ODOT

DESIGN BUILD

SCOPE OF SERVICES

Use of red text in this template designates language providing general direction for required information. Information in red text should not be considered fully comprehensive guidance for all project-specific issues. This is general information to assist the writer. The language shall be removed once final scope is developed.

Use of blue text in this template designates optional language for specific sections which may be used at the discretion of the project manager and with approval of the Office of Alternative Project Delivery. Any unused language shall be removed once final scope is developed.

Use of green text in this template is provided as considerations, recommendations, and other points of interest when completing the DB Scope of Services. Language in Green is never intended to be included within the Scope, but is provided for consideration of the Project Management.

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County: Wood

PID: 119007

Route: IR 75

23-3006 Section: 29.93

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1 PROJECT IDENTIFICATION & GENERAL INFORMATION

Table 1-1: Project Identification

PID	119007
State Project Number	23-3006
County-Route-Section	WOO-75-29.93
Local Route Name (if applicable)	N/A
Highway Functional Classification & Federal Aid System	Urban Interstate/NHS

1.1 Design Designation

A design designation table shall be prepared for all roadways anticipated to include pavement work or geometric modifications.

The DBT shall use the design designations for each of the facilities below various design elements as specified within the Scope of Services.

Table 1-2: Design Designation

Location:	WOO-75-29.93
Current ADT (2023):	77,500
Design Year ADT (2043):	88,000
Design Hourly Volume:	11,500
Directional Distribution:	65%
Trucks:	23%
Design Speed:	70 MPH
Legal Speed:	65 MPH
Design Functional Classification:	Urban Interstate
NHS Project:	Yes

Location:

Lime City Rd.

Current ADT (2023):	4,500
Design Year ADT (2043):	5,600
Design Hourly Volume:	900
Directional Distribution:	55%
Trucks:	3%
Design Speed:	45 MPH
Legal Speed:	45 MPH
Design Functional Classification:	Urban Major Collector
NHS Project:	No

1.2 Existing Plans and Project Information

Available information related to the Project is available in the Document Inventory shown in Table 1-3. The Document Inventory will identify whether the document is designated as "Reference Documents" or "Contractual Appendices".

Reference Documents appendices are provided for informational purposes only. The Department makes no representation or warranty as to the accuracy, adequacy, applicability, or completeness of the Reference Documents. Except to the extent set forth to the contrary in the Contract Documents, reliance upon the Reference Documents shall be at the Proposer's risk, and the Department shall have no liability or obligation as a result of the inaccuracy, inadequacy, inapplicability, or incompleteness of the Reference Documents, regardless of the contents thereof.

Contractual Appendices in the Document Inventory are considered binding obligations of the DBT. The DBT shall meet requirements identified in the Contractual Appendices and shall implement the Work in accordance with these requirements.

The Offerors (i.e. prospective Design-Build Teams) shall examine the information provided in the Document Inventory to determine if the information accurately depicts existing field conditions.

The following existing plans are considered part of the Document Inventory and are available for review:

WOO-75-2993 1967 Original Plans

WOO-75-2993 1991 Rehabilitation Plans

[List the available existing plans]

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The plans identified in the Document Inventory are not as-built plans. All existing plans are considered Reference Documents.

In addition to the existing plans, appendices to the Scope of Services are listed in the Document Inventory and posted on the FTP site.

ftp.dot.state.oh.us - /pub/contracts/Attach/WOO-119007/[Insert FTP site address]

List all appendices provided on the FTP site in Table 1-3. Each document should be designated as a Contractual Appendix or a Reference Document. When a document is designated as a Reference Document, the DBT is NOT contractually obligated to perform the work in accordance with the document and cannot rely on the information within the document. When a document is designated as a Contractual Appendix, the Offerors can rely upon the information/recommendations (e.g. accuracy, completeness, etc.) when developing their Bid. Claims may result if the information in a Contractual Appendices is determined to be inaccurate or incomplete. Therefore, use discretion when assigning the designation.

Table 1-3: Document Inventory

Appendix Title	Contractual/Reference Designation
[Insert text]WOO-119007-Aesbestos Report	[Contractual Appendix or Reference Document]Contractual
WOO-119007-Geotech Report	<u>Contractual</u>
WOO-119007-Right of Way Plans	<u>Contractual</u>

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1.3 Railroad Coordination

If railroad coordination is not required, state "not applicable" in this section. Otherwise include all rail agreements as Contract Documents by appendix (as per Location and Design Manual, Volume 3). The involved railroad/railway must be contacted to determine their maximum review time for technical review and approval of projects that affect their rail lines.

Necessary agreements with the railroads include "Preliminary Engineering Agreements" and "Standard Railroad Construction Agreements". These agreements are issued and executed by the State Rail Coordinator in Central Office. For projects with rail involvement, the State Rail Coordinator must be notified early in project scope development.

The applicable railroad's Special Provisions for construction are to be included in the Scope. These Special Provisions may be obtained from the State Rail Coordinator.

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Railroads, traditionally, are not in favor of the Design-Build process. DB allows partial submissions in atypical formats which can be troublesome for review and response times. Railroads see the buildable submissions as being incomplete submittals and, at times, will reject submissions. Close coordination with the regional contacts, Central Office's State Rail Coordinator, and the Office of Alternative Delivery is highly recommended for DB projects with extensive railroad impacts.

Not applicable.

[Include reference to Railroad Agreement, if required for the Project]

1.4 Airway/Highway Clearance

Not applicable.

[List nearby airports, helipads, and distance.]

If airway/highway clearance is not required, state "not applicable" in this section.

2 PRE-BID MEETING

Indicate whether the pre-bid meeting is mandatory or optional. If mandatory, Bids from firms that did not attend will not be considered. Complete the table with relevant information, as needed. Optional language is also offered when it is determined by the ODOT District Office that a pre-bid meeting is not needed.

The Department has determined that a pre-bid meeting will not be offered for the ProjectSchedules of ATC meetings and Intermediate Technical Proposal meetings will be per the Instructions to Offerors.

3 CONTRACTOR PRE-QUALIFICATION

It is required that the Bidder be a Contractor prequalified in accordance with Section 102.01 of PN [select the applicable PN modifying the 100 series (e.g. PN 97/126/136) associated with the form of DB procurement being used], 97. The Contractor or one of the subcontractors identified in the Proposal must be prequalified for all Work Type Codes included in the Proposal.

The Bidder is also required to have engaged the services of an ODOT pre-qualified Consultant (Designer) in accordance with Section 4 of the Scope of Services to constitute the DBT.

If the Contractor, Designer, and/or the sub-consultant(s) submitted do not meet all the required qualifications, the Office of Contract Sales may reject the bid.

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4 DESIGNER

Each Offeror shall <u>utilize the designer named per their respective RFQ</u>. name the Designer and all design sub-consultant(s) in the electronic form on the following web-page prior to Bid submittal:

http://www.dot.state.oh.us/Divisions/ContractAdmin/Contracts/Pages/Scope.aspx

Each Offeror must list relevant prequalification categories for the Designer and each design 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 as found on the following listing:

http://www.dot.state.oh.us/Divisions/Engineering/Consultant/Consultant/prequalengineering.pdf

The Designer or sub-consultants of the Designer must be prequalified to perform design work associated with the following prequalification categories:

Bridge Design: Level 2 Bridge Design

Roadway: Complex Roadway Design

[List Required Design Pregualification Categories]

In accordance with Section 104.011 of PN <u>97426</u>, design services that require prequalification may only be performed by firms that are prequalified for those services at the time of performance of the services.

Restrictions on Participation in design-build contracts:

Any Consultant <u>or sub-consultant</u> who provided services to the Department 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.

The following consultants have been identified as being precluded from participation:

DGL Consulting Engineers

TetraTech

If applicable, list firms that have provided support to the Department in the development of the preliminary engineering, the Scope of Services, and other activities which may constitute a conflict of interest. Questions regarding potential conflicts of interest may be directed to the Office of Consultant Services.

5 SCOPE OF WORK

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Project Description:	A project to rehabilitate the existing Lime City Rd. bridge over I-75 in Wood County (SFN 8704716) by raising the superstructure to provide a vertical clearance of 16'-6" (min.) and widening the bridge to accommodate a multi-use path. Perform necessary related work.
Project Goals:	 Safely raise the bridge to provide a vertical clearance of 16'-6" (min) Widen the bridge to include a multi-use path and widen the approach embankment to accommodate a future multi-use path
	•Increase the lane and shoulder widths on Lime City Rd. to accommodate the expected increase in commercial vehicle traffic
Completion Date:	9/30/2024
Warranties:	None

Project Limits shall be provided for each roadway with improvements to geometric elements or full-depth, full-width pavement. As defined in Section 101.03 of PN 126, Project Limits shall be provided are points on the mainline centerline of construction where the proposed improvement, as described in the project description on the Title Sheet (excluding incidental construction), begins and ends. Project limits are generally defined as the beginning/ending of proposed full-depth, full-width pavement and do not include "incidental construction", including temporary traffic control devices. Work Limits include all temporary and incidental construction, so they are determined by the DBT.

Consider adding a Project Goals section under Scope of Work. This will further describe the intent of the Scope. Project Goals give the overall indication of the Project's desired results. While they may not be contractually binding or enforceable, they will provide the DBT guidance on the Department's intention. They can also be used as Project Specific Partnering Goals

The approximate Project Limits for each applicable roadway are provided in Table 5-1.

Table 5-1: Approximate Project Limits

Roadway Name	Begin	End
IR 75	29.93	30.00
Lime City Rd. (CR 9)	6.95	7.35

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Work Limits shall be determined by the DBT.

The Consultant shall provide for the engineering services, design, and preparation of detail 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 Contract Documents to fulfill the intent of the Contract.

6 FIELD OFFICE

Field office will not be required.

The below optional language may be included when the Project is complicated, and a high level of ongoing communication is required. Use of co-location shall be coordinated and approved by the Office of Alternative Project Delivery. Consideration can be given to only require co-location during physical construction if so chosen.

Field Office Co-Location:

The DBT shall co-locate with Department personnel for the duration of design and construction of the Project. The DBT shall furnish the facility to be used for co-location. Colocation with the DBT's Contractor is intended to facilitate regular and active communication between the Department and the DBT during the Project.

Co-location requires the DBT and the Department's forces to be housed within the same office facility or building with direct internal access between connecting parties' field offices. An area of the facility shall be designated for the Department's use and shall be separated in such a manner that all doors can be locked, and access can be securely controlled. The Department's facilities shall be contiguous.

Notwithstanding the above, if the DBT demonstrates to the Department that the Project is in an area where sufficient office space is not otherwise available with direct internal access, the DBT and the Department's field offices shall in all cases be located, within walking distance (approximately 500 ft., door-to-door).

Field office co-location is in addition to the existing field office requirements.

If field office co-location is required, the Scope of Services may need to address other considerations (e.g., conference rooms, IT needs, distance from the Project, etc.).

7 GENERAL PROVISIONS FOR THE WORK

7.1 Governing Regulations

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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.

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 date of original advertisement [identify version of documents current as of 1) prebid meeting (typical) or 2) date original advertisement], RFP release 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 & Rehabilitation Manual Specifications for Geotechnical Explorations Survey Manual **Construction and Material Specifications** Proposal Notes for Construction and Material Specifications Supplemental Specifications for Construction and Material Specifications Item Master Manual for Abandoned Underground Mines - Inventory and Risk Assessment Pavement Design and Rehabilitation Manual State Highway Access Management Manual Standard Construction Drawings **Plan Insert Sheets** Traffic Engineering Manual Ohio Manual of Uniform Traffic Control Devices Real Estate Administration Policies and Procedures Manual: Appraisal Acquisition Property Management Relocation **ROW Plans** Utilities Wireless Communication Tower Manual Environmental Services Handbooks and Guidelines Waterway Permits Manual **Design Mapping Specifications** CADD Engineering Standards Manual Geotechnical BulletinsDesign Manual ODOT Multi-Modal Design Guide Aesthetic Design Guidelines

Add local standards or other specialty item standards (if applicable).

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7.2 CADD files supplied by the DBT

The DBT shall comply with ODOT's CADD Standards, and supply files in accordance with the CADD Engineering Standards Manual for OHDOT CONNECT. All data shall be provided to the Department according to the provisions as detailed under the appropriate CADD links accessed from the Department's Division of Engineering's website. This includes, but is not limited to, the level assignments, symbols, lines and line styles that are to be used, line weights, cells, placement of text and file naming conventions.

The standards and necessary downloads can be accessed at the following URL addresses:

https://www.dot.state.oh.us/Divisions/Engineering/CaddMapping/CADD_Services/Standards/ Pages/Manuals.aspx

https://www.dot.state.oh.us/Divisions/Engineering/CaddMapping/CADD_Services/Standards/ Pages/Downloads.aspx

The Department will accept CADD files through electronic media.

- The DBT shall submit all CADD information produced in the process of plan development. All CADD information shall be submitted in the current version of MicroStation (*.dgn) format as indicated in the CADD Engineering Standards Manual for OHDOT CONNECT. The DBT shall provide a comprehensive set of complete and accurate CADD data which is compatible with ODOT's CADD systems with no additional work or modification.
- 2. The DBT shall submit all information produced in the process of plan development according to L&D Volume 3, Section 1500.

The DBT shall use a separate file name for each horizontal or vertical alignment. The DBT shall provide required ASCII report content in accordance with the CADD Engineering Standards Manual.

These requirements and procedures may be updated from time to time with notification provided on the ODOT Division of Engineering website. The DBT shall use ODOT cell files and ODOT seed files consistent with the version of the requirements identified in Section 7.1 (Governing Regulations).

7.3 Pre-Award Conference

Within 7 days following Bid opening, the apparent successful DBT shall attend a mandatory pre-award conference. This confidential meeting will be held with the Office of Contract Sales in the Division of Construction Management to discuss the DBT's bid of the lump sum items. The DBT shall be prepared to discuss general items of Work included within the lump sum bid items, approximate amounts of Work included within the DBT's Bid Items, and

general design approach and design concepts for the Work. Other Department representatives familiar with the Project may attend.

While not required, the DBT may prepare general engineering information to be presented to the Office of Contract Sales to help explain design concepts and quantities. This information will be used only by the Office of Contract Sales to assist in understanding the DBT's bid for award recommendation purposes.

No shared concepts, shared quantity information, discussions, comments made or shared by either party will be considered binding, a revision to the Contract Documents, or acceptance or validation of any design concept or assumed quantities of Work.

