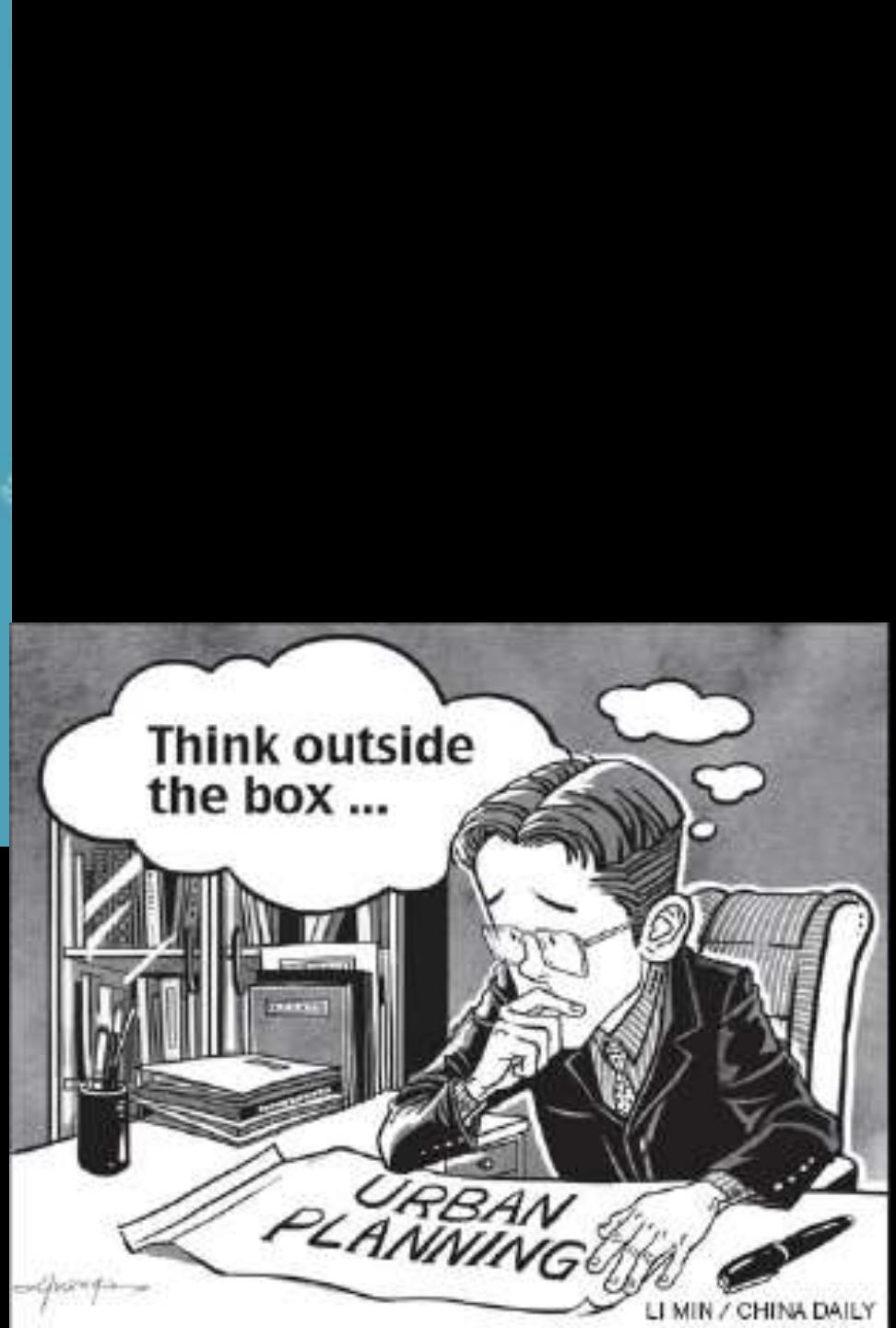


A Partnership:

Land Use Planning and Stormwater Management







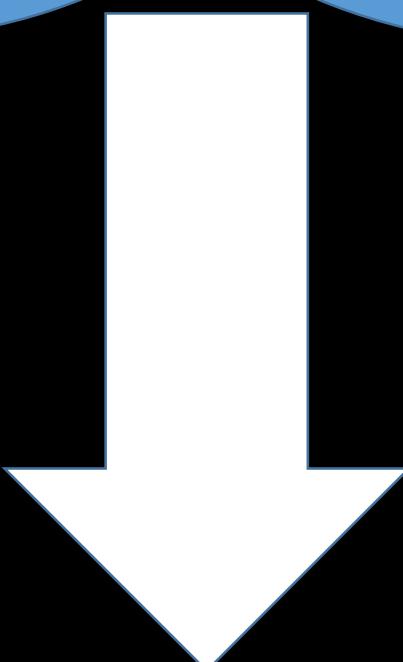
**Corner of Broad Street and
Terrace Avenue
June 2015 Rain Event**

**Corner of Eureka Avenue and
Palmetto Street
July 2015 storm event**



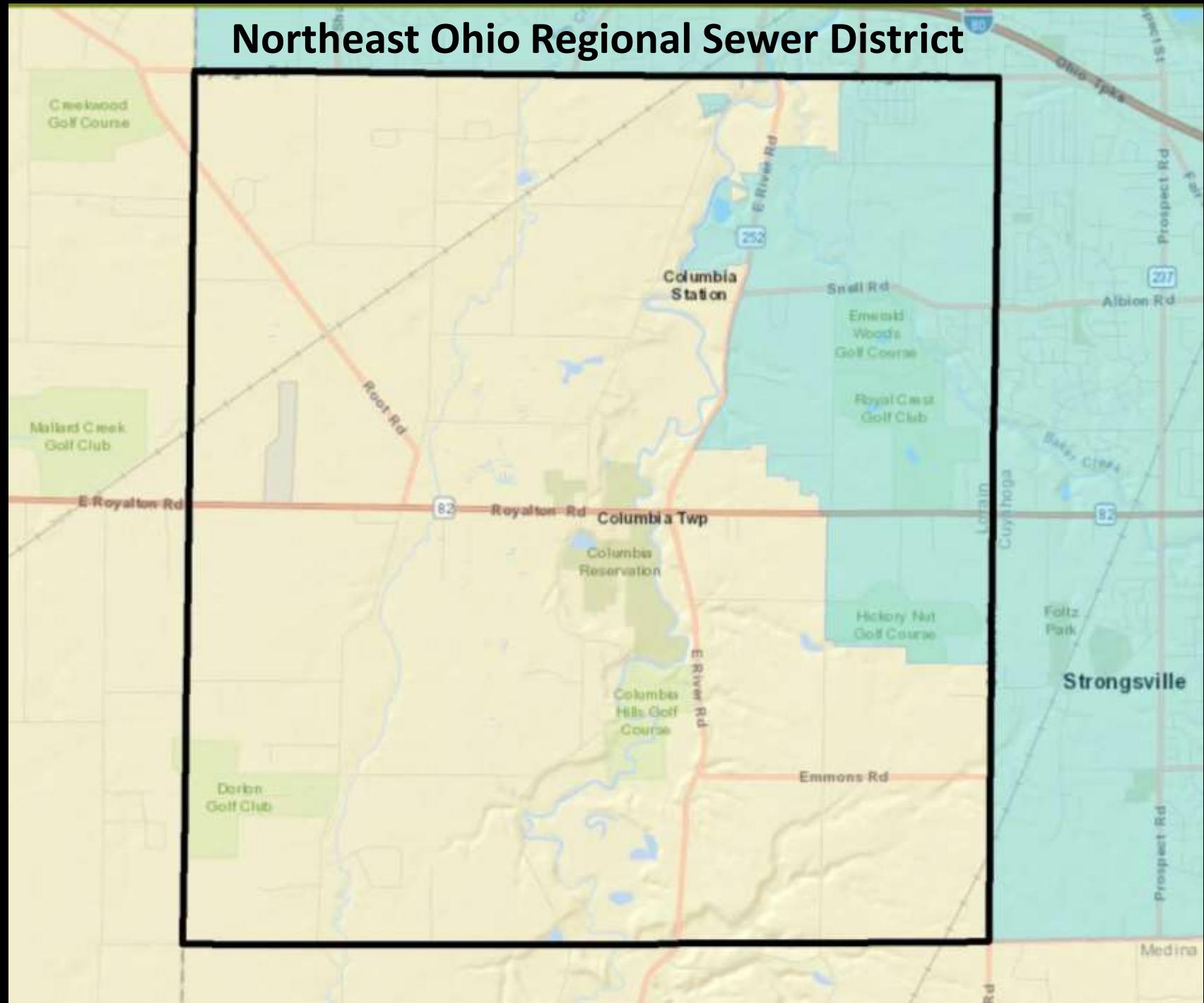
Land Use Plan

Storm Water
Management
Plan



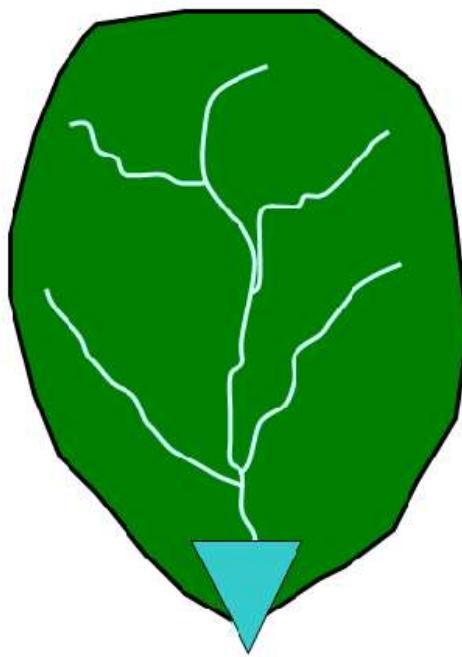
Site Plans

