KOSCIUSZKO BRIDGE PROJECT - (BIN 1075699)

PIN X731.24, Contract D900011

DB CONTRACT DOCUMENTS

ADDENDUM #4

October 21, 2013
Modification to the Request for Proposals
Kosciuszko Bridge Project
PIN X731.24, Contract D900011

General Instructions

Delete Page 5, 23 and 24 of the Instructions to Proposers, and substitute with the attached revised Page 5, 23 and 24.


Delete Page 1 of Form FP of the Instructions to Proposers, Appendix D, Forms and substitute with the attached revised Page 1 of Form FP.


Delete GN-01 and DP-02 of the DB Contract Documents, Part 6, RFP Plans and substitute with the attached revised GN-01 and DP-02.

Delete all Indicative Plans of the DB Contract Documents, Part 6, RFP Plans.

by the Proposer shall also become the property of the Department contingent upon the
Proposer signing the Stipend Agreement.

1.5.3 Errors

If any mistake, error or ambiguity is identified by the Proposer at any time during the Proposal
process in any of the documents supplied by the Department, the Proposer shall have a duty to
notify the Department of the recommended correction in writing in accordance with ITP
Section 2.3. Notification shall be made to the Department as soon as possible.

1.6 PROPOSAL SCHEDULE

1.6.1 Anticipated Schedule

The Department anticipates the following procurement schedule for the Contract:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final RFP to Shortlisted Firms</td>
<td>August 27, 2013</td>
</tr>
<tr>
<td>Proposal period one-on-one meetings with all Proposers,</td>
<td>August 20-21, 2013 to</td>
</tr>
<tr>
<td>specific dates to be determined</td>
<td>October 1-2, 2013</td>
</tr>
<tr>
<td>Final date for Proposers to submit ATC’s for review</td>
<td>October 23, 2013</td>
</tr>
<tr>
<td>Final date for Department’s responses to ATCs submitted</td>
<td>November 8, 2013</td>
</tr>
<tr>
<td>for review</td>
<td></td>
</tr>
<tr>
<td>Final date for receipt of Proposer questions</td>
<td>November 8, 2013</td>
</tr>
<tr>
<td>Issue date for Final Addendum and/or answers to</td>
<td>November 19, 2013</td>
</tr>
<tr>
<td>Proposer questions</td>
<td></td>
</tr>
<tr>
<td>Final date for requests for changes to Proposer’s</td>
<td>November 20, 2013</td>
</tr>
<tr>
<td>organization and personnel</td>
<td></td>
</tr>
<tr>
<td>Final Date for proposer to respond to conditional approval</td>
<td>November 26, 2013</td>
</tr>
<tr>
<td>of ATCs</td>
<td></td>
</tr>
<tr>
<td>Proposal Due Date</td>
<td>December 4, 2013</td>
</tr>
<tr>
<td>Post Proposal meetings (if required)</td>
<td>December 5, 2013 to</td>
</tr>
<tr>
<td></td>
<td>January 9, 2014</td>
</tr>
<tr>
<td>Selection of Best Value</td>
<td>January, 2014</td>
</tr>
<tr>
<td>Execution of Contract</td>
<td>Late February, 2014</td>
</tr>
<tr>
<td>Notice to Proceed</td>
<td>Early March-April 3, 2014</td>
</tr>
</tbody>
</table>

This is a tentative schedule. All dates set forth in the preceding table and in this RFP are subject
to change, in the Department’s’ sole discretion. To the extent that dates are changed, the
Department shall notify the Proposers by Addendum.
an ATC under this ITP. If the Proposer does not clearly designate its submittal as an ATC, the submission will not be treated as an ATC by the Department.

The Department will review each ATC submitted and will use best efforts to provide a response within two weeks. Proposers submitting multiple ATCs shall indicate an order of priority to assist the Department in determining which ATCs should be reviewed first.

If an ATC is summarily approved, the Department’s comments will inform the Proposer that its ATC appears to be generally acceptable. If the Department needs more information to determine whether or not the ATC will be approved, conditionally approved, or not approved, the Department will submit written questions to the Proposer and/or request a One on One meeting as described in ITP Section 2.4.1.

If an ATC is not approved or conditionally approved and the Proposer is of the view that the non-approval or the conditions for approval were due to an incorrect conclusion on the part of the Department, the Proposer may re-submit the ATC for one additional review to the Department’s Designated Representative at the email address identified in ITP Section 2.2.12 until the final date for ATC submittals set forth in ITP Section 1.6.1. If a re-submittal is made, it shall be accompanied by a cover letter clearly identifying such submission as an ATC submitted for an additional review. Upon receipt of a request for additional review in accordance with this Section, the Department will conduct its additional review of the ATC and provide a response to the Proposer by email not later than the date for such responses set forth in ITP Section 1.6.1.

The Proposer shall advise the Department in its ATC submittal if it believes a One-on-One meeting is appropriate.

The Department will attempt to return its approval, non-approval, conditional approval, or additional questions pertaining to any specific ATC no later than two weeks after receipt of that ATC.

3.2 CONTENT AND SUBMISSION OF ATC SUBMITTALS

3.2.1 Contents of ATC Submittals

Each ATC submittal shall include the following:

A. Description: A detailed description and schematic drawings of the configuration of the ATC or other appropriate descriptive information;

B. Usage: Where and how the ATC would be used on the Project;

C. Deviations: References to any requirements of the RFP Documents or to any elements of the Contract Documents that are inconsistent with the proposed ATC, an explanation of the nature of the proposed deviation and a request for: (a) approval of such deviations; or (b) a determination that the ATC is consistent with applicable requirements;
D. Analysis: An analysis justifying use of the ATC and why the deviations from the requirements of the RFP Documents should be allowed;

E. Impacts: Discussion of potential impacts of the ATCs on vehicular traffic with an emphasis on truck traffic in the community due to the construction, Creek traffic, environmental impacts (favorable and unfavorable) identified in appropriate environmental documents (especially with regard to the impacts and commitments of the EIS), community impact, safety and life-cycle, Project and infrastructure costs (including impacts on the cost of repair and maintenance);

F. Environmental Approvals: A discussion of what, if any, changes in the compliance terms, best management practices and avoidance measures identified in the EIS or any Environmental Approval would be required as a result of the ATC. A discussion of whether the ATC would require any deviation from the terms and conditions of any permit or of any anticipated or existing Environmental Approval or new Environmental Approval and, if so, an analysis of the steps required, costs involved and time that would be required to obtain, and the likelihood of success in obtaining, the required approval from the appropriate Governmental Agencies, as well as an analysis of all potential impacts on the Project;

G. History: A detailed description of other projects where the ATC has been used under comparable circumstances, if any, the success of such usage, and names, email addresses and contact telephone numbers of project owners that can confirm such statements;

H. Risks: A description of any added or reduced risks to the Department and other Persons associated with implementing the ATC;

I. Schedule: An estimate of the impact of the ATC upon the Contract duration and schedule shall be given, including the Proposer’s estimate of the likely durations for any permits and consents necessary for the ATC;

J. Price: An estimate of the impact (savings) of the ATC on the Proposal Price;

K. ROW Requirements: A list of additional ROW requirements, if any, and a description of when additional ROW would be required in order to implement the ATC; and

L. One-on-One Meeting: A statement as to whether, in the Proposer’s view, a one-on-one meeting with the Department would be appropriate to discuss the ATC.

3.2.2 Submission of ATC Submittals

Each ATC submittal shall be submitted to the Department’s Designated Representative on Form ATC and shall comprise:

A. Seven printed copies of the ATC submittal contents as summarized in ITP Section 3.32.1; and

B. One electronic copy of the ATC submittal, comprising each submitted document in searchable portable document format (pdf) without copy or password protection on a non-copy protected compact disk (CD).
more than two 8.5” x 11” pages per person) for QC personnel identified in the QC Organization Charts.

The narrative for the Initial Quality Control Plan should describe the approximate number, roles and responsibilities of key QC personnel during each phase of the Project to ensure quality design and construction, and describe the inter-relationship and relative authority within the Proposer’s organization of QC staff and design and construction staff and the interaction with Design and Construction QA Engineers. The Proposer should also describe the proposed Construction Inspection staffing to be provided throughout construction.

B5.0 SCHEDULE

B5.1 INITIAL PHASING/SEQUENCING PLAN

B5.1.1 Base Project Initial Phasing/Sequencing Plan

The Proposer should include an Initial Project Phasing/Sequencing Plan for the Base Project that should be consistent with the Initial Work Zone Traffic Control Plan and should include any proposed segmentation of the Project. The Initial Project Phasing/Sequencing Plan should include: a description of the timing and phasing of the design and construction Work; an executive summary version of the Initial Baseline Project Schedule (see ITP Section B5.2.1); a narrative that lists and describes the assumptions used in preparing the Initial Baseline Project Schedule, which should include the timing, duration and subject matter for the review and processing of all required submittals; a narrative that should describe the restraints, critical path activities, activities requiring night work, activities that include contingencies, holidays and other non-work days, potential problem areas, permits, the timing and duration of temporary lane closures, utility relocations, proposed use of properties for staging and laydown activities, and the accommodation of any work restrictions.

The Initial Project Phasing/Sequencing Plan should include a specific description of the Proposer’s planned coordination with other contractors working in the vicinity and impacted by the construction of the Project.

As part of the Initial Project Phasing/Sequencing Plan the Design-Builder should provide visualizations including 3D animation and 4D schedule simulation that presents a visualization of the key elements of the design concept, approach and Project constraints in accordance with Part 3 – 26. CADD and 4D/5D Models. **Note that the Initial Phasing/Sequencing Plan shall not include cost information or a 5D Model.**

B5.1.2 Base Project Plus the Option Initial Phasing/Sequence Plan

The Proposer should include an Initial Phasing/Sequencing Plan for the Base Project Plus the Option that meets all of the requirements as outlined in section B5.1.1 above.
FORM FP - FORM OF PROPOSAL

Form FP shall be filled out by the Proposer only or by each Principal Participant if the Proposer is a Joint Venture and does not have a Federal ID Number and a New York State Vendor ID Number.

