Town of LaPaz, Indiana Public Hearing

July 14, 2022

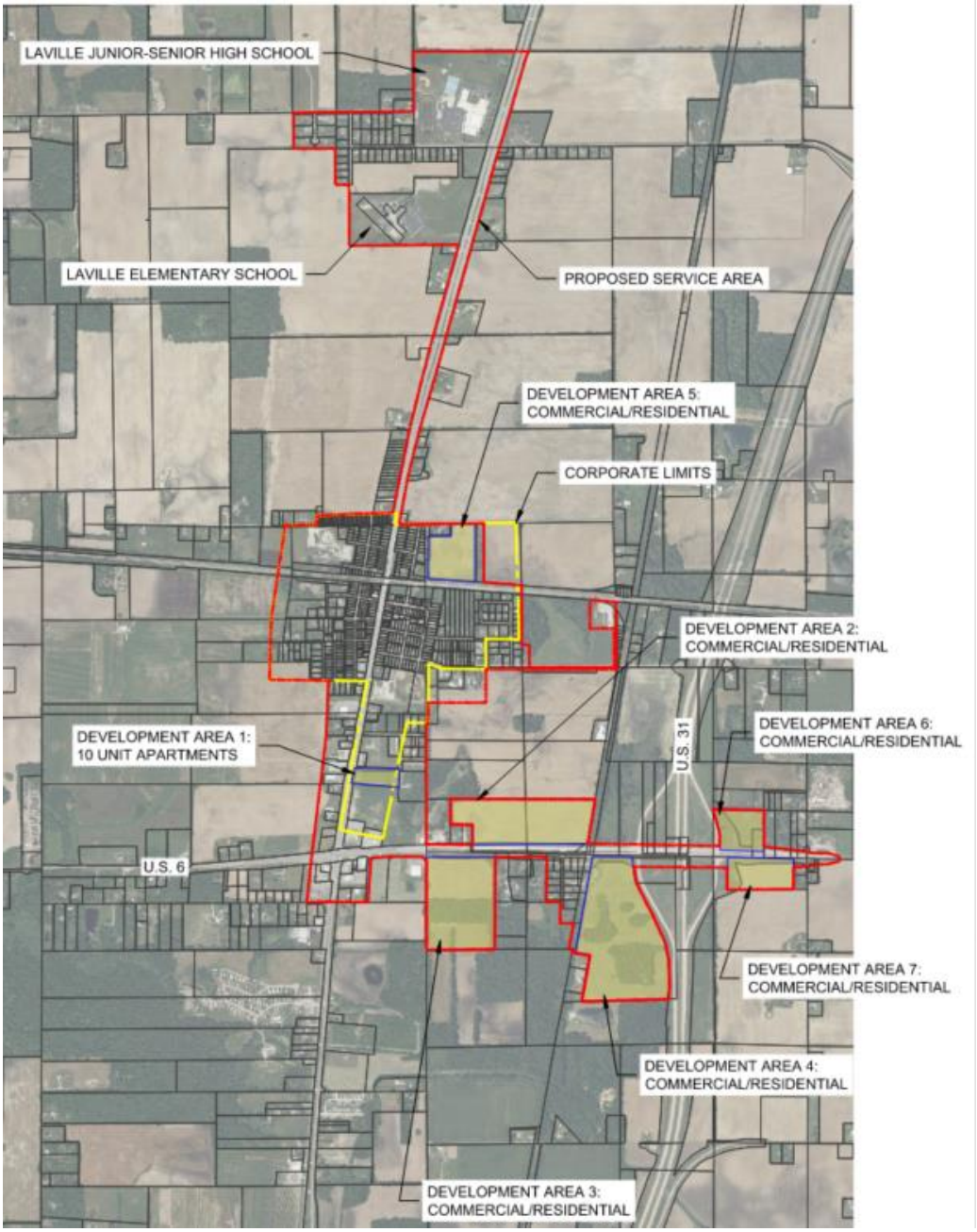
Water Utility System

WESSLER ENGINEERING

More than a Project™

OVERVIEW

- The Town of LaPaz does not have a potable water system.
- Residents within LaPaz are served by private wells.
- The Town is in need of a drinking water utility for multiple reasons including:
    - Health, Sanitation, and Safety / Water Quality
    - Water Quantity
    - Storage Requirements and Fire Flow
    - Economic Growth
- Wessler Engineering completed a study for a new water system.



