

# **Preliminary Engineering Report Wastewater Revolving Loan Fund**



**TOWN OF CHESTERTON, IN**  
**PUBLIC HEARING**  
**OCTOBER 29, 2012**  
**6:00 PM**





# PROJECT SEGMENTS



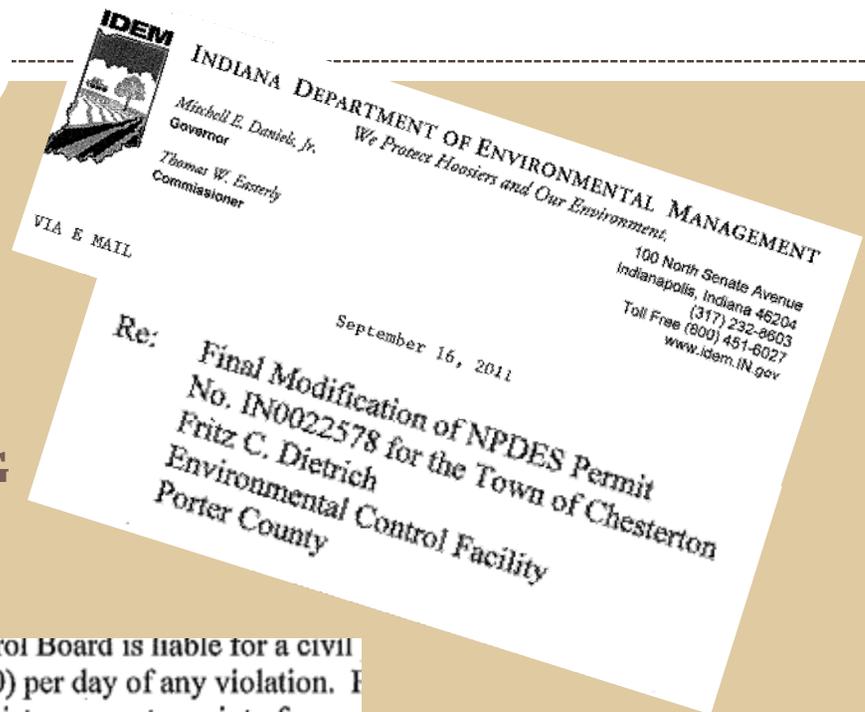
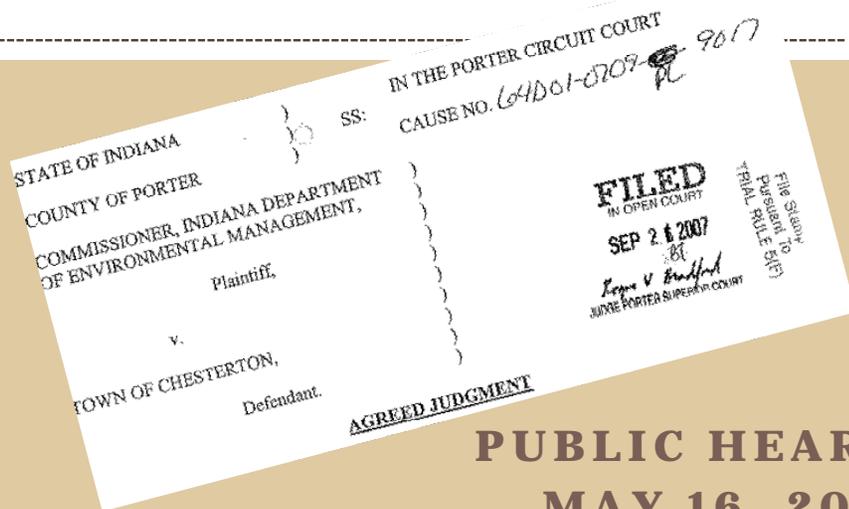
1. COMBINED SEWER OVERFLOW LONG TERM CONTROL PLAN – 75%
2. WASTEWATER TREATMENT PLANT IMPROVEMENTS – 18%
3. LIFT STATION UPGRADES – 2%
4. SEWER SYSTEM REHABILITATIONS – 5%

# PROJECT SEGMENTS



- 1. COMBINED SEWER OVERFLOW LONG TERM CONTROL PLAN – 75%**
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# Chesterton, Indiana Long Term Control Plan

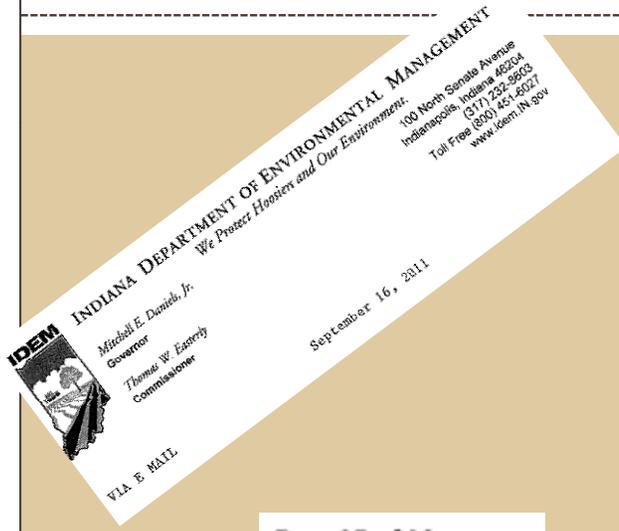


**PUBLIC HEARING**  
**MAY 16, 2011**  
**7:00 PM**

the Water Pollution Control Board is liable for a civil thousand dollars (\$25,000) per day of any violation. I who obstructs, delays, resists, prevents, or interferes w

after a first conviction of such person under this provision is subject to a fine of not more than one hundred thousand dollars (\$100,000) per day of violation, or by imprisonment for not more than two (2) years, or both.

# Chesterton, Indiana Long Term Control Plan



Page 37 of 38  
Permit No. IN0022578  
Revised:

Based on this information, IDEM has determined that the plan is acceptable and formally approves the permittee's LTCP. The LTCP is incorporated herein.

The LTCP shall be implemented in accordance with the approved schedule outlined below:

Task	Completion Date
Project Design	August 2012 – August 2013
Project Permitting	August 2013 – February 2014
Funding Development	March 2014 – September 2014
Bidding and Construction Phase	October 2014 – June 2016
Startup and Commissioning	June 2016 – August 2016
Achievement of Full Operation	September 2016
Post-Construction Monitoring Report	October 2018



# Wet Weather Flow Modeling

10-year, 1-hour  
storm

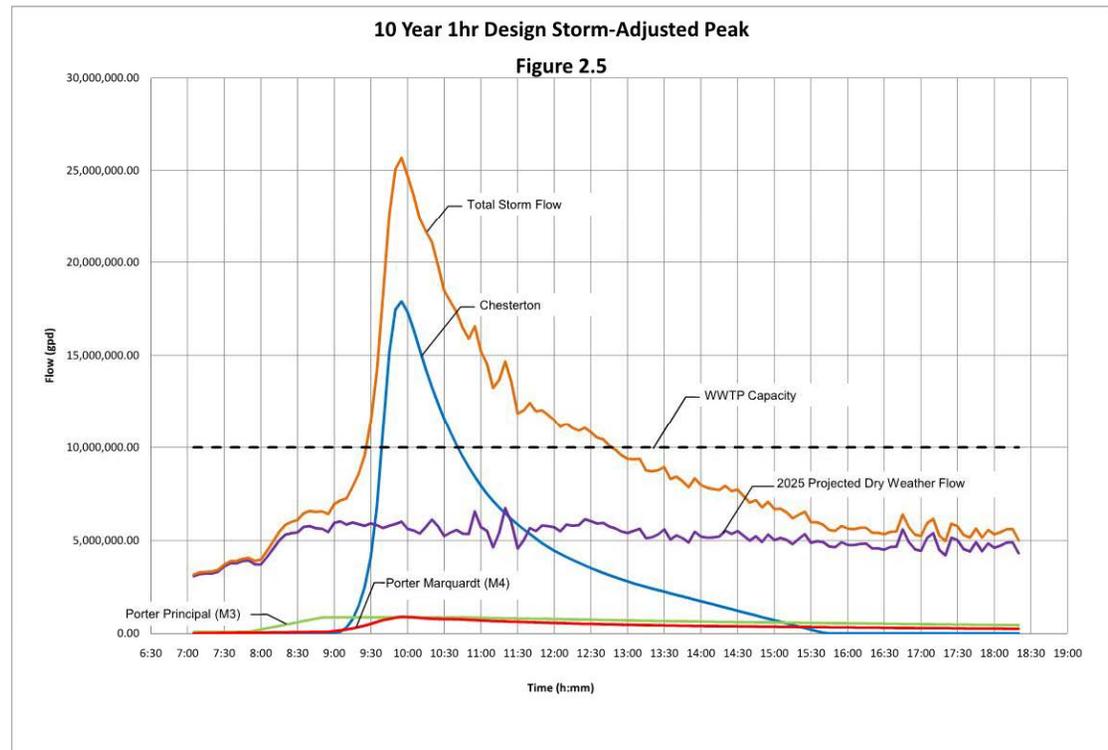
1.98 inch/hour

Total Flow:

