



REQUEST FOR PROPOSAL

City of Dublin, Ohio
Division of Engineering

Design of Signalized Intersection Upgrades

EXECUTIVE SUMMARY

The City of Dublin is requesting proposals to develop a complete set of construction drawings for each of three (3) projects to improve and refresh the lighting and traffic signal features at five (5) intersections within the City of Dublin. The plans will be funded by the City of Dublin. The design project will assess the existing infrastructure at the five signalized intersections and prepare plans based on the assessment to perform significant maintenance work, replace major components of the signal installation and add additional features to the installation to bring the operation into compliance with current City of Dublin standards and set-up the traffic signals to have a long life requiring only minor maintenance for the next decades.

As such, the City is currently in the process of procuring the professional services of a consulting engineering firm to prepare detailed construction plans and technical specifications. The City of Dublin, Division of Engineering is hereby requesting a PROPOSAL from selected, multi-disciplined, professional engineering consulting firms. The majority of the design professionals involved with the project must be located in Central Ohio. The selected firm will provide the professional engineering services for this project in accordance with the attached Project Description and Scope of Services.

The three plan sets are to be produced during the six (6) month design project. The five (5) intersections to be addressed with this design effort and the projected year of their construction are

- Project 18-025-CIP – Signalized Intersection Upgrade – Phase 1 (build in 2019)
 - Bridge Street (US-33/SR-161) at High Street (SR-745)
 - Emerald Parkway at Coffman Road and Coffman Park Drive
- Project 18-026-CIP – Signalized Intersection Upgrade – Phase 2 (build in 2020)
 - Avery-Muirfield Drive at Perimeter Loop Road and Hospital Drive
 - Frantz Road at Blazer Parkway and Longbranch Drive
- Project 18-027-CIP – Signalized Intersection Upgrade – Phase 3 (build in 2021)
 - Riverside Drive (SR-257) at Summit View Road



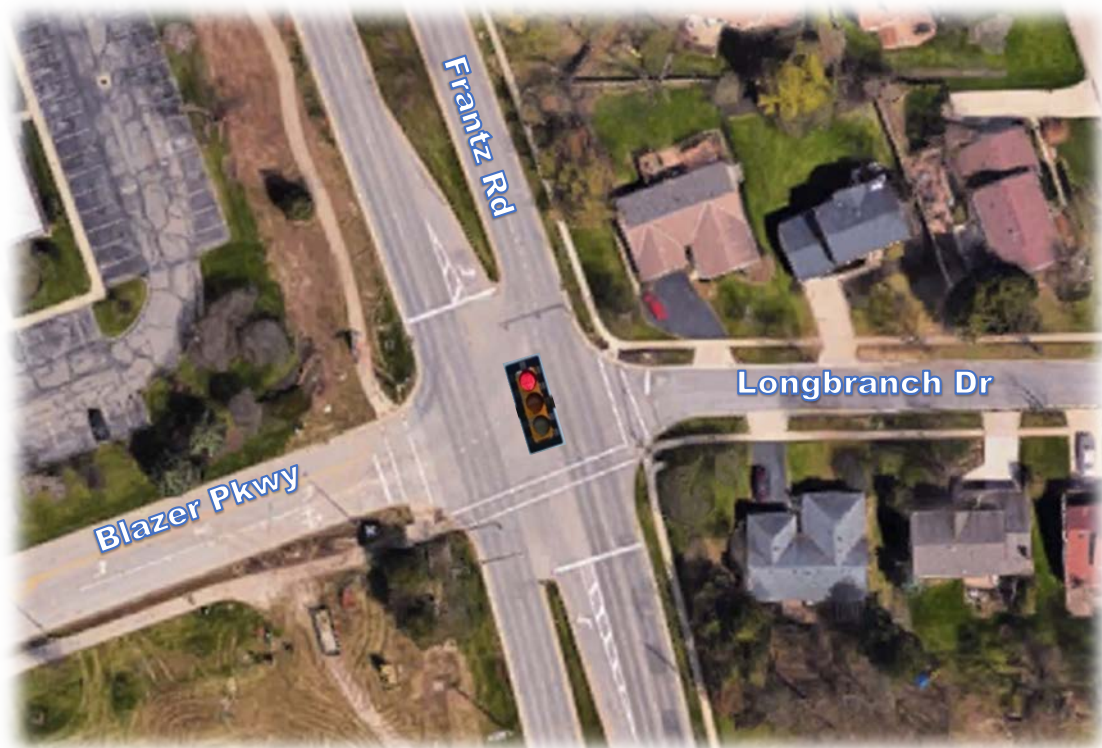
Bridge Street (US-33/SR-161) & High Street (SR-745) Intersection



