



CASHLESS TOLLING

DESIGN-BUILD PROJECT

TA 19-1, Contract No. D800002

Request for Proposals

Addendum #1

March 12, 2019

Modification to the Request for Proposals

CASHLESS TOLLING

Design-Build Project

TA 19-1, Contract No. D800002

Note to Proposers

Differences between the deleted pages and the revised pages have been identified as follows:

- Brackets have been inserted on the left-hand margin of the pages to indicate where changes have been made to the documents; and
- Text additions have been shown in underlined red font and text deletions have been shown in crossed out red font.

General Instructions

Delete Pages A-3 and A-7 through A-19 of the Instructions to Proposers, Appendix A, Project Information, and substitute the attached Pages A-3 and A-7 through A-19. Please note, there are no tracked changes on pages A-9 through A-15 and A-18, but the pages are included due to the shift of text resulting from the additions to Pages A-7, A-8, A-16 and A-17.

Delete Page C-1 and Pages C-4 through C-8 of the Instructions to Proposers, Appendix C, Technical Proposal Submittal Requirements, and substitute the attached revised Page C-1 and Pages C-4 through C-9. Please note, there are no tracked changes on pages C-6 through C-8, but the pages are included due to the shift of text resulting from the additions to Pages C-4 and C-5.

Delete the Page containing the list of Forms in the Instructions to Proposers, Appendix E, Forms. Delete Form SP of the Instructions to Proposers, Appendix E, Forms, and substitute the attached revised Form SP. Add the attached SWPPP Checklist to the Instructions to Proposers, Appendix E, Forms.

Delete the Page containing bullet 11 in Appendix A of the DB Contract Documents, Part 1, DB Agreement, and substitute the attached Page containing bullet 11 in Appendix A.

Delete Pages 33 through 37, 44, 46, 54, 75, 82, 85, 93, 97 through 101, 116, 118, 122, 125 through 133, 137, 151, 157, 158, 164, 165, and 167 and substitute the attached revised Pages 33 through 37, 44, 46, 54, 75, 82, 85, 93, 97 through 101, 116, 118, 122, 125 through 133, 137, 151, 157, 158, 164, 165, and 167. Please note there are no tracked changes on pages 33, 37 and 128 through 133, but the pages are included due to the shift of text resulting from the additions of text to pages 34 through 36 and 125 through 127.

Delete Drawings Interchange 23 Concept, Interchange 25 Concept, and Interchange 39 Concept of the DB Contract Documents, Part 6 – RFP Plans – Indicative/Concept Plans and replace with the attached revised Drawings Interchange 23 Concept, Interchange 25 Concept, and Interchange 39 Concept.

The following changes have been made to Final RFP Part 7 – Engineering Data since the final was posted on February 14, 2019:

Part 7 Section 6 – Asbestos and Hazardous Materials: Added Hazardous Material Reports for Exit 56, 57, 57A, 58, 59, 60 - 2/22/19

New York State Thruway Authority

Part 7 Section 19 – Traffic Data: Added Raw Traffic Data for Terminus Locations at Woodbury (P15), Canaan (PB3), Williamsville (P50), Lackawanna (P55) and Ripley (P61) - 2/21/19

Part 7 Section 16 – Toll Booth Number of Lanes: Added Interchanges 15, B3, 23,24,25, 25A,34A, 36, 39, 45, 46, 47, 50, 55 and 61 to “NYSTA Minimum Lanes by Plaza” - 2/19/19

Part 7 Section 19 – Traffic Data: Included instructions, “Readme Raw Hourly Traffic Volumes by exits”, for using raw hourly traffic volumes - 3/4/18

Part 7 Section 17 – VMS Locations: Modified VMS Placement Locations at Interchanges 19, 31, 35, 39, 43, 44 - 3/7/19

Part 7 Section 18 – Existing & Proposed Conditions: Revised Design Speed at Interchange 25 in “Table of Proposed Conditions for Interchanges and Terminus Locations” - 3/7/19

Part 7 Section 4 ORT Ramp Gantry Schematic- : Added NYSTA Standard Drawing CD-1 “Critical Dimensions for Mounting AVC Units” - 3/7/19

Part 7 Section 2 –ORT Concept Plans: Revised Exit 20W and 49 Concept Plans – 3/11/19

Part 7 Section 18 – Existing and Proposed Conditions: Revised Number of Lanes at Thruway Side of Plaza for 49 Depew in “Table of Proposed Conditions for Exit ORT Locations” – 3/11/19

No other provision of the solicitation is otherwise changed or modified.

Special Exit Work Tolls

Miscellaneous work will be required Exit 16 – Harriman, Exit 17 (Newburgh) and Exit 35.

The Toll-in-Place at Newburgh shall require the Design-Builder to install some signage, protective barrier installations, striping modifications, possibly limited attenuator installations, and new signage packages, including new VMS installations on the canopy on entry to the Thruway only – Newburgh entry to Thruway.

Also at Exit 35 there is no new equipment or Mainline Gantry or Mini-Gantry installation required. The work at this location will involve Toll Booth removal, potential concrete repairs, and possibly new super elevation and signage package(s), during transition to All Electronic Tolling, and necessary striping.

Lastly, Exit 16 (Harriman) shall require the removal of special Tolling Booths at certain exit points. This work needs to be complete immediately after the Toll-in-Place transition to All Electronic Tolling. Additional signage package is expected.

Mainline and Open Road Tolling (ORT) Tolls & Special Exit Work Tolls

The Design-Builder shall design, construct, inspect all locations relative to the Mainline Gantries and Mini-Gantries that supports the Mainline Tolling Equipment and the Open Road Tolling Equipment respectfully, along with the removal of the Toll Booths at the locations identified above after all electric tolling (AET) is operational across this Project's ticketed system. These locations shall require reduction in the roadway footprints. Surfaces may require road surface repairs, traffic control involving Toll Booth removal, concrete repairs, Mini-Gantry erection, installation of treadles, installation of concrete roadway surfaces, other work may involve sign package installations prior to All Electronic Tolling going live and after All Electronic tolling is live.

The Cashless Tolling System shall be operational prior to December 15, 2020, removal of Toll Booths and traffic operating in the required alignment and providing the correct number of lanes in each direction relative to the final condition, correction of Toll Plaza pavements and other modifications, as required, completed prior to ~~December 15~~August 4, 2021. The Cashless Tolling System has to be converted over in one evening (Saturday evening to Sunday morning), essentially at the same time. The only exception to this is the Erie Section, Lackawanna to Ripley, (MP 430.51 to MP 496.00), which can precede the rest of the ticketed system by no more than 30 days~~four (4) months~~ but shall not follow the rest of the ticketed system.

The Project scope of work will also include but not be limited to the following:

- Coordination with and/or preservation of existing utilities;
- Potential remediation and disposal of asbestos containing material;
- Potential remediation and disposal of lead paint;
- Installation of new guide railing;
- Other details, constraints, and/or limitations will be specified in this RFP.

A6.0 CONFLICT OF INTEREST

It is prohibited to hire any person or organization that has a “conflict of interest”. Because of their prior work, the following firms have been identified as having conflicts of interest that prevent their consideration for the pending Project. Due to a conflict of interest based on services currently being provided that are related to this Project, Proposers may not include the services of the following firm(s):

- C.V. Associates NY; PE, LS, P.C.
- SJH Engineering, PC
- Popli, Architecture & Engineering, L.S., DPC
- Shumaker Consulting, Engineering and Land Surveying, PC
- WSP USA Inc.
- Kapsch
- Adesta
- Kuritas

Proposers utilizing firm(s) identified above will be disqualified from participating in this Project.

A7.0 M/WBE AND SDVOB PARTICIPATION GOALS

The overall M/WBE participation goal for the Contract is established at 20% of the total Contract price.

The overall SDVOB participation goal for the Contract is established at 0.5% of the total Contract price.

A7.1 EEO GOALS

GOALS FOR EQUAL EMPLOYMENT OPPORTUNITY (EEO) PARTICIPATION

Goals for Minority and Women Participation by County — Non Federal Aid

<u>County</u>	<u>EEO Minority Goal</u>	<u>EEO Woman Goal</u>
<u>Albany</u>	<u>6.56</u>	<u>4.67</u>
<u>Cayuga</u>	<u>1.38</u>	<u>4.47</u>
<u>Chautauqua</u>	<u>3.47</u>	<u>4.83</u>
<u>Columbia</u>	<u>3.81</u>	<u>3.16</u>
<u>Erie</u>	<u>9.66</u>	<u>3.32</u>
<u>Genesee</u>	<u>5.47</u>	<u>5.18</u>
<u>Greene</u>	<u>2.88</u>	<u>4.09</u>
<u>Herkimer</u>	<u>1.00</u>	<u>4.22</u>
<u>Madison</u>	<u>1.52</u>	<u>4.52</u>
<u>Monroe</u>	<u>14.20</u>	<u>5.81</u>
<u>Montgomery</u>	<u>2.39</u>	<u>3.74</u>
<u>Oneida</u>	<u>3.75</u>	<u>3.98</u>
<u>Onondaga</u>	<u>8.27</u>	<u>5.36</u>

<u>Ontario</u>	<u>1.62</u>	<u>3.79</u>
<u>Orange</u>	<u>10.00</u>	<u>3.46</u>
<u>Rensselaer</u>	<u>3.46</u>	<u>3.01</u>
<u>Schenectady</u>	<u>6.05</u>	<u>2.85</u>
<u>Seneca</u>	<u>2.22</u>	<u>5.45</u>
<u>Ulster</u>	<u>5.93</u>	<u>4.29</u>

A8.0 AUTHORITY’S DESIGNATED REPRESENTATIVE

The Authority’s Designated Representative for this Procurement is:

James Chicoine and Michael Doyle
Attention: Cashless Tolling Design-Build Project
Office of Capital and Contracts Management
New York State Thruway Authority
200 Southern Blvd., 2nd Floor
Albany, New York 12209, USA

E-mail: CTDB@thruway.ny.gov

The above named person(s), as the Authority’s Designated Representative for this procurement, shall be the Authority’s point of contact and source of information for this procurement.

A9.0 ONE-ON-ONE MEETINGS

Prior to and/or after submission of Proposals, the Authority may conduct One-on-One meetings with Proposers as described below. If One-on-One meetings are held, they will be offered to each Proposer. The Authority reserves the right to disclose to all Proposers any issues raised during One-on-One meetings. However, the Authority will not disclose to other Proposers any information pertaining to an individual Proposer’s technical concepts, Proposal or ATCs. The Authority will hold One-on-One meetings on matters it deems appropriate.

A9.1 MEETINGS DURING PROPOSAL PERIOD

If the Authority decides that One-on-One meetings should be held, they will be held between the Authority and each Proposer. The period indicated in this ITP Appendix A for these meetings is subject to change. Specific meeting dates will be confirmed in advance of each meeting by the Authority to each Proposer’s Representative.

At least five (5) business days prior to the first scheduled meeting each Proposer may submit suggested agenda items for each One-on-One meeting to the Authority’s Designated Representative. The Authority will advise the Proposer of the location, final agenda, and the protocol for the meeting at least two (2) business days before the meeting. ATCs may be discussed at One-on-One meetings.

Each Proposer may request One-on-One meeting(s) with the Authority to discuss general concepts for potential ATCs or obtain preliminary feedback from the Authority, to be held prior to the ATC submittal deadline (see ITP Appendix A). Should a One-on-One meeting be scheduled

with a Proposer, the Authority will offer the opportunity for a One-on-One meeting with the other Proposers. The Authority may also schedule One-on-One meetings with any Proposer that has submitted ATC(s), to allow the Authority to fully understand the ATC(s) and to request clarifications. At any meeting, the Authority may seek clarifications regarding previously submitted ATCs.

If a Proposer requests additional meetings, or if the Authority considers it desirable or necessary to schedule additional meetings, the Authority may, in its discretion, schedule any such additional meetings.

The Authority may, in its sole discretion, issue one or more Addenda to address any issues raised in the One-on-One meetings.

A9.2 POST-PROPOSAL MEETINGS

The Authority does not currently anticipate the need for post-Proposal discussions, but reserves the right to enter into discussions and request revised Proposals. If interviews or presentations occur, Proposers shall not modify their Proposals or make additional commitments regarding Proposals at such meetings. The Authority anticipates engaging in limited negotiations with the selected Proposer prior to Contract award regarding such matters as are deemed advisable for negotiations by the Authority, as permitted by 23 CFR Section 636.513. The selected Proposer shall have no right to open negotiations on any matter that has not been raised by the Authority. See ITP Section 5.3. Negotiations can delay award of the Contract and subsequently affect end dates which both parties should avoid.

A9.3 STATEMENTS AT MEETINGS

Nothing stated at any meeting will modify the ITP or any other part of the RFP unless it is incorporated in an Addendum issued pursuant to ITP Section 2.3.1 or, in the case of an ATC, approved in writing in accordance with ITP Section A11.1.

A10.0 PROPOSAL STIPEND

Subject to the requirements and limitations set forth in the Stipend Agreement, the Authority shall pay to the Stipend-Eligible Proposer, and the Stipend-Eligible Proposer agrees to accept as full compensation for its Work Product, an amount (the "Stipend Amount") equal to 50% of the Proposer's total Qualified Costs, as substantiated in accordance with Article 4 (D) & (E) of the Stipend Agreement equals the stipend amount, not to exceed the amount listed in Article 4 (H) of the Stipend Agreement. Overhead costs are eligible. For qualified costs see Appendix G, Abbreviations and Definitions. Relative to overhead costs, the engineering firms established and current overhead rates with the Authority and NYSDOT will be used. However should the engineering firms overhead rates not be current or not accepted by the Authority and/or NYSDOT the overhead rate will default to 125%. The Proposer's costs can include a 110% overhead rate.

The Proposer shall maintain written records substantiating all Qualified Costs in sufficient detail to permit a proper audit thereof. Such records shall be made available for audit or verification of Qualified Costs upon request of NYSTA at the time of this Agreement and for three years after final payment of the Stipend Amount is made. "Qualified Costs" shall comprise the direct costs and overhead costs that are allowable and reasonable, and incurred by the Proposer, the Proposer's team, or third-parties acting at the direction of the Proposer in the production of the Work Product. Examples of qualified costs (subject to limitations of any other contract stipulations such as limits on hourly rates or not to exceed Government travel rates) can include the following:

- Compensation of employee's time charges related to preparation of the Proposal;
- Cost of materials acquired, consumed, or expended related to preparation of the Proposal;
- Cost of equipment utilized related to preparation of the Proposal; and
- Travel expenses incurred related to preparation of the Proposal.

The overhead rate applied to the Stipend calculation shall be equal to the Proposer's current audited rate on file with the NYSTA. An overhead rate of 115% will be applied for firms with no current rate on file. Unallowable Proposer costs are described in CFR-2011 - title 48 – volume 1 - part 31 – subpart 31.6. The Proposer shall submit to NYSTA copies of all substantiating documentation of Qualified Costs concurrently with the submission of its invoice for the Stipend Amount, and at any other time upon NYSTA's request. Failure of the Proposer, the Proposer's team, or third-parties acting at the direction of the Proposer to maintain and retain sufficient records to allow audit or verification of Qualified Costs, or failure to allow NYSTA or its agents access to the same, shall constitute a waiver of the right to any payment of a Stipend, and any Stipend Amount paid to the Proposer under this Agreement shall be immediately returned to the NYSTA.

The proposed stipend amount is being increased to \$350,000.

A11.0 ALTERNATIVE TECHNICAL CONCEPTS (ATCS)

The Authority has chosen to use the confidential ATC process set forth in this ITP Appendix A, Section A11.0 to allow innovation and flexibility to be incorporated into the Proposals and considered in making the selection decision, to avoid delays and potential conflicts in the design associated with deferring of technical concept reviews to the post-award period and, ultimately, to obtain the best value for the public.

The ATC process allows a Proposer to submit for pre-approval, on a confidential basis, proposed alternatives to the requirements of Contract Documents, Part 3 – Project Requirements, and design solutions included in the Contract Documents. The Authority will not approve any ATC that entails a deviation from the requirements of the as-issued Contract Documents unless the Authority determines, in its sole discretion, that the proposed end product based on the deviation is equal to or better than the end product absent the deviation.

Any ATC that has been approved may be included in the Proposal. If an ATC is conditionally approved, the Proposer must respond, accept, and meet the conditions set forth by the Authority by the date indicated in the ITP Appendix A, if the Proposer intends to use the ATC in their Proposal.

A11.1 SUBMITTAL AND REVIEW OF ATCS

A Proposer may submit ATCs for review to the Authority until the date identified in ITP Appendix A. All ATCs shall be submitted in writing, using Form ATC included in ITP Appendix E – Forms, to the Authority's Designated Representative at the e-mail address identified in ITP Appendix A, with a cover letter clearly identifying the submittal as a request for review of 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 Authority.

The Authority 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 Authority in determining which ATCs should be reviewed first.

If an ATC is summarily approved, the Authority's comments will inform the Proposer that its ATC appears to be generally acceptable. If the Authority needs more information to determine whether or not the ATC will be approved, conditionally approved, or not approved, the Authority will submit written questions to the Proposer and/or request a One-on-One meeting.

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 Authority, the Proposer may re-submit the ATC for one additional review to the Authority's Designated Representative at the e-mail address identified in ITP Appendix A until the final date for ATC submittals set forth in ITP Appendix A. 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 Authority will conduct its additional review of the ATC and provide a response to the Proposer by e-mail not later than the date for such responses set forth in ITP Appendix A.

The Proposer shall advise the Authority in its ATC submittal if it believes a One-on-One meeting is appropriate. Since a One-on-One meeting may not be needed for the Authority to determine if a particular ATC will be approved, the Authority will determine, in its sole discretion, whether a One-on-One meeting will be held.

The Authority 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.

A11.2 CONTENT OF ATC SUBMITTALS

Each ATC submittal shall include the following:

- A) Description: A detailed description and schematic drawings/details (Sketched on 8½" x 11" paper) of the configuration of the ATC;
- 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: A technical 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 the community due to the construction, environmental impacts (favorable and unfavorable) identified in appropriate environmental documents, safety and project life-cycle;
- F) Environmental Approvals: A discussion of what, if any, changes in the compliance terms, best management practices and avoidance measures identified in any 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 Authority and other Persons associated with implementing the ATC;
- I) Schedule: An estimate of the impact of the ATC upon the Contract duration and schedule, 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 only) of the ATC on the Proposal Price (No other discussions of Project costs shall be referenced or implied during the one-on-one discussions, ATC discussions or submittals, or any other communications during the procurement process);
- K) ROW Requirements: A list of 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 Authority would be appropriate to discuss the ATC.

A11.3 SUBMISSION OF ATC SUBMITTALS

Each ATC submittal shall be submitted to the Authority's Designated Representative (via e-mail) on Form ATC in searchable portable document format (pdf).

Any subsequent communications about an ATC should quote the relevant sequential ATC submission number.

A11.4 DETERMINATION BY THE AUTHORITY

The Authority will make one of the following determinations with respect to each properly submitted ATC:

- A) The ATC is approved;
- B) The ATC is not approved;
- C) The ATC is conditionally approved subject to specified conditions;
- D) The submittal does not qualify as an ATC but it may be included in the Proposal without an ATC (i.e. the concept complies with the RFP requirements); or
- E) The submittal does not qualify as an ATC and it does not comply with the RFP.

