

2/23/2022

Union County Engineer

DESIGN BUILD

SCOPE OF SERVICES

County: Union **Route:** CR 194 **Section:** 2.305

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1. PROJECT IDENTIFICATION

County: Union Route: CR 194 Section: 2.305
Local Route Name: Leeper-Perkins Road
Highway Functional Classification & Federal Aid System: Local
Structure Identification : Bridge Number: CR194-2.305 Over: Blues Creek
Structure File Number: 8034339

1.1 Design Designation:

Location: CR194
Current ADT (2022): 740
Design Year ADT (2042): 950
Design Hourly Volume: 100
Directional Distribution: 53%
Trucks: 2%
Design Speed: 55 MPH
Legal Speed: 55 MPH (non-posted)
Design Functional Classification: Local

1.2 Existing plans: Not applicable

1A PRIMA FACIE SPEED LIMIT

Not Applicable

1B RAILROAD COORDINATION

Not Applicable

1C AIRWAY/HIGHWAY CLEARANCE

Not Applicable

2 PRE-BID MEETING

This meeting is to discuss and clarify all issues that the project may have.

Location: Union County Commissioner’s Hearing Room
233 West Sixth Street
Marysville, OH 43040

Date : March 11, 2022

Time : 10:00 AM

3 ADDENDA PROCESS

All questions prior to the letting date shall be directed in writing to:

Name : Josh Holtschulte
E-mail : jholtschulte@unioncountyohio.gov

4 PRE-QUALIFICATION

It is required that the bidder be an ODOT pre-qualified Contractor who has engaged the services of an ODOT pre-qualified Consultant to perform *all* the design and construction work required in these Conceptual Documents. If the Consultant and/or the Sub-Consultant(s) submitted do not meet all the required qualifications, Union County may reject the bid.

5 CONTRACTOR’S CONSULTANT

The Contractor must name the Consultant and all Sub-Consultant(s) in the space(s) provided below. The Contractor must list relevant prequalification categories for prime and sub-consultants to show that the prequalification requirements listed below are satisfied. All Consultant names and addresses must be the same as that on file with the Department. The following work types must be performed by members of the Consultant Team (combination of Consultant and Sub-Consultant(s)):

Non-complex Roadway and Level 2 Bridge Design

Consultant

Firm Name : _____
Address : _____
Phone/email : _____

List work types the Consultant will perform:

Sub-Consultant

Firm Name : _____
Address : _____

List work types the Sub-Consultant will perform:

Sub-Consultant

Firm Name : _____

Address : _____

List work types the Sub-Consultant will perform:

Restrictions on Participation in Design-Build Contracts:

Any Consultant who provided services to the Union County Engineer that have been directly utilized in this design-build proposal or Scope of Services document will NOT be eligible to participate in this design-build contract for this project, either as a prime consultant or as a sub-consultant.

6 SCOPE OF WORK

Project Limits : From Sta. 22+55.00 To Sta. 24+20.00

Project Length : 165.00 feet

Work Limits : From Sta. 22+55.00 To Sta. 24+20.00

The Consultant shall provide for the necessary engineering services, design, and preparation of detailed construction plans for the construction of the proposed project.

The Contractor shall provide for the furnishing of materials, construction and completion in every detail of all the work described in the Conceptual Documents in order to fulfill the intent of the contract.

All construction testing will be performed by the Union County Engineer or his representative. The DBT must make the site accessible for periodic testing (concrete, compaction, asphalt samples, etc), must provide materials certifications as requested (i.e. ODOT TE-24 forms), and must provide an asphalt JMF for approval prior to any paving operation.

Project Description : Bridge UNI-CR194-2.305 Leeper-Perkins Road over Blues Creek

Completion date : October 28, 2022

Warranties : The contractor will be responsible for all corrective work for a period of one (1) year following the actual date of construction completion as established by the Union County Engineer.

7 FIELD OFFICE

Not Applicable

8 GENERAL PROVISIONS FOR THE WORK

- 8.1 Governing Regulations:** All services, including but not limited to survey, design and construction work, performed by the DBT and all subcontractors (including sub-consultants), shall be in compliance with all applicable ODOT Manuals and Guidelines.