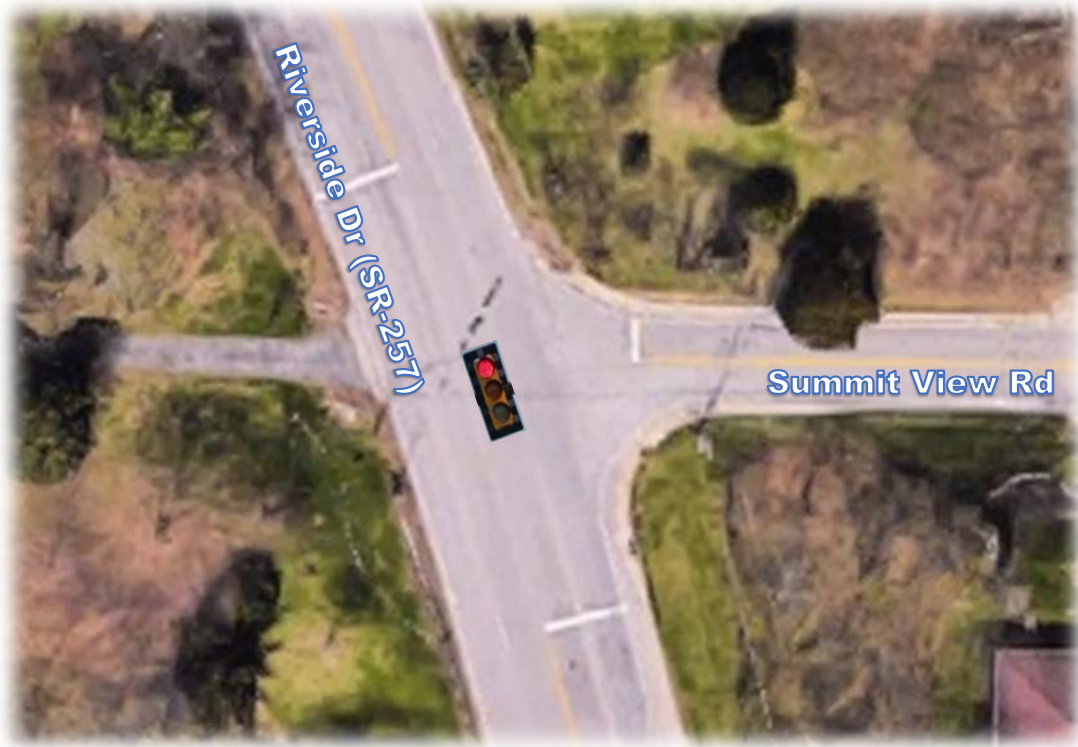
Emerald Parkway @ Coffman Drive & Coffman Park Drive Intersection



