



Lick Run Project Status Update Meeting #1

implementation

January 30, 2014



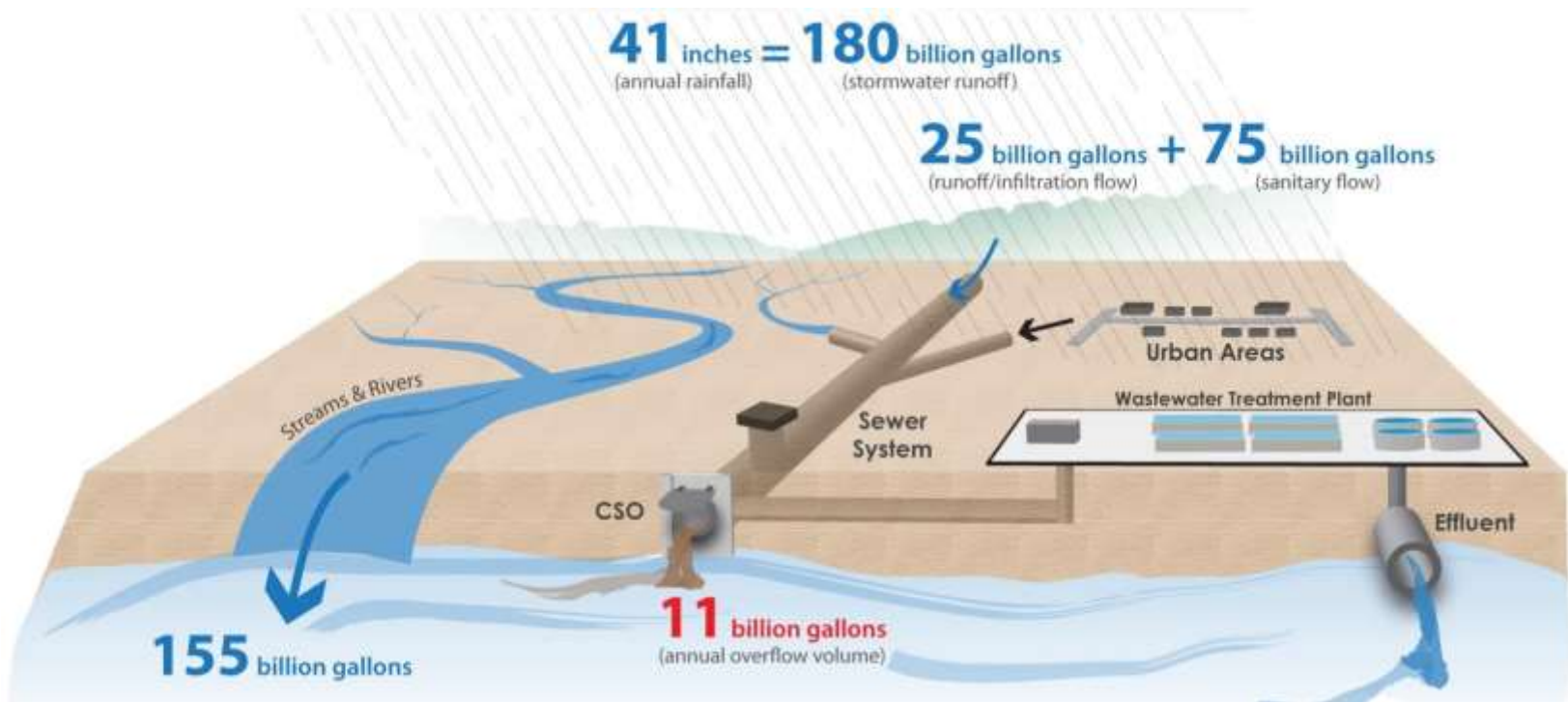
Tonight's Agenda

- Welcome and Overview
- Lick Run Project Details
- Q&A
- Lick Run Project Stations (opportunity to talk to MSD staff)



Our Challenge

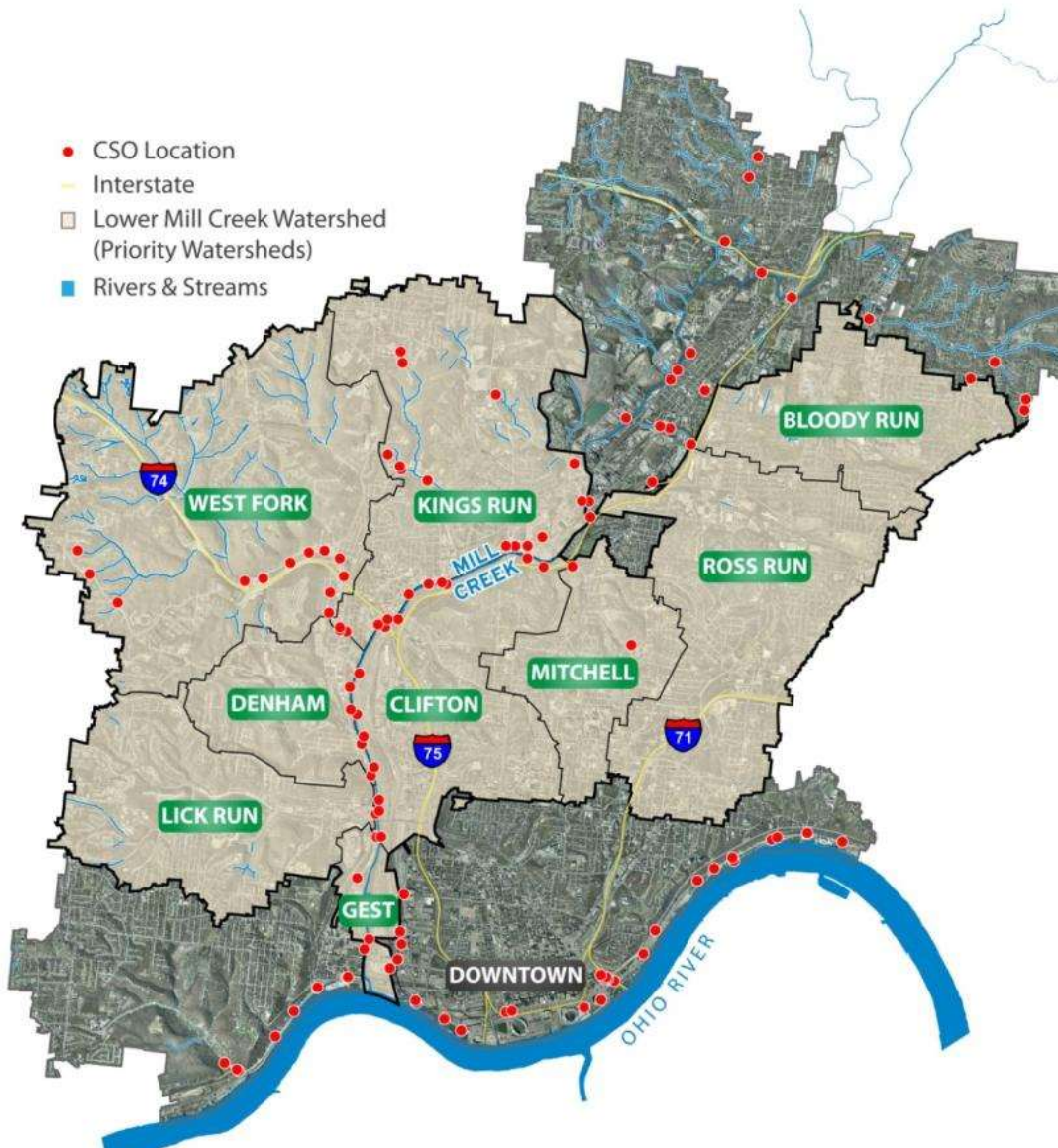
MSD is under a federal mandate (Consent Decree) to reduce sewer overflows into local streams and rivers.



