SUPERSTRUCTURE (4) AND BRIDGE (3) REPLACEMENTS AT VARIOUS LOCATIONS IN REGION 9

PIN 9806.82, Contract D900020

DB CONTRACT DOCUMENTS

PART 3
PROJECT REQUIREMENTS

Draft July 29, 2014
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<td>17.2</td>
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<td>17.3</td>
<td>Requirements</td>
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<tr>
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<td>59</td>
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SECTION 1 GENERAL

1.1 PURPOSE

This Part 3 establishes the basic Requirements of the Project. The Contract Documents; NYSDOT standard drawings, manuals and specifications; and the referenced Design Codes and Manuals shall be followed for the preparation of design and construction documents and the execution of the Work. Any proposed deviation from the Contract requirements or NYSDOT standards shall be submitted to the Department’s Design Quality Assurance Engineer for review, and shall require the submission of a Non-conformance Report.

All designs shall be prepared in U.S. Customary units. The Design-Builder shall be responsible for converting any mapping, plans, etc. into U.S. Customary units as necessary for the completion of the Project.

The Design shall be in conformance with the latest edition of the New York State Department of Transportation, Standard Specifications, with addenda, issued by the Office of Engineering, current as of the date of Proposal submission, except as noted in these Contract Documents.

The Design-Builder shall prepare Project Specifications for the Project, for Work Items not covered by the NYSDOT Standard Specifications or applicable Special Specifications, and shall prepare Design Plans for the Project in accordance with NYSDOT standards for general content and format, and in accordance with the Contract.

Deviations may be proposed within the framework of these Design Requirements to meet the requirements of a particular situation. However, any deviation, discrepancy, or unusual solution requires review by the Department’s Design Quality Assurance Engineer before it can be included in the design. It is the responsibility of the Design-Builder to identify, explain, and justify any deviation from the established criteria to the Department’s Design Quality Assurance Engineer.

The Design-Builder shall prepare and submit a Non-Conformance Report in accordance with the provisions of DB §105-16 for any Work performed that does not conform to the Contract requirements and for any deviations from NYSDOT standards that have not been approved by the Department.

1.2 SCOPE

The Design-Builder shall be responsible for complying with all terms of the Contract Documents at each bridge site. The Design-Builder shall review and understand all terms and conditions of the Contract Documents prior to the commencement of the Project and shall be responsible for determining the full Scope of the Project by undertaking a thorough examination of the Contract Documents, the Reference Documents and the Project Site.

1.3 SCOPE OF WORK – MAJOR ITEMS

1.3.1 Scope of Work – Base Project Major Items

The scope of work for the Base Project includes but is not limited to the following items:

A) Superstructure Replacement for the following bridges as listed in the table below:
### BIN County Municipality Carried Crossed Spans Bridge Length Bridge Roadway Width Existing Type of Bridge

<table>
<thead>
<tr>
<th>BIN</th>
<th>County</th>
<th>Municipality</th>
<th>Carried</th>
<th>Crossed</th>
<th>Spans</th>
<th>Bridge Length</th>
<th>Bridge Roadway Width</th>
<th>Existing Type of Bridge</th>
</tr>
</thead>
<tbody>
<tr>
<td>1095350</td>
<td>Broome</td>
<td>Town of Colesville</td>
<td>Connection Road</td>
<td>Osborne Creek</td>
<td>1</td>
<td>35 ft</td>
<td>60 ft</td>
<td>Prestress Concrete Box Beams</td>
</tr>
<tr>
<td>1034970</td>
<td>Tioga</td>
<td>Village of Candor</td>
<td>NYS Rte 960H</td>
<td>Catatonk Creek</td>
<td>3</td>
<td>230 ft</td>
<td>30.1 ft</td>
<td>Prestress Concrete Box Beams</td>
</tr>
<tr>
<td>1095160</td>
<td>Broome</td>
<td>Town of Maine</td>
<td>NYS Rte 26</td>
<td>Crocker Creek</td>
<td>1</td>
<td>64 ft</td>
<td>44 ft</td>
<td>Prestress Concrete Box Beams</td>
</tr>
<tr>
<td>1023190</td>
<td>Tioga</td>
<td>Town of Barton</td>
<td>NYS Rte 34</td>
<td>Dean Creek</td>
<td>1</td>
<td>45 ft</td>
<td>36.5 ft</td>
<td>Prestress Concrete Box Beams</td>
</tr>
</tbody>
</table>

B) Work at each of the structures in the above table shall include but not be limited to the following:

a) Removal of the existing superstructure for all of the bridges;
b) Modifications to each of the substructures as necessary to accommodate each new superstructure;
c) Approach roadway reconstruction necessary to connect existing roadways to new bridge and bring the superelevation rate to standard;
d) Development of a WZTC plan for each site

C) Other:

a) Coordination with and/or preservation of existing utilities;
b) Fabrication and Installation of new guide railing and bridge railing.

### 1.3.2 Scope of Work – Base + Option Major Items

The scope of work for the Base + Option includes, but is not limited to, the items listed in 1.3.1 as well as the following items:

A) Full Bridge Replacement for the following bridges as listed in the table below:

<table>
<thead>
<tr>
<th>BIN</th>
<th>County</th>
<th>Municipality</th>
<th>Carried</th>
<th>Crossed</th>
<th>Spans</th>
<th>Bridge Length</th>
<th>Bridge Roadway Width</th>
<th>Existing Type of Bridge</th>
</tr>
</thead>
<tbody>
<tr>
<td>1035450</td>
<td>Delaware</td>
<td>Town of Hancock</td>
<td>NYS Rte 97</td>
<td>Pea Brook</td>
<td>1</td>
<td>45 ft</td>
<td>30.5 ft</td>
<td>Concrete T-Beams</td>
</tr>
<tr>
<td>1035460</td>
<td>Delaware</td>
<td>Town of Hancock</td>
<td>NYS Rte 97</td>
<td>Pea Brook</td>
<td>1</td>
<td>39.3 ft</td>
<td>30.8 ft</td>
<td>Concrete T-Beams</td>
</tr>
<tr>
<td>1035470</td>
<td>Delaware</td>
<td>Town of Hancock</td>
<td>NYS Rte 97</td>
<td>Pea Brook Tributary</td>
<td>1</td>
<td>20 ft</td>
<td>32 ft</td>
<td>Concrete Slab</td>
</tr>
</tbody>
</table>

B) Work at each of the structures in the above table shall include but not be limited to the following:

a) Replacement of the existing bridges; including new foundations;
b) Removal of existing substructure and superstructure;
c) Approach roadway reconstruction necessary to connect existing roadways to new bridge;
d) Development of a WZTC plan for each site
e) Development of one SWPPP for all replacement sites if needed.
f) Remediation and disposal of asbestos containing materials;

C) Other:
a) Coordination with and/or preservation of existing utilities;
b) Fabrication and Installation of new guide railing and bridge railing.

If the Department chooses to exercise the Option, the Project will include the Base Project scope of work described in section 1.3.1 as well as the Option services scope of work described above.

1.4 COORDINATION WITH OTHER PROJECTS

There are no known projects currently scheduled to occur within or adjacent to the Contract limits prior to the Project Completion Date

1.5 THIRD PARTY AGREEMENTS

No Third-Party Agreements have been developed in connection with this Project.

1.6 DESIGN CODES AND MANUALS

In addition to this Part 3, Project Requirements, the Design-Builder must comply with all applicable engineering codes and standards, including those of the various Federal, State, and local jurisdictions.

If codes, standards and/or manuals are specified herein for the design of an element of the Project, then the edition(s) in effect on the Proposal due date shall be applicable to the Project. Responsibility for design remains with the Design-Builder in accordance with the terms and conditions of the Contract. If a code, manual or standard is subsequently modified by the issuer, the Design-Builder shall notify the Department of such modification(s) and request the Department’s decision regarding application of the modification(s).

All work shall conform to the following documents. In the event of a conflict between the codes and reference documents listed below, the more stringent requirements, as determined by the Department, shall apply.

For Work not specifically covered by the individual sections of the Project Requirements, the Design-Builder shall, at a minimum, apply the Standards normally applied by NYSDOT for such Work, to the extent they do not conflict with express requirements in the Contract Documents. The Design-Builder shall be solely responsible for ensuring that it identifies and applies all correct Standards.

AASHTO:
• A Guide for Accommodating Utilities within Highway Right-of-Way
• A Policy on Design Standards - Interstate System
• A Policy on Geometric Design of Highways and Streets
• Construction Handbook for Bridge Temporary Works
• Guide Design Specifications for Bridge Temporary Works
• Guide for the Design of Pavement Structures (with Supplement)
• Guide Specifications for LRFD Seismic Bridge Design
• LFRD Bridge Construction Specifications
• LFRD Bridge Design Specifications
• Manual for Assessing Safety Hardware (MASH)
• Manual for Bridge Evaluation
• Manual on Subsurface Investigations
• Mechanistic-Empirical Pavement Design Guide (MEPDG),
• Roadside Design Guide
• Standard Specifications for Highway Bridges

AISC:
• Steel Construction Manual

ANSI
• ANSI/AASHTO/AWS D1.5-95 Bridge Welding Code
• ANSI/IES Approved Recommended Practice for Roadway Lighting, RP-8-00

Asphalt Institute:
• Drainage of Asphalt Pavement Structures

ASTM:
• E2213-03 Standard Specification for Telecommunications and Information Exchange Between Roadside and Vehicle Systems
• E2259-03 Standard Guide for Archiving and Retrieving ITS-Generated Data
• E2468-05 Standard Practice for Metadata to Support Archived Data Management Systems
• E2655-08 Standard Guide for Reporting Uncertainty of Test Results and Use of the Term Measurement Uncertainty in ASTM Test Methods

Federal Geographic Data Committee:
• GIS Standards

FHWA:
• Manual of Uniform Traffic Control Devices (MUTCD)
- Pavement Publications
- Standard Highway Signs and Markings (SHSM) Book
- Steel Bridge Design Handbook
- Technical Advisory T6640.8A, 10/30/87 (environmental analyses)
- Traffic Monitoring Guide

NFPA:
- NFPA 70 – National Electrical Code (NEC)
- 502: Standard for Road Tunnels, Bridges, and Other Limited Access Highways

NYSDEC:
- Standards and Specifications for Erosion and Sediment Control (SESC)
- Stormwater Management Design Manual (SMDM)

NYSDOT:
- Annual Report titled "Axle Factor Update"
- Approved Materials List
- Bridge Detail (BD) Sheets US Customary (NYSDOT BD Sheets)
- Bridge Inspection Manual
- Bridge Inventory Manual
- Bridge Manual
- Bridge Safety Assurance Seismic Vulnerability Manual
- Comprehensive Pavement Design Manual
- Consultant Instructions (CIs)
- Design Consultant Manual
- Engineering Bulletins (EBs)
- Engineering Instructions and Directives (EIs and EDs)
- Environmental Procedures Manual (EPM) / The Environmental Manual (TEM)
- GCP-17, Procedure for the Control of Granular Materials
- Geotechnical Design Manual
- Highway Design Manual (HDM)
- Land Surveying Standards and Procedures Manual
- LRFD Blue Pages / LRFD Bridge Design Specifications
- Manual for Uniform Record Keeping
• New York State Supplement to the Manual on Uniform Traffic Control Devices
• Overhead Sign Structure Design Manual
• Policy on Highway Lighting
• Prestressed Concrete Construction Manual (PCCM)
• Project Development Manual
• Reference Marker Manual
• Rules and Regulations Governing the Accommodation of Utilities within the State Highway Right of Way
• Special Specifications as indicated in the Contract Documents
• Standard Specifications for Construction and Materials
• Steel Construction Manual (SCM)
• Structures Design Advisories
• Structures Technical Advisories
• U.S. Customary Standard Sheets
• Work Zone Traffic Control Manual

The above is a partial listing of applicable NYSDOT Engineering Manuals and Guidelines. The Design-Builder shall perform the Work in conformance with all NYSDOT Engineering Manuals and Guidelines in effect on the Proposal due date.

OSHA:
• PART 1926 - Safety And Health Regulations For Construction

SPC:
• Society of Protective Coatings Standards

USDOJ:
• ADA Accessibility Guidelines for Buildings and Facilities

USDOT:
• ADA Standards for Transportation Facilities

1.7 REQUIREMENTS
The “Requirements” subsection of the individual sections of Part 3 – Project Requirements establishes the Department’s expectations with respect to specific Project elements. These include administrative, managerial and technical considerations as deemed appropriate to the subject, and encompass performance specifications, design criteria, and directive instructions as the Department deems best suited to the subject. The Design-Builder shall develop its
Definitive Design, Design Plans and Project Specifications in conformance with this Part 3 – Project Requirements.

The Design-Builder shall be responsible for meeting all requirements and terms contained in this Part 3 – Project Requirements unless explicitly stated otherwise.

The specific requirements in this Part 3 – Project Requirements may be more stringent and shall govern over the criteria given in the Standards. However, where a specific requirement in this Part 3 – Project Requirements is more stringent than the criteria specified in a Standard, said specific requirement shall become the basis for determining compliance. Non-standard features needing justification and FHWA and/or NYSDOT approval are defined as those not meeting the criteria cited in the Standards listed in this Part 3 – Project Requirements.

1.8 DELIVERABLES

The subsection entitled “Deliverables” in each section of this Part 3 – Project Requirements establishes the Department’s expectations. These shall supplement the review plan and consultation and written comment cycles cited in DB §111-8 through DB §111-14. The Design-Builder may submit deliverables for the Department’s consideration or consultation and written comment in addition to those requested. The Design-Builder shall include such additional submittals in its review plan and revise the review plan as necessary to incorporate sufficient advance notice to the Department.