Northeast Ohio Regional Sewer District

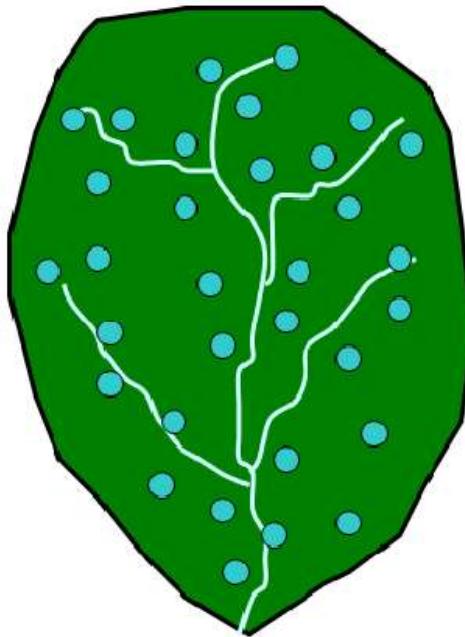




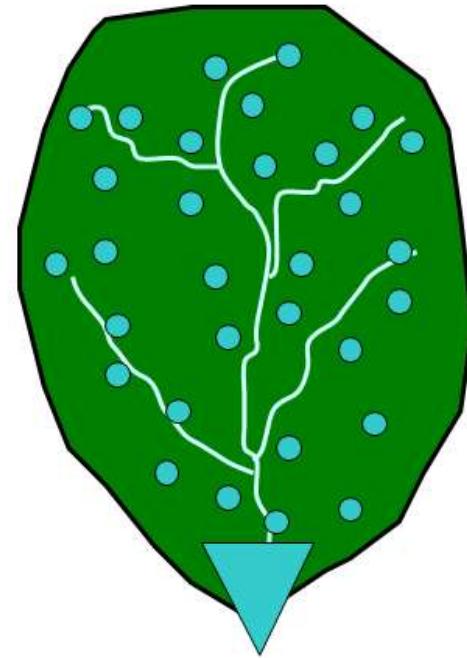
stormwater controls



**Traditional
Regional
Technique**

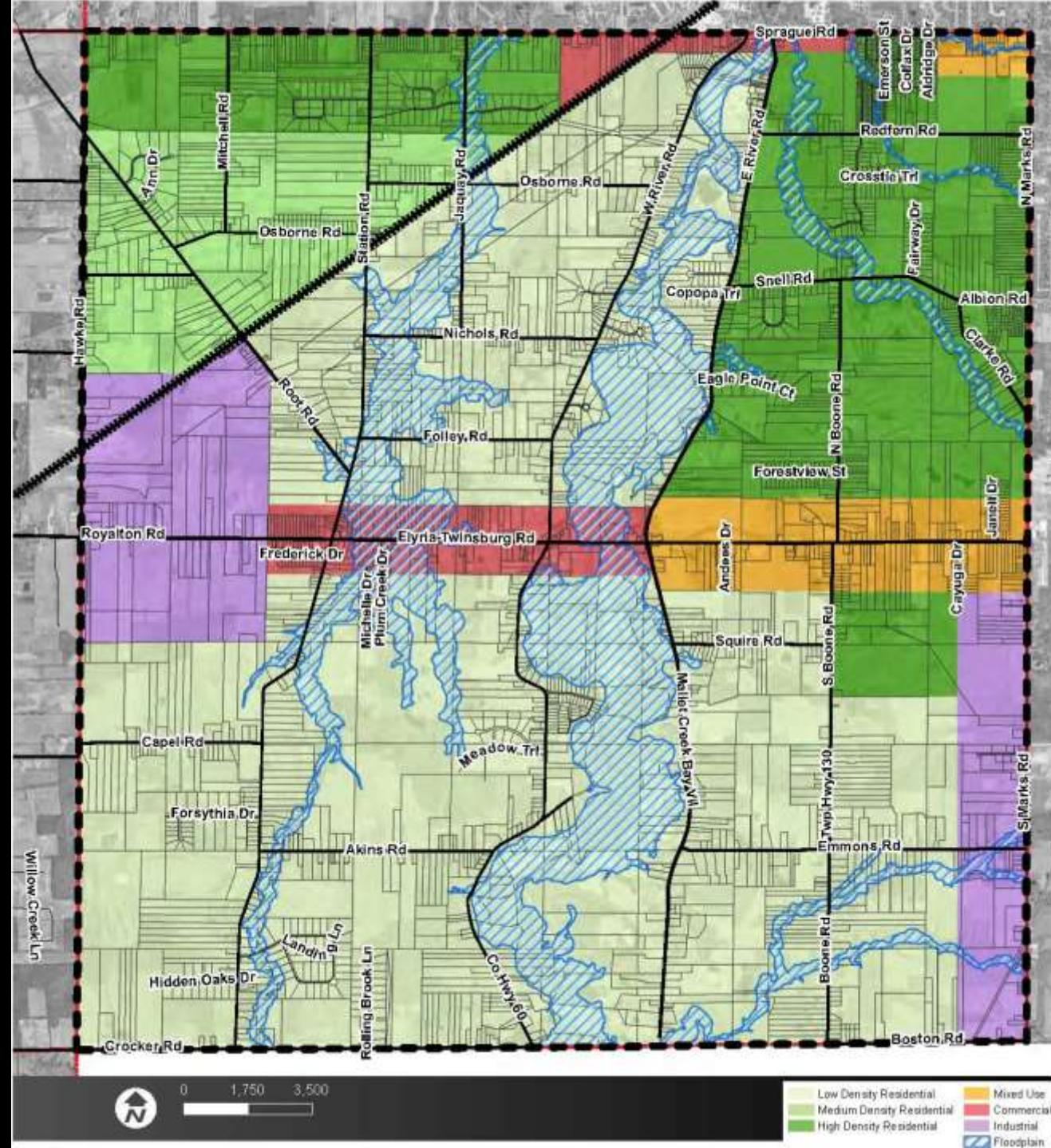


**Distributed
Stormwater
Features**



**Integrated
Stormwater
Controls**

Columbia Township Future Land Use



Columbia Township Land Use Plan – *incorporated Stormwater Management in the plan*

Goals and Objectives –

- *Encourage the protection and preservation of all environmentally sensitive areas of Columbia Township*

Identified Densities for Land Use Types -

- *Encourage setbacks from floodplains and riparian corridors should be used to encourage long term environmental stormwater and aesthetic benefits*

