

P-19 Huntleigh and Tanglewood Estates

Project Information Meeting
September 2015

Storm Water Master Plan Overview

- MS4 Stormwater Permit
- 2011 Storm Water Master Plan
 - 47-miles of Stream Assessment
 - 250 Basins
 - Hydrologic and Hydraulic Modeling
 - Flooding, Stream Stability & Habitat, Water Quality
 - Storm Water Code and Ordinance Review
 - Capital Improvement Projects
 - Over 100 projects at a cost of \$125,000,000

CIP Project Distribution

\$0 < 75 Projects < \$ 2 Million

(\$20 Million)

\$2 Million < 11 Projects < \$ 4 Million

(\$32 Million)

\$10 Million < 5 Projects < \$15 Million

(\$66 Million)

Funding

- 2008: City Voters authorized the City to issue up to \$ 40 million for Storm Water Bonds
- Aug 2012: Voters passed Proposition P
 - » 0.4% Sales Tax Increase
 - » Generate \$4.8 million annually for Parks & Storm Water
- Nov 2012: City sold first \$ 4 million in bonds
- Sales Tax started January 1, 2013

Partnership

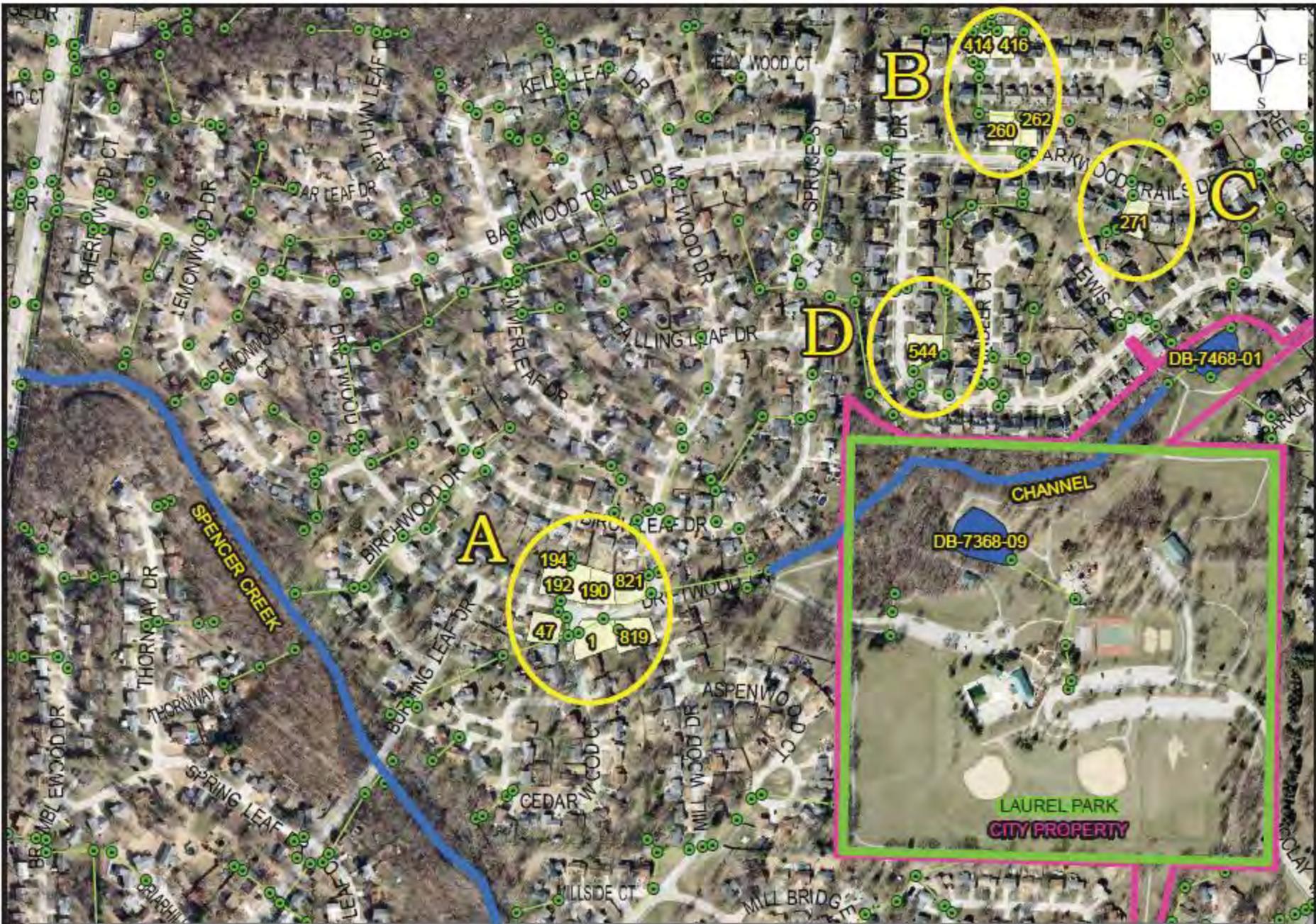
SWMP outlines projects & conceptual improvements

Prop P provides funding to design & construct

City cannot spend public \$ on private property

Property owner donates necessary easements

City can fund design, construction & maintenance



TANGLEWOOD AND HUNTLEIGH EASTATES STORMWATER IMPROVEMENT PROJECT AREAS

Drainage Problems



Street ponding

Drainage Problems



Yard ponding

Drainage Problems

Street ponding (Driftwood Lane between
Burning Leaf Drive and Cedarwood Court)



Ponding has entered house through garage
at 196 Driftwood Lane

Drainage Problems



Two street inlets are regularly overwhelmed on Millwood Drive at Driftwood Lane. Ponding has been so deep that water flows along both sides 821 Millwood Drive down to the backyards of Driftwood Lane homes.



Stormflow enters sliding glass doors at 190 Driftwood Lane located downhill from 821 Millwood Drive. Sandbags are kept on the porch to prevent flooding.



