

Section	Requirement
Bidding	The system will provide multiple user roles to manage the bid process.
Bidding	The system will provide bidding configuration rules associated with multiple Collective Bargaining Agreements.
Bidding	The system will provide configuration rules to allow for prioritization of operators based upon seniority, rank and other measures.
Bidding	The system will have a configurable process to run Metro through an automated bidding process with procedures for errors.
Bidding	The system will provide a tool to allow supervisors to create, open, pause and, close a bid process.
Bidding	The system will have a date and timestamp for all bidding transactions.
Bidding	The system will provide a tool for operators to pick work from the predefined schedule. Once a schedule is selected that schedule will be locked to avoid double selection.
Bidding	The system will support a roster or cafeteria configuration for the bid process.
Common Design Requirements and Guidelines	Metro shall own all data that is configured and generated from the system. The vendor shall allow, under perpetual license to the Metro, the use of all open architecture interfaces, libraries, documents, and Intellectual Property (IP) for internal use and distribution to third-parties at no additional cost.
Common Design Requirements and Guidelines	The vendor shall design the system to be compliant with relevant standards, laws, and regulations to ensure that the system: 1 - Presents no safety hazards for customers and Metro employees 2 - Provides for the secure storage and transmittal of data 4 - Is designed using state-of-the-art methods to maximize quality 5 - Satisfies federal, state, and other requirements for ergonomics and usability
Common Design Requirements and Guidelines	Applicable codes, laws, ordinances, statutes, standards, rules, and regulations include, but are not limited to, the list below. The latest revisions in effect at the time of Final System Acceptance will apply. 1 - Americans with Disabilities Act (ADA) 2 - Americans with Disabilities Act Accessibility Guidelines (ADAAG) 3 - Advanced Encryption Standard 4 - European Norm EN55022, Emissions standards for CE marking 5 - European Norm EN55024, Immunity standards for CE marking 6 - FCC Part 15 Class B – Radio Frequency Devices 7 - FIPS 140-2 8 - International Electrotechnical Commission Standard 529 (IEC529) 9 - ISO/IEC 27002:2013 10 - ISO/IEC 27017 11 - National Electrical Code (NFPA 70) 12 - National Electrical Manufacturers Association Publication 250-2003 13 - National Electrical Safety Code (ANSI C2) 14 - National Fire Protection Association (NFPA) 130 15 - NCITS 322-2002, American National Standard for Information Technology – Card Durability Test Methods 16 - Occupational Safety and Health Administration (OSHA) 17 - Society of Automotive Engineers SAE J1113-13 Electrostatic Discharge 18 - Society of Automotive Engineers SAE J1455 Vibration and Shock 19 - UL Standard 60950, "Information Technology Equipment – Safety" 20 - World Wide Web Consortium, Mobile Web Application Best Practices 21 - Web Content Accessibility Guidelines WCAG 2.0
Dispatch	The system will provide the ability to build and modify vehicle trips.
Dispatch	The system will have the ability to set roster rules to optimize service based upon configurable attributes (veteran vs new operators, guaranteed work times, levels of overtime, time between shifts, etc.)
Dispatch	The system will provide Metro with the ability to track work assignments, hours by operator, vehicle assignments and operator availability on a day to day basis in real-time.
Dispatch	The system will track operator holidays, illnesses, Metro reasons for absence to track operators available to fill potentially vacant runs.
Bidding	The system will provide leave/absence management in real time to properly fill gaps, adjust overtime and move operators in and out throughout the day.
HR Management	The system will provide a module to view employee information including, address, role, seniority, part-time employees, leaves of absence, information required to manage bidding and dispatch and configurable fields to manage Metro business processes identified during design.
HR Management	The system will allow Metro to pull balances for absences and vacations for viewing and scheduling.
HR Management	The system will provide a module for operators to access and update their information with the ability to view online and print. This will include access to current and past work assignments.
HR Management	Please provide a list of HR products you have integrated with in the past to support general HR management, discipline management, time, payroll, and absence management.
HR Management	The system will provide a module for operators to create preferences related to overtime.
