OHIO PUBLIC WORKS FOR YOU

State of Ohio

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: Erie County Engineer — Subdivision Code: 043-00043

District Number: 5 — County: Erie — Date: 09/04/2020

Contact: Tim Lloyd, P.E. — Phone: (419) 627-7712
(The individual who will be available during business hours and who can best answer or coordinate the response to questions)

Email: TLloyd@eriecounty.oh.gov — FAX: (419) 625-9622

Project

Project Name: Bogart Road Widening — Zip Code: 44824

Subdivision Type
(Select one)

- [X] 1. County
- [ ] 2. City
- [ ] 3. Township
- [ ] 4. Village
- [ ] 5. Water (6119 Water District)

Project Type
(Select single largest component by $)

- [X] 1. Road
- [ ] 2. Bridge/Culvert
- [ ] 3. Water Supply
- [ ] 4. Wastewater
- [ ] 5. Solid Waste
- [ ] 6. Stormwater

Funding Request Summary
(Automatically populates from page 2)

Total Project Cost:	795,600 .00
1. Grant:	175,000 .00
2. Loan:	0 .00
3. Loan Assistance/ Credit Enhancement:	0 .00
Funding Requested:	175,000 .00

District Recommendation (To be completed by the District Committee)

Funding Type Requested
(Select one)

- [ ] State Capital Improvement Program
- [ ] Local Transportation Improvement Program
- [ ] Revolving Loan Program
- [ ] Small Government Program

District SG Priority: _____

SCIP Loan - Rate: ____ % Term: ____ Yrs — Amount: _____ .00

RLP Loan - Rate: ____ % Term: ____ Yrs — Amount: _____ .00

Grant: — Amount: _____ .00

LTIP: — Amount: _____ .00

Loan Assistance / Credit Enhancement: — Amount: _____ .00

For OPWC Use Only

STATUS

Project Number: _____

Release Date: _____

OPWC Approval: _____

Grant Amount: _____ .00

Loan Amount: _____ .00

Total Funding: _____ .00

Local Participation: _____ %

OPWC Participation: _____ %

Loan Type: [ ] SCIP [ ] RLP

Date Construction End: _____

Date Maturity: _____

Rate: _____ %

Term: _____ Yrs

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

1.1 Project Estimated Costs

Engineering Services

Preliminary Design:	800 .00		
Final Design:	17,000 .00		
Construction Administration:	24,000 .00		
Total Engineering Services:	a.)	41,800 .00	6 %
Right of Way:	b.)	.00	
Construction:	c.)	753,600 .00	
Materials Purchased Directly:	d.)	.00	
Permits, Advertising, Legal:	e.)	200 .00	
Construction Contingencies:	f.)	.00	0 %
Total Estimated Costs:	g.)	795,600 .00	

1.2 Project Financial Resources

Local Resources

Local In-Kind or Force Account:	a.)	41,800 .00	
Local Revenues:	b.)	578,800 .00	
Other Public Revenues:	c.)	.00	
ODOT / FHWA PID: _____	d.)	.00	
USDA Rural Development:	e.)	.00	
OEPA / OWDA:	f.)	.00	
CDBG: ☐ County Entitlement or Community Dev. "Formula" ☐ Department of Development	g.)	.00	
Other: _____	h.)	.00	
Subtotal Local Resources:	i.)	620,600 .00	78 %

OPWC Funds (Check all requested and enter Amount)

Grant: 100 % of OPWC Funds	j.)	175,000 .00	
Loan: 0 % of OPWC Funds	k.)	.00	
Loan Assistance / Credit Enhancement:	l.)	0 .00	
Subtotal OPWC Funds:	m.)	175,000 .00	22 %
Total Financial Resources:	n.)	795,600 .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 Repair / Replacement: 795,600 .00 100 %

2.2 Total Portion of Project New / Expansion: 0 .00 0 %

2.3 Total Project: 795,600 .00 100 %

A Farmland Preservation letter is required for any impact to farmland

3.0 Project Schedule

3.1 Engineering / Design / Right of Way Begin Date: 07/01/2020 End Date: 05/31/2021

3.2 Bid Advertisement and Award Begin Date: 06/01/2021 End Date: 07/20/2021

3.3 Construction Begin Date: 07/01/2021 End Date: 11/30/2021

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: 19 Years Age: 1999 (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 3,297 Year 2020 Projected ADT 3,642 Year 2040

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

Residential Water Rate Current $_____ Proposed $_____

Number of households served: 0

Residential Wastewater Rate Current $_____ Proposed $_____

Number of households served: 0

Stormwater: Number of households served: 0

4.3 Project Description

A: SPECIFIC LOCATION (Supply a written location description that includes the project termini; a map does not replace this requirement.) 500 character limit.

Bogart Road, in Margaretta Township, from the Castalia Corporation line east to Bardshar Road.

Zip Code: 44824

B: PROJECT COMPONENTS (Describe the specific work to be completed; the engineer's estimate does not replace this requirement) 1,000 character limit.

Replace existing catch basins
Replace storm sewer
Excavate and pour strain pole foundation
Install strain pole
Install signal cabinet, signal wiring and signal hardware
Pavement planing, as per plan (includes widening excavation)
301 Asphalt base, full depth for widening
407 Tack coat
Asphalt concrete intermediate course
Tack coat
448 Asphalt concrete surface course
Place topsoil
Seed and Mulch

Widening lanes from 10' to 11' with 2' paved shoulder. Lane width widened to comply with ODOT Location and Design Manual, Volume 1
Replace existing signal and all associated hardware.

Per the District 5 Capital Improvement Project Questionnaire, this is a Resurfacing, Restoration, Rehabilitation and Reconstruction (4R) of a major access road.

C: PHYSICAL DIMENSIONS (Describe the physical dimensions of the existing facility and the proposed facility. Include length, width, quantity and sizes, mgd capacity, etc in detail.) 500 character limit.

Exist. Pavement: 2x10' travel lanes. Variable stone berms. 1.33 miles long. ADT=3267 vpd. ODOT Functional Class is urban major collector. Last resurfaced in 1999. Pavement heavily oxidized. Edge cracks and stone berm degradation indicate inadequate pavement width. Lane widths do not meet standards based on ADT, speed, and funct. class.

New Pavement: 2x11' travel lanes. 2' paved berms. Length funct. class remain same. Travel lane width will be per ODOT Location & Design Manual, Vol. 1. ADT is 3297.

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: Pete Daniel

Title: Adminstrator

Address: 2900 Columbus Avenue

City: Sandusky State: OH Zip: 44870

Phone: (419) 627-7672

FAX: (419) 627-6877

E-Mail: PDaniel@eriecounty.oh.gov

5.2 Chief Financial Officer

(Can not also serve as CEO)

Name: Richard Jeffrey

Title: Auditor

Address: 247 Columbus Avenue

City: Sandusky State: OH Zip: 44870

Phone: (419) 627-7746

FAX: (419) 627-7740

E-Mail: RJeffrey@eriecounty.oh.gov

5.3 Project Manager

Name: Michael Farrell, P.E.

Title: Project Engineer

Address: 2700 Columbus Avenue

City: Sandusky State: OH Zip: 44870

Phone: (419) 627-7715

FAX: (419) 625-9622

E-Mail: MFarrell@eriecounty.oh.gov

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-IIV, "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.

Pete Daniel, Administrator

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

9/9/20

Original Signature / Date Signed

DISTRICT 5
CAPITAL IMPROVEMENT PROJECTS
QUESTIONNAIRE
ROUND 35

Name of Applicant: ERIE COUNTY ENGINEER
Project Title: BOGART ROAD WIDENING

The following questions are to be answered for each application submitted for State Issue II SCIP, LTIP and Loan Projects. Please provide specific information using the best documentation available to you. Justification of your responses to these questions will be required if your project is selected for funding, so please provide correct and accurate responses. **Communities and Townships under 5,000 in population should also complete the Small Government Criteria.**

1. What percentage of the project in repair A= 0 %, replacement B=100 %, expansion C=__ %, and new D= ___%? (Use dollar amounts of project to figure percentages and make sure the total equals one hundred(100) percent) A+B= 100% C+D= 0 % **ORC Reference(s):164.06(B)(1); 164.14(E)(10)**

Repair/Replacement =Repair or Replacement of public facilities owned by the government (any subdivision of the state).