<table>
<thead>
<tr>
<th>PROPOSER</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME</td>
<td></td>
</tr>
<tr>
<td>TITLE</td>
<td></td>
</tr>
<tr>
<td>TELEPHONE No.</td>
<td></td>
</tr>
<tr>
<td>ADDRESS</td>
<td></td>
</tr>
<tr>
<td>STATE FINANCIAL SYSTEMS VENDOR ID NUMBER</td>
<td></td>
</tr>
<tr>
<td>FEDERAL ID NUMBER</td>
<td></td>
</tr>
</tbody>
</table>

TO NEW YORK STATE DEPARTMENT OF TRANSPORTATION (THE “DEPARTMENT”):

The undersigned proposes to design and construct this Project in accordance with the Part 1 - Design-Build Agreement, Part 2 - Design-Build Section 100, Part 3 - Project Requirements and all other Contract Documents and certifies to furnish and deliver all the materials and to do all work and labor required for the design and construction and other identified activities for the Kosciuszko Bridge Project (BIN 1075699), Kings County and Queens County, at the prices stated in the Schedule of Prices (Form SP). The undersigned also certifies that the undersigned has examined the Site and the RFP, including Parts 1 through 9 inclusive of the Contract Documents before submitting the Proposal and is satisfied as to the requirements therein. As further consideration for the award of this Contract, the undersigned agrees to the following terms, conditions and acknowledgments:

SECTION 1. To execute the Contract and to furnish Contract security, as specified in Contract Documents Part 2, DB Section 103-3 and Appendix (Part 1) to this Form FP within the time period prescribed in Section 5.0 to the Instructions to Proposers, and failing to do so, to forfeit the accompanying check or Proposal Bond to the Department as liquidated damages, and the Department may proceed to award the Contract to others.

SECTION 2. To commence Work promptly following the effective date of the Notice to Proceed, and to complete the Work by the milestone dates and completion deadlines specified in the Contract Documents.

SECTION 3. To furnish a performance bond and a payment bond in the amount specified in the RFP for the full, complete and faithful performance of this Contract.

SECTION 4. The undersigned declares that it is the only entity or party interested in the Proposal as principal and that its officers, employees, subsidiaries or parent corporations (check appropriate box following):
- New Eastbound Main Span
- New Eastbound Brooklyn and Queens Approaches
- New Eastbound and Westbound Brooklyn Connector including the entrance and exit ramps (BIN 1075699A and BIN 1075699B)
- New Eastbound and Westbound Queens Connector including LIE Interchange Ramps
- New Eastbound and Westbound Portion of Meeker Avenue Viaduct
- New Pedestrian Bridge (at Laurel Hill Boulevard), Queens (BIN 1-06589-0)

B) Preliminary Design of:
- New Westbound Main Span
- New Westbound Brooklyn and Queens Approaches
- New Bikeway/Walkway

Preliminary Design of the Westbound structures shall include design for wind loads and wind tunnel testing and additional geotechnical investigation and design. Preliminary Plans shall follow the Structures Preliminary Plan Checklist in Appendix 3F of the NYSDOT Bridge Manual. The Preliminary Design Package must be submitted to the Department by April 30, 2015.

C) Demolition and removal of:
- Existing Main Span
- Existing Brooklyn and Queens Approaches
- Existing Brooklyn Connector including the existing entrance and exit ramps ((BIN 1075699A and BIN 1075699B)
- Existing Queens Connector
- Existing Portion of Meeker Avenue Viaduct
- Existing Buildings in acquired Right-of-Way
- Existing Pedestrian Bridge (at Laurel Hill Boulevard), Queens (BIN 1-06589-0)

D) Design, erection, maintenance and removal of temporary bridges required to maintain six lanes of BQE traffic through-out construction with no detours or diversion of traffic to local streets;

E) Reconstruction and realignment of local streets within the project limits including but not limited to the realignment of Cherry Street between Vandervoort Avenue and Stewart Avenue and the re-opening of Stewart Avenue from Thomas Street to Anthony Street;

F) Design and construction of new bridge drainage system;
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.

1.8 INDICATIVE PLANS

The Indicative Plans provided to the Design-Builder in Part 6 – RFP Plans, to Proposers as References on the Project website in conjunction with, the Structure Justification Reports 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 determine the impacts of the project, the basis for permit applications and to determine the extent of property acquisitions required. Note that the Work Zone Traffic Control Indicative Plans were developed based on a previous four contract Design-Bid-Build scheme and therefore do not reflect the current scope of the Design-Build 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 Project Requirements.

1.9 DIRECTIVE PLANS

The Directive Plans provided to the Design-Builder in Part 6 – RFP Plans are mandatory.

1.10 ENVIRONMENTAL RE-EVALUATION

Decisions to deviate from the Indicative Plans may require a review in relation to the FEIS, Reevaluation Statement and other Environmental Approvals.

If it is determined that the proposed deviations require a further reevaluation of the FEIS or other Environmental Approvals, the Design-Builder shall revise the plans such that they are in conformance with all existing Environmental Approvals. Such revisions shall be carried out at no additional cost to the Department.

1.11 DOCUMENT CONTROL

The Design-Builder shall follow the procedures outlined in Part 5 Special Provision SP15-SP20 – Document Control System.

1.12 SCHEDULE OF PROJECT COMPLETION
E) For the Design-Builder-located areas, the Design-Builder shall notify the Department of scheduled meetings with regulatory agencies and provide to the Department copies of any documentation regarding environmental compliance;

F) The Design-Builder shall be solely responsible for compliance with and violations of any Environmental Requirements;

G) 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.

H) The Design Builder shall construct a cap including fencing and drainage on a portion of the former Phelps Dodge Refining Site in Queens per the Directive Drawings included in Part 6 – RFP Plans. The cap shall be installed by the Design-Builder before construction on and adjacent to the area to be capped can begin. The construction activities on the cap are subject to the loading restrictions included in the Directive Plans. If the Design-Builder constructs a temporary structure on Parcel 1A or 9A for access to the Creek, pile foundations shall not be used. If a spread footing is utilized it shall not penetrate the ground and loads may not exceed the allowable loads indicated in the capping plans. The Design Builder shall provide a Final Engineering Report (FER) and certification of As-Built plans to assure the caps are built in accordance with the approved plans. The Design-Builder shall relocate the unused stockpiled soil from Parcel 1A to Parcels 2 and 1C as directed by the Phelps Dodge representative. The Design-Builder shall provide a minimum of 10 days notice to Phelps Dodge Refining Corporation (PDRC) before the movement of the stockpiled soil on Parcel 1A to allow for a PDRC representative to be onsite during any such movement.

I) The Design-Builder shall provide access to the PDRC inspector and NYSDEC personnel on Parcels 1A and 2 for monitoring and maintenance of the existing Ground Water Treatment System as required.

J) The Design-Builder shall be responsible for complying with the Monitoring Program on the Laurel Hill Site. See Part 6 – RFP Plans. The Department will install the monitoring program prior to award of the Design-Build Contract. The intent of the program is to monitor soil movements and groundwater movements associated with the sheet pile wall that is intended to prevent movement of groundwater from the site into Newtown Creek. Based on readings taken during the RFP phase, the Department intends to establish allowable tolerances for the monitoring program. A layout of the plan is indicated on the capping plans. Two months after award of the contract the Design-Builder shall take over responsibility for maintaining the monitoring and for continuing the readings until Project Completion. If the readings indicate that due to the Design Builder’s activities, the wall has been compromised and that groundwater from the site is moving through the wall into the creek, it may be necessary to halt construction in the vicinity of the wall and remediate the wall until the work can be restarted at the site. The Design Builder shall be responsible for any such delays if they are attributed to the activities of the Design-Builder.

K) The Design-Builder shall take the appropriate actions to limit the potential for propeller scour in Newtown Creek. Provisions shall include limiting the drafts, horsepower and operating speeds of tugboats in the Creek as required. The requirements for monitoring turbidity are described in 3.2.5N below.
L) The Design-Builder shall coordinate with PDRC on all aspects of the project that will affect the Laurel Hill site, including the following: capping of Parcels 1A, 9A and 2; construction of the temporary platform on the northern side of Newtown Creek; construction of the temporary bridge over the barrier wall installed as part of the groundwater collection and treatment system (“GWTS”); geotechnical borings for and construction of support piers on Parcels 2 and 5; implementation of the monitoring program; and removal of any temporary piers from the construction of the temporary platform and temporary bridge over the barrier wall (collectively, “Laurel Hill Activities”). Coordination with PDRC shall include providing a) a minimum of 5 days notice to PDRC of any Laurel Hill Activities so that such representative may be present to observe any such activities, if deemed necessary by PDRC b) relevant progress reports required by DOT and/or DEC to PDRC at the same time they are submitted to the agencies, c) PDRC or its representative 5 business days to review and comment on any significant design modifications or field decisions related to Laurel Hill Activities; and d) PDRC or its representative an opportunity to take split samples of any sampling conducted in accordance with the required monitoring plan or otherwise.

3.2.2 Construction Noise
The Design Builder shall conduct all work to meet the commitments made in the ROD and the requirements of the NYC Noise Code.

3.2.3 Cultural Resources Protection
Per the 2008 Memorandum of Agreement between FHWA, the Department and NYSHPO, the Department has prepared a revised Archaeological Area of Potential Effect (APE), Archaeological Work Plan (AWP), Historic American Engineering Record (HAER), and Construction Protection Plan for Old Calvary Cemetery (CPP). The Department has obtained FHWA and NYSHPO approval for the APE, AWP, HAER and CPP. Before the start of construction the Design-Builder shall revise, if required, the approved Archaeological Work Plan and approved Construction Protection Plan provided by the Department and obtain Department, FHWA and NYSHPO approval of the revised Plans. It is noted that the plan identifies possible significant shipwrecks that are in the project area in Newtown Creek. The Design-Builder shall carry out the requirements set forth in the approved plans including requirements for an on-site archaeologist.

The Design-Builder shall assume three Phase II archaeological surveys will be required. Full reports, including the results of any intensive documentary studies, will be required by the review agencies upon completion of the fieldwork. Black and white photographs are not required as part of the archaeological field records.