Avery-Muirfield Drive @ Hospital Drive & Perimeter Loop Road Intersection



Frantz Road @ Blazer Pkwy & Longbranch Drive Intersection



Riverside Drive (SR-257) @ Summit View Road Intersection

1.0 PROJECT DESCRIPTION

- 1.1** The project is to develop construction plans for the replacement of traffic signal infrastructure for the signalized intersections at
- Bridge Street (US-33/SR-161) & High Street (SR-745);
 - Emerald Parkway @ Coffman Drive & Coffman Park Drive;
 - Avery-Muirfield Drive @ Hospital Drive & Perimeter Loop Road;
 - Frantz Road @ Blazer Pkwy & Longbranch Drive; and
 - Riverside Drive (SR-257) @ Summit View Road.
- 1.2** The project is to evaluate the following items and replace based on that evaluation, due to concerns with the continuing successful maintenance of each signal installation's advanced age.
- Signal mast arm poles (or signal strain poles at Riverside Drive @ Summit View Road)
 - Traffic signal heads
 - Pedestrian signal heads
 - Traffic signal cabinet
 - Pedestrian detectors
 - Signal wiring
 - Vehicle detection wiring
 - Pedestrian detection wiring
 - Overhead internally-illuminated street name signs
- 1.3** The replacement items and new items designed for installation are intended to provide a modern installation with current technologies. The following items should be assumed for the design. The designer may suggest alternative devices/options at the kick-off meeting or at the 30% plans meeting.
- Mast Arm Pole Assembly – evaluate structural and aesthetic quality of the existing infrastructure. If replacement or refurbishing is needed, the following standards apply
 - Support to be 35' tall to accommodate installation of street light luminaire on each support
 - Consider options for Mast Arm design, including assessment of reuse of existing foundation for
 - Accommodating the existing signal heads and signs configuration for all four mast arm poles
 - If analysis suggests that new mast arms are needed, design longer arms for signals to accommodate a future signal arrangement of a 3-section signal head centered in each through lane and a 4-section signal head centered in left-turn lane
 - Powder-coated with, at least, a five-year warranty
 - Dublin Bronze (Federal Stand Color Chart 595C - Color 20040); or
 - Black (Federal Stand Color Chart 595-B Color 27038) for intersection of Bridge Street and High Street

- Blind half-coupling for auxiliary head (3-section or 4-section based on intersection/approach)
- Traffic Signal Heads
 - Yellow Polycarbonate with cut-away visor and louvered non-reflective black backplate
 - LED signal inserts compliant with the ITE VTCSH LED Signal Supplements
 - Vehicle Circular Signal Supplement, 6/27/2005
 - Vehicle Arrow Traffic Signal Supplement, 7/1/2007
- Pedestrian Signal Heads
 - City-supplied polycarbonate housings with clamshell mounting
 - Countdown Pedestrian Signal Compliant (for Full Hand/Full Person) with the ITE PTCSI LED Signal Module Supplement, August 2010
- Accessible pedestrian detectors
 - Polara EZ Communicator Navigator 2-wire with R10-3i sign
 - Programmed for voice message, if detectors are located less than ten feet (10') apart
- Traffic signal complete with
 - Siemens Eagle traffic signal controller model M60 with Linux operating system
 - EDI 12-channel Conflict Monitor
 - Meyer MP2000E Uninterruptible Power Supply
 - Eberle Oracle rack-mount detectors
 - Lighting control circuitry with off/on/auto switch positions
 - Communications termination panel for existing multi-mode fiber-optic communications system
 - Emergency Vehicle Signal Pre-emption System (GTT Opticom GPS)
 - Traffic Signal Cabinet Enclosure to accommodate standard equipment and devices specified above
 - P-58UPS cabinet for most locations
 - Evaluate possible cabinet for Bridge and High streets intersection. Location has tight right-of-way is in a busy pedestrian environment. Preference would be to limit the new cabinet to the existing foundation for the cabinet with battery compartment – 65" w x 24" d.
 - Consider whether pole-mount cabinet is still the most appropriate at the signal located at the Riverside Drive (SR-257) at Summit View location
- Cree Area Edge Luminaires mounted on the new mast arm supports
 - Lighting distribution and LED count based on consultant photometric analysis (120VAC)
- LED Edge-lit Street Name Signs for rigid-mounting to the face of the Mast Arm to the right of the right-most traffic signal head, except at Bridge and High streets, where Black legend on White background flat sheet signs will remain.