New/Expansion = Replacement of privately owned wells, septic systems, private water or wastewater systems, etc.

2a. Existing Physical Condition of Infrastructure **ORC Reference(s):164.06(B)(2);164.14(E)(9);164.14(E)(2); 164.14(E)(8)**

Points	Category	Description	Examples
10	Failing	Infrastructure has reached a point where it requires replacement, reconstruction or reconfiguration to fulfill its purpose	-Intersection Reconfiguration due to accident problem- Structural paving of 3.5" or greater of additional pavement - Pavement Widening to meet ODOT L&D Standards - Complete Pavement Reconstruction -Water or Sewer Line Replacement - Water or Sewer Plant Replacement - Widening graded shoulder width to ODOT L&D Standard -Complete Bridge or Culvert replacement
8	Poor	The condition is substandard and requires repair or restoration in order to return to the intended level of service and comply with current design standards. Infrastructure contains deficiency and is functioning at a diminished capacity.	-Multiple course of paving - Structural Culvert Lining - Bridge Deck Replacement - Replacement of a significant part of a water or sewer plant - Single course of paving with 25% base repair-Widening graded shoulder width to less than ODOT L&D Standard

6	Fading	The condition requires reconditioning to continue to function as originally intended.	-Single course of paving -Sewer Lining Projects -Water tower painting -Replacement of pumps, hydrants, valves, filters, etc in existing water and sewer systems-Widening aggregate berm on existing graded shoulder width
4	Fair	The condition is average, not good or poor. The infrastructure is still functioning as originally intended. Minor deficiencies exist requiring repair to continue to function as originally intended and/or to meet current design standards	
2	Good	The condition is safe and suitable to purpose. Infrastructure is functioning as originally intended, but requires minor repairs and/or upgrades to meet current design standards	
0	Excellent	The condition is new or requires no repair. Or, no supporting documentation has been submitted	

2b. Age of Infrastructure **ORC Reference(s):164.06(B)(2)**

Life	20	30	50
Project Type	Road	Wastewater and Water Treatment	Bridge/Culvert, Sanitary Sewer, Water Supply, Storm Water, Solid Waste
Points			
0	0-4 Years	0-6 Years	0-10 Years
1	5-8 Years	7-12 Years	11-20 Years
2	9-12 Years	13-18 Years	21-30 Years
3	13-16 Years	19-24 Years	31-40 Years
4	17-20 Years	25-30 Years	41-50 Years
(5)	20+ Years	30+ Years	50+ Years

3. Health and Safety Rating: **ORC Reference(s):164.06(B)(4),164.14(E)(1); 164.14(E)(10)**

If the proposed project is not approved what category would best represent the impact on the general health and/or public safety?

ROADS

Extremely Critical: Resurfacing, Restoration, Rehabilitation and Reconstruction (4R) of a Major Access Road.*

Critical: Resurfacing, Restoration and Rehabilitation (3R) of a Major Access Road.*

Major:	Resurfacing, Restoration, Rehabilitation and Reconstruction (4R) of a Minor Access Road.*
Moderate:	Resurfacing, Restoration and Rehabilitation (3R) of a Minor Access Road.*
Minimal:	Preventative Maintenance of a Major Access Road.
No Impact:	Preventative Maintenance of a Minor Access Road.

Projects that have a variety of work will be scored in the LOWEST category of work contained in the Construction Estimate.

Road/Street Classifications:

Major Access Road:	*Roads or streets that have a dual function of providing access to adjacent properties and providing through or connecting service between other roads.*
Minor Access Road:	*Roads or streets that primarily provide access to adjacent properties without through continuity, such as cul-de-sacs or loop roads or streets.*
Preventative Maintenance:	*Non Structural Pavement work such as chip sealing, cape sealing, micro-surfacing, crack sealing, etc.*

***(3R) Resurfacing, Restoration and Rehabilitation - Improvements to existing roadways, which have as their main purpose, the restoration of the physical features (pavement, curb, guardrail, etc.) without altering the original design elements. (Surface and Intermediate layer Mill and Fills, overlays with less than or equal to 3.5" of additional pavement, etc....)**

***(4R) Resurfacing, Restoration, Rehabilitation and Reconstruction - Much like 3R, except that 4R allows for the complete reconstruction of the roadway and alteration of certain design elements (i.e., lane widths, shoulder width, SSD, overlays with greater than 3.5" of additional pavement. etc.).** 10' Lanes to 11' Lanes; meeting ODOT L&D Criteria

BRIDGES SUFFICIENCY RATING

Extremely Critical:	0-25, or a General Appraisal rating of 3 or less.
Critical:	27-50, or a General Appraisal rating of 4.
Major:	51-65 or a General Appraisal rating of 5 or 6.
Moderate:	66-80 or a General Appraisal rating of 7.
Minimal:	81-100 or a General Appraisal rating of more than 7.
No Impact:	Bridge on a new roadway.

WASTEWATER TREATMENT PLANTS

Extremely Critical:	Environmental Protection Agency (EPA) orders in the form of a consent decree, findings and orders or court order. Health Department Construction Ban.

Critical:	Improvements ordered by the Environmental Protection Agency (EPA) in the form of NPDES Orders.
Major:	Replace deficient appurtenances. Update existing processes due to EPA recommendations.
Moderate:	Increase capacity to meet current needs or update processes to improve effluent quality.
Minimal:	New/Expansion project to meet a specific development proposal.
No Impact:	New/Expansion to meet future or projected needs.

WATER TREATMENT PLANT

Extremely Critical:	EPA orders in the form of a consent decree, findings and orders or court order.
Critical:	Improvements to meet Environmental Protection Agency (EPA) Safe Drinking Water Regulations and/or NPDES Orders.
Major:	Replace deficient appurtenances. Update existing processes due to EPA recommendations.
Moderate:	Increase capacity to meet current needs or update processes to improve water quality.
Minimal:	New/Expansion project to meet a specific development proposal.
No Impact:	New/Expansion to meet future or projected needs.

COMBINED SEWER SEPARATIONS (May be construction of either new storm or sanitary sewer as long as the result is two separate sewer systems.)

Extremely Critical:	EPA orders in the form of a consent decree, findings and orders or court order. Health Department Construction Ban.
Critical:	Separate, due to chronic backup or flooding in basements.
Major:	Separate, due to documented water quality impairment, or due to EPA recommendations.
Moderate:	Separate, due to specific development proposal within or upstream of the combined system area.
Minimal:	Separate, to conform to current design standards.
No Impact:	No positive health effect.

STORM SEWERS

Extremely Critical:	EPA orders in the form of a consent decree, findings and orders or court order.
Critical:	Chronic flooding (structure damage).
Major:	Inadequate capacity (land damage).
Moderate:	Inadequate capacity with no associated damage.
Minimal:	New/Expansion to meet current needs.
No Impact:	New/Expansion to meet future or project needs.

CULVERTS

Extremely Critical:	Structurally deficient or functionally obsolete. Deterioration has already caused a safety Critical: hazard to the public.
Critical:	Inadequate capacity with land damage and the existing or high probability of property damage.
Major:	Inadequate capacity (land damage).
Moderate:	Inadequate capacity with no associated damage.
Minimal:	New/Expansion to meet current needs.
No Impact:	New/Expansion to meet future or projected needs.

SANITARY SEWERS

Extremely Critical:	EPA orders in the form of a consent decree, findings and orders or court order. Health Department Construction Ban.
Critical:	Replace, due to chronic pipe failure, chronic backup or flooding in basements. Improvements ordered by the Environmental Protection Agency (EPA) in the form of NPDES Orders.
Major:	Replace, due to inadequate capacity or infiltration, or due to EPA recommendations.
Moderate:	Rehabilitate to increase capacity to meet current needs or to reduce inflow and infiltration.
Minimal:	New/Expansion project to meet a specific development proposal.
No Impact:	New/Expansion to meet future or projected needs.

SANITARY LIFT STATIONS AND FORCE MAINS

Extremely Critical:	Structurally deficient. Deterioration has already caused a safety/health hazard to the public, or, EPA orders in the form of a consent decree, findings and orders or court order.
Critical:	Inadequate capacity with actual or a high probability of property damage. Improvements ordered by the Environmental Protection Agency (EPA) in the form of NPDES Orders.
Major:	EPA recommendations, or, reduces a probable health and/or safety problem.
Moderate:	Rehabilitate to increase capacity to meet current needs.
Minimal:	New/Expansion to meet a specific development proposal.
No Impact:	New/Expansion to meet future or projected needs.

