Berry Creek Wastewater Interceptor Project

December 11, 2018

Project Team

- City of Georgetown – Owner
- Walker Partners – Design Consultant
- SWCA – Environmental and Hydrogeology
- Cambrian – Geologic Assessment and Karst
- Terracon - Geotechnical

Purpose of Appearance at Commissioners Court

- Project Purpose
- Options Considered and Findings Of Field Investigations
- Project Timeline
- Parks and Wildlife Code
- Discussion and Next Steps

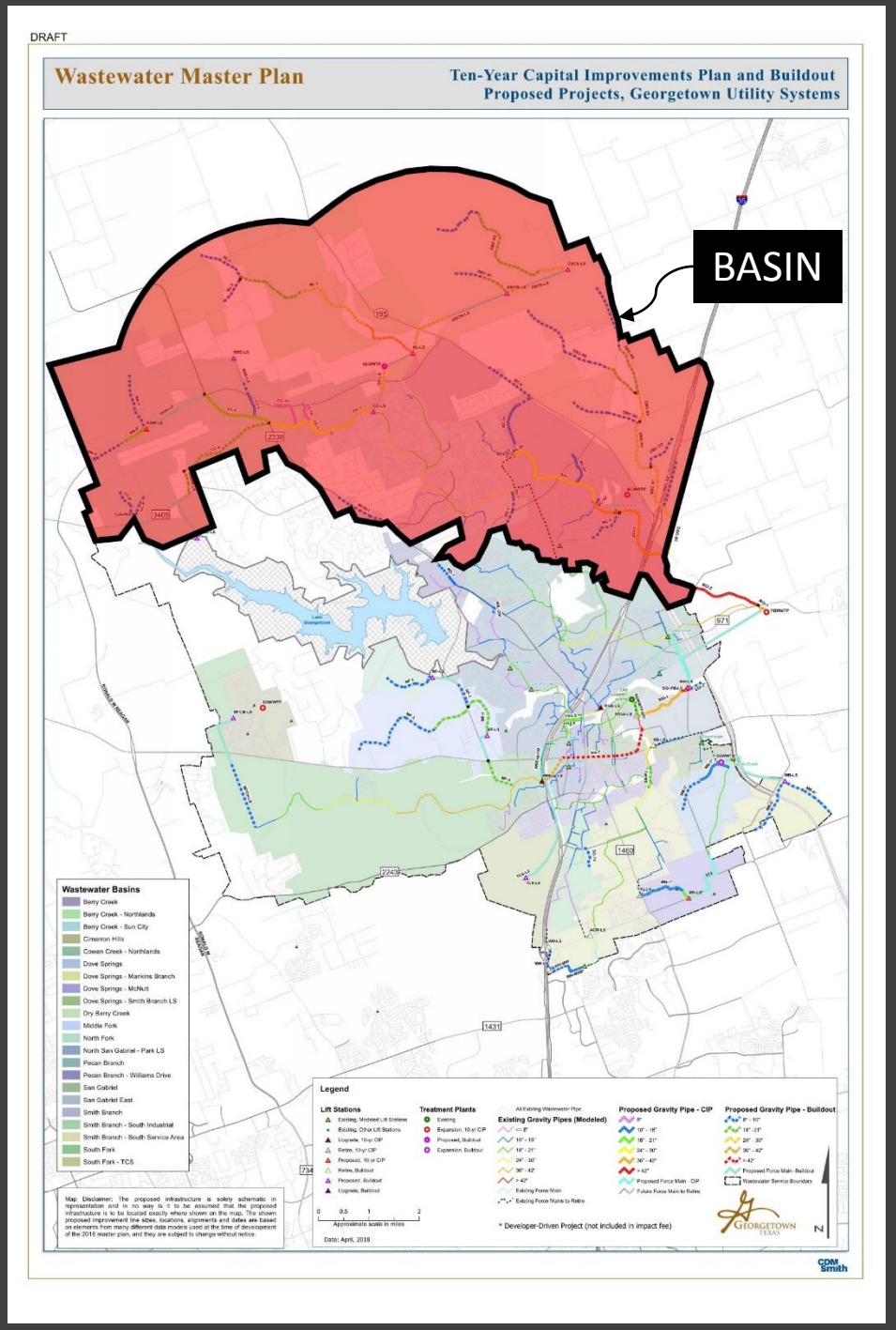
Project Purpose

Find most effective solution to provide wastewater service to a growing area

- Projected ultimate service to 25,000 LUEs in the basin for existing and future customers

Items of consideration

- Environment
- Cultural Resources
- Constructability
- Maintenance
- Operability
- Permitting
- Risk Reduction



