

Exhibit “F”

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY



WMATA New Improvements

Division 01 – General Requirements

Braddock Road Metrorail Station – 700 N. West Street, Alexandria, VA 22314

Issue date: September 2026

OFFICE OF REAL ESTATE AND DEVELOPMENT

SECTION 01 11 00 – TECHNICAL REQUIREMENTS

PART 1 – GENERAL

1.01 SUMMARY

A. Scope of Work:

1. This WMATA Joint Development Site Division 01 – General Requirements (the “**Specifications**”) defines the technical and process requirements that the Developer is required to adhere to in connection with the Project Coordination Agreement to which these Specifications are appended. These Specifications pertain to new transit infrastructure and other transit-related infrastructure on, above, under, and/or adjacent to WMATA’s property.
2. The Developer shall fund and perform the furnishing of all labor, equipment, tools, materials, and supervision for the planning, permitting, design, development, construction, staging/sequencing, coordination, completion, testing, commissioning, and handover of modified Metro Infrastructure (busway, bus bays/stops, bicycle facilities, art work, and interim and final transit plaza pedestrian improvements located at Braddock Road Metrorail Station (700 N. West Street, Alexandria, VA 22314).
3. A basic principle that governs the Project is that WMATA Metro Facilities and supporting infrastructure must remain operable throughout construction. Other WMATA facilities must be relocated or replaced before any existing Metro Facilities and supporting infrastructure can be taken out of service. Developer shall follow the Maintenance of Traffic (MOT) in the Approved Design.
4. In connection with the Developer’s Private Improvements in the Joint Development Agreement (JDA), the Specifications apply to the extent any aspect thereof: (A) affects the integrity, functionality, efficiency, safety, operation, maintenance, legal compliance, cost or profitability of WMATA’s business, customers, operations or activities; (B) lies within the WMATA Zone of Influence or otherwise affects WMATA Facilities including the WMATA Existing Infrastructure, WMATA Reserved Areas, ingress/egress to WMATA Facilities, and similar matters; (C) affects any of WMATA’s adjacent property; and (D) with respect to the design and construction of interim and permanent WMATA New Improvements and any Private Improvements to the extent within the WMATA Zone of Influence is not in compliance with the WMATA Design and Construction Standards. In all other instances within WMATA’s Zone of Influence, the Developer’s Private Improvements will be designed and constructed in accordance with WMATA’s Adjacent Construction Project Manual.
5. The Developer shall perform the design and construction of the WMATA New Improvements in accordance with the following requirements and specifications, which are known at this time and will be subject to change based on further due diligence to be conducted by the Developer to meet regulatory requirements:
 - a. Requirements for existing WMATA Facilities to remain:
 1. Station entrance, guideway, platforms, and emergency exits.
 - i. Station entrance is in use and cannot be relocated or removed.
 - ii. An unrestricted public access path shall be from the street to the station entrance at all times. Maintain walkway of equal width to the exit width. This requirement is per building code. If pathway must be narrowed conduct NEPA 130 Egress analysis and implement recommendation mitigations.

- iii. Access passageway, platforms, and tracks are in use and cannot be relocated or removed.
- iv. Protect the structural integrity and Zone of Influence (ZOI) of the existing structure from any proposed structure, construction staging, or excavation.
- v. Sustain Metro maintenance operations, emergency response access, and mitigating the potential impact on the existing structure both during and after construction.
- vi. Maintain WMATA vehicle access to station for maintenance operations.
- vii. Fire escape routes shall not be obstructed.
- viii. Maintain clear access for the fire department to the Metro fire standpipe system/Siamese connection and fire alarm boxes.

2. Site

- i. Relocation of existing utilities and easements as necessary to support proposed development.
- ii. Relocation of existing trailer-mounted emergency generator with a 430-gallon diesel sub-base tank in front of the metro station, if one is present, as necessary to support metro station operational continuity throughout and post-construction.
- iii. Maintain access to all fire hydrants during and after construction.
- iv. Site utility services shall not be interrupted or disturbed without written permission from Metro.
- v. Maintain access to site utility services and equipment during and after construction.
- vi. Inverted U-racks and bicycle lockers shall remain in continuous use throughout construction. Racks may be temporarily relocated throughout construction. Both existing racks and lockers will be relocated permanently to locations to be determined during design review.
- vii. There is currently a Capital Bikeshare station with 23 docks located on-site. These docks shall remain in continuous use throughout construction. Docks and kiosk may be temporarily relocated throughout construction. The bikeshare station will be relocated to a final location to be determined during design review.
- viii. In their final locations, provide 6 feet of space in front of bicycle racks and bikeshare station in addition to an accessible pathway to allow for regular use.

b. Requirements for WMATA Facilities and Developer Private Improvements in the Approved Development Plan:

1. Joint Development Site

- i. Account for existing WMATA surface and underground facilities to remain, including both temporary construction needs and permanent structural loads.
- ii. To the greatest extent possible, final site grading shall direct water away from WMATA Facilities.

- iii. Any new or changes to traffic signals or signage required at the intersections along East Braddock Road and North West Street to facilitate safe turning movements for buses, must be designed and installed based on local jurisdictional standards.
- iv. Install high visibility crosswalks and ADA curb ramps on all legs at intersections and along East Braddock Road and North West Street around the perimeter of the site, subject to approval by local jurisdiction and to be determined during design review. All corners on all four legs of intersections shall have two (2) separate ramps for pedestrian crossings, each pointing in the walking direction.
- v. Relocate 23-dock bikeshare station to a permanent location if impacted by the final locations of the new building(s) and/or transit plaza, subject to approval by the landowner or appropriate jurisdiction and to be determined during design review. When permanently relocating the bikeshare station, reserve an additional 10 feet at the end for a future 4-dock expansion plate.
- vi. Install an extended overhang from the façade at the station entrance or a cover over the short-term bicycle racks, to be determined during design review.
- vii. The City of Alexandria is currently developing planning and concept designs for the “Braddock Road Trail Access and Corridor Improvements” project along Braddock Road between Russell Road and North West Street, which will include both shared and striped bike lanes. The Developer will relocate the northern curblin on E. Braddock Road to incorporate the City of Alexandria’s “Braddock Road Trail Access and Corridor Improvements”.
- viii. Incorporate a two-way cycletrack, one-way protected bike lane, or bike trail along E. Braddock Road, to be determined during design review, and wider sidewalks with appropriate tree panels into the streetscapes around the perimeter of the site, consistent with City of Alexandria requirements. To the extent possible, include separate curb ramps for bicycles and pedestrians at crosswalks that cross bicycle lanes or trails.
- ix. A transit plaza shall be constructed between joint development building(s), providing pedestrian and bicycle connections to the station entrance from North West Street.
- x. Install dedicated bicycle and pedestrian pathways, through use of signage, striping, and materials, from E. Braddock Road to the station entrance on the west side of the busway. This area will tie into the bike facilities and public realm on E. Braddock Road. Design to be determined during design review.
- xi. Pedestrian and bicycle improvements shall be constructed, providing WMATA-compliant sidewalks connections to the station transit plaza from the pick-up/drop off areas, East Braddock Road, North West Street and the bus facilities.
- xii. Clear lines of sight to the existing station entrance shall be maintained from the pick-up/drop off, bus bays, and through the plaza, during and after construction, and outlined in the MOT.
- xiii. The existing kiss and ride and portions of the busway that will no longer be used following completion of this scope, shall be demolished. The site shall be cleared, graded and seeded.
- xiv. Identify location in coordination with WMATA and City of Alexandria for the relocation and/or installation of new art work on the joint development site or WMATA property.