Total Drainage
140 Acres

Creek Drainage
115 Acres

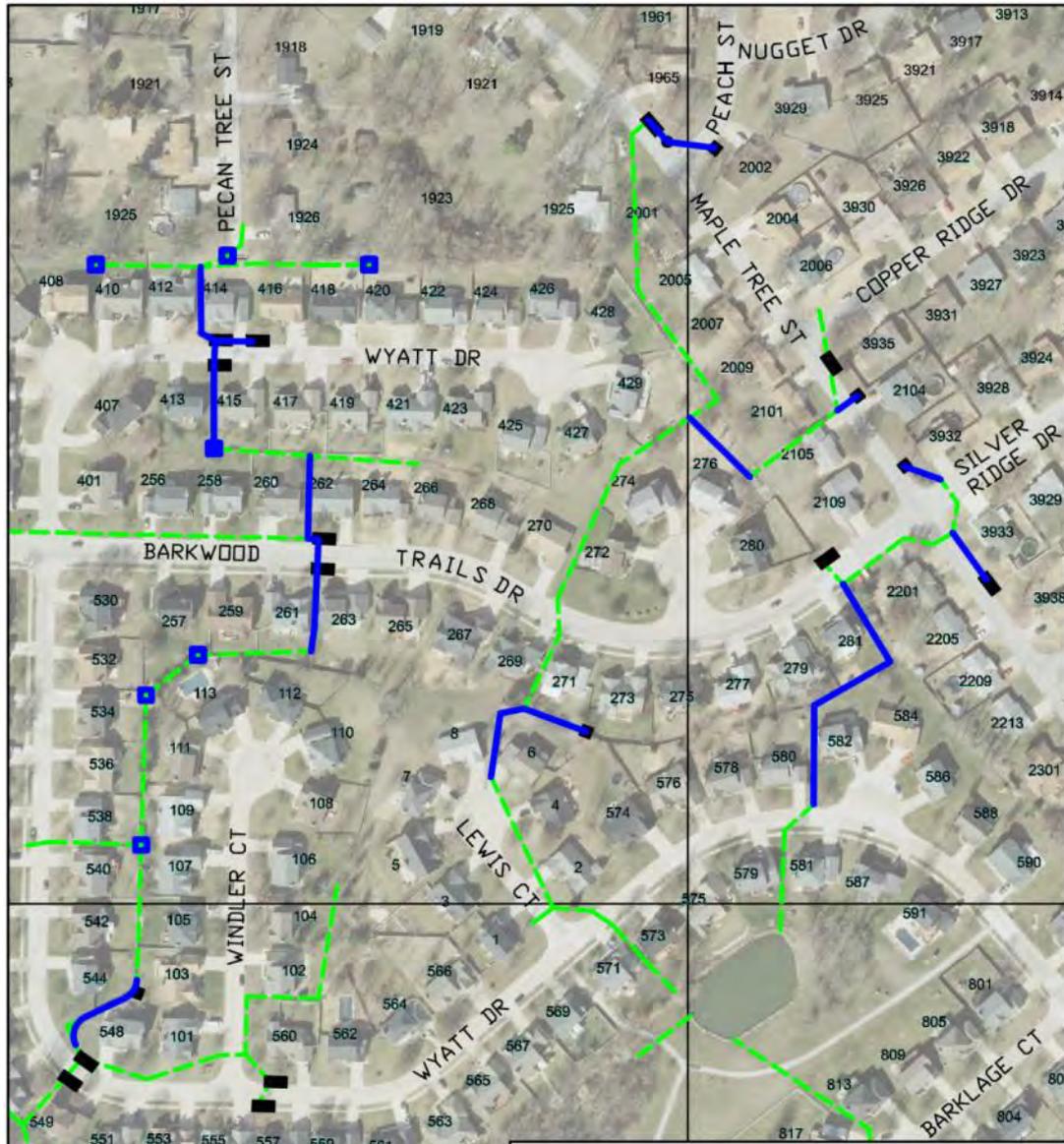
Detained Drainage
10 Acres

Detained Drainage
30 Acres

Types of Stormwater Inlet Structures



Huntleigh Estates



PROPOSED AREA OF IMPROVEMENT

LAUREL PARK

HUNTLEIGH ESTATES

LEGEND

- - - EXISTING STORM SEWER
- _ _ _ PROPOSED STORM SEWER
- PROPOSED DOUBLE INLET
- PROPOSED SINGLE INLET
- EXISTING INLET TO BE IMPROVED



Sources of Drainage Problems: Some storm sewer structures not functioning as designed

Example of street inlet being bypassed due to improper pavement sump.