Options Considered for Providing Wastewater Service

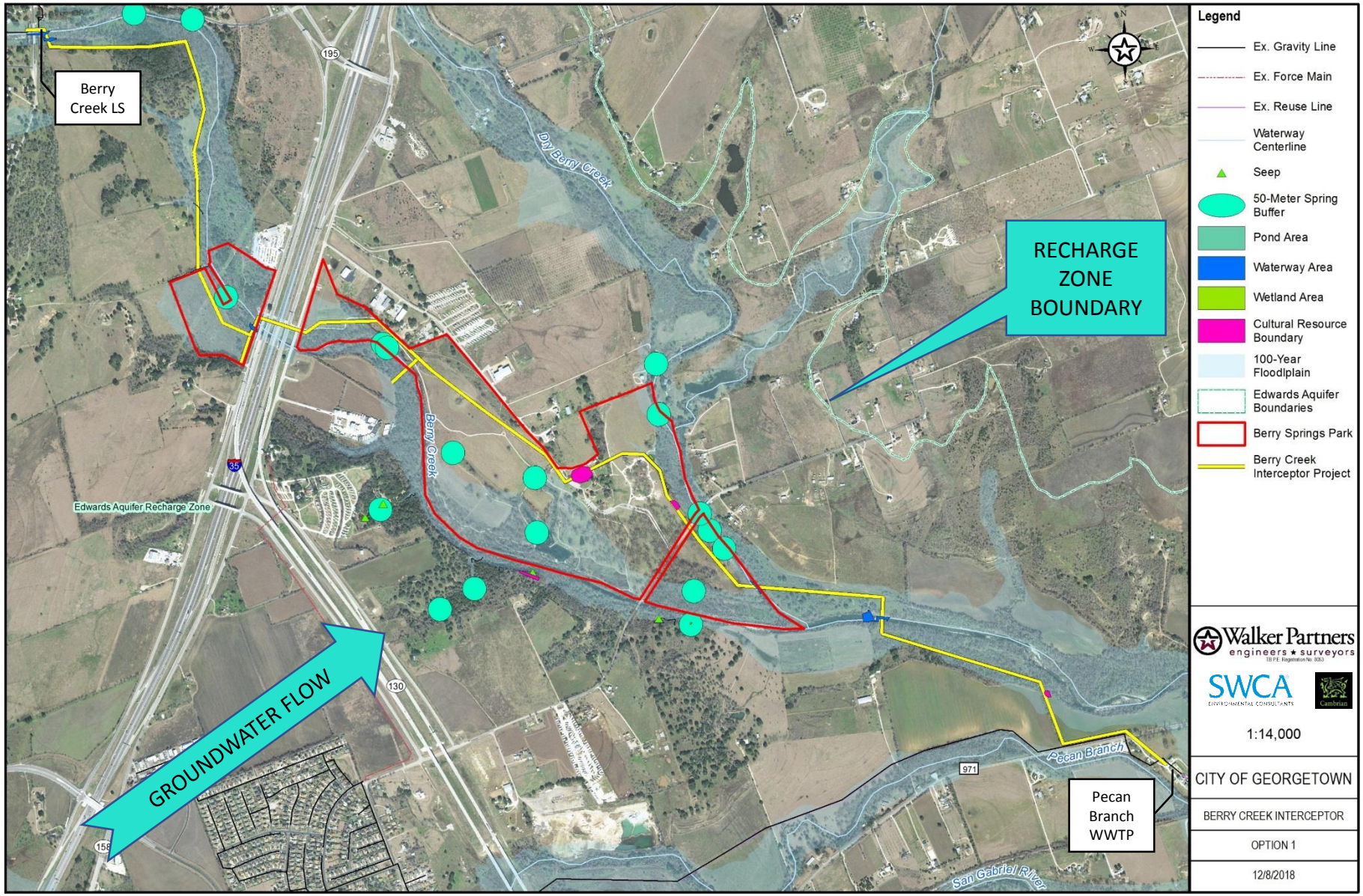
Option 1: Gravity interceptor following Berry Creek through Berry Springs Park

Option 2: Gravity interceptor following Berry Creek adjacent to Berry Springs Park