Unless otherwise indicated in a specific section of this Part 3 – Project Requirements, all deliverables shall be submitted in both electronic format and hardcopy format. Acceptable electronic formats include Bentley Microstation .dgn format and Bentley InRoads.alg and dtm format, Microsoft Word®, Microsoft Excel®, ArcMAP, or searchable portable document format (PDF) files, with no copy or password protection on the file content, unless otherwise indicated in a specific section of this Part 3 - Project Requirements or a Standard cited in a specific section of this Part 3 - Project Requirements.

1.9 INDICATIVE PLANS

The Indicative Plans provided to the Design-Builder in Part 6 – RFP Plans, in conjunction with the PSR/FDR's for BIN’s 1035450, 1035460, and 1035470, convey an overall potential solution to the Project’s needs that the Design-Builder may choose to consider in developing its design. The designs presented herein have been developed to a point sufficient to present the general concepts of the Project. The Indicative Plans are not mandatory, with the exception of elements specifically mentioned elsewhere in this Part 3. The Design-Builder shall develop design solutions that achieve the basic concepts depicted in the Indicative Plans while conforming with the Project Requirements.

1.10 DIRECTIVE PLANS

There are no Directive Plans included in the Contract.

1.11 CADD

CADD formatting for Design and As-Built Plans shall conform to the Department’s CADD Drafting Standards and CADD Design Standards in effect on the Proposal due date.
1.12 SCHEDULE OF PROJECT COMPLETION

All work on the design and on the construction shall be completed in accordance with Part 1, DB Agreement, Article 2, Contract Time, but in no case shall the Project Completion Date be later than November 31, 2016.

1.12.1 Work Schedule

The Design-Builder shall complete the work at BIN's 1095350 and 1034970 during the first construction season of this contract due to the deteriorated condition of the superstructures. The construction schedule for all other locations is to be determined by the Design-Builder.

1.13 WORK PAYMENT SCHEDULE

Progress Payments will be made as each Work Item is completed to the satisfaction of the Department’s Construction Quality Assurance Engineer. Progress payments shall be subject to the requirements of DB §109-2. Payments for Design, Construction Inspection and Laboratory activities will be made in conformance with DB § 109-2.2.

1.13.1 BIN 1095350 – Connection Road Over Osborne Creek

<table>
<thead>
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<th>Work Item</th>
<th>Max. Percent of Lump Sum Price</th>
<th>Percent of Lump Sum Price²</th>
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<tbody>
<tr>
<td>Stage One Demolition and Removal of Superstructure</td>
<td>10%¹</td>
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</tr>
<tr>
<td>Stage Two Demolition and Removal of Superstructure</td>
<td>10%¹</td>
<td></td>
</tr>
<tr>
<td>Stage One Fabricate and Install Bearings and Primary Members</td>
<td>15%¹</td>
<td></td>
</tr>
<tr>
<td>Stage Two Fabricate and Install Bearings and Primary Members</td>
<td>15%¹</td>
<td></td>
</tr>
<tr>
<td>Stage One Construct Concrete Bridge Deck Slab</td>
<td>13%¹</td>
<td></td>
</tr>
<tr>
<td>Stage Two Construct Concrete Bridge Deck Slab</td>
<td>13%¹</td>
<td></td>
</tr>
<tr>
<td>Stage One Approach Slab and Approach Work</td>
<td>11%¹</td>
<td></td>
</tr>
<tr>
<td>Stage Two Approach Slab and Approach Work</td>
<td>11%¹</td>
<td></td>
</tr>
<tr>
<td>Stage One Fabricate and Install Bridge Rail, Approach Guide Railing and Fencing</td>
<td>2.5%¹</td>
<td></td>
</tr>
<tr>
<td>Stage Two Fabricate and Install Bridge Rail, Approach Guide Railing and Fencing</td>
<td>2.5%¹</td>
<td></td>
</tr>
<tr>
<td>All Other Miscellaneous Work (WZTC, etc.)</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Punch list work, Site Cleanup and Restoration</td>
<td>4% (fixed)</td>
<td>4% (fixed)</td>
</tr>
<tr>
<td>Final Acceptance (Per DB §109-12.1)</td>
<td>2% (fixed)</td>
<td>2% (fixed)</td>
</tr>
<tr>
<td>Final Agreement (Per DB §109-12.2)</td>
<td>4% (fixed)</td>
<td>4% (fixed)</td>
</tr>
</tbody>
</table>

1. If completed in one stage the corresponding stage one and two work items will be combined.
2. See Work Payment Schedules included in ITP, Appendix D

1.13.2 BIN 1034970 – NYS Route 960H over Catatonk Creek

<table>
<thead>
<tr>
<th>Work Item</th>
<th>Max. Percent of</th>
<th>Percent of Lump</th>
</tr>
</thead>
</table>

Superstructure and Bridge Replacements in R9
PIN 9806.82, Contract D900020  Part 3 - Project Requirements
Draft July 29, 2014
### 1.13.3 BIN 1095160 - NYS Route 26 over Crocker Creek

<table>
<thead>
<tr>
<th>Work Item</th>
<th>Max. Percent of Lump Sum Price</th>
<th>Percent of Lump Sum Price&lt;sup&gt;2&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage One Demolition and Removal of Superstructure</td>
<td>10%&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Stage Two Demolition and Removal of Superstructure</td>
<td>10%&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Stage One Fabricate and Install Bearings and Primary Members</td>
<td>15%&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Stage Two Fabricate and Install Bearings and Primary Members</td>
<td>15%&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Stage One Construct Concrete Bridge Deck Slab</td>
<td>13%&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Stage Two Construct Concrete Bridge Deck Slab</td>
<td>13%&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Stage One Approach Slab and Approach Work</td>
<td>10%&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Stage Two Approach Slab and Approach Work</td>
<td>10%&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Stage One Curb and/or Sidewalk Replacement</td>
<td>5%&lt;sup&gt;1&lt;/sup&gt;</td>
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<tr>
<td>Stage Two Curb and/or Sidewalk Replacement</td>
<td>5%&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Stage One Fabricate and Install Bridge Rail, Approach Guide Railing and Fencing</td>
<td>2.5%&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Stage Two Fabricate and Install Bridge Rail, Approach Guide Railing and Fencing</td>
<td>2.5%&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>All Other Miscellaneous Work (WZTC, etc.)</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Punch list work, Site Cleanup and Restoration</td>
<td>4% (fixed)</td>
<td>4% (fixed)</td>
</tr>
<tr>
<td>Final Acceptance (Per DB §109-12.1)</td>
<td>2% (fixed)</td>
<td>2% (fixed)</td>
</tr>
<tr>
<td>Final Agreement (Per DB §109-12.2)</td>
<td>4% (fixed)</td>
<td>4% (fixed)</td>
</tr>
</tbody>
</table>

1. If completed in one stage the corresponding stage one and two work items will be combined.  
2. See Work Payment Schedules included in ITP, Appendix D
1. If completed in one stage the corresponding stage one and two work items will be combined.
2. See Work Payment Schedules included in ITP, Appendix D

1.13.4 BIN 1023190 - NYS Route 34 over Dean Creek

<table>
<thead>
<tr>
<th>Work Item</th>
<th>Max. Percent of Lump Sum Price</th>
<th>Percent of Lump Sum Price²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage One Demolition and Removal of Superstructure</td>
<td>10%¹</td>
<td></td>
</tr>
<tr>
<td>Stage Two Demolition and Removal of Superstructure</td>
<td>10%¹</td>
<td></td>
</tr>
<tr>
<td>Stage One Fabricate and Install Bearings and Primary Members</td>
<td>15%¹</td>
<td></td>
</tr>
<tr>
<td>Stage Two Fabricate and Install Bearings and Primary Members</td>
<td>15%¹</td>
<td></td>
</tr>
<tr>
<td>Stage One Construct Concrete Bridge Deck Slab</td>
<td>13%¹</td>
<td></td>
</tr>
<tr>
<td>Stage Two Construct Concrete Bridge Deck Slab</td>
<td>13%¹</td>
<td></td>
</tr>
<tr>
<td>Stage One Approach Slab and Approach Work</td>
<td>11%¹</td>
<td></td>
</tr>
<tr>
<td>Stage Two Approach Slab and Approach Work</td>
<td>11%¹</td>
<td></td>
</tr>
<tr>
<td>Stage One Fabricate and Install Bridge Rail, Approach Guide Railing and Fencing</td>
<td>2.5%¹</td>
<td></td>
</tr>
<tr>
<td>Stage Two Fabricate and Install Bridge Rail, Approach Guide Railing and Fencing</td>
<td>2.5%¹</td>
<td></td>
</tr>
<tr>
<td>All Other Miscellaneous Work (WZTC, etc.)</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Punch list work, Site Cleanup and Restoration</td>
<td>4% (fixed)</td>
<td>4% (fixed)</td>
</tr>
<tr>
<td>Final Acceptance (Per DB §109-12.1)</td>
<td>2% (fixed)</td>
<td>2% (fixed)</td>
</tr>
<tr>
<td>Final Agreement (Per DB §109-12.2)</td>
<td>4% (fixed)</td>
<td>4% (fixed)</td>
</tr>
</tbody>
</table>

1. If completed in one stage the corresponding stage one and two work items will be combined.
2. See Work Payment Schedules included in ITP, Appendix D

1.13.5 BIN 1035450 - NYS Route 97 over Pea Brook (Option)

<table>
<thead>
<tr>
<th>Work Item</th>
<th>Max. Percent of Lump Sum Price</th>
<th>Percent of Lump Sum Price²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage One Demolition and Removal of Existing Bridge Elements and Approach</td>
<td>8%¹</td>
<td></td>
</tr>
<tr>
<td>Stage Two Demolition and Removal of Existing Bridge Elements and Approach</td>
<td>8%¹</td>
<td></td>
</tr>
<tr>
<td>Stage One Abutment Foundations</td>
<td>5%¹</td>
<td></td>
</tr>
<tr>
<td>Stage Two Abutment Foundations</td>
<td>5%¹</td>
<td></td>
</tr>
<tr>
<td>Stage One Abutment and Wing Wall</td>
<td>8%¹</td>
<td></td>
</tr>
<tr>
<td>Stage Two Abutment and Wing Wall</td>
<td>8%¹</td>
<td></td>
</tr>
<tr>
<td>Stage One Fabricate and Install Bearings and Primary Members</td>
<td>12%¹</td>
<td></td>
</tr>
<tr>
<td>Stage Two Fabricate and Install Bearings and Primary Members</td>
<td>12%¹</td>
<td></td>
</tr>
</tbody>
</table>
### Primary Members

<table>
<thead>
<tr>
<th>Work Item</th>
<th>Max. Percent of Lump Sum Price</th>
<th>Percent of Lump Sum Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage One Construct Concrete Bridge Deck Slab</td>
<td>11%(^1)</td>
<td></td>
</tr>
<tr>
<td>Stage Two Construct Concrete Bridge Deck Slab</td>
<td>11%(^1)</td>
<td></td>
</tr>
<tr>
<td>Stage One Reconstruction of the Bridge Approaches</td>
<td>5%(^1)</td>
<td></td>
</tr>
<tr>
<td>Stage Two Reconstruction of the Bridge Approaches</td>
<td>5%(^1)</td>
<td></td>
</tr>
<tr>
<td>Stage One Fabricate and Install Bridge Rail,</td>
<td>3%(^1)</td>
<td></td>
</tr>
<tr>
<td>Approach Guide Railing and Fencing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage Two Fabricate and Install Bridge Rail,</td>
<td>3%(^1)</td>
<td></td>
</tr>
<tr>
<td>Approach Guide Railing and Fencing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Other Miscellaneous Work (WZTC, E&amp;SC, Stormwater,</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Punch list work, Site Cleanup and Restoration</td>
<td>4% (fixed)</td>
<td>4% (fixed)</td>
</tr>
<tr>
<td>Final Acceptance (Per DB §109-12.1)</td>
<td>2% (fixed)</td>
<td>2% (fixed)</td>
</tr>
<tr>
<td>Final Agreement (Per DB §109-12.2)</td>
<td>4% (fixed)</td>
<td>4% (fixed)</td>
</tr>
</tbody>
</table>

1. If completed in one stage the corresponding stage one and two work items will be combined.

2. See Work Payment Schedules included in ITP, Appendix D.

1.13.6 **BIN 1035460 - NYS Route 97 over Pea Brook (Option)**

<table>
<thead>
<tr>
<th>Work Item</th>
<th>Max. Percent of Lump Sum Price</th>
<th>Percent of Lump Sum Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage One Demolition and Removal of Existing Bridge</td>
<td>8%(^1)</td>
<td></td>
</tr>
<tr>
<td>Elements and Approach</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage Two Demolition and Removal of Existing Bridge</td>
<td>8%(^1)</td>
<td></td>
</tr>
<tr>
<td>Elements and Approach</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage One Abutment Foundations</td>
<td>5%(^1)</td>
<td></td>
</tr>
<tr>
<td>Stage Two Abutment Foundations</td>
<td>5%(^1)</td>
<td></td>
</tr>
<tr>
<td>Stage One Abutment and Wing Wall</td>
<td>8%(^1)</td>
<td></td>
</tr>
<tr>
<td>Stage Two Abutment and Wing Wall</td>
<td>8%(^1)</td>
<td></td>
</tr>
<tr>
<td>Stage One Fabricate and Install Bearings and Primary</td>
<td>12%(^1)</td>
<td></td>
</tr>
<tr>
<td>Members</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage Two Fabricate and Install Bearings and Primary</td>
<td>12%(^1)</td>
<td></td>
</tr>
<tr>
<td>Members</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage One Construct Concrete Bridge Deck Slab</td>
<td>11%(^1)</td>
<td></td>
</tr>
<tr>
<td>Stage Two Construct Concrete Bridge Deck Slab</td>
<td>11%(^1)</td>
<td></td>
</tr>
<tr>
<td>Stage One Reconstruction of the Bridge Approaches</td>
<td>5%(^1)</td>
<td></td>
</tr>
<tr>
<td>Stage Two Reconstruction of the Bridge Approaches</td>
<td>5%(^1)</td>
<td></td>
</tr>
<tr>
<td>Stage One Fabricate and Install Bridge Rail,</td>
<td>3%(^1)</td>
<td></td>
</tr>
<tr>
<td>Approach Guide Railing and Fencing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage Two Fabricate and Install Bridge Rail,</td>
<td>3%(^1)</td>
<td></td>
</tr>
<tr>
<td>Approach Guide Railing and Fencing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Other Miscellaneous Work (WZTC, E&amp;SC, Stormwater,</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Punch list work, Site Cleanup and Restoration</td>
<td>4% (fixed)</td>
<td>4% (fixed)</td>
</tr>
</tbody>
</table>
1. If completed in one stage the corresponding stage one and two work items will be combined.
2. See Work Payment Schedules included in ITP, Appendix D.

