ADDENDUM NUMBER 2

FOR THE

CITY OF LEMOORE

FOX ST & 19TH AVE ROADWAY REPAIRS

September 17, 2025

OWNER:
City of Lemoore
711 W. Cinnamon Drive
Lemoore, CA 93245
(559) 924-6700

PREPARED BY:
A&M Consulting Engineers
220 N. Locust Street
Visalia, CA 93291
(559) 429-4747

ADDENDUM NUMBER 2

The following additions, deletions, or modifications shall become part of the Contract Documents for the City of Lemoore Fox St & 19th Ave Roadway Repair Project:

NOTICE TO CONTRACTORS:

Bidding for this project will be extended by three (3) weeks. See the attached updated Notice to Contractors for the new dates.

SPECIFICATIONS:

The following section has been added to the specifications: AI Mobility Platform

See attached to this Addendum Number 2.

BID PROPSAL DOCUMENTS:

The following has been modified on the Bid Proposal Documents:

- The units for Bid Alternative 1 have been modified to TON
- Additive 3 Accessibility Trails (Heritage Park & Lemoore Little League) bid items have been added.
- Additive 4 Traffic Signal Upgrades (Fox Street & Hanford-Armona Rd) bid items have been added

See revised Bid Proposal Documents attached to this Addendum Number 2.

PROJECT PLANS:

Sheet 1 has been modified for this project.
Sheets 27 – 31 have been added to this project:

- Sheet 27 – Lemoore Little League (Additive 3)
- Sheet 28 – Heritage Park (Additive 3)
- Sheet 29 – Traffic Signal – Demolition (Additive 4)
- Sheet 30 – Traffic Signal – Improvements (Additive 4)
- Sheet 31 – Traffic Signal – Details (Additive 4)

See plan sheets attached to this Addendum Number 2.

NOTE: One copy of this Addendum Number 2 shall be signed by the Contractor and must be submitted with the bid as an acknowledgment of receipt and the acceptance of this Addendum Number 2.

Prepared by: _____ September 17, 2025
Orfil Muniz, P.E. Date
A&M Consulting Engineers

Accepted by: _____ _____
Contractor (signature) Date

CITY OF LEMOORE
NOTICE TO CONTRACTORS AND SPECIAL PROVISIONS
FOR
CITY OF LEMOORE
FOX ST & 19TH AVE ROADWAY REPAIRS

CRITICAL DATES AND REQUIREMENTS*

Advertise:	**August 1, 2025**
Pre-Bid Meeting:	August 19, 2025 @ 9:00 AM at Lemoore Public Works located at 711 W Cinnamon Dr, Lemoore, CA. Attendance is not mandatory but recommended.
Last Day to Submit Written Questions:	October 7, 2025
Bids Due/Bid Opening:	October 16, 2025 @2:00 PM at City of Lemoore City Hall 711 W. Cinnamon Dr, Lemoore, CA
License Requirement(s):	'A' or Combination 'C' and City Business License
Project Completion Time:	60 Working Days
Proposed Council Action to Award:	October 21, 2025 Council Meeting
Pre-Construction Meeting / Notice to	Tentative
Proceed: Construction Start Date:	Tentative
Construction End Date:	Tentative
Notice of Completion:	Tentative

*Subject to change upon previous notice

ADDENDUM 2

BID PROPOSAL

TO THE CITY OF LEMOORE

The undersigned declares that he/she/it has carefully examined the location of the proposed work, that he/she/it has carefully examined the Plans and Specifications and read the accompanying instructions to bidders and hereby proposes to furnish all materials and do all the work required to complete the said work in accordance with said plans and specifications, for the unit price or lump sum set forth in the following schedule:

CITY OF LEMOORE
FOX STREET & 19TH AVENUE ROADWAY REPAIRS

BASE BID:					
Item No.	**Item Description**	**Unit**	**Qty**	**Unit Price**	**Total Item Cost**
1*	Mobilization & Demobilization	LS	1		
2	Traffic Control Plan & Implementation	LS	1		
3	Water Pollution Control Plan Preparation & Implementation	LS	1		
4	Dust Control Plan Preparation & Implementation	LS	1		
BASE BID (FOX STREET)					
5	Demolition, Clearing and Grubbing	LS	1		
6	Grind Down Existing Sidewalk To Remove Uplift, Complete and In-Place	LF	58		
7	Grind 0.30' and Dispose of Existing Asphalt Concrete Pavement	SY	9,335		
8	Construct 0.30' HMA Type A over Existing Aggregate Base Graded And Compacted Per Plan To 95% Relative Compaction	TON	1,777		
9	Apply Crack Seal Treatment	GAL	100		
10	Type II Fiberized Micro-Surface Treatment with Black Rock	SY	9,498		
11	Repair Damaged Curb as shown on plans	LF	10		
12	Construct City Standard Curb & Gutter with Aggregate Base, complete and in place	LF	265		
13	Construct City Standard Sidewalk with Aggregate Base, complete & in place	SF	2,757		
14	Plant 15 Gallon Chinese Pistache Tree with root ball barriers complete and in place	EA	22		
15	Install New Irrigation Sleeves for Chinese Pistache Trees	EA	16		
16	Install Signing, Striping (2-Coat), and Markings Complete and In-Place	LS	1		