The fact that the bid items for this Design-Build project are general rather than specific shall not relieve the DBT of the requirement that all work performed and all materials furnished shall be in reasonable conformity with the specifications. The Contractor's Consultant shall reference in the plans the appropriate Construction and Material Specifications Item Number for all work to be performed and all materials to be furnished.

The attention of the Bidder is directed to the provisions of section 100 of the Construction and Material Specifications as modified in the design-build proposal.

It will be the responsibility of the DBT to acquire and utilize the necessary ODOT manuals that apply to the design and construction work required to complete this project.

The current edition, including updates released on or before the prebid meeting date, of the following ODOT Manuals and Guidelines shall be met or exceeded in the performance of the design and construction work required to complete this project:

Bridge Design Manual
Location and Design Manuals
Volume One - Roadway Design
Volume Two - Drainage Design
Volume Three - Plan Preparation
Pavement Design Manual
Specifications for Subsurface Investigations
Survey Manual
Construction and Material Specifications
Proposal Notes for Construction and Material Specifications
Supplemental Specifications for Construction and Material Specifications
Standard Construction Drawings
Traffic Engineering Manual
Ohio Manual of Uniform Traffic Control Devices
Real Estate Administration Policies and Procedures Manual:
 Appraisal
 Acquisition
 Property Management
 Relocation
 ROW Plan
 Utilities
Waterway Permit Manual

Design Mapping Specifications
CADD Engineering Standards Manual
Geotechnical Bulletin
Project Development Process Manual (Appendix B)

- 8.2 Basis of Payment:** All Items covered by Construction and Material Specifications, Supplemental Specifications, Proposal and Special Provision notes with unit price as a basis of payment will be paid for under the appropriate Lump Sum bid item, unless a unit line price item has been established in the Scope Of Services.

The DBT shall be required to furnish the Union County Engineer with a complete breakdown of the lump sum bid items. The breakdown shall include materials to be used in the work, and shall be in sufficient detail to provide the Union County Engineer with a means to check partial payment requests.

- 8.3 Final Payment:** The DBT shall prepare and submit the following prior to the request for final payment:

1. All original project files and notes utilized in the preparation of the survey, design and construction of the project
2. Record-Drawings Plans as required in section 8.4 below.

8.4 Record-Drawing Plans:

A. General: At the completion of the work, prior to final acceptance of the construction, the Consultant shall furnish the Union County Engineer Record-Drawing construction plans. When the Record-Drawing plans are completed the Consultant shall professionally endorse (sign and seal) the title sheet.

In addition to the information shown on the construction plans, the Record-Drawing plans shall show the following:

1. All deviations from the original approved construction plans which result in a change of location, material, type or size of work
2. Any utilities, pipes, wellheads, abandoned pavements, foundations or other major obstructions discovered and remaining in place which are not shown, or do not conform to locations or depths shown in the plans. Underground features shall be shown and labeled on the Record-Drawing plan in terms of station, offset and elevation.
3. The final option and specification number selected for those items which allow several material options under the specification (e.g., conduit).
4. Additional plan sheets may be needed if necessary to show work not included in the construction plans.

Notation shall also be made of locations and the extent of use of materials, other than soil, for embankment construction (rock, broken concrete without reinforcing steel, etc.).

The Plan index shall show the plan sheets which have changes appearing on them.

The Consultant shall perform a load rating analysis (LRFR) for this project under the As-built payment item. The County Engineer will require the input and output files and a hard copy of the results with a summary sealed by a Professional Engineer.

Two copies of the Record-Drawing plans shall be delivered to the Project Engineer for approval upon completion of the physical work but prior to the request for final payment. After the Union County Engineer has approved the Record-Drawing plans, the original tracings and the associated electronic files shall be delivered to the Union County Engineer. Acceptance of these plans and delivery of the original tracings and the associated electronic files is required prior to the work being accepted and the final estimate approved.

The delivered original tracings shall be prepared in conformance with the Location and Design Manual Volume III (Section 1200 - Plan Preparation).

B. CADD files supplied by Consultant: X Yes No
If marked yes, then CADD files shall conform to the following:

1. The Location and Design Manual, Volume 3, Section 1206 and the Bridge Design Manual, Section 1. All files shall be submitted in AutoCAD format.