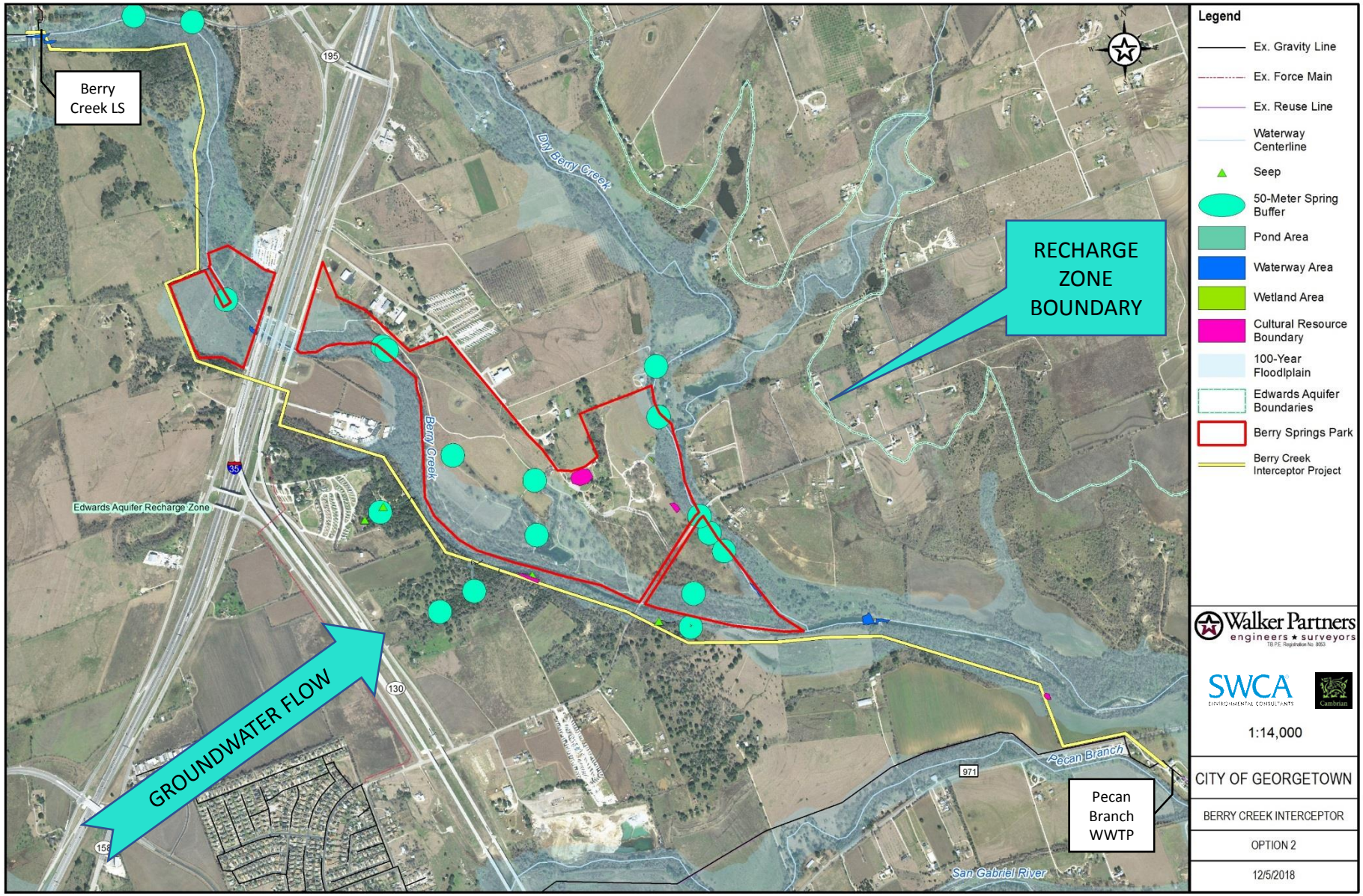
Option 3: Lift station, force main & interceptor around Berry Springs Park

Option 4: Wastewater treatment plant upstream from Berry Springs Park

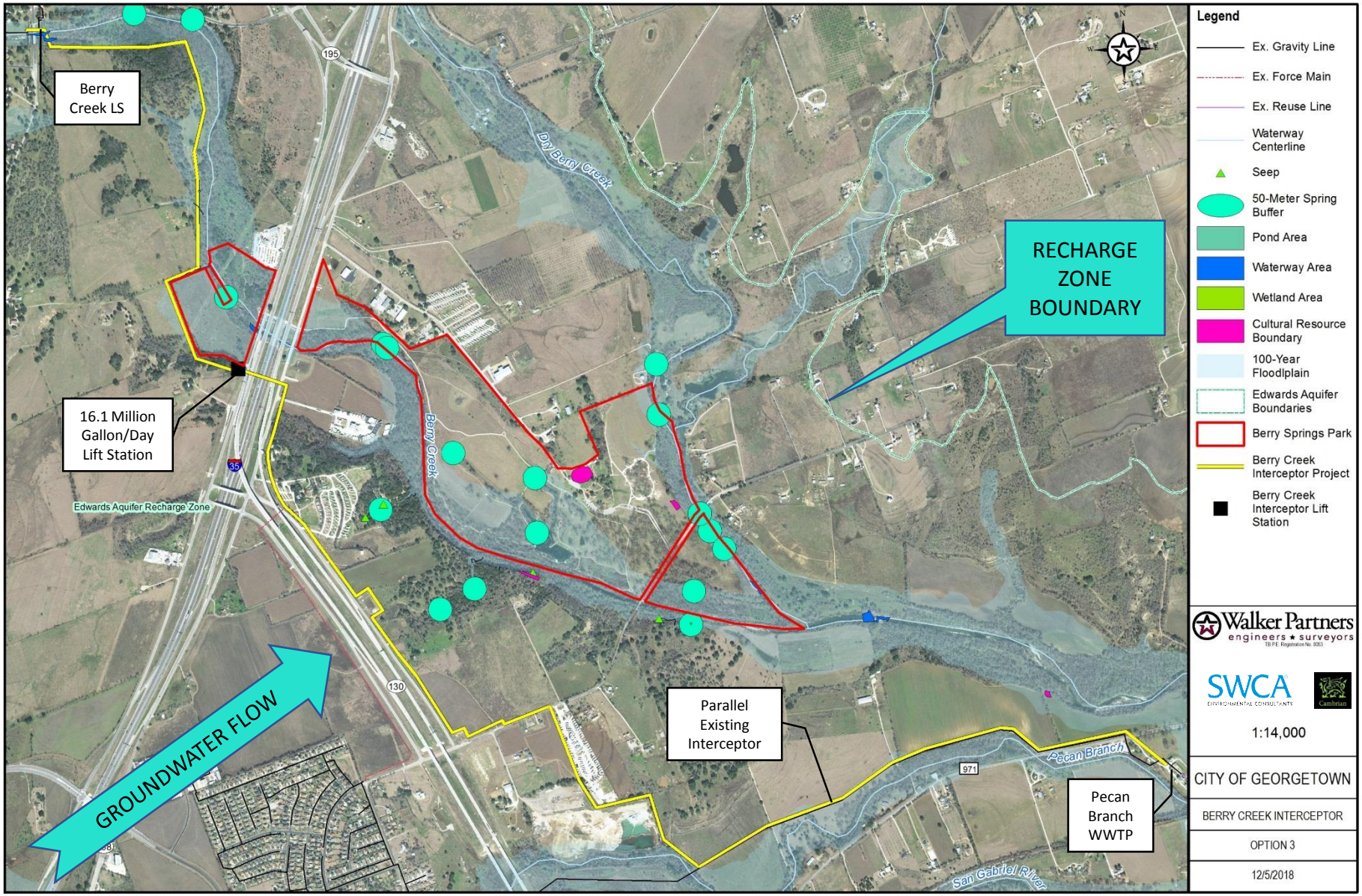
Option 1: Gravity interceptor following Berry Creek through Berry Springs Park