Combined sewers carry both sewage and stormwater in the same pipe.

Our Challenge

More than half of the overflows are into the Mill Creek.



Overflow into the Mill Creek at CSO 5 in South Fairmount



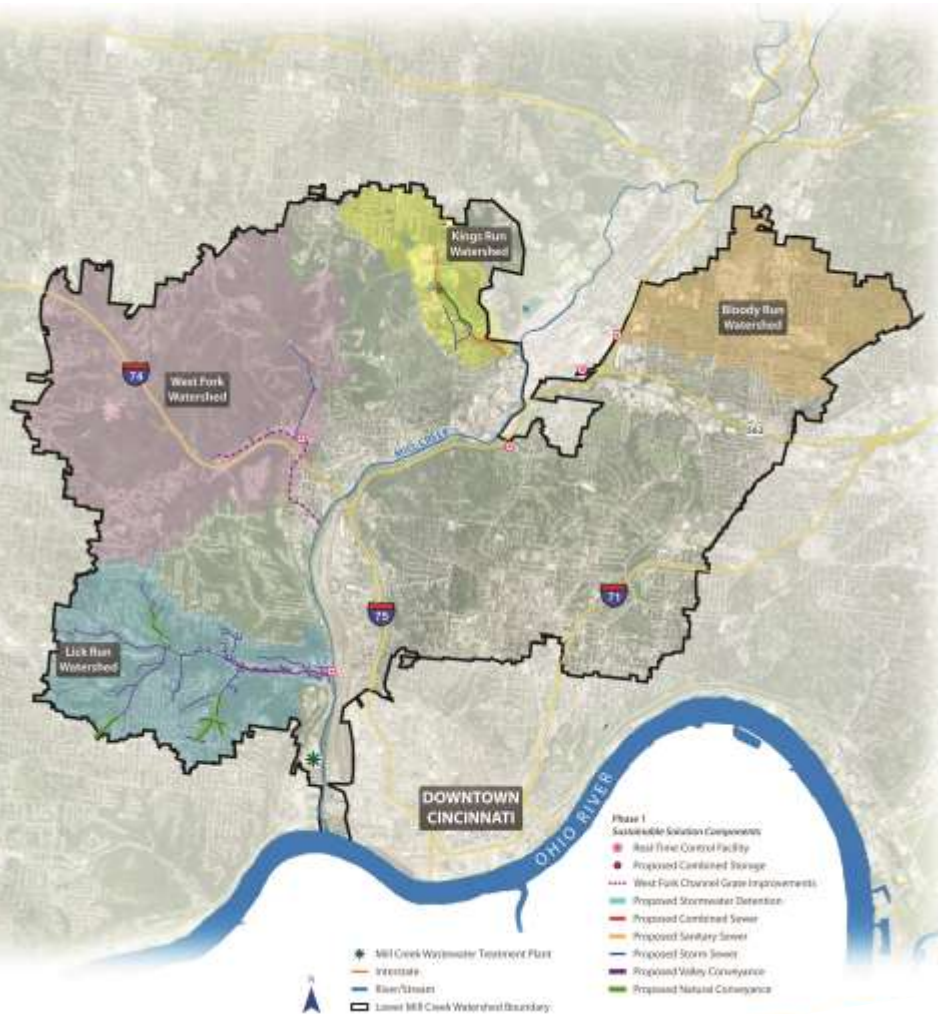
PROJECT GROUNDWORK
your pipeline to clean water

Our Solution

- Project Groundwork is our plan to reduce sewer overflows
- Includes hundreds of sewer and stormwater management projects across Hamilton County



Focus on Lower Mill Creek



- Under Phase 1, MSD required to eliminate 1.78 billion gallons of CSOs annually into Lower Mill Creek
- Regulators approved a sustainable/hybrid, watershed based remedy in May 2013
- Cost is \$244 million (in 2006 dollars), about \$200 million less than the tunnel
- Includes a mix of green and gray projects in Lick Run, Bloody Run, Kings Run, and West Fork watersheds

Focus on Lower Mill Creek...

Overall Benefits of Lower Mill Creek Solution



Project Groundwork Job Creation FTEs

Lick Run

760 Construction Trade Jobs
54,300 feet of storm sewer
3,600 feet of relocated combined
8 detention basins/floodplain
enhancements
8,700 feet of valley conveyance
system
9,900 feet of natural conveyance,
inlet sealing

Kings Run

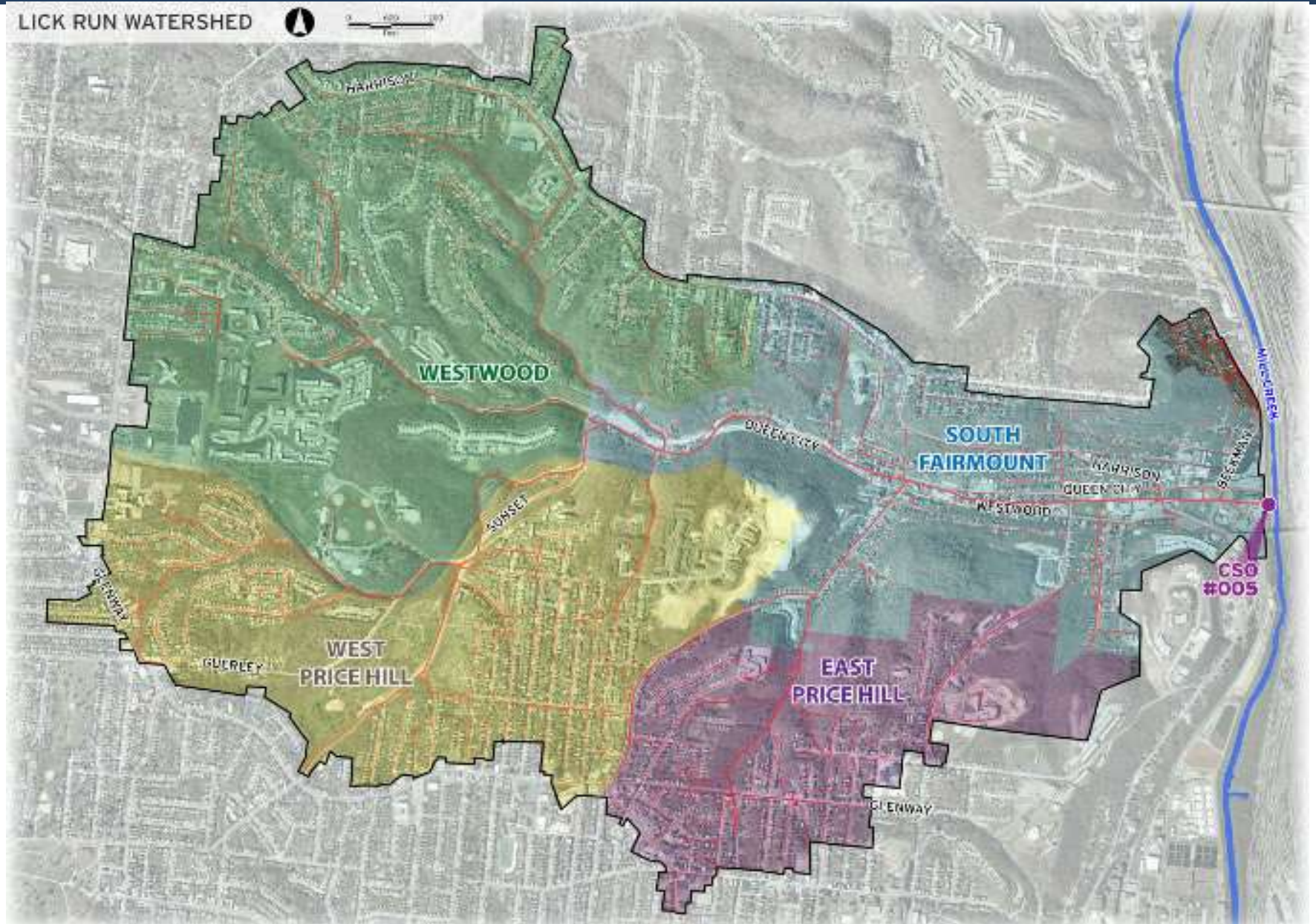
72 Construction Trade Jobs
5,700 feet of storm sewer
7,200 feet of new combined
sewer
1.5 million gallons combined
storage at CSO 217
3 SW detention basins
Stream bank Stabilization and
restoration measures

West Fork

73 Construction Trade Jobs
500 feet of storm sewer
7,600 feet of basin discharge pipe
2 SW detention basins;
approximately 23 acre feet of
storage

Trades jobs are predominantly laborers, operators, and drivers positions.