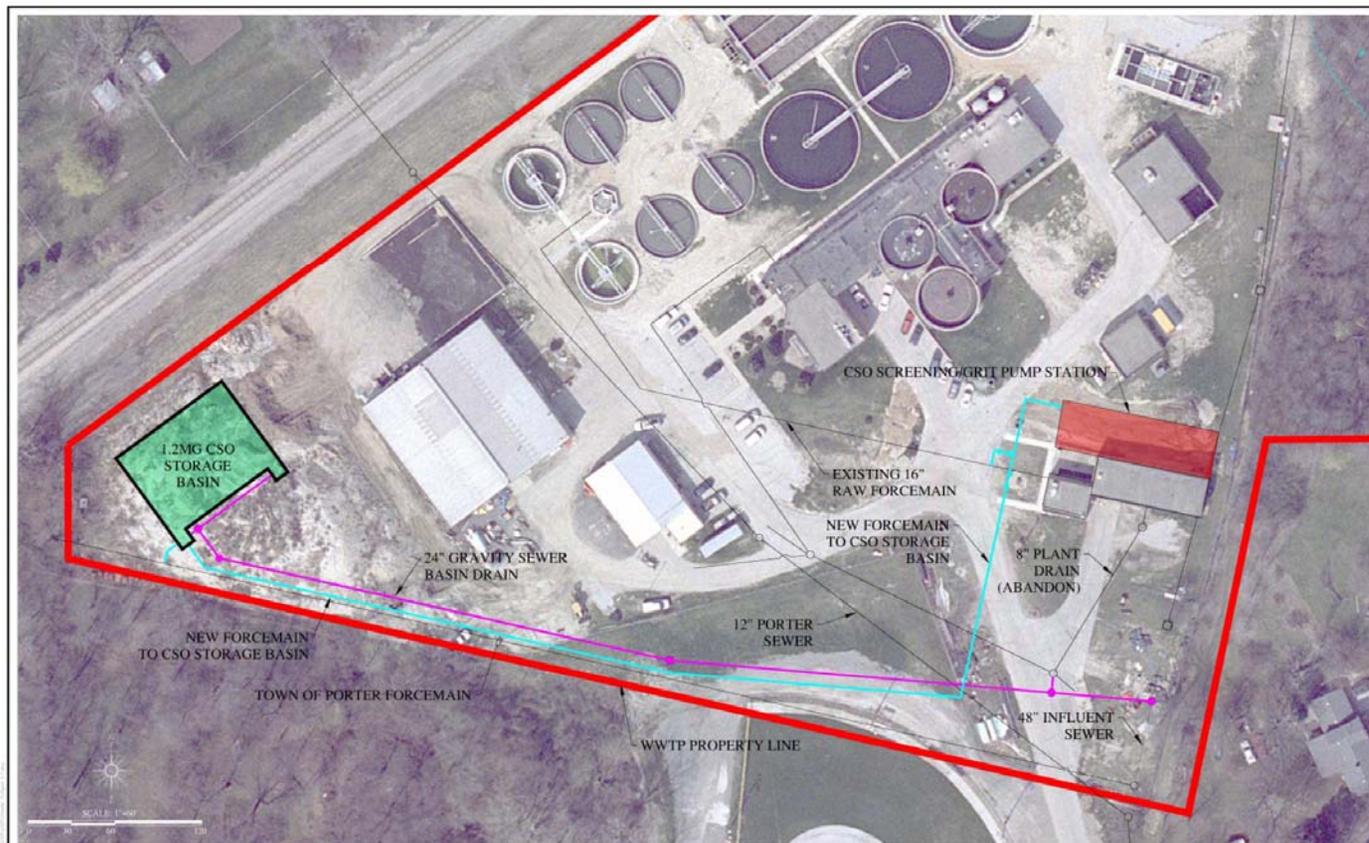
**26 MGD**

Total Storage  
Volume:

**1,200,000 Gallons**



# CSO Controls: Storage Tank Location



TOWN OF CHESTERTON, INDIANA - WASTEWATER TREATMENT PLANT CSO LONG TERM CONTROL PLAN  
ALTERNATIVE LOCATIONS FOR WET WEATHER TREATMENT AND/OR STORAGE - ALTERNATE 1