WATER PUMP STATIONS

Extremely Critical:	Structurally deficient. Deterioration has already caused a safety hazard to the public, or, EPA orders in the form of a consent decree, findings and orders or court order.
Critical:	Inadequate capacity with the inability to maintain pressure required for fire flows.
Major:	Replace due to inadequate capacity or EPA recommendations.
Moderate:	Rehabilitate to increase capacity to meet current needs.
Minimal:	New/Expansion to meet a specific development proposal.
No Impact:	New/Expansion to meet future or projected needs.

WATER LINES/WATER TOWERS

Extremely Critical:	Solve low water pressure or excessive incidents of main breaks in project area.
Critical:	Replace, due to deficiency such as excessive corrosion, etc.
Major:	Replace undersized water lines as upgrading process.
Moderate:	Increase capacity to meet current needs.
Minimal:	New/Expansion project to meet a specific development proposal.
No Impact:	New/Expansion to meet future or projected needs.

OTHER

Extremely Critical:	There is a present health and/or safety threat.

Critical:	The project will provide immediate health and/or safety benefit.
Major:	The project will reduce a probable health and/or safety problem.
Moderate:	The project will delay a health and/or safety problem.
Minimal:	A possible future health and/or safety problem mitigation.
No Impact:	No health and/or safety effect.

NOTE: *Combined projects that can be rated in more than one subset may be rated in the other category at the discretion of the District 5 Executive Committee. In general, the majority of the cost or scope of the project shall determine the category under which the project will be scored.*

(Submittals without supporting documentation will receive 0 Points for this question.)

Extremely Critical _X_, Critical ___, Major ___, Moderate ___, Minimal ___, No Impact ___. Explain your answer. Lane widening to meet ODOT L&D Standards

(Additional narrative, charts and/or pictures should be attached to questionnaire)

4. Identify the amount of local funds that will be used on the project as a percentage of the total project cost. **ORC Reference164.06(B)(6); ORC164.06(B)(3)**

A.) Amount of Local Funds = $ 620,600

B.) Total Project Cost = $ 795,600

RATIO OF LOCAL FUNDS DIVIDED by TOTAL PROJECT COSTS (A□B)= 78 %

Note: Local funds should be considered funds derived from the applicant budget or loans funds to be paid back through local budget, assessments, rates or tax revenues collected by the applicant.

5. Identify the amount of other funding sources to be used on the project, excluding SCIP or LTIP Funds, as a percentage of the total project cost. **ORC Reference(s):164.06(B)(7);164.14(E)(4)**

Grants 0 % Gifts 0 %, Contributions 0 %

Other 0 % (explain)_____ , Total 0 %

Note: Grant funds and other revenues not contributed or collected through taxes by the applicant should be considered other funds. The Scope of Work for each Funding Source must be the same.

6. Total Amount of SCIP and Loan Funding Requested- An Applicant can request a grant per the categories below for points as indicated on the Priority Rating Sheet. If the Applicant is including a loan request equal to, but not exceeding 50% of the OPWC funding amounts listed below, there will be no point penalty. If loan funds requested are more than 50%, points as listed in the Priority Rating Sheet will apply. **ORC Reference(s):164.14(E)(10);164.06(B)(5)**

_____	$500,001 or More
_____	$400,001-$500,000
_____	$325,001-$400,000
_____	$275,001-$325,000
_____	$175,001-$275,000
X	$175,000 or Less

There are times when the District spends all of the grant money and has loan money remaining. When this happens, the district makes a loan offer in the amount of the requested grant to the communities that were not funded. The offers are made in the order of scoring. We need to know if you are not successful in obtaining grant dollars for your project if you would be interested in loan money:

YES _____ NO X
(This will only be considered if you are not funded with grant money and there is remaining loan money.) **Please note: if you answer "no" you will not be contacted, only if you answer "yes" will an offer be made in the event that there is loan money remaining.**

7. If the proposed project is funded, will its completion directly result in the creation of permanent full-time equivalent (FTE) jobs (FTE jobs shall be defined as 35 hours/week) ? Yes ___ No X. If yes, how many jobs within eighteen months? __ Will the completed project retain jobs that would otherwise be permanently lost? Yes ___ No X. If yes, how many jobs ____ **will be created/retrained** within 18 months **following the completion of the improvements**?

   ORC Reference(s): 164.14(E)(3);164.14(E)(10)

   (Supporting documentation in the form of letter from affected industrial or commercial enterprises that specify full time equivlent jobs that will be retained or created directly by the installation or improvement of Public infrastructure. Additional items such as; 1) newspaper articles or other media news accounts, 2) public meeting minutes, and/or 3) a letter from the County Economic Development Director or State of Ohio Economic Development Professional that alludes to the requirement for the infrastructure improvement to support the business. Submittals without supporting documentation will receive 0 points for this question.)

8. What is the total number of existing users that will directly benefit from the proposed project if completed? 3297 (Use households served, traffic counts, etc. and explain the basis by which you arrived at your number.) **ORC Reference 164.14(E)(7); 164.06(B)(10)**

9. Economic Distress Criteria **ORC Reference 164.06(B)(8)**

   What is the Local Median Household Income as a percentage of the District Median Household Income? NA %. Please utilize the Economic Distress Scoring Criteria based on ACS 2013-2017 Data provided in Exhibit A.

10. Readiness to Proceed Criteria **ORC Reference 164.06(B)(9); ORC 164.14(E)(5)**

Please categorize the status of planning and design elements for the project.

__X__ Plans have not begun yet (0 Points)

_____ Preliminary Engineering Complete (1 Point)

_____ Final Design Complete (2 Points)

11. Base Score Total for Questions 1-10= _____

12. County Subcommittee Priority Points= _____

(25-20-15 Points for each of the SCIP and LTIP Project Categories)

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13. DISCRETIONARY POINTS (BY DISTRICT COMMITTEE ONLY)

13a. A **District Discretionary Point** may be awarded to projects that demonstrate significant Area-wide, County, or Community Impact. (Include documentation to support the claim of significance) (Maximum of 1 Point at the discretion of the District Executive Committee) _____ **ORC Reference 164.14(E)(7)**

13b. A **District Discretionary Point** may be awarded to projects that demonstrate that the entity has maximized local financial resources including assessments. Provide a Fund Status Report and/or the water and sanitary waste utility rate structures are at least 2.5% of area median household income for combined systems and 1.5% of the area median household income for water and sanitary only systems. Please provide rate ordinances for water and sanitary sewer to be considered for discretionary points. (Maximum of 1 Point at the discretion of the District 5 Executive Committee)_____ **ORC Reference 164.06(B)(3)**

14. **Grand Total of Points** _____

15. Is subdivision's population less than 5,000 Yes No _X_ If yes, continue. You may want to design your project per Small Government Project Evaluation Criteria, released for the current OPWC Round to assist in evaluating your project for potential Small Government Funding. The Small Government Criteria is available on the OPWC website at https://www.pwc.ohio.gov/Portals/0/Data/SmallGovernment%20Round%2035%20Methodology.pdf?ver=2019-08-07-071749-143

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16. **OHIO PUBLIC WORKS COMMISSION SMALL GOVERNMENT PROGRAM GUIDELINES**

All projects that are sponsored by a subdivision with a population of 5,000 or less, and not earning enough points for District Funding from SCIP or LTIP Funds, are then rated using the Small

Government Program Rating Criteria for the corresponding funding round. In order to be rated the entity must submit the Small Government Suppliment and their required budgets with their application. **Only infrastructure that is village- or township- owned is eligible for assistance.** The following policies have been adopted by the Small Government Commission:

- District Integrating Committees may submit up to seven (7) applications for consideration by the Commission. All 7 must be ranked, however, only the top five (5) will be scored. The remaining two (2) will be held as contingency projects should an application be withdrawn.

- Grants are limited to $500,000. Any assistance above that amount must be in the form of a loan.

- Grants for new or expanded infrastructure cannot exceed 50% ofthe project estimate.

- The Commission may deny funding for water and sewer systems that are deemed to be more cost-effective if regionalized.