Any approval of an ATC will constitute a change in the specific requirements of the Contract Documents to the extent: (i) specified in such approval; and (ii) the Proposer is awarded the Contract. Should the Design-Builder be unable to obtain required approvals for any ATC, it shall not be included in the proposal. If an unapproved ATC is incorporated, it is grounds for disqualification or the Design-Builder shall meet the conditions stated in the RFP with no additional costs or schedule modifications. This is at the discretion of the Authority and cannot be protested. If an ATC is approved and is incorporated into the Contract Documents and the concept otherwise proves to be infeasible, the Design-Builder will be required to conform to the original requirements of the Contract Documents. See Contract Documents Part 2, DB §104-4.6. Each Proposer, by

submission of its Proposal, acknowledges that the opportunity to submit ATCs was offered to all Proposers, and waives any right to object to the Authority's determinations regarding the acceptability of ATCs.

A11.5 INCORPORATION INTO PROPOSAL

A Proposer may incorporate none or one or more pre-approved ATCs into its Proposal, including conditionally approved ATCs, provided that all conditions of approval have been satisfied by the date indicated in ITP Appendix A. Copies of the Authority's ATC approval letters for each incorporated ATC shall be included in the Proposal as specified in Appendix C, along with the approved ATC. Proposals with or without ATCs will be evaluated against the same technical evaluation factors, and the inclusion of an ATC, including an ATC that provides technical enhancements, may or may not receive a higher technical rating.

The Proposal Price, schedule, approach and proposal details should reflect any incorporated ATCs. Except for incorporating approved ATCs, the Proposal may not otherwise contain exceptions to or deviations from the requirements of the RFP Documents.

A11.6 CONFIDENTIALITY

Subject to Section 6.3 of the ITP, ATCs properly submitted by a Proposer and all subsequent communications regarding its ATCs will be considered confidential during the proposal period. If a Proposer wishes to make any announcement or disclosure to third parties concerning any ATC, it shall first notify the Authority in writing of its intent to take such action, including details as to date and participants, and obtain the Authority's prior approval to do so.

The forgoing shall not preclude the Authority from modifying the RFP Documents as necessary to comply with applicable law or to account for information obtained by the Authority outside of the ATC.

A12.0 QUALITY EVALUATION FACTORS, SUBFACTORS AND WEIGHTING

A12.1 QUALITY EVALUATION FACTORS AND SUBFACTORS

The quality evaluation factors and subfactors are as follows:

- A) Design-Build Organization and Process
 - 1. Key Personnel:
 - a. Project Manager;
 - b. Design Manager;
 - c. Quality Manager;
 - d. Supervisor of Resident Engineers;
 - e. Lead Structural Engineer;
 - f. Lead Civil Engineer;
 - g. Lead Geotechnical Engineer;
 - h. Resident Engineers (4 Resident Engineers);
 - i. Civil rights Compliance Manager.
 - 2. Overall Design-Build Team Organization and Approach to Quality

- a. Design-Build Team Organization Chart
 - b. Design-Build Team Communication Protocol
 - c. Design-Build Quality Control Plan
- B) Design-Build Approach to the Project (Technical Solutions)
- 1. Project Understanding
 - 2. Design-Build Approach to Design
 - 3. Design-Build Construction Approach (Means and Methods)
- C) Schedule;
- 1. CPM Schedule;
 - 2. Project Completion Date / Defined Completion Date (SCD Forms)
 - 3. Gantt Chart.

A12.1.1 Design-Build Organization and Process

The evaluation of this section is focused on the formation of a team of key individuals that function within the Proposer's proposed organization structure, with the same understanding of the function and need for consistency; focus on the actual structure of the organization, which is to be displayed in an organization chart format; focus on the communication and processes to be adopted for the Proposer's proposed organization, which has to be illustrated in a communication protocol graphic and described in a narrative format, and focus on the initial quality control plan, which will be further developed and updated as described in Part 3, Section 2 and throughout the Project as a living document.

The narrative will be evaluated on how the Proposer is organized for quality, safety, design and construction to achieve the Project's goals and how the Proposer will communicate with the Authority's Project Manager, Construction Quality Assurance Engineer, the Design Quality Assurance Engineer and their staff; also evaluation of the description of the integration of the design and construction efforts to achieve efficient progression of the work; and evaluation of the means of reporting on and controlling progress of the work to the Authority and for Project control. Evaluation of how the work will be progressed in coordination with other agencies should be included as well.

See ITP Appendix C for additional and more specific details regarding this factor and the specific information to be submitted for the evaluation of this factor.

A12.1.1.1 Key Personnel

This evaluation factor evaluates the qualifications and experience of the Proposer's proposed Key Personnel identified in the Proposer's Proposal. This factor also evaluates whether the designated roles of the Key Personnel as specified in the Proposer's Proposal are appropriate for the Project.

Objective: The scope of the Project demands a highly qualified and integrated team of personnel with expertise in projects of a similar nature to this Project and a record of producing quality work, including project management delivery. The scope of the Project also demands a Team having experience in delivering quality projects, preferably Design-Build projects, on or ahead of schedule and on or under budget. Therefore, the Objective of this evaluation factor is to identify Proposers that have assigned personnel that can complete the Contract to the highest degree of

quality, in a timely and effective manner, and have successfully integrated this philosophy into the various parts of its organization, and can coordinate with the Authority in a cooperative and functional manner; and to identify a Team with demonstrated experience and expertise, and a record of producing quality work on projects of a similar nature to this Project.

Key Personnel are preferred to have experience on projects of a similar size, type of work, and complexity as this Project, and should meet the qualifications described in Part 3, Project Requirements, Section 2. Proposed staff with qualifications less than those described in Part 3, Project Requirements, Section 2 will receive a reduced score compared to staff that meet or exceed the described qualifications. Any requirements described as “shall have...” or “shall be...” are determined to be minimum response requirements. Failure to provide the minimum requirements shall result in a Key Personnel rating of ‘0’ for that subfactor. Should the Proposer’s Proposal still be determined to be the Best Value Proposal, that Key Personnel position rated ‘0’ shall be replaced with a candidate meeting the minimum requirements, as described in Part 3 – Project Requirements, or the offer of Best Value shall be withdrawn.

ITP Appendix C provides additional details regarding this factor and the specific information to be submitted as part of the Proposal and ITP Appendix G for definitions of Key Personnel.

A12.1.1.2 Overall Design-Build Team Organization and Approach to Quality

Design-Build Team Organization Chart - The Proposer’s Design-Build Team Organization Chart shall include all Key Personnel required to be identified under the Key Personnel Section A12.1. The Organizational Chart shall show the Design/Construction/Inspection/Quality Control and Materials Testing components of the Proposer’s proposed Design-Build Team and how they are integrated into the Design-Build Team Structure. The Design-Builder shall include an additional narrative piece as specified in ITP Appendix C and Table C.

Design-Build Team Communication Protocol – The Proposer’s proposed Design-Build Team communication protocol shall be presented utilizing the same Design-Build Team Organization Chart described above with the incorporation of additional communication arrows depicting the lines of communication amongst the Design-Build Team Organization. This Communication Protocol Graphic shall also illustrate the communication between the Design-Build Team and the owner (NYSTA) and its representatives such as the Project Manager, the Design Quality Assurance Engineer, the Construction Quality Assurance Engineer, etc. To supplement and provide clarification to this communication protocol, the Design-Builder shall include an additional narrative piece as specified in ITP Appendix C and Table C.

Quality Control Plan – The Proposer’s approach to Quality Control for design and construction shall be described in an Initial Quality Control Plan, which will be further developed as part of the Project. The Quality Control Plan should describe how the design and construction activities will be coordinated to ensure consistency and quality throughout the Project.

A12.1.2 Design-Build Approach to the Project (Technical Solutions)

The purpose of this set of evaluation factors is to determine first how well the Proposer understands the Project, why the Proposer’s proposed design and construction solutions were chosen, and how all the proposed solutions benefit the Authority in the overall technical solutions and approach to this Project in meeting all the Project objectives.

See ITP Appendix C for additional details regarding this factor and the specific information to be submitted for the evaluation of this factor.

A12.1.2.1 Project Understanding

The purpose of this evaluation factor is to better identify those Proposers demonstrating an understanding of the management, technical, design, construction, documentation, reporting, environmental and maintenance of traffic issues and risks associated with the Project; and

To identify those Proposers demonstrating an understanding of how the Design-Build process and the Proposer's organization will contribute to the success of the Project; and to identify Proposers that have the ability to meet the Authority's Project goals and that have an understanding of the risk sharing and the teaming relationship between the eventual Design-Builder and the Authority.

A12.1.2.2 Design-Build Approach to Design

The Design Solutions should address how well the Proposer understands the design challenges associated with this Project; how the Proposer intends to comply with the design requirements, how the design solutions meet or exceed the Project objectives and how the design solutions benefits the Authority, toll payers and tax payers of New York State and provides a long term solution in addressing the Authority's infrastructure needs including but not limited to the following:

- A) Future maintenance requirements and costs of the newly designed and constructed gantry structures and infrastructure highway solutions. What does the Proposer's Proposal provide beyond the basic standard specifications and criteria to ensure an increased service life for the Project elements? If only the minimum standard design and standard specifications were used the Proposer shall state such.
- B) Mainline Gantries – What are the proposed designs, configurations and locations of the Gantries including Milepost markers (MP) and how do they satisfy or exceed the Project Requirements. How will the Gantries support the required Cashless Tolling Systems Equipment and how will the Designs address access for future Maintenance Work on the equipment ~~will be provided~~. Define the type, size, and what is included in the Mainline Gantry Communications Buildings. Also describe the proposed location and configuration of the Mainline Cashless Toll Communication Buildings, Emergency Generators, and other equipment needed to support the Mainline Cashless Tolling operations. Provide the final lane configurations and cross sections under the Mainline Gantry locations.
- C) Toll Plaza and TUB Demolition – What are the proposed sequence of demolition of the Toll Plazas and TUBs. How will the removal be completed in stages and traffic lanes maintained to avoid congestion at the Toll Booths.
- D) Interchanges and Terminus locations Toll Plaza Modifications – What are the proposed modifications to the Toll Plazas areas that will be removed. What are the proposed lane configurations through the Toll Plaza areas, and the lanes to be closed, and define the reduction of footprint, and ~~what is~~ the rational for the proposed lane configurations. How does the lane configurations address merging conditions.
- E) ORT Exit Sites – What are the proposed changes to the ORT Exit Site alignments and pavement footprints, what are the designs, configurations of the mini-gantry and how do they satisfy the Project requirements. The Design-Builder shall ~~demonstrate/discuss~~show how the repairs, the modified alignments (if any), the mini-gantry location(s), driveway removals, driveway and/or Tandem Lot locations, Park and Ride Lots, and their modifications, along with transitions to and from the Thruway System benefit the Authority, toll payers and the tax payers of New York State.

- F) ORT Toll Plaza removals and installation of New Communication Building – What are the proposed sequence of demolition of the ORT Toll Plazas. Define the type, size, and what is included in the ORT Communications Buildings. Also describe the proposed location and configuration of the ORT Communication Buildings, Emergency Supplemental Generators, and other equipment needed to support the ORT Cashless Tolling operations.

See Appendix C for more details on what is required.

A12.1.2.3 Design-Build Construction Approach (Means and Methods)

This section is devoted to evaluating the means and methods the Proposer intends on using for the demolition and construction and staging of the Project, while protecting existing facilities and minimizing to the greatest extent possible impacts to the traveling public, businesses, and the surrounding communities.

- A) How do the means and methods and construction approaches provide less impact to the travelling public, and the community as a whole?
- B) Environmentally, how do the means and methods meet the Project Requirements, and how do they minimize the impacts to the environment? Do the methods eliminate the need for permits, and if so, what permits? What permits do the proposers anticipate will be required? What effects have been taken to minimize noise intrusion into the potential surrounding communities?
- C) Transportation of materials to and from the Project site shall be accomplished when and how and how does this benefit the Authority, the travelers, and the surrounding communities?
- D) Provide a description of how from a logistical standpoint these means and methods shall be incorporated consistently and throughout the Project to avoid non-conformance issues.

See Appendix C for more details on what is required.

A12.1.3 Schedule

Schedule — evaluates the integrated logic, logistics of design and construction and construction inspection. The scheduling of design and construction; the start and end dates of work zone traffic protection activities and start and end dates of the construction stages and Project Completion and defined completion dates (AETC “go live” date). Schedule should show start and completion dates of design and construction phases of the Mainline Gantry work, the ORT sites, the special Exit Sites, and the Interchange work sites. The design and construction activities shall be detailed sufficiently to show the start and completion of all major construction activities. The Proposer shall submit the following items in connection with this evaluation criteria:

- Initial Baseline Schedule(CPM);
- A Gantt Chart summarizing the start and end dates for all major work items;
- SCD Forms

See ITP Appendix C for additional details regarding this factor and the specific information to be submitted for the evaluation of this factor.

A12.2 QUALITY EVALUATION WEIGHTING

- A) Design-Build Organization and Process (33 points)
1. Key Personnel (15 points):
 - a. Project Manager;
 - b. Design Manager;

- c. Quality Manager;
 - d. Supervisor of Resident Engineers;
 - e. Lead Structural Engineer;
 - f. Lead Civil Engineer;
 - g. Lead Geotechnical Engineer;
 - h. Resident Engineers (4 Resident Engineers);
 - i. Civil Rights Compliance Manager.
2. Overall Design-Build Team Organization and Approach to Quality (18 points)
 - a. Design-Build Team Organization Chart
 - b. Design-Build Team Communication Protocol
 - c. Design-Build Quality Control Plan
- B) Design-Build Approach to the Project (Technical Solutions; 40 points)
1. Project Understanding (10 points)
 2. Design-Build Approach to Design (15 points)
 3. Design-Build Construction Approach (Means and Methods) (15 points)
- C) Schedule (27 points);
1. Initial Baseline Schedule (CPM) (6 points);
 2. Project Completion Date / Defined Completion Date (SCD Forms); (18 points)
 - i. Project Completion Date (3 points). The proposer with the shortest duration from Notice to Proceed shall receive the full 3 points. Remaining proposers' durations to be pro-rated against the shortest duration. For example the shortest duration is 600 days and the next shortest duration is 750 days; the shortest duration would receive the maximum available points x and the next shortest duration would receive $600/750 * x = .80$ (x points).
 - ii. Defined Completion Date (15 points). The proposer with the shortest duration from Notice to Proceed shall receive the full 15 points. Remaining proposers' durations to be pro-rated against the shortest duration. For example the shortest duration is 600 days and the next shortest duration is 750 days; the shortest duration would receive the maximum available points x and the next shortest duration would receive $600/750 * x = .80$ (x points).
 3. Gantt Chart (3 points).

Note Regarding Quality Evaluations and Proposal Format Compliance:

Proposers shall comply with all formatting requirements stated in the ITP in Appendices A, B, C, and D, including page size, section length, and font size. In addition, all Proposers shall comply with the following format requirements:

- A) The inside and outside surfaces of all binders, and both sides of all dividers, shall be solid and shall contain only text; no pictures, renderings or graphics shall be included;
- B) All narrative pages, resumes, Initial Quality Plan components and forms shall contain text only and shall contain no pictures, renderings or graphics;
- C) Photographs, visualizations, and/or renderings, if requested in the ITP, shall not contain any text;
- D) All drawings submitted as part of the Proposal shall include no narratives or text other than notes or call-outs which would typically be included on design drawings.
- E) External web links are not to be included anywhere in the Proposal.

Failure by a Proposer to follow the formatting requirements stated in the ITP will result in the particular page(s) being deleted from the Proposal before technical evaluation. Two possible examples of this are:

1. Appendix C, Table C states the Initial Baseline Progress Schedule is limited to a maximum of fifteen pages. If a Proposer submitted an Initial Baseline Progress Schedule sixteen pages in length, the sixteenth page will be removed from the Proposal.
2. This Section states that external web links are not to be included in the Proposal. If a Proposer were to refer to a web link in their Initial Quality Control Plan, then the specific page with the web link reference will be removed from the Proposal.

Proposers are advised that a Proposal may receive a lower score as a result of any pages removed.

A12.3 NOTE ABOUT PROJECT SUPPORT

The Design-Builder shall be responsible for providing project support relative to public information meetings, media responses, and any public inquiries. The Authority shall still be the face of this project and shall deal directly with the public, the media, and elected officials. The Design-Builder shall be present for all public information meetings. While the majority of the work on the Thruway should not involve public information meetings, ~~bridges over the Thruway involving closures or impacts to traffic~~ will and/or closures may require such meetings. The Design-Builder shall, as a minimum, prepare graphics, renderings and secure places to conduct public informational meetings. The Design-Builder shall assume four such informational meetings shall be required. Locations to be determined. The Authority anticipates the majority of this work will be in dealing with press releases, and providing graphics for elected officials.

The year, the time schedule (how long) for impacting traffic will all be conveyed at these public information meetings. Work results and the Design-Builders progress and meeting of obligations will drive the necessity to have more than ~~the anticipated one~~ public informational meeting. These meetings shall be scheduled as per Section 7 of Part 3 of this RFP.;

C1.0 GENERAL INSTRUCTIONS

This ITP Appendix C provides the general instructions and establishes the content and formatting requirements for the Technical Proposal, Volumes 2. Additional criteria is outlined in ITP Appendix A.

Each Proposer should submit the Technical Proposal required pursuant to this ITP Appendix C, organized, separated and labeled in accordance with the format in Table C.

The submittals should be limited to the page limitations (if any) specified in this ITP Appendix C. Each sheet shall be 8.5" by 11" and printed double sided, unless otherwise stated below. Text shall be in a standard font, a minimum of ten points in height, single-spaced. All design drawings submitted with Proposals shall be printed single-sided on 11" by 17" sheets, and all as-printed text font sizes on plans shall be at least 8 points or per NYSDOT HDM Standards.

C2.0 DESIGN-BUILDER'S ORGANIZATION AND PROCESS

C2.1 KEY PERSONNEL

The Proposer shall include Form R – Summary Individual's Experience for each of the Key Personnel identified in the ITP Appendix A, outlining his/her experience and qualifications.

The content of each Form R that should be filled in includes:

- A) Proposed role on Project;
- B) Relevant licenses, registrations and certifications;
- C) Total years of professional experience and years of experience performing the work the individual would perform on this Project; Form R for Quality Manager should include an attached sheet that provides a description of experience in quality systems based on ISO 9001 if applicable;
- D) Relevant past project experience including project names, locations and total construction costs; the individual's start and end dates on each project; the individual's role on each project; the duties performed on each project. Contact Information should be owners or clients for whom the individual has performed project work for in the past five (5) years and should not be current employers of the individual. The proposed key personnel individual shall have performed the work duties being evaluated, in the past year.
- E) Employment time with participant;
- F) Percent time (percentage of working time) allocated/committed to this Project for each 12 month period of the Project from its NTP through project completion;
- G) If more than one key position is to be filled by the same individual, so indicate.

The Proposer should include Form KP in Volume 1 to communicate any approved changes in the Proposer's proposed roster of Key Personnel, relative to the Proposer's SOQ submission. For each change in Key Personnel since the SOQ, the Proposer should include in the Proposal with Form KP a copy of the written approval received from the Authority for such change (see ITP Section 1.15), details of such Key Personnel's role and a completely filled in Form R of the substitute personnel. If no changes in Key Personnel have been requested since the SOQ, Proposers should use Form KP to state that there is no change relative to the SOQ, as those Key Personnel evaluated during the SOQs do not have to be resubmitted in the final proposal.