Sources of Drainage Problems

Some storm sewer structures not functioning as designed



Sources of Drainage Problems

Some storm sewer structures not functioning as designed



Sources of Drainage Problems: Site D

Some storm sewer structures not functioning as designed

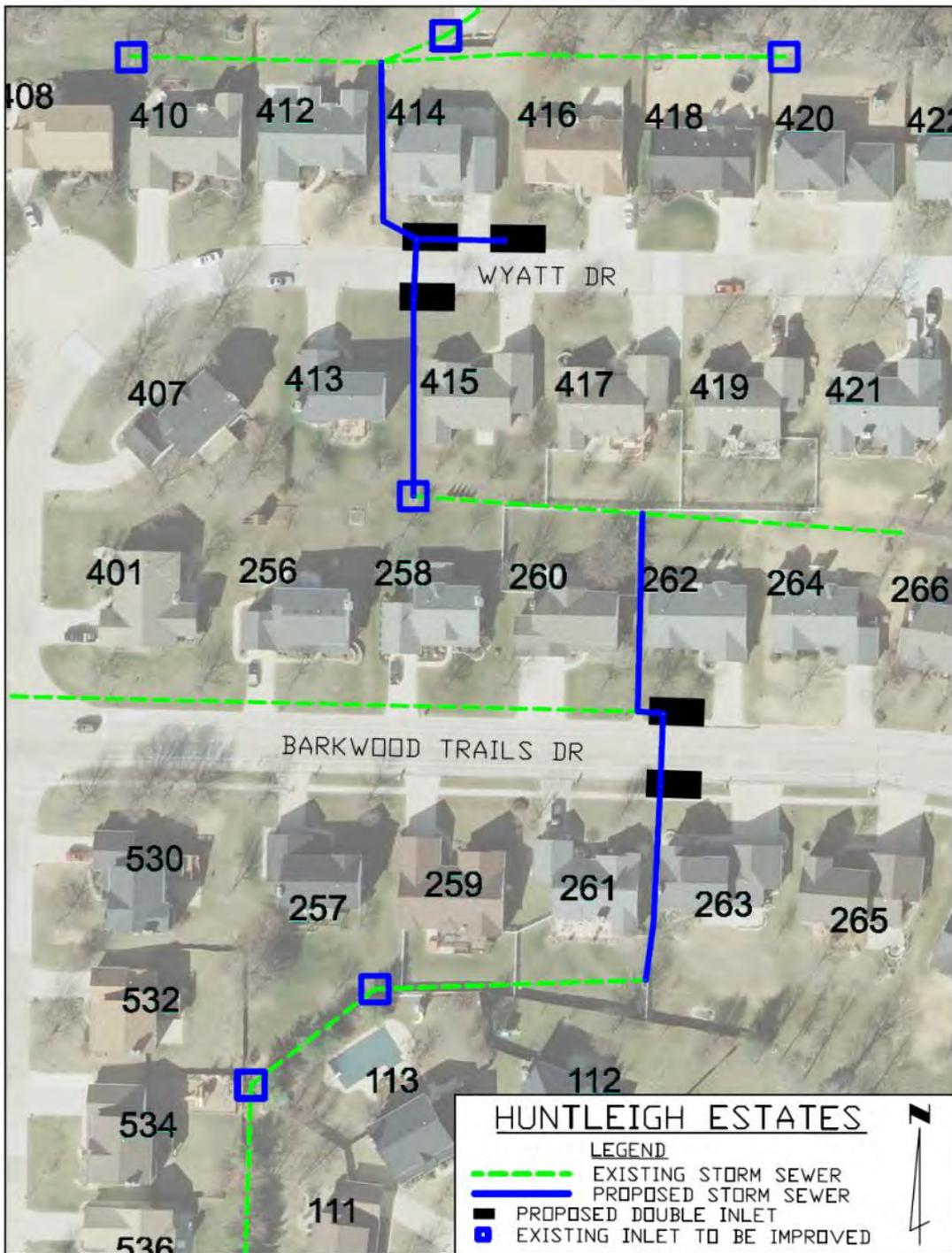


Sources of Drainage Problems: Site D

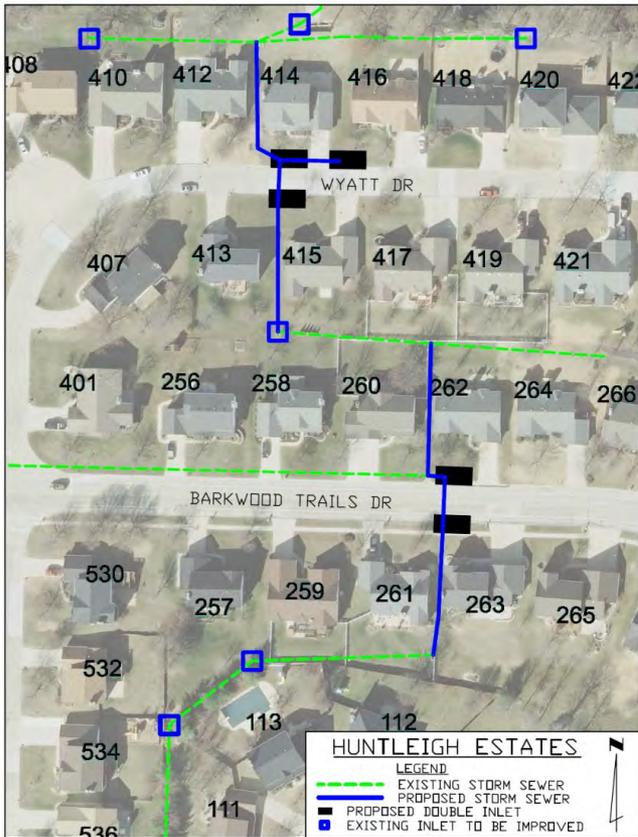
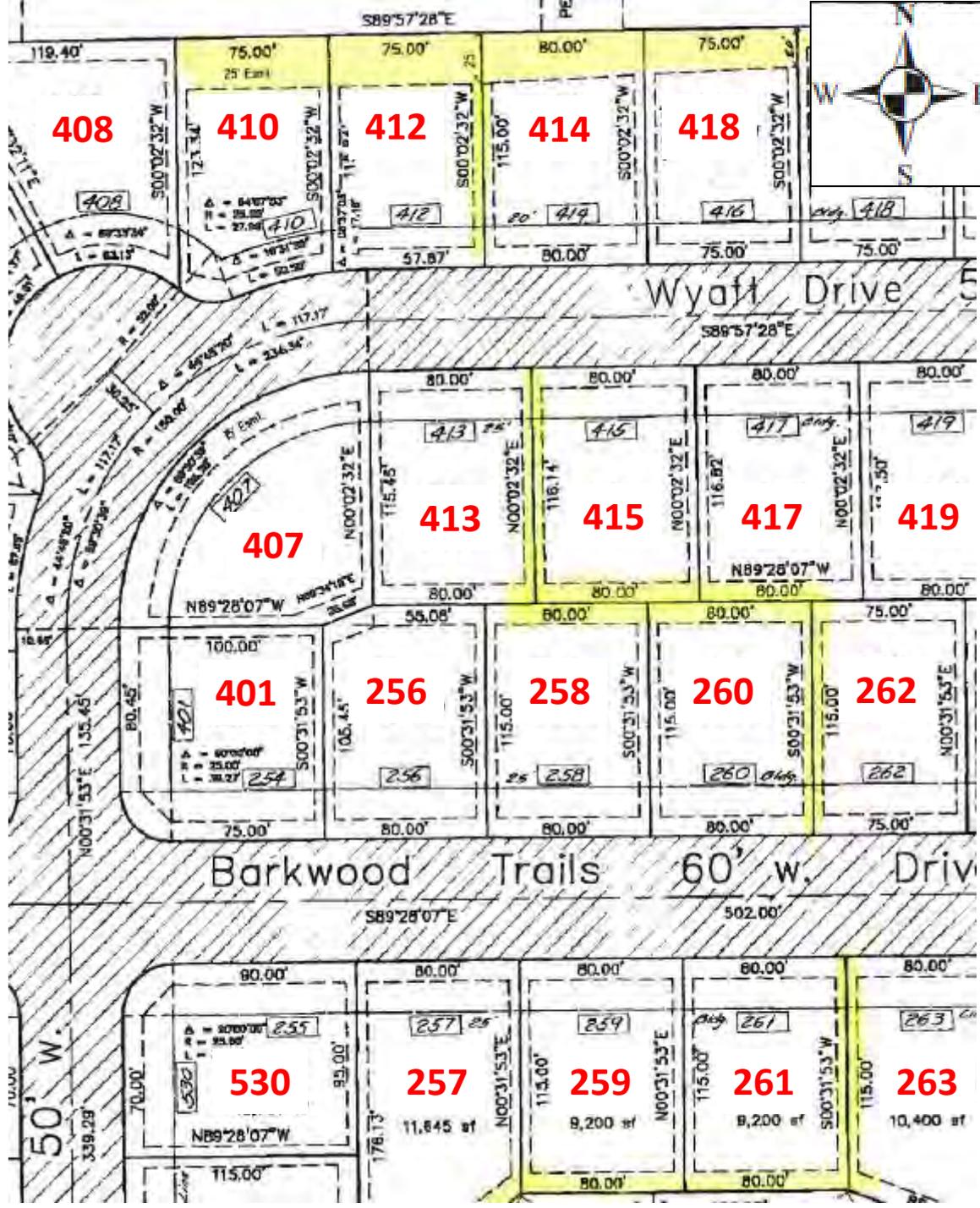
Some storm sewer structures not functioning as designed