7.4 Partnering Agreement

The District must determine whether a facilitated or self-facilitated partnering process will be used for the project. One of the benefits of a good DBT team is the opportunity for the District and DBT staff to work together as a team, and facilitated partnering may not be required. Additional guidance on which project characteristics would necessitate facilitated partnering can be found in Proposal Note 111 (Designer Note).

The DBT is required to enter into a partnering agreement with the Department that is:

- Facilitated
- Self-Facilitated

A partnering agreement with the Department on this project. The objective of this agreement is the timely completion of the work and a quality product that will be a source of pride to both the Department and the DBT. Partnering will not affect the terms and conditions of the contract. The partnering agreement is a document which is solely intended to establish an environment of cooperation between the parties. The costs associated with the partnering process will be in accordance with <u>Section 108.02 of PN 97.</u> <u>[select "Proposal Note 111" for Facilitated Partnering or "Section 108.02 of PN 126" for Self-Facilitated Partnering, as applicable].</u>

7.5 Communication

All communication during design and construction shall be with the District Project Manager and the District Project Engineer.

District's Project Manager's Name:	David Geckle, P.E.
Phone number:	419-373-4377
E-mail:	david.geckle@dot.ohio.gov

District's Project Engineer's Name: Kyle Ruedel

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Phone number:	419-373-4336
E-mail:	Kyle.ruedel@dot.ohio.gov

At the Pre-Design Meeting, the DBT shall name a Project Manager who will act as a liaison between the DBT and the Department.

7.5.1 Task Force Design Meetings

Required

☑ Not Applicable

The below language should only be included with projects having complex design issues which will have an extended design phase. If not applicable to the project, identify as "Not Applicable". This process will put additional burden on the Designer and the Department to attend meetings, but will facilitate the understanding of the design and will expedite reviews.

The DBT shall conduct Task Force Design meetings. These meetings will be held to discuss specific DB solutions, resolve issues with the design and update the Department with the status of the design. At a minimum, these meetings shall include the Designer (and specifically the design element lead engineer or representative) and the Contractor. The DBT shall invite the Department to each Task Force Design meeting. The Task Force Design meetings shall be held every other week for the duration of the design or until mutually agreed by the Department and the DBT.

The Task Force Design meetings shall be integrated multi-discipline design meetings, led by the DBT, focusing on integrating design elements into a single, comprehensive, and buildable design. The Department will participate, but the Department's participation will be limited to general opinions and suggestions which shall not be deemed to be direction. The DBT shall maintain its responsibility to ensure adherence to the contract, including design requirements and schedule.

During the design process, these meetings shall occur at a location agreeable and accessible to all parties. If the co-located field offices are utilized and operational, these meetings should be held at the Department's or DBT's Field Office. The DBT shall provide an agenda two days prior to the meeting.

The DBT shall be responsible to notify any interested or affected third-parties at least two days prior to the meeting . "On-line" meetings (i.e. Skype, WebEx) may be acceptable, if approved by the Department.

Note: Task Force Design meetings add value to projects as they focus the group of individuals focused on one specific discipline to ensure an understanding of all issues prior to the design

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being completed. They should be held centering on topics such as structures, roadway, drainage, and impacts to environmental compliance.

Members of Task Force Design meetings should include designers, key construction personnel, and the agency's discipline experts. They generally meet bi-weekly to discuss discipline related design progress and issues and to plan phased action items, as necessary. The minutes from each task force meeting are recorded and distributed. These should be led by the Designer's discipline leads.

As these can require significant personnel's time, they should only be used on complex projects which will require considerable interaction between all parties. The respective parties' decision makers need to be integral in these meeting to ensure these meetings are beneficial.

7.157.6 Permits

The DBT shall ensure that the Project is constructed and maintained in accordance with all requirements, regulations, and applicable permits required for the Project. This includes the permits described herein and any additional permits not specifically identified in the Contract Documents.

Unless noted otherwise in the Contract Documents, the DBT shall obtain all necessary permits and pay all charges, fees and taxes associated with these permits (e.g., city street opening permits, street crossing/equipment moving permits, water department fees, sewer permits, rail permits and fees, etc.). The DBT shall be responsible for any fines levied by regulatory agencies as a result of their construction activities or non-compliance with any permit special or general conditions.

The DBT shall obtain a permit from the State or local government having jurisdiction to perform any non-construction work within the existing Right of Way and/or limited access.

7.167.7 Entry on Private Property

The DBT, acting as The Department'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 Director of Transportation in accordance with Section 5517.01 of the Ohio Revised Code and 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 ODOT's Survey Manual. The DBT shall forward copies of all notification letters distributed to ODOT's Project Manager.

Any subsequent claims for compensation due to damages incurred while said activities were performed will be negotiated between the DBT and the affected property owners with final approval from ODOT's Project Manager. Crop and property damage minimization and reimbursement information, together with the crop damage reimbursement formula and Special Waiver of Damage form, will be provided to the DBT by ODOT's Project Manager.

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.

8 ENVIRONMENTAL

The DBT shall ensure that the Project is designed, constructed and maintained in accordance with all environmental requirements, regulations, and applicable permits required for this Project.

8.1 NEPA & Environmental Commitments

In general, NEPA approval is preferred prior to award of the DB contract, and should be complete or near to completion when the Proposal is issued. If not contact OES Administrator.

The Scope of Services preparer should use NEPA documentation to determine a project impact area for the DB project. This area will be sized to accommodate a "worst case scenario" from an environmental perspective. It will include all anticipated work areas (including temporary work areas). Assume that all environmental resources within the project impact area will be negatively impacted. While writing the Scope, use the mapping for defining the project impact area limits. Going outside of those limits may require an environmental reevaluation if new impacts are identified

Each Offeror will develop a slightly different project design, resulting in somewhat different environmental impacts and right-of-way needs. To ensure that the project is built in compliance with NEPA (and does not trigger an environmental reevaluation), the bid documents must specify that all project work must be completed within the limits allowed by the approved environmental documents, and that all environmental commitments are kept. The only exception to this rule is storage of materials done on properties owned or leased by the DBT.

Environmental commitments identified in the approved environmental document shall be incorporated into the Scope of Services by Contractual Appendix or through a list within the body of the Scope of Services. For projects where the NEPA document covers multiple sections/phases of a project corridor, the environmental commitments specifically associated with the Project site are extracted and included within the body of the Scope of Services. If the NEPA document applies to the entire Project site and the commitments are clearly communicated within the NEPA document, reference to the appropriate NEPA document as a Contractual Appendix in the Document Inventory is sufficient. Section 8.0 is intended to capture all commitments related to threatened and endangered species, air quality, noise, cultural resources, Section 4(f), Section 6(f), etc.

The DBT shall perform all environmental commitments as described in Table 8-1 *Table 8-1 - Option A or in Appendix XXX (Name of Document) - Option B]*, unless otherwise specified in the Contract Documents.

Table 8-1: Environmental Commitments

Source	Description of Commitment
USFWS	Ensure impacts to the federally listed and protected Indiana bat and northern long-eared bat are avoided and minimized. Do not remove trees from April 1 through September 30. Perform all necessary tree removal from October 1 through March 31. Demarcate clearing limits in the field to avoid any unauthorized tree clearing. For the purposes of this note, a tree is defined as a live, dying, or dead woody plant, with a trunk three inches or greater in diameter at a height of 4.5 feet above the ground surface, and with a minimum height of 13 feet.
USACE	ODOT will obtain all appropriate waterway permits prior to any work within the jurisdictional boundary of any waterway, including wetlands, and all Waterway Permit Special Provisions will be noted under Special Provisions in the scope and adhered to during construction.

The DBT shall:

- 1. Monitor and document Work to demonstrate compliance with environmental commitments.
- 2. Provide documentation of environmental commitment compliance at request of the Department.
- 3. Follow Department and local regulations regarding dust control, adhering to dust control measures outlined in C&MS 616.
- 4. Adhere to local City ordinances for vehicle idling and all current U.S. Environmental Protection Agency (EPA) air quality regulations.

If the DBT becomes aware of any failure to perform an environmental commitment, the DBT shall notify the Department immediately.

8.2 Environmental Permits

The DBT shall:

- 1. Be aware of all applicable environmental permits related to the Work.
- 2. Coordinate with the Department and prepare applications and other relevant information necessary to obtain all environmental permits required to perform the Work.

- 3. Comply with all conditions imposed by environmental permits in design and construction.
- 4. Notify the Department regarding any failure to comply with conditions of the environmental permits.
- 5. Maintain and update environmental permits to ensure they are in effect during the Work.
- 6. Coordinate with the Department and submit any documents regarding updates required for environmental approvals to the Department for coordination with the regulatory agency.

If the DBT modifies elements of the Conceptual Design used as the basis for obtaining a permit, the DBT accepts all responsibility for associated cost and schedule impacts resulting from the permit modification process and accepts the risk that the regulatory agency may not approve the proposed permit modification.

At no time shall the DBT coordinate environmental permitting issues directly with the regulatory agencies, unless directed to do so by the Department. The DBT shall not commence with Work covered by environmental permits until the applicable permits approval are obtained from the regulatory agencies.

Table 8-2 identifies work performed by the Department related to various environmental permits and the status of Department activities. Table 8-2 is not a comprehensive list of the environmental permits required to perform the Work. Unless otherwise noted, the DBT shall be responsible to obtain all necessary environmental permits and pay all charges, fees and taxes associated with these permits.

List any permits that have been obtained or advanced by the Department (e.g. USACE 404, OEPA 401, USCG Section 9, OEPA NPDES, OEPA Landfill 513, etc.). Provide approval, copies of permit authorizations and any approvals or concurrence received from the regulatory agencies. Describe any ongoing activities by the Department related to obtaining the permits listed (i.e., note if the Department intends to be the party responsible to get approval) and make documentation available for review by the Offerors, including appendices and agency comments. The Department shall make every effort to preclude being on the DBT's critical path for obtaining permits.

Some permits generally cannot be obtained until the DBT has progressed the design sufficiently to provide the information required by the permit. The Department must plan and budget for these situations. The DBT, for example, is to provide the Department with the impacts and the disturbed earth quantities in a Storm Water Pollution Prevention Plan as part of the Notice of Intent (NOI).

Table 8-2: Status of Department Activities for Environmental Permits

Agency	Permit/Approval	Status
USACE	Waterway Permit	Under USACE Review

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OEPA	NPDES	Awaiting DBT Plan Development

The Waterway Permit is anticipated to be completed Dec 31, 2023.

The DBT shall acquire required noise permits and/or variances from the local jurisdiction.

The DBT shall be responsible for any fines levied by regulatory agencies as a result of their construction activities or non-compliance with any permit special or general conditions.

8.3 Temporary Sediment and Erosion Control

The DBT shall be responsible for designing and implementing all temporary sediment and erosion controls in accordance with SS 832 and the Ohio NPDES general permit for storm water discharges from construction activities (NPDES Permit). For information about OEPA's NPDES Permit requirements, see:

https://epa.ohio.gov/dsw/permits/GP_ConstructionSiteStormWater.

The DBT shall submit information to the Department for development of the Notice of Intent for the NPDES Permit, including the total acreage of earth disturbing activities for both off project and on project work. The DBT shall assume that approval from OEPA will require a minimum of 31 days following submittal to the ODOT Project Manager. Earth disturbing activity is not permitted prior to approval of coverage under the NPDES Permit.

The Department will submit the NOI to the OEPA within 10 days after information is received from the DBT. Approval from the OEPA takes 21 days and the ODOT Project Manager has 10 days to file the NOI.

For projects that require an NOI, the DBT must develop a Storm Water Pollution Prevention Plan in accordance with SS832 and the NPDES Permit. The DBT shall not initiate any earth disturbing activity until the SWPPP is approved.

The DBT shall be compensated for furnishing and installing items related to temporary sediment and erosion control requirements. The Department will compensate the DBT through an encumbered amount included in the Proposal as a non-bid reference number. The Proposal specifies the unit prices for the temporary sediment and erosion control items. Payments for temporary sediment and erosion control items that exceed the encumbered amount will be made through an Extra Work Change Order using the specified unit prices. The specified unit prices are fixed for the Contract Documents and may not be negotiated or adjusted for inflation or claimed changed condition.

For Projects which are logically known to require an NOI (likely exceeding 1 Acre of disturbed area), consider including pay items for the Lump Sum Storm Water Pollution Prevention Plan, Lump Sum Storm Water Pollution Prevention Inspections, and Lump Sum Storm Water Pollution Prevention Inspection Software include individual pay items.

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If these pay items are not included within the Contract, include the following Optional blue language. While intended for Projects with which it is difficult to discern EDA, the Optional language is maybe appropriate for any design-build project.

All costs associated with the work to development, design, revisions, modifications, amendments and submittals of the Storm Water Pollution Prevention Plan is considered incidental to the Project. All costs associated with the work to perform Storm Water Pollution Prevention Inspections and all work associated with NPDES required inspections, monthly inspections, and reporting is considered incidental to the Project. All costs associated with providing and maintaining the required CPESC and CESSWI personnel, conducting the NPDES required inspections utilizing the SWPPPTrack inspection software application and support engineering services are incidental to the Project. All costs associated with the Storm Water Pollution Prevention Inspection Software includes all costs for the SWPPPTrack inspection software and services and is incidental to the Project.

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

8.4 Regulated Materials

The DBT shall meet all regulatory conditions imposed with regulated materials, including hazardous materials, associated with the Project. The DBT shall characterize, collect, contain, and properly dispose of all waste generated or encountered during the Work. The DBT shall ensure that the site is properly contained during construction so that regulated materials do not migrate off-site. The DBT shall prepare and implement a spill prevention and response plan that will address the proper storage and management of all fuels, oils, and chemicals being stored and/or used on the project and the actions to be taken if a release occurs on the project including notifying reportable releases and spills to the National Response Center and Ohio EPA Spill Hotline. The DBT is to address the project's known areas of regulated materials in their health and safety plan. The DBT is to take reasonable actions to prevent the general public from accessing the regulated materials areas to prevent an exposure and/or a release of the regulated materials.

When documentation (RMR Screening, Assessment, Investigationreports) are available to identify known regulated materials, the Department should provide in the Document Inventory and applicable documents may be listed in the below optional language. List all known regulated materials that may be impacted by Work performed. This may include RMR reports, asbestos surveys and regulated material surveys within buildings to be demolished, and listing of utilities that contain regulated materials (transformers, asbestos ducts, etc.). Provide any informational studies and surveys in the Document Inventory and reference here. For bridge projects, test the existing structure for asbestos and provide results. If asbestos is found, include asbestos abatement as a pay item.