**1.13.7 BIN 1035470 - NYS Route 97 over Pea Brook Tributary (Option)**

<table>
<thead>
<tr>
<th>Work Item</th>
<th>Max. Percent of Lump Sum Price</th>
<th>Percent of Lump Sum Price²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage One Demolition and Removal of Existing Bridge Elements and Approach</td>
<td>8%¹</td>
<td></td>
</tr>
<tr>
<td>Stage Two Demolition and Removal of Existing Bridge Elements and Approach</td>
<td>8%¹</td>
<td></td>
</tr>
<tr>
<td>Stage One Abutment Foundations</td>
<td>5%¹</td>
<td></td>
</tr>
<tr>
<td>Stage Two Abutment Foundations</td>
<td>5%¹</td>
<td></td>
</tr>
<tr>
<td>Stage One Abutment and Wing Wall</td>
<td>8%¹</td>
<td></td>
</tr>
<tr>
<td>Stage Two Abutment and Wing Wall</td>
<td>8%¹</td>
<td></td>
</tr>
<tr>
<td>Stage One Fabricate and Install Bearings and Primary Members</td>
<td>12%¹</td>
<td></td>
</tr>
<tr>
<td>Stage Two Fabricate and Install Bearings and Primary Members</td>
<td>12%¹</td>
<td></td>
</tr>
<tr>
<td>Stage One Construct Concrete Bridge Deck Slab</td>
<td>11%¹</td>
<td></td>
</tr>
<tr>
<td>Stage Two Construct Concrete Bridge Deck Slab</td>
<td>11%¹</td>
<td></td>
</tr>
<tr>
<td>Stage One Reconstruction of the Bridge Approaches</td>
<td>5%¹</td>
<td></td>
</tr>
<tr>
<td>Stage Two Reconstruction of the Bridge Approaches</td>
<td>5%¹</td>
<td></td>
</tr>
<tr>
<td>Stage One Fabricate and Install Bridge Rail, Approach Guide Railing and Fencing</td>
<td>3%¹</td>
<td></td>
</tr>
<tr>
<td>Stage Two Fabricate and Install Bridge Rail, Approach Guide Railing and Fencing</td>
<td>3%¹</td>
<td></td>
</tr>
<tr>
<td>All Other Miscellaneous Work (WZTC, E&amp;SC, Stormwater, etc.)</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>Punch list work, Site Cleanup and Restoration</td>
<td>4% (fixed)</td>
<td>4% (fixed)</td>
</tr>
<tr>
<td>Final Acceptance (Per DB §109-12.1)</td>
<td>2% (fixed)</td>
<td>2% (fixed)</td>
</tr>
<tr>
<td>Final Agreement (Per DB §109-12.2)</td>
<td>4% (fixed)</td>
<td>4% (fixed)</td>
</tr>
</tbody>
</table>

1. If completed in one stage the corresponding stage one and two work items will be combined.
2. See Work Payment Schedules included in ITP, Appendix D
SECTION 2 PROJECT MANAGEMENT

2.1 DESIGN-BUILDER’S ROLE

The Design-Builder shall have responsibility for controlling and managing the Work, including the responsibility for quality management as defined in the Contract Documents, Part 2 - DB §§ 111, 112 and 113. This section identifies the Design-Builder’s Key personnel and summarizes the Management Plans to be produced by the Design-Builder in accordance with the Contract Documents.

2.2 DESIGN-BUILDER’S KEY PERSONNEL

The positions listed below shall be the Design-Builder’s key personnel for the Project. The Design-Builder shall provide personnel that meet these minimum requirements.

The Design-Builder’s Project Manager shall be the Design-Builder’s representative and single point of contact with the Department.

The Department’s Project Manager may designate other Key Personnel positions as needed at any time during the Contract.

A) **Project Manager:** Shall have a minimum of 10 years, but preferably 15 years, demonstrated experience in construction and construction management of bridge and major transportation and infrastructure projects with similar size and type of work as this Project, including projects with compressed timelines, and community information requirements. Such experience in construction and management-of-construction should include at least one highway infrastructure construction project having a construction value in excess of $8,000,000. The Project Manager, who should preferably have Design-Build experience and have extensive project management experience, can hold only this one Key Personnel position. It is preferred, but not required, that this individual be licensed and currently registered as a Professional Engineer in the State of New York.

B) **Design Manager:** Shall be licensed and currently registered as a Professional Engineer in the State of New York, shall be an owner or employee of the Designer and shall have a minimum of 10 years, but preferably 15 years, demonstrated experience in managing design for infrastructure projects of similar scope as this Project. The Design Manager, should preferably have Design-Build experience, should have specific experience on projects of similar size and type.

C) **Construction Manager:** Should preferably be licensed and currently registered as a Professional Engineer in the State of New York and should have a minimum of 10 years of demonstrated construction experience in civil works projects with experience in managing the site work of bridge infrastructure construction projects. Experience should include work of the nature anticipated in the Project, and should preferably include Design-Build contracts.

D) **Quality Manager:** Should have demonstrated experience in bridge design and major infrastructure construction with at least 10 years experience in quality assurance and quality control activities, including preparation and implementation of Quality Plans and
procedures for design and construction. The Quality Manager can hold only this Key Personnel position. The Quality Manager shall have experience of quality systems based on ISO 9001, and shall preferably have experience with the quality systems of the Department.

E) **Resident Engineer:** Shall be licensed and currently registered as a Professional Engineer in the State of New York and should have demonstrated at least 10 years experience in bridge and highway construction inspection, including at least 5 years as a Resident Engineer. The Resident Engineer should have performed Resident Engineer duties on a project within the last 3 years.

F) **Lead Structural Engineer:** Shall be licensed and currently registered as a Professional Engineer in the State of New York and shall have demonstrated at least 10 years experience in structural analysis and design.

G) **Lead Civil Engineer:** Shall be licensed and currently registered as a Professional Engineer in the State of New York and shall have at least 10 years experience in civil roadway design, including congestion management and the preparation of Maintenance and Protection of Traffic Plans.

H) **Project Superintendant:** Should have at least 10 years of demonstrated experience overseeing work on large bridge and highway construction projects. Experience should include directing and coordinating the activities of a contractor’s workforce and all subcontractors, ensuring work progressed according to schedule, within budget and that material and equipment were delivered to the site on time.

### 2.3 MANAGEMENT PLANS AND SCHEDULES

#### 2.3.1 Management Plans and Schedule Requirements

The Design-Builder shall submit to the Department’s Project Manager, for review and comment or approval (as applicable), all the Management Plans listed in Table 2-1. Following receipt of the Department’s acceptance or approval of the individual Management Plans, as described in the Contract Documents, the Management Plans shall be resubmitted to the Department’s Project Manager as the Design-Builder’s consolidated Project Management Plan for the Project.

<table>
<thead>
<tr>
<th>Plan Title</th>
<th>Contract Document Reference</th>
<th>Initial Plan to be Submitted with the Proposal?</th>
<th>Submittal Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workforce Participation Plan</td>
<td>DB § 102-9.4B</td>
<td>No</td>
<td>45 Days after NTP</td>
</tr>
<tr>
<td>Safety Plan</td>
<td>DB § 107-7.5</td>
<td>No</td>
<td>30 Days after NTP</td>
</tr>
<tr>
<td>Quality Control Plan</td>
<td>DB § 113</td>
<td>Yes</td>
<td>25 Days after NTP</td>
</tr>
<tr>
<td>Overall Design-Build Team Organization Plan</td>
<td>Project Requirement Section 2.3.5</td>
<td>Yes</td>
<td>25 Days after NTP</td>
</tr>
<tr>
<td>Design Management Plan</td>
<td>Project Requirement Section 2.3.6</td>
<td>Yes</td>
<td>30 Days after NTP</td>
</tr>
<tr>
<td>Construction Management Plan</td>
<td>Project Requirements Section 2.3.7</td>
<td>Yes</td>
<td>45 Days after NTP</td>
</tr>
</tbody>
</table>
2.3.2 Workforce Participation Plan

The Design-Builder shall develop a Workforce Participation Plan to meet the requirements of DB §102-9.4B and submit it to the Department’s Project Manager for review and comment.

2.3.3 Safety Plan

The Design-Builder shall develop a Safety Plan to meet the requirements of Part 2, DB §107-7.5 and submit it to the Department’s Project Manager for written approval in accordance with DB §107-7.8. No construction Work shall progress and no payment shall be made to the Design-Builder until the Safety Plan is approved by the Department.

2.3.4 Quality Control Plan

The Design-Builder shall use the Initial Quality Control Plan submitted with the Technical Proposal, develop it, as necessary, to include the content required by Part 2, and submit it to the Department’s Project Manager for written approval in accordance with Part 2 DB §113. The Quality Control Plan shall be revised and resubmitted to the Department’s Project Manager within 14 calendar days of receipt of the Department’s written comments and resubmitted as required until Approved by the Department’s Project Manager. No offsite fabrication Work or Construction Work shall commence before the Quality Control Plan has been approved by the Department’s Project Manager. No payment will be made to the Design-Builder until the Quality Control Plan has been approved by the Department.

2.3.5 Overall Design-Build Team Organizational Plan

The Design-Builder shall update the Initial Overall Design-Build Team Organization Plan describing the design and construction organizational arrangements it has implemented. The organizational arrangements described should clearly identify responsibilities and reporting lines of staff, particularly relating to Key Personnel.

The Design-Builder shall include an organization chart (on an 11”x17” sheet of paper), illustrating the Proposer’s Key Personnel and their prospective roles and responsibilities, as well as other principal participants and any known Subcontractors having a material role in the Project’s design Work, design check Work, construction Work and construction inspection Work. The Design-Builder shall include the resumes (maximum of two 8.5” x 11” pages per person) for all personnel listed in the organization charts.

The Design-Builder shall describe the interrelationships and interfaces between each discipline within the Proposer’s organization (e.g., design, design check, shop drawing preparation and review, construction, and quality management).

The Overall Design-Build Team Organization Plan shall also describe the interrelationships and interfaces between the Design-Builder’s organization, the Department and other governmental agencies, utility owners, stakeholders, businesses, the public and other contractors working in the vicinity and impacted by the construction of the Project. This description shall, at a minimum, address the following activities:

A) Reviews of plans and permits;

B) Progress, workshop, partnering and utility coordination meetings; and
C) Construction, engineering and inspection activities.

2.3.6 Design Management Plan

The Design-Builder shall update the Initial Design Management Plan submitted with its Proposal and submit it to the Department’s Project Manager for Review and Comment.

2.3.7 Construction Management Plan

The Design-Builder shall update the Initial Construction Management Plan submitted with its Proposal and submit it to the Department’s Project Manager for Review and Comment.

2.4 BASELINE PROGRESS SCHEDULE

The Design-Builder shall expand and update the Initial Baseline Progress Schedule submitted with the Technical Proposal and develop it, as necessary, in accordance with DB §108-1 and Part 5, Special Provision SP-3.

Design shall be considered complete when all Design related documents have been completed and accepted by the Department including: all calculations, specifications, records of design quality control reviews and procedures; descriptions of and justification for any non-standard features created or retained as a result of the design; resolution of any non-conformance reports; and submission of “As Built” drawings.

Construction shall be considered complete when: the entire Scope of Work has been completed; any damage to the area caused by the Design-Builder’s performance of the Work has been repaired to the satisfaction of the Department; all construction quality control documents, test and inspection reports and forms have been completed; As-Built drawings have been completed; and the work site(s) have been cleaned of any debris.

2.5 MEETINGS

The Design-Builder shall convene or participate in meetings as indicated in Part 2 DB §105-17.

It is the Department’s policy to use the principles of partnering to guide the management of Design-Build contracts and the Design-Build program within the parameters covered by the laws, regulations, and other policies that govern the work. The Design-Builder shall convene or participate in meetings designed to foster the principles of partnering in accordance with Part 2 DB §103-2.

The Design-Builder shall record the minutes for each meeting.

2.6 COMPUTER AND NETWORKING REQUIREMENTS

The Design-Builder shall provide Computer and Networking equipment to the Construction Inspection Professional Engineering Firm (CIPE) as necessary. The Department will issue Citrix connection accounts to the Design-Builder and its CIPE firm. It is recommended that the Design-Builder test the network connection success prior to fully equipping its staff and the CIPE firm, to ensure both hardware and software compatibility.

The following computer related specifications reflect the current technology utilized by the Department when making Citrix Connections and are provided for informational purposes only.
2/HM65 Chipset, and Intel HD Graphics 3000 (or equivalent)
2nd Generation Intel Core i5 2620M Processor, 2.70GHz (Turbo up to 3.40GHz),
1333MHz, 4MB L3 Cache
Mobile Intel HM65 Chipset
14” diagonal LED-backlit HD anti-glare (1366x768)
Intel HD Graphics 3000
4 GB 1333 MHz DDR3 SDRAM – Dual Channel Active
250 GB 7200 RPM 2.5 inch hard drive – or 120 GB Intel SSD
DVD R/W SuperMulti DL Drive
Full Keyboard
Broadcom 4313 GN 802.11 g/b/n 1x1 WiFi Adapter
65W Hardware Kit
6 cell Li-ion Battery
Integrated Gigabit Ethernet
Computers shall have Citrix Receiver installed, which can be accessed at:

http://receiver.citrix.com/

2.7 DEPARTMENT’S CONSULTATION AND WRITTEN COMMENTS

The Department’s review, oversight, audit, and inspection activities are referred to as “consultation and written comment” (see Part 2, DB §105-16). The Department’s consultation and written comment will be provided to the Design-Builder in writing. The Design-Builder shall be responsible for addressing the Department’s comments and shall indicate in writing whether it concurs with the comments. If the Design-Builder does not concur with the Department’s comments, then the Department and Design-Builder will work together to resolve the issue before proceeding.

