

# **SOUTH ALABAMA PURCHASING ASSOCIATION**

110 Beauregard Street  
Mobile, Alabama 36602

***Lead agency for this bid:***



## **PUBLIC NOTICE**

### **INVITATION TO BID**

Sealed bids will be received, opened, and read aloud in public session for the purchase of a **TRAFFIC SIGNAL PREEMPTION SYSTEM** for the **SOUTH ALABAMA PURCHASING ASSOCIATION (SAPA)** at **10:00 A.M. on Thursday, June 29, 2017**, at the City Hall Municipal Complex located at 4099 Orange Beach Blvd., Highway 161, Orange Beach, Alabama.

Bid specifications may be obtained from Orange Beach City Hall, 4099 Orange Beach Blvd., Orange Beach, Alabama, Monday through Friday from 8:00 a.m. until 5:00 p.m., or downloaded from the City's website at [www.cityoforangebeach.com](http://www.cityoforangebeach.com).

Sealed bids may be mailed or delivered directly to the City of Orange Beach prior to the public opening. All sealed bids must be clearly and legibly marked "SEALED BID," the bidder's name, the name of the bid, and the opening date and time. Contact Renee Eberly at (251) 981-6806 or [reberly@cityoforangebeach.com](mailto:reberly@cityoforangebeach.com) with any questions.

Sealed bids must be mailed to the following address:

City of Orange Beach  
Attention: City Clerk  
P.O. Box 458  
Orange Beach, Alabama 36561

Or hand delivered to:

City of Orange Beach  
Attention: City Clerk  
4099 Orange Beach Blvd.  
Orange Beach, Alabama 36561

Be advised that overnight delivery by express or courier to Orange Beach is not guaranteed. Faxed bids will not be accepted.

The lowest responsive, responsible bid will be accepted with key consideration based upon best value and benefit to the public. The South Alabama Purchasing Association reserves the right to reject any and all bids, to waive any irregularity in the bids received, and to accept or reject any items of the bid for the benefit of the public. No conditional bids will be accepted. No bid may be withdrawn for a period of thirty (30) days after the scheduled closing date and time for the receipt of bids.

SOUTH ALABAMA PURCHASING ASSOCIATION (SAPA)

# **SOUTH ALABAMA PURCHASING ASSOCIATION**

110 Beauregard Street  
Mobile, Alabama 36602

## **INVITATION TO BID Requisition No. 2017-0629**

INVITATION TO BID DATE: **June 9, 2017**

BID TITLE: **Traffic Signal Preemption System**

PLACE OF BID OPENING: **City of Orange Beach, City Hall, 4099 Orange Beach Blvd.**

BIDS MUST BE RECEIVED BEFORE: **June 29, 2017 at 10:00 A.M. (Central)**

BIDS WILL BE PUBLICLY OPENED: **June 29, 2017 at 10:00 A.M. (Central)**

Sealed bids will be received by the South Alabama Purchasing Association (SAPA) at the Office of the City Clerk located at Orange Beach City Hall until the above time and date at which time they will be opened as soon thereafter as practicable.

NOTE: For this bid to be considered responsive, all information in this section should be supplied, as appropriate, or the entire bid may be disqualified. Bid response must be in ink or typed with original signature. No errors will be corrected after bids are opened. No prices shall include State or Federal Exercise Taxes; tax exemption certificates furnished upon request. SAPA reserves the right to accept or reject all bids or any portion thereof. SAPA reserves the right to require a bid bond, in which case specific information shall be provided the bid documents.

### **ALL BIDS MUST BE RETURNED AS FOLLOWS:**

All bidders must use the bid form provided in the bid documents and show on the envelope "SEALED BID," the bid title, the bidder's name, and the opening date and time. Each bid must be in a separate envelope.

U.S. Postal Service  
City of Orange Beach  
Attention: City Clerk  
P.O. Box 458  
Orange Beach, Alabama 36561

Courier (UPS, FedEx, etc.)  
City of Orange Beach  
Attention: City Clerk  
4099 Orange Beach Blvd.  
Orange Beach, Alabama 36561

Contact Renee Eberly, City Clerk/Procurement Officer at 251-981-6806/reberly@cityoforangebeach.com for questions concerning the bid documents or general bid procedures.

# SOUTH ALABAMA PURCHASING ASSOCIATION

110 Beauregard Street  
Mobile, Alabama 36602

## BID FORM – TRAFFIC SIGNAL PREEMPTION SYSTEM

These specifications shall be construed as minimum. Should manufacturer's current published data or specifications exceed these, such standards shall be considered minimum and furnished. All integral parts not specifically mentioned in the scope of these specifications that are necessary to provide a complete working unit shall be furnished. All pricing shall include shipping and handling (FOB Delivery) to the SAPA Member.