- If a water or sewer project is determined to be affordable, the project will be offered a loan rather than a grant. Pay special attention to the **Water & Wastewater Affordability Supplemental and the Small Government Water & Wastewater Affordability Calculation Worksheet. Both are available on the Small Government Program Tab at https://www.pwc.ohio.gov/Programs/Infrastructure-Programs/Small-Government**

- Should there be more projects that meet the "annual score" than there is funding, the tie breaker is those projects which scored highest under Health & Safety, with the second tie breaker being Condition. If multiple projects have equivalent Health & Safety and Condition scores they are arranged according to the amount of assistance from low to high. Once the funded projects are announced, "contingency protects" may be funded from project under-runs by continuing down the approved project list.

- Supplemental assistance is not provided to projects previously funded by the Commission.

- Applicants have 30 days from receipt of application by OPWC without exception to provide additional documentation to make the application more competitive under the Small Government criteria. Applications will be scored after the 30-day period has expired. The applicants for each District's two (2) contingency projects will have the same 30-day period to submit supplemental information but these applications will not be scored unless necessary to do so. **It is each applicant's responsibility for determining the need for supplemental material. The applicant will not be asked for or notified of missing information unless the Commission has changed the project type and it affects the documentation required. Important information may include, but is not limited to: age of infrastructure, traffic counts or utility users, median income information, user rates ordinances, and the Auditor's Certificate of Estimated Revenues or documentation from the Auditor of State that subdivision is in a state of fiscal emergency.**

If you desire to have your Round 35 project considered for Small Government Funding please download the Small Government Evaluation Criteria applicable to Round 35 by accessing the OPWC Website at https://www.pwc.ohio.gov/Portals/0/Data/SmallGovernment%20Round%2035%20Methodology.pdf?ver=2019-08-07-071749-143

Please complete the Small Government Evaluation Criteria and attach all required supporting documentation and attach it to the District 5 Questionnaire for Round 35.

Date: 9/4/20

Signature:

Title: Deputy Engineer

Address: 2700 Columbus Avenue, Sandusky, Ohio 44870

Phone: 419-627-7712

FAX: 419-625-9622

Email: tlloyd@eriecounty.oh.gov

District 5
Capital Improvement Project
Priority Rating Sheet, Round 35

COUNTY: Erie
PROJECT: Bogart Road Widening
EST. COST: $795,600
PROJECT NUMBER:

No.	"A" WEIGHT FACTOR	CRITERIA TO BE CONSIDERED	"B" PRIORITY FACTORS	"A" x "B"	PRIORITY FACTORS						No.
			0 2 4 6 8 10		0	2	4	6	8	10	
1	1	(REPAIR OR REPLACE) vs. (NEW OR EXPANSION)		10	0% + Repair or Replacement	20% + Repair or Replacement	40% + Repair or Replacement	60%+ Repair or Replacement	80%+ Repair or Replacemnt	100%+ Repair or Replacement	1
			0 2 4 6 8 10		0	2	4	6	8	10	
2A	1	EXISTING PHYSICAL CONDITION Please refer to Criteria #2 of the Round 35 Scoring Methodology. Must submit substantiating documentation. (100% New or Expansion = 0 Points)		10	Excellent	Good	Fair	Fading	Poor	Failing	2A
			0 1 2 3 4 5		Type	0	1	2	3	4	5	
2B	1	AGE		5	Road	0-4 Yrs	5-8 Yrs	9-12 Yrs	13-16 Yrs	17-20 Yrs	20+ Yrs	2B
					Wastewater	0-6 Yrs	7-12 Yrs	13-18 Yrs	19-24 Yrs	25-30 Yrs	30+ Yrs	
					Bridge/Culvert, Sanitary Sewer, Water Supply, Storm Water, Solid Waste	0-10 Yrs	11-20 Yrs	21-30 Yrs	31-40 Yrs	41-50 Yrs	50+ Yrs	
			0 2 4 6 8 10		0	2	4	6	8	10	
3	2	PUBLIC HEALTH AND/OR SAFETY CONCERNS Submittals without supporting documentation will receive 0 points for this question.		20	No Impact	Minimal	Moderate	Major	Critical	Extremely Critical	3
			0 2 4 6 8 10		0	2	4	6	8	10	
4	2	LOCAL MATCHING FUNDS Percentage of Local Share (Local funds are funds derived from the applicant budget or a loan to be paid back through the applicant budget, assessments, rates or tax revenues) *		20	0%	10%	20%	30%	40%	50%	4
			0 2 4 6 8 10		0	2	4	6	8	10	
5	1	OTHER FUNDING (Excluding Issue II Funds) (Grants and other revenues not contributed or collected through taxes by the applicant; including Gifts, Contributions, etc. – must submit copy of award or status letter.)		0	0%	10%	20%	30%	40%	50%	5
6		OPWC GRANT AND LOAN FUNDS REQUESTED Please refer to Criteria #6 of the Round 35 Methodology for clarification.									6
	2	Grant or Loan Only	-9 -8 0 8 9 10	20	-9	-8	0	8	9	10	
					Grant or Loan Only						6
					$500,001 or more	$400,001 to $500,000	$325,001 to $400,000	$275,001 to $325,000	$175,001 to $275,000	$175,000 or less	
	2	Grant /Loan Combination	-9 -8 0 8 9 10		Grant/Loan Combination						
					$750,000 or more	$600,001 to $750,000	$487,501 to $600,000	$412,501 to $487,500	$262,501 to $412,500	$262,500 or less	6
		When scoring a project that is only grant or only loan. Please use the chart labeled "Grant or Loan Only". When scoring a grant/loan combination, score the project for the grant in the first chart, then use the second chart labeled "Grant/Loan Combination" to score the total (grant and loan combined). Use the lower of the two as the score.									
			0 2 4 6		0	2	4	6			
7	1	JOB CREATION/RETENTION Indicate full time equivalent jobs, include supporting documentation in the form of a commiment letter from business or third party entity.		0	0-6 Jobs	7-14 Jobs	15-24 Jobs	25+ Jobs			7
			0 2 4 6 8 10		0	2	4	6	8	10	
8	1	BENEFIT TO EXISTING USERS (households or traffic counts) Equivalent dwelling unit direct connections. Traffic Counts within two years with certified documentation, etc.		10	0 -99 Users	100 - 349 Users	350 - 499 Users	500 - 749 Users	750 - 1000 Users	1000+ Users	8
			0 1 2		0	1	2				
9	1	ECONOMIC DISTRESS Local MHI as a percentage of the District Median MHI		0	100%+	80%-100%	Less Than 80%				9
			0 1 2		0	1	2				
10	1	READINESS TO PROCEED			Plans Not Begun Yet	Preliminary Engineering Complete	Final Design Complete				10
11		SUBTOTAL RANKING POINTS (MAX. = 115)			Other Info: Does this project have a significant impact on productive farmland? YES NO *Attach impact statement if yes.* Is the Applicant ready to proceed to bids after State Approval within 6 months? YES NO						
12		COUNTY SUBCOMMITTEE PRIORITY POINTS (25-20-15)									
13A		DISCRETIONARY POINTS (BY DISTRICT ONLY) (MAX.=1)			District Discretionary Point may be awarded to projects that demonstarte significant Area-wide, County, or Community Impact. Include documentaion to support the claim of significance.						
13B		DISCRETIONARY POINTS (BY DISTRICT ONLY) (MAX.=1)			District Discretionary Point may be awarded to projects that demonstarte that the entity has maximized financial resources including assessments and utility rate structure.						
14		GRAND TOTAL RANKING POINTS									

*** Applicants must certify local and other share contributions. Specify, all funding sources to be utilized as local share at the time of application submittal.**

JDF

RESOLUTION NO. 20-212

RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF ERIE COUNTY, OHIO, FOR THE PURPOSE OF AUTHORIZING THE COUNTY ADMINISTRATOR TO SUBMIT AN APPLICATION TO THE OHIO PUBLIC WORKS COMMISSION, AND TO EXECUTE CONTRACTS AS REQUIRED FOR PROJECTS PROPOSED BY THE ERIE COUNTY ENGINEER

The Board of County Commissioners of Erie County, Ohio, met this 26th day of August, 2020, in regular session with the following members present:

Patrick J. Shenigo, Mathew R. Old, and Stephen L. Shoffner.

Mr. Old introduced the following resolution and moved its adoption.

BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF ERIE COUNTY, OHIO:

THAT, this Board hereby authorizes the County Administrator to submit an Ohio Public Works Commission application for the widening of Bogart Road (from the Castalia Corporation line to Bardshar Road) on behalf of the Erie County Engineer, and to execute contracts; and

THAT, this Board of County Commissioners hereby finds and determines that all formal actions relative to the adoption of this resolution were taken in an open meeting of this Board; and that all deliberations of this Board and of its committees, if any, which resulted in formal action, were taken in meetings open to the public in full compliance with applicable legal requirements, including Section 121.22 of the Revised Code.

Mr. Shoffner seconded the motion for the adoption of said resolution; and the roll being called upon its adoption, the vote resulted as follows:

Roll Call: Mr. Old, Aye; Mr. Shoffner, Aye; Mr. Shenigo, Aye

Adopted: August 26, 2020

CERTIFICATE

I, Carolyn L. Hauenstein, Clerk of the Board of County Commissioners of Erie County, Ohio, hereby do certify that the above is a true and correct copy of resolution adopted by said Board under said date, and as same appears in Commissioners' Journal Volume #223.

Carolyn L Hauenstein Clerk
Board of County Commissioners
of Erie County, Ohio

Approved by County Administrator
Peter S. Daniel

opwc application-jdf-bogart road widening/clh

FISCAL OFFICER'S CERTIFICATE

I, Richard H. Jeffrey, Auditor of Erie County, hereby certify that Erie County has the amount of $620,600.00 in the Motor Vehicle and Gas Tax Fund account and that this amount will be used to pay the local share for the Bogart Road Widening (Castalia Corporation to Bardshar Road) project when it is required.

Signed this 27th day of August, 2020.

Richard H. Jeffrey
Erie County Auditor

OFFICE OF
ERIE COUNTY ENGINEER
HIGHWAY DEPARTMENT
ENGINEER'S ESTIMATE OF COST

BOGART ROAD WIDENING
CASTALIA CORPORATION TO BARDSHAR ROAD

DESCRIPTION	Items	Quantities	Unit	Unit Price	Total
ROADWAY					
Excavation (for 301)	203	1050.0	Cu. Yd.	$ 15.00	$ 15,750.00
Subgrade Compaction	204	4550.0	Sq. Yd.	$ 1.00	$ 4,550.00
Monument Box Adjusted to Grade, As Per Plan	604	7.0	Each	$ 500.00	$ 3,500.00
Mailbox Relocated, Incl. Approach	Special	88.0	Each	$ 400.00	$ 35,200.00
ROADWAY SUBTOTAL					$ 59,000.00
EROSION CONTROL					
Topsoil Furnished and Placed	653	350.0	Cu. Yd.	$ 35.00	$ 12,250.00
Seeding and Mulching	659	7800.0	Sq. Yd.	$ 2.00	$ 15,600.00
Fertilizer	659	1.1	Ton	$ 600.00	$ 660.00
Erosion Control, as per plan	832	1000.0	each	$ 1.00	$ 1,000.00
EROSION SUBTOTAL					$ 29,510.00
DRAINAGE					
Catch Basin Removed	202	13.0	Each	$ 650.00	$ 8,450.00
8" Conduit, Type C	603	1085.0	Foot	$ 35.00	$ 37,975.00
!2" Conduit, 706.02, Type B	603	135.0	Foot	$ 65.00	$ 8,775.00
Catch Basin, 2-2B, As Per Plan	604	19.0	Each	$ 1,200.00	$ 22,800.00
Rock Excavation	Special	300.0	Cu. Yd.	$ 60.00	$ 18,000.00
DRAINAGE SUBTOTAL					$ 96,000.00
PAVEMENT					
Pavement Planing, As Per Plan	254	4000.0	Sq. Yd.	$ 8.00	$ 32,000.00
Asphalt Concrete Base	301	1300.0	Cu. Yd.	$ 150.00	$ 195,000.00
Tack Coat	407	1680.0	Gallon	$ 2.50	$ 4,200.00
Tack Coat, Intermediate Course	407	1050.0	Gallon	$ 2.50	$ 2,625.00
Stabilized Crushed Aggregate	411	30.0	Cu. Yd.	$ 80.00	$ 2,400.00
Asphalt Concrete Intermediate Course, Type 2, PG64-22	448	900.0	Cu. Yd.	$ 130.00	$ 117,000.00
Asphalt Concrete Intermediate Course, Type 2, PG76-22M	448	20.0	Cu. Yd.	$ 185.00	$ 3,700.00
Asphalt Concrete Surface Course, Type 1, PG64-22	448	650.0	Cu. Yd.	$ 135.00	$ 87,750.00
Asphalt Concrete Surface Course, Type 1, PG76-22M	448	20.0	Cu. Yd.	$ 185.00	$ 3,700.00
PAVEMENT SUBTOTAL					$ 448,375.00
WATER WORK					
Water Valve Adjusted to Grade, As Per Plan	638	5.0	Each	$ 400.00	$ 2,000.00
WATER WORK SUBTOTAL					$ 2,000.00
SANITARY WORK					
Sanitary Manhole Adjusted to Grade, As Per Plan	604	10.0	Each	$ 1,000.00	$ 10,000.00
SANITARY WORK SUBTOTAL					$ 10,000.00
MAINTENANCE OF TRAFFIC					
Law Enforcement Officer with Patrol Car for Assistance	614	8.0	Hour	$ 90.00	$ 720.00
Maintaining Traffic	614	1.0	L.S.	$ 14,504.00	$ 14,504.00
MAINTENANCE OF TRAFFIC SUBTOTAL					$ 15,224.00
TRAFFIC CONTROL					
Conduit, 725.04, 3"	625	10.0	Foot	$ 15.00	$ 150.00
Trench	625	5.0	Foot	$ 10.00	$ 50.00
Ground Rod	625	2.0	Each	$ 150.00	$ 300.00
Rock Excavation for Signal Support Foundation	632	10.0	Foot	$ 75.00	$ 750.00
Covering of Vehicular Signal Heads, As Per Plan	632	8.0	Each	$ 10.00	$ 80.00
Signal Support Foundation	632	1.0	Each	$ 3,500.00	$ 3,500.00
Signal Cable, 5-Conductor, No. 14 AWG	632	330.0	Foot	$ 2.00	$ 660.00
Power Cable, 3-Conductor, No. 6 AWG	632	26.0	Foot	$ 6.00	$ 156.00
Power Cable, 2-Conductor, No. 6 AWG	632	20.0	Foot	$ 4.00	$ 80.00
Power Service, As Per Plan	632	1.0	Each	$ 1,250.00	$ 1,250.00
Signal Support, Type TC-81.21, Design 14, As Per Plan	632	1.0	Each	$ 14,000.00	$ 14,000.00
Vehicular Signal Head, Polycarbonate, LED, 3-section, with 12" Lens, 1-way, As Per Plan	632	3.0	Each	$ 800.00	$ 2,400.00

Vehicular Signal Head, Polycarbonate, LED, 3-section, with 12" Lens, 2-way, As Per Plan	632	1.0	Each	$ 1,250.00	$ 1,250.00
Vehicular Signal Head, Polycarbonate, LED, 3-section, with 12" Lens, 3-way, As Per Plan	632	1.0	Each	$ 1,500.00	$ 1,500.00
Removal of Traffic Signal Installation	632	1.0	Each	$ 2,000.00	$ 2,000.00
Controller Unit, Type TS2/A2 with Cabinet, Type TS1, APP	633	1.0	Each	$ 8,500.00	$ 8,500.00
Cabinet Foundation	633	1.0	Each	$ 1,300.00	$ 1,300.00
Controller Work Pad	633	1.0	Each	$ 300.00	$ 300.00
Uninterruptible Power Supply	633	1.0	Each	$ 4,000.00	$ 4,000.00
Advanced Radar Detection	816	2.0	Each	$ 7,350.00	$ 14,700.00
Advanced Radar Detection	816	4.0	Each	$ 6,500.00	$ 26,000.00
Edge Line	642	2.70	Mile	$ 1,200.00	$ 3,240.00
Center Line	642	1.35	Mile	$ 1,500.00	$ 2,025.00
School Symbol Marking	644	2.0	Each	$ 900.00	$ 1,800.00
TRAFFIC CONTROL SUBTOTAL					$ 89,991.00
MISCELLANEOUS					
Premium for Performance and Maintenance Bond	103.05	1.0	L.S.	$ 3,500.00	$ 3,500.00
MISCELLANEOUS SUBTOTAL					**$ 3,500.00**
Engineer's Estimate of Construction Cost					**$ 753,600.00**
Preliminary Design					**$ 800.00**
Final Design					**$ 17,000.00**
Advertising					**$ 200.00**
Construction Inspection					**$ 15,000.00**
Testing					**$ 9,000.00**
Engineer's Estimate of Total Project Cost					**$ 795,600.00**

Date: 8/27/2020

Approved:

Tim Lloyd, P.E.
Deputy Engineer

The estimated useful life of the Bogart Road Widening project is 19.9 years.