BASE BID (19TH AVENUE)					
Item No.	**Item Description**	**Unit**	**Qty**	**Unit Price**	**Total Item Cost**
17	Grind 0.30' and Dispose of Existing Asphalt Concrete Pavement	SY	8,880		
18	Construct 0.30' HMA Type A over existing Aggregate Base Graded and Compacted to 95% relative compaction	TON	1,690		
19	Install Signing, Striping (2-Coat), and Markings Complete and In-Place	LS	1		
				BASE BID TOTAL	

***Item 1 - Mobilization & Demobilization Lump Sum Item No. 1 shall not exceed 5% of total Bid.**

BID ADDITIVE 1 (COVENTRY DRIVE AT FOX STREET)					
Item No.	**Item Description**	**Unit**	**Qty**	**Unit Price**	**Total Item Cost**
20	Remove Existing Sidewalk	SF	750		
21	Construct City Standard Sidewalk with Aggregate Base, complete & in place	SF	750		
				BID ADDTIVE 1 TOTAL	
BID ADDITIVE 2 (LOOP DETECTOR AT FOX STREET)					
Item No.	**Item Description**	**Unit**	**Qty**	**Unit Price**	**Total Item Cost**
22	Reinstall Loop Detector Type E complete and in place	EA	1		
				BID ADDTIVE 2 TOTAL	

BID ALTERNATIVE 1: Rubberized Asphalt Concrete (RAC) REPLACE FOX STREET [ITEM 8] & 19TH AVENUE [ITEM 18]					
Item No.	**Item Description**	**Unit**	**Qty**	**Unit Price**	**Total Item Cost**
23	Construct 0.30' RAC over Existing Aggregate Base Graded and Compacted Per Plan To 95% Relative Compaction	TON	3467		
				BID ALTERNATIVE 1 TOTAL	

BID ADDITIVE 3 ACCESSIBILITY TRAILS (HERITAGE PARK & LEMOORE LITTLE LEAGUE)					
Item No.	**Item Description**	**Unit**	**Qty**	**Unit Price**	**Total Item Cost**
24	Demolition, Clearing & Grubbing	LS	1		
25	Minor Grading	LS	1		
26	Construct Rubberized Asphalt Concrete (RAC)	TON	564		
27	Construct Class II Aggregate Base	TON	777		
28	Install Striping (2-Coats), Markings, and Parking Bumper complete & in place	LS	1		
29	Install Detectable Warning Surface	SF	30		
				BID ADDITIVE 3 TOTAL	

BID ADDITIVE 4 TRAFFIC SIGNAL UPGRADES (FOX STREET & HANFORD-ARMONA RD)					
Item No.	**Item Description**	**Unit**	**Qty**	**Unit Price**	**Total Item Cost**
30	Install all traffic signal upgrades; remove & replace existing controller with new McCain ATC Flex Controller (or approved equal) and install Notraffic Nexux Video/Radar Detection System complete & in place. Contractor shall install all other applicable wiring, power, equipment, and programming to create a functioning system and system shall be in working condition.	LS	1		
31	Traffic Control Plan & Implementation	LS	1		
32	Grind 0.30' and Dispose of Existing Asphalt Concrete Pavement	SY	214		
33	Construct 0.30' HMA Type A over Existing Aggregate Base Graded And Compacted Per Plan To 95% Relative Compaction	TON	42		
				BID ADDITIVE 4 TOTAL	

ADDENDUM 2

FOX STREET & 19TH AVENUE ROADWAY REPAIRS: The bid for this project is for the project to be completed in accordance with drawings and specs, contract documents, including all costs to the City, including, but not limited to, materials, labor, tools, insurance, cleanup, and warranties, shall be:

Total Amount of **Base Bid** (written in words) is: _____

_____ Dollars and _____Cents.

Total Amount of **Additive Bid 1** (written in words) is: _____

_____ Dollars and _____Cents.

Total Amount of **Additive Bid 2** (written in words) is: _____

_____ Dollars and _____Cents.

Total Amount of **Alternative Bid 1** (written in words) is: _____

_____ Dollars and _____Cents.

Total Amount of **Additive Bid 3** (written in words) is: _____

_____ Dollars and _____Cents.

Total Amount of **Additive Bid 4** (written in words) is: _____

_____ Dollars and _____Cents.

Total Amount of Grand Total (written in words) is: _____

_____ Dollars and _____Cents.

Mobilization shall not exceed 5% of the Grand Total. The apparent Lowest Bidder will be based on the Lowest Sum Total of the Base Bid plus all Additives (Grand Total).