<u>Item</u>	<u>Description</u>	<u>Unit Price</u>
A	Equipment Required per Intersection	\$ _____
B	Annual Cost for Connectivity and Service for Intersection Device	\$ _____/device/year
C	Equipment Required per Vehicle	\$ _____
D	Annual Cost for Connectivity and Service for Vehicle Device	\$ _____/device/year

<b>BID TOTAL</b> (A+B+C+D, for evaluation purposes only)	<b>\$</b> _____
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**Days to Deliver after Receipt of Purchase Order:** \_\_\_\_\_

**Warranty Description:** \_\_\_\_\_

Warranties shall be provided in writing and shall specify any and all exclusions, including parts and labor. If such warranties are provided at additional cost, the incremental cost must be so specified. The procedure necessary to notify such warranty must be specified. Any additional charges relating to the utilization of the warranty provided must be specified.

**Documentation:**

Specifications for any proposed equipment substitutions must be attached to the bid.

# SOUTH ALABAMA PURCHASING ASSOCIATION

110 Beauregard Street  
Mobile, Alabama 36602

The bidder acknowledges receipt of the following addenda covering revisions to the bid documents, and states that the costs, if any, of such revisions have been included in the base bid and other prices quoted herein:

Addendum No. \_\_\_\_\_ Dated: \_\_\_\_\_

Addendum No. \_\_\_\_\_ Dated: \_\_\_\_\_

Note: If no addenda have been received, write in "none."

_____ Company Name	_____ Company Representative
_____ Street Address	_____ Title
_____ City, State, Zip	_____ Phone
_____ Federal Employer ID No. (if no FEIN, enter SSN)	_____ Email

I/we agree to furnish at the prices shown and guarantee that each offered will meet or exceed all specifications, terms and conditions, and requirements listed. This is the total price and includes all delivery or freight charges to the SAPA Member. Any attachment hereto is made and becomes a part of this inquiry and must be signed by the bidder. I herein affirm that I have not been in any agreement or collusion among bidders in restraint of competition to bid at a fixed price or to refrain from bidding otherwise.

SWORN TO AND SUBSCRIBED	_____ Company Name	_____ Authorized Signature (INK)
BEFORE ME THIS DAY OF	_____ Mail Address	_____ Typed Authorized Name
_____, 20____.	_____ City, State, Zip	_____ Title
_____ Notary Public	_____ Phone Including Area Code	_____ Fax Number
_____ Commission Expires		

# BID SPECIFICATIONS

## A. Scope of Work

The successful bidder shall provide GPS-based Traffic Signal Preempt and Remote Monitoring Systems to South Alabama Purchasing Association (hereafter referred to as "SAPA") members. Purchase orders will be placed individually by SAPA members who choose to utilize this contract.

## B. Contract Term

The term of this unit price contract shall be one (1) year from the date of award with the option to renew for two (2) additional years.

## C. Use of Brand Names in Bid

The use of any brand name and/or product numbers is to establish industry standards and minimum specifications. Other brands may be considered for review if detailed product information and specifications outlining any and all differences are included in the bid.

## D. Minimum Requirements

All items shall be new and unused. All equipment shall meet or exceed current industry standards.

### Overview

Each participating SAPA Member Agency wishes to procure a citywide Traffic Signal Preempt and Remote Monitoring System. The intention of the GPS-based Traffic Signal Preempt and Remote Monitoring System is to allow the following key requirements to be provided:

1. The system shall track emergency response vehicles and provide preemption and priority requests to the traffic signal controller.
2. The system shall be capable of configuring preemption and priority request for more than 120 seconds before the vehicle approaches the intersection.
3. A web-based configuration utility shall provide an easy way of preemption and priority zones.
4. The system shall use a GPS position of the vehicle to determine when to send a preemption request to the traffic signal controller.
5. The system shall have redundant communication from the vehicles to the traffic intersections using both 900 MHz radio and cellular communications.
6. The system shall display of the real time fault status of the Agency traffic intersections.
7. The system shall issue real time alerts via SMS and email to the appropriate response personnel immediately when a fault occurs, so that the Agency no longer has to rely on notification by the public.
8. The system shall operate with cloud hosted software with user web based access, and with no software or IT infrastructure for the Agency to install or maintain, with the exception of if the Agency desires to host the software on its own servers. The client user interface will be browser based, with no software to be installed on client computers except for a standard browser.
9. System monitoring shall assure that the preemption devices, both in the vehicles and at the intersections, are functioning correctly and that the system will be available when required.
10. Field devices must be capable of receiving wireless software and security updates. The wireless updates allow new features to be installed remotely without having to physically go to the field devices.
11. The hardware shall be under warranty for as long as the devices have a connectivity and support license and are connected to the remote monitoring system.

### Traffic Signal Preempt and Remote Monitoring System Client User Interface Requirements

The system software user interface shall provide, at a minimum, features to meet the following requirements:

#### E-1. General

1. The user interface shall be web-based and shall be able to be viewed using a browser. Internet Explorer, Chrome, and Firefox browsers shall be supported, as well as Safari on Apple devices. Systems that use remote desktop or similar to view a thick-client user interface will not be acceptable.

2. The system shall require a user name and password to log on.
3. The system shall be mobile-friendly and operators shall be able to pen the system on a mobile phone or tablet to access the data and controls. The web-based system shall be viewable on any modern web browser on a mobile phone or tablet and be automatically sized for the screen.