2. Busway

- i. Existing busway facilities will be reconfigured consistent with the Approved Development Plan. Existing on-site recirculation lane will be demolished.
- ii. Remove the existing southernmost curb cut to the busway and shift to the west on E. Braddock Road, consistent with the Approved Development Plan. Northernmost existing busway entry point will remain generally in the same location but will be reconfigured consistent with the Approved Development Plan.
- iii. Five (5) operational bus bays will be replaced in revised locations, consistent with the Approved Development Plan. Additionally, two (2) layover bus spaces will be introduced at the northern entrance of the busway to support layover operations. The busway shall be one-way southbound and bus-only. The existing busway recirculation lane is to be removed. Buses will complete the recirculation around the site on the roadway network.
- iv. Existing bus service to remain operational at all times throughout design and construction. Existing, temporary, and permanent proposed busway and bus stop locations may be used in combination. No interruption to bus service.
- v. Bus access to and from the station will include a total of seven (7) bus bays/stops. Bus bays shall consist of a minimum of all of the following:
 - a) Busway shall be designed with concrete for overweight vehicles.
 - b) Install a new traffic signal at the busway exit to E. Braddock Road. The signal will have advanced signage, warnings, and/or beacons on the west side of the bridge to be determined in coordination with the City of Alexandria. Remove old crosswalks and install new crosswalks at the new signalized intersection in locations to be determined during design review.
 - c) Five (5) revenue bus bays with shelters along the busway. Bus bays will be designed for 40-foot intercity buses with at least one (1) operational bus bay designed for a 60-foot articulated bus using the applicable standard design lengths for that bay type.
 - d) Two (2) layover bus stops at the north entrance of the busway to support layover operations. At least one (1) layover space will be designed to accommodate a 60-foot articulated bus.
 - e) No private parking or connection to/from private parking may be mixed with busway.
 - f) The busway shall include lighting and video surveillance (CCTVs) and associated infrastructure and equipment. The specific quantity and locations to be determined during design review.
 - g) Entrance and exit to and from busway facilities shall have advanced design techniques to discourage entrance/exit of facilities by private vehicles and vehicles traversing the wrong direction.
 - h) Busway shall be designed using both 45-foot motorcoach and 60-foot articulated buses as design vehicles in the turning movement diagrams.

- i) Install two (2) movable elevated bus platforms for bike lanes in the locations of the existing bus stops on E. Braddock Road just west of the busway exit, subject to City of Alexandria approval.
 - vi. Enhanced design for pedestrian crosswalk across the busway entrance and exit. Differentiate and clearly mark crosswalk location.
 - vii. Nineteen (19) feet height clearance requirement above bus areas, if joint development building(s) or other structures are constructed over the busway.
 - viii. Provide and maintain clear signage informing all road users of vehicle restrictions applicable to the busway.
- 3. Kiss & Ride
 - i. Existing Kiss & Ride facilities including pavement, curbs, signs, meters, and shelter will be removed from the site.
 - ii. Future pick-up/drop-off activities will be provided in new curbside lanes along both sides of North West Street and the north side of East Braddock Road within the City of Alexandria's public right-of-way.
 - iii. At least one (1) on-street space will be striped as an ADA parking space, proximate to curb ramps, near the plaza between buildings and mid-block crossing, subject to City of Alexandria approval.
 - iv. The new parking lane along the northern curblane of E. Braddock Road will be integrated into the streetscape improvements and will utilize space reclaimed from the slip-lane closure. The new parking lane along the west side of North West Street will be created by restriping the curb lane, which is currently an operational through lane. Appropriate signage and restrictions for these curbside lanes to be determined in coordination with the City of Alexandria during design review.
- c. The Developer shall also design and deliver the WMATA New Improvements in accordance with all applicable:
 - 1. Permits, easements, and approvals from the Authority Having Jurisdiction (AHJ)
 - 2. Metro Infrastructure Design Standards:
 - i. WMATA Manual of Design Criteria (MDC)
 - ii. WMATA CAD and BIM Standards, latest adopted version
 - iii. WMATA Standard Specifications
 - iv. WMATA Station Area Planning Guide (SAPG)
 - 3. WMATA Standard Drawings/WMATA Design Directive Drawings, WMATA Metrorail System Signage Design Manual, WMATA Adjacent Construction Program Manual (ACPM), latest adopted version
 - 4. WMATA Bicycle Infrastructure Guidelines
 - 5. Current Adopted Codes, Standard, and Guidelines in the City of Alexandria, Virginia
 - 6. Current Adopted Zoning Regulations in the City of Alexandria, Virginia

7. NFPA 70, National Electric Code
8. WMATA Joint Development Program Guidelines
9. WMATA Construction Safety and Environmental Manual
10. Manual of Uniform Traffic Control Devices (MUTCD) Standards
11. AASHTO Guide for the Development of Bicycle Facilities, 5th Edition
12. Code of Federal Regulations – Occupational Safety and Health Administration (OSHA) Title 29, Parts 1900-1910.999
13. City of Alexandria Master Plan
14. Alexandria Mobility Plan
15. Alexandria Transit Vision Plan
16. The Code of the City of Alexandria, Virginia, 1981
17. WMATA's 10-Year Strategic Plan for Joint Development
18. WMATA Joint Development Policies
19. Federal Transit Administration Guidance on Joint Development
20. Flood Insurance Rate Map (FIRM)
21. U.S. DOT ADA Standards for Transportation Facilities
22. FTA ADA Circular C470.1
23. US Access Board: ADA Accessibility Guidelines for Buildings and Facilities This Specification:
 - i. All transit related facilities shall conform to the accessibility requirements documented in the U.S. Department of Transportation's ADA Standards for Transportation Facilities. All other facilities shall conform to the accessibility standards adopted by the local jurisdiction and to the 2010 ADA Standards for Accessible Design. Transit facilities include the pick-up drop off spaces on N. West St. The accessible curb side space(s) shall connect to the station entrance by the shortest possible route.
 - ii. The Developer may develop additional specifications that may apply to WMATA New Improvements to deliver a comprehensive specification which shall be submitted for review by WMATA in accordance with SECTION 01 11 20 - DESIGN AND PROGRAM REQUIREMENTS and SECTION 01 33 00 – SUBMITTAL PROCEDURES;
 - iii. The Designer(s) shall prepare all discipline-specific technical specifications not included in the WMATA Standard Specifications library. These specifications shall be comprehensive, technically accurate, and fully coordinated with the design drawings. They shall comply with all applicable codes, standards, and the professional standard of care. These industry standard specifications shall be organized and written in accordance with the Construction Specifications Institute (CSI) MasterFormat; and

