



# CITY of NOVI CITY COUNCIL

**Agenda Item E**  
**August 22, 2011**

**SUBJECT:** Approval to award a contract for Automatic Vehicle Locator (AVL) equipment and services to PreCise MRM, LLC for \$40,486 to cover all acquisition and operations costs in FY 2011-12.

**SUBMITTING DEPARTMENTS:** Department of Public Services & Police Department

**CITY MANAGER APPROVAL:**

<b>EXPENDITURE REQUIRED</b>	<b>\$40,486</b>
<b>AMOUNT BUDGETED</b>	\$20,700 PD (\$10,600 - 266-266.00-802.000) (\$10,100 - 101-301.00-802.000) \$20,000 DPS (Rollover from FY 2010-11 - 101-442.20-802.000)
<b>APPROPRIATION REQUIRED</b>	\$ 25,721 (To be included in Q1 Budget Amendment 101-442.20-802.000)
<b>LINE ITEM NUMBERS</b>	101-442.20-802.000 - \$25,721 266-266.00-802.000 - \$7,000 (equipment) 101-301.00-802.000 - \$7,765 (services)

## BACKGROUND INFORMATION:

The City of Novi started using an AVL system in 2008 in support of its municipal operations currently serving Community Development, Senior Transit and DPS. The system has proven invaluable in upholding the City's accountability while delivering public services, improving employee safety, and promoting responsible vehicle operation. The City is seeking to standardize all of its operations using a new AVL platform within the Police Department Uniform Division's patrol vehicles and DPS equipment for seasonal operations (primarily snow removal but also street sweeping, street repair, catch basin cleaning, and similar seasonal activities). This platform can be further extended to accommodate the City's other operational service areas as necessary.

DPS will be using this system to improve snow removal efficiencies, report on the real-time street snow removal status, and estimate the completion times necessary for the clearing of major street routes and local neighborhood roads. The PD will use the system's real time monitoring to promote officer safety as near-real time vehicle location details will be available to the PD Communications Center and command staff. The PD will also build a history of vehicle positions to represent neighborhood and commercial center patrols performed. Additionally, PD dispatchers will be able to dispatch the nearest vehicle unit(s) in response to emergency calls for service.

The City advertised a Request for Proposal (RFP) for this system and a staff team from the DPS, Police, IT, Community Development, and Senior Services participated in a qualifications based selection (QBS) evaluation process. Eight vendors responded to the City's RFP and the team rated each of the proposal responses and narrowed the selection down to four (4) qualified respondents as highlighted in Table 1 below. Following the qualifications evaluation, the team reviewed the pricing details of the qualified vendors and found PreCise to be the most qualified firm based upon the company's proven expertise, capability to fulfill the City's functional

requirements, and by providing the most competitive pricing package (including equipment, data hosting services, and data communication plan).

**Table 1: City of Novi  
QBS Evaluators' Cumulative Score Tally for the RFP Second Generation AVL Systems**

<b>Interfleet</b>	<b>Radio Satellite</b>	<b>PreCise MRM</b>	<b>Location Technologies</b>	<b>DH Wireless (w/out Sprint)</b>	<b>Safety Track</b>	<b>Network Fleet</b>	<b>DH Wireless (w/ Sprint)</b>	<b>CompassCom</b>
<b>2320</b>	<b>2310</b>	<b>1950</b>	<b>1780</b>	1180	1130	1050	880	850

The QBS evaluation team found four of the vendors that submitted proposals were qualified and possess the experience necessary to fulfill the functional requirements of this system. These four were further evaluated by comparing their pricing as represented in Table 2. Table 2 pricing includes all equipment plus 12 months of services to run the system.

<b>Table 2: Annual Cost Summary of AVL Vendors</b>	<b>Annual Cost</b>
<b>PreCise MRM</b>	\$44,717
<b>Radio Satellite Integrators</b>	\$53,124
<b>Location Technologies</b>	\$55,488
<b>Interfleet</b>	\$90,076

The \$40,486 fee recommended for award includes the price for all AVL equipment to be installed, plus the necessary services to run the equipment prorated for the balance of FY 2011/12 (i.e. the remaining 9 months for DPS and 10 months for PD. The DPS time reflects the additional installation time required for DPS vehicle sensor installs).

AVL equipment is slated to be installed on DPS vehicles by the end of October so that DPS can begin to use the technology this winter. At the September 12, 2011 City Council meeting, DPS will be submitting other agenda items related to winter operations, including an item dealing with special snow removal routes, and one addressing sidewalks/pathways to be cleared by DPS. AVL equipment installation in PD patrol cars will likely take place in the September/October timeframe.

As in past practice, the City's standardized contractual language prepared by Secret Wardle was used for this contract. The vendor has accepted these terms without amendment and therefore no additional legal review was required for contract execution.

**RECOMMENDED ACTION:** Approval to award a contract for Automatic Vehicle Locator (AVL) equipment and services to PreCise MRM, LLC for \$40,486 to cover all acquisition and operations costs in FY 2011-12.

	1	2	Y	N
Mayor Landry				
Mayor Pro Tem Gatt				
Council Member Fischer				
Council Member Margolis				

	1	2	Y	N
Council Member Mutch				
Council Member Staudt				
Council Member Wrobel				

**CONTRACT FOR AUTOMATIC VEHICLE LOCATOR (AVL) SYSTEMS  
EQUIPMENT, DATA COMMUNICATIONS, & APPLICATION HOSTING SERVICES**

**THIS CONTRACT FOR SERVICES AND MATERIALS** ("Contract"), shall be considered as made and entered into as of the date of the last signature ("Effective Date"), and is between the City of Novi, a Michigan municipal corporation, whose address is 45175 W. Ten Mile, Novi, Michigan 48375, (hereinafter referred to as "Client"), and PreCise MRM, LLC, a subsidiary of FORCE America, whose address is 1311 East Franklin Rd., Meridian, ID 83642, (hereinafter referred to as "Contractor").

**THE CLIENT AND CONTRACTOR AGREE AS FOLLOWS:**

**Article I. Statement and Performance of Work.**

For payment by the Client as provided under this Contract, Contractor shall provide the materials and perform the services described on and in Schedule A (the "Work"), which is attached hereto and made a part of this Contract by this reference, in a competent, accurate, efficient, timely, good, professional, thorough, complete and responsible manner, and in compliance with the terms and conditions set forth below.

**Article II. Timing of Performance.**

Performance of this Contract shall commence on 8/23/2011 for components represented in Schedule A. The delivery date for all equipment described in Schedule A shall be 9/15/2011. The on-site equipment installation training shall be completed by 9/30/2011. All application reports (including those pertaining to route completion) will be fully tested and approved by the Client on or before 10/15/2011. The timing for performance of any such work may also be extended, if allowed in writing by the Client in its sole discretion.

**Liquidated Damages:** Should the Contractor fail to meet the performance completion dates as described in this contract, the Contractor shall pay the Client a sum of one-thousand US dollars (\$1,000.00) for each calendar day following the required completion date until the Client approves the Schedule A and Proposal activities are considered complete.

**Article III. Contract Price and Payment.**

Subject to the terms and conditions of this Contract, the Client agrees to pay Contractor an amount not to exceed fee schedule line items for services and materials as specifically set forth in the completed Proposal attached which are part of the attached Schedule A. Such payments are in exchange for and consideration of the timely and satisfactory performance and completion of the work required under and pursuant to this Contract. The Client agrees to pay Contractor amounts due within forty-five (45) days of receipt of an itemized billing/invoice from Contractor detailing all materials provided and work performed in connection with the billing and the hours and charges applicable to each such item. Such itemized billings shall be submitted and shall be paid only upon satisfactory completion of the work itemized in the billing.

All costs and expenses incurred by Contractor under this Contract are deemed to be included in the amounts set forth in Schedule A, unless specifically identified in Schedule A as reimbursable expenses and such expenses have been approved by the Client or its designee. Contractor will

obtain written approval of the Client prior to proceeding with any work that is not stated on Schedule A; otherwise, the Client will not be billed for such extra/additional work.

Payments shall be made upon verification of invoices received by the Client. All payments to Contractor shall be submitted by mail at Contractor's address first listed above, unless Contractor provides written notice of a change in the address to which such payments are to be sent.

**Cooperative Purchasing:** The unit pricing for equipment and services detailed in this contract will be extended to participants in the Michigan Intergovernmental Trade Network (MITN) and the school districts of Novi Community Schools, Northville Public Schools, Walled Lake Consolidated Schools, and South Lyon Community Schools.

**Article IV: Termination.**

A. 1. For cause: In the event that either party shall breach the terms and conditions of this Contract, the aggrieved party may notify the other party, in writing via certified mail, of such breach and demand that the same be remedied within ten (10) days. If the defaulting party fails to remedy the breach as demanded, the aggrieved party shall then have the right to terminate by giving the defaulting party thirty (30) days written notice. In addition, if at any time a voluntary petition in bankruptcy shall be filed against either party and shall not be dismissed within thirty (30) days, or if either party shall take advantage of any insolvency law, or if a receiver or trustee of any of a party's property shall be appointed and such appointments shall not be vacated within thirty (30) days, the other party shall have the right, in addition to any other rights of whatsoever nature that it may have at law or in equity, to terminate by giving thirty (30) days notice in writing of such termination.

2. For convenience: The Client may terminate the agreement, in whole or in part, without showing cause upon giving thirty (30) days written notice to the Contractor. The Client shall pay all reasonable costs incurred by the Client up to the date of notice of termination. The Contractor will not be reimbursed for any anticipatory profits that have not been earned up to the date of notice of termination.

B. In the event this Contract is terminated before completion, the Client shall not be responsible to make any further payments for work performed after the effective date of such termination, and shall pay Contractor for such materials as have been delivered and for such work as has been completed and is eligible for payment under the terms of this Contract through the date of such termination. In all events, the Client shall only be responsible to make the payments described in the preceding sentence if, at the Client's request, Contractor continues to fully perform its duties and obligations in full compliance with the terms of this Contract through the effective date of the termination.

**Article V: Independent Contractor/Vendor Relationship.**

A. In the performance of this Contract, the relationship of Contractor to the Client shall be that of an independent contractor and/or vendor and not that of an employee or agent of Client. Contractor is and shall perform under this Contract as an independent contractor and/or vendor, and no liability or responsibility with respect to benefits of any kind, including without limitation, medical benefits, worker's compensation, pension rights, or other rights or liabilities arising out of or related to a contract for hire or employer/employee relationship shall arise or accrue to either party as a result of the performance of this Contract.

Contractor, as an independent contractor and/or vendor, is not authorized to enter into or sign any agreements on behalf of the Client or to make any representations to third parties that are binding upon the Client.

- B. Contractor represents that it will dedicate sufficient resources and provide all necessary personnel required to perform the work described in Schedule A in accordance with the terms and conditions of this Contract. Except as may be specifically stated and agreed to in Schedule A, Contractor shall perform all of the work under this Contract and no other person or entity shall be assigned or sub-contracted to perform the work, or any part thereof, unless approved by the Client in advance.

**Article VI:        Liability and Insurance.**

- A. Contractor agrees to indemnify and hold harmless the Client, its elected and appointed officials and employees, from and against any and all claims, demands, suits, losses and settlements, including actual attorney fees incurred and all costs connected therewith, for any damages which may be asserted, claimed or recovered against the Client by reason of (i) personal injury, death and/or property damages which arises out of or is in any way connected or associated with the actions or inactions of Contractor in performing or failing to perform the work; or (ii) civil damages which arise out of any dispute between Contractor and its subcontractors, affiliates, employees or other private third parties in connection with this Contract. Contractor specifically agrees that it is Contractor's responsibility, and not the responsibility of the Client, to safeguard the property and materials used in performing this Contract. Contractor agrees to hold the City harmless from any loss of or damage to such property and materials used in connection with Contractor's performance of this Contract.
- B. Contractor shall provide evidence of adequate insurance coverage in the types and amounts set forth on Schedule B, which is attached hereto and incorporated herein by this reference. Such insurance shall be maintained at the specified level of coverage throughout the term of this Contract, including any extension of such term, and will cover all work, acts and omissions by and on behalf of Contractor in connection with this Contract, with the Client as named additional insureds, but with such coverage being primary and non-contributory as described in the attached Schedule B.