#### E-2. Map Display

1. The system shall include a scrollable, zoomable map display, with intersections and emergency vehicles shown as representative icons on the map. The map shall include the ability to see the intersections using Google Streetview.
2. The alarm status of the intersection shall be clearly indicated on the icon on the map so that the user can see at a glance which intersections are in alarm.
3. The map display shall also include a list of intersections, with the number and priority of alarms indicated on the list. Intersections in high priority alarm shall be moved to the top of the list, followed by medium priority, low priority, and then finally by intersections not in alarm.
4. The map icons shall change to be able to clearly indicate if an intersection is offline.
5. Clicking on the icon on the map shall expose a box with the current parameters of the intersection shown.
6. The default map display position and zoom shall be configurable by the user so that the user's view will default to show the intersections that the user is responsible for managing.
7. The map view shall have the ability to show Google traffic overlays on the map.
8. The map view shall be able to show vehicle trails when the vehicles have been in an emergency or not active.

#### E-3. Regional Intersection and Vehicle Grouping

1. The system shall provide for intersections and vehicles to be logically grouped into regional groupings (for example, North, South, Fire 1, Fire 2).
2. The system user login should be configurable so that if a maintenance or operational person is responsible for, say, the north intersections and emergency vehicles, then when that user logs on, the user has visibility of only the intersections that belong to the group that the user is authorized to view.

#### E-4. Intersection Detail Display

1. It shall be possible to drill down, either from the map icon or from the list, to a device level detail for the intersection, which at a minimum shall display the following parameters:
  - a. The alarm status, with priority indicated, and a text description of the alarm, if an alarm is present for this device.
  - b. The time since the last communication with the device.
  - c. The following parameters, to include real time now values, minimum for the day values, maximum for the day values, and average for the day values:
    - i. The AC mains voltage (value)
    - ii. The battery back-up voltage (value)
    - iii. The cabinet temperature (value)
    - iv. The cabinet humidity (value)
    - v. The presence of AC power (ok or fail)
    - vi. The flashing status of the intersection (ok or flashing)
    - vii. Stop time status (ok or stop time active)
    - viii. The cabinet door status (open or closed)
    - ix. The intersection fan status (fan on or fan off)
  - d. It shall be possible to view each of the value parameters in graph form over the recent two week period. Real time graphs shall include:
    - i. The AC mains voltage
    - ii. The battery back-up voltage
    - iii. The cabinet temperature

iv. The cabinet humidity

E-5. Diagnostics and Log Display

1. From the device level detail, it shall be possible to further drill down to view the raw data, the error logs, and the communication logs to allow a technician to fault-find problems in the system.
2. It shall be possible to filter the logs by device, by device type, and/or by group as well as between dates.
3. It shall be possible to print these selected logs to a local printer or a PDF file.
4. It shall be possible to export these logs to Excel on the local computer for further analysis.

E-6. Alarms

1. The system shall have a comprehensive alarm generation capability.
2. It shall be possible to configure alarms to be generated on any parameter being out of tolerance including analog values, digital values, and enumerated values.
3. Alarms shall be configurable to be low, high, or critical priority.
4. The alarm priority shall be displayed through the system on all displays using color codes such as red-critical, yellow-high, and amber-low to indicate the priority of the alarm.
5. The current active alarms shall be accessible for view via an expandable window to see which alarms are active and when the alarm occurred. The highest priority alarms shall rise to the top of the list.

E-7. Alerts

1. The system shall have comprehensive alerting capability, to enable the response personnel to be notified when an abnormal situation has occurred.
2. It shall be possible to configure alerts to one or more personnel for each alarm. This will cause, as selected, a text and/or email to be sent to the person when an alarm occurs.
3. The alert shall be configurable to optionally send via text and/or email when an alarm clears.
4. The intention is that the system provides the alerts to the user in real time. The text and/or email shall be issued within 30 seconds of the occurrence of the event which results in an alert being issued.

E-8. Reports

1. It shall be possible to view reports on the device screen, in the system browser, and, if desired, to print the report to a printer or a PDF file.
2. Alarm Activity Report
  - a. The system shall include a report which shows the alarms activity for a period.
  - b. The Alarm Report shall indicate the time the alarm occurred, by color or priority of the alarm, whether it is still active, and, if not active, then the time that the alarm cleared.
  - c. It shall be possible to filter the alarms by device type, by device, by device group, and by date and time in order to view, for example, the alarm activity for a particular intersection or controller type over a three month period.
3. User Activity Report
  - a. The system shall include a report which shows user activity for a given period, to enable an audit report of a user's response to an alarm.
  - b. The report shall show which screens the user viewed, when the screen was viewed, and the IP address of the device from which the screen was viewed.
4. Preempt System Operational Availability Report
  - a. The system shall include a report which shows the overall operational availability of the Agency's intersections. The intersection is available when not in an alarm condition such as flashing or power fail.
  - b. The availability report shall be detailed for each intersection for the period (for example, one month) and summarized by group/region, and for each controller type, shall result in a KPI (Key Performance Indicator) for each region, for each controller type, and an overall system KPI for the intersection system availability.