24. All agreements entered between WMATA and the Developer in connection with the Project, including, but limited to the Joint Development Agreement and the Construction Agreement, (the “Agreements”), collectively referred to as the “Requirements”.
- d. The Developer shall perform the design and construction of the following site-specific tasks, including, but not limited to:
 1. Construction stake-out.
 2. Installation of all required sediment and erosion control measures.
 3. Site grading and construction of stormwater management facilities.
 4. All site utilities, including potable water, sewer line, treated and untreated groundwater, electrical work, communications, and storm drainage. Verify existing capacity. Relocate any existing utilities within the area of proposed construction.
 5. Site facilities including:
 - i. Busway and bus stops
 - ii. Bus shelters
 - iii. Curbside pick-up/drop-off areas
 - iv. Cross walks
 - v. Traffic control signals/signage
 - vi. Roadways, bike lanes, sidewalks, and curbs
 - vii. Interim and final transit plaza
 - viii. Bicycle facilities
 - ix. Signage
 - x. Lighting
 6. Footing and foundation, slabs, and appurtenances.
 7. Structural support system.
 8. Exterior and interior wall systems, windows, doors, etc.
 9. Interior rooms and spaces.
 11. Final grading and landscaping of site. Seeding and mulching of all disturbed areas.
 12. Final cleaning of all interior and exterior building areas to a broom-swept condition.
 13. All start-up, shakedown, and testing required to ensure that the operation of all components of the WMATA New Improvements systems run to the complete satisfaction of the Authority.
 14. Training of the WMATA staff on the operation of all components of the WMATA Improvements.

e. Minimum Requirements During Construction of the WMATA Facilities.

1. The Developer shall perform the scope of work in such a manner as to accommodate and maintain the use of the existing WMATA facilities.
2. The Developer shall provide unlimited and unimpeded access to WMATA personnel and contractors for the existing WMATA Facilities during construction operations.
3. The Developer shall provide the public with unlimited and unimpeded access to the existing station entrance, emergency exits, and all circulation elements during construction operations.
4. The Developer shall not modify the following existing and non-moveable infrastructure (“**Non-Moveable Existing Facilities**”) as they are critical to the operations and safety of the Existing Transit Use without explicit WMATA approval. Requirements for design and construction within WMATA’s Zone of Influence and modifications to the infrastructure are outlines within WMATA’s Adjacent Construction Program Manual.
 - i) Station Entrance
 - ii) Aerial guideway and platform
 - iii) Emergency exits
 - iv) Bus shelters, signs, trash receptacles
 - v) Fire Department Connection; and standpipes
 - vi) Fire hydrants
 - vii) Fire alarm boxes
 - viii) Any existing mechanical systems, equipment, and enabling infrastructure for WMATA’s Existing Non-Moveable Facilities.
5. Modifications to any of the above infrastructure shall be permitted and approved at WMATA’s sole discretion, provided that:
 - i) The Developer submits design calculations, drawings, specifications, catalog cuts and any other information necessary to fully describe the proposed modification.
 - ii) If the Developer proposes to permanently enclose any WMATA fan, emergency exit, exhaust/ventilation units, the enclosure must be designed with appropriate clearances and openings to accommodate the air circulation volumes equal to the design original capacity of the shaft and to meet all current codes and regulations. The proposed construction above or in front of WMATA’s ventilation units/areas must include projected air flow calculations accounting for the specific shaft type.
 - iii) The Developer submits calculations that are signed and stamped by a licensed mechanical engineer practicing in the State of Virginia.
 - iv) A permanent emergency path shall be provided and maintained at all times between the nearest public street and the station entrance to accommodate fire and rescue, WMATA emergency ingress / egress, and WMATA maintenance access.
 - v) The Developer obtains a WMATA Real Estate Permit, in accordance with the Real Estate Permit Process.
 - vi) The Developer submits and obtains approval of a Site-Specific Work Plan (SSWP), Maintenance of Traffic (MOT) permits, and Public Participation Plan.
 - vii) The Developer understands that they may be requested to provide additional due diligence, reports, and submittals and to perform any field tests necessary to verify the

adequacy of the modified system and the equipment performance upon review. Where a modification is approved, the Developer shall be responsible for maintaining original operation capacity of the equipment and the system impacted by the modification.

6. Developer shall provide the WMATA New Improvements in accordance with Metro's Infrastructure Design Standards, which includes the following documents: WMATA Manual of Design Criteria; WMATA Standard Specifications; and WMATA Standard Drawings; WMATA Design Directive Drawings; WMATA CAD and BIM Manual; WMATA Metrorail System Signage Design Manual; WMATA Bicycle Infrastructure Guidelines; and WMATA Station Area Planning Guide.
7. Developer shall supply all materials, management, supervisors, labor, equipment, inspections, and testing, and consult with WMATA, Authorities Having Jurisdiction, and other third parties in accordance with the Requirements.
8. Developer shall design and provide all communications equipment and systems (Video Surveillance, Network, Emergency Telephone, Public Address system, etc.) per the Metro Infrastructure Design Standards.
9. Subject to the provisions of the Joint Development Agreement and Construction Agreement, the Developer shall be fully responsible for dealing with existing site conditions, including soils, groundwater, and utilities, as required to complete the Project.
10. Developer shall immediately notify WMATA in writing to the extent that the Developer becomes aware of any defect in the WMATA Facilities that could impact the Work.
11. Developer and/or WMATA shall allow any third party (e.g., Utility Companies) on to the site as needed for the third party to perform works on the third party's infrastructure required in connection with the Project.
12. For all design and construction in connection with third-party infrastructure (e.g. Utility Companies) included as part of the Work, the Developer shall comply with the respective third-party design and construction standards and procedures.
13. Subject to the provisions of the Construction Agreement, the Developer shall arrange and carry out all coordination of third-party works directly with the applicable third-party or their Contractor, as designated by the third party.
14. Developer shall comply with safety barriers, anti-trespass barriers, noise mitigation measures, and other setbacks, both horizontal and vertical, from the Project Rail Corridor, and undertake the required technical reviews as required by the WMATA Adjacent Construction Project Manual and all relevant industry best practices and standards.
15. Following WMATA's approval of the final plans and specifications, any changes to infrastructure or other development proposed to be constructed by the Developer on any portion of the Joint Development Site that materially and adversely affect the WMATA New Improvements shall require the prior written approval of WMATA, which approval shall be granted or withheld in WMATA's sole and absolute discretion. Notwithstanding anything contained herein to the contrary, Developer shall not construct any infrastructure or other Private Improvements on the WMATA Property prior to Closing as defined in the Joint Development Agreement.
16. SECTION 01 11 00 of the Specifications is not intended to describe minor, obvious, or customary requirements that are common to all building and site developments, rather it is focused on the requirements relating to the Project that are important, unusual, or not obvious.
17. WMATA will coordinate all public communication and outreach efforts for the Project (e.g., signs or leaflets to announce electrical shutdowns) with assistance from the Developer. WMATA will require the Developer to provide information in preparation of

the customer communications plan and materials. All information to the public regarding the Project shall be reviewed and must be approved by WMATA prior to release.