**Article VII:        Information.**

It is expressly acknowledged and agreed that all reports, opinions, compilations, research work, studies, data, materials, artifacts, samples, documents, plans, drawings, specifications, correspondence, ledgers, permits, manuals, applications, contracts, accountings, schedules, maps, logs, invoices, billings, photographs, videotapes and all other materials generated by and/or coming into the possession of Contractor during the term of this Contract, and any extension thereof, that in any way relate to the performance of work by Contractor under this Contract or that are otherwise related or relevant to the work, belong exclusively to the Client and shall be promptly delivered to the Client upon the termination of this Contract or, at any time, upon the Client's request.

**Article VIII:        General Provisions.**

- A. *Entire Agreement.* This instrument, together with the attached Schedules, contains the entire Contract between the Client and Contractor. No verbal agreement, conversation, or

representation by or between any officer, agent, or employee of the parties hereto, either before or after the execution of this Contract, shall affect or modify any of the terms or obligations herein contained.

- B. Compliance with Laws. This Contract and all of Contractor's work and practices shall be subject to all applicable state, federal and local laws, ordinances, rules or regulations, including without limitation, those which apply because Client is a public governmental agency or body. Contractor represents that it is in compliance with all such laws and eligible and qualified to enter into this Contract.
- C. Governing Law. This Contract shall be governed by the laws of the State of Michigan.
- D. Assignment. Contractor shall not assign this Contract or any part thereof without the written consent of the Client. This Contract shall be binding on the parties, their successors, assigns and legal representatives.
- E. Dispute Resolution/Arbitration. The parties agree that any disputes regarding a claimed violation of this agreement shall first be submitted in writing to the other party in an attempt to settle the matter before pursuing other legal actions or notices provided for in this agreement. Such written communication shall clearly state the problem or concern, allow sufficient time for a written response from the other party, and culminate in a face-to-face meeting to determine if a remedial action is possible. In no event shall this process take more than thirty (30) days, unless a specific extended period of time is agreed to by both parties in writing as being necessary. The aforementioned initial written communications between the parties also shall indicate whether the party is willing to submit the dispute to binding arbitration, non-binding mediation or other form of alternate dispute resolution, and share equally the costs for same. Upon the parties agreeing to any such method of dispute resolution and a timetable for doing so, pursuit of other legal actions shall be deferred until the process has been completed. In any binding arbitration, the arbitrator shall provide a written statement of the reasons and basis for an award or decision, a judgment of the Oakland County Circuit Court may be entered based on the arbitration award or decision, and each party shall be responsible for their own costs and attorney fees.
- F. Third Parties. It is the intention of the parties hereto that this Agreement is not made for the benefit of any private third party. It is acknowledged that Client may receive a portion of the funding for the payments under this Contract from one or more private sources, and it is understood by Contractor that it is hired by Client to work exclusively for Client (and by extension for the Township should the work be accepted and implemented by the Township) and Contractor agrees that no private party or parties will be allowed to hold sway or influence, in any way, over Contractor's performance of the work.
- G. Notices. Written notices under this Contract shall be given to the parties at their addresses contained in this Contract by personal or registered mail delivery to the attention of the following persons:  

Client: City Manager Clay J. Pearson and City Clerk Maryanne Cornelius  
Contractor: John L. Stenz, Executive Vice President, Force America Inc.
- H. Changes. Any changes in the provisions of this Contract must be in writing and signed by the Client and Contractor.

- I. Waivers. No waiver of any term or condition of this Contract shall be binding and effective unless in writing and signed by all parties, with any such waiver being limited to that circumstance only and not applicable to subsequent actions or events.
- J. Jurisdiction and Venue of Contract. This Contract shall be considered for all purposes, including the establishment of jurisdiction and venue in any court action between the parties, as having been entered into and consummated in the City of Novi, Oakland County, Michigan.
- K. Conflict. In the event of any conflict or inconsistency between the above provisions of this Contract and either or both of the attached Schedules, the provisions in the above text shall govern.

**IN WITNESS WHEREOF**, the Client and the Contractor have executed this Contract in Oakland County, Michigan, as of the date first listed above.

WITNESS AND DATES  
OF SIGNATURES:

CITY OF NOVI

\_\_\_\_\_  
Date: \_\_\_\_\_

\_\_\_\_\_  
By: David B. Landry  
Its: Mayor

\_\_\_\_\_  
Date: \_\_\_\_\_

\_\_\_\_\_  
By: Maryanne Cornelius  
Its: Clerk

CONTRACTOR

\_\_\_\_\_  
Date: \_\_\_\_\_

\_\_\_\_\_  
By: John L. Stenz  
Its: Executive Vice President





**SCHEDULE A**  
**CITY OF NOVI**  
**SECOND GENERATION AVL SYSTEMS**  
**EQUIPMENT & SERVICES**

**SPECIFICATIONS**

**PROJECT SCOPE & BACKGROUND**

The City of Novi procured its first generation AVL system in 2008 to support of its municipal operations. The system has proven valuable in upholding the City's accountability while delivering public services, improving employee safety, and promoting responsible vehicle operation. The City is seeking to standardize all of its operations using a new AVL platform which will expand our current capabilities. The City also recognizes new advancements in these technologies will enable the City to reduce costs, track vehicle event activities, and improve reporting options.

The City is seeking to deploy from 20 to 40 AVL units (total) in its Department of Public Services and Police Department vehicle fleets. Optionally, the City may also elect to replace its existing 13 vehicle AVL units with the new platform as well.

The City is seeking proposals from qualified AVL system vendors which offer a turnkey/scalable solution which contains an extensible equipment platform, a hosted Internet-based application service, and independent service administration. The provider will be responsible for configuring, training, and implementing the equipment and services for the City's vehicle fleet tracking, reporting, and management purposes.

**PROJECT REQUIREMENTS**

Prospective vendors shall address the following requirements in their proposal responses. *If your company cannot meet any or address these requirements please note accordingly in the Questions for Proposal Responses Section, item #10.*

<b>Section A: Equipment</b>	
1.	The vendor must identify the make(s)/model(s) of the GPS receiver / data modem units to equip within the City's vehicles (see Vehicle Inventory for AVL System Unit Installations)
2.	The vendor shall use internally mounted GPS and modem antenna systems.
3.	GPS receiver/modem units shall be directly wired to the vehicle's ignition power source or directly wired to a primary power source to prevent unauthorized tampering or disconnection due to normal vehicle operation.
4.	The GPS receiver/modem unit shall be of a rugged design, constructed of components intended and suitable for a mobile environment. The equipment should be capable of absorbing shock and operating in extreme temperature environments with performance degradation. The vendor will specify the operating temperatures and shock stress the units can meet.
5.	GPS receiver/modem units shall be capable of containing a minimum of two external sensor inputs in addition to the GPS position data stream. All external connections to the unit shall be made with plug-in connectors to facilitate field replacement of

	components.
6.	Sensor inputs should allow for sensors which are attached to power switches or hydraulic systems to notify activity event status (plow up/down, spreader on/off, brine system activated)
7.	GPS receiver/modem units shall be capable of reporting position with a maximum of a 30 second frequency (or shorter) or as frequent as the following vehicle positioning events occur: <ol style="list-style-type: none"> <li>Vehicle bearing changes more than 45 degrees from its present course</li> <li>Vehicle travels a distance of more than 0.5 miles</li> <li>Vehicle sensor event occurs (e.g. plow up/down, spreader activated / deactivated, etc.)</li> <li>Vehicle geofence event or other exception alert is triggered</li> </ol>
8.	The vendor shall indicate whether the GPS AVL units support remote configuration updates with respect to the following parameters: <ol style="list-style-type: none"> <li>Engine start/off report time intervals</li> <li>Establishing GPS database alerts for distance, time, and turning angles.</li> </ol>
9.	Equipment should have a service life of greater than four (4) years and vendor should specify service life expectations, warranties, and replacement program(s) available. Vendor should address any credits/refunds for equipment failures outside of routine use during the expected service life.
10.	Equipment installation shall be performed by City of Novi personnel at City owned facilities with on-site instruction provided by the vendor's training professional.
11.	Vendor will confirm if the City can swap mobile units between vehicles (seasonally) and update the necessary asset details through the hosted application service.
12.	Vendor shall support over-the-air firmware updates in the event firmware updates are necessary during the lifetime of the equipment.
13.	Vendor shall identify the makes and models of compatible ground speed controllers their GPS / modem units are compatible with. The City currently uses Force America and CompuSpread manufacturers (both of these must be fully supported).
14.	Vendor shall identify the types of ground speed controller details which can be accommodated along with the vehicle positioning information through the data modem at the reporting intervals identified in item #7 above.
15.	Vendor shall identify the manufacturer(s) of the GPS receivers / data modems and state whether its own company is the manufacturer or if it purchases equipment from a third-party.
16.	Wireless Data Service Provider: The selected data provider should fully support a national, wireless data network in addition to possessing a strong presence in the southeast Michigan region. The vendor will specify the data network used by their GPS/modem devices and specify how data charges will apply as part of the monthly solution cost (data pooling, data transfer amount limits, etc).
17.	Vendor shall specify how the vehicle position is reported during periods where the engine is off, idling, and how the frequency of event reporting is set by the client, by vendor, or both.
18.	Vendor solution shall be capable of storing position information in the event of a data network service disruption. The system will continue to collect position details and store data onboard the system. This stored information shall be forwarded at the earliest opportunity when data network becomes accessible to the device. This will ensure the integrity of the data and provide consistent, detailed records of the vehicle's activity movement history.

## Section B: Hosted Application Service

1. Vendor shall indicate the number of named, user accounts provided for its users to access the Internet application service under each of its plan(s) offerings.
2. Vendor shall specify how user accounts are established and administered within the application.
3. The vendor shall specify user accounts can be restricted to viewing information pertaining to specific fleets, reports, or other details.
4. The vendor shall provide the type(s) of application security measures used to prevent anonymous users from accessing vehicle location information.
5. The vendor shall specify where the application data resides, what backup data procedures are used, identify the back-up data centers used, and the current data retention periods applied for recorded data. Please detail which organization operates/owns the data centers (vendor or third-parties). Discuss the Internet service provider backbones and service redundancy measures instituted in the event of an internet service provider disruption.
6. Vendor shall specify the historical data retention period for information collected regarding the City's asset movements. Vendors should discuss whether the retention period can be adjusted to address client needs (up to one year).
7. Vendor shall provide an interactive map interface allowing the current and historical asset position histories to be portrayed. Vehicle positions on this display should be capable of updating automatically at intervals of one minute or less.
8. Vendor shall provide the City with the ability to immediately position all assets by manually executing a call for location with vehicle position responses returning in 30 seconds or less. The information provided should include vehicle status details for moving/idle/off, direction of travel, speed of travel, and approximate site address. This real-time "ping" can utilize Simple Message Service (SMS) communication protocols.
9. Vendor shall note whether their solution can separately track/report activity by specific driver in addition to activity by vehicle.
10. Vendor shall discuss their system's capability to track and send alerts for maintenance updates (oil changes, filter changes, and interface capabilities with other third-party fleet maintenance software).
11. Vendor shall discuss how the City will be able to create time and date specific geofence (notification perimeter) areas to setup automated notifications which can be issued via email and text message service to City-specified individuals.
12. Vendor shall fully support current and future versions of Microsoft Internet Explorer. The vendor shall also detail any browser plug-ins, if necessary, for using the vendor's hosted application service.
13. Vendor shall discuss whether their application can support the City's GIS data layers in ESRI compatible format to portray service areas, new roads, plowing routes, and other types of geographic references. If possible, please include the cost structure to accommodate these additional layers on your fee proposal form, if applicable, and how it is applied for these types of updates. Do not include cost/fees in your proposal.
14. Vendor shall represent how asset detail information is assigned with each GPS/modem unit (vehicle make, model, VIN, primary driver, odometer, hours of use).

