



Public Works Commission

Application for Financial Assistance

IMPORTANT: Please consult "Instructions for Financial Assistance for Capital Infrastructure Projects" for guidance in completion of this form.

Applicant

Applicant: City of Englewood Subdivision Code: 113-25396

District Number: 4 County: Montgomery Date: 08/30/2022

Contact: Eric Smith Phone: (937) 836-3106
(The individual who will be available during business hours and who can best answer or coordinate the response to questions)

Email: smith@englewood.oh.us FAX: _____

Project

Project Name: South Water Tower Rehabilitation Zip Code: 45322

Subdivision Type	Project Type	Funding Request Summary	
	<small>(Select single largest component by \$)</small>	<small>(Automatically populates from page 2)</small>	
<u>City</u>	1. Road	Total Project Cost:	<u>851,400 .00</u>
	2. Bridge/Culvert	1. Grant:	<u>0 .00</u>
	x 3. Water Supply	2. Loan:	<u>482,400 .00</u>
	4. Wastewater	3. Loan Assistance/ Credit Enhancement:	<u>0 .00</u>
	5. Solid Waste	Funding Requested:	<u>482,400 .00</u>
	6. Stormwater		

District Recommendation (To be completed by the District Committee)

Funding Type Requested	SCIP Loan - Rate: _____ % Term: _____ Yrs	Amount: _____ .00
<small>(Select one)</small>		
<input type="checkbox"/> State Capital Improvement Program	RLP Loan - Rate: _____ % Term: _____ Yrs	Amount: _____ .00
<input type="checkbox"/> Local Transportation Improvement Program	Grant:	Amount: _____ .00
<input type="checkbox"/> Revolving Loan Program	LTIP:	Amount: _____ .00
<input type="checkbox"/> Small Government Program	Loan Assistance / Credit Enhancement:	Amount: _____ .00
District SG Priority: _____		

For OPWC Use Only

STATUS	Grant Amount: _____ .00	Loan Type: <input type="checkbox"/> SCIP <input type="checkbox"/> RLP
Project Number: _____	Loan Amount: _____ .00	Date Construction End: _____
	Total Funding: _____ .00	Date Maturity: _____
Release Date: _____	Local Participation: _____ %	Rate: _____ %
OPWC Approval: _____	OPWC Participation: _____ %	Term: _____ Yrs

1.0 Project Financial Information (All Costs Rounded to Nearest Dollar)

1.1 Project Estimated Costs

Engineering Services

Preliminary / Final Design:	_____	⁰	.00	
Construction Administration:	_____	⁰	.00	
Total Engineering Services:		a.) _____	⁰ .00	_____ ⁰ %
Right of Way:		b.) _____	⁰ .00	
Construction:		c.) _____	851,400 .00	
Permits, Advertising, Legal:		e.) _____	⁰ .00	
Construction Contingencies:		f.) _____	⁰ .00	
Total Estimated Costs:		g.) _____	851,400 .00	

1.2 Project Financial Resources

Local Resources

Local In-Kind or Force Account:		a.) _____	⁰ .00	
Local Revenues:		b.) _____	⁰ .00	
Other Public Revenues:				
Local / ODOT - Let:	_____	d.) _____	⁰ .00	
ODOT PID:	_____			
OEPA / OWDA:		e.) _____	⁰ .00	
CDBG:		f.) _____	.00	
Other: ^{DOD}	_____	g.) _____	369,000 .00	
Subtotal Local Resources:		i.) _____	369,000 .00	_____ 43.3 %

OPWC Funds (Check all requested and enter Amount)

Grant:	_____ ⁰ % of OPWC Funds	j.) _____	⁰ .00	
Loan:	_____ ¹⁰⁰ % of OPWC Funds	k.) _____	482,400 .00	_____ ⁸ yrs
Loan Assistance / Credit Enhancement:		l.) _____	⁰ .00	
Subtotal OPWC Funds:		m.) _____	482,400 .00	_____ 56.7 %
Total Financial Resources:		n.) _____	851,400 .00	_____ 100 %

1.3 Availability of Local Funds

Attach a statement signed by the Chief Financial Officer listed in section 5.2 certifying all local resources required for the project will be available on or before the earliest date listed in the Project Schedule section. The OPWC Agreement will not be released until the local resources are certified. Failure to meet local share may result in termination of the project. Applicant needs to provide written confirmation for funds coming from other funding sources.

2.0 Repair / Replacement or New / Expansion

2.1 Total Portion of Project New / Expansion: _____⁰.00

3.0 Project Schedule

3.1 Engineering / Design / Right of Way Begin Date: 02/01/2023 End Date: 06/01/2023

3.2 Bid Advertisement and Award Begin Date: 07/01/2023 End Date: 08/01/2023

3.3 Construction Begin Date: 09/15/2023 End Date: 06/02/2024

Construction cannot begin prior to release of executed Project Agreement and issuance of Notice to Proceed. Failure to meet project schedule may result in termination of agreement for approved projects. Modification of dates must be requested in writing by project official of record and approved by the Commission once the Project Agreement has been executed.

4.0 Project Information

If the project is multi-jurisdictional, information must be consolidated in this section.

4.1 Useful Life / Cost Estimate / Age of Infrastructure

Project Useful Life: 17 Years Age: 2000 (Year built or year of last major improvement)

Attach Registered Professional Engineer's statement, with seal or stamp and signature confirming the project's useful life indicated above and detailed cost estimate.

4.2 User Information

Road or Bridge: Current ADT _____ Year _____

Water / Wastewater: Based on monthly usage of 4,500 gallons per household; attach current ordinances.

Residential Water Rate Current \$ 26 Number of households served: 5,000

Residential Wastewater Rate Current \$ 0 Number of households served: _____

Stormwater: Number of households served: _____

4.3 Project Description

A: SPECIFIC LOCATION (Supply a written location description that includes the project termini; a map does not replace this requirement.) 2000 character limit.

The south elevated water tank is located near the intersection of Hoke Road and Smith Drive in Englewood.

B: IDENTIFY THE PROBLEM (Describe the issue to be addressed) 2000 character limit.

A detailed inspection and condition report was issued by Dixon Engineering on July 11, 2022. A summary is attached. Several OEPA required corrections are also needed.

C: PROJECT SCOPE (Describe the work to be completed) 2000 character limit.

The one million gallon storage tank is proposed for repainting both inside and out. Some minor repairs are also included. A few EPA required improvements are included.

5.0 Project Officials

Changes in Project Officials must be submitted in writing from an officer of record.

5.1 Chief Executive Officer (Person authorized in legislation to sign project agreements)

Name: Eric Smith
Title: City Manager
Address: 333 West National Road

City: Englewood State: OH Zip: 45322
Phone: (937) 836-3106
FAX:
E-Mail: smith@englewood.oh.us

5.2 Chief Financial Officer (Can not also serve as CEO)

Name: Della Stearns
Title: Finance Director
Address: 333 West National Road

City: Englewood State: OH Zip: 45322
Phone: (937) 836-5106
FAX:
E-Mail: stearns@englewood.oh.us

5.3 Project Manager

Name: Eric Smith
Title: City Manager
Address: 333 West National Road

City: Englewood State: OH Zip: 45322
Phone: (937) 836-3106
FAX:
E-Mail: smith@englewood.oh.us

6.0 Attachments / Completeness review

Confirm in the boxes below that each item listed is attached (Check each box)

- x A certified copy of the legislation by the governing body of the applicant authorizing a designated official to sign and submit this application and execute contracts. This individual should sign under 7.0, Applicant Certification, below.
- x A certification signed by the applicant's chief financial officer stating the amount of all local share funds required for the project will be available on or before the dates listed in the Project Schedule section. If the application involves a request for loan (RLP or SCIP), a certification signed by the CFO which identifies a specific revenue source for repaying the loan also must be attached. Both certifications can be accomplished in the same letter.
- x A registered professional engineer's detailed cost estimate and useful life statement, as required in 164-1-13, 164-1-14, and 164-1-16 of the Ohio Administrative Code. Estimates shall contain an engineer's seal or stamp and signature.

A cooperative agreement (if the project involves more than one subdivision or district) which identifies the fiscal and administrative responsibilities of each participant.

Farmland Preservation Review - The Governor's Executive Order 98-IV, "Ohio Farmland Protection Policy" requires the Commission to establish guidelines on how it will take protection of productive agricultural and grazing land into account in its funding decision making process. Please include a Farm Land Preservation statement for projects that have an impact on farmland.

Capital Improvements Report. CIR Required by O.R.C. Chapter 164.06 on standard form.

- x Supporting Documentation: Materials such as additional project description, photographs, economic impact (temporary and/or full time jobs likely to be created as a result of the project), accident reports, impact on school zones, and other information to assist your district committee in ranking your project. Be sure to include supplements which may be required by your local District Public Works Integrating Committee.

7.0 Applicant Certification

The undersigned certifies: (1) he/she is legally authorized to request and accept financial assistance from the Ohio Public Works Commission as identified in the attached legislation; (2) to the best of his/her knowledge and belief, all representations that are part of this application are true and correct; (3) all official documents and commitments of the applicant that are part of this application have been duly authorized by the governing body of the applicant; and, (4) should the requested financial assistance be provided, that in the execution of this project, the applicant will comply with all assurances required by Ohio Law, including those involving Buy Ohio and prevailing wages.

Applicant certifies that physical construction on the project as defined in the application has NOT begun, and will not begin until a Project Agreement for this project has been executed with the Ohio Public Works Commission. Action to the contrary will result in termination of the agreement and withdrawal of Ohio Public Works Commission funding from the project.

Certifying Representative (Printed form, Type or Print Name and Title)

Original Signature / Date Signed

CITY OF ENGLEWOOD

IN

MONTGOMERY COUNTY, OHIO

RESOLUTION NO: 23-22

PASSED: July 26, 2022

A RESOLUTION: AUTHORIZING THE CITY MANAGER TO SUBMIT APPLICATIONS TO THE OHIO PUBLIC WORKS COMMISSION FOR THE STATE CAPITAL IMPROVEMENT PROGRAM (SCIP) AND LOCAL TRANSPORTATION IMPROVEMENT PROGRAM (LTIP) FOR THE 2023 (ROUND 37) PROGRAM YEAR, AUTHORIZING THE CITY MANAGER TO EXECUTE CONTRACTS AS REQUIRED

WHEREAS, the voters of Ohio re-approved the State Capital Improvement Program (SCIP) and Local Transportation Improvement Program (LTIP) which authorizes the State of Ohio to issue bonds for the purpose of financing or assisting local governments in financing public infrastructure capital improvements; and

WHEREAS, Montgomery County has been defined as District 4 by enabling legislation, and has elected a review committee of nine members which as promulgated such rules and procedures as are considered necessary to categorize and review projects for funding; and

WHEREAS, the State Legislature enacted a one cent gasoline tax for local road and bridge improvements, the proceeds of which shall be added to the Issue II funding pot to be similarly distributed; and

WHEREAS, applications for year thirty-seven funding and gas tax projects must be submitted to the District 4 Public Works Integrating Committee by August 31, 2022; and

WHEREAS, applications must include a commitment for partial funding of proposed projects, and must be reviewed by the legislative authority of each applicant; and

WHEREAS, the City of Englewood has an adopted Capital Improvement Program (CIP) and has had an ongoing CIP process for many years;

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF ENGLEWOOD, MONTGOMERY COUNTY, OHIO, AS FOLLOWS:

SECTION I: That the City Manager is herewith authorized to submit an application for projects listed in the improvements schedule attached, and that such schedule and supporting documentation be considered an addendum and full part of the Englewood Capital Improvements Program.