18. Ensure that the power supplied to all electrical systems and assets owned and maintained by WMATA originates from the station's AC electrical room.
19. Design must comply with latest WMATA design criteria, technical specifications and standard drawings.
20. Electrical plans must include panel schedules, conduit routing, grounding & bonding, lighting calculations, and photometric in accordance with WMATA design criteria and standards.
21. Electrical requirements must include electrical testing in accordance with WMATA technical specifications and ANSI/NETA standards.
22. Developer shall provide agendas five (5) business days prior to a meeting for WMATA review. Meeting minutes are required within 3 days of the meeting.
23. Per Adjacent Construction Project Manual (ACPM) section 2.02F submit a JDAC support request form 30 days in advance of activities requiring crew support and switching orders for the following locations including but not limited to:
 - Access to metro facilities
 - Panels
 - Roadway
 - Electrical/communication rooms
 - A/C switch gear room
 - Traction Power Sub Station
 - Tie breaker
 - Ventilation shafts
 - Back of house facilities
 - Non wayside control access facilities
24. Per section 7.12G requests for WMATA support and for scheduled power outages must be submitted for the following non-wayside work:
 1. All emergency, corrective, or modification work as reviewed, coordinated, and accepted by WMATA; and
 2. Any work adjacent to energized cables and other electrical equipment.Except for emergency situations, the ODC must comply with scheduling of power outage(s) and crew support personnel request procedures.

B. Spare Parts Allowance

1. Developer shall provide manufacturer's recommended spare parts for all components and systems required for this project.
- C. Scaffolding used must be designed for egress and approved and stamped by a Professional Engineer licensed in the jurisdiction where the scaffolding will be constructed/installed.**
- D. All dry standpipes must remain in service and accessible during the project duration.**

- E. The Developer shall submit a salvage plan, if applicable, as follows:
1. The Developer shall coordinate with WMATA and submit a list of all potential items for salvage to include, at a minimum:
 - a. all electrical, lighting, IT, and communication equipment,
 - b. mechanical equipment,
 - c. fiber and electrical cables, and
 - d. architectural elements including, but not limited to, metal stairs, swing doors, locksets and handrails,
 - e. bus stops, bus shelters, parking equipment, and other site fixtures,
 - f. signage.
 2. The salvage plan shall be reviewed by WMATA department managers and finalized with delivery locations identified on WMATA property and WMATA shall designate temporary storage locations at the construction site to coordinate removal.
 3. The Developer shall maintain property control records for materials or equipment identified for salvage and shall be responsible for the storage and protection of materials and equipment and shall replace materials and equipment, which are broken or damaged during construction operations as the result of negligence or while in the Developer's care.
 4. Salvaged materials shall be packaged and protected for transport, bag and tag all nuts, bolts, connectors, etc. The Developer shall provide all rigging, transport and handling. WMATA shall inspect delivery and provide a delivery receipt for all salvageable material returned to WMATA.
 5. Salvaged material not identified for reuse shall become the property of the Developer and shall be removed from WMATA property. WMATA shall inspect all non-returned salvageable material prior to removal from site.
 6. The Developer shall provide record photos of and inventory list for the delivery of all materials salvaged.
- F. If Developer and WMATA agree to re-use any parts or components of the WMATA Existing Facilities as part of the WMATA New Improvements, the parties shall conduct a joint inspection of the relevant portion of the WMATA Existing Facilities prior to it being disconnected. Developer must provide WMATA Notice at least sixty (60) Business Days prior to any date it desires to disconnect that part of the WMATA Existing Facilities so the parties may schedule such joint inspection. Within ten (10) Business Days after the date of such inspection, WMATA shall deliver a draft certificate of the condition of the WMATA Existing Facilities to Development Project Manager which shall include, without limitation, a list of all of the WMATA Existing Facilities parts or components that are intended to be included in the WMATA New Improvements and the condition of each such part or component. Developer shall review such draft certificate and deliver to WMATA within five (5) Business Days after receipt thereof a Notice either notifying WMATA that it approves such certificate or identifying any concerns it has with the draft certificate. If Developer disapproves the certificate or identifies any concerns therewith, the parties will work together to resolve the same until such time as the certificate is agreed upon in writing by both parties in their reasonable discretion. Developer shall not disconnect the WMATA Existing Facilities until both parties have signed such certificate.
- G. The Project shall function as an integral part of and be fully compatible with the existing WMATA system.
- H. Related Work Specified Elsewhere:
1. The Developer shall review this specification in its entirety to become familiar with the work required within the other Divisions.

DAYS/HOURS OF WORK

- A. The standard work week for the project will be 5 consecutive 8-hour days Monday-Friday, with the work scheduled between 7 AM to 4 PM or as defined in Section 01 14 10, ACCESS TO SITE.
- B. Provide WMATA 7 Days advance notice prior to changing shift hours and 48 hours advance notice for planned work shifts outside the established work week and workday.

SITE LOGISTICS

- A. Access to and egress from the construction site and any other construction areas within WMATA property shall be through designated entrances only. Personnel entering via any Tracks Facility shall not enter the roadway, unless pre-approved and shall be RWP trained personnel.
- B. Developer shall submit a work plan that addresses WMATA SAFE and City of Alexandria's Fire Department requirements.
- C. Construction equipment and materials shall be staged at one or more of the following locations:
 - 1. Within public right-of-way at street level at locations determined by the Developer, and as approved by the Authority.
 - a. The Developer shall apply and pay all fees associated with obtaining all temporary easements, approvals, and Maintenance of Traffic (MOT) permits as required and in accordance with Section 01 55 00, MAINTENANCE OF TRAFFIC, ACCESS, AND PARKING.
 - 2. Developer is responsible for protecting the Zone of Influence of the existing infrastructure. Construction staging shall take place outside of the Zone of Influence or the Developer shall provide safeguards to protect the structural integrity of all existing facilities.
 - 3. The Developer is responsible for the filing of all applicable permit applications in its entirety, including drawings, maps, calculations, or other items required to fulfil the requirements of each permit, including the cost associated with each permit required for the implementation of the project.
- D. Parking
 - 1. WMATA will not provide construction crew parking or a location for a food truck inside WMATA property.
 - 2. Developer shall park at locations determined by the Developer acquired through the appropriate permitting procedures.
- E. Permits: Obtain permits from Utilities and Jurisdictional Authorities as needed.
- F. Systems Integration: Develop a Systems Integration Plan as part of design development and perform and manage Systems Integration for the project in accordance with Section 01 11 30, SYSTEMS INTEGRATION
- G. Safety: Establish and manage Project safety in accordance with Section 01 11 40, SAFETY/ ENVIRONMENTAL REQUIREMENTS and Section 01 11 50, SAFETY AND SECURITY CERTIFICATION.
- H. Quality: Establish and manage a Quality System in accordance with Section 01 47 00, QUALITY MANAGEMENT SYSTEM.
- I. Inspection and Testing