### **Section C: Hosted Application Service Reporting**

1. Vendor shall provide a summary of all types of asset positioning and asset activity reports as part of its standard service offering.
2. Vendor shall provide a summary of all types of asset positioning and activity reports which involve additional fees for configuration and access (if applicable).
3. Vendor shall discuss whether reports can be summarized by driver, specific asset, department fleet, or entire citywide fleet.
4. Vendor shall represent whether its system can generate an automated route completion progress report for a given time period to track the percentage or mileage of an assigned route completed over the time period. For example, there are 12 vehicles clearing snow on a route representing all local roads within the City. The application will indicate the number of vehicle miles driven by the 12 AVL equipped vehicles over a set period of time within each of the routes. The routes traveled and not traveled will be identified in both a report format and map format representing a service status color (serviced or not serviced) in a map display. The map display will automatically update every minute to provide a real time completion status for each set of roads participating in a given route. Staff will use these completion progress reports to facilitate driver dispatch so the foreman will know which routes are complete and incomplete when using a mobile vehicle PC with a wireless communication data card.
5. Vendor shall represent if its application can report on the user login user history indicating the last login time/date and duration of use over a defined time period.

### **Section D: Unique System Capabilities**

1. Please outline or describe any additional features or capabilities your company's AVL solution delivers which offers your company a distinct competitive advantage over your competitors' similar offerings.
2. Please discuss any alternative solutions which are capable of resolving any of the functional requirements described in Sections A-C (if necessary).

### **QUESTIONS FOR PROPOSAL RESPONSES**

Answers to these questions will provide the City of Novi's proposal review team with an understanding of the vendor's qualifications, competencies, experiences, and capability to successfully perform the scope of work. Please address each of the following questions in your proposal response.

1. How many total clients and mobile GPS/modem units does your company presently support? Does your company offer a 24/7 customer support center? If not, what is the regular operating support center support hour period?
2. How many local government clients do you currently support? Please specify the number of public safety agencies and the number of public services/public works agencies separately.

3. Please identify the terms of the service level agreement your company will maintain for its hosted application service to ensure continuity of service for the City. How will your company monitor service uptime and report these uptime percentages to the City? What resolution measures will be taken to resolve these service disruptions, if needed?
4. In Section A #13, which types/models of your company's GPS / modem units are necessary with vehicles connected to ground speed controllers and those needed without these ground speed controllers?
5. In Section A #17, does the client have the ability to set the reporting frequency for its GPS/modem units and set reporting based upon different events being tracked? If not, how is the reporting frequency and the event reporting triggers configured?
6. In Section B #1, is there a limit to the number of individual named user accounts for the application service? Are their additional fees per account or is a set number included in the package?
7. In Section B #2, is the City independently capable of adding these user accounts and are they immediately available for users to login with?
8. In Section B #4, are user names and passwords encrypted (e.g. using SSL certificates)? Can an administrative user identify the most recent login date of named users? Can an administrative user add/modify/delete user accounts without vendor intervention? Can an administrative user assign users to view/access information restricted to only those fleet(s) the user needs to access?
9. In section B #12, can the City independently assign new asset details with a GPS/modem unit if it is swapped between vehicles due to seasonal fleet needs? Is the asset positioning history associated with a specific vehicle asset record or is it permanently associated with the mobile GPS/modem unit (e.g. a mobile unit which was swapped between two vehicles will represent a combined history of both vehicles)?
10. In section C #4, can the system generate a report identifying which roads have been driven (serviced) and which roads have yet to be driven on a minute-by-minute update frequency from a starting time/date through to an ending time/date (or present time)? Can this report detail these street segments at the block detail level? Can this information be represented on an automatically updating map display which represents the roads driven in one color and those yet to be driven in a different color?
- 11. Please list any exceptions to the requirements section A-C above.**

## **COMPANY PROFILE SHEET (ONE-PAGE)**

Provide the following information about your firm in a succinct, one-page summary format:

- Firm name and business address, including primary phone number, fax number, and internet URL for the business unit responsible for delivering the services in this proposal.
- Year the firm was established (including former names and they year's established, if applicable)
- Type of ownership (sole proprietorship, partnership, corporation, joint venture, etc) and any parent company, if applicable.
- Disclose the number of full-time employees working for your company (include number of contractors, if any, and note their functions as they pertain to the services the City is soliciting in this proposal).
- State your company's core service competencies and the services your company is actively delivering in the marketplace.

## **CLIENT REFERENCES REQUESTED**

The City of Novi asks prospective vendors to consider ensuring their product and service offerings are complementary to the operational environment and context the City is seeking to deploy its AVL GPS units in. Please provide a minimum of three (3) local government (county, city, township, and village) client references in public services (public works) and public safety roles. References in Michigan and/or the immediate region are encouraged. Please provide the name, title, organization, address, phone, and email contact information for each reference.

## **PROPOSAL EVALUATION CRITERIA**

Proposals will be evaluated by the Qualifications Based Selection (QBS) process Qualifications using the following criteria:

1. Vendor's ability to fulfill the Project Requirements as described in Sections A-C.
2. Vendor's demonstrated experience in performing similar types of projects.
3. The strength of the client's references attesting to the quality, support, and reliability of the equipment and services being solicited in this proposal.

## VEHICLE INVENTORY FOR AVL EQUIPMENT INSTALLATIONS

Department of Public Services (Vehicles List To Be Outfitted with AVL Units – Seasonal Equipment Transfers Anticipated)

Dept.	Year	Make	Model/Body Type	Color	Car ID	Specific Use/Purpose
DPS-Field Ops	1986	Ford	Single Axle 'Dump Truck w/plow	Red	680	Material Hauling/Snow Plowing
DPS-Field Ops	1986	Ford	Single Axle 'Dump Truck w/plow	Red	681	Material Hauling/Snow Plowing
DPS-Field Ops	1988	Ford	Single Axle 'Dump Truck w/plow	Red	670	Material Hauling/Snow Plowing
DPS-Field Ops	1988	Ford	Single Axle 'Dump Truck w/plow	Red	671	Material Hauling/Snow Plowing
DPS-Field Ops	1991	GMC	1 Ton Dump-cold patch truck w/plow	Red	684	Cold Patch
DPS-Field Ops	1994	Ford	Single Axle 'Dump Truck w/plow	Red	686	Material Hauling/Snow Plowing
DPS-Field Ops	1994	Ford	Single Axle 'Dump Truck w/plow	Red	687	Material Hauling/Snow Plowing
DPS-Field Ops	1998	Ford	Single Axle 'Dump Truck w/plow	Red	698	Material Hauling/Snow Plowing
DPS-Field Ops	1998	GMC	1 Ton Dump w/Plow w/plow	Green	633	Material Hauling/Snow Plowing
DPS-Field Ops	1999	Ford	1 Ton Dump w/plow-DIESEL	Red	690	Material Hauling/Snow Plowing
DPS-Field Ops	2000	Sterling	Tandem Axle Dump Truck w/plow	Red	699	Material Hauling/Snow Plowing
DPS-Field Ops	2000	Ford	F-750 Truck - Chip Truck	Red	649	Tree Maintenance
DPS-Field Ops	2001	Ford	1 Ton Dump w/plow-DIESEL	Red	691	Material Hauling/Snow Plowing
DPS-Field Ops	2001	Sterling	Tandem Axle Dump Truck w/plow	Red	620	Material Hauling/Snow Plowing
DPS-Field Ops	2001	Sterling	Single Axle Dump w/plow	Red	621	Material Hauling/Snow Plowing
DPS-Field Ops	2001	Oshkosh	Single Axle 'Dump Truck w/plow	Red	605	Material Hauling/Snow Plowing
DPS-Field Ops	2003	Sterling	Tandem Axle Dump Truck w/plow	Red	603	Material Transport
DPS-Field Ops	2005	CAT	Grader	Yellow	612	Road Maintenance
DPS-Field Ops	2005	Tymco	Street Sweeper	White	606	Road Maintenance
DPS-Field Ops	2007	Sterling	Vactor	White	614	Drain Maintenance
DPS-Field Ops	2008	International	Tandem Axle Dump Truck w/plow	Red	611	Material Hauling/Snow Plowing
DPS-Field Ops	2008	Ford	1 Ton Dump w/plow-DIESEL	Red	617	Material Hauling/Snow Plowing
DPS-Field Ops	2009	International	Single Axle 'Dump Truck w/plow	Red	619	Material Hauling/Snow Plowing
DPS-Field Ops	2010	International	7400 SBA 4x2 Single Axle Dump Truck w/plow	Red	601	
DPS-Field Ops	2011	International	7401 SBA 4x2 Single Axle Dump Truck w/plow	Red	602	
DPS-Field Ops	1995	GMC	Pickup w/plow	Red	634	Field Ops/Snow Plowing
DPS-Field Ops	1996	GMC	4x4 Pickup w/plow	Red	636	Field Ops/Snow Plowing
DPS-Field Ops	1998	Dodge	Ram 1500 Pickup	Red	637	Field Ops/Snow Plowing
DPS-Field Ops	2000	GMC	Pickup w/plow	Red	639	Field Ops/Snow Plowing
DPS-Field Ops	2000	GMC	4x4 Pickup w/Plow	Green	640	Field Ops/Snow Plowing

DPS-Field Ops	2001	GMC	Sierra 4x4 Pickup w/Plow	Green	641	Field Ops/Snow Plowing
DPS-Fleet	2002	Chevy	Silverado	Red	642	Parts
DPS-Field Ops	2003	Ford	F-250 Pickup w/plow	Red	604	Inspection/Snow Plowing
DPS-Field Ops	2005	Chevrolet	Tahoe	White	623	Supervision
DPS-Field Ops	2006	Ford	F-250 4x4 w/hyd. Lift gate	Red	607	Inspection/Snow Plowing
DPS-Field Ops	2006	Ford	F-250 4x4 w/plow	Red	608	Field Ops/Snow Plowing
DPS-Field Ops	2006	Ford	F-250 4x4 w/Plow-DIESEL	Red	643	Field Ops/Snow Plowing
DPS-Field Ops	2006	Ford	F-250 4x4 w/Plow-DIESEL	Red	644	Field Ops/Snow Plowing
DPS-Field Ops	2007	Ford	F 350 SRW Pickup 4 x 4 w/Plow-DIESEL	Red	645	Field Ops/Snow Plowing
DPS-Field Ops	2008	Ford	F250 Super Duty w/plow	Red	615	Transferred to Pool from PD
DPS-Field Ops	2008	Ford	F250 Super Duty w/hyd. Lift gate	Red	616	Sign Shop
DPS-Field Ops	2008	Ford	F-550 w/plow	Red	635	Field Ops/Snow Plowing
DPS-Field Ops	2008	Ford	F-350 w/plow	Red	618	Field Ops/Snow Plowing
DPS-Field Ops	2008	Ford	F 350 SRW Pickup 4 x 4 w/Plow	Red	650	Field Ops/Snow Plowing
DPS-Field Ops	2009	Ford	F250 Super Duty w/plow	Red	610	
DPS-Field Ops	2009	Ford	F-250 w/plow	Red	628	Inspection/Snow Plowing
Multi Sensor (Ground Speed Controller Option)						
Basic AVL (Track/Trace Only)						

## Police Department

Dept.	Equip or Vehicle	Car Number	Yr	Make	Model/Body Type	Color
Police	V	253	2009	Ford	Crown Victoria	Black
Police	V	254	2009	Ford	Crown Victoria	Black
Police	V	260	2009	Ford	Expedition 4x4	Black
Police	V	261	2009	Ford	Expedition 4x4	Black
Police	V	262	2010	Ford	Crown Victoria	Blk/Wht
Police	V	263	2010	Ford	Crown Victoria	Blk/Wht
Police	V	264	2010	Ford	Crown Victoria	Blk/Wht
Police	V	265	2010	Ford	Crown Victoria	Blk/Wht
Police	V	266	2010	Ford	Crown Victoria	Blk/Wht
Police	V	267	2010	Ford	Crown Victoria	Blk/Wht
Police	V	268	2010	Ford	Crown Victoria	Blk/Wht