Project and describe how the firms and personnel will communicate and collaborate to deliver a quality Project.

C3.2 DESIGN-BUILD APPROACH TO DESIGN

C3.2.1 Design Narrative

Provide a narrative describing how the Proposer will apply the requirements of Contract Documents Part 3 - Project Requirements to the roadways and structures, while complying with any environmental and permitting requirements and other Contract requirements during the performance of the design and construction Work. The Proposer should provide a description of why particular aspects of the design were selected and the benefits of these design decisions, including the Proposer's selection of structure (Mainline Gantries and Mini-Gantries) types, the span lengths, foundation types, and materials and other items as specified in ITP, Appendix A, Section A12.1.2. A summary of any ATCs approved or conditionally approved by the Authority should be included.

- A) Describe the proposed general arrangements and materials of the Mainline Gantries and Mini-Gantries and other elements of the Proposer's designs; why the Proposer is proposing the chosen general arrangements and materials; and how the Authority benefits from the Proposer's proposal; and
 - i. Provide as part of the narrative the requirements described in ITP, Appendix A, Section A12.1.2.2
 - ii. Provide copies of the Authority's approval letters for each ATC that is incorporated into the Proposer's Proposal along with a copy of each submitted ATC that was approved.
- B) Describe the design method that will be used to determine foundation capacities;
- C) Describe any Design Non-Conformances or aspects of the Design that do not conform to the Project Requirements and/or Standards listed in the RFP. Any Design Non-Conformances or designs that do not conform to the Project Requirements and/or Standards listed in the RFP, have not been approved by the Authority, and have not been described in the Proposer's Proposal will be rejected by the Authority after Contract Award.

C3.2.2 Design Drawings

Provide design drawings showing the plan view, typical cross section and elevation view as required to appropriately convey the scope of work and relevant information, with elements appropriately labeled and/or dimensioned.

The Drawings should include the following information:

- A) Plans showing Work Zone Traffic Control for Toll Booth removal during for Exits 16, 17 and 18, each construction stage to accomplish that as part of work at the following locations: Special Exit 17 (exit location), Interchange 24, Terminus location Williamsville, ORT Exit Sites: Exit 19, Exit 49, Exit 27 and Exit 20W;
- B) Plans showing proposed alignment, lanes, shoulders, mini-gantry locations, barriers, delineators, railings and the reduction of foot prints for the ORT sites at the following locations: Exit 22, Exit 49, Exit B2, Exit 43;
- C) Plans showing final alignment, proposed lanes, shoulders, barriers, railings, ~~and final alignment~~ with reduced pavement footprints ~~of infrastructure of the interchanges~~ at the following locations: Interchange 23, 24, 39 and 45;

- D) Plans and Cross Sections of Roadway under the Mainline Gantry and final alignment for the Mainline Gantry locations and terminus locations.. The cross sections should show as a minimum: lanes, shoulders, railings, barriers, Communications Buildings and reduced footprints of the infrastructure at the following locations: between 23 (Boulevard) and 24 (Washington Avenue), between 39 (State Fair) and 40 (Westport), between 34 (Canastota) and 34A (Collamer) and at Terminus location Williamsville;
- E) Plans, elevations and cross sections showing proposed configurations and dimensions of the primary structural elements of the Mainline Gantry structures, the means of accessing Cashless Tolling Equipment on the Mainline Gantries, and the Communication Buildings supporting the Cashless Tolling Systems at the following locations: between 23 (Boulevard) and 24 (Washington Avenue), between 39 (State Fair) and 40 (Westport), Terminus locations, Canaan, Ripley and Williamsville; For the ORT Exit Sites plans, elevations, and cross sections showing proposed configurations and dimensions of the primary structural elements of the mini-gantry structures, and to Communication Buildings supporting the Cashless Tolling Systems at the following: Exit 20W, Exit 31, Exit 49, and Exit 57. Table of minimum vertical clearances to be provided at the following mainline Gantry locations: between 23 (Boulevard) and 24 (Washington Avenue), between 25 (Interchange) and 25A (Duanesburg), between 39 (State Fair) and 40 (Westport) at Terminus locations Canaan, Williamsville, and Ripley each Gantry and ORT Site Gantries for every lane in each direction. In addition include in the table of vertical clearances for the mini-gantries at the ORT Exit Sites: Exit 27, Exit 33, Exit 19, and Exit 43. Drawings may be used in combination with or in place of the table

C3.3 DESIGN BUILD CONSTRUCTION APPROACH (MEANS AND METHODS)

C3.3.1 Overall Construction Sequence of the Work

Provide a narrative describing the overall construction sequence of the Work in the Contract, including all staging areas, as well as the final permanent footprint of the constructed improvements. The narrative **shall** discuss the logistics and challenges of constructing the project elements while meeting the Work Zone Traffic Control requirements, and shall discuss why the sequence was chosen, how the sequence benefits the Authority, and why it is the best solution for constructing the project elements. The Narrative **shall** also discuss the requirements as stated under ITP, Appendix A, Section A12.1.2.3.

C3.3.2 Work Zone Traffic Control (WZTC)

Provide a narrative describing the proposed WZTC at each Gantry removals and Toll Plazas to be demolished including a description of the Proposer's plan to maintain safety and use of traffic control to minimize disruption to the travelling toll payers and minimize congestion, stemming from the construction work. At a minimum, the Work Zone Traffic Control narrative should:

- A) Describe the major phases of the Work;
- B) Include complete typical sections by phase, including information regarding maintenance of access and egress. It should provide phase notes and details regarding sequence of work activities;
- C) Identify each affected road and access way within the vicinity of the Project site, and describe the potential impacts, mitigation measures, limitations of use, and the number and duration of time that each road and maintenance access way may be impacted in performing the Work, including information regarding detours;

- D) Describe the Proposer's approach to accommodate emergency service providers and commercial vehicles; and
- E) Describe how the WZTC will be coordinated with adjacent projects to provide safe passage of traffic.

C3.3.3 Protection of Existing Facilities

Provide a narrative describing the proposed methods of protecting existing facilities, including a description of the specific means the Proposer intends to use to minimize impacts to existing utilities, local roads and properties adjacent to or within the Project Limits. This description should identify how the Proposer intends to mitigate impacts due to vibrations conditions and other effects of the Proposer's construction operations.

C3.3.4 Utility Work

Provide a narrative describing the proposed approach to the required Utility Work, including a description of how utility work will be approached with minimal disruptions to utility operations and other activities on the Project. Identify specific and/or unique design and/or construction methods that will be implemented to minimize the impacts on existing utilities and facilities as a result of construction activities. If no impacts, provide a declarative statement stating such.

C3.3.5 Drainage Modifications

Provide a narrative describing the proposed approach to any Drainage Modifications that will be required, including concepts for Stormwater management and connections to existing facilities and pipes. If no impacts, provide a declarative statement stating such.

C4.0 PROJECT SCHEDULE

C4.1 INITIAL BASELINE PROGRESS SCHEDULE (CPM)

The Proposer should include an Initial Baseline Progress Schedule that is comprised of a logic based, critical path method (CPM) project schedule for the Work to be performed from the execution of the Contract up to and including Final Acceptance. The Initial Baseline Progress Schedule should include a start date and the duration in days for all major Design and Construction activities, as well as a detailed work plan with a hierarchical breakdown of work scope by location, type and task.

The successful Proposer will be required to develop and complete a project schedule using Primavera P6 Enterprise software in conformance with Part 2, DB §100 – General Provisions and Part 5, Special Provision SP-3 – Critical Path Method Schedule within 10 calendar days, after award of the contract. The successful Proposer will be required to maintain the dates, durations and other milestones shown on the Initial Baseline Schedule when preparing the Primavera P6 Enterprise based schedule. See Contract Document Part 2 - DB §108 and Special Provision SP-3.

The Initial Baseline Progress Schedule should include the following information, at a minimum, for the overall project:

- A) Notice to Proceed;
- B) Design and design reviews;
- C) Start of work at the project site(s);
- D) Duration and dates of start and end for roadway closures, staging phases, and detours;

- E) Dates for start and end of major design and construction activities, all Mainline Gantry work, Interchange Work, ORT Exist Site Work, and Special Exit Work;
- F) AETC “go live” date; and
- G) Final Completion date.

With the Initial Baseline Progress Schedule, the Proposer should provide a narrative that lists and describes the assumptions used in preparing the schedule, which should include the timing, duration and subject matter for the review and processing of all required submittals. The narrative should also include an explanation of the sequencing and phasing of construction activities and how the construction activities are planned to be performed based on different/multiple work shifts.

The Initial Baseline Progress Schedule should be provided in hard copy and electronically on thumbdrive. The schedule shall be presented in hard copy printed on 11” by 17” sheets with all as-printed font sizes at least 8 point. The electronic copy shall be in portable document format (pdf). The thumbdrive shall be labeled “Cashless Tolling, Project INITIAL BASELINE PROGRESS SCHEDULE, then the Proposer’s name. In addition, submit the electronic file in P6V8.2 format.

C4.2 SCHEDULE OF CONTRACT DURATIONS

The Proposer shall submit Form SCD.

C4.3 GANTT CHART

The Proposer should submit the Gantt Chart, supplied on Form G, which is a simplification of the Initial Baseline Progress Schedule showing all major construction activities. The Gantt Chart shall be presented in hard copy printed on an 11” by 17” sheets with all as-printed font sizes at least 8 point. For the purposes of this section, the following are examples of major construction activities (if applicable):

- Start of Construction
- All Mainline Gantry Work locations start and end dates; ;
- Interchange (11 locations) start and end dates; ;
- Toll Plaza Removal start and end dates;
- Toll Plaza demolition of each stage;
- ORT Exit site(s) start and end dates;
- All Special Exits start and end dates;
- Modifications of access to and from NYSTA Maintenance Facilities;
- Highway paving work for all locations start and end dates;
- Utility relocations and/or new installation work at applicable sites;
- AETC “go live” date;
- Overall Construction Project Completion.

C5.0 FORMAT OF VOLUME 2

<p style="text-align: center;">Cashless Tolling DESIGN-BUILDER'S PROPOSAL VOLUME 2 TECHNICAL PROPOSAL</p> <p style="text-align: center;">PROPOSER: _____</p>

Organize Volume 2 in the format shown in Table C, with the cover of the volume labeled as follows:

Provide the Technical Proposal submittals in Volume 2 in the order set forth in Table C. Separate the individual submittals in Volume 2 with tabs labeled as outlined in Table C (e.g., "Design-Build Quality Control Plan"), and use a copy of the Table C as a checklist for the basis of the table of contents for Volume 2 (which shall be the first page of Volume 2).

**Table C
Format of Volume 2**

Proposal Component	Reference
Volume 2, Section A – Design-Build Organization and Process	
Volume 2, Section A1 – Key Personnel	
Key Personnel Form R	C2.1
Volume 2, Section A2 – Overall Design-Build Team Organization and Approach to Quality	
Design-Build Organization Chart (Narrative, Max 10 pages plus 11” x 17” org. chart)	C2.2.1
Design-Build Team Communication Protocol (Narrative, max. 10 pages plus 11” x 17” communication graphic)	C2.2.2
Design-Build Quality Control Plan (max. 15 narrative pages plus 2 org. charts)	C2.2.3
Volume 2, Section B – Design Build Approach to the Project (Technical Solutions)	
Volume 2, Section B1– Project Understanding	
Project Understanding (Narrative, max. 10 Pages)	C3.1
Volume 2, Section B2 – Design-Build Approach to Design	
Design Narrative (Narrative, max. 18 pages)	C3.2.1
Copies of Authority’s approval letters for each ATC that is incorporated into the Proposer’s Proposal along with each submitted ATC that was approved and used.	C3.2.1
Volume 2, Section B3 – Design Build Construction Approach (Means and Methods)	
Overall Project Construction Sequence (max. 15 pages)	C3.3.1
Work Zone Traffic Control (max.10 pages)	C3.3.2
Protection of Existing Facilities (max. 3 pages)	C3.3.3
Utility Work (max. 3 pages)	C3.3.4
Drainage Modifications (max. 3 pages)	C3.3.5
Volume 2, Attachment A – Design Drawings (separate 11” x 17” binder)	
Work Zone Traffic Control for Toll Plazas Project Limits Plans Special Exit Sites (3 locations)	C3.2.2A
Plans ORT Exit Sites (34 Sites)	C3.2.2B
Plans Interchanges (411 locations)	C3.2.2C
Plans Mainline Gantry Areas (3min. 16 sites) and Terminus locations (5-1 sites)	C3.2.2D
Plan Designs of Mainline Gantry (2), Terminus locations (3), ORT Exit Sites (4) and Table of Vertical Clearances Mini-Gantry Structures	C3.2.2E
Volume 2B, Attachment B – Project Schedule	
Initial Baseline Progress Schedule (max. 15 pages)	C4.1
Initial Baseline Progress Schedule Narrative (max. 10 pages)	C4.1
Form SCD – Schedule of Contract Durations	C4.2
Form G – Gantt Chart (max. 10 pages)	C4.3

Note: Volume 2, Attachment A – Design Drawings, shall be submitted in a separate 11” x 17” binder.

APPENDIX E

Form Designator Form Title

Proposal Form

FP	Form of Proposal
FP(A)	Appendix to Form of Proposal

General Forms

AAP-10	MWBE/SDVOB Solicitation Log
AR	Acknowledgement of Receipt of RFP, Addenda and Responses to Questions
ATC	Alternative Technical Concept Submittal Form
BDEA**	Bid Document Escrow Agreement
C	Proposer's Representative
CR	Commitment to Assign Identified Resources to Project
EEO	Equal Employment Opportunity Certification
G	Gantt Chart
KP	Key Personnel Information
L-3	Authorization to Provide Professional Services in New York State
LC	Lobbying Certificate
LLL	Disclosure of Lobbying Activities
LDB	List of Proposed MWBE/SDVOBs
LSI	Letter of Subcontract Intent
NC	Non-Collusion Affidavit
PAB**	Form of Payment Bond (Labor and Material Bond)
PEB**	Form of Faithful Performance Bond
R	Summary of Individual's Experience
RFC	Request for Change
SA*	Stipend Agreement
SCD	Schedule of Contract Durations
SDU	Schedule of Proposed MWBE/SDVOB Utilization
<u>SWPPP</u>	<u>SWPPP Checklist</u>
U	Conflict Questionnaire

Price Proposal Forms

PP	Price Proposal Cover Sheet
SP	Schedule of Prices
WPS	Work Payment Schedule
PB	Proposal Bond

* Included for reference only. Form or Agreement to be submitted after Proposal Due Date

** Included for reference only. Form or Agreement to be submitted after Proposal Due Date by the selected Best Value Proposer

FORM SP
SCHEDULE OF PRICES

Proposer: _____

Item #	Item Name	<u>Price</u> (1)
806.06000115	Design Build – Construction Work Woodbury	
806.06000215	Design Build – Construction Work Special Exit 16	
806.06000315	Design Build – Construction Work Special Exit 17	
806.06000415	Design Build – Construction Work Exit 18	
806.06000515	Design Build – Construction Work Exit 19	
806.06000615	Design Build – Construction Work Exit 20E	
806.06000715	Design Build – Construction Work Exit 20W	
806.06000815	Design Build – Construction Work Exit 21	
806.06000915	Design Build – Construction Work Exit 21B	
806.06001015	Design Build – Construction Work Exit B1	
806.06001115	Design Build – Construction Work Exit B2	
806.06001215	Design Build – Construction Work Canaan	
806.06001315	Design Build – Construction Work Exit 22	
806.06001415	Design Build – Construction Work Gantry	
806.06001515	Design Build – Construction Work Interchange 23	
806.06001615	Design Build – Construction Work Gantry	
806.06001715	Design Build – Construction Work Interchange 24	
806.06001815	Design Build – Construction Work Gantry	
806.06001915	Design Build – Construction Work Interchange 25	
806.06002015	Design Build – Construction Work Gantry	
806.06002115	Design Build – Construction Work Interchange 25A	
806.06002215	Design Build – Construction Work Gantry	
806.06002315	Design Build – Construction Work Exit 26	
806.06002415	Design Build – Construction Work Exit 27	
806.06002515	Design Build – Construction Work Exit 28	
806.06002615	Design Build – Construction Work Exit 29	
806.06002715	Design Build – Construction Work Exit 29A	
806.06002815	Design Build – Construction Work Exit 30	

New York State Thruway Authority

806.06002915	Design Build – Construction Work Exit 31	
806.06003015	Design Build – Construction Work Exit 32	
806.06003115	Design Build – Construction Work Exit 33	
806.06003215	Design Build – Construction Work Exit 34	
806.06003315	Design Build – Construction Work Gantry	
806.06003415	Design Build – Construction Work Interchange 34A	
806.06003515	Design Build – Construction Work Gantry	
806.06003615	Design Build – Construction Work Special Exit 35	
806.06003715	Design Build – Construction Work Gantry	
806.06003815	Design Build – Construction Work Interchange 36	
806.06003915	Design Build – Construction Work Gantry	
806.06004015	Design Build – Construction Work Exit 37	
806.06004115	Design Build – Construction Work Exit 38	
806.06004215	Design Build – Construction Work Gantry	
806.06004315	Design Build – Construction Work Exit 39	
806.06004415	Design Build – Construction Work Gantry	
806.06004515	Design Build – Construction Work Exit 40	
806.06004615	Design Build – Construction Work Exit 41	
806.06004715	Design Build – Construction Work Exit 42	
806.06004815	Design Build – Construction Work Exit 43	
806.06004915	Design Build – Construction Work Gantry	
806.06005015	Design Build – Construction Work Interchange 44	
806.06005115	Design Build – Construction Work Gantry	
806.06005215	Design Build – Construction Work Interchange 45	
806.06005315	Design Build – Construction Work Gantry	
806.06005415	Design Build – Construction Work Interchange 46	
806.06005515	Design Build – Construction Work Gantry	
806.06005615	Design Build – Construction Work Interchange 47	
806.06005715	Design Build – Construction Work Gantry	
806.06005815	Design Build – Construction Work Exit 48	
806.06005915	Design Build – Construction Work Exit 48A	
806.06006015	Design Build – Construction Work Exit 49	
806.06006115	Design Build – Construction Work Williamsville	
806.06006215	Design Build – Construction Work Lackawanna	
806.06006315	Design Build – Construction Work Exit 56	

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806.06006415	Design Build – Construction Work Exit 57	
806.06006515	Design Build – Construction Work Exit 57A	
806.06006615	Design Build – Construction Work Exit 58	
806.06006715	Design Build – Construction Work Exit 59	
806.06006815	Design Build – Construction Work Exit 60	
806.06006915	Design Build – Construction Work Ripley	
806.06007015	Design Build – Construction Work VMS All Locations	
800.04000025	Design Build – Force Account Work	\$8,000,000.00
	Subtotal A	
800.05000015	Design Build – Site Mobilization (Maximum 4% of Subtotal A)	
	Subtotal B (Sum of Subtotal A and Site Mobilization)	
800.01000015	Design Build – Design Services	
800.02000015	Design Build – Construction Inspection Services	
800.03000015	Design Build – Quality Control Services (Materials and Testing)	
	TOTAL PROPOSAL PRICE	

Notes:

- 1.) Proposers shall complete Form SP using the excel spreadsheet located on the Authority’s Project web site.
- 2.) Subtotal B will be the value used to *calculate* the 51% Prime/MWBE/SDVOB self-work requirement less any Self Performance Specialty Items included in Part 5 – Special Provisions.