- Signs to be designed to sign lettering sizes specified in 2012 OMUTCD for overhead sign, utilizing mixed-case White lettering on Brown background
 - Add signs to remind the vehicular and pedestrian users to be mindful of conflicting movements
 - Place “TURNING TRAFFIC YIELD TO PEDSTRIANS” signs on each mast arm to the right of the left head (Signs exist on two of the existing approaches)
 - Place “WATCH FOR TURNING VEHICLES” mast arm support above each pedestrian signal head (Sample of these signs exist at intersection of Coffman Road and Coffman Park Drive at Emerald Parkway)
 - The wiring expected to be replaced by this project include
 - Signal head wiring
 - Vehicular signal displays
 - Pedestrian signal displays
 - Pedestrian detector cable
 - Internally-illuminated sign power
 - Emergency vehicle preemption equipment indicators and antennae
 - Streetlights and illuminated street name signs
- 1.4** Check underground facilities for condition and ensure that the conduits have the capacity, good condition to accommodate all remaining wiring (detector lead-in) and new or replacement wiring including appropriate separation of voltage levels between conduits. If existing conduit and pull boxes are inadequate, include replacement of these items in the plan.
- 1.5** Analyze pedestrian and shared-use path facilities and make recommendations to possibly improve access to traffic signal-related pedestrian detection.
- 1.6** While it is not the intention of this project to have significant construction that would require additional right-of-way (R/W), identify the existing limits of the R/W and any potential acquisitions of R/W required by options considered for this project.
- 1.7** Preliminary layouts will be prepared, including right-of-way impacts, any associated utility impacts, and any environmental concerns will be identified as part of this project.
- 1.8** Construction cost estimates and, if needed, right-of-way estimates and exhibits shall be prepared.
- 1.9** Status updates: The Consultant will provide written project updates on a weekly basis via e-mail.

2.0 KEY TECHNICAL POINTS FOR DETAILED FINAL DESIGN

- 2.1** Construction plans and specifications will be prepared to be a complete and biddable set of construction plans.

- 2.2** Specifications/Guidelines. The following design manuals shall be followed as applicable;
- ODOT
 - 2016 Construction and Material Specifications;
 - Traffic Engineering Manual;
 - 2012 Ohio Manual of Uniform Traffic Control Devices;
 - Traffic Signal Design Manual, City of Columbus, August 2018
 - City of Dublin Standard Drawings will be provided to Consultant.
- 2.3** Plans will include a note stating all existing traffic signal equipment that is salvageable be returned to the City of Dublin. This will include a detailed matrix.
- 2.4** Consultant to provide the proposed street lighting photometrics which will indicate the wattage of the luminaire to be used and its pole mounting orientation for review by City of Dublin for the intersection of
- Frantz Road at Blazer Parkway and Longbranch Drive
- 2.5** In order to separate the power feed to the traffic signal and the street lighting, a new 3-wire power service will be requested to include metered service in addition to the standard disconnect switch. (Metered power service is a new AEP policy for all traffic signal installations.)
- 2.6** A note will be provided for the contractor to test and replace, as directed by the engineer, any ground rods that are providing excessive resistance. If replaced, the contractor will contact OUPS for underground utility information.
- 2.7** Maintain existing signal phasing and signal timing.
- 2.8** Communication capability shall be maintained or established.
- Cabinet/traffic signal controller must accommodate the City's fiber in its final configuration.
 - Bridge Street (US-33/SR-161) at High Street (SR-745)
 - Emerald Parkway at Coffman Road and Coffman Park Drive
 - Avery-Muirfield Drive at Perimeter Loop Road and Hospital Drive
 - Frantz Road at Blazer Parkway and Longbranch Drive
 - Cabinet/traffic signal controller must accommodate the cell modem communications, as specified by the City of Dublin IT Department.
 - Riverside Drive (SR-257) at Summit View Road
- 2.9** Specify the timeframe to
- remove the existing signal and install the new signal to a state of vehicular operation;
 - restore pedestrian signals and pedestrian detection to full operation;
- 2.10** Survey. Survey work to be included as consultant deems appropriate. Provide description of consultant's rationale for surveying work in Proposal.
- 2.11** Right-of-Way. Additional right-of-way is not anticipated to be required for this project.

