CASHLESS TOLLING

DESIGN-BUILD PROJECT

TA 19-1, Contract No. D800002

Request for Proposals

Addendum #7

April 18, 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 Page A-6 of the Instructions to Proposers, Appendix A, Project Information, and substitute the attached revised Page A-6.

Delete Pages 61, 62, 63, 65, 66, 67, 94, 95, 134 and 158 of the DB Contract Documents, Part 3, Project Requirements and substitute the attached revised Pages 61, 62, 63, 65, 66, 67, 94, 95, 134 and 158. Please note, there are no tracked changes on Page 63 but the page is included due to the shift of text resulting from the addition to Pages 61 and 62.

Note to Design Build Proposers, the following changes have been made to Final RFP Part 7 – Engineering Data since Amendment #6 was posted on April 17, 2019:
Part 7, Section 8 – Signage: Replaced sign removal package. Woodbury terminus location sign removals will be provided in amendment 8 – 4/18/19
Part 7, Section 24 – Interchange 23 Traffic Signal Plans: Added interchange 23 traffic signal details – 4/18/19

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

Date Proposers may start submitting ATCs for review	February 16, 2019
Proposal period one-on-one meetings with all Proposers.	February 15 – March 20, 2019
Final date for Proposers to submit ATC's for review	March 25, 2019
Final date for requests for changes to Proposer's organization and/or personnel	April 3, 2019
Final date for Authority's responses to ATCs submitted for review	April 3, 2019
Final date for receipt of Proposer questions	April ~~1~~22, 2019
Final date for Proposers to respond to conditional approval of ATC's	April 23, 2019
Issue Date for Final Addendum and/or answers to Proposer questions	April ~~2~~30, 2019
Technical Proposal Due Date	May 13, 2019
Price Proposal Due Date	June 6, 2019
Design-Builders Meeting to Identify Apparent Best Value	June 6, 2019
Confirmation – Selection of Best Value	June 10, 2019
Post Proposal meetings (if required)	TBD
Limited Negotiations (if required)	TBD
Anticipated Contract Award	July 16, 2019
Notice to Proceed	July 22, 2019

This is a tentative schedule. All dates set forth in the preceding table and in this RFP are subject to change at the Authority's' sole discretion. To the extent that dates are changed, the Authority shall notify the Proposers by Addendum.

A5.2 TECHNICAL PROPOSAL DUE DATE

The completed Technical Proposal (Volumes 1 & 2) shall be delivered to the Authority's Designated Representative at the address specified in Section A8.0, no later than 12:00 P.M. (midday) (Eastern Time), on the date specified in Section A5.1 (the "Technical Proposal Due Date").

A5.3 PRICE PROPOSAL DUE DATE

The completed Price Proposal (Volume 3) shall be delivered to the Authority's Designated Representative at the address specified in Section A8.0, no later than 12:00 P.M. (midday) (Eastern Time), on the date specified in Section A5.1 (the "Price Proposal Due Date").

SECTION 12 SIGNAGE, PAVEMENT MARKING AND SIGNALS

12.1 SCOPE

The Design-Builder shall provide all temporary and permanent fixed signing, variable message signs, temporary and permanent pavement markings, including rumble strips (if applicable), and signal work (if applicable) required for the Project. Project Signage shall be in accordance of the requirements shown in the documents in Part 7 – Engineering Data, Section 8 – Signage.

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

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

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

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

The following constitutes the requirements for signage for ticketed system: Part 7 – Engineering Data, Section 8 for Mainline Gantry and Terminus locations Signage (Permanent) in place when AET goes live, a small temporary sign package required on all active toll booths prior to Toll Booth demolition and during staging to demolish the Toll Booths is required at the Terminus locations. Section 8 for Interchanges (Permanent) when AET goes live and includes a small temporary sign package required on all active toll booths prior to Toll Booth demolition and during staging to demolish the Toll Booths. Section 8 provides the sign package for Toll-in-Place (Newburgh only) and shall be in place when AET goes live. Section 8 also provides the necessary signage package required at Exit 35 when AET goes live and the Toll Booths are removed. A small temporary sign package is required here as well prior to Toll Booth demolition and during Staging to demolish the Toll Booths. Section 8 provides the required signage package for all the ORT Exit sites (34 locations/Exits) and shall be in place when AET goes live. This Package also includes a small temporary sign package required on all active Toll Booths prior to Toll Booth demolition and during staging to demolish the Toll Booths. Section 8 includes all the sign details required. The Design-Builder is responsible for the design and construction of the necessary sign posts and foundations and all shall be supported by breakaway posts and have appropriate protection per current Standards.

