

City of Santa Fe, New Mexico

memo

Date: Aug 24, 2023

To: Travis Dutton Leyda, Chief Procurement Officer

Via: *Regina Wheeler*
Regina Wheeler (Aug 29, 2023 13:47 MDT)
Regina Wheeler, Public Works Department Director

From: Jose Lerma, Traffic Operations Manager 

Subject: Sole Source Request and Determination for Applied Information (Supplier) and Paradigm (Distributor)

ACTION:

Request for Approval of Sole Source Request and Determination for Paradigm and Applied Information to Supply and Test Cellular Modems for 17 Traffic Signals Intersections on Cerrillos Road for a cost of \$50,490.00.

BACKGROUND AND SUMMARY:

The City of Santa Fe Traffic Operations Department needs remote access to 120 traffic signals within the City of Santa Fe for efficiency of traffic management and operations. This purchase of 17 cellular modems for traffic signals on Cerrillos Road represents the next phase of this effort. In February, 2023, The Public Works Department had also met with Edward Duran of the ITT Department separately to make sure that there were no issues with Public Works spending their own funds going through a private VPN on a cloud-based server before moving forward with this purchase.

This is a very unique type of purchase that has a very specific set of capabilities that are outlined in the attached "Key Systems Features for Remote Network Unit" sheet from Applied Information, outlining the level of communication, remote monitoring platform, and the connected vehicle smartphone application. Not all cellular modem services carry these capabilities which involve specifically diagnosing traffic signal malfunctioning from afar, being able to monitor traffic control functions, or change traffic signal timing for changing traffic conditions. However, what makes unique for justifying the Sole Source is the following application that any road user can download for free with the purchase of the cellular modems:

TravelSafely, the smartphone application provides connected vehicle messages to mobile phones, including but not limited to SPaT (Signal Phase and Timing), BSM (Basic Safety Messages), PSM (Personal Safety Messages), and TIM (Traveller Information Messages and provide visual and audible connected vehicle message notifications/alerts/warnings. (Please note Patent 11,069,234 which covers this feature in the attached letter from Applied Information, the supplier.)

The 17 Modems will be installed at the following signalized intersections:

1. RT-14 (Cerrillos Rd) & Beckner Rd
2. RT-14 (Cerrillos Rd) & Wellness Way
3. RT-14 (Cerrillos Rd) & Las Soleras Dr
4. RT-14 (Cerrillos Rd) & Governor Miles Rd
5. RT-14 (Cerrillos Rd) & Cristos Rd
6. RT-14 (Cerrillos Rd) & Wagon Rd
7. RT-14 (Cerrillos Rd) & RT-300 (Rodeo Rd)
8. RT-14 (Cerrillos Rd) & Zafarano Dr
9. RT-14 (Cerrillos Rd) & Vegas Verdes Loop
10. RT-14 (Cerrillos Rd) & Avenida De Las Americas
11. RT-14 (Cerrillos Rd) & Richards Ave
12. RT-14 (Cerrillos Rd) & Camino Consuelo
13. RT-14 (Cerrillos Rd) & Calle Del Cielo
14. RT-14 (Cerrillos Rd) & Siler Rd
15. RT-14 (Cerrillos Rd) & Camino Carlos Key
16. RT-14 (Cerrillos Rd) & Lujan St
17. RT-14 (Cerrillos Rd) & St Michaels Dr

If granted, the Public Works Traffic Operations office will move forward with the purchase as part of the next phase to install cellular modems for the traffic signals. Then, in the future, there will be pursuit of installing the rest of the cellular modems with further coordination as necessary.

PROCUREMENT METHOD:

Sole source as per NM Stat§ 13-1-126.1 (2020).

BUDGET INFORMATION:

FUND NAME: Operations/Maintenance

ORG: 1000415 **OBJ:** 510310

ATTACHMENTS:

Exhibit A-Sole Source Justification and Determination Form

Exhibit B-Applied Information Sole Source Letter

Exhibit C-Paradigm Requisition, Quote, and Buyboard Update

Exhibit D-"Key Systems Features for Remote Network Unit" from Applied Information



City of Santa Fe, New Mexico



SOLE SOURCE REQUEST AND DETERMINATION FORM

This sole source request form **must** be submitted to the City of Santa Fe, Purchasing Division for authorization, determination and processing by the Chief Procurement Officer (CPO).

Please ensure to complete this form in its entirety - () must be completed.*

*Date: 08/24/2023

*Prepared By Jose Lerma

*Title Traffic Operations Manager

*Vendor Name Paradigm Traffic Systems & Applied Information (supplier)

*Address: 2201 East Division Street

*City: Arlington

*State: Texas

*Zip Code: 76011

*Description of Goods/Service to be procured:

*Estimated Cost:

\$50,490.00

Term of Contract:

One (1) to Four (4) year from award 4

*Sole Source Request Justification Questions 1-3.

1. Explain the purpose/need of purchase. Ensure to include a thorough scope of work for the services, construction or items of tangible personal property (if this is an amendment request to an existing contract, attach current contract).

The purpose for the purchase is to install cellular modems for 17 traffic signalized intersections along the busy corridor of StCerrillos Road within the City of Santa Fe. Installation involves minimal time in the field and will not require construction or traffic control. Then the Glance software from Applied Information (the supplier) will be set up by Paradigm and be connected to these modems through a private VPN on a cloud-based server at no additional cost. Paradigm will test to make sure connection with the cellular modems is working and that the signals can be monitored remotely.

Once this is in place, this will allow Traffic Operations staff to view traffic signal malfunctions, traffic controller properties and traffic signal timing remotely without having to make visits to the field. Then timings can be adjusted remotely if necessary, and malfunctions can possibly be diagnosed remotely. Additionally, alerts can be set up to be sent for any malfunctioning. In addition to safety benefits to staff and road users, this cuts down tremendously on staff time as well as delay time for vehicles if signal is not operating properly.

With the purchase of the cellular modems, the TravelSafely app can be downloaded for free to a smartphone by anybody within the vicinity to have alerts to surroundings while driving, bicycling or walking. Use of this application could help to keep road users safe and accidents from happening.



City of Santa Fe, New Mexico



2. Provide a detailed explanation of the criteria developed and specified by the department as necessary to perform and/or fulfill the contract.

X

The contractor has affirmed sole source for the services, construction or items of tangible personal property (*Attach memo from vendor*). Provide documentation of due diligence for other possible vendors/contractors to provide the requested services/goods proved unsuccessful; or

X

Other: explanation of the reasons, qualifications, proprietary rights or unique capabilities (*unique and how this uniqueness is substantially related to the intended purpose of the contract*) of the prospective contractor that makes the prospective contractor *the one source* capable of providing the required professional service, service, construction or item(s) of tangible personal property. (Please do not state the source is the “best” source or the “least costly” source. Those factors do not justify a “sole source.”) *Unique and how this uniqueness is substantially related to the intended purpose of the contract.*

The unique capabilities of the remote network unit associated with the cellular modems are demonstrated in the attached Key System Features sheet from Applied Information. Some system capabilities are further explained in Section 1 and Section 3 of this form. Please note the US Patent 11,069,234 in the attached memo which relates to the unique TravelSafely app.

In the future, with the purchase of the cellular modems, it also opens up the opportunities to move forward with additional purchases as described by US Patents 11,055,991 and 11,205,345 in the memo.

3. Explain why other similar professional services, services, construction or item(s) of tangible personal property *cannot* meet the intended purpose of the contract.

Other cellular modem services that have been investigated do not allow the capability to demonstrate a wide range of traffic controller qualities and functions such as signal malfunctions, temperature, humidity, and voltage along with signal timing using a remote application.

No other platform offers anything similar to the Travel Safely smart phone application along with SPaT messaging that this platform does. As mentioned in Section 1, this allows road users (drivers, bicyclists, and pedestrians alike) to receive alerts regarding their surroundings including school zone speeding, presence of other vehicles, bicyclists, and pedestrians or emergency vehicles.

The other item that is unique is the over-the-air software and security updates as part of the remote connection and Glance Software from Applied Information.



City of Santa Fe, New Mexico



***Approvals:**

Based on the above facts, the City of Santa Fe Purchasing Officer has made the determination that the justification for a Sole Source procurement is in accordance with the State Procurement Code, Section 13-1-126 Sole source procurement., NMSA 1978 and shall be posted for a 30-day period prior to award.

Aug 30, 2023

Travis Dutton Leyda, CPO Date
Purchasing Officer for the
City of Santa Fe

Pursuant to the State Procurement Code, Section 13-1-126 Sole source procurement., NMSA 1978, the 30-day posting period of the Notice of Intent to Award this Sole Source request was met and no obligation to the award to the above referenced contractor were received. *This Sole Source determination will be valid for a period of one (1) year from the date of the award.*

Travis Dutton Leyda, CPO Date
Purchasing Officer for the
City of Santa Fe

***Required Attachments:**

**Letter from Contractor acknowledging they are the only source (on their business letterhead and signed by the head of business or financial operations),*

**Quote from sole source Contractor*

**Agenda Item to be presented to City Council if over \$60,000 for Professional Services and \$60,000 for Goods and Non-Professional Services*



March 27, 2023

Santa Fe, NM

To Whom It May Concern,

This letter is in regard to the city of Santa Fe, NM's request for sole source designation, concerning Applied Information's line of systems. This includes the AI-500-052 and all of Applied Information offerings including Glance software, Glance Preempt and Priority Control System, remote communications, cabinet monitoring, school beacon controllers, ITS devices and ancillary matched component equipment.

Please be advised that Paradigm Traffic Systems, Inc. is the only authorized Applied Information distributor of traffic products for the city of Santa Fe, New Mexico. Paradigm Traffic Systems, Inc. has been authorized for product training, technical support, sales, warranty and overall support of Applied Information's products.

In addition, Applied Information has been granted three patents by the U.S. Patent and Trademark Office to date, including U.S. Patents 11,069,234, 11,055,991, and 11,205,345.

U.S. Patent 11,069,234 entitled Systems, Methods, and Devices for Communication Between Traffic Controller Systems and Mobile Transmitters and Receivers provides for smartphones with the Applied Information's TravelSafely app, and other in-vehicle computers, to communicate with properly equipped traffic control devices to deliver traveler information and safety messages such as red-light running and speeding in active school zones. The patent provides for the communication of safety messages between smartphones with TravelSafely enabling pedestrians and cyclists to be warned of a potentially dangerous encounter with a vehicle. In addition, the patent covers the unique ability to determine what lane a vehicle occupies and how that relates to the traffic signal's phase, for example knowing if the vehicle is in a turning lane and providing a "Get Ready for Green" message for that lane. Additionally, the app calculates the trajectory and velocity of the vehicle in relation to the traffic signal to warn of potential red light running.

U.S. Patent 11,055,991 entitled Systems, Methods, and Devices for Communication Between Traffic Controller Systems and Mobile Transmitters and Receivers provides for changing the state of one or more traffic signals using both cellular communications and direct radio signals from a vehicle. The technology can be used to provide first responders with automatic green lights at intersections, thus reducing response times by about 18 percent. Current use of the technology involves fire apparatus, ambulances, snowplows and police vehicles, and is deployed in cities in the U.S. and Canada. The patent also covers the use of providing green light priority to other vehicles such as transit and school buses and delivery vans. Properly equipped automobiles can communicate that they have arrived at a red light providing the traffic signal controller with additional information to reduce wait times.

U.S. Patent 11,205,345 entitled Systems, methods, devices, and apparatuses for intelligent traffic signaling - designed to improve safety when entering a roadway or crossing lanes of oncoming traffic such as at an unprotected left turn - describes systems that include sensors to detect and calculate the speed of crossing or oncoming traffic. Algorithms incorporated in the patented systems can calculate the time to arrival, or gap, and use signs and flashing lights to provide a visible signal when it is safe or unsafe to turn. The technology can be incorporated into connected vehicle applications to warn the driver in the vehicle with audible and additional visual alerts using cellular vehicle to everything (C-V2X). The technology can also be integrated into autonomously controlled vehicles in the future.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Ashley', with a stylized flourish at the end.

Peter Ashley
VP Business Development
Applied Information Inc.

Purchase Requisition

City of Santa Fe - Public Works -
Complete Streets

Requisition #		Vendor #	9741
Purchase Order #		Contract #	Sole Source (TBD)
Project ID:		Project String:	

Administrative Section

FUNDS AVAILABLE YES NO

VENDOR #1	VENDOR #2	VENDOR #3
Paradigm Traffic Systems		
2201 East Division Street		
Arlington, Texas 76011	Arlington, Texas 76011	
WRITTEN QUOTE	WRITTEN QUOTE	WRITTEN QUOTE
TOTAL COST \$ 50490	TOTAL COST \$ 50490	TOTAL COST \$

Comments:
Traffic Operations Signal Shop needs to purchase 17 cellular modems to connect the signalized intersection control cabinets to the Traffic Operations Advanced Traffic Management System.

ORG / OBJECT (Line Item)	Qty	UNIT	DESCRIPTION	UNIT COST	TOTAL
1000415.510310			Paradigm Traffic Systems Quote		50490
TOTAL					50490

REQUESTOR SIGNATURE _____ DATE _____



P.O. Box 5508 – Arlington – Texas – 76005-5508
 817.831.9406 – fax 817.831.9407
 Estimating@Paradigmtraffic.com
www.paradigmtraffic.com

QUOTATION

TO: Paradigm Traffic Systems
 2201 East Division Street
 Arlington, Texas 76011
attn: Estimating Department
ph: 817-831-9406
fx: 817-831-9407

RFQ: BuyBoard Contract # 603-20
 Public Safety, Fire House Supply Equipment
 Traffic Signals 8/4/2023
 512-467-0222 ph
 800-211-5454 fax

DATE	SLSMN	Delivery Date	FREIGHT	SHIP VIA	F.O.B	TERMS	QTE NUMBER
8/4/2023	RK	60 - 90 Days ARO	PPD & Allowed	Best Way	Destination	Net 30	Q32716RK
ITEM	QTY	DESCRIPTION				UNIT PRICE	TOTAL PRICE
		PLEASE SEE NOTES THROUGHOUT THIS QUOTE					
		This quote is valid for 60 days. Thereafter it is subject to change without notice					
1	17	CELLULAR MODEM <i>*NOTE* Cellular Modem consists of Applied Information AI-500-052 with AC Power Supply Kit, Glance License, Configuration and 5 year Connectivity & Service plan with passthrough.</i> <i>*NOTE* Video not included.</i> NOTE: Purchase Orders MUST be processed through WWW.BUYBOARD.COM For any questions, comments or concerns, Please email us at : Estimating@Paradigmtraffic.com				\$2,970.00	\$50,490.00
						TOTAL	\$50,490.00

***This quote is valid for 60 days. Thereafter it is subject to change without notice.**
 *Thank you for the opportunity to submit a proposal to you. Please reference this quotation (by QTE number) when placing order. If you have any questions, please call or send a fax to me.
 *When sending RFQ's, PO's or RFI's, please send to Estimating@paradigmtraffic.com

OFFERED BY:

Robert Kelly
Paradigm Traffic Systems, Inc.
Estimating@paradigmtraffic.com
Federal ID# 75-2520341

KEY SYSTEM FEATURES:**Remote Network Unit**

with Passthrough Capability

KEY SYSTEM FEATURES FOR REMOTE NETWORK UNIT:**REMOTE COMMUNICATION SYSTEM WITH CLOUD-BASED MONITORING PLATFORM AND PASSTHROUGH COMMUNICATION CAPABILITIES (“Remote Communications System”)****Communication:**

- Supports 4G LTE communication
- Equipped with HSM (high-speed modem) for sufficient communication speeds to support passthrough communication capabilities
- Modular design, and easily upgradeable to 5G communication
- Supports over-the-air software and security updates
- Passthrough communication over secure VPN network
- Field-initiated communication, allowing for low-cost data plans with infrequent polling
- Upgradeable as technology changes

Remote Monitoring Platform:

- Allows for remote monitoring, control, and system configuration
- Cloud-hosted, browser-based. No additional software required. Accessible via standard web browser (e.g., Chrome, Firefox, Safari, etc.)
- Issues real-time fault alerts via email and text
- Advanced reporting capabilities
- Monitoring functions accessible through an API (Application Programming Interface)
- In the event that the cell service is interrupted or is not available, all events are stored locally and forwarded to the monitoring platform immediately upon the cellular service being restored, ensuring a complete record of field events are stored

Connected Vehicle Smartphone Application:

- TravelSafely, the smartphone application provides connected vehicle messages to mobile phones, including but not limited to SPaT (Signal Phase and Timing), BSM (Basic Safety Messages), PSM (Personal Safety Messages), and TIM (Traveller Information Messages and provide visual and audible connected vehicle message notifications/alerts/warnings.

Other Features Of Note:

- Capable of integrating with any traffic cabinet type and
- Compatible with all major USA traffic signal controllers, including:
- Capable of integrating with any IP addressable device in the traffic cabinet to provide monitoring capabilities.

Video Streaming:

- Capable of streaming on-demand real-time video from the traffic cabinet to the browser-based utility

KEY SYSTEM FEATURES:
Remote Network Unit
with Passthrough Capability



Connectivity, Support, Warranty:

- No-questions-asked Warranty: Under warranty for as long as the device has an active connectivity and support license and is connected to the browser-based monitoring platform hardware shall be replaced in the event that the device is irreparable.

Security:

- Redundant server architecture with 99% server availability







Sole Source Request - Paradigm Traffic Systems (17 Cellular Modems)

Final Audit Report

2023-08-29

Created:	2023-08-29
By:	Amanda Archuleta (ajarchuleta@ci.santa-fe,nm.us)
Status:	Signed
Transaction ID:	CBJCHBCAABAANB-Dz5moMsmxMrifln_hb7xE-HUnDL4y

"Sole Source Request - Paradigm Traffic Systems (17 Cellular Modems)" History

-  Document created by Amanda Archuleta (ajarchuleta@ci.santa-fe,nm.us)
2023-08-29 - 2:12:54 PM GMT- IP address: 63.232.20.2
-  Document emailed to rawheeler@santafenm.gov for signature
2023-08-29 - 2:15:57 PM GMT
-  Email viewed by rawheeler@santafenm.gov
2023-08-29 - 7:46:44 PM GMT- IP address: 104.47.64.254
-  Signer rawheeler@santafenm.gov entered name at signing as Regina Wheeler
2023-08-29 - 7:47:51 PM GMT- IP address: 63.232.20.2
-  Document e-signed by Regina Wheeler (rawheeler@santafenm.gov)
Signature Date: 2023-08-29 - 7:47:53 PM GMT - Time Source: server- IP address: 63.232.20.2
-  Agreement completed.
2023-08-29 - 7:47:53 PM GMT

CPO 600 PARDIGIM TRAFFIC SYSTEMS

Final Audit Report

2023-08-30

Created:	2023-08-30
By:	Jimmy Tapia (jptapia@ci.santa-fe.nm.us)
Status:	Signed
Transaction ID:	CBJCHBCAABAATaJkwkyfNRF8w2oNZ0eV2oSlwGpGMIqJ

"CPO 600 PARDIGIM TRAFFIC SYSTEMS" History

-  Document created by Jimmy Tapia (jptapia@ci.santa-fe.nm.us)
2023-08-30 - 2:09:18 PM GMT- IP address: 63.232.20.2
-  Document emailed to Travis Dutton-Leyda (tkduttonleyda@santafenm.gov) for signature
2023-08-30 - 2:10:25 PM GMT
-  Email viewed by Travis Dutton-Leyda (tkduttonleyda@santafenm.gov)
2023-08-30 - 2:10:45 PM GMT- IP address: 174.218.18.134
-  Document e-signed by Travis Dutton-Leyda (tkduttonleyda@santafenm.gov)
Signature Date: 2023-08-30 - 6:05:15 PM GMT - Time Source: server- IP address: 63.232.20.2
-  Agreement completed.
2023-08-30 - 6:05:15 PM GMT