- SECTION II:** That the City Manager be authorized to either directly, or through his designee, provide such information as may be requested by the District 4 Public Works Integrating Committee, or by the State Commission, or by its directors or administrators.
- SECTION III:** That the City Manager be authorized to determine the best source of matching funding for the capital improvements projects requested, and City Council agrees that any or all monies or services pledged be provided.
- SECTION IV:** That the City Manager is further authorized to enter into any contracts and/or agreements as may be necessary and appropriate for obtaining this financial assistance.
- SECTION V:** That the City of Englewood agrees to an assessment for the expenses of the District 4 Public Works Integrating Committee, said assessment not to exceed one percent (1%) of funded project estimates, loans or credit enhancement.
- SECTION VI:** That the City of Englewood recognizes that cost overruns may not be funded by the District 4 Committee.
- SECTION VII:** It is hereby found and determined that all formal actions of this Council concerning and relating to the passage of this Resolution were taken in an open meeting of this Council, and that all deliberations of this Council and of any committees that resulted in those formal actions were in meetings open to the public, in compliance with all legal requirements.
- SECTION VIII:** That this Resolution shall be in full force and effect at the earliest date allowed by law.

PASSED this 26th day of July, 2022.


Thomas Franz, Mayor

ATTEST:


Kerry Norman, Clerk of Council

Attachment "A"

1. Camborne Drive Water Main Replacement
2. Wenger Road Water Main Replacement
3. Water Tower Rehab

CERTIFICATE

I, Kerry Norman, Clerk of Council of the City of Englewood, Montgomery County, Ohio, do hereby certify the foregoing is a true and correct copy from the *Record of Proceedings* of said City. WITNESS my signature this 26th day of July, 2022.



Kerry Norman, Clerk of Council

CERTIFICATE OF POSTING

I, Kerry Norman, Clerk of Council of the City of Englewood, Montgomery County, Ohio, do hereby certify publication of the foregoing RESOLUTION was made as designated by Sections 224.01 and 24.02 of the Englewood Code.



Kerry Norman, Clerk of Council



CITY OF ENGLEWOOD

333 West National Road, Englewood, Ohio 45322-1495, (937) 836-5106

Fax (937) 836-7426 Internet Address: www.Englewood.oh.us

CHIEF FINANCIAL OFFICER'S
CERTIFICATION OF AVAILABILITY OF
FUNDS AND OF LOAN REPAYMENT

Date: August 31, 2022

I, Della Stearns, Finance Director of the City of Englewood, hereby certify that the City of Englewood has the amount of \$482,400.00 in the Water Fund and that this amount will be used to pay the local share and/or loan repayment for the South Water Tower Rehabilitation when it is required.

The loan repayment schedule the City anticipates is 0% for fifteen (15) years.

A handwritten signature in black ink, appearing to read "Della Stearns", is written over a horizontal line.

Della Stearns
Finance Director



open space community

**DETAILED ENGINEER'S ESTIMATE /
USEFUL LIFE STATEMENT**


Englewood, Ohio 1,000,000 Gallon Spheroid (South) Water Storage Tank Rehabilitation

ITEM	QUANTITY	UNIT	PRICE	AMOUNT
Exterior repaint with containment	1	Lump Sum	N/A	\$430,000
Wet interior repaint	1	Lump Sum	N/A	\$240,000
Dry interior repaint	1	Lump Sum	N/A	\$60,000
Roof painter's railing	1	Lump Sum	N/A	\$7,000
Overflow flap gate	1	Lump Sum	N/A	\$3,000
Roof vent	1	Lump Sum	N/A	\$6,000
Ladder cage removal	1	Lump Sum	N/A	\$2,000
Sample tap	1	Lump Sum	N/A	\$1,000
Mixer	1	Lump Sum	N/A	\$20,000
Mud Valve	1	Lump Sum	N/A	\$5,000
Subtotal				\$774,000
Contingencies (10%)				\$77,400
TOTAL				\$851,400

The weighted useful life is 17.09 years. See attached for calculation.

James Rowley, PE

Digitally signed
by James Rowley
PE
Date: 2022.08.
'12:30:13 -04'00



Weighted Useful Life Calculation

Englewood, Ohio 1,000,000 Gallon Spheroid (South) Water Storage Tank Rehabilitation

Item	Useful Life	Estimated Cost	Weighted Useful Life
Exterior repaint with containment	15 years	\$430,000	6,450,000 dollar-years
Wet interior repaint	20 years	\$240,000	4,800,000 dollar-years
Dry interior repaint	20 years	\$60,000	1,200,000 dollar-years
Roof painter's railing	30 years	\$7,000	210,000 dollar-years
Overflow flap gate	30 years	\$3,000	90,000 dollar-years
Roof vent	30 years	\$6,000	180,000 dollar-years
Ladder cage removal	-	-	- dollar-years
Sample tap	15 years	\$1,000	15,000 dollar-years
Mixer	10 years	\$20,000	200,000 dollar-years
Mud valve	10 years	\$5,000	50,000 dollar-years
Total		\$772,000	13,195,000 dollar-years

Average Weighted Useful Life 13,195,000 dollar-years / \$772,000 **17.09 years**

I hereby certify this weighted useful life calculation to be reasonable and accurate to the best of my knowledge and based upon current industry practices for such a calculation.

James Rowley, PE

Digitally signed
by James Rowley

Date: 2022.08.2
'12:33:20 -04'00



OHIO PUBLIC WORKS COMMISSION DISTRICT 4 Round 2022-2023 Supplemental Questionnaire

Applicant: [City of Englewood](#)

Project Title: [South Water Tower Rehabilitation](#)

Application Summary:

Briefly describe the project:

[Englewood's south water tower is due for minor repairs and re-coating inside and out.](#)

Priority:

Is this application your priority project? (Circle One)	
Yes <input checked="" type="radio"/>	No <input type="radio"/>

Generation of Revenue:

Will new user fees or assessments be assessed as part of this project? (Circle One)	
Yes <input type="radio"/>	No <input checked="" type="radio"/>
What will the new user fees or assessments be used for?	

Additional Funding:

Will OPWC match, in part, a committed grant or loan? (Circle One)	
Yes <input checked="" type="radio"/>	No <input type="radio"/>
If no, was the project submitted to an appropriate agency for funding, but denied due to lack of funding? (Circle One)	
Yes – Appropriate Documentation Attached <input type="radio"/>	No <input type="radio"/>

Readiness of Project:

Will this project be <u>substantially</u> underway on or before June 1, 2024? (Circle One)	
Yes <input checked="" type="radio"/>	No <input type="radio"/>

Health & Safety:

Describe the specific health or safety issue being addressed by this project. What deficiency or condition is causing the health or safety issue?
Repairs to a water tower that is beginning to show deterioration. A detailed inspection and condition report was issued by Dixon Engineering on July 11, 2022. A summary is attached. Several OEPA required corrections are also needed.

Addresses District Infrastructure Needs:

Is this project located in more than one community? (Circle One)		
Yes <input type="radio"/>	No <input checked="" type="radio"/>	
What percentage of the community will be served by this project? (Circle One)		
Less than 25% <input type="radio"/>	25% to 40% <input type="radio"/>	More than 40% <input checked="" type="radio"/>

Economic Development

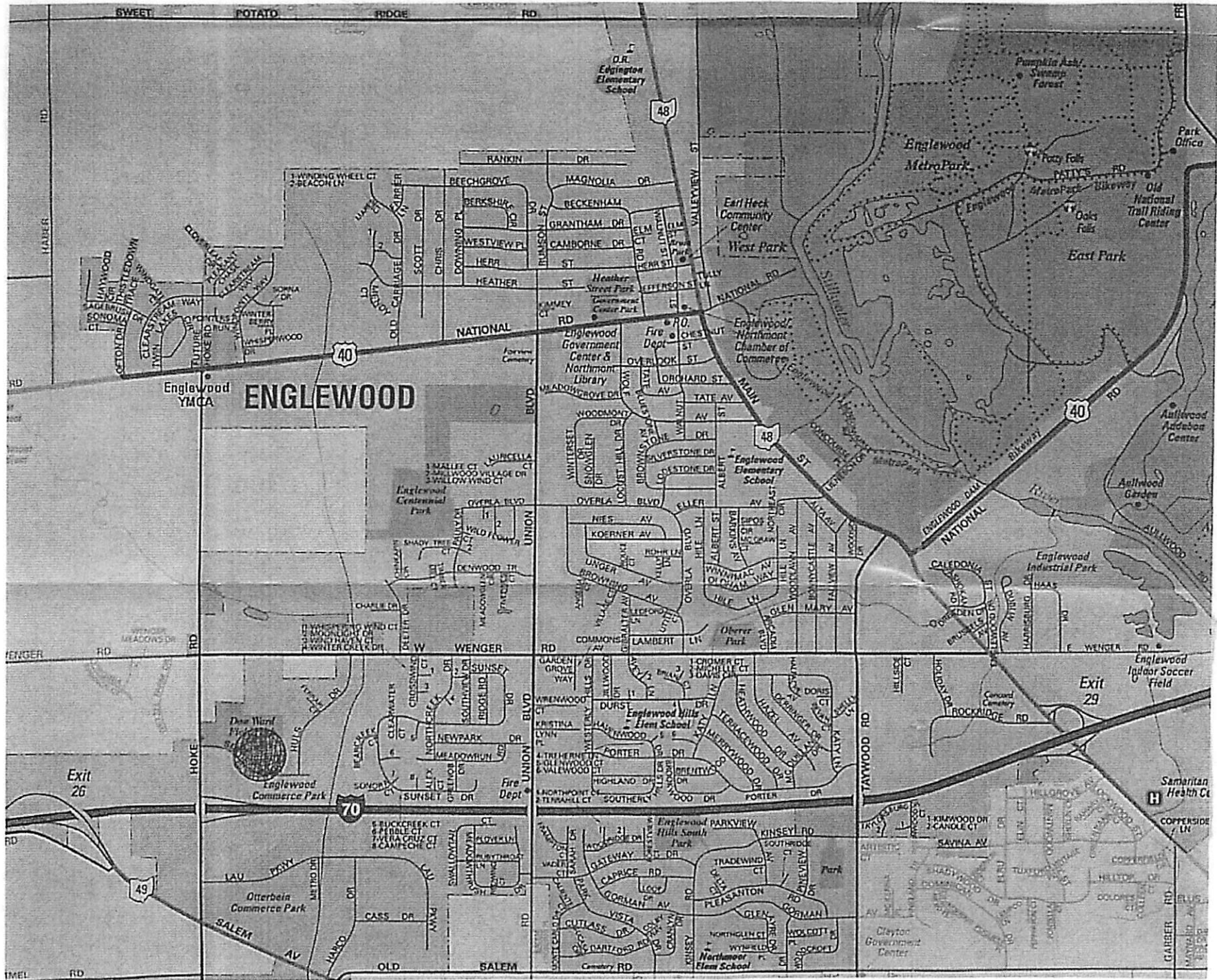
How many jobs are being created as a result of this project?	
How many jobs will be retained as a result of this project?	
Why is it necessary to fund this improvement to secure this development?	
What type of industry is proposed in this development?	

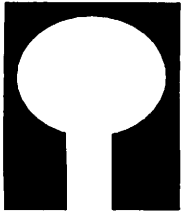
Relieve Existing Traffic Congestion:

What is the level of service?	
--------------------------------------	--

Other Factors

What other factors exist that make this project more important than other like projects?





