

EXECUTION VERSION

I-395 Project

Exhibit C-3

Technical Requirements

Attachment 1.0e

Pentagon South Parking Scope of Work

PENTAGON SOUTH PARKING SCOPE OF WORK

The Pentagon South Parking Work involves the incorporation of new bus lanes and HOV commuter (“slug”) lanes on the Pentagon’s existing parking lot located just east of Eads Street and just north of I-395. These enhancements are designed to improve traffic flow and safety in a traditionally congested area of the Pentagon Reservation.

The work involves the following key components:

- New concrete pavement for the bus loop
- Enhancements to the storm drainage network to accommodate the new drainage patterns
- New pedestrian sidewalks with ornamental fencing and passive K-12 barrier system
- New signage and pavement marking to delineate the slug lanes and reconfigured parking lot layout
- Safety and security enhancements to accommodate the future improvements detailed in the Pentagon’s Master Plan
- New lighting for the bus loop, sidewalk and slug lanes
- Conduit ductbank, vault and associated electrical and communications infrastructure
- Maintenance of Traffic

These components, once complete, will help minimize the traffic bottleneck at this critical interface point to the 395 Express Lanes system.

The project schedule requirements to complete the Pentagon South Parking Scope of Work are contained in Part 2, Section 1.4.1.B.16.

Geometric Layout

The geometry shown on the Pentagon South Parking RFP Conceptual Plans was developed in coordination with the Pentagon’s Master Plan. The geometry shall not be modified unless approved by the Concessionaire and the Pentagon.

Survey

The Design-Builder shall be responsible for obtaining survey data as required to produce final construction documents. The Design-Builder’s survey shall utilize the following the coordinate system to be consistent with the Pentagon existing and planning surveys:

- North meridian and bearings referenced to Virginia state grid north, north zone as projected on the North American datum of 1983 (NAD83). Vertical datum and elevations are referenced to the North American vertical datum of 1988 (NAD88).

The Design-Builder shall provide the final survey to the Concessionaire and the Pentagon for their use.

Security System Location and Details

The locations of the security system elements are preliminary and are subject to change. The Design-Builder shall be responsible for the coordination and approved final locations as part of the design development process and coordination with the Pentagon per Section 1.8.14.D. Changes in locations made during the design phase are considered to be part of the Design-Builder’s Scope of Work.

A K-12 rated passive barrier system shall be installed along the curb adjacent to the slug lanes. The system shall be Model 6 bollards or an approved equal in accordance with UFC 4-022-02. The chosen K-12 rated passive barrier system shall be approved by the Pentagon.

A non-rated ornamental fence system shall be installed between the slug sidewalk and the exit lane of the bus loop. The system shall be an IMPASEE II system or an approved equal. The chosen ornamental fence system shall be approved by the Pentagon.

Demolition and Utilities

Structures within the site to be demolished, removed and disposed include underground pipelines, utilities, and storm water collection structures. Utilities to be demolished shall be removed to the limits shown on the Plans and capped at the limits. All abandoned utilities within the project limits shall be identified and demolished. The Design-Builder shall prepare a Demolition Plan for review and approval by the Concessionaire and Pentagon in advance of initiating construction activities on the Pentagon Reservation. Due to security protocols, the existing utility information cannot be shared with the Design-Builder's during the bidding stage. The Concessionaire and Pentagon representatives will provide detailed information to the selected Design-Builder after award and any impacts or changes will be addressed as part of the Scope Validation Period.

The Design-Builder shall develop and implement a construction and demolition (C/D) waste management plan prior to performing any demolition. The C/D waste management plan shall ensure that 60 percent of the work on the Pentagon Reservation will be diverted from the landfill through recycling or reuse. The plan shall also identify diversion goals, relevant C/D waste to be diverted, and implementation protocols. All costs associated with the C/D waste management plan are incidental to the cost of the Pentagon South Parking work.

Existing utilities shall remain in service throughout construction. The Design-Builder shall coordinate any utility outages with the Concessionaire and Pentagon in advance of the expected utility outage.

Excavation and Grading

The Design-Builder shall provide a sediment and erosion control plan for review and approval by the Concessionaire and the Pentagon in advance of initiating construction activities on the Pentagon Reservation. The plan shall include the Design-Builder's staging areas.

