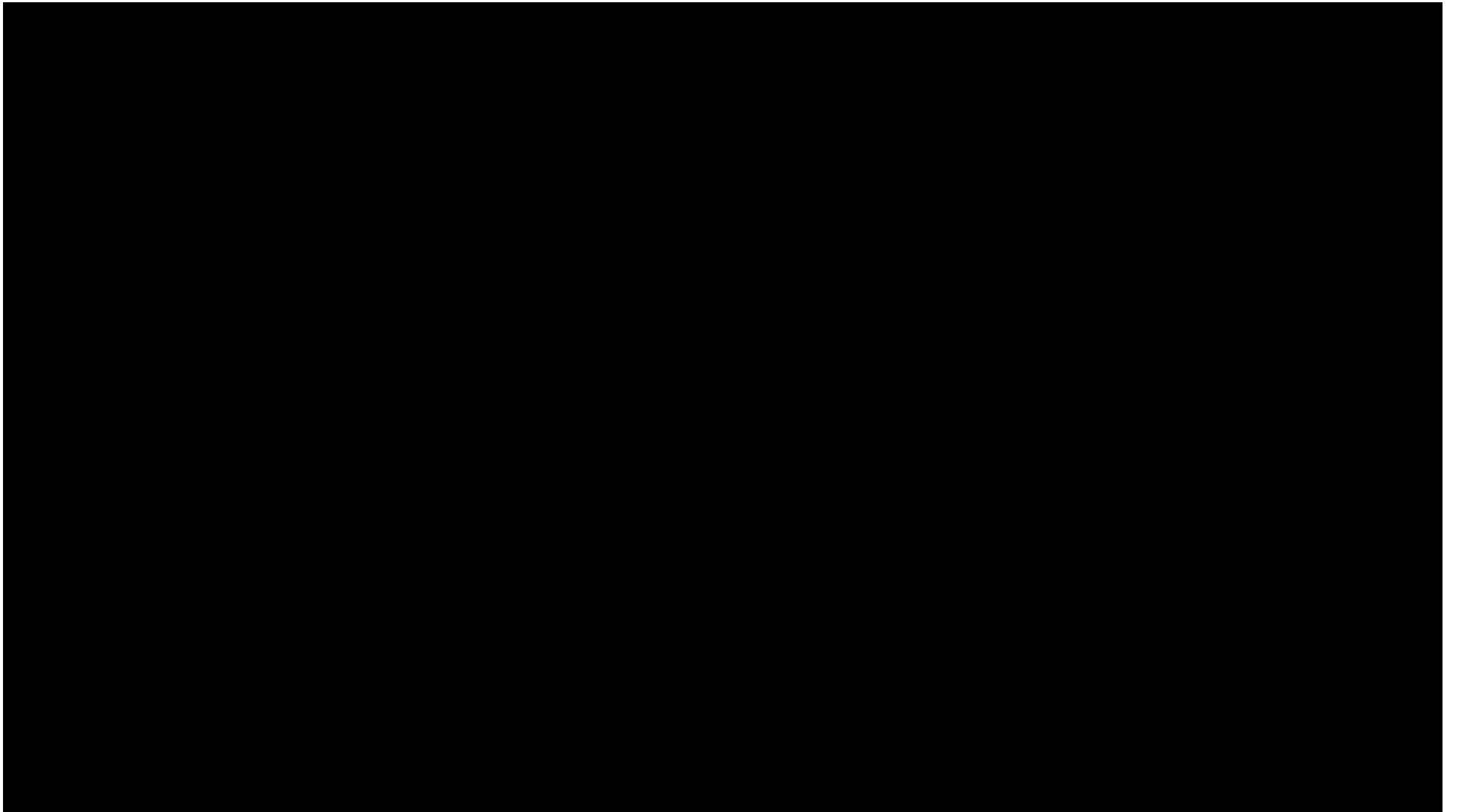




Board of Commissioner's Special Called Meeting
Thursday, October 19, 2017



Matter at hand
Sewerage Disposal for Edneyville
Elementary

We are here tonight to provide a general overview of potential project options and to hear thoughts from the community.

This is a public input meeting, part of the decision making process.

No Decisions have been made

No timeframe has been established. However the elementary school is scheduled to be occupied August 2019.

For technical questions please contact
Marcus Jones, Henderson County
Engineer

majones@hendersoncountync.org

828-694-6526

Why are we here?...

Edneyville Elementary School



On-Site Sewer Option:

- Engineers determined that the school can be served by an on-site wastewater and disposal system utilizing a drip irrigation process.
- A drip irrigation system is contained completely within the school property. It receives the wastewater from the school, passes it through a treatment process, and then discharges the effluent in designated areas on the property through a drip process.
- The estimated cost for the system is **\$705,000**. Annual operation and maintenance costs will be approximately **\$35,000**.