8.5 Post-Award Conference: Within 10 days after bid award, the DBT shall attend a mandatory post-award meeting. This confidential meeting shall be held with the Union County Engineer to discuss the Lump Sum estimate and other issues.

8.6 Communication: All communication during design and construction shall be with the Union County Engineer or his designee.

County Engineer Contact Name: Josh Holtschulte, Union County Engineer's Office
Phone number: 937-645-3109
E-mail: jholtschulte@unioncountyohio.gov

At the pre-design meeting, the Contractor shall name a Project Manager who will act as a liaison between the DBT and Union County.

8.7 Permits: Contractor will be required to obtain a permit from Union County to perform any non-construction work within the existing Right of Way and/or limited access.

8.8 Entry On Private Property: The DBT, acting as the Union County Engineer's agent, may enter upon any lands within the State for the purpose of inspecting, surveying, leveling, digging, drilling, or doing any work deemed necessary in the execution of any survey authorized by the Union County Engineer in accordance with Section 5517.01 of the Ohio Revised Code and Section 102.6 (inclusive of Sections 102.61 through 102.66) of ODOT's Survey Manual. Prior to performing said survey, the DBT will send

notification letters indicating the date and duration of entry to the affected property owners no less than forty-eight hours nor more than 30 days prior to the date of entry for said survey in accordance with 102.6 of ODOT's Survey Manual. The DBT shall forward copies of all notification letters distributed to the Union County Engineer. Any subsequent claims for compensation due to damages incurred while said survey was being performed will be negotiated between the DBT and the affected property owners with final approval from the Union County Engineer. Any subsequent entries onto private property for the purpose of obtaining additional survey or soil information prior to the submission of the bid will be made in accordance with the procedures outlined in this section.

9 HAZARDOUS MATERIALS

At this time, the Union County Engineer is not aware of, nor is in possession of, any information relating to the presence of hazardous material at the site.

This structure was inspected for asbestos in May 2021. The inspection was performed in advance for the purposes of demolition. No suspect material was found. The inspection report is included in Exhibit E of this Scope of Services document.

The contractor shall complete the "*Ohio Environmental Protection Agency notification of demolition and renovation*" form and submit to the OEPA 10 days prior to demolition or renovation activities. This coordination shall be included in Item 202 Special-Removal, Misc.

10 ENVIRONMENTAL

10.1 Project Specific Commitments:

- 1) Union County will be responsible for the removal of the necessary trees prior to the bid. These tree removals will not be part of the DBT contract. Remaining stumps will be the responsibility of the DBT. A tree is defined as a live, dying, or dead woody plant, with a trunk 3 inches or greater in diameter at a height of 4.5 feet above the ground surface, and with a minimum height of 13 feet.
- 2) No in-stream work is permitted from April 15 to June 30.

10.2 Waterway Permits:

Permit from the Army Corps of Engineers is pending. At any time, upon the DBT's request, a copy of this document can be forwarded to the DBT. The DBT shall be aware of the requirements addressed in the Nationwide Permit. Any other necessary waterway permits shall be the responsibility of the DBT.

It is required that the bidder be aware of Section 404/401 Permits/Certifications for all projects impacting "waters of the US". The level of permit, that is Nationwide versus Individual 404 and 401, is determined by the exact amount of impact to "waters of the US", (i.e., acreage of fill activities in a stream or wetland or linear feet of work in a stream) and in some cases the waters impacted. All individual 404 Permits require 401

Water Quality Certification. Nationwide Permits are activity specific permits used to authorize projects with minor impacts. Projects with more than minor impacts require individual review by the U.S. Army Corps of Engineers and the Ohio Environmental Protection Agency.

The DBT should be aware of the Nationwide Permits and conditions as issued for the State of Ohio and should design projects to meet the requirements of these general permits to avoid the requirements for Individual 404/401 Permits if possible. The Nationwide Permits for the State of Ohio can be found at the various Corps of Engineers' web sites. The Huntington District's web site can be found at: <http://www.lrh.usace.mil/or/permits/>.

Coordination of the waterway permits can take up to six (6) months for Individual 404 Permits. Therefore it is imperative that the DBT submit plans (i.e., plan & profile, cross-section and detail sheets for any bridges, culverts, or fill areas in waters) to the Union County Engineer, for permit determination, no less than 90 days prior to any in stream or wetland work. The review of plans, any required coordination or the processing of permit applications must be accomplished by the Union County Engineer prior to the commencement of construction activities. The DBT shall be responsible for completing applications for 404 Permits and 401 Water Quality Certification, if they are required. At no time will the DBT coordinate waterway permit issues directly with the permitting agencies unless directed to do so by the Union County Engineer.