The type of material present, as well as quantity, location, parties responsible for testing, handling requirements, and payment method (lump sum or unit price, etc.), should all be listed in this section. The District should consider providing Bidders pre-bid access to such

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locations or structures to be demolished to allow the Bidders to price the asbestos abatement or management of other regulated materials that will be required.

If regulated materials are present and the quantities known, provide the information in the Proposal, and have bid as lump sum (risk on the DBT). When regulated materials are present and the quantities are unknown, consider requesting a unit price bid for an estimated quantity as part of the Proposal, with payment based on the actual quantity encountered (risk on the Department). The risk shall be assessed by the District and, if warranted, a contingency quantity maybe established additional discussion is provided in Section 3.5.4 Regulated Materials Change Order.

The DBT shall be responsible for abatement, excavation, storage, testing for disposal and disposal handling associated with known regulated materials. Known regulated materials include materials associated with *[list appropriate appendices/documents from the Document Inventory]*.

If any unknown regulated materials are discovered through work on the Project, the DBT shall notify the Department immediately and shall follow the spill prevention and response plan, as well as all appropriate regulations.

When information regarding type or extent of regulated materials is not sufficient for the Offerors to develop a Bid, it may be necessary for bid purposes to establish assumed limits of regulated materials, type of material, and contamination levels. Depending on the projectspecific issues and extent of risk, the Department may want to include unit price pay items and request quantities to be bid. Coordinate with the Office of Alternative Project Delivery regarding use of unit price pay items to address regulated materials.

8.4.2<u>8.4.1</u> Asbestos

An asbestos survey of the WOO-75-2993 (SFN 8704716) was conducted by a certified asbestos hazard evaluation specialist on March 30, 2023. The inspection determined that no asbestos is present. See <u>the Appendix [XX]</u> for inspection results.

A copy of the Ohio Environmental Protection Agency (OEPA) notification of demolition and renovation forms, partially completed and signed by ODOT, will be provided to the successful bidder. The DBT shall complete the form and submit it to:

Ohio EPA, CDO 50 West Town Street, Suite 700 Columbus, OH 43215 Kelly Toth, APC Manager Office # 614 728-3778, Fax # 614 728-3898

At least ten (10) working days prior to the start of any demolition and/or rehabilitation, the DBT shall provide a copy of the completed form to the engineer.

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Information required on the form will include: 1) the DBT name and address, 2) the scheduled dates for the start and completion of the demolition or rehabilitation work, and 3) a description of the planned demolition/rehabilitation work and the methods to be used.

The DBT shall furnish all fees, labor, and material necessary to complete and submit the OEPA notification form.

OPTION 1:

An asbestos survey of the [Insert structure (SFN)] was conducted by a certified asbestos hazard evaluation specialist on [Insert date]. The inspection determined that no asbestos is present on the following structures. See Appendix [XX] for inspection results.

A copy of the Ohio Environmental Protection Agency (OEPA) notification of demolition and renovation forms, partially completed and signed by ODOT, will be provided to the successful bidder. The DBT shall complete the form and submit it to:

Ohio EPA, CDO 50 West Town Street, Suite 700 Columbus, OH 43215 Kelly Toth, APC Manager Office # 614 728-3778, Fax # 614 728-3898

At least ten (10) working days prior to the start of any demolition and/or rehabilitation, the DBT shall provide a copy of the completed form to the engineer.

Information required on the form will include: 1) the DBT name and address, 2) the scheduled dates for the start and completion of the demolition or rehabilitation work, and 3) a description of the planned demolition/rehabilitation work and the methods to be used.

The DBT shall furnish all fees, labor, and material necessary to complete and submit the OEPA notification form.

OPTION 2:

Asbestos inspection has been conducted by a certified asbestos hazard evaluation specialist on [Insert date]. See Appendix [XX] for inspection results.

Asbestos containing materials were encountered. All suspect materials shall be removed and properly disposed of by a certified Asbestos Removal contractor in accordance with Ohio Administrative Code (OAC) 3745-20. An individual trained in the provisions of NESHAP (40 CFR Part 61, subpart M) will be on site during the Demolition or Renovation of any structure with Asbestos Containing Materials (ACM) and evidence that the required training has been accomplished by this person will be available during normal business hours.

All associated costs of asbestos materials to be removed and properly disposed of, will be paid under "Third party billing" provisions of ODOT Change Order Policy 510-010(P) Appendix E.

OPTION 3:

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The DBT shall conduct asbestos inspections of all bridges and/or buildings subject to renovation or demolition as per Chapter 3745-20-04 of the Ohio Administrative Code (OAC) "Demolition and renovation procedures for asbestos emission control" utilizing a certified Ohio Asbestos Hazard Evaluation Specialist. Should suspect Asbestos Containing Materials (ACM) be encountered; perform bulk sampling and analysis. Prepare a letter report (1-2 pages) including a brief discussion of the inspection of and sampling methodology, mapping indicating the bridge location and sampling locations, and analytical test results.

For all options, at least 10 working days before operations begin, the DBT shall complete an Ohio Environmental Protection Agency (OEPA) "Notification of Demolition and Renovation" form and submit this to the local air pollution control division, if delegated, or OEPA.

The DBT shall provide a copy of the completed form to the Department. Payment for all fees, labor and material needed to inspect the bridges and submit OEPA notification shall be included in the appropriate Structure Remove Lump Sum bid item.

Should asbestos containing materials be encountered, all suspect materials shall be removed and properly disposed of by an Ohio EPA licensed Asbestos Hazard Abatement Contractor.

All associated costs of asbestos materials to be removed and properly disposed of, will be paid under "Third party billing" provisions of ODOT Change Order Policy 510-010(P) Appendix E.

8.278.5 Noise Analysis and Noise Barriers

Not applicable.

If the DBT has flexibility with design that could impact noise levels resulting in changes to anticipated noise barrier locations, add requirement for DBT to perform analyses, complete the environmental reevaluation, and assume risk of adding/modifying noise wall requirements. If noise walls are required, include specifications and details in Section 19.3.

9 RIGHT OF WAY (ROW)

In many cases, ROW acquisition is not necessary to construct the project or the ROW acquisition has been completed prior to advertisement of the DB project. In scenarios where ODOT has not completed right of way acquisition prior to the advertisement of the DB project, ODOT will typically provide a Right of Way Status Matrix as a Contractual Appendix. The matrix typically identifies the parcel number, owner name, acquisition start date, estimated months to clear, date when ODOT takes ownership of parcel, date that parcel becomes available for construction, and comments related to the parcel. Optional language is shown below when acquisition is ongoing during the procurement and after contract execution.

For some more involved projects, the DBT can be scoped to provide R/W plans, title reports, and continuation of title reports. Requirements shall be coordinated and approved by the Office of Alternative Project Delivery. The Department must retain responsibility for

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carrying out appraisals, appraisal reviews, and the acquisition itself. The DBT must understand the Federal Highway Administration acquisition policies and the importance of strict adherence to them.

The DBT shall perform all necessary construction work for the project within the Project existing and Proposed Right of Way (ROW).

The Department anticipates on havingwill secure_d-the proposed R/W by the award of the design-build contract_as depicted in the ROW plans.

The DBT shall locate existing right of way lines based on requirements specified in Chapter 4733-37 of the Ohio Revised Administrative Code (Board Rules) governed by regulations outlined in Chapter 4733, Ohio Revised Code (Regulation Laws). The DBT shall research existing right of way information from all available sources including but not limited to ODOT records, County road records, Commissioners' Journals and records of other County offices to the extent necessary to provide an accurate basis for the establishment of the existing right of way.

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

The DBT shall identify all right of way encroachments on the construction plans with the Interim Design submission. ODOT's Project Manager will be responsible for clearing all encroachments on Federal-aid projects in accordance with standard encroachment removal.

The status of each parcel that is currently in the acquisition process is indicated in Appendix [XX] (Right-of-Way Status Matrix). Additional requirements and information for specific parcels are included in the Right-of-Way Status Matrix. The DBT will be provided access to each parcel as the parcel is cleared. The Department will provide written notification to the DBT of the availability of each required parcel and notify the DBT of any access restrictions that may be applicable. The DBT shall not be allowed access to any parcel until written notification is provided by the Department.

The Department will provide an update to the Right of Way Status Matrix at the time of NTP. In addition, the Department will provide the DBT with monthly reports regarding the status of the acquisition process for parcels for which access was not provided at the time of NTP.

9.39.1 Temporary Easements

Projects with temporary easements should address the timing and process related to use of these easements. Optional language is provided below, when applicable.

The Department will facilitate use of certain parcels through temporary easements. The DBT shall use temporary easements solely for the purposes described within the easement in accordance with Appendix [XX] (Temporary Easements). The DBT shall only be able to use the temporary easement for the duration established in accordance with Appendix [XX] (Temporary Easements). The duration commences on the date when physical work commences within the temporary easement site. The DBT shall provide written notice to the Department indicating the planned date for beginning work in a temporary easement. The

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DBT shall not enter into temporary easement sites after the duration of the temporary easement has elapsed.

The DBT shall construct temporary fence around temporary easements being acquired for the Project. Upon completion of Work within temporary easements, and prior to completion of the temporary easement access duration, the DBT shall remove the temporary fence and restore the temporary easement site to pre-construction conditions. There are no temporary easements being obtained. All work shall be performed in the permanent or proposed permanent ROW.

10 UTILITIES (OPTION A)

Note: There are two versions of recommended utility notes. Option A should be the typical note utilized. This note puts the majority of the utility risk upon ODOT. This should be the typical approach. Design-Build project candidates should have as few potential utility conflicts as possible. This will allow a DBT to consider all potential options giving the Department the most cost-effective solution. High utility risks will increase costs and eliminate solutions. The Department needs to make every attempt to pre-locate conflicting utilities and have the utilities relocate prior to the Project being initiated. Regardless of the level of potential utility impacts. the Department should consider developing a "Utility Conflict Matrix" and include this matrix as part of an appendix, The matrix should list the utility (Name / Type), list the general location (station or cross street), and identify the status of the relocation (To be relocated / Relocated / Relocation In Process / Remaining / Abandoned), and the likelihood to be impacted (Impacted / No Impact /

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Potential). A "For Reference" appendix will assist the **DBTs in bidding and tracking of utilities.** Outreach to potentially-affected utilities is important; Pre-Scoping meeting to explain DB process Requiring District Utility Coordinators involved during the Scoping process Gathering of all known utility plans Discussion of risk and coordination on projects with considerable utilities which can only be relocated after final design - Discussion of using one of the two versions of the utility notes (Option A or Option B within this template document) Discussion of Responsibilities of the DBT and of ODOT utility coordinators before and after sale Inclusion of all public utilities within the Scope of Services so DBT can control Discussion of review timeframes for utility owner review of DBT relocation plans During the contract, when plans are submitted by the **DBT for Department review, such review must be** coordinated with affected utilities. In addition, the contract should specify that ODOT should be notified whenever the DBT contacts the Ohio Utilities Protection Service (OUPS).

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Option A language should be used on design-build projects which have had utilities clearly coordinated and impacts identified prior to DB procurement. Utility relocations should be completed or should be reasonable assured to be completed. The Department shall provide the date in which utility relocation(s) will be completed if occurring after Award.

10 All underground and overhead utilities should be listed in this section of the Scope of Services, similar to a Utility note. The Proposal should indicate that one of the goals of the project design is to minimize utility impacts.

10.1 Existing Utilities

The District Utility Coordinator, in coordination with the registered underground utility protection services, Oil and Gas Producers Underground Protection Service (OGPUPS), and other utility owners that are non-members of any utility protection services, has determined that the utilities identified in Table 10-1 are located in the area of the Project.

List all known utilities on the Project site in Table 10-1.

Utility Owner	Utility Contact	Relocation Status
AT&T Ohio	Robert Fey	Utility conflicts to be determined
	130 N. Erie St., Room 714	determined
	Toledo, OH 43624	
	419-245-7304	
	Rf1281@att.com	
Buckeye Broadband	Michael Sheahan	Utility conflicts to be
	2700 Oregon Rd.	determined
	Northwood, OH 43619	
	419-724-3713	

Table 10-1: Utility Contacts and Status

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	msheahan@sharedsvcs.com	
Columbia Gas of Ohio	Clint Wells 2901 W. Manhattan Blvd. Toledo, OH 43611 419-539-6066 <u>clintwells@nisource.com</u>	Utility conflicts to be determined
Toledo Edison	Randy Swope 6099 Angola Rd. Holland, OH 43528 rrswope@firstenergy.com	Utility conflicts to be determined
Northwestern Water & Sewer District	Tom Stalter 12560 Middleton Pike Bowling Green, OH 43402 419-354-9090 <u>rstalter@vwwsd.org</u>	Utility conflicts to be determined

10.2 Utility Coordination Responsibilities

The DBT shall coordinate all utility adjustments for construction activities on the Project.

As soon as it is feasible, the DBT shall stake the existing ROW (and new ROW, if additional ROW has been acquired) in the field and shall perform clearing and grubbing within that ROW in accordance with the Contract Documents to facilitate utility relocation. The DBT shall maintain and update ROW stakes as needed throughout the Project Limits for the duration of the Project.

The DBT shall design the project and perform construction work in a manner that minimizes the scope and extent of utility conflicts and adjustments. The DBT shall not design or construct the Work in a way that precludes legal occupancy of the highway right-of-way by the adjusted utility. The DBT shall minimize potential delays and coordinate efficient adjustments of utilities.

The DBT shall copy the ODOT Project Manager and the District Utility Coordinator on all correspondence or phone calls between the DBT and each utility. This shall include the submittal of plans to each utility. A meeting at or near the Interim Design submission shall be held between the DBT, the District Utility Coordinator and the utility owners to determine if any significant utility relocations can be eliminated or mitigated.

Any betterment to the utility's facility and ineligible, or unnecessary, work shall not be included in the Project without Department approval. The Department will not compensate for betterments or other ineligible utility work. The DBT shall coordinate determination of eligibility through the District Utility Coordinator.

10.3 Subsurface Utilities Engineering (SUE)

If Subsurface Utility Engineering is needed, check "Yes" and specify what level type is required: A, B, C, or D, and provide information defining these level types. A definition of these types can be found in the Department's Real Estate Policies and Procedures Manual. Consider setting payment for test holes as per location (i.e., not part of a lump sum). If Subsurface Utility Engineering is not needed, check "No" below.

Subsurface Utility Engineering Required: 🗹 Yes 🗌 No

If yes, then include the following text:

The DBT shall use an ODOT prequalified SUE location service to field verify all underground utilities prior to beginning any design work and shall incorporate the results in the design.