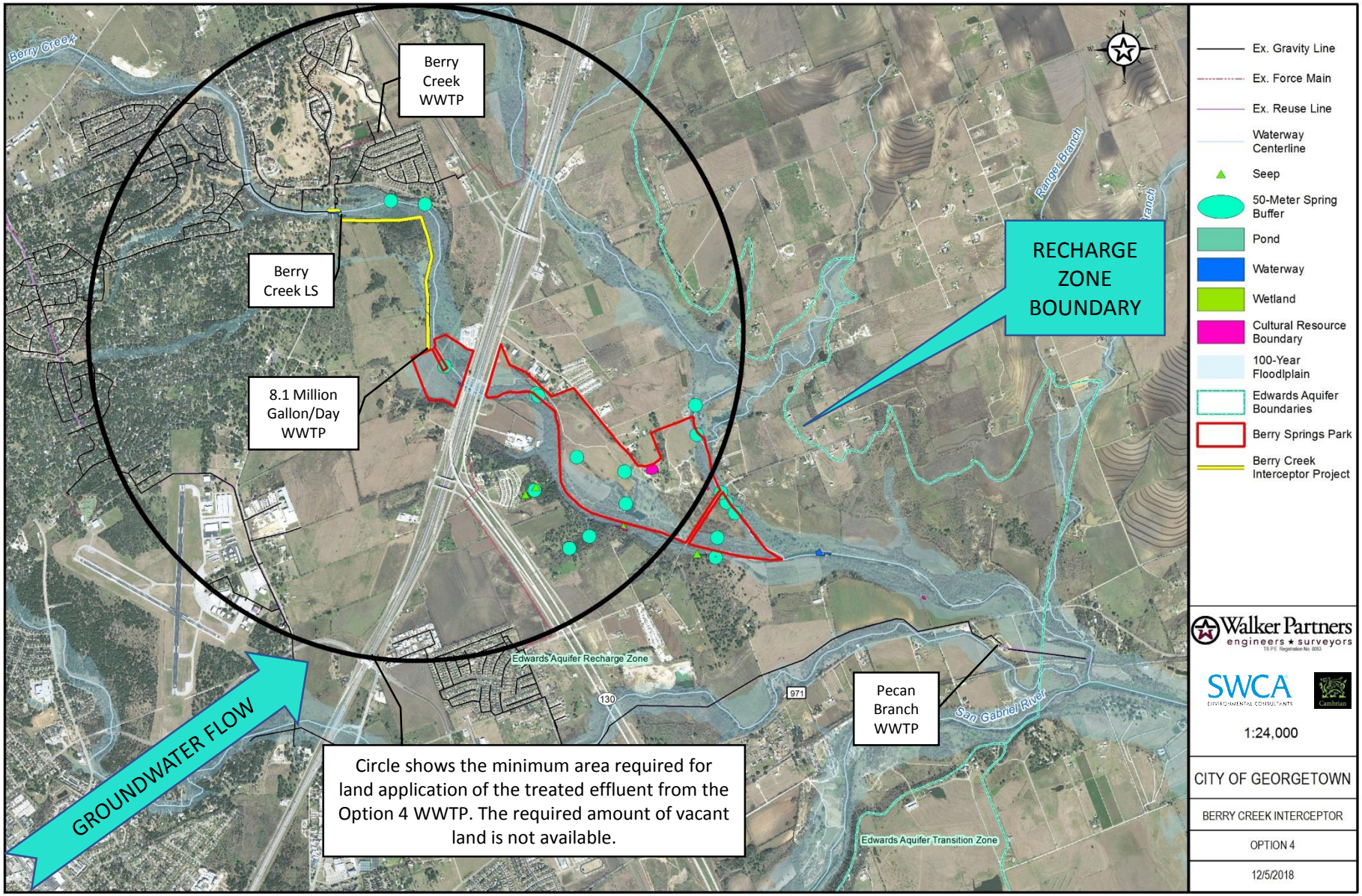
Option 2: Gravity interceptor following Berry Creek adjacent to Berry Springs Park



