

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

1.1 Project Estimated Costs

Engineering Services

Preliminary / Final Design:	<u>65,000</u>	.00	
Construction Administration:	<u>10,000</u>	.00	
Total Engineering Services:	a.) <u>75,000</u>	.00	<u>9.8</u> %
Right of Way:	b.) <u>0</u>	.00	
Construction:	c.) <u>762,120</u>	.00	
Permits, Advertising, Legal:	e.) <u>1,000</u>	.00	
Construction Contingencies:	f.) <u>76,212</u>	.00	
Total Estimated Costs:	g.) <u>914,332</u>	.00	

1.2 Project Financial Resources

Local Resources

Local In-Kind or Force Account:	a.) <u>0</u>	.00	
Local Revenues:	b.) <u>0</u>	.00	
Other Public Revenues:			
Local / ODOT - Let: _____	d.) <u>0</u>	.00	
ODOT PID: _____			
OEPA / OWDA:	e.) <u>0</u>	.00	
CDBG:	f.) _____	.00	
Other: _____	g.) <u>0</u>	.00	
Subtotal Local Resources:	i.) <u>0</u>	.00	<u>0</u> %

OPWC Funds (Check all requested and enter Amount)

Grant: <u>25</u> % of OPWC Funds	j.) <u>228,583</u>	.00	
Loan: <u>75</u> % of OPWC Funds	k.) <u>685,749</u>	.00	<u>29</u> yrs
Loan Assistance / Credit Enhancement:	l.) <u>0</u>	.00	
Subtotal OPWC Funds:	m.) <u>914,332</u>	.00	<u>100</u> %
Total Financial Resources:	n.) <u>914,332</u>	.00	<u>100</u> %

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: 01/04/2023 End Date: 05/31/2023
3.2 Bid Advertisement and Award Begin Date: 06/08/2023 End Date: 07/05/2023
3.3 Construction Begin Date: 08/01/2023 End Date: 05/31/2024

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: 29 Years Age: 1956 (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 1298 Year 2019

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

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

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.

This project, Phase II, is located on Hay Avenue, from Mulberry Street to Cusick Avenue, approximately 530'. This project will begin at the end of the previously constructed OPWC funded Phase I portion. See attached Vicinity Map for details.

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

The roadway will be completely reconstructed including new water main, storm sewer, sidewalk, and curb/gutter. The reconstruction will correct the limited storm sewer drainage along Hay Avenue as well as improve the reliable delivery of fire protection and drinking water to residents and businesses in the area.

This project consists of reconstructing a deteriorating Hay Avenue consisting of aggregate base, asphalt concrete intermediate course, and asphalt concrete surface course. Improvements will also include the replacement of deteriorating curb and sidewalk on both sides of Hay Avenue, new driveway approaches, and adjustments of storm appurtenances.

Also, included in this project is the replacement of approximately 715 feet of aging and deteriorated 4" water main with an 8" water main. The replacement of existing water services and fire hydrants will be included in the reconstruction.

This project also includes the relocation of three utility poles.

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

The existing roadway is approximately 31 feet wide. The proposed project consists of 530 feet of full depth street reconstruction. The project consists of excavation of subgrade and structural embankment, aggregate base, stabilized crushed aggregate, 2-3/4" asphalt concrete intermediate course, 1-1/4" asphalt concrete surface course, 4,285 S.F. of 4" concrete walk, 876 S.F. of concrete curb ramps, 1,070 FT. of 4"-18" conduit Type B storm sewer, 715 FT. of 8" water main, 220 FT. of 1" water service laterals & 2 fire hydrants.

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: Sonja Keaton
Title: _____
Address: 301 Sycamore Street

City: Brookville State: OH Zip: 45309
Phone: (937) 833-2135
FAX: _____
E-Mail: skeaton@brookvilleohio.com

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

Name: Michelle Brandt
Title: _____
Address: 301 Sycamore Street

City: Brookville State: OH Zip: 45309
Phone: (937) 833-2135
FAX: _____
E-Mail: mbrandt@brookvilleohio.com

5.3 Project Manager

Name: Allan Heitbrink
Title: Project Manager
Address: 440 E. Hoewisher Road

City: Sidney State: OH Zip: 45365
Phone: 937-497-0200
FAX: _____
E-Mail: sjh@choiceoneengineering.com

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

No. **RESOLUTION NO. 22-19**

Passed **AUGUST 16**

Yr. **2022**

A RESOLUTION AUTHORIZING THE CITY OF BROOKVILLE TO PREPARE AND SUBMIT AN APPLICATION TO PARTICIPATE IN THE OHIO PUBLIC WORKS COMMISSION STATE CAPITAL IMPROVEMENT AND/OR LOCAL TRANSPORTATION IMPROVEMENT PROGRAM(S) AND TO EXECUTE CONTRACTS AS REQUIRED.