DBT shall have the SUE perform the following Quality Levels:

□ SUE Level A
☑ SUE Level B
□ SUE Level C
□ SUE Level D

If SUE has been completed by the Department, reference the appropriate Appendix in the Document Inventory as noted in Optional language below.

Completed SUE is provided_<u>in Appendix XX (SUE)</u> in the Document Inventory.

11 MAINTENANCE OF TRAFFIC (MOT)

11.1 General

The DBT shall be responsible for designing, providing, and maintaining safe and effective traffic control 24 hours a day for the duration of the Project. The DBT shall furnish, install, maintain and remove all traffic control devices. The DBT shall implement Maintenance of Traffic (MOT) in a manner that minimizes both construction duration and impact to the traveling public.

The DBT shall provide written notice to the Department fourteen (14) days in advance of modifications in MOT or traffic patterns, including modifications to the following:

- 1. MOT configuration
- 2. Access
- 3. Detours
- 4. Schedule
- 5. Duration
- 5.

If other agencies are involved which require notification, add contact information.

The DBT shall furnish temporary MOT devices compliant with the AASHTO Manual for Assessing Safety Hardware (MASH), as applicable.

All detour routes will be provided by the Department and shall be signed by the DBT. The designated local detour will be provided by the Department.

11.2 MOT Requirements

The DBT shall design and implement the MOT in accordance with the requirements referenced in Table 11-1.

Table 11-1: MOT Requirements

1			
Requirement	Detailed Requirement Information		
Minimum number of lanes in each direction to remain open on I-75 during construction	Follow Permitted Lane Closure website. Permitted Lane Closure - Home (state.oh.us) The DBT may close 1 lane on 1-75 in each direction. Additional lane closures must follow the Permitted Lane Closure website. Permitted Lane Closure - Home (state.oh.us).		
Minimum lane width on I-75	11'		
Maximum duration of detour for Lime City Rd.	Lime City Rd. shall remain closed to traffic for a period not to exceed 120 consecutive calendar days. Disincentives in the amount of \$2,500/day shall be assessed for each calendar day the roadway remains closed beyond the specified limit.		
Restrictions on lane closures during special events (sports events, fairs, concerts, etc.)	N/A		
Restriction related to hospitals, fire and police, schools, etc.	The WOO-75-2993 bridge lies in close proximity to Penta Career Center (at Buck Rd.) and Rossford Elementary School and Athletic Complex (at SR-795).		

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The closure of Lime City Rd. shall coincide as much
 as possible with summer break.

Short term (15 minute) closures of I-75 may be utilized between the hours of 12:00 AM (midnight) to 5:00 AM to set and/or remove steel girders on the bridge.

The ramp from Buck Rd. to Southbound I-75 may be closed between the hours of 7:00 PM and 6:00 AM for falsework placement and removal, setting and removing of steel girders and other work deemed necessary by the Engineer. All other ramps shall remain open at all times.

Lane Value Contract Table				
Lanes/Ramp to be <u>Maintained</u>	Restricted Time Periods	<u>Time Unit</u>	Disincentive	
2 Lanes of I-75 NB & I-75 SB*	Per PLCS & Holiday <u>Note</u>	Per minute, per lane	<u>\$275</u>	
The interior lane of I-75 NB & I-75 SB may be closed as necessary for the duration of the project.				
* The add/drop lane between Buck Rd and the Ohio Turnpike in both directions of I-75 is not considered a full lane within the permitted lane closures schedule. Any notations of 3:2 and 3:1 on the permitted lane closure website relate to the interior three lanes in each direction.				

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Portable message boards shall be utilized to advise the traveling public of lane closures, ramp closures, intermittent short-term closures and any other items of significance as deemed necessary by the Engineer.

The detour route for Lime City Rd. shall be SR 795 - Glenwood Rd. - Buck Rd. <u>Design</u>, <u>Hinstall</u> all necessary signage. Remove at project completion.

When no longer needed for the project, the DBT shall remove the existing portable concrete barrier, and-impact attenuators, temporary traffic signals and all other temporary MOT installations and <u>and</u> deliver these materials to the ODOT Northwood Outpost facility at 200 Lemoyne Rd., Northwood, OH between the hours of 7:00 AM and 2:30 PM. The Department will have equipment at the Outpost to offload the barrier and impact attenuators the materials.

Within the limits of temporary workzone markings on 1-75, perform 1" 254-Pavement Planing and 1" 424-Fine Graded polymer asphalt regardless of pavement marking material type(s) prior to placement of final pavement markings.

Additional rows to address various MOT requirements may be incorporated in Table 12-1 or added to this section to address the following, as applicable to the project.

Construction-Phase Traffic Management

The DBT should be allowed flexibility in the duration and phasing of the maintenance of traffic (MOT), to match the needs of their construction plans.

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The District Work Zone Traffic Manager (DWZTM) or the Maintenance of Traffic Exception Committee (MOTEC) shall be consulted as needed.

Permits

The Department shall acquire the permits needed for any lane closures allowed (see DWZTM), and include within the Document Inventory.

Department shall provide details on any Exceptions to Permitted Lane Closures (Maps/Schedules are suggested).

Indicate that any exceptions must be requested through the District Multi-Lane Coordinator for a waiver or modification of the lane closure restrictions at the site.

Project-Specific Restrictions

Local coordination is required to prepare a MOT plan that takes into account local needs (e.g. no closures during local fairs and festivals) as well as identifying typical holiday traffic issues (e.g. Thanksgiving traffic on I-71). This coordination work with local officials may be assigned to the DBT as part of the contract. However, because the Department owns the project, it will retain ultimate responsibility for public response. It may therefore be best to leave MOT coordination in the hands of the DWZTM (as is done for DBB contracts), and only require that the DBT send personnel to participate in the coordination efforts, or simply require that the DBT adhere to the restrictions set out by the DWZTM.

Restrictions that should be considered and included in the Scope of Services (as applicable) include the following:

Identify FHWA restrictions on interstate routes

Define time restrictions/construction time management

Short duration total closures anticipated

 Identify peak hour, lane closure prohibitions, seasonal peaks, special events, local events (sport events, festival, college move-in days, etc.), and national holidays, particularly times and locations of high traffic congestion

 Define limits to construction zone (Project work limit [or refer to project description], MOT phases work limits [use mapping], Number of lanes required to remain in-service in each construction phase)

Define requirement for temporary traffic signals, if applicable

Define maximum length of closures allowed

 Coordinate with other local projects that may impact traffic (e.g. closures on parallel or intersecting roadways undergoing construction)

Define if impact attenuators are required (temporary or permanent)

Define speed management -regulatory or warning

Define temporary pavement marking material types (existing and new pavement)

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<u>Detours</u>

If detours are needed during construction, identify the following:

Route - include detour surveys and approvals from local road agencies

Consider pre-approval of detour if needed from local entity

Length of the detour

Expected traffic volume

Any physical limits on vehicle type such as load or width limits, hazmat routing, etc.

Transit/freight rail accommodations and/or detours

Detour route improvements (during detour or upon completion)

Haul route restrictions

Pavement conditions video requirements for detours/haul routes (pre-construction)

Note that where structural capacity of bridges, shoulders and pavement of detours are inadequate, these elements may need to be improved as part of the project, particularly if heavy or oversize truck traffic is expected.

Bicycle and Pedestrian Traffic

A determination should be made as to whether bicycle and pedestrian facilities need to be maintained during construction (either on and/or off road). If so, the following information must be provided to the DBT in the Scope of Services:

Location of bike pedestrian facilities that need to be maintained

Maximum spacing between crossings/access points to bike/pedestrian_facilities

• Temporary warning sign locations – while there is no need for the Department to provide detailed sign locations nor any Department specific design requirement, project-specific requirements may need to be defined for important bike/ped routes should be noted.

Effect on permanent signing

Additional special provisions needed (e.g. covered walkways)

Use of portable message boards

 Use of local enforcement officers for ensuring safety and directing traffic - Scope of Services should provide the approximate number of hours officers will be required, as well as locations and/or construction operations where officers are needed. This will provide definition for potential Bidders.

Nighttime delineation and illumination of signs

Transit Coordination

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A determination should be made as to whether transit (bus or rail) services need to be maintained during construction (either on and/or off road). If so, the following information must be provided to the DBT in the Scope of Services:

Define relocation requirement (temporary or permanent) for transit stops in the vicinity of
the project

Define relocation of pedestrian access to bus stops, covered walkways, etc

 Require DBT coordination with transit agencies regarding notification of agency as well as riders

Railroad Crossings and Coordination

The DBT will be required to coordinate with railroads that cross or are adjacent to the site to ensure safety. The Scope of Services must include the following:

Identification of railroads located in or adjacent to the project site, and train frequency

 Requirement for DBT to coordinate with the railroad to provide flaggers when needed and details about financial responsibility

Define temporary signal operation

Other Construction Phasing Issues

Phasing Requirements

Allowable lane closures for bridge steel erection if required

Maximum length of work area or lane closure

 Require DBT to submit the location of work zone access/ingress points for Department review (design should be in accordance with TEM)

 Night work restrictions (consider local noise ordinances prohibiting work during certain hours)

Define width restrictions

 Restrictions on groupings of closures - (e.g. cannot close two adjacent entrance ramps at the same time)

 Duration of work/special conditions - (e.g. setting up conditions such as the maximum allowed closure time for specific phases or holidays, winter requirements if more than one year of construction)

 Evaluation of existing shoulder, ramps, gores or other likely locations of MOT traffic (consideration of known condition issues and needed repairs).

 Drop-offs (change in grade between lanes) - reference a standard drawing regarding required barrier types

Sign bridge installations

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Intelligent Transportation System (ITS) deployment for work zones

 Ramps that may be closed (If an entrance ramp is to be closed, consider location, volume, and impact on mainline, if working on an entrance ramp, ensure that the merge lengths are adequate, etc.)

 Temporary drainage needs - to prevent flooding during construction (must follow L&D Manual and CMS)

Restrictions on use of lights for night work (to not blind oncoming drivers)

Temporary roadway lighting for night traffic

Start-up procedures and phase changes

- Temporary Barrier installation
- Clarify if portable barrier can be stored in the median over the winter shutdown
- Geometry of temporary roadways

• Clarify if there will be a drop off in the construction zone. If so, attach the Drop off in Construction Zone plan insert sheet

• Special contract provisions needed (i.e., anything else not listed above)

Access to Construction Zone and Worker Parking

In general, this issue should be left to the DBT, with text in the Scope of Services stating that "the DBT is responsible for maintaining access to the construction zone and employee parking that meets the requirements of the TTCM, and does not unduly impact traffic and local residents and businesses."

Before issuing the Proposal, however, District staff should consider the issues below to determine if additional right-of-way is needed, or if additional DBT requirements should be specified (e.g. restrictions on construction vehicle travel through sensitive areas).

Worker parking

 Restrictions on delivery routes for construction materials and equipment (including roads not to be used, restrictions on hours of use, or a designated delivery route)

Acceleration or deceleration lanes needed

• Local traffic on closed roads (e.g. residential traffic, access to commercial properties)

Restrictions on waste and borrow sites

• If required by the District, add a note that the DBT is required to provide a detail of access point requirements for construction ingress/egress area in accordance with MOT Manual and any designs per Insert Plan Sheet.

Issues for Multi-Year Projects

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If it appears likely that the work will extend multiple seasons, the following items should be considered, again keeping in mind than many of these issues can be left to the DBT:

 Need to specify longer lasting pavement marking requirements if traffic will be diverted for multiple seasons or interim pavement marking requirements

Part width construction for structures

Emergency Planning and Coordination

DBT project managers need to be prepared for different types of emergencies, including evacuations (e.g. from floods), for incident response by local responders (e.g. for injury accidents) and by tow trucks (e.g. for vehicle breakdowns), as well as ambulance access for workplace incidents. Emergency response must also consider mitigation for MOT that may hinder emergency response to surrounding neighborhoods, and ongoing coordination may be required to ensure that police, fire, and ambulance services have ways to get over or through a closed construction site if possible.

The items below should be considered after reviewing the local incident management plans, and discussing the project with the District Work Zone Traffic Manager and the Maintenance of Traffic Exception Committee (MOTEC). DB contracts can be written to have the DBT perform the coordination, with participation and review by District staff who have local expertise in these matters.

 Incident management plans (IMPs). An IMP will be developed by ODOT for general purposes (not project/MOT specific) and DBT must provide a plan for the project area during construction (on major projects)

• Specify that the DBT is required in their plans to provide access for dealing with accidents, breakdowns, tow trucks, snow removal, emergency closures (e.g. hazmat spills, Level 3 snow emergencies), utility interruptions.

• The DBT will need to provide a contact for coordination with State police and local law enforcement and local officials (police, fire, hospitals, schools, environmental agencies, utilities, toll facilities, etc)

• Public awareness to provide information on changing traffic patterns, closures, etc. This can include the media, motorist service agencies, local businesses, motor carriers, and use of portable changeable message signs (specify number and/or locations).

Special events

Intra-agency coordination - maintenance crews, permits section, adjacent projects

Transit, ferries, railroads, airports

Work Zone Speed Limit

11.10411.3 Work Zone Speed Reduction

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The DBT shall evaluate if a work zone speed reduction is warranted based on the final MOT scheme. The evaluation requirements are listed in Section 600 of the Traffic Engineering Manual.

If a work zone speed reduction is warranted, the DBT shall design and implement signing in accordance with the requirements of the Traffic Engineering Manual.

11.10511.4 Haul Routes

In addition to the requirements of C&MS 105.13, the Progress Schedule shall account for 30 Days for the Department to secure approval for haul routes.

The following roads have been pre-approved as haul roads for the project:

- Lime City Rd. between US 20 and Buck Rd.
- Glenwood Rd. between US 20 and Buck Rd.
- Buck Rd. between Glenwood Rd. and Lime City Rd.

11.10611.5 Traffic Engineering Manual Notes

The Department is responsible for establishing the TEM requirements and clearly defining expectations on a project-specific basis.

If there are notes that only apply to certain situations, the Department shall modify the language to clarify that the DBT shall be responsible to be compliant with the Department's guidance in the TEM, specific to the proposed MOT approach.

The DBT shall design and implement the MOT in accordance with the following TEM notes:

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This listing is not all inclusive and the DBT shall incorporate notes, as recommended per the		
TEM, relative to the MOT approach.		
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List required TEM notes

1312 SURVEY

A. ODOT Survey Responsibilities

The Department shall ensure the below information is provided in the Document Inventory. Update as needed to be consistent with available information.

