

CITY OF GOSHEN

**Public Hearing
for
WWTP and Sewer System
Improvements Project
Preliminary Engineering Report**

May 15, 2018

Presented by:

Bryce Gast – Donohue & Associates, Inc.



Public Hearing Agenda

- A. Welcome and Introductions
- B. Public Hearing Purpose
- C. Project Needs and Goals
- D. Overview of Preliminary Engineering Report (PER) & State Revolving Fund (SRF) Process
- E. Proposed WWTP Improvements Project
- F. Proposed Lift Station Improvements Project
- G. Proposed Rock Run Sewer Improvements Project
- H. Project Schedule
- I. Estimated Cost of Project
- J. Project Funding
- K. Public Questions and Comments

Public Hearing Purpose

- Discuss the Project Needs and Goals
- Discuss Proposed Project Work to be Funded by an Indiana SRF Loan
- Comply with SRF Loan Requirements
- Discuss Project Funding
- Provide Opportunity for Public Participation

Project Needs

Much of the Wastewater Treatment Plant (WWTP) and lift station equipment is reaching the end of its service life, deteriorated, and in need of replacement

WWTP CBOD₅ treatment capability is nearing 90% capacity

Higher efficiency WWTP equipment is available

The existing sludge storage lagoon has a deteriorated embankment with low freeboard

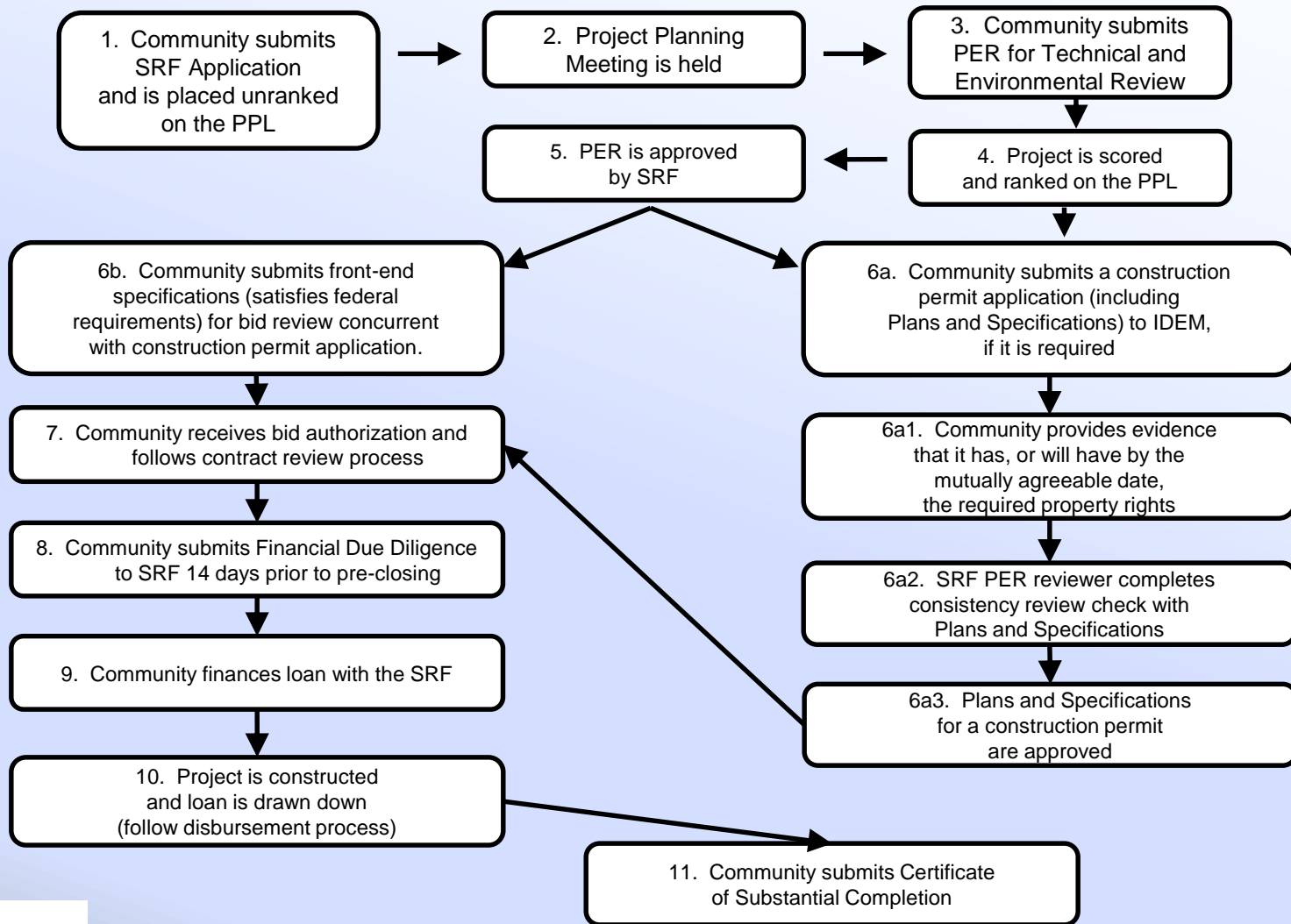
Lift station telemetry and controls are a mixture of new and old throughout the City collection system