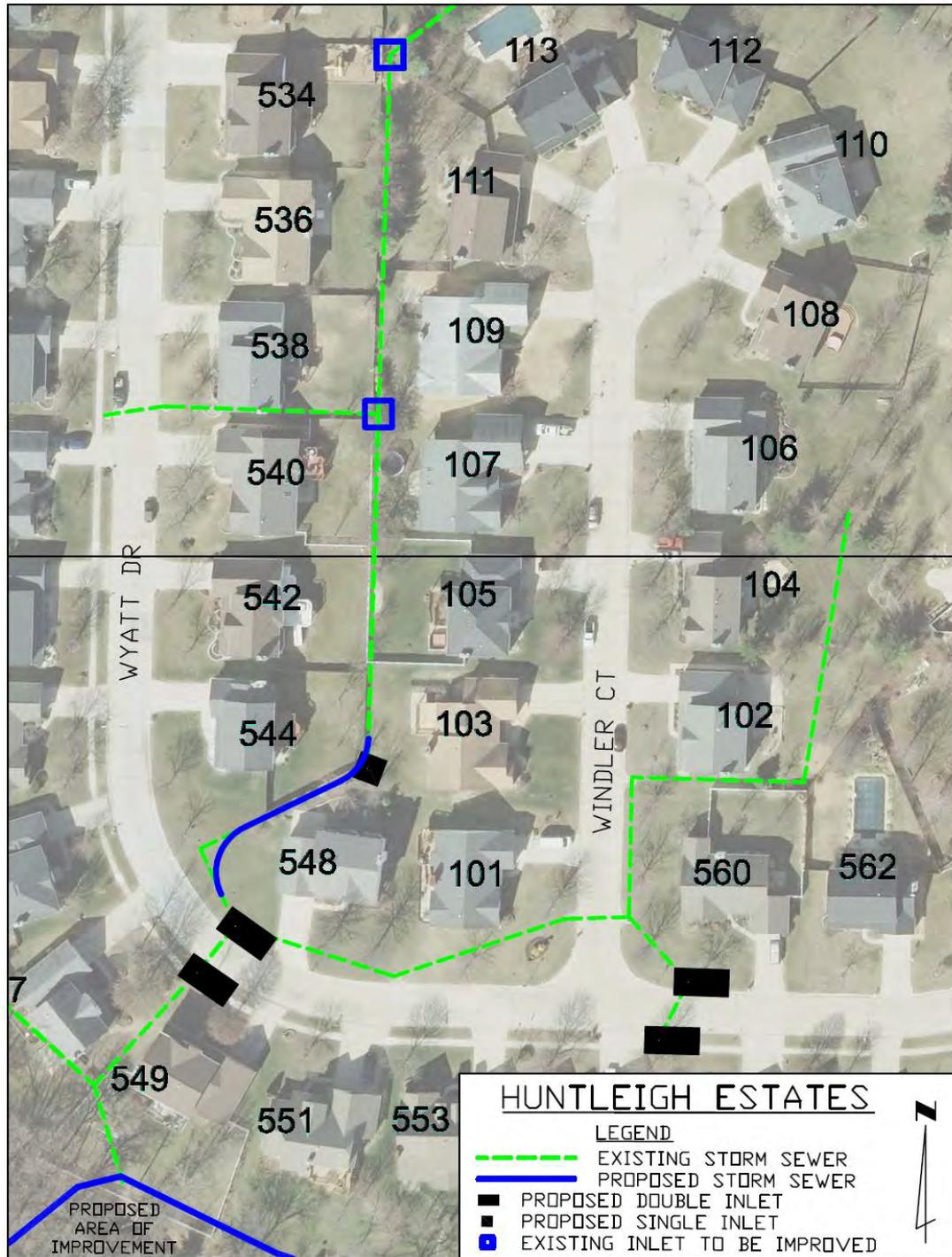


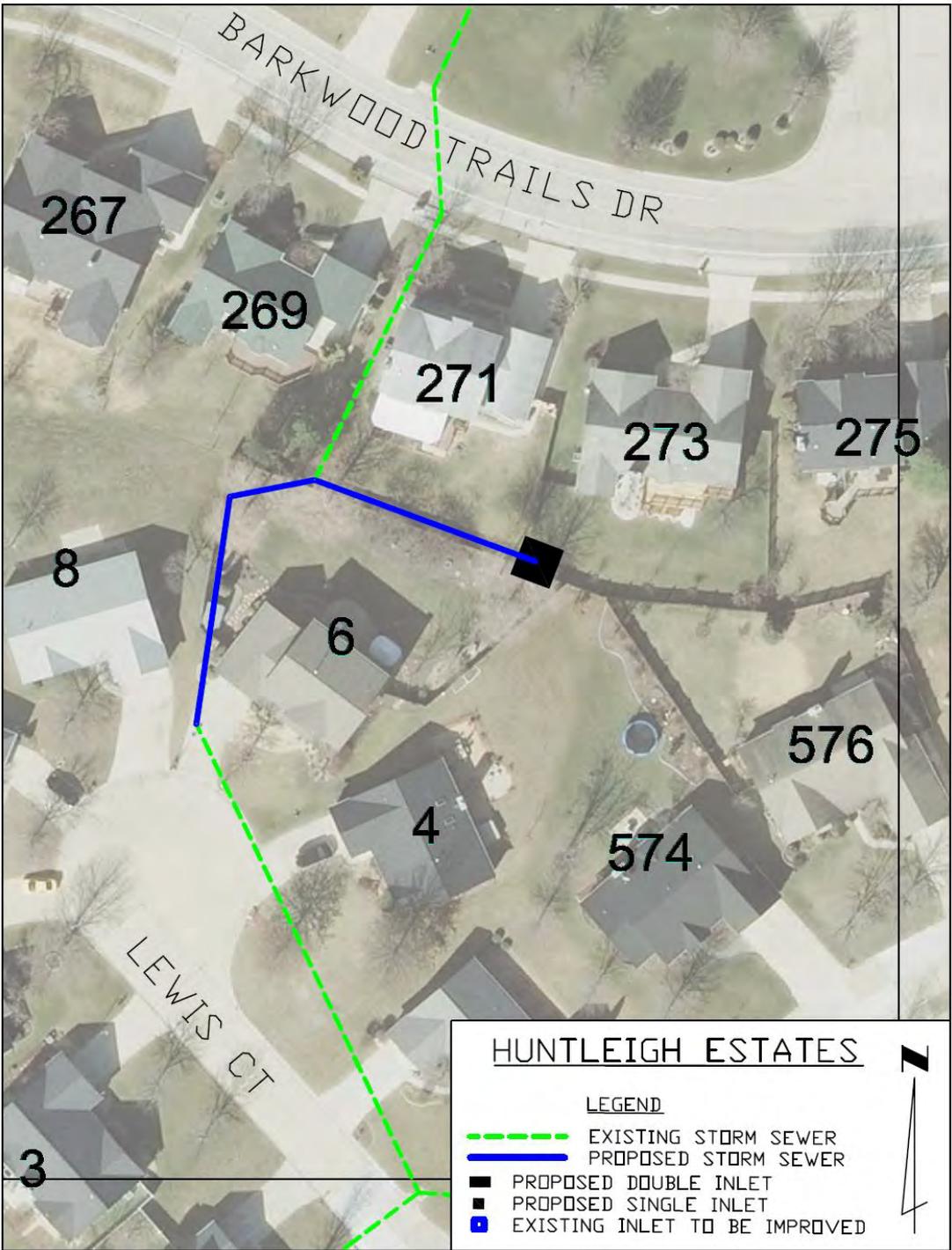
Encroachment of fences and private drain lines causing bypass
(258 Barkwood Trails Drive & 540 Wyatt Drive)