Due to the volume of disturbance, the Design-Builder shall obtain an Arlington County Stormwater / Erosion & Sediment Control Permit. All site grading shall be stabilized in accordance with the approved sediment and erosion control plan and related documents, including but not limited to the Virginia Department of Environmental Quality (DEQ) Construction Stormwater Permit. All excavations shall utilize UFC 3-220-05 for dewatering and groundwater control.

The Design-Builder shall determine the maximum area allowed to be disturbed and obtain a Land Disturbing Activity Permit from Arlington County prior to initiating construction activities on the Pentagon Reservation.

The Design-Builder shall manage and utilize the existing site earthwork on-site to the maximum extent possible. All earthwork shall be performed in accordance with the "Washington Headquarters Services Guidance Document for Proper Handling of Excavated and Imported Soil at the Pentagon Reservation". A copy is included in Appendix B to this Attachment 1.0e. The Design-Builder shall develop and submit a Soil Management Plan (SMP) for approval by the Pentagon prior to any earthwork proceeding.

Slopes shall be restricted to a maximum of 3 horizontal to 1 vertical.

The grades for new sidewalks shall be:

- Center Line = 0.5% minimum and 5.0% maximum
- Cross-Slopes = 0.5% minimum and 2.0% maximum
- All grades shall comply with ADA and ABA requirements.

Lighting and Ductbanks

Continuous lighting is required for at least the following areas of the Pentagon South Parking improvements: intersections associated with the two new traffic signals, bus lanes, slug lanes, taxi drop off lane/area, sidewalks, and median areas. The Design-Builder shall submit to the Concessionaire and Pentagon for review and approval an evaluation of the proposed lighting to determine the minimum illumination levels in accordance with current VDOT standards that will be present for each of these areas. Existing lighting to remain may be considered in the lighting evaluation.

As determined in the approved evaluation of the existing lighting, the Design-Builder shall upgrade deficient lighting and add new lighting as required to satisfy the minimum illumination levels for the intersections associated with the two new traffic signals, bus lanes, slug lanes, taxi drop off lane/area, sidewalks, and median areas. For all new lighting, Light Emitting Diode (LED) Roadway Luminaires in accordance with the applicable VDOT Special Provision dated July 23, 2015 shall be used.

The light pole locations which are no longer needed due to the reconstruction or interfere with the proposed construction shall be demolished and circuit conductor removed back to the nearest junction point beyond the demolition area, until new circuit infrastructure is connected to the new parking lot configuration of conduit duct bank and pole bases. Existing lighting and circuitry is to remain in continuous working order unless removed as called out on the Plans. If existing lighting within the remaining parking area is impacted during construction.

The routing of power, IT/Communications and control conductors shall be accomplished via concrete encased ductbanks at the locations shown on the Plans. There shall be two drag lines/pull strings provided between all man holes and hand holes and termination points in all conduits.

Drainage

395 Work related to the Pentagon South Parking Scope of Work and performed on the Pentagon Reservation shall be consistent with the following drainage requirements:

- The Design-Builder shall comply with the Pentagon's (MS4) Permit, issued by the Virginia Department of Environmental Quality, by installing low impact development (LID) and obtaining an Arlington County Land Disturbing Activity (LDA) Permit. Documents for the Arlington County LDA Permit shall be submitted to the Environmental, Sustainability and Energy Branch (ESEB) of the Pentagon for review at the interim design submittal. Once the ESEB review is complete, the Design-Builder shall submit to Arlington County to obtain the LDA Permit. The Design-Builder shall design and install LID according to the DEQ Stormwater Design Specifications. Final location of LID measures shall be approved by the Pentagon.
- The Design-Builder is not responsible for the overall stormwater outfall design on the Pentagon Reservation. The Design-Builder shall be responsible for the new drainage improvements and connection into existing drainage structures for storm water related to the bus loop, reconfigured intersections, slug lanes, taxi drop off lane/area, sidewalks and median areas, as well as drainage for the remaining parking lot area as needed due to the demolition of most of the existing inlets

and pipes. New parking lot inlets shall be located where ponded water will least interfere with people exiting their vehicles. Provide oil water separators and similar pollution control systems where required. All grates shall be pedestrian friendly.

- New pipe materials shall have a minimum design life of 50 years.