3.2.4 Ecological Management
The Design Builder shall be required to comply with all conditions of the permits.

3.2.5 Contaminated Materials Management
A) The Design-Builder is advised that previous investigations identified contaminated soil, groundwater, and soil vapor at the project site. The results of previous investigations conducted by the Department for the project are available in the Contaminated Material Investigation Findings Report, Kosciuszko Bridge Reconstruction Project, Brooklyn and
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.

Table 7.3-2 – Occupied Properties within NYSDOT Acquired ROW – Vacancy Pending

<table>
<thead>
<tr>
<th>Tenant</th>
<th>Map and Parcel Numbers</th>
<th>Anticipated Vacancy Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lanoves, Inc.</td>
<td>M28 P46, P47, P48</td>
<td>October 18, 2013</td>
</tr>
</tbody>
</table>

The Design-Builder should proceed under the assumption that Sunny Lumber (Map 28) and Karp Associates (Map 31) will not be vacated until after the Notice to Proceed has been issued. Provisions in the proposal should accommodate and avoid these occupied properties until such time as the Design-Builder receives a Notice of Availability in writing for each individually listed parcel from the Department.

7.3.2 Notification of Property Owners

The Design-Builder shall coordinate with property owners and/or tenants so as to minimize impact on the property owners’ and/or tenants’ operations when performing work in the Permanent and Temporary Easements. The Design-Builder shall inform the property owners and/or tenants 72 hours in advance of occupying any Permanent or Temporary Easement, and shall provide the Department with a two week look ahead schedule of planned operations that may impact or affect property owners or tenants.

7.3.3 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.

The Design-Builder shall be aware that the acquisition of temporary land or other property beyond what is shown on the indicative Directive plans may require a review in relation to the Uniform Act, FEIS, Reevaluation Statement and other Environmental Approvals and is subject to review by the Department. If it is determined that the proposed acquisitions require a further reevaluation of the FEIS or other Environmental Approvals, the Design-Builder shall revise the plans such that they are in conformance with all existing Environmental Approvals. Such revisions shall be carried out at no additional cost to the Department.
These strategies are consistent with the requirements of Part 3 Section 16 – 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 will be responsible for the daily 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.

8.3.3 Community Liaison Office

The Design-Builder shall provide a Community Liaison Office (CLO) which may be part of the Design-Build Office or an independent office. The CLO shall be staffed by a Community Liaison provided by the Department. The Design-Builder shall provide the CLO with a desk, chair, computer, printer, storage capacity for hard copy files, and smart phone for 24/7 availability and email capability. The CLO shall have a phone hotline for individuals to call with concerns or questions. The phone number of the hotline shall be posted by the Design-Builder on signs within the affected neighborhoods, on the Project website, and in the Project newsletter.

8.3.4 Community Meetings

The Design-Builder shall support community meetings to inform the general public (Open Houses) and the Kosciuszko Bridge Stakeholders Advisory Committee (SAC) about the project and construction activities. The meetings shall include formal PowerPoint presentations and informal discussion about the planned work, design issues, upcoming construction activities, Work Zone Traffic Control (WZTC), traffic impacts and detours, construction impacts such as noise, dust and vibrations and mitigation of construction impacts. The Design-Builder shall support these meetings and presentations providing applicable staff, photos, graphics, visualizations and drawings. General topics and schedule for SAC meetings and Open Houses are as follows:

<table>
<thead>
<tr>
<th>Community Meeting Schedule</th>
<th>Meeting Types</th>
<th>Meeting Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within 60 days of Notice to Proceed start of construction</td>
<td>1 SAC Meeting, Brooklyn &amp; Queens (B/Q) Open Houses</td>
<td>Introduce Design-Build Team, Overview of Design-Build Process, Presentation of Bridge Visuals, Construction Schedule, Construction Impacts and Mitigation, Work Zone Traffic Control Scheme</td>
</tr>
<tr>
<td>Within 30 days of start of construction</td>
<td>1 SAC Meeting, B/Q Open House</td>
<td>Upcoming construction, WZTC, Traffic impacts and mitigation, Construction impacts and mitigation</td>
</tr>
</tbody>
</table>
8.3.5 Website

The Department will host and maintain the Project’s website. The Design-Builder shall support the Department by providing applicable photos, graphics, visualizations and drawings. These materials will primarily be prepared for other outreach activities but may need to be reformatted for use on the website.

8.3.6 Weekly Press Releases

The Design-Builder shall prepare draft weekly press releases that provide the upcoming week’s daily work scope and schedule, highlighting any lane closures and related traffic impacts. The final press releases will be distributed by the Department.

8.3.7 Project Newsletters

The Design-Builder, in coordination with the Department, shall support the preparation of biannual Project Newsletters. The Project newsletters shall provide the public with updates on Project activities, schedule of key events, and related information, including locations on the Project website or elsewhere where further information can be obtained by the public. The Design-Builder shall support preparation of the newsletters by providing input on proposed upcoming activities and providing applicable photos, graphics, visualizations and drawings.

8.3.8 Technical Media

The Design-Builder shall be responsible throughout the duration of the Project (until Final Acceptance) for preparing public information videos for use in various public involvement activities, including the Project website and public meetings. The Design-Builder shall provide appropriate technical media and materials that: (1) provide the public with up-to-date information through the Project’s website that demonstrates the progress on the Project’s construction; (2) use text, graphics, live video and video simulations to document relevant aspects of the Project’s design and construction; and (3) use strategically positioned videocam systems and time-lapse imagery of the construction of the project. The Design-Builder shall be responsible for preparing and providing to the Department all videos, videocam systems and any other technical visual tools. The Design-Builder shall be responsible for storing the entire Project’s video documentation in a database to which the Department shall have access and which shall become the property of the Department at Final Acceptance.
Telecom Services of New York, Time Warner Cable of NYC and Empire City Subway Ltd. / Verizon Comm. In addition, the Department is currently coordinating with National Grid to finalize and execute a Preliminary Utility Agreement to be provided to Proposers by Addendum. A draft of this agreement is included in Part 4 – Utilities.

It is anticipated that final utility relocation agreements will be executed between the Department, the Design-Builder and the 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 the Preliminary Utility Agreements in Part 4 - Utilities and all associated costs shall be included in the bid.

9.3.2 Electrical Power Supply and Distribution

9.3.2.1 General requirements

The Design-Builder shall be responsible for the design and implementation of the necessary normal electricity supply commensurate with the Design-Builder’s design, and for all planning and liaison necessary with relevant utility suppliers for the arrangements for provision of the necessary normal power supply. The Design-Builder’s design shall maximize the reliability of the normal power while minimizing the total installation cost and future electricity and maintenance costs.

The Design-Builder shall purchase and install all necessary components required to deliver the normal electricity supply and distribution systems from Consolidated Edison Company of New York or an approved equal.

All electrical work performed by the Design Builder shall be performed by or under the supervision of a Master Electrician licensed in the State of New York and New York City. Final approval and acceptance of the work shall be granted by the utility owner.

9.3.2.2 Bridge Structure Normal Electric Power Redundancy

The normal electricity supply to the bridge shall include full redundancy from two electric feeds, from both Brooklyn and Queens. Full redundancy includes automatic facilities to transfer without interruption all the loads energized by one source to the other source, in the event of a utility power outage. Full redundancy includes the ability to power the entire bridge with electricity supplied by one feed in the event either feed service is disrupted. See Section 15 – Intelligent Transportation System of these Project Requirements for additional electric power needs. Full redundancy shall be coordinated with the utilities serving power to both sides of the bridge by the Design-Builder.

9.3.2.3 Power Supply and Distribution Staging

The electrical supply to the existing bridge, including existing NYCDOT Street lighting, or existing ITS power, shall remain fully operational throughout construction of the new bridge structures. The Design-Builder is responsible for permanent and temporary electrical
also be provided in Brooklyn wherever the edge of the new structure passes over an existing building to remain.

3) Protection shall be provided to all superstructure elements above the deck. Rigid traffic barriers shall be used to separate roadway shoulders from the towers and the stay cables. The level of protection shall be in accordance with Security Requirements provided by the Department.

4) Barriers, railings and/or fencing that will be designed and constructed to contain users and materials, shall be detailed to prevent people from climbing, provide for maximum safety and security, minimize weather (wind, rain, snow) impacts and maximize viewing opportunities.

B) Decks. Precast panel and/or cast in place decks are allowed except at steel girder Approach and Connector spans where cast-in-place decks will be required. Filled, overfilled or unfilled steel grating decks and orthotropic steel decks are not permitted. All decks must be protectively sealed. A 2” concrete overlay is required at the Main Span and at concrete box girders if utilized.

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 shall be used unless the nature of the movement (i.e. significant transverse movement) precludes their use. For larger movements, modular type joints shall be used in the roadway sections. For the joint between the cable-stayed main span and approach structure, movement and rotations shall be accounted for in the joint design. Deck joints in the bikeway/walkway shall be bicycle-safe.

D) Superstructures

1) The interior of any superstructure element such as box girders shall be accessible for inspection and maintenance. Means to facilitate safe access to interior spaces shall be provided.

2) Structural steelwork shall be fully metalized or galvanized. This includes the interior of steel box girders, if utilized. All metalizing shall be 90% zinc metalizing with 9 mil dry thickness sealer. Hot dip galvanizing shall be 4 mil thick. Structural steelwork at the Meeker Avenue Viaduct only shall be painted. Anchor Box Steel not exposed to the elements may be painted.

3) The interior of any box girders shall be illuminated and provided with 120V outlets as required in Project Requirement 14 - Lighting.

4) Drain holes shall be provided at all low points in box girder cells to ensure no ponding occurs in the event of water leakage into the box. All drain holes shall be protected with type 316 stainless steel bird screens.

E) 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.
under this Project, the Design-Builder shall design and construct the Eastbound structure to allow for future installation of these crosswalks.

M) Dampers. Dampers shall only be used for the stay cables and shall not be used for structure damping.

N) Stay Cable System

1) The Stay Cable system shall be in accordance with Part 5 – Special Provisions – Stay Cables. Security measures shall be incorporated into the design per the security requirements provided by the Department and the Department’s review and approval. In addition, an icing prevention system shall be incorporated in the design and construction of the towers and the cable stays over the roadway.