Option 3: Lift station, force main & interceptor around Berry Springs Park



Option 4: Wastewater treatment plant upstream from Berry Springs Park



Option Comparison

System Component Risk of Failure	Option 1	Option 2	Option 3	Option 4
Electric Power				
Pump				
Electric Motor				
Control Panel				
Supervisory Control				
Pressure Pipe				
Automatic Valve				
Operator Error				
Pipeline Collapse				
Pipeline Blockage				
Construction, Operations & Maintenance	**Option 1**	**Option 2**	**Option 3**	**Option 4**
Land Available				
Tree Removal				
Park Sewer Connections Available				
Maintenance Access				
Inspection Access				
Total Length of Construction < 10' Deep				
Total Length of Construction 10'-25' Deep				
Total Length of Construction 25'-40' Deep				
Total Length of Construction > 40' Deep				
Total Length of Tunneling				
Greatest Depth				
Total Estimated Cost				

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Legend

Highest Risk

Minor Risk

Lowest Risk

Field Investigation Resource Map

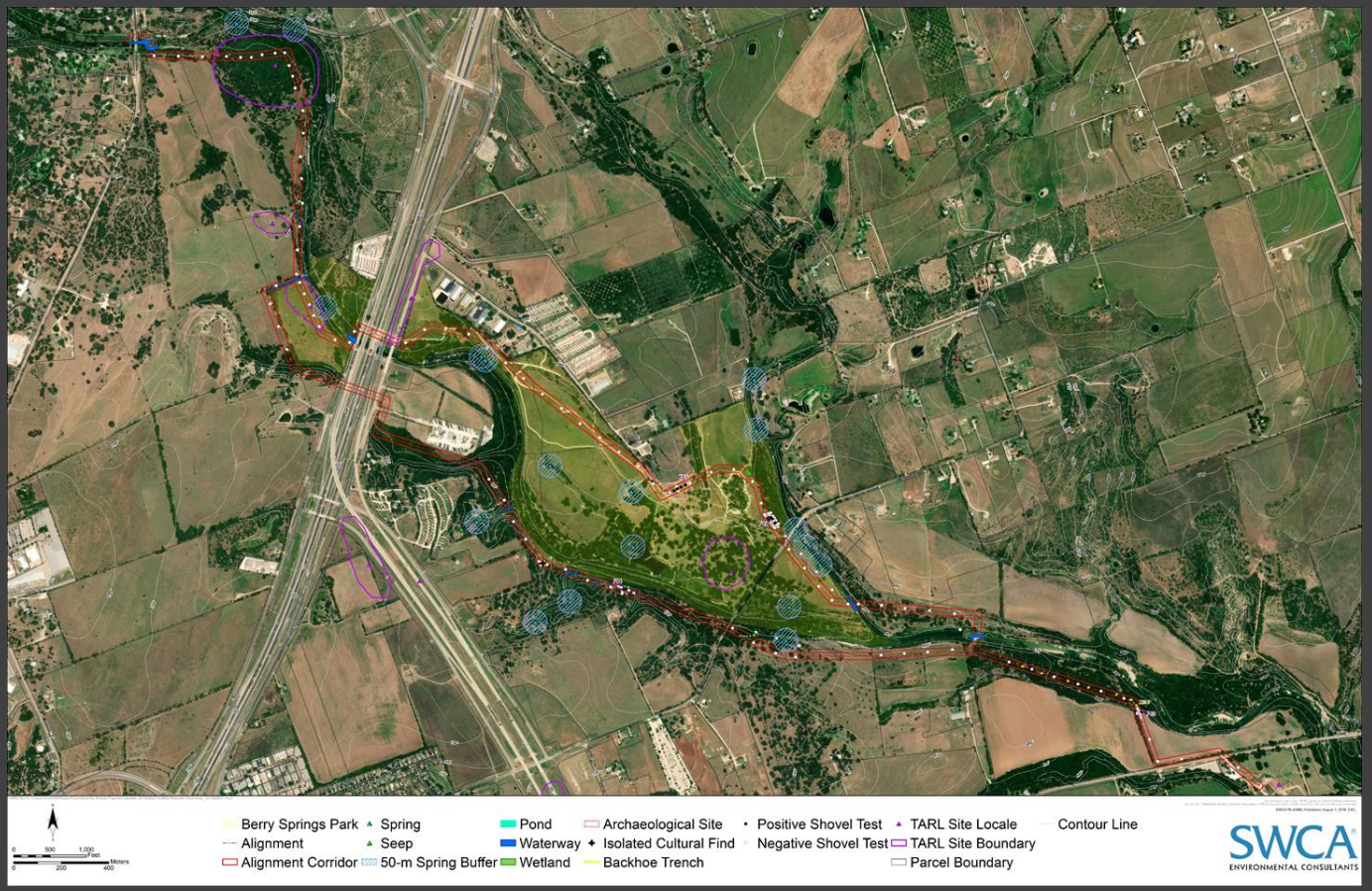
Waters of the U.S.