Stormwater Management Guidelines in Appendix –

- *Riparian Setback and Compensatory Storage*
- *Stormwater Management Methods*

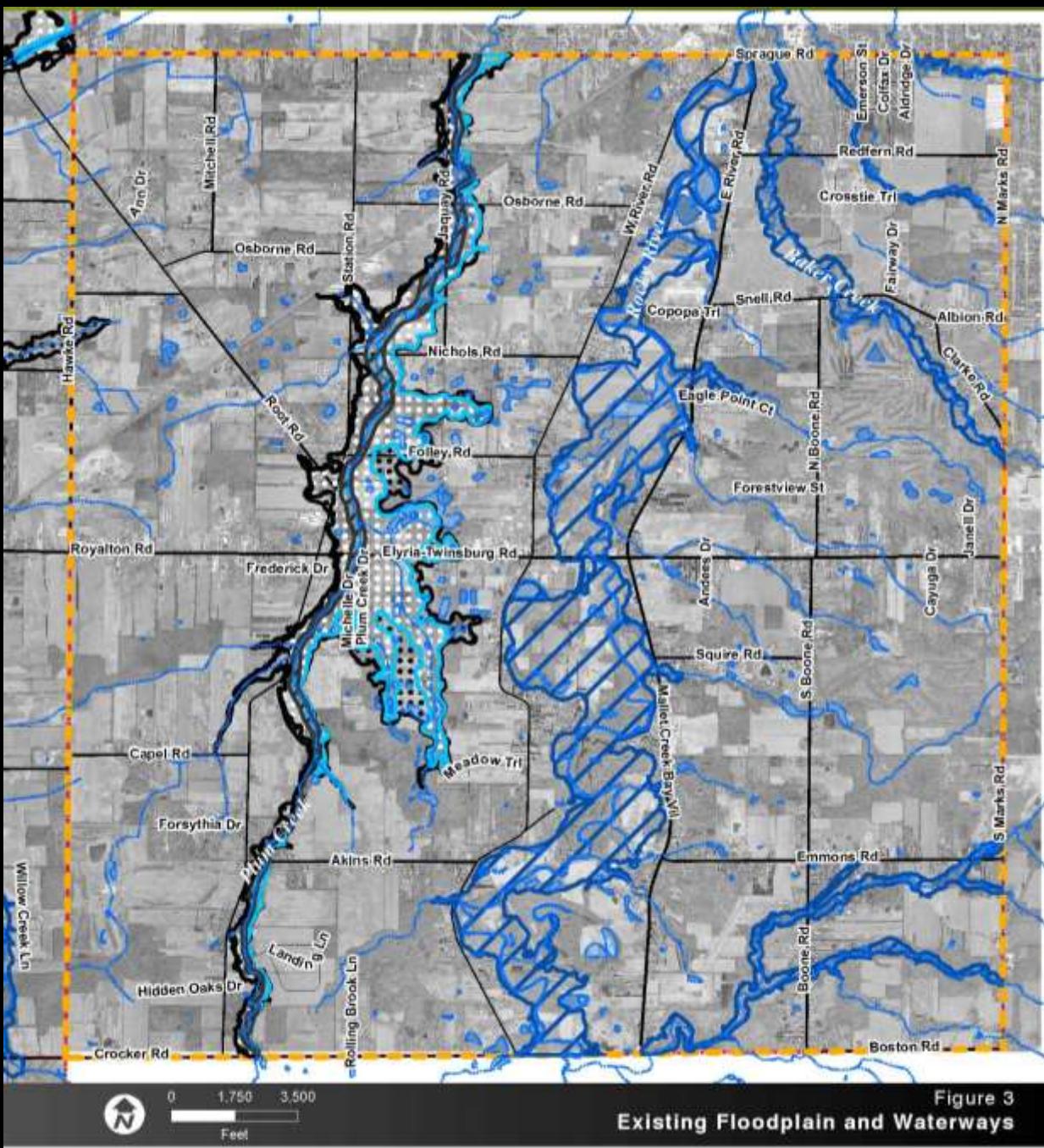


Figure 3
Existing Floodplain and Waterways



ms consultants, inc.
engineers, architects, planners

Waterways
Lakes and Ponds

ZONE A 100 YEAR FLOODPLAIN
(No Base Flood Elevations Determined)
ZONE AE 100 YEAR FLOODPLAIN

