Serial Number: IFB FQ15090/GG Date of Issue: May 20, 2015 IFB Due Date: July 1, 2015

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY 600 FIFTH STREET, N.W. WASHINGTON, D.C. 20001

June 9, 2015

AMENDMENT NO. 1 TO REQUEST FOR PROPOSALS FOR REHABILITATION OF WMATA PARKING GARAGES AT SHADY GROVE (NORTH), FRANCONIA-SPRINGFIELD (EAST), GROSVENOR-STRATHMORE AND COLLEGE PARK FQ15090/GG

TO WHOM IT MAY CONCERN:

The Invitation for Bid for IFB FQ15090/GG requesting Bids for the above project is hereby changed in part as listed below.

- Volume 1 Bidding and Contracting Requirements

 Delete the following pages and in lieu thereof substitute the accompanying pages:

 DELETE
 SUBSTITUTE

 p.4 Letter to Bidders
 p.4 Letter to Bidders
- 2. Volume 2 Technical Specifications

Add the following pages:

ADD Division 1 TABLE OF CONTENTS Section 01100 SUMMARY OF WORK Section 01400 QUALITY CONTROL AND ASSURANCE REQUIREMENTS Section 01550 ACCESS ROADS, PARKING AREAS AND PARKING CONTROL Section 01560 TEMPORARY BARRIERS AND ENCLOSURES

3. Volume 3 – Drawings

Add the following pages:

ADD Index of Drawings – III, Drawings G-003A (M1269-3A)

4. Acknowledgment

Bidders are required to acknowledge receipt of this Amendment on Bid Form in the spaces provided. Failure to acknowledge all Amendments may cause the Proposal to be considered not responsive to the RFP, which would require rejection of the Proposal.

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Richard Owens Contracting Officer Office of Procurement

* * * * *

Site Visit	Date: May 20, 2010
IEB EQ15090/GG	Date: May 20, 2015
Washington Metropolitan Area Transit Authority	Contract No. IFB FQ15090

WMATA will conduct a site visit at Shady Grove parking garage. Attendees must provide their own transportation. Attendees must be escorted by WMATA.

The Site Visit will start on Monday, June 1, 2015, 2.00 PM (14:00). Meeting point will be the north side outside of Shady Grove parking garage, located at 15903 Somerville Drive, Rockville, MD 20855.

Attendees will be required to sign in at the Site Visit.

Attendees that have a current WMATA Contractor ID shall display their ID and bring PPE and WMATA approved safety vest. Attendees not holding WMATA Contractor ID with PPE and vest should specifically identify themselves to the WMATA escorts.

Individuals that plan to attend the Site Visit are requested but not required to send an email by COB on May 28, 2015 to <u>ggufranova@wmata.com</u>, with their name, title, company name, mailing address, telephone, and email for each attendee.

Pre-Award Information: Shall <u>not</u> be submitted with the bid. After the bid opening, only the Apparent Low Bidder will be requested to submit Pre-Award Information.

Bids Due: July 1, 2015 by 2:00 PM (14:00) and shall be delivered to WMATA, Office of Procurement and Materials, Room 3C-02, 600 Fifth Street, NW, Washington, DC 20001. Bids will be publicly opened and read aloud in the WMATA Meeting Room, Lobby Level, 600 Fifth Street, NW, Washington, DC 20001.

Bidders are cautioned to not take exceptions or qualify their bid. Any questions regarding the solicitation should be made in writing to the Contrac Administrator, Guzel Gufranova, on ggufranova@wmata.com no later than seven (7) business days prior to the bid opening. Please carefully review the Notice to Bidders of the IFB. The Notice to Bidders addresses common problems found in previous bids that may cause bid rejection.

A Virginia Contractor License

All bidders shall have a Virginia Class A contractor license. <u>http://www.dpor.virginia.gov/</u>. This is a Commonwealth of Virginia law and WMATA complies with the law.

Basis of Award

A single contract for all items will be awarded to the lowest responsive and responsible bidder.

Type of Contract:

Firm fixed price contract for the items in the Unit Price Schedule.

IFB Volumes

Volume 1, Bidding and Contracting Requirements Volume 2, Technical Specifications Volume 3, Drawings

IFB availability:

Once	the	IFB	is	issued	it	will	be	posted	on	the	WMATA	website	at
Contract IFB FQ15090							Page 4				FB Letter	1	

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

REHABILITATION OF WMATA PARKING FACILITIES SHADY GROVE NORTH, GROSVENOR-STRATHMORE, COLLEGE PARK, AND FRANCONIA-SPRINGFIELD (EAST)

SPECIFICATIONS

DIVISION 1

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SECTION 01100

SUMMARY OF WORK

PART 1 GENERAL

1.01 RELATED SECTIONS

Section 01400 – Quality Control and Assurance Requirements

1.02 GENERAL DESCRIPTION OF CONTRACT

The scope of Work of this Contract is depicted on the accompanying Contract Drawings and in the Specifications. The contractor shall furnish all labor, tools, equipment, materials, shoring, maintenance of traffic, storage, permits, transportation, and other items necessary to satisfactorily complete the project as written in the specifications and as indicated in the Contract Drawings. The work includes but is not limited to:

- 1. The Contractor shall be responsible for all permits and jurisdictional inspections, federal and jurisdictional safety requirements and codes pertaining to this project.
- 2. The Contractor shall be properly licensed to do business in the Commonwealth of Virginia and the state of Maryland.
- 3. The Contractor shall remove from the Authority's property all debris resulting from the work to locations off the Authority's property and obtain written permits and release from the owners of the property where the materials will be deposited.
- 4. The Contractor shall coordinate his efforts in the performance of this contract with the AR.
- 5. The Contractor shall be responsible for all permits, shall complete the work required under this Contract in the compliance with all applicable Building Codes, National Electrical Codes (NEC), safety and other jurisdictional codes pertaining to this project.
- 6. Contractor shall be in possession of a valid contracting license, as required prior to the commencement of this project.
- 7. The Contractor shall furnish all labor and material necessary to install all new materials specified herein and shown on the contract drawings. These materials include, but are not limited to; repair mortar, bonding agent, epoxy and chemical grout, waterproofing coatings and sealers, deck shear connectors, deck expansion joints, bearing pads, stair nosings, and paint for parking markings.
- 8. The Contractor shall confine his equipment, the storage of materials and the operation of his workmen to limits established by law, ordinances, permits or directions of the AR and shall not unreasonably encumber the premises with his materials.
- 9. The Contractor shall take detailed field measurements on which to base all shop drawings, working drawings, shoring calculations, shoring details and inform the AR of any discrepancies in the Contract Drawings and Specifications. Copies of Contractor's field measurements shall be included with shop drawings and submittals.

SUMMARY OF WORK

- 10. Contractor shall set up construction barriers for the duration of the project's work sequence as outlined in the phasing plan in the Contract Drawings.
- 11. Any damage, which occurs to the structure, walls, ceilings, floors furnishings or items as a result of the Contractor's work, shall be repaired to the satisfaction of and at no cost to the Authority.
- 12. Contractor shall provide access to the work, provide storage facilities and cooperate fully with any testing and inspection firm retained separately by the Authority to provide quality control inspections and testing as deemed necessary by the Authority for the Authority's sole use. This requirement does not replace nor alter the requirements of the Contractor's quality control procedures as specified in Section 01 40 00.
- 13. The Contractor shall employ an independent Quality Control Engineering Firm to perform the quality control testing and inspection activities described herein. The Independent Quality Control Engineering Firm shall report directly to the AR and be represented at the job site at all times during construction activities associated with this Contract.

1.03 SPECIFIED WORK

The Contractor will be responsible as follows:

Grosvenor-Strathmore Parking Garage General Repairs.

- 1. Application of Sikalastic 710/715 Traffic System to entire roof deck level and exposed ramp surfaces.
- 2. Application of Silane waterproofing material to all intermediate deck levels.
- 3. Mill down uneven concrete edges along joints.
- 4. Apply crack healer sealer to fine to wide concrete cracks at roof and intermediate deck levels.
- 5. Replace sealant at joints with Sikaflex 2c SL at roof deck and intermediate levels.
- 6. Replace sealant joints and flashing at parapet walls.
- 7. Select replacement of expansion joint elastomeric concrete and joint membrane at elevated decks only.
- 8. Select concrete spall removal and repair on top surface at roof and intermediate deck levels.
- 9. Application of waterproofing coating on light walls exhibiting map cracking.
- 10. Select concrete spall cleaning and epoxy paint coat application of exposed reinforcement bars at intermediate deck levels.
- 11. Select concrete delamination removal, cleaning and epoxy paint coat application to exposed reinforcement bars.
- 12. Realign or replace bearing pads at underside of expansion joint shear transfer angles.
- 13. Reinforce corner of double tee beam flange underside.
- 14. Powerwash water seepage areas.
- 15. Remove joint gap fillers at elevated deck levels.
- 16. Select concrete spall repair at parapet wall at roof deck level.
- 17. Repair failed patches at precast panel lifting point locations.
- 18. Replace and paint storm pipes and drain bodies at intermediate deck levels.
- 19. Replace missing or damaged traffic signs.
- 20. Clean and paint traffic bollards.

- 21. Replace damaged or missing bolts at bollard base plates.
- 22. Replace missing traffic delineators.
- 23. Repaint faded traffic striping.
- 24. Remove bird nesting at underside of framing elements.
- 25. Replacement of existing or missing hollow metal and aluminum doors and hardware.
- 26. Repair of existing hollow metal and aluminum doors and hardware.
- 27. Replacement of damaged/missing perforated steel guardrail infill panels.
- 28. Installation of surface-applied tactile warning strips at pedestrian ramps.
- 29. Replacement of missing cast iron drain strainer unit.
- 30. Reattach existing separated handrail to existing storefront framing system.
- 31. Replacement of existing deteriorated stainless steel termination bar flashing with new stainless steel reglet cap flashing.
- 32. Installation of new stainless steel base flashing at base perimeter of Toll Collection Booth.
- 33. Repaint existing stand pipe and steel pipe guard.
- 34. Repaint existing curbs.
- 35. Replace deteriorated concrete ramp with new concrete pedestrian pavement.
- 36. Repair trim at damaged perimeter of canopy roof above pedestrian walkway.
- 37. Remove graffiti from precast concrete wall.
- 38. Scrape clean, prime and paint existing guardrail posts.
- 39. Replace broken glazing panel.
- 40. Replace broken plastic covers at precast lift points.
- 41. Replace deteriorated metal trim at storefront wall system.
- 42. Non-operational lighting fixtures (not including pole lights): Verify circuit is energized at the proper voltage. If electrical power is present, replace lamp and/or ballast with manufacturer's recommended replacement components. If replacement lamp or ballast is not available, replace as directed by WMATA.
- 43. Corroded conduits, conduit mounting hardware: Lockout breaker, tag, identify, and then remove the existing conductors from conduit, to the nearest junction box or point of termination. Cut and remove the portion of compromised conduit, rethread, and reassemble conduit. Reinstall existing conductors, and re-terminate. See corrective action no.121, and remove and replace supporting straps and mounting supports with anodized-aluminum. Paint exterior of metal components with a corrosive-preventive coating.
- 44. Burned or damaged receptacles: Lockout breaker, identify, tag, and disconnect the existing conductors from defective device. Replace defective device in kind.
- 45. Non-operation blue lamp lighting fixture: Verify circuit is energized at the proper voltage. If electrical power is present, replace lamp in kind with approved led lamp.
- 46. Non-operation lighting pole: Verify that light pole circuit has not been disconnected or if the control circuit components, such as photocell and/or timer, are non-operational. If faulty circuit control components have been corrected, and light pole fixtures are not operational, then replace lamp and/or ballast with manufacturer's recommended replacement component(s).
- 47. Damaged Exit light: Replace damaged component(s), or replace entire fixture in kind.