Pavement and Geotechnical

Minimum pavement sections and geotechnical requirements as shown on the RFP Conceptual Plans and in Appendix C shall be utilized for Proposal preparation purposes only. If the Design-Builder confirms that the minimum pavement sections and locations of these sections are inadequate for actual design/construction conditions, it shall notify the Concessionaire during the Scope Validation Period of the necessary changes and proposed price adjustments, if any. Acceptable changes to the minimum pavement sections are limited to increasing the thickness of the base or subbase layers specified below. Any changes to the minimum pavement sections and/or location for the pavement sections noted above shall be approved by the Concessionaire. The Design-Builder shall be responsible for the final design and construction of the pavements for the Pentagon South Parking in accordance with the Contract Documents.

Concrete Sidewalks

Concrete sidewalks on the Pentagon Reservation shall be constructed to match other concrete sidewalks previously constructed as close as possible. The approved mix design and representative sample mock-up shall be approved by the Pentagon prior to proceeding with the work.

The concrete sidewalk between the slug lanes and bus loop shall be designed to meet ADA requirements. The Design-Builder's final design shall address ADA accessibility along the sidewalk and the interface with the K-12 passive barrier along the slug lane curb.

Channelizing Posts

Posts: The channelizing post shall consist of a modified T-shaped tubular post a minimum of 3 inches wide by 2 inches deep, with 0.125 inch (min.) walls, comprised of flat front and curved rear surfaces and sides to create areas of opposing compression stresses on the inner and outer walls when impacted resulting in superior rebound. All channelizing posts shall be capable of sustaining a minimum of twenty (20) direct wheel-over impacts at 70 mph without damage to the post or the reflective sheeting applied to the post. All posts shall be easily replaceable. All posts shall be constructed of UV-stabilized thermoplastic polyurethane (TPU) for superior durability. Channelizing posts shall be 36" in length. All posts shall have retro-reflective sheeting applied. The minimum reflective sheeting shall be two (2) 6-inch wide wraps of sheeting the same color as the post applied one (1) inch down from the top of the post with a six (6) inch gap between wraps. The sheeting shall be Reflexite ® AR 1000 cube-corner micro-prismatic reflective sheeting or approved equal for superior brightness, scratch resistance and durability. Channelizing posts shall be constructed of UV-stabilized polymers and colors. The color shall be solid throughout and stabilized to resist UV degradation. The post shall be white.

Bases: Channelizing posts shall mount to a base unit with two (2) nylon locking pins. Base shall be 1.5 pounds or greater in weight. All bases shall be constructed of a UV-stable high-impact thermoplastic styrenic alloy. Bases shall be constructed of UV-stabilized polymers and colors. The color shall be solid throughout and stabilized to resist UV degradation. The base shall be white.

Locking Pins: The channelizing posts shall be secured to the base units with two (2) rust-proof black locking pins to prevent dislocation when posts are impacted and to ease replacement of old posts.

NCHRP Compliance: The channelizing posts shall be fully crash-tested on the AASTHO's NTPEP Test Deck and meet requirements for Category 1 devices as specified in NCHRP Report #350. All channelizing posts shall have the acceptance of the U.S. Department of Transportation, Federal Highway Administration. Certifications of acceptance to these standards must be supplied by the manufacturer upon request.

Attachments: Posts shall be secured to the roadway with removable and reusable one-piece anchor bolts with a finished hex head, integral washer, dual lead threads and chamfered tip. One-piece bolts shall be used to eliminate improper assembly; dual threads shall be used to prevent bolts spinning in holes when tightened. All channelizing posts shall be completely removable with standard power tools.

Maintenance of Traffic and Maintenance of Parking Lot Access

The Design-Builder shall provide continuous vehicular and pedestrian access to the Eads Street entrance into the Pentagon and the south parking lot during all proposed construction stages. The Design-Builder shall develop a detailed Maintenance of Traffic and Access Plan for review and approval by the Concessionaire and the Pentagon in advance of initiating construction activities on the Pentagon Reservation.

Generally, the work on the Pentagon Reservation shall be completed during the Pentagon's normal work hours of 6 AM to 6 PM on Monday through Friday. Off Hours are from 6 PM to 6 AM Monday through Friday, all day Saturday, Sunday and Federal Holidays. The Design-Builder shall request approval to work during Off Hours to the Concessionaire and the Pentagon at least 7 calendar days in advance.