DIXON

**ENGINEERING & INSPECTION SERVICES
FOR THE COATING INDUSTRY**

1104 Third Avenue
Lake Odessa, MI 48849
Telephone: (616) 374-3221
Fax: (616) 374-7116

July 11, 2022

City of Englewood
333 West National Rd.
Englewood, OH 45322

Attn: Eric Smith, City Manager

Re: 1,000,000 Gallon Spheroid Water Storage Tank (South)
Maintenance Inspection

Dear Mr. Smith:

Please find enclosed the above referenced report for the 1,000,000 gallon spheroid water storage tank. The inspection was completed on May 10, 2022. The report consists of: 1) cover page; 2) conclusions and recommendations; 3) detailed report; 4) Field Inspection Report (FIR); 5) photographs and descriptions; and 6) flash drive.

Brief explanation: 1) The cover page is self-explanatory. 2) Conclusions and recommendations explain in short form what was found on the tank and what DIXON recommends for repair and maintenance of the tank. 3) This section is the long report that goes into detail to explain what exactly was found and why DIXON makes the recommendations. 4) Field Inspection Report (FIR) is the form that was completed when the inspection team was on-site and includes the dimensions and conditions of the tank. 5) Photographs and descriptions give the Owner a visual record of the condition of the tank and appurtenances. 6) Flash drive is an Adobe PDF format of the complete report and photos for your convenience.

If you have any questions or concerns, please call me at (330) 201-9901.

Thank you for choosing DIXON for your inspection needs.

FOR DIXON ENGINEERING, INC.,

Tony Lovejoy
Project Manager

Enclosures

Dixon Engineering, Inc.

Maintenance Inspection
1,000,000 Gallon Spheroid
(South)

Englewood, Ohio

Inspection Performed: May 10, 2022
Reviewed by Joseph T. Hoban, P.E.: June 8, 2022

Dixon Engineering Inc.
1104 Third Ave. Lake Odessa, MI 48849

Phone (616) 374-3221
Fax (616) 374-7116
<http://www.dixonengineering.net>
dixon@dixonengineering.net

CONCLUSIONS:

1. The exterior coating is an unknown system. The coating is in good condition overall. Coating deterioration includes spot failures to the substrate with rust undercutting, topcoat delamination, and rust bleedthrough. There are numerous coating failures on the roof and a few on the basebell and bowl.
2. The dry interior coating is presumed to be an epoxy system. The coating is in good condition overall. Coating deterioration includes spot failures to the substrate. Most of the failures are on the topside of the platforms.
3. The wet interior coating is presumed to be an epoxy system. The coating is in good condition overall. Below the high-water level coating deterioration includes spot failures to the substrate on the bowl and access tube. Above the high-water level coating is deteriorating at the roof panel weld seams.

RECOMMENDATIONS (GENERAL AND IMMEDIATE WORK):

Annually inspect the roof vent, hatches, and any other health or security items on the structure. The work could be performed by in-house personnel or contracted as part of a regular maintenance program.

Schedule regular cleanings and inspections of the tank by an independent third party once every five years as recommended by AWWA.

1. Continue to maintain the cathodic protection system. The cost would be dependent on your contract with your cathodic vendor.
2. Verify operation of the aviation lights. If operational, the lights should illuminate shortly after dusk. The work can be performed by in-house personnel from the ground.
3. Request that the antenna owners return to correct deficiencies in cable sealing. The cable penetrations should be sealed with caulk or rubber boots.

RECOMMENDATIONS (IMMEDIATE WORK TO MEET OHIO EPA REQUIREMENTS):

The Ohio EPA may allow some of the required changes to be delayed until the next paint project. These items are listed as immediate work since they are currently out of compliance.

1. Install a gasket on the wet interior roof hatch to meet current Ohio EPA requirements. The cost would be incidental to the next painting project or could be performed by in-house personnel.
2. Replace the roof vent with a pressure vacuum vent that has a rain shield to meet current Ohio EPA requirements. The estimated cost is \$6,000.

3. Replace the cover over the access tube air gap to meet current Ohio EPA requirements. The cost would be incidental to the next painting project.
4. Install a sample tap on the fill/draw pipe to meet current Ohio EPA requirements. The estimated cost is \$1,000.

RECOMMENDATIONS (WITH THE NEXT PAINT PROJECT):

Complete the recommended work pending the revised condition assessment after the next five year inspection. The repairs and upgrades should be completed during the next major tank rehabilitation project when coating repairs are made.

1. Abrasive blast clean the exterior inside a dust tight containment system and repaint with a urethane system. The estimated cost is \$330,000 plus \$100,000 for containment.
2. Spot abrasive blast clean the topside of the platforms, the baseplate, and other spot coating failures in the dry interior. Spot repaint all prepared surfaces with an epoxy coating system. The estimated cost is \$20,000.
3. Recoat the foundation to help prevent deterioration. The cost would be incidental to the next painting project.
4. Install a painter's railing outside the existing roof handrail. The estimated cost is \$7,000.
5. Install additional rigging couplings on the roof for temporary fall prevention of workers in the wet interior. The cost would be incidental to the next painting project.
6. Remove all antennas and antenna cables prior to abrasive blast cleaning and repainting. The cost is assumed to be the responsibly of the antenna owners.
7. Install a screened flap gate at the overflow pipe discharge. The estimated cost is \$3,000.
8. Install a handhold at the wet interior roof hatch and access tube roof hatch. The handhold would assist the climber while entering and exiting the openings. The cost would be incidental to the next painting project.
9. Remove the cage on the dry interior riser and basebell ladders. The estimated cost is \$2,000.
10. Install a mechanical mixer in the wet interior. The estimated cost is \$20,000.
11. Remove the glandular expansion joint on the fill/draw pipe and replace with a bellows type joint. The estimated cost is \$8,000.
12. Install a mud valve in the bottom of the tank. The estimated cost is \$5,000.

A DISCUSSION ON RESCUE AND RETRIEVAL OPERATIONS FROM ELEVATED STORAGE TANKS

Working on elevated water storage tanks is inherently dangerous. OSHA regulations give guidelines for the climbing on elevated structures. Contractors and Engineers/Consultants are responsible for their own employees, but even with safety training and proper equipment, accidents can occur. Most rescue squads are local or neighboring fire departments, with some departments having more experience than others. Water storage tanks are designed to store water and are not suited for rescue or retrieval convenience. We recommend that you meet with your local rescue personnel and draft a rescue plan. A copy of the plan should be kept at the tank and with the rescue crew.

OSHA does not require 30 inch manways or hatches, but for rescue purposes 30 inch openings would allow enough room for a rescue basket with an injured person on it to pass through. Smaller openings may not be sufficient for retrieval.

Rescue personnel would gain access to the injured person using the existing ladders while attached to fall prevention devices. If possible, the basket would be lowered through the riser and out the opening in the bottom. If needed, the rescue crew would work from the roof inside a handrail. A tripod would be used to attach a winch to the basket. If the basket cannot fit through the riser then it would need to be raised to the roof.

From the roof it is possible to lower the basket over the side to ground level, but that would require a very large winch and increased loading on the attachment point. On a rainy, windy, or snowy day, the objective would be to get rescue personnel off the roof as soon as possible, so lowering through the dry interior is preferred. A helicopter rescue would need to be performed if it is not possible to lower the rescue basket down the dry interior.

Upgrades intended to make a rescue easier are included in this report. Dixon recommends 30 inch manways or hatches where possible, and fall prevention devices on all ladders.

COST SUMMARY:

Exterior repaint with containment	\$430,000
Dry interior partial repaint	20,000
Roof painter's railing	7,000
Overflow flap gate	3,000
Roof vent	6,000
Ladder cage removal	2,000
Sample tap	1,000
Mixer	20,000
Expansion joint	8,000
Mud valve	<u>5,000</u>
Sub Total	\$502,000
Engineering and Contingencies	<u>\$72,000</u>
Total	\$574,000

Notes: For convenience, it may be desirable to add wet interior repainting to the project, although it can be delayed for another ten years. The estimated cost is \$240,000.

Exterior coating is primarily for aesthetics and can be delayed as long as desired since the next paint job cannot be an overcoat. While the appearance will deteriorate the structural integrity should not be impacted.

Exterior repainting will require temporary removal and relocation of the antennas and cables. This cost is not included in these estimates and is assumed to be the responsibility of the antenna owners. Cost is also not included for coordinating with the antenna carriers or for any redesign work needed for antenna mounting or cable routing.

INSPECTION:

On May 10, 2022, Dixon Engineering Inc. performed a maintenance inspection on the 1,000,000 gallon spheroid (South Tank) elevated water storage tank owned by the City of Englewood. Purposes of the inspection were to evaluate the interior and exterior coating's performance and life expectancy, assess the condition of metal surfaces and appurtenances, review safety and health aspects, and make budgetary recommendations for continued maintenance of the tank. All recommendations with budgeting estimates for repairs are incorporated in this report.

The inspection was performed by Ryan Szczepaniak, Engineering Technician. The inspector was assisted by Jesse Darnell, Engineering Technician, and Larry Houck, Staff Technician.

A source of water for cleaning was provided by the City. Sediment was flushed from the wet interior. Following the inspection, chlorine was added to disinfect the tank per AWWA Standard C652-19 Method No. 3. Photos are included with this report.

GENERAL INFORMATION:

The tank was built in 2000 by CB&I with a height to low-water level of 95 feet 6 inches.

CONDITIONS AND RECOMMENDATIONS:

EXTERIOR COATING CONDITIONS:

The exterior is likely the original system applied in 2000. The exterior was likely abrasive blast cleaned to a SSPC-SP6 commercial condition. The coating applied is an unknown system.

The coating is in good condition overall

The basebell coating is in good condition with a few failures. Primary method of deterioration is spot failures to the substrate.

The riser coating is in good condition with no failures.

The bowl coating is in fair condition with a few failures. Primary method of deterioration is spot failures to the substrate.

The sidewall coating is in good condition with no failures. There is lettering that states "Englewood" on the sidewall in two locations. There is a square emblem on the sidewall in two locations.

The roof coating is in fair condition with numerous failures. Primary methods of deterioration are spot failures to the substrate, rust bleedthrough, and topcoat delamination.

EXTERIOR COATING RECOMMENDATIONS:

Budget for total exterior coating removal and repainting in approximately five years or when aesthetics dictate. Fading will continue and more rust spots will occur decreasing the tank's aesthetic appearance.

Remove the existing coating by dry abrasive blast cleaning the steel to a commercial (SSPC-SP6) condition and apply a urethane system. All blast work would be performed inside a dust tight containment system using negative air pressure.

Total removal is recommended because the coating age is over 20 years, the overcoat window is typically 15 years.

The coating system would consist of a full prime coat on the bare metal, a full coat of epoxy, and followed by two full coats of urethane. The urethane system offers excellent abrasion resistance with high gloss and sheen retention. The expected life of this system is fifteen years. The system can be overcoated in fifteen years, and a second time approximately fifteen years after the first overcoat, extending the total life of the coating to approximately forty-five years before total removal would be necessary. The tank would be removed from service during the coating project. This is necessary to reduce condensation on the tank's surface. Urethane coatings have a minimum temperature requirement for application and are sensitive to moisture during the curing process. If moisture is present during the curing process, the appearance will become cloudy with little or no gloss. The estimated cost is \$330,000 plus \$100,000 for containment.

DRY INTERIOR COATING CONDITIONS:

The dry interior on this structure is defined as the non-water contact surfaces, consisting of the basebell, riser, bowl, and access tube.

The dry interior coating is likely the original system applied in 2000. The coating is presumed to be an epoxy system based on the appearance. Determining the exact coating type is not essential because we do not recommend overcoating in the dry interior.

The coating is in good condition overall.

The basebell coating is in good condition with only a few failures. Primary method of deterioration is spot failures to the substrate. Most of the failures are on the baseplate.

The riser coating is in good condition with only a few failures. Primary method of deterioration is spot failures to the substrate.