“Package Plant” Option:

- A package plant is a separate treatment facility on-site with an off-site discharge into a receiving stream (likely Clear Creek).
- Requires treatment plant, pump station and force main to the discharge location. Easements for the force main will be required.
- Likely the State Department of Environmental Quality (approving organization) will not look favorably on an application for a discharging system.
- The estimated cost for the system is **\$950,000** with annual operations and maintenance at **\$35,000**

Public Sewer Option, Pressurized:

- The pressurized public sewer option would locate a pump station on the school site. The pump station would receive the school's wastewater and pump it into a pressurized force main. The force main would carry wastewater to the City's sewer system near North Henderson High School.
- The force main route would be along US-64 and approximately 3.5 miles.
- The system could be maintained by the County or turned over to the City utility system. Written commitment from City to accept the wastewater flow and / or the system has been received.
- The estimated cost for the system is **\$1,500,000** with annual operating and maintenance costs of \$29,000 (EJA + \$650,000)

Public Sewer Option, Gravity:

- Gravity sewer is possible with the topography between the school site and the City sewer system near North Henderson High School.
- The line would generally run adjacent to Clear Creek and a tributary to the school site at a length of almost 5 miles.
- Will likely require a temporary onsite solution.
- The estimated cost for the system is **\$4,500,000** with annual operations and maintenance costs of \$19,000 (EJA +\$4,000,000)

Summary of Onsite Costs

- Onsite Sewer Options
 - Drip System – \$705,000 (with \$35,000 Annual Operating & Maintenance)
 - Package Plant - \$950,000 (with \$35,000 Annual Operating & Maintenance)

Public Sewer

What is a sewer district?

N.C.G.S. § 162A-86 – County Water and Sewer Districts

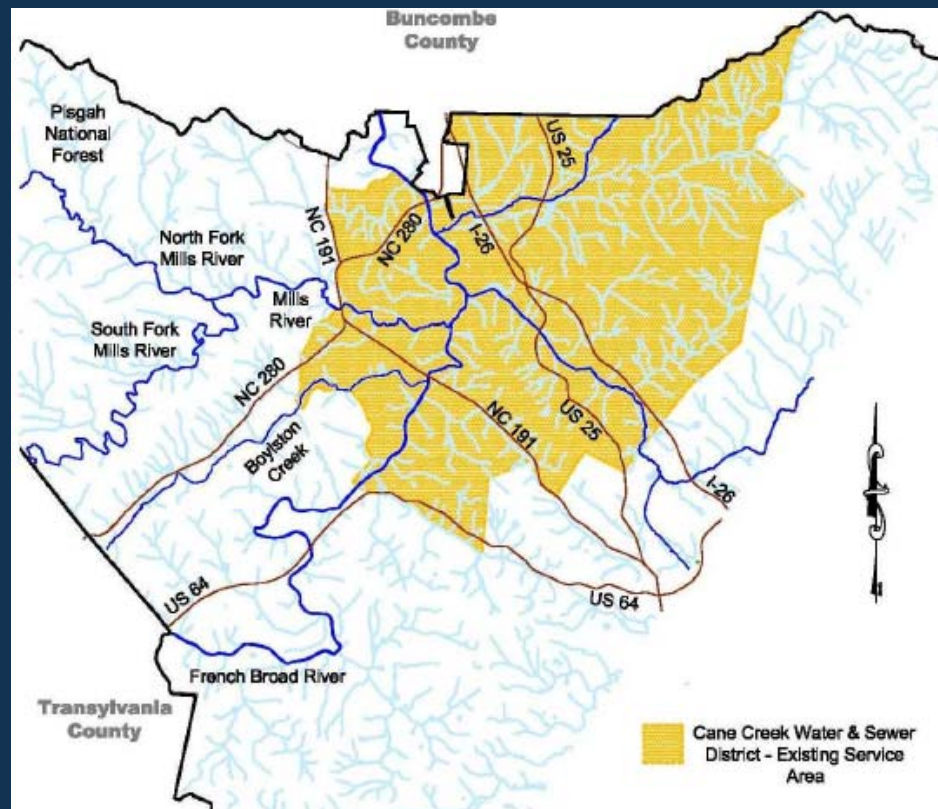
- Governed directly by the Board of Commissioners
- Sets out a portion of the county, defined by geographical boundaries, to be served

What are the powers of a sewer district?