All Waterway Permit requirements are found in the Waterway Permits Manual.

10.3 National Pollutant Discharge Elimination System (NPDES) permit:

The DBT shall submit to the Union County Engineer the total number of acres of earth disturbance activities for both off project and on project work in a timely manner. This information will be used to develop the NOI if required. The NOI will be submitted to the OEPA within 10 days after this information is received from the DBT. Approval from the OEPA takes 21 days and the Union County Engineer has 10 days to file the NOI so these 31 days will be counted for in the project.

All temporary erosion control is the responsibility of the Contractor even if a SWPPP is not required. Earth disturbing activity is not permitted prior to the OEPA permit approval. For projects that require an NOI, the SWPPP must be in place prior to the initiation of any earth disturbing activity. All temporary erosion control work and the SWPPP if required will be per SS832. For information about OEPA's NPDES permit requirements see <http://www.epa.state.oh.us/dsw/storm/index.html>.

Items used to implement the DBT's Erosion Control requirements are paid from an encumbered amount included in the proposal as a non-bid reference number. The proposal specifies the unit prices for the erosion control items. Payments for erosion control items that exceed the encumbered amount will be made by an Extra Work Change Order using the specified unit prices. The specified unit prices are fixed for the contract and may not be negotiated or adjusted for inflation or claimed changed condition.

10.4 Removal of Temporary Erosion Control Items

All temporary erosion control items shall be removed before the project is accepted. Removed materials shall become the property of the Contractor and shall be disposed of in accordance with the appropriate C&MS specifications.

10.5 Stream Crossing Investigations (flood plain analysis)

The Union County Engineer has performed a flood plain analysis for the waterway crossing and has acquired a flood hazard permit dated February 23, 2021.

The DBT will not be required to perform a flood analysis for this project. Bridge shall be designed to meet hydraulic criteria specified in section 15 of this document.

11 RIGHT OF WAY (ROW)

All necessary construction work for the project will be performed within the existing and proposed right of way as shown on the attached plans.

The DBT will stake and flag the right of way in the field prior to the start of construction and will maintain said stakes and flags throughout the duration of the project.

12 UTILITIES

Utilities Special Provisions in addition to the Governing Regulations listed in section 8.1 of this document and section 153.64 of the Ohio Revised Code.

12.1 Existing Utilities: The County Engineer, in concurrence with the registered Underground Utility Protection Services- Ohio Underground Protection Service (OUPS) and Oil and Gas Producers Underground Protection Service (OAGPUPS) and other utility owners that are non-members of any utility protection services, has determined that the following utilities are located in the area of the project:

Union Rural Electric	CenturyLink
15461 US Route 36	www.centurylink.com
Marysville, OH 43040	1-800-366-8201 or
800-642-1826	937-599-9285

12.2 Utility Coordination Responsibilities: As soon as it is feasible after the final plan is approved by the County Engineer, the DBT shall stake the existing ROW (and new ROW if additional is acquired) in the field and shall perform clearing and grubbing within that ROW as required by the specifications and the proposal documents, in order to allow utility relocation and reduce potential delays. ROW stakes shall be maintained and updated as needed throughout the project length.

The DBT shall be cognizant of the project's impact on utility facilities. In the event utility rearrangements are required, the project shall not be designed to preclude legal occupancy of the highway ROW by the rearranged utility facilities.

Union County will coordinate the relocation of all utilities.

- 12.3 Subsurface Utilities Engineering (SUE):** _____ Yes No
not applicable

13 DESIGN AND CONSTRUCTION REQUIREMENTS: MAINTENANCE OF TRAFFIC (MOT)

Maintenance of Traffic (MOT) Special Provisions in addition to the Governing Regulations listed in section 8.1 of this document:

- 13.1 General:** All temporary MOT devices shall comply with the National Cooperative Highway Research Program (NCHRP) 350 Hardware report.

All detour routes shall be provided by the Union County Engineer and signed by the Contractor. No designated local detour will be provided.