ZONE AE 100 YEAR FLOODWAY
ZONE X 500 YEAR FLOODPLAIN





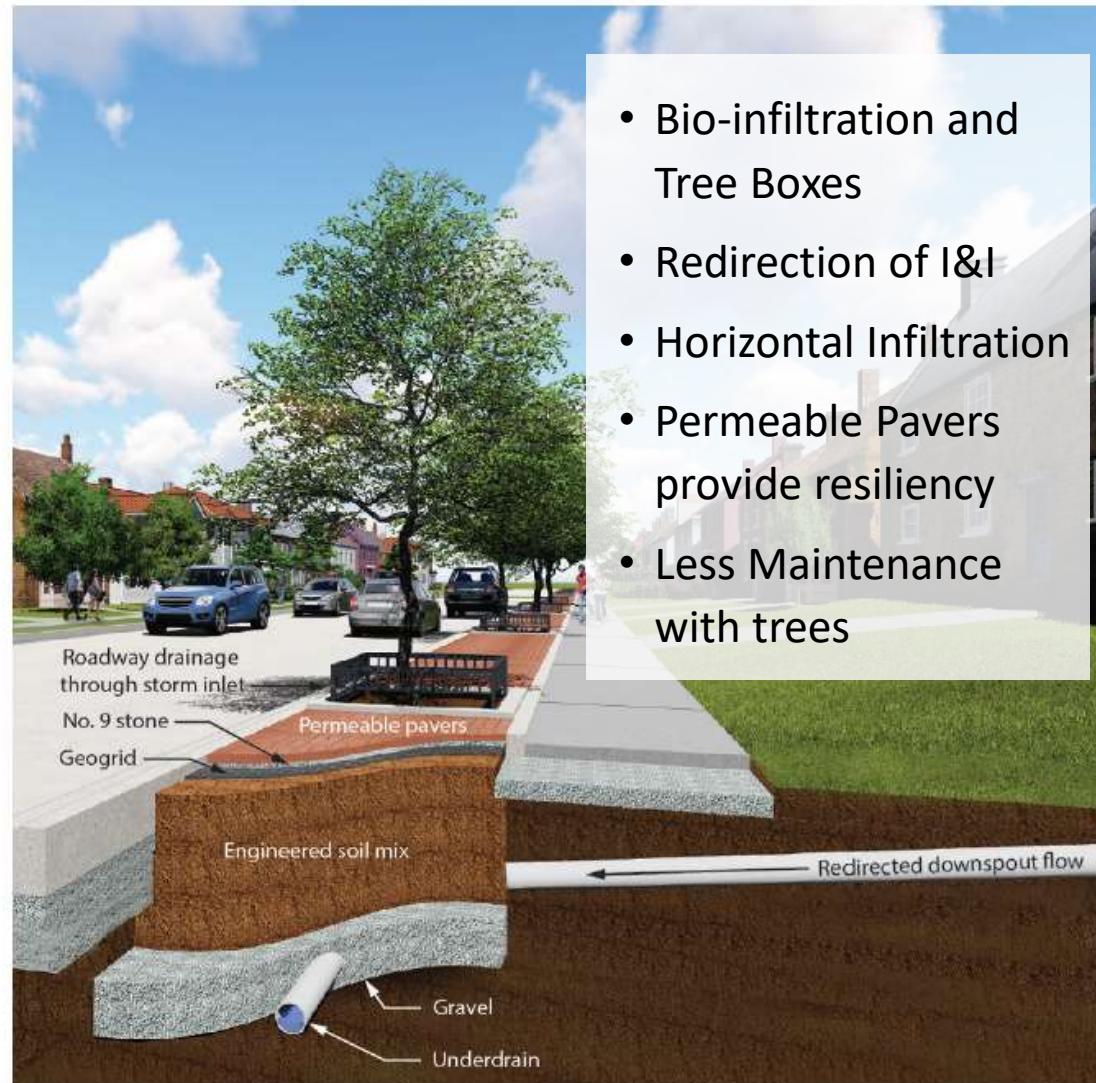
green infrastructure



AFTER



BEFORE





GI Opportunities



Alley
Before



Bio-retention
Before



Alley
After



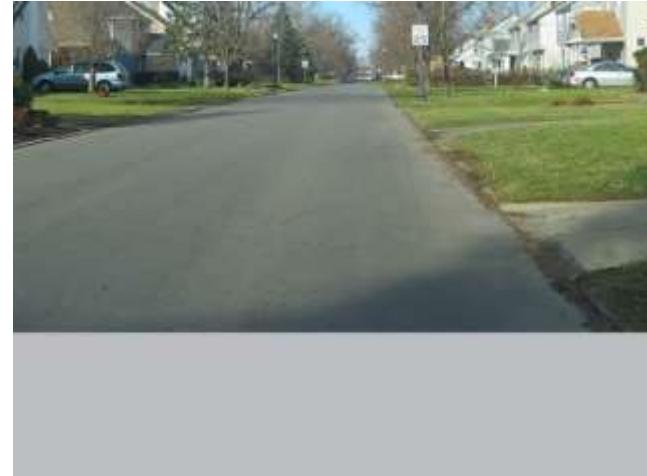
Bio-retention
After



GI Opportunities



Vacant Land
Before



Pervious
Sidewalks
Before



Vacant Land
Conversion
After



Pervious
Sidewalks
After

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Land Use Planning and Stormwater Management