WHEREAS, the State Capital Improvement Program and the Local Transportation Improvement Program both provide financial assistance to political subdivisions for capital improvements to public infrastructure; and

WHEREAS, the City of Brookville is planning to make capital improvements to the Hay Avenue Reconstruction, Phase II Project; and

WHEREAS, the infrastructure improvement herein above described is considered to be a priority need for the community and is a qualified project under the Ohio Public Works Commission (OPWC) programs.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF BROOKVILLE, OHIO, THAT:


SECTION I: The City Manager is hereby authorized to apply to the OPWC for funds as described above.

SECTION II: The City Manager is further authorized to enter into any agreements as may be necessary and appropriate for obtaining this financial assistance.

SECTION III: This Resolution shall take effect and be in force thirty (30) days after passage as provided by the Charter of the City of Brookville.

PASSED this 16th day of August 2022.

ATTEST:



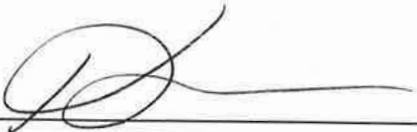
Kimberly Duncan, Clerk



Charles Letner, Mayor

CERTIFICATE

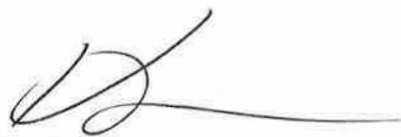
The undersigned, Clerk of the City of Brookville, Ohio does hereby certify that the foregoing is a true and correct copy of Resolution No. 22-19, passed by the Council of said City on the 16th day of August 2022.



Kimberly Duncan, Clerk

CERTIFICATE OF POSTING

The undersigned, Clerk of the City of Brookville, Ohio hereby certifies that the foregoing Resolution No. 22-19 was posted at the City Building, U.S. Post Office, and the Brookville Branch of the Montgomery County Library, Brookville, Ohio on the 17th day of August 2022 to the 15th day of September 2022, both days inclusive.

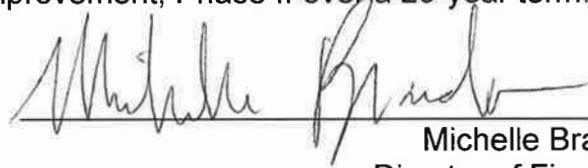


Kimberly Duncan, Clerk

CERTIFICATION OF LOAN REPAYMENT LETTER

August 4, 2022

I, Michelle Brandt, Director of Finance of the City of Brookville, hereby certifies that the City of Brookville will have the amount of \$685,749 in the Street, Storm and Water Funds and that this amount will be used to repay the Ohio Public Works Commission SCIP loan requested for the Hay Avenue Roadway Improvement, Phase II over a 29-year term.