The coating on the topside of the platforms is in poor condition with numerous failures. Primary methods of deterioration are spot failures to the substrate and rust bleedthrough.

The bowl coating is in good condition with only a few failures. Primary method of deterioration is spot failures to the substrate.

The access tube coating is in good condition with no failures.

DRY INTERIOR COATING RECOMMENDATIONS:

Spot abrasive blast clean the dry interior to a commercial (SSPC-SP6) condition including the topside of the platforms and other areas of failed coating. The prepared surfaces would be coated with an epoxy system. The work should be performed with an exterior painting project. The estimated cost is \$20,000.

WET INTERIOR COATING CONDITIONS:

The coating is likely the original system applied in 2000. The coating is presumed to be an epoxy system based on the color and condition. Determining exact coating type is not essential because spot repair is not typically recommended and overcoating in the wet interior is never recommended.

The roof coating is in good condition with a few failures. Primary method of deterioration is spot failures to the substrate. There are minor coating failures on the roof panels but most of the deterioration is along the welded lap seams.

The sidewall coating is in good condition with no failures. There is no significant coating damage at the high-water level which would be the area most affected by ice movement.

The access tube coating is in good condition with only a few failures. Primary method of deterioration is spot failures to the substrate. There is significant coating damage at the high-water level likely caused from ice movement.

The coating on the bowl is in good condition with only a few failures. Primary method of deterioration is spot failures to the substrate. The bowl was covered with approximately 12 inches of sediment that was flushed from the interior during the inspection.

The surfaces below the normal operating water level are covered with mineral staining which does not affect the integrity of the coating system.

Overall adhesion of the coating is good. Adhesion was tested using a low-pressure power washer. With poor adhesion it would be possible to notice the coating fluctuate, and loose coating could be completely removed during cleaning. This is a crude form of testing, yet the least destructive. A destructive test involves cutting the coating to the substrate, the test area is then susceptible to corrosion.

WET INTERIOR COATING RECOMMENDATIONS:

The existing coating system has not deteriorated to the point where replacement is warranted. The cathodic protection system should adequately protect all areas below the high-water level where the coating has deteriorated. Reinspect in five years to update conditions and recommendations. Long term budget to repaint in ten years. The estimated cost is \$240,000.

CATHODIC PROTECTION CONDITIONS:

The tank has a suspended impressed current cathodic protection system. Surfaces below the high-water level are protected by the submerged system that is suspended from ropes attached to the sidewall. The supporting ropes, arms, and anode wires appear to be in good condition with no visible damage.

CATHODIC PROTECTION RECOMMENDATIONS:

Continue to maintain the cathodic protection system. The cost would be dependent on your contract with your cathodic vendor.

PIT PIPING CONDITIONS:

There is a pit in the basebell that contains piping and a valve. The pit has a metal grate cover that is in good condition. The piping is in good condition. The coating on the piping is in fair condition with general surface corrosion.

FOUNDATION AND ANCHOR BOLT CONDITIONS:

The exposed concrete foundation is in good condition. The top of the foundation is coated. The coating is in good condition with no significant failures.

There are anchor bolts evenly spaced on the baseplate around the basebell. The anchor bolts are in good condition with no deterioration.

FOUNDATION AND ANCHOR BOLT RECOMMENDATIONS:

Recoat the exposed concrete with an epoxy coating system to help prevent deterioration. The cost would be incidental to the next painting project.

GROUT CONDITIONS:

The grout between the steel baseplate and the concrete foundation is in good condition with none damaged or missing.

ROOF HANDRAIL, PAINTER'S RAILING, AND ROOF RIGGING CONDITIONS:

There is a handrail on the roof surrounding the roof hatches and the vent. The handrail is in good condition. The handrail is being used for antenna mounting.

The tank does not have a painter's railing.

There are not enough roof rigging couplings for safety and staging lines during wet interior coating work.

ROOF HANDRAIL, PAINTER'S RAILING, AND ROOF RIGGING RECOMMENDATIONS:

Install a painter's railing outside the existing roof handrail. The railing gives the contractor a rigging point for staging. The estimated cost is \$7,000.

Install additional rigging couplings on the roof for fall prevention of workers in the wet interior. The couplings would allow a contractor working in the wet interior to be tied off to a fall prevention device at all times. The cost would be incidental to the next painting project.

LIGHTING/ELECTRIC COMPONENTS CONDITIONS:

The tank has a double aviation light on the roof that appears to be in good condition. There is a photocell that will switch the lights on when it is dark outside. It could not be determined if the lights are operational. The photocell was covered by the inspector, but the light did not turn on. Sometimes the photocell will not switch the light on until it has been dark for several minutes.

There are light fixtures located in the dry interior. The lights were functioning properly during the inspection.

LIGHTING/ELECTRIC COMPONENT RECOMMENDATIONS:

Verify operation of the aviation lights. If operational, the lights should illuminate shortly after dusk. The work can be performed by in-house personnel from the ground.

ANTENNA CONDITIONS:

There are eight roof antennas and miscellaneous antenna equipment attached to the handrail. The antenna cable routing is in good condition and does not interfere with climbing or tank operations. Some of the cables are routed through openings at the top of the access tube to the roof that are sealed with spray foam insulation.

ANTENNA RECOMMENDATIONS:

Request that the antenna owners return to correct the deficiencies in cable sealing. The cable penetrations should be sealed with caulk or rubber boots.

All antennas and cables will need to be removed from the tank during the next repainting project. While the equipment is off the tank, proper cable routing and securing of the equipment should be designed, and all welding and coating performed prior to antenna reinstallation. Costs will vary depending on the lease you have with the carriers.

OVERFLOW PIPE CONDITIONS:

The overflow pipe extends along the access tube in the dry interior, down through the dry riser, and exits near the bottom of the basebell. The overflow pipe discharge is vertical. The discharge end of the overflow pipe is screened. The screen is in good condition but is oversized. The pipe discharges to a splash pad. The air gap meets the required 12-24 inches. The discharge area is in good condition.

OVERFLOW PIPE RECOMMENDATIONS:

Install a screened flap gate discharge. The flap gate would allow water to discharge even if the screen becomes covered with debris or frosted over. The gate is designed to stay closed to prevent rodents or birds from entering the pipe. The screened flap gate would allow water out but prevent debris from clogging the discharge. The estimated cost is \$3,000.

HATCH AND MANWAY CONDITIONS:

There is a 30 inch diameter roof hatch to the wet interior that is in good condition. The hinged cover is in good condition. There is no handhold next to the hatch to aid the climber while entering and exiting the opening. The hatch was secured with a wire. The hatch neck curb height meets the minimum height requirement of 4 inches. The hatch cover lip meets the minimum height requirement of 2 inches. There was no gasket on the hatch

There is a bolted painter's hatch on the roof that is in good condition. The hatch can be used for ventilation and lighting during maintenance work. There is a gasket on the hatch that is in good condition.

There is a 30 inch diameter roof hatch into the dry interior that is in good condition. The hinged cover is in good condition. There is no handhold next to the hatch to aid the climber while entering and exiting the opening.

There is a 12 x18 inch manway in the access tube to the wet interior that is in good condition. The manway gasket showed no signs of leakage and the bolts are in good condition.

There is a ladder to the manway that is in good condition. The ladder is equipped with a fall prevention device.

There is a service door in the basebell that is in good condition. The door operated properly during the inspection.

There is a painter's hatch (bird hatch) at the top of the riser that is in good condition. There is a safety handhold above the hatch.

The condensate platform ladder opening is 30 inch diameter. The opening is equipped with a hinged cover. There is a safety handhold next to the opening.

The top platform ladder opening is 30 inch diameter. The opening is equipped with a hinged cover. There is a safety handhold next to the opening.

There is a rigging attachment point on the bowl for rescue retrieval line attachment.

HATCH AND MANWAY RECOMMENDATIONS:

Install a gasket on the wet interior roof hatch to meet current Ohio EPA requirements. The cost would be incidental to the next painting project or work could be performed by in-house personnel.

Install a handhold at the wet interior roof hatch and access tube roof hatch. The handhold would assist the climber while entering and exiting the openings. The cost would be incidental to the next painting project.

VENT CONDITIONS:

The roof vent is a pressure vacuum design that is in good condition. The pressure vacuum plate was found to be properly aligned. There is a large external screen intended to keep birds out and a smaller mesh screen on the interior intended to keep insects out. The screens are in good condition. There is not a rain shield over the outer screen.

The access tube air gap on the roof is not covered. There is a gasket that was wedged inside the gap but it has become loose from the access tube moving.

VENT RECOMMENDATIONS:

Replace the roof vent with a screened pressure vacuum vent that has a rain shield to meet current Ohio EPA requirements. The estimated cost is \$6,000.

Install a weather tight cover over the access tube air gap to meet current Ohio EPA requirements. The cost would be incidental to the next painting project.

LADDER CONDITIONS:

The dry interior ladders are located in the basebell, riser, and access tube. The ladders are in good condition. The ladders meets current OSHA size requirements. The ladders are equipped with rail-type fall prevention devices that are in good condition. There is a cage on the basebell and riser ladders.

There is a wet interior ladder from the roof to the bowl that is in good condition. The ladder is equipped with a rail-type fall prevention device that is in good condition.

LADDER RECOMMENDATIONS:

Remove the cage on the dry interior basebell and riser ladders. The cage interferes with lowering a rescue basket. The estimated cost is \$2,000.

FILL/DRAW PIPE CONDITIONS:

The tank fills and draws from a single pipe. The pipe routes through the dry interior into the bottom of the bowl and extends approximately 36 inches into the wet interior. There are deflector bars over top of the pipe in the wet interior. The fill/draw pipe is not insulated in the dry interior.

There is no sample tap on the fill/draw pipe.

FILL/DRAW PIPE RECOMMENDATIONS:

Install a sample tap on the fill/draw pipe to meet current Ohio EPA requirements. The estimated cost is \$1,000.

MIXING CONDITIONS:

There is ice abrasion damage on the access tube coating. The cause is a short circuiting of mixing during inflow and draw allowing ice to form. Tanks with the same pipe for influent and draw are especially susceptible. Many factors are involved such as daily turnover, rate of turnover, and pump turn on and turn off level settings. Using most of the capacity of the tank during a pump down helps with mixing. If operational changes to improve water turnover are not possible, consider installation of a mixing system.

MIXING RECOMMENDATIONS:

There are a few options available to limit ice formation and the short-circuiting effect. A static system would consist of a draft tube over the fill pipe or dispersal tree with check valves. Static systems are expensive and can cost upwards of \$60,000. A mechanical mixing system can be installed to assist in situations where turnover is low but will eventually require maintenance since there are moving parts. We recommend a mechanical mixing system because the device is easily removed during repainting and

many can be removed for maintenance or replaced while the tank is in service. The estimated cost is \$20,000.

EXPANSION JOINT CONDITIONS:

The fill/draw pipe is equipped with a glandular expansion joint that is located inside the basebell. The expansion joint is corroded.

EXPANSION JOINT RECOMMENDATIONS:

Replace the existing glandular expansion joint with a stainless-steel bellows style joint. A new bellows style joint cannot bind like the glandular style can, making it maintenance free. The estimated cost is \$8,000.

The glandular style of expansion joint can seize if corrosion forming at the joint stops the joint from moving as designed. If the expansion joint seizes it cannot take up the longitudinal movement of the fill/draw pipe and the tank bottom will flex to compensate for this movement. With enough flexing, the weld at the tank bottom could crack and cause a leak.

MUD VALVE CONDITIONS:

There is not a mud valve in the bottom of the tank.