FIGURE  
5.7

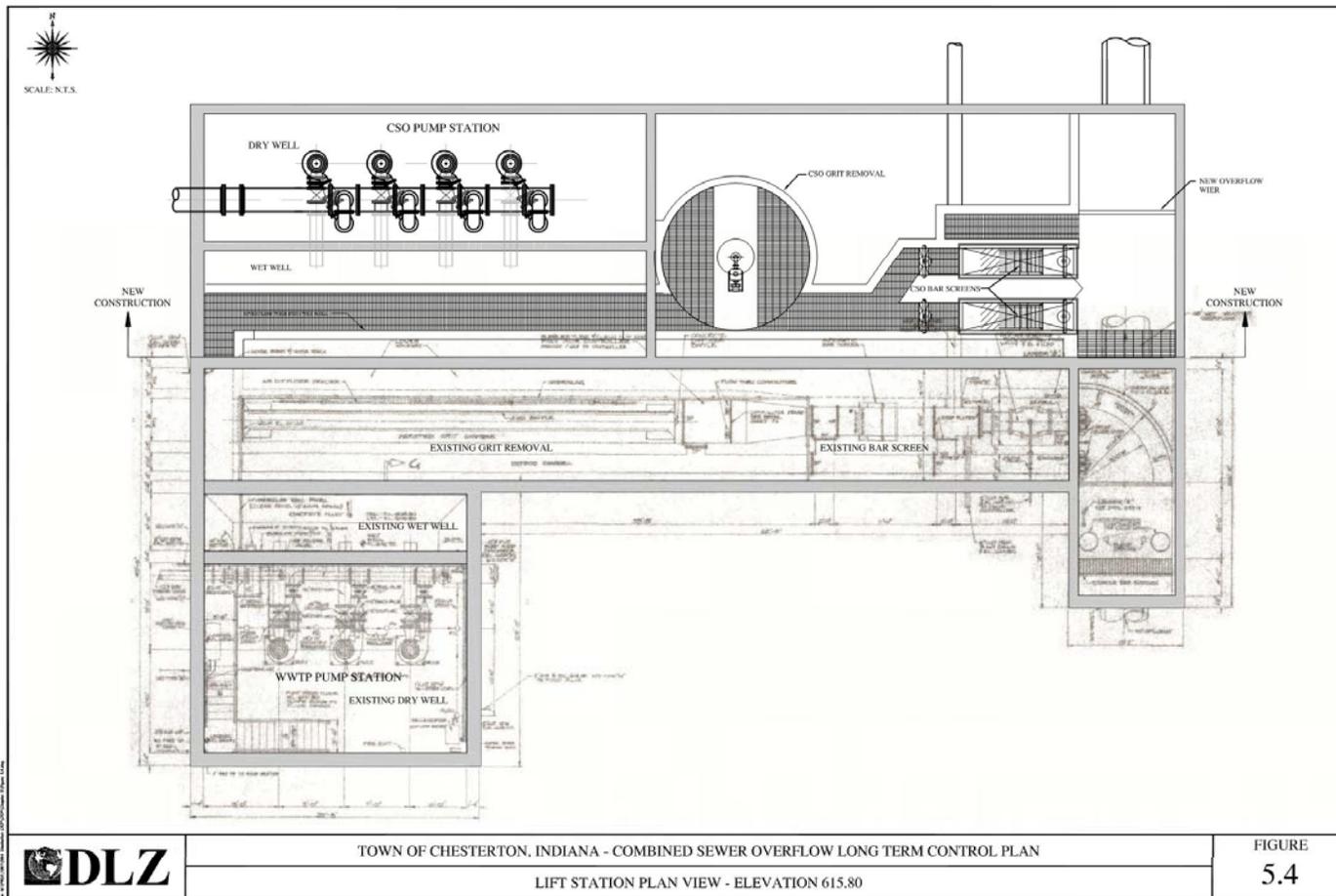
# CSO Controls: Headworks



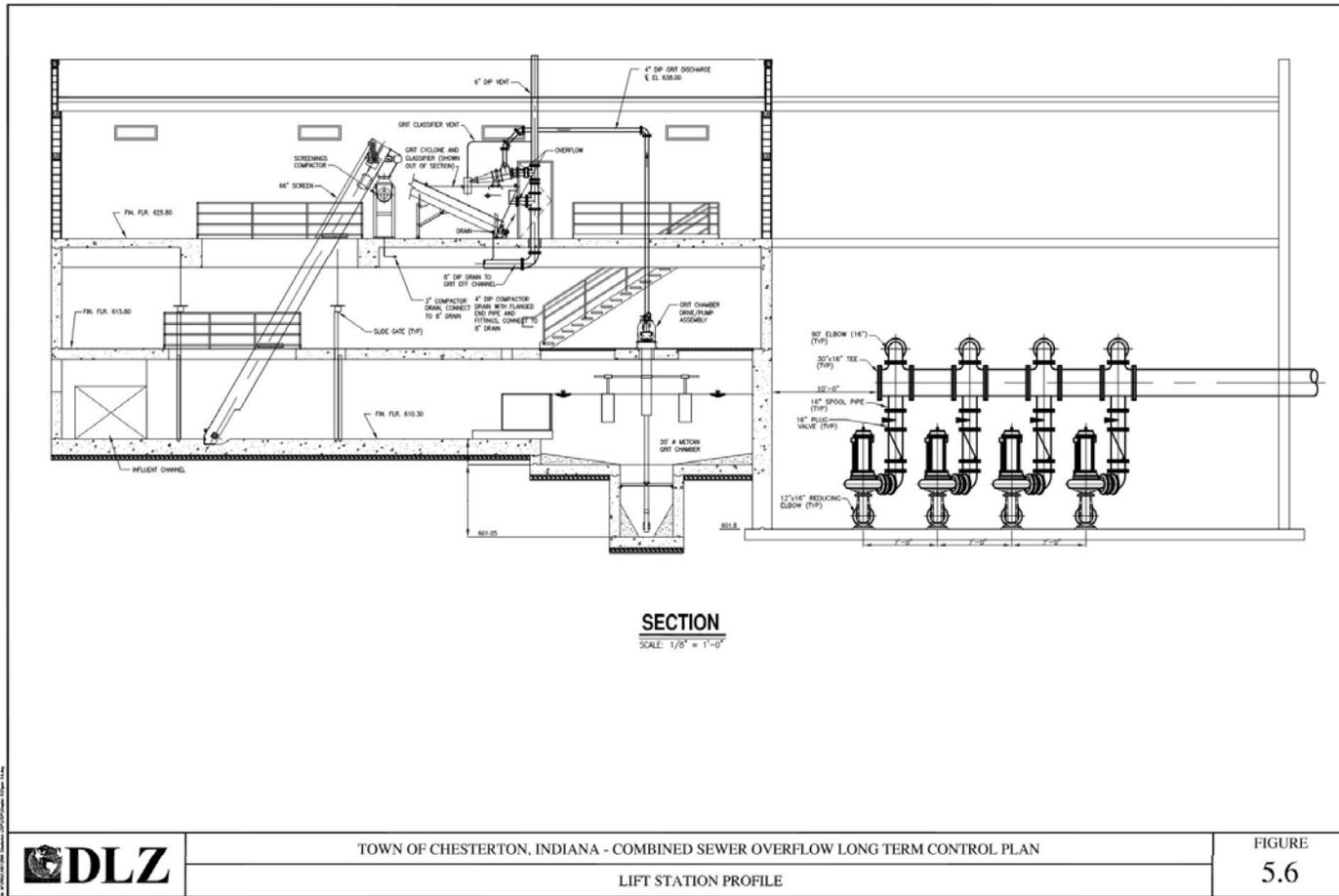
- Screening
- Grit Removal
- Pumping to the Storage Basin
- Additional Flow Capacity for Future WWTP Expansions



# CSO Controls: Headworks



# CSO Controls: Headworks



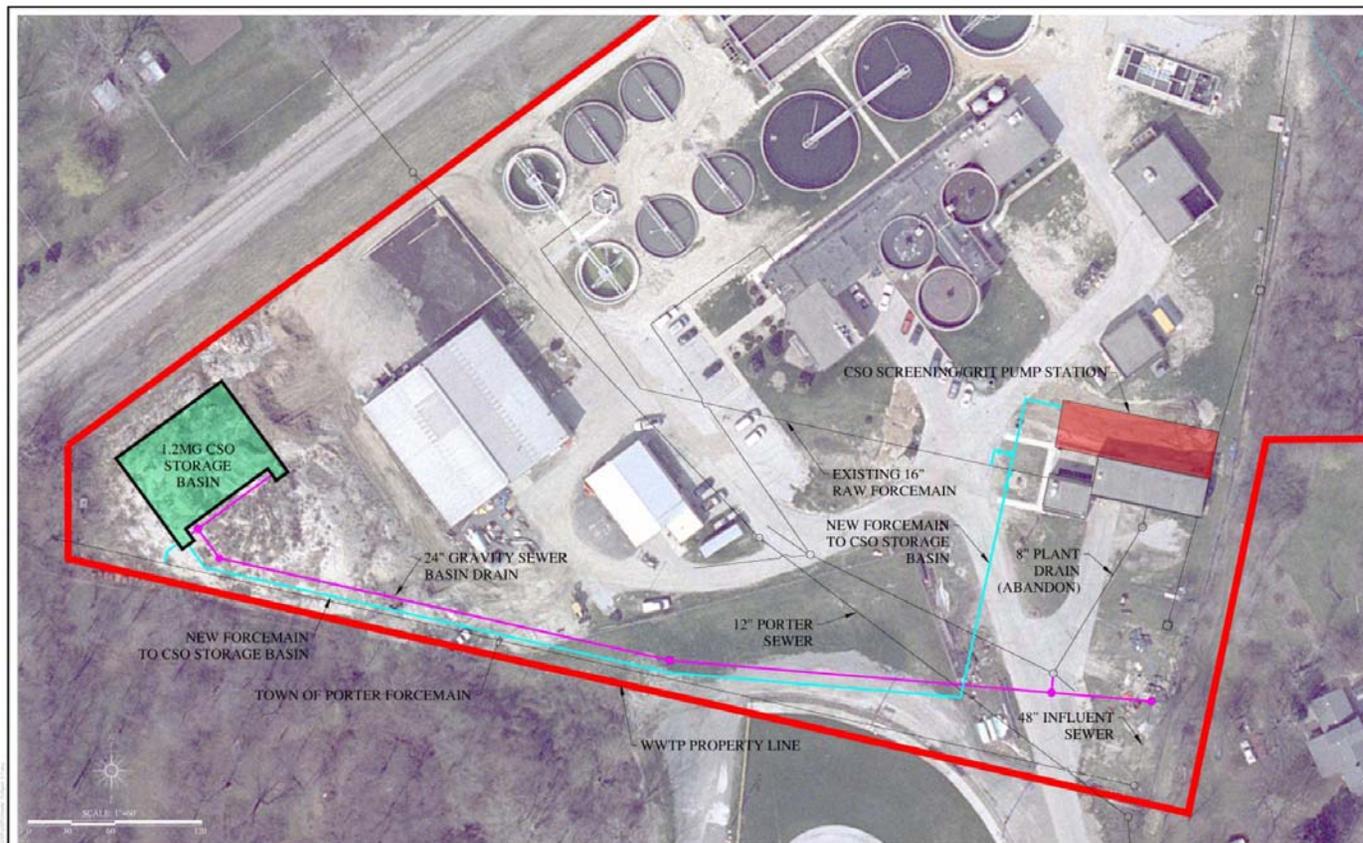
TOWN OF CHESTERTON, INDIANA - COMBINED SEWER OVERFLOW LONG TERM CONTROL PLAN

LIFT STATION PROFILE

FIGURE

5.6

# CSO Controls: Storage Tank Location



TOWN OF CHESTERTON, INDIANA - WASTEWATER TREATMENT PLANT CSO LONG TERM CONTROL PLAN  
ALTERNATIVE LOCATIONS FOR WET WEATHER TREATMENT AND/OR STORAGE - ALTERNATE 1