The Department survey crews have provided the following survey information, listed below:

- 1. Centerline control and benchmarks
- 2. Beginning and ending centerline points for the project
- 3. At least two benchmarks for the project (the datum used was that which the project was originally laid out by)
- 4. Critical points such as P.C., P.I., P.T., T.S., C.S.
- 5. Vertical clearances for the overhead structures, to serve as a check for the existing vertical clearances
- B. DBT Survey Responsibilities

The DBT shall submit all survey data using ODOT's standard field codes and ODOT's standard mapping codes. Reduced point data, in comma delimited ASCII text format, will be provided for all surveyed points. This data will include: point number, North (y) coordinate, East (x) coordinate, elevation and point ID.

For projects with new/revised alignments, DBT may need to set new centerline/ROW monumentation. Optional text provided below.

The DBT shall install all new centerline monuments, monument assemblies, and reference monuments, as required, in accordance C&MS 623 and the ODOT Real Estate Policies and Procedures manuals. If applicable, the DBT shall set ROW monuments for parcels being acquired for the Project Right of Way. Monuments on Department-maintained facilities shall be furnished and installed in accordance with Department standards.

The DBT shall not disturb existing monumentation. If the DBT disturbs the monumentation, then the DBT shall replace the monument, in-kind, using a Registered Surveyor, with current registration, recognized by the Ohio State Board of Registration for Professional Engineers and Surveyors. Costs associated with monument replacement caused by DBT disturbance shall be borne by the DBT. The DBT shall provide copies of all monumentation changes to the District Real Estate Administrator.

The DBT shall include all control points, provided by the Department, in the ASCII file supplied by the DBT to the Department. They should retain the original point numbers and coordinate values as assigned by the Department.

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

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- 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. All monumentation shall be located utilizing NAD 83 (Horizontal Data), NAVD 88 (Vertical Data).
- 6. 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.

1413 PAVEMENT

Full depth pavement replacement shall occur within the limits of embankment widening. between touchdown-to-touchdown of bridge embankment regardless of if proposed embankment work extends to these limits. Curb and gutter shall be placed to the limits of the full depth pavement. Proposed pavement on Lime City Rd. shall be asphalt. Pavement buildup shall be provided by the DBT utilizing the Pavement Design Manual.

Define limits of full-depth pavement, pavement repairs, and resurfacing. Define the type of grading (safety, clear zone, standard). Define if curb and gutter is required or just curb. Define pavement composition for traveled lanes and shoulders, including different requirements if different classes of roadways or different local/ODOT maintenance requirements. Alternatively, require DBT to design pavement in accordance with the ODOT Pavement Design Manual. The Department may specify pavement types (e.g. asphalt or concrete). Confer with pavement selection committee, when applicable.

Define resurfacing/restoration of roadways impacted by MOT operations that are outside of project limits. Recommend giving typical sections. Full depth/partial depth pavement repairs should be provided as a contingency item. The Department should establish an estimated quantity and locations with work to be done on a unit cost basis.

Initial soil exploration data shall be provided by the Department. The Department will analyze the subgrade according to Geotechnical Bulletin 1 (GB1): Plan Subgrades. Collection of additional soils information if needed, should be performed by the Department, but may

be assigned to the DBT. Provide type, locations, and limits of any subgrade stabilization needed.

Address longitudinal joint requirements, as needed.

45<u>14</u>ROADWAY

Horizontal and vertical alignments are provided in the existing survey and as per the existing plans. Proposed horizontal and vertical alignments shall follow the Location and Design Manual, Vol. 1 utilizing the design speeds and volumes provided in Table 1-2. The proposed cross section for Lime City Rd. shall include 2 - 12' lanes, 2 -4' shoulders and embankment on the West side to construct a 10' multi-use path (path to connect to the bridge with a future project).

Embankment widening for the future 10' MUP along Lime City shall occur between Sta 89+20 to 111+00.

The maximum side-slopes on Lime City Rd. shall be 2:1.

Cross sections shall be provided at 50' intervals and any abrupt changes.

All guardrail within the Project Limits of Lime City road shall be redesigned and replaced.

Type D barrier wall shall be installed on northbound and southbound I-75 to protect the outside piers and tied to the existing guardrail with appropriate transitions. Design and install proper barrier protection for the median pier.

Guardrail impacted by construction shall be replaced.

Address roadway geometric requirements.

Provide existing horizontal and vertical alignments and define new horizontal alignment and vertical profile in accordance with Conceptual Plans or provide flexibility for the horizontal alignment and vertical profile to be determined by DBT. Identify and correct all deficiencies in horizontal and vertical alignment, and any design exceptions needed. Establish requirements for maximum grades, curves, or other geometric elements for each roadway classification.

Describe roadway work. Identify specific requirements for various typical section elements, if applicable, including: number of lanes, lane widths, median widths, shoulder widths, curbing, treelawn width, bike and pedestrian facilities, grading type (safety, clear zone, standard, barrier), maximum slopes, barriers, fencing, ditch configuration, etc.

Specify the intervals at which DBT should provide cross sections to ODOT for review (usually 50' and any abrupt changes).

Identify alignment/profile configurations to be avoided (e.g. not keeping alignment tangent in attempt avoid an item, exceptions to site distance, especially for detours)

Identify if any superelevation deficiencies need to be corrected. Identify if partial and if design exception is needed.

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List any desire criteria needing to exceed the standard. For example, increase sight distance at intersections to stopping sight distance (SSD), increase sight distance at intersections to intersection sight distance (ISD), increase vertical clearances at structures.

Identify items to be avoided such as light poles, signal installations, etc.

Define intersection/interchange geometric requirements such as turn lane lengths, design vehicle requirements, etc.

Define removal of existing infrastructure elements no longer used.

Address on site waste opportunities/restrictions.

15.1214.1 Design Exceptions

Typically, any known design exceptions will have been obtained and approved prior to advertising a project for sale. The Scope of Services should explicitly state if additional design exceptions will be allowed or prohibited. Specify a time period for review and approval of the design exception for the planning/scheduling of the DBT.

List and provide information or specific reference to Document Inventory appendix. Design Exceptions included shall be identified as Contractual.

The DBT shall notify ODOT regarding any design features that are believed to not meet the minimum design criteria and require a design exception. The DBT shall develop a design which does not require approval of additional design exceptions.

Option 1: The DBT shall develop a design which does not require approval of additional design exceptions.

Option 2: The DBT may develop a design requiring a design exception, subject to sole discretion approval of the Department and FHWA. The DBT shall prepare any proposed design exceptions and submit to the Department for coordination with FHWA and approval. Following submittal of the complete design exception submittal, the Department will provide a response within thirty (30) days. The DBT shall accept all cost and schedule risk associated with obtaining ODOT and FHWA approval of the design exception.

15.1414.2 Interchange Modification/Justifications Studies

If applicable, provide any IMS/IJS as an Appendix to the Scope of Services.

Not applicable.

The DBT may develop a design which requires modification to an existing interchange study, subject to sole discretion approval of the Department and FHWA. The DBT shall prepare any proposed modifications and submit to the Department for coordination with FHWA and approval. The DBT shall accept all cost and schedule risk associated with obtaining ODOT and FHWA approval of the modification.

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1615 DRAINAGE

The existing culvert under IR-75 shall be retained. Re-alignment of the existing ditch on the West side of Lime City Rd. <u>will-may</u> be required to accommodate the widening.

The proposed bridge drainage shall be off the ends of the bridge. New inlets and storm sewers will be required on Lime City Rd. near the bridge to convey the storm water from the bridge deck and along the widened portion near Penta.

The Wood County Engineer shall approve of all proposed culvert flow line elevations.

Post-construction storm water Best Management Practices (BMP) are required as per Location and Design Manual, Volume 2.

The Scope of Services should include requirements for drainage along mainline and ramps. Refer to L&D Manual, Volume 2 for additional information. Note that L&D Volume 2 includes the use of many "should" and "may" conditions, which should be reviewed against project requirements.

Items to consider and specify:

Specify if existing system is to be retained

 Specify whether drainage systems need to be cleaned out or repaired prior to construction. If re-used, perform evaluation and specify portions for salvage (length and location)

 Specify if DBT needs to close any drainage systems or if open drainage can be used

Define adjustment to catch basins, inlets and manholes to accommodate
resurfacing or feather pavement

Specify use of catch basins, scuppers or sodded flumes for bridge drainage

Specify any acceptable variation to spread practice (prohibit any variation to

spread)

Specify if County Engineer flow line approvals are required

Specify if FEMA approvals are required

Specify if COE/EPA approvals are required.

• Establish criteria for allowable reuse of infrastructure including applicable video/condition assessment/condition analysis and define removal/abandonment criteria for items not reused. Provide condition assessment if available.

Specify if new headwalls are required for existing drainage conduits.

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Specify need for slope drains, spring drains or field drains if applicable Note in the Scope of Services that post-construction storm water Best Management Practices (BMP) are required as per Location and Design Manual, Volume 2. Any site-specific or owner-specific requirements should be included in the Scope of Services if they differ from Department's practice. **Hydraulics** See L&D Manual, Volume 2 and the Bridge Manual. Issues to consider and specify requirements for: For structures, Preliminary hydraulics should be part of the Scope of Services. The Department shall determine if a flood hazard evaluation is necessary, and the DBT is responsible for certifying the hydraulics for the structure. In other words, prior to the issuance of the Proposal, ODOT is responsible for preliminary structure hydraulics. Be aware that a decrease in the waterway opening must be carefully considered. In a designated Flood Insurance Area, generally a decrease in the waterway opening is not acceptable. DBT is responsible for acquiring permits including FEMA Coordination and approval if needed for floodplain impacts, as well as for certifying the structure opening. Describe drainage work required considering local requirements for non-Department facilities +

Specify possible drainage problems outside the toe of the embankment and

including pipe materials, drainage structure standards, construction standards and inspection requirements if different than ODOT's. Provide local details/specifications if not publicly available and listed in Governing Regulations. Define limitations and jurisdiction (ODOT/local) for post construction BMP's.

The DBT shall perform a detailed flood plain analysis for all highways that encroach on floodplains, bodies of water or streams. The analysis shall be in accordance with the Location & Design Manual Volume 2 and the Bridge Design Manual. The extent of the analysis shall be from a minimum of 500' downstream, to the greater of either one bridge opening/width upstream, or to the limits of the area inundated by the 100-year event.

The results of the detailed flood plain study, supporting hydraulic calculations, and recommendations shall be submitted to the District for review and comment prior to construction of the drainage structure. If the proposed crossing is in a special flood hazard area as defined by FEMA, the detailed flood plain analysis shall be submitted concurrently to the local flood plain coordinator.

17<u>16</u> LANDSCAPING

requirement to address.

Landscaping Required: 🗌 Yes 🛛 🗹 No

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Define specific seeding requirements and tree and landscape requirements (species, spacing, < location(s) and limits, and sizes) if applicable.

48<u>17</u> Additional Description of Required Work and Special

Provisions

List / describe any contract requirements outside of those not addressed (aesthetic treatments, Public Information Officer requirements (e.g. must live near site, hours of availability), potential emergency management plans, and any other item of additional managerial responsibilities to be placed on DBT (monthly budget reports, schedule updates, etc.).

None

1918 STRUCTURES

19.1<u>18.1</u>	Existing Structures Identification
Structure Identification:	WOO-00075-2993
Structure File Number:	8704716
Feature Intersection:	Over I-75

19.218.2 General Requirements

Consider including a list of General Requirements identifying specific items that may be prohibited or permitted and would apply to all structures.<u>All structural steel shall be of uniform depth.</u>

All steel shall be painted per CMS 514.

If the existing structural steel is reused, the DBT shall prepare the required design exception for the superstructure inventory rating factor of less than 1. Design exception for superstructure designs utilizing all new steel will not be considered.

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19.318.3 Design and Construction Requirements of Structure

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Copy and repeat Section 18.2 for every structure on the project (copy Paste Options - continue List).

For each retaining wall, perform similar exercise identifying specific wall requirements, excluded wall types, aesthetic treatments, railing/fence system, etc. If MSE, or other similar wall types are allowed, then define utility restrictions within reinforcement areas.

For existing structures being reused/rehabbed define applicable structure design loading controls, define allowable demo/rehab methods, methods of measurement and compensation terms for anticipated work and changed conditions. Consider multiple payment items to avoid large lump sum work items that would be hard to negotiate price structure for extra work.

Str: LUC-00075-2993	
Existing Structure Data:	
Overall Length:	475'
Width o/o:	30'-2"
Design Loading:	HS20-44 (Case II) and Alternate Military Loading
Туре:	Four span continuous composite steel girder bridge with reinforced concrete deck and substructures.
Spans:	Four (81'-0"; 153'-0"; 153'-0", 81'-0")
Date Built:	1967; Reconstructed in 1991
Alignment & Profile	
Alignment:	✓ Follow Existing
	□ Relocated: □ Per ODOT □ Per DBT
Profile:	□ Follow Existing
	🗹 Relocate: 🛛 Per ODOT 🗹 Per DBT
	🗹 Feathered (Adjustment): 🛛 Per ODOT 🗹 Per DBT

Profile of WOO-75-2993 structure shall accommodate 16'-6" vertical clearance over all lanes of traffic (including shoulders)

Span Configuration: 🛛 Per Original

Span Lengths:

Per ODOT Per DBT

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□ Variable	
Transverse Sections	
Roadway Width: Proposed - 32' (2 - 12' lanes & 2 - 4' shoulders)	
Railing: 🗹 Yes 🗌 No 🛛 Type: Per BDM	
Fence: 🗹 Yes 🗌 No 🛛 Height/Type: Per BDM	
Sidewalks: 🗹 Yes 🗌 No 🛛 Width: 10' multi use path on West side	
Investigate the need for Prefabricated Structure: \Box Yes \blacksquare No	
Investigate the need for Retaining Walls: 🗌 Yes 🛛 🗹 No	
All Shop Drawings shall comply with Item 501.	
The structure does not carry highspeed NHS traffic, therefore no future wearing surface requirements needs applied.	
Initial foundation investigation will be provided by the Department.	
Foundation investigation shall be provided as an Appendix. If contractual, documentation shall not include any foundation recommendations.	
The DBT shall determine the need for additional subsurface investigations necessary to complete the Project. Geotechnical explorations shall be performed and documented in accordance with the Specifications for Geotechnical Explorations.	
The existing steel plate girders, abutments and piers may be salvaged. If the existing girders are salvaged, a new girder (Girder A) shall be installed between the existing splices between Piers 1 and 2, including the installation of new crossframes. Girder B shall also be heat-straightened as per SS 849 near the impact zone between Piers 1 and 2.	
The existing reinforced concrete deck shall be removed and replaced in its entirety.	
The structure shall be converted to semi-integral utilizing the detail provided in BDM Figure 404-6. <u>The DBT shall remove a minimum of 1ft of existing abutment beams seats.</u>	
The baseline Aesthetic Design treatments shall be applied to the structure.	Formatted: Space After: 0 pt
• <u>and bB</u> lack PVC coating on the vandal fence) . •	Formatted: List Paragraph, Indent: Left: 0.31", Bulleted + Level: 1 + Aligned at: 1.25" + Indent at: 1.5"
The superstructure beams/girders (existing salvaged or new) shall receive a three coat paint system as per C&MS 514. Color shall be Brown, AMS-595A, 10324.	
The existing and proposed widened substructure and superstructure shall be sealed with Epoxy-Urethane sealer per the limits in the BDM.	
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If the existing piers substructure units are utilized and if the proposed service deadload is not greater than 115% of the original designed service deadload, no additional substructure capacity analysis is required for the existing piers. Substructure capacity analysis is required if the existing abutment are utilized.