- c. Using this report, it shall be possible to determine if system availability is trending up or down for the overall intersection system, by region and/or by controller type. It shall also be possible to compare the system availability by region, and also to compare system availability by controller type.
- 5. Fault Occurrence by Controller Type Report
  - a. The system shall include a report which shows the number and type of faults that have occurred in each intersection, which can be summarized by region and/or by controller type.
  - b. This report will allow the user to compare the frequency of faults by region and/or by controller type.
- 6. Response Time for Fault Repair Report
  - a. The system shall include a report which shows the response time to clear faults for a given time frame (for example, one month).
  - b. This report will allow the user to determine the number of faults, and the total and average time to clear the fault.
  - c. This report will allow the response times by region to be compared.
- 7. Vehicle Trip Report
  - a. The system shall include a report which shows all the emergency vehicle trips and includes start time, end time, total travel time, average speed, and destination point.
  - b. This report shall provide the user with the ability to select a start date and end date.
  - c. This report will show response times to emergency call outs and how quickly the vehicle arrived.

#### E-9. Vehicle Trails

- 1. The map display shall show live information of the preempt status of the emergency vehicles in the system.
- 2. The user shall have the option to select which class of emergency vehicles to display on the map via the information overlay menu.
- 3. The information overlay will provide the option to select the number of hours of live data the operator would like to see, with a range from one hour to 24 hours. The user shall have the option to fade out older data.
- 4. The information overlay shall provide the ability for the user to display the device names on the map for easy identification of both intersections and emergency vehicles.
- 5. Operators will have the ability to display legends that explain emergency vehicle trail color codes, including idle, preempt service requested, left turn indicator, and right turn indicator, so that it is easy to see the behavior of the emergency vehicle.

#### E-10. Vehicle Playback

- 1. The system shall include the ability to playback the activity of the emergency vehicles, so that retrospective fault finding of the preempt system can be carried out.
- 2. Playback shall support the same controls for panning and zooming the map, as well as using the information overlay to select the type of data being displayed on the playback menu.
- 3. Users shall have the additional functionality of controlling which devices are displayed by selecting the checkboxes on a selection panel on the map.
- 4. The playback screen should provide the user with the option to select a date range via a drop down date selector menu. The menu will provide a full calendar and the option to select the exact start time and end time for the playback.
- 5. The bottom section of the map screen shall display the timestamp based on the location within playback.
- 6. The user shall have controls that allow one click access to start from the beginning, rewind, play, fast-forward, and scroll to end.
- 7. The user shall have the option to use a slider that is operated by click and drag to the time of interest in the playback.



### E-11. Remote Power Cycle

1. The system shall include the ability to remotely cycle power to the outlets on the back of the field device. In this way it shall be possible to cycle power to ancillary connected equipment such as network switches, cameras, and similar equipment.
2. The user interface shall display the status of the outlets and provide confirmation via an associated input whether the sockets are energized or not.

### **Preempt System Functional Requirements**

The Traffic Signal Preempt System shall conform to the following requirements:

### E-12. Overall Requirements

1. When an emergency vehicle requests preempt service, the system shall reliably request a preempt from the traffic controller by activating a digital output connected to the preempt inputs on the traffic controller when the circumstance of the emergency vehicle (for example, location, speed, estimated time of arrival) comply with the rules established by the configuration of the intersection.
2. The preempt activation shall be managed by implementing the following rules/parameters:
  - a. The approach area of a rule shall be bounded by a left and right direction, and a minimum and maximum distance. A preempt shall only be activated if the vehicle is within this boundary and approaching the intersection.
  - b. If enabled, the preempt shall be activated when the estimated time of arrival (ETA) for the vehicle is less than the set parameter.
  - c. If enabled, the preempt shall be activated when the vehicle is less than the minimum distance to the intersection.
  - d. If enabled, the preempt shall only be activated if the vehicle has the left turn signal, or right turn signal, active as configured.
  - e. If enabled, the preempt shall be activated early if congestion is detected in front of the emergency vehicle so that the early activation of the preempt can help clear the congested traffic out from in front of the emergency vehicle. Congestion shall be detected by the emergency vehicle traveling below a threshold speed.
  - f. Each rule shall cause a particular preempt to be activated. Multiple rules shall be able to be associated with a particular preempt.
  - g. If configured, a preempt rule shall stay active until the vehicle is detected at a safe distance away from the intersection and moving away from the intersection.
  - h. The preempt shall be released once all active rules that triggered the preempt have become deactivated.
3. The preempt system shall support a minimum of eight (8) preempt or pulsed low priority outputs. All inputs shall be optically isolated.
4. The status of preempts shall be indicated by LEDs on the front of the in-cabinet preempt unit.
5. It shall be possible to test each of the preempts by pressing a test button with an associated selector switch which will cause each preempt to be triggered. This will allow for the wiring and operation of the signal controller to be tested without physically driving a vehicle down each approach.
6. The system shall be able to support service calls on a first-come-first-serve basis.