Shady Grove Parking Garage General Repairs

- 1. Application of Sikalastic 710/715 Traffic System to entire roof deck level and exposed ramp surfaces.
- 2. Application of Silane waterproofing material to all intermediate deck levels.
- 3. Mill down uneven concrete edges along joints.
- 4. Apply crack healer sealer to fine to wide concrete cracks at roof and intermediate deck levels.
- 5. Replace sealant at joints with Sikaflex 2c SL at roof deck and intermediate levels.
- 6. Replace sealant joints and flashing at parapet walls.
- 7. Select replacement of expansion joint elastomeric concrete and joint membrane at elevated decks only.
- 8. Select concrete spall removal and repair on top surface at roof and intermediate deck levels.
- 9. Application of waterproofing coating on light walls exhibiting map cracking.
- 10. Select concrete spall cleaning and epoxy paint coat application of exposed reinforcement bars at intermediate deck levels.
- 11. Select concrete delamination removal, cleaning and epoxy paint coat application to exposed reinforcement bars.
- 12. Realign or replace bearing pads at underside of expansion joint shear transfer angles.
- 13. Reinforce corner of double tee beam flange underside.
- 14. Powerwash water seepage areas.
- 15. Remove joint gap fillers at elevated deck levels.
- 16. Select concrete spall repair at parapet wall at roof deck level.
- 17. Repair failed patches at precast panel lifting point locations.
- 18. Replace and paint storm pipes and drain bodies at intermediate deck levels.
- 19. Replace missing or damaged traffic signs.
- 20. Clean and paint traffic bollards.
- 21. Replace damaged or missing bolts at bollard base plates.
- 22. Replace missing traffic delineators.
- 23. Repaint faded traffic striping.
- 24. Remove bird nesting at underside of framing elements..
- 25. Powerwash extents of pedestrian sidewalk adjacent to south and west elevations.
- 26. Reinstall defective parking signs.
- 27. Replace existing or missing hollow metal and aluminum doors and hardware.
- 28. Repair existing hollow metal and aluminum doors and hardware.
- 29. Installation of surface-applied tactile warning strips at pedestrian ramps.
- 30. Repair deteriorated/broken sections of concrete pedestrian pavement.
- 31. Replace deteriorated heavy-duty trash receptacle.
- 32. Clean and paint existing CMU wall.
- 33. Scrape clean, prime and paint deteriorated sections of existing boundary fence.
- 34. Replace broken plastic covers at precast lift points.
- 35. Scrape clean, prime and paint existing snow gate, gate hardware.
- 36. Replace deteriorated sign posts adjacent to snow gate.
- 37. Remove graffiti from precast concrete wall.
- 38. Replace deteriorated steel stair nosings at stairwells.
- 39. Scrape clean, prime and paint existing guardrails and handrails at stairwells.
- 40. Repair damaged stucco at exterior of stair towers.

- 41. Replace broken glazing panel.
- 42. Replace existing roofing membrane at Stair D with new SBS Modified Bitumen roofing system.
- 43. Non-operational lighting fixture (not including lighting poles): Replace lamp and/or ballast with manufacturer's recommended replacement components. If replacement lamp or ballast is not available, replace in kind.
- 44. Non-operational blue lamp lighting fixture: Verify circuit is energized at the proper voltage. If electrical power is present, replace lamp in kind with approved led lamp.
- 45. Debris in electrical rooms: All materials, equipment, tools, and other stored items are not to be kept in electrical spaces where access to electrical controls and disconnecting means are kept. Per NEC article 110.26(b), "working spaces required by this section shall not be used for storage. Close cover, and gasket, over the opening of the conduit body or enclosure. Replace cover and gasket, if required. Replace with anodized-aluminum or galvanized steel component(s), as necessary. Paint exterior of metal component(s) with a corrosive-preventive coating, approved for use, if required. Close cover, and gasket, if required. See cover and gasket, if necessary and replace cover and gasket, if required. See corrective action no.121, and remove and replace supporting straps and mounting supports with anodized-aluminum. Paint exterior of metal components with a corrosive-preventive coating, approved for use and application.
- 46. Non-operational Exit light: Verify circuit is energized at the proper voltage. If electrical power is present, replace non-operational lamp(s) or battery unit in kind.
- 47. Non-operational lighting pole: Verify that light pole circuit has not been disconnected or if the control circuit components, such as photocell and/or timer, are non-operational. If faulty circuit control components have been corrected, and light pole fixtures are not operational, then replace lamp and/or ballast with manufacturer's recommended replacement component(s).
- 48. Corroded conduit and receptacles: Lockout breaker, tag, identify, and then remove the existing conductors from conduit, to the nearest junction box or point of termination. Cut and remove the portion of compromised conduit, rethread, and reassemble conduit. Reinstall existing conductors, and re-terminate. Lockout breaker identify, tag, and disconnect the existing conductors from defective device. Remove defective device and replace in kind.
- 49. Missing conduit body or enclosure: Close cover, and gasket, over the opening of the conduit body or enclosure. Replace cover and gasket in kind.
- 50. Missing lighting pole: Replace light pole in kind.

College Parking Garage General Repairs

- 1. Application of Sikalastic 710/715 Traffic System to entire roof deck level and exposed ramp surfaces.
- 2. Application of Silane waterproofing material to all intermediate deck levels.
- 3. Mill down uneven concrete edges along joints.
- 4. Apply crack healer sealer to fine to wide concrete cracks at roof and intermediate deck levels.
- 5. Rout and repair dynamic cracks at top of deck surfaces.
- 6. Replace sealant at joints with Sikaflex 2c SL at roof deck and intermediate levels.
- 7. Replace sealant joints and flashing at parapet walls.

- 8. Select replacement of expansion joint elastomeric concrete and joint membrane at elevated decks only.
- 9. Select concrete spall removal and repair on top surface at roof and intermediate deck levels.
- 10. Application of waterproofing coating on light walls exhibiting map cracking.
- 11. Select concrete spall cleaning and epoxy paint coat application of exposed reinforcement bars at intermediate deck levels.
- 12. Select concrete delamination removal, cleaning and epoxy paint coat application to exposed reinforcement bars.
- 13. Realign or replace bearing pads at underside of expansion joints.
- 14. Clean, paint, or replace double tee beam flange's embedded plates as required.
- 15. Powerwash water seepage areas.
- 16. Remove joint gap fillers at elevated deck levels.
- 17. Select concrete spall repair at parapet wall at roof deck level.
- 18. Repair failed patches at precast panel lifting point locations.
- 19. Replace and paint storm pipes and drain bodies at intermediate deck levels.
- 20. Replace missing or damaged traffic signs.
- 21. Repair damaged miscellaneous pipe and install traffic bollards.
- 22. Replace damaged or missing bollard anchor bolts.
- 23. Repaint faded traffic striping.
- 24. Remove bird nesting at underside of framing elements.
- 25. Replace damaged fence.
- 26. Replace existing or missing hollow metal and aluminum doors and hardware.
- 27. Repair existing hollow metal and aluminum doors and hardware.
- 28. Replace cracked sections of pedestrian pavement.
- 29. Scrape clean, prime and paint existing generator enclosure.
- 30. Replace spalled sections of concrete curb and impacted asphalt.
- 31. Relocate existing wall-mounted trash receptacle and fire extinguisher at Toilet Room for no conflict with ADA-required clearances.
- 32. Remove abandoned light fixture base and impacted section of pedestrian pavement.
- 33. Replace damaged chain link guard panel and anchoring hardware.
- 34. Replace broken/missing flexible traffic delineators.
- 35. Remove graffiti from precast concrete wall.
- 36. Replace broken plastic covers at precast lift points.
- 37. Scrape clean, prime and paint existing rusted vent pipe.
- 38. Replace deteriorated steel stair nosings at stairwells.
- 39. Scrape clean, prime and paint existing guardrails and handrails at stairwells.
- 40. Non-operation lighting fixture (not including lighting poles): Verify circuit is energized at the proper voltage. If electrical power is present, replace lamp and/or ballast with manufacturer's recommended replacement components. If replacement lamp or ballast is not available, replace in kind.
- 41. Debris in electrical rooms: All materials, equipment, tools, and other stored items are not to be kept in electrical spaces where access to electrical controls and disconnecting means are kept. Per NEC article 110.26(b), "working spaces required by this section shall not be used for storage."
- 42. Non-operational blue lamp lighting fixture: Verify circuit is energized at the proper voltage. If electrical power is present, replace lamp in kind with approved led lamp.

- 43. Damaged receptacles: Lockout breaker, identify, tag, and disconnect the existing conductors from defective device. Remove defective device and replace with in kind.
- 44. Missing lighting pole access cover: Replace light pole cover and gasket in kind.
- 45. Missing conduit body or junction box: Close cover, and gasket, over the opening of the conduit body or enclosure. Replace cover and gasket in kind.
- 46. Non-operational lighting pole: Verify that light pole circuit has not been disconnected or if the control circuit components, such as photocell and/or timer, are non-operational. If faulty circuit control components have been corrected, and light pole fixtures are not operational, then replace lamp and/or ballast with manufacturer's recommended replacement component(s).
- 47. Non-operational Exit light: Verify circuit is energized at the proper voltage. If electrical power is present, replace non-operational lamp(s) or battery unit with manufacturer's recommended replacement component.
- 48. Corroded conduit and mounting hardware: Lockout breaker, tag, identify, and then remove the existing conductors from conduit, to the nearest junction box or point of termination. Cut and remove the portion of compromised conduit, rethread, and reassemble conduit. Reinstall existing conductors, and re-terminate. See corrective action no.121, and remove and replace supporting straps and mounting supports with anodized-aluminum. Paint exterior of metal components with a corrosive-preventive coating, approved for use and application.

Franconia-Springfield Parking Garage General Repairs

- 1. Application of Sikalastic 710/715 Traffic System to entire roof deck level and exposed ramp surfaces.
- 2. Application of Silane waterproofing material to all intermediate deck levels.
- 3. Mill down uneven concrete edges along joints.
- 4. Apply crack healer sealer to fine to wide concrete cracks at roof and intermediate deck levels.
- 5. Replace sealant at joints with Sikaflex 2c SL at roof and intermediate deck levels.
- 6. Replace sealant joints and flashing at parapet walls.
- 7. Select replacement of expansion joint elastomeric concrete and joint membrane at elevated decks only.
- 8. Select concrete spalls removal and repair on top surface at roof and intermediate deck levels.
- 9. Application of waterproofing coating on light walls with map cracking.
- 10. Select concrete spall cleaning and epoxy paint coat application of exposed reinforcement bars at Intermediate Deck Levels.
- 11. Select concrete delamination removal, cleaning and epoxy paint coat application to exposed reinforcement bars.
- 12. Realign or replace bearing pads at underside of expansion joints.
- 13. Powerwash water seepage areas.
- 14. Removal of detached joint gap fillers at elevated deck levels.
- 15. Select concrete spall repair at parapet wall at roof deck level.
- 16. Repair cracks and step cracks and repoint CMU walls.
- 17. Repair failed patches at precast panel lifting point locations.
- 18. Clean and paint storm pipes and drain bodies at intermediate deck levels.
- 19. Replace missing or damaged traffic signs.

- 20. Repair damaged miscellaneous pipe and install traffic bollards.
- 21. Replace damaged or missing bollard anchor bolts.
- 22. Replace missing traffic delineators.
- 23. Clean and paint storm and fire standpipes.
- 24. Repaint faded traffic striping.
- 25. Remove bird nesting at underside of framing elements.
- 26. Replace missing parking meter.
- 27. Replace existing or missing hollow metal and aluminum doors and hardware.
- 28. Repair existing hollow metal and aluminum doors and hardware.
- 29. Replace deteriorated steel stair nosings at Stair #3.
- 30. Scrape clean, prime and paint existing guardrails and handrails at pedestrian ramp and Stair #3.
- 31. Scrape clean, prime and paint existing guardrail posts at stairwells.
- 32. Scrape clean and paint CMU walls.
- 33. Remove and replace deteriorated sealant at all parapet barrier posts.
- 34. Replace damaged chain link guard panel and anchoring hardware.
- 35. Replace broken plastic covers at precast lift points.
- 36. Replace rusted door saddle.
- 37. Electrical heaters and motorized equipment clearance from flammable materials: All electric heating or motorized equipment shall have the necessary, and required, clearances from flammable materials, to allow for normal operation and access for routine maintenance. Provide adequate clearances.
- 38. Corroded conduits and conduit mounting hardware: Remove and replace supporting straps and mounting supports with anodized-aluminum. Paint exterior of metal components with a corrosive-preventive coating, approved for use and application.
- 39. Damaged receptacles: Lockout breaker, identify, tag, and disconnect the existing conductors from defective device. Remove defective device and replace in kind.
- 40. Non-operational blue lamp lighting fixture: Verify circuit is energized at the proper voltage. If electrical power is present, replace lamp in kind with approved led lamp.
- 41. Non-operational lighting fixtures (not including lighting poles): Verify circuit is energized at the proper voltage. If electrical power is present, replace lamp and/or ballast with manufacturer's recommended replacement components. If replacement lamp or ballast is not available, replace in kind. Replace damaged component(s), or replace entire fixture in kind.