The Rock Run Sewer is not capable of conveying peak flows to the existing City interceptor

Project Goals

- Replace old and deteriorated WWTP equipment to provide a safer, more efficient treatment plant
- Increase CBOD₅ and ammonia treatment capacity for the projected 20-year loadings
- Replace existing lift station telemetry and controls to provide a modern, congruent collection system
- Replace deteriorated process equipment that is beyond its expected service life in several lift stations
- Upgrade portions of the Rock Run Sewer to immediately reduce the potential for hydraulic bottlenecks
- Provide at least 3-million gallons of digested sludge storage capacity which can also be used for supplemental CSO storage

Overview of PER & SRF Process





WWTP Improvement Project

Proposed Project Components

- Replace 4 existing raw wastewater (RWW) pumps with 4 new RWW pumps and variable frequency drives (VFDs)
- Replace 2 existing grit removal mechanisms and classifiers
- Construct a new vac-truck unloading facility
- Replace existing deteriorated primary clarifier equipment, weirs, and troughs and repair existing concrete
- Replace 2 existing constant speed blowers with more efficient blowers and motors with variable speed drives
- Add an additional aeration basin and introduce an anoxic zone in all five (5) basins
- Install an automatic DO control system for the aeration system

Proposed Project Components

- Construct a new aeration system effluent lift station
- Replace the 2 existing digester boilers
- Construct 3 new 1-million gallon sludge storage tanks with jet nozzle mixing system
- Expand the existing maintenance building
- Replace deteriorated and unsafe handrail, walkways, grating, and stairs throughout the WWTP
- Update the SCADA system to accommodate new processes
- Improve flood protection to existing electrical switchgear and motor control centers at the WWTP