FIGURE  
5.7

# CSO Controls: Storage Basin

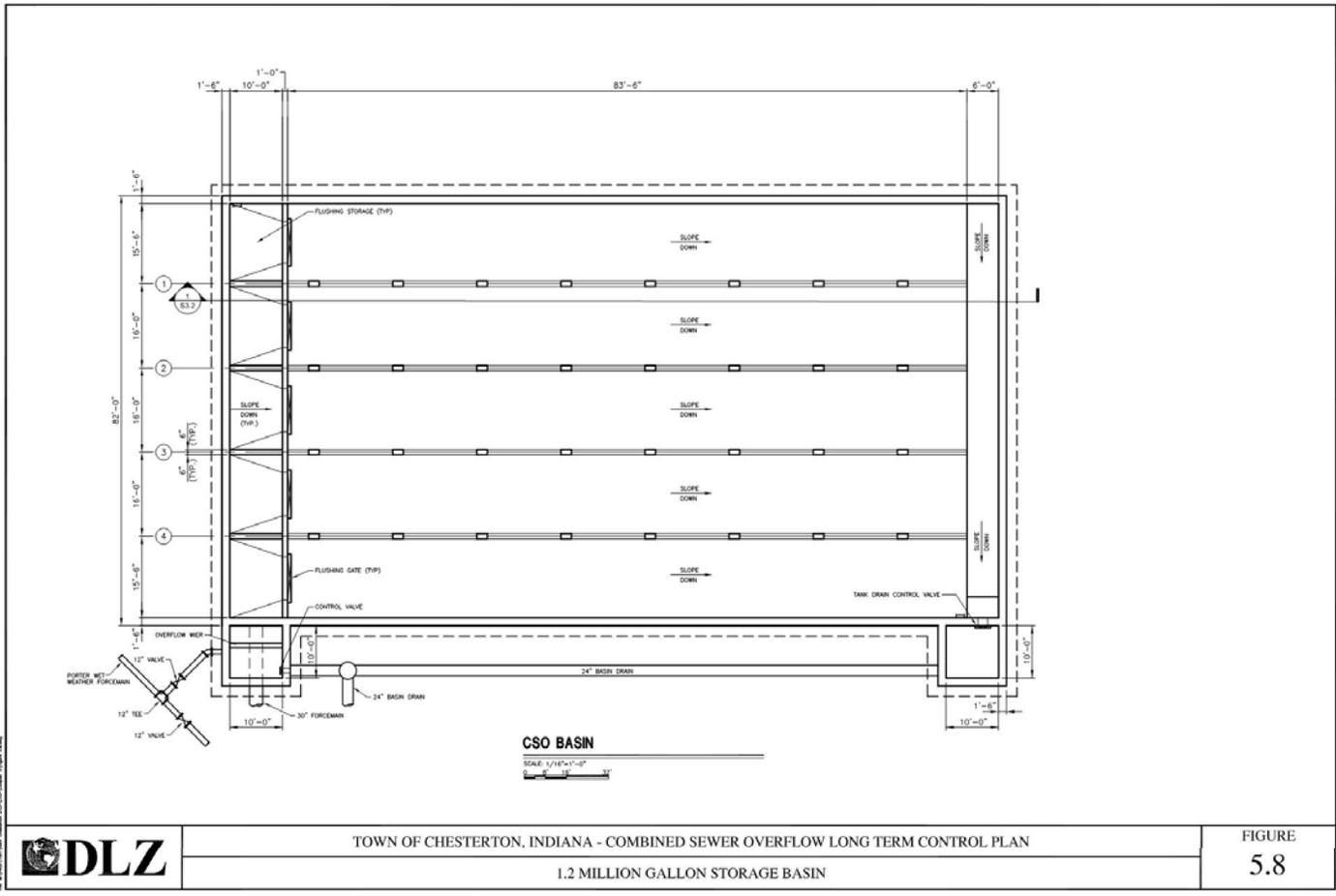
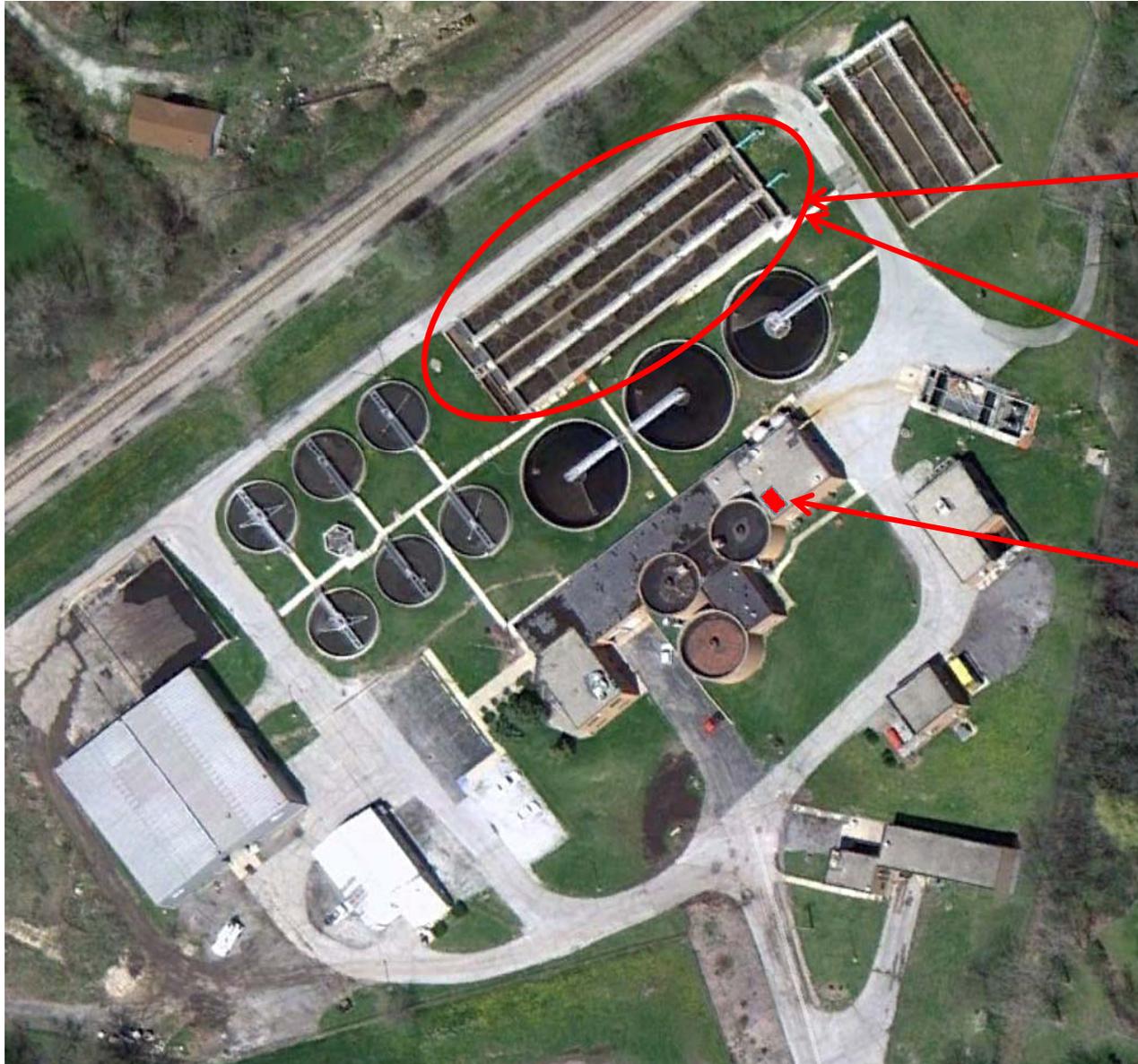