1.04 WARRANTY

Except as otherwise expressly provided in this Contract, the Contractor shall remedy at his own expense any failure of the work for a period of three (3) years to conform to contract Specifications and any defect of material, workmanship, or design in the work, but excluding any defect of any design furnished by the Authority under the Contract, provided that the Authority Representative gives the Contractor notice of any such failure or defect promptly after discover but not later than three (3) years after final acceptance of the work. The Contractor, at their own expense, shall also remedy damage to equipment, the site, or the buildings or the contents hereof that is the result of any failure defect, and shall restore any work damaged in fulfilling the terms of this Article. Should the Contractor fail to remedy such failure or defect within a

SUMMARY OF WORK

reasonable time after receipt of notice thereof, the Authority shall have the right to replace, repair or otherwise remedy such failure or defect at the Contractor's expense, this warranty shall not delay final acceptance of or final payment for the Contract work.

All subcontractors', manufacturer's and supplier's warranties and guarantees, expressed or implied, respecting any part of the work and any materials used therein shall be deemed obtained and shall be enforced by the Contractor as the agent and for the benefits of the Authority without the necessity of separate transfer or assignment thereof, provided that, if directed by the AR, the Contractor shall require such subcontractors, manufacturers and suppliers to execute such warranties and guarantees in writing to the Authority Representative.

Any work repaired or replaced pursuant this Article shall also be subject to the provisions of this Article to the same extends as work originally performed. The rights and remedies of the Authority provided in this Article are in addition to and do not limit any rights afforded to the Authority by any other Article of this Contract.

Concrete Repairs.

1. The work shall be warranted by the Contractor for a period of three (3) years from final acceptance of the project the warranty shall assign the rights to all materials and manufacturer's warranties to the Authority.

2. The work is warranted against defective materials and workmanship for the warranty period and during this period shall be replaced by the Contractor at no cost to the Authority. The work is warranted against failure by: delamination or spalling within the repaired area; cracks greater than 1 /32" in width within or at the edges of the repaired areas; corrosion of reinforcing steel within the repaired area; failure of bond or cracking between the existing concrete and repair material; failure or water leakage at concrete repairs and concrete repair perimeters, sealed cracks, construction joints, and control joints; failure or leakage at expansion joints; and failure of the concrete coatings. The warranty shall not extend to areas beyond those repaired.

Traffic Bearing Urethane Coating

1. The work shall be warranted by the Contractor for a period of five (5) years from final acceptance of the project. The warranty shall assign the rights to all materials and manufacturer's warranties to the Authority.

2. The work is warranted against defective materials and workmanship for the warranty period and during this period shall be replaced by the Contractor at no cost to the Authority. The work is warranted against failure by: delamination or spalling; cracks greater than 1/32" in width; failure of bond or cracking between the existing concrete and traffic bearing urethane coating system; failure or water leakage at sealed cracks, perimeter of concrete repair areas, construction joints , and control joints.

Expansion Joints:

1. The work shall be warranted by the Contractor for a period of five (5) years from the final acceptance of the project. The warranty shall assign the rights to all materials and manufacturer's warranties to the Authority.

2. The work warranted against defective materials and workmanship for the warranty period and during this period shall be replaced by the Contractor at no cost to the Authority.

SUMMARY	OF WORK	

The work is warranted against failure by: delamination, glad failure, block-out spalling and water leakage.

1.05 ACCESS TO SITE

The Project Sites are located as follows:

1. Grosvenor-Strathmore Parking Garage is located on Tuckerman Lane in Rockville, Montgomery County, Maryland. The parking serves the Grosvenor-Strathmore Metro Station located on the red line.

2. Shady Grove Parking Garage North is located on Sommerville Drive in Gaithersburg. Montgomery County, Maryland. The parking garage serves the Shady Grove Metro Station located on the red line.

3. The College Park parking garage is located on Paint Branch Parkway in College Park, Prince George's County, Maryland. The parking garage serves the College Park Metro Station located on the green and yellow lines.

4. The Franconia-Springfield (East) parking garage is located on Frontier Drive in Springfield, Fairfax County, Virginia. The parking garage serves the Franconia-Springfield Metro Station located on the blue and yellow lines.

1.06 WORK SEQUENCE

Examine suggested methods of phasing of the Work as shown on the Contract Drawings and/or described in another Section. Submit shop drawings showing proposed sequences to the AR for review and approval.

1.07 PRE-CONSTRUCTION CONFERENCE

It is required that there shall be a pre-work conference and the Contractor shall attend this meeting. It shall take place at a time and place to be announced later. This meeting shall take place before the beginning of construction. Performance of the contract will be discussed, plus scheduling, number of crews, equipment, materials and construction details.

PART 2 PRODUCTS

2.01 CONTROLS OF MATERIALS

Certification of Compliance

1. Certification of specification compliance shall be furnished for all materials and material installation as specified throughout the Contract Documents.

Materials Storage Areas

1. Upon request, the Authority will allow storage of materials at locations designated on the drawings. The request must contain a listing of items to be stored and the location of the

proposed storage. The Authority will assist the Contractor in any way possible to provide storage.

Protection and Restoration of Property

1. The Contractor shall protect all electrical, signal, communication, fire standpipe, and other systems from damage or buildup of applied materials. Over spray that accumulates on the cables, boxes, fixtures or other equipment must be removed immediately to protect the systems.

Disposal of Materials Outside the Work Site

1. For disposal of excavated material, and other waste and excess material, the Contractor shall adhere strictly to all applicable laws of the Virginia Department of Environmental Quality (VDEQ) and to municipal and local ordinances and regulations. Authorities having jurisdiction shall approve in advance all routes used by the Contractor for hauling materials. Upon completion of this work, the Contractor shall restore the site to original condition except for applied materials.

END OF SECTION

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SECTION 01400

QUALITY CONTROL AND ASSURANCE REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for quality control.
- B. The Contractor shall employ an independent Quality Control Engineering Firm to perform the quality control testing and inspection activities described herein. The independent Quality Control Engineering Firm shall report directly to the AR and be represented at the job site at all times during construction activities associated with this Contract.
- C. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's quality control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality control services required by the Contract Documents or authorities having jurisdiction are not limited by provisions of this Section.

1.02 DEFINITIONS

- A. Quality Control: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that completed construction comply with Contract requirements. Services do not include contract enforcement activities performed by the AR.
- B. Quality-Assurance: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and ensure that proposed construction complies with requirements.
- C. Mockups or Sample Panels: Physical example assemblies to illustrate finishes and materials. Mockups and Sample Panels are used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation. Mockups and Sample Panels establish the standard by which the Work will be judged.

D. Quality Control Engineering Firm: An entity licensed in the Commonwealth of Virginia and the state of Maryland retained by the Contractor to perform specific tests, inspections, or both as required by the Contract Documents, codes and/or jurisdictional agencies. The Quality Control Engineer shall work independently of the Contractor and shall report directly to the AR. Quality Control Engineer, testing laboratory or testing agency or similar language used in the Contract Documents shall mean the same as Quality Control Engineering Firm.

1.03 DELEGATED DESIGN

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated. Design professional retained shall be licensed in the Commonwealth of Virginia and the state of Maryland.

1.04 REGULATORY REQUIREMENTS, CODES AND STANDARDS

A. Copies of Regulations, Codes and Standards: Obtain copies of the regulations, codes and standards referenced in the Contract Documents and retain at project site to be available for reference by parties who have a reasonable need to reference the information.

1.05 SUBMITTALS

- A. Qualification Data the Quality Control Engineer specified in this Section to demonstrate their capabilities and experience. Include proof of qualifications in the form of a current certification of the inspection of the Quality Control Engineering Firm by one of the agencies listed. Submit individual resumes outlining experience, registration and certifications required for the Professional Engineer, full time field inspector, and additional field inspectors to be assigned to the project in accordance with the following requirements. The individuals submitted and approved shall not be replaced on the project without prior written approval of the Authority. The minimum requirements for the Quality Control Engineering Firm shall be as follows:
 - The Quality Control Engineering firm shall have an in-house construction materials laboratory equipped, experienced and staffed to perform the testing outlined in the Contract Documents. The Quality Control Engineering firm shall have at least one Professional Engineer licensed in the Commonwealth of Virginia permanently stationed in the office of the Quality Control Engineering Firm providing services for the project. The Professional Engineer shall be in responsible charge of all work performed by the Quality Control Engineering firm on the project
 - 2. The Quality Control Engineering Firm's construction materials laboratory shall be certified by one of the following agencies. The certification shall be current and remain in force for the duration of the project.
 - a. Washington Area Council of Engineering Laboratories (WACEL).

- b. American Association of State Highway and Transportation Officials (AASHTO).
- c. Department of the Army, Corps of Engineers.
- d. Cement and Concrete Reference Laboratory (CCRL).
- 3. The Quality Control Engineering firm shall provide one field inspector to be stationed on site full time for the duration of the project. The minimum qualifications of the full time field inspector shall be certifications held by the assigned individual. At least one of the following certifications shall be held by the individual and remain in force for the duration of the project:
 - a. WACEL Structural Inspector
 - b. American Concrete Institute; Concrete Construction Inspector
 - c. National Institute for Certification in Engineering Technologies (NICET); Construction Level 3.
- 4. The Quality Control Engineering Firm shall provide additional field inspectors to assist the full time field inspector as required by the work activities or the AR to ensure that the testing and inspection requirements are fulfilled. A minimum of two (2) field inspectors shall be on site during all concrete pours. The minimum qualifications of the additional field inspectors shall be certifications held by the assigned individual. At least one of the following certifications shall be held by each individual and remain in force for the duration of the project.
 - a. WACEL: Concrete Level II.
 - b. American Concrete Institute: Concrete Field Testing Technician Grade I.
 - c. NICET: Construction Level II.
- 5. The Quality Control Engineer Firm shall provide at least one field inspector to inspect structural steel fabrications and field welding performed as part of the work. This inspector may be assigned to the project of a part-time basis but shall be responsible for the monitoring and inspection of all work involving structural steel and welding. The minimum qualifications of the additional field inspectors shall be certifications held by the assigned individuals. At least one the following certifications shall be held by the individual and remain in force for the duration of the project:
 - a. WACEL: Structural Steel.
 - b. American Welding Society: AWS QC1.
- B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to the Contractor to be designed or certified by a design professional, indicating that the products, materials and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services. The design professional shall be a Professional Engineer or Architect (based on the specific design discipline requirements) licensed in the Commonwealth of Virginia and state of Maryland. Submittals requiring seals shall be sealed and signed by the responsible design professional.
- C. Schedule of Tests and Inspections: Schedule of tests and inspections shall be developed jointly between the Contractor and Quality Control Engineer based on the

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requirements of the Contract Documents. The schedule shall be submitted within 30 days of the Notice to Proceed. The schedule shall be formatted in tabular form and include the following:

- 1. Specification Section number and title.
- 2. Description of test and inspection.
- 3. Identification of applicable standards.
- 4. Identification of test and inspection methods.
- 5. Number of tests and inspections required.
- 6. Time schedule or time span for tests and inspections.
- 7. Entity responsible for performing tests and inspections.
- 8. Requirements for obtaining samples.
- 9. Unique characteristics of each quality control service.
- D. Reports: The Quality Control Engineer shall prepare daily activity reports and test reports for the project Daily reports shall be delivered to the AR at the end of each day's work. Daily reports and test reports shall be forwarded to the office of the Quality Control Engineer, reviewed by the Professional Engineer, certified and written reports delivered within five (5) working days of the test or inspection activity. Daily reports and test reports that include the following:
 - 1. Date of issue.
 - 2. Project title, correspondence, number, and Contract number. Follow the format provided by the Authority.
 - 3. Name, address, and telephone number of Quality Control Engineering firm.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection method.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.
 - 10. Ambient conditions at time of sample taking and testing and inspecting.
 - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Documents requirements.
 - 12. Punch list where required.
 - 13. Recommendations on retesting and re-inspecting.
 - 14. Name and signature of field or laboratory inspector.
 - 15. Name and signature of the AR.
 - 16. Signature and Seal of the Professional Engineer in responsible charge.
 - 17. Two copies shall be delivered directly to the AR and one copy shall be delivered to the Contractor.
- E. Permits, Licenses, and Certificates: For the Authority's records, submit copies of permits, inspection releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.06 QUALITY ASSURANCE

- A. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- B. Manufacturer's Representative Qualifications: An AR of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- C. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful inservice performance. Where required, submit copies of manufacturer's certifications held by Installer.
- D. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified and licensed to practice in the Commonwealth of Virginia and state of Maryland, and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for inspection and testing, installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.
- F. Quality Assurance Compliance:
 - The Contractor shall prepare a contract quality assurance program based on the 1. requirement for work plans, submittals and other quality assurance and quality control articles contained in this Contract. The program shall consist of the plans, procedures and organization necessary to provide inspection, testing unless otherwise specified, and verification that materials, equipment, workmanship, fabrication, construction and operations comply with Contract requirements. The Quality Assurance Program and the name and qualifications of the person within the Contractor's organization responsible for managing the approved Quality Assurance Program shall be submitted to the Authority Representative. Work will not be permitted for any portion nor will progress payments be made for any portion of work until the Contractor's Quality Assurance Program is approved for that portion by the Authority Representative and the Quality Assurance Manager is approved by the Authority Representative. Notify the Quality Control Engineer and AR at least 48 hours in advance of time when Work that requires testing or inspecting will be performed.
 - 2. To assure the Contractor's compliance with and conformance to the approved Contractor's Quality Assurance Program, the program will be subject to quality audits. Audits will be scheduled by the Authority Representative as required.