1. Inspect the Work to ensure that construction is being performed in accordance with Issued for Construction Drawings, Issued for Construction Specifications, and applicable submittals. Maintain Inspectors Daily Reports and submit to the WMATA Representative weekly.
 2. Establish and perform component testing and system integration testing as specified in various specification sections and the Technical Requirements and in accordance with Section 01 47 00, QUALITY MANAGEMENT SYSTEM.
 3. Provide and manage the services of an independent testing agency that shall conduct material testing.
 4. Provide and manage the services of independent inspectors for those disciplines required by jurisdictional authorities. Independent inspectors shall perform third party inspections necessary to certify that construction has been performed in accordance with Issued for Construction Drawings and Issued for Construction Specifications. Independent inspectors shall have the qualifications required by jurisdiction authorities.
 5. The independent testing agency and independent inspectors may be provided through a single entity.
 6. All inspection and testing reports shall be submitted to WMATA representative.
- J. As-Built Documents: Maintain a hard copy drawing and specification record of as-built conditions during construction phase and provide updated AutoCAD/REVIT models of As-Built conditions. As-Built Drawings, and As-Built Specifications at the completion of the Project in accordance with Section 01 78 39 PROJECT RECORD DOCUMENTS.
- K. Training and Commissioning: Provide support for commissioning in accordance with Section 1 of the Technical Requirements and provide training to WMATA staff as indicated in Section 01 82 00, DEMONSTRATION AND TRAINING for requirements.

II. PRODUCTS (NOT USED)

III. EXECUTION (NOT USED)

END OF SECTION

SECTION 01 11 20 - DESIGN AND PROGRAM REQUIREMENTS

PART 1 – GENERAL

SUMMARY

- A. This Section specifies requirements for carrying out detailed design and design support during construction, as indicated, and provides requirements for design management to be followed by the Developer. The Section also establishes Program Requirements for the Project.

REFERENCES

- A. Metro's Infrastructure Design Standards
- B. WMATA Adjacent Construction Project Manual

SUBMITTALS

- A. Make the submittals of this Section for Approval by the Authority in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, unless noted otherwise.
 - 1. Milestone documents as specified within this Section.
 - 2. Check sets of Design Drawings and Design Specifications at each design milestone.
 - 3. Test, acceptance, and verification criteria and procedures for the product being specified as described in Section 01 47 00, QUALITY MANAGEMENT SYSTEM.
 - 4. Meeting minutes of all design coordination meetings attended by third-party entities as described in Section 01 31 20, Project Meetings.
 - 5. At the end of the Contract, submit in accordance with Section 01 77 50, CLOSEOUT, a complete configuration management database.

GENERAL DESIGN REQUIREMENTS

- A. All design and field engineering Work required to be performed by the Developer shall be performed under the direct supervision of the Design Engineering Manager by a licensed professional and shall satisfy the laws of the jurisdiction in which the Project is located.
- B. Review Project requirements and discuss any issues needing clarification with WMATA Representative along with WMATA design review team, end users and other stakeholders at the Pre-Design Meeting prior to beginning any design work. The meeting shall be attended by the Development Project Manager, Design Engineering Manager, Architect, and Engineers of Record involved in designing the Project elements.
- C. Perform a code review for the Project and identify any potential conflicts amongst the design requirements, assumptions, field conditions, Metro Infrastructure Design Standards and jurisdictional codes that may affect scope, cost, schedule, or quality of work. Notify the WMATA Representative of potential conflicts as soon as practicable but no later than within thirty (30) Calendar Days of discovery. The notification shall include a clear statement of the conflict, the source of the requirement and criteria,

- and a recommended solution to the potential conflict. Refer to Chapter 1 in the Manual of Design Criteria for additional discussion on addressing conflicts between codes and standards, project requirements, and Infrastructure Design Standards.
- D. Perform additional detailed surveys and investigations to verify the Site conditions as needed for development of the final design.
 - E. Perform additional detailed environmental investigations and coordinate with the Jurisdictional Authorities as needed for development of the final design and for obtaining all necessary permits.
 - F. Developer shall provide WMATA with any additional information in Developer's possession or control that WMATA may reasonably request to assist WMATA in reviewing the Developer's design.
 - G. Accessible Design and Construction Compliance
 - 1. WMATA facilities are subject to the Architectural Barriers Act under code section §4151 and, therefore, shall be designed and constructed to be fully accessible for use by all customers, employees and visitors. All Metrorail station facilities including bus facilities, pick-up/drop-off areas, and the path from these facilities to the station entrance shall conform to accessibility requirements documented in the U.S. DOT ADA Standards for Transportation Facilities. All other site facilities shall conform to the local jurisdiction adopted accessibility standards and to the ADA Standards for Accessible Design.
 - 2. If there is a conflict between the two standards for a specific condition, the most stringent requirement shall apply.
 - 3. Ensure that facility designs, except as noted, comply with FTA accessibility requirements by providing a duly certified Accessible Design Compliance Certification Form using the form provided by the Authority. If form is no longer available, Designer shall be responsible for developing the form based on FTA accessibility requirements for transit facilities and provided to the Authority for review and approval.
 - H. Develop and provide Design Drawings and Design Specifications. WMATA Standard Drawings and WMATA Standard Specifications shall be incorporated into the Design Drawings and Design Specifications as applicable, without edits, where referenced in the Technical Requirements. Develop Project-specific specifications for work not addressed in the WMATA Standard Specifications. Submittals specified in the Project-specific specifications developed by the Developer shall be submitted to WMATA for review and approval. Design must comply with the latest WMATA design criteria; including section #17 environmental.
 - I. Design work pertaining to rehabilitation of existing facilities shall be based on the assumption that the facility will remain operational during until the new system is fully operational, permitted and compliant for a minimum of 90 days, and the Developer hands over the WMATA New Improvements to WMATA. The Developer must coordinate facility access through the WMATA Representative.
 - J. Design Reviews: WMATA will review and Approve milestone design submittals based on the requirements of the WMATA New Improvements Requirements and Specifications, WMATA Manual of Design Criteria, WMATA Standard Specifications as referenced in the Technical Requirements, and program requirements established in this Section. Set up meetings with Authority including outside agencies, if needed, to present the design packages for all milestone submittals. The Design Engineering Manager is responsible for obtaining comments from Jurisdictional Authorities and Utilities. Proceeding with furthering design prior to the resolution of all review comments from all entities to the Authorities satisfaction is at the Developer's own risk.
 - K. As part of each submittal, the Developer shall submit individual design packages that are clearly marked for WMATA's New Improvements to be reviewed concurrently in accordance with the Requirements