FIGURE 5.8

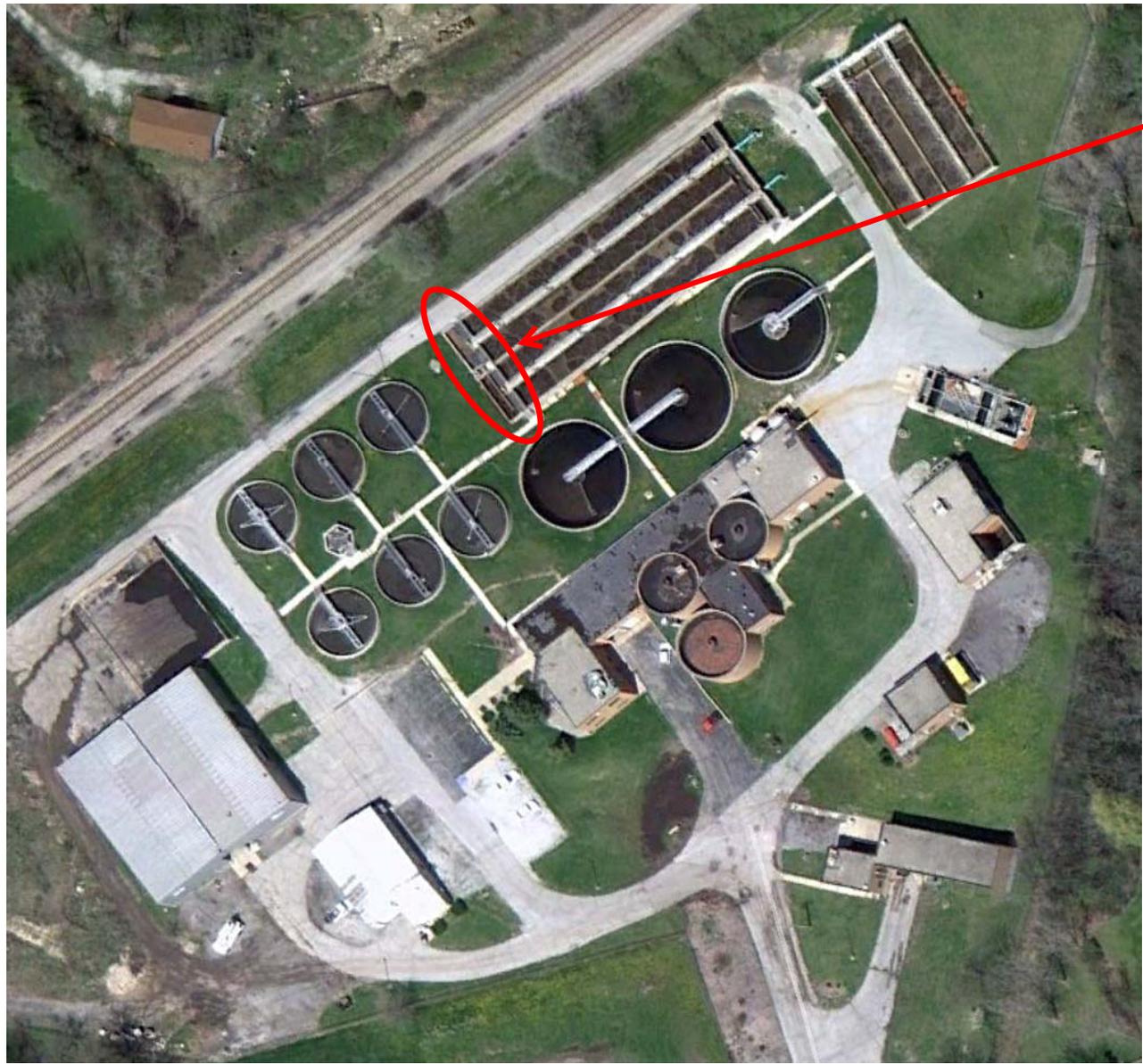
# PROJECT SEGMENTS



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2. **WASTEWATER TREATMENT PLANT IMPROVEMENTS – 18%**
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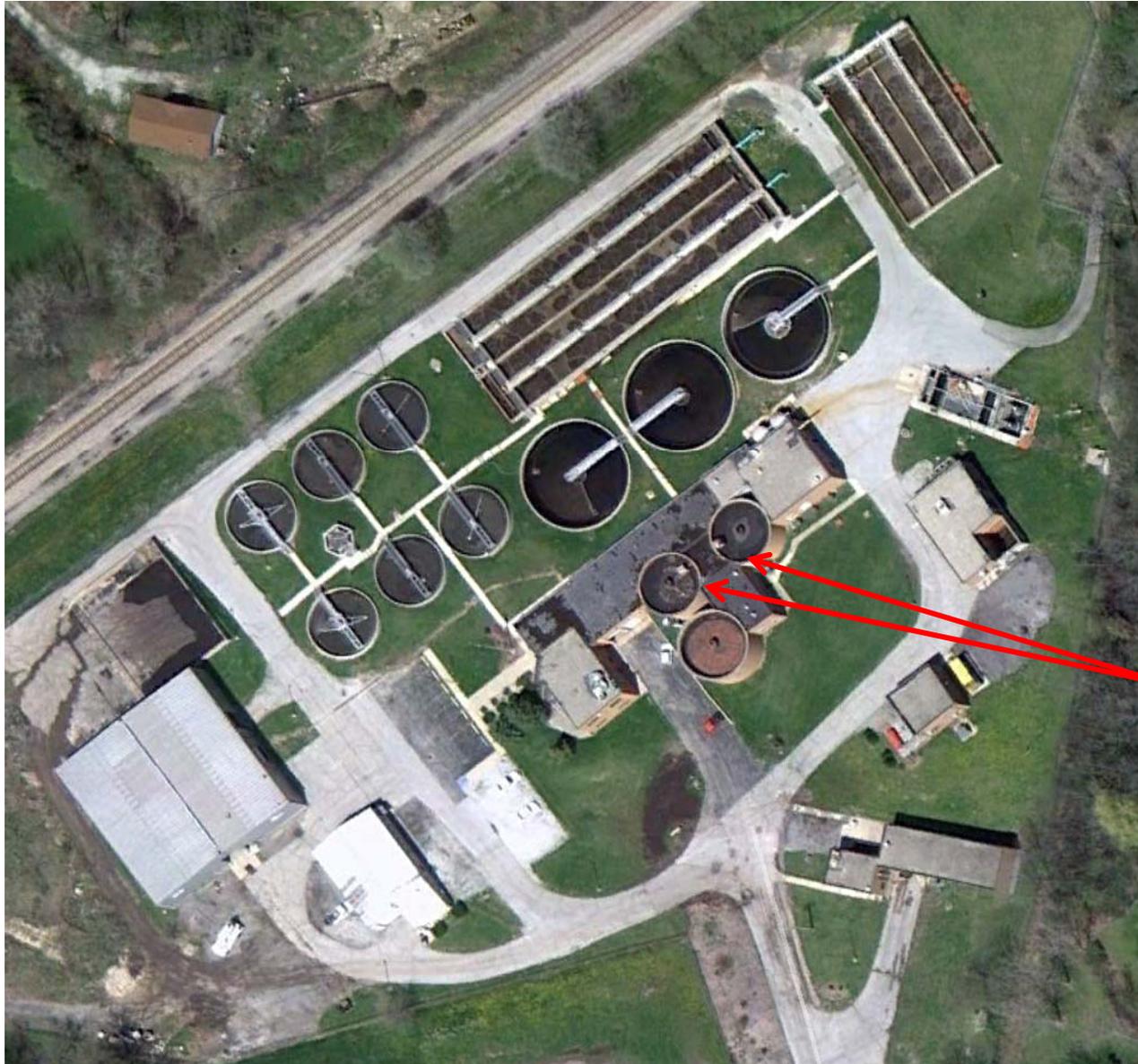
- REPLACE AERATION DIFFUSERS IN TANKS 1-4
- REPLACE OXYGEN MONITORING PROBES
- REPLACE AERATION BLOWER