Police	V	273	2011	Ford	Crown Victoria V8	Blk/Wht
Police	V	274	2011	Ford	Crown Victoria V8	Blk/Wht
Police	V	276	2011	Ford	Crown Victoria V8	Blk/Wht
Police	V	275	2011	Ford	Crown Victoria V8	Blk/Wht
Police	V	271	2011	Ford	Crown Victoria V8	Blk/Wht
Police	V	270	2011	Ford	Crown Victoria V8	Blk/Wht
Police	V	272	2011	Ford	Crown Victoria V8	Blk/Wht
Police	V	277	2011	Ford	Crown Victoria V8	Blk/Wht
Police	V	269	2010	Dodge	Charger	Blk/Wht





**CITY OF NOVI  
INSURANCE REQUIREMENTS  
ATTACHMENT A**

1. The Contractor shall maintain at its expense during the term of this Contract, the following insurance:
  - a. **Worker's Compensation** insurance with the Michigan statutory limits and Employer's Liability insurance with minimum limits of **\$100,000** (One Hundred Thousand Dollars) each accident.
  - b. **Commercial General Liability Insurance** – The Contractor shall procure and maintain during the life of this contract, Commercial General Liability Insurance, Personal Injury, Bodily Injury and Property Damage on an “Occurrence Basis” with limits of liability not less than **\$1,000,000** (One Million Dollars) per occurrence combined single limit.
  - c. **Automobile Liability** insurance covering all owned, hired and non-owned vehicles with Personal Protection insurance to comply with the provisions of the Michigan No Fault Insurance Law including Residual Liability insurance with minimum bodily injury limits of **\$1,000,000** (One Million Dollars) each person and **\$1,000,000** (One Million Dollars) each occurrence and minimum property damage limits of **\$1,000,000** (One Million Dollars) each occurrence.
2. All policies shall name the Contractor as the insured and shall be accompanied by a commitment from the insurer that such policies shall not be canceled or reduced without at least thirty (30) days prior notice date to the City.
3. The City of Novi shall be named as Additional Insured for General Liability and Auto Liability. Certificates of Insurance evidencing such coverage shall be submitted to City of Novi, Purchasing Department, 45175 West Ten Mile Road, Novi, Michigan 48375-3024 prior to commencement of performance under this Contract and at least fifteen (15) days prior to the expiration dates of expiring policies. A current certificate of insurance must be on file with the City for the duration of the contract.
4. The Contractor shall be responsible for payment of all deductibles contained in any insurance required hereunder.
5. If, during the term of this Contract, changed conditions or other pertinent factors should in the reasonable judgment of the City render inadequate insurance limits, the Contractor will furnish on demand such additional coverage as may reasonably be required under the circumstances. All such insurance shall be effected at the Contractor's expense, under valid and enforceable policies, issued by the insurers of recognized responsibility which are well-rated by national rating organizations and are acceptable to the City.

6. If any work is sublet in connection with this Contract, the Contractor shall require each subcontractor to effect and maintain at least the same types and limits of insurance as fixed for the Contractor.
7. The provisions requiring the Contractor to carry said insurance shall not be construed in any manner as waiving or restricting the liability of the Contractor under this contract.
8. The City has the authority to vary from the specified limits as deemed necessary.

### **ADDITIONAL REQUIREMENTS**

#### **Indemnity/Hold Harmless**

1. The Contractor agrees to save harmless and defend the City against and from any or all liability, loss or damages (including without limitations, fees and expenses of attorneys, expert witnesses and other consultants) which the City may suffer as a result of claims, demands, costs, or judgments against it arising from, out of or in consequence of the performance of this Agreement, excepting only such liability, loss or damage as shall have been occasioned by the sole negligence of the City of Novi, its officers, agents or employees.
2. The Contractor agrees that it is its responsibility and not the responsibility of the City of safeguard the property and materials used in performing this Contract. Further the Contractor agrees to hold the City harmless for any loss of such property and materials used in pursuant to the Contractor's performance under this Contract.
3. The Contractor shall not discriminate against any employee, or applicant for employment because of race, color, sex, age, or handicap, religion, ancestry, marital status, national origin, place of birth, or sexual preference. The Contractor further covenants that it will comply with the Civil Rights Act of 1973, as amended; and the Michigan Civil Rights Act of 1976 (78. Stat. 252 and 1976 PA 453) and will require a similar covenant on the part of any consultant or subcontractor employed in the performance of this contract.



***Company Profile:***

Name: PreCise MRM, LLC. A Subsidiary of FORCE America  
Address: 1311 East Franklin Road  
Meridian, ID 83642  
208-323-7141 (phone)  
952-252-3731 (fax)  
[www.precisemrm.com](http://www.precisemrm.com)

Corporate: FORCE America  
Address: 501 East Cliff Road  
Burnsville, MN 55337

Manufacturing: FORCE America – Electrical Division  
Address: 1601 Airport Road  
Waukesha, WI 53188

PreCise MRM is a wholly owned Subsidiary of FORCE America. PreCise MRM as an entity is based in Meridian, ID (on the border of Boise, ID). FORCE America owns two (2) other business units which include Varitech Industries ([www.varitech-industries.com](http://www.varitech-industries.com)) and PreCise MRM ([www.precisemrm.com](http://www.precisemrm.com)).

FORCE America, including its Subsidiaries, acts as a private organization. PreCise MRM, like its parent company, is a private based organization.

FORCE America as a company has 250-260 employees.

FORCE America and its companies, including its entities, are incorporated and chiefly located out of Burnsville, MN.

FORCE America is licensed to do business in Michigan and has been doing business with the City of Eau Claire for years.

FORCE America has been doing business for 50+ years. The PreCise MRM name was established in 2006. The foundation of the product was established back in 2000.

PreCise MRM core competencies are delivering GPS applications to its customers that want to increase job management and asset management efficiencies. These are the things we have been delivering and are actively delivering today.

Authorized signer of contract:

**John L. Stenz**  
Executive Vice President  
**Phone:** (952)-846-2107  
**Cell:** (651)-260-5010  
**Fax:** (952)-846-2108  
**E-mail:** [jstenz@forceamerica.com](mailto:jstenz@forceamerica.com)

**FORCE America Inc.**  
501 East Cliff Road

PreCise MRM, LLC - A Subsidiary of FORCE America, Inc.  
1311 East Franklin Road, Suite 101/102 Meridian, ID 83642  
[www.precisemrm.com](http://www.precisemrm.com) 1-888-449-0357



***Client References:***

**Organization Name: Livingston County**

Address: 3535 Grand Oak Drive. Howell, MI 48843

Type of Business: Municipal

Contact Person: George Messner

Telephone: 517-294-2302

Email address: [gmessner@livingstonroads.org](mailto:gmessner@livingstonroads.org)

Dates of Installation: December 2008 and ongoing as they add devices.

Description of System: Currently Livingston County has around 24 devices that they own and about 20 of those devices are currently installed. They are installing the units on plow trucks and graders. They are using the PreCise application to monitor location, idle times, and material management. Along with the ability to monitor asset utilization, prove/disprove tort claims, better service the community, etc. PreCise actually displaced the Grey Island (Intefleet application which is now owned by Webtech).

**Organization Name: Wisconsin Department of Transportation.**

Address: 4802 Sheboygan Avenue. Room 501. Madison, WI 53707-7986\_

Type of Business: Municipal

Contact Person: Sharon Bremser (State Highway Maint. Engineer)

Telephone Number: 608-266-8460

Email Address: [sharon.bremser@dot.wi.gov](mailto:sharon.bremser@dot.wi.gov)

Secondary Contact Person: Mike Sproul

Telephone Number: 608-266-8680

Email Address: [michael.sproul@dot.wi.gov](mailto:michael.sproul@dot.wi.gov)

Dates of Installation: On going for the last 12-18 months.

Description of System (quantities, type of equipment, etc.): Currently 25+ Counties in the State of WI. 900+ devices. Majority are snow plows, with a number of other assets including sweepers, sign trucks, patrol trucks, mowers, graders, fleet maintenance, management. They are using the PreCise application to monitor location, idle times, and material management. Along with the ability



to monitor asset utilization, prove/disprove tort claims, better service the community, etc.

**Organization Name: Washington State Department of Transportation**

Address: 310 Maple Park Ave. SE. Olympia, WA 98504

Type of Business: Municipal

Contact Person: Tom Clay (Maint. And Operations IT Manager, Highway)

Telephone Number: 360-705-7847

Email Address: [clayt@wsdot.wa.gov](mailto:clayt@wsdot.wa.gov)

Secondary Contact Person: Please contact Tom Clay.

Telephone Number: Please contact Tom Clay.

Email Address: Please contact Tom Clay.

Dates of Installation: Last 3+ years, continued installation.

Description of System (quantities, type of equipment, etc.): 250+ devices. Snow plow fleet and currently installing units on Vector trucks. They have built their own application and they pull the data from our servers into their own back end system. The PreCise MRM devices provide the information to the data base. They are pulling application rates (granular, pre-wet, and direct), plow status, location, speed, heading, date & time.

**Organization Name: City of Wausau, WI**

Address: 400 Myron Street. Wausau, WI

Type of Business: Municipal.

Contact Person: Don Skare (Street Superintendent)

Telephone Number: 715-261-6961

Email Address: [don.skare@ci.wausau.wi.us](mailto:don.skare@ci.wausau.wi.us)

Dates of Installation: Last 2+ years and ongoing.

Description of System (quantities, type of equipment, etc.) They have round 125 devices of which 100 or so are installed today. They have devices installed on patch trucks, vans, snow plows, sweepers, trucks, cars, tractors, ambulance, fire



trucks, etc. They use PreCise to manage their assets, increase efficiencies, reduce fuel consumption, and make their overall fleet more productive.

**Organization Name: City of Duluth, MN**

Address: 4825 Mike Colalillo Drive. Duluth, MN 55807

Type of Business: Municipal.

Contact Person: Arley Bordenkircher (Director of Fleet Services)

Telephone Number: 218-730-4450

Email Address: [ABORDENKIRCHER@duluthmn.gov](mailto:ABORDENKIRCHER@duluthmn.gov)

Dates of Installation: Started June 2011 and still in progress.

Description of System (quantities, type of equipment, etc.) Around 350 devices of which 100 or so are installed by the time you receive this bid document. They have devices installed on their entire fleet of vehicles including but not limited to passenger vehicles, dump trucks, plows, graders, all terrain vehicles, one ton trucks, pickup trucks, sidewalk cleaners, sweepers, mowers, three wheel utility vehicles (police), unmarked squad cars (police), marked squad cars (police), service trucks, tandems, flusher trucks, sign trucks, utility vans, etc. They use PreCise to manage their assets, increase efficiencies, reduce fuel consumption, and make their overall fleet more productive.

**Organization Name: Dane County, WI**

Address: 2302 Fish Hatchery Road. Madison, WI 53713

Type of Business: Municipal.

Contact Person: Jim Matzinger (CPA, Department of Public Works, Highway and Transportation).

Telephone Number: 608-266-4040

Email Address: [Matzinger@co.dane.wi.us](mailto:Matzinger@co.dane.wi.us)

Dates of Installation: Started September 2009 and still adding units.

Description of System (quantities, type of equipment, etc.) They have around 175 devices of which all devices are currently installed. They have devices installed



on a large part of their fleet but not the entire fleet just yet. Those assets include autos, pickups, crew cabs, supervisors assets, dump trucks, snow plows, haul trucks, brine trucks, attenuators, graders, They use PreCise to manage their assets, increase efficiencies, reduce fuel consumption, manage material costs and make their overall fleet more productive.



***Questions/Answers for Proposal Response:***

- 1) PreCise MRM has around 190 clients as of 7/15/11. Those clients have purchased around 4000 PreCise devices. Those devices are of all different flavors which include the IX-101, 201, 301 and 302.