- County water and sewer district is a separate legal entity from the County, with finance and condemnation power.
- Can levy taxes and assessments for “constructing, reconstructing, extending or otherwise building or improving sewage disposal systems”.
- Can levy “system development fees” on “new development” (subdivision, construction, or change in use of land).
- Can require “tap fees”, in addition to service charges, to repay construction costs.

What is the precedent for a sewer district?

Cane Creek Sewer District, established in 1981



FAQ

- Who has the authority to establish a sewer district?
 - Henderson County Board of Commissioners by state law
- Who is included in the district? What is the size?
 - Decided by Board of Commissioners
- How does the district pay for sewer lines?
 - Borrowing done by the sewer district

FAQ

- Who pays for the district loans?
 - The users of the system
- How?
 - Taxes, Special revenue fees, Tap fees, Bonds (borrowing)
- Will this affect the value of my property?
 - Generally, land with access to utilities has more market value than without

How can this affect growth?

- Generally, more people will be able to live in an area that is served by public utilities.
- Provision of sewer service will generally accelerate the potential for development
- Increases the likelihood of commercial and industrial development

How can this affect growth?

With current zoning up to 10,766 multifamily residential units could be developed if the gravity sewer option to Edneyville Elementary School is built.

How does sewer fit in with the small area plan?

- Edneyville small area plan identified the need for future sewer service to the area
- The plan also identified the need to preserve existing farmland
- The specific route of the sewer line generally fits what was discussed in the community plan

Why is this an issue now?

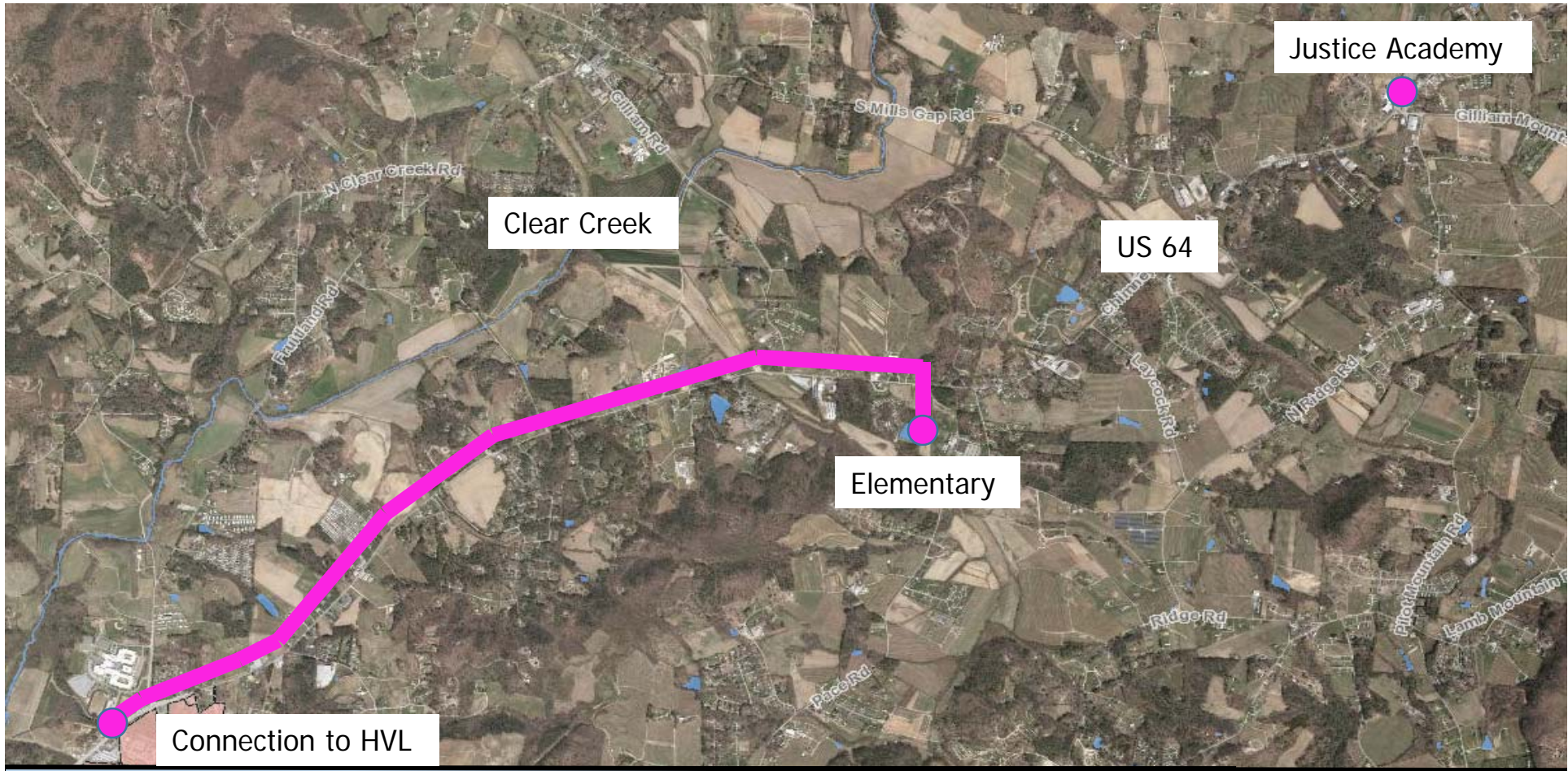
- Edneyville Elementary
 - Building to start March 2018
 - School to be opened August 2019