The Design-Builder shall also be required to remove ~~a list of~~ signs as part of this project~~provided in Section 8~~. ~~The timing of the removals are provided in the excel sheet in the Engineering Data.~~ The requirements and timing of the removals are as listed below and as indicated in Section 8 of Part 7 – Engineering Data. Removal of Signs requires removal of sign panels, posts and foundations to 2 ft. below existing ground elevations.

For the ORT Exits, the Design-Builder is responsible for the removal of all toll related signs within the limits of Thruway Mainline to the end of the furthest project limit from the Mainline Thruway at each Exit site. For B1 and B2 in addition to the above requirements, additional signage removals are in Part 7, Section 8 – Sign Removals. Within these ORT Exits, the Design-Builder shall remove and/or cover these signs once the toll booths are no longer having traffic pass through them. Ultimate removal of signs shall occur within seven (7) days thereafter.

For the Interchange locations, the Design-Builder is responsible for the removal of all signs indicated in Part 7, Section 8 – Sign Removals. The timing and requirements are indicated in this section as well. In addition, all toll related signs on ramps from the Thruway Mainline to the project limits, ramps from the NYSDOT Interstates to the project limits, and within the interchange project limits, including both overhead and ground mounted toll related signs, shall be removed by the Design-Builder. The

timing for removal and/or coverage is the same as stated for the ORT Exit Sites and the ultimate removals as well.

At Terminus locations, the Design-Builder shall be responsible for the removal of all signs as indicated in Part 7, Section 8 – Sign Removals. The timing and requirements are also provided in Part 7, Section 8.

Special Exits:

For Exit 35, the Design-Builder shall follow the requirements as stated for the ORT Exit Sites.

For Exit 17, the Design-Builder shall follow the requirements as states for the Terminus location sites.

For Exit 16, the Design-Builder shall be responsible for the removal of all toll related signs on the ramps from the Thruway Mainline to the furthest project limits from the Mainline Thruway. The timing of removals and/or coverage shall be the same as the ORT Exits and the ultimate removal of same signs.

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

12.2 STANDARDS

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

12.3 REQUIREMENTS

12.3.1 Design Requirements

The Design-Builder shall develop a signing and pavement marking plan and a Traffic Signal Plan (if applicable) for the Project sites that shall:

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

B) Encompass the placement of new signs, the removal of no longer applicable signs, and signage transition plans as AETC is activated to when the Toll Booths are removed. This applies to both the Interchange(s), Mainline Gantry locations, the Terminus location(s), and the ORT locations work areas, as well as the special exits of Exit 16, Exit 35 and Exit 17 (Newburgh)

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

D) Provide signs with high reflectivity with Type XI sheeting such as to not warrant sign lighting;

E) Provide and Erect mainline mile marker posts consistent with Authority practice, spaced every 0.10 mile, and the Thruway shall supply the mile marker signs;

F) Overhead Sign Structures on the Thruway Mainline shall not be 800 ft. behind/after the Mainline Gantry, as the Gantry will obstruct the sign panel visibility if within those limits. In addition, the Mainline Gantry following an Overhead Sign Structure shall not be within 100 ft. of the Overhead Structure.

G) Permanent Overhead Sign Structures on any of ORT Exit Site locations shall not be 150 ft. before/after the Mini Gantry as the Mini Gantry will obstruct the sign panel visibility if within those limits.

The Design-Builder shall not attach signs to corridor overhead bridges without the written prior consent of the Authority.

The Design-Builder may present the respective signing and pavement marking elements on separate drawings, but shall demonstrate that the proposed signs and pavement markings work are in unison in the manner called for in this Project Requirements and the governing standards.

The Design-Builder shall prepare Design Plans that shall at a minimum cover the following signing aspects:

H) Accurate sign locations;

I) Sign panel sizes and legends;

J) Types of sign supports.