PreCise does not provide a 24/7 customer support center but it is not uncommon for customers to call their local FORCE America rep (Mike Taylor) and their PreCise Project Manager (Bob Lowe) 24/7. As the City of Novi is currently a FORCE America customer, the employees of the City know that FORCE America values customer support and the City can call at anytime. The standard operating support hours for PreCise are 7am – 6pm MST (9am – 8pm EST). The PreCise support team is based out of Meridian, ID which is where PreCise is located.

- 2) Currently within the State of Michigan PreCise has two (2) clients. Those clients include Livingston County and Bay County Road Commission. Though, of the 190 current customers of PreCise, around 130 are Municipal. PreCise has a lot of customers within the State, County, City, Village, and Township vertical markets. Both Livingston County and Bay County Road Commission are customers within the public services/public works segments. PreCise does have many customers within public safety and public works. City of Duluth, one of PreCise's recent wins has devices installed within public safety and public works. City of Duluth purchased/installed around 350 units.
- 3) PreCise MRM utilizes an enterprise class 3<sup>rd</sup> party data center provided by SolutionPro in Boise, ID. Data is backed up to identical hardware for our warm site disaster recovery running in our Force America corporate data center in Burnsville, MN at a rate of every 30 minutes. This is a fully redundant set of hardware that can be brought up as the primary PreCise servers in the event that the servers located at SolutionPro are not available. The current data retention period is 2 days for every 30 minute snapshot and 10 days for the snapshot taken every 2 hours. SolutionPro owns the data center in Boise, ID and the PreCise hardware there is maintained by our PreCise web developers and corporate IT team. The PreCise hardware at our corporate data center in Burnsville, MN is owned by our parent company, Force America, and maintained by our web developers and corporate IT team. Currently SolutionPro maintains multiple Gig-E connections to major IP carriers. The physical and logical connections to these carriers have been engineered to provide an optimized level of redundancy. Other critical features such as parallel redundant UPS power, generator backup, N+1 climate control, fire protection, 24x7 secure access and remote monitoring enforce our commitment to application access and data redundancy.





- 4) PreCise fully supports our controllers which are the controllers that are manufactured by FORCE America. As the City of Novi already knows, PreCise MRM is owned by FORCE America acting a subsidiary of FORCE America.
  - a. IX-301. This device fully supports the SSC5100/SSC6100. In doing so, we support 37 separate events coming off of our controllers (which nobody else in the industry can claim). Within our application, customers can run Material Usage reports which give the total amount of granular, pre-wet, and direct material total. There are a host of other reports the City can utilize when using our devices with our controllers. In regards to the other controllers from CompuSpread, we would only be able to provide on/off status of the controller. We do not fully support competitive products. **\*\*\*Please note that if a competitor is trying to support our controllers (SSC5100/SSC6100) they have to purchase an upgrade key from PreCise MRM. This key provides a firmware upgrade to the controller(s) so they can send the data. Any competitor claiming they can support our controllers have to quote this key. If not, they bid should be deemed as incomplete.**
  - b. IX-101. This device will be used for all the other equipment within the City of Novi that does NOT have a ground speed controller. This device does have two (2) inputs which would give the City the ability to monitor such things as seat belt, strobe lights, pto, etc.
- 5) Yes, the City has the ability to set the reporting frequency of the PreCise units and it also automatically records information based upon the change of triggers. PreCise as an application is event driven, so if there are changes based upon time, distance, angle change, and the change of events (plow up/down, spreader on/off, input on/off, etc.) the new recordings are geostamped. PreCise also allows the City to change the reporting intervals of the device (how often the device reports in the information collected). This would allow the City to monitor its own costs. All of these changes are made by the City and are done over the air within the PreCise application.
- 6) No, there is NOT a limit to the number of individual named user accounts for PreCise. There are no additional fees for the account. The City can have as many users, fleets, accounts, etc. as they want. Unlimited.
- 7) Yes, the City is independently capable of adding the user accounts and can do so at anytime within the PreCise application. Any user account added by the City would be immediately available.



- 8) See below.
- a. PreCise does not use SSL certificates, but the passwords are encrypted using the MD5 algorithm.
  - b. At this time PreCise does not provide the ability to identify the most recent login date of a specific named user. PreCise does track the last time that changes were made to an account. This allows PreCise the ability to track who made changes to a fleet or an asset. Though PreCise does not have the ability now to do so, we will be looking into this added functionality. If PreCise does look into this enhancement and build the application, it will come at no additional cost to the City.
  - c. Yes, administer(s) can add/modify/delete user accounts without PreCise intervention.
  - d. Yes, administer(s) can assign user needs based upon certain restrictions to specific fleets. Administer can also lock out certain applications and also only give users access to specific assets if the City wants to do so.
- 9) Yes, the City can independently assign new asset details if it is swapped from one asset to another. PreCise has many customers that swap units from asset to asset. It is recommended that the City purchase additional power harnesses and antennas to make the swap of devices extremely easy. The information collected via the PreCise application is assigned to the asset created within the PreCise application. This allows for easy retiring of assets during non-use months. The information is collected for the asset not the device. If the City swapped units for multiple assets the information would never be combined, it would be collected at the asset level.
- 10) Yes, the future route completion report will identify which roads have been driven and which roads have not been driven. This report will be time generated (date/time). Our route completion report will have the ability to segment blocks as long as the City builds those blocks. Yes, information will be represented on a map in regards to a different color for those roads that have been driven vs. those that have not been driven. For more detail please refer back to C 4.
- 11) Exceptions and explanations per the RFP.

A 1-18. PreCise MRM meets all requirements. #2 is explained below. #13 is answered within the Questions for Proposal Responses, #4.



2. The PreCise device will be installed internally, somewhere within the asset. The antenna can be mounted inside the cab but it is NOT recommended. The PreCise antenna needs to have a clear view of the sky and it is recommended that the City install the antenna on top of the asset, typically the roof. To meet the specifications of accuracy, the antenna will need to be mounted to where it has a clear view of the sky.

***B 1-14 explanations/answers:***

- 1) PreCise application does not restrict the end user in regards to named accounts, fleets, users, etc. The City of Novi can have as many users, fleets, assets, as they want. There is no additional fee for extra users. Unlimited.
- 2) When creating user accounts, the Administer sets them up and follows the wizard. The Adminster within the PreCise application (City can have as many or as few as they desire) monitors users and provides them with access to fleets, assets, etc. The City is already aware of how the PreCise application works, and it is recommended that PreCise shows to other City of Novi personnel how it works via a Webinar.
- 3) PreCise allows the Administrator to restrict viewing information via fleet, asset, and by report. PreCise would recommend demonstrating via a Webinar to those that have not seen the PreCise application.
- 4) The PreCise application is user name/password protected. The only way in which someone could view the City of Novi information would be if they got their hands on the username/password of a City of Novi employee.
- 5) Application data resides on a Storage Area Network (SAN) located at a colocation center (colo) in Boise, Idaho (SolutionPro, a third-party provider). On-going SAN to SAN replication is performed with equipment based in Burnsville, Minnesota at the corporate headquarters of Force AMERICA. Additionally, data is backed up at least once per day locally and a copy of the backup is automatically sent to the Burnsville servers. Furthermore, data is backed up to tape storage at month end. The most recent backup tape is stored off-site. SolutionPro has multiple redundant internet connections, on-site diesel generators in case of power disruptions, fire-protection systems, 24-hour on-site personnel, and other measures to ensure continuous operation. Additionally, PreCise has warm-site disaster recover capabilities in case the SolutionPro center is somehow disabled.
- 6) The PreCise application stores the data for instantaneous access for three (3) years. This surpasses the City requirements by two (2) years. After the three (3) years the



information is simply archived. There are many things that PreCise does for its customers, we can delete the data, we can put it out to an FTP to where the City can retain it internally, etc. There is no additional cost for any of these things.

- 7) Yes, PreCise provides an interactive map that can update in one-minute or less.
- 8) PreCise does have the ability to call a device via a “ping” (SMS) and have it instantly report back giving the GPS information (location, speed, heading, date, time). PreCise does not have the ability to do this for an entire fleet at one time. Our current “ping” technology is accomplished at the individual asset level. Please note that “ping” capabilities are only as guaranteed as the level of text messaging is guaranteed. Not all texts are 100% guaranteed. If the “ping” does not get through, the device will not report back. This does NOT happen that often, less than 5%.
- 9) PreCise can track and report activity via the driver when interfacing into one of our SSC5100/SSC6100 controllers. If the asset does not have a SSC5100/SSC6100 controller, PreCise does not record data via driver w/out another piece of hardware. Another piece of hardware would be required for the City to track via operator. Though, within the PreCise application, you can put notes within assets. Typically, most operators are assigned to specific assets.
- 10) Within the PreCise application there is a maintenance application. This maintenance application is based upon engine hours and odometer readings. Within the PreCise application you can add notes based upon what maintenance was applied. You can also modify dates, determine whether date was true or estimated, etc. PreCise has the ability to integrate into 3<sup>rd</sup> party software via Web Services. Web Services is a free technology that allows a outside database to tie into the PreCise data base making Web Services calls. The City would determine what information they want to import. This technology along with the support from PreCise engineers is free.
- 11) Within the PreCise application you can create as many geofence’s as you want. The City would create a polygon. When creating the geofence, you can have as many polygonal points as you want. This allows the City to create detailed geofences. A lot of competitive GPS applications only allow the end user to use pre-determined shapes. This is not the case with PreCise. The notifications of the geofence (entered/exited) can be sent via email to specific users. I would recommend showing these features to the City via a Webinar.



- 12) PreCise develops its platform to support all versions of Microsoft IE. With the most recent versions of IE, Microsoft Silver Light is included. If you are running a older version of IE, the end user will have to install Silver Light.
  
- 13) At this moment in time, PreCise does not support the ability to take the City's ESRI into our application. Though we do not do it at this time, PreCise is currently investigating what it would take to bring this functionality in house. If PreCise takes on this project and allows the ability to support and bring in house ESRI layers, PreCise will notify the City of Novi. PreCise does not know the additional cost at this time if PreCise develops this technology.
  
- 14) PreCise asset detail information:
  - a. Year
  - b. Make
  - c. Model
  - d. Vin
  - e. License #
  - f. Stock #
  - g. Notes
  - h. Fleet assigned
  - i. Description
  - j. Status
  - k. Availability
  - l. Asset type (icon)
  - m. Meter readings
    - i. Odometer, hours, etc.
  - n. Configuration
    - i. Reporting interval
    - ii. Recording interval
  - o. Inputs (seat belt, wing, plow, sweeper, etc)
  - p. User access

***C 1-5 explanations/answers:***

- 1) PreCise has many reports within the application. Everything outlined within the specifications that PreCise has provided would be accessible to the City of Novi. All of our reports are provided to every single customer. It is up to the City in regards to



whether or not they use all the reports. Also, if PreCise develops any new applications, the City would be able to utilize those applications as well. Specifications are located within Section D.

- 2) There are no additional fees. All reports and applications are available the City of Novi along with any new reports that are created.
- 3) The PreCise applications allow the City to run reports for specific assets or at the fleet level. Driver applications are generated only via the Material Usage Report.
- 4) Please see attachment Route Completion for definition. PreCise will have this build complete before the Winter season of 2011/2012. Expected time for completion and for all PreCise customers to utilize will be sometime in October.
- 5) At this current time PreCise does not have an application that allows the City to view the last time users logged into the application. PreCise is exploring what it would take to generate this report and if PreCise develops this report it will be available to the City. Again, no charge if PreCise adds this report to its functionality.

***D 1-2 Unique System Capabilities and additions:***

**PreCise specifications**

**A Mobile Data Collection System (MDC) with AVL/GPS system shall be supplied with each vehicle.**

**MDC (Mobile Data Collection System) system shall be fully integrated in all aspects with the FORCE America 5100 or 6100 MA Patrol Commander Control Center.** The system must support the FORCE America Advanced firmware/protocol. Device Communication must be bi-directional, to include device handshaking with Send/Receive/Delete routine. Data integrity must be protected by a 16-bit Cyclic Redundant Check-sum and allow for dynamic string definition. (This allows for accurate and verified communication between the SSC5100 or SSC6100 series spreader controller and the AVL modem.)