2) A 1'-6" clear horizontal distance shall be provided from the outside face of barrier to the nearest obstruction associated with the stay cable system and associated hardware. This distance shall be maintained from the top of barrier to 18 feet above the roadway deck adjacent to traffic lanes. Adjacent to the bikeway/walkway, a one foot minimum clear distance shall be provided from the outside face of the bikeway/walkway railing to the nearest obstruction associated with the stay cable system and associated hardware. This distance shall be maintained from the top of railing to 10 feet above the bikeway/walkway deck.

3) The bridge shall be designed so that each stay cable can be replaced one at a time without temporary supports. The bridge shall be designed so that cable(s) loss will not result in failure of the bridge. The loss of cables shall be determined from analysis as specified in the Security Requirements provided by the Department.

4) The non-linear effects due to large deformations shall be considered for cable replacement and cable loss cases. Non-linear analysis considering the P-Δ effect of the tower pylon shall be performed.

11.3.1.5 Bikeway/Walkway

1) The geometrical design criteria for the Bikeway/Walkway are specified in Project Requirement 24 – Highway Design. The Bikeway/Walkway shall have a minimum clear width of 20 feet along its full length on the bridge and approaches. Design of the Bikeway/Walkway shall accommodate all users including high-speed bicyclists, low-speed bicyclists, runners, in-line skaters, pedestrians, and persons with disabilities; and separation of bicyclists and pedestrians shall be provided by pavement markings or other clearly defined attributes.

2) Fences or railings shall be anti-climbing. Pedestrian railings along the walkway/bikeway shall be designed to withstand the horizontal pressure of 50 psf.

3) The new Pedestrian Ramp at Laurel Hill Boulevard shall be design and constructed per the requirements of the NYSDOT Highway Design Manual.

11.3.1.6 Materials

A) Concrete
SECTION 14 LIGHTING

14.1 SCOPE
The Design-Builder shall conduct all Work necessary to provide all lighting located inside the Project Limits. This includes the transportation related permanent and temporary roadway lighting of the bridge, under-deck lighting at street crossings, maintenance lighting, navigation and aviation lights, aesthetic lighting and lighting of local streets.

The Design-Builder shall be responsible for the replacement of existing street lighting and traffic signals on existing at-grade streets to be reconstructed with full depth pavement in order to realign or reestablish that street.

14.2 STANDARDS AND REFERENCES
The Design-Builder shall perform the lighting activities in accordance with the Contract Requirements and the applicable New York City and New York State Standards, Codes and Manuals listed in Section 1.5.Requirements. The lighting design and construction will require review and approval from the New York City Department of Transportation Bureau of Street Lighting.

Additional reference is made to:

- AASHTO GL-6 Roadway Lighting Design CedeGuide.
- FHWA Lighting Handbook

In addition to the documents referenced above, the IESNA has published two technical memorandums that solely address light trespass and sky glow.

- TM-11-00, Light Trespass: Research, Results and Recommendations/Illuminating Engineering Society of North America, 2000 (TM-11-00)
- TM-10-00, Addressing Obtrusive Light (Urban Sky Glow and Light Trespass) in conjunction with Roadway Lighting, Illuminating Engineering Society of North America, 2000 (TM-11-00)
- MLO, Model Lighting Ordinance, Illuminating Engineering Society of North America and the International Dark Sky Association

These additional criteria documents provide recommendations for measuring, determining, and identifying light trespass, and sky glow and light trespass from for roadway and aesthetic lighting. These documents shall be used to determine whether light control apparatus trespass mitigation devices, such as shields, will be required. The Contractor shall submit an analysis report detailing light trespass and sky glow, as well the size and calculated effectiveness of any shielding recommended.

The criteria referenced for the design of the aesthetic lighting can be found in:

The particular tables to be used are:

- 4.1 Recommended Illuminance Targets;
- 22.4 Indoor and Nighttime Outdoor Activity Level Definitions
- 26.2 Exterior Illuminance Recommendations
- 26.4 Nighttime Outdoor Lighting Zone Definitions.

14.3 REQUIREMENTS

All roadway, street, and pedestrian path lighting shall meet the values for illumination, luminance, and veiling luminance ratio listed in Table 3-5a of the AASHTO Roadway Lighting Design Guide.

The Design-Builder shall employ a professional lighting designer and electrical engineer (s) who is a professional member (minimum) of the International Association of Lighting Designers has completed at the professional member level, with a minimum of at least two successful bridge lighting experiences, and projects to the satisfaction of the Department. This electrical engineer shall be licensed in the State of New York and have at least ten years of experience in roadway and bridge lighting design.

Said individual or firm—The Design-Builder shall also employ a lighting designer / lighting structural engineer who is lighting certified (LC) by the National Council on Qualifications for the Lighting Profession, with a minimum of design of five the light poles and anchorages. This structural engineer shall be licensed in the State of New York and have at least ten years of site and roadway lighting design experience, in roadway and bridge lighting design.

14.3.1 General

The Design-Builder shall be responsible for designing, furnishing, and installing everything required for the implementation of the lighting system for the Project, including new luminaires, controls, traffic signals, poles, mounting, wiring, conduits, support hardware, containment, installation, programming, focusing, commissioning, and as-built information necessary for delivering a complete and functional system. The Design-Builder shall be responsible for ensuring that the system meets the following requirements:

A) Provides illumination such that the road surface illumination meets or exceeds the uniformity and the illuminance and/or luminance criteria during darkness;

B) Utilizes energy efficient and long-life, low maintenance lighting technologies that have been reviewed and accepted by the Department;

C) Provides aesthetic architectural lighting scheme during darkness;

D) Lighting fixtures, poles, and supports shall be accessible for inspection and maintenance by the maintaining agency(s), and their maintenance equipment shall be verified as suitable by the Design-Builder;
D) Minimizes avian/bird impacts as outlined in the Kosciuszko Bridge Project Reevaluation Statement, January 2011;

E) Meets U.S. Coast Guard navigational requirements for Newtown Creek including the shipping channel;

F) Provides aviation warning to meet Federal Aviation Administration (FAA) requirements during daylight and darkness;

G) Utilizes a photo-control switch system that automatically activates lighting before dusk and deactivates the system past dawn. In addition, the use of independent light switching control of the roadway, pedestrian, and aesthetic lighting shall be included, in order to reduce power consumption and allow manual control of lighting;

H) Provides inspection lighting for all enclosed areas such as pier, towers and box girders;

I) Provides surge suppression devices for protection against damage by lightning strikes; and complying with NFPA-780 and UL 96;

J) Uses lighting fixtures that meet vibration resistance per ANSI C136.31-2010, and light poles that include damping devices as needed to insure that the fixtures are not damaged nor have their life shortened by bridge vibration;

K) Provides IEC 60529-IP65 fixtures that are water tight and intended for a marine/industrial environment; and

L) The roadway and bikeway/walkway lighting shall be readily available luminaries and not proprietary equipment.

The Design-Builder shall coordinate with the Department and NYCDOT to ensure the appropriate design methods, procedures, submittals, plan preparation, analysis methodology, review and comment processes, approval procedures, specifications and construction requirements are met.

A complete lighting analysis of the roadway lighting including all aesthetic lighting to include veiling luminance calculations shall be submitted by the Design-Builder for approval to the New York City Department of Transportation Bureau of Street Lighting.

14.3.2 Bikeway/Walkway Lighting

The Design-Builder shall ensure that the lighting installation at the bikeway/walkway shall:

A) Provide permanent lighting on the entire length of the bikeway/walkway, both on and off the Bridge;

14.3.3 Power Supply Requirements

Electrical power supply requirements are further defined in Project Requirements 9 – Utilities. For reference, the lighting installation shall:

A) Meet all requirements of the latest NFPA 70 – National Electrical Code (NEC);

B) All outdoor electrical enclosures shall be type 316 stainless steel rated NEMA 4X or a higher degree of protection; and
C) Meet all requirements of applicable IEEE and ANSI power engineering standards.

14.3.4 Interior Inspection Lighting

All enclosed areas subject to regularly scheduled inspection and maintenance shall be provided with a low voltage (120 V a.c.) inspection and maintenance lighting system, and electrical outlets. **Power distribution for these systems may be up to 480V a.c. with local step-down transformers and distribution panels.**

The lighting levels shall be 30 foot candles horizontal. Bulbs for interior lighting system shall be high-endurance bulbs and fixtures shall be impact resistant. The system wiring shall be sized so that voltage drop shall not be more than 5%. **Megger test all system transformers, distribution panels, and conductors shall be megger tested and meet NETA-ATS insulation resistance requirements before putting them into service.** Test results documentation shall become part of the Operation and Maintenance Manual for reference. Installation shall meet all requirements of the latest edition of the National Electric Code (NEC) and local ordinances.

Electrical receptacles shall be provided and be 120V a.c. GFCI duplex receptacles, in non-metallic-powder coated cast steel or iron outlet boxes at 50' maximum on centers. Each receptacle shall have a weather-protective gasketed outdoor plate cover. The load for the last receptacle of every circuit run shall be a minimum of 12 amps.

Switches shall be mounted at each end of each span and at each access door. **Six Twelve** hour reset timers with key-lockable override switches shall be provided for each circuit to turn off lighting system automatically.

**Do not use conductor size larger than an AWG No. 4.**

14.3.5 Aesthetic Lighting

Aesthetic lighting fixtures used shall be accessible by way of normal and customary for inspection and maintenance access by the maintaining agency(s), and their maintenance equipment shall be verified as suitable by the Design-Builder. Aesthetic lighting fixtures shall be IEC 60529-IP65 rated, shall be water tight, and marine grade.

The aesthetic lighting scheme shall at a minimum illuminate all of the main span and back span stay cables as well as all faces of the main span towers full height, i.e. from the top of the tower footings to the top of the towers. Aesthetic lighting shall also be provided along the length of the main span and back span edge girders. The lighting scheme shall minimize avian/bird impacts in accordance with the Kosciuszko Bridge Project Reevaluation Statement, January 2011 and utilize LED fixtures to the maximum extent feasible.

Aesthetic lighting shall pose no veiling luminance to roadway or navigable channel users as defined by IES-RP8.