At minimum, the Design Plans shall cover the following pavement marking aspects:

K) Plan views showing the proposed pavement markings with the transitions and tapers appropriate for the design speed. Existing markings shall be graphically distinguished from proposed markings, for example by using a lighter-weight drawing line than for the proposed markings;

12.3.2 Variable Message Signs (VMS)

The Design-Builder shall refer to the google images for the identified locations of where the variable message sign structures shall be located. The images provided in Part 7 – Engineering Data, Section 17 provide locations of VMS sites and deal with directions approaching entry to the Thruway System. The VMS shall be ground mounted and shall be utilized to notify motorists of Thruway closures due to weather, accidents, or emergency conditions. The google images of the VMS sign locations limit placement at each site by a distinct colored line. One sign is a different distinct color on the Google Image. The reason for the different colored line is that VMS at that location shall be fiber connected and be powered by electricity. The distance to the available sources of fiber and electricity make this a cost-effective approach. Lastly, there are approximately 81 VMS sign locations. The one sign is required to be fiber and electric and the Authority prefers to have all signs that are located on the Authority's right of way to also be powered by electricity and connected to the Authority's fiber network. The signs that are within a few hundred feet of an existing Authority Toll Plaza and Toll utility building can be easily connected to both power and fiber at the building. For locations listed in 12.3.2.1, the Design-Builder has the option of providing fiber and/or electrical or both between the location of the VMS and the Toll Utility Building (TUB), Maintenance building or the new Comm. Bldg., or provide cellular and/or solar type VMS at these locations. The Design-Builder is responsible for the design, supply, construction, inspection of these VMS along with testing of their performance. These shall all be ground mounted except for Exit 17 (Newburgh), which shall be canopy mounted on Thruway entry side at this location and shall be electric powered and fiber connected. Part 7 – Engineering Data, Section 22 provides the Right of Way areas for the VMS signs. Part 7 – Engineering Data, Section 17 only provides a longitudinal limit of where the VMS shall be placed within, but the Design-Builder shall cross-reference with Part 7, Section 22.

The VMS signs shall be in place anytime the Design-Builder can install but must be installed a minimum of two months prior to the overall Contract completion date.

The Authority will secure a Statewide permit from NYSDOT so that the VMS/DMS locations identified are available for the Design-Builder to install the signs required, along with the WZTC required to install them.

12.3.2.1 Connectivity to Variable Message Signs (VMS)

The DB will be responsible for installation and connection to VMS near the entrance(s) to the Thruway as shown in the Part 7 – Engineering Data, Section 17.

For the locations listed below, the Design-Builder has the option of providing fiber and/or electrical or both connections between the location of the VMS and the Toll Utility Building (TUB), Maintenance building or the new Comm. Bldg., or provide cellular and/or solar type vims at these locations.

The Design-Builder's Obligations for the communications are as follows-
Additional details regarding these obligations can be found in the appropriate specifications.

Canastota – Fiber to TUB
Carrier Circle – Fiber to TUB
Liverpool – Fiber to TUB
Weedsport – Fiber to TUB
Waterloo – Fiber to TUB
Geneva – Fiber to TUB
Manchester – Fiber to TUB
Batavia – Fiber to TUB
Pembroke – Fiber to TUB
Depew – Fiber to TUB
Blasdell – Fiber to TUB
Hamburg – Fiber to TUB
Eden – Fiber to TUB
Silver Creek – Fiber to TUB or Maintenance building
Dunkirk – Fiber to TUB or Maintenance building
Westfield – Fiber to TUB or Maintenance building

For all other sites, where fiber is not available, a cellular modem will be used for communications. The modems have to be configured by the Authority's Network Services team. The DB will need to procure the following equipment, and the modems only will need to be sent to the Authority's Network Services team at 200 Southern Blvd, Albany, NY 12209, the Authority will be responsible for configuration. These parts should be verified with the Authority before purchase as this type of technology is often changing. The Design-Builder should verify the quantities with the design plans. Due to the work load on the Authority's Network Services team it is recommended this equipment is ordered and delivered as soon as the contract is awarded, it is required that the equipment be in the hands of the Authority a minimum of 60 days in advance of the scheduled Design-Builder's install date. The Authority will return the modems to the Design-Builder for the Design-Builder required installation and testing.