The system must communicate at a 19200 baud rate between the FORCE America SSC5100 or SSC6100 series controller and the AVL modem.

The system must be able to collect and show 37 separate events off the FORCE America SSC5100 or SSC6100.

The communications technology to be used for transmitting data shall be dual mode – 802.11b/g and GPRS. System shall include all necessary hardware items, processors, antennas, etc. (This provides the flexibility to use either 802.11b/g wireless or GPRS to do automatic data downloads if necessary.)



The system shall provide a RS-232 serial connection, six (6) discrete inputs, J1939 and J1708 connections. (The variety of connectors provides flexibility in reading spreader controllers, plow positions, hoist positions, etc. as needed.)

System shall support at least 16MB flash memory for storage of data over extended periods of connectivity loss. (This allows for storing all readings until 802.11b/g or GPRS coverage is re-established then transmitting the stored data to provide an updated history of the vehicle.)

System shall provide *Store and Forward* capabilities. (System collects vehicle activity data and geo-stamp data and stores onboard until data can be securely transmitted to provide a detailed historical record of activity while in the field.)

The system shall provide ability to detect and report previous power loss if unit is disconnected then reconnected. (This reports if someone was to disable the system during their shift whether inadvertent or intentional.)

GPS receiver shall be accurate to less than 8 meters, for at least 90% of readings. (Provides accurate mapping data for corresponding application rates from spreader controller.)

System shall have less than 8mA typical current draw in key-off mode. (Provides minimal battery discharge when not in use.)

System shall meet SAE J1455 environmental specifications and provide +/- 25g shock rating (Provides a ruggedized solution in the high abuse environment that system will be used in.)

System shall support over-the-air firmware updates. (This allows for updating the system without the need to return to the district shop to be updated.)

System shall support over-the-air configuration updates for the following:

1. Start time report intervals
2. Reporting transmit intervals
3. Reporting power up/down
4. Setting GPS database triggers for distance, time, speed and angle.

System shall include notifications when a vehicle is due for preventive maintenance based on engine hour readings.

The system shall provide hourly usage reports to reflect how many minutes in each hour a vehicle was in use.

The system shall provide mileage reports to reflect how many miles in each day, month, and year vehicle drove.



The system shall provide the ability to draw geo-fences, label fences, and show the accumulation of time and mileage within said fence.

System shall provide user-configurable notifications for excess speeds, excess idle times, and operation after normal operating hours, previous power loss, maintenance exceptions, geo-fence violation, and battery voltage.

The system shall provide user-configurable odometer and hour meter synching to the vehicle's actual odometer and hour meter. System shall also include the ability to readjust both odometer and hour meters if a variance occurs.

Vehicle AVL/GPS system shall be of rugged design, constructed of components intended and suitable for the mobile equipment market. To ensure longevity in harsh mobile environments, the system shall conform to SAE1455 for chassis-mounted devices, as well as not be damaged by mechanical shock of +/- 25g. For guaranteed low-temperature operation, the device must operate without degradation of performance in ambient temperatures of -30°C to 60°C.

The modem shall be dual mode 802.11b/g and GSM/GPRS. It shall include two RS-232 serial connections and one J1939 and J1708 connections. The unit will support a minimum 16MB flash memory for storing data over extended periods of connectivity loss and also provide ability to detect and report previous power loss if unit is disconnected then reconnected.

The AVL/GPS system shall be protected and immune to over-voltage conditions and reverse polarity. System shall utilize a live 12V connection to the vehicle battery. To minimize vehicle battery drain, unit current draw shall not exceed 8mA during sleep mode (key off).

The system shall contain all necessary hardware and on-board memory to log GPS coordinates including (latitude/longitude), speed, heading and time, engine hours (ignition "on" time) and spreader data.

Data strings of outputting data collected by the system from the on-board electronic spreader control shall include comprehensive spreader activity including spreader status, material feed rates, actual materials applied, operating modes, and warning and error conditions and be capable of supporting new spreader functions and features as added. Spreader event data shall be produced and collected based on programmable event triggers that can be based on a field status change. This is to reduce the flow of data and monthly charges due to larger volumes of data being transmitted.

The AVL/GPS system shall also log the status change of (6) discrete digital inputs to allow for monitoring the state and condition of various optional vehicle sensors. Connections to unit shall be made with plug-in connectors (not hardwired) to facilitate simple field replacement of components.





The unit shall come with two antennas. One shall be GPS dual-band and the other is GPRS-850/1900 MHz. The GPS antenna is 3-5Vdc, 23.5-32.5dB of gain, and is equipped with a male SMA connector. The GPRS antenna is 3-5Vdc, has less than 3dBi gain, and is equipped with a RP-SMA connector.

DATA Commander Solution is a turn-key web hosted vehicle management solution that provides visibility into the daily work activities of the equipped vehicles. It also provides a detailed snow and ice treatment record/history when utilizing the FORCE SSC5100 or SSC6100 series controller. This solution not only provides automatic vehicle tracking data, but it also monitor's actual material application rates (lbs. per lane mile) of salt, salt/sand mix, direct liquids and pre-wet systems as well as air/road temperatures, plow position (up/down and roads actually plowed) as well as tracking vehicle ID number and operator name.

Software shall have ability to modify cellular reporting characteristics of hardware to optimize information based on need. Configuration possibilities should include ability to initiate report on equipment power-up, power-down, X number of minutes during operation, wake-up feature to set a periodic interval for a "nightly report" and on the change of a switch state (example, when availability switch changes). Customer should be able to change this configuration via a web interface and have changes applied over-the-air without physically handling the GPS device.

All collected data is stored at our data center and available for access by users with the appropriate security access 24 hours per day, 7 days per week. This solution provides detailed mapping and reporting interfaces that are accessible from anywhere in the world through via most standard internet web browsers. All information is kept live on the PreCise database for three (3) years and backed up on a daily basis per standard IT practices. After the 3 year period, an archive copy is created and stored in case of future needs or litigation claims. In the event that the end user would require access to this data after it was archived, the data can be restored and made available to the end user within 72 hours from the request. All data is stored in a Level 2 data center in Boise, ID and backed up by a RAID 5 storage system.

The DATA Commander Ultra allows for configurability of GPS defined by: distance, time, angle change, start, and stop.

The DATA Commander Ultra allows for configurability of GPRS defined by: power up, power down, interval(s), wake-up, and switch change. This allows the customer to manage internally the data costs associated with sending information over the air. This allows the customer to optimize data cost by determining how often they want to see information off of the asset.

DATA Commander Solution utilizes Microsoft ASP.NET web services to make all data collected available to the end user. This data can be used in other applications such as GIS mapping software, MMS software programs or any other open format database software. The end user would be required to provide the appropriate programming and integration into their specific application such as GIS databases. A copy of the Web Services documentation can be provided as a guide to enable this feature.



The DATA Commander Ultra provides automatic download of IFTA Reports.

The DATA Commander Ultra provides automatic download of Usage Reports.

That DATA Commander Ultra provides integration with intelligent devices such as the SSC5100 or SSC6100, Cleral on-board weighing application, and Road Watch temperature sensors.

DATA Commander solution uses a store and forward technology that continues to collect the data and store it onboard the data collection unit. If cell coverage is lost for any reason the DATA Commander solution will continue to store data until cellular connectivity is restored or it can connect to a Wi-Fi access point, at that time the stored data will be safely transmitted. This protects the integrity of the data and provides an accurate detailed record of the vehicles activity/history.

DATA Commander solution provides user customizable dash board with quick fleet summary reports.

DATA Commander solution geo stamps and reverse geo codes every data point provided within the historical trip report.

The DATA Commander provides clustered data points within the historical trip report for faster load times.

The DATA Commander application provides a “quick look” Home Page that allows the user to see a quick update in regards to the weekly reporting of the assets. Each Home Page for each User is completely customizable based upon the available applications to the Home Page. The current applications available include:

- Full Screen Map
- My Equipment (Fleet based)
- Seven Day Total Distance
- Seven Day Total Idle
- Seven Day Engine Hours
- Seven Day Driving Percentage
- Maintenance Report (Hourly)
- Maintenance Report (Distance)
- Seven Day Speeding Exceptions
- Seven Day Idle Exceptions
- Seven Day Input Usage
- Monthly Calendar
- Days Since Last Report
- Over 30 Minutes since last GPS Report
- Seven Day Input to Engine Hours Report
- Routing
- One Day Total Distance
- One Day Driving Percentage



- One Day Total Idle
- One Day Idle Exceptions
- One Day Engine Hours
- One Day Input Usage
- One Day Input to Engine Hours
- One Day Speeding Exceptions
- New Features

The DATA Commander application provides the following reports and/or information at this time:

- Last known location map view
- Dispatch map (full screen)
- Last location relative to home (pre-determined address)
- Odometer readings
- Total engine hours
- Last time asset reported in
- Last known location (map view)
- Historical trip report (map view)
- Raw data report
- Exception reports
  - Battery voltage
  - Speed
  - Idling
  - Operating during “off” hours
  - Maintenance
  - Power
  - Geo fence (in/out)
  - Temperature (custom attention required)
  - FORCE Controller Exceptions (SSC5100/SSC6100)
    - 34 separate Exceptions. EX: Auger Feedback error
- Zone/Route report (Geo fence application)
- Material Usage Report
- Idle report
- Engine Data Report (J1939/J1708 integration)
- Fleet Stop report
- State Summary report
- Road Condition report (when integrated with Vehicle Data Terminal)
- Individual Vehicle Mileage Report (IFTA/IRP filings)
- Daily Asset Usage report
- Weekly Asset Usage report
- Monthly Asset Usage report
- Custom Asset Usage report
- Custom Input Usage report (monitors usage of 6 discreet inputs)



- Custom Input Distance report (monitors distance of 6 discreet inputs)
- Asset Distance report
- View Maintenance History/Update Maintenance Record
- Fleet Summary report
- Zone Cycle Time report
- Ping Asset (SMS report)
- Health Check report
- GPS Lost for over 30 Minutes report

The DATA Commander provides an unlimited amount of user defined polygonal geo fences.

DATA Commander application provides unlimited user logins.

DATA Commander Solution allows any authorized personnel to view the data via standard web browsers (i.e. IE, Firefox). Also, it allows the Users with Administration privileges to set up additional Users that may include other Administrators or just individuals that only have the ability to view data but not edit any settings. Or, any combination that the end user would require on a per User basis.

DATA Commander Solution provides a fleet-wide settings feature that enables the administrator to set options to apply to the entire fleet eliminating the cumbersome process of setting up and editing each asset individually. The solution can also vary user's privileges to view fleets and reports based on login.

DATA Commander Solution provides an In Service, Out of Service and Retired tab so that an asset can be tracked or archived if it is no longer in service. This allows for maintaining records on specific assets without cluttering up the map with inactive or retired units.

The DATA Commander application provides a Maintenance history that is defined by hours and miles or the combination of both.

DATA Commander application provides a dispatch application that automatically refreshes and updates every two (2) minutes. Within the dispatch application it allows you to drop a "pushpin" in which it will then display the closest asset when hovering on that "pushpin".

DATA Commander allows end user to select specific icons to display specific assets. Also, the application allows for different color code representation for the following: available, unavailable, and maintenance is due.

The DATA Commander solution provides all HELP files and documentation online with the application including screenshots and graphical views of how to use the app. These are maintained and updated as new features are released.



The DATA Commander solution provides a HELP feature that allows a user to report an issue by clicking on an AMBULANCE icon located in various locations on the application. By clicking on this icon, a user captures the screen he has the question or error and inputs the information into the helpdesk to address the issue.

The DATA Commander provides LED's that display the status and provides assistance in trouble shooting.

The DATA Commander allows for JBUS interface.

DATA Commander has SMS Ping capabilities.

The DATA Commander has two (2) digital outputs available for configuration.

The DATA Commander application provided by PreCise MRM is designed, manufactured and supported in the USA. The design and manufacturing includes the software, hardware, and the firmware.