Wetlands

Springs

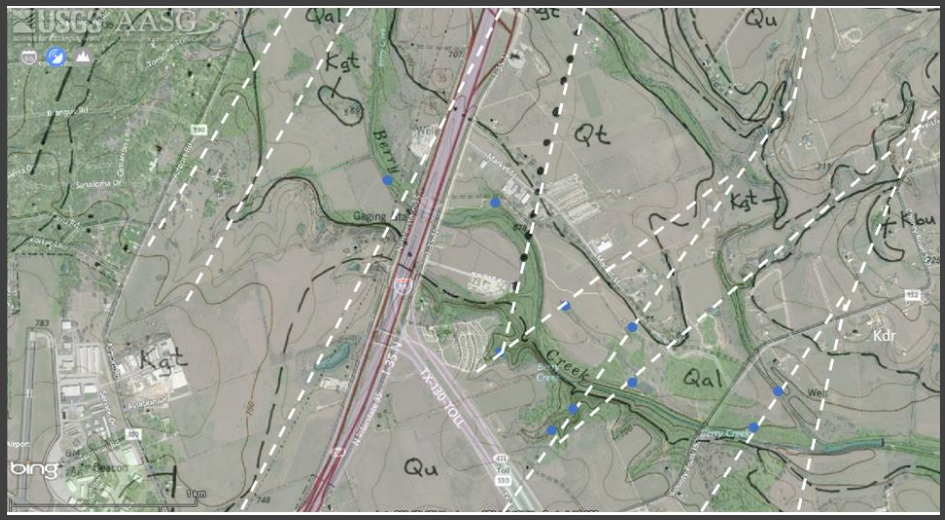
Seeps

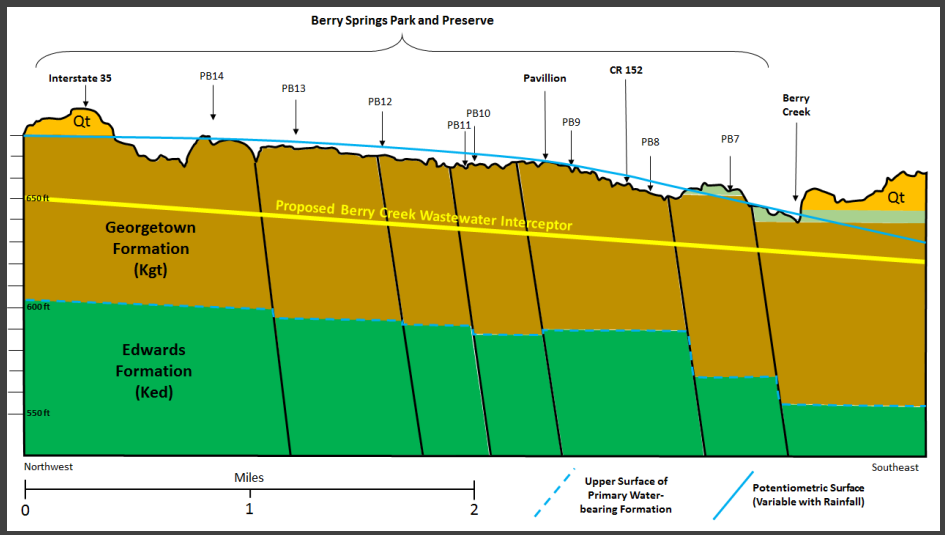
Cultural Resources



Geologic Assessment

- Review of previous geologic studies and scientific literature
- Field investigation of creeks, springs, faults, topography, etc.
- Geotechnical borings and soil sample testing
- Piezometer readings of groundwater flow through Georgetown Formation
- Edwards Aquifer recharge, flow and discharge





Project Timeline

1989 – Texas Water Development Board funded Wastewater Master Plan identifies need for Berry Creek Interceptor

October 1, 2016 – Fiscal Year 2017 funding for the City includes Berry Creek Interceptor

February 28, 2017 – Citizens to Address the Council

October 24, 2017 – Council Approval – Walker Partners MSA

October 24, 2017 – Council Approval – Terracon – GeoTechnical Engineering

October 24, 2017 – Council Approval – Walker Partners Engineering Design

November 14, 2017 – Initial Presentation to Wilco Commissioner's Court

December 1, 2017 – April 30, 2018 – Right of Entry for Field Investigations

August 27, 2018 – Meeting with Commissioner Long

September 4, 2018 – Meeting with Commissioner Cook

September 4, 2018 – Meeting with Commissioner Madsen

September 5, 2018 – Meeting with Commissioner Covey

October 4, 2018 – Open House at the Parks Administration Meeting Room

November 1, 2018 – Meeting with Judge Gattis

November 16, 2018 – Site Tour with McDaniels Family at Berry Springs Park

December 4, 2018 – Commissioners approved request for a Public Hearing to be held on December 18, 2018

Parks and Wildlife Code

TITLE 3. PARKS
CHAPTER 26. PROTECTION OF PUBLIC PARKS AND RECREATIONAL LANDS
Sec. 26.001. PROTECTED LAND; NOTICE OF TAKING.