Instructions:

- 1.) Enter Lump Sum Price for each Price Item in the white, non-shaded, cells.

NYSTA Stormwater Pollution Prevention Plan (SWPPP) Review Checklist for Design-Build Projects

Project Name:	Design-Builder Name:	Contract #: D
Location:	Design-Builder Reviewer:	NYSTA Reviewer:
	Title:	Title:
<input type="checkbox"/> Phase 1 Site Work – E&SC SWPPP	Date:	Date:
<input type="checkbox"/> Phase 2 Final Design – Full SWPPP		

General Requirements:

- | | |
|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Copy of electronic Notice of Intent (eNOI) | <input type="checkbox"/> Documentation of screening and consultation with NYS OPRHP to address potential impacts to archeological and historic resources |
| <input type="checkbox"/> Copy of signed Owner/Operator Certification | <input type="checkbox"/> Potential sources of pollutants in runoff identified |
| <input type="checkbox"/> Copy of signed SWPPP Preparer Certification | <input type="checkbox"/> Trained Contractor requirements described |
| <input type="checkbox"/> MS4 SWPPP Acceptance Form | |

Required Mapping:

- Vicinity map showing project boundaries; on-site and adjacent perennial and intermittent streams, wetlands, lakes, and ponds; floodplain/floodway limits; drainage area boundaries
- Mapping and description of soils from USDA Soil Survey, including Hydrologic Soil Groups

Required Plans:

- Location of existing and proposed highways, right-of-way boundaries, utilities, easements, driveways, buildings and other structures, limits of disturbance
- Location and flow path of existing and proposed closed and open conveyance systems including swales, channels, culverts and drainage structures
- Site map/construction drawing(s) showing the specific locations, sizes, and lengths of each erosion and sediment control practice, temporary sediment basins (and permanent stormwater management practices in Phase 2 SWPPP)
- Location and size of staging areas; equipment, material storage and waste areas; and concrete washout areas
- Boundaries of existing predominant vegetation and proposed limits of vegetation clearing
- Plans stamped and signed by a licensed Professional Engineer or Registered Landscape Architect

Erosion and Sediment Control and Full SWPPP Requirements:

- Description of temporary and permanent structural and vegetative measures for soil stabilization, runoff control and sediment control for each stage of the project from initial land clearing and grubbing to project close-out
- Material specifications, dimensions, installation details and operations and maintenance requirements for erosion and sediment control practices, including the location and sizing calculations for any temporary sediment basins
- Description of structural practices to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable
- Identification of any design elements not in conformance with the NYS Department of Transportation Standard Specifications Section 209 Soil Erosion and Sediment Control, reason for the deviation or alternative design, and demonstration that the alternative is equivalent to the technical standard
- Inspection and Maintenance schedule to ensure continuous and effective operation of the erosion and sediment control practices, in accordance with the *New York State Standards and Specifications for Erosion and Sediment Control*

- Construction sequencing plan describing the intended sequence of construction activities, including clearing and grubbing; excavation and grading; implementation, timing and duration of temporary and permanent erosion and sediment control practices; installation of utilities and infrastructure; and any other soil disturbing activity
- Construction phasing plan, including acreage to be disturbed in each phase and cuts and fills plan
- Final landscaping plans for revegetation and/or reforestation and any green infrastructure practices
- Soil Restoration plan for restoring compacted areas, in accordance with the *New York State Standards and Specifications for Erosion and Sediment Control / New York State Stormwater Management Design Manual*
- Description of pollution prevention measures to control construction litter, construction chemicals and debris
- Description, location of, and treatment measures for any stormwater discharges associated with industrial activity other than construction at the site, including but not limited to, stormwater discharges from asphalt plants and concrete batch plants on the construction site
- Weekly or twice-weekly inspection checklist identifying measures to be inspected by a qualified site inspector
- Request to disturb greater than five acres at any given time including justification for disturbance, additional erosion and sediment control measures to mitigate disturbance, phasing plan, cuts and fills plan, and total acreage to be disturbed in each phase

Stormwater Management Requirements (Full SWPPP only):

Hydrologic and hydraulic analysis for all structural components of stormwater system (e.g. storm drains, open channels, swales, stormwater management practices, manufactured treatment systems, etc.) for applicable design storms including:

- Existing and Proposed condition analyses for time of concentrations, runoff rates, volumes, velocities, water surface elevations and routing showing methodologies used and supporting calculations
- Water Quality and Runoff Reduction volume calculations; documentation of Runoff Reduction practices and their treatment volumes
- Channel Protection Volume and detention time calculations
- Comparison summary of post-development stormwater runoff conditions with pre-development conditions for 1-year, 10-year, 100-year design storms in accordance with the *New York State Stormwater Management Design Manual*
- Documentation of downstream analysis or discharge to fifth-order stream to request waiving control of Channel Protection Volume, Overbank Flood Control or Extreme Flood Control
- Stormwater management practice sizing calculations (note: calculations using Enhanced Phosphorus Removal Standards for phosphorus-limited watersheds specified in Appendix C of the SPDES General Permit)
- Infiltration/percolation tests, where required; or geotechnical report and supporting logs of borehole investigations

Representative cross-section and profile drawings and details of structural stormwater management practices and conveyances (e.g. drainage structures, open channels, swales, etc.) which include:

- Construction drawing(s) identifying the specific locations and sizes of each post-construction stormwater control practice
- Construction drawing(s) showing locations of Runoff Reduction practices; and design, material specifications and installation details
- Existing and proposed structural elevations (e.g. invert of pipes, manholes, etc.)
- Description, dimensions, material specifications and installation details for each post-construction stormwater control practice, including outlet structures, embankments, spillways, settling basins, grade control structures, conveyance channels, etc.
- Identification of any stormwater management practices that deviate from the *New York State Stormwater Management Design Manual*, reason for the deviation and demonstration that the alternative practice or deviation is equivalent to the technical standard
- Post-construction maintenance schedule to ensure continuous and effective operation of each post-construction stormwater management practice, including inspection and maintenance frequency, identification of responsible parties, description of applicable easements, vegetative requirements, access and safety issues, and testing and disposal of sediments as they are removed

delinquent in filing tax returns or may have understated their tax liabilities and to generally identify persons affected by the taxes administered by the State Commissioner of Taxation and Finance. The information will be used for tax administration purposes and for any other purpose authorized by law.

The above personal information is maintained at the New York State Thruway Authority/Canal Corporation, Department of Finance and Accounts, P.O. Box 189, Albany, New York 12201.

11. EQUAL EMPLOYMENT OPPORTUNITIES FOR MINORITIES AND WOMEN. In accordance with State Executive Law §312, if this contract is: (i) a written agreement or purchase order instrument, providing for a total expenditure in excess of \$25,000, whereby the Authority/Corporation is committed to expend or does expend funds in return for labor, services, supplies, equipment, materials or any combination of the foregoing, to be performed for, or rendered or furnished to the Authority/Corporation; or (ii) a written agreement in excess of \$100,000 whereby the Authority/Corporation is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon; or (iii) a written agreement in excess of \$100,000 whereby the owner of a State assisted housing project is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, or major repair or renovation of real property and improvements thereon for such project, then the following shall apply and by signing this contract the Contractor certifies and affirms that it is Contractor's equal employment opportunity policy that:

(a) The Contractor will not discriminate against employees or applicants for employment because of race, creed, color, national origin, sex, age, disability, or marital status, and shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on Authority/Corporation contracts and will undertake or continue existing programs of affirmative action to ensure that minority group members and women are afforded equal employment opportunities without discrimination. As used in this clause, "affirmative action" shall mean recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, lay-off or termination, and rates of pay or other forms of compensation.

(b) At the request of the Authority/Corporation, the Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union or representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status, and that such union or representative will affirmatively cooperate in the implementation of the Contractor's obligations herein.

(c) The Contractor shall state, in all solicitations or advertisements for employees, that in the performance of this contract all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status.

The Contractor shall include the provisions of (a), (b) and (c) above in every subcontract over \$25,000 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon except where such work is for the beneficial use of the Contractor. Section 312 does not apply to: (i) work, goods or services unrelated to this contract; or (ii) employment outside New York State. The Authority/Corporation will consider compliance by a Contractor or its subcontractor with the requirements of any Federal law concerning equal employment opportunity which effectuates the purpose of this section. The Authority/Corporation shall determine whether the imposition of the requirements of the provisions hereof duplicate or conflict with any such Federal law, and if such duplication or conflict exists, the Authority/Corporation may waive the applicability of Section 312 of the Executive Law to the extent of such duplication or conflict. The Contractor shall comply with all duly promulgated and lawful rules and regulations of the Department of Economic Development's Division of Minority and Women's Business Development pertaining thereto.

~~(d) The EEO Goals for the Project are as follows:~~

~~MBE Goal: 6%~~

~~WBE Goal: 7%~~

12. CONFLICTING TERMS. In the event of a conflict between the terms of the contract (including any and all attachments thereto and amendments thereof) and the terms of this Appendix A, the terms of this Appendix A shall

move forward with the application materials as submitted. The Authority will cooperate with the Design-Builder as reasonably requested by the Design-Builder, including execution and delivery of appropriate applications and other documentation as prepared by the Design-Builder. The Authority will not be responsible for any delay or additional costs associated with the Design-Builder's environmental permit/approval applications;

- C) The Design-Builder shall be solely responsible for compliance with and violations of any Environmental Requirements; and
- D) The Design-Builder is responsible for any fines, non-compliance, violations, or damages incurred by reason of failure of the Design-Builder to comply with Environmental Approvals and shall indemnify the Authority 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. Resulting fines or damages shall be deducted from monies owed the Design-Builder.

3.3.2 Environmental Plans

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

A) Environmental Compliance Plan

The Design-Builder shall prepare, implement, and update monthly an Environmental Compliance Plan (ECP) that shall detail the Design-Builder's measures and procedures to ensure all applicable compliances. An Environmental Compliance Plan shall be submitted to the Authority at least 10 days prior to the start of construction for consultation and written comment. At a minimum, the Environmental Compliance Plan shall include the following elements:

A. Environmental team

- 1. Environmental personnel: names, titles and project related responsibilities, years of relevant experience, licensing and applicable training;
- 2. Environmental team organization; and
- 3. Environmental team contact information.

B. Environmental compliance tracking and reporting procedures

- 1. Method of reporting to the Authority of permit progress and status, emergencies and alleged violations of Environmental Requirements, Environmental Approvals and Environmental Laws; and
- 2. Procedures for environmental compliance.

C. Environmental Approvals

- 1. Describe the Design-Builder's plan to obtain all necessary permits and Environmental Approvals identified and how they fit into the Design-Builder's schedule.
- 2. Identify and adequately assess any environmental impacts that are greater than those disclosed in the SEQRA environmental documents;
- 3. Identify all permits and Environmental Approvals, including supplements to the SEQRA Document.

B) State Pollutant Discharge Elimination System (SPDES) Permit application; see Soil Erosion and Water Pollution Control;

C) Stormwater Pollution Prevention Plan (SWPPP).

3.3.3 Soil Erosion and Water Pollution Control

The Design-Builder shall prepare and maintain on file a Stormwater Pollution Prevention Plan (SWPPP) complying with the New York State SPDES General Permit for Stormwater Discharges from Construction Activities (GP-0-15-002 or current version). The Design Builder shall follow and complete the "NYSTA Stormwater Pollution Prevention Plan (SWPPP) Review Checklist for Design Build Projects" (SWPPP Checklist) when preparing each SWPPP. The SWPPP Checklist can be found in the ITP, Appendix E, Forms of the RFP.

When phasing a project is necessary to allow for the commencement of initial site preparation and demolition work while the final site design is being prepared, the first phase ("Phase 1") shall include site preparation and demolition work limited to temporary traffic shifts and crossovers, bridge foundation excavation and construction, embankment construction and/or removal, temporary drainage, temporary road widening, critical utility relocation excavation and installation, temporary erosion and sediment control measures and temporary stormwater management practices. Phase 1 work shall not include the construction of new permanent impervious surfaces. The Design-Builder shall prepare a separate SWPPP for each phase.

The SWPPPs for all phases shall include erosion and sediment controls. At a minimum, the SWPPP shall include construction sequencing and phasing, cuts and fills, grading, pollution prevention measures, inspection and maintenance schedules, and drawings showing size, location and details of permanent (e.g., swales, check dams, etc.) and temporary (e.g., silt fence, construction entrance(s)/exit(s), temporary seed, mulch, etc.) erosion and sediment controls. The SWPPPs for Phase 2 and any subsequent phases that will include permanent impervious or other construction that requires post-construction stormwater management shall include plans, details and design calculations for stormwater management practices to provide treatment of water quality volume and runoff reduction volume, stream channel protection, overbank flood, and extreme flood controls, as appropriate.

The Design-Builder shall apply for coverage under the SPDES General Permit for Stormwater Discharges from Construction Activity for each phase after preparing a compliant SWPPP as noted above. The Design-Builder shall submit the SWPPP and a corresponding SPDES electronic Notice of Intent (eNOI) for Phase 1, and an "MS4 SWPPP Acceptance Form", and a copy of the SWPPP Checklist to the Authority's NYSTA Project Manager for review and acceptance prior to the scheduled start of construction. The eNOI shall include the text "DB: Site Preparation, Temporary Work and Demolition" along with the Project/Site Name. The following information must be provided in Q39 of the eNOI: a project summary which identifies the project as a "Design-Build" project; the type of work being undertaken; number of phases; phase of the current submission; and, any other pertinent information The Design-Builder shall submit the following items to the New York State Department of Environmental Conservation (NYSDEC) to obtain coverage under the SPDES General Permit: the eNOI, a SWPPP Preparer Certification and Owner/Operator Certification signed by the Design-Builder, and the MS4 SWPPP Acceptance Form signed by the Authority NYSTA, Phase 1 cConstruction activities shall not commence until the date authorized on the SPDES Acknowledgement Letter from the NYSDEC.

The Design-Builder shall prepare and submit a compliant Phase 2 package inclusive of the final design SWPPP and all required Post-construction Stormwater Management Practices, a fully completed SPDES eNOI, an "MS4 SWPPP Acceptance Form," and a copy of the SWPPP Checklist to the NYSTA Project Manager for review and acceptance prior to the scheduled start of construction for Phase 2 and each phase subsequent to Phase 1 (for SWPPPs that are in compliance with the NYSDEC Technical Design Standards).

SWPPPs that deviate from NYSDEC Technical Design Standards are subject to a 60-business-day NYSDEC review and authorization period. The Design-Builder shall submit the following items to the NYSDEC to obtain coverage under the SPDES General Permit: the eNOI, a SWPPP Preparer Certification and Owner/Operator Certification signed by the Design-Builder, and the MS4 SWPPP Acceptance Form signed by the NYSTA. The following information must be provided in Q39 of the eNOI: a project summary which identifies the project as a "Design-Build" project; the type of work being undertaken; number of

phases; phase of the current submission; and, any other pertinent information. Construction activities for Phase 2 and subsequent phases shall not commence until the date authorized on the SPDES Acknowledgement Letter from NYSDEC. The Design-Builder shall submit a revised eNOI to the NYSTA and NYSDEC if changes to the project require revisions to the SWPPP regarding the type, size and/or location of post-construction stormwater management practices, or increase in the acreage of disturbance or acreage of new impervious.

The Design-Builder shall analyze the potential use of green infrastructure practices per the Stormwater Management Design Manual. The Design Builder shall meet the minimum Runoff Reduction Volume utilizing Green Infrastructure Practices. Note that Dry Swales are the typical practice used by NYSTA in meeting the Runoff Reduction Volume. If the project's full water quality volume is not satisfied by green infrastructure practices, the Design Builder shall analyze the potential use of Standard Stormwater Management Practices (SMP). Again, note that Dry Swales are the typical practice used by NYSTA in meeting the water quality volume, followed by Stormwater Ponds. During the selection of green infrastructure practices and stormwater management practices (SMPs), the Design-Builder shall evaluate maintenance access to the practices. No practice shall be chosen that would not have access by equipment/vehicles, would require the closing of lanes on the mainline for maintenance of the practice, or removal of guiderail to gain access to the practice. The preference is for equipment/vehicle access from ramps.

The Design-Builder shall maintain SPDES General Permit coverage for Phase 1 and each subsequent phase until the entire project is complete. Upon project completion, The Design-Builder shall prepare Notices of Termination (NOTs) for each phase, complete final inspections and sign Parts VII, VIII and IX of the NOT. The Design-Builder shall submit the NOTs to the Authority's-NYSTA Project Manager for acceptance and Part VI signature prior to submitting the NOTs to the NYSDEC to terminate SPDES General Permit coverage.

SPDES General Permit, electronic Notice of Intent, MS4 SWPPP Acceptance, SWPPP Preparer Certification, Owner/Operator Certification and Notice of Termination Forms and Instructions are located at:

<http://www.dec.ny.gov/chemical/43133.html>

3.3.4 Threatened and Endangered Species Coordination

The Design-Builder shall be aware that the Indiana bat and northern long-eared bat (NLEB) occur in the Project area and are protected under the Endangered Species Act of 1973. To avoid adverse effects on the bats, any removal of trees 3" or greater in diameter at breast height (dbh) and should occur during the period between October 31st and March 31st. In addition, a determined number of replacement trees shall be planted upon completion of the work. See Section 11 for replacement conditions.

Other threatened and endangered species may be present in the project area. Most work will occur within Thruway ROW which is maintained and cleared, therefore it is not anticipated there will be impacts to the habitat of threatened or endangered species. The Design Builder shall be responsible for securing the necessary approvals associated with state and federal threatened and endangered species, as required by any state and federal permits.

3.3.5 Invasive Species

A review of the existing corridor indicates presence of known invasive species such as common reed (*Phragmites australis*), Japanese knotweed (*Fallopia japonica*), and purple loosestrife (*Lythrum salicaria*) within the right of way. When work will encounter invasive species, care shall be taken to prevent the spread of those species as per NYSDOT special specifications Item 617.1000024 – Disposal of Material Containing Invasive Plant Species and Item 617.1100024 – Equipment Cleaning for Invasive Plant Species.

3.3.6 Asbestos Containing and Hazardous Materials

An Asbestos and Hazardous Material Assessment of many existing tolling structures was performed by a NYS Department of Labor licensed firm using certified inspection staff. Asbestos Containing Materials (ACMs) identified during this screening/assessment were sampled and positively analyzed for asbestos content; suspect ACMs are presumed positive. Lead in paint and polychlorinated biphenyls (PCB) testing were also included in the scope of this study. While all existing tolling structures were not screened for ACMs, Lead and PCBs, it is expected that all unscreened tolling structures will have similar levels of ACMs, Lead and PCBs. The completed Asbestos Containing Material and Hazardous Materials Reports are located in Part 7 – Engineering Data, Section 6.