If agreement cannot be reached, the issue must be resolved as provided in the Contract Documents for dispute resolution in accordance with Part 2 DB §109-10.

2.8 PROJECT WISE

ProjectWise shall be used to organize, manage and archive electronic Project design documents for NYSDOT. These documents typically include but are not limited to:

- All design reports including drafts and final;
- All studies and supporting reports;
- Permits;
- Survey and ROW mapping;
- Photos taken prior to and during design;
- CADD and 3D/4D models files including current NYSDOT-supported Microstation and InRoads file formats;
- Engineering calculations to support designs;
- All electronic plan sheets;
• Engineers estimate based on Payment Breakdown Structure; and

• Public Information.

All files posted to ProjectWise shall be in accordance with the file naming convention and submission procedures as defined in Appendix 14 of the NYSDOT Project Development Manual. In addition the Payment Breakdown Structure (PBS) shall be used in the file naming convention, specifically the work item number in the PBS.

The Design-Builder may obtain a ProjectWise account by contacting the Department’s Project Manager and providing the required account information per Appendix 14 of the Project Development Manual.

The Design-Builder shall ensure that all electronic design documents are stored in ProjectWise. Updates of engineering documents shall be provided on a monthly basis.
SECTION 3  ENVIRONMENTAL COMPLIANCE

3.1  SCOPE

Except as otherwise detailed herein, the Design-Builder shall be responsible for preparing its design, carrying out construction activities, performing Quality Control, and undertaking other activities as needed to ensure compliance with the Project’s Environmental Requirements and all applicable environmental laws and regulations.

This Project Requirement identifies certain required actions to be performed by the Design-Builder to ensure that the Environmental Requirements are complied with throughout the duration of the Project.

3.2  ENVIRONMENTAL APPROVALS

The Department has determined that this project is a NEPA Class II, Categorical Exclusion in accordance with 23 CFR 771.117 and the Federal Environmental Approval Worksheet. Class II actions that do not individually or cumulatively have a significant environmental effect are excluded from the requirement to prepare an Environmental Impact Statement (EIS) or an Environmental Assessment (EA).

The Department has determined that this project is a SEQRA Type II Action in accordance with 17 NYCRR, Part 15. No further SEQRA processing is required. The project has been identified as a Type II action, per 17 NYCRR Section 15.14, Subdivision (e), Item 37, Paragraph (iv) “replacement, reconstruction or rehabilitation, at present site or immediately adjacent thereto, of existing bridges, culverts or other transportation structures, including railroad crossing structures, not involving substantial expansion of the structure”. This permits the project to be classified as Type II since the project area does not violate any of the criteria contained in subdivision (d) of Section 15.14.

If during detailed design and/or construction the Design-Builder introduces design elements, variations, or methodologies that potentially induce environmental impacts, then the Design-Builder shall re-evaluate the NEPA process for this Project and obtain the necessary Environmental Permits for the Project prior to proceeding with construction. This requirement also applies to proposed variations which may affect resources covered under Section 106, Section 4(f), Executive Order 11990 (wetlands), and other applicable federal and state environmental regulations.

3.3  REQUIREMENTS

3.3.1  General

A) The Design-Builder shall procure all Environmental Approvals as needed for all Design-Builder-located areas, including staging, borrow and disposal sites, and any other areas used by the Design-Builder, for its convenience, in the execution of the Project;

B) The Design-Builder shall be responsible for obtaining all new Environmental Approvals. For any such approvals required to be obtained by the Design-Builder that must formally be issued in the Department's name, the Department will cooperate with the Design-Builder as reasonably requested by the Design-Builder, including execution and delivery of appropriate applications and other documentation prepared by Design-Builder in a form approved by the Department;
C) The Design-Builder shall be solely responsible for compliance with and violations of any Environmental Requirements; and

D) The Design-Builder shall indemnify the Department and the State of New York for any fines, violations or damages incurred by reason of failure of the Design-Builder to comply with Environmental Approvals.

E) The Design-Builder shall be solely responsible for any permits needed if any work or access is required in any of the Creeks for the Superstructure Replacements.

F) The Design-Builder’s attention is directed to special conditions and general requirements placed on the Design-Builder’s activities pursuant to Section 404 of the Clean Water Act as regulated by the US Army Corps of Engineers Nationwide Permit program. The work at BINS 1035450, 1035460, and 1035470 is authorized under the terms and conditions of Nationwide Permit #3. The Design-Builder shall read and become aware of the terms and conditions of the Nationwide Permit before commencing work, and shall be guided accordingly by such conditions in bidding and complying with contract requirements. In no case shall contract requirements supersede the requirements of this permit.

G) The work on this project is also regulated by Section 401 of the Clean Water Act of the Environmental Conservation Law as administered by the NYS Department of Environmental Conservation (DEC).

H) Work is prohibited at BIN’s 1035450, 1035460, and 1035470 BINs over the Pea Brook and its tributary and on their banks between October 1 and May 31. Work may not occur within the stream or on its banks during these dates. Pea Brook and its tributary are class C(ts) streams. The streams are protected for sustainable fish populations, including trout and their spawning. In accordance with the Article 15 MOU between NYSDOT and NYSDEC, consultation with NYSDEC Region 3 will be required to ascertain the restrictive dates and conditions that will apply to the project and NYSDEC’s other related concerns. These may include turbidity, erosion, and sedimentation protection measures.

I) It has been determined through contact with the NYSDEC Endangered Species unit and The Natural Heritage Program that a New York State listed threatened species is present in the area surrounding the Pea Brook and its tributary structures. The presence of the Timber Rattlesnake (Crotalus Horridus) has been indicated ¼ mile from the project site. It has been determined that the project should cause no adverse impact to the reptiles. However, they may be present in the work area, and it should be noted that the Timber Rattlesnake is protected by NYSDEC as a threatened species. NYSDEC should be contacted if Timber Rattlesnakes are encountered on the construction site. No Timber Rattlesnakes may be harmed or killed during the construction of the bridges. A fact sheet about Timber Rattlesnakes is posted on the Department’s reference website.

3.3.2 Environmental Plans

The Design-Builder shall be responsible for preparing the following documents in conformity with all Environmental Requirements. The Design-Builder shall submit the following Environmental Documents:

A) One Stormwater Pollution Discharge Elimination System (SPDES) Permit application for BIN’s 1035450, 1035460, and 1035470; see Soil Erosion and Water Pollution Control (See Section 3.3.3);
B) One Stormwater Pollution Prevention Plan (SWPPP) for BIN’s 1035450, 1035460, and 1035470; see Section 19 – Drainage and Stormwater;

C) SPDES permit application and/or SWPPP for any other site that meets the requirements.

3.3.3 Soil Erosion and Water Pollution Control

The Design-Builder shall provide to the Department an Erosion Control Plan complying with the New York State SPDES General Permit for Stormwater Discharges from Construction Activities (GP-0-10-001 or current version) for review and comment 60 days prior to any ground disturbance. This plan is to include but is not limited to construction entrance(s), construction phasing, drawings showing size and location of permanent (e.g., swales, check dams, etc.) and temporary (e.g., silt fence, temporary seed, mulch, etc.) erosion controls, and details. The Design-Builder shall apply for coverage under the SPDES General Permit for Stormwater Discharges from Construction Activities after providing the Department with an acceptable Erosion Control Plan and SWPPP. The Design-Builder shall prepare the final SWPPP and Notice of Intent (NOI), sign/complete the Contractor/Subcontractor SPDES Permit Certification form (CONR 5), and submit the NOI to NYSDEC for approval. Discharges covered under the SPDES general permit shall not commence until the date authorized on the SPDES Acknowledgement Letter from NYSDEC.

3.3.4 Performance

The Design-Builder shall perform all activities required under each of the foregoing plans until Final Acceptance of the Project, except to the extent that the plans provide for activities to be undertaken by the Department or third parties. Provisions in said plans for activities to be undertaken by the Department or third parties are subject to prior written approval by the Department.

3.3.5 Invasive species

No instances of target invasive plant species have been encountered within the Project limits. If any invasive species are discovered during the Project, the Design-Builder shall be responsible for controlling target invasive species in accordance with the guideline presented in EI 09-001 and the special specifications presented in EI 09-002.

3.3.6 Asbestos Containing Materials

An Asbestos Screening and Assessment of the impacted right-of-way and structures was performed by a NYS Department of Labor licensed firm using certified inspection staff.

The complete Technical Memorandum Asbestos Assessment, for BIN’s 1095350, 1034970, 1095160, and 1023190 is located in the Reference Documents section of the Project Web Site. Asbestos-containing materials identified during this screening/assessment were sampled and negatively analyzed for asbestos content; suspect asbestos-containing materials are presumed positive.

The Technical Memorandum Asbestos Assessment, for BIN’s 1035450, 1035460, and 1035470 will also be posted in the Reference Documents section of the Project Web Site.
Asbestos-containing materials identified during this screening/assessment were sampled and positively analyzed for asbestos content; suspect asbestos-containing materials are presumed positive. The complete Asbestos Assessment Report will be posted in the Reference Documents section of the Project Web Site.

The Design-Builder shall be responsible for the abatement design, containment, removal and disposal of all confirmed and assumed asbestos containing materials if such materials will be disturbed during the performance of the Work, except as noted in Section 3.3.7 below. The removal and disposal of ACMs shall be performed in accordance with the applicable safety and health codes and all applicable State and Federal regulations. See also DB Section 112-5.5, Asbestos.

The Design-Builder shall be responsible for performing any additional asbestos inspections should it prove necessary, and shall perform all abatement, containment, removal and disposal activities and provide project/air monitoring services as part of this Contract in accordance with 12 NYCRR 56.

New York State Department of Labor (NYSDOL) asbestos licensure and applicable staff certification(s) are required for Work where confirmed or presumed asbestos-containing materials are impacted. All necessary asbestos inspection, Project design and project/air monitoring work shall be conducted in conformance with policy and guidance provided in the NYSDOT TEM.

### 3.3.7 Inaccessible/Assumed ACMs

Section not used.

### 3.3.8 Environmental Plan Deliverables

At a minimum, the deliverables shall include the items listed in Table 3-1 – Environmental Compliance Deliverables for the Department’s review.

Each of the deliverables listed in Table 3-1 – Environmental Compliance Deliverables, shall be provided to the Department by the earlier of: (i) 30 days after NTP; or (ii) 30 days prior to the relevant on site activity, including start of construction.

**Table 3-1 – Environmental Compliance Deliverables**

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Number of Copies</th>
<th>Reference Section</th>
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<tr>
<td>Stormwater Pollution Discharge Elimination System (SPDES) Permit application</td>
<td>1</td>
<td>3.3.2</td>
</tr>
<tr>
<td>Stormwater Pollution Prevention Plan (SWPPP)</td>
<td>1</td>
<td>3.3.2</td>
</tr>
</tbody>
</table>

### 3.4 MIGRATORY BIRD PROTECTION

The Design-Builder shall be aware of and comply with the Migratory Bird Treaty Act (MBTA) and shall inspect the Project Area and Highway Right-of-Way, including the bridge substructure and...
superstructure, for bird nesting activity before performing bridge demolition, clearing and grubbing and tree removal.

All questions relating to migratory birds and nesting should be directed to the Department’s Project Manager.
SECTION 4  GENERAL PROJECT SCOPE OF WORK

4.1  SCOPE

The Design-Builder shall perform all Work necessary to prepare the Project site for construction, maintain the site in suitable condition during all stages of construction and provide cleanup and restoration of the construction site and all disturbed areas.

4.2  STANDARDS AND REFERENCES

The Design-Builder shall perform the Work in accordance with the applicable Standards, Codes and Manuals cited in Section 1.6, unless otherwise stipulated in this Project Requirement, or otherwise applicable to the Project.

4.3  REQUIREMENTS

The Design-Builder shall prepare site work plans showing the extent of site works; disposal and storage locations; facility removal details; and approximate volumes; and shall provide for uninterrupted Department maintenance and operations. All regulated waste shall be handled according to Section 3 – Environmental Compliance.

The site work shall include but not be limited to: clearing and grubbing; excavation and embankment; removal of pavement and pavement markings, road barriers, soil, drainage facilities, fencing, signs, and miscellaneous structures; subgrade preparation and stabilization; dust control; removal of abandoned above-ground and shallow piping and wiring, valves, meters, and other waste materials; and aggregate surfacing.

Unless specified otherwise in the Contract Documents, the Design-Builder shall remove all obstructions down to a minimum of 2 feet below the existing or proposed surrounding ground elevation or to the elevation necessary to properly construct the Work, whichever is lower.

The Design-Builder shall grade and pave all disturbed areas to match the existing surrounding ground elevation. The Design-Builder shall cut pavement or sidewalk to full depth with straight lines at removal terminations.

The Design-Builder shall over-excavate as necessary to remove unsuitable material from under the footprint of pavements and structures and backfill with properly compacted suitable material. Topsoil may be stripped, stockpiled, and reused within the Project Limits.

The Design-Builder may only reuse materials on the Project that meet the requirements for grading and backfill materials. Disposal of obsolete, unsuitable, and surplus material is not allowed within the Right-of-Way and shall be removed. All material to be removed shall become the property of the Design-Builder and shall be disposed of off-site.