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.

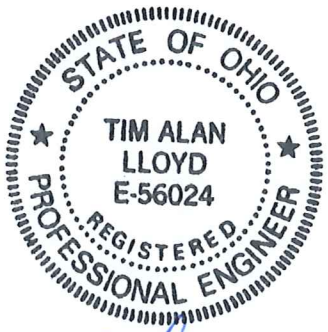
Weighted Useful Life & Design Service Capacity Calculations

Major Component	Cost ($1,000)	Portion Repair / Replacement (%)	Repair / Replace Product	Useful Life (Years)	Useful Life Product
Full-depth road construction w/ drainage				25	
Full-depth road construction w/o drainage				25	
Partial-depth road construction w/ drainage	537	100	53700	15	8055
Partial-depth road construction w/o drainage				15	
Storm Sewers	96	100	9600	40	3840
Sanitary Sewers	10	100	1000	40	400
Water Lines	2	100	200	40	80
Bridge				75	
Pumps, Lift Stations				15	
Sidewalks		100		25	
Bike Facility		100		7	
Signal	88	100	8800	25	2200
Totals	733		73300		14575

Weighted Useful Life: 19.9 Years

Design Service Capacity (Project Application, Section 2.0):

Portion Repair / Replace	100 %
Portion New / Expansion	%



8/24/20

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: MARGARETTA TWP
Street: BOGART RD (MAPLE-BARDSHAR)

A study of vehicle traffic was conducted with the device having serial number 137032. The study was done in the EB & WB lane at BOGART RD (MAPLE-BARDSHAR) in MARGARETTA TWP, OH in ERIE county. The study began on 08/25/2020 at 12:00 AM and concluded on 08/26/2020 at 12:00 AM, lasting a total of 24.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 3,297 vehicles passed through the location with a peak volume of 87 on 08/25/2020 at [03:45 PM-04:00 PM] and a minimum volume of 0 on 08/25/2020 at [12:15 AM-12:30 AM]. The AADT count for this study was 3,297.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 40 - 45 MPH range or lower. The average speed for all classified vehicles was 44 MPH with 42.38% vehicles exceeding the posted speed of 45 MPH. 1.55% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 40MPH and the 85th percentile was 49.12 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
0	9	2	8	16	77	474	1304	1088	251	32	12	2	2	3

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.
Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 2131 which represents 65 percent of the total classified vehicles. The number of Vans & Pickups in the study was 1008 which represents 31 percent of the total classified vehicles. The number of Busses & Trucks in the study was 103 which represents 3 percent of the total classified vehicles. The number of Tractor Trailers in the study was 38 which represents 1 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
2131	752	256	68	18	29	12	14							

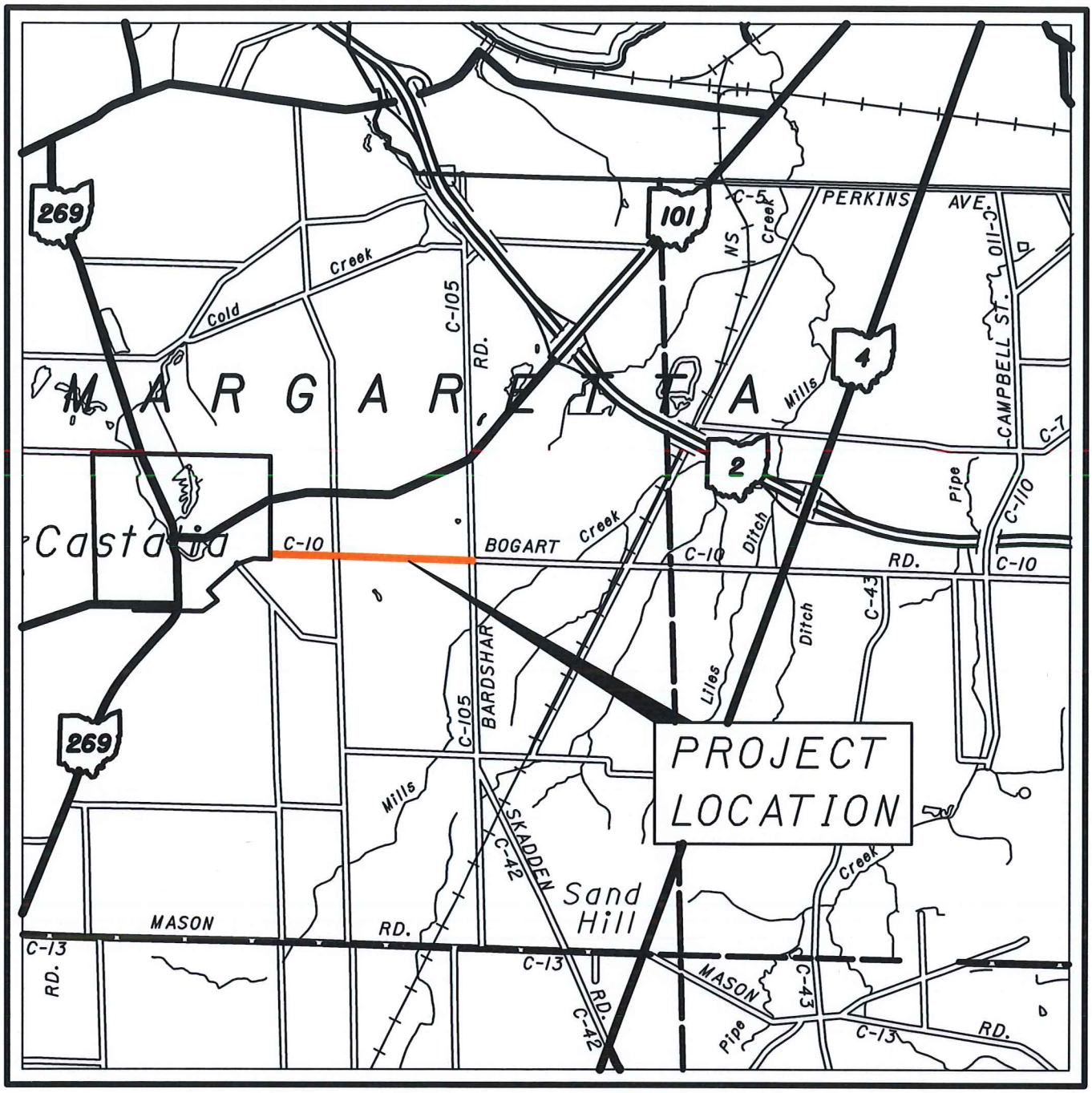
CHART 2

HEADWAY

During the peak traffic period, on 08/25/2020 at [03:45 PM-04:00 PM] the average headway between vehicles was 10.227 seconds. During the slowest traffic period, on 08/25/2020 at [12:15 AM-12:30 AM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 81.00 and 127.00 degrees F.



LOCATION MAP

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED

INTERSTATE & DIVIDED HIGHWAYS

UNDIVIDED STATE & FEDERAL ROUTES

OTHER ROADS

RURAL LANE WIDTHS (A)	301-2 REFERENCE SECTION 301.1.2

Function Classification	Traffic Design Year ADT	Minimum Lane Widths (ft.) Design Speed (mph)										
		20	25	30	35	40	45	50	55	60	65	70 or >
Interstate, Other Freeways, and Expressways	ALL	--	--	--	--	--	--	12	12	12	12	12
Arterial	> 2000	--	--	--	--	12	12	12	12	12	12	12
	400 to 2000	--	--	--	--	11	11	11	12	12	12	12
	< 400	--	--	--	--	10	10	11	11	11	11	11
Collector	> 2000	11	11	11	11	11	11	11	11(C)	11(C)	--	--
	400 to 2000	10	10	10	11	11	11	11	11	11	11	--
	< 400	10	10	10	10	10	10	10	11	11	11	--
Local	> 2000	11	11	11	11	11	11	11	11(C)	11(C)	--	--
	400 to 2000	10	10	10	10	10	11	11	11	11	--	--
	< 400	9	9	9	9	9	10	10	11	11	--	--

NOTES:

(A) There may be some rural locations that are urban in character. An example would be a village where adjacent development and other conditions resemble and urban area. In such cases, urban design criteria (**Figure 301-4**) may be used.