MUD VALVE RECOMMENDATIONS:

Install a mud valve to aid with removal of sediment during regular maintenance inspections. Without a mud valve the sediment must be removed by sending it down the fill/draw pipe and flushing it out of a hydrant, which may not be possible on your tank. The estimated cost is \$5,000.

CONDENSATE DRAIN CONDITIONS:

There is a condensate drain line that routes from the platform to the overflow pipe. There is a check valve in the line to stop backflow during overflow conditions. The line is in good condition. The drain opening appeared operational.

WET INTERIOR METAL CONDITIONS:

The steel structure is in good condition overall. No pitting was observed at the coating failures.

DIXON ENGINEERING, INC.
STEEL TANK FIELD INSPECTION REPORT
PEDESTAL TANK

DATE: May 10, 2022

OWNER: City of Englewood
 CLIENT CODE: 35-57-09-01
 TANK NAME: South
 LOCATION: Address: 225 Smith Drive
 City: Englewood
 State: Ohio

TANK SIZE: Capacity: 1,000,000 gallons
 Bottom (LWL): 95 feet 6 inches (from nameplate)
 Head range: 52 feet (count rungs)

CONSTRUCTION:
 Type: Spheroid
 YEAR CONSTRUCTED: 2000
 MANUFACTURER: CB&I
 CONTRACT NUMBER: 113435
 USE: Potable water and fire protection

Coating information below is from: The coating year is presumed

COATING HISTORY	EXTERIOR	WET INTERIOR	DRY INTERIOR
YEAR COATED	<u>2000</u>	<u>2000</u>	<u>2000</u>
CONTRACTOR	<u>CB&I</u>	<u>CB&I</u>	<u>CB&I</u>
SYSTEM	<u>Unknown</u>	<u>Presumed Epoxy</u>	<u>Presumed Epoxy</u>
SURFACE PREPARATION	<u>Presumed SSPC-SP6</u>	<u>Presumed SSPC-SP10</u>	<u>Presumed SSPC-SP6</u>
HEAVY METAL COATING SAMPLES	<u>No</u>	<u>No</u>	<u>No</u>
HEAVY METAL BEARING	<u>No</u>	<u>No</u>	<u>No</u>

PERSONNEL: Lead inspector Ryan Szczepaniak
 Crew members Jesse Darnell and Larry Houck
 METHOD OF INSPECTION: Dry

SITE CONDITIONS

Fenced: **No**
Site large enough for contractor's equipment: **Yes**
Control building: **No**
Antenna control site: **No**
Power lines within 50 feet: **No**
Site drainage: **Away from tank**
Indications of underground leakage: **No**
Shrub, tree, etc. encroachment: **No**

EXPOSED PIPING

Location: **Tank base (in a pit)**
Condition of structure: **Good**
Structure is: **Wet**
Pump present: **Yes**
Drain line present: **Yes**
Cover condition: **Good**
Pipe coating condition: **Fair**
Describe coating: **Rust bleedthrough**
Condition of metal: **Good**
Piping comments: **Rust bleedthrough throughout the pipe**

FOUNDATION

Foundation exposed: **Yes**
Exposed height: **1-4 inches**
Exposed foundation condition: **Good**
Damage or deterioration: **No**
Foundation coated: **Top only**
Coating condition: **Good**
Grout condition: **Good**
Undermining of foundation: **No**

EXTERIOR COATING

Basebell:

Topcoat condition: **Good**
Previous coat/system condition: **Good**
Describe coating: **Spot coating failures to substrate**
Dry film thickness: **14-20 mils**
Adhesion: **5A**
Metal condition: **Good**
Basebell comments: **Approximately ten small coating failures on the basebell**

EXTERIOR COATING

Riser:

Topcoat condition: **Good**
Previous coat/system condition: **Good**
Describe coating: **No significant coating deterioration**
Mildew growth: **No**
Metal condition: **Good**

Bowl:

Topcoat condition: **Fair**
Previous coat/system condition: **Fair**
Describe coating: **Spot coating failures to substrate**
Mildew growth: **No**
Metal condition: **Good**
Bowl comments: **Approximately fifteen spot coating failures ranging from ½ inch to 5 inch diameter**

Sidewall:

Lettering: **Yes**
Number: **2**
Lettering content: **ENGLEWOOD**
Logo: **Yes**
Number: **2**
Describe logo: **Square with an emblem in the middle**
Topcoat condition: **Good**
Previous coat/system condition: **Good**
Describe coating: **No significant coating deterioration**
Metal condition: **Good**

Roof:

Topcoat condition: **Fair**
Previous coat/system condition: **Fair**
Describe coating: **Spot coating failures to substrate, rust bleedthrough, topcoat delamination**
Dry film thickness: **4-7 mils**
Adhesion: **3A**
Metal condition: **Good**

EXTERIOR APPURTENANCES

Baseball Door:

Size: **36 x 80 inches**
Metal condition: **Good**

EXTERIOR APPURTENANCES

Anchor Bolts:

Number: 20
Diameter: 1½ inches
Location: Exterior
Metal condition: Good

Overflow Pipe:

Metal condition: Good
Discharge orientation: Vertical
Screen condition: Good
 Percent of screen open: 100
 Mesh size: 4
Flap gate/duck bill check valve: No
Air gap: Yes
 Lowest part of discharge to the ground distance: 17 inches
 Height to baseball penetration: 30 inches
Overflow discharges to: Concrete pad
 Condition: Good

Roof Handrail:

Diameter: 20 feet
Height: 42 inches
Midrail height: 20 inches
Kick plate height: 4 inches
Vertical post type: Angle
 Size: 2.5 x 2.5 inches
Top rail type: Angle
 Size: 2.5 x 2.5 inches
Midrail type: Angle
 Size: 2.5 x 2.5 inches
Metal condition: Good

Painter's Rail:

N/A

Roof Rigging Points:

Number: 3
Couplings covered: Yes
 Covered with: Plugs
Metal condition: Good

EXTERIOR APPURTENANCES

Wet Interior Roof Hatch:

Neck size: **30 inches**

Distance from center of the tank (to outer edge): **5 feet**

Shape: **Round**

Handhold at opening: **No**

Curb height: **6 inches**

Cover overlap: **2 inches**

Gasket on cover/neck curb: **No**

Hatch security: **Wire**

Metal condition: **Good**

Dry Interior Roof Hatch:

Neck size: **30 inches**

Shape: **Round**

Handhold at opening: **No**

Hatch security: **Chain**

Metal condition: **Good**

Bolted Ventilation Hatch:

Neck diameter: **24 inches**

Curb height: **6 inches**

Gasket: **Yes**

Metal condition: **Good**

Access Tube Air Gap:

Covered: **Yes**

Material: **Neoprene**

Condition: **Poor**

Access tube air gap comments: **Gasket is falling down, pushed it back in the gap but do not know how long it will last**

Roof Vent:

Number: **1**

Distance from center of the tank (to outer edge): **10 feet**

Type: **Pressure-vacuum**

Neck diameter: **20 inches**

Flange opening diameter: **36 inches**

Vertical expanded metal condition: **Good**

Mesh size: **2**

Interior screen condition: **Good**

Mesh size: **24**

EXTERIOR APPURTENANCES

Rain shield: **No**
Pressure plate condition: **Good**
Plate free to move: **Yes**
Plate screened: **Yes**
Mesh size: **24**
Height of the lowest opening above the roof: **15 inches**
Metal condition: **Good**

Aviation Lights:

Design: **Double red**
Location: **Handrail**
Functioning: **Unknown**
Globe condition: **Good**
Photoelectric cell: **Yes**
Location: **Roof**

Antennas:

Roof number: **8**
Attached to: **Handrail**
Roof cable penetrations sealed: **Yes**
Sealed with: **Rubber boots, spray foam, caulk**
Antenna or cables interference: **No**

Electrical Conduit:

Electrical conduit condition: **Good**
Exposed wiring: **No**

DRY INTERIOR COATING

Basebell:

Coating condition: **Good**
Describe coating: **Spot coating failures to substrate**
Dry film thickness: **10-12 mils**
Metal condition: **Good**
Floor: **Concrete**
Drain line present: **No**
Comments: **Coating failures all around the baseplate**

Condensate Platform:

Platform design: **Full**
Coating condition: **Poor**
Describe coating: **Spot coating failures to substrate**

DRY INTERIOR COATING

Metal condition: **Good**

Ladder opening size: **30 inches**

Shape: **Round**

Opening covered: **Yes**

Handhold at opening: **Yes**

Drain: **Yes**

Size: **2 inches**

Type: **To overflow**

Check valve: **Yes**

Platform comments: **Five areas of failures that are 2-12 inch diameter**

Riser above the Condensate Platform:

Coating condition: **Good**

Describe coating: **No significant coating deterioration**

Dry film thickness: **9-14 mils**

Metal condition: **Good**

Fill/Draw Pipe:

Coating condition: **Fair**

Describe coating: **Spot coating failures to substrate**

Manway size: **30 inches**

Insulated: **No**

Metal condition: **Good**

Top Platform:

Platform design: **Full**

Material: **Steel plate**

Coating condition: **Poor**

Describe coating: **Spot coating failures to substrate, rust undercutting, rust bleedthrough**

Metal condition: **Good**

Ladder opening size: **30 inches**

Shape: **Round**

Opening covered: **Yes**

Handhold at opening: **Yes**

Top platform comments: **Large coating failures throughout, rust undercutting on the edge of the platform**

Riser above the Top Platform:

Coating condition: **Good**

Describe coating: **No significant coating deterioration**

DRY INTERIOR COATING

Dry film thickness: **6-10 mils**

Metal condition: **Good**

Bowl:

Coating condition: **Good**

Describe coating: **Rust bleedthrough**

Metal condition: **Good**

Rigging lug above opening: **Yes**

Bowl comments: **One spot of rust bleedthrough about 6 inch diameter**

Access Tube:

Diameter: **42 inches**

Coating condition: **Good**

Describe coating: **Spot coating failures**

Dry film thickness: **6-8 mils**

Metal condition: **Good**

DRY INTERIOR APPURTENANCES

Electrical Components:

Lights functioning: **Yes**

Missing covers (globes and cages): **No**

Additional lights needed: **No**

Electrical outlet/conduit condition: **Good**

Used during inspection: **Yes**

Sample Tap:

N/A

Threaded Coupling (for chemical feed on the fill/draw pipe):

N/A

Expansion Joint on Fill/Draw Pipe:

Location: **Bottom of pipe**

Accessible for inspection: **Yes**

Type: **Glandular**

Coating condition: **Poor**

Metal condition: **Good**

Basebell Ladder:

Toe clearance: **7 inches or greater**

Width of rungs: **16+ inches**

DRY INTERIOR APPURTENANCES

Thickness of rungs: ¾ inch
Shape of rungs: **Diamond**
Metal condition: **Good**
Fall prevention device: **Yes**
 Type: **Rail**
 Function properly: **Yes**
Cage: **Yes**
 Diameter: **32 inches**

Riser Ladder:

Toe clearance: **7 inches or greater**
Width of rungs: **16+ inches**
Thickness of rungs: ¾ inch
Shape of rungs: **Diamond**
Metal condition: **Good**
Fall prevention device: **Yes**
 Type: **Rail**
 Function properly: **Yes**
Cage: **Yes**
 Diameter: **32 inches**

Painter's (bird) Hatch:

Handhold above hatch: **Yes**
Metal condition: **Good**
Hatch security: **Bolt**

Manway to Wet Interior:

Size: **18 x 12 inches**
Location: **In the access tube**
Metal condition: **Good**

Mud Valve:

N/A

Mud valve comments: **They have a ball valve in the bowl but no hose connected to it**

Access Tube Ladder:

Toe clearance: **7 inches or greater**
Width of rungs: **16+ inches**
Thickness of rungs: ¾ inch
Shape of rungs: **Diamond**

DRY INTERIOR APPURTENANCES

Metal condition: Good
Fall prevention device: Yes
Type: Rail
Function properly: Yes

WET INTERIOR COATING

Roof:

Topcoat condition: Good
Primer coating condition: Good
Describe coating: Spot coating failures to substrate
Metal condition: Good
Lap seams: Welded
Condition of lap seams: Good
Roof comments: Approximately twenty spot coating failures along the weld seams

Sidewall:

Topcoat condition: Good
Primer coating condition: Good
Describe coating: No significant coating deterioration
Mineral deposits: Moderate
Metal condition: Good
Active pitting: No
Previous pitting: No
Sidewall comments: Moderate mineral staining

Access Tube:

Topcoat condition: Fair
Primer coating condition: Fair
Describe coating: Spot coating failures to substrate
Mineral deposits: Light
Metal condition: Good
Active pitting: No
Previous pitting: No
Access tube comments: Approximately twenty spot coating failures throughout. There is significant coating damage below the overflow pipe penetration, likely from ice movement

Tank Bottom:

Type: Bowl
Topcoat condition: Good

WET INTERIOR COATING

Primer coating condition: **Good**
Describe coating: **Spot coating failures to substrate**
Mineral deposits: **Heavy**
Metal condition: **Good**
Active pitting: **No**
Previous pitting: **No**
Sediment depth: **12 inches**
Bottom comments: **Coating failures near the fill pipe and five small coating failures throughout**

WET INTERIOR APPURTENANCES

Ladder:

Toe clearance: **7 inches or greater**
Width of rungs: **16+ inches**
Thickness of rungs: **3/4 inch**
Shape of rungs: **Diamond**
Shape of side rails: **Flat**
Metal condition: **Fair**
Fall prevention device: **Yes**
Type: **Rail**
Function properly: **Yes**

Cathodic Protection:

Location of clips: **Sidewalls**
Type: **Ring**
Location of controls: **In basebell**
Ropes damaged: **No**
Wires damaged: **No**

Roof Stiffeners/Painters Railing(s):

N/A

Sidewall Stiffeners:

N/A

Overflow Pipe Inlet:

Type: **Elbow**
Metal condition: **Good**

WET INTERIOR APPURTENANCES

Fill Pipe:

Diameter: **30 inches**

Height above the tank bottom: **3 feet**

Deflector over end: **Yes**

Type: **Bars**

Metal condition: **Good**

Separate Draw Pipe:

N/A

Mixer:

N/A

Field Inspection Report is prepared from the contractor's viewpoint. It contains information the contractor needs to prepare his bid for any repair or recoating. The engineer uses it to prepare the engineering report. Cost estimates are more accurate if the contractor's problems can be anticipated. While prepared from the contractor's viewpoint, the only intended beneficiary is the owner. These reports are completed with diligence, but the accuracy is not guaranteed. The contractor is still advised to visit the site.



1,000,000 gallon spheroid (South) located in Englewood, Ohio



1) The concrete foundation is in good condition.

2) The grout between the steel foundation and the concrete baseplate is in good condition.



3) The basebell anchor bolts are in good condition.



4) Same.

5) The service door operated properly during the inspection.

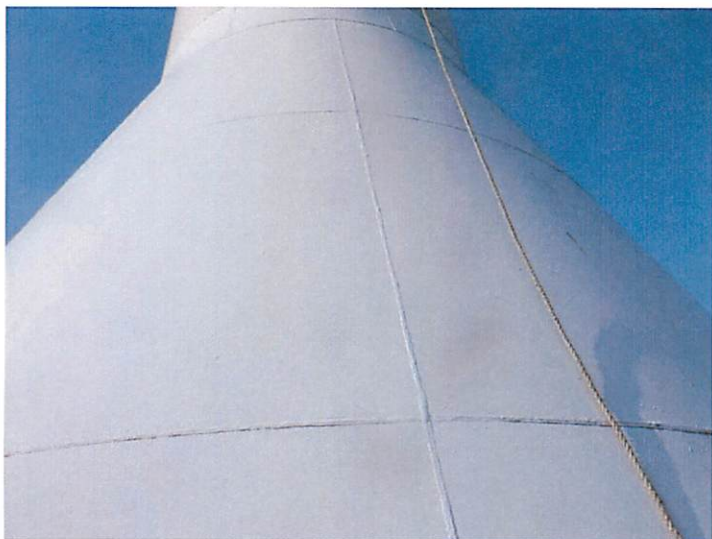


6) There are coating failures on the door.

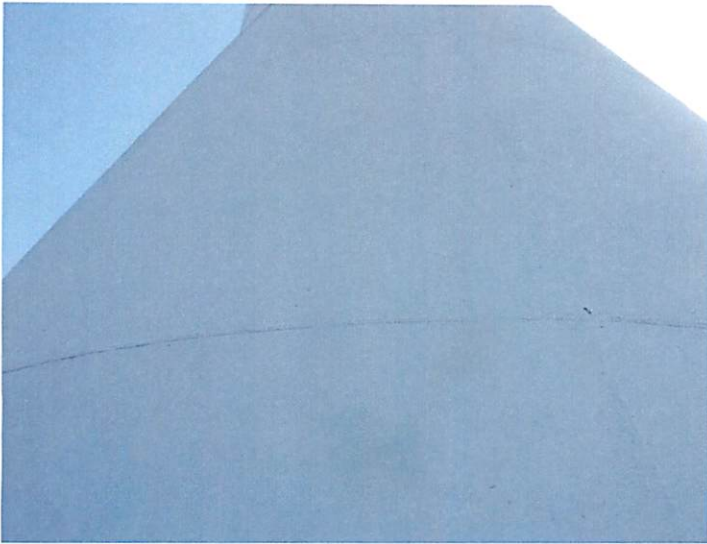


7) The overflow pipe discharges to concrete splash pad.

8) The overflow screen is in good condition. There are coating failures on the flange.

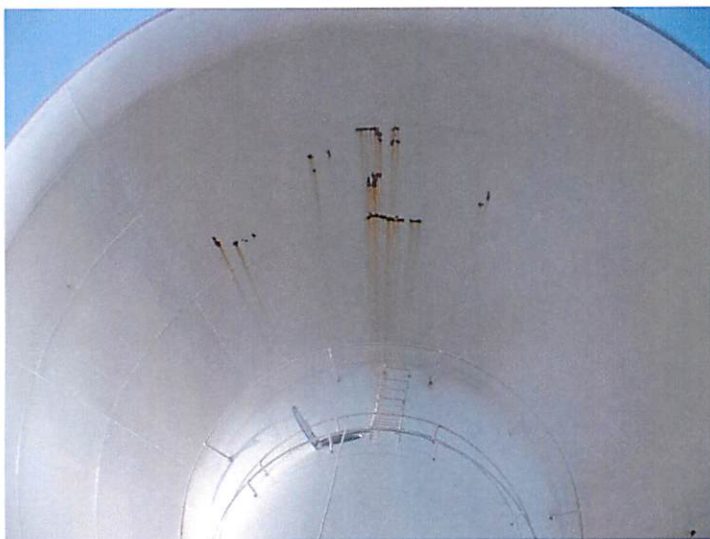
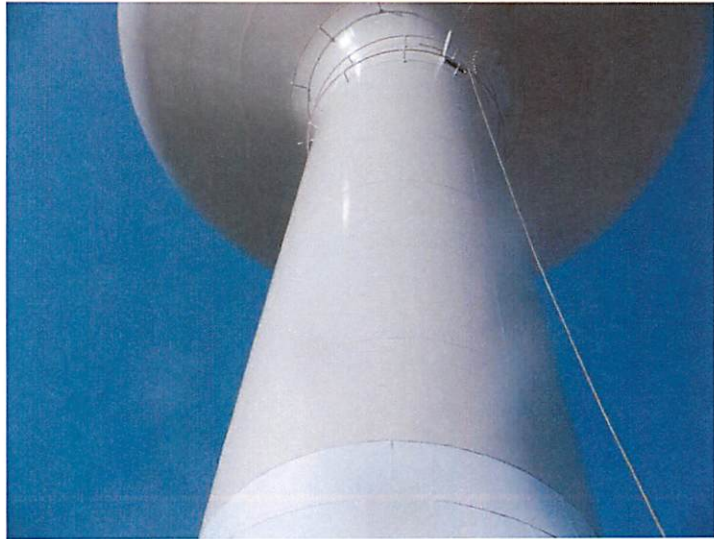


9) The coating on the basebell is in good condition with minor spot failures.



10) Same.

11) The coating on the riser is in good condition.

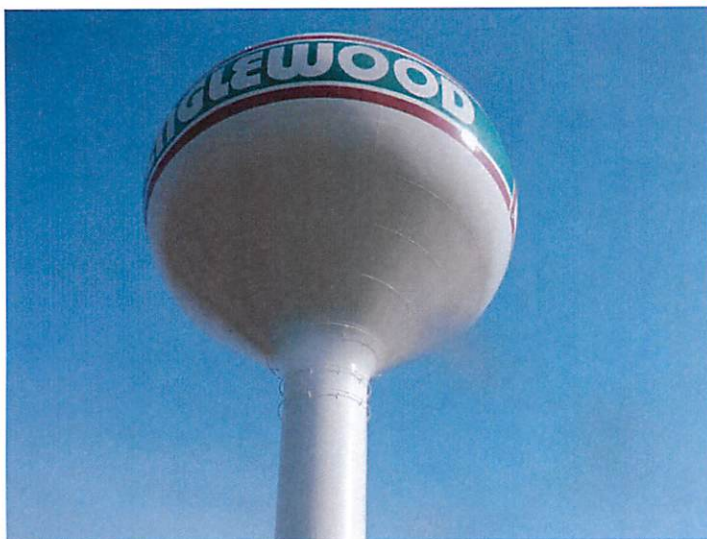
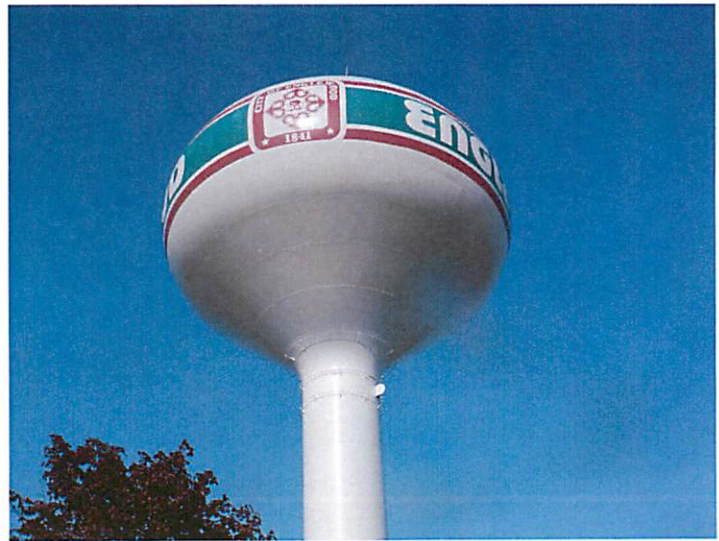


12) The coating on the bowl is in fair condition with minor spot coating failures.



13) Same.

14) The coating on the sidewall is in good condition.



15) Same.



16) The coating on the roof is in fair condition with moderate failures.

17) Same.