The ~~Authority is~~Design-Builder shall be responsible for performing Asbestos Screenings and Hazardous Material Assessments for all remaining unscreened existing tolling structures and ~~the remaining~~ TUB facilities to be removed. . As the locations are completed, the testing results shall be made available so the Proposers can properly identify costs for abatement and monitoring. The overall final reports will follow as completed. It is anticipated that all remaining sites will be completed by the Final Amendment deadline, however the testing results should be prior. The Design-Builder needs to constantly monitor Part 7 – Engineering Data, Section 6 for new screening data/reports. The Design-Builder shall ~~also~~ be responsible for the abatement design, asbestos abatement, waste disposal and any required project monitoring/compliance air sampling during abatement of all confirmed and assumed asbestos containing materials if such materials will be disturbed during the performance of the Work. All asbestos abatement and waste disposal shall be performed in accordance with applicable safety and health codes and all applicable State and Federal regulations. See also DB Section 112-5.5, Asbestos.

The Design-Builder (in particular, the lead constructor on the Design-Build team) is also made aware that 12 NYCRR 56 specifically prohibits the abatement contractor from directly contracting project monitoring and/or compliance air monitoring services. In order to comply with this regulatory requirement, no Principal Participant may perform any asbestos abatement work for this Project. The Design-Builder shall subcontract asbestos abatement and project monitoring/compliance air sampling services to separate and independent firms.

If during the course of work, any asbestos-containing or hazardous materials not already documented in the asbestos and hazardous material assessments provided, or Project record plans, are encountered and require disturbance, the Design-Builder shall be responsible for any needed additional asbestos assessment, abatement design, asbestos abatement, waste disposal, and Project monitoring/compliance air sampling. The Design-Builder will also be responsible for the proper removal, handling, and disposal of any other un-documented hazardous materials. All additional work related to undocumented asbestos and hazardous materials shall be paid for under the Force Account pay item.

New York State Department of Labor (NYSDOL) asbestos licensure and applicable staff certification(s) are required for Work where confirmed or presumed asbestos-containing materials are impacted. All necessary asbestos assessment and Project design Work shall be performed in conformance with policy and guidance provided in NYSDOT's The Environmental Manual (TEM).

Any ACMs associated with private utilities located within the Project limits shall be the responsibility of the private utility owner. The Design-Builder shall coordinate with the private utility owners for the remediation of any ACMs which may be identified.

The Design Builder shall be responsible for the handling and disposal of all lead, PCB and hazardous materials in accordance with all applicable safety and health codes and all applicable State and Federal regulations.

3.3.7 Contaminated Materials

The project activities are generally limited to the existing highway and toll plaza areas. The proposed project will be constructed within the existing right-of-way. It is unlikely that subsurface hazardous or contaminated materials will be encountered.

If new subsurface hazardous or contaminated material is found then the additional material found shall be paid for under the Force Account pay item. All work shall be performed in accordance with all applicable safety and health codes and all applicable State and Federal regulations.

3.3.8 Cultural Resources

The Design-Builder shall be responsible for compliance with Section 14.09 of the NYS Historic Preservation Act. It is anticipated that all ground disturbing activities will take place in areas impacted by previous highway construction. With the exception of the Woodbury location, the Design-Builder should place any new gantries on the mainline 500 feet beyond the immediate limits of any historic district or resource directly adjacent to the Thruway. The limits for these resources are located on the NYS OPRHP's Cultural Resource Information System (CRIS) at: <https://cris.parks.ny.gov/>.

3.3.9 Wetland and Stream Information

Gantry Limits on Mainline

General information has been gathered relating to the potential location of wetlands and streams for the gantry limits along the mainline as identified in Part 7 Section 1 - Gantry Limits. Maps with this assessment information can be found in Part 7 Section 7 - Wetland Assessments. The Wetland Assessment maps display the following (be advised all wetland and stream boundaries are approximate):

Assessed Streams: Stream boundaries observed in the field within 50 feet from the edge of pavement.

Assessed Wetlands: Wetland boundaries observed in the field within 50 feet from the edge of pavement.

Mapped National Wetland Inventory (NWI) Wetlands: Mapped federal wetlands (US Army Corps of Engineers regulated).

Mapped NYSDEC Wetlands: Mapped NYSDEC Regulated Wetlands.

No wetland delineations were performed in the field in the locations of the Gantry Limits. No data sheets or other documentation are available.

In areas where Assessed Wetlands or Assessed Streams are shown, the Assessed Wetland or Stream boundary shall take precedence over the mapped boundaries. Any Assessed Wetland in close vicinity to a Mapped NYSDEC Wetland should be assumed to be part of that NYSDEC wetland. NYSDEC Wetlands include a 100 foot adjacent area beyond the wetland boundary. This 100 foot buffer is also regulated by NYSDEC. If an assessed wetland is not in the vicinity of either a "Mapped NWI Wetland" or a "Mapped NYSDEC Wetland", the wetland shall be assumed to be regulated by the U.S. Army Corps of Engineers.

Interchange Locations

Wetland delineations have been undertaken only at Interchanges 24, 25A, 34A, 36, 39 and 45 where modifications are being proposed to facilitate egress and ingress associated with the maintenance facilities, tandem lots and park and ride commuter lots. The wetland delineation information can be found in Part 7 Section 20 – Wetland Delineations.

3.3.10 Environmental Plan Deliverables

Deliverables shall be as stated elsewhere in the RFP documents.

The Design-Builder shall provide the Authority with a minimum of two weeks advance notification for each public information activity (press announcements, travel advisories, VMS postings, etc.) to allow for proper review and comment by the Authority.

The Design-Builder shall provide the Authority's CQAE with a written work Schedule (including anticipated traffic changes) two weeks in advance of work that will change traffic patterns.

7.3.2 Media Relations

Media Inquiries: All media inquiries, requests for interviews from local print or broadcast news media, trade magazines or other media outlets must be referred to the CQAE for direction. The Authority will coordinate and respond to all media requests. The Design-Builder shall alert all Project personnel about this policy.

Travel Advisories: To allow for timely notice to the public, two weeks advance notice of the start of work, any lane closures, road closures, or changes to traffic patterns is required to be given to the CQAE and the Authority's Project Manager.

Notifications referenced above are in addition to the written work schedule discussed in Section 7.3.1. The Authority will develop a draft travel advisory for content and quality review by the Design-Builder and other Authority staff as deemed appropriate. The travel advisories will be finalized and distributed to the press and appropriate state elected officials, and posted on the Project website by the Authority. However, the Design-Builder is responsible for the notification of local public officials, emergency service providers, schools, residents, businesses, and other affected parties, of any major travel pattern change.

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

7.3.3 Public Information Meeting

The Design-Builder shall be prepared to partner with the Authority on additional Public Information Meeting(s) to discuss the Project's progress with the community in an open forum format. The Design-Builder shall prepare design and construction-related information about the Project and the Design-Build process and progress, schedule or construction methods being used to advance the Project, etc., that will help inform Project stakeholders. The Design-Builder shall work in cooperation with the CQAE in determining the necessary presentation materials, but PowerPoint material shall be required.

Project update meetings including public informational meetings, as discussed above, may be required during the course of construction, depending on how smoothly the Project is progressing and the community(s) reaction and receptiveness to the construction of the Project. The Design-Builder shall assume the need for four (4) informational meetings, potentially one (1) meeting per division.

8.3.1 Electrical Power Supply and Distribution

8.3.1.1 General Requirements

The Design-Builder shall be responsible for the design and implementation of the necessary 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 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. Wherever it is feasible and cost-effective, electricity shall be delivered to the Authority at the primary billing rate.

The Design-Builder shall purchase and install all necessary components required to deliver the electricity supply and distribution system including but not limited to the following: power substations, transformers and distribution equipment; electrical grounding and master metering; extension of the existing lightning protection system; excavation, paving, temporary construction barriers; structural elements for conduit systems; fire-rated electrical rooms; and fireproofing.

Utility Poles in the Right of Way are provided in Part 7 - Engineering Data, Section 13 – Power Poles and may be used as a mechanism to obtain electrical power lines required for equipment at the Cashless Tolling Gantries. The Design-Builder may construct one additional Utility Pole in the Thruway Right of Way as needed to support electrical power lines coming from Utility Poles adjacent to the Thruway Right of Way. The electrical power lines shall be transitioned from the Utility Poles in the Thruway Right of Way to underground lines to be designed and constructed by the Design-Builder. The power lines currently providing power to the Toll Plazas that are not going to be demolished shall remain as is.

The Design-Builder shall be responsible for commissioning electrical power systems.

All electrical work shall be performed by or under the supervision of a Master Electrician licensed in a New York State municipality.

All costs associated with the electrical provider's fees for applications, reviews, permits, and costs associated with the necessary electrical work provided by the electrical providers shall be paid for under the draw down force account item established on Form SP.

8.3.1.2 Emergency Power Generation

In the event that the normal electrical supply experiences an interruption at the Cashless Tolling locations, the supply system shall automatically switch to emergency power generation utilizing a diesel fuel generator and shall return to normal power as soon as the normal supply of electricity is restored.

The emergency power systems shall be capable of feeding the entire electrical load at each Mainline Cashless Tolling location, with the exception of any purely aesthetic light fixtures. Components (for example, automatic transfer switches) shall be sized and installed at locations to minimize the length of emergency power conduit and conductors.

At the ORT sites, emergency backup generators currently exist within the TUBs that are to remain or immediately adjacent to those TUBs. At least eleven locations of supplement power backup generators are required. The locations and requirements of those generators are found in Part 7 – Engineering Data, Section 12.

SECTION 10 STRUCTURES

10.1 SCOPE

The Design-Builder shall be responsible for all work necessary to complete the design and construction or rehabilitation of all permanent and temporary structures required to complete the Project, including, but not limited to, the Toll Utility Buildings (TUBs), barriers, sign structures and miscellaneous structures. The design and construction and rehabilitation of all structural systems and components shall provide functionality, durability, ease of operations, maintenance, inspection, safety and pleasant aesthetics.

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

10.2 STANDARDS

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

10.3 DESIGN REQUIREMENTS

10.3.1 General Components

- A) Barriers, Railings and Pedestrian Fencing: Temporary traffic barriers shall meet, as a minimum, the testing requirements of TL 2 and permanent traffic barriers on bridge structures shall meet, as a minimum, the testing requirements of TL 5.
- B) Decks: Precast panel and/or cast in place decks are preferred. Cast in place decks shall use internally curing concrete as per NYSDOT Special Specifications 557.51090018 and 557.54090018. Two-course decks with asphalt overlays as defined in the NYSDOT Bridge Manual are not permitted. Unfilled steel grating decks and orthotropic steel decks are not permitted. Bridge decks shall be made fully composite with the underlying primary member system. All decks shall be protectively sealed. All deck reinforcement shall be galvanized.
- C) Deck Joints shall not be allowed.
- D) Superstructure: The superstructure may be constructed of concrete or structural steel. Structural steel, if used, shall be either weathering steel or conventionally metalized or galvanized steel. If weathering steel is used on curb less bridges and/or bridges with deck joints, the fascia side of all exterior girders, including the underside of the top flange and the top and underside of the bottom flange, shall be metalized or galvanized. In addition, all girder ends within 1.5 times the depth of the girder or five (5) feet, whichever is greater from a deck joint, (if applicable) shall be metalized or galvanized. Should weathering steel be used, the following conditions shall also apply:
- Uncoated weathering steel bridges shall be detailed to include an additional 1/16 inch of thickness per exposed face beyond what is required by design for the small amount of corrosion expected over the life of the bridge. The additional thickness shall not be included in calculations for design strength, but must be included in the dead load and

damages shall be applied under Section 619 of the Standard Specifications. This is considered a major violation act.

15.3.2 Work Zone Traffic Control at Toll Plazas Prior to AET Going Live

The Authority provide(s) under Part 7 – Engineering Data, Section 16 the Design-Builder with the number of lanes that must remain open at each Exit for each hour of the day. The number of lanes that must remain open is a Project Requirement and shall not be violated. The work at the Exits where the Toll Plaza work is occurring prior to AET going live shall be completed within these requirements.

At the ORT Exit sites, the Design-Builder can take a single lane out of service in a two lane directional scenario provided the hourly volume of traffic is 1200vph or less.

The Design-Builder can direct traffic to the shoulder area (if available) in a single lane directional scenario provided the hourly volume of traffic is 1200vph or less. Alternating one way traffic with flaggers is allowed provided the combined opposing traffic hourly volumes are 600vph or less.

Any violation of these established restrictions shall result in Liquidated Damages as applied under Section 619 of the Standard Specifications. Regardless of the Liquidated Damages amount, this is considered a major violation act.

15.3.3 Work Zone Traffic Control at Toll Plazas to be Demolished

The Design-Builder shall follow the requirements as stated below. The demolition of the Toll Booths shall require staging as stated under the Mainline Gantry Requirements Section 23 and ORT Exit Sites, section 25. The Authority has determined that once the Cashless Tolling is activated and the booths are all EZPass at speeds of 20 MPH that 1,100 cars per hour per booth per direction can be processed. The Design-Builder shall determine the number of booths in each direction that shall be required to be used for each stage of toll booth removal based on the 1,100 vehicles per lane booth/per hour based on the traffic data provided in Section 19 of the Engineering Data Part 7, for all locations requiring Toll Booth removals. Failure to provide the necessary required number of toll booths for staging purposes will result in safety issues/congestion/public outcry and Liquidated Damages resulting in the number of booths deficient to handle the traffic X multiplied by 1,100 vehicles multiplied by Y hours of direction in effect multiplied by \$2.50/vehicle. Where X is the number of Booths deficient and Y is the number of hours the deficiency existed. This is considered a major violations act.

15.3.4 Work Zone Traffic Control Plans

The Design-Builder shall prepare and submit WZTC Plans, for each Project Toll Collection location current and proposed, for managing traffic operations and controlling access until Project Completion. The Plans shall identify stages and phases of construction and provide appropriate operating procedures. The plans shall be signed and stamped by a New York-registered professional engineer and submitted to the Authority's Project Manager prior to initiation of any work in proximity to traffic or the implementation of any change in traffic patterns.

The Authority will retain responsibility for toll operations throughout the Project's duration.

The WZTC Plans shall be submitted to the Authority's Design Quality Assurance Engineer a minimum of two weeks prior to initiation of any Work requiring a lane closure or the implementation of any change in traffic patterns.

Except as noted in this Section, all asphalt pavement on the Thruway mainline shall be designed in accordance with the requirements of Chapter 6 of the Comprehensive Pavement Design Manual (CPDM) including Performance Graded Binder Selection, Compaction Monitoring, and Friction Aggregate Requirements.

If the existing roadway section at the limits of work varies from the standards applicable for new or resurfaced sections, the roadway features (lane & shoulder widths and cross slope) shall be transitioned to meet the existing conditions.

Straight Tack Coat is required for all Mainline and Ramp pavement installations.

For HMA pavements, NYSDOT EI 18-016: New Standard Specification Section 653 Pavement Ride Quality Smoothness applies to this project. Pavement installation at Interchanges, , 23, 24, 25, 25A, 34A, 36, 39, 44, 45, 46, 47 shall be performed to the same ride quality requirements as Interstates.

16.3.1 Full Depth Reconstruction

Where the Design-Builder is required to do Full Depth Reconstruction, the Design-Builder shall develop and construct pavement section(s) for full depth reconstruction, including subbase, of the Project roadways in conformance with the Comprehensive Pavement Design Manual, using the ESAL-based pavement design method.

Full depth reconstruction is required within the limits of any horizontal alignment changes, or vertical alignment changes until such point as the revised alignment meets the existing alignment. However, increases in profile elevations, up to eight inches (8"), may be made through asphalt and concrete overlays without the requirement of full depth reconstruction. No partial-width full depth reconstruction will be permitted; any roadway requiring full depth reconstruction shall be reconstructed for its full width, including shoulders, curbs and/or sidewalks.

If any roadway is permanently widened, beyond the limits of the existing travel lanes, for the purpose of providing additional travel and/or turning lanes, new full depth pavement need only be developed and constructed for the widened section, provided that no other portion of the pavement within the widened section requires full depth reconstruction for any other purpose. However, the existing pavement within the widened section shall be milled and resurfaced from curb to curb or edge of pavement to edge of pavement to provide a uniform pavement as specified in Section 16.3.3.

16.3.2 Gantry Approach Pavement

Non-metallic reinforced concrete pavement installed at the Gantry treadle detector slabs shall be placed at locations in accordance with current NYSTA Standard Sheets. Other new or reconstructed pavement within the Project limits that are not required to be non-metallic reinforced shall be designed and installed in accordance with Section 16.3.1.

All remaining existing areas of Toll Plaza pavement transition limits not reconstructed under the Project shall at minimum be milled and resurfaced in accordance with Section 16.3.3.

16.3.9 Repaired or Damaged Pavement

Except as noted in this section, requirements of Section 619 of the Standard Specifications, as supplemented by the Thruway Addendum, apply.

Concrete or Composite Pavement: Locations of concrete or composite pavement systems shall be repaired by the Design-Builder in accordance with the Authority's methodologies and repair details. Slab replacements at locations with existing precast pavement shall utilize precast pavement slabs with in-kind thickness.

Asphalt Pavement: Wearing course repairs and/or full depth asphalt sections shall be repaired by the Design-Builder in accordance with the Authority's methodologies and repair details.

Pavement to remain that is damaged by the Design-Builder's operations, whether within or outside the Project Limits, shall be repaired such as to maintain safe and reliable operation during construction, and restored to its original or better condition, at the end of construction.

16.3.10 Subsurface Drainage System

The Design-Builder shall design and construct edge drains, where stipulated within this Project Requirement, and/or in accordance with the applicable Standards. Subsurface drainage outlets shall not cross roadways. Left- and right-side subsurface drainage systems shall not use a common outlet pipe. Additionally, the Design-Builder shall evaluate and provide an underdrain system as follows:

- A) Underdrain shall be installed where an existing ground water condition needs to be addressed;
- B) The proposed pavement traverses an area with high ground water;
- C) Where identified as needed by the Engineer or Foundations Lead Designer of record.

16.3.11 Pavement Removal

Obsolete and unnecessary pavement shall be removed and disposed of by the Design-Builder. Pavement removal shall be such as to permit the unimpeded use of the space for the immediate and/or permanent purposes of the affected space. At a minimum, obsolete and unnecessary pavement shall be removed to the top of the subbase. Any pavement to remain that is damaged during pavement removal operations shall be replaced by the Design-Builder. In the absence of the need for treatments associated with specific subsequent uses, disturbed material underlying removed pavement shall be re-compacted to not less than 95% standard proctor maximum density, and then top soiled and seeded.

16.4 PROJECT LIMITS

Project limits are defined as follows:

- A. For the ORT Exit Sites and Special Exit 35 the minimum project limits are from the existing Authority gore areas to the intersecting NYSDOT Road or the existing intersecting local roads. The Design-Builder shall meet all current standards, including proper cross slopes and proper drainage.
- B. For the interchange locations (11 locations) the minimum project limits are from interstate gore areas to interstate gore areas. Essentially from the existing Authority gore area to the interstate gore areas of the NYSDOT interstate system. In these applications, the gore areas are not defined as the striped gore area but rather the gore areas are defined by the grassy area or where no grassy areas exist, where existing ramp guiderail ends and concrete barrier (positive separation) is required.
- C. The mainline gantry locations and terminus locations project limits are defined by the Design-Builder, as required by Section 18 of Part 3 and the requirements under this Section of Part 3.
- D. The two remaining special exits are Exits 16 and 17. At Exit 17, the proposed limits are identified by the limits of new guiderail required to be placed. At Exit 16, Harriman, the Project Limits are defined by the Toll Booth removal to the straightening of the alignment via potential striping.