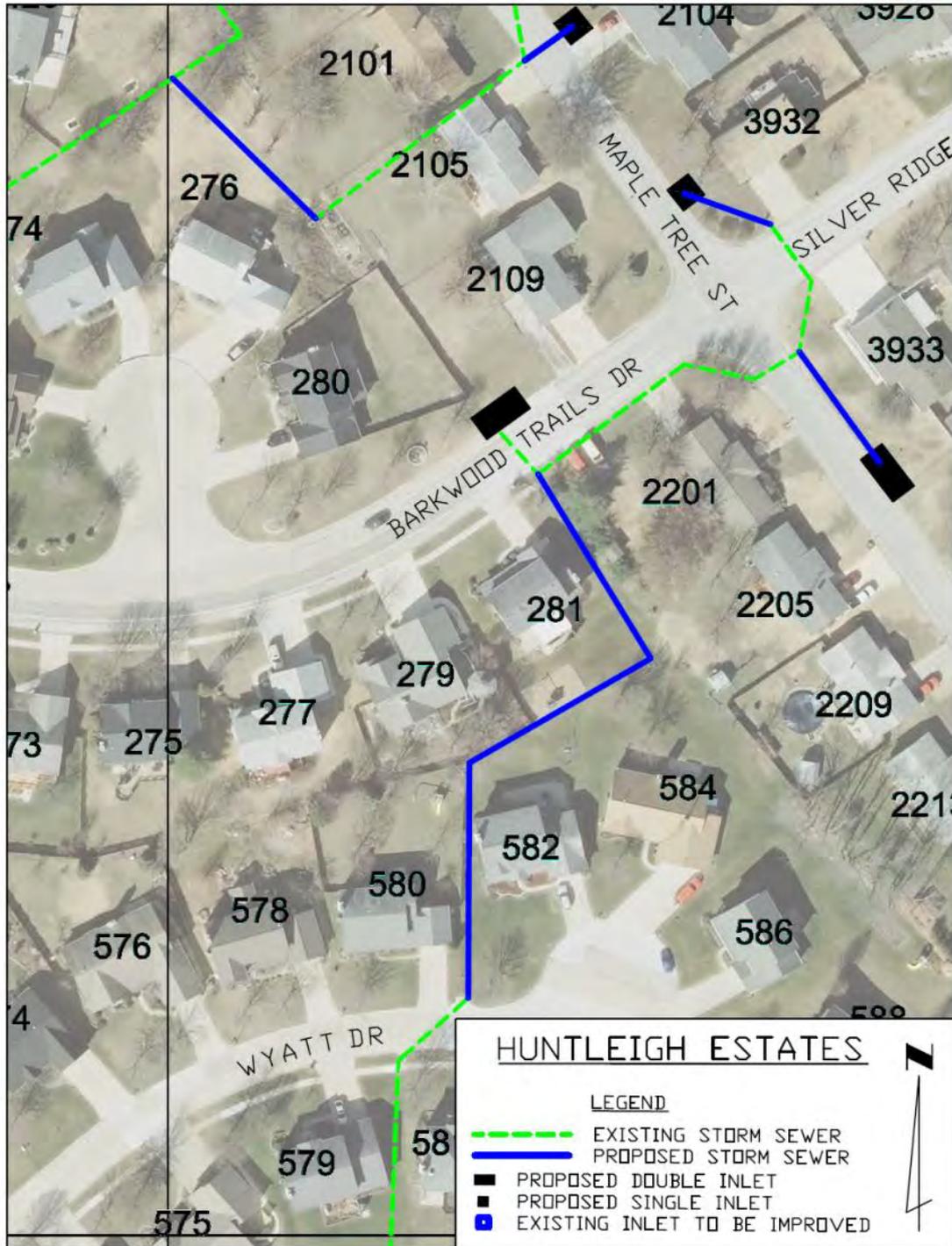
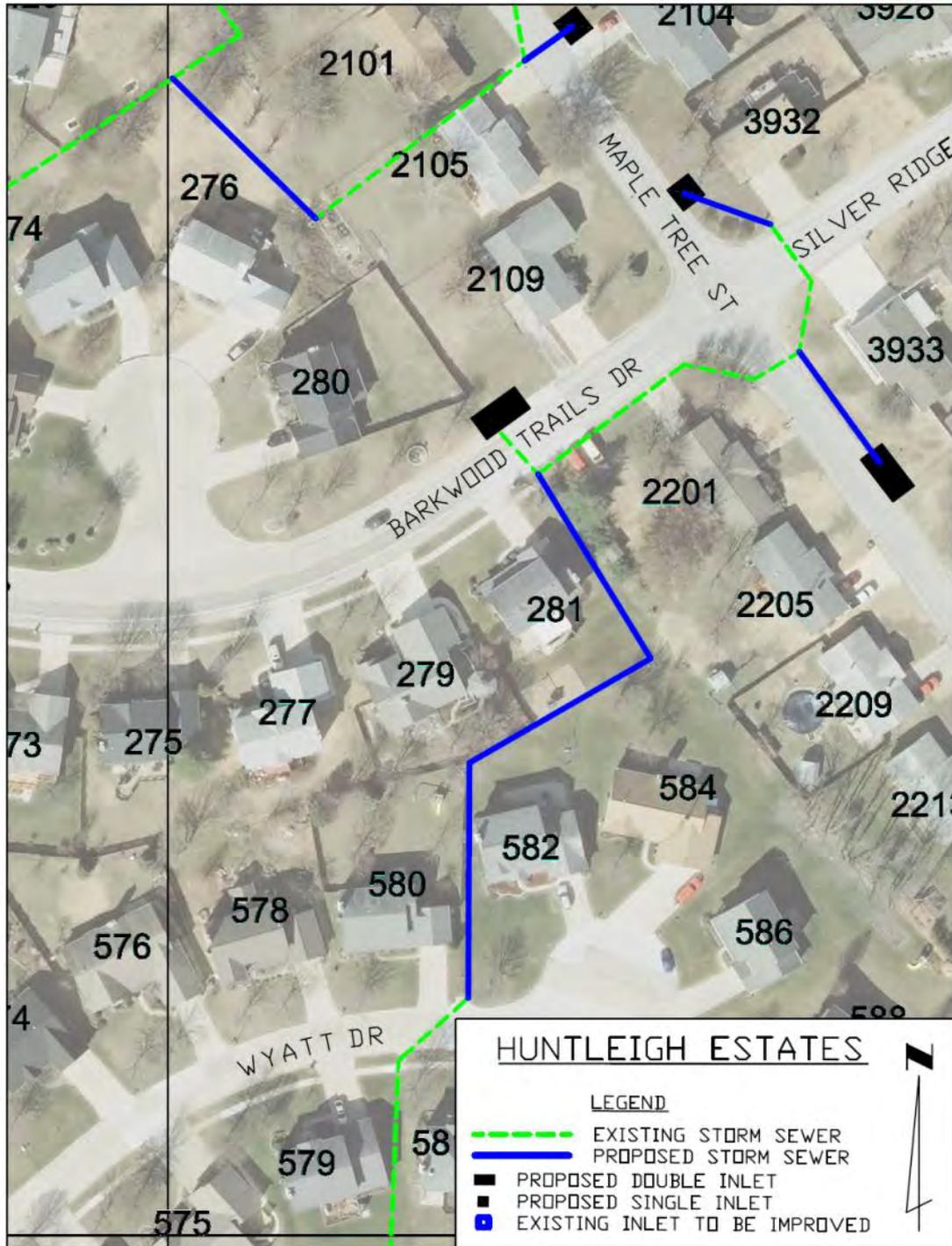


