Request for Quote – Formal

Bid# 3140002598

FEDERAL SIGNAL LIGHT BAR VALOR - LOW PROFILE NON-LINEAR LIGHT BARS

Purpose: The purpose of this Invitation is to purchase three hundred fifty (350) new Federal Signal Light bar Valor – Low Profile Non-Linear Light bars.

Submission of Quotes: Bid(s) will be quoted until, Tuesday**, March 16, 2021, at 10:00 A.M.**, Central Standard Time, in the Procurement Department, 4th Floor, Room 402, 1900 East Woodrow Wilson Avenue, Jackson, MS 39216, or by electronic bid submission. Submission will be evaluated. Vendors who meet all requirements outlined in this invitation will be eligible to participate in the Reverse Auction process.

Instructions to Bidders: All vendors must be registered with the State of Mississippi. If not registered, please go to https://www.dfa.ms.gov/dfa-offices/mmrs/mississippi-suppliers-vendors/ to register your company and receive a supplier number. Once on the website, click on "Supplier (Vendor) Self-Service". Then click on "State of Mississippi Supplier Registration". If you need instructions on how to register, click on the supplier training tab.

Suppliers who have completed the registration process and have received a User ID and Password must attach a W-9 to their supplier account in the Mississippi's Accountability System for Government Information and Collaboration (MAGIC). Supplier may also submit a valid W-9 to the following:

MS Department of Finance and Administration
P.O. Box 1060
Jackson, MS 39215-1060

Or

MS Department of Finance and Administration
501 North West Street, Suite 701-B
Jackson, MS 39215-1060

Phone: 601-359-3538
Fax: 601-359-5525
Email: ofmmagic@dfa.ms.gov

Quotes must be submitted and received on or before, Tuesday, March 16, 2021, 10:00 a.m., Local Time. Regardless of the reason, bid(s) received after this date and time will not be accepted. One original copy of quote must be submitted in an envelope or package clearly marked with the information listed below to the address listed below:

***Bid #* 3140002598**

Federal Signal Light bar Valor – Low Profile Non-Linear Light bars

MS Department of Public Safety
Procurement Department
4th Floor, Room 402
1900 East Woodrow Wilson Avenue
Jackson, MS 39216

Quotes not received in compliance with this requirement will be rejected. Facsimile or e-mail bids will not be accepted.

Vendors are also encouraged but not required to submit one electronic copy through the Mississippi's Accountability System for Government Information and Collaboration at https://portal.magic.ms.gov/irj/portal which must include all information requested in this invitation. No costs or expenses associated with providing this information in the required format shall be charged to the MS Department of Public Safety. All required documents must be submitted. It is the responsibility of the vendor to verify that all of the requirements for submitting the bid have been fulfilled.

Online learning instructions on how to submit your quote electronically, can be obtained by logging onto the Mississippi Management and Reporting System website at https://www.dfa.ms.gov/dfa-offices/mmrs/mississippi-suppliers-vendors/, next, click on "Supplier Training" and last, select the LOG820 Supplier Self-Service Course link and then "Launch Course."

If you are having problems submitting your quote electronically, please contact the MAGIC Support Center at 601-359-1343 or email at mash@dfa.state.ms.us.

If you have any questions regarding this invitation, please contact Betsy Toles by phone at (601) 987-1467 or Sonya Toaster at (601) 987-1305. You may email Betsy Toles at btoles@dps.ms.gov or Sonya Toaster at stoaster@dps.ms.gov. The MS Department of Public Safety (MDPS) reserves the right to reject any and/or all bids and to waive all informalities.

If using a commercial delivery company, which requires that you use their shipping package, your quote should be sealed separately and labeled as stated above within the commercial packaging to prevent premature opening. Parties submitting a quote assume all risks of delivery. Facsimile or e-mail quotes will not be accepted.

Bidder Responsibility: Bidders must, upon request of the MS Department of Public Safety, (MDPS), provide satisfactory evidence of ability to furnish products or services in accordance with the terms and conditions of the specifications. The MS Department of Public Safety reserves the right to make the final determination as to the bidder's ability.

Invitation to Bid: All information requested on the Invitation Form must be completed.

Quantity: Purchase of three hundred fifty (350) new Federal Signal Light bar Valor – Low Profile Non-Linear Light bars

Confidential Information: Confidential information shall mean all materials, documents, and data furnished to the successful bidder. The successful bidder shall provide to the MS Department of Public Safety a letter that the successful bidder agrees to protect all confidential information. Any liability resulting from the wrongful disclosure of confidential information on the part of the successful bidder shall rest with the successful bidder.

Prequalification of Suppliers ***Vendor should include specifications, literature, samples, etc. with their quotes. Upon completion of the quote evaluation process, the MS Department of Public Safety will email the vendor or vendors who have submitted quotes and meet all requirements outlined in the RFQF to participate in the Reverse Auction process.***

Award Criteria: The award will be made via the reverse auction process to the best bid or bids. Factors to be considered in determining the best bid include.

Bottom Line Figure
Conformity with specifications
Responsibility of the bidder

Notes: It is the intent of MS Department of Public Safety to obtain a product that will adequately meet the needs of the agency while promoting the greatest extent of completion that is practicable. It is the responsibility of the prospective bidder to review the entire Invitation packet and to notify the Procurement Department of the MS Department of Public Safety if the Instructions and Special Conditions, or the General Conditions are formulated in a manner which would unnecessarily restrict competition. Any protest or questions concerning the specifications or bidding procedures must be received in writing in the MS Department of Public Safety, Procurement Office, not less than 72 hours prior to the time and date set for the bid opening.

Reverse Auction: All qualified bidders are required to participate in the reverse auction process. Bidders must ensure technical requirements are met.

Acceptable Internet Browser(s)

- Microsoft Internet Explorer (IE) version 11
- Firefox versions 51 or lower
- Google Chrome versions 49 and above (will need to download and install a Chrome Extension called "IE Tab Extension")

Unsupported Internet Browser(s)
- Microsoft Internet Explorer (IE) version 10 or below
- Microsoft Edge
- Google Chrome
- Safari
- Firefox version 52 and above

Note: Pop-up blocker must be turned off

Participation in Person by Supplier: If a supplier needs assistance chooses to participate in the Auction in person, they must so indicate in their response to the initial RFQF so that the Procurement department can have adequate personnel at the event to perform surrogate bidding. Suppliers participating in person must submit each bid during the Auction in writing, signed by someone authorized to bind the Supplier to the bid.

Invitation for Bid Issue Date:	February 24, 2021
First Publication Second Publication	February 24, 2021 March 3, 2021
Bidder submission deadline	March 16, 2021
Opening Date and Time	March 16, 2021 at 10:00 A.M.
Qualify Bids	March 23, 2021
Email Qualified Bidders	March 31, 2021
Reverse Auction	April 7, 2021 between 10:00 A.M and 10:20 AM
Bids Evaluations	April 14, 2021
Intent to Award	April 21, 2021
Submission date to obtain approval in MAGIC(Pending cost goes over $500,000 then approval required by Public Procurement Review Board - PPRB estimated meeting on June 2, 2021)	June 2, 2021

Bid File No: 3140002598
Bid Opening Time: 10:00 A.M.

MISSISSIPPI DEPARTMENT OF PUBLIC SAFETY

(Bid Form Page 1of 2)

INVITATION TO BID

Federal Signal Light bar Valor –
Low Profile Non-Linear Light bars
Commodity or Equipment

Bid File No: 21-05 (3140002598)

Bid Opening Time: 10:00 a.m.

Tuesday, March 16, 2020
Bid Opening Date

Federal Signal Light bar Valor – Low Profile Non-Linear Light bars

Description	EA
43.7 Inch Model	
51.3 Inch Model	

Bidder Information (Please complete ALL Sections Below)

BIDDER INFORMATION (Please Complete ALL Sections Below)

Company Name: _____

Company Address: _____

_____

Telephone Number: _____ **Fax Number** _____

Email: _____

Company Representative Name (Print): _____

Company Representative Signature: _____ Date: _____
(Authorized Company Representative Signatures)

SPECIFICATIONS

Federal Signal Light bar Valor – Low Profile Non-Linear Light bars

All bids must meet or exceed the minimum specifications as set forth in the Invitation for Bid.

VALOR - LOW PROFILE NON-LINEAR LIGHT BAR

1. SCOPE

This specification describes the minimum requirements for an emergency vehicle Visual Light System (VLS). System shall be designed to reduce risks to emergency personnel and the public. VLS shall include a vehicle roof mounted warning light and all necessary mounting and installation hardware.

2. PRIMARY WARNING

2.1 The roof mounted warning light shall be designed in a non-linear shape, so as to maximize emergency light warning at the 45-90 degree angles found at intersections. The non-linear design ultimately shall provide 360-degree lighting, eliminating weak spots and providing off-axis warning around the light bar. The light bar shall be a single-level LED light bar with ROC™ (Reliable On-Board Circuitry) and Solaris® LED technologies. Any light bar of linear design, using double or triple level light sources are not acceptable.

2.2 Reliable Onboard Circuitry (ROC™) technologies shall be utilized. ROC internal microprocessor shall supply three priority operational modes and a library of at least 27 flash patterns. To increase the safety of officers, pedestrians, and motorists, the light bar shall have standard front and rear cutoff, dimming, and intersection warning. ROC circuitry shall be field replaceable and shall meet the approval of the following specifications: CISPR 25 and SAE J845. No exceptions will be allowed.

2.3 Solaris® LED technologies shall be used as lighting source. Solaris LED modules shall use offset complex reflector surfaces for accurate beam-shaping and the highest optical efficiency. Bright white LED lighting source shall be standard for takedown and alley lights. Multicolor heads shall also be standard, eliminating the loss of primary warning colors in takedown, alley, directional warning positions. The non-linear bar design shall be utilized to provide maximum intersection warning, the most dangerous situation in moving traffic.

2.4 VLS shall include a total of twenty-eight (28) Solaris modules. Driver side front shall consist of eight Solaris modules, each containing twelve red and white diodes. The passenger side front shall consist of eight Solaris modules, each containing twelve blue and white diodes. The rear shall contain ten Solaris modules: four each containing twelve red and amber diodes, four each containing blue and amber diodes, two each containing six all red diodes and two each containing six all blue diodes. Total diode count of the VLS, shall be three hundred twelve (312) diodes.

2.5 Front/Rear Cutoff or Enable function: The light bar shall be able to provide a front/rear cutoff and front/rear enable function. Front/rear cutoff is controlled by applying 12 VDC to the supplied controlled wires. Front/rear enable activates the LED modules when +Bat is applied to their control wires. This function allows the light bar to be custom programmed to meet a wide range of departmental needs and installed light controls.

2.6 VLS shall be able to operate in the low power mode if desired. The light bar shall be capable of dimming the main bar LEDs approximately 50% to prevent blinding the drivers of approaching vehicles. The low power function shall only operate in Mode 1 or Mode 2 levels only. It is disabled when the light bar is turned off or switched to another flash pattern, including Mode 3 or the intersection mode level. Light bars that dim in Level 3 or during the pursuit mode shall not be accepted, no exceptions.

2.7 Intersection flash mode of operation: The VLS shall provide a high activity pattern that attracts attention to the vehicle as it approaches an intersection. Intersection operation shall be able to be controlled by three selected options including Power On-Off function, TAPII (push-on/push-off) by using a momentary contact switch or horn ring button or 8-second timer activation.

3. SECONDARY WARNING

(*Both models listed, use dimensions for desired model*)

3.1 The following secondary light functions shall be available.

a. Flashing - various numbers of Solaris modules may flash in a sequence determined by the selected pattern.

b. Directional - provides a sequential flash pattern for protection of the vehicle operator and the public.

c. Takedown lights – (*Both models listed, use dimensions for desired model*)

43.7-inch model:

One pair of Solaris modules shall face forward at each end of the light bar. Both modules shall be capable of steady on and/or a flashing mode. Each takedown light module shall utilize six high output white LEDs with narrow spot beam reflectors. This will ensure proper officer/user safety by projecting the brightest and most direct focused white light source available. A flashing feature is included for takedown light pairs.

51.3-inch model:

Two pair of Solaris modules shall face forward at each end of the light bar. Both modules shall be capable of steady on and/or a flashing mode. Each takedown light module shall utilize six high output white LEDs with narrow spot beam reflectors. This will ensure proper officer/user safety by projecting the brightest and most direct focused white light source available. A flashing feature is included for takedown light pairs.

d. Alley lights – (*Both models listed, use dimensions for desired model*)

43.7-inch model:

Seven (7) pair of Solaris modules shall face sideways. Light bar will consist of seven (7) modules on left side of light bar and seven (7) modules on right side of light bar. Both pair of seven (7) modules shall be capable of steady on and/or a flashing mode. Each alley light module shall utilize six high output white

LEDs diodes with narrow spot beam reflectors. Total count of high output white LED diodes for Left Alley Light will be forty-two (42). Total count of high output white LED diodes for Right Alley Light will be forty-two (42). This will ensure proper officer/user safety by projecting the brightest and most direct focused white light source available. A flashing feature is included for alley light pairs.

51.3-inch model:

Eight pair of Solaris modules shall face sideways. Light bar will consist of eight (8) modules on left side of light bar and eight (8) modules on right side of light bar. Both eight (8) pair of modules shall be capable of steady on and/or a flashing mode. Each alley light module shall utilize six high output white LEDs diodes with narrow spot beam reflectors. Total count of high output white LED diodes for Left Alley Light will be forty-eight (48). Total count of high output white LED diodes for Right Alley Light will be forty-eight (48). This will ensure proper officer/user safety by projecting the brightest and most direct focused white light source available. A flashing feature is included for alley light pairs.

e. Flood – (*Both models listed, use dimensions for desired model*)

43.7-inch model:

- Left Flood – upon activation, all seven driver side Solaris modules shall illuminate steady-on. A total of forty-eight (42) white high output LED's shall illuminate a 90° area at the driver side front and side perimeter of the emergency vehicle.

- Right Flood – upon activation, all seven passenger side Solaris modules shall illuminate steady-on. A total of forty-eight (42) white high output LED's shall illuminate a 90° area at the passenger side front and side perimeter of the emergency vehicle.

- Full Flood - upon activation, all fourteen (14) forward and side facing Solaris modules shall illuminate steady-on. A total of eighty-four (84) white high output LED's shall illuminate a 180° area at the front and side perimeter of the emergency vehicle.

51.3-inch model:

- Left Flood – upon activation, all eight driver side Solaris modules shall illuminate steady-on. A total of forty-eight (48) white high output LED's shall illuminate a 90° area at the driver side front and side perimeter of the emergency vehicle.

- Right Flood – upon activation, all eight passenger side Solaris modules shall illuminate steady-on. A total of forty-eight (48) white high output LED's shall illuminate a 90° area at the passenger side front and side perimeter of the emergency vehicle.

- Full Flood - upon activation, all sixteen (16) forward and side facing Solaris modules shall illuminate steady-on. A total of ninety-six (96) white high output

LED's shall illuminate a 180° area at the front and side perimeter of the emergency vehicle.

4. SIGNALMASTER

4.1 The VLS shall include a LED rear directional light assembly that provides additional warning capability. The directional light shall have pre-programmed light patterns that provide supplemental warning for hazardous situations.

4.2 When the light bar is operating in any of the three priority flashing modes, all Signal Master modules shall emulate the selected flash patterns. When the operator activates the Signal Master, the directional warning patterns shall override any other activity in that portion of the light bar. Light bars that are not capable of this feature shall not be accepted.

4.3 Directional light shall consist of eight Solaris reflector assemblies mounted horizontally. Each assembly shall meet SAE J595 specifications.

4.4 Directional light functions:

a). Sweep right - lights shall individually activate sequentially in a sweeping motion to the right, to direct oncoming traffic to the right of the operator's vehicle.

b). Sweep left - lights shall individually activate sequentially in a sweeping motion to the left, to direct oncoming traffic to the left of the operator's vehicle.

c). Center out - lights shall activate in a sweeping motion beginning with the two innermost lights, and sweeping to the left and right simultaneously, to direct oncoming traffic to either side of the emergency vehicle.

d). Alternate warning – four progressively brighter flash patterns shall be available to warn oncoming traffic.

5. SERIAL INTERFACE

5.1 A CAT5 communications cable shall be the only connection made to light bar in addition to power and ground. All flash patterns shall be controlled through the light bar's CAT5 communication cable. The cable should connect to the Serial Interface Module allowing control via switch box. CAT5 communication cable may also be capable of connection to a Federal Signal Six-Button Serial Controller, Three-Button Serial Controller, or the Smart Siren Series Platinum System.

5.2 The light bar must be capable of being removed from the vehicle without disassembly of the vehicle interior components for ease of service or repair. The light bar should have a waterproof (IP67) external connector system for power and communication to allow removal of the light bar from the vehicle without opening the light bar. It should be protected against reverse polarity damage. The light bar shall be capable of being installed in any vehicle with a 12-volt NEGATIVE ground electrical system.

6. HOUSING

6.1 The solid aluminum extrusions shall be of a 1/8" nominal thickness design to provide strength and durability without excessive weight. The one-piece molded polycarbonate base shall be attached to the extrusions and the one-piece aluminum base plate forming a rigid base assembly. The base assembly shall incorporate carriage bolts in the extrusions' integrated mounting channels for attaching the mounting feet and the dome, which provides a well-secured mounting platform.

6.2 Both the light bar base and dome shall be one-piece molded polycarbonate for durability and strength. The dome shall be secured to the base assembly by means of barrel nuts fastened onto carriage bolts that ride in the extrusion's integrated mounting channel. Barrel nuts will incorporate O-rings, and base a multi-lip seal for a weatherproof seal. The dome shall be protected with galvanized steel cover plate, powder coated, to protect the light bar components from unforeseen impacts. The dome color shall be clear.

6.3 The light bar must be capable of being removed from the vehicle without disassembly of the vehicle interior components for ease of service or repair. The light bar should have a waterproof (IP67) external connector system for power and communication to allow removal of the light bar from the vehicle without opening the light bar.

7. MOUNTING BRACKETS

7.1 A hook-on mounting bracket with stainless steel hardware must be included. For hook-on mounts, a vehicle specific hook kit shall be included.

7.2 The mounting feet are supplied attached to the light bar. Adjustable brackets are also provided in the hardware kit to accommodate various roof slopes. Adjustable brackets shall include a positive stop screw to prevent slippage.

8. ELECTRICAL

7.1 Light bar hookup shall require only power, ground, and a snap-in CAT5 communication cable to enter vehicle to minimize the diameter of holes made in the vehicle roof top.

7.2 The light bar shall be capable of being installed in any vehicle with a 12-volt negative ground electrical system, and shall be protected against reverse polarity damage.

7.3 The LED Solaris module system shall incorporate a unique suppression circuit design that greatly minimizes RFI noise (Radio Frequency Interference) associated with LED technology. RFI can greatly reduce public safety two-way radio reception sensitivity and interfere with vehicular laptop computer performance operation. The light bar must meet the requirements of Test Specification 11452-2 and J1113-21 for Radiated Immunity and Test Specification CISPR 25 for Radiated Emissions.

7.2 Total current requirements (rated in amperes) at 12.8 VDC shall not exceed:
(*Both models listed, use specifications for desired model*)

43.7-inch model:
12.0 A

51.3-inch model:
14.0 A

*Amperage for a typically loaded light bar with all lights flashing at 50 percent duty cycle

8. DIMENSIONS

8.1 The non-linear light bar shall have maximum dimensions as follows:
(*Both models listed, use dimensions for desired model*)

Dimensions for 43.7-inch model:

Length:	43.7 in (111.0 cm)
Height:	1.96 in (5.0 cm)
Width:	19.8 in (50.4 cm)
Weight:	39.3 lbs. (17.8 kg)

Dimensions for 51.3-inch model:

Length:	51.3 in (130.3 cm)
Height:	1.96 in (5.0 cm)
Width:	19.8 in (50.4 cm)
Weight:	43.2 lbs. (19.6 kg)

9. WARRANTY

9.1 The warranty period shall be six years' parts replacement and six-year labor coverage. LED components shall be covered by six years' parts replacement and six-year labor coverage.

9.2 There should be one free set of new replacement Lenses for the VLS after Three years of use.

10. PRODUCT REFERENCE

10.1 A complete system shall include the light bar, a vehicle specific hook kit, a 2 Channel Programmable switch panel/siren controlling device and speaker along with a OBDII interface. Programmable controlling device must be plug and play with the bar light.

DynaMax/ES100C Siren Speaker

1. SCOPE

This specification details a 100W speaker that is capable of reproducing voice and siren sounds

from siren/public address amplifiers found in emergency and public safety vehicles.

2. CONSTRUCTION

The speaker housing shall be manufactured from 30% glass-filled PET composite plastic. Physical dimensions not to exceed 5.5” in height, 5.9” in width, 2.5” in depth.

The speaker shall weigh no more than 5 pounds.

The speaker housing shall be constructed of polyethylene terephthalate (P.E.T.).

The speaker shall use a neodymium speaker driver.

The speaker shall use ferrofluid to assist in cooling.

The speaker shall have a variety of vehicle specific mounting bracket options for the customer to select from.

The speaker shall comply with SAE J1849; CCR Title 13; Class “A” and UL 94HB.

3. WARRANTY

The warranty period shall be two years.

PATHFINDER™ SIREN

1. GENERAL

1.1 The PathFinder is a full featured, 12/24 VDC, programmable, dual-tone 100/200 W electronic siren and light control system. The PathFinder siren uses class D amplifier technology to provide two independent 100 W channels of audio, for a total of 200 W, without the need for a large and heavy transformer. The system shall consist of a one- piece integrated control head and siren amplifier utilizing Federal Signal’s Convergence Network.

2. SIREN AMPLIFIER

2.1 PathFinder siren shall be (case dimensions) height 2.5 inches, width 6.0 inches, length 8.4 inches, and net weight 3.9 pounds.

2.2 Amplifier shall consist of an easily accessible external volume adjustment for radio rebroadcast and public address which includes visual confirmation that power is being supplied to the unit. A hardwired noise cancelling microphone shall be provided and exit at the front of the controller.

2.3 Twelve (12) programmable solid-state auxiliary relay outputs shall be provided for non- serial controlled Light bars, perimeter lights, and accessories. One-10 A high/low, five-10 A active high solid-state relays and six-5 A high relays shall correspond to each auxiliary output. Each relay shall be internally protected.

2.4 PathFinder shall provide (7) programmable input circuits for: Horn-Ring Transfer (TAPII, Timer, or Hands Free), Park, Ignition, and four (4) general purpose inputs, i.e. trunk/door release, gun lock, intrusion alarms and monitoring K9 temperature systems. The polarity of each input shall be programmable, except for Ignition.

2.5 PathFinder amplifier shall consist of two “plug-n-play” serial ports to be used for Federal Signal’s Convergence network products, i.e. Federal Signal light bar, ILS, or CN SignalMaster.

2.6 The PathFinder amplifier shall provide easy access to all auxiliary input and relay output connections, power and ground connections, two Convergence Network ports, USB programming connection, and OBDII cable connections.

2.7 A security gun timer is also provided to minimize the possibility of unauthorized shotgun release.

2.8 The PathFinder siren shall produce three default siren tones: wail, yelp, and priority siren tones, as well as Air Horn. Additional tones shall be programmable. Siren tones shall be compliant with standards SAE J1849 JUL89. Additional features shall include horn ring transfer, public address, and radio rebroadcast.

2.9 The PathFinder siren shall be capable of driving one or two, 11-ohm impedance, 100- watt speakers.

2.10 Operating temperature range is -40 degrees to +80 degrees Celsius (all relays at 50 percent power).

2.11 PathFinder has a frequency range of 182 to 1600 Hz and an audio response range of 300 Hz to 3,000 Hz ± 3 dB.

3. CONTROLLER FUNTIONS AND INDICATIONS

3.1 The PathFinder shall control warning lights, siren functions, radio, SignalMaster arrow directional light patterns, ILS systems, and auxiliary lights.

3.2 The control head shall consist of a four-position progressive slide switch, a seven- position rotary switch, a volume control knob and nine auxiliary push button switches.

3.3 The control head shall have the capability of interchangeable custom legends for designating any of the nine switch functions. A sheet of applicable function legends is supplied.

3.4 The control head includes a visual reference emulating selected patterns of the SignalMaster arrow directional operations: left, right, center-out, and rear warn patterns.

3.5 The control head can provide an audible signal when an auxiliary or slide switch position is activated. Notification beep shall be factory set at ten second intervals for any active function. An LED glows over

the position in which the slide switch is placed. Control head can be programmed to decrease the levels of brightness of any of the nine push button switches.

3.6 The keypad shall be capable of dual color backlighting available in red or blue and shall be capable of dimming. Pressed buttons turn bright to indicate that the function they control is active.

3.7 A hardwired noise cancelling microphone shall be provided and exit at the front of the control head.

3.8 Siren speaker status indicator is programmable and shall be visible on the control head. When speaker one or speaker two is enabled, a LED indicator light shall be on.

4. SIGNALMASTER ARROW DIRECTIONAL LIGHT

4.1 The PathFinder siren and light controller can operate a six or eight lamp SignalMaster arrow directional light. Any push button (programmable) shall control all arrow functions, LRCO (left/right/center-out) as a step-through push button.

4.2 SignalMaster directional patterns, when engaged shall be displayed on the face of the controller.

5. SIREN OPERATIONS

5.1 A seven position rotary selector switch shall be provided and control the siren, and radio rebroadcast functions.

5.2 PathFinder default siren tones shall include Wail, Yelp, Priority, Manual/Peak-and-Hold, Hi-Lo, Power Call, and Air Horn. Unitrol™ branded siren tones shall also be available and include Wail, Yelp, Futura, Hi-Lo, Ultra Hi-Lo, Alarm, Air Horn, and Hetro.

5.3 The rotary selector switch functions shall include the following:

5.31 RADIO: Incoming radio messages are amplified by the siren and rebroadcast over the speaker(s).

5.32 MANUAL: Allows siren operation via the Air Horn or Manual push button switches or through the vehicle horn ring if the horn ring transfer (HRT) function is enabled.

5.33 WAIL: Produces a continuous ‘wailing’ sound.

5.34 YELP: Produces a continuous and rapid ‘warbled’ tone.

5.35 HF: Hands Free operation via the vehicle horn (horn ring transfer). First press will activate the first programmed siren tone. Each subsequent horn press will switch the siren to the next programmed tone. A double tap horn press will de-activate the siren tones.

5.36 TONE 1: Priority (default setting) siren produces a continuous and rapid ‘warbled’ tone. Tone 1 shall be programmable.

5.37 TONE 2: Dual tone factory default setting shall include channel #1 as wail and channel #2 as yelp. Tone 2 shall be programmable.

5.4 Unitrol™ siren tones will include:

5.41 WAIL: The siren shall automatically rise and fall between 500 and 1650 Hz at 11 cycles per minute.

5.42 YELP: The siren shall automatically rise and fall between 500 and 1650 Hz at 250 cycles per minute.

5.43 FUTURA: The siren shall have fundamental frequencies sweeping between 750 Hz and 1.5 kHz at 761 cycles per minute.

5.44 HI-LO: two HI-LO sounds shall be provided. Both shall have fundamental alternating frequencies of 1350 and 600 Hz operating automatically 60 cycles per minute. One shall provide a higher third frequency alternately operating with each high and low frequency.

5.45 AIR HORN: Siren shall emit a simulated Air Horn sound with a 1000 Hz mid-frequency.

5.46 HETRO: The siren shall have fundamental frequencies of 1350 and 60 Hz at 900 cycles per minute incorporating three (3) frequencies.

5.47 MANUAL: The siren shall rise and fall only as the vehicle's horn ring or a manual switch is selected. Sustained pressing shall make the siren sustain a peak tone. A momentary tap shall provide a brief (less than 2 second) burst. Frequencies below 500 Hz shall be eliminated to prevent speaker damage.

5.5 The Public Address (PA) system shall provide inputs for radio and microphone audio. The microphone can be dedicated for PA. The output power is 50 watts 400 Hz to 10K Hz with less than 10% harmonic distortion (1 V input, 1 KHz reference).

5.6 Park (siren) Kill: Siren shall stop when the vehicle is shifted to park gear. Public address and warning lights remain operational.

5.7 Horn Ring Transfer (HRT) when enabled will function via the vehicle horn. When the siren is activated, each press of the vehicle horn will cycle the tone to the next programmed tone. HRT and siren tones shall be dependent (factory default) on the slide switch positions. Slide switch positions Off, 1, and 2 the HRT is not transferred. Slide switch position 3 the HRT is transferred and will scroll through all the siren tones chosen on the selector switch.

5.8 PathFinder shall have the ability to play recorded voice messages.

6. RUMBLER LOW FREQUENY SIREN INTEGRATION

6.1 PathFinder shall provide Rumbler low frequency siren integration.

6.2 PathFinder can produce a Rumbler tone without the need for a separate externally mounted amplifier. No exceptions.

6.3 Rumbler capability requires one or two woofers (RBKIT1 or RBKIT2) and vehicle specific mounting brackets:

6.31: PathFinder + one 100 W siren speaker = single tone 6.32: PathFinder + two 100 W siren speakers = dual tone

6.33 : PathFinder + one 100 W speaker + one or two Rumbler woofers = single tone and Rumbler capability

6.34 : PathFinder + two 100 W siren speakers + RUMBLER-3-PF kit (includes two woofers) = Rumbler and Dual Tone siren capability (one channel will Rumble).

6.4 To utilize Dual tone and Rumbler capability shall require the optional RUMBLER-3-PF siren system.

7. FS Vehicle Integration/On-Board Diagnostics Integration (OBDII)

7.1 PathFinder siren shall provide for On-Board Diagnostics (OBDII) integration with the existing vehicle CAN bus. The FS Vehicle Integration uses a vehicle specific cable to seamlessly integrate with the vehicle.

7.2 FS Vehicle Integration option allows light and siren control with vehicle events such as door open, headlight, brake, speed, park, etc. functions. The use of the FS Vehicle Integration removes the need to separately wire certain options such as horn ring transfer or ignition.

7.3 The optional OBDII interface cable shall connect at the rear of the siren amplifier and be available as part number OBDCABLE5 (5').

8. TIMER FEATURE

8.1 Timer feature shall sense ignition on/off and will allow the selection of multiple time settings.

8.2 Various user selectable time delays shall be configurable in the programming software.

8.3 Various devices can be wired to relay outputs such as in-car video DVR's, radios, and laptop chargers. No aftermarket external timer is required, no exceptions.

9. ELECTRICAL

9.1 The siren shall be designed for negative ground vehicles. Normal operating voltage shall be 12.0 VDC to 24.0 VDC.

9.2 Standby current shall be less than 0.1 amperes.

9.3 Power can be controlled through the positive (12 VDC +) ignition input.

9.4 Volume control for radio rebroadcast and PA is located on the amplifier.

10. PROGRAMMING SOFTWARE FORMAT

10.1 PathFinder programming software shall be available at www.fedsig.com.

10.2 Configured programs may be extracted, modified, and stored for ease of service and re- use.

10.3 A USB connection at the back of the PathFinder shall provide connection to a computer for programmed software functions. Programming does not require disassembling or removing any hardware from the vehicle.

11. WARRANTY

11.1 Warranty shall be five years parts and five-year labor coverage.

12. PRODUCT REFERENCE

12.1 The siren shall be manufactured in University Park, IL USA by the Federal Signal Corporation, model PF200 - PathFinder siren.

GENERAL CONDITIONS – REVERSE AUCTIONS

ALL BIDS SUBMITTED SHALL BE IN COMPLIANCE WITH ALL CONDITIONS SET FORTH HEREIN. THE BID PROCEDURES FOLLOWED BY THIS OFFICE WILL BE IN ACCORDANCE WITH THESE CONDITIONS. THEREFORE, ALL BIDDERS ARE URGED TO READ AND UNDERSTAND THESE CONDITIONS PRIOR TO SUBMITTING A BID.

1. DEFINITIONS

The use of the word "agency" in any Bid Invitation solicitation or specification shall be intended to mean state agencies only.

2. PREPARATION OF BIDS

2.1 Bids and/or Quotes may be submitted through the State of Mississippi's e-procurement system (MAGIC) or in person to the Mississippi Department of Public Safety "MDPS". Paper bids are allowed. All prices and notations must be printed in ink or typewritten. No erasures permitted. Errors may be crossed out and corrections printed in ink or typewritten adjacent and must be initialed, in ink, by the person signing bid.

2.2 To submit bids electronically, bidders must ensure they are registered in the MAGIC system and have received a login, password, and supplier number and that all technical requirements have been met.

2.3 If a bidder is unwilling or unable to participate through MAGIC, an MDPS representative can enter the Vendor's bid(s) manually (i.e. Surrogate bidding).

2.4 Bidders participating in person by surrogate bidding must so indicate in their response to the initial Request for Quote-Formal (RFQF).

2.5 Failure to examine any drawings, specifications, and instructions will be at bidder's risk.

2.6 Price each item separately. Unit prices shall be shown. Bid prices must be net.

2.7 It is understood that reference to available specifications shall be sufficient to make the terms of such specifications binding on the bidder.

2.8 Bidders must furnish all information requested in the bid specifications. Further, when required, each bidder must submit for bid evaluation cuts, sketches, descriptive literature and technical specifications covering the product offered. Reference to literature submitted with a previous bid or on file with MDPS will not satisfy this provision.

2.9 Samples of items, when requested, must be furnished free of expense, and if not destroyed in testing will, upon request, be returned at the bidder's expense. Request for the return of samples must be made within ten (10) days following opening bids. Each individual sample must be labeled with bidder's name, manufacturer's brand name and number, State of Mississippi commodity number, bid number and item reference.

2.10 Time of performance. The number of calendar days in which delivery will be made after receipt of order shall be indicated in the bid specifications.

3. BID SUBMISSION

3.1 When submitting a bid electronically, the authorized signature may be typed or be an electronic signature.

3.2 Bids and modifications or corrections received after the closing time specified will not be considered.

3.3 When submitting the response to the RFQF in MAGIC, bidder must ensure all questions have been answered within the RFQF and all proposed items in bid have a response.

3.4 Bidders submitting paper responses should submit responses to the MDPS by the response deadline.

4. ACCEPTANCE OF BIDS

MDPS reserves the right to reject any and all bids, to waive any informality in bids and unless otherwise specified by the bidders, to accept any items on the bid. The State reserves the right to modify or cancel in whole or in part its Invitation for Bids.

If a bidder fails to state the time within which a submitted will expire, it is understood and agreed that the MDPS shall have 60 days to accept.

5. ERROR IN BID

If a vendor is participating in a Live Auction, the vendor can notify MDPS in the event of an erroneous bid via the chat message feature. Erroneous bids, where the mistake is apparent to MDPS, may be deleted during the live auction.

6. SPECIAL DISCOUNT PERIOD

Time in connection with a special discount offered will be computed from date of delivery at destination or from the date correct invoices are received, if the latter date is later than the date of delivery. Cash discounts will not be considered in the award process.

7. AWARD

7.1 Contracts and purchases will be made or entered into with the lowest responsible bidder meeting specifications, except as otherwise specified in the bid specifications. Where more than one item is specified in the specifications, the State reserves the right to determine the low bidder either on the basis of the individual item(s) or on the basis of all items included in its Invitation for Bids, or as expressly provided in the State's Invitation for Bids.

7.2 Unless the bidder specified otherwise in the bid, the State may accept any item or group of items of any kind.

7.3 A written purchase order or contract award furnished to the successful bidder within the time of acceptance specified in the Invitation for Bid results in a binding contract without further action by either party. The contract shall consist solely of these General Conditions, the Instructions and Special Conditions, the successful bidder’s bid, and the written

purchase order or contract award. The contract shall not be assignable in whole or in part without the written consent of the State.

8. INSPECTION

Final inspection and acceptance or rejection may be made at delivery destination, but all materials and workmanship shall be subject to inspection and test at all times and places, and when practicable. During manufacture, the right is reserved to reject articles which contain defective material and workmanship. Rejected material shall be removed by and at the expense of the contractor promptly after notification or rejection. Final inspection and acceptance or rejection of the materials or supplies shall be made as promptly as practicable, but failure to inspect and accept or reject materials or supplies shall not impose liability on the State or any subdivision thereof for such materials or supplies as are not in accordance with the specification. In the event necessity requires the use of materials or supplies not conforming to the specification, payment therefore may be made at a proper reduction in price.

9. TAXES

The State is exempt from federal excise taxes and state and local sales or use taxes and bidders must quote prices which do not include such taxes. Exemption certificates will be furnished upon request. Contractors making improvements to, additions to or repair work on real property on behalf of the State are liable for any applicable sales or use tax on purchase of tangible personal property for use in connection with the contracts. Contractors are likewise liable for any applicable use tax on tangible personal property furnished to them by the State for use in connection with their contracts.

10. GIFTS, REBATE, GRATUITIES

10.1 Acceptance of gifts from bidders is prohibited. No officer or employee of the MDPS, nor any head of any state department, institution or agency, nor any employee of any state department, institution or agency charged with responsibility of initiating requisitions, shall accept or receive, directly or indirectly, from any person, firm or corporation to whom any contract for the purchase of materials, supplies, or equipment for the State of Mississippi may be awarded, by rebate, gifts, or otherwise, any money or anything of value whatsoever, or any promise, obligation or contract for future rewards or compensation.

10.2 Bidding by state employees is prohibited. It is unlawful for any state official or employee to bid on, or sell, or offer for sale, any merchandise equipment or material, or similar commodity to the State during the tenure of his or her office or employment, or for the period prescribed by law thereafter, or to have any interest in the selling of the same to the State.

11. BID INFORMATION

Bid information and documents may be examined pursuant to the Mississippi Public Records Act of 1983, MS Code 25-61-1 et seq.

12. PRECEDENCE

Bids shall be made and the contract shall be entered into in accordance with the General Conditions as hereinafter amended and modified. Should a conflict exist between the General Conditions and the Instructions and Special Conditions, the Instructions and Special Conditions shall take precedence.

13. COMPETITION

There are no federal or state laws that prohibit bidders from submitting a bid lower than a price or bid given to the U.S. Government. Bidders may bid lower than U.S. Government contract price without any liability as the State is exempt from the provisions of the Robinson-Patman Act and other related laws. In addition, the U.S. Government has no provisions in any of its purchasing arrangements with bidders whereby a lower price to the State must automatically be given to the U.S. Government.

14. WAIVER

MDPS reserves the right to waive any General Condition, Special Condition, or minor specification deviation when considered to be in the best interest of the State.

15. CANCELLATION

Any contract or item award may be canceled with or without cause by the State with the giving of 30 days written notice of intent to cancel. Cause for the State to cancel may include, but is not limited to, cost exceeding current market prices for comparable purchases; request for increase in prices during the period of the contract; or failure to perform to contract conditions. The Contractor will be required to honor all purchase orders that were prepared and dated prior to the date of expiration or cancellation if received by the Contractor within a period of 30 days following the date of expiration or cancellation. Cancellation by the State does not relieve the Contractor of any liability arising out of a default or nonperformance. If a contract is canceled by the State due to a Contractor's request for increase in prices or failure to perform, that Contractor will be disqualified from bidding for a period of 24 months. The Contractor may cancel a contract for cause with the giving of 30 days written notice of intent to cancel. Cause for the Contractor to cancel may include, but is not limited to the item(s) being discontinued and/or unavailable from the manufacturer.

16. SUBSTITUTIONS DURING CONTRACT

During the term of a contract, if adequate documentation is provided that supports the claim that the contract item(s) are not available, items which meet the minimum specifications may be substituted if approved by MDPS and the substitutions are deemed to be in the best interest of the State.

17. APPLICATION

It is understood and agreed by the bidder that any contract entered into as a result of this Invitation for Bids is established for use by state agencies and all purchases made by these agencies for products included under the provisions of the contract shall be purchased from the bidder receiving the award unless exempt by special authorization from the MDPS.

Under the provisions of Section 31-7-7 Mississippi Code of 1972, Annotated, the prices offered herein shall be extended to the governing authorities. However, the governing authorities, by provisions of Section 31-7-12 Mississippi Code, may purchase products covered by state contracts from any source offering an identical product at a price that does not exceed the state contract price.

Employees of the MDPS have acted exclusively as agents of the State for the award, consummation, and administration of the contract and are not liable for any performance or nonperformance by the state agencies that utilize the contract.

18. ADDENDA

Addenda modifying plans and/or specifications may be issued if time permits. No addendum will be issued within a period of two (2) working days prior to the time and date set for the bid opening. Should it become

necessary to issue an addendum within the two (2) day period prior to the bid opening, the bid date will be reset to a date not less than five (5) working days after the date of the addendum, giving bidders ample time to comply with the addendum. When replying to a bid request on which an addendum has been issued, and the specifications require acknowledgement, the bid shall indicate that provisions of the addendum have been noted and that the bid is being offered in compliance therewith. Failure to make this statement may result in the bid being rejected as not being in accordance with the revised specifications or plans.

19. NONRESPONSIVE BIDS

Nonresponsive bids will not be considered. A non-responsive bid is considered to be a bid that does not comply with the minimum provisions of the specification. Any bidder found to repeatedly offer alternated products that are not compliant with specifications in an attempt to obtain a contract on the basis of pricing only will be disqualified from bidding for a period of 24 months.

20. SPECIFICATION CLARIFICATION

It shall be incumbent upon all bidders to understand the provisions of the specifications and to obtain clarification prior to the time and date set for the live auction or bid opening. Such clarification will be answered only in response to a written request submitted in the specified amount of time set by the MDPS. The MDPS reserves the right to specify a time frame in which clarification request shall be made.

21. PRE-QUALIFICATION PROCESS

22.1 The purpose of the RFQF is to advertise the competitive procurement for solicitation of formal quotes from potential bidders to participate in the Reverse Auction. The MDPS will be responsible for defining product categories, adding bidders, and publishing all bid related documents to the procurement portal. Once the responses have been received and the Opening Date has been reached, the MDPS will review the submissions to qualify bidders and determine a starting price for reverse auction items.

22.2 The Invitation for Bids/RFQF shall be advertised in accordance with Section 3.106.05.4 of the Mississippi Procurement Manual. The MDPS shall advertise for 14 consecutive days in accordance with Section 31-7-13(c) (i) (1) of the Miss. Code Ann. Responses to the RFQF will be due on the 8th working day after the last day of advertisement.

22.3 Responses to the RFQF will be reviewed by the MDPS for responsiveness to specifications. Price quotes received will be evaluated in conjunction with other market research to determine the starting price for the Auction.

22.4 The MDPS will accept bidder responses in MAGIC who have qualified meeting RFx specifications. Bidders not meeting specifications will not be allowed to participate in the Auction.

22.5 Once qualified, the MDPS will notify the vendor of Qualification and the date of the Live Auction via email. After receiving the confirmation email, bidders should review/ensure technical requirements for MAGIC have been met or confirm participation in person.

22.6 It is requested that bids be submitted on the basis of statewide distribution. Contractors must maintain adequate distribution capabilities and adequate stock of all items to insure prompt delivery.

23. FIRM BID PRICE

Prices accepted from bidder submissions shall be firm for the term of the contract except that the State shall receive the benefit of any price decrease in excess of five (5) percent. The contractor must provide written price reduction information within ten (10) days of its effective date.

24. CONTRACT EXTENSION

No extensions necessary.

25. SUSPENSION AND DEBARMENT

By submitting a bid, the bidder is certifying that neither the bidder nor any potential subcontractors are debarred or suspended or are otherwise excluded from or ineligible for participation in federal assistance programs.

26. ASSIGNMENT

The Contractor shall not assign or subcontract in whole or in part, its right or obligations under this agreement without prior written consent of the MDPS.

27. INDEMINIFICATION

Contractor shall indemnify, defend, save and hold harmless, protect, and exonerate the State of Mississippi, its Commissioners, Board Members, officers, employees, agents, and representatives from and against all claims, demands, liabilities, suits, actions, damages, losses, and costs of every kind and nature whatsoever, including, without limitation, court costs, investigative fees and expenses, and attorneys' fees, arising out of or caused by Contractor's and/or its partners, principals, agents, employees, and/or subcontractors in the performance of or failure to perform this Agreement. In the State's sole discretion, Contractor may be allowed to control the defense of any such claim, suit, etc. In the event Contractor defends said claim, suit, etc., Contractor shall use legal counsel acceptable to the State; Contractor shall be solely liable for all reasonable costs and/or expenses associated with such defense and the State shall be entitled to participate in said defense. Contractor shall not settle any claim, suit, etc., without the State's concurrence, which the State shall not unreasonably withhold.

28. LIVE AUCTION

28.1 Notification of Auction Start date and time will be sent via email to qualifying bidders. If a bidder is unwilling or unable to participate through MAGIC, a representative from the MDPS can enter the Vendor's bid(s) manually (i.e. Surrogate Bidding). If a bidder elects to participate via Surrogate Bidding, the bidder must be physically present at the public bidding location, with the means to submit written bids for each offer made and signed by an authorized agent of the Vendor. A Bid Form will be provided to the Vendor at the start of the auction. This form will not be returned to the bidder but will become a part of the Bid Documentation for Evaluation by the MDPS.

28.2 The Auction time may be extended at the discretion of the MDPS. Examples of reasons to extend an auction include, but are not limited to, technical difficulties experienced by the MDPS or bidder, the need to pause the Auction, or bids placed within the last few moments of bidding.

28.3 Communication with bidders participating electronically during the Auction may be done via the Live Chat Feature. The MDPS has the ability to send messages to particular bidders or broadcast to

all bidders. Bidders can ONLY communicate with the MDPS, not other bidders.

28.4 Bidders may be removed from a Live Auction for improper conduct, including but not limited to profanity, threats, consistently entering erroneous or extremely low bids, or other disruptive behavior.

29. FORCE MAJEURE

If the MDPS is closed for any reason, including but not limited to: acts of God, strikes, lockouts, riots, acts of war, epidemics, governmental regulations superimposed after the fact, fire, earthquakes, floods, or other natural disasters (the "Force Majeure Events"), which closure prevents the opening of bids at the advertised date and time, all bids received shall be publicly opened and read aloud on the next business day that the agency shall be open and at the previously advertised time. The new date and time of the bid opening, as determined in accordance with this paragraph, shall not be advertised, and all bidders, upon submission of a bid proposal, shall be deemed to have knowledge of and shall have agreed to the provisions of this paragraph. Bids shall be received by the agency until the new date and time of the bid opening as set forth herein. The MDPS shall not be held responsible for the receipt of any bids for which the delivery was attempted and failed due to the closure of the MDPS as a result of a Force Majeure Event. Each bidder shall be required to ensure the delivery and receipt of its bid by the MDPS prior to the new date and time of the live auction or bid opening.