Implementation and Transition Services	The vendor shall provide a detailed Transition Plan for Metro review and approve during the design phase, and a final version no later than 120 calendar days prior to the project's go-live.
Implementation and Transition Services	The Transition Plan will describe all aspects of software configuration, steps to transition from manual to automated and processes used post go-live. This includes specific business rules, bid, dispatch, adjustment and other procedures that were part of the configuration decisions.
Implementation and Transition Services	The vendor shall be responsible for designing, developing, and testing the new scheduling system. The system will be activated according to an Implementation Plan developed by the vendor and approved by Metro. Of particular importance is the vendor's plan for transitioning from the current operations system TMS to the new scheduling system with the least amount of risk and disruption to Metro operations and to the public.
Implementation and Transition Services	Design - The vendor shall conduct design workshops with Metro staff to review the current state and identify areas for improvement before designing and configuring the new system.
Implementation and Transition Services	Design - Using the workshop results the vendor shall provide Metro a draft design document for review and approval. Once approved configuration can commence.
Implementation and Transition Services	Implementation of the new modules must include a measurement of the success of the project. Metrics should be established and used to measure the overall project as well as each project phase from planning to post launch operations. The metrics should align with Metro's strategic goals and include Metro's standard project performance metrics. Metrics will need to be established in advance so that baseline, pre-transition values can be measured. Metrics will be reported to all Metro project stakeholders. More metrics are better. Potential metrics that should be considered include: - Accuracy of crew and vehicle data - Accuracy of operational information - Effectiveness of integration with existing Metro systems - Metro satisfaction - Budget and schedule adherence - Metro resources required for implementation and operation - Up time and time between failures
Information Security	The design of the system (and all sub-components, APIs, and other interfaces) will reflect the recommended controls outlined in relevant best practices frameworks, including but not limited to ISO 27002:2013 and ISO/IEC 27017.
Information Security	User access to the system will be controlled by Metro's Active Directory.
Information Security	The system must support MFA/single sign-on, with SAML 2.0 with Entra preferred.
Information Security	The system must support compliance frameworks for employees including ISO 2071, FedRAMP, StateRAMP, and SOC 2 Type 2.
Information Security	The system must use TLS 1.3 (1.2 standard) and AES 256 encryption at rest.
Information Security	The system should support SCIM deprovisioning.
Information Security	The vendor must provide information on how they handle archiving and user data.
Information Security	The vendor must provide incident response and breach notification within 24 to 72 hours.
Information Security	All data handling must stay within the United States.
Information Security	The vendor must share third-party penetration testing results and allow Metro the right to review them.
Information Security	The system must be FIPS 140-2 compliant, with a plan for FIPS 140-3 compliance within 10 years.
Information Security	The vendor must disclose who is hosting the data (e.g., AWS/Azure).
Integration Services	The vendor shall design an integration to allow service data to be used by mapping or GIS applications.
Integration Services	The system must be able to consume webservices for GIS.
Integration Services	The system will allow Metro to upload a flat file with vehicle information including vehicle status on a recurring basis.

Integration Services	The system will allow Metro to upload bus stops and all the attributes associated with each configuration.
Integration Services	The system will allow for Metro to upload a flat file with operator information including details for self service, bidding, and crew assignments based upon rank, classification, seniority, vacation accruals, holidays, personal days and other fields.
Integration Services	The vendor shall work with Metro staff to define payroll requirements for a flat file export to meet payroll needs in their Kronos system.
Integration Services	The vendor shall work with Metro staff to create an integration with TrackIT for operator information used to facilitate scheduling using APIs.
Integration Services	The vendor shall work with Metro to create an integration with Avail Technologies, the agencies CAD/AVL solution using APIs.
Operation and Maintenance Services	During the warranty period, any required configuration changes or adjustments will be the financial responsibility of the vendor.
Operation and Maintenance Services	The vendor shall provide application services in accordance with an appropriate Service Level Agreement to be agreed on with Metro prior to contract award.
Operation and Maintenance Services	Software maintenance will be the responsibility of the system vendor, and the price will be included in the ongoing system fees. This includes upgrades and bug fixes for the back office, web based UI, OS, and security upgrades on the hosted platform.