The structure does not carry highspeed NHS traffic, therefore no future wearing surface requirements needs applied.

If the existing structural steel is reused<u>and the superstructure inventory rating factor of less</u> <u>than 1</u>, the DBT shall prepare the required design <u>exceptioexception</u> for the superstructure <u>inventory rating factor of less than 1</u>. Design exception for superstructure designs utilizing all new steel will not be considered.

Rehabilitated Structures

Superstructure

- Do the existing beams meet loading criteria (as given in the Bridge Design Manual [BDM])?
- Merlin Dash or comparable analysis (with composite action) should be completed prior to writing the Scope of Services.
- If the beams need the load carrying capacity increased beyond being made composite (i.e., moment plates, etc.) replacement is to be considered.
- Do the existing steel beams meet the AASHTO fatigue criteria? If not, specify fatigue retrofit or new beams. Analysis should be done prior to Scope of Services.
- Are hinges utilized? If so, consider removing.
- If the beams are to be replaced, should any replacement superstructure type be prohibited?
- Is the deck to be retained or replaced? If the deck is to be retained, is an overlay
 necessary? If so, specify type.
- Eliminate the longitudinal joint? See the BDM, section 405.1.
- Will bridge widening with weathering steel beams be permitted where original structure is painted?
- Will fracture critical members be allowed or will they be prohibited.

Abutments

- Are the abutments to be salvaged or replaced? Refer to the BDM, section 403.
- If the abutments are replaced, define type acceptable if there are any limitations.
- If the abutments are to be salvaged, what is the load carrying capacity? And if repairs are needed to salvaged abutments, specify limits.
- If the footings are to be retained and are supported on piles, are the pile logs available?

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- If their condition is good, stub and integral type abutments should be considered acceptable if the dead loads are increased by 20% or less due to the new superstructure (live + dead loads) and the bearing locations are not changed.
- Foundations should be considered acceptable if the increase in load is less than given in the following list for appropriate type (Friction piles of Drilled Shafts ~15%, piles bearing on rock -30%, drilled shafts with rock sockets -no limit)
- Backwall -retained or replaced? If replaced, should there be any restrictions as to type?
- Abutments founded on spread footings not on bedrock are normally prohibited. If allowed, they must be founded below the stream thalweg, as well as evaluated by the geotechnical engineer and the hydraulics engineer.
- Guardrail and Barrier Type and Tie-in

Piers

- Are the piers to be retained or replaced? Refer to the BDM, Section 403.
- Prohibit non-redundant piers? In the case of widening, will freestanding piers be allowed or prohibited?
- Evaluate shear capacity of existing pier caps and potential need for retrofit. If piers are functioning properly and are in good shape, the requirements to meet code can be waived if the superstructure loads are not increased by more than 15% and the new beam lines are placed in the same bearing location (except wall type) as the existing beam lines. Consult the Office of Structures before including in Scope of Services. This should be analyzed for each structure, prior to scope.
- Piers on spread footings, not on bedrock, in a stream shall be replaced.
- If the footings are to be retained and are supported on piles, are the pile logs available?

New Structures

Type

- Are there any preferred structure types, or should any structure types be prohibited?
- Are there any preferred prestressed beam shapes, or any prohibited shapes? Will beam shapes be restricted to those shown in ODOT standards? Some non-ODOT shapes have advantages for certain situations (e.g. post-tensioned bulb tees to reduce number of piers required.)
- Are box beams allowed? Can the superstructure be non-composite or is composite required?
- Concrete slab bridge acceptable?
- Truss bridge acceptable?
- **Superstructure**

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Is a specific size (length) structure desired?

Are there skew restrictions needed?

- Are two Bidwell pours permitted with rail supports in deck? If so, give the minimum acceptable length (begin - end stations)
- Are utilities to be banned from the structure? If so, no utilities shall be placed on the bridge. The BDM suggests keeping utilities off.

<u>Substructure</u>

- Should any substructure type be ruled out? (Example No capped pile piers for overpass structures)
- Evaluation of drilled shafts vs. piling for interbedded shale?
- Any need to limit the abutment type?
- The BDM does not limit the use of spread footings except when in streams. (Location and Design Manual, Volume 2, Section 1008 provides limitations on the use of spread footings for arch or flat slab topped culverts)

19.4918.4 Noise Barrier

Noise Barrier Construction Required: 🗌 Yes 🗹 No

Include any aesthetic treatment requirements and patterns, define color if any, provide appendix within the Document Inventory as needed.

Consider location requirements (outside of clear zone, or acceptable to have placement against roadway with barrier).

Graffiti removal on existing noise walls should be considered

Foundation investigation shall be provided as an Appendix. If contractual, documentation shall not include any foundation recommendations.

2019 TRAFFIC CONTROL

20.119.1

Pavement Markings and Delineators

The DBT shall perform Work related to pavement markings and delineators in accordance with Section 7.1 and the following sections.

A. Pavement Marking Requirements and Locations

Lime City Rd. - Item 642 -- Paint

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Specify type of markings and if same on concrete and asphalt surfaces. Specify wet reflective and recessed, if required.

G.B. Raised Pavement Markers: ☑ ☐ Yes ☐ ☑ No

D.C. Delineators: □ Yes ☑ No

E.D. Barrier Reflectors: 🗹 Yes 🗆 No

All barrier reflectors shall confirm to Item 626 and shall be placed on bridge parapets, concrete barrier walls, retaining walls and guardrail, in accordance with current design standards. Guardrail blockout reflectors shall be installed on the side of the blockout away from traffic.

F.E.Object Markers: \square Yes \square NoG.F.Rumble Strips: \square Yes \square NoH.G.Rumble Stripes: \square Yes \square No

20.219.2 Signing

The DBT shall perform Work related to signs in accordance with Section 7.1 and the following sections.

List any additional requirements, for example: Recreational and Cultural Interest Area Signs, Destination Guide Signs, Memorial or Dedication Signs, Road User Services Guidance, Tourist Information, and Evacuation Routes. Also identify responsibilities of existing third-party signs/supports that are impacted by project. Provide details/specifications for any custom signage, such as local requirements for overhead mast arm mounted street name signage. If specific treatments are desired for locations where the TEM and OMUTCD provide options to the designer, such as multi-lane freeways exits, then define requirements for DBT.

20.2.3 Flat Sheet Signs

- A. Flat Sheet Sign work required: $\mathbf{\Sigma}$ Yes \Box No.
- Redesign and replace all existing flat sheet signs with new signs, except as indicated below. This includes all signs on the mainline and interchange ramps. This also includes all STOP signs on intersecting roads. Size the signs in accordance with the OMUTCD.

Removed flat sheet signs shall become the property of the Contractor.

Typically, all flat sheet signs on a project should be upgraded, even if some have not reached the end of their useful life.

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It must be made clear to the DBT that the Department maintains the STOP signs on any intersecting non-state roads, and that these will need to be included as part of the project design and construction.

The road name signs on conventional state highways are usually maintained by the local jurisdiction. The Department can decide to install road name signs (including advance signs) if desired. This can be selectively done on an intersection by intersection basis.

Optional signs that are to be included should be sufficiently described. This includes destination signs, cross road and side road intersection warning signs, other warning signs, generator signs, and recreational and cultural interest area signs.

If supplemental left side mounted signs are to be used at any locations, the District must specify where.

If oversized signs are to be used at any locations, the District must specify where.

If some signs will be provided by the Department for DBT installation, such as Ohio Byway signs, this needs to be clearly indicated.

Specify the minimum mounting height and lateral offset if different from the OMUTCD and Standard Construction Drawing requirements. If a maximum mounting height is desired, this needs to be specified as well.

If some flat sheet signs will be mounted overhead, this needs to be specified.

20.2.1319.2.1 Extrusheet Signs

<u>1.</u> Extrusheet Sign Work Required: \Box Yes \blacksquare No. <u>1.</u>

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Coordinate overhead sign support work with roadway/pavement scope, noting that changes to median barrier heights may require replacement of sign supports and sign support foundations. Also coordinate to ensure that changes to pavement elevation to not adversely affect required minimum clearances to overhead signs.

Typically, all extrusheet signs on a project must be upgraded, even if some have not reached the end of their useful life.

Optional signs that are to be included must be sufficiently described. This includes additional advance guide signs, generator signs, and recreational and cultural interest area signs.

Specify the minimum mounting height and lateral offset if different from the OMUTCD and Standard Construction Drawing requirements.

Specify where extrusheet signs will be mounted overhead.

Specify that wide, narrow signs, such as destination signs on conventional highways, be made of extrusheet.

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For freeway and expressway mainline designable guide signs, the element sizes (level of signing) must be indicated if it may be unclear to the DBT what level would be required, or if the District desires to use a higher level than required by the OMUTCD and TEM.

If some signs will be provided by the Department for DBT installation, such as state line signs, this needs to be clearly indicated.

For freeway and expressway guide signing, the District must scrutinize the current signing, and decide if different signing strategies should be employed. This includes the increased use of sign spreading, interchange sequence signs, and diagrammatic signs.

For freeway and expressway guide signing, unnecessary pull-thru signs must be eliminated

Freeway and expressway entrance ramp approach signing that is located beyond the right-ofway and is not on a rural state route or state route extension in a municipality is not the responsibility of the Department. If this signing will be included, it must be clearly indicated. (Consent of the local jurisdiction may be required.)

TODS and logo signs are installed and maintained by Ohio Logos, Inc., under contract with and in locations approved by ODOT. Under the terms of the contract, Ohio Logos can be required to temporarily remove or relocate the signs during construction. They can also be required to permanently remove or relocate the signs.

20.2.2719.2.2 Ground Mounted Post Supports

- A. Replace: ☑ Yes □ No.
 - Redesign and replace all existing ground mounted post supports with new supports. New sign installations shall be on new supports. No reuse of existing ground mounted supports shall be allowed.
 - 2. Removed ground mounted supports shall become the property of the Contractor.

Typically, all ground mounted post supports must be upgraded. All post supports in exposed locations not meeting current crash testing requirements (e.g. back-to-back U-channel posts) must be replaced.

For No. 2 and No. 3 posts, direct driven U channel, direct driven square post, and square post in anchor base are considered as equivalents on SCD TC-41.20. If the District prefers one support system, this needs to be described. (Even if square posts are specified for flat sheet signs, the District may want to consider allowing U-channel for small extrusheet signs to simplify sign attachment to support.)

If the District wants a breakaway connection used, this needs to be described in detail.

20.2.3119.2.3 Ground Mounted Beam Supports

A. Ground Mounted Beam required: \Box Yes \blacksquare No.

Confirm whether existing supports are to be reused. Galvanized steel structural beam sign supports can oftentimes be reused if they are in good condition, in the correct location, and the replacement sign is of a comparable size.

For structural beam supports, the slip base and alternate connection as shown on SCD TC-41.10 are considered as equivalents. The slip base connection will usually be supplied due to its lower cost. If the District wants to require the exclusive use of the alternate connection, this needs to be specified.

Structural beam sign supports subject to multidirectional impacts at intersections should use the alternate connection on sizes larger than S4 x 7.7.

If the District wants to use a different support system, such as the laminated veneer wooden beams, this needs to be described in detail.

F.<u>B.</u> Overhead Supports: \Box Yes \blacksquare No.

Due to the high cost of overhead supports, the District will need to determine in advance which overhead supports will be reused in place, relocated, or replaced, and where new overhead supports will be installed.

Overhead sign supports must be inspected by the District to determine their condition and structural adequacy.

The steel portions of existing structures that will be reused can be recoated using the standard four-step process developed for this purpose. This process can also be applied to new structures.

Specify the required vertical clearance of overhead signs. **OMUTCD** Section 2A-18 defines this as seventeen feet, except when other structures use a lesser clearance. In this case, the vertical clearance does not need to be greater than one foot higher than the minimum design clearance of other structures. However, whenever possible, a seventeen foot clearance is required.

Consideration should be given to revising median end frame foundations that are encased in barrier wall assemblies to the top of the concrete barrier (SCD TC-21.40). The barrier wall assembly can result in increased maintenance as this design will tend to accumulate debris that will need to be periodically removed to avoid vegetation growth.

If end frames and poles located in the clear zone do not meet current requirements for shielding (guardrail or barrier), a determination will need to be made regarding appropriate remedial measures.

The use of aesthetic treatments should be considered in accordance with the Department policy.

Specify type of sign and lighting needs. Verify if lighting is required.

Sign lighting components must be removed and disposed of by the DBT.

20.1219.3 Lighting

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The DBT shall perform Work related to lighting in accordance with Section 7.1 and the following sections.

The existing highway lighting in conflict with the proposed work shall be relocated, as needed. Proposed Lighting

- Define the maintenance responsibilities for existing lighting, and the schedule for when the Department or Local Public Agency will resume maintenance.
- Define requirements for river navigation lighting or airway clearance.
- Define the type of lighting equipment to be installed (Conventional, off highway, low mast, high mast, underpass, post top, decorative).
- Define the light source required (high pressure sodium, induction, light emitting diode, metal halide)
- Define owner preferences (brands and model of luminaries, brands of lowering devices, type of pullboxes, wiring methods, maximum wire sizes, metered electric, type of conduit)
- Include equipment details (mounting heights, power supply locations, system voltages)
- Define aesthetic devices.
- Include tunnel lighting. Widened overpasses can result in longer underpasses. Refer to TEM or provide project-specific requirements. It is recommended that the Scope of Services specify spacing.
- Is light trespass into surrounding areas a concern (public meetings and input, cut-off luminaries, low mast or conventional instead of high mast)

Existing Lighting

- If existing lighting is not to be disturbed, include statement if any equipment, poles, foundations, pull boxes, conduit crossovers, etc. be reused or define criteria for reuse.
- State if existing lightings need to be maintained
- State who will own the existing equipment if replaced and when and where it is to be delivered.
- Evaluate existing lighting for the need for tunnel/underpass lighting

Jurisdictional boundaries

- Provide jurisdictional boundaries and note that luminaires in different jurisdictions are to be separate physical plant and have separate power services.
- Determine if township and county road underpasses are to be lit (local agencies willing to pay power cost).