- G. Quality Assurance (QA) Program:
 - 1. Before starting the other Work of this Contract, develop and implement an approved Contractor's Quality Assurance Plan (CQAP) for this Contract that incorporates the requirements of the Federal Transportation Administration's 15 quality elements as described in FTA IT-90-5001-02.1, referred to as the FTA Guidelines, and the additional requirements in this Contract's Specifications.
 - a. The CQAP must include the specified requirements for all 15 quality elements listed in the FTA Guidelines.
 - 1) Not all of the required quality elements are identified and specified in this Section.
 - 2) Some of the 15 FTA Quality Elements required to be incorporated into the CQCP, including numbers 1, 2, 3, 4, 5, part of 8, 9, 13, 14, and 15, are identified and specified in this Section.
 - 3) Several of the required quality elements, including FTA Quality Elements 6, 7, part of 8, 10, 11, and 12, are identified and specified in Quality Control.
 - b. Submit the Contractor's Quality Assurance Plan (CQAP) to the AR for approval.
 - 2. Contractor Quality Assurance Plan (CQAP):
 - a. Management Responsibility [FTA Quality Element 1]:
 - 1) Define your organizations quality policy in the CQAP.
 - a) Provide a statement that shows your organization's commitment to the quality policy extends to the highest level.
 - (1) Your organization's management must declare and document its commitment to quality within a Quality Policy Statement to be included at the beginning of the CQAP.
 - 2) In the CQAP, show that your quality policy extends to all levels of your organization.
 - b. Quality Assurance and Control Personnel:
 - 1) Contractor Quality Assurance Manager:
 - a) Employ a Contractor Quality Assurance Manager empowered with full authority and responsibility to represent and act for the Contractor on all quality related matters for this Contract.
 - (1) Give the Quality Assurance Manager the authority and responsibility for ensuring the quality policy is communicated, implemented, and maintained.
 - (2) Have the Quality Assurance Manager, or his designated substitute, available and on the Work Site at all times that any work is in progress.
 - (3) Give the Quality Assurance Manager responsibility for coordinating inspections and testing to be performed by the Testing and Inspecting Agencies as specified in Section Quality Control, and authority to stop further construction of nonconforming Work pending completion of required corrective action.
 - b) Contractor's Quality Assurance Manager Qualifications:

- The Contractor's Quality Assurance Manager must have a minimum of five years of construction-related Quality Assurance experience with a minimum of two years in supervision or management of Quality Assurance Work.
- (2) The Contractor Quality Assurance Manager must be acceptable to the AR.
- (3) Submit the proposed Contractor's Quality Assurance Manager's resume showing his name, qualifications, and experience to the AR for approval.
- 2) Quality Control Inspectors and Test Personnel:
 - a) Employ, at a minimum, one qualified full-time Quality Control inspector to be on-site during the installation and testing phase of the Contract.
 - b) Assign or designate additional Contractor Quality Control personnel to perform inspections and test the Work as required.
 - c) Submit the resumes showing the names, qualifications, and experience of all quality control personnel assigned to the Quality Control Manager to the AR for approval.
- Place the Quality Assurance Manager and other assigned quality assurance personnel on the direct payroll of the Contractor, but do not assign them to any other positions under this Contract.
 - a) Have the Quality Assurance Manager report directly to the highest level of management, such as corporate principal or corporate quality assurance manager, and not to any project level manager.
 - (1) Set up the Contractor Quality Assurance Manager position to be independent of the Contract's construction staff.
- 4) Identify those persons responsible for the quality assurance and control functions in the CQAP; and define in writing the responsibility, authority, and interrelation of those persons.
 - a) Include an Organization Chart detailing the quality assurance and control organization and reporting responsibilities.
 - b) Identify a Contractor Quality Assurance Manager and show that his position is independent of the Contract's construction staff.
 - c) Show the Contractor Quality Assurance Manager's staff and clear lines of authority and responsibility for quality management.
- 5) Do not remove any Contractor quality assurance personnel from their duties on this Contract without prior written notice to the AR.
 - a) Notify the AR, in writing, if you plan to remove or replace the Quality Assurance Manager or other key quality control personnel identified on the organization chart.
 - b) Submit the resumes of replacements for the Quality Assurance Manager and other key quality control personnel showing their qualifications to the AR for approval.
- 3. Documented Quality Management System [FTA Quality Element 2]:
 - a. Establish and document a quality management system within the Contractor Quality Assurance Plan (CQAP) to ensure Contract quality objectives are

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satisfied, and maintain the quality management system during the life of the Contract.

- Develop, implement, and maintain a quality management system consistent with the requirements of this Section, General Provisions and FTA-IT-90-5001-02.1 to assure that the equipment and materials provided conform to the applicable requirements of every Section of the Contract Specifications.
- Provide a quality management system to assure accuracy and consistency in production, installation, and construction processes by providing documented work instructions where needed to ensure quality.
- 3) Do not begin Work covered by the Contractor's Quality Assurance Plan (CQAP) until the AR reviews and approves the plan.
- 4) Extend the quality management system requirements to Suppliers and Subcontractors as appropriate.
- b. Establish, implement, and maintain a Quality Procedure Development Plan (QPDP) to develop procedures and instructions for implementing the Contractor's Quality Assurance Plan (CQAP).
 - 1) Develop written procedures and instructions for activities affecting quality in design, procurement, manufacturing, and construction, as applicable to the Work being performed.
 - a) Procedures must contain a statement of their purpose, scope, applicability, and assigned responsibilities.
 - (1) Assign specific responsibilities and clearly delineate individual job authorities and responsibilities.
 - b) Describe sequential processes to be followed to accomplish quality objectives; and contain references to codes, standards, specifications, and related or interfacing procedures.
 - (1) Prescribe inspection and testing techniques with written procedures, and keep them up-to-date.
 - (2) If new inspection or testing techniques are being used for construction or manufacturing, allow adequate time to develop appropriate quality procedures for the new techniques.
 - (3) Include formats for the quality records needed to ensure that the procedures and instructions are followed and documentation requirements are understood.
 - c) In developing the quality procedures, give consideration to identifying and acquiring any inspection equipment, skills, or special quality processes needed to ensure quality performance.
 - 2) Include an index of all procedures and instructions to provide a comprehensive account of the quality controls that are required to implement the Contractor Quality Assurance Plan (CQAP).
- c. Daily Quality Management Reports:
 - 1) Prepare Daily Quality Management Reports for each day any Work is performed and which at a minimum identify material deliveries, Work accomplished, tests conducted, results of inspection and tests,

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nonconforming work and its disposition, causes of nonconforming work, and corrective actions taken to prevent recurrence.

- 2) Submit the Daily Quality Management Reports to the AR for review on a daily basis.
- d. Certification of Payment Requests:
 - 1) Submit Application for Payments in accordance with the requirements of General Provisions.
- e. Certification of Completion of the Work:
 - 1) When all obligations under the Contract have been fulfilled, submit written notice to the AR in accordance with the requirements of General Provisions.
- 4. Design Control [FTA Quality Element 3]:
 - a. Establish appropriate written procedures within the Contractor's Quality Assurance Plan (CQAP) for identifying, documenting, and reviewing and approving all changes and modifications to the original design.
 - Establish and maintain procedures to control and verify the design of systems in order to ensure that the design criteria, other specified requirements, and requirements of the relevant regulatory agencies are met.
 - 2) Extend this responsibility to those responsible for developing "as-built" documents as part of the design documentation at the end of the Contract, and to construction or manufacturing to ensure compliance with the design requirements.
 - b. Design control includes planning the design interfaces and design verification activities to ensure that the design requirements are understood, and controlling design changes through Contract completion.
 - 1) Prepare a Design Plan that identifies individuals responsible for different design parts and who has the responsibility to assure the quality of the design.
 - a) Identify, document, and review design input requirements; and have the requirements reviewed by the designer and those responsible for developing the requirements.
 - b) Assign competent individuals to verify the quality of the design.
 - 2) Verify and document that design output meets the design input requirements.
 - a) Design output includes acceptance criteria, conformance to regulatory requirements whether or not these have been stated in the design output requirements, and identifying those aspects of the design that are crucial to the safe and proper functioning of the final product or system.
 - Identify the various organizational interfaces required between various groups producing and commenting on the design, and specify the information to be documented, transmitted, and regularly reviewed.
 - c) Include the following design verification activities, as appropriate:
 - (1) Alternative calculations.

- (2) Independent checks of design calculations, specifications, drawings, and contract documents.
- (3) Conducting and documenting design reviews.
- (4) Undertaking qualification tests and demonstrations.
- (5) Comparing the design with similar proven designs, if available.
- (6) Design reviews for constructability, operability, and maintainability.
- Specify within the Design Plan how the operating and maintenance departments of the Authority would interface with those producing the design.
- 5. Document Control [FTA Quality Element 4]:
 - a. Establish and maintain written procedures for the control of Contract documents.
 - 1) Develop document control procedures that provide controls for the drawings, specifications, Contract data, special work instructions, operational procedures, and receipt and transmittal of submittals.
 - 2) Provide procedures for the distribution and storage of documents related to the Contract.
 - a) Promptly eliminate obsolete documents from each work location.
 - b) Retain superseded documents in Contract files, and clearly identify each as such.
 - 3) Examples of the types of Contract documents requiring control include, but are not limited to:
 - a) Contract Drawings.
 - b) Specifications.
 - c) Special work instructions.
 - d) Operational procedures.
 - e) Quality assurance program procedures.
 - b. Develop document control measures to assure that all relevant documents are current and available to all users who require them.
 - 1) Develop procedures to insure that documents are reviewed by the relevant authorized personnel.
 - a) Provide procedures to insure that changes to documents are reviewed and approved by the same authorized individuals that reviewed and approved the original documents.
 - b) Control changes to Contract documents, and promptly distribute those changes to all required locations together with a master list enumerating the current revisions of each document.
 - Develop procedures to assure that all documents required are received and distributed in a timely manner, and contain the necessary technical information.
 - a) Distribute and make available copies of documents to all locations needing them to assure that the quality management system functions effectively.
- 6. Purchasing [FTA Quality Element 5]:
 - a. Establish and maintain procedures to assure that purchased services and products conform to specified requirements.