and the Developer's Private Improvements which is to be reviewed in accordance with the Adjacent Construction Project Manual, except to the extent that the Private Improvements (A) affects the integrity, functionality, efficiency, safety, operation, maintenance, legal compliance, cost or profitability of WMATA's business, customers, operations or activities; (B) lies within the WMATA Zone of Influence or otherwise affects WMATA Facilities including the WMATA New Improvements, WMATA Reserved Areas, ingress/egress to WMATA Facilities including the WMATA New Improvements, and similar matters; (C) affects any of WMATA's adjacent property; and (D) with respect to the design and construction of interim and permanent WMATA New Improvements and of any Private Improvements to the extent within the WMATA Zone of Influence is not in compliance with the Metro's Infrastructure Design Standards.

- L. Permits: Prepare designs necessary to submit plans and obtain all permits needed to implement the Project. Do not modify Contract Document requirements based on comments from Jurisdictional Authorities or Utilities without approval from WMATA.
- M. Provide Engineering and Architectural services during construction, such as performing Request for Information and submittal reviews prior to their submittal to the WMATA Representative as further described in Section 01 33 00, SUBMITTAL PROCEDURES, and prepare As-Built Drawings and As-Built Specifications as further described in Section 01 78 39 PROJECT RECORD DELIVERABLES.

DESIGN CONTROL PLAN

- A. Develop and maintain a Design Control Plan (DCP) that establishes basic guidelines for the preparation and development of design documents culminating in Issued for Construction Drawings and Issued for Construction Specifications. The DCP shall address the following requirements as a minimum:
 - 1. Control of design inputs and changes shall be managed by the Developer in a manner that assures Contract and Developer requirements are correctly translated into the drawings and specifications used for procurement, manufacturing, construction, and testing.
 - 2. Establish processes and procedures for preparing and checking of design calculations, drawings, and specifications for each milestone design submittal.
 - 3. Detailed checking of documents shall be carried out by an individual who has qualifications and experience equal to or greater than the preparer. Maintain record of check sets through the life of the Project and submit these with each milestone design submittal. Authority will audit these check sets periodically. Identify superseded documents with a stamp to avoid wrongful use of documents.
 - 4. Configuration management.
- B. Prepare plans for each design activity for the WMATA New Improvements and the Developer's Private Development and define responsibility for its implementation.
- C. Provide verification and validation of software products designed for the Project.
- D. Design verification shall include checking and back-checking calculations, drawings, specifications, and other design elements without reliance on review and comments from the Authority and shall be conducted before providing each milestone design submittal to the Authority and before the start of construction or fabrication.
- E. Provide certification with each milestone design submittal stating that the documents being submitted are reviewed, checked and backchecked.
- F. Design or provide documentation for submission/approval for all required test, acceptance, and verification criteria and procedures for the product being specified. Test and acceptance criteria and procedures may be used by the Authority and its on-call architectural and engineering consultants to

- verify designs and products. The design verification process shall test the design to assure that it meets Contract Document requirements.
- G. Implement configuration management and document change control for the duration of this Project for calculations, drawings, specifications, documents, systems, operating and maintenance documentation, and physical materials. Maintain document change control and update all documents as the design and installation progresses. Configuration management system shall provide an accurate historical record that can trace decisions made through the life of the Contract. At the end of the Contract, submit to WMATA in accordance with Section 01 77 50, CLOSEOUT, a complete configuration management database.
 - H. Include a means for contemporaneously relating the modification status of equipment and construction to the corresponding drawing or specification.
 - I. Maintain process control, including:
 - 1. Completion of quality procedures, work instructions, and initial coordination meetings prior to the start of a design activity.
 - 2. Documented procedures for checking calculations and survey computations.
 - 3. A formal system of continuous feedback of problems and their resolution shall be developed between the Designer and construction staff.
 - J. Any deviations requested by the Developer to the WMATA Design and Construction Standards, or another Standard, Code, or Guideline shall be submitted by the Developer to WMATA as part of the applicable Submission and documented as part of the Submission cover letter for review and approval, which approval may be withheld by WMATA in its sole and absolute discretion. The Authority will only consider requested design changes, which are submitted to the WMATA Representative with the following supporting documentation:
 - 1. A valid reason for the change.
 - 2. Evidence that the change is feasible.
 - 3. An explanation of why the change is desirable.
 - 4. Estimates of effects on performance, costs, including operation and lifecycle costs, and schedule.

MLESTONE DESIGN SUBMITTALS

- A. **Project Schedule** – The Developer shall prepare and submit a Project Schedule, prior to or concurrent with the first design submittal and accompanied with every submittal, which shall be updated with each plan submission, setting forth all activities and key milestones that must be tied to the appropriate predecessor and successor items that comprise the overall Project Schedule, including:
 - 1. Submittal Schedule
 - 2. Permits, easements, and approvals
 - 3. Construction, sequencing, and staging activities
- B. All milestones to interface with other adjacent project, including the Private Improvements, to a sufficient level of detail for planning, coordination, and eliminating time and space conflicts
 - 1. Testing and commissioning activities

2. Close-out activities
3. Utility relocation or protection activities
- C. Track or site access activities
 1. Hold and witness points for which WMATA will notify the Developer based on the Project Schedule, and the Developer shall incorporate into future updates.
- D. **Proof of Concept** (5-10% Schematic Design Phase) – The objective of this submission is for the Developer to demonstrate to WMATA, a concept plan identifying the major components of the Project, site analysis, functional programming and relationships, spatial planning and requirements, code, zoning constraints, and design concepts of the project.
 1. Drawings
 - a. Site Plan
 - 1) Identifying locations and connections between all major technical requirements (including, access points, circulation routes, parking facilities, building(s), road conditions, accessible paths, track structures and facilities, associated works on public roads and infrastructure). Submission must show the location, identification, and size of the systems rooms.
 - 2) Preliminary plan and profile drawings outlining horizontal and vertical track and structures.
 - 3) Relationships to private development, including functional adjacencies, entrance and access points, major circulation routes (all modes) and elements of impact and/or influence between private development, WMATA's New Improvements, and WMATA's Non-Moveable Existing Facilities.
 - 4) Identify and include utility demarcation, transformers, generator, electrical rooms, communication rooms, raceways, handholes, manholes, fan shafts, fire department connections, and grounding test wells, on a drawing background that is coordinated between architectural, mechanical, structural, and civil.
 - 5) Include demolition, relocation, and removal of existing WMATA facilities, including electrical and communications, if applicable.
- E. Design report outlining the design concept and approach
 1. Stormwater Capacity Analysis and Bench Testing Analysis - Draft
 2. Supporting design, drawings, materials, including:
- F. Building massing models showing surrounding context and including all building/structures reflecting the Transit Requirements
 - a. Site elevation and section concepts.
- G. **Proposed Development Plan** (30% Design Development Phase) – the objective of the submission is to resolve all internal comments for the Schematic and Design Development Phases, and to determine the Developer's compliance with all scope and Transit Requirements prior to advancing to the Construction Documents Phase. The Proposed Development Plan as approved by WMATA will be referred to as the "**Approved Development Plan**".
- H. Includes all Transit Requirements and infrastructure consistent with and to the extent prepared as part of the information which the Developer anticipates presenting to the Local Jurisdiction in connection with