Easement & Working Room For Construction







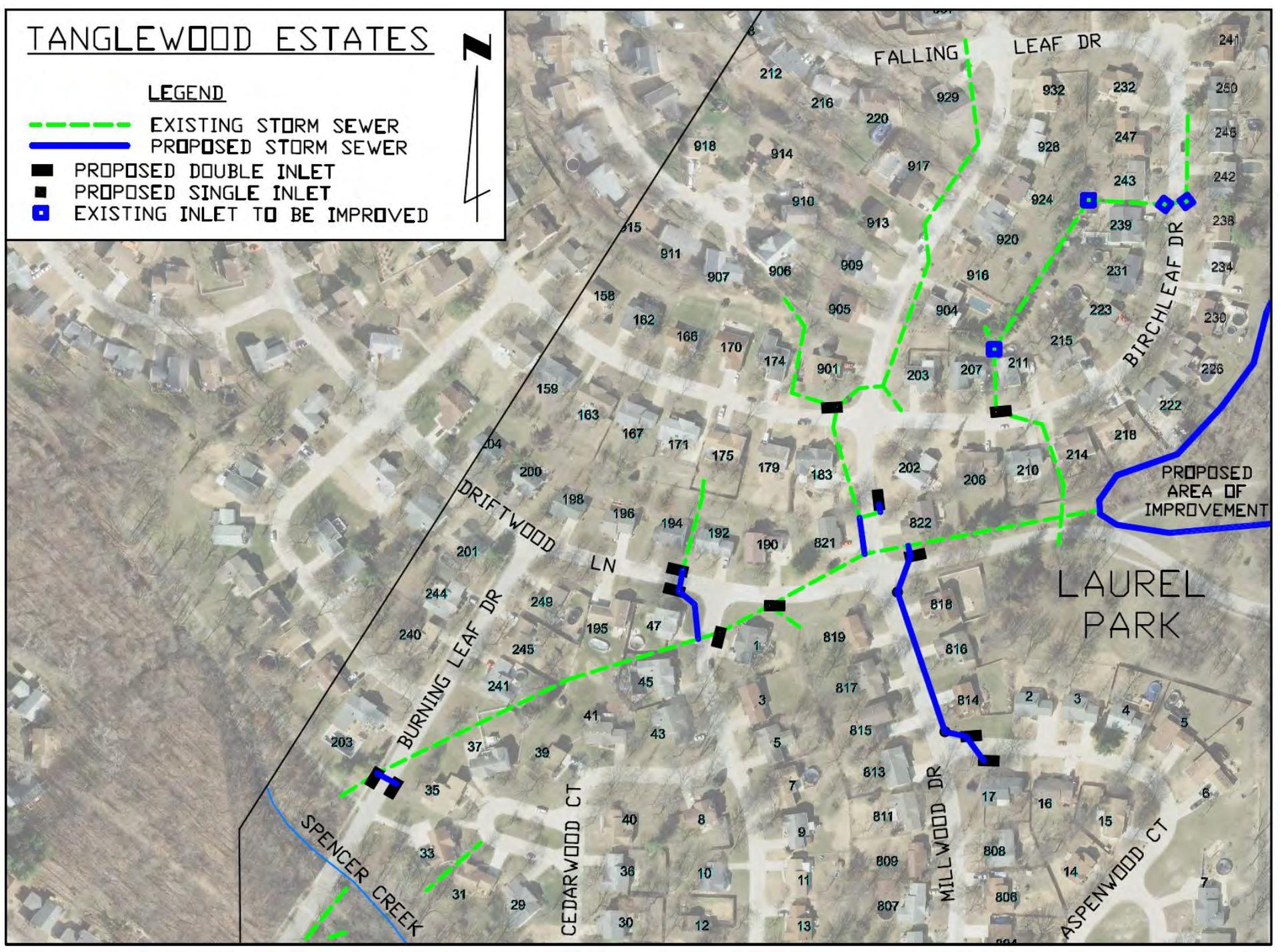


Tanglewood Estates

TANGLEWOOD ESTATES

LEGEND

- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- PROPOSED DOUBLE INLET
- PROPOSED SINGLE INLET
- EXISTING INLET TO BE IMPROVED



PROPOSED
AREA OF
IMPROVEMENT

LAUREL
PARK

Sources of Drainage Problems:

Some storm sewer structures not functioning as designed

Example of street inlet being bypassed due to improper pavement sump.



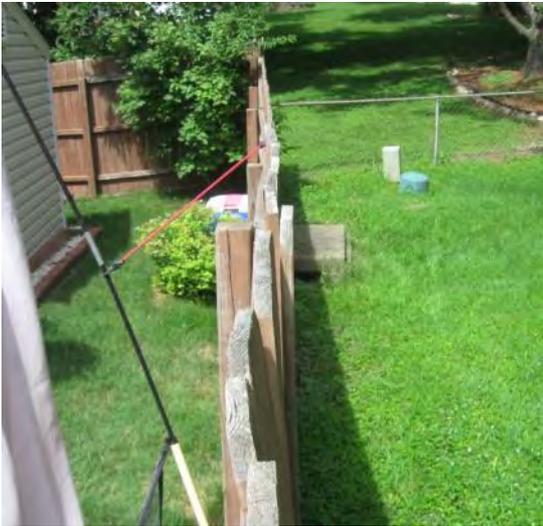
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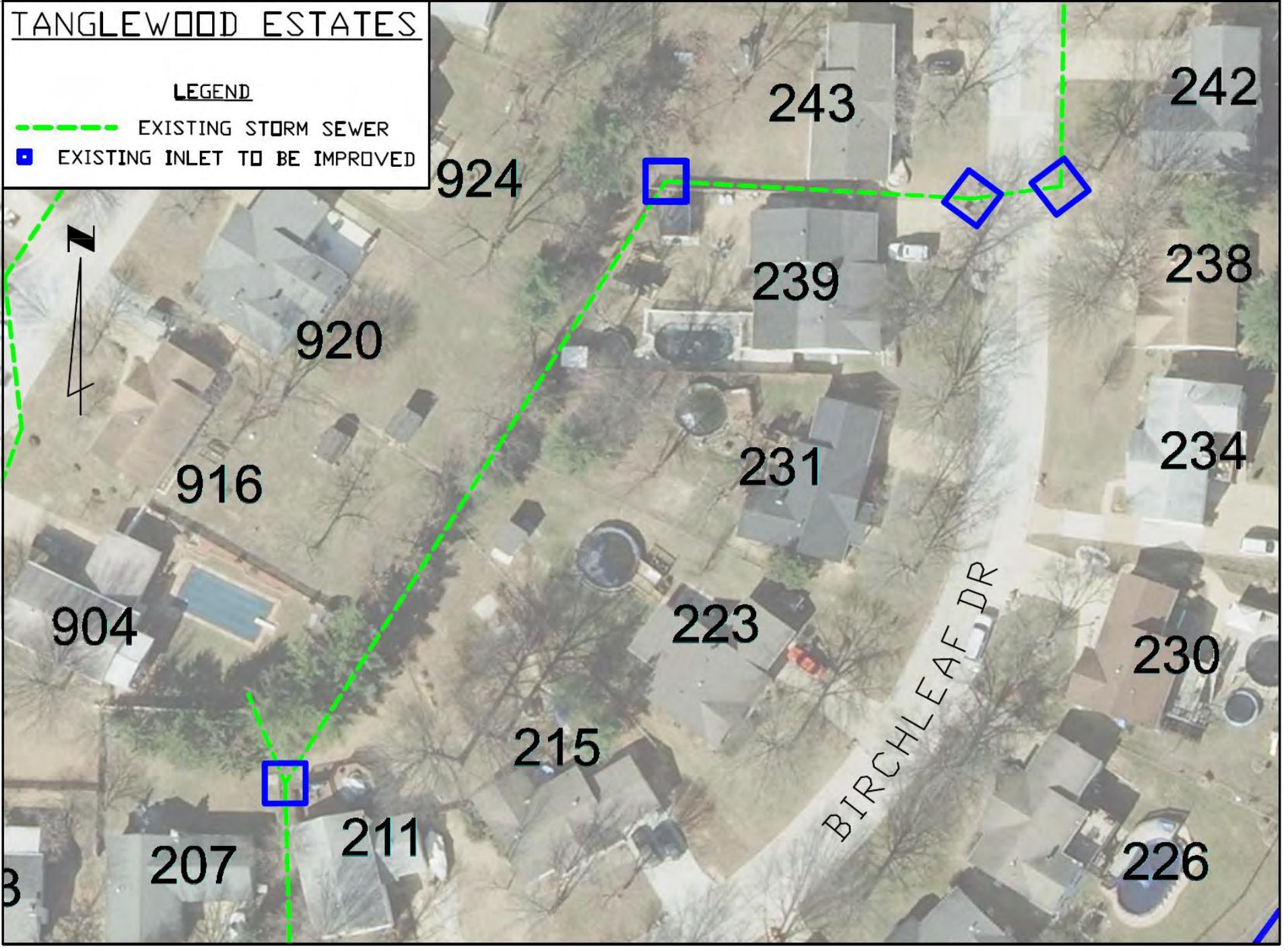
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TANGLEWOOD ESTATES