Michelle Brandt
Director of Finance

**HAY AVENUE RECONSTRUCTION - PHASE 2
CITY OF BROOKVILLE
PRELIMINARY CONSTRUCTION ESTIMATE**

6/7/2022

ITEM NO.	DESCRIPTION	UNIT OF MEASURE	APPROX. QTY.	UNIT PRICE	TOTAL
	-530' (FROM THE END OF PHASE 1 TO CUSICK AVE)				
201	CLEARING AND GRUBBING	LUMP	1	\$5,000.00	\$5,000.00
202	REMOVED	LUMP	1	\$20,000.00	\$20,000.00
202	CURB AND GUTTER REMOVED	FT.	1115	\$8.00	\$8,920.00
202	WALK REMOVED	S.F.	4240	\$4.00	\$16,960.00
202	CATCH BASIN REMOVED	EACH	2	\$650.00	\$1,300.00
202	FENCE REMOVED	FT.	150	\$10.00	\$1,500.00
203	EXCAVATION INCLUDING EMBANKMENT	C.Y.	1050	\$26.00	\$27,300.00
204	SUBGRADE COMPACTION	S.Y.	2820	\$4.00	\$11,280.00
204	EXCAVATION OF SUBGRADE AND STRUCTURAL EMBANKMENT	C.Y.	850	\$70.00	\$59,500.00
204	GEOGRID FOR SUBGRADE STABILIZATION	S.Y.	900	\$6.00	\$5,400.00
304	AGGREGATE BASE	C.Y.	710	\$72.00	\$51,120.00
407	NON-TRACKING TACK COAT	GAL	145	\$10.00	\$1,450.00
411	STABILIZED CRUSHED AGGREGATE	C.Y.	70	\$95.00	\$6,650.00
441	1-1/4" ASPHALT CONCRETE, SURFACE COURSE, TYPE 1, (449), PO 64-22	C.Y.	85	\$350.00	\$29,750.00
441	2-3/4" ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 2, (449)	C.Y.	185	\$325.00	\$60,125.00
452	6" NON-REINFORCED CONCRETE PAVEMENT	S.Y.	50	\$90.00	\$4,500.00
452	8" NON-REINFORCED CONCRETE PAVEMENT	S.Y.	80	\$80.00	\$6,400.00
605	6" SHALLOW PIPE UNDERDRAIN	FT.	375	\$35.00	\$13,125.00
608	4" CONCRETE WALK	S.F.	4285	\$10.00	\$42,850.00
608	CURB RAMP	S.F.	880	\$22.00	\$19,360.00
608	CONCRETE STEPS	FT.	45	\$325.00	\$14,625.00
609	COMBINATION CURB AND GUTTER, TYPE 2	FT.	1115	\$32.00	\$35,680.00
611	4" CONDUIT, TYPE B, 707.45	FT.	100	\$40.00	\$4,000.00
611	6" CONDUIT, TYPE B, 707.45	FT.	100	\$45.00	\$4,500.00
611	8" CONDUIT, TYPE B, 707.45	FT.	100	\$50.00	\$5,000.00
611	6" CONDUIT, TYPE B, 707.45 STORM LATERAL	FT.	100	\$80.00	\$8,000.00
611	12" CONDUIT, TYPE B, 707.45	FT.	200	\$80.00	\$16,000.00
611	18" CONDUIT, TYPE B, 707.45	FT.	470	\$90.00	\$42,300.00
611	TYPE 1 CATCH BASIN	EACH	6	\$3,500.00	\$21,000.00
611	STORM SEWER MANHOLE, TYPE 3	EACH	2	\$7,000.00	\$14,000.00
614	MAINTAINING TRAFFIC	LUMP	1	\$25,000.00	\$25,000.00
616	WATER	MGAL	5	\$200.00	\$1,000.00
623	CONSTRUCTION LAYOUT STAKES AND SURVEYING	LUMP	1	\$7,000.00	\$7,000.00
630	SIGNAGE AND PAVEMENT MARKINGS	EACH	1	\$10,000.00	\$10,000.00
638	1" WATER SERVICE LATERAL	FT.	220	\$80.00	\$17,600.00
638	8" DIP CL-51 WATER MAIN	FT.	715	\$125.00	\$89,375.00
638	8" GATE VALVE	EACH	5	\$2,750.00	\$13,750.00
638	8" TAPPING SLEEVE AND VALVE	EACH	1	\$7,500.00	\$7,500.00
638	METER PIT, INCLUDING METER, SETTING AND VALVES	EACH	1	\$2,000.00	\$2,000.00
638	FIRE HYDRANT REMOVED	EACH	2	\$650.00	\$1,300.00
638	6" FIRE HYDRANT ASSEMBLY	EACH	2	\$7,500.00	\$15,000.00
659	SEEDING AND MULCHING, CLASS 1	S.Y.	1000	\$10.00	\$10,000.00
832	EROSION CONTROL	EACH	5000	\$1.00	\$5,000.00
	SUBTOTAL				\$762,120.00
	CONTINGENCY (10%)				\$76,212.00
	TOTAL CONSTRUCTION COST				\$838,332.00
	SEPERATED STORM SEWER COST				\$116,100.00
	SEPERATED WATER COST				\$146,525.00
	SEPERATED ROADWAY COST				\$499,495.00



We make no warranty, express or implied, that the actual construction cost of the work associated with these estimated quantities and costs will not vary. The cost reflects our opinion of current probable construction cost.

Does not include any utility pole relocations (aprox. 3 poles will need to be moved)

CERTIFICATE OF ESTIMATE:

I HEREBY CERTIFY THAT THE PROJECT ESTIMATED COSTS LISTED ABOVE ARE REALISTIC BASED ON THE LEVEL OF DETAIL CURRENTLY AVAILABLE FOR THIS PROJECT AND ANTICIPATED FOR A 2023 CONSTRUCTION TIME FRAME.

I ALSO CERTIFY THAT THIS PROJECT HAS AN EXPECTED USEFUL LIFE OF 29 YEARS BASED UPON NORMAL USAGE AND REGULAR MAINTENANCE, AND CONSTRUCTED AS PER CURRENT STANDARDS IN USE BY THE OHIO

Component	Useful Life	Estimated Cost	Weighted Useful Life
Reconstruction	25 years	\$436,144.50	\$10,903,613
Resurfacing	15 years	\$98,862.50	\$1,482,938
Sewer	40 years	\$142,147.50	\$5,685,900
Water	40 years	\$161,177.50	\$6,447,100
		\$838,332.00	\$24,519,550

Average weighted useful life of total project = **29 YEARS**

Allan J. Heitbrink
Allan J. Heitbrink
6/9/2022
Date

A weighted useful life statement stamped/sealed and signed by a licensed professional engineer must be included with the project application.

This spreadsheet has formulas to make a weighted useful life calculation and is populated with an example for illustrative purposes. Items can be added to column a.