(B) The number of lanes should be determined by a capacity analysis.

(C) Consider using a 12' lane width where substantial truck volumes are present or agricultural equipment frequently use the road.

(D) For National Network lane width requirements, see Section 105.3

Note: For the design criteria pertaining to Collectors and Local Roads with ADT's of 2000 or less, refer to the **AASHTO publication Guidelines for Geometric Design of Low-Volume Roads (2nd Edition 2019)**

Oxidized pavement with edge cracking. The breaking of the edge of the asphalt and the difficulty in holding the berm are indications of the need for wider travel lanes that meet the requirements of the ODOT Location and Design Manual, Volume 1. The road will also receive a paved berm with Safety Edge.

Per report No. FHWA-SA-08-011 from the U.S. Department of Transportation Federal Highway Administration, the improvements proposed with this project will reduce accidents by the following:

Countermeasure	Crash Type	Crash Severity	Crash Reduction Factor(CRF)/Function
Widen Lane (add 1 foot to both sides)	Head-on	All	16
	ROR	All	16
	Sideswipe	All	16
Widen shoulder(paved) (from 0 to 2 feet)	Fixed Object	All	3*
	ROR	All	3*

3* CRF calculated from Widen shoulder (paved) (from 0 to 2 ft) minus Widen shoulder(from 0-2 ft) or (16 - 13 = 3 CRF)

Heavy wheel path cracking.

Oxidized pavement with edge cracking. The breaking of the edge of the asphalt and the difficulty in holding the berm are indications of the need for wider travel lanes that meet the requirements of the ODOT Location and Design Manual, Volume 1. The road will also receive a paved berm with Safety Edge.

Per report No. FHWA-SA-08-011 from the U.S. Department of Transportation Federal Highway Administration, the improvements proposed with this project will reduce accidents by the following:

Countermeasure	Crash Type	Crash Severity	Crash Reduction Factor(CRF)/Function
Widen Lane (add 1 foot to both sides)	Head-on	All	16
	ROR	All	16
	Sideswipe	All	16
Widen shoulder(paved) (from 0 to 2 feet)	Fixed Object	All	3*
	ROR	All	3*

3* CRF calculated from Widen shoulder (paved) (from 0 to 2 ft) minus Widen shoulder(from 0-2 ft) or (16 - 13 = 3 CRF)

Desktop Reference for Crash Reduction Factors

Report No. FHWA-SA-08-011
U.S. Department of Transportation
Federal Highway Administration

September 2008

Countermeasure(s)	Crash Type	Crash Severity	Area Type	Road Type	Daily Traffic Volume (veh/day)	Ref	Effectiveness				Study Type
							Crash Reduction Factor / Function	Std Error	Range		
									Low	High	
Vary outside shoulder width (cont'd)	All	All	Rural	Rural Highway		6	100(1-((EXP(-0.021(Ws-8))-1.0)(Pi/0.16)+1.0)); Ws=outside shoulder width (ft), Pi=proportion of crash type subset (for values of Pi, refer to source).				
Vary shoulder width	All	All	Urban	Urban Street		6	100(1-((EXP(-0.014(Ws-1.5))-1.0)(Pi/0.088)+1.0)); Ws=shoulder width (ft), Pi=proportion of crash type subset (for values of Pi, refer to source).				
Vary side slopes	All	All	Rural	Rural Highway		6	100(1-((EXP(0.692(1/Ss-0.25))-1.0)Ps+1.0)), Ss= horizontal run for a 1ft change in elevation (average for length of segment, ft), Ps=proportion of crash type subset (for values of Ps, refer to source).				
Vary spiral transition curvature	All	All	Rural	Rural Highway		6	100(1-((1.55Lc+80.2/R-0.012)/(1.55Lc+80.2/R))); Lc=length of horizontal curve (mi), R=curve radius (ft).				
Vary superelevation	All	All	Rural	Rural Highway		6	0 through -15 according to the superelevation deficiency (refer to source).				
Vary uncurbed cross-sections	All	All	Urban	Urban Street		6	100(1-((EXP(-0.074)(1-Poff-road))+EXP(-0.225)Poff-road)); Poff-road=proportion of off-road crashes.				
Widen lane (add 1 ft to both sides)	Head-on	All				15	12				
	ROR	All				15	12				
	Sideswipe	All				15	12				
Widen lane (add 2 ft to both sides)	Head-on	All				15	23				
	ROR	All				15	23				
Widen lane (add 2 ft to both sides) (cont'd)	Sideswipe	All				15	23				

U.S. Department of Transportation
Federal Highway Administration
1200 New Jersey Avenue, SE
Washington, DC 20590
202-366-4000

Safety

Desktop Reference for Crash Reduction Factors

< Previous Table of Contents Next >

Tables for Roadway Departure Crash Reduction Factors

Table 4. Barrier Countermeasures

Countermeasures	Crash Type	Crash Severity	Area Type	Road Type	Daily Traffic Volume (veh/day)	Ref	Effectiveness				Study Type
							Crash Reduction Factor/Function	Std Error	Range		
									Low	High	
BARRIER COUNTERMEASURES											
Improve guardrail	All	All			<5,000/lane (Total)	15	18				
	All	All			>5,000/lane (Total)	15	9				
	All	All	All	All		1	5				
	All	All				15	5				
	All	All				15	6				
	All	All				15	7				
	All	All				15	7				
	All	All				15	11				
	All	All				15	15				
	All	All				15	15				
	All	All				15	20				
	All	Fatal	All	All		1	50				
	All	Injury				15	35				
	All	Injury	All	All		1	35				
	Fixed object	All			<5,000/lane (Total)	15	23				
	Fixed object	All			>5,000/lane (Total)	15	18				
	Fixed object	All				15	21				
	ROR	All				15	26				
	ROR	All			>5,000/lane (Total)	15	32				
	ROR	All				15	28				
	Overturn	All			<5,000/lane (Total)	15	41				
	Overturn	All			>5,000/lane (Total)	15	27				
	Overturn	All				15	34				
	Rear-end	All			<5,000/lane (Total)	15	41				
	Rear-end	All			>5,000/lane (Total)	15	27				
	Rear-end	All				15	34				
Install animal fencing	Animal	All				15	80				
	Animal	All	All	All		1	90				
	Animal	All				15	70				

	ROR	All				15	60					
	Ped	All				15	71					
	Sideswipe	All				15	28					
	Sideswipe	All				15	41					
	Sideswipe	All				15	15					
Widen shoulder (paved) (from 0 to 2 ft)	Fixed Object	All				15	16					
	ROR	All				15	16					
Widen shoulder (paved) (from 0 to 4 ft)	Fixed Object	All				15	29					
	ROR	All				15	29					
Widen shoulder (paved) (from 0 to 6 ft)	Fixed Object	All				15	40					
	ROR	All				15	40					
Widen shoulder (paved) (from 0 to 8 ft)	Fixed Object	All				15	49					
	ROR	All				15	49					
Widen shoulder (unpaved)	All	All	Rural	2-lane		15	15					
	All	All				15	22					
Widen shoulder (unpaved) (from 0 to 2 ft)	Fixed Object	All				15	13					
	ROR	All				15	13					
Widen shoulder (unpaved) (from 0 to 4 ft)	Fixed Object	All				15	25					
	ROR	All				15	25					
Widen shoulder (unpaved) (from 0 to 6 ft)	Fixed Object	All				15	34					
	ROR	All				15	34					
Widen shoulder (unpaved) (from 0 to 8 ft)	Fixed Object	All				15	43					
	ROR	All				15	43					