In all situations defined above, project limits do not include necessary rail replacements on existing ramps or Work Zone traffic limits or new signage, replacement signage, temporary signage, or signage removals. These effects constitute the work limits at each location, not the project limits.

20.3.3 Cameras at Tandem Lots

The Design-Builder is responsible for purchasing and installing cameras potentially mounting hardware at various Tandem lots and an identified service area (Dewitt). Camera pole design, installation may also be required. Refer to Table 20-1 for the locations, availability of existing poles to mount the cameras and other information that may be of value to the Design-Builder.

The cameras required shall be able to view the entire lot including the entering and departure locations.

The cameras required for the access gate area shall be mounted so that Thruway TSOC can identify the single trailer seeking backside access to the Tandem Lot. The viewing of the vehicles will allow the Authority to raise and lower the access gate when needed and/or requested.

The following specifications apply, Items 651.0201, Item 651.02001525, Item 683.6730-25.

20.3.4 Protections of Existing Utilities at Tandem Lot Locations

The Design-Builder is responsible for ensuring that all existing utility structures, utilities or utility facilities are properly protected by appropriate guiderail systems depending on driveway designs or driving modifications.

SECTION 21 MAINLINE TOLLING GANTRIES (11 INTERCHANGES & 5 TERMINUS)

21.1 SCOPE

The Design-Builder shall design and construct Cashless Tolling Gantries at the following locations: between 22 (Selkirk) and 23 (Boulevard), between 23 (Southern Boulevard) and 24 (Washington Ave.), between 24 (Washington Ave.) and 25 (Schenectady), between 25 (Schenectady) and 25A (Duanesburg), between 25A (Duanesburg) and 26 (Rotterdam), between 34 (Canastota) and 34A (Collamer), between 34A (Collamer) and 35 (Thompson Road), between 35 (Thompson Road) and 36 (Mattydale), between 36 (Mattydale) and 37 (Electronics Parkway), between 38 (Liverpool) and 39 (State Fair), between 39 (State Fair) and 40 (Weedsport), between 43 (Manchester) and 44 (Canandaigua), between 44 (Canandaigua) and 45 (Victor), between 45 (Victor) and 46 (Henrietta), between 46 (Henrietta) and 47 (Leroy), between 47 (Leroy) and 48 (Batavia).

Mainline Gantries are also required at the following Terminus Locations: Woodbury (Approx. MP 45.03), Canaan (Approx. MP 17.83), Williamsville (Approx. MP 419.60) ; Lackawanna (Approx. MP 430.52), and Ripley (Approx. MP 494.51).

Location of Gantries shall be constructed within the limits described in Part 7 – Engineering Data, Section 1. The Design-Builder shall not place any Mainline Gantries beyond the specified limits. Gantries shall not span over the acceleration or deceleration ramps.

The Design-Builder shall be responsible for reducing the footprint currently leading into and out of the Toll plazas at the Terminus locations, which will involve pavement removal work, Toll Plaza removals, potential positive separation of opposing traffic flow, placement of barrier/guiderail to delineate active lanes, striping, drainage, etc. are all part of the work.

Mainline Gantries shall not be placed in Wetland Assessment Areas and Historic Districts. Wetland Assessments are provided in Part 7 - Engineering Data, Section 7.

21.2 STANDARDS

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

21.3 GENERAL REQUIREMENTS

The Mainline Gantries shall be located to ensure that the Authority can capture where vehicles enter and exit the Thruway system. This is imperative and required so that the Authority can accurately bill motorists by providing the entry and exit locations of each vehicle. It also ensures proper and accurate revenue collection, and potential projections thereof..

The Mainline Gantries shall be designed and constructed so that maintenance and/or replacement, inspection, and adjustments of Cashless Tolling Equipment attached to the Mainline Gantries can be accomplished without the need for any lane(s) taken out of service, which subsequently impacts traffic. To access the equipment to perform maintenance, replacement, inspection, or modifications, the Mainline Gantries shall have a 4 foot minimum, 5 foot maximum, walkway system above traffic with easy accessibility from this walkway to the various equipment components.

The Kapsch Vehicle Detection, Tracking, Triggering and Classification System (nVDC) unit mounted below the horizontal Gantry structure is required to be accessible and available for maintenance repair and/or replacement by Authority employees from the gantry walkway. The requirement entails that work to repair/replace or adjust the operations of nVDC unit shall occur from the Mainline Gantry walkway. Employees of the Authority shall have full access to the nVDC from this walkway area and be able to remove and replace each piece of Equipment from the walkway area. No lane closures shall be required to replace, repair/or adjust the nVDC units. The nVDC units must be accessible and be able to be worked on while the employee is on the Mainline Gantry walkway. The mechanisms to access the equipment (cameras/lasers/ illuminators/nVDC units) shall not require tools to safely protect the traffic below. The access to the equipment to be worked on may require leverage mechanisms. Those leverage mechanisms shall be tethered and the tether cannot be greater than 3 feet

The access opening for the nVDC unit shall require a retraction up into the walkway area (not a lift and place). Once the nVDC unit is in the working position the gap/opening that is generated by this action has to be protected/covered so employees or equipment cannot fall to the traffic below. The access opening must be securely closed. The access opening area shall also be outlined in yellow paint as to denote the potential for a possible opening for safety awareness. The gantry grating requires a 3" yellow stripe around the nVDC hatch or opening. The top and side surfaces of the grating must be painted so that the stripe is visible from above. The surface shall be suitably prepared, primed with 100% lead-free metal primer, and factory painted with at least two (2) coats of DuPont Centari Acrylic Auto Enamel Yellow 224AK (100% lead free); or Rust-Oleum Corp. MFG #260277 paint, yellow base/low VOC, ALKYD Enamel NYSTA Yellow #2 (100% lead free); or approved equal.

The stairway to the walkway shall be steady with minimal movement. Only one stairway to access the walkway is required. The minimum stairway interior width shall be 4224" (inside of railing to inside of railing).

Access to the walkway from the ground level shall be via stairways, founded on a concrete pad. All walkway areas, on the Mainline Gantries and stairways shall not retain snow nor allow icicles to form for the safety of the traveling public and employees. To access the stairways the Design-Builder shall provide for a minimum of 2 parking spaces within 150' of the stairways to ensure ample safety so that employees do not have to cross highway traffic to perform the repairs or inspection of the gantry.

The Mainline Gantry Walkways shall have handrails on both sides and a continuous tie off mechanism that minimizes the number of times an employee has to reconnect as they travel across the Mainline Gantry. The handrails, when not in use, shall be retractable and still remain secure. The railings when not in use shall not be seen by the traveling public. The elevation view of the Mainline Gantry itself as traveler's approach should not be viewed as a multiple type structure but rather as a single element, even though that is not the case. In other words, the Mainline Gantry should look streamlined. In addition, negative camber is not allowed.

The Design-Builder shall install electrical and fiber conduits to connect the Cashless Tolling Equipment to the Communications Building. The conduits shall be hidden from view and shall be protected from vandalism.

Whatever Mainline Gantry design is used at one location, the style shall be used throughout the ticketed system for all Mainline Gantries and Terminus locations for the purposes of consistency, maintenance access, maintenance repairs, parts, and other reasons that benefit the Authority. Obviously spans dictate member sizes but the style of the Mainline Gantry shall remain the same.

The equipment locations, their distances from the Roadway surfaces, and their relation to one another, is presented in a graphical display of these requirements, later in this section.

The Design-Builder is responsible for the foundation design for all Mainline Gantries. See Part 3, Project Requirements, Section 9 – Geotechnical Requirements.

Since the equipment shall be accessed from the Mainline Gantry walkway, the amount of effort to raise any of the pieces of equipment shall be small to prevent injury. Access to the equipment shall not require any employee to lean over the railing or the Mainline Gantry itself to bring equipment up or to work on the equipment. The nVDC unit shall be brought to the Mainline Gantry walkway area where employees can repair, replace or adjust their functions. As the nVDC unit is being worked on, no openings to the traffic below shall be allowed and movement by employees around or across from the nVDC being worked on shall be safe and include preventing employees from falling by eliminating any walkway openings.

All Mainline Gantry Components shall have a protective coating system such as galvanizing or metalizing, use of aluminum or aluminum components are acceptable to ensure long term durability and resistance to corrosion or degradation of the initial design strength. Painting is not an acceptable solution.

The span length of each Mainline Gantry shall be determined by the Design-Builder. The Gantries may span across traffic in both directions or they could be two separate Gantries each handling traffic in opposing directions. Regardless of span choices the vertical supports of the Mainline Gantry shall be protected via an appropriate barrier system in compliance with the design standards. Under no circumstance, even if the vertical supports are outside the clear zone, can they be unprotected.

The placement of the Mainline Gantries shall not include mainline deceleration or acceleration ramps, rest area access ramps, service area ramps, text stop locations or welcome center ramps. Mainline Gantry shall not be located within 1000' to existing 2014-Toll Booths at the Terminus locations.

Mainline Gantries shall not be located within 800 feet before or 100 feet after overhead roadway signage.

21.4 HIGHWAY REQUIREMENTS AT MAINLINE GANTRY LOCATIONS:

Requirements of the Highway at the Mainline Gantry Locations is as follows:

- Treadle Frame shall be installed as per Specification Item 690.6202—25
- The Treadle Frame shall be located as per Part 7 – Engineering Data, Section 21.
- Concrete Pavement (approximately 104 ft. in length including treadle frame) shall be installed so that 70 ft. of slab exists prior to the treadle frame and 30 ft. after the treadle frame in the direction of travel for each lane of travel. The treadle frame must be centered within the travel lane as the treadle frame is typically 10 ft. in length. Details about the treadle frames can be found in the Thruway Authority's standard sheets.
- Prior to placement of the concrete slabs that should reside under the Mainline Gantries the existing slabs are required to be removed and proper sub-base and/or asphalt placed depending on the existing highway section makeup. The removal of existing slabs shall be 50 feet beyond the limits of the proposed new slab locations (begin and end limits). Proper drainage such as underdrain shall be included in the reconstructed sections as defined above (approximately 104'+100'). If drainage structures are within the limits of the new Mainline Gantry proper, adjustments to elevation, stormwater flow and drainage capacity shall be the responsibility of the Design-Builder under the New York State's DOT Highway Design Manual.

- The Design-Builder shall reconstruct the entire pavement shoulders within the reconstruction limits defined above. The shoulders to be reconstructed shall be full depth asphalt to allow for loops to be cut into the asphalt. The Design-Builder is responsible to ensure proper drainage of the shoulder areas and treadle slabs.
- The Mainline Gantries shall be fully completed and conduits from the Communication Building to the Mainline Gantries along with all the mounting hardware, brackets or arms shall be in place so that cameras, antennas, laser scanners and illuminators can be attached by Kapsch and adjusted.
- Cashless Toll lanes and shoulders shall as a minimum match the maximum number of approach lanes and shoulders entering the Cashless Toll Collection Zone;
- Design-Builder shall ensure the slab containing the treadle and trench drain shall be embedded in a minimum of 22 inch of heavily reinforced Portland Cement Concrete (PCC) utilizing fiber reinforced polymer (FRP) reinforcing bars so as not to interfere with the Authority's toll collection system

21.4.1 Woodbury Terminus Location

Terminus location at Woodbury ~~required~~requires the design and construction of a vehicle enforcement area for the State Police. It shall be provided after the mainline gantry as traffic heads South. The required enforcement area shall be constructed utilizing the current available concrete pavement located to the West of the traffic headed South. Proper deceleration and acceleration lanes shall be applied. The vehicle enforcement pertains to all types of vehicles utilizing the Thruway, from tandems to passenger vehicles. Proper pavement striping, signage is required. The Design-Builder is responsible for the full design and construction at this location. Refer to Part 7 – Engineering Data, Section 5 for concept drawings. This particular location does not require a reduction of the overall infrastructure foot print, with the exception of the area specifically designated to be removed involving the deceleration lane and ramp to Exit 16 for traffic heading South. See concept drawings. The Design-Builder shall be aware for traffic heading North that the pavement area is more than required. The Design-Builder based on the design shall be required to properly channelize traffic with, as a minimum proper striping, cross hatching, and signage to ensure the proper and safe passage of traffic heading North to through the mainline gantry or Exit 16.

21.5 KAPSCH REQUIREMENTS

The Authority has selected Kapsch TrafficCom USA Inc. (Kapsch) to supply, install and monitor the Cashless Tolling system at all Mainline Gantries. The Design-Builder shall coordinate activities with Kapsch for installation at each Mainline Gantry site as per the following requirements:

Kapsch will provide a maximum of six (6) teams that will be able to install and test the Cashless Tolling Equipment at each Mainline Gantry and Communication Building. Kapsch will install all tolling equipment/server/additional racks for each lane/all wiring and cables from the Communication Building to the Mainline Gantry to the Mainline Gantry equipment with the exception of the Network rack supplied by the Design-Builder.

Kapsch will complete their installation and test their system in 30 calendar days not including major holiday weekends. The Design-Builder shall notify Kapsch 30 calendar days prior to the expected completion of the Mainline Gantry so that Kapsch can secure resources for installation.

Kapsch will need one (1) week prior to commencement of Kapsch work in order to deliver equipment and supplies for the Communications Building and Mainline Gantry. The Design-Builder shall prepare an area for the delivery of this equipment. Kapsch shall supply the size of the area based on the Design-Builder's design. Each Kapsch Team will need one (1) week after a Mainline Gantry site has been tested, adjusted, and/or modified to re-stage at another requested Mainline Gantry site.

For Kapsch to do this work, and meet the thirty (30) calendar day window, to install the cashless tolling equipment, wiring, Communications Building racks, and test all of the equipment, the following work shall be done prior to Kapsch beginning work at the site. The Design-Builder shall ensure that the following work is complete:

Road Surface

- Treadle Frame installed as per specifications and requirements
- Shoulders reconstructed as specified
- 100 ft. of concrete slabs (30 ft. after the treadle slab and 70 ft. before the treadle slab) installed at correct superelevations

Mainline Gantry

- Mainline Gantries, Communications Buildings, Trenching and Conduit Installation fully complete including, but not limited to Mainline Gantry walkways with railings in place, all associated arms and brackets, nVDC access, retractable equipment mechanisms, fiber connecting to the Communications Building, electrical power to the Communications Building, lightning protection, back-up generators, etc.
- Cable lengths shall not exceed 250' which includes service loops from the furthest rack in Communications Building to piece of equipment.
- All equipment shall have overhead access except the antenna.
- Further details are found later in this section and in the confidential information that was provided the Design-Builders that required the nondisclosure agreement to access.

Communications Building

- Purpose is to house specialized computer equipment provided by Kapsch to operate the AET toll system and the Authority's network equipment
- Kapsch to provide computer cabinets
- Design-Builder to provide both vertical and horizontal cable trays within the Communications Building.
- Power outlets to be provided on the ceiling and walls
- Fiber access to ~~the a~~ Thruway network rack provided by the Design-Builder is required shall be provided

Pre-Installation Requirements

Kapsch will install their system when the following conditions have been met:

- Mainline Gantry Installed with brackets, conduit, pull boxes and accessible stairs in place
- Concrete slabs with treadle frame and dummy treadle installed
- Shoulder pavement in final condition with shoulder pull box installed
- Conduit from gantry, treadles, shoulder pull box to Communication Building installed

The Design-Builder shall ensure that any extra fiber cable will be coiled inside the ORT Communication Building.

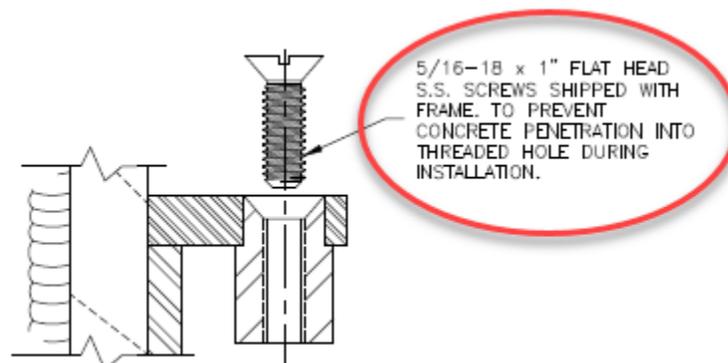
There shall be no splicing of fiber cables. They shall be ordered sufficiently long to reach from the lane to the ORT Communication Building, plus a minimum additional 30 foot length inside the building.

The Design-Builder shall install an appropriately sized individual conduit from the pullbox to the ORT Communication Building.

The Design-Builder shall ensure that the following steps are observed during installation of the fiber treadle:

- Use 5/16-18 by 1.5" full thread stainless bolts to secure the treadle frames (McMaster P/N: 93190A587)
- Install a single Belleville washer, with the crown side up on each bolt. (McMaster-Carr [part # 9713K418-P/N: 91235A115](#))
- Use Loc-tite #243214 thread locker on the side of the mounting hole, not the bolts.
- Do not substitute any other mounting bolts
- Bolts are torqued to 138 inch pounds, starting with the bolts closest to the leads and working outward to the opposite end.
- Bolt holes are filled with 100% silicone sealant after all of the bolts have been torqued
- Fibers are labelled 1, 2 and 3. Strip 1 is the strip that is contacted first when vehicles are travelling in the forward direction.

The Design-Builder shall ensure that flat head screws shipped with the treadle frame remain installed during treadle frame installation to prevent accidental plugging with concrete, as shown below:



The picture below depicts a typical fiber treadle installation in treadle frames embedded in concrete pavement:

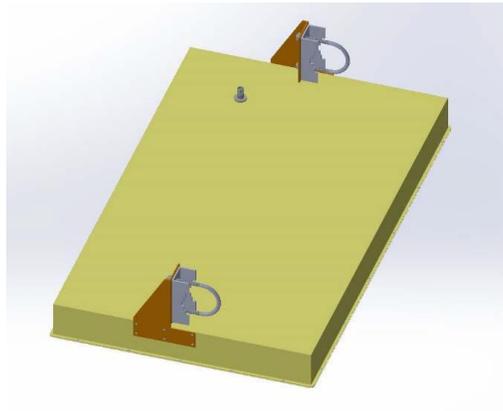
The Design-Builder shall hang the antenna and pull the antenna cable. Authority personnel will terminate the cable and set the antenna angle.

The Design-Builder shall include a six foot service loop at each antenna end.

The Design-Builder shall procure a Lightning Protector Part # L-Com AL-NFNFB-9 for each antenna cable, and provide them to Authority personnel for installation in the ORT Communication Building.

If E-ZPass antennas at the ORT plaza are located within 600 feet of E-ZPass antennas at an existing Authority toll plaza, the Design-Builder shall install a synchronization cable between the ORT Communication Building and the existing Authority toll plaza reader. Cabling shall be Belden 9730 or 89730 cable or approved equivalent. The Design-Builder will route the cable in an appropriately sized conduit.

The picture below depicts a typical E-ZPass antenna with mounting brackets:



22.3.7 Laser Scanner

The Design-Builder shall procure and install the laser scanner, mounting brackets, and all required cabling. Dimensions for the laser scanner are 17.9 x 9.6 x 6.1 inches. Weight is 20.5 lbs.