### E-13. Communication Requirements

1. The system shall support both radio and cellular communications.
2. The radio system shall operate on unlicensed bands, and shall not require user certification.
3. The radio shall have a range in excess of 2,500 feet.
4. The system latency shall support real time communications on a second-by-second basis from the vehicle to the intersection.
5. Data paths shall be established, if configured, to operate via radio and via cell network. In this way, the preemption request packets from the vehicle will potentially arrive at the intersection from both

communication paths. The intersection shall process the packet that arrives first, and ignore the packet that arrives subsequently.

6. The system shall continue to operate correctly in the event of radio or cellular failure.

#### E-14. Central Configuration Requirements

1. It shall be possible to configure the parameters required to implement the desired rules on a browser client connected to the central computer.
2. Setting of left and right directional limits and distances shall be accomplished by clicking and dragging of lines on a map of the roads.
3. Other rule parameters shall be entered on the user interface and saved and/or sent to the intersection as required.
4. Systems that require the installation of software onto client computers will not be acceptable.

#### E-15. Local Configuration Requirements

1. It shall be possible to edit the preemption rules at the roadside by connection a laptop computer to the controller with an Ethernet cable.
2. The editing of the rules shall be accomplished by using a local website hosted by the preempt controller using a browser.
3. Systems that require the user to load custom configuration software on the laptop for the purpose of editing the preemption rules will not be acceptable.

#### E-16. Intersection Device Requirements

It is a requirement that the system operate independently of the brand/type of intersection controller deployed at the intersection. The system contractor shall install a small field device into each intersection cabinet which connects to the terminal strip in the cabinet via a wiring harness that enables the system to function independently of controller operation. The system field device shall conform to the following requirements:

1. The system field device shall function correctly between -34°C and +74°C.
2. The system field device shall be sized suitably for placement in a traffic cabinet.
3. The system field device shall be provided with appropriately rated connections that allow the device to be exchanged by unplugging connectors without tools.
4. The system field device shall incorporate an integrated GPS and cell modem.
5. The configuration of the system field device shall be accomplished by accessing the internal web server with a browser. It shall be possible to configure the device without any special software.
6. The system field device shall be powered via a standard 120V input power.
7. The system field device shall allow for the routing of the controller configuration packets to and from the controller, either by Ethernet or serial communications, for each type of controller utilized by the Agency. In this way, it shall be possible to configure the controller and to utilize the controller specific software to interrogate the controller. The system shall provide the communication method which allows this to be accomplished.
8. The system field device shall utilize field initiated communications. This allows for a low cost cellular data plan to be used with infrequent polling. However, when an abnormal event occurs and is detected by the system field device, then the device will immediately initiate the transfer of a data packet to the system to enable real-time alerting of response personnel to take place.
9. The system field device shall, within the size limitations above, include a battery and battery charging/monitoring circuit to allow the system to function correctly even when all power to the intersection has failed. The battery shall continue to power the device for a minimum of five hours after all power has failed to the intersection.
10. The system field device shall incorporate an integrated GPS which will allow the device to geolocate itself on the map without configuration.

11. The system field device shall operate without requiring a static IP address. The only configuration required at the device shall be to enter the URL of where the system central software is hosted.
12. In the event that the cell service is interrupted or is not available, the system field device shall store any events that occur in internal memory and forward these events automatically to the system when the cell service is restored. In this way, a complete record of events at the device can be maintained even if cell service is interrupted for a period. The system will store a minimum of 5,000 events.
13. The system field device shall utilize HTTP and HTTPS protocols and XML data structures for communications with the system. In this way, the data will be open for future expansion and competition. The use of secret proprietary protocols is not permitted.
14. The system field device shall be a 1U 19" rack mount device with all connections on the rear and LED indicators, power switches, and selector switches on the front.
15. The system field device shall include Ethernet communications with an RJ45 connector.
16. The system field device shall not use self-tapping screws.
17. The system field device shall have powder coated aluminum enclosures.
18. The system field device shall include weather proof antennas if installed externally.

#### E-17. In-Vehicle Device Requirements

The Traffic Preempt System Vehicle Device shall conform to the following requirements:

1. The system vehicle device shall function correctly between -34°C and +74°C.
2. The system vehicle device shall be capable of being mounted inside a vehicle either under a seat or strapped under the dashboard. The unit shall include all wiring needed to connect the system to the vehicle.
3. The system vehicle device shall interface to a non-invasive road sensor for environmental measurements via either RS485 or Bluetooth connection.
4. The system vehicle device shall be provided with appropriately rated and keyed connectors that allow the device to be exchanged by unplugging connectors without tools.
5. The system vehicle device shall incorporate an integrated GPS and cell modem.
6. The configuration of the system vehicle device shall be accomplished by accessing the internal web server with a browser. It shall be possible to configure the device without any special software.
7. The system vehicle device shall utilize field-initiated communications. This allows for low cost cellular data plans to be used with infrequency polling. However, when an abnormal event or significant change in road conditions occurs, then the device will immediately initiate the transfer of a data packet to the system to enable real-time road condition information to be displayed on the device.
8. The system vehicle device shall incorporate an integrated GPS which will allow the device to geolocate itself on the map without configuration.
9. The system vehicle device shall operate without requiring a static IP address. The only configuration required at the device shall be to enter the URL of where the system central software is hosted.
10. In the event that the cell service is interrupted or is not available, the system vehicle device shall store any events that occur in internal memory and forward these events automatically to the system when the cell service is restored. In this way, a complete record of events at the device can be maintained even if cell service is interrupted for a period.
11. The system vehicle device shall utilize HTTP and HTTPS protocols and XML data structures for communications with the system. In this way, the data will be open for future expansion and competition. The use of secret proprietary protocols is not permitted.
12. The system vehicle device shall support Ethernet, cellular, and license-free radio communication.
13. The system vehicle device shall have the option of being supplied with an enhanced GPS, which provides GPS coordinates based on dead-reckoning even when the GPS signal is shielded from the vehicle, such as under an overpass, in a tunnel, or in between tall buildings. The dead-reckoning system shall include accelerometers, gyroscopes, and a distance measure that will provide accuracy of better than 20 feet in 1,000 feet when there is no information from the GPS satellites. The enhanced GPS shall

have the option of being connected to the vehicle OBD-II port, the J1939 ECU port for heavy vehicles, or a wheel tick sensor as the project requires. The enhanced GPS shall self-calibrate the wheel tick input.

#### E-18. Installation

All installation work in the Agency's traffic cabinets shall be carried out by personnel certified by the Agency for work in the Agency's traffic cabinets.

#### E-19. Hosting, Connectivity, and Service

The system contractor, as part of the bid pricing, shall include annual pricing for connectivity and service. Connectivity and service shall be available at this pricing for a minimum of five years.

The Connectivity and Service Agreement shall include at a minimum:

1. Cellular connectivity
2. Upgrades for the cellular modem if the technology is not supported by cellular networks
3. Telephone and email support
4. No cellular overage charges
5. Extended warranty on the hardware for the period of the Connectivity and Service Agreement
6. Over-the-air software updates
7. Over-the-air security updates
8. Future connected vehicles service

#### E-20. Commissioning, Training, and Documentation

The system contractor shall configure the system and reports, and train the Agency in the correct operation of the system to enable the Agency to utilize the system for the objectives outlined above.

#### E-21. Extensibility

The system shall be designed to be extensible to cover the monitoring, maintenance, and operations of additional ITS systems such as:

1. School beacons
2. Speed feedback radars
3. Dynamic message signs
4. Mobile systems such as maintenance vehicles and remote weather tracking vehicles
5. Traffic detection systems
6. ITS cabinet monitoring systems
7. Remote Weather Information Systems (RWIS)
8. Over-height vehicle detection and warning systems
9. High mast lighting control systems

#### **E. Bid Pricing**

Unit pricing shall contain the cost of all items including handling and shipping charges. SAPA members are tax exempt. Prices shall be firm against any increase for one (1) year from the date of award. Prior to the commencement of subsequent renewal periods, it shall be the Vendor's responsibility to send written notification thirty (30) days in advance of any requested price changes. SAPA reserves the right to grant or deny the request for a price increase.

#### **F. Quantities**

The items listed on the bid form will be furnished at such time and in such quantities as they are required. SAPA members reserve the right to purchase any varying amounts with no change in unit prices.

#### **G. Business License Requirements**

It is the successful bidder's responsibility to ensure proper business licensing is obtained when required by participating SAPA members.

# GENERAL INSTRUCTIONS FOR BIDDERS

## 1.0 THE SOUTH ALABAMA PURCHASING ASSOCIATION (SAPA)

The South Alabama Purchasing Association, hereinafter referred to as SAPA, was established to consolidate the procurement of equipment and supplies in order to obtain volume discounts for all members of SAPA.

The host agency for SAPA is:

South Alabama Regional Planning Commission, 110 Beaugard Street, Mobile, AL 36633

1.1 The award of all bids will be made by the Chairperson and other SAPA Members in accordance to the provisions set forth in the Intergovernmental Agreement. Each member of SAPA will be responsible for the issuing of its own Purchase Orders, delivery instructions, invoicing, insurance requirements, and the issue of its own tax exemption documentation as required by the vendor.

1.2 The current members of SAPA in good standing are as follows:

- Baldwin County Board of Education
- Baldwin County Commission
- City of Bay Minette
- City of Daphne
- City of Fairhope
- City of Foley
- City of Gulf Shores
- City of Orange Beach
- City of Robertsdale
- City of Saraland
- City of Satsuma
- Daphne Utility Board
- Mobile Area Water and Sewer System
- Mobile County Commission
- North Baldwin Utilities
- South Alabama Regional Planning Commission

1.3 It is anticipated that other agencies will be joining within Mobile, Baldwin, and Escambia Counties, Alabama. It is understood that vendors must agree to provide any additional SAPA member the same pricing as quoted in any existing SAPA contract.