Engineering

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- Define what information will be given to the Bidders concerning preliminary pole location and circuit design.
- Define the extent of the lighting plan to be developed and requirements for District approval.
- If the DBT is to determine the pole locations, add the following note to the Design Requirements: "Lighting fixtures of various manufactures are not exactly identical in their respective outputs. The DBT shall include supporting calculations to allow the reviewer to determine that the proposed design will function within the required design parameters as stated herein no matter which of the currently specified brands of equipment is installed."
- Provide list of luminaires for consideration in design. Specify any needed lighting revisions, upgrades, or relocations. Specify replacement of controller (if necessary) or upgrades to wiring. If applicable, identify any unique requirement differences between ODOT maintained and locally maintained lighting systems impacted by the project, including but not limited to: fixtures, circuits, photocells, power supply, conduit systems, pull boxes, transformers, and control centers. Identify specific circuit requirements, such as overhead versus underground, 480V, versus 240V, etc.

20.1319.4 Traffic Signals

The DBT shall perform Work related to lighting in accordance with Section 7.1 and the following sections.

Specify any needed signal revisions, upgrades, or relocations. Specify replacement of controller (if necessary), upgrades to wiring, locality specific requirements. Identify signal head requirements (three-section versus five-section, placement requirements of heads over lanes, number of heads per approach, detection system requirements, controller requirements, directional, etc.).

Signal Analysis

• Define if the DBT is responsible for signal warrant analysis or (preferably) define where signalized intersections are to be located. If the DBT does the analysis, define how the DBT is to proceed with the warrants that are met.

 Define signal phasing, timing analysis, and signal coordination (timing and time-space) requirements.

Specify who is responsible for traffic counts and if the DBT has to get TTS certification

• Specify if a central monitor station is to be provided, what the minimum equipment requirements are for personal and laptop computers. List locations where central monitor stations will be provided.

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 Specify if emergency vehicle preemption or railroad preemption is required. List locations. New railroad preemption may require agreements and force account work by the railroad
company.
• Specify if signals need to be interconnected (where and how)
 Specific design requirements of municipalities must be addressed
 Specify the use of adaptive signals (which detect traffic, and can alter signal timing in response to queueing).
Reconstructed Signal Intersections
List the existing signalized locations, including flasher locations.
 Define if any signal(s) are required to be interconnected and where and how.
• Define the extent to which the existing signal operation is maintained and if timing can be changed, or turns prohibited.
Specify if any equipment be reused.
Specify if any existing foundations or supports be reused.
 Specify if any existing loops to be reused.
 Specify if the existing controller is capable of being upgraded.
 Specify if the existing underground conduit system and pullboxes be reused. If reused, specify if the DBT needs to clean it.
Pedestrian
 Define pedestrian push-buttons requirements (across mainline, across all approaches, access, paved area/curb ramps)
Define pedestrian signal heads requirements/locations
<u>Control Equipment</u>
 Define any restrictions or limitations on multiple intersections being run from one controller. Specify need to coordinate with signal system owners.
- Define type of controller/cabinet and/or minimum phase capability.
- Define if ground or pole mounted.
Define cabinet finish (Unpainted or aesthetically painted, color)
Define software needs and who provides (DBT or the Department)
Specify "guarantee and warranty" periods
• Specify if "prepare to stop when flashing" (PTSWF) operation be used. Specify where and the distance in advance of the intersection.

Specify if concrete work pad required

Specify if any proprietary items are required for system compatibility.

Signal Interconnection

• Specify which signals are to be interconnected and how (radio, twisted pair, fiber optic) and if is to be overhead or underground.

Define master controller requirements.

• Specify telephone drop and modem requirements and who is responsible for maintaining the telephone account and for how long (final acceptance).

Vehicle Detection

• Define type and location of detection required (video, loops, magnetometers, microwave) along with specific requirements (size, lead-in cable and detector channel, delay/extension features, rack/shelf mounted, etc).

Specify emergency vehicle preemption requirements.

<u>PP.A.</u> Signal Support work required: \Box Yes \blacksquare No.

20.1419.5 Intelligent Transportation Systems (ITS)

A. ITS Work Required: □ Yes ☑ No

Contact and coordinate with the ITS section with Central Office to identify any additional ITS requirements.

2220 PROJECT SCHEDULE REQUIREMENTS

The DBT shall develop and maintain a project schedule in accordance with the selected note:

CM&S 108.03 A. Progress Schedule

□ 🗹 Proposal Note 105 - Critical Path Method Progress Schedule for Single Season Projects

☑ — Proposal Note 107 - Critical Path Method Progress Schedule for Multi-Season Projects

□ Proposal Note 132 - Critical Path Method Progress Schedule for Design/Build Multi-Season Projects including updates released on or before the prebid meeting date, shall be met or exceeded.

Designer notes within each proposal note (PN 105, PN 107, PN 132) provides additional guidance for selecting which schedule requirements/proposal note(s) shall be included.

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PN 132 is appropriate for multi-season DB projects with costs greater than \$10M.

2321 PLAN SUBMITTALS AND REVIEW REQUIREMENTS

23.121.1 Plan Components

All plans format submitted by the DBT shall be in conformance with the following ODOT manuals:

- Real Estate Policies and Procedures Manual Section 3100. Note: The DBT shall also identify all topographic features within the existing and proposed Right-Of-Way limits, including underground utilities.
- Bridge Design Manual. Note: Bridge subsummaries are required.
- 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
1307.4	Quantity Calculations
1310.3	Earthwork and Seeding Quantities

Units of measure are **NOT** required.

Simplified plans (section 1301.2) are NOT allowed.

23.221.2 Quality Control

The DBT is responsible for the professional quality, technical accuracy and adherence to the Governing Regulations listed in Section 7.1 (Governing Regulations) of this document, for all plan submittals required under this contract.

The DBT shall immediately notify the Department of any apparent discrepancy between the various design and construction manuals and the Contract Documents.

The Department shall have the discretion to dictate the level of Design review. The Department's acceptance of the design or failure to identify improper design does not, in any way, relieve the DBT of the responsibility for the quality, accuracy, or feasibility of the Design.

In the event the Department determines that any required submission is incomplete, contains inaccuracies which preclude a meaningful review, or does not adhere to the Governing

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Regulations listed in Section 7.1 (Governing Regulations) of this document, the Department 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 Department will schedule a review meeting or issue review comments as appropriate.

23.321.3 Buildable Units

Buildable Units (BUs) 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.

For the Interim (Section 21.9), Final (Section 21.10), Released for Construction Plans (Section 21.11) Design submittals, 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 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 Department, 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. The Progress Schedule for design review shall be developed such that information from other dependent BUs is available at the time of submission of the BU at hand. 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.

23.421.4 Comment Resolution Process

This section establishes transmittal processes and interaction between the Department and the DBT during submittal reviews in addition to the requirements found within the Scope of Services and other Contract Documents. The process can be modified upon mutual agreement between the DBT and the Department with the intention of meeting the requirements of the Contract or specific submission needs. This process may be revised by mutual agreement of both parties.

Specific identified procedures may be amended, revised, eliminated, or added to address project specific needs or mutual party understanding.

This process shall utilize electronic transmittals for all design submissions unless otherwise specified in the Scope of Services. Plan and design submissions shall be in PDF format, Microsoft Excel, Microsoft Word, or other document types as mutually agreed and appropriate to and for the submission.

Submissions should generally conform to the Scope of Service and other specification included in the Contract Documents, as appropriate, with variations as mutually agreed.

The Department shall establish a file transfer website (typically, an ODOT Project SharePoint, ProjectWise site, or other appropriate file transfer and storage site), with controlled and controllable access, for uploading design submissions and subsequent transmittal of design review comments.

Project specific process details shall be discussed at the Pre-Design Meeting. These details include the responsible contacts (Department and DBT), file server location/IP address, known required persons needing access, and login requirements.

A. Procedure

The Department will grant access to an identified DBT representative who will have authority and responsibility to create Buildable Unit Submission (BUS) folders and other folders within the transfer website. Each folder shall be logically named. Within each BUS folder, additional folders representing each stage of review (i.e. Interim/Final/Construction) will be created. If mutually agreeable, the DBT may perform this role if management by the DBT facilitates submissions.

With each Buildable Unit with each Design Submission, the DBT shall include a transmittal sheet describing the BUS, the BUS stage (Interim/Final/Construction), the contractual review response date (from the Department as well as any other third-party reviewer, if applicable), critical assumptions made for the BUS impacting subsequent BUS submissions, and any information which could facilitate review.

The DBT shall develop and utilize a Comment Resolution Spreadsheet (CRS) for each Buildable Unit with each Design Submission (Interim, Final, Construction) for use in logging and tracking review comments. The DBT shall provide a blank CRS to the Department and other third-party reviewers at Interim Design Submission. The Department and applicable reviewing agencies shall review for Contract requirements. The Department will utilize the CRS document to centralize all Department employee Buildable Unit Design Submission comments.

Department review comments will primarily focus on compliancy with the Contract Documents. The Department will refrain from making excessive preferential and formatting comments. Reviewer preferential comments shall be marked "Preference" within the CRS. While formatting comments do not need responded to, the Department reserves it's right to reject a submission which, in its judgement, is not reasonably following required ODOT CADD standards.

An updated copy of the CRS shall be provided to all reviewers at the Final Submission. With the Final Submission on the transmittal page, the DBT shall identify major design revisions and design approaches made between Interim and Final Submission being outside the course of typical design progression and were not made to address Interim Review comments. The updated copy shall include all comments received at Interim submittal along with the DBT's written disposition of all Non-Compliant comments made during formal Interim design submittals. The Department and other appropriate third-party reviewing agencies will review the DBT's formal disposition to Interim Submittal review comments as well as revised plans to respond to previous comments. The Department will include any additional comments based on the Final Design Submittal review within the CRS.

The DBT shall clearly identify if an ODOT Interim review comment responded with an "Accept" by the DBT is not being corrected within a Final submission. If an "Accept" comment is not being addressed, the DBT shall clearly describe the intended resolution for the RFC submission. The Department may require additional information before the Construction Plan submission, or may request a Comment Resolution meeting (or phone call if appropriate) to understand the DBT's design direction. The DBT shall memorialize the time of the Comment Resolution Meeting within the CRS submitted with the Construction Plans.

In the event the DBT believes that any review comment, or direction issued by the Department or other third-party review, require a change to a Contract, the DBT shall first contact the Department for clarification and shall, within 10 days of receipt of the comments or direction, provide written notice to the District Project Manager and Project Engineer concerning the reasons why the DBT believes the scope has been changed.

The DBT is not required to comment nor respond to ODOT identified Preference comments.

For comments considered substantial to the Department or the DBT, the DBT shall schedule a Comment Resolution Meeting with the Department to discuss.

- 1. The Department shall notify the DBT, either within the CRS or other notice, if the Department requires a Comment Resolution Meeting.
- 2. The DBT shall notify the Department within seven days of any "Non-Compliant" comments they intend to "Dismiss" or "Resolve". The DBT shall schedule a Comment Resolution Meeting prior to the next stage submittal.
- 3. For less substantial comments and as agreed by the Department and the DBT, a comment resolution conference call may be sufficient.

The DBT shall obtain Department concurrence with the "Non-Compliant" comment dismissal and this concurrence shall be documented on the CRS.

The DBT shall resolve all outstanding issues and comments from the Final Submittal (or other outstanding comments) and prepare a full set of Design Documents stamped "Checked and Ready for Released for Construction" (RFC). The Department's expectation is that no revisions shall be made except for those required to address Final review comments. In the event that other revisions are required unrelated to review comments, the DBT shall notify the Department and coordinate revisions for concurrence.

The Department shall review to ensure all comments from final reviews have been resolved or "Closed" to the satisfaction of the Department. There is no formal review period for Construction submission.

The DBT has the responsibility for ensuring the RFC meets all contract requirements. If upon Department review it is determined that it is questionable as to whether comments received from the Department or other agencies have been resolved or addressed appropriately, the DBT shall stop construction of the portion of the Buildable Unit in question, consult with the commenter to resolve such comments. The DBT shall document resolution of the comment within the CRS.

The DBT continues to be liable for design accuracy regardless of ODOT review.

B. General Third-Party Requirements

A "Third-Party", in regard to the Design-Build Comment Resolution process, is any overseeing agency with oversight and design approval authority of relevant portions of the design as identified in the Contract.

Other third-party reviewers may not utilize the CRS.

It is the DBT's responsibility to reasonably add all third-party markups and comments received; the DBT shall consolidate third-party comments into the CRS corresponding to each Buildable Unit and save on the ODOT Project SharePoint site. Any plan markups shall also be scanned by the DBT and included on SharePoint within the appropriate BUS folder.

The DBT shall address all third-party review comments. All third-party review comments shall be, initially, considered as a "Non-compliant" comment type, as identified below.

With ODOT's concurrence, the DBT may subsequently identify comments as potentially a "Preference" or "Recommendation". The DBT shall obtain Department concurrence with the "Non-Compliant" comment dismissal and this concurrence shall be documented on the CRS.

C. Comment Resolution Spreadsheet

Minimum requirements of the CRS along with information on content is included below. The DBT may modify format or include additional information with Department concurrence.