4.3.1  Field Office

The Design-Builder shall provide, furnish and maintain a Field Office for use by the Department in accordance with the NYSDOT Standard Specifications. The Field Office shall be a Type 2 Office as described in the NYSDOT Standard Specifications.
4.3.2 Construction Vehicles on Bridge

The Design-Builder is prohibited from running equipment that does not operate on rubber tires (milling machines, rollers, etc) across newly constructed bridge decks unless proper precautions (mats, etc) are provided to prevent damage to the deck. The methods used to move equipment across bridge decks shall be subject to approval by the Construction Inspection Professional Engineering Firm with comments from the CQAE.

4.3.3 Salvage

Region to confirm if there are any salvage requirements The Design-Builder shall work with the Department’s PM and the Dept to arrange for the Department to Pick it up applicable items.

4.3.4 Surplus Quantity

Section not used.

4.3.5 Sidewalk Plowing Coordination During Winter Shutdown

Prior to the end of the construction season, the Design-Builder shall provide the State a list of new sidewalks that are open to the public that will need to be plowed by the municipality during the winter months. Before winter shutdown, the Design-Builder shall ensure that all sidewalks are free and clear of obstructions, barricades, fixed objects, etc. that would interfere with the snow plowing effort.
SECTION 5  SURVEYING AND GIS

5.1  SCOPE

The Design-Builder shall perform all surveying tasks necessary to undertake and complete the Project including but not limited to: acquisition of terrain data (topography); mapping of roadways and appurtenances, features, bridges, and utilities as needed; locating boundaries; waterway surveys; contract control plan; construction and stakeout surveys; As-Built surveys; surveys that arise from other Project Requirements; asset inventory; and all other surveying services as necessary.

The Design-Builder shall review and coordinate the requirements of DB §105-8 Stakeout with these Project Requirements. In instances where they differ, these Project Requirements shall govern.

5.2  STANDARDS AND REFERENCES

The Design-Builder shall perform the surveying activities in accordance with the applicable Standards, Codes and Manuals cited in Section 1.6, unless otherwise stipulated in this Project Requirement or otherwise applicable to the Project.

5.3  REQUIREMENTS

5.3.1  Project Survey Control

The Design-Builder shall use the available Project survey control information from the Department to be included in Part 7 – Engineering Data, and shall supplement that information as necessary to perform all the necessary surveys required to complete the Project.

5.3.2  Department-supplied Data

The Department will provide the Design-Builder with the following Survey-Related Data as Reference Documents if available:

- ROW / Highway Boundary Geometry;
- Survey and/or Photogrammetric Base Mapping Planimetrics;
- Survey and/or Photogrammetric Digital Terrain Model; and
- Record Plans.

The Design-Builder shall be responsible for verifying any data used for the Project.

5.3.3  Survey Reports, Records and Maps

The Design-Builder shall submit to the Construction Inspection Professional Engineering Firm, all information listed under the ‘Documentation’ sub-section of each chapter of the NYSDOT Land Surveying Standards and Procedures Manual that is applicable to its survey work. The Design-Builder shall index and submit all calculations, notes, computer files, raw data, Project reports, meeting notes, correspondence, digital images, maps, corner records, records of survey, aerial photogrammetric products, centerline alignment maps, and other maps and related items.
The Design-Builder shall be responsible for ensuring that information submitted is compatible with the applicable NYSDOT CADD standards, software and operating systems and formats.

All survey reports and maps, including bathymetric survey plans, shall be signed-and-sealed by a licensed professional land surveyor.

5.3.4 Permanent Survey Markers

The Design-Builder shall place two permanent survey makers at every BIN in accordance with the NYSDOT Standard Specifications.

5.4 SURVEYING AND GIS DELIVERABLES

At a minimum, the Design-Builder shall submit the items listed in Table 5-1 - Survey and GIS Deliverables to the Department.

Electronic measurement raw data shall be provided in electronic format only.

Where applicable, electronic copies of deliverables listed in Table 5-1 - Survey and GIS Deliverables shall be supplied as per the specifications given in Chapter 20 of NYSDOT HDM. All relevant Bentley MicroStation® files (including .DGN files) and Bentley InRoads® files (including DTM, ALG files) shall be compatible with the MicroStation XM and InRoads XM software versions.

### Table 5-1 - Survey and GIS Deliverables

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Number of Copies</th>
<th>Delivery Schedule (for final submission)</th>
<th>Reference Section</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hardcopy</td>
<td>Electronic</td>
<td></td>
</tr>
<tr>
<td>All survey Reports, Records and Maps</td>
<td>1</td>
<td>1</td>
<td>Not more than 30 days after Project Completion</td>
</tr>
<tr>
<td>GIS-format data</td>
<td>-</td>
<td>1 (txt)</td>
<td>Not more than 60 days after Project completion</td>
</tr>
<tr>
<td>As-Built surveys</td>
<td>1 (signed and sealed)</td>
<td>1</td>
<td>Not more than 60 days after Project Completion</td>
</tr>
</tbody>
</table>
SECTION 6  RIGHT-OF-WAY

6.1  SCOPE

The Right-of-Way (ROW) for the Project has been acquired by the Department and Plans showing the existing State owned ROW are included in the Reference Documents. The Design-Builder shall perform all the permanent Project Work within the limits shown on those Right of Way maps.

Right of ownership of all ROW and the improvements made thereon by the Design-Builder shall remain at all times with the Department. The Design-Builder’s right to entry and use of the ROW arises solely from permission granted by the Department under the Contract.

6.2  REQUIREMENTS

6.2.1  Right-of-Way Fencing

Any ROW fencing that has been damaged due to construction of the Project or removed by the Design-Builder shall be replaced by the Design-Builder with new ROW fencing meeting current NYSDOT standards.

6.2.2  Property Interests Identified by the Design-Builder for its Convenience

The Design-Builder shall be responsible for the acquisition and all costs associated therewith for any temporary land or other property required for the Design-Builder’s convenience outside the ROW Limits, such as for staging, lay-down, access, office space, temporary works, or other purposes. The Design-Builder shall assume responsibility for satisfying all Federal and State regulations, identifying, analyzing, and documenting the environmental impacts associated with the additional space and securing all necessary consent, including that of the Department, prior to initiating use of the space, in accordance with DB §107-1.
SECTION 7  PUBLIC INVOLVEMENT

7.1  SCOPE

The goal of the public involvement activities is to inform the public and agency participants by providing timely information throughout the design and construction process. The Design-Builder shall be responsible for supporting and cooperating with the Department with all public involvement activities.

7.2  STANDARDS

The Design-Builder, in close coordination with the Department, shall perform the Public Involvement activities in accordance with the NYSDOT Project Development Manual: Appendix 2, Public Involvement Manual.

7.3  REQUIREMENTS

7.3.1  Public Outreach

The Design-Builder shall have the primary responsibility for performing public outreach activities for the Project, consistent with the Public Involvement Plan posted in the reference documents, but the coordination in all public outreach activities shall be the Construction Quality Assurance Engineer (CQAE) and the Regional Public Information Officer (PIO). All public outreach activities shall be coordinated through the Department’s Construction QA Engineer. All public communication activities must be reviewed and approved by the CQAE and/or the RPIO. This includes communication and notifications of key stakeholders (motorists, general public, area residences, educational institutions, emergency services, businesses, etc.) of road closure information, Project milestones or Project construction related activities that have the potential to affect the general public and/or residents in proximity to the Project area. Project milestones include, but are not limited to: the visible start of construction activities; travel pattern changes; significant Project accomplishments; and construction completion.

The Design-Builder shall coordinate with and provide a minimum of one week advance notice to the CQAE prior to all changes to traffic patterns and the following Project milestones: start of construction; Project completion; and any other construction milestone as determined by the CQAE.

The Design-Builder shall provide the Department with a minimum of one week advance notification for each public information activity (press announcements, travel advisories, PVMS postings, etc.) to allow for proper review and comment by the CQAE and/or PIO.

The Design-Builder shall provide the Department’s Construction QA Engineer with a written work Schedule (including anticipated traffic changes) one week in advance of work that will change traffic patterns.

7.3.2  Media Relations

Media Inquiries: All media inquiries, requests for interviews from local print or broadcast news media, trade magazines or other media outlets must be referred to the CQAE for direction. The Department’s PIO or his/her designee, under direction from the Regional Office, will coordinate and respond to all media requests. The Design-Builder shall alert all project personnel about this policy.
Travel Advisories: To allow for timely notice to the public, one week advance notice of the start of work, any lane closures, road closures, or changes to traffic patterns is required to be given to the CQAE and the Department’s Project Manager.

To allow for the timely distribution of information to the public, two weeks advance notice of start of work, any lane closures, full road closures, or significant changes to traffic patterns is required to be given to the Region via the Department’s Project Manager. This notification is in addition to the written work schedule discussed in Section 7.3.1. Upon review by the Regional Director, the PIO will develop a draft travel advisory for content and quality review by the Design-Builder, the Department’s CQAE, and other appropriate Regional staff members. The travel advisories will be finalized and distributed to the press and appropriate state elected officials, and posted on the Project website by the PIO. However, the Design-Builder is responsible for the notification of local public officials, emergency service providers, schools, residents, businesses, and other affected parties, of any major travel pattern change.

The strategies described above are consistent with the requirements of Part 3 Section 15 – Work Zone Traffic Control and Access, and shall include Construction Bulletins published by the Department, based on information provided by the Design-Builder, especially focused on traffic changes, night time work, higher-noise construction periods or locations, or other construction activities of potential concern to the public. The Design-Builder shall be responsible for interaction with the affected homeowners, tenants and businesses with regards to issues including but not limited to, security of and access to their property or properties, utility services, night time operation, etc.

7.3.3 Public Information Meeting

A Public Information Meeting is required for BIN 1034970, and shall be held four weeks prior to implementing work zone traffic controls. The requirement for a Public Information Meeting at other sites, due to work zone traffic controls and/or off-site detours, will be at the discretion of the RPIC and the RPIO.

The Department shall be responsible for scheduling a date and location of any Public Information Meeting that is needed.

The Design-Builder shall be responsible to submit all Public Information Meeting handouts and displays, as previously requested by the Department, to the RPIC and the RPIO for review and approval in advance of the Public Information Meeting(s).

The Design-Builder and the Department shall meet at the Binghamton State Office Building in advance of any Public Information Meeting(s) to discuss logistics. The Design-Builder shall have a representative at any Public Information Meeting(s) to answer questions from the public.
SECTION 8 UTILITIES

8.1 SCOPE

The utility requirements set forth in Part 4 – Utility Requirements and DB §102-5 present the Design-Builder’s responsibilities as they relate to existing and/or new utilities, the manner in which utilities shall be protected, relocated, upgraded, constructed or incorporated into the construction, and responsibilities for the Work.

8.2 STANDARDS AND REFERENCES

The Design-Builder shall perform all utility activities in accordance with the Contract Requirements, the applicable Standards, Codes and Manuals listed in Section 1.6 or otherwise applicable to the Project, and the standards required by the various utility companies affected by the work.

8.3 GENERAL REQUIREMENTS

The Design-Builder shall examine the record plans of the work site, make a field survey of the work site and examine all other available documents to determine the type and location of all utilities that may be affected by the work. Before any work begins the Design-Builder shall inform the Department’s Project Manager what utilities are present and how they may be affected by the work.

The Design-Builder, in coordination with the Department’s Project Manager (or designee) and the Regional Utility Engineer, shall meet with all the affected Utility owners or operators for the purpose of discussing the effect on the utility facilities and to agree on a plan to maintain, protect, relocate, reinstall, or other action that may be necessary for the work to progress.

All utilities must be maintained, supported and protected during construction, unless otherwise directed by the utility owner. Any damage to utilities due to the Design-Builder’s operations shall be repaired at the Design-Builder’s expense.

The Design-Builder shall make good any damage and consequential damages to those utilities caused by his operations. If the nature of the damage is such as to endanger the satisfactory operations of the utilities and the necessary repairs are not immediately made by the Design-Builder, the work may be done by the respective owning companies and the cost thereof charged against the Design-Builder.

The Design-Builder shall provide notice to the Construction Quality Assurance Engineer (CQAE) at least 10 days before construction begins on any portion of the Project. The CQAE will notify the Regional Utility Engineer of the pending construction and of any planned interruptions to service. It should be noted that utility companies set their own notification time frames and requirements. The Design-Builder shall coordinate with respective Utility Owners.

8.3.1 Utility Relocation Agreements

It is anticipated that Utility Work Agreements will be executed between the Department, the Design-Builder and the owners of impacted utilities once the Design-Builder has determined the final locations of the impacted utilities. See Part 4 for details on utility inventory, coordination and relocations.
The Design Builder shall be responsible for the design and construction of these facilities as outlined in Part 4 - Utilities.

8.3.2 Other Utility Conflicts

Please see Part 4 – Utility Requirements for additional utilities in the project vicinity that may require relocation and modification.
SECTION 9 GEOTECHNICS

9.1 SCOPE

The Design-Builder shall be responsible for all Geotechnical Work necessary for the design and construction of all permanent and temporary structures, including assessing available information, planning and implementing subsurface investigations, geotechnical analysis and reporting, geotechnical instrumentation and monitoring, and protection of existing infrastructure, structures and utilities in accordance with the requirements of the Contract Documents.

These requirements are considered as a minimum and do not include all possible conditions that may be encountered in the Design-Builder's final design.

The Department has performed subsurface investigations in the vicinity of the Project Site. Information from these previous subsurface investigations has been provided as Reference Documents. Presentation of this information in no way implies that subsurface conditions are the same at other locations.

The Design-Builder shall be familiar with available geotechnical, geologic, seismic, hydrogeology, soils literature, existing site conditions (both native and man-made), and shall interpret the existing geotechnical data pertaining to the Project Site. The Design-Builder shall form its own interpretation of the existing geotechnical data, and any additional geotechnical data the Design-Builder may obtain from its own investigations, and satisfy itself as to the nature and behavior of the ground and sub-soil, the form and nature of the Site, and nature of the Work that may affect its detailed design, construction method, and tools.