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- b. Provide written procedures within the Contractor's Quality Assurance Plan (CQAP) that address at a minimum the following:
 - 1) Evaluation and selection of Suppliers using specified evaluation criteria including supplier quality programs.
 - a) Generate a list of qualified Suppliers with the descriptions of the scope of services that they have been qualified to provide to the Contract.
 - (1) Prior to procurement of items and materials, submit a list of Suppliers and Subcontractors that includes a description of the items to be supplied, and/or other pertinent information as appropriate to the AR for approval.
 - b) Select Suppliers based on their ability to meet Contract requirements.
 - 2) Transmission of applicable design, manufacturing, quality, and other associated technical requirements in purchase documents.
 - 3) Review and approval of purchasing documents by a designated authority to verify the adequacy of requirements specified prior to release.
 - 4) Periodic assessment of Supplier performance; e.g., inspection and testing at the source, and/or auditing of the Supplier by the Contractor.
 - 5) Evaluation of the adequacy of the products procured at the time of receipt and/or at the point of manufacture to verify compliance with purchasing documents.
- c. Extend the quality requirements of this Section to Suppliers and Subcontractors as appropriate to the work being performed.
 - 1) Impose upon Suppliers and Subcontractors within procurement documents the same quality control requirements, including inspection and test procedures, as imposed on the Contractor by this Section, other Contract Specifications, and referenced standards.
- 7. Inspection and Testing [FTA Quality Element 8]:
 - a. Testing and Inspection Agencies:
 - Employ the services of one or more independent certified material testing laboratories, hereafter referred to as the Testing and Inspection Agency or Testing and Inspection Agencies, to perform materials testing, control testing, and inspections of the materials to be incorporated into the Work of this Contract; and having the following qualifications.
 - 2) Testing and Inspection Agency Qualifications:
 - a) Each Testing and Inspection Agency must comply with the quality standards for testing laboratories of the nationally recognized associations and agencies that promulgate the test standards specified, and to the basic requirements of ASTM E 329 and the other standards specified in individual Specification Sections.
 - b) Each Testing and Inspection Agency must be capable of performing the reviews, inspections, and testing required by this Contract; including but not limited to the following:

- (1) Inspecting, sampling, and testing proposed materials and production as required by the AR for compliance with the Contract Documents.
- (2) Capable of securing production samples of materials at plants or stockpiles during the course of the work, and testing the samples for compliance with the Contract Documents.
- c) The Testing and Inspection Agency must be approved by the AR, and must also be accepted by the local jurisdictions responsible for building inspection.
- d) Submit the qualifications and certifications of the proposed Testing and Inspection Agencies to the AR for approval.
- 3) Dismissal and replacement of any of these independent certified Testing and Inspection Agencies by the Contractor requires written notice to and the approval of the AR.
- 8. Inspection, Measuring, and Test Equipment [FTA Quality Element 9]:
 - a. Identify, control, calibrate, and maintain inspection, measuring, and test equipment (M&TE) required to perform inspections, tests, and measurements in order to demonstrate the conformance of Work to the specified requirements.
 - Establish and maintain a system to identify, control, calibrate, and maintain all inspection, measuring, and test equipment prior to its use to demonstrate that construction conforms to the requirements of the Specifications.
 - a) Identify each piece of inspection, measuring, and test equipment with unique identification label permanently and directly affixed to the equipment.
 - b) Also affix calibration labels to inspection, measuring, and test equipment showing the date the equipment was last calibrated and the date recalibration is due.
 - 2) Use only inspection, measuring, and test equipment of the proper type and accuracy for the required measurement, and store and use equipment under suitable environmental conditions.
 - a) Inspection or tests performed using inspection, measuring, and test equipment that is subsequently found to be out-of-tolerance, or damaged during use, or lost are considered nonconforming until all characteristics previously inspected or tested using the equipment have been reassessed and re-verified as correct, re-inspected, or re-tested as necessary.
 - A nonconformance report for out-of-tolerance or damaged inspection, measuring, and test equipment must be processed in accordance with the requirements of Nonconformance Reporting [FTA Quality Element 11] as specified in Section Quality Control.
 - b. Make provisions for the recalibration of inspection, measuring, and test equipment in a timely manner.
 - 1) Contractor or Authority must perform and document calibration of inspection, measuring, and test equipment using calibration standards

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traceable to the National Institute of Standards and Technology (NIST), and at intervals specified in calibration procedures to assure the accuracy of inspection, measuring, and test equipment.

- a) NIST information is accessible at <u>ts.nist.gov</u>.
- 2) In the event that no national standards exist for calibration, document the basis for calibration.
- 3) Recall and recalibrate inspection, measuring, and test equipment at preprescribed intervals and maintain records of calibration.
- 9. Quality Records [FTA Quality Element 13]:
 - a. Establish and maintain written procedures for quality records to identify which records are to be kept; responsibility for their production and collection; and responsibility for indexing, filing, storage, maintenance, and disposition of quality records.
 - 1) Identify every type of quality record to be generated as a result of implementing the CQAP, and specify the retention time for each.
 - 2) Quality records requiring control include, but are not limited to:
 - a) Inspection Reports.
 - b) Test Data.
 - c) Certification Records.
 - d) Personnel Qualifications.
 - e) Submittals, Value Engineering Change Proposals (VECP), Change Orders, and Requests for Interpretation/Information (RFI).
 - f) Calibration Records.
 - g) Nonconformance Reports.
 - h) Corrective Action Reports.
 - i) Quality Audit Reports.
 - 3) Include Supplier, Contractor, and Subcontractor quality records.
 - 4) Ensure that a level of authority commensurate with the nature of the quality records verifies the adequacy of records on a systematic basis.
 - b. Index, file, and maintain all quality records in a manner that provides for timely retrieval, traceability to, identification with, and acceptability of, material, equipment and systems.
 - 1) Quality records must be legible and specify the work involved.
 - 2) Only complete, legible, and properly authenticated documents can be considered quality records.
 - 3) Maintain quality records to provide objective evidence that all activities conform to CQAP requirements specified, to show that the quality management system is properly functioning, and to document the basis of decisions.
 - 4) Maintain quality records in a manner that minimizes deterioration and damage.
 - 5) Index of Quality Control Records:
 - a) Prepare and submit an index of all quality control records that will be accumulated and maintained during the progress of the Work.
 - c. Make quality records available to the AR upon request.
 - d. Retention time for all quality records will be not less than 3 years after the date of Final Acceptance, except as modified below.

- 1) Sample retention:
 - a) In addition to the Sample requirements of Special Conditions, retain all Samples of materials, products, or assemblies to be incorporated into the Work for a minimum period of 1 year after the date of the Certificate of Final Acceptance.
- 2) Provide 30 days notice to the AR of intent to discard or destroy quality records, including Samples as may be in the possession of the Contractor or his Subcontractors, subsequent to this retention time.
- 10. Quality Audits [FTA Quality Element 14]:
 - a. Establish and implement written procedures for the performance of internal quality audits to assure that the elements of the quality management system are functioning as intended.
 - 1) Quality audits are not the same as financial audits.
 - b. Quality Audit Schedule:
 - 1) Establish a Quality Audit Schedule denoting the locations, organizations to be audited, topics, and scheduled dates.
 - 2) Schedule audits based upon the status and importance of the activity being audited.
 - At a minimum, perform audits at 90-day intervals or as necessary to verify that all elements of the Quality Management System are functioning as intended.
 - 3) Update the audit schedule at 90-day intervals beginning on the date of approval of the initial schedule by the AR.
 - c. Quality Audit Plan:
 - 1) Prepare and submit quality audit plans to the AR for each audit.
 - a) Address audit scope, location, and dates.
 - b) Include audit checklists to be used.
 - d. Quality Audit Procedure:
 - Perform scheduled internal audits to verify that quality assurance procedures are being enforced and are functioning as intended to ensure total compliance with the Specifications, Contract Drawings, and all reference standards.
 - 2) Conduct Audit Entrance Meetings with the audited organization's responsible management personnel.
 - 3) Use procedures, standards, and audit checklists to assure substantive audit results.
 - 4) Identify records examined, activities witnessed, and personnel interviewed during the audit.
 - 5) Thoroughly investigate problems and clarify misunderstandings during the course of the audit.
 - 6) Document the quality problems in Audit Finding Reports.
 - Conduct Audit Exit Meetings with responsible personnel and discuss audit results, problems noted, and required corrective action, and schedules for completion of corrective actions.
 - e. Quality audit personnel:
 - 1) Use qualified personnel having no direct responsibilities in the area audited.

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- 2) Document the basis of audit personnel qualification.
- f. Quality Audit Report:
 - 1) Document audit results within a Quality Audit Report.
 - a) Report areas/topics audited.
 - b) Identify the audited organization and report any problems found.
 - c) Address the root causes that led to any nonconforming conditions, and recommend actions to prevent recurrence of the nonconformance.
 - Distribute Quality Audit Reports and Audit Finding Reports to personnel having responsibility for the areas audited within 10 working days following the completion of the audit.
 - 3) Submit all Quality Audit Reports to the AR for approval no later than 30 days after each audit.
 - 4) Maintain records of quality audits as quality records and make them available to the AR upon request.
- g. Quality audit follow-up:
 - 1) Assure that responses to Audit Fining Reports are complete and accurate.
 - 2) Track and verify corrective action, and close problem reports resulting from audits in a timely fashion.
 - 3) Re-audit deficiency areas on an accelerated basis to verify effectiveness of corrective action and actions to preclude recurrence of problems.
- h. Authority Audits:
 - Quality audits of Contractor, Subcontractor, and Supplier activities may be performed by the Authority's representatives to verify compliance with the Specifications and referenced standards.
 - 2) Upon notice by the AR, provide timely access to facilities, locations, records, and personnel by the Authority's auditors to facilitate performing Authority audits.
 - 3) Assure cooperation with the Authority's auditors by all Contract personnel.
 - 4) Provide timely and thorough responses to Authority-identified quality problems.
- 11. Training [FTA Quality Element 15]:
 - a. Establish and maintain documented procedures for identifying training needs and to provide for the training of all personnel performing activities affecting quality.
 - Training must include, but not be limited to, procedures to identify potential quality problems in either the Work or materials; and must include appropriate direction for identifying, reporting, and resolving quality problems.
 - 2) Train the Contractor's quality assurance and quality control personnel so they are qualified for their assigned quality tasks based on having the appropriate education, training, or experience required.
 - 3) Train the workers, Subcontractors, Suppliers, and others who perform tasks affecting quality to comply with the various quality-related

procedures defined in the CQAP as they relate to the individual's responsibilities.

- 4) Develop and maintain a training matrix that lists the following:
 - a) Project personnel by title.
 - (1) Include consultant, Contractor, and Subcontractor personnel.
 - b) Applicable procedures, standards, specifications, or other training materials.
 - c) Type of training (classroom or required reading).
- H. Field Samples and Mock-Ups:
 - 1. When specified, provide Samples and mock-ups that illustrate functional and aesthetic characteristics similar in every way to the actual materials or equipment to be incorporated into the work.
 - a. Provide office Samples of sizes and quantities that clearly illustrate the full color range and functional characteristics of products and materials, including attachment devices.
 - b. Furnish required Samples and mock ups at no additional cost to the Authority.
 - 2. Erect field Samples and mock-ups at the Work Site as specified in individual Specification Sections, and as may be necessitated by the Contractor submitting value engineering proposals, at locations acceptable to the AR.
 - a. Do not incorporate the Sample or mock-up material or equipment into the Work until approval to do so is received from the AR.
- I. Failure to Perform:
 - 1. In the event the Contractor fails to adequately perform any or all of the provisions of this Section, the Authority, at its sole discretion, reserves the right to have the AR perform any or all of the provisions in this Section and back charge the Contractor for the actual cost to the Authority of such services.
 - a. This remedy for the Contractor's failure to perform is in addition to any other right or remedy available to the Authority under this Contract.
 - b. Refer to General Provisions, for additional information regarding the Authority's remedies.
- J. Preconstruction Testing: Quality Control Engineer shall perform preconstruction testing for compliance with specified requirements for performance and test methods.
 - 1. Contractor responsibilities include the following:
 - a. Provide test specimens and assemblies representative or proposed materials and construction. Provide sizes and configurations of assemblies to adequately demonstrate capability of product to comply with performance requirements.
 - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 - c. Fabricate and install test assemblies using installers who will perform the same tasks for the Project.
 - d. When directed by the AR, remove assemblies; do not reuse materials on Project.

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- 2. Quality Control Engineer Responsibilities: Submit a certified written report of each test, inspection, and similar quality control service directly to the AR, with copy to the Contractor. Reports shall be submitted within five (5) working days after the activity. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
- K. Mockups/Sample Panels: Before installing portions of the Work requiring mockups and/or sample panels, build mock ups and/or sample panels for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
 - 1. Build mockups in location and of size indicated or, if not indicated, as directed by the AR
 - 2. Notify AR seven (7) days in advance of dates and times when mockups and/or sample panels will be constructed.
 - 3. Demonstrate the proposed range of aesthetic effects and workmanship.
 - 4. Obtain AR's approval of mockups or sample panels before starting work, fabrication, or construction.
 - 5. Maintain mockups and/or sample panels during construction in an undisturbed condition as a standard for judging the completed Work.
 - 6. Demolish and remove mockups when directed by the AR

1.07 QUALITY CONTROL

- A. Authority Responsibilities: The AR will review the activities of the Quality Control Engineer.
- B. Contractor Responsibilities: Unless otherwise indicated, provide quality control services specified by the Contract Documents and required by authorities having jurisdiction through the Quality Control Engineer.
 - 1. All quality control services are to be provided through the Quality Control Engineering Firm.
 - 2. Notify the Quality Control Engineer and AR at least 48 hours in advance of time when Work that requires testing or inspecting will be performed.
 - 3. Testing and inspecting requested by Contractor and not required by the Contractor Documents and Contractor's responsibility.
 - 4. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
 - 5. Allow the Quality Control Engineer to remove material samples as required for testing.
 - 6. Furnish any labor necessary to assist the Quality Control Engineer in obtaining and handling samples.
 - 7. Provide water or electric power for quality control sampling, testing and inspections as required.