- 13.2 MOT Restrictions:**
Maximum duration of detour: 90 days.

13.3 Additional Description of Required Work and special provisions:

Ingress and egress for all drives and parking areas shall be maintained. Areas with multiple drives shall have at least one half of the drives opened at all times. Notification shall be given to adjoining properties a minimum of 24 hours in advance of access interruptions.

Through traffic will be detoured along the following route: CR 113 (White Stone Road), CR 120 (Black Road), CR 107 (Springdale Road). Liquidated damages shall be assessed in accordance with section 108.07 of the construction and material specifications for each calendar day that the roadway remains closed to traffic beyond the specified limit.

Until the detour is placed into effect, two-way traffic shall be maintained at all times. The contractor shall furnish, erect, maintain and subsequently remove approved traffic control devices as per C&MS Item 614, Maintaining Traffic, including barricades and signs in accordance with standard drawing MT-101.60. Detour signs and supports will be erected and maintained by the contractor. The contractor shall provide at least 14 days notice to the Union County Engineer prior to closure.

Type III Barricades (Road Closed Ahead) shall be placed at the intersections of CR 194 (Leeper-Perkins Road) with CR 113 (White Stone Road), CR 194 (Leeper-Perkins Road) with TR 193 (Kaiser Road) and CR 194 (Leeper-Perkins Road) with CR 107 (Springdale Road). Road Closed gates and barricades shall also be placed at each end of the work limits.

All work and traffic control devices shall be in accordance with 614 and other applicable portions of the specifications, as well as the Ohio Manual of Uniform Traffic Control Devices.

The road shall not be opened to traffic until the permanent signage is in place.

The road shall not be opened to traffic until either the permanent or temporary markings are in place. Temporary pavement markings shall be provided as directed by the engineer.

The DBT shall advise the Union County Engineer at 937.645.3018 fourteen (14) days prior to the start of construction activities. The DBT will immediately inform the Union County Engineer of any and all delays and/or changes regarding the construction project. The DBT will provide clarification for any questions about this notification requirement.

14 DESIGN AND CONSTRUCTION REQUIREMENTS: LOCATION & DESIGN

Location & Design Special Provisions in addition to the Governing Regulations listed in section 8.1 of this document:

14.1 Survey

A. Union County Engineer Survey Responsibilities: The Union County Engineer has provided the necessary survey requirements, listed below:

1. Horizontal control
2. Elevation bench mark
3. Survey of existing conditions (plan & profile, road cross sections)
4. Stage 1 Plans

B. Survey Responsibilities: All survey data shall be submitted as specified by the County. Reduced point data, in comma delimited ASCII text format, will be provided for all surveyed points. This data will include: point number, x coordinate, y coordinate, elevation and point ID. A hard copy of the data shall also be provided.

Monumentation shall not be disturbed. If the Contractor does disturb the monumentation, then it shall be replaced, in-kind, by a Registered Surveyor, with a current registration, recognized by the Ohio State Board of Registration for Professional Engineers and Surveyors. Costs associated for this item shall be borne by the Contractor. Copies of all monumentation changes shall be forwarded to the Union County Engineer.

All control points, provided by the Union County Engineer, shall be included in the ASCII file supplied by the DBT to the Union County Engineer. They should retain the original point numbers and coordinate values as assigned by the Union County Engineer.

The DBT shall provide the following items prior to final acceptance of the Record-Drawing plans:

1. Copies of all field notes (written or electronic) which shall include the following information:
 - a. Date
 - b. Crew members
 - c. Weather conditions, including temperature, barometric pressure, etc.
 - d. Instrument(s) used (Serial Number)
 - e. Raw observation field data
 - f. Other notes as needed
2. Copies of all Deeds, Plats, Maps and other written evidence used to establish points related to the project including summaries of all parole evidence acquired as a part of the survey operation.
3. Listing of all found monumentation (Horizontal and Vertical).
4. Listing of all monumentation set as part of the project (Horizontal and Vertical) including reference ties for recovery.
5. Short report indicating adjustment factors and methods, signed and certified by a Registered Surveyor (State of Ohio). The Registered Surveyor (State of Ohio) shall include in the report the datum used and all associated adjustments used.

14.2 Vertical and Horizontal Alignment:

Vertical and horizontal alignment shall be constructed as shown on the attached drawings.