14.3.6 Navigation Lights & Aviation Beacons

The Design-Builder shall design, furnish and install navigation and aviation lighting systems for the Main Span Bridge over Newtown Creek. The system shall be suitable for marine environment.

The installations, equipment, materials and workmanship shall be in accordance with the applicable provisions of the National Electrical Code, the United States Coast Guard **Bridge**
Lighting and Other Signals (33 CFR 118), and the Federal Aviation Administration. Obstruction Marking and Lighting (AC 70/7460-1K).

Marine navigation red and green lanterns shall be provided on each side of the span over the navigable channel in accordance with 33 CFR 118. The navigational lights shall be placed to mark the navigation channel. Two suspended duplex red channel margin marker lights (180 degrees) and one suspended duplex center channel green lantern (360 degrees) shall be displayed below the superstructure on each side of the bridge. A mounting bracket with retrieval chain shall be provided to hold the lantern in proper operating position. The navigation lights shall have siliconized bronze housings, mounting bracket shall be hot-dip galvanized steel brackets, and swivel housing with stainless steel spindle. The attaching pipes, pull chains, and mounting hardware shall be type 316 stainless steel. Systems shall be complete with all required accessories required for an operational and maintainable system.

The navigational lights shall be placed so as to mark the navigation channel.

Aviation beacons lights shall be subject to FAA approval and consistent with the Revaluation Statement with regard to minimizing avian/bird impacts. Housing shall be constructed type 316 stainless steel. The FAA has determined the aviation lighting is to be in accordance with AC 70-7460-1k Chapters 4, 5, and 12.

Temporary navigation lights and other navigation signals shall be installed during construction as required by the United States Coast Guard (USCG).

14.3.7 Lightning Protection System

The Design-Builder shall provide a UL master labeled lightning protection system. The installation shall comply with NFPA-780 and UL 96. All connections and components of the system shall be accessible for inspection and maintenance by the maintaining agency(s), and their maintenance equipment shall be verified as suitable by the Design-Builder.

Lightning protection of concrete pylons and stay cables of cable-stayed structures shall consist of the following:

A) Installation of collector lines from each stay cable anchorages to the transition line. Installation of a collector line from the reinforcement near the top of the pylon to the transition line. Collector lines should be made of copper and have a cross section of at least 0.08 inches; and

B) Installation of a transition line, in direct contact with the reinforcement cage, from the pylon tip down to the foundation. The transition line should have a cross section of at least 0.3 square inches and may consist of specifically designated reinforcing steel bars properly welded together to assure adequate electrical conductivity. The transition line should be connected to the foundation earth which typically consists of a horizontal closed loop of reinforcing steel bars (min 0.3 inches cross section) placed low in the foundation, inside the concrete. The concrete deck does not need any specific protection in general. In case electrically isolated bearings are used, they need to be electrically connected to earth with cables (min. cross section of 0.08 square inches or copper bar Ø ¼ inches). Composite structures are suggested to be protected similarly to concrete structures; and

C) UFER grounds as the sole grounding system are not acceptable.
14.3.8 Roadway Signage
The requirements for roadway signage are further defined in Project Requirement 13 – Signing Pavement Marking and Signals. No signage installed as part of the Project requires sign lighting.

14.3.9 Relocation of Existing Equipment
All existing lighting luminaires and associated equipment on utility poles to be relocated shall be relocated to the proposed utility poles. Any existing equipment damaged by the Design-Builder during the progress of the Work shall be replaced at no additional cost to the Department.

14.4 DESIGN REQUIREMENTS

14.4.1 Existing Inventory
The Design-Builder shall be responsible for the production of an inventory including a map and list, of as-built locations of all existing lighting, illuminated signals and related cabling and controls within the Project Limits and such features located beyond the Project Limits that may be impacted by the Project.

14.4.2 Lighting and Electrical Design Plans
The Design-Builder shall develop a lighting plan and electrical plans for the Project that shall:
A) Provide for all components as called for in this Project Requirement;
B) Meet the Visual Quality Requirements of Section 18; and
C) Provide a complete visual representation of the lighting design.

14.5 CONSTRUCTION REQUIREMENTS

14.5.1 General
The Design-Builder shall use materials listed on the NYSDOT approved list of materials or suitable LED luminaire models pre-approved for use by the NYCDOT for roadway and street lighting and by the Department, for aesthetic lighting, if none is included in the NYSDOT list.

The Design-Builder shall provide lighting materials that:
A) Are new at the time of installation;
B) Meet the visual and aesthetics goals for the Project;
C) Are long life, with a minimum L70 rating of 50,000 hours L70 per IES Standards, and are energy efficient;
D) Are compatible with the electrical characteristics (including voltage, number of phases, number of wires) of the power supply available at the Project site;
E) Minimize future maintenance and can be readily and inexpensively serviced and replaced by the Department's in-house personnel; and

F) All permanent LED luminaires shall have a minimum manufacturer's warranty of five years from Final Acceptance.

The Design-Builder shall:

A) Provide all permanent and temporary lighting and related supports, lamping, controls for operational systems throughout the duration of the Project;

B) Ensure that all temporary lighting used during construction and demolition works shall conform to the glare control requirements of NYSDOT Standard Specification Construction and Materials §619-3.19.

C) Provide all new luminaires, poles, supporting hardware, mounting, controls, wiring, grounding and bonding, electrical raceways/conduits, pull boxes, switches, junction boxes, panels, cabinets, enclosures, and related electrical equipment as needed;

D) Ensure that all electrical work is performed by or under the full-time supervision of a Master Electrician licensed electrician in the State of New York and New York City;

E) Ensure that all exposed raceways/conduits shall be made of PVC coated rigid galvanized steel (RGS). Short runs of liquid-tight flexible metal conduit may only be used to make a final connection between the main power feeder and a light pole or fixture;

F) Ensure that all outdoor electrical enclosures and attached parts (e.g. breather drain) shall be type 316 stainless steel rated NEMA 4X or a higher degree of protection;

G) Provide all luminaires required for safety markings;

H) Provide As-Built Plans with narratives annotations fully describing the final lighting and electrical installation;

I) Ensure that all electrical enclosures shall have a key lock; with a common key (keyed alike);

J) Ensure all lighting shall include breakaway devices, unless protected by concrete barrier. Light poles shall feature have a breakaway base, except where located behind bridge rails, or concrete barriers. Breakaway bases shall be avoided in high pedestrian areas; and

K) Ensure that all lighting installed by the Design-Builder shall be maintained in an operational condition until Final Acceptance.

14.5.2 O&M Manual for Lighting

The Design-Builder shall supply to the Department an Operation and Maintenance (O&M) manual for the Project lighting. The O&M manual shall include:

A) Operational instructions;

B) Trouble shooting instructions and emergency maintenance procedures;

C) Details of inspection intervals and extent of inspection for all components

D) Detailed procedure of inspection, maintenance and replacement operations;

E) Detailed instructions for operation and maintenance of aesthetic lighting applications;
F) Manufacturer’s proprietary literature;
G) Relevant data sheets and electrical diagrams including location, make, type, dimension;
H) Equipment list;
I) Access procedures;
J) Spare parts list;
K) List of suppliers with address, email and telephone numbers;
L) As-Built Plans and records;
M) Procedures shall include details of how the components can be replaced;
N) Test certificates; and
O) Any relevant reference documentation.

14.6 DELIVERABLES

At a minimum, the deliverables shall include the items listed in Table 14.36-1 for the Department’s consultation and written comment.

<table>
<thead>
<tr>
<th>Deliverable</th>
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<th>Delivery Schedule</th>
<th>Reference Section</th>
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<td>Design Plans</td>
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<tr>
<td>Manufacturer’s warranties for all new equipment, associated parts and software</td>
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<tr>
<td>O&amp;M manual for lighting</td>
<td>5</td>
<td>1</td>
<td>At Bridge Substantial Completion(for Bridge lighting); and At Physical Completion (for all lighting)</td>
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</table>
SECTION 18 VISUAL QUALITY

18.1 SCOPE

The Design-Builder shall be responsible for ensuring the Kosciuszko Bridge Project including all structures and streetstcapes is a valued visual and aesthetic component compatible with the environmental, social, and physical characteristics of the region and the neighborhoods in which it is located. The Design Builder shall prepare a Visual Quality and Lighting Plan as indicated below.

The Design-Builder shall be responsible for ensuring that all aesthetic aspects shall comply with the requirements laid out in the Environmental Documentation, including the Final Environmental Impact Statement (FEIS), Record of Decision (ROD) and the Reevaluation Statement as they apply to this Project. The Design-Builder shall prepare a Visual Quality and Lighting Plan that will address the aesthetic aspects of all visually significant elements of the Project work. The Visual Quality and Lighting Plan shall consider both the Project and the Project plus the Option.

18.2 CONTEXT SENSITIVE SOLUTIONS

The Design-Builder shall conduct its visual quality management work consistent with the principles of context-sensitive solutions using inclusive design approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. The Design-Builder shall ensure that the Project fits within the unique environmental, social, aesthetic and physical character of the site and neighborhoods within which it is located.

18.3 VISUAL QUALITY AND LIGHTING PLAN

The Design-Builder shall prepare a Visual Quality and Lighting Plan (VQP) that shall include elevation views, plan views, cross sections and details for the main spans, approaches, connectors, retaining walls, local streets and all elements that are included in the visual impact of the project. A Preliminary VQP shall be prepared during the proposal phase and shall be submitted as part of the Technical Proposal. The preliminary plans shall define the configuration and details of the primary structural members, including height, shape, tapers, approximate dimensions, cross sections, orientation, and architectural details and aesthetic lighting.

The Design-Builder shall include a licensed architect, with experience in aesthetics of major long-span signature bridges, who shall be responsible for the development of uniform architectural criteria and standards to be applied for the entire Project.

The development of the design shall be a collaboration of Design-Builder's bridge engineers working along with the architect as an integrated team. In the development of bridge designs and selection of structures every attempt shall be made to integrate the ramps and approaches
with the Main Span Bridge, so that from an aesthetics viewpoint the bridge will be viewed as a total design concept where all elements are fully coordinated in both structural and visual terms.