- 8. Provide access to the Work including scaffolding and walk boards as required for quality control sampling, testing and inspection.
- 9. Repair all damage or labels made on work surfaces as part of quality control sampling, testing and inspections.
- 10. Provide and maintain, including temperature control, for the sole use of the Quality Control Engineer, adequate facilities for the safe storage and proper curing of the concrete test specimens on the project site for the first 24 to 48 hours as required by ASTM C31.
- 11. Do not place concrete or cover portions of the Work until all inspections and testing have been completed and all deficiencies have been corrected to the Quality Control Engineer's and AR's satisfaction. Work, which is performed prior to the Quality Control Engineer's and AR's approval, is subject to removal and replacement at the Contractor's expense.
- 12. Additional sampling, testing and inspection shall be performed at the Contractor's expense when required by the AR due to:
 - a. Changes in materials or proportions, changes in work sequencing, or changes in curing times or methods as requested by the Contractor.
 - b. Testing of materials or concrete, which, due to failure by previous test or inspection, do not meet the Contract requirements.
 - c. Failure by the Contractor to execute the Work as detailed or specified in the Contract Documents.
- C. Quality Control Program:
 - 1. The Contractor is responsible for all quality control for the Contract, with the exception of those tests or inspections specifically identified as being performed by others.
 - Omissions and errors in the Contract Document descriptions do not relieve the Contractor of his responsibility to perform all tests/inspections required within the scope of this Contract.
 - 3. Inspections and tests performed by the AR are for the Authority's Quality Assurance and do not relieve the Contractor from the responsibility of meeting the specified requirements.
 - a. Inspections and tests performed by the AR are not to be considered a guarantee for acceptance of materials that will be delivered subsequent to the time the items were inspected or tested.
 - 4. At no increase in Contract Price, bear the cost for the Contractor Quality Control inspections and tests required in accordance with the requirements of General Provisions.
- D. Contractor's Quality Control Plan (CQCP)
 - 1. Before starting the other Work of this Contract, an approved Contractor's Quality Control Plan (CQCP) that includes the fifteen quality elements listed in FTA IT-90-5001-02.1 must be developed and implemented for this Contract as specified in Section Quality Assurance.
 - a. Not all of the quality elements required to be incorporated in the CQCP are specified in Section Quality Assurance; several of the required quality

elements, including FTA Quality Elements 6, 7, part of 8, 10, 11, and 12, are identified and specified in this Section.

- 2. Product Identification and Traceability [FTA Quality Element 6]:
 - a. Establish and maintain measures for identifying and controlling items of production such as batches, materials, parts, and components, to prevent the use of incorrect or defective items and to assure that only correct and acceptable items are used or installed.
 - Develop documented procedures within the Contractors' Quality Assurance Plan (CQAP) specified in Section Quality Assurance, to assure that procured items, equipment, and materials are physically identified.
 - Provide traceability of items to required documents during all phases of production from receipt of raw materials, components, or subassemblies through the construction process, to delivery of final products.
 - Provide identification and traceability throughout all inspections, test activities, and record keeping.
 - (2) Develop and maintain a documented system to clearly identify the inspection and test status of materials and equipment throughout construction.
 - (3) For stored items, preserve item identification and traceability consistent with the expected duration and type of storage.
 - b) Physically identify and control items to the extent possible from the time of receipt inspection through installation and testing.
 - (1) Insure the identity of items by placing markings on or with the items or by placing the items in specifically identified physical locations.
 - (a) Facilitate identification by means of stamps, tags, or other control devices attached to or accompanying the material or equipment.
 - (b) Employ physical separation, procedural control, or other appropriate means where physical identification is impractical.
 - (2) Mark, track, and control equipment and materials that require inspection or testing within specific time intervals.
 - (3) Establish procedures to control the use of status tags, including logging, installation, and removal.
 - (4) Define who is authorized to apply and remove status tags.
 - 2) Serialization Plans:
 - a) Develop a comprehensive plan for tracking the serial numbers of equipment provided under this Contract.
 - (1) Include the proposed numbering scheme, method for assigning numbers, and tracking tools and procedures.
 - (2) Include the proposed organization of the serial number database.
 - b) Maintain the serial number database and use it to track inventory and to establish equipment reliability.

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- Intentional unauthorized removal of non-conformance status tags will result in immediate dismissal and removal from the Work Site of all responsible personnel.
- 4) Segregate items that do not have identification, items for which record traceability has been lost, and items that do not conform to the requirements of the Contract to prevent their inadvertent incorporation into the Work of this Contract.
- b. Receiving Incoming Products, and Final Inspection and Testing:
 - Specify and implement the procedures for receiving incoming products and for final inspection and testing, and document the results of these procedures.
 - a) Conform with the requirements specified in General Provisions, and establish material control procedures to ensure that equipment and materials accepted through receiving inspection comply with the procurement documents, and to assure that equipment and materials are properly received, inspected, stored, maintained, installed, and used.
 - 2) Receiving Inspection:
 - Implement documented receiving inspection procedures for purchased items such as materials, parts, or equipment delivered to the Contractor.
 - b) Receiving Inspection Records:
 - (1) Develop and maintain Receiving Inspection Records, which at a minimum must contain the following information:
 - (a) Purchase order number.
 - (b) Item number.
 - (c) Supplier name.
 - (d) Quantity.
 - (e) Item description.
 - (f) Reference to applicable Contract requirements.
 - (g) Date received.
 - (h) Heat number, serial number, or other identification, as applicable.
 - (i) Inspection records for in-transit damage and gross defects.
 - (j) Verification of receipt of all required supporting documentation, including Certificates of Compliance and Certified Material Test Reports, and verification that these documents are traceable to the items received.
 - (k) Acceptability (accept/reject) and nonconformance report number, if applicable.
 - (I) Quality control person's signature and date.
 - c) Receiving Inspection Log:
 - (1) Develop and maintain a Receiving Inspection Log, which at a minimum must contain the following information:
 - (a) Purchase order number.
 - (b) Quantity.
 - (c) Item description.

- (d) Date received.
- (e) Heat number, serial number, or other identification, as applicable.
- (f) Acceptability (accept/reject) and nonconformance report number, if applicable.
- (g) Quality control person's initials and date.
- 3. Process Control [FTA Quality Element 7]:
 - a. Identify and plan the production and installation processes that directly affect quality, and ensure these processes are performed under controlled conditions.
 - Handle, store, and preserve procured items, equipment, and materials from the time of receipt to the time of installation and testing to prevent damage, deterioration, distortion of shape or dimension, loss, degradation, loss of identification, or substitution.
 - 2) Use special devices, e.g., crates, boxes, containers, dividers, slings, material handling and transportation equipment, and other facilities, for handling material; and insure the special devices are maintained and periodically inspected.
 - 3) Provide only new materials for incorporation into the Work except where specified otherwise.
 - 4) Develop work instructions for production and installation processes that include:
 - a) Sequencing work operations, including hold and witness points for required examinations, inspections, and tests, where such work is complex or when there are multi-discipline interfaces.
 - (1) Hold points are mandatory.
 - (2) Witness points may be waived by the establishing individual.
 - b) Using suitable equipment.
 - c) Providing a suitable work environment.
 - d) Using qualified personnel and stating qualification requirements, e.g. certifications, credentials, or licenses.
 - e) Conforming to referenced and other applicable codes, standards, and quality plans.
 - f) Controlling and monitoring work processes during manufacturing, installation, and construction.
 - b. Continuously monitor special processes, the result of which cannot be verified by subsequent inspection and testing.
 - Conduct continuous monitoring and/or assure conformance with documented procedures during special processes such as welding, nondestructive examination, and heat treatment where the results cannot be verified during subsequent work operations.
 - 2) Use personnel approved by the AR and that have the experience, training, certification, and where required the license commensurate with the scope, complexity, or nature of the activity whenever performing special processes, i.e., welding, brazing; or inspection/test tasks.
 - 3) Special process procedures at a minimum must include the following.a) Requirements for the qualification of special process procedures.

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- b) Personnel qualifications required for performing the special process including certifications, credentials, or licenses.
- c) Orientation into quality program requirements.
- d) Training in applicable special process procedures.
- e) Evaluation (initial and periodic) of the personnel performing special processes.
- 4. Inspection and Testing [FTA Quality Element 8]:
 - a. Materials and fabrication procedures will be subject to inspection, sampling, and testing in the mill, shop, and field by the building official, and the Testing and Inspection Agency or Agencies for the duration of this Contract.
 - 1) The qualifications for the Testing and Inspection Agency or Agencies are specified in Section Quality Assurance.
 - 2) When material furnished or work performed by the Contractor fails to conform to the Contract Documents, the Testing and Inspection Agency is responsible for immediately reporting such deficiency to the AR and the Contractor.
 - 3) The Testing and Inspection Agency must submit certified written reports that document the results of all tests and inspections performed directly to the AR immediately after the work is performed.
 - a) The reports must state whether the tested and inspected items comply with specified requirements or deviate from them.
 - 4) Inspections and tests performed by the Testing and Inspection Agency do not relieve the Contractor of responsibility for providing materials and fabrication procedures in compliance with specified requirements.
 - b. Inspection and Test Plan:
 - Develop an Inspection and Test Plan, consistent with the requirements of this Section, to plan inspection and testing procedures as necessary to verify the quality of the Work of this Contract.
 - a) Identify all required inspections and tests required by each Specification Section, the required frequency of each, the accept/reject criteria of each, records required to document compliance, and the procedures or instruction to be used for control of each activity.
 - b) Provide sufficient detail to allow the AR or any agency having jurisdictional authority over the Work, to find any and all operations to be inspected by that organization in the plan.
 - c) Provide written inspection and test procedures that address at a minimum the following:
 - (1) Test prerequisites.
 - (2) Required tools, equipment, and instrumentation.
 - (3) Personnel qualification requirements.
 - (4) Necessary environmental conditions.
 - (5) Acceptance criteria.
 - (6) Nonconformance reporting requirements.
 - (7) Data to be recorded.
 - (8) Test Results reporting forms.
 - (9) Identification of items inspected or tested.

- 2) Submit the Inspection and Test Plan to the AR for approval, and do not commence inspection or test activities until such approval is granted.
- 3) Implement and maintain the approved Inspection and Test Plan for the duration of this Contract.
 - a) Using the Contractor's quality control personnel or an approved Testing and Inspecting Agency as appropriate, perform in-process testing and inspection in accordance with documented procedures reviewed and approved by the AR to verify conformance of an item or work activity to specified requirements.
 - (1) Make procedures and instructions readily available to inspection and test personnel at the time and place of the inspection or test.
 - (2) Perform acceptance testing and inspection using qualified personnel other than those performing the Work.
 - (3) When methods of inspection and test are changed, reflect revisions in approved written procedures prior to implementation of the change on any Work.
 - (4) Immediately report inspection/test results indicating nonconformance (failure) with specified requirements to the AR.
 - b) Perform both inspections and process monitoring to ensure that the requirements specified for controlling work processes and the quality of the item are being achieved.
 - Verify that the methods and processes reflected in approved work procedures and instructions are completely and continuously followed.
 - (2) Perform inspections and tests as necessary to verify the quality of the Work on items such as the following:
 - (a) Items of the Work affecting safety.
 - (b) Items that affect system reliability.
 - (c) Items that affect service life.
 - (d) Long lead-time items and custom manufactured items.
 - (e) High visibility areas.
 - (f) ADA compliance items.
 - c) Prepare and submit records (reports) of inspection and test activities that address at a minimum the following:
 - (1) Name of item(s) inspected/tested.
 - (2) Specification reference by Section and Paragraph and revision level or revision date (where applicable).
 - (3) Quantity of Items.
 - (4) Location.
 - (5) Inspection/test procedure reference.
 - (6) Date.
 - (7) Name of inspector/tester.
 - (8) Observations/comments.
 - (9) Specified requirements with the Section/Paragraph number reference.