Lick Run Communities



Lick Run Master Plan

Community Engagement Process

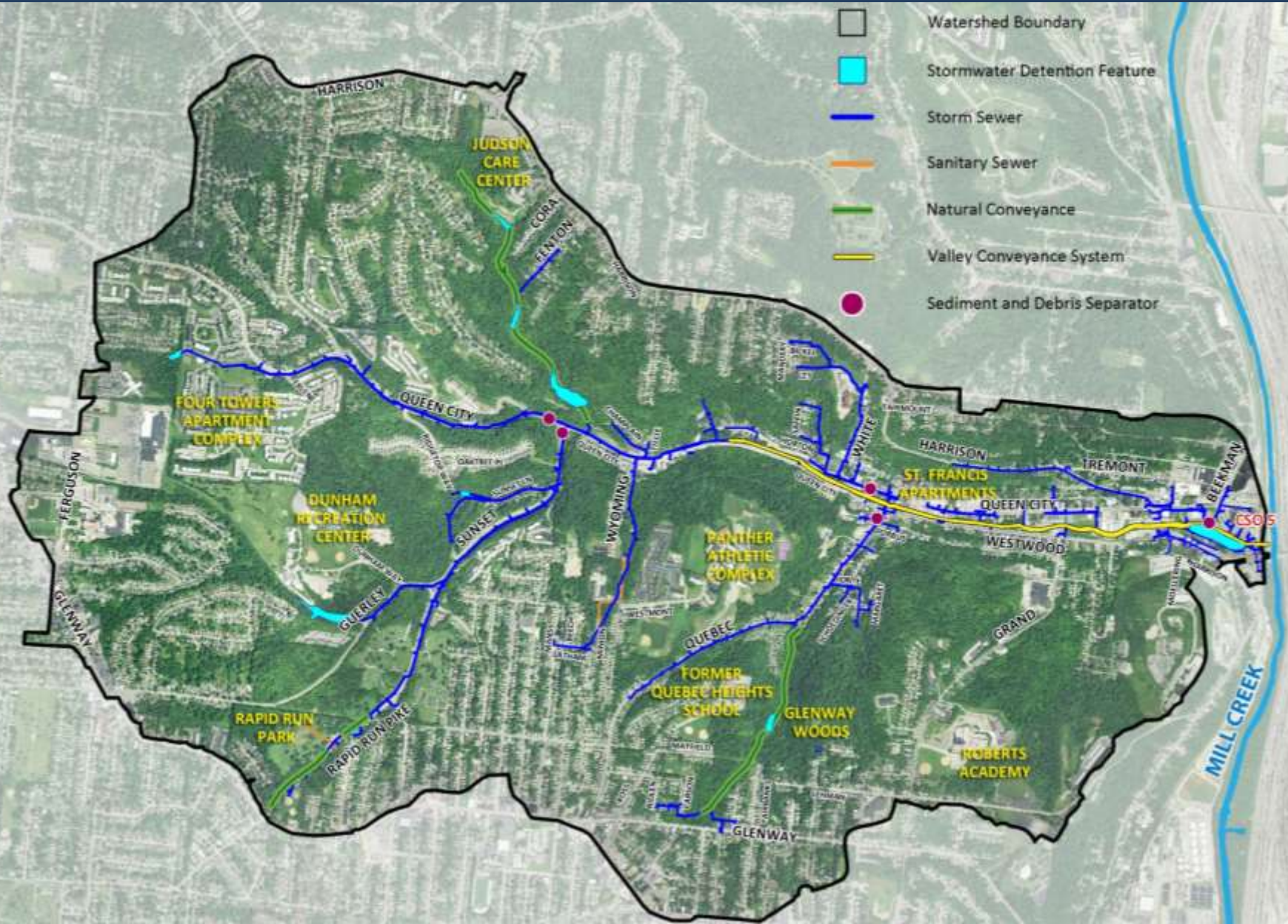


Lick Run Project

- Project will eliminate 624 million gallons of overflows annually into the Mill Creek
- Includes 12 separate projects including:
 - Urban waterway or Valley Conveyance System (VCS) in South Fairmount that will carry stormwater to the Mill Creek
 - 11 other projects to convey stormwater to the VCS
- \$193 million to design and construct (2006 dollars)
- \$518,900 annually to operate and maintain (in 2012 dollars)



Lick Run Project Map



Lick Run Projects

12 projects include (in order of anticipated construction start):

1	Harrison Avenue, Phase A	COMPLETED
2	Rapid Run Park	UNDER CONSTRUCTION
3	Queen City Avenue, Phase 1	UNDER CONSTRUCTION
4	Harrison Avenue, Phase B	Spring 2014 – Fall 2014
5	Wyoming & Minion Avenues	Summer 2014 – Summer 2015
6	Sunset Avenue, Sunset Lane & Rapid Run Pike	Fall 2014 – Winter (Dec) 2015