14.3 Pavement:

Pavement shall be constructed as shown on the attached drawings. Approach pavement shall be full depth over the entire project limits. Safety edge shall be used on all paving. Proposal Note 555 (smoothness measurements) will not be required.

14.4 Roadway:

The DBT is responsible for the design of the guardrail system. Design shall meet or exceed limits shown on the attached drawings. New guardrail shall be Type MGS, with Type E anchor assemblies.

Bridge terminal assemblies shall be Type TST-2 and included in pay item 530 Special – Superstructure, along with bridge railing.

14.5 Drainage: Yes X ; No ____.

Bridge shall be designed and constructed for over-the-side drainage.

14.6 Design Exceptions:

No further design exceptions will be approved.

14.7 **Landscape:** Yes ___ ; No X.

14.8 **Fencing:** Yes _____; No X.

14.9 **Additional Description of Required Work and Special Provisions :**

15 **DESIGN AND CONSTRUCTION REQUIREMENTS : STRUCTURES**

15.1 **Hydraulic data provided by the Union County Engineer:** The Union County Engineer has provided the following items listed below:

1. The elevation, flowrate and velocity of the 10 and 100-year flood events.
2. The minimum low point of the superstructure (947.85).
3. The minimum water opening as provided by substructure and span configuration options.

15.2 **Existing Structures Identification:**

Structure File No. 8034338

15.3 **Design and Construction Requirements of Structure** in addition to the Governing Regulations listed in section 8.1 of this document:

Existing Structure Data

Length: 65' +/-

Width o/o 28'-0" +/-

Type: prestressed concrete box beam Spans = 2

Date Built: 1971

Alignment & Profile

Alignment: Existing X Relocated ___ ; By County Engineer ___ ; By DBT ___:

Profile: Existing ___ Relocated X Feathered (Adjustment) ___ .
By County Engineer X ; By DBT ___:

(see attached drawings)

Transverse Sections

Roadway Width: 28'

Railing: Type Three Steel Tube (TST-2-21) Height 3'-3".

Fence: Yes No Height/Configuration ____.
Sidewalks: Yes No Width ____.

Investigate the need for **Prefabricated Structure**: Yes ; No .

Investigate the need for **Retaining Walls**: Yes ; No .

All **Shop Drawings** shall comply with Item 501.

Initial **foundation investigation** by County Engineer is attached.

Note: Collection of **additional** soils information shall be the responsibility of the DBT and considered incidental to this design effort.

15.4 Additional Description of Required Work and special provisions:

- Bridge shall consist of three (3) spans. Center span shall be 32.5 feet. Each of the two outer spans shall be approximately 26 feet, adjusted as necessary to provide the same or greater waterway opening as the site plan example. The total span of the bridge shall be a minimum of 84.5 feet.
- New bridge shall provide a final surface grade as shown on the attached plans.
- The low point of the superstructure shall be no lower than 947.85.
- Abutments shall be constructed of reinforced concrete.
- Piers shall be constructed of reinforced concrete and shall be capped column, capped pile, solid wall, or cantilever (tee) solid panel type.
- Abutments and piers shall be founded on steel H piles, cast-in-place concrete piles or drilled concrete shafts.
- Galvanized piles will not be allowed. Complete encasement with polyethylene pipe will be required on any steel pier piling.
- Existing footing thickness and location is not known.
- Superstructure shall be constructed of concrete or steel. Superstructure shall be simple or continuous spans. Superstructure shall be concrete slab or concrete deck on steel.
- Concrete slab superstructure shall be constructed with QC2 (without QC/QA) Concrete.
- Stay-in-place forms will not be allowed.
- Approach slabs shall be constructed per AS-1-15. Sleeper slab shown in AS-2-15 is not required.
- Steel shall be American made in accordance with ORC 153.011 and 5525.21.
- Steel beam bridge shall be constructed with galvanized steel or A588 steel. Steel truss bridges shall not be installed.
- Bridge rail shall be three steel tube type. Note: Bridge rail to be paid under Item 530 Special – Superstructure.
- Rock Channel Protection Type B shall be provided at a depth of 2' at the bridge opening.