- 2.12** Maintenance of Traffic. Prepare a detailed maintenance of traffic plan along Frantz Road and Bradenton Avenue during construction, including how pedestrian access will be maintained during the construction
- 2.13** Progress and Review Meetings. Consultant will meet as necessary with City of Dublin staff to report progress and review details. Expected meetings and submission dates are

		Progress & Review Meetings (days after notice to proceed)		
		Plan Review		Final Plan Submission
Project	Kick-off	30%	90%	
18-025-CIP	7	30	65	90
18-026-CIP	7	65	90	120
18-027-CIP	7	90	120	150

- 2.14** Construction Plans. Plans will be in a format similar to plans previously prepared for City CIP projects. The City of Dublin will prepare all additional bidding documents and bid the construction projects. Consultant will assist the City with answering questions during the bidding and construction period and attend the pre-construction meeting, as requested.
- 2.15** Geotechnical: No geotechnical will be necessary for this project.
- 2.16** Private utilities: Identify impacts and coordinate with private utilities.
- 2.17** Public utilities: Identify impacts and coordinate with public utilities.

3.0 DELIVERABLES

- 3.1** The consultant shall prepare construction drawings, including title sheet, a general summary of quantities, signalized / interconnect general notes, maintenance of traffic plan notes, signalization plan, signalization details and miscellaneous design details.
- A 30% complete plan set, including signalized / interconnect general notes, signalization plan, signalization details, miscellaneous design details and construction cost estimate, will be submitted to City staff one week prior to a review meeting at which time the City will specify which options offered from the consultant's analysis are to be basis for final plans. The options developed will be based on the consultant's preliminary analysis of proposed options outlined in the Project Description section above and include reports of impacts to right-of-way need and costs to construct.
 - A 90% complete plans, including, title sheet, a general summary of quantities, signalized / interconnect general notes, maintenance of traffic plan notes, signalization plan, signalization details miscellaneous design details, signal design calculations and construction cost estimate will be submitted to City staff for review prior to final submittal. All project documentation will be provided in hard copy

and electronic (PDF) format. Milestone date to be presented in the proposal by the consultant.

- The final plans will be prepared and delivered in one set of Mylar tracings (four-mil, double mat) and one set of electronic files on compact disc in both Auto Desk's AutoCAD Release 2004 or higher DWG format and PDF format to the City for record purposes. Also, provide one half-sized set of paper originals for reproduction purposes, eight additional half-sized sets (three-hole punched) and five full-size sets on standard paper in 11x17 format due within at the target dates outlined in Section 2.13.

- 3.2** The Consultant will coordinate with private utility companies as required. At least, American Electric Power will be included in this coordination, which now requires a new metered power service for the traffic signal.

4.0 TIME OF COMPLETION

- 4.1** The Consultant affirms that time is of the essence regarding the execution of this project and furthermore accepts the City's commitment to completion dates listed in Section 2. Therefore, the Consultant commits to work with the City to perform their professional services expeditiously.
- 4.2** Failure of the Consultant to comply with the above-established deadline will jeopardize consideration of the Consultant for providing professional engineering services on future City projects and may be used as cause to reject future proposals submitted by the Consultant to the City.