obtaining Entitlements for the Joint Development Site and shall also specifically address the design, cost, financing, and sequencing of any WMATA New Improvements for the WMATA Property.

- I. Design Drawings, Design Specifications, calculations, and all associated design documents shall be completed to include the minimum requirements listed below:
 1. Drawings
 - a. Plan and profile location of WMATA's New Improvements with all potentially affected utilities, structures, streetscaping, and building envelopes showing relationship to private development and WMATA's Non-Moveable Existing Facilities – In Progress
 - b. Preliminary Subdivision Plan confirming adjacent property lines – In Progress
 - c. Plan showing temporary and permanent Right-of-Way requirements – In Progress
 - d. Plan of existing conditions – In Progress
 - e. Sizing of primary structural members – In Progress
 - f. Retaining wall elevations and sections – In Progress
 - g. Architectural plans and elevations – In Progress
 - h. Conceptual design (including exterior treatments)
 2. Design Report including documentation of:
 - a. A written description and graphical representation of the physical impact that construction of the WMATA New Improvements will have on WMATA Existing Facilities. The description must list all penetrations, borings and planned modifications at or near any portion of WMATA Existing Facilities.
 - b. A list of any and all WMATA Facilities to be affected, altered, and/or removed during the construction of the WMATA New Improvements and procedures to be used for protection, restoration, and/or replacement of the WMATA Facilities affected, removed, and/or altered. Developer's plans must show how WMATA's operations will maintain full functionality during construction.
 - c. Constructability and Construction Staging Plan – Draft
 - d. Utility and Structures Relocation/Protection/Support – Draft
 - e. Traffic Impact Assessment including constraints, maintenance plans, parking inventories, truck haul routes, and new/modified road systems to WMATA's New Improvements – Draft
 - f. Hydrology/Stormwater Management and Drainage Plan and Report - Draft
 - g. Supplemental Geotechnical Investigation – Draft
 - h. Systems Interface Management Plan – Draft
 - i. Proposed Maintenance of Traffic and Phasing Plan
 - j. Identification of required permits and jurisdictional authority approvals – Complete
 3. Stormwater Capacity Analysis and Bench Testing Analysis – Complete

- J. Proposed Maintenance Plan, delineating responsibility of operations and maintenance of WMATA's New Improvements
- K. Survey compliant with current ALTA/NSPS standards
 - 4. Salvage Plan, if applicable – Draft
 - 5. Specifications: Index of all specification Sections including project-specific specifications for work not addressed in the WMATA Standard Specifications - Draft
 - 6. Project Budget – a reasonable estimate of the soft and hard costs of design and constructing the WMATA New Improvements and shall include the following, each broken down on a line-by-line-item bases:
 - a. the cost of all labor, materials and equipment needed for the completion of the WMATA New Improvements (the “Hard Costs”).
 - 1) Hard Cost breakdown including cost codes and CSI Division alignment.
 - a. all other costs, fees and expenses relating in any way to the design and construction of the WMATA New Improvements (the “Soft Costs”)
 - 2) include line item for WMATA Betterment Allowance in the amount of \$150K.
 - 3) Itemize Design Fee, Overhead line item, Contractor Fee and General Conditions. The Project Budget shall also include the General Contractor breakdown for both General Conditions with a separate line item for all jobsite management personnel, and General Requirements and provide maximum change order mark-up for General Contractor and all Subcontractors, Tier 1, Tier 2 and Tier 3 on a per change order basis for a total maximum mark-up of 40%.
 - b. The project Budget shall be submitted in accordance with the Budget Form and Bid Form.
- L. Updated Project Schedule, as applicable
- M. Intermediate Design (60% Design – Construction Documents Phase) – required for all electrical, mechanical and plumbing work – Design Drawings, Design Specifications, calculations, and all associated design documents shall be completed to include the minimum requirements listed below:
 - 1. Drawings:
 - a. Plan and profile location of all potentially affected utilities and structures – Complete.
 - b. Plan to confirm adjacent property lines – Complete.
 - c. Plan showing temporary and permanent Right-of-Way requirements – Complete.
 - d. Plan of existing conditions – Complete
 - e. Civil sections – In Progress
 - f. Sizing of primary structural members – Complete
 - g. Retaining wall elevations and sections – In Progress
 - h. Architectural plans and elevations – In Progress

- i. Architectural wall sections – In Progress
 - j. Architectural floor plans – In Progress
 - k. Structural plans – In Progress
 - l. Mechanical plans – In Progress
 - m. Electrical plans – In Progress
 - n. ICA plans – In Progress
 - o. Architectural plans – In Progress
 - p. Mechanical equipment list – In Progress
 - q. Electrical single line diagram – In Progress
 - r. Applicable codes and standards – Complete
 - s. CADD files for verification of file structure
2. Specifications: Index of all specification Sections including project-specific specifications for work not addressed in the WMATA Standard Specifications – Complete
3. Intermediate design calculations for each discipline commensurate with design development.
4. Design Report including documentation of:
 - a. Constructability and Construction Staging Plan – Draft
 - b. Utility and Structures Relocation/Protection/Support – Draft
 - c. Traffic Impact Assessment including constraints, maintenance plans, parking inventories, truck haul routes, and new/modified road systems – Complete.
 - d. Handling and Disposal of Excavated Material – Draft
 - e. Hydrology/Stormwater Management and Drainage - Complete.
 - f. Supplemental Geotechnical Investigation – Complete
 - g. Supplemental Environmental Documentation – Draft
 - h. Systems Interface Management Plan – Complete
 - i. Identification of required permits and jurisdictional authority approvals – Complete
5. Public meeting presentation materials
6. Salvage Plan, if applicable - Complete
7. Quality Assurance Documentation
8. Risk Assessment Documentation
9. Project Schedule including the Design Schedule – Complete.