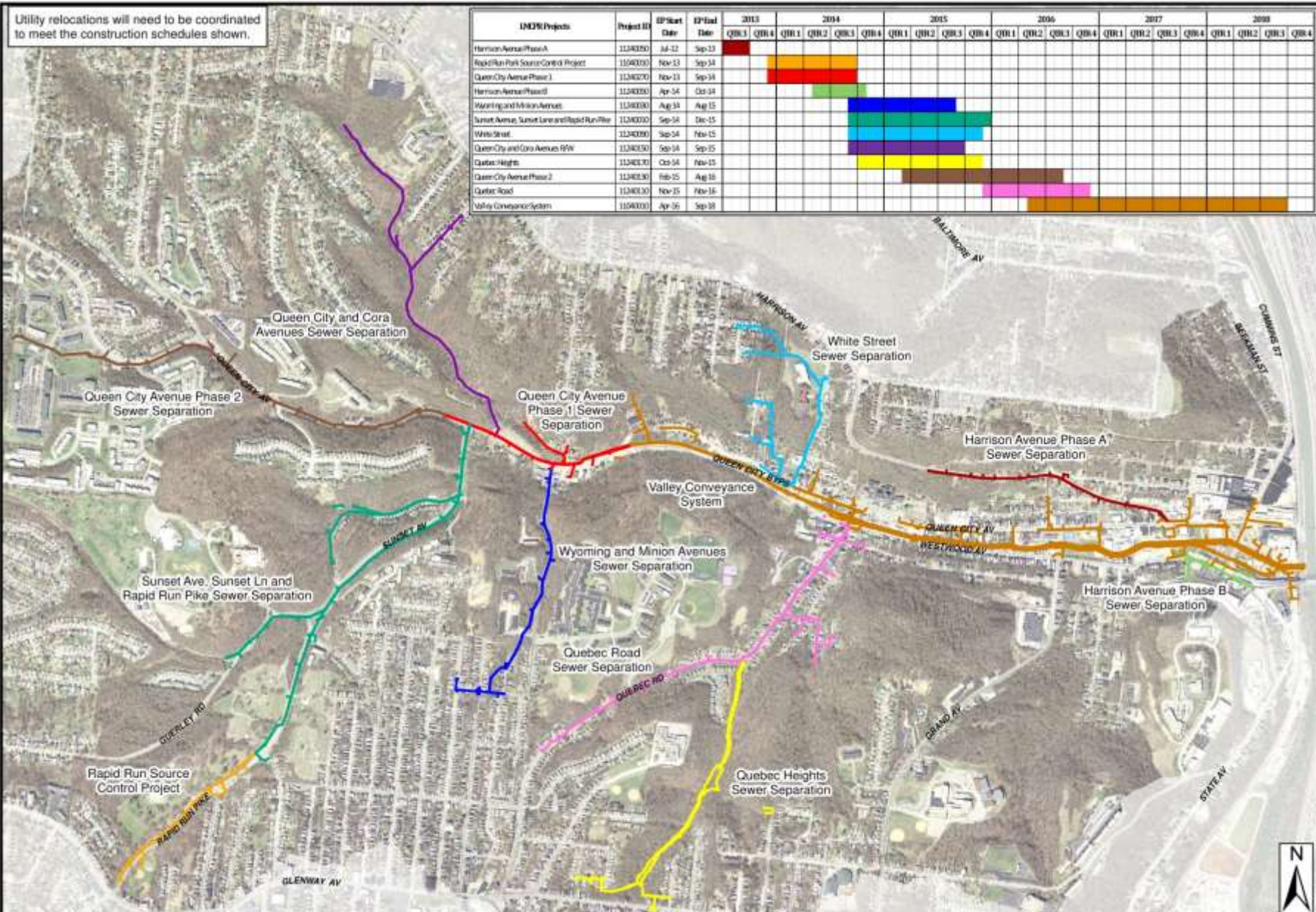


Lick Run Projects...

7	White Street	Fall 2014 – Fall 2015
8	Queen City & Cora Avenues	Fall 2014 – Fall 2015
9	Quebec Heights	Fall 2014 – Fall 2015
10	Queen City Avenue, Phase 2	Winter (Feb) 2015 – Summer 2016
11	Quebec Road	Fall 2015 – Fall 2016
12	Urban Waterway or Valley Conveyance System (VCS)	Spring 2016 – Fall 2018



Construction Sequencing



Harrison Avenue, Phase A (COMPLETED)



- New stormwater sewers along Harrison Avenue (from Everglade Place to Queen City Avenue)
- Coordinated with CDOTE road work on Harrison
- Connects to Valley Conveyance System (VCS)
- Construction completed in Fall 2013
- Will include a curb-side bumpout planter at Tremont by spring 2014.

Rapid Run Park (UNDER CONSTRUCTION)



- Green infrastructure project at Rapid Run Park
 - Bioswale parallel to Rapid Run Pike
 - Two small bioretention basins
 - New stormwater sewers
- Connects to Sunset Avenue project
- Construction:
Fall 2013 - Fall 2014



Queen City Avenue, Phase 1 (UNDER CONSTRUCTION)



- New stormwater sewers along Queen City Avenue (from the Queen City Bypass to Sunset Avenue)
- Additional stormwater sewers along Tillie Avenue and Champlain Street
- Connects to Valley Conveyance System (VCS)
- Construction:
Fall 2013 - Fall 2014



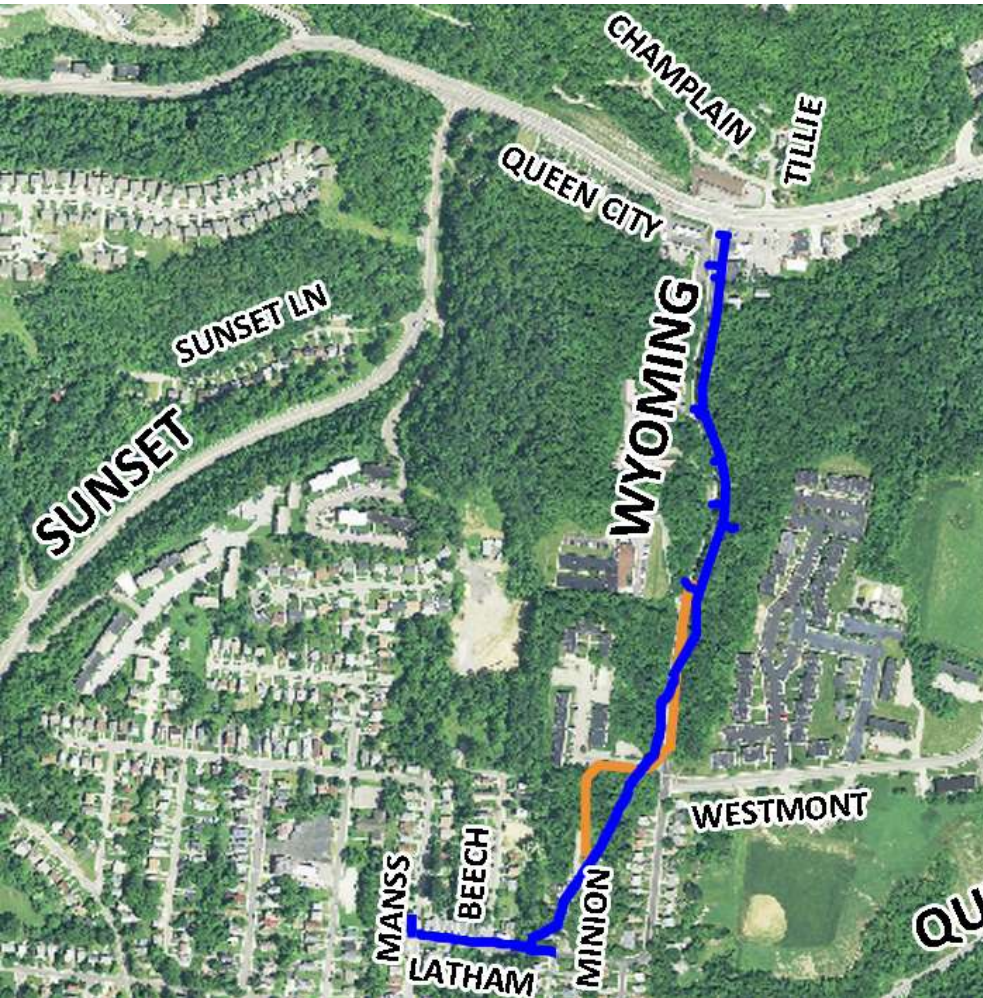
Harrison Avenue, Phase B



- New stormwater sewers along Harrison Avenue and Moelling Avenue near the Western Hills Viaduct
- Connects to Valley Conveyance System (VCS)
- Anticipated construction: Spring 2014 – Fall 2014