- (10) Deviations/non-conformances.
- (11) Corrective action.
- (12) Evaluation of results.
- (13) Acceptability.
- (14) Signature of authorized inspection and test personnel.
- c. Certificates of Compliance and Certified Material Test Reports:
 - 1) Materials may be accepted on the basis of a Certificate of Compliance or Certified Material Test Report.
 - 2) Materials accepted on the basis of a Certificate of Compliance may be sampled and inspected/tested by the AR, or his designee, at any time.
 - 3) The fact that the materials were accepted on the basis of certification does not relieve the Contractor of his responsibility to provide materials and equipment that comply with the Specifications.
 - 4) Submit the Certificate of Compliance/Certified Material Test Report to the AR prior to incorporation of the item into the Work.
- d. The AR may elect to perform additional inspections and/or tests of materials at the place of manufacture, the shipping point, or at the destination to verify compliance with applicable Specification requirements.
 - Inspection and tests, conducted by persons or agencies other than the Contractor, do not in any way relieve the Contractor of responsibility for meeting the requirements of all Specifications and the referenced standards.
- e. Refer to Section General Provisions, for additional testing and inspection requirements.
- 5. Inspection and Test Status (FTA Quality Element 10):
 - a. Provide a means for identifying the inspection and test status of work during production and installation.
 - 1) Maintain inspection and test status by means of marking, stamps, tags, labels, routing cards, inspection records, test software, physical location, or other suitable means.
 - 2) Status identification must indicate the conformance or nonconformance with regard to inspections and tests performed.
 - b. Establish controls to assure that only work that has passed the required inspections and tests are accepted.
 - 1) Prepare Daily Quality Control Reports for each day that Work is performed and which at a minimum identify tests conducted and results of inspections and tests.
 - a) Record the status of completed, tested, and inspected items or construction work in Daily Quality Control Reports.
 - b) Submit the Daily Quality Control Reports to the AR for information.
 - 2) Document nonconforming items or construction work on nonconformance reports issued in accordance with the requirements for nonconformance reporting specified in Subparagraph 1.09.D.6.
- 6. Nonconformance Reporting [FTA Quality Element 11]:
 - a. A nonconformance exists when material furnished or Work performed does not comply with the requirements of the Contract, Specifications, codes,

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- 1) Nonconforming Work also exists when either material or equipment exhibits a deficiency in physical inspection, test characteristics, or documentation.
- b. Establish and maintain documented procedures to identify and control nonconforming work in order to ensure that only conforming Work is used for constructions.
 - 1) Establish written procedures to define the methods and responsibilities for the identification, documentation, control, and processing of nonconforming equipment and material.
 - 2) Apply this system for identifying and controlling nonconforming Work to the actions associated with installation and construction, and to all material and equipment that, for any reason, fails to conform to the Specifications or other applicable and approved product descriptions.
 - a) Develop a mode of operation that emphasizes the identification, correction, and prevention of non-conformances in the Work.
 - 3) The Contractor quality control personnel have the authority to stop that portion of the Work that does not comply with the Contract requirements.
- c. Nonconformance Procedure:
 - 1) Comply with the requirements regarding nonconforming and defective work General Provisions, and with the requirements for nonconforming Work specified in this Section.
 - 2) Address the following within the nonconformance procedures to identify and prevent the use of nonconforming items/materials:
 - a) Define "nonconformance".
 - b) Methods of identifying non-conformances.
 - c) Nonconformance reporting requirements that include immediate verbal notification to the AR followed submission of a written Nonconformance Report to the AR.
 - d) Application and removal of nonconformance status tags.
 - e) Evaluations/recommendations.
 - f) Physical segregation, removal from jobsite, or reassignment of nonconforming items to lesser applications.
 - (1) Nonconformance items to be reassigned to lesser applications must be previously approved by the AR.
 - g) Cause of non-conformance.
 - h) Corrective action to be taken.
 - 3) Nonconformance Report Log:
 - a) Develop, maintain, and periodically submit a Nonconformance Report Log to the AR containing, at a minimum, the following information to enable tracking of all Nonconformance Reports:
 - (1) Sequential, unique nonconformance report number.
 - (2) Date issued.
 - (3) Originator.
 - (4) System, affected/drawing number/serial number.

- (5) Brief description of the nonconformance and its source (e.g. Supplier, Subcontractor, welder).
- (6) Recommended and approved disposition.
- (7) Verification of corrective action.
- (8) Date closed.
- (9) Contractor Quality Control Manager's initials.
- (10) Remarks, as applicable.
- b) The disposition of all Nonconformance Reports must conform to the requirements of the required corrective action as specified in Subparagraph 1.09.D.7.
- 7. Corrective Action [FTA Quality Element 12]:
 - a. The resolution of nonconforming item/material issues must be approved by the AR with input from the Contractor's project management and quality assurance personnel.
 - 1) Assign corrective action dispositions to Nonconformance Reports as follows:
 - a) REPAIR Nonconforming items or Work that are restored to a conforming condition by alternative means.
 - b) REWORK Nonconforming items or Work that are restored through additional normal processing.
 - c) USE-AS-IS Nonconforming items or Work that are to be used in its current condition.
 - SCRAP Nonconforming items that do not meet requirements and cannot be practically assigned REWORK or REPAIR dispositions to meet requirements.
 - Re-inspect items having Nonconformance Reports assigned either a REPAIR or REWORK disposition in accordance with original requirements.
 - Submit Nonconformance Reports with dispositions of REPAIR of USE-AS-IS to the AR for approval prior to the implementation of corrective action.
 - a) The Authority may seek compensation for items assigned either a REPAIR or USE-AS-IS disposition.
 - 4) Immediately segregate items assigned a SCRAP disposition from conforming material, and remove them from the jobsite within 24 hours of disposition, as practicable.
 - b. Establish and maintain written procedures of investigating the cause of nonconforming Work and for the corrective action needed to prevent recurrence of nonconforming Work.
 - 1) Investigate the root cause of nonconforming conditions and take the corrective actions needed to prevent recurrence.
 - 2) Ensure that corrective actions are completed in a timely fashion and that they are effective.
 - 3) Provide for analyzing processes to detect and eliminate potential causes of nonconforming work.
 - 4) Initiate preventative actions to deal with problems at a level corresponding to the risks encountered.

- 5) Include measures for implementing and recording changes in procedures resulting from corrective action.
- E. Failure to Perform:
 - 1. In the event the Contractor fails to adequately perform any or all of the provisions of this Section, the Authority, at its sole discretion, reserves the right to have the AR perform any or all of the provisions in this Section and back charge the Contractor for the actual cost to the Authority of such services.
 - a. This remedy for the Contractor's failure to perform is in addition to any other right or remedy available to the Authority under this Contract.
 - b. Refer to General Provisions, for additional information regarding the Authority's remedies.
- F. Manufacturer's Field Services: Where indicated, engage a manufacturer's representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing to the AR within five (5) working days after the activity.
- G. Quality Control Engineer's Responsibilities: Cooperate with the AR and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
 - 1. The Quality Control Engineer shall perform all services independent of the Contractor and shall report directly to the AR. The services performed are for the benefit of the Authority and shall be executed in strict accordance with the Contract Documents.
 - 2. The Quality Control Engineer shall be responsible for performing all Quality Control testing and inspection requirements specified in the Contract Documents, required by code, and required by jurisdictional agencies.
 - 3. The Quality Control Engineer shall report all testing and inspection results directly to the AR independent of the results provided by copy to the Contractor.
 - 4. Notify AR and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 - 5. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 - 6. Submit a certified written report, in duplicate, of each test, inspection, and similar quality control service directly to the AR. One copy shall be provided to the Contractor.
 - 7. Do not release, revoke, alter, or increase requirements of the Contract Documents or approve or accept any portion of the Work.
 - 8. Do no perform any duties of the Contractor or AR.
 - 9. The Quality Control Engineer shall perform quantity verifications as directed by the AR.
- H. Cooperate with agencies performing required tests, inspections, and similar quality control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

- 1. Access to the Work.
- 2. Incidental labor and facilities necessary to facilitate tests and inspections.
- 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
- 4. Facilities for storage and field-curing of test samples.
- 5. Delivery of samples to testing agencies.
- 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
- 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- I. Coordination: Coordinate sequence of activities to accommodate required quality control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, the Contractor shall repair damaged construction and restore substrates and finishes.
- B. Provide materials and comply with installation requirements specified in other Sections of these Specifications. Restore patched areas and extend restoration into adjoining areas in a manner that eliminates evidence of patching.
- C. Protect construction exposed by or for quality control service activities.
- D. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality control services.

END OF SECTION

SECTION 01550

ACCESS ROADS, PARKING AREAS AND PARKING CONTROL

PART 1 GENERAL

1.01 SUMMARY

A. This work shall consist of maintaining and protecting traffic through areas of construction, public and private entrances, constructing and obliterating detours, and protecting the traveling public within the limits of the project in accordance with the contract documents.

1.02 RELATED SECTIONS

- A. Section 01560 Temporary Barriers and Enclosures
- B. Section 07180 Traffic Coatings
- C. Section 07190 Water Repellents
- D. Section 09910 Traffic Striping and Painting

1.03 REQUIREMENTS

- A. Contractor:
 - 1. Maintain vehicular parking to site and within site that are not under construction.
 - 2. Remove temporary equipment and facilities when no longer required.
 - 3. Restore grounds to original conditions.

1.04 MATERIALS

- A. Signalization, barricades, channelizing devices, safety devices, and pavement markings shall conform to the requirements specified in Section 01 56 00, and the Virginia Work Area Protection Manual except where otherwise indicated. Retro reflective surfaces shall conform to the requirements of Virginia DOT Sections 235, 247, and 702, as applicable.
- B. All signage and pavement markings at facilities located in the state of Maryland shall comply with "Standard Specifications for Construction and Materials" dated January 2001, as published by the Maryland Department (MDOT) of Transportation State Highway Administration (SHA) and latest revisions or additions, including specifications herein, and latest revisions.
- C. Temporary pavement markers shall conform to the requirements of Virginia DOT Section 235 and Maryland DOT.

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- D. Construction pavement markings shall conform to the requirements of Virginia DOT Section 246 and Maryland DOT.
- E. Construction signs shall conform to the requirements of Virginia DOT Section 247 and Maryland DOT.
- F. Post mounted and wall mounted traffic control and informational signs, traffic control signals, traffic cones and drums, flares and lights as required by the Authority.
- G. Temporary traffic striping and markings shall be in accordance with Specification Section 09910 and the Authority.

1.05 ROADS AND PARKING AREAS

- A. Provide access for emergency vehicles. Maintain driveways a minimum of 15 feet wide between and around combustible materials in storage and mobilization areas.
- B. Keep fire hydrants and water control valves free from obstruction or damage and accessible for use.
- C. Additional access roads other than provided herein, requested by any Contractor shall be at the requesting Contractor's expense and approved by the AR. Removal and restoration of the area to original condition shall also be at that contractor's expense.

1.06 TRAFFIC CONTROL

- A. Provide and operate traffic control and directional signals in all areas under Coordinating Contractor's control.
- B. Provide traffic control in accord with appropriate articles in the IDOT Standard Specifications for Road and Bridge Construction, Section 700, and National Manual on Uniform Traffic Control Devices.
- C. Construction Parking Control.
 - 1. Control vehicular parking to preclude interference with public traffic or parking, access by emergency vehicles, using agency's operations or other construction operations.

PART 2 EXECUTION

2.01 CONSTRUCTION

A. Construction methods at Contractor's option for temporary facilities which will be removed when no longer needed; adequate to provide specified results.

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- B. Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, and Authority's operations.
- C. Maintain vehicular access to and through parking areas not affected by construction.
- D. Prevent construction parking vehicle on or adjacent to access roads or in nondesignated areas.

2.02 MAINTENANCE

- A. Maintain roads, walks and parking areas in a sound, clean condition. Maintenance shall consist of maintaining roadways to allow customers to all other areas that are not under construction.
- B. Repair or replace all damages during progress of construction work.

2.03 REMOVAL

- A. Completely remove temporary materials or construction when access needs can be met by use of permanent construction or when directed by AR.
- B. Restore areas to original conditions at completion of work as directed by AR.