Existing Preliminary Treatment



Existing Primary Treatment



Existing Aeration System



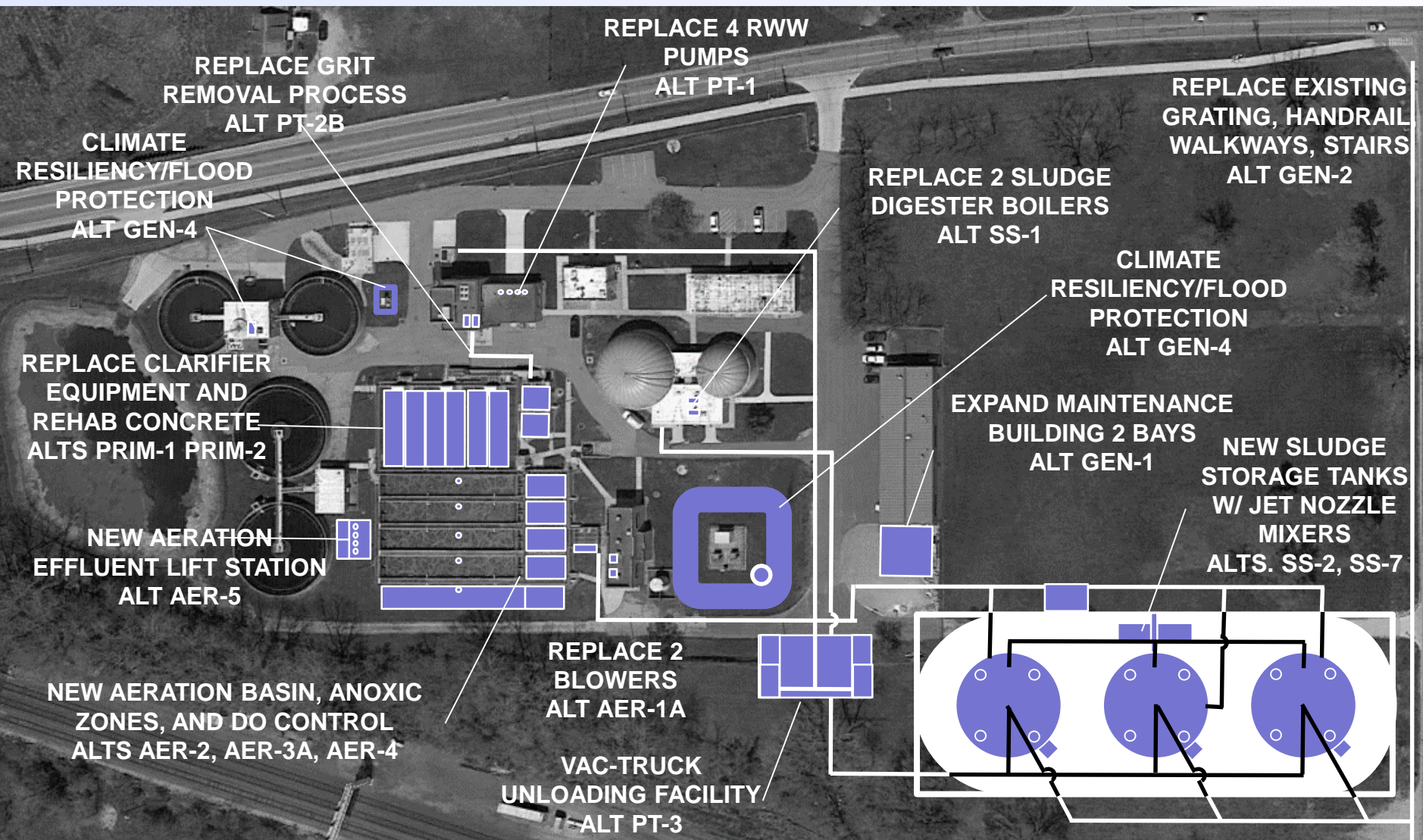
Existing Sludge Handling Facilities



General Needs



WWTP Proposed Upgrades



Lift Station Improvements Project



Proposed Project Components

- Four different categories of improvement
- Category 1
 - Total control, telemetry, and electrical replacement
 - 10 lift stations
- Category 2
 - Total control and telemetry replacement, partial electrical replacement
 - 7 lift stations
- Category 3
 - Total control and telemetry replacement
 - 4 lift stations
 - Includes minor equipment upgrade at a fifth lift station

Proposed Project Components

- Category 4 - Total Replacement
 - Burdick Lift Station
 - » Complete structural, piping, and equipment replacement
 - » Includes a Category 1 upgrade
 - Maplecrest Lift Station
 - » Complete structural, piping, and equipment replacement
 - » Includes a Category 1 upgrade
 - Lincoln Lift Station (Partial Replacement)
 - » Total piping and pump replacement
 - » Partial structural replacement
 - » Includes a Category 1 upgrade