Manufacturer Part # Digi TDK Lambda WR31-M52A-DE1-TB DRB30-12-1
Description: Cellular Modem
Power Supply (Din Rail)
Overhead Sign Structures (Existing)
Mainline Gantries – The Design-Builder shall ensure that within the limits presented for the Mainline Gantry and Terminus locations, eleven Interchanges locations, 34 ORT Exit Sites that the new Gantries are constructed by the Design-Builder do not interfere with the overhead sign structure panels. The new Mainline Gantries and Terminus locations shall not be within 800 ft. of the approach to an overhead structures sign panel. Visibility of the Sign panel is not adequate for the design speed on the Thruway (interstate) System.
For the mini Gantries at the ORT sites all the conditions apply as well except that the new Mini Gantries shall not be within 150 ft. of the approach to the existing overhead sign structures sign panels unless the Design-Builder wishes to ground mount the overhead sign structure sign panels and removes the overhead sign structure complete.

12.3.3 Construction Requirements

12.3.3.1 Signs

The Design-Builder shall not reuse any existing Authority sign panel materials as part of the permanent signing installation and shall be responsible for the disposal of all signing materials and structures that are removed from the Project. Standard signs owned by municipalities other

than Authority, and non-standard signs owned by private entities but placed within Authority right-of-way, with the acceptance of the Authority, shall be removed, stored and reinstalled as required.

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

12.3.3.2 Pavement Markings

Pavement markings shall be uniform in type, color, dimensions, location, and reflectivity and shall meet the Thruway Standards and Specifications.

The Design-Builder shall be responsible for the design of all temporary and permanent pavement markings for this Project. Permanent pavement markings for the 5 Terminus Locations and all Mainline Gantry Locations for the new asphalt placed shall use the Thruway's triple drop pavement marking system, specification Item Number 685.17XX-25. For all ORT Sites and Interchange locations, permanent pavement markings on new asphalt placements shall be epoxy pavement markings.

At the ORT Exit Sites, the Design-Builder shall provide solid continuous pavement markings (white and yellow) under the Mini-Gantries (64 feet), for the purposes of preventing vehicles crossing lanes while under the Mini-Gantries to better collect information to reinforce surety of proper toll collection.

All linear roadway and cross hatching pavement markings shall be installed in accordance with the Authority's Specifications.

12.3.3.3 Ground Mounted Sign Structures

All ground mounted sign supports shall include breakaway devices, unless protected by concrete barrier.

12.3.3.4 Traffic Signals

Design-Builder shall comply with NYSDOT Plan Sheets as noted, Notes, Special Notes, Special Specifications and Standard Specifications associated with signal rebuild of #2A and 2.1A at the intersection of Rte 9W and NYS Thruway Exit 23.

Provisions listed below shall apply to the signalized intersections at Interchange 23 constructed as part of this project.

Infrastructure shall be provided to facilitate the addition of traffic signal heads for dedicated protected left turn phases (including red, yellow and green left turn arrow displays).

Loop detectors shall be installed per plans.

The Design-Builder will be responsible for maintaining the existing signal until the new signal is activated. No actuated signal shall be left on fixed time operation for more than 30 days. The Contractor shall use new detectors to be installed under the contract to provide detection for the existing signal phases ~~with the approval of the EIC~~. Any changes in the existing controller to allow the use of these new detectors will be performed only by NYSDOT Traffic Signal Maintenance personnel.

Failure to provide detection at actuated signals beyond the 30-day period shall be considered as noncompliance with the requirements of 619-3.17 of the Standard Specifications and result in the Contractor being ineligible for payment ~~under Items 619.1611 – Maintain Traffic Signal Equipment (Requirement A) or 619.1613 – Maintain Traffic Signal Equipment (Requirement C)~~.

Traffic signal activation shall be done by NYSDOT Traffic Signal Personnel only. The Design-Builder shall pay a liquidated damages charge of $10,000 if the traffic signal is activated (including flashing operation) without NYS Traffic Signal personnel present. The Design-Builder shall notify the Authority's Project Manager and the Region 1 Traffic Signal Maintenance Supervisor (518-237-3954) two weeks prior to the requested date of activation inspection.

Provisions below apply to the entire project area.