- The contractor shall remove and dispose of existing structures. Existing substructures shall be removed to a minimum of one (1) foot below final grade or removed entirely if required to construct the new bridge.
- A load rating analysis shall be performed for the structure.

16 DESIGN AND CONSTRUCTION REQUIREMENTS : TRAFFIC CONTROL

16.1 Pavement Markings and Delineators Special Provisions in addition to the Governing Regulations listed in section 8.1 of this document:

A. Pavement Markings: Yes X ; No ____.

Pavement markings shall be Type 1. Striping shall be centerline only, no edgeline. Centerline markings shall be double solid.

B. Raised Pavement Markers: Yes ____ ; No X .

C. Delineators: Yes ____ ; No X .

All flexible delineators shall conform to Item 620 and shall be placed in accordance with current design standards. Confirmation, that no conflicts exist between the proposed locations of delineators and any underground utilities, shall be made prior to the installation of the delineators.

D. Barrier Reflectors: Yes X ; No ____.

All barrier reflectors shall conform to Item 626 and shall be placed on bridge rail and roadway guardrail, in accordance with current design standards.

E. Object Markers: Yes ____ ; No X .

All object markers shall conform to Item 630, Sign, Flat Sheet.

16.2 Signing Special Provisions in addition to the Governing Regulations listed in section 8.1 of this document:

All permanent signing shall be the responsibility of Union County.

17 PROJECT SCHEDULE REQUIREMENTS

The current edition of Proposal Note 107, including updates released on or before the prebid meeting date, shall be met or exceeded.

18 PLAN SUBMITTALS AND REVIEW REQUIREMENTS

18.1 Plan Components: All plans submitted by the DBT shall be in conformance with the following ODOT manuals:

1. Real Estate Policies and Procedures Manual Section 3100.
The DBT shall also identify all topographic features within the existing and proposed Right-Of-Way limits, including underground utilities.

2. Bridge Design Manual.
3. Location and Design Manual, Volume 3:
The following sections of the Location and Design Manual, Volume 3 are **NOT** required:

1302.13	Plan Signatures
1307.2	General summary sheet
1307.3	Subsummaries
1307.4	Quantity Calculations
1310.3	Earthwork and Seeding Quantities

Units of measure is required.

Simplified plans (section 1301.2) are **NOT** allowed.

- 18.2 Quality Control:** The DBT will be responsible for the professional quality, technical accuracy and adherence to the Governing Regulations listed in section 8.1 of this document, for all plan submittals required under this contract.

The DBT shall immediately notify the Union County Engineer of any apparent discrepancy between the various design and construction manuals and the Conceptual Documents.

Unless stated otherwise, review comments do not revise the scope or intent of the project and do not constitute a request for changes beyond the current contracted Scope of Services

In the event the Union County Engineer determines that any required submission is incomplete, contains inaccuracies which preclude a meaningful review, or does not adhere to the Governing Regulations listed in section 8.1 of this document, the Union County Engineer will advise the DBT of the shortcomings and direct the DBT to revise and resubmit the plan. No time extension will be granted as a result of such action. The Union County Engineer will schedule a review meeting or issue review comments as appropriate.

In the event the DBT believes that any review comment, or orders issued by the Union County Engineer, require a change to the scope of the agreed work, the DBT shall first contact the Union County Engineer for clarification and shall, within 10 days of receipt of the comments or orders, provide written notice to the Union County Engineer concerning the reasons why the DBT believes the scope has been changed.

- 18.3 Stage 3 Plan Review Submission:** For each Buildable Unit the Consultant shall submit Stage 3 detailed design plans as per Location & Design Manual, Volume 3 for review by the Union County Engineer. All submissions must be shown on the required Progress Schedule.

The Union County Engineer shall have 14 calendar days from receipt to review complete submissions.

This review time must be shown on the required Progress Schedule.

Following the review the Union County Engineer will return to the DBT marked plans noted ‘ACCEPTED’, ‘ACCEPTED AS NOTED’ or ‘NOT ACCEPTED’ as described in section 105.02 of the Construction and Material Specifications. The DBT shall correct errors, incorporate changes, perform investigations and make related changes to the plans and supporting documents prior to submitting construction plans.

Plan Review Distribution Table: The DBT shall supply half size (11" x 17") paper prints simultaneously to the parties indicated below.