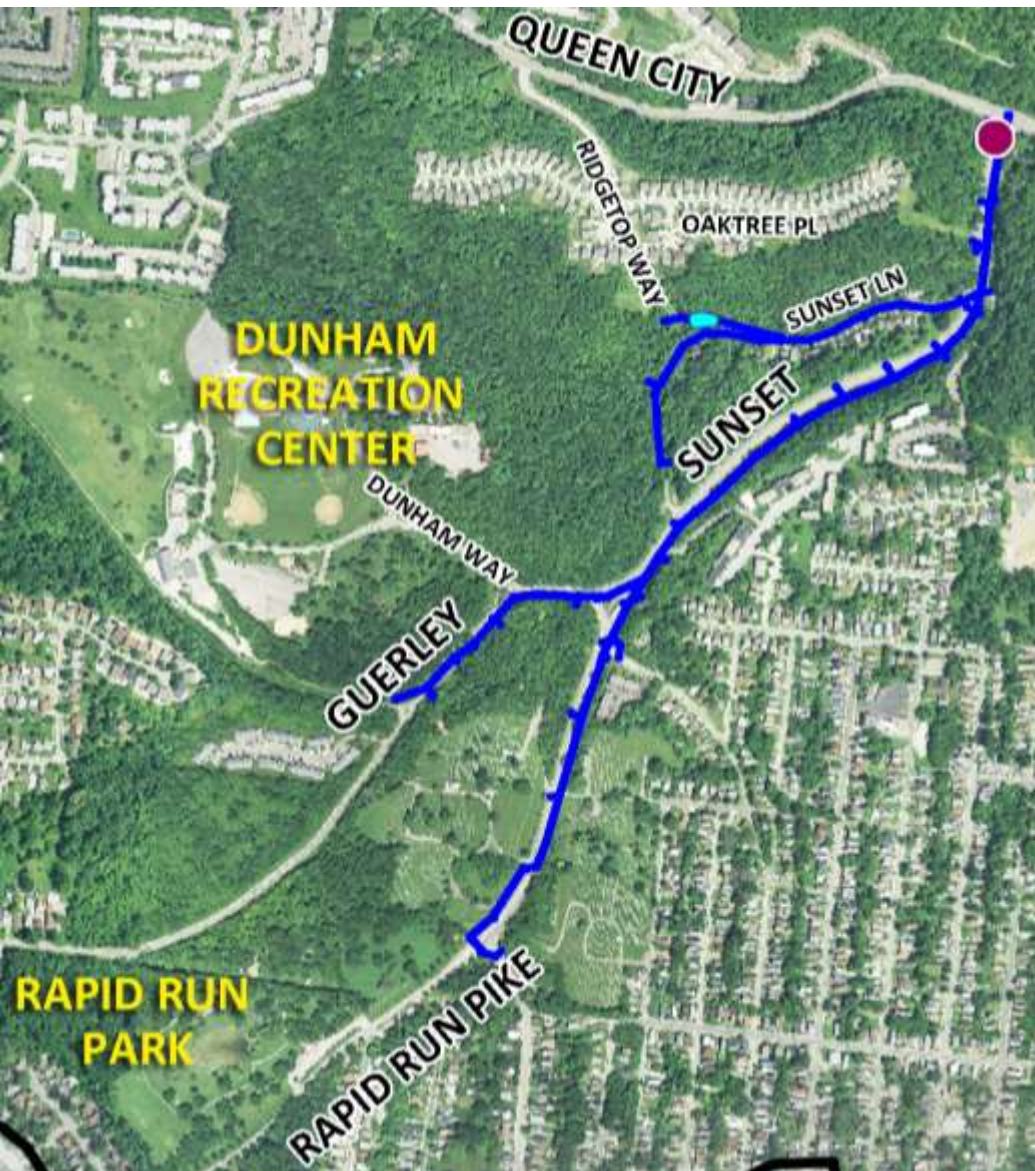
Wyoming & Minion Avenues



- New stormwater sewers along Wyoming Avenue, Westmont, Minion, Beech, Latham and Manss
- Connects to Queen City Avenue, Phase 1 project
- Anticipated construction: Summer 2014 – Summer 2015



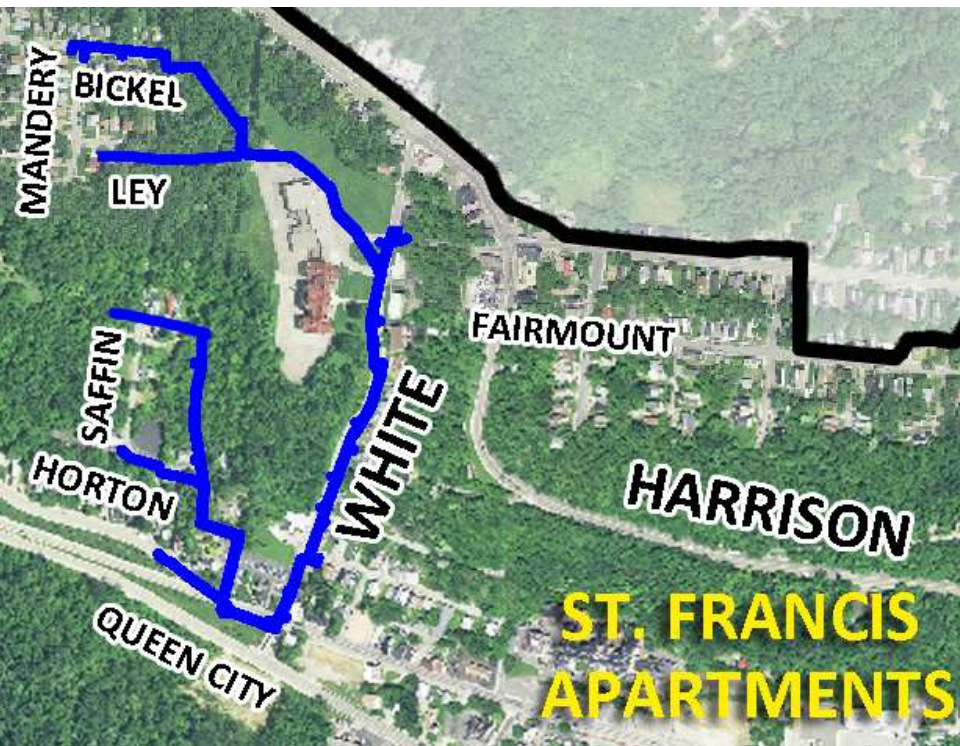
Sunset Avenue, Sunset Lane and Rapid Run Pike



- New stormwater sewers and one detention basin
- Connects to Queen City Avenue, Phase 1 project
- Ties in Rapid Run Park and Guerley Road Dam projects
- Anticipated construction: Fall 2014 – Winter (Dec) 2015



White Street



- New stormwater sewers along White Street and multiple adjacent streets:
 - Richter Street, Horton Street, Pinckney Avenue, Ley Avenue, Bickel Avenue and Queen City Avenue
- Connects to the Valley Conveyance System (VCS)
- Anticipated construction: Fall 2014 – Fall 2015



Queen City and Cora Avenues



- Green infrastructure project behind Judson Care Center:
 - Restoration of an historical stream that was enclosed in a combined sewer
 - Enhancement of three low-lying areas to slow and hold stormwater
 - New stormwater sewers along Fenton Avenue and at bottom of ravine
- Connects to Queen City Avenue, Phase 1 project
- Anticipated construction:
Fall 2014 – Fall 2015



Quebec Heights



- Green infrastructure project in Glenway Woods park
 - Restoration of an historical stream that was enclosed in a combined sewer
 - Enhancement of one low-lying area to slow and hold stormwater
 - New stormwater sewers along local streets
- Connects to Quebec Road project
- Anticipated construction: Fall 2014 – Fall 2015



Queen City Avenue, Phase 2



- New stormwater sewers along Queen City Avenue (from Sunset Avenue to apartment complex off East Tower Drive)
- Retrofit of existing stormwater detention basin
- Connects to the Queen City Avenue, Phase 1 project
- Anticipated construction: Winter (Feb) 2015– Summer 2016

Quebec Road



- New stormwater sewers along Quebec Road and multiple adjacent streets:
 - Thinnes, Forbus, Lierman, Jonte, Schoedinger, Graebe, Lorna, Margret, Faehr and Westwood Avenue
- Connects to the Valley Conveyance System (VCS)
- Anticipated construction: Fall 2015– Fall 2016



Other Related Projects

- Guerley Road Dam
(Cincinnati Stormwater Management Utility Project)
- Roberts Academy
- Early Success Projects:
 - St. Francis Court Apartments
 - San Antonio Church
 - Immanuel United Church
 - Reforestation
- Sewer Replacement Projects