Summary of Costs

- Onsite Sewer Options
 - Drip System – \$705,000 (with \$35,000 Annual Operating & Maintenance)
 - Package Plant - \$950,000 (with \$35,000 Annual Operating & Maintenance)
- Offsite Sewer Options
 - Pressure System from Proposed Elementary to HVL: \$1,500,000
 - Pressure System from proposed Elementary line to Justice Academy: \$650,000
 - Pressure System from HVL system to Justice Academy: \$2,150,000
 - Gravity from HVL system to Edneyville Elementary: \$4,500,000
 - Gravity from proposed Elementary line to Justice Academy: \$4,000,000
 - Gravity from HVL system to Justice Academy: \$8,500,000
 - Gravity from HVL system to Elementary and Pressure to Justice Academy: \$5,150,000

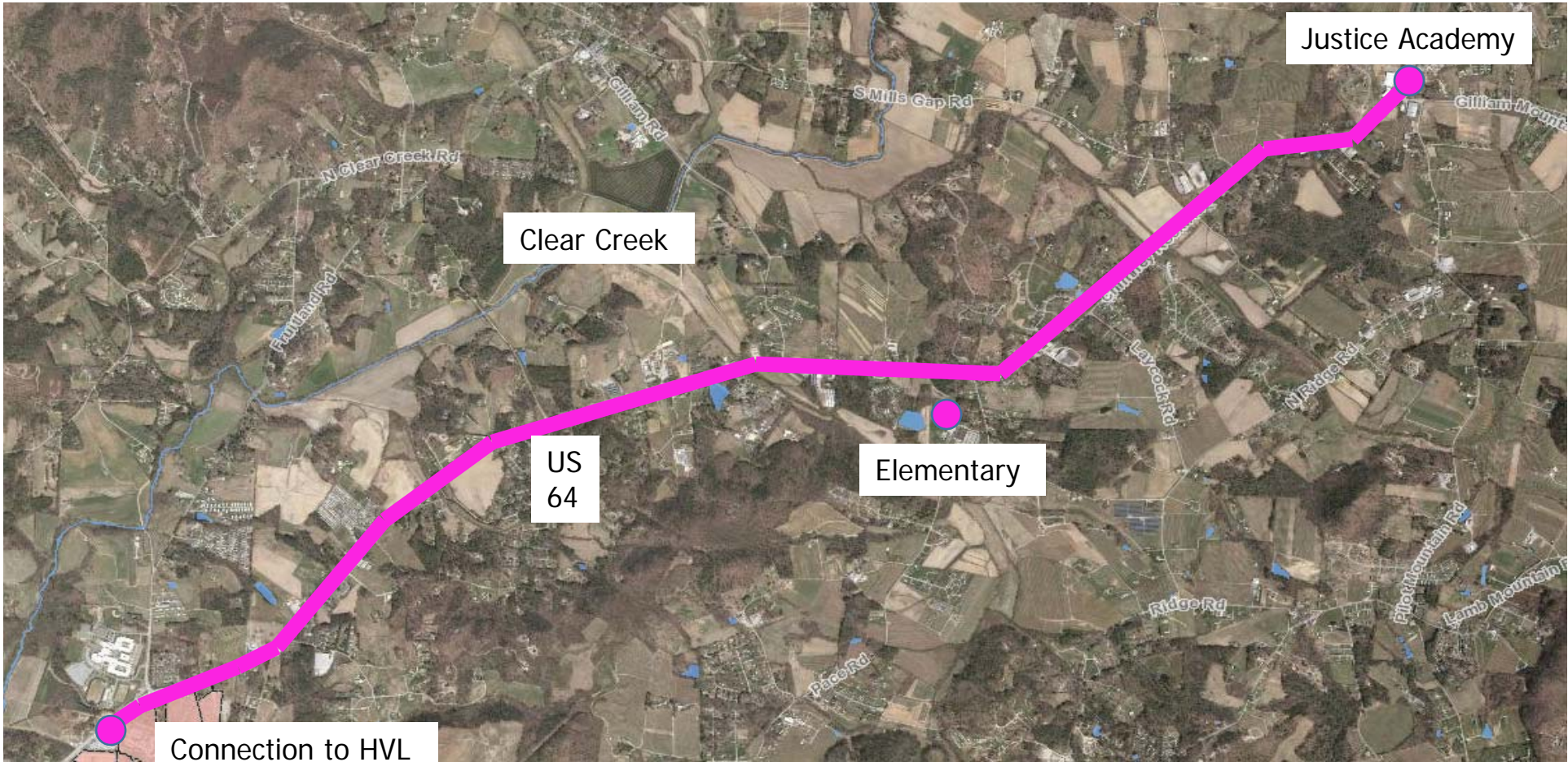
The Sewer line has not been designed:

- Exact location has not been determined
- The following maps are based on the premise that gravity lines follow creeks; pressure lines follow the road
- Should design go forward, the specific issues will have to be addressed and could perhaps lead to changes



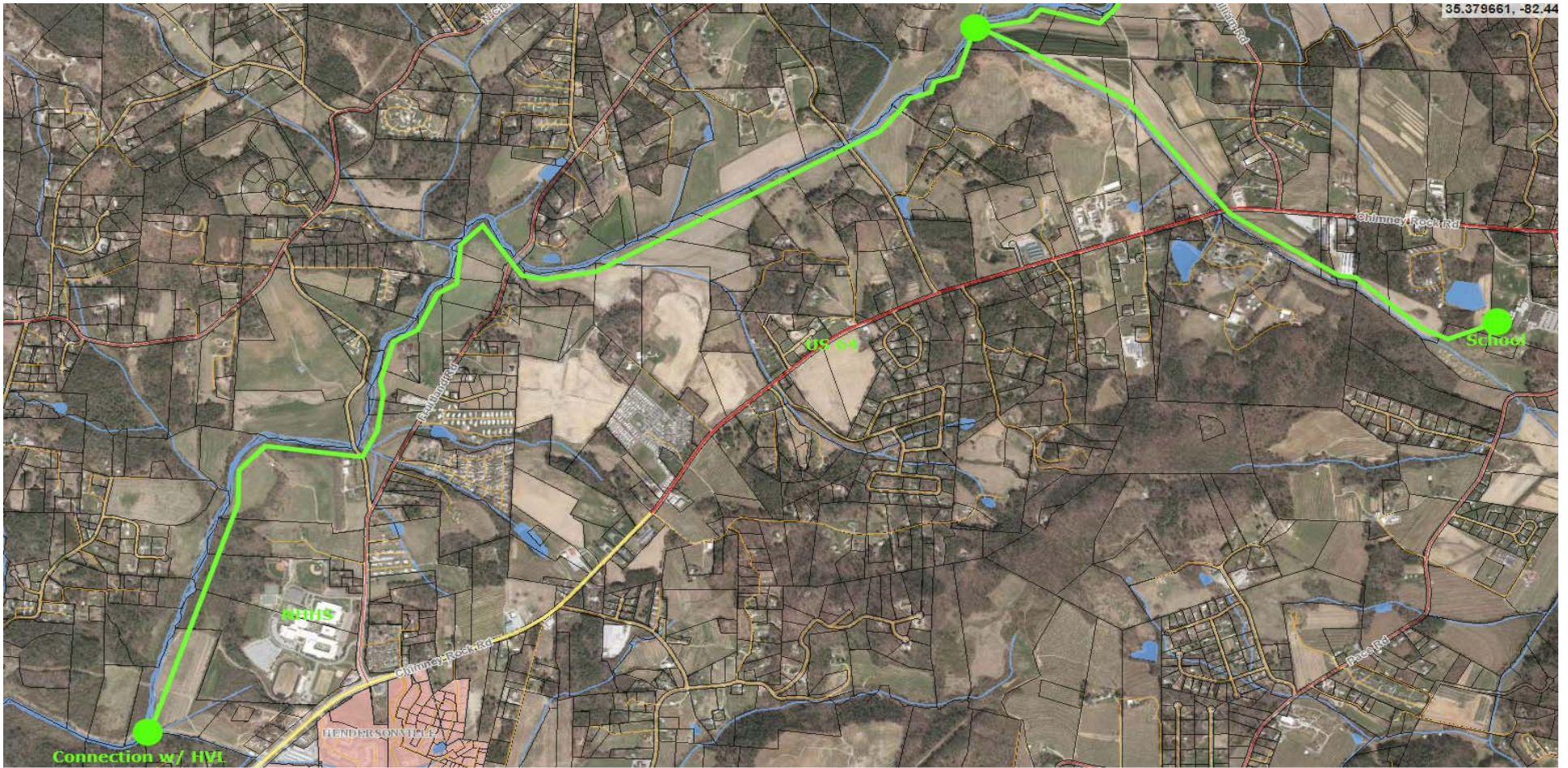
Layout of Pressure Line: HVL System to Elementary
(Sewer has not been designed – exact location has not been determined)