The Design-Builder will be required to adhere to the following requirements while performing work on the Pentagon Reservation:

- Throughout the entire construction period, there shall be no full street closures requiring detours. All construction activities that involve street closures shall occur during non-peak times (9 AM-3 PM) during the week or on weekends.
- Access for bus traffic to and from the Pentagon Transit Center via the Eads St. Connector Road underpass shall be maintained throughout construction. Traffic interruption to DOD shuttles, WMATA buses, and other public transit busses is not allowed.
- Pedestrian access from the parking areas to the building shall be maintained throughout construction.
- Access for passenger vehicles around construction areas to areas where parking remains must be maintained.
- Shut down of the entire parking area during construction will not be permitted unless approved in advance by the Pentagon.
- Maintenance of traffic shall be required for lane reconfiguration during non-peak periods.
- Temporary travel lanes may be used to maintain access to parking areas and access roads.
- Provide temporary slug stations as required and maintain safe pedestrian and vehicle circulation.

Haul routes and staging areas shall be strategically located to maximize efficiency and maintain safe vehicular and pedestrian access at all times. The Design-Builder shall submit a request for approval for staging areas to the Pentagon for review and approval. The request should identify at least the location of the staging area, any trailers to be placed on the site, means and methods for material storage and the identification of the Design-Builder equipment, and personnel to be parked on the site. Staging areas on the Pentagon Reservation shall only be used exclusively for the purpose of construction work related to the Pentagon Reservation.

In the Pentagon South Parking RFP Conceptual Plans, the Construction Concept Plan (Sh. No. PP-5) refers to three different levels of access. These access and construction levels are defined as:

- Long Term – Encompasses work along the new Bus Loop Road including connections to Eads Street. This work shall be barrier separated from public vehicular and pedestrian traffic. The Contractor has uninterrupted use of this space within approved working hours during their construction activities.
- Short Term – Encompasses minor improvements in conflict with local daily traffic. Short term closures will need to be approved in advance by the Pentagon.
- Temporary Construction Areas – Encompasses work along the public access parking area. This work shall be done during off work hours. Temporary closures will need to be approved in advance by the Pentagon.

Access to the south parking lot shall be maintained at all times, except as approved in advance by the Concessionaire and the Pentagon. The Design-Builder shall provide detailed layouts of the south parking lot access and striping for all proposed construction stages for review and approval by the Concessionaire and the Pentagon. All existing striping that is in conflict with the specific traffic flow during each construction phase shall be blacked out to minimize confusion. Temporary striping shall be utilized as needed to provide safe and consistent pavement markings throughout all stages of construction. Accessible parking spaces shall be provided per the American with Disabilities Act (ADA) during each construction phase (5% of the parking spaces shall be assigned to handicap accessible van parking).

Chain Link Fence with Dark Fabric Visual Barrier

Where Chain Link Fence with Dark Fabric Visual Barrier is indicated on the Pentagon South Parking RFP Conceptual Plans, the Dark Fabric Visual Barrier shall have an opacity of 95% or greater, and be closed mesh woven fabric and either dark green or black in color.

Turnover and Acceptance Process

Upon completion of the Pentagon South Parking improvements, the Design-Builder shall follow the turnover process identified in DD1354. This series of documents is required to be submitted to the Federal Government as part of the turnover process, as it is required in UFC 1-300-08 Criteria for Transfer and Acceptance of DoD Real Property. This process will need to be completed prior to the opening and transfer of this work to the Pentagon.

APPENDICIES TO ATTACHMENT 1.0e

APPENDIX A – PENTAGON SOUTH PARKING CONCEPTUAL PLANS

- RFP Conceptual Plan Sheets (11”x17”) *dated October 20, 2016*
- Electrical, Lighting and Signal Plan *dated October 20, 2016*
- Pavement Marking and Signing Plan *dated October 20, 2016*
- Site and Drainage Plan *dated October 20, 2016*

APPENDIX B – WASHINGTON HEADQUARTERS SERVICES GUIDANCE DOCUMENT FOR PROPER HANDLING OF EXCAVATED AND IMPORTED SOIL AT THE PENTAGON RESERVATION

APPENDIX C – MEMO DATED OCTOBER 5, 2016 TITLED “PAVEMENT DESIGN RECOMMENDATIONS, RECONFIGURE SOUTH PARKING INFRASTRUCTURE AT PENTAGON”