Guerley Road Dam (UNDER CONSTRUCTION)



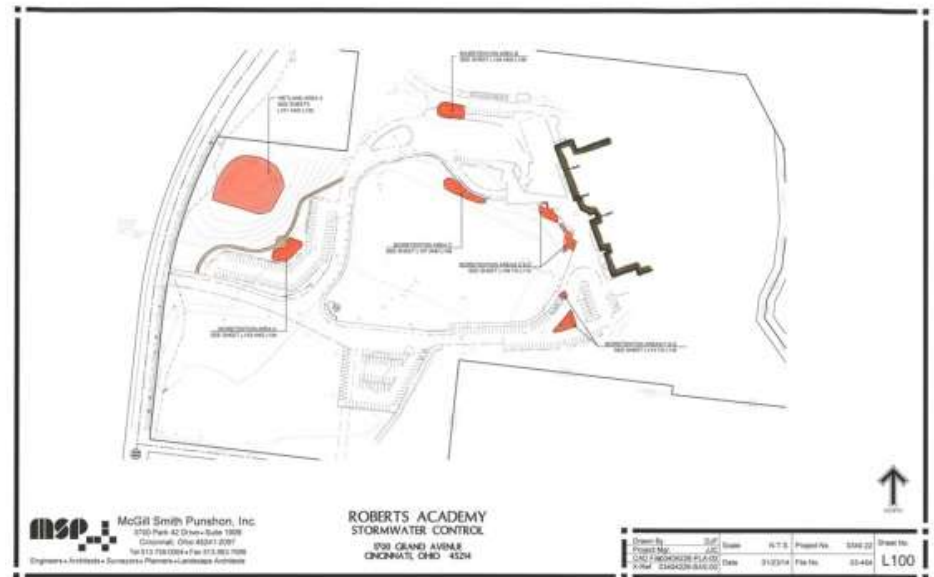
- Cincinnati Stormwater Management Utility (SMU) project
- Large earthen detention dam (1.4 acres)
- Will reduce street flooding on Guerley road
- Will help reduce CSOs into the Mill Creek
- Construction:
Fall 2013 – Summer 2014

Guerley Road Dam (UNDER CONSTRUCTION)



Roberts Academy

- Retrofit of existing stormwater detention basin
- Will help reduce CSOs
- Partially funded by a Ohio EPA grant with matching funds from MSD and Cincinnati Public Schools
- Construction to start in summer 2014 and be complete by fall 2014



Early Success Projects



**Pervious pavement at
San Antonio Church**

Early Success Projects...



**Rain Garden at
Immanuel United Church**

Early Success Projects...



Early Success Projects...



Reforestation

MSD Sewer Replacement Projects

1	Fairmount Avenue Sewer Replacement	Summer 2014- Summer 2015
2	McKeone Avenue Sewer Replacement	Winter 2015- Spring 2015
3	Cora Avenue Sewer Replacement	Fall 2015-Spring 2016
4	Faehr Street Sewer Replacement	Spring 2016 – Fall 2016
5	Quebec Road Sewer Replacement	Summer 2016 – Summer 2016
6	Wahl Terrace Sewer Replacement	Summer 2017 – Spring 2018

Valley Conveyance System (VCS)

What is the VCS (Urban Waterway)?

- Stormwater conveyance system to carry or convey stormwater to the Mill Creek
- 1.5 miles long – from Old Queen City Avenue to the Mill Creek
 - **1 mile of a “naturalized” waterway at the surface**
 - Stormwater conveyance box underneath the entire system
 - Wetlands forebay area at Old Queen City Avenue
 - Headwaters area near White Street
 - Pond area east of Harrison Avenue



Valley Conveyance System (VCS)...



Valley Conveyance System (VCS)...

Overall Project Benefits

- Reduce CSOs into the Mill Creek
- Provide flood control while minimizing risks to public safety
- Improve water quality/enable aquatic habitat
- Improve recreational space in South Fairmount
- Provide a community amenity that could serve as a potential catalyst for community revitalization



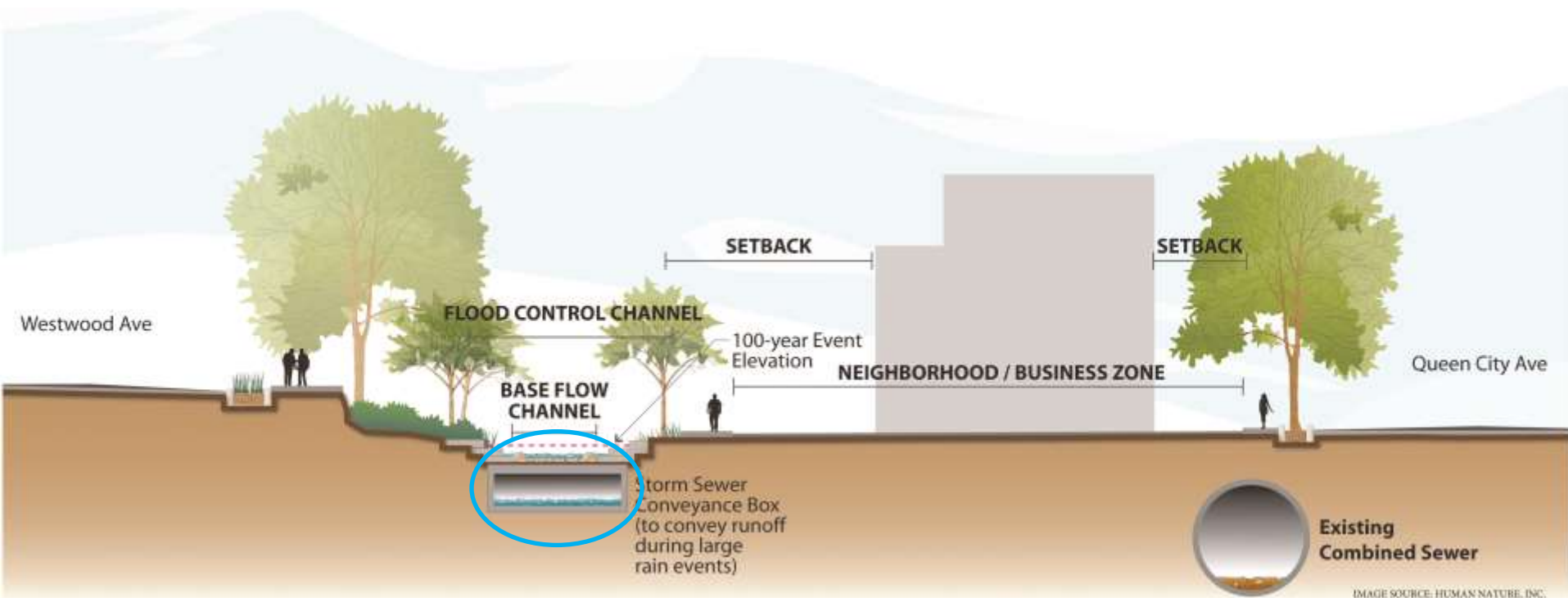
Valley Conveyance System (VCS)...

What will the VCS look like?