Reviewer				
Comment ID No	Consecutive listing			
Document	ubmittals may include multiple components including plans, eports, calculations, etc. This column will list which item the omment is on.			
Page	Page reference/location comment refers to			
Comment type	Either "Non-compliant", "Preference", or "Recommendation".			
	Non-compliant - elements that do not meet requirements of the Contract.			
	Preference - elements which depict the owner's preferred design method or result but are not required by the Contract.			
	Recommendation - a general noted item intended to make the designer aware of potential troublesome design methods.			
Contract Section	If Comment Type is Non-compliant to the Contract, the reviewer shall include the Contract Document of the requirement that is non-compliant (for example, Scope Section 8.2, L&D Volume 1, BDM, etc)			
Reviewer Note	A Reviewer Note is optional but is recommended to ensure the designer understands the intent to the comment made. Reviewer shall note if a Comment Resolution Meeting or discussion is desired.			
Reviewer Agency	Representing Agency			
Reviewer Name	Name of reviewer			
DBT Response	1			
Resolution Code (Approve, Dismiss, or Resolve)	Accept - DBT agrees with the comment and addressed the comments			

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	Dismiss - DBT disagrees with the comment based on comment no longer applying because the design has changed, reviewer error, or other reasons.			
	Resolve - DBT needs additional clarification and/or coordination to address the comment accordingly. Comment may also reflect a change to the Contract Documents which will require additional discussion and direction by the Department due to the financial/schedule impacts.			
DBT Comment/Disposition	The DBT shall provide a more detailed response to the comment as necessary. Response shall note if a Comment Resolution Meeting or discussion is desired.			
Reviewer Response				
Status	Open - the submittal did not address the original comment made. Closed - the submittal or disposition addresses the original comment.			
	The DBT shall schedule a comment resolution meeting with the Department to discuss any comments from previous submittals that remain "Open" according to the reviewer. The DBT and the Department will also discuss whether review comments are in conformance with the Contract Document requirements or preferential comments. For less substantial comments and as agreed by the Department and the DBT, a comment resolution conference call may be sufficient.			
Reviewer Name	Name of reviewer			
Date Closed	Date that the reviewer responded to the comment.			
Comments	Provide a more detailed response clarifying why comment remains "Open" or other information			

23.521.5 Document Management

The DBT shall create and maintain a BUS Log sheet to facilitate submission tracking. The BUS Log shall identify the name of the Buildable Unit, brief description of the BUS, Interim Design submission date, Interim Submission review comments transmittal date, Final Submission date, Final Submission comments transmittal date, Released for Construction date, and a BUS Comments field. The BUS Comments field shall note any necessary resubmissions, dates of Comment Resolution meetings with noted submission stages, Over-the-Shoulder meeting dates resulting in design adjustments, or any other needed summarized data to help understand the BUS process. The BUS Log Sheet may be modified as necessary to facilitate review. The BUS Log shall be maintained in the master project folder, or in a location mutual agreeable and accessible to the DBT and the Department.

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The DBT shall create a folder for each BU on the Department's Project SharePoint Site. Each BU folder shall have an "Interim", "Final", and "RFC" folder. All Design Documents (plans, calculations, reports, etc) submitted at each phase (Final, Interim, RFC) shall be uploaded by the DBT to the Project SharePoint Site. An updated CRS at each submittal shall be included in each folder with the latest including all comments "closed". Meeting minutes from comment resolution meetings or over-the-shoulder reviews shall be prepared by the DBT and also saved to SharePoint.

23.621.6 Optional Pre-submission Meeting

The DBT may request a Pre-submission Meeting to be held prior to, or concurrent with, the submission of a Buildable Unit. The intention of the Pre-submission meeting is an opportunity for the DBT to explain design intent to facilitate owner review. Formal assembly and submittal of drawings or other documents will not be required, but the DBT is encouraged to provide informal submittals to facilitate reviews.

23.721.7 Optional Over-the-Shoulder Reviews

The DBT or the Department may request "Over-The-Shoulder" (OTS) review of designs at any time in the design process. The OTS is an informal review of a partial design during development. This may include in-progress drawings, calculations, sketches, design concepts, proposed specifications, or any other document used or created during the design. They are to facilitate communication and the design process. These can be in the form of a phone call, meeting, correspondence, or any other means of information sharing between the DBT and the Department.

An Over-the-Shoulder review may be necessary to discuss direction on potential design changes. An OTS may be requested during any period in the design development. Appropriate third-party agencies, as well as the DBT and Department, may also participate in these meetings. The DBT or the Department may include the decision or direction given in an OTS within the applicable CRS submission.

The OTS reviews shall not replace the formal Interim and Final Review. Likewise, the Department may also request an OTS review during any stage of design to facilitate review or design development.

23.821.8 Major Design Decision

Separate submittals for concurrence with major design decisions are required. The submittals may be required during any phase of Design. Major design decisions involve significant utility relocation, unforeseen acquisition of ROW by the Department, traffic operation or geometric decisions that involve two or more viable solutions, designs not typical nor standards not ordinarily exercised by members of the engineering profession practicing under similar conditions at the same time and locality, and any other decision that impacts the public, operation of the facility or designs which require future long term excessive maintenance.

The level of development of the submittal is dependent upon the level of detail necessary to accurately depict the major design decision.

When the DBT becomes aware of additional decisions during the design, they must advise the District Project Manager in writing.

23.921.9 Interim Design Review Submission

For each Buildable Unit, the DBT shall submit the Interim Design submission for review by the Department and other third-party agencies as appropriate.

Interim Design Submission is defined as followed:

- A. Maintenance of traffic, traffic signals, lighting, utilities (water, power, sanitary, etc.), and landscaping shall be developed to Stage 2 level of detail as defined the ODOT Location & Design, Volume 3.
- B. Full signing plans are not required at Interim, however, all overhead signage and major ground mounted signage shall be shown on plan sheets (may be shown on pavement marking plans if signing plans are not submitted).
- C. All other plan components and supplemental submittal requirements as defined as Stage 1 per the ODOT Location & Design, Volume 3.

Unless indicated below, the Department will have 10 Work Days from receipt to review complete submissions. The following are excluded as Work Days: State Holidays, Federal Holidays, Saturdays, Sundays, the Friday after Thanksgiving, Christmas Eve, and the days between Christmas and New Year's Day. This review time must be shown on the required Progress Schedule.

Include any other agencies (for example, utilities, local jurisdiction) performing review along with review time. This review time will be contractual and used in the DBT's Progress Schedule so expectations with agencies shall be coordinated prior to RFP release.

Following this review, the DBT shall correct any errors, incorporate modifications, perform required investigations and make related changes to the plans and supporting documents prior to submitting the plans for Final Design review.

<u>Plan Review Distribution Table</u>: The DBT shall supply an electronic version (in PDF format) along with half size (11" x 17") paper prints simultaneously to the parties indicated below, except that **each affected utility company shall receive one full size (22"x34") plans.**

	Number of half size Sets
ODOT District <u>2</u> Planning and Engineering	Electronic Only
ODOT District 2_Construction	Electronic Only

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ODOT Central Office, Division of Highway Operations	
Each affected utility or railroad company	

If acceptable to all reviewers, electronic submissions are acceptable. Coordinate the anticipated media type prior to advertisement.

23.1021.10 FINAL DESIGN Review Submission

For each Buildable Unit the DBT shall submit the Final Design submission for review by the Department and other third-party agencies as appropriate.

The Final Design submission shall include submittal requirements as defined as Stage 3 per the ODOT Location & Design, Volume 3, however, subsummary and general summary sheets are not required. Quantity summaries shall be provided in electronic format (Excel and PDF) prior to construction for the Department's use in establishing testing requirements.

The Department shall have 10 Work Days from receipt to review complete submissions. The following are excluded as Work Days: State Holidays, Federal Holidays, Saturdays, Sundays, the Friday after Thanksgiving, Christmas Eve, and the days between Christmas and New Year's Day. This review time must be shown on the required Progress Schedule.

Include any other agencies (for example, utilities, local jurisdiction) performing review along with review time. This review time will be contractual and used in the DBT's Progress Schedule so expectations with agencies shall be coordinated prior to RFP release.

				-	
Submittal	Adjusted Review Time	•		-(Formatted: Left, Right: 0", Line spacing: Multiple 1.08 li
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Following the review, the Department 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.

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<u>Plan Review Distribution Table:</u> The DBT shall supply an electronic version (in PDF format) along with half size (11" x 17") paper prints simultaneously to the parties indicated below except that each affected utility company shall receive one full size (22"x34") plans:

	Number of half size Sets
ODOT District 2 Planning and Engineering	Electronic Only
ODOT District 2_Construction	Electronic Only
ODOT Central Office, Division of Highway Operations	

23.1121.11 Released for Construction Plans

After the review comments for the Final Design 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 Department and appropriate third-party agencies before the DBT submits the construction plans. No revisions shall be made except for those revisions needed to address Final Design review comments.

Each plan sheet shall have its <u>last revised date</u> noted on the sheet and clearly marked 'Released for Construction'. The 'Released for Construction' plan set shall be signed, dated and sealed by a Professional Engineer. Physical construction shall not begin until the plans marked 'Released for Construction' are delivered to each party on the Plan Distribution Table below.

No time extensions will be approved by the District Construction Engineer if the plan distribution is not completed and project delays occur as a result.

<u>Plans Distribution Table:</u> The DBT shall supply an electronic version (in PDF format) along with full size ($22^{\circ} \times 34^{\circ}$) and/or half size ($11^{\circ} \times 17^{\circ}$) paper prints of the each plan submission simultaneously to the parties indicated below:

	# of Full Sets	# of Half Sets
ODOT District Planning and Engineering	Electronic Only	Electronic Only
ODOT District Construction	Electronic Only	<u>Electronic</u> <u>Only</u>
ODOT Central Office, Division of Highway Operations		

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ODOT Central Office, Division of Construction Management	
Federal Highway Administration	
Wood County Engineer	
Each affected utility or railroad company	

23.1221.12 Railroad Submittals

Design Submittals to Railroads

The DBT shall perform ongoing coordination of their design, and anticipated construction schedule with the railroad throughout the Project. This coordination shall include, but is not limited to, Interim and Final BU plan submittals as well as informal submittals and resubmittals, as determined by the DBT, in accordance with the Governing Regulations to ensure a design acceptable to the railroad. Upon concurrence of design with the railroad, the DBT shall submit professional engineer signed, stamped and dated RFC plans to the railroad for final review and approval. This submission shall include resolution of all comments received throughout the design process. The railroad will attempt to complete their review of BU's within the timeframes identified in the contract, however for all-BU submittals, the DBT shall include at least 90 Calendar Days for railroad review for Interim, Final, and Construction Plans in the Project Progress Schedule.

For projects with railroad involvement, a separate BU shall be submitted for review that includes all work components over, under, within and adjacent to the railway that could impact or influence railroad operations. Buildable units for railroad review submissions shall not be defined by types of work but shall be determined by the limits of railroad regions of concern. The BU shall include all work within the applicable railroad region of concern (as agreed with the railroad and DBT) and shall not be segmented partial design pieces of an entity but shall be the overall design phased submission of the entity. Subdivision of work components that impact or influence railroad operations into multiple BU's shall not be performed unless previously agreed to by the Department and railroad.

A. Construction Submittals to Railroads

The DBT shall continue coordination with the railroad after design is complete. This coordination shall include, but is not limited to, required construction submittals in accordance with the Governing Regulations. Unless otherwise approved by the Department and railroad, the DBT shall not make construction submittals to the railroad until railroad approval of the Construction Plan BU submission. Railroad review times for these submittals are in accordance to the Rail Agreement, Not applicable

23.1321.13 Plan Distribution Addresses

Ohio Department of Transportation, District 2

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317 East Poe Rd. Bowling Green, OH 43402 Attn: David Geckle, P.E. David.geckle@dot.ohio.gov

Ohio Department of Transportation<u>, District 2-Central Office</u> <u>Attn: Kyle Ruedel</u> <u>Kyle.ruedel@dot.ohio.gov</u> <u>Division of Highway Management</u> 1980 West Broad Street Columbus, Ohio 43223 <u>Attn: (Contact Person)</u>

Ohio Department of Transportation Central Office Division of Construction Management 1980 West Broad Street Columbus, Ohio 43223 Attn: (Contact Person)

Ohio Department of Transportation Central Office Office of Environmental Services 1980 West Broad Street Columbus, Ohio 43223 Attn: (Contact Person)

Federal Highway Administration 200 North High Street Room 328 Columbus, Ohio 43215-2408 Attn: (Contact Person)

Wood County Engineer One Courthouse Square Bowling Green, OH 43402 Attn: Jason Sisco, P.E., P.S.

Utility Companies (As shown in section 12)

23.1421.14 Plan Revisions

Plan Revisions are DBT requested, ODOT directed, or condition necessary changes to the Released for Construction plans which materially modifies the design intent, materially revises the Plan to an extent which would require revised design calculations, materially revises plan dimensions or plan depictions, or otherwise would modify the Released for Construction plans in a manner which a competent engineer would identify as a necessary design re-evaluation.

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Plan Revisions are required to follow Interim, Final, and Released for Construction review processes. Plan Revision review timeframes and review breadth shall be dependent and commensurable the identifiable impacts of the Plan Revision, as agreed by the DBT and ODOT.

23.1521.15 As-Built Construction Record-Drawing Plans

At the completion of the construction work for each respective Buildable Unit, the DBT shall provide a "Red-Line" set of drawings that clearly identify all changes made to the Released for Construction Plans. They may be noted by hand markup of the revisions, utilizing the Clouding command in MicroStation (or other CAD software) or the Clouding command in PDF editing software. The red-lined drawings shall have a Contractor signed verification on the title sheet indicating all field changes are being incorporated into the red-lined drawings.

Prior to Final Acceptance of the Work, the DBT shall furnish the Department formal As-Built Construction Record-Drawing plans. The DBT shall provide a general summary within the final As-Built Construction Record-Drawing plans. The formal As-Built Construction Record-Drawing shall include all red-lined changes. Red-line change shall be denoted utilizing the Clouding command in MicroStation (or other CAD software) or the Clouding command in PDF editing software. The As-Built Construction Record-Drawing shall have a signed verification on the title sheet from the Designer and the Contractor indicating that all red-lined and field changes have been incorporated into the As-Built Construction Record-Drawing.

> Note: The Contractor's verification statement indicates all known field modifications made after the RFC plans where sealed by the Designer have been included in the formal Record-Drawing. The Contractor's verification statement shall be signed by the Contractor's Project Manager (or acceptable representative).

Note: The Designer's verification indicates the Designer's acknowledgement of the red-line and field changes, the presented field changes have been included within the As-Built Construction Record-Drawing and is the Designer's concurrence that these changes meet the design intent of the Contract. The Designer's verification statement shall be signed by the Lead Designer's representative.

The DBT may choose to omit the "Red-Line" submission and submit only formal As-Built Construction Record-Drawing.

As-Built Construction Record-Drawing plans shall be submitted using the following method:

PDF Images created according to the documentation on the Office of Contracts website

http://www.dot.state.oh.us/DIVISIONS/CONTRACTADMIN/CONTRACTS/Pages/TIFF.aspx

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.

- 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.

Two copies of the As-Built Construction 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 Department has approved the As-Built Construction Record-Drawings, the associated electronic files shall be delivered to the District Capital Programs Administrator. Acceptance of these plans and delivery of the associated electronic files is required prior to the work being accepted and the final estimate approved.

The plans shall be prepared in conformance with the Location and Design Manual, Volume 3, Section 1200 - Plan Preparation.