Geofencing additions:

- You have a full screen map when you are drawing geofences. This should give you much more real estate to create, edit and modify geofences.
- There is a toolbar that gives you several options simplifying your use:
  - You can view your assets on the map while drawing the geofences. This should help if you know where your equipment is but don't have an address.
  - You can undo or delete the last point. If you make a mistake while drawing, you no longer have to start over. Just undo your last point and proceed.
  - You can view other geofences on the map while drawing a new geofence.
- Also the ability to edit an existing geofence. If you find you want to add a stretch of highway to an existing geofence or fix an old geofence, you no longer have to start over. Just open the existing geofence and edit the points.
- Grouping -- You can now create groups of geofences for running reports like the Zone Report or Material Usage Report. This helps when you may have individual zones you are tracking day to day but want to run a summary of all routes.

Routing -- Included now on the full screen map is the ability to get directions from an asset to a point. This is a great dispatching feature. The way this works is as follows: A dispatcher wants to send a technician to a jobsite. He places a pushpin on the map either by entering an address or right-clicking on the map. When he hoves over the pushpin, he sees all the assets and who is the closest available. From there, he can click on a navigation link and this opens a separate window providing both a map view and turn by turn directions. The dispatcher can email, text and print these directions out. There is also the option to modify the route to include other stops and change it based on traffic conditions.



- There is also a new widget that will provide similar functionality. The user can just enter the from and to address and again, a new window will open with the map and directions.

#### Haul Cycle Report:

- PreCise introduced a Haul Cycle report last fall that is designed for customers who have trucks making several trips from a plant to a jobsite in a day. The report helps the customers get a quick and informative view at their average cycle times to identify where time is being wasted. With this release we've made several improvements to the report including:
  - Added the ability to view multiple trucks for the same job.
  - Added the first start and last stop for each truck.
  - Added averages for the time at each location
  - Widened the report and increased the font size for easier previewing.

#### Icons:

- PreCise now has added the following icons for use on the full screen map:
  - Bobcat
  - Boring Machine
  - Payloader
  - Street Sweeper
  - Snow Plow
  - Truck
  - Car
  - Box Van
  - Excavator
  - Service Truck
  - Bulldozer
  - Haul Truck (Semi)
  - Fork Lift
  - Van
  - Bus
  - Tractor

#### New widget:

- PreCise has added the New Feature widget which is what you are using to view this material.

#### Microsoft Silverlight:

- Silverlight is a tool that boosts the performance and capabilities of the Virtual Earth mapping functions. Specific benefits for users included enhanced graphics, faster performance and a dynamic user interface. There are several features within this release made possible by Silverlight and many more to come.



- Users will have access to Silverlight based on their administrator giving permission to use Silverlight maps. Once this permission is given, the user will see new icons on the map that when clicked will load the Silverlight application and maps.

#### Fleet-wide Route Replay:

- PreCise customers have always appreciated the descriptive ways possible to see where an individual vehicle has traveled over a given period. With the Fleet-wide Route Replay feature, users can now replay an entire day for their whole fleet and see exactly where each vehicle traveled during the course of the day. Through color-coded lines and a rolling clock, dispatchers and operations managers will see when vehicles cross paths, how long vehicles stayed at certain locations and exactly how the day progressed. This can be a useful tool when reviewing the deployment of mobile resources for efficiency. This tool is made possible by Silverlight and is available to users if the administrator gives them permission.

#### Wake-up and Check Location Feature:

- Primarily designed for off-road equipment, this feature allows the administrator to set a regular interval where the device wakes-up and verifies it has not been moved. If it has been moved, the vehicle reports it has moved. Through the use of either geofences or other exception reporting, email alerts could then be sent notifying management that equipment has moved unexpectedly. This can be used either for theft alert or if equipment is being moved via a trailer unexpectedly.
- This feature is available on the configuration tab of every asset and can be set fleet-wide.

#### Material Usage Report Performance Boost

- During a winter storm event, literally hundreds of thousands of data-points are collected to determine the amount material, spreader distance and equipment data to assess exactly the operational cost of winter operations. Due to the sheer volume of data, reports can result in longer load times. With this release, PreCise has added some performance improvements that pre-processes as much of the report data as possible to make some noticeable improvements to the load times of the Material Usage Report.

#### Operators Added To Material Usage Report

- Through the use of the FORCE America SSC5100 or SSC6100, customers have the option of having the drivers login to the spreader controller using a driver-ID key. The SSC tracks which driver logged in on start-up and throughout a winter storm event. PreCise has now included this information within the Material Usage Report. This means that as supervisors are reviewing activity from a storm event, they can now get a breakdown not only the activity of individual trucks but also of the operators within the trucks.

#### Improved Email Alert Set-up



- Based on feedback from our customers, we've simplified the set-up of email alerts by pre-populating a pull-down list of all the existing email addresses associated with the user accounts in the system. This eliminates the need to manually type in a user's email address. And, it also allows you to enter multiple email addresses at the same time.

Exception emails for FORCE SSC5100 or SSC6100

- PreCise already provides a mechanism for alerting winter operations staff when equipment operates above prescribed levels of speed, idle and when the equipment's battery level is low or there is a power loss. This email alert system means less time fishing through the system for important data. Now, with this release, the staff can also be alerted of exceptional errors and events coming from the FORCE America SSC5100 or SSC6100. In fact, there are over 60 different events the administrator can choose to be alerted on related to the SSC5100 or SSC6100. As an example, the SSC5100 or SSC6100 alerts the operator when the material gets low. If the operator disregards this alert, the net result is the operator may be spreading from an empty truck wasting time and fuel. Operations staff could choose through simply checking a box to be alerted via email each time a low material alert is triggered so they could monitor if these situations occur.
- Other errors include errors such as stuck switches, shorts, over speed warnings and other hydraulic warnings.

### ***PreCise Warranty:***

Manufacturer warrants that on the Date of Purchase this Product will conform to Manufacturer's published specifications for the product, which are available from Manufacturer on request, and Manufacturer warrants that the product is free from defects in materials and workmanship. This Limited Warranty extends for thirty-six (36) months from the date of manufacture. Manufacturer will, at its option, repair or replace any product found by Manufacturer to be defective and subject to this Limited Warranty.

This Limited Warranty does not apply to parts or products that are misused; abused; modified; damaged by accident, fire or other hazard; improperly installed or operated; or not maintained in accordance with the maintenance procedures set forth in Manufacturer's Installation and Operating Instructions.

To obtain warranty service, you must ship the product(s) to the specified Manufacturer location within thirty (30) days from expiration of the warranty period. Contact customer service to obtain a RMA number and write the number on the shipping container. You must prepay shipping charges and use the original shipping container or equivalent. Return shipping charges





within the United States, Canada, and Puerto Rico, will be paid by Manufacturer. This Limited Warranty will apply only to a product purchased and located in the United States, Canada, or Puerto Rico.

*PreCise key value propositions:*

**KEY VALUE PROPOSITIONS**

- Direct product support via phone and email provided by highly experienced and knowledgeable support engineers out of Boise, Idaho in the great US of A!
  - o Tech Direct hotline
  - o Online issue submission
- PreCise provides a flexible product line to meet the needs of any of your unique fleets.
  - o 201/301/302/101 & wifi and/or cellular
- PreCise is designed and manufactured in the USA. We aren't buying foreign knock-offs and reselling them. We're employing US workers and building a rugged, time-tested solution specifically built for the municipal, service, utility, asphalt, concrete, heavy equipment and heavy equipment rental markets.
- PreCise is a Minnesota-based company. We are centrally located which allows us to meet the onsite visits our customers require. We employ over 100 people in Minnesota and Wisconsin alone. When our customers have a problem, where is the guy you will call? For FORCE America he is more than likely in the same state and the executive management team is located in MN.
- PreCise is financially sound. We are an employee owned company who has not done a layoff and has remained financially solid through the recession. FORCE America has grown through the rough economic times and remained a profitable entity.
- PreCise data is fully redundant with servers in Idaho and Minnesota. Our IT staff is in Minnesota.
- PreCise is proven regionally. Our references are solid. We have large installs like Washington State DOT, RDO, Duluth, and over 800 units in the counties of Wisconsin. We are a known quantity. Organizations spend a lot of money on GPS projects. They need a partner in this who is in it for the long term. These projects and references all represent long term investments by growing organizations.
- The solution itself has been refined over many years now specifically for municipal, service, utility, asphalt, concrete, heavy equipment and heavy equipment rental customers. We listen closely and are continually enhancing the solution to fit your needs. We have not only the PreCise division but the large presence of FORCE America sales and service who make a large part of our living within customers just like you. We are in their facilities each week. We aren't a company solely focused on GPS who will install these units and be gone. We are a service oriented company.



- We have built mechanisms into our solution to help our customers identify when there is a problem before it begins to cost a significant amount of data loss. Our healthcheck report is something we know of no other vendor doing. And we're continuing to enhance it.
- We recognize your needs will change. We've proven over time that as their needs evolve, so will our solutions.



*PreCise Route Completion:*

# Precise Route Completion Use-Case Specification

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## **Introduction**

### ***Document Purpose and Scope***

This specification defines how to use PreCise Route Completion

### ***Supporting References***

## **Use-Case Model**

### ***Description of the Model***

### ***Use-Case Model Diagram***

<Insert a link to the use-case model diagram>

## **Use-Case Flow of Events**

### ***Routes***

The system will provide the ability for users to add/edit/delete/maintain a list of Routes

### ***Pre-Conditions***

The user is assigned the “Route Maintenance” permission.

The user is logged in to the system and navigates to the “Routes” page

### ***Basic Flow***

#### **View a List of Routes**

- The system will present the user with the following:
  - A sort-able list of existing Routes



- For each Route in the list the system will display the following:
  - Route Name
    - The name of the Route
  - Total Distance
    - The total distance the Route contains (miles or kilometers)
  - Last Modified
    - The last date/time this Route was modified by a user.
  - Actions
    - Edit Route
    - Delete Route
- Action Buttons
  - Add Route
    - Loads a full-screen Map for the user to define a Route as a child window.
    - See 3.1.2.5

### **Edit Route**

- The system will present the user with the following:
  - Loads a full-screen map (see 3.1.2.5) that is pre-populated with the Route Segments that are defined for the given Route.

### **Delete Route**

- The system will present the user with the following:
  - A modal-dialog that asks the user if they are sure they wish to delete this Route.
  - Action Buttons
    - Cancel
      - Closes the modal-dialog.
    - Ok
      - Deletes the Route and associated data from the database.
      - Refreshes the Route List.



- Closes the modal-dialog.

## Draw a Route

- The system will present the user with the following:
  - A full page map.
  - Ability to add points to the map to define their Route.
    - User will add each point via left-clicking on the map.
    - Points will be connected in the order they are added by the user (i.e. point #2 will be connected to point #1 with a Route Segment).
    - Route Segments will only be visible between added points.
    - As each point is added to the map the system will calculate and display the total distance of the route.
    - Route lines between points will follow existing streets based on route data received from Microsoft Bing Maps.
    - Route points can be moved around the map to update the street path for associated Route Segments.
  - A Toolbox containing the following items:
    - 'Jump to Address' button
      - Button to zoom in to a particular address on the map
    - Undo button
      - Deletes the last point drawn on the map
    - List of Fleets
      - A list-box of current Fleets
      - Toggles the display of Assets belonging to a given Fleet onto the map based on their last known position.
      - Zero or more Fleets can be selected at any one time.
    - Existing Routes
      - A pop-up list of existing Routes with the following actions:
        - Add to map



- Adds the given Route (if not already added) to the map.
- Remove from map
  - Removes the given Route (if currently visible) from the map.
- Finished
  - Closes the pop-up.
- Preview
  - Disables edit functionality
  - Disables map functionality
  - Provides the user with the following action choices:
    - Edit
      - Re-enables map functionality
      - Re-enables edit functionality
    - Save
      - Saves Route information to the database.
- Restart
  - Discards existing user changes.
  - Basically starts the process over.