The architect shall develop an architectural theme for the bridge including preferred shapes for superstructure cross-sections, stay-cable arrangements, towers and pier configurations. All elements of the bridge should have a sense of unity that results from the commonality of expression, sense of scale, simplification of form and contour and similarity of materials, texture and color. The relationship of the Main Span Bridge to the approaches and other structures shall be defined so that the placement of piers, the roadway deck, and the superstructure all contribute to the overall sense of proportion, scale, rhythm and unity of design.

There should be similarity in the detailing and articulation of all elements and components of the entire bridge appurtenances, standards for signs, treatment for drainage pipes and scuppers, architectural finishes and facing, and concrete rustication details. They must be clear, concise, and visible without being dominant.

All concrete components, either precast or cast-in-place, shall be of uniform color and texture. All concrete surfaces on the exterior face of the bridge, and those elements visible to the traveling public, i.e. parapets, barriers and pedestals shall be treated with a Silane/Siloxane sealer so that it will retain original color and help in removing graffiti.

All electrical system components (conduit, boxes, transformers, switches, wires, etc.) must be hidden or concealed from public view.

The final design and construction shall conform to the VQP submitted with the Technical Proposal.

18.3.1 Substructure

For each substructure type, provide drawings showing the column shape and orientation, details of architectural shapes, tapers and finishes, approximate dimensions, and any unique aesthetic details.

18.3.2 Superstructure

Provide drawings from schematic that show overall aesthetic character and visual quality of the bridge design. Provide accompanying drawings showing the elevations, cross section and visualizations of each superstructure type or sub-type including locations and dimensions of lanes, barriers, shoulders, bikeway/walkway, railings, fences, primary structural elements, light fixtures, etc. Provide drawings showing the elevation and cross-section of primary structural elements for each superstructure type or sub-type or condition including the deck, stay cables and stay cable attachments to the towers and superstructure.

18.3.3 Cable Stayed Main Spans

Provide drawings/visualizations showing the configuration and details of the primary structural members, including height, shape, tapers, approximate dimensions, cross sections, orientation, and architectural details and aesthetic lighting. These renderings shall be set within the context of the local site, and shall include views similar to those in the Visual Resource Assessment (VRA) prepared for the Environmental Impact Statement.
18.3.4 Approaches

Provide drawings/visualizations showing the configuration and details of the primary structural members, including height, shape, tapers, approximate dimensions, cross sections, orientation, and architectural details.

18.3.5 Retaining Walls and Abutments

Provide drawings/renderings for retaining walls and abutments. Include elevation and plan views showing the extent of the Work, conceptual details for connections, transitions, and architectural surface treatments. The drawings/renderings shall be set within the context of the local site, and shall include views similar to those in the VRA.

18.3.6 Underpasses

Provide drawings/renderings for the local street underpasses below the highway.

18.3.7 Bikeway/Walkway

Provide drawings/renderings showing the bikeway/walkway, including treatments at connections to local streets. Include plan and profile drawings, various cross-sections proposed, ornamental railing/barrier/fencing details, transition area layouts, road crossing layout plan, lighting, terminations, notification/informational signing concepts, and preliminary surface and structural section designs.

18.3.8 Landscaping

Provide plans or renderings as needed to convey the visual quality design approach related to landscaping and streetscapes within the construction limits. The aesthetic design of these elements shall coordinate and comply with Part 3 Section 12 – Landscape Architecture.

18.3.9 Newtown Creek

Provide plans, sections, and/or renderings as needed to convey the visual quality design approach for the banks of Newtown Creek. The aesthetic design of these elements shall coordinate and comply with Part 3 Section 12 – Landscape Architecture.

18.3.10 Lighting

Provide plans, sections, elevations, details, and renderings of architectural-roadway, pedestrian, bikeway/walkway and aesthetic lighting for the bridge, inclusive of Main Span and approach structures, cables, deck, understructure, and piers. The aesthetic design of these elements shall coordinate and comply with Part 3 Section 14 – Lighting. The drawings/renderings shall be set within the context of the local site.

18.4 PUBLIC OUTREACH VISUALIZATION MATERIALS
SECTION 20  DRAINAGE AND STORMWATER

20.1 SCOPE

The Design-Builder shall provide a bridge drainage system that is compliant with the NYSDOT Highway Design Manual Chapter 8 and NYCDEP requirements. Where realignment and reconstruction of local streets impact the existing local street drainage system, the Design-Builder shall provide a new drainage system compliant with NYCDEP requirements. The Draft Drainage Design Report provided on the Department’s Project website has been coordinated with NYCDEP. The Design-Builder shall revise the Draft Drainage Design Report as necessary and obtain NYCDEP and Department approval for the proposed drainage plans.

Prior to Physical Completion, the Design-Builder shall be responsible for video inspection and cleaning of all new and existing drainage facilities within the Limits of Construction.

20.2 STANDARDS AND REFERENCES

The Design-Builder shall perform the drainage and stormwater activities, including highway, bridge and site systems, in accordance with the applicable standards in Section 1.5, unless otherwise stipulated in this Project Requirement.

20.3 REQUIREMENTS

20.3.1 General

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

A) Provide a 75-year minimum service life on all drainage and stormwater management facilities for the bridge drainage within the Limits of Construction that is consistent with the Draft Drainage Design Report;

B) Provide all new drainage and stormwater management elements for the Brooklyn Connector, the Brooklyn Approach, the Main Span, the Queens Approach, the Queens Connector and the portions of the LIE Interchange within the Limits of Construction. The Design-Builder shall not be responsible for the construction of the Westbound Approach Span Drainage structures. However, the new drainage structures and outfalls that are constructed as part of the Contract shall be designed and sized to accommodate the future Westbound roadway drainage;

C) Provide new outfall pipes at the Brooklyn and Queens banks of Newtown Creek; stormwater runoff from the Brooklyn Approach, Main Span, Queens Approach and Queens Connector to be directed to new outfall pipes; runoff from the Brooklyn Connector and LIE interchange to be split between existing NYCDEP sewer systems and the new outfall pipes;

D) Provide new pre-treatment system prior to creek outfalls;
SP 20. DOCUMENT CONTROL SYSTEM

20.1 GENERAL REQUIREMENTS

The Design-Build Team shall prepare, status, electronically file and transmit all Drawings (plans), project correspondence, Shop Drawings, Submittals, Requests For Information, meeting minutes, and schedule narratives utilizing a document control software application (Oracle Primavera Contract Management), the licenses for which will be provided by the Department. This document control software application will also provide uniform project information and reporting. The Design-Build Team will access the document control software application via the internet.

The Design-Builder shall be responsible for entering into a Service Order contract with a vendor to provide Third Party Hosting Services for the duration of the contract. The Third Party Hosting Services are to be performed by an experienced firm authorized by Oracle Primavera (e.g., LoadSpring Solutions, MLM Project Services, Oracle) to provide Third Party Hosting Services for: Oracle Primavera Contract Management software application and related integrated software applications (e.g., Adobe Acrobat Reader, InfoMaker, Microsoft Office Suite); and Oracle Primavera P6. These services shall be sufficient to allow access by the appropriate number of Design-Build team staff, CI and DQ Quality Manager, Department staff, the Department’s Design Quality Assurance and Construction Quality Assurance staff.

The Third Party Hosting Services shall include distributed user account management, to allow two to three Department program administrators to create, modify and delete all user Active Directory, Oracle Primavera Contract Management, and Oracle Primavera P6 accounts. The Department will provide the Design-Build team access to the document control system software, Oracle Primavera Contract Management, and a common file server. All information that resides on the shared document control system shall become the sole property of the Department.

The Third Party Hosting Services shall also include: reporting tools to allow the Department to generate reports of named account usage within specified date ranges; support for user technical support requests and resolution by the vendor; and one project email box connected to Contract Management for each active construction project to enable the email import function.

20.1 SUBMITTAL COORDINATOR

DOCUMENT CONTROL SPECIALIST: The Design-Build team shall furnish the services of one or more of their administrative employees, entitled the Submittal Coordinator, who will ensure that contract documents required to be submitted, monitored and controlled via the Document Control System are routed to the appropriate person(s) for review and/or approval and status the associated database record in Contract Management; and will assure when these documents are returned with comments and/or approved that they are returned to the appropriate person within the Design-Build Team; utilizing a document control system as provided by the Department or its agents.

The Submittal Coordinator(s) shall be designated by name, in writing with a resume of their qualifications, within five (5) calendar days of the award of the Contract and shall not be changed without prior written notice to the Department. Although the Design-Builder may designate more than one person to perform the Submittal Coordinator role, one person shall be responsible for coordinating the work of these individuals and shall be knowledgeable of the
status of all contract documentation aspects of the work throughout the length of the Contract.

The primary function of the Submittal Coordinator is route contract documents to the appropriate person, to properly status the associated database record, and to monitor the timeliness of review/approval periods to ensure timely processing of all contract documentation in coordination with the contract Progress Schedule.

The named Submittal Coordinator shall be responsible for maintaining information related to the responsibility (BIC), status, elapsed time since submission, held time, and a history of all submittal revisions.

20.2 DOCUMENTATION CONTROL SYSTEM ACCESS REQUIREMENTS

Within five (5) days of Contract Award, the Design-Builder shall submit to the Department’s Project Manager a completed and signed “Request For Access” form requesting the Department establish a user account for the employee(s) designated as the Document Control Specialist to logon to Contract Management. The Request For Access form can be downloaded from the Department’s website at the following URL address https://www.dot.ny.gov/main/business-center/contractors/construction-division/primavera

The Design-Builder may submit additional Request For Access forms to the Department’s Project Manager to allow Design-Build team personnel (may include, but is not limited to, design staff, construction staff, inspection staff, subcontractors or fabricators) to access the document control system. The Design-Builder shall specify on the Request for Access form the “Role” they are requesting for these users in the Contract Manager application.