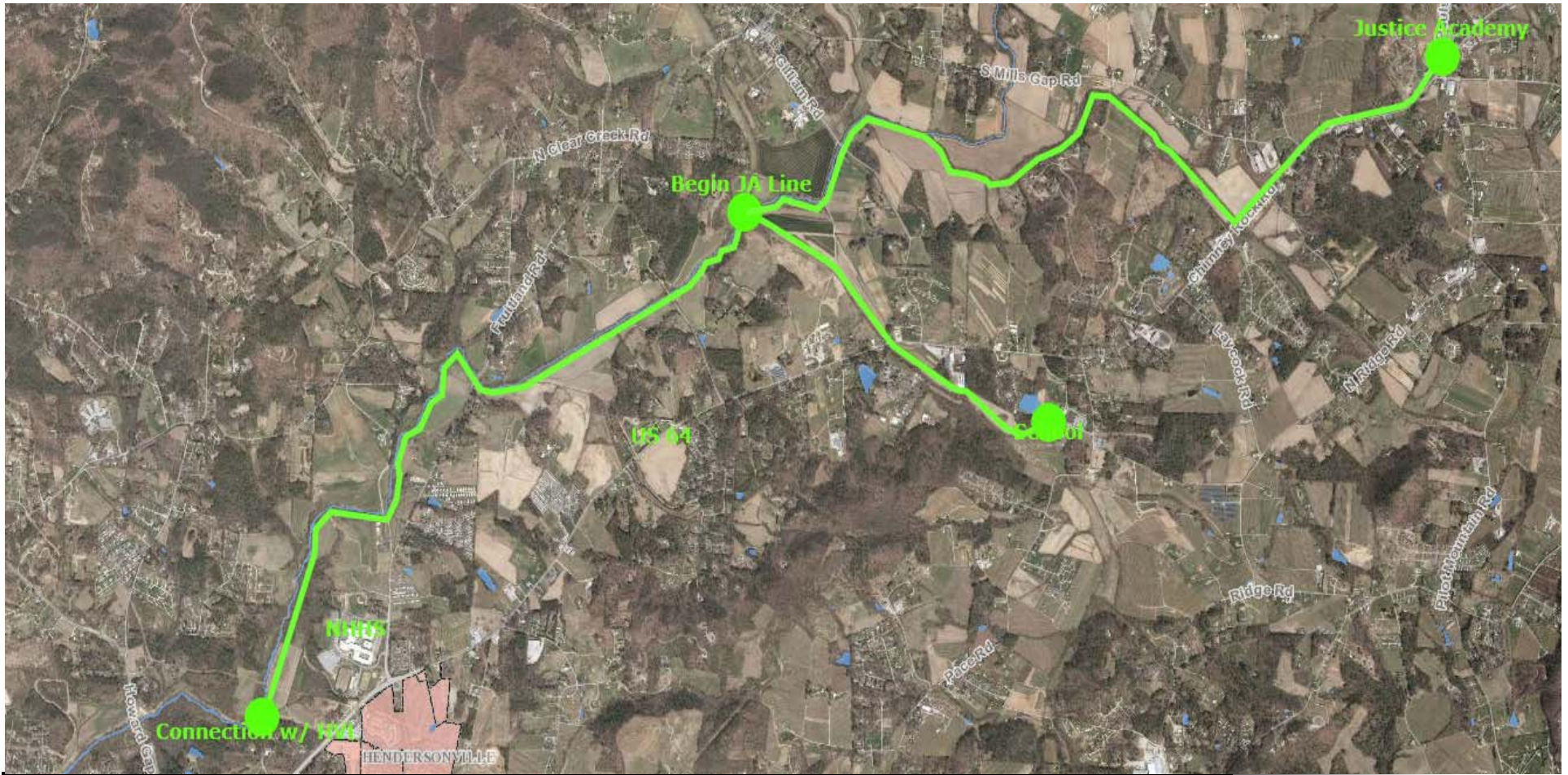
Layout of Pressure Line: HVL System to Justice Academy
(Sewer has not been designed – exact location has not been determined)





