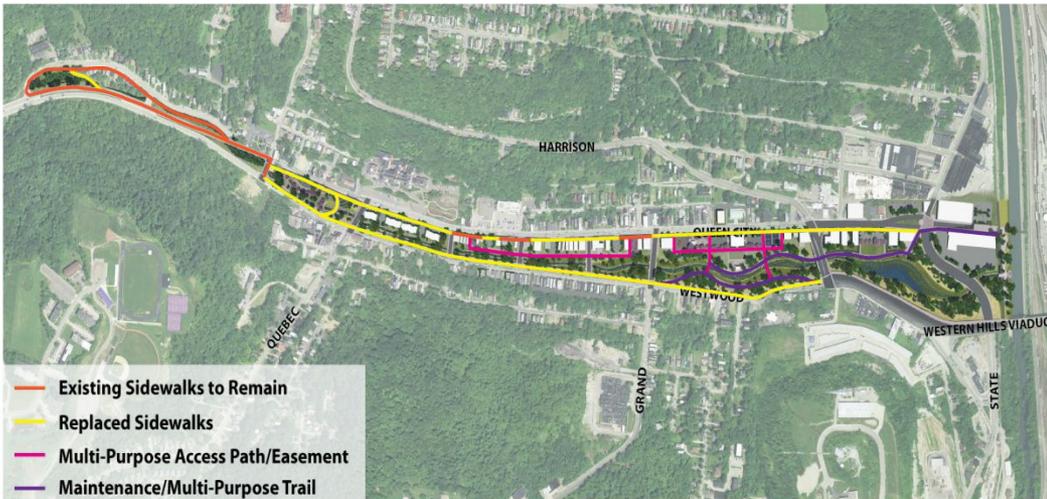
- Existing Sidewalks
- South Fairmount Community Recreation Park Features



Replaced
Infrastructure
\$2 million
3% VCS Cost
0.6% Base
Project Cost

Relocated Infrastructure

Impacted by Project



- Currently exist and disturbed by construction of project
- Sidewalks, parking lot
- Basketball courts
- Playground
- Picnic shelter/pavilion
- Cost in base project = \$2 million

Regulator Feedback

- Understand these costs are included due to the unique nature of this CSO project.
- Acknowledged the look of features is different than traditional projects in order to fit into a public setting, but it accomplishes the same functionality.
- Agreed features needed for safety or to fit into neighborhood are appropriate costs.
- Noted, in general if a feature meets test of necessary and reasonable, then it is viewed as a project cost.
- Agreed the features included for safety, maintenance access, water quality, and restoration of impacted areas would be placed into the category of “necessary and reasonable.”

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QUESTIONS?