	Number of half size Sets
Union County Engineer	3
Each affected utility company	1

18.4 Construction Plans: After the review comments for the final plan review submission have been complied with, and following approval of the design documentation, the DBT shall prepare plan sets for use during construction. All review comments shall be resolved in writing by the DBT to the satisfaction of the Union County Engineer before the DBT submits the construction plans. Each plan sheet shall have its last revised date noted on the sheet and clearly marked ‘Approved For Construction’. Physical construction shall not begin until the plans marked ‘Approved For Construction’ are delivered to each party on the Plan Distribution Table below. No time extensions will be approved by the Union County Engineer if the plan distribution is not completed and project delays occur as a result.

Plans Distribution Table : The DBT shall supply full size (22" x 34") and/or half size (11" x 17") paper prints of each plan submission simultaneously to the parties indicated below :

	# of Full Sets	# of Half Sets
Union County Engineer	1	4
Each affected utility company	0	1

18.5 Plan Distribution Addresses:

Union County Engineer
 Josh Holtschulte
 Union County Engineer’s Office
 233 West Sixth Street
 Marysville, OH 43040

Utility Companies
 (As shown in section 12)

19 **BUILDABLE UNITS (BU)**

Definition : Buildable Units are portions of the projects which can be designed, reviewed and built with only limited controls and assumptions coming from the design of other portions of the project. Often a Buildable Unit will be defined by a geographic area within the plan, but it may also be defined by types of work or construction stages which may require or permit similar, nearby work to be divided into separate Buildable Units. All Buildable Units shall summarize the materials required to construct that portion of the project. The summary shall include the Construction and Material Specifications Item Number, and a description of the materials to be used.

General : After the approval of the Preliminary Plan, the DBT may break the project work into two or more separate BU which can be progressed through design and construction with minimal or known effect on each other and/or which can be dealt with sequentially such that sufficient data is available for design and review of each BU. In order that the design and construction of one BU may proceed without significant approved information from an associated BU, the DBT may develop and propose assumptions which will allow for the first BU to proceed through design and/or construction. These assumptions shall be submitted for review and comment but their accuracy and effort upon the final design are the sole responsibility of the DBT. Should error in these assumptions result in additional work, remedial work or other changes to assure an acceptable design or should they result in the need to remove work and substitute additional work, the Contractor shall be responsible for all such costs including, removal of unacceptable materials from the site, modification, additional work, repairs, etc. as necessary to produce an acceptable result.

If the DBT elects to develop Buildable Units, the DBT shall prepare, for review by the Union County Engineer, a table of Buildable Units for the project with each BU described in detail. If the table is approved, the DBT shall modify the Progress Schedule to show a separate group of activities for BU and these activities shall encompass all of the design and construction work in each BU. Work activities shall be further separated in the Progress Schedule to show a meaningful completion status (i.e. separate activities comprising the placement of a bridge deck on steel beams shall describe; shoring, form building, steel placement, placement of conduit & joints, pouring concrete, forming parapets, pouring or slip forming parapets, provision of membranes, provision of wearing surfaces, curing, repair, form removal, cleaning, etc.)

The Final Review Submission and construction plans shall specifically be identified by the Buildable Unit code. If the design of a BU requires input information from an adjacent or related BU, the source for that information in previously approved plans shall be cited or the DBT shall provide an estimated value of the data. The input data shall also be carefully identified. In the same way any assumption, calculations or results from the stage and BU which are used as input to another BU shall be similarly identified, and where appropriate, compared back to that BU to verify previous assumptions. Should assumptions not match values calculated later, the DBT shall re-analyze all affected components and determine appropriate changes. Should those elements have already

been constructed, the DBT shall recommend repairs, adjustments, modifications or replacement of the existing work as necessary to comply with the Scope of Work. All costs for re-design, re-submissions, modifications, removals, disposal of materials and new work needed to remedy the project and bring it to compliance shall be borne by the Contractor and no time extensions shall be approved for this.

20 **INDEX OF ATTACHMENTS**

- Exhibit A Stage 1 Plans
- Exhibit B Digital AutoCAD Files (including survey of existing conditions)
 available for download at
 <https://www.unioncountyohio.gov/bid-info>
- Exhibit C Soil Boring Information
- Exhibit D Flood Hazard Permit
- Exhibit E Asbestos Inspection Report