The Design-Builder shall designate one of their authorized personnel to be the Document Control Specialist and act as the document control system contact person for the Design-Build team. That person shall be trained and experienced in the use of Primavera Contract Management version 13 or higher. All Design-Build team personnel requesting access authorization must complete the minimum training requirements described below and submit a certificate of completion to the Department. Anytime following notice by the Department that they are the apparent successful Proposer, the Design-Builder may submit Request For Access forms (with accompanying training certificate(s)) to the Department’s Project Manager, and with approval thereof, the Department will issue a user ID and password to each of the authorized Design-Build team personnel for access to the document control system. The Design-Builder will ensure that only Department authorized Design-Build team personnel access and utilize the control system in a responsible, non-destructive manner. The Design-Builder shall make every reasonable effort to prevent the disclosure or sharing of access information (usernames and passwords) for unauthorized use of the control system. The Department, at its discretion, may revoke access authorization from any user if it is determined that: a) the contract is not awarded; b) the user has used the control system for any other reason than is intended by this specification; c) the user is no longer in the Design-Builder’s employ or associated with the project or d) the user has disclosed their access information for use by another person or party for any reason.

20.3 DOCUMENTATION REQUIREMENTS

All written and electronic correspondence within the Design-Build Team, and from the Design-Build team to the Department or the Department’s representatives (e.g., the NYSDOT Project
Manager(s)) for the duration of the contract shall be transmitted and controlled using Oracle Primavera Contract Management, including, but not limited to: design reviews, constructability reviews, construction reviews, plans, transmittals, items comprising the Management Plan, meeting minutes, design documents/requests for approval, Requests For Information (RFI’s), Shop Drawings, Schedule Narratives, Force Account submittals, field memos, notices, letters, and punch lists. All common correspondence files (submittals, requests, answers, changes, reports, minutes, agendas, letters, etc) shall be generated from, and stored within the common file server, including any and all file attachments. The Design-Builder is responsible to coordinate the overall creation and submission of all project documentation to meet the requirements of the project schedule and specifications, along with facilitating the Department’s over the shoulder reviews. The Design-Builder is encouraged to supply the Department with corporate logos, formats, Sybase Infomaker files, etc. to facilitate the creation and utilization of custom forms and reports.

Documents (letters, logs, drawings, sketches, etc) to be transmitted within the Design-Build Team and to the Department by the Design-Builder, for which the Design-Builder does not have an electronic version, shall be scanned, converted into an Adobe Acrobat PDF format, and attached accordingly in Oracle Primavera Contract Management.

Correspondence between the Department’s Main Office Contract Management Bureau and the Design-Builder shall not be transmitted through Oracle Primavera Contract Management.

The requirements for each module within the Contract Management Control Center are as follows:

1. REQUESTS FOR INFORMATION

   The Design-Builder shall enter any “Requests for Change” into the “Requests for Information” module, and in the field named “Reason for Request for Information” the Design-Builder shall designate it as a “Contractor Request”. The request will require identifying information which includes but is not limited to: Name of Ball-in-Court, BIC; Impact type to project; detailed requests; Question signed by & dated; Urgency of request and a required finish date. Any further information identified as necessary to improve communication.

2. SUBMITTAL PACKAGES

   The Design-Builder shall enter any submittal packages into the system and the following field requirements should be incorporated into the identifying information: Package #; The item numbering convention shall be as follows: (XXX.YY-Z); Type of Drawings; BIN #, Stage, Phase; Location; CIN; Other specific identifiers/naming system, as required by the Department’s Project Manager to ensure clear communication of the submittal packages to avoid and prevent confusion including Preliminary/Final identification and signatures. It should be noted that the Design-Builder shall attach submittal documents in Adobe PDF format. Multiple Submittal documents shall be combined into a multiple page PDF file. The maximum file size of a multiple page PDF file shall be 50 MB. Each Package may have several PDF files attached. The multiple page PDF file will be attached on the Attachments section of the current Review Cycle 00x window in the Submittal level.

   Additionally, each package shall have a minimum of two Review cycles. One will be for “Preliminary Approval” and the other will be for the “Signature approval”. If an individual Submittal is rejected, once the Design-Builder makes their changes, they are to resubmit their changes as another Review Cycle of the same Submittal. The Design-Builder shall not create a new Submittal or Submittal package for revised documents that have already been submitted.
Instead they shall increment the review cycle of the Submittal by one. When the Design-Builder makes revisions to a Submittal document, the Design-Builder shall re-attach the entire multi-page document to the Attachments section of the current Review Cycle 00x window. The reviewer of drawings will upload a PDF File with any comments at the Submittal level. The Design-Builder can then view the status of each Submittal.

3. SUBMITTALS
The Design-Builder shall name the Submittal Title to coincide with the parent Submittal Package. The purpose of individual Submittal records in Contract Management is to track the status and dates related to the review and approval cycles of the individual pages of the multi-page PDF file attached to the Submittal Package. A Submittal will not exist without a parent Submittal Package. The Design-Builder’s attachments for Submittal documents will be at the Attachment section of the Review Cycles on the Submittal level. The Department or Design-Builder designated reviewer will attach their review comments or approvals at the same location and again, on the Submittal level. When the BIC workflow is statused by the Submittal Coordinator to the reviewer/approver the Submittal Coordinator shall also transmit an e-mail within Contract Management to the NYSDOT Project Manager(s) informing of the availability of the submittal.

4. CORRESPONDENCE
Correspondence Sent: This Module tracks and maintains a log of all correspondence sent in Contract Management. Correspondence Received: This Module tracks and maintains a log of all correspondence received in Contract Management.

5. MEETING MINUTES
The Meeting Minute module will be used to document the agenda and meeting minutes of all meetings between the Design-Builder and the Department or the Department’s representatives. Meeting minutes will be entered by the Design-Builder or their designee. The Department shall review the meeting minutes and provide written comments to the Design-Builder’s Project Manager within a reasonable time period (not later than two (2) weeks). All meeting minutes shall be logged into the system. The NYSDOT Project Manager(s) is responsible to utilize meeting minutes and respond (electronically) to meeting minute items assigned to the Department.

6. LETTERS
The Letters module shall be used by the Design-Builder and the NYSDOT Project Manager(s) to transmit any formal letters between the two parties.

7. COMPANIES
The Design-Builder will be responsible for entering the names and addresses for all companies associated with the contract that are required for use in Oracle Primavera Contract Management, along with the names and contact information of the appropriate company contact persons. This shall include, but is not limited to: Department; Department’s Design Quality Assurance Engineer; Design-Build Team; Fabricators; Suppliers; Public utilities; Municipalities and associated departments/subdivisions; Etc. The NYSDOT Project Manager(s) shall notify the Design-Builder’s Project Manager of any companies and company contact information that the Department requires to be entered into Contract Management.

8. DRAWING SETS
The Drawing Sets module allows for the logical grouping of individual contract plan drawings (plan sheets). The Design-Builder shall be responsible for entering the Drawing Sets, which shall reflect the grouping shown in the Index of Drawings on the contract plans.

9. DRAWINGS
The Drawings module contains the individual contract Drawings (Plan Sheets) generated from the 2D/3D design model in Adobe PDF file format. Each Drawing will contain the drawing versions including released for construction, along with any revisions due to Field Changes. The Design-Builder will be responsible for entering the Drawings. The drawing log will be maintained to indicate the latest construction drawings that have been reviewed and released for construction by the Department, or its representatives, for distribution of these drawings to the Design-Builder, subcontractors, and fabricators. Each drawing will be individually entered, tracked, and the status maintained, including all revisions. The Design-Builder is responsible to utilize the latest approved drawings as identified in the control system. All revisions will be logged into the control system, describing each change. Plan sheets shall be generated from the Design-Builders 2D/3D model as a smart file in Adobe PDF format.

10. PUNCH LISTS
The Construction Quality Assurance Engineer will be responsible for entering punch list items. The Design-Builder shall be responsible for monitoring this module and responding to listed items.

11. NONCOMPLIANCE NOTICES
The Construction Quality Assurance Engineer will be responsible for entering noncompliance notices. The Design-Builder shall be responsible for monitoring this module and responding to listed items.

12. ISSUES
The Submittal Coordinator will be responsible for entering Issues and linking the appropriate documents in various modules to those issues to facilitate efficient quality control and assurance reviews. The NYSDOT Project Manager(s) can submit requests to the Design-Builder’s project Submittal Coordinator for any Issues the Department needs entered into this module, so the NYSDOT Project Manager(s) can link Letters, RFI’s, emails, etc to the appropriate Issue.

13. CONTRACT INFORMATION
The Design-Builder shall be responsible for making all non-propriety contract agreement documents signed by the Office of the State Comptroller available in this module.

14. UNUSED MODULES contained within Contract Management include:
Specific modules in “Project Information” Folder; Schedule – Use Primavera P6 instead “Communication” folder containing; Notepads; Telephone Records; Additionally Safety “Logs” Folder & insurance and finally, Materials.

20.4 TRAINING REQUIREMENTS
The Design-Builder shall provide training in the use of Primavera Contract Management version 13 (or latest version, if appropriate) for any Design-Build team and Department personnel.
accessing the document control system. This training shall consist of the standard three (3) day Oracle Primavera Systems Course 201 – Contract Management Basic Course conducted by Oracle-Primavera, a company certified as part of the Oracle Partner Network at a minimum of the Gold level to conduct Primavera Contract Management training, and receipt of a training certificate from Oracle-Primavera indicating successful completion. The Training Certificate for each proposed user shall be forwarded to the Department with the completed Request For Access form. Information on the Oracle Partner Network can be located through the Oracle Web site at http://www.oracle.com/partners/index.html

20.5 AVAILABILITY OF THE THIRD PARTY HOSTING SERVICES

The Design-Builder shall enter into a Service Order Contract with the Vendor, within two weeks of the contract award date, to provide access for the Department staff (and their consultant staff) and the Design-Build Team staff to access the project management software necessary for the administration of the construction contract. The NYSDOT Project Manager(s) will determine how many Department staff will require access to these services. The Department shall provide up to fifty (50) Primavera Contract Management software licenses and up to ten (10) Oracle Primavera P6 software licenses to the Third Party Hosting Service for use during the contract by the Design-Builder staff, plus additional licenses required for Department staff. All costs for Third Party Hosting Services shall be paid for by the Design-Builder under Pay Item costs in the contract.