5.0 PROPOSAL CONTENT

Evaluation of the Proposals and ultimate selection of the consultant shall be based on the following criteria:

5.1 Firm and Individual Qualifications

- The competence of the firm to perform the required services as indicated by its background and experience on similar projects. Consultant should list and describe no more than five (5) projects that best demonstrate their experience on similar projects and additionally provide the Estimated Construction Cost and the Final Construction Cost of each project.
- Technical qualification, training, education, and experience of the offeror's principals and key technical personnel who would be assigned to perform the work. Resumes shall only be included in the Proposal for those individuals who will actually be involved in the project and assisting in the performance of the work. No other resumes shall be included.
- Name and experience of principal responsible for the work.
- Name and experience of project engineer who would be responsible for managing the project for the Consultant and would be the primary contact with the City during the progress of the work.

- Name and experience of engineers and/or technicians who would be assisting in the performance of the work.
- Name and experience of key personnel from all sub-consultants who would be assisting in the design and completion of this project.

5.2 Capacity to Perform the Work

- Consultant's statement of understanding of and approach to the Scope of Services and other requirements relating to performance of their work. The project understanding and approach needs to cover all elements through final design.
- The capacity of the firm to perform the required services competently and expeditiously to meet proposed schedules as indicated by the firm's size and availability of necessary personnel, sub-consultant(s) availability, current workload, and equipment and facilities.

5.3 Time of Completion

- The demonstrated commitment of the firm to perform the work expeditiously and without delay.
- The ability of the firm to meet the Time of Completion as outlined in Section 3.

5.4 Compensation

- All professional services will be provided on a cost plus fixed fee basis. Fees for additional items, as requested and authorized, will be established separately. The proposed fee will be based on delivery of completed final plan set and construction estimate for the 18-025-CIP project no later than **November 29, 2018**. The delivery deadlines for the 18-026-CIP and 18-027-CIP project will be no later than **December 27, 2018**, and **January 24, 2019**, respectively. Failure to submit fee proposal may cause the City to reject Proposal for this project.

5.5 References

- Quality, responsiveness, timeliness, and cost of work previously performed and completed for the City or other municipalities.
- Completeness of thoroughness of work performed. Accuracy of previous estimates of professional fees and estimated construction costs relative to final construction costs.
- Capabilities of key technical personnel who were assigned to perform and complete the work.
- Capabilities of key technical personnel from all sub-consultants who were assigned to perform and complete the work.
- The ability of the consulting firm to meet schedules and deadlines.
- The ability of the consulting firm to control costs and meets budgets.
- Overall communication and cooperation of the consulting firm and its principals and key technical personnel with the client.



6.0 PROPOSAL REQUIREMENTS

- 6.1 Responding firms shall include in their Proposals all the information that is requested in Section 5, Proposal Content. Firms are encouraged to provide any additional information they feel will further demonstrate the firm's qualifications and abilities to acceptably complete this project but are hereby instructed to limit such additional information to that which is directly relevant to the services being requested.
- 6.2 The Proposal shall not exceed twenty (20) pages. Any superfluous information included not relevant to the services being requested only lengthens the review of a Proposal and could certainly detract from the true merits of the Proposal. Three (3) copies shall be submitted.
- 6.3 Electronic submissions will be required. The submission must be compatible with Adobe Acrobat, in a single file, and be formatted to print on standard office paper sizes. No pages shall be larger than 11x17. Fax submissions will not be accepted.
- 6.4 All material submitted in accordance with this RFP becomes property of the City and will not be returned.

If you have any questions regarding this RFP, please contact the **City's Project Manager, Eagan L. Foster, P.E., PTOE**, (614) 410-4637; efoster@dublin.oh.us. Any other contact with City personnel related to this RFP, prior to the formal selection of the consultant, is expressly prohibited without the consent of the City's Project Manager, Eagan L. Foster, P.E., PTOE.

The Proposal should be submitted to the following address no later than **4:00 PM on May 24, 2018**. Proposals received after this deadline will NOT be considered.

Consultants should submit their Proposal to:

Eagan L. Foster, P.E., PTOE
City of Dublin, Ohio
Division of Engineering
6555 Shier Rings Road
Dublin, OH 43016

Or

efoster@dublin.oh.us