**Weighted Useful Life & Design Service Capacity Calculations
HAY AVENUE RECONSTRUCTION - PHASE 2**

Major Component	Cost (\$1,000)	Portion Repair / Replacement (%)	Repair / Replace Product	Useful Life (Years)	Useful Life Product
Full-depth road construction w/ drainage	436.1445	100	43614.45	25	10903.61
Full-depth road construction w/o drainage				25	
Partial-depth road construction w/ drainage	98.8625	100	9886.25	15	1482.938
Partial-depth road construction w/o drainage				15	
Storm Sewers	142.1475	100	14214.75	40	5685.9
Sanitary Sewers				40	
Water Lines	161.1775	100	16117.75	40	6447.1
Bridge				75	
Pumps, Lift Stations				15	
Sidewalks				25	
Bike Facility				7	

Totals	838.332		83833.2		24519.55
---------------	----------------	--	----------------	--	-----------------

Weighted Useful Life: 29 Years

Design Service Capacity (Project Application, Section 2.0):

Portion Repair / Replace 100 %
Portion New / Expansion %



Allan J. Heitbrink
Allan J. Heitbrink

6/9/2022
Date

OHIO PUBLIC WORKS COMMISSION DISTRICT 4

Round 2022-2023 Supplemental Questionnaire

Applicant: _____

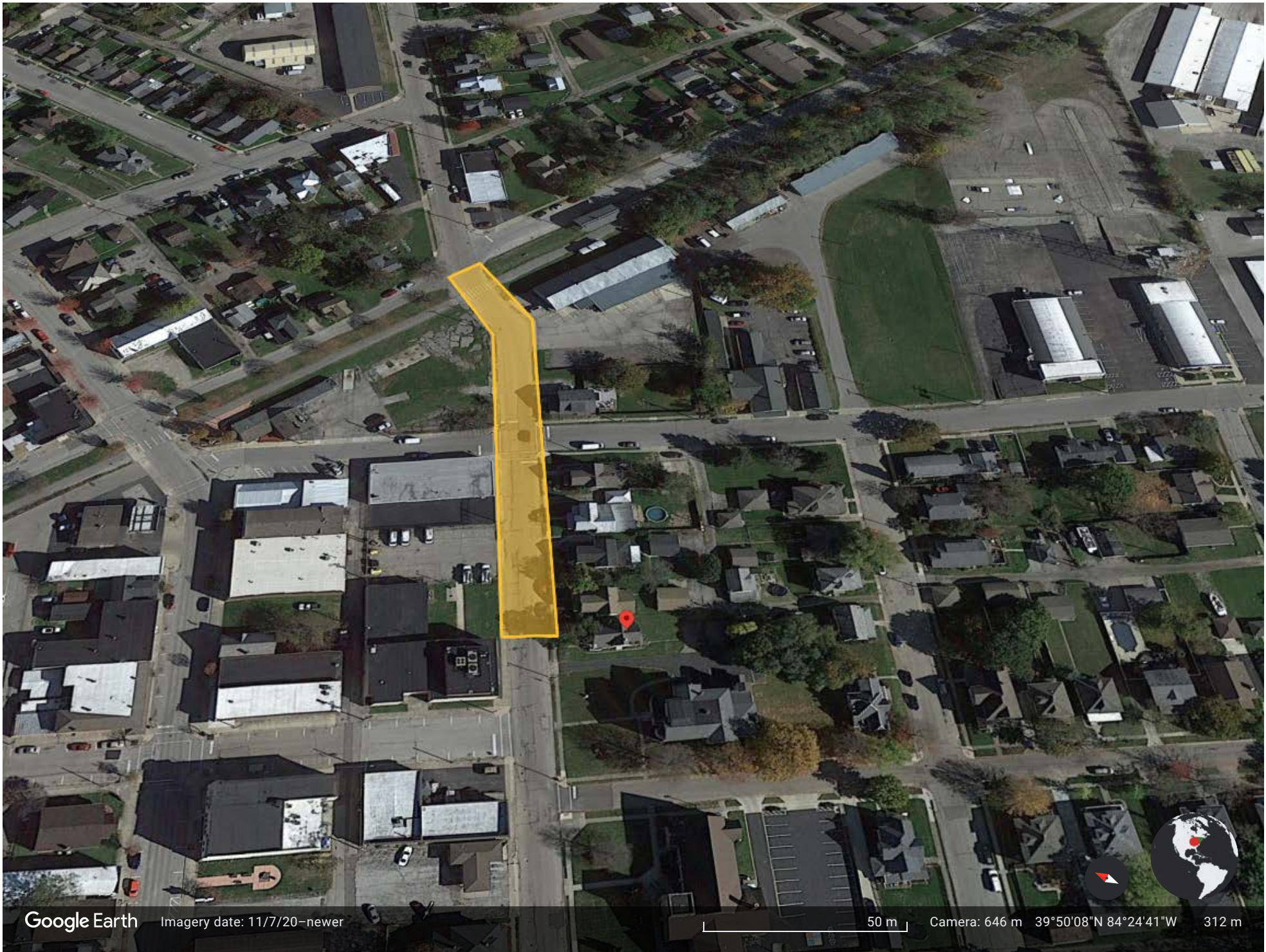
Project Title: _____

Application Summary:

Briefly describe the project:

Other Factors

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



Google Earth

Imagery date: 11/7/20 - newer

50 m

Camera: 646 m 39°50'08"N 84°24'41"W 312 m

VICINITY MAP



Hay Avenue, Phase 2 - Current Roadway Conditions



Hay Avenue, Phase 2 – Current Roadway Conditions



Photo of section of 4" watermain installed in 1903 that was removed for repairs in April 2022.