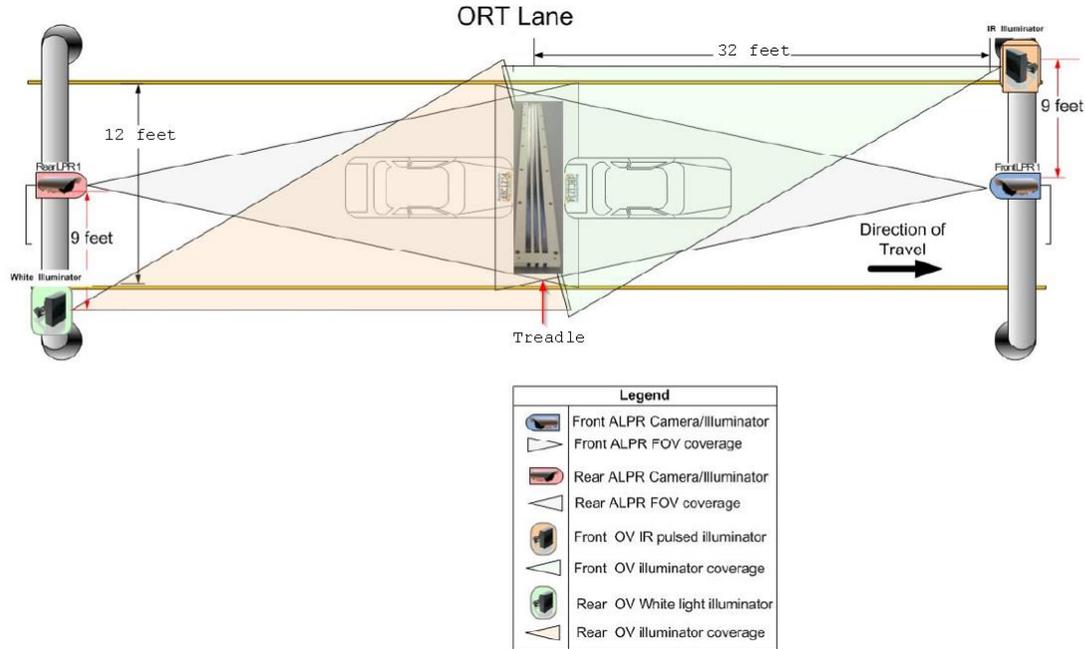
The Design-Builder shall install supports to mount the laser scanner at a location as depicted in NYSTA Standard [Drawing Specification CD-1 included in Part 7 – Section 4](#).

The Laser Scanners are able to withstand a maximum vibration of 5 to 30Hz, 0.5G for 3 minutes in each axis. The Design-Builder shall ensure that the vibration is within these vibration specifications at the laser mounting location.

There shall be no structural support, cables, or other obstructions that interfere with the Laser Scanner's beam pattern.

The laser scanner shall be mounted so that the lower lens shroud shall be 3" to 9" downstream of the steel treadle frame flange and at a height of 20' from the pavement.

The laser scanners shall be mounted at the center of the toll lanes.



The camera shall be Inex part # IZA-800ORT-L-TWY. Dimensions for the camera are 17.7 x 6.7 x 4.6 inches. Weight is 5 lbs.

The camera shall be mounted using Inex part # MNT-GL-UCAIZ. There shall be one front and one rear camera in each lane.

The rear camera illuminator shall be Inex part # IZ-SW2-20 (white light illuminator). The rear camera illuminator shall be mounted using Inex part # MNT-GL-UIL.

The front camera illuminator shall be Inex part # IZ-S2-20 (infrared light illuminator). The front camera illuminator shall be mounted using Inex part # MNT-GL-UIL.

The Design-Builder shall provide and install three appropriately sized conduits for power cables, communication cables, and possible future addition of a second front camera in each instrumented lane. Power cables and communication cables shall be routed through separate conduits. The Design Builder shall provide a hinged, stainless steel junction box for D.C. power and communications within 56 feet of each camera to support the “whip” cables from the camera/illuminator to the junction box. The enclosure is to be NEMA 4x rated and have a minimum size of 12”H x 12”W x 6”D. The enclosure must include a removable back panel and no conduit connectors shall impede the installation and removal of the back panel. The design builder shall install 4 weather tight connectors for 1/4” diameter cables in the enclosure to support the whip cables. No penetrations are permitted through the top of the enclosure.

The Design-Builder shall provide:

- A separate power cable for each camera.
- A separate power cable for each illuminator.
- A separate communication cable for each camera.

22.3.12 Items with Long Manufacturing Lead Times

Orders will be placed for the following items upon Design-Builder receiving Notice to Proceed (NTP) from the Authority.

1. Inex camera part # IZA-800ORT-L-TWY
2. OSI LaserScan part # AS615-UDK
3. MSI Fiber strips, part # SL 3 EZ TREADLE3042-3-1-XX, where XX is one of 50, 75, or 100 and denotes in the length in meters.
4. MSI Individual Fiber strips, part # SL PUR 215-1-125-PE

Upon receipt of the cameras, and laser scanners, and E-ZPass Readers from the manufacturers, Design-Builder will deliver these components to the Authority.

For ORT Exit Sites where all the work relative to the mini-gantries and the ORT Ramp checklist are completed in 2019 only: If the Design-Builder's order for the Inex cameras and illuminators does not arrive relative to the Design-Builder's schedule for 2019, the NYSTA will install that equipment when they are received from the Design-Builder and will not hold-up the acceptance of the location waiting for the Inex cameras and illuminators.

As per the preceding paragraph above, these locations that will be completed and signed off on by the Authority by the end of 2019 only: If the Design-Builder is unable to secure OSI Laser Scan units prior to the location being ready for the NYSTA installation team, NYSTA is willing to provide 30 OSI Laser Scan units to the Design-Builder for laser installation and aiming. Once the correct mounting is confirmed on the checklist, the Design-Builder can use the OSI Laser Scan units at the next location. When the new OSI Laser Scan units are received and turned over to NYSTA, the NYSTA installation team will install the new units. The NYSTA shall be responsible for the Work Zone Traffic Control at these locations to install the new equipment.

For locations that will be completed and turned-over to the Authority by the end of 2019 only: The Design-Builder must include a form listing the quantity for 25, 35, or 50 meter cable lengths of the MSI Fiber Strips and MSI Individual Fiber strips needed for installation in 2019. Once the Best Value contract is determined, NYSTA will order these items so that they can be provided to the Design-Builder sooner than waiting for the final notice to proceed prior to placing the order. The Design-Builder will be responsible for securing the remainder of the units, for work in 2020.

22.3.13 Installation and Inspection Schedule

Design-Builder shall include within its schedule sufficient time for Authority personnel to install, connect, and test the toll collection system for ORT before it becomes operational.

The Authority will have two~~one~~ installation teams in the Albany, Syracuse, and Buffalo Divisions, and one in the New York ~~for each~~ Division. The Authority will move teams, if necessary, to an adjacent Division to keep as many teams as practical working on the installations. Each installation team requires 14 calendar days, not counting major Holiday weekends, to complete an installation and can only work on one installation at a time. Installation teams require two workdays, not counting weekends, prior to moving to the next ORT Gantry location.

The Design-Builder must take the Authority's installation schedule into consideration prior to announcing that all work is complete and ready for the final 30-day test before go-live. A Division with twelve ORT Ramp Gantry locations will require, at a minimum, 96~~192~~ calendar days for completion. The number of ORT Gantry Locations by Division are:

- New York Division: 1

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- Albany Division: 12
- Syracuse Division: 12
- Buffalo Division: 9

The Design-Builder shall notify the Authority 30 calendar days prior to the expected completion of the ORT Gantry so that the Authority can schedule resources for inspection and installation.

~~The Authority will secure~~Design-Builder shall provide all lane closures for Authority personnel to complete their work.

Authority staff / Authority Quality Assurance Firm will be performing inspection of all components installed by the Contractor at the ORT sites, as specified in the ORT Ramp checklist that follows this section. The Authority can support inspection at a maximum of four ORT gantry sites per division simultaneously. The Design-Builder shall provide any lane closure and equipment required for Authority personnel to complete this inspection.

To facilitate system testing, the Design-Builder at a minimum shall construct the first ORT Gantry site at Interchange 22 – Selkirk, NY by the end of 2019. The Authority and Authority's Quality Assurance Firm will inspect this site frequently during construction to insure that the first installed ORT Gantry location meets the requirements for quality workmanship, RFP intent, and design standards, ~~before additional ORT Gantry sites are installed throughout the Thruway~~. The results of the inspections will be reviewed with the Design-Builder so that all future installations are consistent and include any changes that were made to the Interchange 22 – Selkirk, NY site.

~~For the Authority to do this work and meet the fourteen (14) calendar day window to install the tolling equipment for ORT, and test all of the equipment, ALL work described in this section shall be completed prior to the Authority beginning work at the ORT site. Once the Design-Builder proves that the checklist is complete at a site, a NYSTA installation team will start to install the equipment on the gantry and in the Communications Building. If the NYSTA installation team finds any problems with any of the cables (power, communication, coax, etc.) the Design-Builder will be required to provide the resources to replace the cable within 10 business days.~~

ORT Ramp Checklist

For NYSTA to install the ORT tolling equipment on the gantry and in the ORT Communications Building, the Design-Builder shall ensure that the following work is complete:

Road Surface, Pull Boxes

- Treadle Frame installed as per specifications and requirements
- Treadle installed, cables through pull box and into ORT Communications Building
- Shoulder pavement in final condition with shoulder pull boxes installed
- Treadle strips installed in shoulder (as required), cables through pull box and into ORT Communications Building
- 36 ft. of concrete in exit lanes, and 36 ft. of full depth asphalt installed in toll zone per plans
- Loops installed per plans, cables through pull box and into ORT Communications Building
- Permanent Positive separation installed between opposing directions of travel
- Two paint stripes installed on all entry lanes

ORT Communications Building

- Permanent electrical power & grounding
- HVAC installed and operational
- Transfer switch installed in NEMA 4X cabinet outside
- Generator installed and connected
- Equipment racks installed
- Vertical and horizontal cable trays installed
- Power outlets to be provided per the specification

- Work bench and outlets installed
- Fiber operational at the ORT Communications Building to the NYSTA network
- Doorway secured with exterior lighting per the specification
- Driveway, parking, and ORT Communication Buildings access

Gantry

- Gantries grounded
- Camera mounts installed
- Camera illuminator mounts installed
- Antennas mounted per the specification, ten degree angle, 17.5' to the support per drawings
- OSI laser scanners mounted, angle verified by use of a smart level, and contractor supplied Beam Finder used to verify that the beam lands on the pavement straddling the treadle or on the gray stripes for entry lanes. Includes the installation of all power and Communications cables.
- Conduit backfill complete

Gantry Conduit, Junction Boxes, Cabling

- Camera/Illuminator NEMA 4X Junction Boxes installed, with a 4' service loop of all cables at Junction box.
- Penetrations in Junction box are installed per specification
- All cables installed between Gantry and ORT Communications Building, separate conduits for power and Communications
- Expansion conduit for future front camera installed per the specification
- All conduit installations include sweeps and the correct diameter conduit
- Antenna cables have a 6' service loop at the antenna
- Each cable going into the ORT Communications Building will have a 30' coil in the building
- All cables will be tested from the equipment to the ORT Communications Building

22.3.14 Component List and Responsibility Matrix

This chart provides the parts and quantities required per lane and per ORT Gantry site. DB denotes the Design-Builder, and TA denotes the Thruway Authority, and these abbreviations specify who has installation responsibility for a particular component.

The SUB column indicates whether or not the Design-Builder is allowed to propose an alternate component approved by the Authority that is equal to or better than the specified component.

Mfg part #	SUB	Description	Source	Quantity Required	Installation Responsibility
802260-101	N	Kapsch MPR 2.3 Redundant Reader	Provided by Authority	2 Per ORT Gantry site	TA
802344-203	N	MPR 2.3 Lane Kit	Provided by Authority	- 1 per toll lane - 1 per instrumented shoulder - 1 per skip line between instrumented lanes	DB (antenna and antenna mount), TA (RF module)

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Mfg part #	SUB	Description	Source	Quantity Required	Installation Responsibility
LMR-400-DB, EZ-400-NMH-X, WSB-400 OR LMR-600-DB, EZ-600-NMH-X, WSB-600 OR Andrews LDF4-50A	Y	Antenna Cable, Connector, and Outdoor Weatherproofing kit	TIMES MICROWAVE SYSTEMS or Commscope	1 per antenna, cable length to be determined by Design-Builder	DB
AL-NFNFB-9	Y	Lightning Protector	L-Com, Inc.	1 per antenna	TA
CT-FAN3-QTRK-B	Y	Cable Tronix cabinet cooling fan	cabletronix.com	2 per ORT Gantry site	TA
ZADR1620PR OXR_WEB-I	Y	Web Relay Board 16-Channel 20-Amp ProXR	relaypros.com	2 per ORT Gantry site	TA
iBoot-PDU8-2N20	Y	Remote Power Switch, 8 outlets, 20 Amps	dataprobe.com	2 per ORT Gantry site	TA
iBoot-PDU8-N20	Y	Remote Power Switch, 8 Outlets, 20 Amps	dataprobe.com	1 per ORT Gantry site	TA
BASE-WIRED	Y	Base Unit (SensorGateway)	serverscheck.com	1 per ORT Gantry Site	TA
BASE-PWR	Y	Power Adapter for SensorGateway	serverscheck.com	1 per ORT Gantry Site	TA

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Mfg part #	SUB	Description	Source	Quantity Required	Installation Responsibility
ADDON-CELLALERT	Y	Cellular Alerting Add-On	serverscheck.com	1 per ORT Gantry Site	TA
PWR-FAIL-AC	Y	AC Power Failure Sensor Probe (110v-240v)	serverscheck.com	1 per ORT Gantry Site	TA
GXT4-3000RT120	N	LIEBERT UPS STATION W/BATTERY RACK/TOWER	Anixter Inc.	3 per ORT Gantry site	TA
GXT4-72VBATT	N	BATTERY PACK FOR LIEBERT UPS STATION	Anixter Inc.	3 per ORT Gantry Site	TA
MP2-130P	N	Liebert 2U MicroPod Maintenance Bypass for Liebert PSI and Liebert GXT 3000VA, 120V UPS	Anixter	2 per ORT Gantry Site	TA

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Mfg part #	SUB	Description	Source	Quantity Required	Installation Responsibility
MP2-130E	N	Liebert 2U MicroPod Maintenance Bypass for Liebert PSI and Liebert GXT 3000VA, 120V UPS	Anixter	1 per ORT Gantry site	TA
ER1-17N8-IP	Y	w/ 8-Port KVM; 2-User (1 Active) [1 x Local, 1 x IP]; Combo (PS/2 or USB); VGA	eclipsrackmount.com	1 per ORT Gantry Site	TA
PowerEdge R330	Y	Toll System Server. Server must be certified to run the Ubuntu Server operating system (see https://certification.ubuntu.com/server) and include components equal or better to those specified in the cut sheets for the PowerEdge R330. Server side MUST be 1U.	Dell, Inc.	6 per ORT Gantry Site	TA

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Mfg part #	SUB	Description	Source	Quantity Required	Installation Responsibility
HGLN-CAT6-HP	Y	Shielded CAT6 Hi-Power Lightning Surge Protector	L-Com, Inc.	1 per camera	TA
DPP100-24-1	Y	TDK-Lambda Power Supply; AC-DC; 24V; 2.1A; 85-264V In; Enclosed; DIN Rail Mount; 100W; DPP Series	Allied	1 per camera and its connected illuminator	TA
Reference Design Specifications	N	Treadle Frame	TRMI, Inc.	1 per 12 foot toll lane	DB
SL MD-220	N	SL MD-220 Optical Transmittance Analyzer	TE Connectivity	1 per toll lane	TA
SL-3 EZ TREADLE304 2-3-1-XX, where XX is one of 50, 75, or 100 meters	N	MSI Fiber Strip inserts for installation in treadle frame	TE Connectivity	1 per treadle frame	DB
SL PUR 215-1-125-PE	N	MSI Individual Fiber Strips	TE Connectivity	2 per instrumented shoulder	DB
AR2507	Y	NetShelter 48U 600mm Wide x 1200mm Deep Enclosure with Sides Black	APC, Inc.	2 per ORT Gantry Site	DB

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Mfg part #	SUB	Description	Source	Quantity Required	Installation Responsibility
AS615-UDK Hybrid	N	Single Lane Overhead Vehicle Classifier, 120V, Hybrid	OSI LaserScan.	1 per 12' lane, 1 per instrumented shoulder	TA
19471022-9	N	AS Mounting Kit	OSI LaserScan.	1 per laser scanner	DB
9291011-9-XXX	N	AS Power Cable, 120V, XXX feet. Part number depends on gantry design.	OSI LaserScan	1 per laser scanner	DB
9291010-29-XXX	N	AS RS422 Communications Cable, 120V, XXX feet. Part number depends on gantry design.	OSI LaserScan	1 per laser scanner	DB
81000143-9	Y	RS422 Surge Suppressor	OSI LaserScan	1 per laser scanner	TA
9301000-9	N	Beam Finder	OSI LaserScan	10 for entire project	DB
Reference Design Specifications	Y	Loops	Never-Fail Loop System Inc. or Patriot Detection, Inc.	2 per lane, 2 per instrumented shoulder	DB
EDI LMD301 TS	Y	SINGLE CHANNEL LOOP DETECTOR WITH DELAY & EXTENDING TIMING & SOLID STATE OUT	Eberle Design, Inc.	1 per loop	TA
IZA-800ORT-L-TWY	N	ORT Camera	Inex Zamir	2 per instrumented lane	TA

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Mfg part #	SUB	Description	Source	Quantity Required	Installation Responsibility
IZ-SW2-20	N	Illuminator-white	Inex Zamir	1 per instrumented lane	TA
IZ-S2-20	N	Illuminator-Infrared	Inex Zamir	1 per instrumented lane	TA
MNT-GL-UIL	N	Illuminator Mount	Inex Zamir	2 per instrumented lane	DB
MNT-GL-UCAIZ	N	Camera Mount	Inex Zamir	2 per instrumented lane	DB
#7919A	Y	Cat5e cable – 328 feet - Belden Multi-Conductor - Category 5e DataTuff® Twisted Pair Cable, part	Belden	TBD by DB	DB
# 5100UE	Y	Belden, 2 Conductor, 14 Guage	Anixter	TBD by DB	DB

22.3.15 Spare Parts

The Design-Builder is to procure and provide to the Authority the following additional parts in the quantities specified:

Mfg Part #	Quantity
Inex camera part # IZA-800ORT-L-TWY	20
Inex White Light illuminator part # IZ-SW2-20	20
Inex Infrared illuminator part # IZ-S2-20	20
Inex White Light Illuminator part # IZ-SW1-30(white)	8
Inex Infrared Illuminator IZ-S1-30 (IR)	8
OSI LaserScan part # AS615-UDK	35
MSI Fiber strips, part # SL 3 EZ TREADLE3042-3-1-100	20
Dell PowerEdge R330	20
MSI SL PUR 215-1-125-PE	10

- The 1 northbound exit lane shall widen to 2 lanes to meet the existing 2 lanes for the intersection with RTE 32.
- D. Complete installation of delineators.
- E. Remove pavement to provide footprint reduction areas and these areas should be top soiled and seeded.