The Service Order Contract shall have a cost breakdown including: the cost per user per month for access to each software application along with any cost reductions based on volume of users, users having a combination of software applications, multi-year discounts, government discounts, etc; costs for file server disk space; project email address setup costs; and any one time and yearly recurring costs. These costs shall be included in the Lump Sum price provided by the Proposer.

Third Party Hosting Services shall be available to the Design-Build team and the Department’s staff prior to the start of any contract work, including the submission of any Shop Drawings or Requests-For-Information, and shall be made available after contract final acceptance as directed in writing by the NYSDOT Project Manager(s).

The Design-Builder shall notify the NYSDOT Project Manager(s) when the Service Order Contract has been executed.

The Vendor shall notify the NYSDOT Project Manager(s) of the availability of the services outlined in the Service Order Contract within 15 days of execution of the contract.

The Design-Builder shall make every effort to expedite the execution of the service order contract for Third Party Hosting Services, and for the availability of these services to the Department and the Design-Builder team. Availability of these services is vital to the timely management of contract documents, and the ability for staff responsible for quality control and quality assurance to perform their review and approvals.

The Design-Builder should insist that all system maintenance be performed during none core business hours to maximize possible down time by all users.

20.6 TERMS AND CONDITIONS FOR THE SERVICE CONTRACT FOR THIRD PARTY HOSTING SERVICES:
The following contract provisions shall be included in the Service Order Contract between the Design-Builder and the Vendor:

Vendor provided Technical Support requirements:

Business Hour Support: The Vendor’s technical support personnel shall be available via telephone during the hours of 8:00 AM and 6:00 PM EST for response to NYSDOT technical issues related to functionality/access, hosted applications at a systems level, and/or printing/external device access. The Vendor’s technical support shall also support requests from users via email for technical issues not requiring immediate response.

After Hours Support: For events where there is a critical emergency, the Vendor shall provide NYSDOT a toll free phone number for 24 hour support.

Application Upgrades: Software patches and upgrades will first be tested and validated in a test environment by NYSDOT and then promoted to a production environment for major and minor activities. All changes will be communicated and approved by NYSDOT prior to execution through a formal change management process.

Data Backup: A Web interface shall be provided for NYSDOT to manage custom data backups (fully recoverable) to secure location for immediate download. 15 GB included. Including up to two (2) automated/scheduled backups per day from Portal to FTP Location and automated download to NYSDOT network servers, and up to five (5) data and database restorations per month. The Department shall be able to restore a data backup to any day within the last month, and the first week of any month within the last year.

Portal Requirements:

- Distributed User account management, to allow Department program administrators to remotely create, modify and delete all user accounts.
- Reporting tools to allow the Department to generate reports of named account usage within specified date ranges, and user technical support requests and resolution by the Vendor.
- Vendor support for self serving knowledgebase for case management.
- System enforcement of complex passwords.
- Password recovery tools.
- LDAP authentication between web portal accounts and focus application accounts.
- Ability to broadcast messages to project team users.
- Ability for two Department’s Admin users to remotely control a user’s computer (upon user’s permission) for support purposes. (e.g. Go-To-Meeting) (may be separate from Portal if necessary)
- Ability to hold on-line meetings for two or more parties to share the hosted applications.

Operating Hours of Software Applications to Users: 24 hours per day / 7 days a week

Uptime Guarantee: 98%, measured on a monthly basis.

Project Data Storage Space: Initial requirement is 20.0 GB minimum User Storage; pricing in the Service Order Contract shall include provisions for potential increments of 10.0 GB of
User storage up to 150GB.

**E-Mail Account** - A project email account shall be provided for Contract Management to receive documents from external email systems.

**Shared Network File Exchange System** - Secure and easy user file exchange without FTP or VPN.

**Database** - Primavera supported Oracle version

**User Accounts** - Configuration and testing of the number of user accounts and connections to applications required by the NYSDOT Project Manager(s).

All applications shall be accessed through 128 bit encrypted VeriSign SSL Certificates.

Focus Applications shall be software applications accessible through an icon in the web portal: (one test database, and one production database for Contract Management; one test database, and one production database for P6) and a file manager to access files on the shared server drive. Additional applications shall include Microsoft Word, and Excel.

Integrated Applications shall include Adobe Acrobat Reader integrated with P6, PDF Generator for P6 users, InfoMaker for Contract Management, Project E-mail box connected to Contract Management to enable email import function.

**Infrastructure Security, Management & Monitoring:**

The Vendor shall be responsible for providing the following infrastructure components:

a) Managed Firewall protection of all data center servers accessed and shared by the Design-Builder, Department and its agents.

b) Managed Antivirus protection of all data center servers accessed and shared by the Design-Builder, Department and its agents.

c) Network connectivity from server equipment of a measurable bandwidth equaling or exceeding requirements of the Design-Builder, Department and its agents to the public Internet.

d) Secure network traffic encryption from Department’s users system to Vendor data center servers using a combination of 128-bit Secure Sockets Layer (SSL) and/or 128-bit Secure ICA encryption software.

e) 24 Hr x 7 Day x 365 Process Monitoring of all active production servers and networking equipment, including functional checks of web sites, applications and Portal modules.

f) Advanced backup and offsite media storage procedures with the following schedule:

- Daily Differential backups that will permit point-in-time recovery;
- Full weekly Normal backups that include structure and data;
- Backups will be stored on removable and stored off site in fireproof locked storage system on a weekly basis and removed from media rotation for a period of 12 months.

- For data restorations, databases in the prior seven (7) day period will be restored to a specific point in time, whereas files in the prior thirty (30) and databases in the prior eight (8) to thirty (30) day period will be restored to the start of the day, to be determined by the Department and the Vendor. The restoration will be completed within twenty-four hours of the agreed determination of point-in-time.

- For data restorations older than thirty (30) days and less than twelve months, only data captured by the first full weekly backup of each month will be restored.

g) Enforced procedural access including: Complex passwords (min 8 characters, 5x password history, min 90 day password change), Verisign SSL access to portal workspace, advanced User Administration access for designated Department software application Administration staff.

**Service Access & Remedy**

It will be the responsibility of the Vendor to ensure Design-Builder, Consultant, and Department access to all software applications and services identified by Program Sets on the Service Order Contract during the Operating Hours identified on the front page of the Service Order Contract. In the event that the Design-Builder, Consultant, the Department, or any user authorized by the Department, cannot access the identified services, they will be instructed to contact the Vendor immediately.

The Department’s users will: (a) be authorized and appropriately trained in accessing the Vendor’s Web Portal and the focus applications, (b) have access to the public Internet from a computer system running any Microsoft Windows Operating system and Microsoft Internet Explorer with a minimum Cipher Strength of 128-bit, version 5.5 or greater. (c) notify the Vendor immediately if they satisfy items a and b above, but still cannot connect to the Vendor’s Portal.

In the event that any user authorized by the Department cannot access a Program Set identified in the Service Order Contract during identified Operating Hours for a Measurable Downtime exceeding that allowed in the Service Contract, the Vendor will credit the Design-Builder an amount equal to 1/2 the monthly recurring fee associated with the Program Set(s) which experienced Measurable Downtime in excess of that allowed in the Service Order Contract.

**Intellectual Property Rights**

All copyright, patent, trademark, trade secret and other proprietary rights ("Intellectual Property Rights") to the Vendor’s software and related documentation shall remain the property of the Third Party Hosting Service or its suppliers. The Vendor or Design-Builder shall not claim any rights, title, or interest in any software, data or content, which is owned by the Department and is installed on the Vendor’s managed equipment. The Vendor shall not attempt to obtain the source code to software provided by the Department through decompilation, disassembly or other means. The Design-Builder shall not use, reproduce or sublicense Hosting Service services, software or documentation, or any related information
or documentation, and shall take reasonable efforts to ensure that same are not used, reproduced or delivered to any of their agents for any purposes except those purposes expressly permitted by the terms of this Service Order Contract.

Confidentiality

Except as may be required by law, neither the Vendor nor Design-Builder shall use or divulge or communicate to any person (other than to those whose province it is to know, or as permitted by this Service Order Contract) any confidential information concerning the services, the software, customers, business accounts, finance or contractual arrangements or other dealings transactions or affairs of the other party or the Department and its agents/subsidiaries which may come to either party during the course of this contract or any of the terms of this Service Order Contract.

The Vendor and Design-Builder shall use all reasonable efforts to prevent the unauthorized publication or disclosure or dissemination of any such information material or documents, described in the paragraph above, and to ensure that any person to whom such information or documents are lawfully disclosed is aware that the same is confidential and agrees to keep such information material and documents confidential, with the exception of information which is (i) public knowledge, (ii) previously known, (iii) obtained from a third party having the right to disclose, (iv) developed by receiving party independent of disclosing party, or (v) necessarily disclosed by the license of commercial products.

Termination

The Department may, for any reason, direct the Design-Builder to terminate the Service Order Contract with the Vendor by giving thirty (30) days notice in writing to the Vendor.

In the event of any termination or expiration of the Contract, regardless of reason, both parties to the Service Order Contract shall cooperate with and provide to the other party all information and assistance reasonably necessary or desirable by either party to ensure the orderly wind-down and transfer of the services, functions, responsibilities, tasks and operations comprising the services as set forth in the Service Order. Fees for the above mentioned services provided by the Vendor after the agreement is terminated will be at actual verifiable time & material costs plus ten percent (10%).

The Design-Builder or Vendor may terminate the Service Order Contract if the other party commits any material breach of any of the terms of this specification, or the other party is unable to perform its obligations for a period of fifteen (15) consecutive days or for periods aggregating 90 days in any calendar year, or the other party becomes insolvent, files or has filed against it a petition in bankruptcy, proposes any dissolution, liquidation, composition, financial reorganization or recapitalization with creditors.

Department provided software

The Department will provide the following software application licenses for the duration of the contract (delivered to the Vendor a minimum of 7 days prior to the expected activation of any/all Program Sets): Oracle Primavera named user licenses registered to the Department that allows users access to Oracle Primavera Contract Management software, and Oracle Primavera P6 software. The software, owner’s manuals, concurrent licensing and database shall be owned and retained by the Department. Any/all additional software application
licenses and media shall be provided by the Vendor.

**Computer Hardware**

The successful Proposer shall contact the Department to discuss the hardware requirements to successfully operate the systems.