Date
August 8, 2019

Subject
Hay Avenue ADT Certification
City of Brookville, Montgomery County, Ohio

Based on traffic counts completed by Choice One Engineering on Thursday August 1, 2019 (attached), I certify the following ADT is accurate:

- Hay Avenue ADT – 1,298

Michael K. Goettemoeller 8/8/19

SEAL:

Michael K. Goettemoeller, P.E., PTOF
Project Manager

Date



West Central Ohio
440 E. Hoewisher Rd.
Sidney, OH 45365
937.497.0200 Phone

S Ohio/N Kentucky
203 W. Loveland Ave.,
Loveland, OH 45140
513.239.8554 Phone

Eastern Indiana
607 N. Meridian St.
Portland, IN 47371
260.766.2500 Phone



Study Name Hay Avenue ADT
 Start Date 08/01/2019
 Start Time 12:00 AM
 Site Code

Channel Direction	Direction	Direction
	Westbound	Eastbound
12:00 AM	1	3
12:15 AM	0	0
12:30 AM	2	0
12:45 AM	1	0
1:00 AM	0	0
1:15 AM	0	0
1:30 AM	0	0
1:45 AM	0	0
2:00 AM	2	1
2:15 AM	0	0
2:30 AM	0	2
2:45 AM	0	1
3:00 AM	0	0
3:15 AM	1	1
3:30 AM	0	0
3:45 AM	0	0
4:00 AM	0	0
4:15 AM	1	1
4:30 AM	0	0
4:45 AM	1	2
5:00 AM	0	0
5:15 AM	3	3
5:30 AM	1	1
5:45 AM	1	3
6:00 AM	5	2
6:15 AM	6	8
6:30 AM	3	15
6:45 AM	5	14
7:00 AM	4	10
7:15 AM	10	4
7:30 AM	4	8
7:45 AM	6	14
8:00 AM	5	10
8:15 AM	10	9
8:30 AM	6	5
8:45 AM	5	13
9:00 AM	4	10
9:15 AM	7	14
9:30 AM	11	5
9:45 AM	9	5
10:00 AM	7	10
10:15 AM	14	6
10:30 AM	9	13
10:45 AM	6	11
11:00 AM	14	12
11:15 AM	8	4
11:30 AM	20	7
11:45 AM	9	11
12:00 PM	13	15
12:15 PM	12	14
12:30 PM	10	17
12:45 PM	13	12
1:00 PM	22	7
1:15 PM	8	14
1:30 PM	9	15
1:45 PM	6	11
2:00 PM	11	10
2:15 PM	13	6
2:30 PM	7	11
2:45 PM	8	16
3:00 PM	14	11
3:15 PM	15	6
3:30 PM	15	11
3:45 PM	12	9
4:00 PM	8	17
4:15 PM	19	7
4:30 PM	11	11
4:45 PM	10	15
5:00 PM	17	17
5:15 PM	14	8
5:30 PM	10	19
5:45 PM	12	10
6:00 PM	13	16
6:15 PM	11	13
6:30 PM	9	11
6:45 PM	7	7
7:00 PM	10	6
7:15 PM	10	7
7:30 PM	6	2
7:45 PM	11	5
8:00 PM	11	13
8:15 PM	11	10
8:30 PM	6	4
8:45 PM	6	8
9:00 PM	6	4
9:15 PM	3	5
9:30 PM	3	0
9:45 PM	5	6
10:00 PM	5	5
10:15 PM	4	3
10:30 PM	0	1
10:45 PM	0	2
11:00 PM	2	3
11:15 PM	5	1
11:30 PM	1	2
11:45 PM	0	0
Directional Total	635	663
ADT		1298



Date
August 9, 2019

Subject
Hay Avenue Pavement Ratings
City of Brookville, Montgomery County, Ohio

Based on the pavement rating completed by Choice One Engineering on Thursday August 9, 2019 (attached), I certify the following pavement rating is accurate:

- Hay Avenue PCR - 71

 8/9/19

Michael K. Goettemoeller, P.E. Date
Project Manager

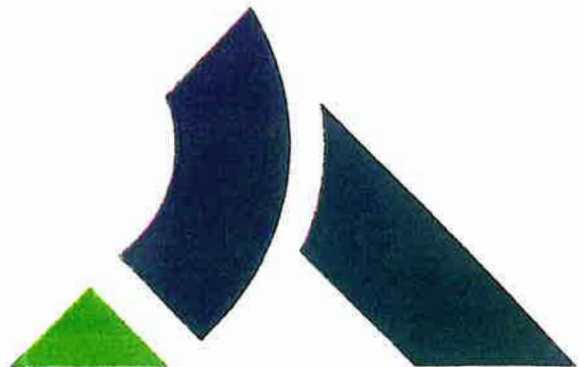
SEAL:



W Central Ohio/E Indiana
440 E. Hoewisher Rd
Sidney, OH 45365
937.497.0200 Phone

S Ohio/N Kentucky
8956 Glendale Millford Rd., Suite 1
Loveland, OH 45140
513.239.8554 Phone

www.CHOICEONEENGINEERING.com



Section: **Hay Avenue**

Date: August 9, 2019

Log Mile: _____ to _____

**LOCAL
ASPHALT
PAVEMENT CONDITION RATING**

Rated by: MKG

Sta: _____ to _____

of Utility Cuts _____

DISTRESS	Distress Weight	SEVERITY WT.*			EXTENT WT.**			STR	DEDUCT POINTS***
		L	M	H	O	F	E		
RAVELING	10	0.3	0.6	1	0.5	0.8	1		3
BLEEDING	5	0.8	0.8	1	0.6	0.9	1		0
PATCHING	5	0.3	0.6	1	0.6	0.8	1		1.8
DEBONDING/POTHOLES	5	0.3	0.6	1	0.6	0.8	1		0.9
RUTTING	10	0.3	0.7	1	0.6	0.8	1	√	2.4
MAP CRACKING	5	0.2	0.6	1	0.4	0.8	1		4
BASE FAILURE	10	0.6	0.8	1	0.7	0.9	1	√	4.2
SETTLEMENTS	5	0.4	0.7	1	0.6	0.8	1		1.2
TRANSVERSE CRACKING	10	0.4	0.7	1	0.5	0.7	1	√	2.8
WHEEL TRACK CRACKING	15	0.4	0.7	1	0.5	0.7	1	√	3
LONGITUDINAL CRACKING	5	0.2	0.6	1	0.4	0.8	1	√	0.8
EDGE CRACKING	5	0.4	0.7	1	0.5	0.7	1	√	0
PRESSURE DAMAGE/UPHEAVAL	5	0.4	0.6	1	0.5	0.8	1		1
CRACK SEALING DEFICIENCY	5	NOT CONSIDERED			0.5	0.8	1		4
TOTAL DEDUCT =									29.1
SUM OF STRUCTURAL DEDUCT (√) =									13.2
100 - TOTAL DEDUCT = PCR =									70.9

Notes:

WATER LINE REPLACEMENT PRIORITIES JULY 2015

FIRE PROTECTION BENEFIT	WATER LINE QUALITY	STREET/SEWER QUALITY	TOTAL SCORE	STREET NAME		STREET 1	STREET 2
1	1	1	1	200 block of Maple Street	Between	E. McKinley	Oak
1	1	1	1	300 block of Maple Street	Between	Oak	Gaines
1	1	1	1	400 block of Maple Street	Between	Gaines	Westbrook
1	1	1	1	10 & 100 block of Hay Avenue	Between	Wolf Creek	Maple
1	1	1	1	200 block of Hay Avenue	Between	Maple	Sycamore
1	1	1	1	500 block of Hay Avenue	Between	Joanna	Wall
1	1	1	1	600 block of Hay Avenue	Between	Wall	Albert
2	1	1	1.3333	300 block of N. Wolf Creek Street	Between	Brookside	Durwell
2	1	1	1.3333	200 block of N. Wolf Creek Street	Between	Brookside	Durwell
2	1	1	1.3333	100 block of S. Orchard Street	Between	Westbrook	Simmons
2	1	1	1.3333	110 block of N. Orchard Street	Between	Western	Mound
1	1	2	1.3333	300 block of Hay Avenue	Between	Sycamore	Cusick
1	1	2	1.3333	400 block of Hay Avenue	Between	Cusick	Joanna
2	1	1	1.3333	500 block of Main Street	Between	Jefferson	Salem
2	1	1	1.3333	500 block of Vine Street	Between	Jefferson	Wall
2	1	1	1.3333	600 block of Vine Street	Between	Wall	Salem
2	1	2	1.6667	400 block of N. Wolf Creek Street	Between	Karrland	Brookside
2	1	2	1.6667	100 block of N. Wolf Creek Street	Between	Durwell	Main
2	1	2	1.6667	10 block of N. Wolf Creek Street	Between	Main	Market
2	1	2	1.6667	10 block of S. Wolf Creek Street	Between	Market	Hay
3	1	1	1.6667	100 block of S. Clay Street	Between	Westbrook	Simmons
3	1	1	1.6667	10 block of N. Clay Street	Between	Western	Church
2	1	2	1.6667	10 block of W. McKinley Street	Between	Hill	Wolf Creek
1	1	3	1.6667	10 block of E. McKinley Street	Between	Wolf Creek	Maple
2	1	2	1.6667	10 block of Main Street	Between	Wolf Creek	Walnut

The following table shows a detail of the pipe greater than 50-years old along with a replacement ranking and probable construction cost for primarily the 4-inch waterlines. These are shown on Exhibit 8 along with high maintenance areas that have a significant number of repairs. Some 6-inch waterlines are included that would have impact to the 4-inch waterline replacement and/or the available flows for the areas that could not meet the modeled fire flow constraints. Some of the pipes overlap with the pipes included for meeting fire flows in the previous section and are included in the list below and ranked for replacement based on need to meet fire flows and age.