2.04 TRAFFIC SIGNS AND SIGNALS

- A. At approaches to site and on site, install at crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.
- B. Relocated as Work progresses, to maintain effective traffic control.

END SECTION

01550-3	
ACCESS ROADS, PARKING AREAS AND PARKING CONT	ROL

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	01550-4
ACCESS ROADS, PARKING	AREAS AND PARKING CONTROL

AMENDMENT 1

SECTION 01560

TEMPORARY BARRIERS AND ENCLOSURES

PART 1 GENERAL

1.01 SUMMARY

- A. This Section includes:
 - 1. Temporary Barricades and Warning Signs.
 - 2. Temporary Safety Fencing.
 - 3. Construction Railings.
 - 4. Pollution Control.
 - 5. Protection of Work, Personnel and Materials.

1.02 RELATED SECTIONS

A. Section 01550 – Access Roads, Parking Areas and Parking Control

1.03 QUALITY ASSURANCE

- A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including but not limited, to the following:
 - 1. Building Code requirements.
 - 2. Health and safety regulations.
 - 3. Utility company regulations.
 - 4. Owner insurance company regulations/requirements.
 - 5. Police, Fire Department and Rescue Squad rules.
 - 6. Environmental protection regulations.
 - 7. City ordinance and regulations.

1.04 VEHICULAR ACCESS AND PARKING

A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles in accordance with Section 01550.

PART 2 PRODUCTS

2.01 MATERIALS

A. Provide new materials. Undamaged, previously used materials in serviceable condition may be used if approved by Authority. Provide materials suitable for use intended.

PART 3 EXECUTION

3.01 TEMPORARY BARRICADES AND WARNING SIGNS.

- A. Roads, Parking Areas and Sidewalks:
 - 1. The Contractor shall provide, erect and maintain as necessary for his work, strong and suitable barricades, danger signals, signs, warning lights and other traffic control devices, and shall take all necessary precautions for the protection of the work and safety of the public.
 - 2. All barricades and obstructions shall be illuminated at night and all lights for this purpose shall be kept illuminated from sunset to sunrise.
 - 3. Sufficient barricades shall be erected to keep vehicles from being driven on or into work under construction.
 - 4. The Contractor shall erect warning signs in advance of any place on the project where operations may interfere with the use of the facility by vehicular or pedestrian traffic, and at all other points where the new work crosses or coincides with an existing roadway, traffic lane(s) or pedestrian walkways. Such warning signs shall be constructed and erected in accordance with the Manual on Uniform Traffic Control Devices, or as directed by the AR.
 - 5. The Contractor shall furnish, erect and maintain warning and direction signs in the number required by the AR and at locations designated by the AR throughout the limits of the project. For street and highway type traffic, the signs shall conform in every respect to the requirements of the Manual on Uniform Traffic Control Devices (MdMUTCD) for Streets and Highways. Signs must be freshly painted and adequately reflectorized before being placed on any project. No work may be performed or begun unless an adequate number of signs of the proper category are in place.
 - 6. In cases where the Contractor's sequence of operations results in grade differentials which would be hazardous to vehicular or pedestrian traffic the Contractor shall, at the direction of the AR provide suitable substantial barriers to the extent determined by the AR.
- B. The Contractor's responsibility for the maintenance of barricades, signs and lights shall continue until the Authority accepts the Work. The Contractor shall provide and maintain other warning signs and barricades in other areas and around their respective work as may be required for the safety of all those employed in the work, plant operating personnel, or those visiting the site.
- C. Materials that constitute temporary barricades, signs and lights are property of Contractor.

01560-2

3.02 TEMPORARY SAFETY FENCING

- A. Protective Safety Fencing:
 - 1. The Contractor shall provide and erect, when required or shown on the Contract Drawings or directed by the AR, temporary project safety fencing at the work site.

- 2. The safety fencing shall be a high visibility, orange colored, high density polyethylene grid or approved equal, a minimum of 4 feet high, supported and tightly secured to steel posts located on maximum 6-feet centers.
- B. Fencing shall be maintained by the Contractor during the life of the Contract and, upon completion and acceptance of the work, shall become the property of the Contractor and shall be removed from the work site.

3.03 CONSTRUCTION RAILINGS

- A. Provide construction railings at least 42" in height and sufficient to direct pedestrians around construction areas.
- B. Railing shall be maintained by the Contractor during the life of the Contract and, upon completion and acceptance of the work, shall become the property of the Contractor and shall be removed from the work site

3.04 POLLUTION CONTROL

- A. The Contractor shall prevent polluting air with dust and particulate matter.
- B. The Contractor shall provide systems for control of atmospheric pollutants to prevent toxic concentrations of chemicals and to prevent harmful dispersal of pollutants into the atmosphere.
- C. All chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, or reactant of other classification, must show approval of the EPA and other recognized certifying agencies. Use of all such chemicals and disposal of residues shall be in strict conformance with regulatory requirements.
- D. All Contractor equipment used during construction shall conform to all current federal, state and local laws and regulations.

3.05 PROTECTION OF WORK, PERSONNEL AND MATERIALS

- A. During the progress of the work and up to the date of final payment, the Contractor shall be solely responsible for the care and protection of all work, personnel, equipment and materials covered by the Contract.
- B. In order to prevent damage, injury or loss, actions taken by the Contractor shall include, but not be limited to, the following:
 - 1. Store materials, supplies, and equipment in an orderly, safe manner that will not interfere with the progress of the work or the work of any other Contractor or utility service company.
 - 2. Provide suitable storage facilities for all materials that are subject to injury by exposure to weather, theft or breakage.

- 3. Place upon the work or any part thereof only such loads as are consistent with the safety of that portion of the work.
- 4. Clean up frequently all refuse, rubbish, scrap materials, and debris caused by his operations, to the end that at all times the site of the work shall present a safe, orderly and workmanlike appearance
- C. The Contractor shall protect the existing work and material from damage by his workmen and shall be responsible for repairing any such damage at no additional cost to the Authority.

3.06 CLEANING

A. Remove debris resulting from work specified herein from project site.

END OF SECTION

INDEX OF DRAWINGS - III

SUCCESTED I II,		
GROSVENOR-ST	RATHMORE PARKING GARAG	iΕ
SHEET No.	DWG. No.	TITLE
M1269-276	A11P-TM-001	SUGGESTED GROUND FLOOR PHASING PLAN
M1269-277	A11P-TM-002	SUGGESTED SECOND FLOOR PHASING PLAN
M1269-278	A11P-TM-003	SUGGESTED THIRD THROUGH FIFTH FLOOR TYPICAL PHASING PLAN
M1269-279	A11P-TM-004	SUGGESTED SIXTH FLOOR PHASING PLAN
SHADY GROVE N	IORTH PARKING GARAGE	
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M1269-280	A15P-TM-001	SUGGESTED GROUND FLOOR PHASING PLAN
M1269-281	A15P-TM-002	SUGGESTED SECOND THROUGH SIXTH FLOOR TYPICAL PHASING PLAN
M1269-282	A15P-TM-003	SUGGESTED SEVENTH FLOOR PHASING PLAN
COLLEGE PARK	PARKING GARAGE	
SHEET No.	DWG. No.	TITLE
M1269-283	E09P-TM-001	SUGGESTED GROUND FLOOR PHASING PLAN
M1269-284	E09P-TM-002	SUGGESTED SECOND THROUGH FIFTH FLOOR TYPICAL PHASING PLAN
M1269-285	E09P-TM-003	SUGGESTED SIXTH FLOOR PHASING PLAN
FRANCONIA-SPR	INGFIELD (EAST) PARKING G	ARAGE
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M1269-286	J03P-TM-001	SUGGESTED SECOND AND KISS & RIDE FLOOR PHASING PLAN
M1269-287	J03P-TM-002	SUGGESTED THIRD THROUGH FIFTH FLOOR TYPICAL PHASING PLAN
M1269-288	J03P-TM-003	SUGGESTED SIXTH FLOOR PHASING PLAN

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WASHINGTON METROPOLITAN AREA TRANSIT AUTHOR A Gannett Fleming/P JOINT VENT

OFFICE OF CHIEF, INFRASTRUCTURE SERVICES DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES

APPROVED CHIEF ENGINEER

DATE

SUBMITTED PROJECT MANAGER

DATE	AS SHOWN	drawing no. G-003A	SHEET NO. M1269-3A
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			contract no. FQ15090





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GROUND FLOOR PHASING PLAN

TM-001 SCALE: 1/20"=1'-0"



CONSTRUCTION PHASING NOTES:

- (A)

···(B)

C

·(D)

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1. FOR CONSTRUCTION PHASING NOTES, SEE DRAWING NO.

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CONTRACT NO.

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<u>NOTE:</u>

1. FOR CONSTRUCTION PHASING PLAN NOTES, SEE DRAWING NO. A15P-TM-001.



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APPROVED CHIEF ENGINEER

DATE

SUBMITTED PROJECT MANAGER

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- 9. MAINTAIN AT LEAST TWO MEANS OF EGRESS AND ACCESS TO ELEVATORS FROM EACH PARKING LEVEL AT ALL TIMES. CONTRACTOR SHALL PROVIDE TEMPORARY SIGNAGE DIRECTING PATRONS TO OPERATIONAL STAIR AND ELEVATORS.
- 10. CONTRACTOR TO PROVIDE A MINIMUM OF TWO WEEKS NOTICE PRIOR TO RELOCATION OF ALL HANDICAP PARKING SPACES. CONTRACTOR TO PROVIDE TEMPORARY SIGNS AS PER M.U.T.C.D. STANDARDS, BUT NO SIGN SHALL BE LESS THAN 2'-0" BY 2' -0" IN SIZE.
- 11. PHASING BASED ON POTENTIAL NEED FOR SHORING TWO LEVELS BELOW THE WORK AREA FOR BEARING PAD REPLACEMENT FOR EACH PHASE AREA, NO MORE THAN THREE LEVELS WITHIN PHASE AREA SHALL BE CLOSED AT A TIME (ONE FOR WORK AND TWO FOR SHORING BELOW) IN ORDER TO MINIMIZE OCCUPIED PARKING SPACES. CONTRACTOR SHALL SUBMIT SHORING PLANS AND PROCEDURES.
- 12. CONSTRUCTION HOURS OF WORK SHALL CONFORM TO CONSTRUCTION GENERAL PROVISIONS IN VOLUME 1 -BIDDING AND CONTRACTING REQUIREMENTS.

PHASE NO.	ZONE	OCCUPIED PARKING SPACES
(1)		43
(2)		34
(3)		14
(4)		26
(1)		42
(2)		26
(3)		_

CONTRACT NO. FQ15090

DATE	SCALE AS SHOWN	drawing no. J03P–TM–001	SHEET NO. M1269-286						
URE		PHASING PLAN							

REHABILITATION OF WMATA PARKING FACILITIES

STRUCTURAL-FRANCONIA-SPRINGFIELD (EAST) SUGGESTED SECOND AND KISS & RIDE FLOOR



			REFERENCE DRAWINGS			REVISIONS					
DESIGNED	D.D.	06/01/15	NUMBER	[DESCRIPTION	DATE	BY		DESC		
		DATE				6/1/15	JDP	ADDED	DRAWING		
DRAWN	D.C.	06/01/15									
CHECKED	<u> </u>	06/01/15									
		DATE 06 /01 /15									
APPROVED	J.D.P.	 DATE									
		BATE									

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF CHIEF, INFRASTRUCTURE SERVICES DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES

G A Gannett Fleming/Parsons **JOINT VENTURE**

APPROVED CHIEF ENGINEER

AMR IBRANIM AL

DATE

SUBMITTED PROJECT MANAGER <u>NOTE:</u>

1. FOR CONSTRUCTION PHASING NOTES, SEE DRAWING NO. J03P-TM-001.

PHASE NO.	ZONE	OCCUPIED PARKING SPACES
(1)		99
(2)		14
(1)		96
(2)		41



CONTRACT NO.



WASHINGTON METROPOLITAN AREA TRANSIT AUTHOR

A Gannett Fleming/ JOINT VEN

DATE	AS SHOWN	DRAWING NO. JO3P-TM-003	SHEET NO. M1269–288
Parsons TURE	SUGGESTED SIXTH FLOOR PHASING PLAN		
RITY	REHABILITATION OF WMATA PARKING FACILITIES STRUCTURAL-FRANCONIA-SPRINGFIELD (EAST)		
			FQ15090

PHASE NO.	ZONE	OCCUPIED PARKING SPACES
(1)		75
(2)		14
(1)		86
II (2)		2