Existing Lift Station – Telemetry and Controls



Existing Lift Station – Total Replacement



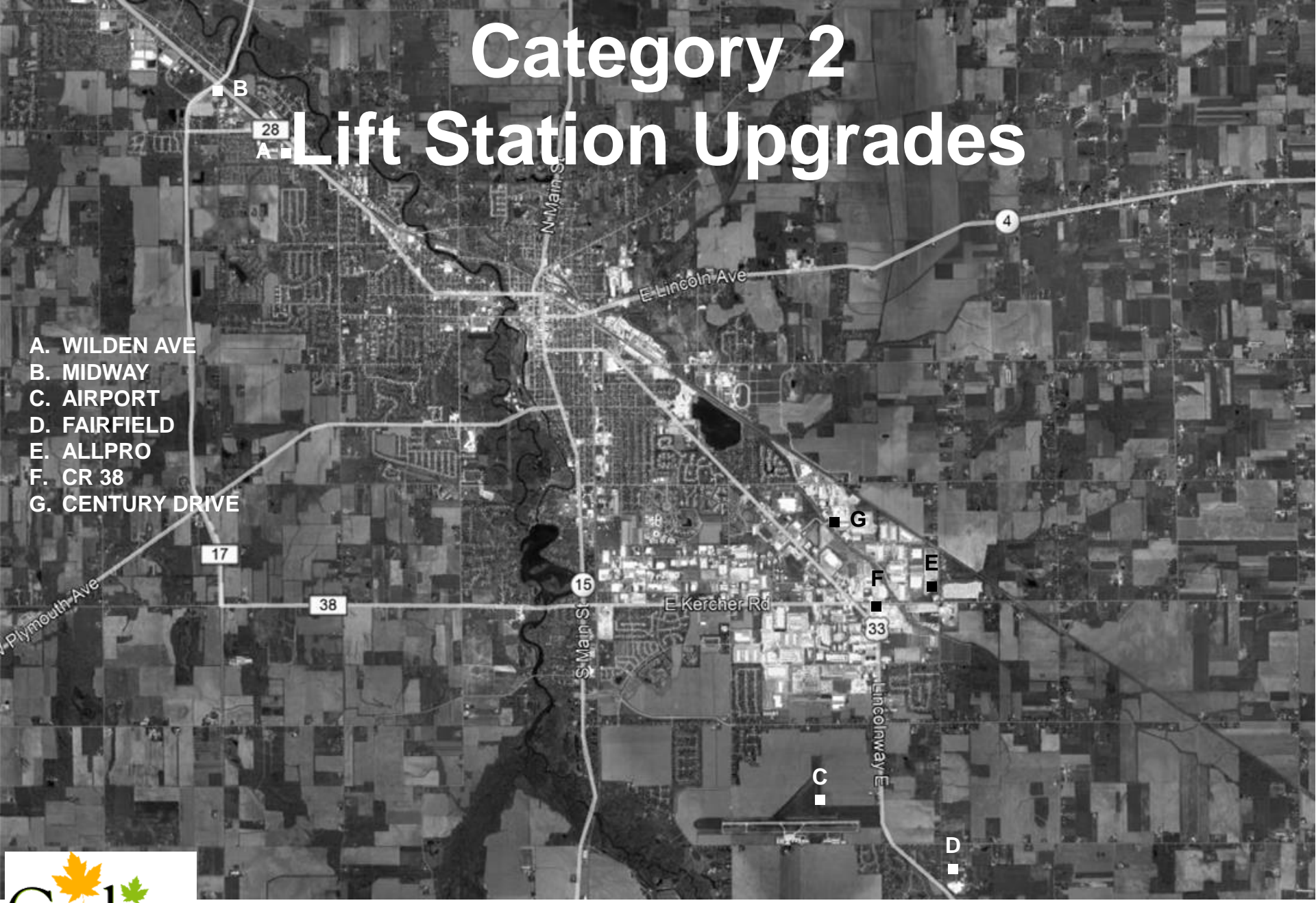
Category 1 Lift Station Upgrades

- A. GEORGIA RD
- B. PICKWICK
- C. SAM'S
- D. REITH RILEY
- E. BRIARWOOD
- F. SECOND ST
- G. CLOVER TRAILS
- H. MARRIOT
- I. CR 27
- J. FAIRGROUNDS