- Bioengineered to mimic a natural waterway:
 - Meandering channel
 - Runs, pools and riffles
 - Natural stone
 - Riparian edge planted with native plants and trees

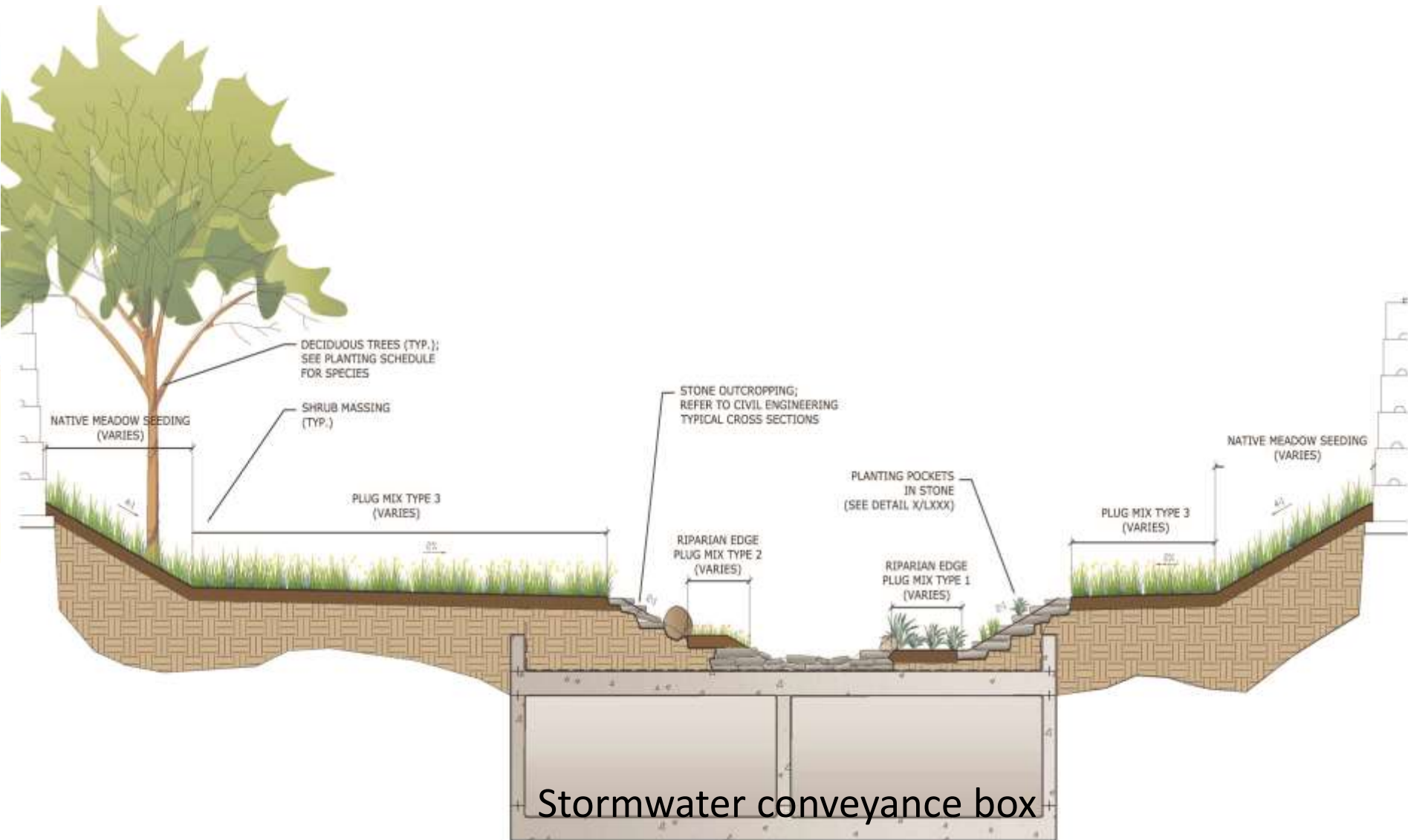


Valley Conveyance System (VCS)...



- VCS consists of a naturalized waterway and a stormwater conveyance box
- Concrete conveyance box runs beneath the entire system to convey runoff during large storms
- The concrete box will NOT be visible aboveground

Valley Conveyance System (VCS)...



Valley Conveyance System (VCS)...

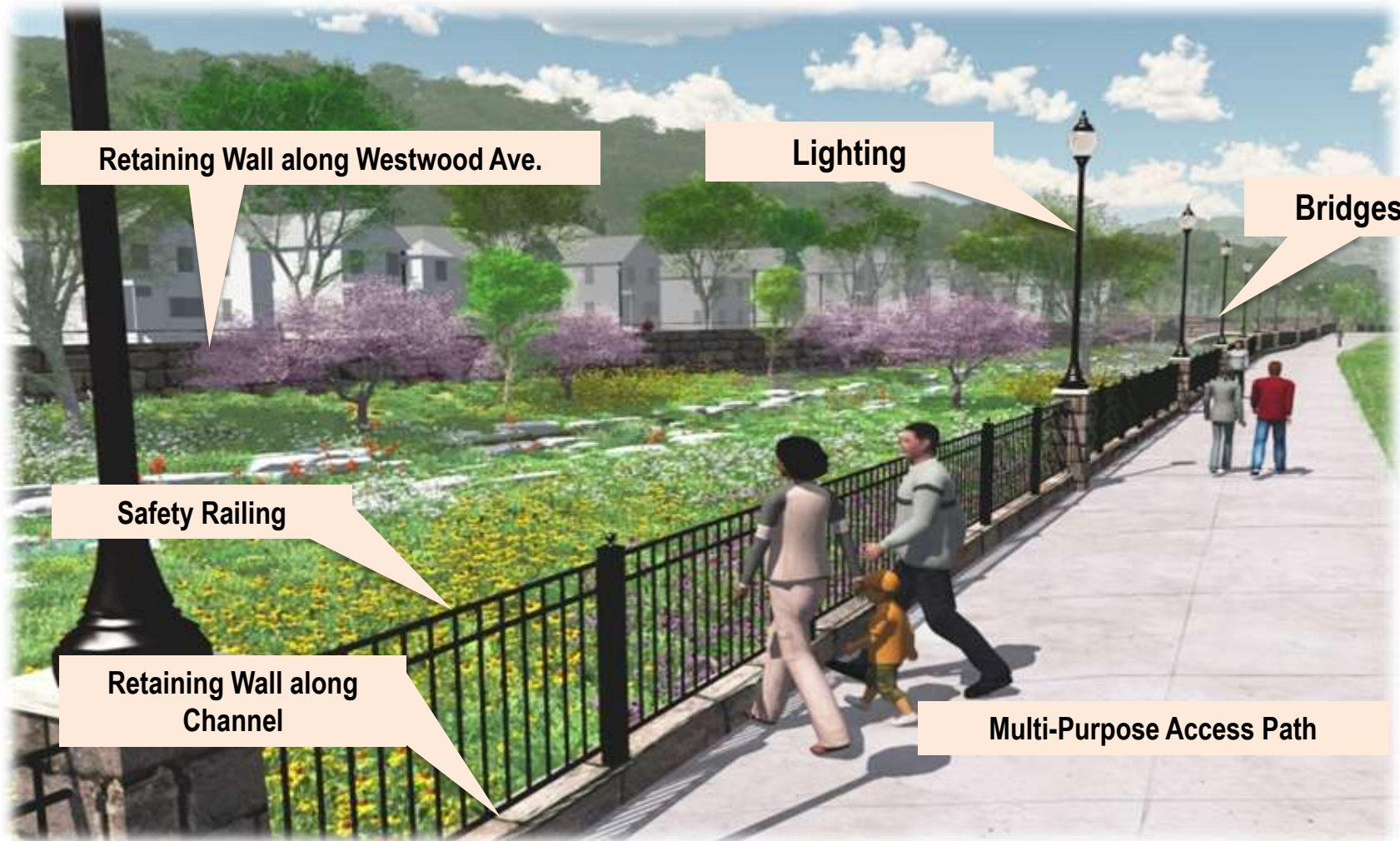
Water Quality Benefits

- Upstream of the VCS, most stormwater will have been filtered by the wetlands forebay, water quality units (to remove debris and sediment), stormwater detention basins, stormwater planters and/or bioinfiltration basins
- In VCS, water quality benefits include:
 - Oxygenation (riffles)
 - Nitrogen processing (pools)
 - Channel shape and profile mimics habitat niches (e.g. fast and slow-flowing waters)
 - Sediment removal



Valley Conveyance System (VCS)...