## 2.0 INTRODUCTION

All bidders will be bound to the general conditions and requirements set forth in these general instructions and such instructions shall form an integral part of each purchase contract awarded by SAPA. Applicability of general conditions as stated below shall be determined by SAPA. All bids must be submitted on and in accordance with the instructions provided by SAPA.

## 3.0 BID DOCUMENTS

A complete set of Bid Documents is included herein. The date, time, and place of a bid opening will be given in the Invitation to bidders. Copies of the complete set of Bid Documents may be inspected and/or obtained at the following location:

Orange Beach City Hall  
4099 Orange Beach Boulevard  
Orange Beach, AL 36561

Or downloaded from the City's website:  
[www.cityoforangebeach.com](http://www.cityoforangebeach.com), see "Bids"

All bid documents will also be posted on [www.sarpc.org](http://www.sarpc.org) under the SAPA section entitled "Bids."

#### **4.0 EXAMINATION OF DOCUMENTS**

- 4.1 Carefully examine the Bid Documents, Specifications, and Drawings.
- 4.2 Bids shall include all costs required to provide the requested materials.
- 4.3 No charge will be allowed for federal, state, or municipal sales and excise taxes since SAPA members are exempt from such taxes.

#### **5.0 INTERPRETATIONS AND ADDENDA**

- 5.1 Should a bidder find discrepancies, ambiguities, or omissions in the Specifications, or should he/she be in doubt as to their meaning, he/she shall immediately notify the SAPA Chairperson (Renee Eberly at 251-981-6806 or [reberly@cityoforangebeach.com](mailto:reberly@cityoforangebeach.com)).
- 5.2 The SAPA Chairperson will issue Addenda to clarify discrepancies, ambiguities, or omissions in the Specifications.
- 5.3 Addenda will be posted on the City's website at: [www.cityoforangebeach.com](http://www.cityoforangebeach.com)
- 5.4 All bid documents will also be posted on [www.sarpc.org](http://www.sarpc.org) under the SAPA section entitled "Bids."
- 5.5 Addenda shall become part of the bid and all bidders must acknowledge receipt of Addenda on their Bid Form or their bid will be rejected. Bidders shall be bound by all Addenda.
- 5.6 SAPA is not responsible for any oral instructions.

#### **6.0 PREPARATION OF BID**

- 6.1 The bid must be submitted on the Bid Form furnished. All information required by the Bid Documents must be given to constitute a complete bid.
- 6.2 The Bidder must print, in figures, without interlineations, alterations, or erasures, a Unit Price. The Bidder shall then print the total sum on the line designated as "Bid Total." The City will check the total sum printed by the Bidder, and, in case of error or discrepancy, the total sum printed by the Bidder listed in the bid shall prevail and this shall be the Contract Bid Price.
- 6.3 Prices and all information must be legible. Illegible or vague bids may be rejected.
- 6.4 All signatures must be written. Facsimile, printed, or typewritten signatures are not acceptable.
- 6.5 Under penalty of perjury, the Bidder certifies by signature on the Bid Form that:
  - The bid has been arrived at by the Bidder independently and has been submitted without collusion with any other vendor of materials, supplies, equipment, or services for the type described in the Invitation to Bid; and
  - The contents of the bid have not been communicated by the Bidder; nor to his/her best knowledge and belief by any of his/her employees or agents to any person not an employee or agent of the Bidder or its surety on any bond furnished herewith prior to the official opening of the bid.

#### **7.0 DELIVERY AND SUBMISSION OF BID**

- 7.1 Each bid shall be placed, together with the Bid Bond, if applicable, in a sealed envelope. Bid envelopes must be clearly marked "SEALED BID," the Bidder's name, the title of the bid, and the opening date and time.
- 7.2 All bids received after the time stated in the Invitation to Bid will not be considered and will be returned unopened to the Bidder. The Bidder assumes risk of delay in the mail. Whether sent by

mail or by means of personal delivery, the bidder assumes responsibility for having bids deposited on time at the place specified.

- 7.3 The submission of a bid will be construed to mean that the Bidder is fully informed as to the extent and character of the supplies, materials, or equipment required, and as a representation that the bidder can furnish the supplies, materials, or equipment satisfactorily in complete compliance with the specifications.

## **8.0 MODIFICATIONS AND WITHDRAWALS OF BIDS**

- 8.1 No alteration, erasure, or addition is to be made in the typewritten or printed matter. Deviations from the specifications must be set forth in the space provided in bid or by attached sheets for this purpose.
- 8.2 Bids may not be modified after submittal.
- 8.3 Bidder may withdraw his/her bid, either personally or by written request, at any time prior to the scheduled bid opening time.
- 8.4 No bidder may withdraw his/her bid for a period of thirty (30) days after the bid opening.