Table 9 Replacement Priority Ranking and Probable Construction Cost based on 8-inch Waterline Replacement							
Label	Dia. (in)	Approx. Installation Year	Length (ft)	Location	Included in Fire Flow Improvements	Priority Ranking	Probable Construction Cost*
P-276	4	1951	551	Church St	Yes	1	\$99,180
P-277	6	1963	180	Church St	Yes	1	\$32,400
P-274	4	1951	420	Church St		1	\$138,420
P-271	4	1951	349				
P-453	6	1960	273	Lisa Court	Yes	1	
P-248	6	1960	103	Poplar St			
P-249	6	1960	565	Poplar St Verify connection if this is connected to the 12", these 6" lines are adequate			
P-225	4	1956	561	Main St	Yes	1	
P-226	4	1956	325	(north of Columbia) verify connection to the 10" on Salem Street			
P-553	4	1956	682				
P-430	4	1982	749	Market St to H-233	Yes	1	\$134,820
P-260	4	1959	28	S Clay St	Yes	1	\$115,380
P-265	4	1959	613				
P-263	4	1953	605	S Orchard St	Yes	1	\$108,900
P-264	4	1959	278	Simmons between Orchard/Clay	Yes	1	\$50,040
P-285	4	1964	311	Osage Alley - s from Harshman St	Yes	1	\$55,980
P-619	4	1984	222	Walnut St to H-399	Yes	1	\$39,960
P-618	4	1963	722	Walnut St		2	\$129,960
P-262	4	1959	320	Westbrook between Clay/Simmons	Yes	1	\$57,600
P-345	4	1960	1,167	Vine St - High Maintenance Area		2	\$324,540
P-346	4	1956	636				
P-347	4	1956	620	Wall St - High Maintenance Area		2	\$111,600
P-231	4	1965	979	Hay Ave (sw of Wolf Creek Trail)		2	\$230,580
P-334	4	1956	302				
P-337	4	1956	297	Hay Ave (ne of Wolf Creek Trail)		2	\$211,860
P-338	4	1956	138				
P-339	4	1960	358				
P-340	4	1960	384				
P-378	4	1956	94	March Ave (approx 100' connecting the 6" to the Western Ave 12")		3	\$16,920
P-377	6	1956	1003	March Ave - 1000' of 6"		5	\$180,540
P-292	4	1951	458	N Hill St - From Western to Mound		3	\$82,440



June 8, 2022

Sonja Keaton
301 Sycamore Street
P.O. Box 10
Brookville, OH 45309

Subject: Hay Avenue Reconstruction – Phase 2
City of Brookville, Ohio

As the engineer for the City of Brookville, we recommend the reconstruction of Hay Avenue from Mulberry Street to Cusick Avenue (Phase 2).

Hay Avenue is being reconstructed in a phased approach to improve safety for vehicular and pedestrian traffic. The complete reconstruction consists of the replacement of curb and gutter and sidewalk on both sides of the street. The project will also include waterline replacement to improve fire protection and provide a reliable delivery of drinking water to the residents. Additionally, old, broken-down storm sewer will be replaced, which will help to preserve the pavement and base.

The existing road has several areas of surface and base failures and is to the point where a complete reconstruction is necessary. This is very important because Hay Avenue is a heavily traveled roadway that allows people to travel to the City's major industrial park, Brookhaven Nursing Complex, and provides access to Interstate 70.

If you have any questions or concerns, please give us a call.

Sincerely,

A handwritten signature in blue ink that reads "Allan Heitbrink".

Allan J. Heitbrink, P.E.
Project Manager

W. Central Ohio/E. Indiana
440 E. Hoewisher Rd.
Sidney, OH 45365
937.497.0200 Phone

S. Ohio/N. Kentucky
8956 Glendale Milford Rd., Suite 1
Loveland, OH 45140
513.239.8554 Phone

www.CHOICEONEENGINEERING.com






FROM THE DESK OF...
RONALD E. FLETCHER, OFE
DIRECTOR OF FIRE / FIRE CHIEF

MEMORANDUM

July 25, 2022

TO: Sonja Keaton, City Manager
FROM: Ronald Fletcher, Fire Chief 
REF: Hay Avenue Water System Improvements

The water main that runs the entire length of Hay Avenue, and its potential improvement, is important to the Brookville Fire Department as it relates to water available for firefighting. Originally constructed in the mid 1950's, the section that runs between Mulberry Street and the Bike Path, and the fire hydrants along this main offer very poor volume.

This section of Brookville was once the "business center" and it still contains old, large buildings that require a great deal of water when on fire. In the area of Hay Avenue and Jefferson Street the water available from the hydrant here is woefully poor. Unfortunately, this hydrant is the primary water source for more than 31,500 square feet of commercial space and several residential structures. Residential structure fires can require a needed water flow of 1000 gallons per minute or more. The fire hydrant here offers less than 300 gallons per minute. The lack of water offered by the current water main make it challenging to suppress a building fire in this area, and even more challenging to protect neighboring buildings exposed to the original fire building.