LEGEND

- EXISTING STORM SEWER
- EXISTING INLET TO BE IMPROVED



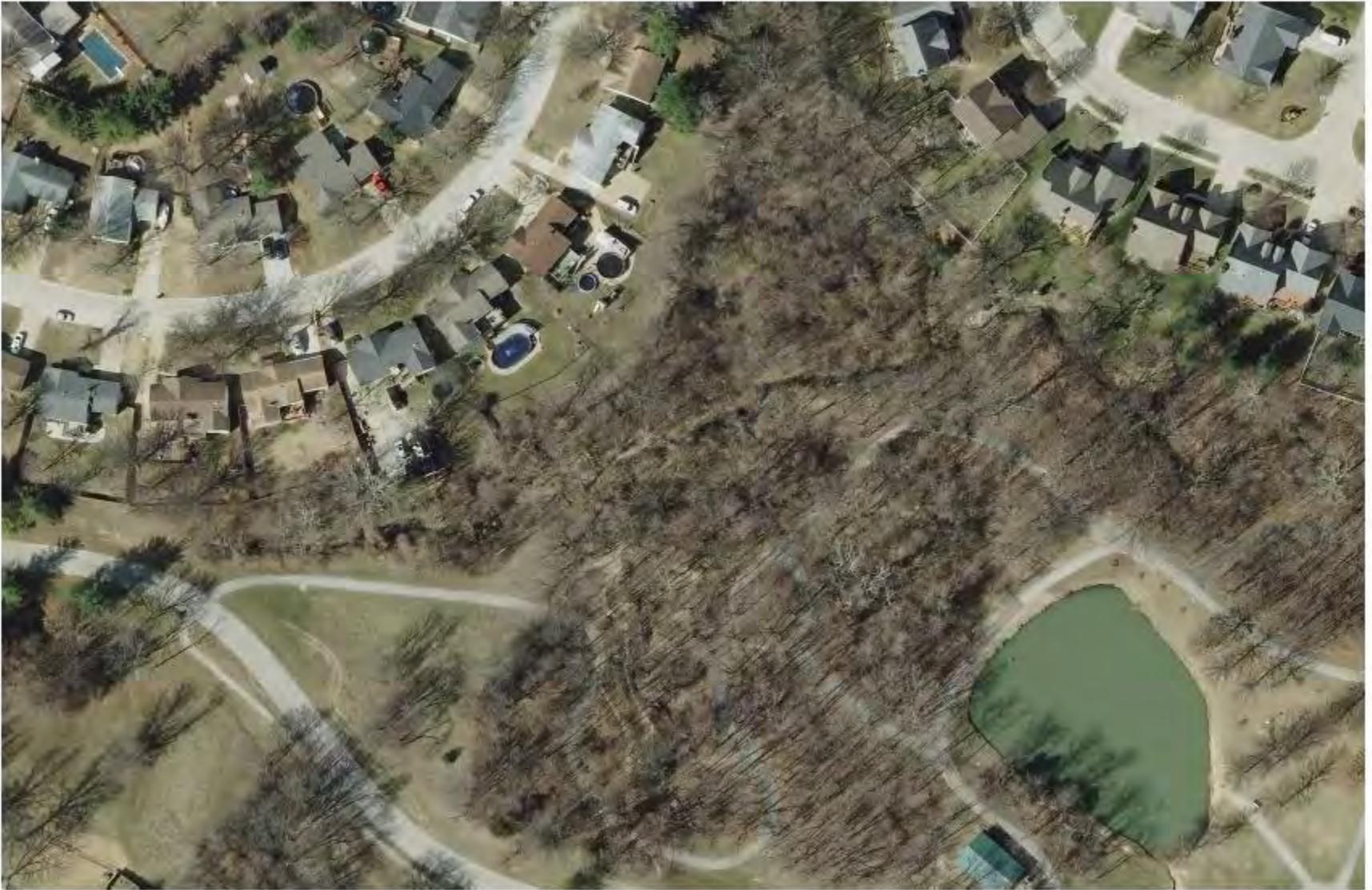
Example Installation: Pipe Sewer in Trench



Example Installation: Pipe Sewer in Trench



**BASIN DESIGN : Mid-Valley Creek
Existing Aerial Photo**





Existing storm sewer
New storm sewer





Existing storm sewer

New storm sewer

LAUREL
PARK
BASIN

BASIN DESIGN : Mid-Valley Creek



Location of New Dam



Example Installation: Dam Embankment



Example Installation: Dam Embankment



PLANT PALETTE : Perennial Slope Mix



Asclepias tuberosa
BUTTERFLY WEED



Baptisia australis
WILD BLUE INDIGO



Bouteloua curtipendula
SIDEOATS GRAMA



Liatris spicata
BLAZING STAR



Panicum virgatum
SWITCHGRASS



Schizachyrium scoparium
LITTLE BLUESTEM

CHARACTERISTICS + INTENT: Herbaceous perennial and forb mix, including grasses and sedges up to 6' in height to maximize infiltration, reduce erosion, slow flows, and provide an educational and aesthetic feature for the park that also provides native habitat.

PLANT PALETTE : Woodland Plant Mix



Aesculus parviflora
BOTTLEBRUSH BUCKEYE



Cercis canadensis
EASTERN REDBUD



Mertensia virginica
BLUEBELLS



Osmunda cinnomomea
CINNAMON FERN



Phlox divaricata
WOODLAND PHLOX



Viburnum rhytidophyllum
LEATHERLEAF VIBURNUM

CHARACTERISTICS + INTENT: Ephemeral perennial and wildflower mix along with shrub and understory tree layers that serve to provide aesthetic interest, enriched habitat and viewshed screening.