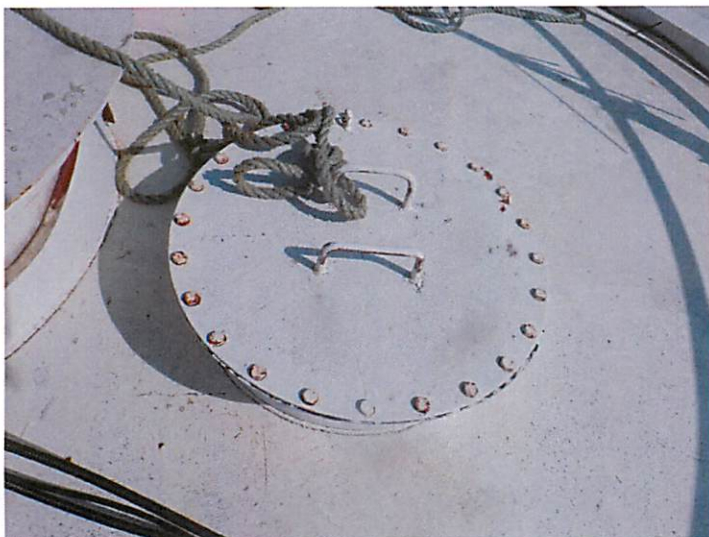
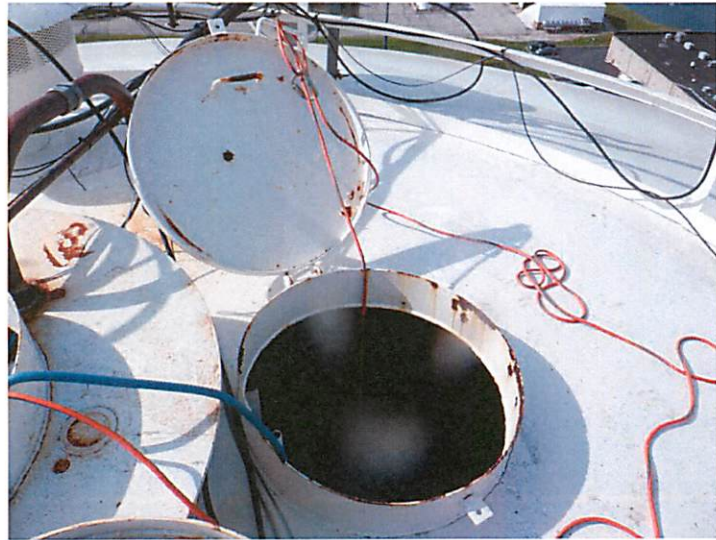


18) Same.



19) The dry interior hatch is in good condition.

20) The wet interior hatch is in good condition. There was no gasket on the hatch.



21) The bolted ventilation hatch is in good condition.



22) Same.

23) The access tube air gap was sealed with a gasket wedged into the opening. The gasket has come loose.



24) Same.



25) The double aviation light appears to be in good condition.

26) The roof handrail is in good condition. There are coating failures on the railing.



27) Same.

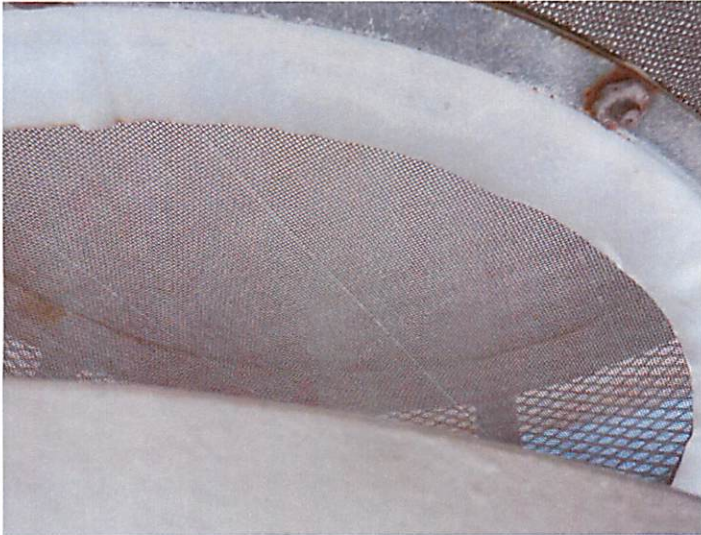


28) The roof cable penetrations are sealed with caulk and spray foam.

29) Same.



30) The roof vent is in good condition but there is no rain shield. The vertical expanded metal screen is in good condition.



31) The interior roof vent screen is in good condition.

32) The screened pressure plate was found to be in good condition.



33) Antennas are mounted to the roof handrail.

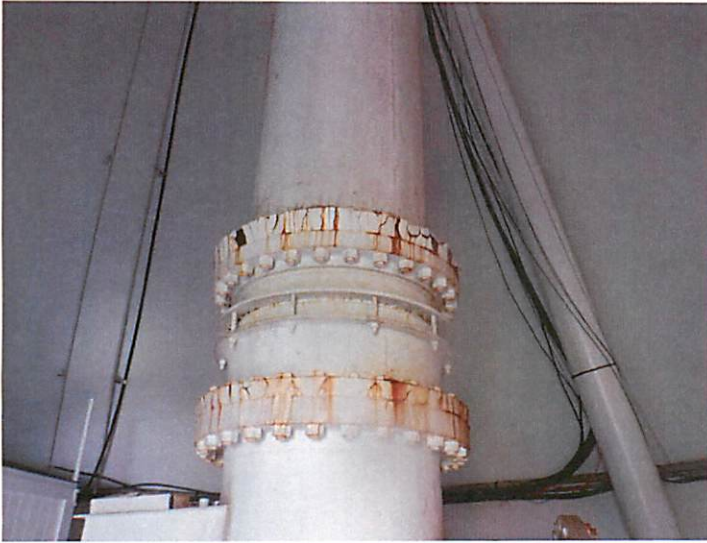


34) Same.

35) The basebell coating is in good condition with delamination on the baseplate.

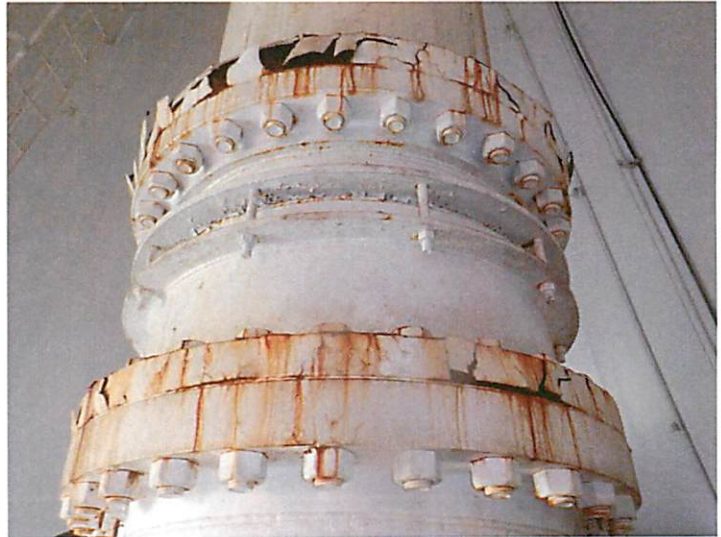


36) Same.

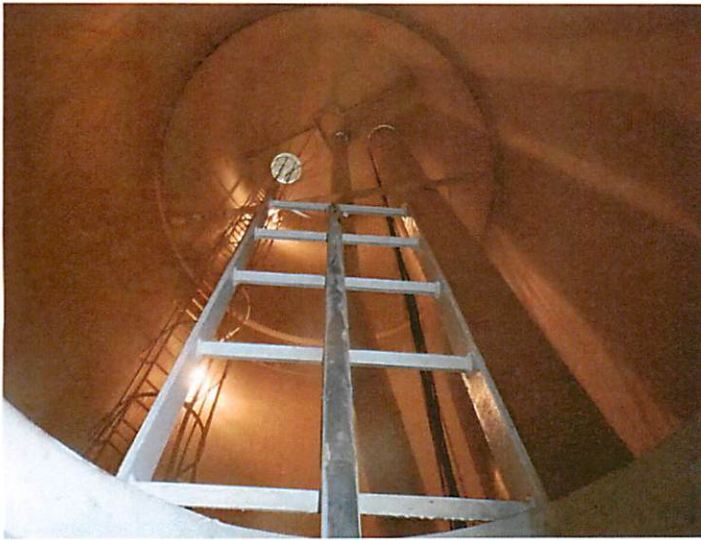


37) There is a glandular expansion joint on bottom of fill/draw pipe. The joint appears to be in good condition.

38) Same.

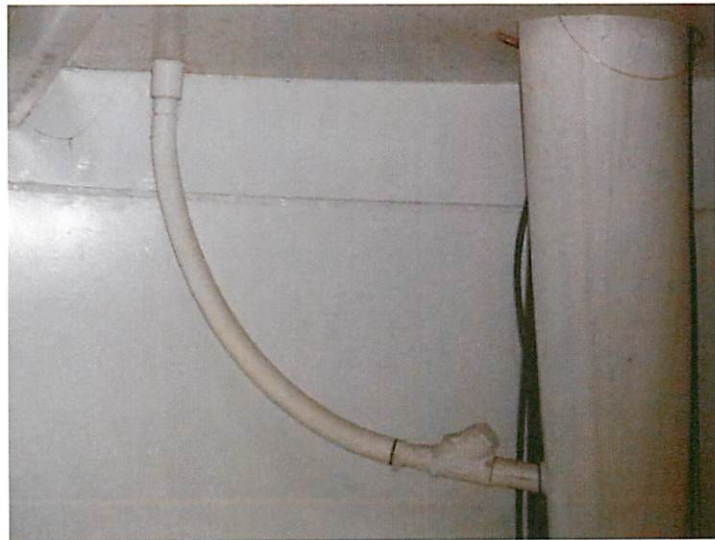


39) The fill/draw pipe manway is in good condition. The fill/draw pipe is not insulated in the dry interior.



40) The basebell ladder is in good condition. The ladder is equipped with a fall prevention device and is caged.

41) The condensate platform drain line is in good condition. The check valve appears to be in good condition.



42) The condensate platform opening is equipped with a hinged cover.



43) The condensate platform coating is in poor condition.

44) The condensate platform drain appears to be in good condition.

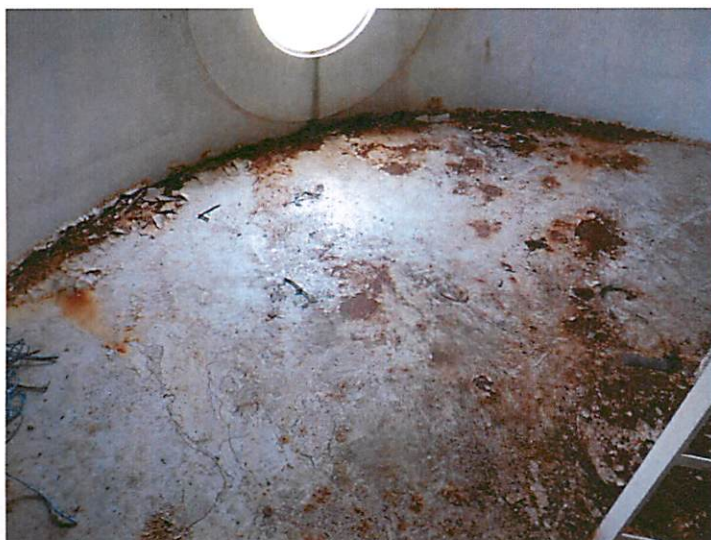


45) The riser ladder is in good condition. The ladder is equipped with a fall prevention device and is caged.



46) The coating in the riser is in good condition.

47) The top platform opening is equipped with a hinged cover.



48) The coating on the top platform is in poor condition.