Table 7. Median Countermeasures

Countermeasures	Crash Type	Crash Severity	Area Type	Road Type	Daily Traffic Volume (veh/day)	Ref	Effectiveness				Study Type
							Crash Reduction Factor/Function	Std Error	Range		
									Low	High	
MEDIAN COUNTERMEASURES											
Install median	All	All	All	All		1	15				
	All	Fatal/Injury	Rural	2-lane		5	-94	56			Meta-Analysis
	All	Fatal/Injury	Urban	2-lane		5	39	10			Meta-Analysis
	All	Injury	Rural	Multilane		5	12	3			Meta-Analysis
	All	Injury	Urban	Multilane		5	22	2			Meta-Analysis
	All	PDO	Rural	Multilane		5	18	3			Meta-Analysis
	All	PDO	Rural	2-lane		5	-128	55			Meta-analysis
	All	PDO	Urban	Multilane		5	-9	2			Meta-analysis
Install median (flush)	All	All			<5,000/lane	15	44				
	All	All			>5,000/lane	15	52				
	All	All	All	All		1	25				
	All	All				15	15				
	All	All				15	15				
	All	Fatal				15	90				
	Left-turn	All			<5,000/lane	15	72				
	Left-turn	All			>5,000/lane	15	78				
Install median barrier	All	All	All	All		27	86	3			EB Before-After

COUNTY	TWP	ADM ATH	ROUTE	FAP IND	IDENTIFICATION PTS	SECT BEG.	SECT LENG	SURF TYPE	SURF WDTH	ROAD WDTH	MI CL	RD CL	FC	AR CD	TWP ATH NO.	ADJ COU	ADJ TWP	ADJ ADM ATH	ADJ ROAD	HP MS	N H S	#LN	YEAR
ERI	09	C	00008		JCT T1276 RT	00.779	00.146	L	28	32	1	1	5	99490								02	14
ERI	09	C	00008		JCT SHADY LN RT	00.925	00.074	L	28	32	1	1	5	99490								02	14
ERI	09	C	00008		JCT T1187 LT	00.999	00.188	L	21	28	1	1	5	99490								02	14
ERI	09	C	00008		JCT T1253 RT	01.187	00.035	L	21	28	1	1	5	99490								02	14
ERI	09	C	00008		JCT T1130 LT	01.222	00.089	L	21	28	1	1	5	99490								02	14
ERI	04	C	00008		JCT T118	01.311	00.093	G	21	28	1	1	5	99490								02	14
ERI	04	C	00008		JCT T1117 RT	01.404	00.182	G	21	28	1	1	5	99490								02	14
ERI	04	C	00008		JCT T1224 RT	01.586	00.163	G	21	28	1	1	5	99490								02	14
ERI	04	C	00008		JCT T1248 LT	01.749	00.149	G	21	28	1	1	5	99490								02	14
ERI	04	C	00008		JCT T319 RT	01.898	00.808	G	21	28	1	1	5	99490								02	14
ERI	04	C	00008		JCT T1278 RT	02.706	00.239	G	21	28	1	1	5	99490								02	14
ERI	04	C	00008		JCT C8A LT	02.945	00.032	G	21	28	1	1	5	99490								02	14
ERI			TOTAL ROUTE MILEAGE				2.977	**															
ERI	09	C	00008***		(ROAD NAME) ***	00.000	****		HULL RD														
ERI	09	C	00008A		JCT US250	00.000	00.039	G	14	14	1	1	7	99490								01	14
ERI			TOTAL ROUTE MILEAGE				0.039	**															
ERI		C	00010***		(ROAD NAME) ***	00.000	****		LOWELL ST														
ERI		C	00010		BEGIN JCT SR101	00.000	00.207	G	20	32	8	1	5	99490	7							02	14
ERI		C	00010***		(ROAD NAME) ***	00.207	****		E LUCAS ST														
ERI		C	00010		JCT BARDWELL RD RT	00.207	00.153	G	20	32	8	1	5	99490	7							02	14
ERI		C	00010		JCT BARDEN ST LT	00.360	00.111	G	20	32	8	1	5	99490	7							02	14
ERI	06	C	00010***		(ROAD NAME) ***	00.471	****		BOGART RD W														
ERI	06	C	00010		CASTALIA CL	00.471	00.432	L	20	32	1	1	5	99490						*		02	14
ERI	06	C	00010		JCT T103	00.903	00.176	L	20	32	1	1	5	99490						*		02	14
ERI	06	C	00010		JCT T1190 RT	01.079	00.225	L	20	32	1	1	5	99490						*		02	14
ERI	06	C	00010		JCT T1191 RT	01.304	00.194	L	20	32	1	1	5	99490						*		02	14
ERI	06	C	00010		JCT T1197 LT	01.498	00.286	L	20	32	1	1	5	99490						*		02	14
ERI	06	C	00010		JCT C105	01.784	01.003	G	28	32	1	1	5	99490								02	14
ERI	06	C	00010		JCT T106	02.787	00.287	G	28	36	1	1	5	99490								02	14
ERI	09	C	00010		PERKINS TWP LINE	03.074	00.730	G	28	36	1	1	5	99490								02	14
ERI	09	C	00010***		(ROAD NAME) ***	03.804	****		W BOGART RD														
ERI	09	C	00010		JCT SR4	03.804	00.661	L	40	40	1	1	5	99490								03	14
ERI	09	C	00010		JCT C43 RT	04.465	00.453	L	28	36	1	1	5	99490								02	14
ERI	09	C	00010		JCT T111 RT	04.918	00.204	L	28	36	1	1	5	99490								02	14
ERI	09	C	00010		JCT C110 LT	05.122	00.309	L	40	40	1	1	4	99490								02	14
ERI	09	C	00010		JCT BRANDON BLVD LT	05.431	00.006	L	40	40	1	1	4	99490								02	14
ERI	09	C	00010			05.437	00.179	L	28	36	1	1	4	99490								02	14
ERI	09	C	00010		JCT T1225 LT	05.616	00.064	L	28	36	1	1	4	99490								02	14
ERI	09	C	00010		JCT T44 RT	05.680	00.411	L	28	36	1	1	4	99490								02	14
ERI	09	C	00010		JCT T1230 LT	06.091	00.602	L	28	36	1	1	4	99490								02	14
ERI	09	C	00010		JCT T1331 RT	06.693	00.008	L	28	36	1	1	4	99490								02	14
ERI	09	C	00010			06.701	00.092	L	31	39	1	1	4	99490								02	14
ERI	09	C	00010***		(ROAD NAME) ***	06.793	****		E BOGART RD														
ERI	09	C	00010		JCT C120	06.793	00.899	L	40	40	1	1	4	99490						*		02	14
ERI	09	C	00010		JCT SHAKER VILLAGE O	07.692	00.006	L	28	36	1	1	4	99490						*		02	14
ERI	09	C	00010		JCT TAYLOR BROOK LN	07.698	00.128	L	28	36	1	1	4	99490						*		02	14
ERI	09	C	00010		JCT C70 RT	07.826	00.131	L	28	36	1	1	4	99490						*		02	14
ERI	09	C	00010		JCT C10A LT	07.957	00.031	L	28	36	1	1	4	99490						*		02	14
ERI	09	C	00010		JCT US250	07.988	00.110	L	38	38	1	1	4	99490								03	14

ML_CL Indicates whether road is inside or outside of incorporated areas.
1 - Rural, not in an incorporated area
2 - Rural subdivision street
5 - Old Federal Aid urban system
6 - Impassible (Legally Dedicated)
7 - Private, open to the public
8 - Municipal, within incorporated area
9 - Overlap

RD CL 1 = Undivided
2 = Divided

FC Functional Classification
1 - Interstate
2 – Principal Arterial - Other Freeways
3 – Principal Arterial
4 - Minor Arterial
5 - Major Collector
6 – Minor Collector
7 – Local Road

AR CD Five digit area code assigned to all urban areas. (See appendix B)

TWP ATH Used when section of roadway is a township road and runs along adjoining township, county or state lines, or a county road that runs along county or state lines.
1 - Township road along township lines
2 - Township road along county line
3 - County road along county line
4 - Township road along state line
5 - County road along state line
6 - Township road along corporation line
7 - County road along corporation line
8 - Township subdivision street along corporation line
9 - County subdivision street along corporation line

ADJ COU Standard county abbreviation code of county which adjoins the section being coded when the township or county road traverses county lines. "IND", "MIC" and "PEN" for adjoining state.

ADJ TWP Two digit township code of township which adjoins the section being coded when township road traverses township lines.

ADJ ADM ATH Indicates jurisdiction in the adjoining county
C = County