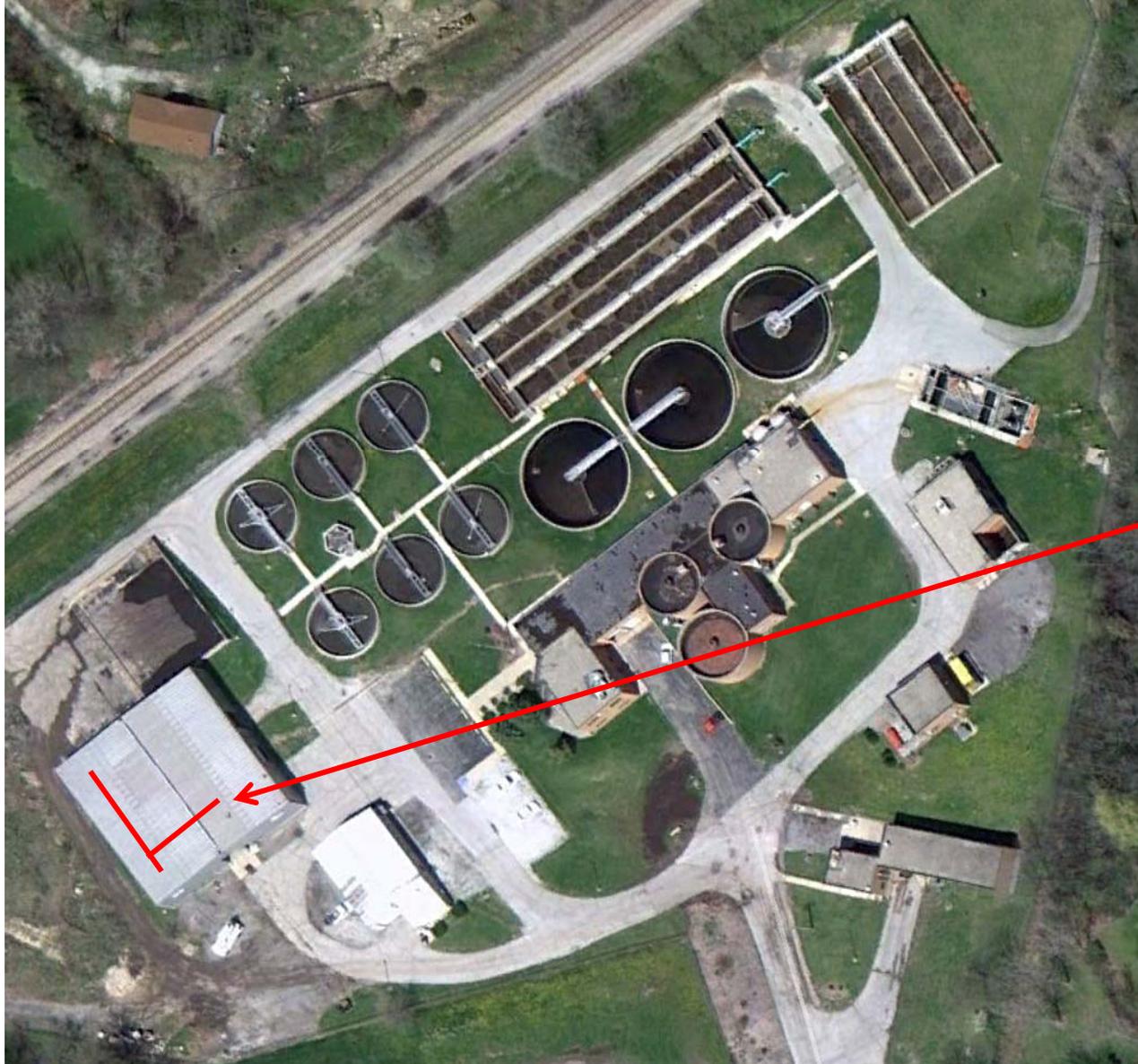
- AERATION TANK FLOW SPLIT IMPROVEMENTS



- REPLACE SLUDGE THICKENER



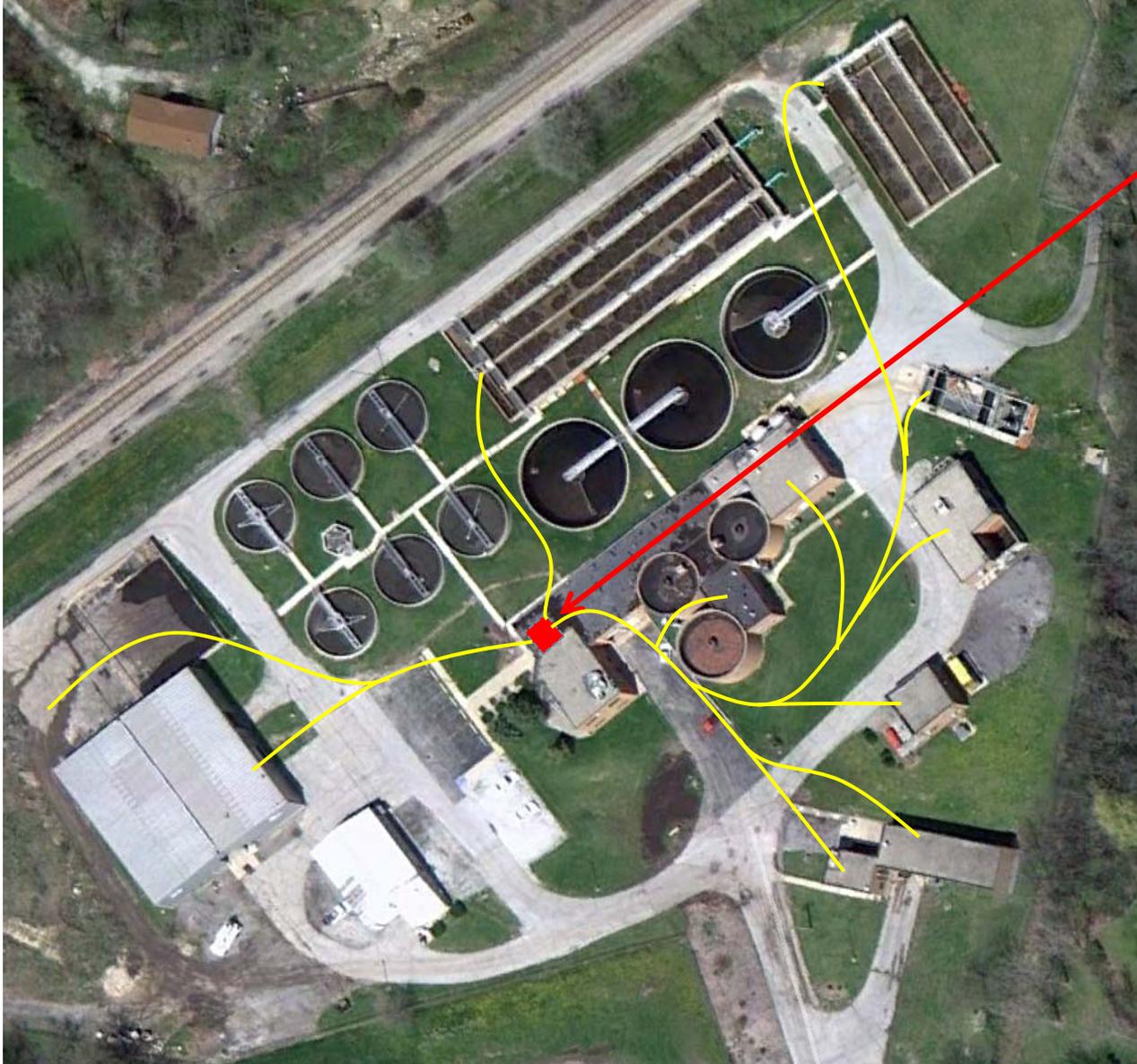
- **DIGESTER  
CLEANING, CRACK  
REPAIR AND GAS  
SYSTEM UPGRADE**



- REPLACE/UPGRADE SLUDGE CONVEYOR SYSTEM



- REPLACE EXISTING GENERATOR



- MONITORING/  
CONTROL SYSTEM  
UPGRADES

# PROJECT SEGMENTS

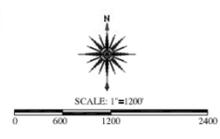
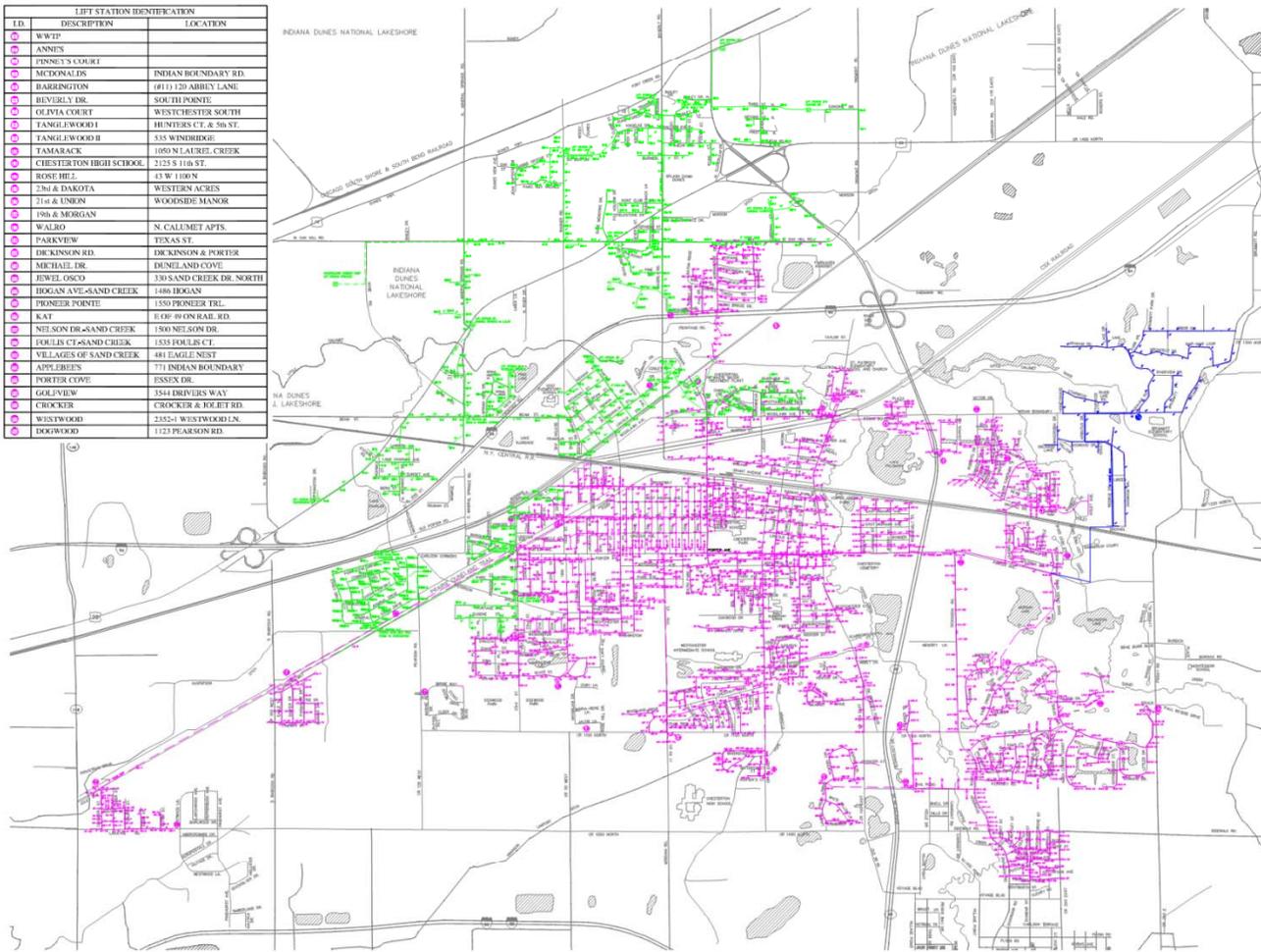


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# Current Collection System



LIFT STATION IDENTIFICATION	
ID	LOCATION
○	WWTP
○	ANNEX
○	PINNEY'S COURT
○	MCDONALD'S
○	INDIAN BOUNDARY RD.
○	(611) 120 ABBEY LANE
○	BEVERLY DR.
○	SOUTH POINTS
○	OLYMPIA COURT
○	WESTCHESTER SOUTH
○	TANGLEWOOD I
○	HUNTERS CT. & 50 ST.