Two weeks prior to beginning any construction work on traffic signals associated with the project, the Design-Builder shall notify the Authority's Project Manager to perform an inspection of the existing traffic signal equipment. After the inspection, the Design-Builder shall submit to the Authority Project Manager a written notification of the date they will assume responsibility for traffic signal maintenance. No construction work shall proceed until traffic signal maintenance is assumed by the Design-Builder. The existing traffic signal shall be maintained by the Design-Builder under the requirements of Section 619 of the Standard Specifications, except for the controller, programming, and timing which shall be maintained by the Authority/NYSDOT Region 1.

12.3.3.5 Microwave Detectors

The Design-Builder shall provide microwave detection at all approaches following specifications for NYSDOT Item 680.58010009. Any other detection shall be per plans or as approved by the Authority.

12.3.3.6 Conduit/Cabling Requirements

The following cables shall be utilized during the installation of new signal heads.:

A) One way signal heads: furnish and install a 5C#14 awg cable;

B) Two way signal heads: furnish and install a 10C#14 awg cable;

The Design-Builder shall furnish and install the following conduit as a minimum:

C) Detection loop conduits shall be 1" Flex between the first junction box and loop including "J-box" in left lanes or far side pullbox.

D) Conduits under roadway shall be 3" Rigid Plastic (typical).

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.

Table 20-1

Tandem Locations

INTERCHANGE/LOT	OPEN/CLOSE/ RELOCATE/NEW	ADDITIONAL NEW CAMERA NEEDED (Y/N)	ADD TO EXISTING TRAFFIC CAMERA POLE	ACCESS GATE NEEDED (Y/N)
6A (MP 5.47)	N/A	N/A	N/A	N/A
14 (MP 24.31)	N/A	N/A	N/A	N/A
15 (MP 32.40)	N/A	N/A	N/A	N/A
17 (MP 60.10 S)	OPEN	Y	Y	N
18 (MP 76.01)	OPEN	Y	Y	N
19 (MP 91.37)	OPEN	Y	Y	N
23 (MP 141.92)	CLOSE	N	N/A	N
24 (MP 148.15)	OPEN	Y	Y	Y
25A (MP 158.82)	OPEN	Y	N	N
27 (MP 173.59)	OPEN	Y	N	N
29 (MP 194.10)	OPEN	Y	N	N
31 (MP 232.85)	OPEN	Y	Y	N
32 (MP 243.37)	OPEN	Y	N	N
33 (MP 252.71)	OPEN	Y	N	N
34 (MP 261.50)	OPEN	Y	N	N
34A (MP 276.58)	OPEN	Y	N	N
35 (MP 278.93)	OPEN	Y	Y - Extend*~~Raise~~ Camera/Pole	N
DeWitt Service Area (MP 279.9)	NEW	Y	Currently no camera/structure	Y
36 (MP 282.93)	OPEN	Y	Y	N
39 (MP 289.53)	OPEN	Y	Y	N
40 (MP 304.19)	OPEN	Y	Y	N
42 (MP 327.10)	OPEN	Y	N	N
43 (MP 340.15)	OPEN	Y	N	N
45 (MP 350.99)	OPEN	Y	Y	N

46 (MP 362.44)	OPEN	Y	N	Y
47 (MP 378.56)	OPEN	Y	N	Y
48 (MP 390.13)	OPEN	Y	N	N
49 (MP 417.27)	OPEN	Y	N	N
57 (MP 436.22)	OPEN	Y	N	N
59 (MP 467.74)	OPEN	Y	N	N
61 (MP 494.50)	OPEN	Y	Y	N

* The Design-Builder can extend or replace or etc. to provide necessary coverage per RFP.

20.3.5 Tandem Lot Barrier Gate System

The Design-Builder shall provide and install a Barrier Gate System (BGS) to control access into and out of tandem lots at I-90 Interchanges 24, 46, 47, and the DeWitt Service Area. In addition to the BGS, the Design-Builder shall provide a pole so that the Authority can mount a side fired antenna and install a reader and server in a cabinet provided by the Design-Builder. A single lane shall be instrumented with a BGS at each of these locations.