PROJECT NEED

WATER QUALITY

- Private wells are not regulated by the EPA; water quality is not monitored continuously
- Groundwater in LaPaz has high iron levels
- Iron in drinking water does not pose significant health hazards, but can have adverse effects such as:
    - The presence of bacteria that feed off the iron
    - Negative effects on skin
    - Metallic taste
    - Staining of items it comes into contact with
    - Clogging of piping and fixtures and reducing available water flow

WATER QUANTITY

- LaVille Elementary and LaVille Junior/Senior High School own and operate water systems
- The Elementary School has 2 wells and the Junior/Senior High School has 1 well
- In the past, the Junior/Senior High School has had to close due to well failure

PROJECTED SYSTEM DEMAND

- Existing System Projected Demand - Based off 110 gpd/capita & existing WWTP flows
- Future System Projected Demand (20-year) - Based off population projections and anticipated development

	Average Day (gpd)	Maximum Day (gpd)
Existing Projected	62,000	155,000
Future Projected	132,000	330,000

STORAGE REQUIREMENTS & FIRE PROTECTION

- The *American Water Works Association (AWWA)* recommends the total storage in a system should be = operating storage + fire flow storage + emergency storage
    - Operating storage = 20% of maximum day demand
    - Fire flow storage = 1,400 gpm for 2 hours
    - Emergency Storage = round up required tank size

	Operating Storage (gallons)	*Fire Flow Storage (gallons)*	*Total Storage (gallons)*	*Tank Size (gallons)*
Existing	31,000	168,000	199,000	200,000
Future	66,000	168,000	234,000	250,000

PROPOSED PROJECT

INITIAL PHASE (to meet current projected demand)

Groundwater Wells

- Test well drilling
- Water quality testing
- (2) pitless adapter groundwater wells with casing size large enough to accommodate 300-gpm pumps in the future
- (2) 150-gpm pumps
- 200 kW generator and automatic transfer switch

Packaged Treatment Unit

- 150-gpm Aeralater unit
- (2) 150-gpm high service pumps
- Sodium hypochlorite chemical feed equipment
- 1,000 square foot CMU treatment building
- New 3 phase, 400A, 480/277V Electrical Utility Service from Michigan Road

Elevated Storage Tank

- 250,000-gallon elevated storage tank
- Mixer
- Security fencing

Distribution System

- 19,000 LF 6" PVC
- 30,000 LF 8" PVC
- 80 Fire Hydrants
- 70 6" Gate Valve
- 50 8" Gate Valve
- 350 Service Lines, Curb Stops, Meter Pits and Meters