Operation and Maintenance Services	As part of the ongoing maintenance contract the vendor will provide customer service through a website with issue management, escalation management and ad hoc support. At a minimum the contract will provide Metro with 4 hours per month of ad hoc support.
Operation and Maintenance Services	The vendor shall provide preventative and corrective software maintenance to support system operations while meeting the performance standards set forth in this specification.
Operation and Maintenance Services	The vendor shall provide ongoing support for the use of the system according to an agreed upon System Maintenance Agreement (SMA). The first three years of the system maintenance will be included in the system price. The vendor shall include a warranty of at least three years for all hardware components of the system in the system price. The warranty period will begin with System Acceptance.
Performance Measurement	The system will allow Metro to establish performance business rules based upon the CBA for use in operator performance monitoring. The system will be required to track elements of the CBA to keep Metro in compliance with the agreement and support payroll. The CBA will be provided as part of the project.
Performance Measurement	The system will provide a tool for supervisors (those with appropriate access) to review and monitor operator performance. This includes but is not limited to disciplinary measures, performance based upon business rules established, awards, attendance.
Performance Measurement	The vendor shall develop quantifiable measurements of performance to assess the proper operation of the system.
Project Management	The vendor shall provide a robust project management team and project management plan to support the design, configuration, implementation, and training of the new scheduling system. The vendor shall designate a responsible and experienced individual to serve as the Project Manager (PM) for the entire term of the contract. The PM will maintain close collaboration with the Metro team throughout the project lifecycle.
Project Management	Metro needs the vendor to submit a Project Management Plan (PMP) shortly following Notice to Proceed (NTP). The PMP will include at a minimum project organization, master schedule, project scope, risks, quality management and process to track and manage decisions and adjustments. The vendor shall provide a plan for regular project status meetings with Metro that will help coordinate project activities, facilitate decision-making, and provide status/updates on all elements of the project throughout the life of the project.
Project Management	Metro needs the vendor to provide a tracking tool for maintaining a Master Issues List (MIL). This tool will be used for the ongoing tracking and management of project issues, document comments, decisions and project action items. The vendor shall be responsible for managing the electronic tracking tool, including tool inputs and outputs, and shall provide Metro with read/write access to the tool.
Reporting Interface	The system will allow Metro to create and review reports that highlight scheduling analytics including at a minimum: - Revenue/Non Revenue hours by route, vehicle, operator and timeframe - Revenue/Non Revenue miles by route, vehicle, operator and timeframe - Trip counts by route, vehicle and timeframe - Operator time behind the wheel
Reporting Interface	The system will have a configurable process to run Metro through an automated bidding process with procedures for errors.
Reporting Interface	The reporting interface will include ability to run reports by date and time periods for: 1 - Daily schedule with assignments 2 - Daily log showing results of the day with vehicle, operator, adjustments 3 - Performance 4 - Overtime reporting 5 - Streak Performance 6 - Key metrics i.e. vehicle and operator hours, vehicle miles, etc.
Reporting Interface	Reports should be able to be exported in pdf and Excel
Reporting Interface	The reporting interface will allow filtering of fields for reports, these include, at a minimum: Route Number, Block, Trip, Operator, Vehicle ID, and Stop ID.
Reporting Interface	The central system will include a robust reporting interface that generates canned and custom reports. The reporting interface will allow the viewing, running, and scheduling of predefined reports, as well as the creation of custom reports.
Reporting Interface	As part of implementation, the vendor shall deliver a full data dictionary and schema. Metro shall have read-level access through a secure connection. This interface will provide the ability to query the database directly, export data in a variety of formats, and establish a connection to a third-party reporting tool for use in custom reporting.
Scheduling	The system will have the ability to import Metro's current GTFS file that includes, schedule, stops, routes, etc. to create an initial baseline.
Scheduling	The system will have the ability to present the scheduler with optimization suggestions based upon business rules, labor costs, vehicle availability, etc.
Scheduling	The system will have the ability to export the static schedule in GTFS, Excel and PDF.
Scheduling	The system will have the ability to create visualizations in the blocking and run cutting phase of scheduling service.
Scheduling	The system will have the ability to create multiple schedules (scenarios) during the creation process.