Fire departments today face numerous challenges – adequate staffing, homes full of combustibles that burn extremely fast, and building contents that require a greater fire flow than fifty years ago. We can often overcome these challenges with a good water supply. The difficult nature of our job, combined with a poor water supply, place our residents and our firefighters in a dangerous position.

I support and encourage efforts to improve the water line along Hay Avenue. Please feel free to contact me with questions / concerns.

The following table shows a detail of the pipe greater than 50-years old along with a replacement ranking and probable construction cost for primarily the 4-inch waterlines. These are shown on Exhibit 8 along with high maintenance areas that have a significant number of repairs. Some 6-inch waterlines are included that would have impact to the 4-inch waterline replacement and/or the available flows for the areas that could not meet the modeled fire flow constraints. Some of the pipes overlap with the pipes included for meeting fire flows in the previous section and are included in the list below and ranked for replacement based on need to meet fire flows and age.

Table 9 Replacement Priority Ranking and Probable Construction Cost based on 8-inch Waterline Replacement							
Label	Dia. (in)	Approx. Installation Year	Length (ft)	Location	Included in Fire Flow Improvements	Priority Ranking	Probable Construction Cost*
P-276	4	1951	551	Church St	Yes	1	\$99,180
P-277	6	1963	180	Church St	Yes	1	\$32,400
P-274	4	1951	420	Church St		1	\$138,420
P-271	4	1951	349				
P-453	6	1960	273	Lisa Court	Yes	1	
P-248	6	1960	103	Poplar St			
P-249	6	1960	565	Poplar St Verify connection if this is connected to the 12", these 6" lines are adequate			
P-225	4	1956	561	Main St	Yes	1	
P-226	4	1956	325	(north of Columbia) verify connection to the 10" on Salem Street			
P-553	4	1956	682				
P-430	4	1982	749	Market St to H-233	Yes	1	\$134,820
P-260	4	1959	28	S Clay St	Yes	1	\$115,380
P-265	4	1959	613				
P-263	4	1953	605	S Orchard St	Yes	1	\$108,900
P-264	4	1959	278	Simmons between Orchard/Clay	Yes	1	\$50,040
P-285	4	1964	311	Osage Alley - s from Harshman St	Yes	1	\$55,980
P-619	4	1984	222	Walnut St to H-399	Yes	1	\$39,960
P-618	4	1963	722	Walnut St		2	\$129,960
P-262	4	1959	320	Westbrook between Clay/Simmons	Yes	1	\$57,600
P-345	4	1960	1,167	Vine St - High Maintenance Area		2	\$324,540
P-346	4	1956	636				
P-347	4	1956	620	Wall St - High Maintenance Area		2	\$111,600
P-231	4	1965	979	Hay Ave (sw of Wolf Creek Trail)		2	\$230,580
P-334	4	1956	302				
P-337	4	1956	297	Hay Ave (ne of Wolf Creek Trail)		2	\$211,860
P-338	4	1956	138				
P-339	4	1960	358				
P-340	4	1960	384				
P-378	4	1956	94	March Ave (approx 100' connecting the 6" to the Western Ave 12")		3	\$16,920
P-377	6	1956	1003	March Ave - 1000' of 6"		5	\$180,540
P-292	4	1951	458	N Hill St - From Western to Mound		3	\$82,440

July 25, 2022

Ohio Public Works Commission

This letter is about the proposed upgrades to the Hay Ave. water and storm lines. The age of the existing 4" water main is approximately 70 years old. This water main is unlined cast iron, producing rusty drinking water for residents in the area. The main has had multiple breaks over the past several years. The improvement to 8" ductile iron would improve quality and fire flow for the area. Hay Ave has connectivity to several other areas that have existing 4" water main. Upgrade of the Hay Ave. water main provides connectivity, allowing other areas to be upgraded to 8" water main in the future.

The existing storm lines are in poor condition, with cracked lines washing away aggregate and undermining the asphalt pavement. Improvement of the storm lines will provide access for homeowners as we continue to combat inflow and infiltration into the sanitary system. The current curb and gutter system are composed of several different styles. The lack of consistency allows water to penetrate the edge of asphalt, shortening its lifespan.

The pavement conditions on Hay Ave. have suffered extreme deterioration. The pavement was last resurfaced in 2004 and requires base repair in several areas. Restoration patches exist in multiple locations from previous water main break repairs and gas service line upgrades. Gas lines in the area were all upgraded in 2018, old steel gas lines in the roadway were evacuated and abandoned in place.

If you have any questions or need additional information upon reviewing this application, please feel free to contact me at (937) 833-2135 x401.

The City of Brookville appreciates your attention to this project and would appreciate any financial assistance extended.

Respectfully submitted,



Christian J. Homan
Service Superintendent