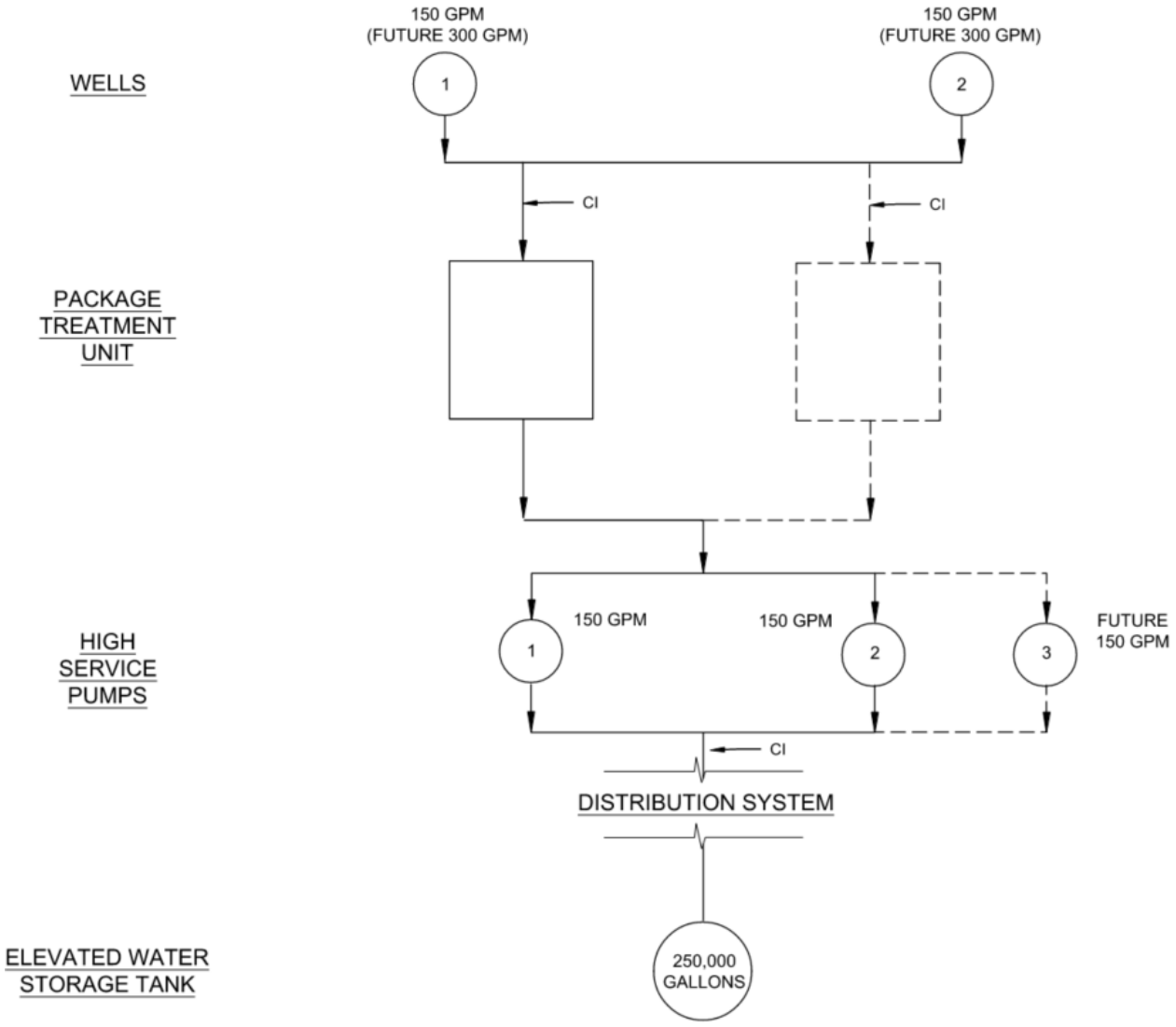
FUTURE PHASE (to meet 20-year future projected demand)