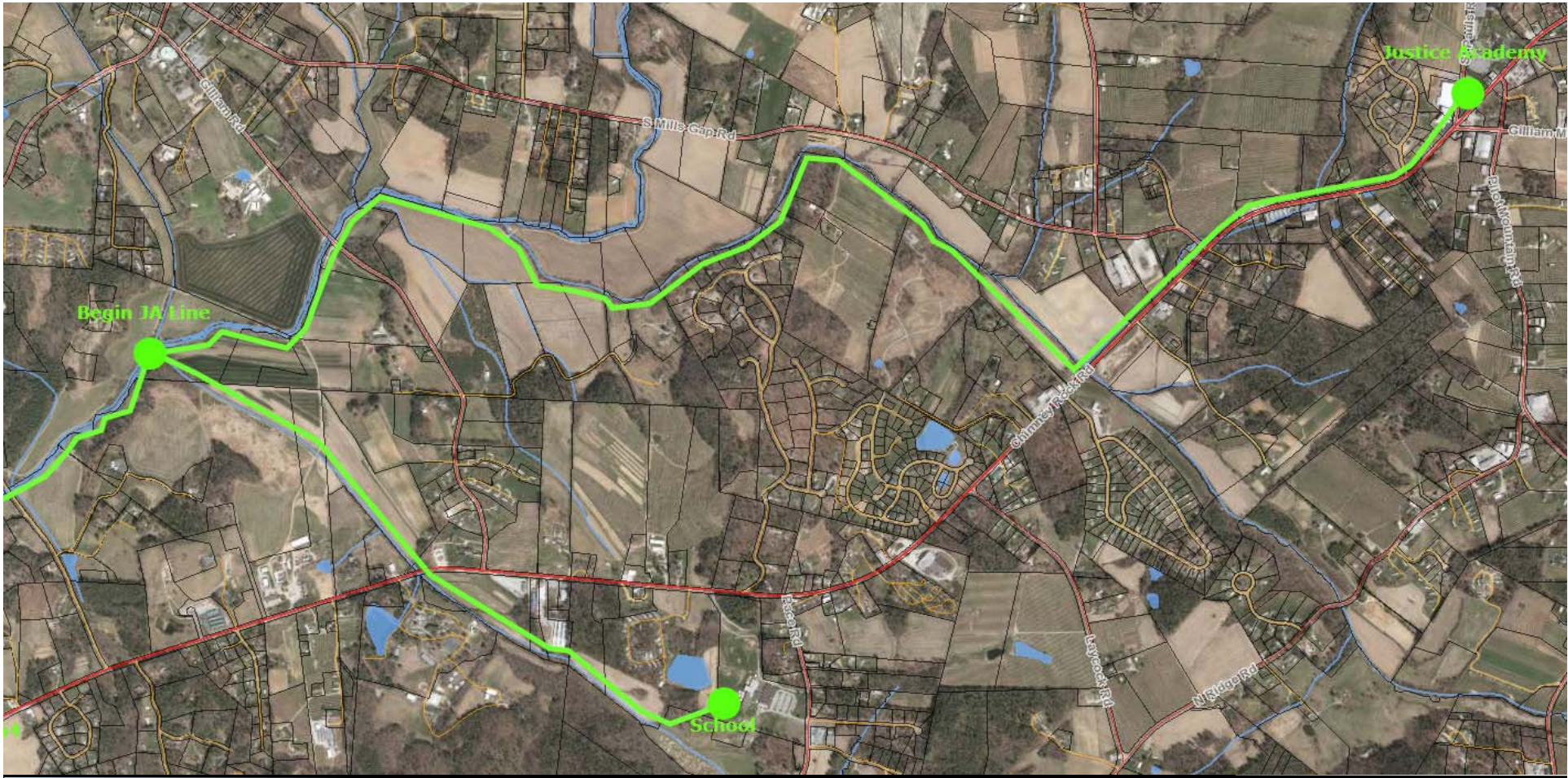
Layout of Gravity Line: NHHS to Elementary
(Sewer has not been designed – exact location has not been determined)