○	TANGLEWOOD II
○	535 WINDRIDGE
○	TAMARACK
○	1050 NATUREL CREEK
○	CHESTERTON HIGH SCHOOL
○	2125 S 110th ST.
○	ROSE HILL
○	43 W 1100 N
○	23rd & DAKOTA
○	WESTERN ACRES
○	21st & UNION
○	WOODSIDE MANOR
○	19th & MORGAN
○	WALRO
○	N. CALUMET APTS.
○	PARKVIEW
○	TEXAS ST.
○	DE KUNSON RD.
○	DE KUNSON & PORTER
○	MICHAEL DR.
○	DUNELAND COVE
○	JEWEL OSCO
○	330 SAND CREEK DR. NORTH
○	HOGAN AVE-SAND CREEK
○	1486 HOGAN
○	PIONEER PORTE
○	1550 PIONEER TRL.
○	KAT
○	E 09th DR INDIAN RD.
○	NELSON DR-SAND CREEK
○	1500 NELSON DR.
○	FOULIS CT-SAND CREEK
○	1533 FOULIS CT.
○	VILLAGES OF SAND CREEK
○	481 EAGLE NEST
○	APPLEBEE'S
○	771 INDIAN BOUNDARY
○	PORTER COVE
○	ESSEX DR.
○	LOOKVIEW
○	3544 BRIVERS WAY
○	CROCKER & JOE ET RD.
○	WESTWOOD
○	2352-1 WESTWOOD LN.
○	DOGWOOD
○	1123 PEARSON RD.