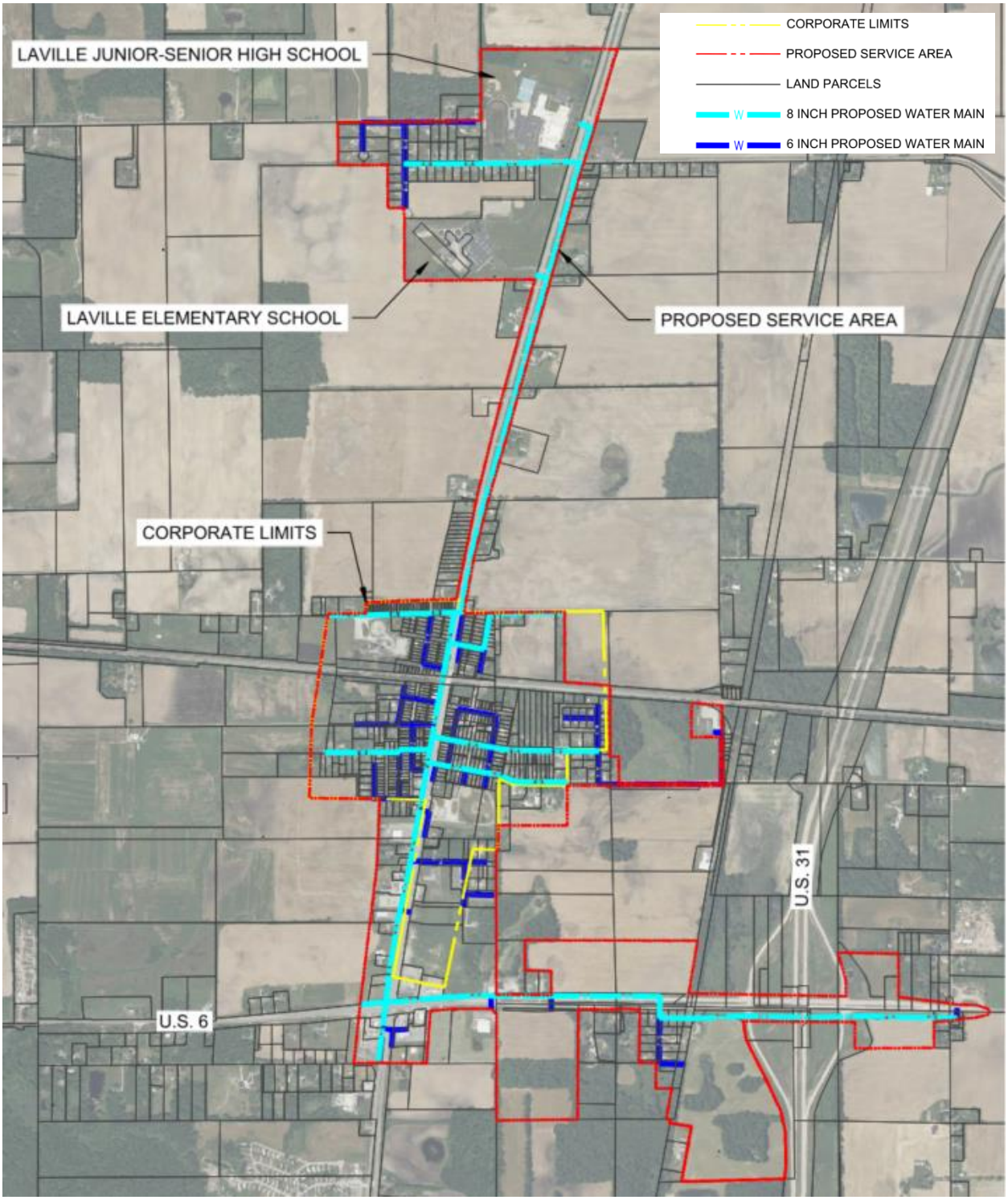
Groundwater Wells

- 300-gpm pumps to replace the 150-gpm pumps

Packaged Treatment Unit

- A second 150-gpm Aeralater
- A third 150-gpm high service pump
- Additional process piping and valves
- Electrical and controls
- CMU building addition


150 GPM
(FUTURE 300 GPM)
150 GPM
(FUTURE 300 GPM)
WELLS
1
2
CI
CI
PACKAGE
TREATMENT
UNIT
HIGH
SERVICE
PUMPS
150 GPM
150 GPM
FUTURE
150 GPM
1
2
3
CI
DISTRIBUTION SYSTEM
ELEVATED WATER
STORAGE TANK
250,000
GALLONS


CORPORATE LIMITS
PROPOSED SERVICE AREA
LAND PARCELS
8 INCH PROPOSED WATER MAIN
6 INCH PROPOSED WATER MAIN
LAVILLE JUNIOR-SENIOR HIGH SCHOOL
LAVILLE ELEMENTARY SCHOOL
PROPOSED SERVICE AREA
CORPORATE LIMITS
U.S. 31
U.S. 6

PROJECT PERMITS

- IDEM Stormwater Construction Permit
- IDEM Drinking Water Branch – Construction Permit
- FAA – Obstruction to Aviation Permit
- RR Utility Crossing
- INDOT Construction within Right-of-Way

PROJECT COSTS

Description	*Initial Phase Cost (SRF Funded)*
Groundwater Wells	$945,000
Packaged Treatment Unit	$2,213,000
Elevated Storage Tank	$2,167,000
Distribution System	$11,528,000
Total Probable Construction Costs	$16,853,000
Non-Construction Costs	$3,009,000
Anticipated Grants	$725,000
SRF Funded Project Costs (Initial Phase Only)	**$19,137,000**

FUNDING

- State Revolving Fund (SRF) Loan Program
- Office of Community and Rural Affairs (OCRA) Grant Program
- Pursuing additional funding sources

PRELIMINARY PROJECT TIMELINE

Project Milestone	*Date*
Submit PER	May 1, 2022
Anticipated PER Approval	July 2022
Begin Design	August 2022
Submit IDEM Permit	July 2023
Anticipated IDEM Permit Approval	September 2023
Bid Advertisement	September 2023
Start Construction	January 2024
End Construction	July 2025