What community amenities are included with the VCS?



Retaining Wall along Westwood Ave.

Lighting

Bridges

Safety Railing

Retaining Wall along
Channel

Multi-Purpose Access Path

Valley Conveyance System (VCS)...

Additional Community Amenities

- 6 vehicular bridges over the VCS
- Headwaters park area near White Street with off-street parking
- Recreational area improvements, including:
 - New concrete stage area
 - New playground
 - New basketball courts
 - Off-street parking
 - Pedestrian bridge over the VCS
 - Spray ground stays in place
 - Two shelters remain but one is relocated

Valley Conveyance System (VCS)...

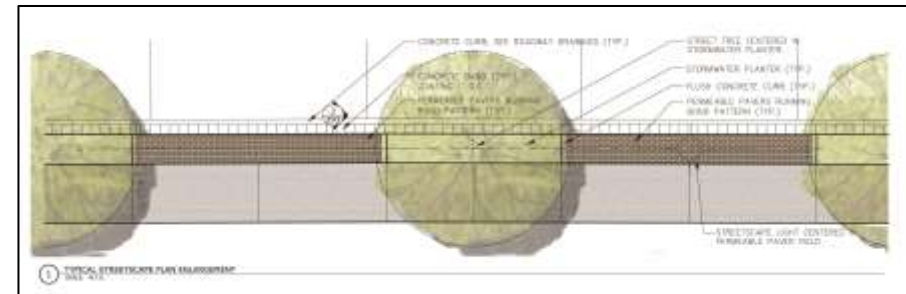
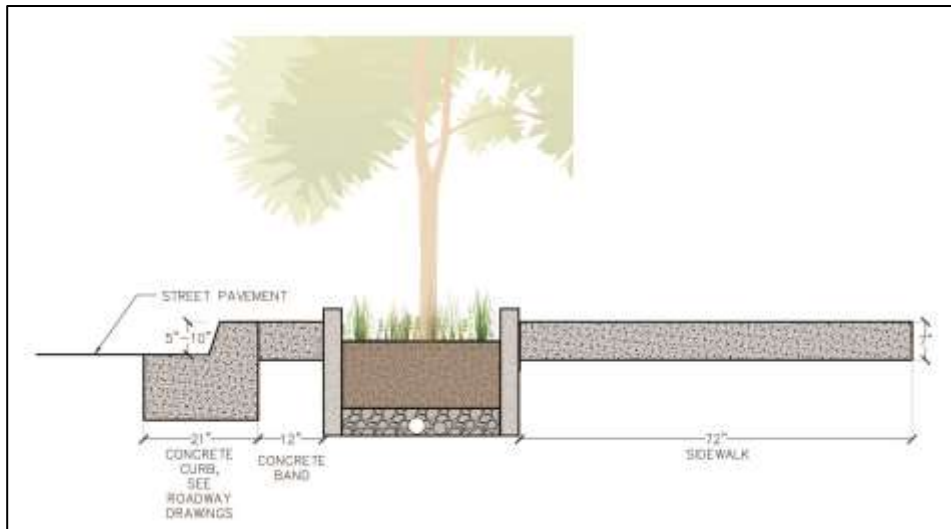
Plantings

- 8 Planting Zones/Types
 - Channel Zone: Riparian Plug Mixes 1, 2 and 3
 - Upland Seeded Meadow
 - Seeded or Sodded Lawn
 - Wetland Plug Mix
 - Stormwater Planter Mix (Perennial & Groundcover)
 - Shrub Massings
 - Perennial Beds
 - Trees: Deciduous, Street, Flowering, Coniferous



Valley Conveyance System (VCS)...

Stormwater Planters (along Queen City Avenue)



Example of stormwater planters in Oakley Square



Valley Conveyance System (VCS)...

Maintenance of the VCS

- Stormwater conveyance box for flood control
 - Periodic sediment and debris removal
 - Periodic structural inspections
- Retaining walls
 - Periodic structural inspections
 - Removal of graffiti
- Channel
 - Plant management
 - Erosion control
 - Litter/debris clearing
 - Periodic dredging of pond



Valley Conveyance System (VCS)...

Will the VCS run dry?

- VCS has the potential to “run dry” much like a natural stream based on average weather conditions (between 290-350 days/yr)
- Community/MSD desire for some level of continuous flow
- MSD is proposing to augment natural drainage by re-circulating water from the pond to the headwaters
- Requires an underground force main (pipe) and pump station
- <1% of total construction costs and 6% of total annual operation & maintenance costs



Valley Conveyance System (VCS)...

What properties are needed?

- 90 properties are needed from Old Queen City Avenue to the Mill Creek
 - 57 properties have been secured to date
 - ✓ 45 purchased by MSD
 - ✓ 6 under contract to purchase by MSD
 - ✓ 6 publicly owned
 - 64% of the total properties and 72% of the total acreage



Valley Conveyance System (VCS)...

Properties where project impacts may be minimized

- 1409 Queen City Ave (Process Construction)
- 1521 Queen City Ave (Family Dollar)
- 1607 Queen City Ave (Cincinnati Bell)
- 1609 Queen City Ave
- 1701 Queen City Ave (strip mall -Xtreme Sound)
- 1717 Queen City Ave (laundromat)
- 1755 Queen City Ave
- 1811 Queen City Ave
- 1813 Queen City Ave
- 1815 Queen City Ave
- 1817 Queen City Ave
- 1819 Queen City Ave (Vitt & Stermer garage)
- 2047 Old Queen City Ave
- 2051 Old Queen City Ave
- 2053 Old Queen City Ave
- 2055 Old Queen City Ave
- 2057 Old Queen City Ave
- 2059 Old Queen City Ave

Valley Conveyance System (VCS)...



Family Dollar



1811-1819 Queen City Avenue



Xtreme Sound strip mall

Valley Conveyance System (VCS)...

Demolitions/Deconstruction

- 20 of 76 buildings demolished to date
 - 19 by MSD
 - 1 by the Port Authority
- About 20 more buildings to be demolished by summer 2014
- To date, no buildings have been demolished that are potentially eligible for the National Register of Historic Places



Deconstructing exterior from the facade of 1777 Queen City Ave.



Valley Conveyance System (VCS)...

How is historic property being addressed?

- 5 potentially historic properties and 1 of community interest in path of VCS:



1786 Westwood
(Queen Anne)



1806 Westwood
(American Foursquare)



1824 Westwood (Mission)
Former Vitt & Stermer
Funeral Home

Valley Conveyance System (VCS)...



1783 Queen City (Mission)



1789 Queen City
(Nun's House)

1806 Westwood
(American Foursquare)



2311 Grand (old Niehoff
Dairy – this property is
not eligible for National
Register of Historic Place)

Valley Conveyance System (VCS)...

How is historic property being addressed?...

- 3 meetings with interested community members
- Examples of mitigation options discussed include:
 - Video history
 - Relocate moon tree
 - Cultural trail
 - Website
 - Relocate buildings
 - Property documentation
- Mitigation plan available as hard copies and on Lick Run website
- Next Steps?
 - Further evaluate feasibility of mitigation options with interested stakeholders (e.g., building relocation)
 - Seek outside funding for mitigation options

Valley Conveyance System (VCS)...

Schedule

- Design – 2013 through 2015
 - 30% design right now
- Estimated Start of Construction – Spring 2016
- Estimated Construction Completion – Fall 2018



Lick Run Website:

www.projectgroundwork.org/lickrun

Questions?

Project Stations