## **9.0 RIGHT TO REJECT BID**

Bids may be rejected if they contain any omissions, alterations of form, additions not called for, conditional bids, alternate bids unless requested by SAPA, incomplete bids, erasures, or irregularities of any kind. Bids in which the Unit or Lump Sum prices are obviously unbalanced may be rejected. SAPA reserves the right to reject any and all bids for any reason and to waive any informality or irregularity in the bids received.

## **10.0 BASIS OF AWARD**

All purchases which are based on competitive Invitations to Bids are awarded to the lowest, responsive bidder subject to SAPA's right to reject any or all bids and to waive informality and irregularity in bids and bidding. In addition to price, consideration will be given to the following items when determining the lowest, responsive bidder:

- The best interests of SAPA members;
- The quality and performance of the goods or services to be supplied;
- Conformity to specifications;
- Delivery time; and
- Other unique requirements outlined in the bid request.

## **11.0 CONTRACT**

- 11.1 The Bid Form shall constitute a contract with the successful bidder and bind the successful bidder to furnish and deliver at the prices and in accordance with the conditions of the bid.
- 11.2 The placing in the mail a notice of award or purchase order to a successful bidder, to the address given in the bid, will be considered sufficient notice of acceptance of bid.
- 11.3 If the successful bidder fails to deliver within the time specified or within reasonable times as interpreted by the SAPA Member, or fails to make replacement of rejected articles when so requested immediately or as directed by the SAPA Member, the SAPA Member may purchase from other sources to take the place of the item rejected or not delivered. SAPA Members reserve the right to authorize immediate purchase from other sources against rejections on any contract when necessary.
- 11.4 A contract may be canceled for non-performance.

- 11.5 No items are to be shipped or delivered until receipt of an official purchase order from a SAPA member.
- 11.6 It is mutually understood and agreed that the successful bidder shall not assign, transfer, convey, sublet, or otherwise dispose of the contract of bidders right, title or interest therein, or bidders power to execute such contract to any other person, company, or corporation without the previous written consent of the City of Orange Beach.

## **12.0 GUARANTEES BY THE SUCCESSFUL BIDDER**

The successful bidder guarantees:

- Products against defective material or workmanship and to repair or replace any damages or marring in transit;
- To furnish adequate protection from damage for all work and to repair damages of any kind for which the bidder or bidder's workers are responsible to the building, grounds, or equipment;
- To carry adequate insurance to protect the SAPA Member from loss of property and/or life in cases of accident, fire, or theft;
- That all deliveries will be equal to bid samples.



## **SOUTH ALABAMA PURCHASING ASSOCIATION**

110 Beauregard Street  
Mobile, Alabama 36602

### **REQUIREMENTS FOR CONTRACTS AND PURCHASES**

Effective January 1, 2012 under the "Beason-Hammon Alabama Taxpayer and Citizen Protection Act," Act No. 2011-535, Alabama Code (1975) Section 31-13-1, Et Seq., before entering into a contract with a government agency to:

1. Perform a service;
2. Perform work;
3. Provide a product;
4. Accept a grant; and/or
5. Accept an initiative

The State of Alabama requires the business entity to sign a notarized affidavit agreeing:

1. Not to knowingly employ, hire for employment, or continue to employ, any unauthorized aliens in the State of Alabama;
2. To enroll in the E-Verify Program, to verify the immigration status of every employee required to be re-verified through that system and to provide documentation of its enrollment; and
3. To require its subcontractors to comply with the above requirements.

Before any contract can be let, purchase can be made, or payment can be issued by a SAPA Member after January 1, 2012, the Affidavit on the reverse side of this document must be completed, notarized, and returned to our offices.

Note: Proof of enrollment in the E-Verify Program must accompany the Affidavit, unless you do not have or hire any employees.

Questions about this process may be directed to Renee Eberly, SAPA Chairperson, at (251) 981-6806 or via e-mail at [reberly@cityoforangebeach.com](mailto:reberly@cityoforangebeach.com).

**COMPLETED AFFIDAVIT MUST BE RETURNED IN SEALED BID.**

**SOUTH ALABAMA PURCHASING ASSOCIATION**

110 Beauregard Street  
Mobile, Alabama 36602

**AFFIDAVIT OF CONTRACTOR OR DIRECT VENDOR**

State of \_\_\_\_\_

County of \_\_\_\_\_

Before me, a notary public, personally appeared \_\_\_\_\_ (print name) who, being duly sworn, says as follows:

As a condition for the award of any contract, grant, or incentive by the South Alabama Purchasing Association (SAPA), I hereby attest that in my capacity as \_\_\_\_\_ (state position) for \_\_\_\_\_ (state business entity/employer/contractor name) that said business entity/employer/contractor shall not knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama.

I further attest that said business entity/employer/contractor is enrolled in the E-Verify program.

**(Attach documentation establishing that business entity/employer/contractor is enrolled in the E-Verify Program.)**

\_\_\_\_\_  
Signature of Affiant

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

I certify that the affiant is known (or made known) to me to be the identical party he or she claims to be.

\_\_\_\_\_  
Signature and Seal of Notary Public

My Commission Expires: \_\_\_\_\_