10. Response to Authority and Jurisdictional Authority Review Comments

N. Pre-Final Design (90% Design – Construction Documents Phase)– required for all portions (electrical, mechanical and plumbing work as well as structural platforms design) of the project – Design Drawings, Design Specifications, calculations, and all associated design documents shall be completed to include the minimum requirements listed below:

1. Drawings:

- a. Plan and profile location of all potentially affected utilities and structures.
- b. Plan to confirm adjacent property lines.
- c. Plan showing temporary and permanent Right-of-Way requirements.
- d. Plan of existing conditions
- e. Sizing of all structural members
- f. Structural plans
- g. Mechanical plans
- h. Electrical plans
- i. ICA plans
- j. Architectural plans
- k. Mechanical equipment list
- l. Electrical single line diagram
- m. Applicable codes and standards
- n. CADD files for verification of file structure

2. Design Specifications

3. Pre-Final design calculations for each discipline commensurate with design development.

4. Design Report including documentation of:

- a. Constructability and Construction Staging Plan
- b. Utility and Structures Relocation/Protection/Support
- c. Traffic Impact Assessment including constraints, maintenance plans, parking inventories, truck haul routes, and new/modified road systems.
- d. Systems Interface Management Plan
- e. Identification of required permits and jurisdictional authority approvals.

5. Public meeting presentation materials

6. Quality Assurance Documentation

7. Risk Assessment Documentation
8. Design Schedule
9. Response to Authority and Jurisdictional Authority Review Comments
- O. Final Design (100% Design – Construction Documents Phase)– required for all portions (electrical, mechanical and plumbing work as well as structural platforms design) of the project – Design Drawings, Design Specifications, calculations, Project Schedule, and all associated design documents shall be complete, checked, and ready for signing and sealing after Approval by the Authority.
- P. Issued For Construction – Design Drawings, Design Specifications, and calculations signed and sealed by Architect and Engineer of Record.

ADDITIONAL PROGRAM REQUIREMENTS

- A. Project-specific Program Requirements that supplement or replace requirements imposed by WMATA Manual of Design Criteria are as stated in the Technical Requirements, Contract Drawings, and Contract Specifications.

II. PRODUCTS (NOT USED)

III. EXECUTION

DESIGN MANAGEMENT

- A. Appoint a Design Engineering Manager to lead and coordinate the Developer's design effort.

IMPLEMENTATION

- A. Prepare the design by developing detailed Issued for Construction Drawings, Issued for Construction Specifications, design calculations, analyses and reports, with all engineering required in accordance with accepted industry practices and submit milestone design submittals to the WMATA Representative for Approval.
- B. Provide the engineering design as specified for facilities owned by states, cities, agencies, districts, and utilities including service connections, and facility modifications and relocations as applicable.
- C. Coordinate and resolve conflicts for locations and sizes of openings, conduits, equipment placement, power and HVAC requirements, and clearances and weights of all elements among all the disciplines as applicable.
- D. Immediately notify the WMATA Representative in writing upon identification of design issues or problems, which may affect cost, schedule, the work of Utilities, or other contracts.
- E. Issued for Construction Drawings and Issued for Construction Specifications, design calculations, analyses, and reports and certifications shall be signed and sealed by registered Professionals licensed to practice engineering in all jurisdictions where the Project will be constructed, as applicable.
- F. Provide WMATA with quarterly reports updating the status of the Entitlements process and all other governmental approvals applied for by the Developer with respect to the Joint Development Site in order for WMATA to monitor the progress thereof. Upon receipt of written request therefor, Developer shall provide to WMATA any additional information related to the Entitlements within Developer's possession or control, including copies of any notices Developer receives that the Joint Development Site may be rezoned or subjected to new Entitlements, and such other information as WMATA may

reasonably request, but specifically excluding Developer's financial or marketing projections, any privileged communications, and any trade secrets or other proprietary information.

- G. Coordinate design with governmental, public and private agencies and others. Such coordination shall include attending meetings as may be necessary. Notify WMATA Representative of coordination meetings a minimum of 2 business days prior to meetings. Prepare and submit to the WMATA Project Representative through e-Builder meeting minutes of all such meetings attended. Promptly notify the WMATA Representative in writing through e-builder of any betterments or other work beyond the scope of the Contract Documents that are requested by jurisdictional authorities, Utilities, and property owners.

INTERFACE REQUIREMENTS

- A. Investigate existing systems. Design, furnish, and install systems and materials, which interface with and are fully compatible with existing systems and that function in a fully compatible regard to safety, reliability, and maintainability as specified in Section 01 11 30, SYSTEMS INTEGRATION.
- B. Systems, which require functional and physical interface coordination, may include, but are not limited to:
 - 1. Drainage Systems
 - 2. Existing Underground Utilities
 - 3. Traffic Maintenance during Construction and Traffic Signalization
 - 4. Power and Energy Management System
 - 5. Mechanical Systems
 - 6. Plumbing Systems
 - 7. Electrical Systems
 - 8. Communications Systems including Video, Voice, and Data
- C. Interface and compatibility requirements within various other interfaces for the Communications Systems include:
 - 1. Ancillary and Remote Facilities: Coordinate provisions for Fire and Intrusion Alarm System and wayside telephones.
 - 2. Local Fire Jurisdictional Authorities: Coordinate provisions for fire detection, alarm, and suppression to ensure compliance.
- D. Interface and compatibility requirements for the Utility systems:
 - 1. Coordinate equipment location and drain inlets and pipes. Coordinate new drain inlets and pipes with existing manholes, drain inlets, and pipes. Coordinate new sanitary sewer pipes with existing manholes and pipes.
 - 2. Coordinate electrical power requirements and location of equipment, feeders, and ductbanks.
- E. Interface and compatibility requirements for the Public Telephone system:
 - 1. Right-of-Way: Coordinate required changes to telephone company facilities affected by construction.

- F. Develop a Systems Interface Points matrix, which shall identify all system interfaces and describe in detail the functional and physical interfaces between new and existing systems. The descriptions shall include interface locations, operating parameters, and applicable test points. The Systems Interface Points matrix shall:
1. Assign primary and secondary responsibilities to the providers of the interfaced systems and provide assurances that the systems provided under this Contract are fully compatible and that interface connections will not degrade, be compromised, or otherwise interfere with the normal operations of either of the interfaced systems.
 2. Provide assurances that the systems provided under this Contract are interfaced in a manner similar to existing WMATA systems performing the same functions. Differences in the manner in which the systems are interfaced shall be clearly described and subject to the Approval of the WMATA Representative.
 3. Provide a direct reference to one or more test procedures contained in the Developer's approved Systems Integration Plan, which will verify that each system interface fully satisfies the requirements described therein.
 4. Be developed before or concurrent with the systems designs and shall be submitted for review along with each milestone design submittal.
- G. Control systems installation, its current configuration, and provide appropriate documents to support system configuration. Issue engineering recalls, update installed material, and update support material such as test equipment and documentation.

END OF SECTION