9.2 STANDARDS AND REFERENCES

The Design-Builder shall perform geotechnical activities in accordance with the Contract Requirements and the applicable Standards, Codes and Manuals cited in Section 1.6 or otherwise applicable to the Project.

9.3 DESIGN REQUIREMENTS

For the Base scope items, described in Section 1.3.1, the Design-Builder shall assess the Geotechnical Work necessary for this work as stated in Sections 9.1 and 9.2 above.

For the Option scope items, described in Section 1.3.2, the Design-Builder shall at a minimum provide the following:

A) Geotechnical Work Plan (see Section 9.3.1);

B) Geotechnical Data Report (see Section 9.3.6); and

C) Geotechnical Instrumentation and Construction Monitoring Plans (see Section 9.3.8).

9.3.1 Geotechnical Work Plan

The Design-Builder shall prepare a geotechnical work plan, which shall include:
A) Design-Builder’s knowledge and understanding of the geotechnical, geologic, hydrogeologic and seismic settings of the Project Site and how the nature and behavior of the soil, rock, groundwater and subsurface conditions will affect the investigation, design and methods of construction;

B) Anticipated methods of analysis and design for foundations and a discussion of the foundation optimization process and rationale for selection of the foundation types;

C) Identification of key constraints and a description of how the geotechnical activities will be designed and constructed to meet these constraints; and

D) Types of subsurface investigations to be carried out for the Project, including locations and depths of borings and other field testing with a narrative of the in-situ tests (if applicable) and laboratory tests to be carried out.

9.3.2 Geotechnical Investigations

The Design-Builder shall plan and conduct geotechnical investigations in accordance with the Department's and AASHTO Standards for subsurface exploration programs, and as deemed necessary by the Design-Builder’s Lead Designer to establish the geotechnical conditions and to perform all geotechnical and foundation design and analysis.

The Design-Builder shall determine the coordinate location and ground surface elevation for each boring and field investigation position, and shall show the coordinates, station and offset, and elevation for each individual boring log or investigation record in accordance with Department standards. Coordinates and station and offsets for the borings shall be referenced to the appropriate stationing at each bridge site. Elevations shall be referenced to the Project datum and horizontal control system.

9.3.3 Minimum Number of Borings

The minimum number of borings required for various structures shall be as per the applicable standards.

9.3.4 Subsurface Investigation Records

The Design-Builder shall be responsible for keeping a continuous and accurate log of the materials encountered and a complete record of the operation of progressing the casing. Where driving is used, a record of the number of blows required to advance the sampling barrel, each 6 inches in the soil where each sample is taken, shall be kept. Records shall be kept using the NYSDOT Subsurface Exploration Log Form (US Units).

9.3.5 Software Requirements

The Design-Builder shall use Bentley gINT® or similar commercial software to develop and maintain an electronic database of subsurface information including in-situ test and laboratory test results, and to produce boring records.
9.3.6 Geotechnical Data Report

The Design-Builder shall be responsible for preparing a geotechnical data report, signed and sealed by the Lead Designer. The geotechnical data report shall serve as a factual depiction of the subsurface conditions and at a minimum it shall include:

A) A detailed description of the investigation methods;
B) Complete records with summary tables of investigation;
C) Complete records with summary tables of laboratory test results; and
D) An exploratory hole location plan, showing locations of any existing (pre-award) exploratory holes for which data was used by the Design-Builder plus locations of post-award exploratory hole locations undertaken by the Design-Builder.

The Design-Builder shall provide the Department with a copy of the final log for each subsurface investigation exploratory hole progressed.

9.3.7 Retaining Walls

Section not used.

9.3.8 Geotechnical Instrumentation & Construction Monitoring

Section not used.

9.3.9 Fill/Embankments

9.3.9.1 Excavation and Embankment

Excavations and embankment construction shall be in accordance with the requirements of Section 203 of the NYSDOT Standard Specifications. Embankment cross-sections shall be in accordance with the requirements of the Roadway Geometrics Performance Specification. The minimum compaction control testing and graduation testing shall be in accordance with NYSDOT Construction Inspection Manual.

9.3.9.2 Reinforced Soil Slope Design

Section not used.

9.3.10 Soil Improvement

Any soil improvement systems adopted by the Design-Builder shall be designed using procedures consistent with FHWA Ground Improvement Methods.

9.3.11 Slope Stability

The Design-Builder shall be responsible for assessing the stability of any new fill and cut slopes (permanent and temporary) required for the Project, and ensuring the stability of these slopes.

The Design-Builder shall design any new fill and cut slopes and check existing slopes for the static case in accordance with FHWA NHI-05-123 - Soil Slope and Embankment Designs and...
for the seismic case in accordance with FHWA-NHI-11-032 GEC No.3 LRFD Seismic Analysis and Design of Transportation Geotechnical Features and Structural Foundations. The Design-Builder shall be responsible for ensuring that the following minimum requirements are satisfied:

A) The minimum factors of safety from limit equilibrium analysis for static load conditions for permanent slopes shall be 1.3 for non-critical slopes and 1.5 for critical slopes (at bridge abutments, wingwalls and existing structures);

B) The minimum factor of safety for seismic load cases shall be 1.0 for non-critical slopes and 1.1 for critical slopes and the Design-Builder shall be responsible for establishing the acceptable permanent deformations the slopes can accommodate for the design seismic events;

C) The minimum factor of safety for a rapid drawdown condition shall be 1.1;

D) For non-permanent slopes, the minimum safety factor shall be 1.3 under static load conditions.

The Design-Builder shall use resistance factors determined as the reciprocals of the minimum factors of safety values stated in this Section 9.3.12.

9.3.12 Temporary Works

The Design-Builder shall be responsible for the design and construction of all temporary works required for the Project.

9.4 CONSTRUCTION REQUIREMENTS

9.4.1 Dewatering and Groundwater Control

The Design-Builder shall be responsible for evaluating the potential need for dewatering and groundwater control, and for implementing such measures as appropriate, and shall evaluate the effects on existing facilities resulting from any dewatering and draw down.

9.4.2 Deep Foundations (Option only)

Section not used.

9.4.3 Condition Surveys

9.4.3.1 Pre-Construction Condition Survey

The Design-Builder shall conduct a pre-construction inspection and survey of the existing condition of all structures and properties within 100 feet of vibration or settlement causing construction activities for the purposes of generating photographic and video documentation of existing damage, leaks and cracks. The pre-construction condition survey shall form the basis against which all new cracks, existing progressive cracks, or damage will be measured.

In its preparation for the pre-construction survey, the Design-Builder shall ensure that the pre-construction condition survey encompasses at a minimum all properties within areas that are identified by the Design-Builder to be potentially prone to: (i) ground vibration levels, expressed as resultant peak particle velocity, in excess of 2.0 inches per second; and (ii) predicted ground settlements of greater than ¼ inch.
The Design-Builder shall submit to the NYSDOT the records and photographic and video documentation of the pre-construction condition survey, which shall be signed and stamped by a Professional Engineer registered in the State of New York.

### 9.4.3.2 Post-Construction Condition Survey

The Design-Builder shall conduct a post-construction condition survey of the properties covered by the pre-construction conditions survey. The post-construction condition survey shall be performed by the Design-Builder at Project Completion, and it shall compare the post-construction conditions with the conditions recorded in the pre-construction condition survey. The location and scope of the post-construction condition survey shall match those of the pre-construction condition survey. The complete documentation of the post-construction survey, describing the comparison with the preconstruction conditions and signed by a Professional Engineer registered in the State of New York, shall be submitted to the Department.

### 9.5 DELIVERABLES

At a minimum, for the Option scope items, described in Section 1.3.2, the deliverables shall include the items listed in Error! Not a valid bookmark self-reference., for the Department’s review.

**Table 9-1 – Geotechnical Deliverables**

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Number of Copies</th>
<th>Delivery Schedule</th>
<th>Reference Section</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Hardcopy</td>
<td>Electronic</td>
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<tr>
<td>Geotechnical Work Plan</td>
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<td>1</td>
<td>20 days after NTP</td>
</tr>
<tr>
<td>Geotechnical Data Report</td>
<td>1</td>
<td>1 and 5 CDs</td>
<td>20 days after completion of subsurface investigation, including testing</td>
</tr>
<tr>
<td>Pre-Construction Condition Survey Report</td>
<td>3</td>
<td>1</td>
<td>Not less than 30 days prior to start of construction</td>
</tr>
<tr>
<td>Post-Construction Condition Survey</td>
<td>3</td>
<td>1</td>
<td>Not less than 30 days before Final Acceptance</td>
</tr>
</tbody>
</table>
SECTION 10 STRUCTURES

10.1 SCOPE

The Design-Builder shall be responsible for all work necessary to complete the design and construction of all permanent and temporary structures required to complete the Project, including the permanent bridges and new superstructures. The design and construction of all structural systems and components shall provide functionality, durability, ease of maintenance and inspection, safety, and pleasant aesthetics.

The Design-Builder shall be responsible for the review and approval of all shop drawings needed for the scope of work. The review and approval process shall be in conformance with the Design-Builder’s Quality Control Plan.

10.2 STANDARDS AND REFERENCES

The Design-Builder shall perform structural design and construction activities in accordance with the Contract Requirements and the applicable Standards and References cited in Section 1.6, unless otherwise stipulated in this Project Requirement or otherwise applicable to the Project.

10.3 DESIGN REQUIREMENTS

The Design-Builder shall design bridge structure components, as applicable to the Base Project and the Option, including but not limited to the following: primary and secondary structural elements, reinforced concrete deck, deck joints, pedestrian sidewalks, curb(s), abutment structures, abutment foundations bridge railings, bearings and drainage systems.

The Design-Builder may propose various types of superstructure systems and/or foundations and substructures to replace the existing bridges subject to the limitations outlined below. Allowable primary member systems include, but are not limited to, precast concrete arch systems (with precast headwalls and earth fill), precast prestressed composite concrete beam systems (sections found on NYSDOT BD sheets or approved equal), composite steel plate girder, composite steel box beam, prefabricated bridge panels, prestressed post-tensioned concrete segmental units or other innovative solutions not prohibited by the limitations shown below or design specifications.

The Design-Builder shall meet the Q100 freeboard that is shown on the PSR/FDR's for the 3 bridge replacements sites. For the Superstructure Replacement sites, if the proposed hydraulic opening is less than the current design, the Design-Builder shall provide a hydraulic analysis that shows the new superstructure has a minimum freeboard of 2 feet for the 50 year flood.

10.3.1 Components

Unless otherwise noted, the following items apply to both the Base and Option scope items.

A) Barriers, Railings and Pedestrian Fencing: Temporary traffic barriers shall meet the testing requirements of TL 2 and permanent traffic barriers shall meet the testing requirements of TL 2.

Barriers, railings and/or fencing that will be designed and constructed to contain users and materials, shall be detailed to prevent people from climbing and provide for maximum safety and security.
BIN’s 1035450, 1035460, and 1035470 are located in a New York State Scenic Byway. To maintain the visual resources of the area, permanent concrete rail shall not be used at any of the sites listed above.

B) Decks: Precast panel and/or cast in place decks are allowed. Two-course decks with asphalt overlays as defined in Section 5.1.4 of the NYSDOT Bridge Manual are not permitted. Bridge decks shall be made fully composite with the underlying primary member system. Filled, overfilled or unfilled steel grating decks and orthotropic steel decks are not permitted. All decks must be protectively sealed.

If the final surface is precast concrete with longitudinal and transverse field cast joints then profilographing or grinding shall be performed as necessary to ensure a smooth riding surface at the as designed grade and cross slope.

C) Deck Joints: The number of deck joints shall be minimized to the extent practical to minimize future maintenance. Where the range of movement is 2-½ inches or less, Armorless Bridge Joint Systems per the NYSDOT BD Sheets should be used, unless the nature of the movement (i.e. significant transverse movement) precludes their use. Deck joints in the sidewalk shall be ADA compliant.

If steel plate girders or prestressed concrete girders are utilized as primary members in conjunction with a composite reinforced concrete bridge deck, then, at a minimum, the beams and deck shall be made continuous for live load in lieu of installing a bridge deck joint over the pier. A joint-less deck system is required at each abutment. The minimum number of deck joints shall be used.

D) Superstructure: The superstructure may be constructed of concrete or steel. Structural steel, if used, shall be either weathering steel or conventionally painted steel.

Timber superstructure systems are not permitted. Composite beams, such as fiber reinforced polymer beams, are not permitted. Fracture-critical members, as defined by the NYSDOT Bridge Manual, are not permitted.

E) Prefabricated components and bridge panels: If prefabricated components and/or bridge panels are used, field cast joints between prefabricated components shall be made with ultra-high-performance concrete (UHPC) where applicable in accordance with the latest NYSDOT special specification regarding field cast joints between precast concrete units (including but not limited to Special Specification 557.21020016). Longitudinal and transverse field cast joints shall be proportioned, shaped and reinforced sufficiently to transmit load effects to adjacent units. Unreinforced longitudinal and transverse field cast joints are not permitted. In the absence of guidance found in traditional structural design manuals, lap lengths of reinforcement in UHPC shall conform to guidance contained in published research.

F) Bearings: Design and location of bearings shall provide for maintenance, accessibility and future replacement. Jacking points with sufficient capacity (full dead load and live load) to allow the superstructure to be lifted for bearing replacement under live load shall be provided. The plans shall include the location of the jacking points and the jacking loads.

G) Earth Retaining Structures and Abutments (Option only): The Design-Builder shall determine the location(s) and types of earth retaining structures and abutments. Wall type
selection and design by the Design-Builder shall meet all applicable Project Requirements. All earth retaining structures shall be designed for seismic events. Wingwalls shall be considered as part of the retaining walls. All walls including abutments shall have the same architectural facing treatment. Gabion and crib walls are not permitted.