49) Same.

50) The painter's hatch at the top of the riser is in good condition. There is a handhold over the opening.



51) The coating on the riser above the top platform and the bowl is in good condition with minor failures.

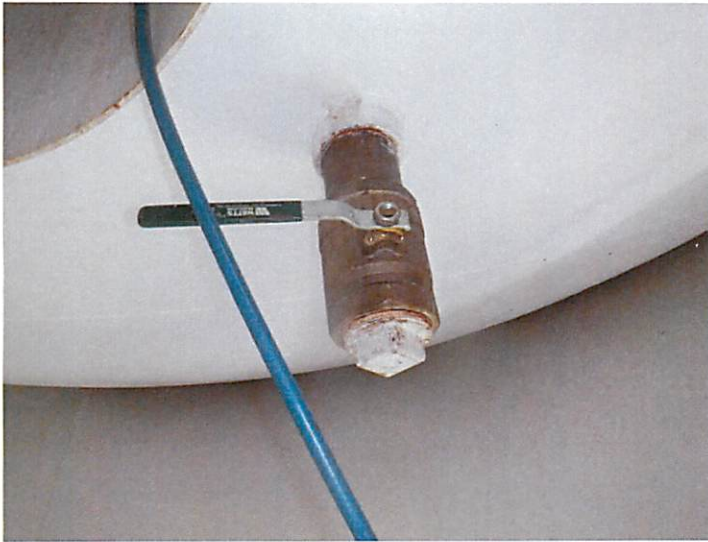


52) Same.

53) The pressure fitting for cathodic protection appears to be in good condition.

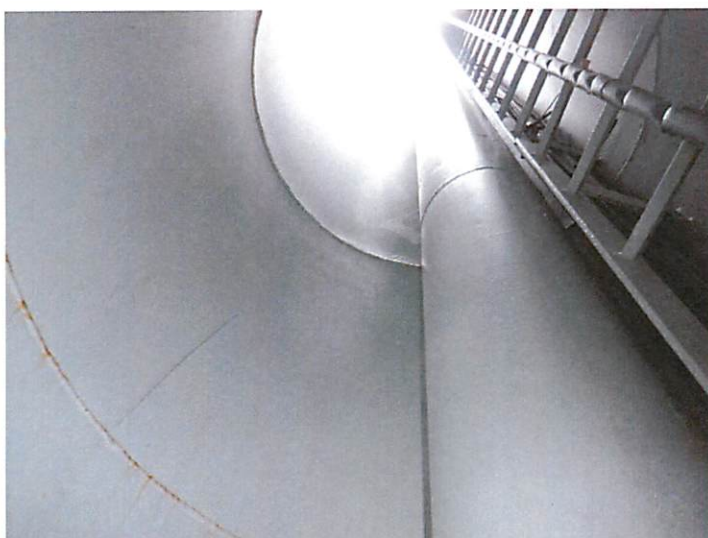


54) The rigging lug on the bowl above top platform hatch is in good condition.



55) There is a plugged drain valve in the bowl.

56) The wet interior manway located in the access tube is in good condition.



57) The access tube coating is in good condition.



58) Same.

59) The wet interior roof coating is in good condition.

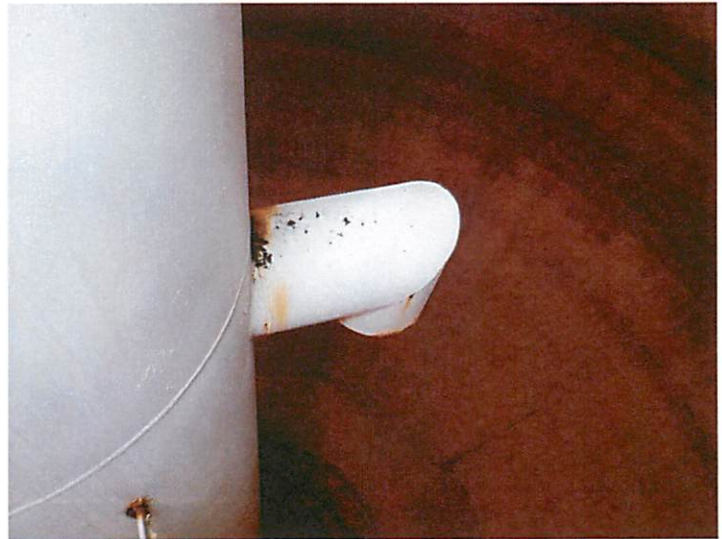


60) Same.

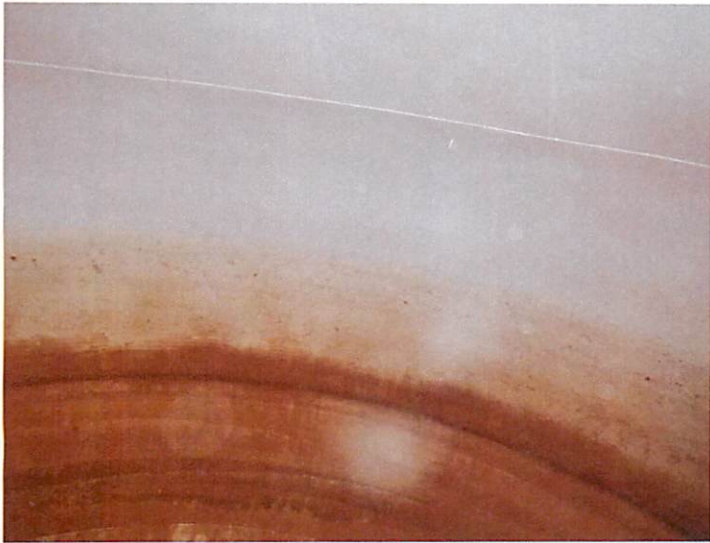


61) Same.

62) The overflow pipe elbow is in good condition.



63) The wet interior ladder is in good condition. The ladder is equipped with a fall prevention device.



64) The coating on the sidewall is in good condition.

65) Same.



66) The coating on the access tube is in fair condition.



67) There is coating damage on the access tube likely from ice movement.

68) The cathodic protection system appears to be in good condition.



69) Same.



70) The coating on the bowl is in good condition overall with a few minor spot coating failures.

71) Same.



72) The fill/draw pipe is in good condition. There are deflector bars over the top of the pipe.



73) There is piping located in a pit in the basebell. The pit cover is in good condition.

74) The coating on the pit piping is in fair condition.



75) Same.

CITY OF ENGLEWOOD
IN
MONTGOMERY COUNTY, OHIO

ORDINANCE NO: 22-02

PASSED: January 11, 2022

AN ORDINANCE: AMENDING SECTION 1044.10, CHARGES FOR WATER SUPPLIED WITHIN THE CITY; SECTION 1044.11, CHARGES FOR WATER SUPPLIED OUTSIDE THE CITY; SECTION 1052.11, CHARGES FOR SEWER SERVICE WITHIN THE CITY; AND SECTION 1052.12, CHARGES FOR SEWER SERVICE OUTSIDE THE CITY, OF THE CODIFIED ORDINANCES OF ENGLEWOOD, OHIO, 1972, AS AMENDED

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF ENGLEWOOD, OHIO, AS FOLLOWS:

SECTION I That Section 1044.10: **CHARGES FOR WATER SUPPLIED WITHIN THE CITY**, of the Codified Ordinances of Englewood, Ohio, 1972, as amended, is hereby amended to read as follows:

1044.10 CHARGES FOR WATER SUPPLIED WITHIN THE CITY

Each consumer or owner whose premises within the City is connected to the water system shall pay to the City for the connection and for water at the rate of not less than twenty-five dollars and seventy-eight cents (\$ 25.78) bimonthly for each dwelling, commercial, manufacturing or other unit served, plus five dollars and seventeen cents (\$ 5.17) per 1,000 gallons of water delivered bimonthly over 5,000 gallons for each such unit served.

SECTION II That Section 1044.11: **CHARGES FOR WATER SUPPLIED OUTSIDE THE CITY**, of the Codified Ordinances of Englewood, Ohio, 1972, as amended, is hereby amended to read as follows:

1044.11 CHARGES FOR WATER SUPPLIED OUTSIDE THE CITY

Each consumer or owner whose premises outside the City is connected to the water system shall pay to the City for the connection and for water at the rate of not less than thirty-eight dollars and sixty-eight cents (\$38.68) bimonthly for each dwelling, commercial, manufacturing or other unit served, plus seven dollars and seventy-six cents (\$7.76) per 1,000 gallons of water delivered bimonthly over 5,000 gallons for each such unit served.

SECTION III That Section 1052.11, **CHARGES FOR SEWER SERVICE WITHIN THE CITY**, of the Codified Ordinances of Englewood, Ohio, 1972, as amended, is hereby amended to read as follows:

1052.11 CHARGES FOR SEWER SERVICE WITHIN THE CITY

Each consumer or owner whose premises within the City is connected to the sewer system shall pay to the City for the connection and for sewer service at the rate of not less than twenty-three dollars and sixty-two cents (\$ 23.62) bimonthly for each dwelling, commercial, manufacturing or other unit served, plus four dollars and seventy-two cents (\$ 4.72) per 1,000 gallons of water delivered bimonthly over 5,000 gallons for each such unit served.

Each consumer or owner whose premises within the City is connected to the sewer system but not the water system shall pay to the City for the connection and for sewer service at the flat rate of seventy dollars and eighty-five cents (\$70.85) bimonthly for each unit served.

SECTION IV That Section 1052.12, **CHARGES FOR SEWER SERVICE OUTSIDE THE CITY**, of the Codified Ordinances of Englewood, Ohio, 1972, as amended, is hereby amended to read as follows:

1052.12 CHARGES FOR SEWER SERVICE OUTSIDE THE CITY

Each consumer or owner whose premises outside the City is connected to the sewer system shall pay to the City for the connection and for sewer service at the rate of not less than thirty-five dollars and forty-two cents (\$ 35.42) bimonthly for each dwelling, commercial, manufacturing or other unit served, plus seven dollars and eight cents (\$ 7.08) per 1,000 gallons of water delivered bimonthly over 5,000 gallons for each such unit served.

SECTION V That all prior ordinances in conflict herewith are hereby repealed.


SECTION VI It is hereby found and determined that all formal actions of this Council concerning and relating to the passage of this Ordinance were taken in an open meeting of this Council, and that all deliberations of this Council and of any committees that resulted in those formal actions were in meetings open to the public, in compliance with all legal requirements.

SECTION VII That this ordinance shall be in full force and effect at the earliest date allowed by law and shall be implemented on all utility bills generated after February 1, 2022.

PASSED this 11th day of January, 2022.

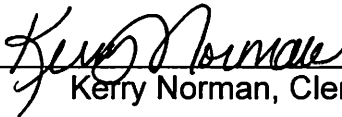

Thomas Franz, Mayor

ATTEST:


Keyry Norman, Clerk of Council

CERTIFICATE

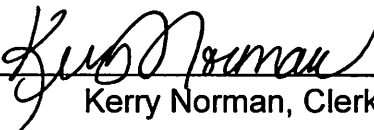
I, **Kerry Norman, Clerk of Council of the City of Englewood, Montgomery County, Ohio**, do hereby certify the foregoing is a true and correct copy from the ***Record of Proceedings*** of said City. **WITNESS** my signature this 11th day of January, 2022.



Kerry Norman, Clerk of Council

CERTIFICATE OF POSTING

I, **Kerry Norman, Clerk of Council of the City of Englewood, Montgomery County, Ohio**, do hereby certify publication of the foregoing **ORDINANCE** was made as designated by Sections 224.01 and 24.02 of the Englewood Code.



Kerry Norman, Clerk of Council