Category 2

Lift Station Upgrades

- A. WILDEN AVE
- B. MIDWAY
- C. AIRPORT
- D. FAIRFIELD
- E. ALLPRO
- F. CR 38
- G. CENTURY DRIVE



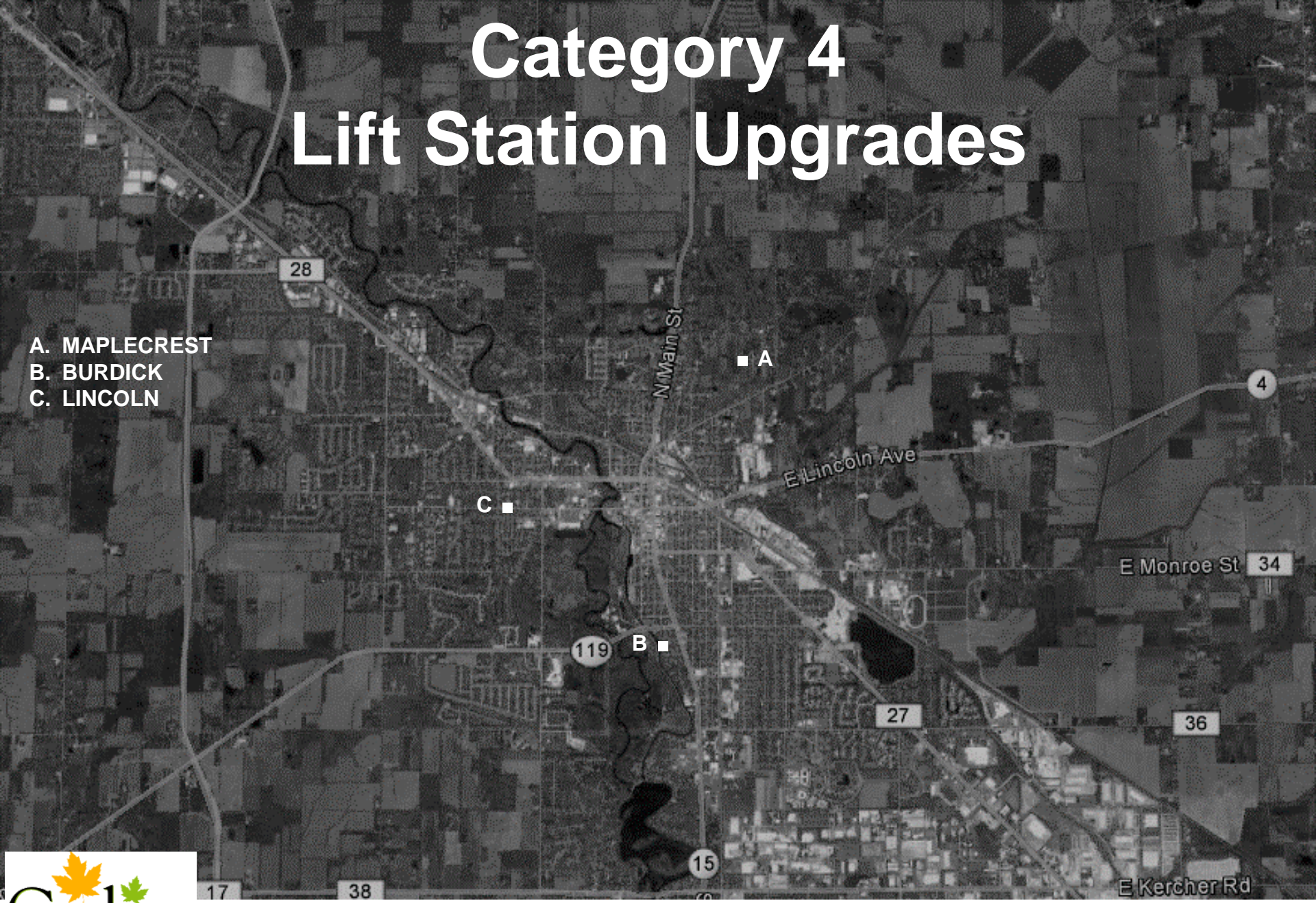
Category 3 Lift Station Upgrades

- A. MEIJER
- B. LYNNWOOD
- C. BASHOR
- D. HOSPITAL
- E. 12th STREET



Category 4 Lift Station Upgrades

- A. MAPLECREST
- B. BURDICK
- C. LINCOLN



Rock Run Sewer Improvement Project



Proposed Project Components

- Phase 1 of 5
- Install approximately 1,400 feet of 42-inch sewer from 1st Street, through Kauffman Park, to the existing Rock Run Interceptor between Main Street and State Road 15
- Replace existing siphon crossing of Rock Run Creek with new siphon crossing
- Connect to existing collection system at
 - Intersection of Middlebury and Main Streets,
 - West of Main Street
 - North of Kauffman Park
- Replace an existing manhole at the intersection of Bridge and 9th Streets
- Remaining Phases to be completed at a later date when funding is available

Existing Rock Run Sewer



Rock Run Sewer – Phase 1



KAUFFMANN PARK

24"

42"

42"

24"

ABANDON EXISTING 21" SEWER

12"

NEW DROP MANHOLE

EXISTING COLLECTOR

EXISTING INTERCEPTOR

PROPOSED INTERCEPTOR



Preliminary Project Schedule

**Table 6-2
Preliminary Project Schedule**

Task	Approximate Date
Public Hearing	May 15, 2018
Submit PER to Indiana SRF	June 14, 2018
Anticipated PER Approval	September 2018
Plans & Specs Submitted to IDEM	March 2019
Plans & Specs Approval by IDEM	June 2019
Land & Easement Acquisition	June 2019
Advertise for Bids	June 2019
Receive Bids	July 2019
Loan Closing	July 2019
Contract Award	July 2019
Initiation of Construction	August 2019
Substantial Completion of Construction	May 2021
Initiation of Operation	May 2021
Final Completion of Construction	July 2021



Project Funding

Estimated Non-Construction Costs

Table 6-1 Part 1
Selected Plan Cost Summary

Item	Total Cost
Non-Construction Costs	
Administrative and Legal	\$160,000
Financial	\$160,000
Land & Rights-of-way Acquisition	\$50,000
Relocation	\$0