Exit 20W Saugerties West

The Design Builder shall construct an ORT zone at the east or west side of the toll plaza with 24 lanes and a shoulder for the southbound exiting traffic and one lane and shoulder for the southbound entering traffic in each direction with 4 foot median and delineators for a Design Speed of 40 MPH – Semi-direct Connecting Ramp.

After the ORT toll system becomes functional Design Builder shall remove the existing toll plaza and connect the ORT Toll Zone to Rte 32 as follows:

- A. Restripe the plaza to align the lanes with the appropriate number of toll lanes, to manage the peak hour traffic flow, for temporary traffic control prior to and during the toll plaza removal.
- B. Entering Traffic
- Provide 1 lane and shoulder. Note that the maximum cross slope requirement of 3% in Section 22.3.2 may be exceeded for this location.
- C. Exiting Traffic
- The 1 southbound exit lane shall widen to 2 lanes prior to after the toll zone and continue as 2 lanes to meet RTE 32.
- D. Complete installation of delineators.
- E. Remove pavement to provide footprint reduction areas and these areas should be top soiled and seeded.

Exit 21 Catskill

The Design Builder shall construct an ORT zone at the north end of the toll plaza where the ramps merge with 2 lanes with a shoulder in the exiting direction and 1 lane with shoulder in the entering direction with positive protection barrier for a Design Speed of 40 MPH – Semi-direct Connecting Ramp. Prior to the Go Live Date the Design Builder shall:

- A. Eliminate the northern Maintenance driveway, remove the existing driveway pavement.
- B. Reconfigure the existing Maintenance Driveway to the south of the toll booths as a 2-way driveway. The left turn movement out will be for Authorized Vehicles (Thruway Maintenance vehicles) only.
- C. Construct new 2-way access driveway from Rte 23B to the Maintenance yard with a connection to the commuter parking lot.
- D. Reconfigure Commuter lot to relocate Handicap Parking spaces impacted by the access drive. Close access to the ramp from the parking area.

After the ORT toll system becomes functional Design Builder shall remove the existing toll plaza and connect the ORT Toll Zone to Rte 23B as follows:

- A. Restripe the plaza to align the lanes with the appropriate number of toll lanes, to manage the peak hour traffic flow for temporary traffic control prior to and during the toll plaza removal.
- B. Entering Traffic
 - The entering lane shall transition from the existing 1 lane and shoulder entering the plaza from Rte 98 and transition to 1 ft lane through lane and a median/turn lane for the Commuter Parking Lot Driveway, and then transition to 2 lanes with shoulder as shown.
- C. Exiting Traffic
 - The 3 exit lanes shall taper to 2 lanes with shoulder as shown to meet the existing 2 lanes at the Rte 77 intersection.
- D. Complete installation of positive protection barrier.
- E. Remove pavement to provide footprint reduction areas and these areas should be top soiled and seeded.

Exit 49 Depew

The Design Builder shall construct an ORT zone on the tangent section of the ramps east of where the ramps merge with 3 lanes and a shoulder in the eastbound exiting direction and 2 lanes and a shoulder in the westbound entering direction with positive protection barrier for a Design Speed of 40 MPH – Semi-direct Connecting Ramp.

Prior to the Go Live Date the Design Builder shall:

- A. Develop a second entering lane with shoulder from the existing toll plaza to the ramp diverge to meet the two ramp lanes at the diverge.

After the ORT toll system becomes functional Design Builder shall remove the existing toll plaza and connect the ORT Toll Zone to Rte ~~98~~78 as follows:

- A. Restripe the plaza to align the lanes with the appropriate number of toll lanes, to manage the peak hour traffic flow, for temporary traffic control prior to and during the toll plaza removal.
- B. Entering Traffic
 - Entering traffic from Rte 78 shall be shifted to the north to create a two-way left turn lane for the tandem truck lot and the park and ride lot.
 - The 2 westbound entering lanes shall continue to meet the two lanes constructed prior to ORT Go Live.
- C. Exiting Traffic
 - The 3 eastbound exit lanes shall continue as 3 lanes with shoulder after the toll zone to meet the existing 3 lanes at the intersection RTE 78.
- D. Complete installation of positive protection barrier.
- E. Remove pavement to provide footprint reduction areas and these areas should be top soiled and seeded.

two (2) weeks prior indicating what Toll Booths require closure based on the Design-Builder's work. The details of work and Work Zone Traffic Control shall be complete and reviewed with Released for Construction stamped and dated at that 2 week notification lead time requirement.

Interchange 23 – This is a complicated short interchange area and has a short merge opportunity. Additional signing to enable motorists to properly align with the lanes leading from the Thruway system to 9W South, 9W North and I-787 is a requirement and responsibility of the Design-Builder. This additional signage shall be placed well enough in advance so travelers know they must move left or right to avoid last minute potential non-safe moves attempting to get into the correct lanes to either access 9W North, South or access I-787 North. In addition, the Thruway has accident issues (rear end accidents) at the slip ramp to 9W South after exiting the Thruway. The Thruway is requiring the slip ramp be extended utilizing NYS DOT property and Authority property on the right side of Route 9W South. The salt shed shall be removed so that the Design-Builder has almost a blank slate to design and construct. Lighting, drainage adjustments, curb, striping, stop bars and any other items that may interfere with the Design-Builder designing and constructing the improvements is the responsibility of the Design-Builder. A preliminary layout (see concept plans) revealed no conflict with utilities (exception light poles, and drainage infrastructure). None of Thruway buildings conflict once the Salt Shed is removed which should be completed no later than September 1, 2019, if not sooner. A preliminary investigation into underground utilities revealed utilities should be deep enough to not prevent the construction of this extended slip ramp. In addition, the Thruway is requiring that the ramp leading to 9W North become a two-lane left turn lane as opposed to the one lane that exists now. Tandem Lot is to be closed and the Tandem Lot shall be removed, then top soiled and seeded.

Interchange 23 also requires the installation of an emergency break in concrete barrier to facilitate the “U-turning” of vehicular traffic should the Thruway close and traffic is queued at the interchange site. Refer to Part 8 for the Special Specification Item 606.9575—25 Median Barrier Gate System (installed). The location of this item shall be (on entering the Thruway) as close as possible to the gore area where North and South ramps split, and the location allows enough area for vehicles to essentially U-turn.

Interchange 23 requires a new signal configuration with the addition of the two (2) lane left turn from the Thruway exit to the 9W North. The Design-Builder is responsible for the design and construction of the complete new signal system with new supports, foundation, and new signals to align properly with all traffic movements, along with new traffic cabinet. See Section 12 for Traffic Signal details.

The two lane left turn shall be striped along with performed pavement symbols. These requirements apply only to the exit ramp intersecting with 9W leaving the Thruway system. Striping on the slip ramp to 9W South and a new stop bar placement at Noonan Lane is also required. All work shall meet current standards.

The Design-Builder shall design the double left turn movement to accommodate current required standard vehicles. The right lane of the double left turn movement shall be designed for a WB-67 vehicle. The requirement to accommodate side by side operation of the design vehicle specified will be considered a non-conforming feature. This occasional vehicle will require some encroachment on the island between the double lefts and the slip ramp to Rte. 9W South. The Design-Builder shall allow such opportunity by providing 10' of additional pavement in the island. Although the striping shall be in accordance with current design standards the encroachment shall be via the provision of additional pavement area. The Authority does not expect vehicles of this size for the following two reasons. The first being the closure of the Exit 23 interchange Tandem lot and the second being the only routes available after proceeding further north on Rte. 9W are intersections with City Streets presenting problems for these types of vehicles.

Interchange 24 – One of the largest Interstate-to-Interstate connections in this project. The uniqueness of this site is the large usage of the Tandem Lot, the necessary legislation proposed to provide safe movement of Tandems to reenter the Thruway system. Due to the anticipated higher speeds through the interchange area the Design-Builder is required to design and construct an acceleration lane for the Tandems so that their entering speeds can be reasonable for entering and merging with I-90 Eastbound traffic. The Design-Builder should pay close attention to the overhead signage and the placement location of the current overhead sign structures. When the interchange is complete of all work the Design-Builder is responsible to ensure the signage is in compliance with the MUTCO. Other Part 3 requirements pertain to this

particular Interchange work as well as other Parts of Engineering Data. A gated controlled access is required from the Washington Avenue driveway entrance to the Tandem Lot.

Interchange 24 also requires the installation of an emergency break in concrete barrier to facilitate the “U-turning” of vehicular traffic should the Thruway close and traffic is queued at the interchange site. Refer to Part 8 for the Special Specification Item 606.9575—25 Median Barrier Gate System (installed). The location of this item shall be (on entering the Thruway) as close as possible to the gore area where West and South ramps split, and the location allows enough area for vehicles to essentially U-turn.

Interchange 25 – The Authority expects a low level of service when All Electric Cashless Tolling “goes live” at this location. The Thruway entering the I-890 interstate narrows and the Curry Road ramp onto I-890 presents issues. Once again, the Design-Builder shall design additional signage to attempt to properly alert motorists in advance so that there may be a reduction in merge movements. No Tandem Lot here. Additional work such as crack sealing, pavement repairs, etc., as with all these interchange locations may be required as per of Engineering Data, Part 7 - Section 14.

Interchange 25A – Issues with Tandem Lot access and single trailer trucks accessing the local roads is problematic. As shown on the proposed legislative Tandem routes, this location is different. Due to limited ROW the proposed route shown in Part 7 – Engineering Data, Section 3 is the only avenue to provide access for Tandems to the Tandem Lot. The Design-Builder is responsible for this design and construction. An acceleration lane must be incorporated so that Tandems entering I-88 to enter the Thruway system can merge at reasonable speeds. Also, the Tandem Lot driveway entrance requires modification.

Interchange 34A - At this location there is concern with the Tandem Lot entrance to access the proposed legislative Tandem Route. An acceleration lane shall be designed and constructed so that Tandems do not present a safety concern and Tandems can reach a reasonable speed to merge into anticipated higher speeds of traffic. The Park and Ride at this location is scheduled to be closed and the access to and from the Park and Ride lot shall be removed. A minimum of 15’ shall be removed between the shoulder and the closed Park and Ride Lot.

Interchange 36 – This location is similar to other interchanges. There is required legislation to accommodate Tandem movements. The Tandem Lot entrance to the traffic accessing I-81 is anticipated to be at higher speeds requiring an acceleration lane leading into traffic to allow Tandems to reach reasonable speeds to merge with free flowing traffic to utilize the proposed legislative route.

Interchange 39 - This location is somewhat unique in that the Exiting Tandem Lot is to be closed and a new Tandem Lot constructed in the location as shown on the concept plans in Part 6. This new Tandem Lot is a requirement, as well as a proper driveway ~~entrance and exit~~ to provide for access in and out, lighting, an area in the Tandem for a Park and Ride accommodations requiring 52 parking spaces properly striped. The Park and Ride Lot and the Tandem Lot shall be properly delineated with signing, striping and/or other means to minimize the mixing of cars and Tandems.

Interchange 44 – This location appears to be relatively straight forward. The Design-builder shall design and construct proper tapers, merge conditions, striping to provide clear and distinct signage so travelers can properly align with roadway alignments (lanes) to reduce merging

The Design-Builder is responsible at all locations where full Toll Plaza removal is required to provide in the tunnel under those toll plazas to install 2-4 inch conduit capped at both ends for future use by Authority Resources. Upon completion of that installation of the Thruway special specification conduit, the tunnel is to be filled with low strength fill.

The Design-Builder is responsible for capping or repairing the highway pavement void after the Toll Booths are removed. The Design-Builder shall design and construct an appropriate reconstructed section of pavement for this voided section as indicated in Part 7 - Engineering Data, Section 14 prior to the necessary normal crown or super elevated highway section (the final pavement highway section for these locations being applied).

One week prior to the beginning of the removal of the Toll Booths at each location, the Design-Builder shall notify the Authority's Project Manager so that Thruway personnel can remove tolling equipment. It shall take Thruway personnel a maximum of three (3) days to remove the equipment.

If the first Toll Booth removals are not to occur until a time greater than 1 month after the AETC "go live" date than the previous paragraph does not apply as the equipment at all locations shall be removed within that one month period.

Prior to Toll Booth removal, all electric and fiber connected to the Toll Booths shall be appropriately terminated at the existing TUB locations by the Design-Builder.

25.2.3 Hazardous Materials

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

The abatement of all Hazardous Materials shall be completed to the greatest extent possible prior to any demolition taking place unless a legal variation from related laws, rules and regulations can be obtained. If the Hazardous Material has been identified through the Hazardous or Asbestos Screening document and/or the record plans, the Design-Builder is responsible for all costs. Should Hazardous Material or Asbestos be found and information related to its presence was not previously available to the Design-Builder, all costs associated with abatement, containment, removal, and disposal shall be covered under the Fixed Force Account item.

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

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

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

Utility connections shall be discontinued and capped in accordance with the requirements of the utilities companies or the Authority prior to demolition works.

25.2.4 Deliverables

A Demolition and Removal Plan, signed and stamped by a Professional Engineer, registered in the State of New York, shall be submitted to the Authority for review and written comment.

25.3 TOLL BOOTH REMOVAL INCENTIVES

The Authority has determined that there is value in the removal of the Toll Booths as soon as possible after the AETC “go live” date. Based on volumes of traffic, incentives are being offered in an attempt to remove the Toll Booths at these higher traffic volume locations. The Interchange and Terminus locations involved and the associated incentives are shown below:

Location	AADT	Incentive
Interchange 24	≈ 75,600	\$1,000,000
Williamsville	≈ 54,200	\$720,000
Lackawanna	≈ 49,200	\$655,000
Interchange 25	≈ 40,300	\$535,000
Interchange 45	≈ 36,800	\$490,000
Canaan	≈ 23,600	\$315,000
Potential Incentives		\$3.715 M

To be eligible for the incentive payment the following conditions have to be met:

1. The final permanent alignment and lane configurations shall be in place (travel lanes and shoulders)
2. Positive separation shall be in place, either permanent or temporary concrete barrier, for the median and right side to channelize traffic through the Toll plaza area.
3. Pavement repairs are complete
4. Construction of temporary asphalt pavement where Toll Booths were removed and meet the existing Toll plaza elevations of roadway surface.
5. Temporary striping and temporary directional signage shall be in place. The temporary striping can be reflectorized paint, or epoxy.
6. The work at the individual locations shall be complete by January 15, 2021.

The temporary conditions defined above shall comply with Standard Specifications.

25.4 TOLL BOOTH REMOVAL DATE

The Design-BUILDER is responsible to have all Toll Booths removed and the final lane configurations in place by August 4, 2021. Failure to meet this dateline shall result in a loss of the project completion incentive of one calendar day incentive (\$20,000)/per calendar day late/per each Toll Booth removal location. If the Design-BUILDER is not pursuing the incentive this value constitutes the liquidated damages associated with not meeting the defined deadline date.

Communications Buildings are critical to the receipt of correct tolling revenue, similar to the mainline gantries, mini-gantry, smaller communication buildings at the ORT Exits and thus require traffic protections. The guiderail protection system is a function of current standards and based on the placement of the Communication Buildings. Regardless, though, a method of protection is required even if the Communication Building were outside the clear zone.

The Design-Builder is responsible for supplying and installing fiber optic inner-duct from an Authority specified hand-hole/splice location to and through the Communication Building foundation and concrete floor to a junction box located 4 to 5 feet above finished grade and located on the interior side of the exterior wall (but not the front exterior wall). The Design-Builder is also responsible for transitioning the inner-duct to interior fire rated inner-duct at the interior wall junction box to the service rack supplied by the Design Builder via a ladder rack.

Adesta shall pull and install the fiber optic cable line within the Design-Builders installed inner-duct. The inner-duct installation shall be laid straight without multiple bends. Bends shall only be allowed for change in direction points. The inner-duct shall be laid straight within the trench (no small bends or ripples in the conduit). Adesta shall supply, install and test the fiber for full functioning and connectivity. Adesta shall connect/splice the fiber into the Thruway's fiber backbone. The Design-Builder is responsible for back filling the trenches when Adesta completes the tests of fiber connection from the splice locations to the racks.

Refer to the document "Fiber Optic Communications for Mainline Gantries" provided separately to each Design-Builder for additional requirements.

Design-Builder shall be responsible for all the outlets, lighting, HVAC system (for climate control) and other misc. work as required by the building codes as stated in Section 1 of Part 3.

The Design-Builder is also responsible for the installation of the conduit from the Communication Building to the gantry foundation and up out of the foundation to the center of the Gantry vertical support. The conduit should end 12 inches above the top of the Gantry foundation.

Kapsch is responsible for all the cabling (supply and install) from the Communications Building to all pieces of equipment on the gantry. Each piece of equipment has a separate independent run of cabling (cameras/illuminators/nVDC unit/antenna/lasers). The independent cabling runs from Communication Building to Gantry equipment (total length) shall not exceed 250 feet including service loops.

Available hand-hole/splice locations within Gantry limits are provided in the document "Fiber Optic Communications for Mainline Gantries" provided separately to each Design Build team.

26.3.1 Mechanical Requirements

26.3.1.1 Indoor Air Quality

The Design-Builder shall minimize to the fullest extent possible the use of materials that emit VOCs and similar pollutants.

26.3.1.2 Mechanical Ventilation

As a means to monitor air quality, carbon monoxide monitoring systems shall be installed within the ventilation systems.

26.3.1.3 Mechanical Equipment and Systems

DESIGNED BY: B. LAGRAVE
 CHECKED BY: K. CZORA
 DRAFTED BY: P. FITZGERALD
 CHECKED BY: K. CZORA
 Plotted By: scdusers
 Design File: scd0118
 Plot Date: 8/20/18



 Thruway Authority	TITLE OF PROJECT CASHLESS TOLLING ON THE NYS THRUWAY	CONTRACT NUMBER:
	LOCATION OF PROJECT EXITS 16 TO 61	DATE: 1/11/2019
	TITLE OF DRAWING INTERCHANGE 23 CONCEPT	DRAWING NUMBER:

Plotted By: scduser
 Design File: scdfiles
 Plot Date: 8/31/18
 DRAFTED BY: P. FITZGERALD
 CHECKED BY: K. CZORA
 DESIGNED BY: B. LAGRAVE
 CHECKED BY: K. CZORA
 DESIGN SUPERVISOR: B. DOHERTY



R 449' e=8.0%

R 488'

R 512'

TOLL BOOTH REMOVALS REQUIRED

R 352' e=8.0%

TUB AND DRIVEWAY TO BE REMOVED

GRID NORTH



TITLE OF PROJECT CASHLESS TOLLING ON THE NYS THRUWAY	CONTRACT NUMBER:
LOCATION OF PROJECT EXITS 16 TO 61	DATE: 1/11/2019
TITLE OF DRAWING INTERCHANGE 25 CONCEPT	DRAWING NUMBER:

Plotted By: scdusers
 Design File: scd01e
 Plotted: 8/21/19
 DRAFTED BY: P. FITZGERALD
 CHECKED BY: K. CZORA
 DESIGNED BY: B. LAGRAVE
 CHECKED BY: K. CZORA
 DESIGN SUPERVISOR: B. DOHERTY



 NEW YORK STATE OF OPPORTUNITY.	Thruway Authority	TITLE OF PROJECT CASHLESS TOLLING ON THE NYS THRUWAY	CONTRACT NUMBER:
		LOCATION OF PROJECT EXITS 16 TO 61	DATE: 1/11/2019
		TITLE OF DRAWING INTERCHANGE 39 CONCEPT	DRAWING NUMBER: