

FIRST AMENDATORY AGREEMENT

THIS FIRST AMENDATORY AGREEMENT is entered into as of the date indicated on the signature page, by and between the **CITY AND COUNTY OF DENVER**, a Colorado municipal corporation ("City"), Party of the First Part, and **BOMBARDIER TRANSPORTATION (HOLDINGS) USA INC.**, a Delaware corporation (the "Contractor"), Party of the Second Part;

WITNESSETH

WHEREAS, the parties entered into an Agreement dated July 27, 2018 (the "Existing Agreement") for the purchase of new Automated Ground Transportation System vehicles for use at Denver International Airport; and

WHEREAS, the parties desire to amend the Existing Agreement by amending several exhibits for purposes of clarifying terms and conditions contained therein; and

NOW, THEREFORE, for and in consideration of the premises and other good and valuable consideration, the parties hereto agree as follows:

1. **EXHIBITS C, E, F, and G** are hereby amended by deleting the Exhibits in their entirety and replacing them with the attached Exhibits.
2. Except as otherwise provided herein, all of the terms and conditions of the Existing Agreement shall remain in full force and effect as though set out in full herein.
3. This First Amendatory Agreement shall not be effective or binding on the City until fully executed by all signatories of the City and County of Denver.

[END OF PAGE]

Contract Control Number: PLANE-201841190-01

Contractor Name: BOMBARDIER TRANSPORTATION HOLDING
USA INC

By: Jennifer A. Callery

Name: JENNIFER A. CALLERY
(please print)

Title: Vice President
(please print)

ATTEST: [if required]

By: Johnetta Falk

Name: Johnetta Falk
(please print)

Title: Secretary
(please print)



Contract Control Number:

IN WITNESS WHEREOF, the parties have set their hands and affixed their seals at Denver, Colorado as of

SEAL

CITY AND COUNTY OF DENVER

ATTEST:

By _____

APPROVED AS TO FORM:

REGISTERED AND COUNTERSIGNED:

By _____

By _____

By _____



PROJECT MANUAL



CONTRACT NO.
201841190

Exhibit C

Special Conditions

CITY & COUNTY OF DENVER
DEPARTMENT OF AVIATION

Special Conditions
Contract No. 201841190

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SPECIAL CONDITIONS

SC-1 MANUFACTURING LOCATION

The Contractor is to manufacture the 26 cars covered by this contract at the facility to be designated in writing by Contractor prior to commencement of manufacturing.

SC-2 CONTRACTOR PERFORMANCE; SUBCONTRACTING

The contractor can subcontract no more than 10% of the Contract value.

SC-3 CONTRACTOR RESPONSIBILITY

The Contractor is responsible to provide fully functional equipment that interfaces with the DEN system. Any and all work or equipment that is required whether identified in the Technical Specifications or not will be provided by the Contractor. The Technical Specifications describe the minimum requirements. These descriptions are not exhaustive, and the Contractor is required to coordinate its activities and work as may be required to meet the DEN AGTS operating requirements, TSA, FAA or City requirements while performing work at DEN.

SC-4 PROSECUTION AND COMPLETION OF THE WORK:

The Work to be performed under the Contract is described in the Technical Specifications and Contract Documents. The Contractor shall complete the Work within 48 months from Notice to Proceed.

The Contractor will develop the contract schedule that will become part of the contract which shall be Exhibit F.

However, the following trains in service schedule shall be achieved:

Spare cars 1-2

Train #1 cars (3, 4, 5, 6) (these dates need to be identified as days after NTP)

Train #2 cars (7, 8, 9, 10)

Train #3 cars (11,12,13,14)

Train #4 cars (15,16,17,18)

Train #5 cars (19, 20, 21, 22)

Train #6 cars (23, 24, 25, 26)

SC-5 FACILITY SECURITY AND PERSONNEL ACCESS

The Contractor shall conduct all its activities at the Airport in compliance with the Airport security system rules and regulations, which are administered by the Airport Operations Division. The Contractor shall obtain the proper access authorizations for its employees, subcontractors and suppliers (i.e., Badges and Permits), and shall be responsible for such persons' compliance with all the Airport rules and regulations. A copy of the Contractors' section of the Airport Security rules and regulations are available for Contractor review at the Airport Access Services Office, Concourse A East Subcore, 4th Level. Persons regularly entering the construction areas must obtain personnel access badges from the Airport Access Services Office and must display badges, at all times, upon entering the construction, restricted and sterile areas of the airport. Any employee, subcontractor or supplier who violates such rules may be subject to revocation of his access authorization, including authorization for access to the construction site and all other restricted and sterile areas.

The security status of the Airport is subject to change without notice. These contract Special Conditions are applicable to the current security status of the Airport. Should the security status of the Airport change at any time during the term of this Contract, a written notice shall be issued to the Contractor detailing all applicable security modifications from the airport's current security status. The Contractor shall take immediate steps to comply with those security modifications as directed in the written notice.

If these security modifications involve any additional project cost, the Contractor shall submit a Contractor Change Request in accordance with the General Conditions for the additional cost. The Contractor Change Request shall outline in specific detail the effects of the security modifications on the Contractor's performance of the Contract, and shall provide a detailed cost breakdown for each item for which the Contractor is requesting reimbursement.

The Contractor shall return to the City, at contract completion or termination, or upon demand by the City, all access keys issued to it by the City to all areas of the Airport. If the Contractor fails to return any such key or keys at contract completion or termination or upon demand by the City, the Contractor shall be liable to the City for all the City's costs, including the City's labor costs for employees, incurred in re-coring doors and any other work which is required to prevent compromise of the Airport security system. In order to collect such costs hereunder, the City may withhold funds in such amount from any amounts due and payable to the Contractor under this Contract.

The construction of all the Project / Task Items that involve the breaching of any airport perimeter security boundary or continued access to restricted access rooms or areas will require the posting of authorized contract security personnel to maintain required security controls. The Contractor's Guarantee Maximum Price / Total Contract Proposal Amount / Task Order Proposal shall include the cost of providing security services to maintain control and supervision of any and all airport perimeter security boundary breaches and

for the duration of work activities where access to restricted areas is required and until the airport perimeter security boundaries are reestablished.

When security boundaries are opened for any reason, the Contractor must maintain one hundred percent (100%) control and supervision for the entire time that the openings are present to prevent unauthorized access to the secure / restricted access areas.

THE IMPORTANCE OF THIS SPECIAL CONDITION CANNOT BE OVER-EMPHASIZED.

SEVERE FINANCIAL PENALTIES AS WELL AS CONTRACT TERMINATION COULD RESULT IF AIRPORT PERIMETER SECURITY REQUIREMENTS ARE NOT STRICTLY FOLLOWED. THE REQUIREMENT TO PROVIDE ONE HUNDRED PERCENT (100%) CONTROL AND SUPERVISION OF BREACHES IN THE AIRPORT'S PERIMETER SECURITY BOUNDARY IS ABSOLUTE. AT NO TIME, DURING WORK AND NON-WORK HOURS SHALL ANY BREACHES IN THE AIRPORT'S SECURITY PERIMETER BE UNSUPERVISED AND / OR UNSECURED.

For off-hours of construction, the Contractor may choose to erect a temporary wall to close all perimeter openings. The wall construction shall be of sufficient materials and strength to prevent access to the airport's Sterile/Restricted Areas. The Contractor shall submit for review and approval, the details and materials for the temporary closure of security perimeter breaches for review and approval.

The Contractor will provide contract security guard services to maintain supervision of these openings. The security services must provide coverage to allow for lunch breaks, comfort breaks and etc. The security services must be obtained from the following contract security guard company:

HSS
900 S. Broadway, Suite 100
Denver, Colorado 80209
DEN Contact: Glenn Spies (303) 342-4323

All security guards provided for this project must have a Denver Airport SIDA Badge.

The DEN Security Guard Contractor may change between the proposal phases of this contract from Notice to Proceed to closure of all security perimeter breaches. The Contractor shall maintain a contractual relationship with the Security Guard Contractor holding the most current contract with Denver International Airport.

The Contractor shall continue to provide security of these areas until such time that the breaches in the airport's security perimeter have been permanently secured.

The Contractor shall submit a written security plan for approval to the Director of Airport Security prior to the start of construction on any work where a breach of the perimeter security boundaries is required.

SC-6 FACILITY ACCESS

The Contractor shall have access to the work site via the north DEN access gate. This access will be for all equipment and materials.

SC-7 VEHICLE PERMITTING

Vehicle access on the Airport Operation Area (“AOA”) is controlled by and requires permission from the Airport Access Services Office. It is not anticipated that the Contractor will need to operate vehicles on the AOA to perform the Work other than the delivery of the finished vehicles. The on-site AGTS O&M contractor will coordinate these deliveries with DEN operations.

SC-8 COMMUNICATION DEVICES

Any site communications devices, mobile communication devices or internet data devices used at DEN must be approved by DEN Technologies.

SC-9 ATTORNEY’S FEES

Colorado Revised Statute 38-26-107 requires that in the event any person or company files a verified statement of amounts due and unpaid in connection with a claim for labor and materials supplied on this project, the City shall withhold from payments to the Contractor sufficient funds to insure the payment of any such claims. Should the City and County of Denver be made a party to any lawsuit to enforce such unpaid claims or any lawsuit arising out of or relating to such withheld funds, Contractor agrees to pay to the City its costs and a reasonable attorney’s fee. Because the City Attorney Staff does not bill the City for legal services on an hourly basis, Contractor agrees a reasonable fee shall be computed at the rate of two hundred dollars per hour of City Attorney time.

SC-10 PAYMENTS TO CONTRACTORS

Contractor agrees that, to the fullest possible within the CPM System, the City shall be entitled to all non-Confidential records, reports, data, and other information related to the project that are available to Contractor through the CPM System, including, but not limited to, information related to Contractor and subcontractor billings. To that end, Contractor agrees that it will activate any available settings within the CPM System that are necessary to grant the City access to such non-Confidential information related to the contract and the project. Applications for payment shall be based on the Contract Unit Prices or the approved Schedule of Values described in the contract documents.

In accordance with the City’s, PAYMENT PROCEDURE, the party(ies) responsible for review of all Pay Applications shall be:

Agency/Firm	Name	Telephone
DEN	To be assigned	303-342-XXXX

Applications for payment shall include the following:

1. The estimate of Work completed shall be based on the approved schedule of values or unit prices, as applicable, and the percent of the Work complete.
2. Each Application for Payment shall include each and every independent subcontractor's payroll information including pay dates and pay amounts.

Applications for Payment must be accompanied by completed Partial or Final Claim Release Form, as appropriate, from EACH subcontractor and supplier, AND the Contractor's Certification of Payment Form.

SC-11 DISPOSAL OF EXISTING VEHICLES AND RECYCLING

Once new 300R vehicles have been received and placed in revenue service, DEN will begin to retire cars in the existing CX-100 fleet. The contractor will assist and support DEN with the logistics involved in the Disposal of the vehicles. This is anticipated to include the coordination and on-site support with any rigging or packaging for the vehicles to be removed from site. The contractor is required to provide the rigging, packaging, and transport to a location on DEN property.

The contractor is required to comply with the City's Recycling program. This will include the following the removal of all hazardous materials from the vehicles to include as minimum: refrigerant, oils, lubricants etc. and precious metals. Technical Specification 01566 Environmental Controls will apply to this contract.

The Contractor may be permitted to collect and use any salvageable materials from the retired CX-100 fleet as spare parts under the O&M Contract executed the 6th day of December 2017.

SC-12 VEHICLE CERTIFICATE OF SUBSTANTIAL COMPLETION

The contractor is directed to Exhibit E the Project Management Provisions of the contract. Exhibit E provided a detailed description of the substantial and final completion requirements of the contract.

Substantial completion will be granted on a car by car basis. Warranty will begin on a car by car basis and is subject to a restart if the car fails the 30-day Operational Demonstration period.

Final completion and acceptance will be on a contract basis after all cars have passed all requirements and all the requirements of the contract have been completely satisfied.

PROJECT MANUAL



CONTRACT NO.
201841190

Exhibit E

Project Management Provisions

CITY & COUNTY OF DENVER
DEPARTMENT OF AVIATION

**Project Management Provisions
Contract No. 201841190**

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PROJECT MANAGEMENT PROVISIONS

PM-1 AIRPORT RULES AND REGULATIONS

All City and Airport, safety, security, badging, vehicle permitting environmental requirements, radio and cell phone communications, necessary for the performance of this Contract will be coordinated and identical to those in place or modified by 201734112. This list is not complete.

PM-2 ON-SITE WORK SEQUENCE AND CONSTRAINTS

The Contractor has the Operation and Maintenance Contract for the AGTS System under CCD Contract Number 201734112. The work in this Contract must be performed in strict compliance with the availability requirements of the operating system. The Contractor's Project Manager for this Contract must ensure that all activities associated with the Work is coordinated with the Denver on-site AGTS Operation and Maintenance team ("O&M team").

1) Project Field Office, Equipment Storage, and Staging

The Contractor, if needed, is expected to use an office location dedicated to the project within the existing AGTS Maintenance Facility. The office or the maintenance facility must provide the necessary furnishings and equipment to conduct the project meetings and communicate with the Contractor's engineering and production facility. In addition, the Contractor will use space within this facility for the receipt of equipment and the staging of the work required in this contract. If additional space is required, the Contractor shall coordinate this request with the DEN Project Manager.

2) Work Sequence and AGTS System Access

The Work sequence shall be in compliance with the Contract Documents and in accordance with the approved WBS and Work schedule developed by the Contractor. The Schedule shall be in compliance with the requirements indicated in the Contract documents. All AGTS access is to be coordinated with the on-site AGTS O&M team.

The Contractor shall coordinate its access and construction activities if any are required with the affected Airlines and Airport operations through the DEN Project Manager.

PM-3 SYSTEM INTERRUPTIONS

AGTS system interruptions or changes in operating availability that may be required as a result of the Work in the Contract must be coordinated and scheduled with the Project Manager and the AGTS O&M team. A special system service alteration form will be developed by the Contractor and submitted for approval by the Project Manager prior to any alterations or changes in service are approved.

The request forms shall be submitted only during the normal work week (Monday through Friday) between 8:00 AM and 4:00 PM unless otherwise noted, all shutdown requests are required 72 hours before the requested shutdown time. For the Electrical

System and Fire Systems, submit requests five (5) working days prior to the time of requested interruption.

There is no anticipated complete system shutdowns of the system for the work contained in the contract documents.

It is understood that the AGTS operation is critical and that at any time it may be necessary to alter these service alterations, interruptions, or shut down requests. If, due to airport operations, the Contractor is not permitted to work on an approved work period, the City will grant the Contractor additional time in the Contract Schedule to complete the work.

PM-4 COMMUNICATIONS AND DOCUMENTATION BETWEEN THE PARTIES

Denver International Airport Planning and Development Division is actively working towards a complete paperless exchange process for contracts managed in this division. To this end it will be a goal of the contract to provide the required communications and documentations exchange in an electronic paperless fashion where ever possible.

PM-5 BUILDING INFORMATION MODEL - NOT USED

PM-6 OWNERSHIP AND TITLE

Upon the City's issuance of a Certificate of Substantial Completion for the Work, title to the equipment installed under this Contract shall transfer from the Contractor to the City subject to the City's rights under this Contract. Substantial Completion will be issued for each car once it enters the 30-day operational demonstration period. See Special Conditions 25.

PM-7 MAINTENANCE AND REPAIR

Prior to the issuance of a Certificate of Final Completion for all the vehicles, the Contractor shall be solely responsible for the maintenance and repair of the vehicles. After issuance of the Certificate of Final Completion for all the vehicles the responsibility for maintenance of the vehicles shall rest solely on the City, subject to the City's rights under warranty according to this Contract. Software components of the vehicles shall remain the property of the Contractor, subject to the applicable software license agreement and escrow between the parties contained in the contract documents.

PM-8 LOSS AND DAMAGE

Until a Certificate of Substantial Completion for each vehicle is provided the Contractor shall assume the risk of loss, including theft or destruction, and the risk of damage to the vehicles from any and every cause whatsoever, whether or not such loss is covered by insurance.

PM-9 CONTRACTOR'S WARRANTY

The Contractor will guarantee that spare parts will be available for twenty-five (25) years. If original parts or components are no longer available, compatible parts or components can be used if all the requirements of the Technical Specifications will be met by such items. The Warranty period for materials and workmanship shall be limited to a period of one year from the Substantial Completion date of each car.

PM-10 CONTRACTORS MANAGEMENT PLAN

1. Project Management Plan

Within thirty (30) days after the date of receiving NTP the Contractor shall submit a Project Management Plan for review and acceptance by the City. This Plan shall include (at a minimum) the following items:

1. A listing of key personnel, together with their qualifications, responsibilities, and involvement in the Project.
2. A complete Work Breakdown Structure (WBS) organization of Work items, indicating the source/responsibility for completing each aspect of the Work. The WBS shall be the basis for organizing all Work under the Purchase Order, and shall be reflected in the organization of the Work Schedule, Submittal Schedule, and Schedule of Values. The WBS shall include a description of the Contractor's Plan for executing the Work.
3. A Preliminary Work Schedule showing all milestones, intermediate-milestones, events, and activities in bar chart format. This preliminary Work Schedule shall be a firm schedule for all activities in the first one-hundred and twenty (120) days of the Work, and preliminary for activities thereafter. This bar chart must show when City approvals are needed.
4. A preliminary Submittal Schedule for all deliverables and design review data.
5. A description and outline of the Progress Reports.
6. An organization chart showing the Contractor's organization (including subcontractors' organizations) and explanation of how each entity will be involved in this Project, defining their general and project-specific responsibilities, and discussing how the individual entities will coordinate their Work on this Project.
7. A numbering system and distribution listing for all correspondence and transmittals under this Contract, subject to acceptance by the City.

8. Work Schedule

The Contractor shall, one hundred twenty (120) days following the date of his receipt of a NTP, prepare for the City's review and acceptance a detailed Final Work Schedule. The Final Work Schedule shall be a time scaled bar chart showing the order in which the Contractor proposes to carry out all Work covered under this Contract. This detailed Final Work Schedule shall be based upon the Preliminary Work Schedule

submitted with the Management Plan and shall contain all the milestones and intermediate-milestones of the Schedule of Values. Using a bar chart format keyed to the Work Breakdown Structure, the Contractor shall indicate all major items of design, construction and procurement and installation, and the dates for starting and completing each item. The Contractor shall maintain and update the Work Schedule showing the actual progress made and any revisions in the schedules or at any time that changes in the design, construction, procurement, and installation cause any major change in the overall schedule.

PM-11 REGULATORY REQUIREMENTS

This Section identifies primary compliance with the State of Colorado and City and County of Denver's regulatory requirements, including the Department of Aviation, Colorado Department of Transportation, the Division of Wastewater Management, Colorado Department of Labor and Employment, Denver Fire Department, Fire Prevention Division, and the Department of Public Works standards which govern design, construction and equipment acquisition projects at Denver International Airport.

The work shall be based on the latest edition of the referenced codes including additions and revisions thereto that are in effect at the time of project bidding.

1. APM Alteration Permit State of Colorado Conveyance Section

The Contractor is responsible to provide the City with the necessary documentation to obtain an alteration permit if required for the work covered by this Contract. The Contractor is directed to 7 C.C.R. to Section 1101-8 of the Colorado Administrative Code for the detailed information that is required for this permit.

2. Building Code

All design and construction work that may be required under this contract shall be governed by the Building Code for the City and County of Denver, latest edition, which is based upon the International Building Code with Denver Amendments. Appendix N of the amendments addresses Airport Buildings and Structures.

3. Permits and Certifications

The Contractor shall maintain records on-site of all permits acquired by federal, state, and local agencies. Posting of permits shall conform to requirements of the respective agencies.

At the completion of any inspection by other agencies, the Contractor shall forward copies of the status of the inspection and copies of any approved or "signed-off" inspections by the respective agencies to the Project Manager.

PM-12 PROJECT MEETINGS AND REPORTING

The Work specified in this Section requires the Contractor's Project Manager, Lead Technical Engineer, and Quality Control representative to attend project progress

meetings to be scheduled as the Work demands by the City for the collection and dissemination of information related to the subject contract. These meetings will take place at DEN and will be attended by the local on-site project team. Attendees from the Contractor's facility can attend by teleconference.

The City's Project Manager will prepare the minutes of each meeting and distribute them to each of the participants.

1. Project Kick-off Meeting

A Project Kick-off Meeting will be scheduled by the City after the Contract has been signed by all parties. The purpose of this meeting is to introduce the City's Representatives to their counterparts in the Contractor's organization and to establish lines of communication between these representatives and outline contract requirements.

The Project Manager will distribute a notice of this meeting, along with an agenda of the subjects to be addressed.

The Project Manager will explain and discuss the responsibilities and authorities of the City, the City's APM consultant, and the Project Manager's organization.

The Project Manager will provide highlights of the following information at this meeting:

- Procedures for submitting deliverables, including design review materials.
- Monthly pay estimate cutoff dates.
- Payment procedures.
- Communication procedures.

2. Project Progress Meetings

Progress meeting will be held monthly as a minimum. The Contractor will submit an agenda of the items to be discussed the day before the meeting. As a minimum the following items are to be covered at the meetings as they become relevant to the phase of the project:

- Work activities, discuss the progress of the work
- Identify progress against the schedule and identify any risk elements effecting meeting the schedule dates
- Status of the CDRL submittals
- Status of the Design Submittals Conceptual Design Review (CDR), Preliminary Design Review (PDR) and Final Design Review(FDR).
- Identification of any design issue requiring discussion

- Identification of any product or component delivery delay
- Quality control issues and quality assurance issues
- Status of manufacturing and assembly process
- Status of the repair and maintenance manuals
- Status of the training program and training manuals
- Status of in factory testing
- Status of the vehicle delivery schedule

3. On-Site Work Progress Meetings

When activities begin on site the progress meeting may change to weekly meetings. At a minimum, the following items will be addressed at each meeting. The items addressed in the meeting do not waive notification or submittal requirements as required elsewhere in the contract.

- Open discussion to include coordination items with other contractors and or agencies.
- Safety
- Quality control issues
- Three-week look ahead and discussion and identification any impact on the AGTS operating system
- Vehicle deliveries scheduled and coordination with DEN Operations
- Vehicle testing progress report.
- Status of training and spares parts inventory

PM-13 SCHEDULE

The Contract Schedule for the performance of the Work shall be a Critical Path Method (CPM) system, with reasonable detail including a time scaled network and computer printout.

The Contractor shall submit a monthly progress report and schedule update with each monthly pay application. The Contractor will have the contract schedule available at all progress meetings.

The Contractor shall complete the Work within the contract time and in accordance with the most recent schedule submittal that has been approved in writing by the City.

A. Planning

The total contract time, including project milestones as indicated in the contract documents is the maximum allowable for the completion of the contract including final acceptance and contract close out.

In addition to the design activities, assembly and installation activities the schedule shall include activities for furnishing materials and equipment and any vendor shop drawing preparation. The Preliminary Contract Schedule, a supporting narrative, and the overall progress curve shall be submitted for approval within thirty (30) days after Notice to Proceed. Within fourteen (14) days the City will respond with approval or direction to revise and resubmit within ten (10) days. Failure of the Contractor to have a Contract Schedule approved by the City will be considered cause for withholding progress payment(s). The final contract schedule with the appropriate details is to be delivered to the City within 120 days of the NTP.

To the extent that the Contract Schedule or any revisions thereof contains anything not jointly agreed upon in writing, or fails to show anything jointly agreed upon in writing, it shall not be considered to have the approval of the City. Failure to include any work item required for performance of this Contract shall not excuse the Contractor from completing all work within applicable completion dates, regardless of the City's approval of the schedule.

DEN reserves the right to impose any additional schedule development and reporting requirements.

Failure of the Contractor to comply with this Section will be considered cause for withholding progress payment(s) or termination for default.

B. Execution

The Contractor will take the Contract Summary Schedule and develop and expand the schedule to comply with the requirements of these Project Management Provisions. The total contract time must fall within the time provided for in the contract.

The Contract Schedule shall be a computerized CPM schedule that includes:

1. The Work Breakdown Structure (WBS) for activity identification, which shall correspond with the content of the Technical Specifications
2. The order, sequence and interdependence of all significant work items including design, procurement, fabrication, testing, startup and inspection and delivery of critical or special materials and equipment, submittals and approvals of critical design review documentation, samples, shop drawings, procedures, or other documents that could have a schedule impact.
3. Work items by the City, other contractors, utilities and other third parties that may affect or be affected by Contractor's activities.
4. Proper referencing of all work items to identify applicable subcontractors or other performing

parties.

5. Work item duration not to exceed fifteen (15) working days, unless approved by the Project Manager. No more than 25 percent of the work item may be on the critical path.
6. Work items shall be resource loaded to show the direct craft man-hours estimated to perform the work including work by subcontractors.
7. A narrative that explains the basis for the Contractor's logical progression of the work. It shall include estimated quantities and production rates, hours per shift, work days per week, and types, number, and capacities of major equipment to be used and whether the Contractor plans to work weekends or holidays.

The Contract Schedule shall be prepared to include the data for the total contract duration, and the critical path shall be identified, including critical paths for interim completion dates. Scheduled start or completion dates imposed on the schedule by the Contractor shall be consistent with contract milestone dates. Milestone events shall be the schedule dates specified in the Contract documentation and shall be prominently identified and connected to the appropriate work item, denoting its start or completion. Work items related to any interim milestones shall be coded for that milestone.

The Contractor shall submit the following documents to the City upon completion of the Contract Schedule:

- 1) A time phased plot of the CPM schedule showing all logic ties.
- 2) Various computer-generated construction schedule reports that contain the following data for each work item: Identification, description, responsibility, duration, early start and early finish, late start and late finish, total float, and resources. The work items shall be sorted by float, early start, subcontractor, or other sorts mutually agreed to. The reports shall also show the logic ties of successor and predecessor work items.
- 3) A physical progress curve showing either manpower or other appropriate key contract items derived from the construction schedule and against which physical progress performance will be measured for schedule and payment purposes.

PM-14 PROGRESS REPORTING

1. Quarterly Progress Report

The Contractor shall submit to the City two copies of a Quarterly Progress Report. This Report shall contain the following sections:

1. Executive Summary;
2. Task Activities Planned for Next Quarter;
3. Planned or Proposed Schedule Revisions or other Remedial Actions;
4. Identification and Analysis of any Scheduling, Coordination, or Other Problem Areas;

5. Progress Photos (digital camera; 4 or 5 images).

The exact format and detail level required for the Quarterly Progress Report will be established jointly by the City and the Contractor within thirty days after NTP based on a proposed format prepared by the Contractor.

The Contractor shall submit quarterly Schedule Status on a time scaled bar chart showing scheduled and actual progress to date.

PM-15 HAZARDS IDENTIFICATION AND ANALYSIS

The Contractor shall carry out the following:

Perform subsystem, System, and operating and support (O&S) detailed hazards analyses and present the findings in a document entitled Detailed Hazards Analysis (DHA) to be submitted within one hundred and twenty (120) days after the final subsystem design review. Individual detailed hazards analyses shall be documented/discussed as part of associated subsystem design reviews. Analyses may be limited to Categories I and II hazards identified by the PHA. Qualitative analyses shall be conducted for the express purpose of identifying unresolved hazards, establishing causes of failure, and providing priorities for subsequent action. Applicable analyses conducted for previous people-mover installations using the same equipment will be acceptable where it can be shown that no changes have been made which affect safety.

The Contractor shall comply with all requirements of the Hazardous Communication Standard, OSHA Standard 1910.1200.

PM-16 SAFETY DOCUMENT FILES

The Contractor shall maintain for a period of six (6) years following the termination of this Contract a complete set of safety files with all documents required by or supporting the requirements of this Section. These files shall be used, in part, to support the activities of Maintenance Manuals below. These files shall be provided to the City upon the City's request.

PM-17 SAFETY CERTIFICATION

As a condition for Substantial Completion before the vehicles are placed into passenger service operation, the Contractor shall formally certify to the City that the vehicles provided by the Contractor has been designed and installed using the safety principles customarily applied in the transit industry for automated people-mover systems in the United States and the system meets or exceeds all applicable federal, state, and local laws, rules, codes, orders, and regulations.

PM-18 MAINTENANCE MANUALS

Maintenance Manuals shall be provided for the vehicles. These manuals shall provide detailed procedures and reference data for performing all of the required maintenance

tasks. The text and detail of these manuals shall be consistent with the Contractor's proposed maintenance philosophy and the required maintenance personnel skill levels, facilities, and equipment. The manuals shall include expanded assembly pictorials and complete instructions for assembly and disassembly as required. The maintenance manuals shall contain general information such as:

1. Preventive maintenance and overhaul schedules for all System components.
2. Descriptions of maintenance procedures of all System components.
3. Description of System operation including interactions between major subsystem elements.
4. Detailed descriptions of individual System components and assemblies including clearances, tolerances, circuit operations, test point voltages, waveforms, etc., with references to System drawings as applicable down to the lowest replaceable unit (LRU).
5. Detailed descriptions of operational procedures for all manual operations.
6. Detailed description of test equipment operation and procedures for its correct use in equipment maintenance.
7. Description of replacement parts, including identifying description and parts numbers as necessary to order such parts from the original parts supplier or manufacturer. There shall be a complete parts list for all numbered parts, correlating the parts number with the parts name, unit price, and name of the original manufacturer down to and including the LRU. Where an LRU is not a Contractor-specific design or product but is purchased from a vendor or subcontractor, the Original Equipment Manufacturer (OEM) shall be identified together with the OEM specified part and/or model numbers and copies of the OEM maintenance instructions. The parts list shall be provided as part of a computerized inventory control system, along with the software and hardware, for changing, updating, and sorting by any category or data field, and printing the results.
8. Appropriate drawings, literature and other information which accompany LRU's purchased from other vendors. These may be provided as appendices to the manual.
9. Troubleshooting guides at the System, subsystems, and component equipment level to aid in diagnosis of common failure modes.
10. The Contractor will provide all the manuals and documentation in the same format containing no less than all the same type of information as currently being used by the on-site O&M team.
11. The Contractor will submit a draft of the required manuals to the on-site O&M team and the City Project Manager for their review and approval no later than 150 days prior to delivery of the first vehicle. The O&M team and City will review and return comments within 30 days of receipt. The contractor will coordinate the comments and incorporate the appropriate changes requested by the City and the O&M contractor. The contract will supply two (2) complete hard copies and one (1) electronic copy 60 days prior to the arrival of the first car. Following acceptance of the manuals and prior to Final Acceptance,

the Contractor shall submit a minimum of ten (10) copies of the final manuals.

PM-19 RECOMMENDED SPARE PARTS LIST FOR NEW AGTS VEHICLES

Contractor shall develop an initial list of the required spare parts for the vehicles. This list will be discussed with the project manager and the APM consultant during the design submittal process. The final agreed upon list of parts will be delivered to DEN 120 days prior to the delivery of the first vehicle.

PM-20 DESIGN REVIEWS

The purpose of the design review is to build the confidence of both the City and the Contractor that the Contractor's designs, as implemented, will meet all the requirements of this Contract, and to exchange information regarding interfaces between the Contractor's and the City's other work. It will alert the Contractor to areas where requirements might not be met, in order that the Contractor may allow time for refinement of designs and thus avoid future delays and costs due to any re-work necessary to meet requirements.

None of the review comments provided by the City shall be interpreted as directives to the Contractor to carry out any work that is not required by this Contract.

A. Execution

There will be three levels of Design Reviews- Conceptual Design Review (CDR), Preliminary Design Review (PDR) and Final Design Review (FDR). The Contractor shall present all the submittal requirements outlined in the Contract Documents for the Design Reviews that are related to the Technical Specifications.

All printed, audio and/or video information presented for design review shall be in the English language. As the basis for the design reviews, the Contractor shall submit Design Review Data to document the designs of the System and subsystems, and to facilitate the review and understanding of such designs.

Unless otherwise specified, the Contractor shall submit five (5) copies of all printed matter, drawings, audio and/or video material as part of each Design Review Data package.

Schedules for submissions of the design review material shall be developed by the Contractor and approved by the City.

The City reserves the right to request additional Design Review Data as it, in its sole discretion, deems necessary, and the Contractor shall furnish such materials as requested. Additional information requested in writing by the City shall be provided by the Contractor within two weeks after receipt of a written request. In such cases the time allowed by the City for completing the design review shall be extended accordingly.

B. Procedure

The entire design review process shall begin and be completed within the time specified in the approved detailed Contract Schedule. The schedule and content of each design review meeting will be developed jointly by the Contractor and the City. Contract compliance for some aspects of the System may be verified through review of analyses submitted by the Contractor as part of the design review process. At the time of the design reviews, the City will examine the design review material and, in its sole discretion, will make decisions regarding the extent of its applicability for contract compliance purposes.

After reviewing the material, the City will provide the Contractor its review comments on each submittal. If necessary, subsequent meetings shall be scheduled and organized by the Contractor for clarifying and discussing design issues.

The Contractor and the City will mutually develop and distribute an agenda of topics for such meetings in advance of the meeting date. If so requested, the Contractor shall present an overview of the design information at the meeting, using standard engineering drawings, specifications, catalog cuts and other similar material, and respond to comments raised by the City in its review. After the meeting, the City and Contractor will mutually identify any remaining problems to be resolved. Prior to termination of the design review meeting, a list of action items and assigned responsibilities will be mutually agreed upon between the City and the Contractor. Within thirty (30) days thereafter, the Contractor will prepare a memorandum Record of Design Review (RDR) to document the review questions, discussions, and resolutions.

Copies of each RDR will be forwarded to the City for its records. Any exceptions taken by the City to the information contained in the RDR shall be sent to the Contractor within 21 days after receipt; otherwise, the RDR shall stand as the official record of the design review process for the affected component and subsystem.

Any issues which cannot be resolved shall be identified as "critical issues" and carried as open items on the Contractor's monthly progress report, along with a date for their ultimate resolution. Resolution of any dispute item arising during the design review process will be resolved in accordance with the provisions of the Contract regarding dispute resolution.

C. Location

Upon request, The City Project Manager may agree to design reviews being conducted at Bombardier's facilities in Pittsburgh, PA.

PM-21 SUBMITTALS

The Work specified in this Section summarizes the requirements for the submittal of documents to the City that are defined in these Contract Documents. It also describes the procedures for "supplemental" submittals.

1) Submittal Schedule

The Contractor shall provide a submittal schedule within fourteen (14) days after Notice

to Proceed. The Submittal Schedule shall be directly related to the CPM Schedule and the Work Breakdown Structure (WBS). It shall identify all the submittals, and shall include the following information for each submittal item:

- A. CDRL line item reference, Contract Article, or Specification Section or Project Management Provisions.
- B. Item description
- C. Date the submittal shall be submitted
- D. Name of subcontractor or supplier.

The submittal schedule shall be updated monthly by the Contractor and submitted with the progress payment request.

Unless stated otherwise, two (2) copies and one (1) CD of all submittals shall be furnished. Two-sided submittals will not be accepted.

2) Initial Submittal

Each submittal document shall include a title block showing the following information:

- A. Date of submittal and revision dates
- B. Contract title and number.
- C. The names of Contractor, subcontractor, supplier, manufacturer and when applicable, the seal and signature of an engineer registered in the State of Colorado, for the involved discipline.
- D. Identification of product by description, model number, style number or lot number.
- E. Subject identification by contract drawing or specification reference.
- F. Include a blank space on each sheet, three inches by four inches, in the lower right corner, just above the title block, in which the City may indicate the action taken.
- G. Make submissions sufficiently in advance so that the City review may be completed not less than 30 days before Work represented by those submittals is scheduled to be performed.
- H. Allow a minimum cycle of 30 days for review of each submittal by the City.

Accompany submittal documents with DEN transmittal form CM-30 that shall contain the following information:

- 1) Contractor's name, address, and telephone number.
- 2) Submittal number and date.

- 3) Contract title and number.
- 4) Supplier's, manufacturer's, or subcontractor's name, address, and telephone number.
- 5) Identification of variations from Contract Documents.
- 6) Contractor's stamp and signature certifying his review.
- 7) Identification of submittal:
 1. If the submittal is being made on a Project Management Provisions, reference the Provision number.
 2. If the submittal is being made under a specification section, reference the specification number, paragraph number and subparagraph number.
 3. If the submittal is being made under a drawing, reference the drawing(s) number and sub number.

The Contractor shall at the time of submission describe variations from the contract documents in writing, separate from the submittal document. If the Project Manager approves any such variations, an appropriate contract change order shall be issued except that, if the variation is minor and does not involve a change in price or in time of performance, a modification need not be issued. If a submission contains variations and the variation column is not marked on the transmittal form, it will not be considered for review and acceptance. Along with marking the transmittal as a variation, a description must be included which outlines all the differences including maintenance and utility services along with any cost savings from an item not containing the variation.

Changes in accepted submittal documents will not be permitted unless those changes have been accepted, in writing, by the City.

An electronic copy of the CM-30 and CM-30 Supplement forms are available from the Project Manager.

3) Supplemental Submittals

Supplemental submittal documents initiated by the Contractor for consideration of corrective procedures shall contain sufficient data for review. Make supplemental submittals in the same manner as initial submittals with the appropriate primary transmittal referenced.

4) Execution

1. Contractor's Review

The Contractor shall review submittal documents, stamp and sign as reviewed and approved as complying with Contract Documents prior to submission to the City.

2. City Review

Submittal documents will be reviewed by the City, the City's APM Consultant and the Project Manager for conformance to requirements of the contract drawings and specifications. Review of a separate item will not constitute review of an assembly in which the item functions. The City will withhold approval of submittals that depend on other submittals not yet submitted. Review and acceptance will not relieve the Contractor from his responsibility for accuracy of submittals, for conformity of submittal document to requirements of contract drawings and specifications, for compatibility of described product with contiguous products and the rest of the system, or for protection and completion of the Contract in accordance with the Contract drawings and Specifications.

The City, APM Consultant, and/or the Project Manager will review the submittal documents for general conformance with the contract documents and mark the Action Code, sign, and date the transmittal.

The Action Codes have the following meanings:

1. **A - ACCEPTED** is an approval, and means that the illustration and description appears to conform to the respective requirements of the contract documents.
2. **B - ACCEPTED AS NOTED** is an approval, and means that the illustration and description will conform to the respective requirements of the contract documents after changes in recognition of the reviewer's comments. Submittals so marked need not be resubmitted.
3. **C - REVISE AND RESUBMIT** means that the submittal is unacceptable and must be revised and resubmitted.
4. **E - NOT ACCEPTED** means that the submittal is not approved and that a new submittal in accordance with the contract documents shall be made.
5. **F - RECEIPT ACKNOWLEDGED** means an item is received by the Project Manager but no review was made. This mark is for use in resubmitting items that were previously accepted as noted and the Contractor has incorporated the notes and wants the Project Managers' staff to have the same material that the Contractor's field staff is using.

5) Contractor's Responsibilities

Coordinate each submittal document with the requirements of the Work; place emphasis upon ensuring that each submittal of one trade is compatible with other submittals of that trade and submittals of other trades including producing as needed drawings showing the relationship of the work of different trades.

Contractor's responsibility for errors and omissions in submittal documents and associated calculations is not relieved by the City's review, correction and acceptance of submittals.

Contractor's liability to the City, in case of variations in the submittal document from the requirements of the contract documents, is not relieved by the City's review and acceptance of submittals containing variations unless the City expressly approves the deviation in writing, in which the City describes the variation.

The Contractor shall maintain a file of all approved submittal documents at the work site. The complete file of approved submittal documents shall be turned over to the City with the as-built documents at the end of the project.

Schedule impact due to resubmittal requirements is the responsibility of the Contractor.

PM-22 SHOP AND WORKING DRAWINGS, PRODUCT DATA AND SAMPLES

The Work specified in this section consists of preparing and submitting shop and working drawings, product data, samples and record documents required by the Technical Specifications. This information is to be submitted during the Design Review process as specified in the Contract Documents.

The Project Manager will return one copy of the shop drawings, working drawings and product data to the Contractor with a written transmittal within the time periods noted in the Contract documents.

The Contractor shall not submit as shop drawings copies or reproductions of drawings issued to the Contractor by DEN.

All submittals shall be delivered to the DEN Project Manager in electronic format. All submittals must be of a consistent format (all Acrobat or all Word, etc.). No combination of electronic file types will be allowed unless required by a specific specification section. If manufacturer's printed information is in color, all copies of submittals must be in color.

1. Acceptable electronic formats

1. Adobe Acrobat 8.0 or newer.
2. Microsoft Office 2007 or newer.
3. Autodesk AutoCAD 2007 or newer. All files shall be self-contained with no external x-references.
4. Other files pre-approved by the DEN Project Manager

5. Adobe Acrobat Requirements:

1. Drawings shall have security set to "No Security". Commenting, printing, adding photos, form fields and document signing must be allowed.
2. PDF submittals shall be one continuous file. No external links are allowed.
3. All individual components of submittals shall be bookmarked inside the PDF file.

4. All original documents shall be directly converted from the original electronic format to PDF. Scanning of files shall only be allowed by the DEN Project Manager when the original electronic information is not obtainable.
5. Failure to comply with these requirements will result in a return of file to the Contractor for immediate revision.

6. Quantities

1. Electronic files of each shop or working drawing, manufacturer's standard schematic drawings, manufacturer's calculations and manufacturer's standard data, manufacturer's printed installation, erection, application and placing instructions.
2. Two samples of each item specified in the various specification sections, unless otherwise specified
3. Electronic files of inspections and test reports.

4. Changes

Changes in products for which shop or working drawings, product data or samples have been submitted will not be permitted unless those changes have been accepted and approved in writing by the Senior Vice President of Operations.

5. Quality Control

Shop drawings and record documents shall be prepared to a high standard of quality such as that set forth in ASME Y14.100M, Engineering Drawing Practices, or other equivalent specification defining equal drafting quality for microfilming.

6. Shop and Working Drawings

Prepare shop and working drawings in a reproducible electronic format supporting a sheet size of 24 x 36 inches to a scale large enough to easily depict and annotate each of the drawing details.

Include the following as they apply to the subject:

- a. Contract title, work order and number.
- b. Respective contract drawing numbers.
- c. Applicable specification section numbers.
- d. Relation to adjacent structure or materials.
- e. Field dimensions clearly identified as such.
- f. Applicable standards such as ASTM or Federal Specification number, AASHTO and pertinent authority specifications or standards.

- g. Identification of deviations from the contract specifications.
- h. Drawing name, number and revision.
- i. Contractor's stamp, initialed or signed, certifying:
 - 1. Review of submittals for compliance with contract requirements.
 - 2. Compatibility of the Work shown thereon with the DEN AGTS system.

Drawings of equipment and other items that contain multiple parts shall include exploded views showing the relationship of parts and the description of the parts into the smallest units that may be purchased or serviced.

A. Product Data

Modify manufacturer's standard and/or schematic drawings to delete information which is not applicable to the contract. Supplement standard information with additional information applicable to this contract.

Modify manufacturer's standard(s), diagrams, schedules, performance charts, illustrations, calculations, and other descriptive data to delete information which is not applicable to the contract. Indicate dimensions, clearances, performance characteristics and capacities. Include with the submittal electrical, HVAC and any other diagrams, as applicable.

Modify erection, application and placing instructions to delete information that is not applicable to the contract or work order.

Include the following:

- Contract title, work order and number
- Respective contract drawing numbers
- Applicable contract technical specification section numbers
- Applicable standards such as ASTM or Federal Specification number, FAA, AASHTO and pertinent authority specification or standards
- Identification of deviations from the contract specifications
- Contractor's stamp, initialed or signed, certifying:
 - 1. Dimensional compatibility of the product with the space in which it is intended to be used
 - 2. Review of submittals for compliance with contract requirements

3. Compatibility of the product with other products with which it is to perform, or which will be next to it.
4. The products electrical, control and HVAC requirements conform to contract documents.

B. Samples

Submit samples of sizes and quantities to clearly illustrate full color range and functional characteristics of products and materials including attachment devices.

The Contractor shall verify, through appropriate inspections and tests, that the samples submitted meet the specifications and shall provide inspection and test data with the samples. The review and comments on the sample shall not relieve the Contractor of his responsibility for completion of the Contract.

Show the following information:

- 1) Contract title and number
- 2) Respective contract drawing numbers
- 3) Applicable technical specification section numbers
- 4) Applicable standards such as ASTM or Federal Specification number
- 5) Identification of deviations from the contract specifications
- 6) Contractor's stamp, initialed or signed, certifying:
 1. Dimensional compatibility of the product with the space in which it is intended to be used
 2. Review of submittals for compliance with contract requirements
 3. Compatibility of the product with other products with which it is to perform, or which will be next to it

If multiple samples are submitted and the Project Manager is requested to make a choice, each sample shall have a unique identification number attached to it, so the returned transmittal can state the identification number of the accepted sample and the Contractor will know which one it is.

C. Review by the City

One copy of the marked-up shop and working drawing and one copy of the product data will be returned to the Contractor by the Project Manager. Only the transmittal form, appropriately marked, will be returned on sample submittals.

Contractor's responsibility for errors and omissions in submittals for compatibility will

not be reduced, waived, or otherwise limited by the review and acceptance of submittals by the City.

PM-23 CONTRACTOR QUALITY CONTROL

This section identifies the Quality Control activities to be performed during all phases of the Contract by the Contractor.

All materials required for the Contract shall be new except where specified otherwise. The Project Manager may elect to perform additional inspections and/or tests at the place of the manufacture, the shipping point or at the destination to verify conformance to applicable specifications. Inspections and tests performed by DEN shall not relieve the Contractor from the responsibility to meet the specifications, nor shall such inspections/tests be considered a guarantee for acceptance of materials that will be delivered at a later time.

The Contractor is obligated to correct or remove non-conforming materials, whether in place or not. If necessary, the Project Manager will send written notification to the Contractor to correct or remove the defective materials from the project. If the Contractor fails to respond, the Project Manager may order correction, removal and/or replacement of defective materials by others, in which case the Contractor shall bear all costs incurred by such actions.

Materials accepted based on a Certificate of Compliance may be sampled and inspected/tested by DEN or its designer at any time. The fact that the materials were accepted based on such certification shall not relieve the Contractor of his responsibility to use materials that conform to the specifications.

The Contractor shall impose upon his suppliers the same quality control requirements, including inspection and test procedures, as imposed upon him by the specifications and referenced standards. The Contractor shall apply appropriate controls, designed to ensure that all materials supplied meet the requirements and specifications.

The Contractor shall have in place his Quality Control Program as necessary to ensure that all materials and work are completed in compliance with Contract Documents. The Contractor is solely responsible for Quality Control except for those tests and/or audits that may be conducted by the City as defined in the Contract Documents. The Quality Control Program covers all work on the contract including work performed at the Contractor's manufacturing facility.

a. Quality Control Plan

Within thirty (30) days after Notice to Proceed, the Contractor shall submit a Quality Control Plan for review and acceptance. Acceptance by the Project Manager does not relieve the Contractor of compliance with the Contract requirements. The Contractor Quality Control Plan shall address the following as a minimum:

- a. The Contractor shall designate an employee as the Quality Control Manager qualified to perform quality control monitoring of the Work. The designated

individual shall have the authority to direct work changes required to bring the Work into conformance with contract requirements including stopping non-conforming work in progress.

- b. Provide a general description of Quality Control monitoring to be performed starting from the initial design until final acceptance by DEN.
- c. The Quality Control Plan shall address the technical specification requirements for quality control. The Contractor shall identify each item requiring submittal and approval/acceptance prior to installation of work. Also, the Contractor shall identify any element of work requiring testing by the independent testing agency.
- d. The Quality Control Plan shall address and establish controls and documentation format to ensure that items or materials that have been accepted through receiving inspection are used or installed. Identification and traceability shall be provided throughout all inspections, test activities and records. For stored items, provisions shall be made for the control of item/material identification, consistent with the expected duration and type of storage.
- e. Provide methodology of monitoring, testing, and exercising of all equipment, and/or assemblies to ensure the Work installed on the vehicle is in proper working order.
- f. The Contractor shall submit a list of suppliers and subcontractors. This list shall include items to be supplied by each supplier and/or subcontractor and shall identify work to be performed by each subcontractor. The list shall be updated and resubmitted as required.

b. **Daily Quality Control Report**

- a. Once work begins on-site at DEN, the on-site Quality Control representative will furnish the Project Manager with a daily report.
- b. A Daily Quality Control Report shall be submitted on the form (form to be provided by the City). The Contractor may add sheets of information to this form as required. The report shall address as a minimum the following:
 - 1. Identify number of workers on-site each day by project title.
 - 2. Identify notifications and discussions with/by DEN Quality Assurance Inspectors, APM consultant and other agency inspectors,
 - 3. Identify quality of work placed that day and any deviations and/or corrections required to bring the Work into conformance with the contract,
 - 4. Daily reporting may not be computerized or typed. Only legible, hand written reports on the approved form shall be accepted,

5. Submit two copies of the Daily Quality Control Report to the Project Manager the day following the work. The report shall be signed by the Contractor's Quality Control Representative and the Contractor's Superintendent.

c. Documentation

The Contractor shall not change or alter approved submittals, procedures, specifications, drawings, or other pertinent documentation without the Project Manager's written authorization.

All records and documents that are quality related shall be prepared, identified, and maintained by the Contractor and shall be made available to DEN upon request. The Contractor shall maintain records at the actual work site and at Contractor's office to show the inspection status of materials and items installed to ensure that the required inspections and tests have been performed in a timely and correct manner. Retention time for all quality records shall be not less than three years from date of Final Acceptance of the Contract.

PM-24 CONTRACT TEST AND INSPECTION PLAN

The Contractor shall develop an implementation, start up, testing and training plan for the vehicles to be used when the vehicles arrive at DEN. Preliminary inspection and testing plans will be submitted for initial review by DEN and the local Bombardier O&M team with the Final Design Review submittal. The final inspection and testing plan will be submitted to the DEN Project Manager for approval 90 days prior to the arrival of the first car. DEN, the O&M contractor and the APM consultant will provide comments to the Contractor within 30 days of receipt and the Contractor will coordinate the appropriate changes to the plan. The final approved plan will be in place at DEN no later than 30 prior to the start of on-site commissioning and testing of the first car(s).

The Contractor's startup and testing procedures shall include detailed descriptions of all pre-operational hardware, electrical, mechanical and instrumentation used for testing work. Each control device, item of electrical, mechanical and instrumentation equipment, and all control circuits shall be considered in the testing procedures which shall be designed in a logical sequence to ensure that all equipment has been properly serviced, aligned, connected, wired, calibrated, and adjusted prior to operation. The Contractor is advised that failure to observe these precautions may place the acceptability of the equipment in question, and he may either be required to demonstrate that the equipment has not been damaged, or replace it as determined by the Project Manager.

Testing procedures shall be designed on the final installed equipment system wherever possible. In case testing requires the simulation of functions, the test shall be designed to duplicate as close and realistic as possible all conditions of operations and shall be carefully selected to ensure that the equipment is not damaged. Once the Project Manager has accepted the testing procedures, the Contractor shall provide checkout, alignment, adjustment, and calibration signoff forms for each item of equipment and each system that will be used. The Contractor and the Project Manager shall use the

signoff forms in the field jointly to ensure that each item of electrical, mechanical and instrumentation equipment and each system has been properly installed and tested. Any special equipment needed to test equipment shall be provided to the City at no cost for a period of 30 days during startup.

Before starting up the equipment, the Contractor shall properly service it and other items, which normally require service in accordance with the maintenance instructions.

The Contractor shall be responsible for the startup, adjustment, preliminary maintenance and checkout of all equipment and instrumentation. All systems shall be carefully checked for conformance with the design criteria.

If any equipment or system does not operate as specified in the Contract, the Contractor shall immediately replace or repair components until it operates properly.

Prior to the start of the implementation, start up, testing and training plan of the vehicles a pre-work meeting will be held at the AGTS site office. The meeting will be to familiarize the project team and the on-site AGTS Operations and Maintenance team with how the vehicles will be tested, accepted, and integrated into the existing system. Quality Control and Safety representative(s), the DEN Project Manager and DEN APM consultant will attend.

The purpose of the meeting is to ensure that the Contractor's personnel and the on-site operations personnel have no misunderstandings regarding their safety and quality procedures as well as the technical requirements of the contract and the individual work element to be performed. The following items shall be presented and reviewed by the Contractor:

- 1) A clear presentation of the work element and its impact to the operating system.
- 2) An identification of the risks associated with the work
- 3) A recovery plan if the work will impact the AGTS operation
- 4) Safety, security, and environmental precautions to be observed
- 5) Any other preparatory steps dependent upon the operation
- 6) The Contractor's means and methods for performing the Work.

The Contractor's designated Quality Control Representative shall inspect the work and shall ensure the work complies with the contract requirements prior to any requests for inspection or testing.

When the specifications, laws, ordinances, rules, regulations, or orders of any public agency having jurisdiction require the Project Manager's surveillance of inspections or tests, the Contractor shall notify the Project Manager of the place, date, and time 48 hours prior to the inspection and/or test. The Contractor shall be responsible for notifying and requesting inspection by other agencies including but not limited to the

Denver Building Inspection Division, and Denver Fire Department.. Prior to request for other agency inspections, the Contractor shall meet and plan inspection times with the Project Manager and or the Project Manager's designated representative.

Special inspections or tests may be required by the Technical Specifications, City, State, and/or Federal Agencies in addition to those tests already performed. The Contractor shall notify the Project Manager at least 48 hours in advance of the additional inspections or tests.

PM-25 DEN QUALITY ASSURANCE DURING MANUFACTURING, FABRICATION, ON SITE INSPECTION AND TESTING

This Section identifies DEN Inspection activities that may be performed by inspectors employed by DEN and working under the direction of the Project Manager.

Inspection and tests, conducted by persons or agencies other than the Contractor, shall not in any way relieve the Contractor of his responsibility and obligation to meet all specifications and the referenced standards and all the elements of the approved final design.

The inspection and approval of work by other agencies above does not constitute inspection or acceptance of work required by DEN.

The Project Manager may elect to perform additional inspections and/or tests at the place of the manufacture, the shipping point or at the destination to verify conformance to applicable specifications. Inspections and tests performed by DEN shall not relieve the Contractor from the responsibility to meet the specifications, nor shall such inspections/tests be a guarantee for acceptance of materials that will be delivered at a later time.

The Project Manager or his authorized representative may inspect at its source any material or assembly to be used in the Work. Manufacturing plants may be inspected periodically for determining compliance with specified manufacturing methods or materials to be used in the Work and to obtain samples for testing and further inspection.

Should the Project Manager conduct plant inspections the following conditions shall exist:

- A. The Project Manager shall have the cooperation and assistance of the Contractor and the producer with whom the Contractor has contracted for materials.
- B. The Project Manager shall have full access during scheduled production or warehousing working hours to any part of the plant that are concerned with the design manufacture, production, storage, or shipping of materials being furnished under this contract.
- C. The Contractor shall arrange for adequate office or working space that can reasonably be needed for conducting inspections or tests at the contractors or their suppliers facilities Office or working space shall be conveniently located with

respect to the plant and/or warehouse as required by the Project Manager.

- D. It is understood and agreed that DEN shall have the right to re-test at DEN's expense any materials that have been tested and accepted at the source of supply after it has been delivered to the site.

1) Inspections and Tests

It is understood and agreed that DEN shall have the right to take samples and perform testing of samples at different intervals or at intervals concurrent to the Contractor's testing program. The Contractor shall be issued a Nonconformance Report or a Remedial Action Request in the event DEN tests fail.

Materials accepted on the basis of a certificate of compliance may be sampled and inspected/tested by DEN or its consultant at any time. The fact that the materials were accepted based on such certification shall not relieve the Contractor of his responsibility to use materials that conform to the specifications.

DEN inspection can include but not be limited to Initial Inspection, Follow-up Inspection, Completion Inspection, Pre-Final Acceptance Inspection, and Final Acceptance Inspection.

2) Remedial Action Request (RAR)

The Project Manager will request the Contractor to take remedial action when nonconforming work is discovered and/or when test results indicate nonconforming work.

The Project Manager will document remedial action that cannot be taken immediately (the same day) by issuing a Remedial Action Request form to the Contractor. Remedial Action Requests are appropriate when the affected element of work is in-progress and discrepancies can be rectified as the work proceeds. RAR's shall be written when work can be brought back into conformance with the contract documents.

When issued, a Remedial Action Request will preclude payment for elements noted and will remain in effect until corrective actions have been submitted, approved, and performed.

Upon satisfactory completion of the remedial action, the Contractor shall transmit the RAR form with the Contractor's statement of action taken (including any applicable test results) to the Project Manager. The Project Manager will perform a follow-up inspection to verify the RAR has been satisfactorily completed. The RAR then will be closed.

3) Nonconformance Report (NCR)

The Project Manager will issue a Nonconformance Report to the Contractor whenever there are violations of the terms of the contract that cannot be immediately brought back into conformance, including materials received and/or items of the work found not to be in conformance with Contract requirements. When issued, a Nonconformance

Report will preclude payment for elements noted and will remain in effect until corrective actions have been submitted, approved, and performed.

The Nonconformance Report form will describe the nature and extent of nonconforming elements and will include space for the Contractor's corrective action proposal, the designer's review of the Contractor's proposal, reinspection and/or verification of approved corrective rework and a space for the Project Manager's disposition of the nonconformance matter. Copies of the Nonconformance Report, at each step of its processing (i.e., initial issuance to Contractor through final disposition) will be sent to the Project Manager.

The Project Manager will make the disposition of nonconforming items/materials.

The Contractor is obligated to correct any item deemed deficient.

PM-26 DELIVERY AND ON-SITE TESTING OF AGTS CARS

The AGTS vehicles manufactured by the Contractor shall be delivered by the Contractor F.O.B. Denver International Airport in accordance with the delivery schedule set forth in Exhibit F. Once received and commissioned the Contractor can begin the on-site testing per the approved test plans. DEN and their APM consultant may at any time participate and witness the testing. These tests are all required to be successful and complete prior to substantial completion for each vehicle. The Contractor shall be present during the testing and start up period with adequate labor and support personnel to adjust equipment and troubleshoot system failures that might arise.

1. Tests shall be as specified in the Contractors approved WBS and shall be made to determine whether the equipment has been properly assembled, aligned, and connected. Any changes, adjustments or replacements required to make the equipment operate as specified shall be carried out by the Contractor as part of the work.
2. At least 30 days before the time allowed in the contract schedule for commencing startup and testing procedures, the Contractor shall submit to the Project Manager two copies of the final detailed procedures of the test and startup plan. These procedures are submitted for the final review and acceptance.

PM-27 SUBSTANTIAL COMPLETION

The City shall issue to the Contractor a Certificate of Substantial Completion on a vehicle by vehicle basis when all of the requirements of the contract documents have been met, including but not limited to the following conditions:

1. The successful completion of the on-site test
2. A final punch list for the vehicle has been accepted by DEN
3. The State inspector has been informed and deemed operation acceptable
4. Initial testing and commissioning is complete
5. Adequate spare parts are on site at DEN

6. The contractor and the DEN Project Manager mutually agree the unit is ready for service

The form of a Certificate of Substantial Completion is Exhibit H of the contract documents. Certificates of Substantial Completion may be issued for more than one vehicle at a time if approved by the Project Manager. Issuance of a Certificate of Substantial Completion shall indicate that the City may use the AGTS Car(s) for their intended purpose of transporting passengers; however, the Contractor shall be responsible for completing the outstanding items noted on the Certificate of Substantial Completion and the Operational Demonstration requirements. The start of the demonstration period will be the start of the warranty period for that vehicle or vehicles. If the demonstration period fails, the warranty will start over when the vehicle begins the demonstration period again.

PM-28 OPERATIONAL DEMONSTRATION

Each vehicle's Operational Demonstration period can begin after it has been issued a Certificate of Substantial Completion. During this demonstration period all hardware, electrical and mechanical equipment, communications, alarm systems and associated devices shall be energized and operated under local and automatic controls. The Contractor shall be present during the demonstration period with adequate labor and support personnel to adjust equipment and troubleshoot system failures that might arise.

1. During the demonstration period each new vehicle must be incorporated into the DEN AGTS system and operated as part of the normal pinched loop operation and shuttle mode. During its demonstration period, each new vehicle must be operated for at least 300 hours in regular loop service and used as a lead, trail, and middle car, for substantially equal amounts of time during the thirty (30) day Operational Demonstration period.
2. During the 30-day Operational Demonstration period, if any new vehicle experiences more than (3) failures which cause it to be removed from service, a new 30-day Operational Demonstration period will commence when the vehicle is returned to service after repair following the 4th such failure.
3. If a new vehicle has less than (4) failures causing its removal from service during its Operational Demonstration, but has been operated in service for less than 300 hours in regular loop service, the Operational Demonstration period for that vehicle will be extended until the vehicle has been successfully operated for at least 300 hours in regular loop service and has not experienced more than 3 failures which require its removal from service. If a vehicle experiences a 4th failure causing its removal from service during any such extension of the Operation Demonstration, then the 30-day demonstration period will re-commence as described in subsection (2) above.
4. Successful completion of the Operational Demonstration shall be required before a new vehicle shall be eligible for final acceptance. Final payment will not be made until all the AGTS vehicles have successfully completed the Operational Demonstration. Repairs to vehicles during Operational Demonstration shall be at Contractor's cost, except for repair

of damage from vandalism, use, or another cause other than equipment failure.

PM-29 FINAL COMPLETION

The City shall issue to the Contractor a Certificate of Final Completion when the Contractor has satisfactorily completed the delivery and the City has accepted all items required by the contract documents, all vehicles have successfully completed their operational demonstration period and when all punch list items have been cleared. A form of the Certificate of Final Completion is Exhibit I of the contract documents. A single Certificate of Final Completion will be issued for all the AGTS vehicles, and not issued separately for one or more individual vehicles. For Final Completion all shop manuals plus special tools will need to be on site and all training shall be completed.

PM-30 USE OF AGTS VEHICLES

No passengers shall be transported on any AGTS Car until the City issues a Certificate of Substantial Completion for such AGTS Car.

PM-31 ACCEPTANCE

When the term "acceptance" is used in this Contract with reference to the AGTS vehicles, it shall mean the issuance by the City of a Certificate of Substantial Completion for one or more of the AGTS vehicles or of a Certificate of Final Completion.

Any changes, adjustments or replacements required to make the equipment operate as specified shall be carried out by the Contractor as part of the work.

1) Systems Start-up, Testing and Demonstration Period

After adequate spare parts are on site at DEN, training has been completed, all shop manuals, and special tools are on site and the Contractor has satisfied himself the vehicle is ready for service then the Contractor can begin the 30-day Operational Demonstration period. During this demonstration period all hardware, electrical and mechanical equipment, communications, alarm systems and associated devices shall be energized and operated under local and automatic controls. The Contractor shall be present during the startup period with adequate labor and support personnel to adjust equipment and troubleshoot system failures that might arise.

When a piece of electrical or mechanical equipment is found to be in conflict with specific criteria, an experienced representative of the manufacturer shall make an adjustment to the item.

If adjustments fail to correct the operation of a piece of equipment or fixture, the Contractor shall remove the equipment or fixture from the project site and replace it with a workable replacement that meets the specification requirements.

The Contractor shall submit a test report to the Project Manager within 30 days after completion of the 30-day demonstration period

Final Instructions and Operations Training

The City can at their discretion participate in all training sessions provided to the O&M Contractors personnel. The Contractor will provide the City ten (10) days' notice of all training sessions. The City may send up to four individuals to the training sessions.

PM-32 CONTRACT RECORD DOCUMENTS

The Work specified in this Project Management Provision consists of maintaining, marking, recording, and submitting contract record documents which include shop drawings, warranties, contract documents, software documentation and contractor records.

2) Maintenance of Documents

The Contractor shall maintain at the work site on a current basis one record copy of all as-built drawings, specifications, addenda, change orders, approved design review documents, working drawings, product data and samples in good order and marked currently to record all changes made during execution of the Work.

The "as built" configuration of all hardware and software which are upgrades to or deviations from the current configuration shall be documented in detailed drawings, documents, notes, and other descriptive material as defined herein.

As Work Progresses. The Contractor shall keep a complete and accurate field and manufacturing plant record of all changes or deviations from the final approved design. the Contractor's subsystem and Contract Technical Specifications the Contractor's approved construction and equipment top level assembly drawings, and similar documents, indicating the Work as actually fabricated and installed. All such changes shall be neatly and correctly shown on the blackline prints of the manufacturing drawings affected, or in the Contract with appropriate supplemental notes. All such changes shall be tracked by the Contractor's established configuration control procedures for top level assembly drawings. This set of Record Documentation shall be kept at the manufacturing plant and job site during fabrication and installation into the DEN AGTS. At the conclusion of the Work, the as-built records shall be consolidated, organized, cataloged, and submitted to the City.

Mark-up Procedure. During progress of the Work, the Contractor shall maintain a black-line set of Record Documentation for any field construction work, with mark-up of actual work which varies substantially from the work as originally shown. The Contractor shall mark whatever document is most capable of showing the actual condition, fully and accurately. Where equipment assembly or installation drawings are affected, the Contractor shall mark cross-references on contract drawings at the corresponding locations. Marks shall be made with erasable colored pencil, using separate colors where feasible to distinguish between changes for different categories of work at the same general location. Mark-up shall include important additional information which was either shown schematically or omitted from original drawings. Particular attention shall be given to information on work cancelled, which would be difficult to identify or measure and record at a later date. Alternate numbers, change order numbers and similar identification shall be noted.

On Completion of the Work. Not later than 120 days after the date of Substantial Completion, and as a condition of Final Acceptance, the Contractor shall deliver to the City: two (2) complete hard-copy sets, one (1) complete reproducible set and the CADD Electronic Submittal in AutoCAD version 14 (or newer) in approved size and format, of top level assembly drawings, design specifications, and design documents (the "as-built deliverables"). These as-built deliverables shall be complete in every detail so as to correctly reflect as-built conditions. The as-built deliverables shall be segregated into two groups: (1) non-proprietary, and (2) proprietary. The "non-proprietary" documents shall describe all aspects of the site installation work and conditions and all commercially available items/products. (A "commercially available" product is one designed and produced for a multiplicity of other purposes and is not unique to the Contractor's transit system technology that is being applied for the System.)

For all "commercially available" items (including software), the as-built deliverables shall include the purchase specifications, the names, and addresses of the Original Equipment Manufacturers (OEM's) from which the items were purchased (i.e., contractors or otherwise), the OEM's identifying information/model numbers for reordering, and a complete set of the documentation supplied by the OEM with the items.

The "proprietary" documents shall provide all the necessary design information (except for production tooling and manufacturing process design) to operate and maintain all subsystems, equipment and components that are not unique to the System. By unique to the System, it is meant that the item was designed specifically by or for the Contractor, for use in either the System or the Contractor's basic system from which the System design was derived. "Proprietary," as distinct from "commercially available," shall mean that the design of the subsystem, equipment or component was not carried out under this Contract, or other contract with the City, or a federally funded contract but that such designs were included in the Contractor's development of the items as part of the Contractor's basic system technology that it is applying under this Contract as part of the System.

Certification of As-Built. The above as-built drawings and documents shall be arranged in accordance with the accepted Work Breakdown Structure and properly indexed. The Contractor shall certify that each of the revised as-built drawings and documents is complete and accurate.

3) Monthly Review

Prior to any application for payment, the Project Manager or his designated representative will inspect the record documents to ensure that they are being maintained and contain the most current correct data with particular attention to as-built drawings.

If, during the inspection, the Project Manager determines that the documents are not being maintained and kept current as to as-built conditions, an amount may be withheld from the payment request and deducted from the contract value to cover the City's cost of collecting and recording the as-built contract data. This cost will be determined on the basis of \$100.00 per man-hour of effort.

The As-built record contract documentation shall be submitted prior to Substantial Completion for each vehicle.

Each submittal of record documents shall be marked "PROJECT RECORD" and contain the following information:

1. Date
2. Project title and numbers
3. Contractor's name and address
4. Title and number of each record document
5. Certification that each document as submitted is complete and accurate
6. Signature of the Contractor or his authorized representative
7. At the completion of this contract, deliver all record documents including the following:
 1. As-built shop drawings, diagrams, illustrations, schedules, charts, brochures, and other similar data.
 2. Project Technical Specifications and drawings shall be legibly marked to record:
 3. Manufacturer, trade name, catalog number and supplier of each product and item installed
 4. Changes made by change orders, requests for information, substitutions and variations approved by submittals.
 5. Warranties, guarantees and bonds
 6. Documents including the record of delivery of software to the required escrow noted below
 7. Contractor records.

4) Software and as built documentation for software

Software and as-built documentation for software is to be delivered to the Guard-IT escrow account. The Contractor is to coordinate this activity with the City Project Manager.

Special attention shall be given to documentation procedures for all computer software programs supplied. For all software unique to the System and not commercially available, the as-built documentation shall include, at a minimum, functional, performance and interface requirements; descriptions of the supervisory, control, and operating software; source listings; flow charts; configuration control documentation;

and programmer and user manuals incorporating appropriate modification and control procedures, including the name of any subcontractor if employed for preparation of this software.

The Contractor shall for the benefit of the City also retain possession of the as-built documentation for software which is not commercially available and which is necessary for the operation and maintenance of the AGTS in a separate file and shall allow an authorized representative of the City to inspect that file at any time upon reasonable notice. Such documentation shall be kept up to date and shall include any upgrades or modifications which have been or are in the future incorporated in software programs which are used to operate the System.

For all commercially available software used, the as-built documentation shall include all of the documentation which is available from the supplier for such software. One (1) reproducible master and two (2) copies of all programmer and user manuals and other similar material will be provided to the City with the as-built drawings and documents along with a complete and fully documented listing of all software programs (one (1) copy on tape, two (2) printed copies).

5. Upon the occurrence of any of the conditions specified below, the software and proprietary documentation which is not commercially available shall be delivered to the City at no cost as soon as reasonably possible:

- 1) The commencement of any case or proceedings, whether voluntary or involuntary, under any applicable Federal or State bankruptcy, insolvency, reorganization, or other similar law.
- 2) The Contractor ceases to provide APM Systems of an equivalent quality and capability to the one being upgraded under this Contract.
- 3) The Contractor is acquired by or merges with another entity which does not have the capability to build, operate and maintain the AGTS Systems of the same quality as that provided by the Contractor.

At such time as the proprietary software and documentation is turned over to the City, the City shall have the right and license to use it or allow any party to use same for the operation, maintenance and repair of the System and completion of the Work under the Contract. However, the City may not sell the proprietary As-Built Deliverables or allow any party to use the same for any other project without the Contractor's written approval. Contractor shall continue to have the full and complete right to use the software in any manner it chooses.

The parties may enter into a separate software escrow agreement to accomplish the requirements of this section, or they may include the software covered by this Contract in any existing software escrow agreement between the parties which involves AGTS software.

PM-33 STANDARD FORMS

1) Forms

The forms listed below and appended to this Section will be used for performance of the Work as indicated. This is not a complete listing of all required forms. The Contractor shall properly complete all forms required by the contract or the Project Manager. The Project Manager shall review and approve all submitted forms. If submitted forms are not acceptable the Contractor shall resubmit forms in an acceptable format.

2) Appendices

Attached to these Project Management Provisions are the following forms:

- Contractor's Daily Activity Report (Form CM-13) (1 Page)
- Request for Information (Form CM-17) (1 Page)
- Pay Application Form (Form CM-18) (1 Page)
- Contractor's Certification of Payment (Form CM-19) (1 Page)
- Subcontractor Partial Lien Release (Form CM-26) (1 Page)
- Subcontractor Final Lien Release (Form CM-70) (1 Page)

EXHIBIT F

Activity ID	Activity Name	Original Duration	Start	Finish	2019																															2020												2021												2022											
					A	S	Oct	N	D	J	F	M	A	M	J	Jul	A	S	Oct	N	D	Jan	F	M	A	M	J	Jul	A	S	Oct	N	D	J	F	M	Apr	M	J	Jul	A	S	Oct	N	D	J	F	M	A	M	J	Jul	A	S	Oct	N	D														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53														
Total		1139	06-Aug-18 A	15-Dec-22																																																																			
Denver APM 300R		1139	06-Aug-18 A	15-Dec-22																																																																			
Major Milestones		1139	06-Aug-18 A	15-Dec-22																																																																			
A1190	Notice to Proceed	0	06-Aug-18 A																																																																				
A2310	Hold Kick Off Meeting in Denver	0		26-Sep-18 A																																																																			
A1080	Conceptual Design Review (CDR)	0		16-Nov-18																																																																			
A1100	Preliminary Design Review (PDR)	0		04-Feb-19																																																																			
A1120	Final Design Review (FDR)	0		03-Jun-19																																																																			
A2470	First Train Delivered to Denver	0		25-Feb-21																																																																			
A2300	Substantial Completion	0		30-Jun-22																																																																			
A2460	Final Acceptance	0		15-Dec-22																																																																			
PROJECT WIDE MANAGEMENT		322	25-Feb-21	23-May-22																																																																			
Contract Management		322	25-Feb-21	23-May-22																																																																			
DNVHMF3310	CONTRACT Milestone [Train #001] - [Car # 01, 02, 03, 04, 05, 06] - Arrive at site [Denver]	0		25-Feb-21*																																																																			
DNVHMF3320	CONTRACT Milestone [Train #002] - [Car # 07] [Car # 08] [Car # 09] [Car # 10] - Arrive at site [Denver]	0		21-May-21*																																																																			
DNVHMF3330	CONTRACT Milestone [Train #003] - [Car # 11] [Car # 12] [Car # 13] [Car # 14] - Arrive at site [Denver]	0		13-Sep-21*																																																																			
DNVHMF3340	CONTRACT Milestone [Train #004] - [Car # 15] [Car # 16] [Car # 17] [Car # 18] - Arrive at site [Denver]	0		29-Dec-21*																																																																			
DNVHMF3350	CONTRACT Milestone [Train #005] - [Car # 19] [Car # 20] [Car # 21] [Car # 22] - Arrive at site [Denver]	0		25-Feb-22*																																																																			
DNVHMF3360	CONTRACT Milestone [Train #006] - [Car # 23] [Car # 24] [Car # 25] [Car # 26] - Arrive at site [Denver]	0		23-May-22*																																																																			
Engineering		228	13-Sep-18	29-Jul-19																																																																			
A1000	Preliminary Design Carbody Flatpacks	100	13-Sep-18	30-Jan-19																																																																			
A1010	Preliminary Design Doors	100	13-Sep-18	30-Jan-19																																																																			
A1020	Preliminary Design Bogies, Axles, Ring Bearings	100	13-Sep-18	30-Jan-19																																																																			
A1030	Preliminary Design Interior	100	13-Sep-18	30-Jan-19																																																																			
A1040	Preliminary Design HVAC	100	13-Sep-18	30-Jan-19																																																																			
A1560	Preliminary Design Wiring	100	13-Sep-18	30-Jan-19																																																																			
A1830	Preliminary Design TCMS	100	13-Sep-18	30-Jan-19																																																																			
A1840	Preliminary Design Coupling/Trainline	100	13-Sep-18	30-Jan-19																																																																			
A1450	Preliminary Design Propulsion	93	27-Sep-18	04-Feb-19																																																																			
A1490	Preliminary Design Signalling	93	27-Sep-18	04-Feb-19																																																																			
A1110	Final Design Carbody Flatpacks	85	31-Jan-19	29-May-19																																																																			
A1260	Final Design Bogies, Axles, Ring Bearings	85	31-Jan-19	29-May-19																																																																			
A1320	Final Design Interior	85	31-Jan-19	29-May-19																																																																			
A1380	Final Design HVAC	85	31-Jan-19	29-May-19																																																																			
A1590	Final Design Wiring	83	31-Jan-19	27-May-19																																																																			
A1780	Final Design Coupling/Trainline	83	31-Jan-19	27-May-19																																																																			
A1870	Final Design TCMS	83	31-Jan-19	27-May-19																																																																			
A1090	Final Design Doors	85	31-Jan-19	29-May-19																																																																			
A1240	Advance Order Long Lead Bogie, Axle, Items	10	05-Feb-19	18-Feb-19																																																																			
A1300	Advance Order Long Lead Items on Interior	10	05-Feb-19	18-Feb-19																																																																			
A1360	Advance Order Long Lead Items HVAC	10	05-Feb-19	18-Feb-19																																																																			
A1570	Advance Order Long Lead Wiring Items	10	05-Feb-19	18-Feb-19																																																																			
A1760	Advance Order Long Lead Items Coupling/Trainline	10	05-Feb-19	18-Feb-19																																																																			
A1850	Advance Order Long Lead TCMS Material	10	05-Feb-19	18-Feb-19																																																																			
A1910	Advance Order Long Lead Door Items	10	05-Feb-19	18-Feb-19																																																																			
A1930	Advance Order Long Lead Carbody Material	10	05-Feb-19	18-Feb-19																																																																			
A2320	Final Design Propulsion	85	05-Feb-19	03-Jun-19																																																																			
A2330	Final Hardware Design Signalling	85	05-Feb-19	03-Jun-19																																																																			
A1990	Final Release TCMS	5	28-May-19	03-Jun-19																																																																			
A1050	Final Release Door System	5	02-Jul-19	08-Jul-19																																																																			
A1130	Final Release Carbody Flatpacks	10	02-Jul-19	15-Jul-19																																																																			
A1270	Final Release Bogies, Axles, Ring Bearings	5	02-Jul-19	08-Jul-19																																																																			
A1330	Final Release Interior	5	02-Jul-19	08-Jul-19																																																																			
A1390	Final Release HVAC	5	02-Jul-19	08-Jul-19																																																																			
A1600	Final Release Wiring	5	02-Jul-19	08-Jul-19																																																																			
A1790	Final Release Coupling/Trainline	5	02-Jul-19	08-Jul-19																																																																			
A1500	Final Release Vehicle Assembly	10	16-Jul-19	29-Jul-19																																																																			
Procurement		323	13-Sep-18	09-Dec-19																																																																			
A1460	Place PO Propulsion	10	13-Sep-18	26-Sep-18																																																																			
A1530	Place PO for Signalling	10	13-Sep-18	26-Sep-18																																																																			
A1470	Procure Propulsion/Work with Prop Engineering on Design Requirements	200	05-Feb-19	11-Nov-19																																																																			
A1540	Procure Signalling Equipment/Work with RCS Engineering on Design Requirements	200	05-Feb-19	11-Nov-19																																																																			
A1250	Procure Long Lead Bogie, Axle Items	200	19-Feb-19	25-Nov-19																																																																			
A1310	Procure Long Lead Interior Items	200	19-Feb-19	25-Nov-19																																																																			
A1370	Procure Long Lead Items HVAC	200	19-Feb-19	25-Nov-19																																																																			
A1580	Procure Long Lead Items Wiring	200	19-Feb-19	25-Nov-19																																																																			
A1770	Procure Long Lead Items Coupling/Trainline	200	19-Feb-19	25-Nov-19																																																																			
A1860	Procure Long Lead Items TCMS	200	19-Feb-19	25-Nov-19																																																																			
A1920	Procure Long Lead Door Items	200	19-Feb-19	25-Nov-19																																																																			
A1940	Procure Any Long Lead Carbody Material	200	19-Feb-19	25-Nov-19																																																																			
A1880	Place POs Balance TCMS Material	15	04-Jun-19	24-Jun-19																																																																			
A1890	Procure Balance of TCMS Material	85	04-Jun-19	30-Sep-19																																																																			
A1060	Bid Cycle Door System	15	09-Jul-19	29-Jul-19																																																																			
A1420	Place POs for Bogies, Axles, Ring Bearings	25	09-Jul-19	12-Aug-19																																																																			
A1430	Place PO Interior	15	09-Jul-19	29-Jul-19																																																																			
A1610	Place POs Wiring	15	09-Jul-19	29-Jul-19																																																																			

EXHIBIT G

Denver 300R Payments

Month	Date	Milestone Description	Milestone Amount	PM / PE Amount	Monthly Amount	Retainage	Retainage Release	Monthly Invoice	Quarterly Payment
1	Aug-18	NTP	11,505,000	34,413	11,539,413	-576,971		10,962,442	
2	Sep-18			34,413	34,413			34,413	10,996,855
3	Oct-18			34,413	34,413		576,971	611,384	
4	Nov-18	Submit CDR Docs	2,296,876	34,413	2,331,289			2,331,289	
5	Dec-18			34,413	34,413			34,413	2,977,086
6	Jan-19	Place P/O for Signalling	2,296,876	34,413	2,331,289			2,331,289	
7	Feb-19			34,413	34,413			34,413	
8	Mar-19	PDR Docs Accepted	2,296,876	34,413	2,331,289			2,331,289	4,696,991
9	Apr-19			34,413	34,413			34,413	
10	May-19			34,413	34,413			34,413	
11	Jun-19			34,413	34,413			34,413	103,239
12	Jul-19	FDR Docs Accepted	2,296,876	34,413	2,331,289			2,331,289	
13	Aug-19	Final Release Mat'l	3,830,876	34,413	3,865,289			3,865,289	
14	Sep-19			34,413	34,413			34,413	6,230,991
15	Oct-19			34,413	34,413			34,413	
16	Nov-19			34,413	34,413			34,413	
17	Dec-19			34,413	34,413			34,413	103,239
18	Jan-20			34,413	34,413			34,413	
19	Feb-20			34,413	34,413			34,413	
20	Mar-20			34,413	34,413			34,413	103,239
21	Apr-20			34,413	34,413			34,413	
22	May-20			34,413	34,413			34,413	
23	Jun-20	Final Assembly Car 1	3,417,315	34,413	3,451,728			3,451,728	3,520,554
24	Jul-20	Final Assembly Car 2	2,650,315	34,413	2,684,728			2,684,728	
25	Aug-20	Final Assembly Car 3	2,650,315	34,413	2,684,728			2,684,728	
26	Sep-20	Final Assembly Car 4	2,650,315	34,413	2,684,728			2,684,728	8,054,184
27	Oct-20	Final Assembly Car 5	2,958,196	34,413	2,992,609			2,992,609	
28	Nov-20			34,413	34,413			34,413	
29	Dec-20	Final Assembly Car 6	2,650,315	34,413	2,684,728			2,684,728	5,711,750
30	Jan-21	Factory Test Cars 1-6	1,769,386		1,769,386			1,769,386	
31	Feb-21	Final Assembly Cars 7-8	6,154,675		6,154,675			6,154,675	
32	Mar-21	Ship Cars 1-6	3,812,241		3,812,241			3,812,241	11,736,302
33	Apr-21	Final Assembly Cars 9-10	4,038,025		4,038,025			4,038,025	
34	May-21	Factory Test Cars 7-10	4,038,025		4,038,025			4,038,025	
35	Jun-21	Ship Cars 7-10	2,610,932		2,610,932			2,610,932	10,686,982
36	Jul-21	Final Assembly Cars 11-13	2,610,932		2,610,932			2,610,932	
37	Aug-21	Final Assembly Cars 14-15	2,385,148		2,385,148			2,385,148	
38	Sep-21	Factory Test Cars 11-14	2,918,813		2,918,813			2,918,813	7,914,893
39	Oct-21				0			0	
40	Nov-21	Ship Cars 11-14	260,196		260,196			260,196	
41	Dec-21	Final Assembly Cars 16-20	1,568,412		1,568,412			1,568,412	1,828,608
42	Jan-22				0			0	
43	Feb-22				0			0	
44	Mar-22				0			0	0
45	Apr-22				0			0	
46	May-22				0			0	
47	Jun-22				0			0	0
48	Jul-22	Final Acceptance	2,035,087		2,035,087			2,035,087	2,035,087
			75,702,023	997,977	76,700,000	-576,971	576,971	76,700,000	76,700,000