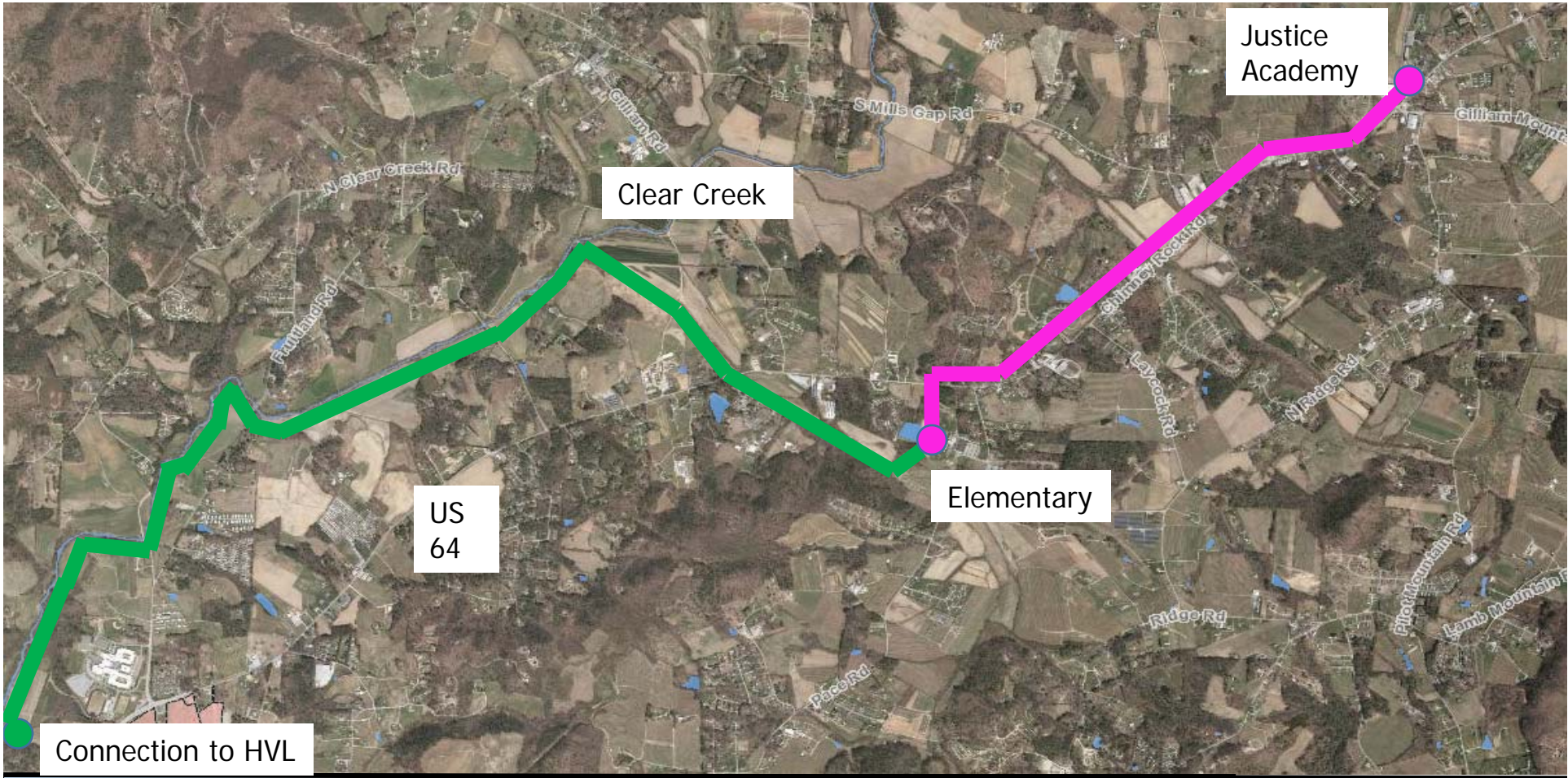
Overall Layout of Gravity Line: NHHS to Justice Academy
(Sewer has not been designed – exact location has not been determined)





Layout of Gravity Line: Elementary Line to Justice Academy
(Sewer has not been designed – exact location has not been determined)





Layout of Gravity / Pressure Line from HVL System to Justice Academy
(Sewer has not been designed – exact location has not been determined)



What potential impact on development of the community could be facilitated by the provision of public sewer?

Development Study

- Potential for 10,766 multifamily units to be built.
 - x2 people per unit = 21,532
 - x3 people per unit = 32,298
 - x4 people per unit = 43,104

Development Study

The Board of Commissioners has authorized a community impact analysis that would basically identify potential impacts and concerns related to the construction of a sewer line.

Development Study

- Component Assessments
 - Residential Land Supply
 - Development Capacity
 - Impact of Proposed Sewer Line Options
 - Identify Transportation Concerns
 - Public Safety Issues
 - Impact on School Capacity
 - Revenue Generation Potential

Development Study

- Assess the potential for future rezoning to industrial/commercial

Development Study

Concern would be the potential for dramatic growth and development in the community and potential negative impacts on public health, safety and wellbeing.