### **Jump to Address**

- The user clicks on the 'Jump to Address' button
  - The system will present the user with the following:
    - Address
      - Required data entry field.
    - 'Submit' button
      - Button to zoom the map to the provided address.
    - 'Cancel' Button
      - Button that returns the user to the 'Define Route' page without making any changes.



## Save Route

- The system will present the user with the following:
  - A modal-dialog that contains the following fields:
    - Route Name
      - The name of the Route.
    - Route Distance
      - The total distance of the route.
      - Will be populated with the distance calculated for the route, but can be modified.
  - Action Buttons
    - Cancel
      - Closes the modal-dialog.
      - User will be presented with the “Edit” mode
    - Save
      - Saves the user’s changes to the database.
      - Refreshes the Route List.
      - Closes the Define a Route window.

## Alternate Flows

### Fatal error on page

- The system will redirect the user to a Fatal Error page that will list support information as well as a basic description of the error that occurred.

## Post-Conditions

## Requirements

## Extension Points



## ***Reporting Based on Routes***

### **Pre-Conditions**

The user is assigned the “Route Completion” permission.

The user is logged in to the system and navigates to a report that utilizes pre-defined Routes

### **Basic Flow**

#### **Route Completion Report**

- Assets
  - A checkbox list of Assets that can be selected to run a report on.
  - Can select multiple Assets.
- Start Date/Time
  - The starting date/time of the report.
- End Date/Time
  - The ending date/time of the report.
- Action Buttons
  - Run Report
    - Submits all user choices to the server to generate a report.
- Report Results
  - A list of results based on the user selections.
  - For each Company Route defined, the following data is displayed
    - Route Name
      - The name of the Route
    - Total Distance
      - The total distance of the route (Miles, Kilometers)
    - Start Time
      - The last time that an asset started on the route.
    - Finish Time
      - The last time that an asset completed the route since the start time. Will display “----“ if the route has not been completed since the start time.
    - Total Distance Traveled
      - The total distance the Asset traveled inside the Route the last time it traveled the route.
    - Percent Distance Traveled
      - The calculated percentage of distance traveled vs. Total Distance.





- Route Completion Count
  - The total number of times the route was completed withing the specified date/time range.
- The system will display the Total Distance Traveled and Percent Distance Traveled for all routes.
- Action Buttons
  - Save to Excel
    - Exports the result set to an Excel file.

## **Alternate Flows**

### **Fatal error on page**

- The system will redirect the user to a Fatal Error page that will list support information as well as a basic description of the error that occurred.

### **Post-Conditions**

### **Requirements**

### **Extension Points**

### ***Route Mapping***

#### **Pre-Conditions**

The user is assigned the “Route Completion” permission.

The user is logged in to the system and navigates to the Route Completion Map from the Full-Screen Map.

#### **Basic Flow**

#### **Route Completion Map**

- The system will present the user with the following:
  - Fleet
    - A selectable list of fleets the current user has access to.
  - Assets
    - A checkbox list of Assets based on the selected fleets(s) that can be selected to display on the map.
    - The user can select all/multiple Assets.



- Routes
  - A checkbox list of pre-defined routes the current user has access to that can be selected to display on the map.
  - Can select all/multiple Routes
- Start Date/Time
  - The starting date/time of the report.
- End Date/Time
  - The ending date/time of the report.
- Action Buttons
  - Run Report
    - Submits all user choices to the server to generate a report.
- When the user clicks the 'Run Report' button the system will display a full-screen map.
  - The map will display the assigned icon for each selected asset at its current location.
  - The map will display all selected routes with completed route segments highlighted green and incomplete segments highlighted in red.
  - The map will updated every 10 seconds with the latest asset locations and route completion data.

## **Alternate Flows**

### **Fatal error on page**

- The system will redirect the user to a Fatal Error page that will list support information as well as a basic description of the error that occurred.



**CITY OF NOVI**

**SECOND GENERATION AVL  
SYSTEMS EQUIPMENT & SERVICES**

**FEE PROPOSAL FORM (2 PAGES)  
(To Be Included in a Separate Sealed Envelope)**

We the undersigned propose to furnish to the City of Novi, according to the specification, terms, conditions and instructions attached hereto and made a part thereof:

**PART I: Equipment Acquisition & Installation – Application Service Hosting Configuration**

1. GPS/Data Modems (per unit for 20 - 40 total units)  
Pricing for units without ground speed controller connectivity      \$ **350.00** (IX-101)  
Pricing for units with ground speed controller connectivity      \$ **650.00** (IX-301)
  
2. On-Site Equipment Installation & Training (4 hours)\*      \$    **0.00** (Included)  
\* Novi staff will learn to install three units with a certified trainer.
  
3. Application Service Hosting Configuration Fees (if applicable)\*    \$    **0.00** (Included)  
\* Include any additional costs to load City GIS map data layers into ESRI compatible format.

**PART II – Monthly Application Service Hosting Fees (Price Per GPS/Data Modem Unit)**

Council award date – June 30, 2012** (first year contract)	\$129.99 per year/ (40 assets x 129.99 = \$5199.60)
July 1, 2012 – June 30, 2013** (provided contract is renewed)	\$129.99 per year/ (40 assets x 129.99 = \$5199.60)
July 1, 2013 – June 30, 2014** (provided contract is renewed)	\$129.99 per year/ (40 assets x 129.99 = \$5199.60)

\*\* The City will agree to an initial contract with options to renew for one-year terms during years 2 and 3.

**PART III – Monthly Wireless Data Plan Fees** (Price Per Unit / Monthly Data Transfer Limit)

Price Per Unit (Unlimited Data)	<b>\$27.99 asset/month</b>
Price Per Unit ( ____ GB / month)***	<b>\$10.99 per/MB</b>
Price Per Unit (____GB / month)***	<b>\$10.99 per/MB</b>

\*\*\* Specify the options which are appropriate or discuss data pooling options and address how data consumption is accurately estimated and measured. If data usage is incorporated into the monthly application service hosting fee please note accordingly.

**Options and explanation:**

Monthly application fee above is actually quoted per year. If the City wants to pay PreCise MRM monthly for the application fees, that cost would be \$10.84/month. The annual fees (Network Access Fee) include data hosting (3) years, satellite imagery, product assurance, network access, maintenance and support, access to all enhancements/upgrades.

The monthly or yearly (determined on how City wants to pay) application fee is separate from the data fees.

Data pooling is a great option for those customers that want to actively manage their fees. Data pooling would allow the City to change at any time the data transmission rates for their fleets. For example the City may want to have their snow plow fleet transmit data every few minutes during Winter storm events but during non-storm events simply have the assets within the snow plow fleet report in on power up/power down. This would allow the City to reduce their annual fees. If the City determines they want their fleet to report in every few seconds year round, a unlimited data plan would be recommended to the City by PreCise. Please note the City can have different plans for different fleets. For example the City might have a data pooling plan for the snow plow fleet (which would allow the City to manage the data transmission intervals) and a unlimited data plan for their police fleet.

**Additional cost structure to accommodate additional GIS data layers, if applicable, as addressed in Section B #13:**

PreCise will be supporting the City of Novi in regards to incorporating their GIS data layers into the PreCise application. This will be done at no additional cost to the City of Novi.

**We acknowledge receipt of the following Addendums:** there were NOT any addendums for this RFP.

**(please indicate numbers)**

Comments/Exceptions: PreCise MRM looks forward to doing business with the City of Novi.

**Company (Legal Registration):** PreCise MRM (a wholly owned subsidiary of FORCE America.

Address: 1311 East Franklin Road

City: Meridian      State: Idaho      Zip: 83642

Telephone: 208-323-7141      Fax: 952-252-3731

Agent's Name (printed): Bob Lowe

Agent's Signature:

A handwritten signature in black ink, appearing to read "Bob Lowe", written over a horizontal line.

Agent's Title:

PreCise MRM Sales Manager

E-mail:

[blowe@precisemrm.com](mailto:blowe@precisemrm.com)

Date:

7/18/11

## SCHEDULE B

### A. Insurance Requirements

The vendor will not commence work, nor will the City of Novi sign a contract, until vendor has obtained and delivered to the City of Novi the certificate of insurance required under this contract. All insurance carriers must be acceptable to the City of Novi and licensed and admitted to do business in the State of Michigan.

A new certificate of insurance will be provided to the City of Novi at the time of policy renewal any time during the entire length of the contract.

1. Coverage: The Vendor shall maintain at its expense during the term of this Contract, the following insurance:
  - a. **Worker's Compensation** insurance with the Michigan statutory limits and Employer's Liability insurance with minimum limits of **\$100,000** (One Hundred Thousand Dollars) each accident.
  - b. **Commercial General Liability Insurance** – The Contractor shall procure and maintain during the life of this contract, Commercial General Liability Insurance, Personal Injury, Bodily Injury and Property Damage on an “Occurrence Basis” with limits of liability not less than **\$1,000,000** (One Million Dollars) per occurrence combined single limit.
  - c. **Automobile Liability** insurance covering all owned, hired and non-owned vehicles with Personal Protection insurance to comply with the provisions of the Michigan No Fault Insurance Law including Residual Liability insurance with minimum bodily injury limits of **\$1,000,000** (One Million Dollars) each person and **\$1,000,000** (One Million Dollars) each occurrence and minimum property damage limits of **\$1,000,000** (One Million Dollars) each occurrence.
2. Deductibles: The Vendor shall be responsible for payment of all deductibles contained in any insurance required hereunder.
3. Insured: All policies shall name the Vendor as the insured.
4. Cancellation Notice: All policies shall include the following language: “Should any of the above policies be cancelled before the expiration date thereof, the issuing insurer will mail 30 days written notice to the certificate holder named on this certificate”.
5. Additional Insured: All policies include the following language “The City of Novi, their officers, agents, employees and volunteers, all boards, commissions and/or authorities and board members, including employees and volunteers thereof are added as additional insured.” Certificates of Insurance evidencing such coverage shall be submitted to Sue Morianti, City of Novi, 45175 W. Ten Mile Rd., Novi, MI 48375 prior to commencement of performance under this Contract and at least 15 days prior to the expiration dates of expiring policies.

6. If any work is sublet in connection with this Contract, the Vendor shall require each subcontractor to effect and maintain at least the same types and limits of insurance as fixed for the Contractor.
7. The provisions requiring the Vendor to carry said insurance shall not be construed in any manner as waiving or restricting the liability of the Contractor under this contract.
8. The City of Novi has the authority to vary from the specified limits as deemed necessary.
9. If, during the term of this Contract, changed conditions or other pertinent factors should in the reasonable judgment of the City of Novi render inadequate insurance limits, the Vendor will furnish on demand such additional coverage as may reasonably be required under the circumstances. All such insurance shall be effected at the Vendor's expense, under valid and enforceable policies, issued by the insurers of recognized responsibility which are well-rated by national rating organizations and are acceptable to the City.
10. Hold harmless/Indemnity
  - a. The Vendor agrees to save harmless and defend the City of Novi against and from any or all liability, loss or damages (including without limitations, fees and expenses of attorneys, expert witnesses and other consultants) which the City of Novi may suffer as a result of claims, demands, costs, or judgments against it arising from , out of or in consequence of the performance of this agreement, excepting only such liability, loss or damage as shall have been occasioned by the sole negligence of the City of Novi, it's officers, agents, or employees.
  - b. The Vendor agrees that is it its responsibility and not the responsibility of the City of Novi to safeguard the property and materials used in performing this contract. Further, the Vendor agrees to hold the City of Novi harmless for any loss of such property and materials used pursuant to the Vendors performance under this contract.
  - c. The Vendor shall not discriminate against any employee, or applicant for employment who is qualified to perform the work required in the execution of this contract because of religion, race, color, national origin, age, sex, height, weight, handicap, ancestry, place of birth, sexual preference or marital status. The Vendor further covenants that it will comply with the Civil Rights Act of 1973, as amended; and the Michigan Civil Rights Act of 1976 (78. Stat. 252 and 1976 PA 453) and will require a similar covenant on the part of any consultant or subcontractor employed in the performance of this contract.