H) Foundations (Option only): The Design-Builder shall calculate settlements for the different founding conditions along the bridge. Settlements likely to occur during construction shall be calculated separately from long term settlements.

I) Drainage: Drainage requirements are outlined in Section 17 of these Project Requirements.

10.4 DEMOLITION REQUIREMENTS

10.4.1 Scope

The Design-Builder shall demolish and remove the existing bridge superstructures, abutments, foundations, and pavement within the Project Limits in a safe and environmentally acceptable manner.

The demolition of the existing Bridge shall include all existing superstructure elements and all substructure elements to two feet below final grade elevation or in accordance with environmental permitting. Where new foundations are placed at the locations of existing foundations the existing foundations shall be removed to the extent needed to construct the new foundations.

The Design-Builder shall test for the presence of Hazardous Materials in all structures to be disturbed to ensure the handling, removal and disposal is done in accordance with all applicable laws and standards.

The abatement of all Hazardous Materials shall be completed to the greatest extent possible prior to any demolition taking place unless a legal variation from related laws, rules and regulations can be obtained.

The Design-Builder shall perform all Work with care so that any materials that are to remain in place, or that are to remain the property of the Department shall not be damaged. If the Design-Builder damages any materials that are to remain in place or which are to become or to remain the property of the Department, the damaged materials shall be repaired or replaced in a manner satisfactory to the Department at no cost to the Department.

The Design-Builder shall ensure that no aspects of the Works have a detrimental effect on public safety or the environment.

The Design-Builder shall ensure that no aspects of the Works have a detrimental effect on public safety.

The Design-Builder shall assume responsibility for safety and maintenance of all existing structures within the Project Limits, identified for removal in accordance with DB §105-12.
10.4.2 Standards

The Design-Builder shall perform the demolition activities in accordance with the Contract Requirements and the applicable Standards, Codes and Manuals listed in Section 1.6 unless otherwise stipulated in this Project Requirement, or otherwise applicable to the Project.

10.5 CONSTRUCTION REQUIREMENTS

The Design-Builder shall develop erection procedures for the bridge that include complete detailed erection sequence drawings; erection stresses in permanent and temporary members; bent and falsework reactions determined for each construction stage.

10.6 DELIVERABLES

At a minimum, the deliverables shall include the items listed in Table 10-1 for the Department’s Review for each project site.

Table 10-1

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Number of Copies</th>
<th>Delivery Schedule</th>
<th>Reference Section</th>
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<td>Bridge Load Ratings</td>
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<td>1</td>
<td>At Final Design Review</td>
</tr>
</tbody>
</table>
SECTION 11 LANDSCAPE ARCHITECTURE

11.1 SCOPE

The Design-Builder shall perform the landscape architectural activities as described in this Section 11.

11.2 STANDARDS AND REFERENCES

The Design-Builder shall perform site work in accordance with the Contract Requirements and the applicable Standards, Codes and Manuals cited in Section 1.6, unless otherwise stipulated in this Project Requirement or otherwise applicable to the Project.

11.3 GENERAL LANDSCAPE DEVELOPMENT

11.3.1 Existing Vegetation

Existing vegetation removal and disturbance shall be minimized to the cut/fill limits and any removals beyond those areas shall be replaced in kind with native species appropriate for USDA NY Plant Hardiness Planting Zone 5.

The Design-Builder shall obtain approval from the Department’s Construction QA Engineer prior to the removal of any tree with a diameter breast height (DBH) of 6 inches or greater outside of the cut/fill limits.

Vegetation outside the limits of disturbance shall be protected with temporary plastic barrier fence. The temporary plastic barrier fence shall be installed at or as close as feasible to the drip line of the trees to be protected.

Disturbed areas shall receive Topsoil and Turf Establishment. The type, either roadside or lawn, will vary based on location. The Design-Builder shall refer to guidance given in the Highway Design Manual.

11.3.2 Tree Replacement Factors

A) Every live, native deciduous tree greater than six inches diameter at breast height (“DBH”) which is removed must be replaced with a total quantity of deciduous trees a minimum of 2 inch caliper (size measured 6 inches above the base of the tree) equal to the total DBH size of the tree removed. For example, 10 inch DBH tree removed should be replaced with (5) two inch caliper trees; however the replacement quantity will go down if larger caliper trees are used.

B) Every live, native coniferous tree removed must be replaced with a total quantity of coniferous trees equal to the height and width of the tree removed. For example, a 20 ft high x 10 ft wide coniferous tree should be replaced by two (2) 10 ft high x 5 ft wide coniferous trees.

Each replacement tree should be the same genus and species of the tree removed, unless the tree being removed was identified as an invasive plant species.
11.3.3 Replacement Locations

Replacement planting may be located in the available right-of-way near the original locations of the trees that were removed.

Replacement planting may also be done near the right-of-way line or on private property. Planting on private property may only be done if private property owners provide written permission to the Design-Builder and agree to take over the long term care and maintenance of the plant material, and the appropriate release is obtained by the Design-Builder and in consultation with the adjoining property owner in accordance with NYSDOT EI 11-010.

The removal of any major deciduous trees over 6 inches in diameter at breast height shall be documented and the species noted in the existing tree inventory prepared by the Design-Builder’s arborist. Note that all trees, living and dead, should be included in the existing tree inventory and calculations for tree replacement.

11.3.4 Proposed Planting

The Design-Builder shall not use invasive plant species for any of the proposed planting subsequent to New York State 2012 Invasive Species Prevention Act, or a monoculture of plant species, to reduce the potential for disease or invasive insect species to eradicate the proposed planting. Planting shall be located in a manner that does not interfere with the safe use of travel ways. Planting should be designed in a manner that provides a mix of plant material species to create seasonal interest for the traveling public.

Post planting care and replacement plantings shall be as per the requirements of Special Specification 611.190X0024, Post Planting Care with Replacement.
SECTION 12 SIGNAGE, PAVEMENT MARKING AND SIGNALS

12.1 SCOPE

The Design-Builder shall provide all permanent fixed signing, permanent pavement markings and signal work required for the Project.

The Design-Builder shall be responsible for identifying, designing, detailing, fabricating, delivering and installing all signing and pavement marking materials and shall install all components necessary for a complete and functional system which, in addition to meeting the design and construction criteria specified above, meets the following requirements:

A) Provides for the orderly and predictable movement of all traffic;

B) Provides such regulation, guidance, warnings and advisories as are needed to ensure safe and informed operation;

C) Is fully and seamlessly integrated into the existing signing elements beyond the Project limits; and

The Design-Builder shall be responsible for the review and approval of all shop drawings needed for the scope of work. The review and approval process shall be in conformance with the Design-Builder’s Quality Control Plan.

12.2 STANDARDS AND REFERENCES

The Design-Builder shall perform the signage, pavement marking and signals activities in accordance with Contract Requirements and the applicable Standards, Codes and Manuals cited in Section 1.6, unless otherwise stipulated in this Project Requirement or otherwise applicable to the Project.

12.3 REQUIREMENTS

12.3.1 Design Requirements

The Design-Builder shall develop a signing and pavement marking plan for the Project that shall:

A) Provide for all components as called for in this Section 12;

B) Encompass the replacement of all existing signs within the Project limits;

C) Provide signing and pavement markings for bicycle and pedestrian facilities within the Project Limits;

D) Locate signs in accordance with the MUTCD and the NYS supplement;

E) Provide signs with high reflectivity with Type IX sheeting such as to not warrant sign lighting;
The Design-Builder may present the respective signing and pavement marking elements on separate drawings, but shall demonstrate that the proposed signs and pavement markings work in unison in the manner called for in these Project Requirements and the governing standards.

12.3.2 Construction Requirements

12.3.2.1 Signs

The Design-Builder shall not reuse any existing NYSDOT sign materials as part of the permanent signing installation and shall be responsible for the disposal of all signing materials and structures that are removed from the Project. Standard signs owned by municipalities other than NYSDOT, and non-standard signs owned by private entities but placed within NYSDOT right-of-way, with the acceptance of the Department, shall be removed, stored and reinstalled as required.

The Design-Builder shall be responsible for the provision of all signs, posts, frames and other structural components required for the installation and support of the sign panels.

12.3.2.2 BIN Plate Sign

The Design-Builder shall furnish and install a new BIN plate meeting the requirements set forth in this section.

The material requirements for the BIN plate are:

A) Panel with reflective background: The aluminum panel shall conform to the requirements of the NYSDOT Standard Specifications. The background material shall be green reflective sheeting conforming to the requirements of the NYSDOT Standard Specifications for Class A Sheeting. The size of the panels shall be 1/8" thick by 3" by 12". A thin rubber or plastic gasket or sheeting matching the plate size shall be placed behind the plate prior to installation.

B) Numbers: The numbers shall be reflective sheeting conforming to the requirements of the NYSDOT Standard Specifications for Class A Sheeting, except that the adhesive shall be pressure-sensitive such that the numbers can be applied to the background in the field. The numbers shall be 2" high and silver-white in color conforming to FHWA series C dimensions.

Prior to placing the numbers on the panel, the reflective background shall be clean and free of dirt and oil which may adversely affect proper adhesion. The numbers shall be placed on the reflective background, perpendicular to the longitudinal axis of the panel and vertically centered. The reflective background and numbers shall be coated and/or edge sealed in accordance with the recommendations of the sheeting manufacturer.

The BIN plate shall be attached to the beginning abutment, right side of the bridge using expansion anchors. The plate shall be placed high on the abutment, near the fascia of the bridge so that it cannot be painted over via a spray paint can or easily removed or damaged.

12.3.2.3 Pavement Markings

All linear roadway and cross hatching pavement markings shall be installed in accordance with the Department’s Specifications for epoxy pavement markings.
12.4 DELIVERABLES

Section not used.
SECTION 13  LIGHTING

Section not used.
SECTION 14  INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

Section not used
SECTION 15  WORK ZONE TRAFFIC CONTROL AND ACCESS

15.1  SCOPE

The Design-Builder shall be responsible for the planning and provision of Work Zone Traffic Control (WZTC), required to perform the Project Work until Project Completion. This Project Requirement applies to any roads, including ramps, cross roads, local streets, maintenance roads, driveways, and active paths within and/or affected by the Project.

The Design-Builder shall provide WZTC for the safe and efficient movement of people, goods, and services through the Project area(s) while maintaining access and minimizing negative impacts to residents, commuters, businesses, and NYSDOT maintenance operations.

Note that, as used in this section, “Work Zone Traffic Control plan” or “WZTC plan” is the equivalent of “Maintenance and Protection of Traffic plan” or “MPT plan” as described in Chapter 16 of the Highway Design Manual (HDM).

15.2  STANDARDS AND REFERENCES

The Design-Builder shall perform the work zone traffic control activities in accordance with the Contract Requirements and the applicable Standards, Codes and Manuals listed in Section 1.6, unless otherwise stipulated in this Project Requirements, or otherwise applicable to the Project.

15.3  REQUIREMENTS

15.3.1  General Requirements

A)  No overnight lane closures shall be permitted between November 1st and March 31;

B)  For BIN 1034970 Pedestrians shall be provided access across Catatonk Creek at all times during construction;

C)  Other than as noted in B) above, off-site detours that meet Department standards may be proposed at all bridge sites. In general, off-site detours should utilize the shortest route on State-owned highways that has no bridges with load postings, R-posted restrictions, or vertical clearance restrictions, or that are or will be under construction during the detour. The detour shall be fully signed.

15.3.2  Work Zone Traffic Control Plan

The Design-Builder shall prepare and submit a WZTC Plan for managing traffic operations and controlling access until Project Completion.

The WZTC Plan shall be submitted to the Department’s Design Quality Assurance Engineer a minimum of two weeks prior to initiation of any Work in proximity to traffic or the implementation of any change in traffic patterns.

The WZTC Plan shall include:

A)  Contingency plans for weather, utility issues, and other unforeseen interruptions;

B)  Duration of each WZTC stage, including duration of lane closure(s), if any;
C) Location and scheduled dates of use for all traffic control and safety devices, including but not limited to traffic channelization devices, barriers, impact attenuators, signs, pavement markings and variable message signs; and

D) Time of construction.

The Design-Builder shall confirm the acceptability of the proposed WZTC Plan with local officials, residents, and affected police jurisdictions to facilitate safe and effective enforcement. The WZTC Plan shall recognize the need for approval of the use of local public roads.

The Design-Builder shall produce a clear graphical representation of each stage, with associated traffic clearly delineated, in chronological order. Each significant change in traffic patterns shall be presented as a separate stage.

The Design-Builder shall be responsible for updating the WZTC Plan as necessary throughout the Contract, so that at all times the current version reflects the planned current and future construction staging activities.

The Design-Builder shall coordinate with any municipality or agency affected by any detours, lane closures or road closures that are part of the WZTC. The Design-Builder shall incorporate any comments from those municipalities or agencies into the WZTC Plan as directed by the CQAE.

The Design-Builder shall inform the Department’s CQAE one week in advance of any proposed WZTC lane closure or staging.

15.3.3 General Restrictions

The Design-Builder shall be aware that no short-term lane closures, as defined in the NYSDOT Standard Sheets for Work Zone Traffic Control, will be permitted on the following days and times:

A) from the Friday before Memorial Day through Memorial Day;

B) from the Friday before Labor Day through Labor Day;

C) from the day before Independence Day through Independence Day;

D) from the day before Thanksgiving Day through the Sunday following Thanksgiving Day;

E) Christmas Eve

F) Christmas Day;

G) during the Dick’s Sporting Goods Open for BIN 1095160 only. Note that the Dick’s Sporting Goods Open is an annual which has recently taken place at the En-Joie Golf Course in Endicott. The Open has been a three day event starting on a Friday in July or August. The dates of the Open are typically released in the preceding Spring at the discretion of the PGA Tour.
15.3.4  Access to Commercial Properties and Driveways

The Design-Builder must maintain public access in accordance with the Standard Specifications, and Standard Sheets.