Planning Engineering (LTCP Update & PER)	\$205,900
Project Engineering Fees	
Design	\$1,258,000
Bidding Services	\$157,000
Construction Related Services (Project Observation, Startup, Training)	\$1,415,000
Programming	\$239,000
Non-Construction Subtotal	\$3,644,900
Total Non-Construction Costs without Planning	\$3,439,000

Estimated Construction & Total Project Costs

Selected Plan Cost Summary	
Item	Total Cost
Non-Construction Cost Subtotal	\$3,644,900
Non-Construction Cost Subtotal without Planning	\$3,439,000
WWTP Construction Costs	
Preliminary Treatment Improvements	\$2,039,000
Primary Treatment Improvements	\$812,000
Aeration Improvements	\$2,603,000
Solids Stabilization and Storage Improvements	\$5,319,000
General Plant Improvements	\$675,000
Contingencies (10%)	\$1,145,000
Total WWTP Construction Cost	\$12,593,000
Lift Stations Construction Costs	
Category 1 Upgrades	\$677,000
Category 2 Upgrades	\$390,000
Category 3 Upgrades	\$110,000
Lift Station Replacement	\$969,000
Contingencies (10%)	\$215,000
Total Lift Station Construction Cost	\$2,361,000
Rock Run Sewer Construction Costs	
Rock Run Sewer Upgrades	\$971,000
Contingencies (10%)	\$97,000
Total Rock Run Sewer Construction Cost	\$1,068,000
Total Project Cost w/o Planning	\$19,461,000
Total Project Cost with Planning	\$19,666,900



Project Funding

- Project is proposed to be funded or partially funded by an SRF loan
- Current estimate assumes borrowing approximately \$19,666,900 for all WWTP and Sewer System improvements (\$19,461,000 w/o planning cost)
- Interest rates could range from $\approx 2.0\%$ to 3.0%
- SRF interest rate adjustments typically take place in January, April, July, and October of each year
- Council has approved a gradual wastewater user fee rate increase to cover the costs of the project



Public Questions and Comments

Additional Public Input is Welcome

- Written or email comments will be accepted until:
 - **May 22nd at 1:00 p.m.**
- Send additional comments to:

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