Scheduling	The system will have the ability to allow Metro to maintain stops including different configurations of each stop e.g. bench, shelter, etc.
Scheduling	The system will allow Metro to maintain bus types and use the attributes of each bus type to facilitate scheduling.
Scheduling	The system will provide an auto-runcutting feature with the ability to manually adjust.
Scheduling	The system will allow crew assignments to be developed in order to cover vehicle blocks
Scheduling	The system will allow the scheduler to adjust a schedule after it has been saved without recreating the schedule from scratch. For example a new detour.
Scheduling	The system will allow for automated methods to generate crew travel times for identifying reliefs.
Scheduling	The system will allow for crew assignment detail display to be organized by time, work time and pay time level.
Scheduling	The system will allow support optimizing weekly work using rule sets relating to Collective Bargaining Agreement (CBA) requirements, and general service performance standards set by Metro.
Scheduling	The system will allow both crew and vehicle schedules to be viewed side-by-side.
Scheduling	The system will support preparing efficient weekly schedules.
Scheduling	The vendor will configure state and federal employment rules to support crew assignment and performance reporting that includes working hour limits, vacations, sick day, FMLA etc.
Scheduling	The system will allow Metro to schedule non-revenue vehicles.
Scheduling	The system will allow Metro to schedule special events ad hoc.
Scheduling	The system will provide an auto-blocking feature to optimize blocks based upon Metro rules, schedules and allow for manual adjustments of auto-block scenarios.
Scheduling	The system will provide the ability to shift/move trips to difference vehicle blocks
Scheduling	The system will provide functionality for different vehicle types including electric.
Scheduling	The system will allow for interlining on trips and routes.
Scheduling	The system will allow for the creation and update of deadhead times
Scheduling	The system will provide the ability to set layovers by minutes or a % of the trip.
Scheduling	The system will track vehicle status to support vehicles available for scheduling.
System Architecture	The system will provide multiple methods for user to sign-in including single sign-on, username/password without email and via Kiosk. This will support access from within Metro and remote.
System Architecture	The system will have a mobile/Tablet App to allow for users to sign on for scheduling, reporting, bidding and reviewing schedules.
System Architecture	The vendor will be responsible for managing all software, backup, up time at 99.9, maintenance and notify Metro 24 hours in advance if any maintenance will cause disruptions longer than 4 hours. The Architecture can either be Software as a Service or hosted.
System Architecture	The system must have the ability to have multiple windows open at the same time e.g. a window showing blocking and another showing a schedule.
System Architecture	The vendor shall provide a system that offers protection against data loss and system failure.
System Architecture	The vendor's disaster recovery plan will contain or reference detailed procedures to be followed to restore the primary system in the event of a disaster and from a failover event.
System Architecture	All open architecture API, libraries, and Intellectual Property (IP), including data exchange formats and algorithms, will be provided to Metro under a perpetual license to enable internal use and distribution to third-parties at no additional cost.
System Architecture	The API and Interface Control Documentations (ICD) will be fully owned by or licensed to Metro with the right to use and distribute the specifications without further approval, license, or payment.
System Architecture	The system will be an open architecture system with key system integrations built using APIs published by the vendor and fully owned or licensed by Metro.

Testing	The vendor shall be responsible for a Test Plan, which shall be approved by Metro. Twenty (20) days prior to the commencement of testing, the vendor shall deliver a Test Plan for review, modification (if necessary), and approval. Testing must cover unit, full system acceptance and integration at a minimum.
Testing	All tests will be documented by the vendor and monitored and signed off by Metro or their representatives.
Training	The vendor shall provide training manuals and user guides, that cover topics including but not limited to: - Instructor guides; - Student guides; - Operations manuals; - Training presentations; - Training handouts; - Quick reference guides; - Interactive videos or demonstrations; and - Course and instructor comments sheets
Training	The vendor shall provide three direct onsite training sessions, with options of one on one during, and one session of "Train the Trainer" training prior to and coordinated with implementation.
Training	The vendor shall be available for additional training at a set per course price throughout the life of the contract.
Training	The vendor shall provide all training materials required for all courses.