BGS shall include:

- Gate
- Embedded loops
- Controller

BGS System Requirements:

- The BGS shall control access to a single, bi-directional traffic lane 14 feet in width.
- The BGS arm shall be 14 feet in length and constructed of wood.
- The BGS shall be operable in temperatures between -20 to 140 degrees Fahrenheit, and shall include appropriate heaters and/or fans as specified by the manufacturer to meet this range of temperatures.
- The BGS shall include a Vehicular/Pedestrian Detection System that prevents the barrier from coming down if a pedestrian or vehicle is detected under the gate.
- The BGS shall include loops embedded in pavement on either side of the gate as specified by the manufacturer to prevent the gate from closing on vehicles in the path of the gate. The loops shall be connected to the BGS using loop controllers as specified by the manufacturer.
- The BGS shall be operated on 115 VAC, 60 HZ input. The Design-Builder shall provide power to the BGS.
- The BGS shall include a feature to automatically open the gate if power is lost.
- The Design-Builder shall provide a means of gate equipment protection to protect the gate equipment from being damaged from vehicle hits (e.g. guiderail, post, etc.)

Door King Model # 1601 is provided as an example BGS that satisfies these requirements, but the Design-Builder is free to propose other solutions. The Design-Builder must verify that all requirements are met by whatever solution is proposed.

20.3.6 Tandem Lot Equipment Cabinet

The Design-Builder shall provide an equipment cabinet as specified in 680.8020XX25 Cabinets for ITS Equipment. The cabinet provided shall be the one specified for TRANSMIT. The Equipment Cabinet shall be mounted on a 20 foot tall pole, per the following specifications: 670.1120 (20' tall light pole), and 670.0106 (6' pole foundation)

The cabinet shall be mounted on the pole at a height of 3 feet. The cabinet shall be adjacent to the BGS.

22.4 OPEN ROAD TOLLING (ORT) WORK AT EXIT SITES

22.4.1 General Requirements

Directive Requirements for the construction of the Open Road Tolling (ORT) system at each interchange shall be as specified below and elsewhere in this RFP. Refer to the corresponding concept plans for details found in Part 7 – Engineering Data, Section 2:

- ORT Zones shall be installed within the "Potential Tolling Area" locations shown on the concept plans
- Locations for access to the Maintenance Facilities, Tandem Lots, Commuter Parking Lots and State Police Facilities as shown on the concept plans. The locations are directive but the path from Point A to B can be modified. A new location is not allowed without an ATC.
- All TUBs are to remain in place.

General Design Requirement for the construction of the Open Road Tolling (ORT) system at each interchange shall be as specified below (Refer to corresponding concept plans for details):

- Ramp lane widths – 12 ft minimum
- Ramp shoulder widths
- Ramp shoulder widths within the ORT Zones shall be in accordance with the graphics posted.
- Design vehicle for tandem truck movements – WB-109D
- Design vehicle for Thruway Maintenance facility driveways – WB-62 unless shared with tandem truck lot, then use WB-109D
- The alignments shown in Part 7 – Engineering Data, Section 2 and those alignments are conceptual (not engineered) and the Design-Builder is responsible for alignment design but with meeting the requirements below.
- Design Speed of 40 MPH – Semi-direct Connecting Ramp
- The Design-Builder based on design speed stated is responsible for proper superelevation or cross section of highways, within the defined project limits.
- Pavement repairs are required at some ORT sites and can be found in Part 7 – Engineering Data, Section 14.
- All Gantry supports shall be protected with some level of guiderail per current standards. Even if the Gantry supports are outside the clear zones a guiderail protective system is still required to protect the Thruway's Tolling revenue.
- There currently exist at the ORT Exit sites four (4) foot medians leading from the Thruway into the Toll Plaza area. That median area needs to be carried through the new ORT Exit site alignments. Whether it is positive separation or delineators, a minimum of 1 foot left shoulder shall be required, and no greater than a minimum of four (4) foot left shoulders shall be allowed. Changes to existing four (4) foot median width shall be properly transitioned with required tapers ~~to~~for ramp design speed.

All costs associated with this work is to be included under the misc. item on WPS Form for Interchange 23.

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.

The interchange 23 double left turn installation, the extended slip ramp to Rte. 9W South, and all the traffic signal work shall be completed prior to "AETC Go Live" date to prevent excessive queues and to better manage traffic control while traffic is still stopping at the toll booths and paying tolls.

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.

At Exit 23 provisions of Part 3, Section 16.3.1 relative to Route 9W. The scope of work to mill and resurface Route 9W, which is 5 lanes wide, and the shoulders ~~that~~ are not part of this project, and no cost should be associated with such work. At this location, the slip ramp extension relative to full depth widening is required, along with the requirements for the signal work.

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.