(a) A department, agency, political subdivision, county, or municipality of this state may not approve any program or project that requires the use or taking of any ... park ... unless the department, agency, political subdivision, county, or municipality … determines that:

(1) there is no feasible and prudent alternative to the use or taking of such land; and

(2) the program or project includes all reasonable planning to minimize harm to the land … resulting from the use or taking.

(b) A finding required by Subsection (a) of this section may be made only after notice and a hearing as required by this chapter.

(c) The governing body or officer shall consider clearly enunciated local preferences, and the provisions of this chapter do not constitute a mandatory prohibition against the use of the area if the findings are made that justify the approval of a program or project.

Are there feasible and prudent alternatives to the use of the park?

Is Option 2, 3 or 4 feasible?

- Options 2 & 3 are feasible, but not prudent.
- Option 4 is not feasible because the extensive private land required for land application of treated effluent is not available.

Why is Option 2 not prudent?

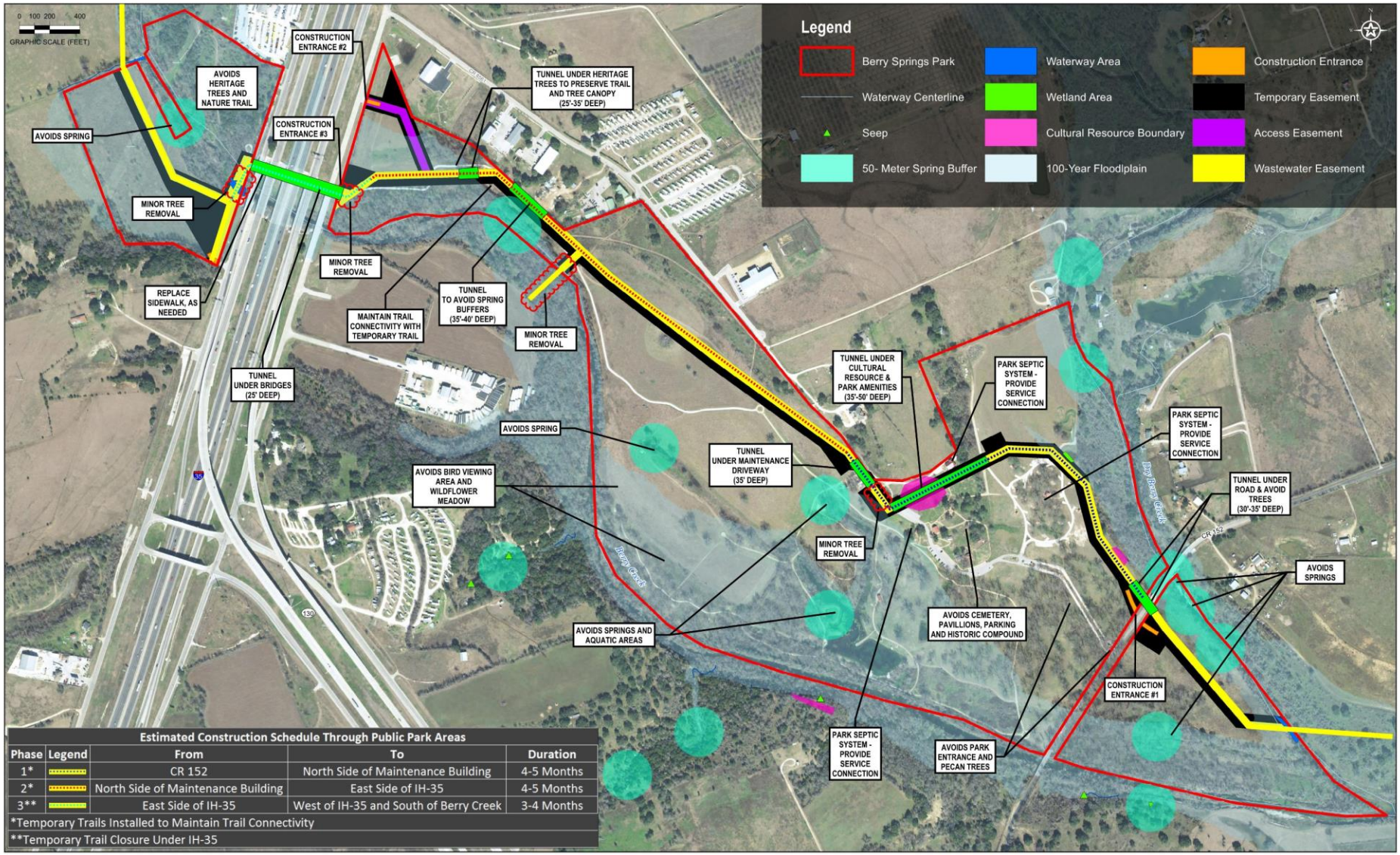
- Clear cuts and removes an additional 10-acres of trees along the creek.
- Tunneling length is almost double Option 1.
- Requires maintenance and inspection access 75-feet below ground.
- No relief for existing and future septic systems.

Why is Option 3 not prudent?

- Requires two lift stations adjacent to creek.
- Risk of mechanical system failure and a discharge of raw sewage to creek is very possible.
- Requires maintenance and inspection access 75-feet below ground.
- No relief for existing and future septic systems.

Feasible and Prudent - Recommended Route

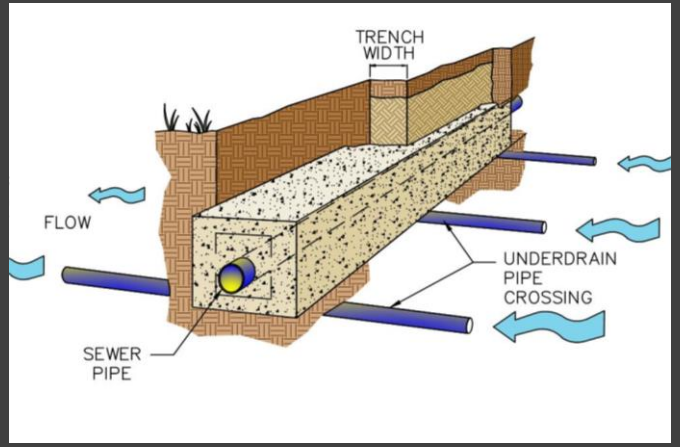
Option 1: Gravity interceptor following Berry Creek through Berry Springs Park

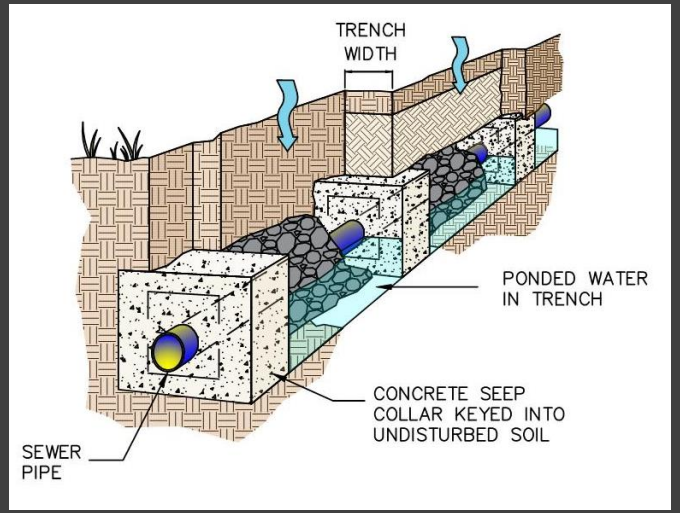


Estimated Construction Schedule Through Public Park Areas				
Phase	Legend	From	To	Duration
1*		CR 152	North Side of Maintenance Building	4-5 Months
2*		North Side of Maintenance Building	East Side of IH-35	4-5 Months
3**		East Side of IH-35	West of IH-35 and South of Berry Creek	3-4 Months
*Temporary Trails Installed to Maintain Trail Connectivity				
**Temporary Trail Closure Under IH-35				

What planning is included to protect the Edwards Aquifer and Spring Hydrology?

- Minimum 50-meter buffer from all springs to avoid direct impacts
- Construction monitoring for sensitive hydrologic features by professional geoscientists
- Implementation of Best Management Practices (BMPs) to maintain site hydrology (under drains, seep collars, etc.)
- Additional BMPs per approved TCEQ Edwards Aquifer Protection Plan
- Install pipe with leak-proof joints and water-tight manholes
- Conduct internal inspection of pipeline every 5 years





What planning is included to minimize harm to the land?

- Preserve all heritage trees and avoid potential damage
- Use silt fence to protect creeks from sediment runoff during construction
- Collaborate with park supervisor on construction schedule
- Provide multiple construction entrances away from park entrance
- Use temporary chain link fence to protect pedestrians and wildlife during construction
- Limit the length of open trenches and cover/fill trenches over night
- Provide temporary trails during construction, and restore trails and replace sidewalks after construction
- Place manhole cones and covers level with natural ground
- Restore preferred material and vegetation to disturbed areas in cooperation with County and County experts

Discussion and Next Steps

Public Input and Frequently Asked Questions

- gus.georgetown.org

Additional County Input

Commissioners' Comments

Next Step - Public Hearing

- December 18, 2018 during Commissioner's Court Meeting
- Finding from Commissioner's Court per Parks and Wildlife Code

Inputs / Comments