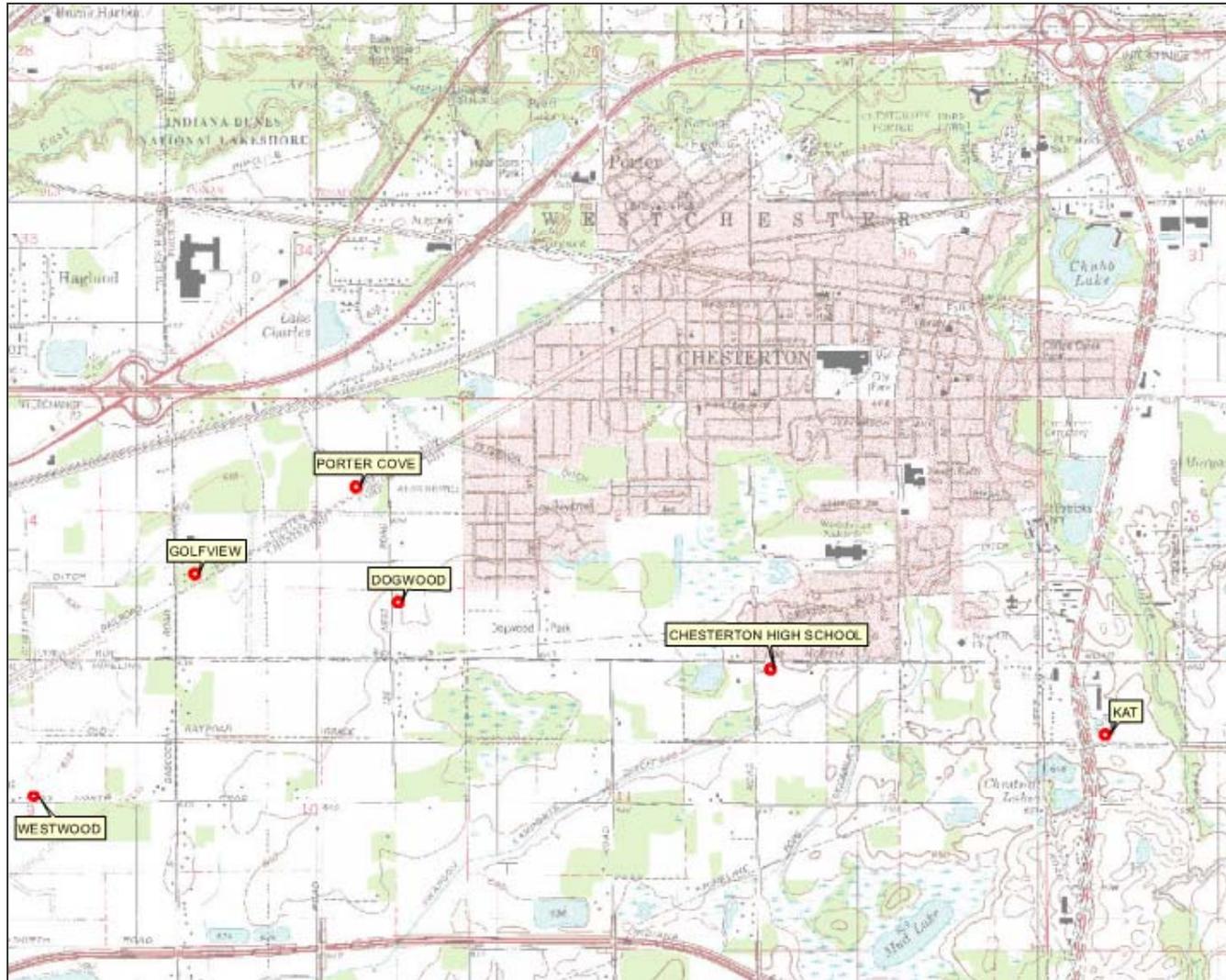


LEGEND	
<span style="color: green;">—</span>	PORTER SEWERS
<span style="color: magenta;">—</span>	CHESTERTON SEWERS
<span style="color: blue;">—</span>	INDIAN BOUNDARY CONSERVANCY DISTRICT

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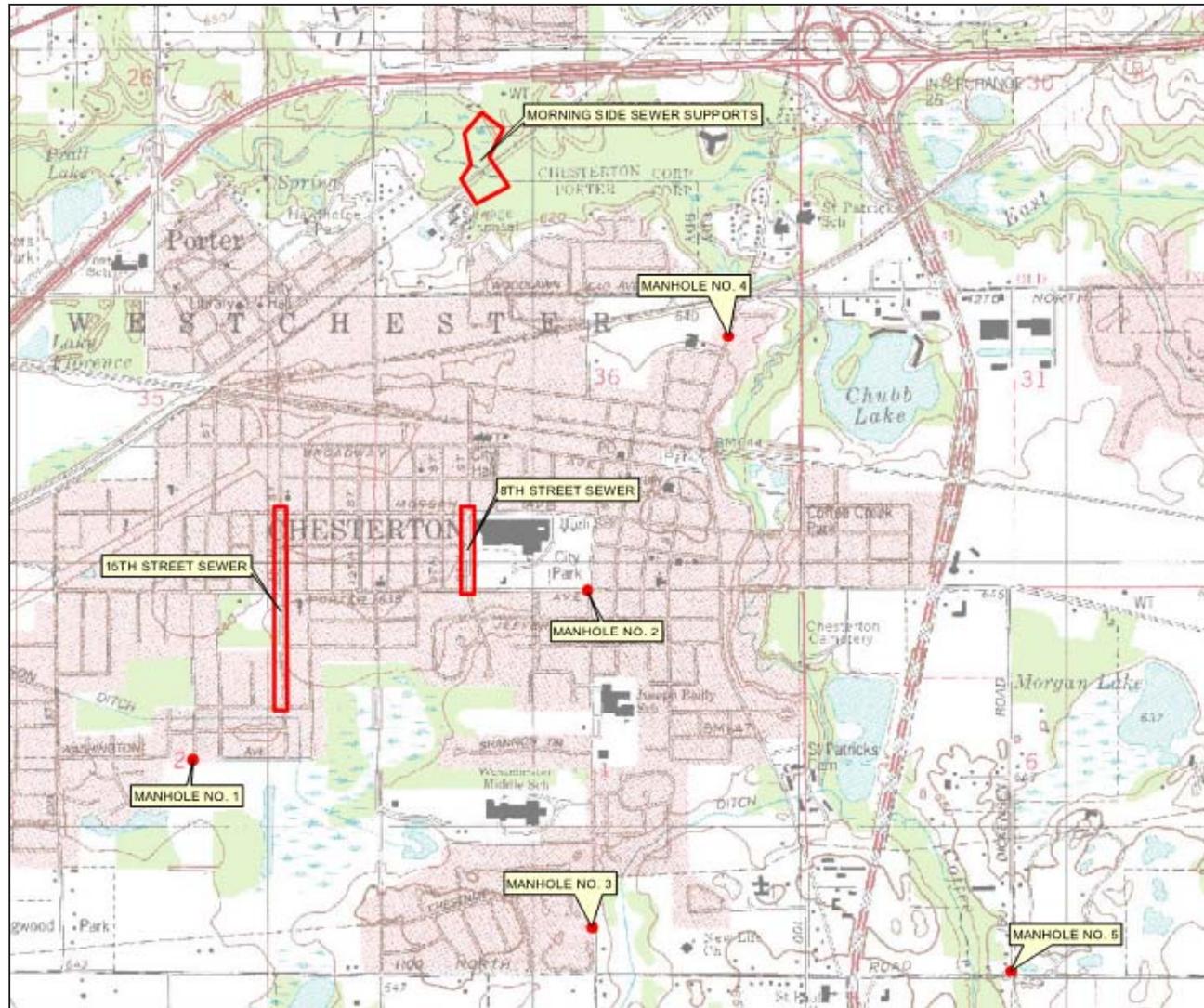
## 6 LIFT STATION UPGRADES

- VARIABLE SPEED DRIVES
- POWER UPGRADES
- MONITORING UPGRADES
- Cost Savings \$22,800.00/yr

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## SEWER SYSTEM REHABILITATION PROJECTS

- PIPE SUPPORT UPGRADE
- TWO SEWER PIPE LININGS
- FIVE MANHOLE LININGS

# Schedule



- Public Hearing October 29, 2012
- Public Comment Period (5 Days) November 5, 2012
- Utility Service Board Approval November 19, 2012
- PER Submittal November 22, 2012
- Anticipated PER Approval January 2013
- First Phase Plans & Specs Submittal January 2013
- First Phase Plans & Specs Approval February 2013
- Advertise for Bid March 2013
- First Bond Closing April 2013

# Schedule



- Second Phase Plans & Specs Submittal June 2013
- Second Phase Plans & Specs Approval July 2013
- Advertise for Bid August 2013
- Second Bond Closing September 2013
- Contract Award October 2013
- Initiation of Construction November 2013
- Substantial Completion July 2015
- Initiation of Operation September 2015

# Schedule



- Second Phase Plan Approval June 2013
- Site Preparation July 2013
- Project Design August 2013
- Project Permitting August 2013 – February 2014
- Funding Development March 2014 – September 2014
- Bidding and Construction Phase October 2014 – June 2016
- Startup and Commissioning June 2016 – August 2016
- Achievement of Full Operation September 2016
- In-Plant Construction October 2018
- Substantial Completion July 2015
- Initiation of Operation September 2015

Task	Completion Date
Project Design	August 2012 – August 2013
Project Permitting	August 2013 – February 2014
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Achievement of Full Operation	September 2016
Post-Construction Monitoring Report	October 2018

# Estimated Project Costs



## Estimated Construction Costs:

• Secondary Treatment	\$ 2,155,000.00
• Inflow / Infiltration Correction	\$ 800,000.00
• Combined Sewer Overflow Correction	\$8,864,000.00
• Contingencies	<u>\$1,181,000.00</u>
• <b>TOTAL CONSTRUCTION:</b>	<b>\$13,000,000.00</b>

## Estimated Non-Construction Costs:

• Financial	\$ 100,000.00
• Legal	\$ 125,000.00
• Engineering	<u>\$1,675,000.00</u>
• <b>TOTAL NON-CONSTRUCTION:</b>	<b>\$1,900,000.00</b>

**TOTAL PROJECT COST (Estimated): \$14,900,000.00**





# Questions?



**THANK YOU**