15.3.5  Closure Restrictions

No overnight lane closures shall be permitted between November 15\textsuperscript{th} and March 15\textsuperscript{th}.

15.3.6  Minimum Lane Widths during Construction

The Design-Builder shall maintain a minimum travel lane width of 10 feet during construction.

The minimum lane width requirement is not to be interpreted as the minimum physical opening requirement.

CONDITIONS RESULTING IN A TRAFFIC WIDTH RESTRICTION:

If a physical opening of less than 14 feet exists along the traveled way through the work zone, special work zone width restriction signing will be required.

Physical openings of less than 16 feet require a width restriction to be filed with the Regional Permit Office. Restriction to be filed 2 weeks (min.) prior to planned implementation.

15.3.7  Portable Variable Message Signs

The Design-Builder shall provide at least six Portable Variable Message Signs for the duration of this Contract. The Portable Variable Message Signs shall be deployed as necessary for the various WZTC schemes developed. The portable variable message signs provided shall meet the requirements of NYSDOT Item No. 619.110202 (Portable Variable Message Boards with Cellular Option)

It is anticipated that the development of messages will primarily be the responsibility of the Department’s CQAE and operations staff at the NYSDOT’s Transportation Management Center.

The Design-Builder shall contact the Department’s CQAE at least two weeks prior to placement of any Variable Message Sign regarding their location and receive his concurrence of the location.

15.3.8  Temporary and Interim Pavement Markings

The Design-Builder shall provide temporary and interim pavement markings during all construction phases conforming to the requirements of the NYSDOT Standard Specifications.

15.3.9  Coordination with Regional Traffic Management Center

The Design-Builder is advised that the NYSDOT’s Traffic Management Center will provide support for the Project’s WZTC activities. Therefore, coordination among the Department’s Construction Quality Assurance Engineer, Design-Builder, and NYSDOT’s Traffic Management Center, will be required for all WZTC activities, particularly with respect to the use of Variable Message Signs (VMS)) in the Project area.
15.3.10 Emergency Response and Transportation Management Plans

The Design-Builder shall notify the Department’s CQAE immediately following any impacts to motorists due to construction activities and/or unforeseen circumstances. The CQAE will be responsible for disseminating the information to the appropriate personnel/entities for appropriate response to mitigate impacts to motorists.

The Design-Builder shall also provide the Department’s Project Manager a Transportation Management Plan (TMP) per FHWA’s Final Rule on Work Zone Safety and Mobility, 23 CFR 630 Subpart J. The Emergency Response Plan shall be a component of the TMP and shall be located in the contingency section of the TMP.
SECTION 16  PAVEMENT DESIGN AND CONSTRUCTION

16.1  SCOPE

The Design-Builder shall perform all Work necessary to provide all pavement required for the Project. This includes design, furnishing of materials, fabrication and construction of all temporary and permanent pavement for roadways within the Project Limits.

The Design-Builder shall be responsible for the review and approval of all submittals needed for the scope of work. The review and approval process shall be in conformance with the Design-Builder’s Quality Control Plan.

16.2  STANDARDS AND REFERENCES

The Design-Builder shall perform the pavement activities in accordance with the Contract Requirements and the applicable Standards, Codes and Manuals listed in Section 1.6, unless otherwise stipulated in this Project Requirement, or otherwise applicable to the Project.

16.3  REQUIREMENTS

All pavement materials and construction methods shall be in accordance with the requirements of the NYSDOT Standard Specifications and the NYSDOT materials and pavement installation methods.

Limestone and/or dolomite, regardless of the acid insoluble residue content, shall not be allowed for Type F1 friction aggregate requirements.

16.3.1  Full Depth Reconstruction

The Design-Builder shall develop and construct a pavement section(s) for full depth reconstruction, including subbase, of the Project roadways in conformance with the Comprehensive Pavement Design Manual, using the ESAL-based pavement design method. No partial-width full depth reconstruction will be permitted; any roadway requiring full depth reconstruction shall be reconstructed for its full width.

The limits of full depth reconstruction shall be the minimum required to provide a smooth transition from the existing pavement to the new bridge approaches and/or decks.

16.3.2  Milled and Resurfaced Roadways

The Design-Builder shall mill and resurface pavement areas as necessary to provide for a smooth transition between the existing and fully reconstructed pavement surfaces in accordance with the applicable Standard Sheets. The Design-Builder shall mill a minimum of 50’ beyond the limits of any full depth reconstructed pavement sections.

16.3.3  Utility Trench Restoration

Outside areas of full depth reconstruction, pavements in trench restoration areas shall match the adjacent pavement section.
SECTION 17 DRAINAGE AND STORMWATER

17.1 SCOPE

The Design-Builder shall design and construct a drainage system as needed for the estimated storm runoff that provides functionality, durability, ease of maintenance, maintenance access, safety, pleasant aesthetics, and protection against vandalism.

The Design-Builder shall be responsible for the review and approval of all shop drawings needed for the scope of work. The review and approval process shall be in conformance with the Design-Builder’s Quality Control Plan.

Drainage facilities shall be compatible with existing and/or proposed drainage systems in adjacent State highway properties and should preserve existing drainage patterns. Where drainage patterns will or must be changed from existing patterns, the Design-Builder shall be responsible for securing all necessary permits prior to construction of any drainage facilities.

Prior to Project Completion, the Design-Builder shall be responsible for cleaning all new and existing drainage facilities within the Project Limits.

17.2 STANDARDS AND REFERENCES

The Design-Builder shall perform the drainage and stormwater activities, including highway, bridge and site systems, in accordance with the Contract Requirements and the applicable Standards, Codes and Manuals listed in Section 1.6, unless otherwise stipulated in this Project Requirement or otherwise applicable to the Project.

17.3 REQUIREMENTS

17.3.1 General

The Design-Builder shall perform a hydraulic analysis to determine if bridge drainage and conveyance is required.

The Design-Builder shall design and construct the drainage and stormwater systems to meet the following requirements:

A) Provide a 50-year minimum service life on all drainage and stormwater management facilities for NYSDOT stormwater within the Limits of Construction; and

B) Modify the existing drainage and stormwater management elements for the Project to accommodate the proposed construction.

17.3.2 Drainage Report

The Design-Builder shall provide a Drainage Report to the Department and any other entities whose facilities will be impacted by the Project in accordance with HDM Chapter 8. The Design-Builder shall be responsible for coordination in advance with any third party to determine the necessary document submission required by the third party. At least 15 days prior to providing documents to any third party, the Design-Builder shall submit a draft Drainage Report to the Department’s Design Quality Assurance Engineer for consultation and written comment.
The Drainage Report shall document the design criteria used, any alternatives considered, final design basis, and all supporting calculations and computer model output.

17.3.3 Connections to Existing Systems

The Design-Builder shall develop Design Plans and Project Specifications for any connections to existing storm systems. The Design-Builder shall be responsible for calculations performed to ensure there is sufficient capacity to accommodate any increase in flow due to changes in drainage catchment area and/or to land use. These details shall be provided by the Design-Builder for review by the Department’s Design Quality Assurance Engineer and by any affected local entities at least 30 days prior to the proposed date for making the relevant connections. This paragraph shall not be construed to relieve the Design-Builder of the obligation to treat runoff water that requires treatment.

17.3.4 Spill Management

Spill prevention and response measures shall be described in the SWPPP.

17.4 DELIVERABLES

At a minimum, the deliverables in Table 17-1 shall be provided to the Department for consultation and written comment.

Table 17-1 Deliverables

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Number of Copies</th>
<th>Delivery Schedule</th>
<th>Reference</th>
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<td>Section</td>
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<td>Drainage Report</td>
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<td>Prior to preparation of drainage plans</td>
<td>17.3.2</td>
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<tr>
<td>Details of connections to existing systems</td>
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<td>See Section 17.3.3</td>
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</table>
SECTION 18 HIGHWAY DESIGN

18.1 SCOPE

The Design-Builder shall be responsible for the design, construction and reconstruction of the permanent roadway(s) to be constructed within the Project Limits, and any other roads damaged by construction operations, or necessary for permanent operations, all in accordance with the design requirements stated herein. Highway design, construction and reconstruction shall be understood to include the design, furnishing, and construction of all road appurtenances, protections, and safety devices not specifically cited in other Project Requirements.

In addition, the Design-Builder shall be responsible for the removal of non-standard systems that are affected by the proposed work and replacement with systems meeting current Department Standards.

18.2 STANDARDS

The Design-Builder shall perform the Work in accordance with the Contract Documents and the Applicable Standards, Codes and Manuals listed in Section 1.6, unless otherwise stipulated in this Project Requirement or otherwise applicable to the Project.

18.3 REQUIREMENTS

18.3.1 General

The Design-Builder shall be responsible for performing the detailed highway design and construction within the Project Limits in accordance with the Project Requirements set forth herein.

18.3.2 Design Requirements

Design requirements for the reconstruction of each project site shall be as specified below:

- For BIN 1095350 Connection Road over Osborne Creek:
  - Design Speed: 40 mph;
  - Lane Widths: 12 feet;
  - Shoulder Widths: 6 feet;
  - Bridge Roadway Width: 60 feet;
  - Pedestrian Accomm: Shoulder

- For BIN 1034970 NYS Rte 960H over Catatonk Creek
  - Design Speed: 35 mph;
  - Lane Widths: 12 feet;
  - Shoulder Widths: 3 feet;
  - Bridge Roadway Width: 35 feet;
  - Pedestrian Accomm: 5 ft sidewalk on left side
- For BIN 1095160 NYS Rte 26 over Crocker Creek
  - Design Speed: 55 mph;
  - Lane Widths: 12 feet;
  - Bridge Roadway Width: 44 feet;
  - Pedestrian Accomm: Shoulder

- For BIN 1023190 NYS Rte 34 over Dean Creek
  - Design Speed: 60 mph;
  - Lane Widths: 12 feet;
  - Bridge Roadway Width: 36 feet;
  - Pedestrian Accomm: Shoulder

- For BIN 1035450 (Option)
  - Design Speed: 60 mph;
  - Lane Widths: 11 feet;
  - Approach Lane Width: 11 feet;
  - Bridge Roadway Width: 32 feet;
  - Pedestrian Accomm: None

- For BIN 1035460 (Option)
  - Design Speed: 60 mph;
  - Lane Widths: 11 feet;
  - Bridge Roadway Width: 32 feet;
  - Pedestrian Accomm: None

- For BIN 1035470 (Option)
  - Design Speed: 60 mph;
  - Lane Widths: 11 feet;
  - Bridge Roadway Width: 32 feet;
  - Pedestrian Accomm: None

Typical Sections shall be developed to construct the roadways within the Project limits.

18.3.3 Guide Rail, Median Barriers and Impact Attenuators

The Design-Builder shall remove and dispose of all existing guide rail systems within the Project limits and replace with new guide rail to current NYSDOT Standards.

The limits of work for guide rail and median barrier shall be the lesser of the following:

1) The point where barrier is no longer warranted; or

2) A point where the proposed barrier can be transitioned to an existing barrier system which conforms to current standards.

All existing barrier systems that are removed shall become property of the Design-Builder.
The maximum interval of time between existing barrier removal and new barrier installation on a roadway that is open to traffic shall be in accordance with the NYSDOT Standard Specifications. All other time allowances shall conform to time allowances stated in the HDM. All installed barrier systems shall include appropriate glare screens, delineation and vegetation control strips.

18.3.4 Clear zone

The Design–Builder shall document clear zone on the final record plans.

18.4 DESIGN EXCEPTIONS AND NON-STANDARD FEATURES

It is the responsibility of the Design-Builder, in coordination with the Department, to obtain acceptance of any non-standard features included in the final design. The Department has identified two different non-standard features that were included in the PSR/FDR for which the Design-Builder would not need to obtain acceptance. The two non-standard features are as follows:

18.4.1 BIN 1035460 – NYS Route 97 over Pea Brook

A maximum proposed grade of 6.1%.

18.4.2 BIN 1035460 – NYS Route 97 over Pea Brook Tributary

A horizontal curve proposed of 716.7 feet.
SECTION 19  STANDARDS

19.1  GENERAL REQUIREMENTS

The Design-Builder shall identify the specific version of each Standard it uses. It is the Design-Builder’s responsibility to obtain clarification of any apparent error, omission, ambiguity or conflict regarding any Standard in accordance with DB §102-2.

19.2  SPECIFIC REQUIREMENTS

The Design-Builder shall assume that all provisions of the Standards, including the figures and tables, are mandatory and guidelines contained therein shall be assumed to be requirements. All words such as “should,” “may,” “must,” “might,” “could,” and “can” shall mean “shall” unless the context requires otherwise, as determined in the sole discretion of the Department. It shall be in the Department’s sole discretion to determine when the context does not require a provision to be mandatory.

Except as expressly otherwise provided in the Contract Documents, any reference to NYSDOT under a Standard shall mean the Department.

When a Standard refers to an action being necessary, needed, or recommended, the Design-Builder shall construe the action as required unless the context requires otherwise, as determined in the sole discretion of the Department.

Where reference is made in the Standards to items that are indicated in the plans or special provisions or required in the plans or special provisions, the plans or special provisions shall mean the Design-Builder’s Plans or the Special Provisions.

References in the Standards to approved products or materials shall mean approved by the Department.

All references in the Standards to the inspector, the field inspector, the project engineer, the engineer, the materials engineer, the district materials engineer, the survey crew, the project supervisor, the agency certified technician, the certified plant technician, and the representative of the Office of Materials shall mean the Design-Builder, except as otherwise expressly provided in the Contract Documents or otherwise directed by the Department.

When a Standard refers to an approval of any correction or repair that deviates from the Contract requirements, the Acceptance must be by the Department.

When a Standard refers to items that will be performed or provided by NYSDOT or by a division or employee of NYSDOT, the Design-Builder shall construe the requirements as applying to the Design-Builder unless otherwise specified in the Contract Documents, or unless the context requires otherwise. It shall be in the Department’s sole discretion to determine when the context requires otherwise.