In the event of discrepancy between words and figures, the words shall prevail and in the event of discrepancy between unit prices and total, the unit price shall prevail. The bid for this project contains a Base Bid and additives. The City reserves the right to award the base bid only or the Base Bid and additives.

The award of the Contract, if it be awarded, will be made within ninety (90) days after the opening of the bids. Unless required by law, a bidder cannot withdraw its bid during said 90-day period after the time set for the opening of all bids. A cashier's check, certified check or bidder's bond of ten percent (10%) of the bid must be enclosed with the bid.

The Bidder hereby acknowledges that the City has reserved the right to reject any and all bids and/or waive any irregularity in any bid received and/or determine in its sole discretion the responsibility of any bidder and which bid is most advantageous to the City.

The Bidder confirms that the figures above have been checked by the Bidder who understands that neither the City nor any of its agents, employees, or representatives shall be responsible for any errors or omissions on the part of the undersigned Bidder in preparing and submitting this Bid Proposal.

Acknowledgement of Bid Addenda: The Bidder confirms that this Bid Proposal incorporates and is inclusive of all items or other matters contained in Bid Addenda issued by or on behalf of the City.

_____ _____ _____

Addendum No. and date

The undersigned further agrees that in case of default in duly signing and providing to the City the required Contract, with necessary bonds, within fifteen (15) calendar days, including Sundays, weekends and holidays, after having received notice that the Contract is ready for signature, the proceeds of the check or bond accompanying his/her/its bid shall become the property of the City of Lemoore.

Licensed in accordance with an act providing for the registration of contractors:

License No. _____ Classifications _____

Expiration Date:_____. I (We) hereby state under penalty of perjury that the above made representations are true and in accordance with the provisions of section 7028.15 of the Business and Professions Code of the State of California. _____; and DIR number _____.

Signature of Bidder _____

(If an individual, so state. If a firm or co-partnership, state the firm name and give the names of all individual co-partners composing the firm. If a corporation, state legal name of corporation, also names of president, secretary, treasurer, and manager thereof.)

_____
Name

_____
Title

_____
Company

_____
Business Address

_____
Telephone Number

Dated: _____

Note: Attach Corporate Seal and Notary Form

AI MOBILITY PLATFORM

This specification defines the minimum requirements for an AI mobility platform that provides non-intrusive detection of traffic at signalized intersections using hybrid sensors that fuse video and radar, a cloud portal, 24/7 live monitoring & support, remote connectivity, and a variety of ITS applications for stop bar, advance, dilemma, bicycle, and pedestrian detection, traffic counts, real-time optimization, signal performance measures, and safety analytics.

1 Hardware

1.1 General

The Platform shall comprise two primary hardware components, the Sensor and the cabinet interface unit (“Nexus”) (or approved equal).

All hardware and material shall be new. All fasteners exposed to the elements shall be Type 304 or Type 316 passivated stainless steel. Primary hardware components shall have permanent labels that bear the name of the manufacturer, description, part number, date of manufacture, and serial number.

All hardware shall comply with the environmental and operating requirements of NEMA TS 2 Section 2.1.5 (Temperature & Humidity), Section 2.1.6 (Transients, Power Service), Section 2.1.8 (Nondestructive Transient Immunity), Section 2.1.9 (Vibration), and Section 2.1.10 (Shock) and shall have been tested by an independent third-party laboratory using the procedures defined in Section 2.2.7 (Transients, Temperature, Voltage, and Humidity), Section 2.2.8 (Vibration), and Section 2.2.9 (Shock/Impact).

1.2 Sensor

The Sensor shall comprise a video sensor and a radar sensor housed in a single enclosure that mounts on traffic signal structures (mast arms, strain poles, posts, etc.). The Platform shall be supplied with one Sensor per approach including at least one Sensor Type 2 and the remainder Sensor Type 1, or in quantities specified by the contract documents.

Sensor Type 1 shall include a 1080p HD video camera, 60 GHz radar, Nvidia processor (or equal), one 8P8C Ethernet receptacle, and Wi-Fi communications. Sensors employing radar frequencies such as 24 GHz that are susceptible to interference from 5G communications are not compliant with this specification.

Sensor Type 2 shall comprise Sensor Type 1 plus a C-V2X module and two external omnidirectional V2X antennas. Sensor Type 2 shall comply with FCC regulations for C-V2X road-side units (RSUs).

Sensor enclosures shall be rated for IP67 and MIL-STD-810G. Sensors shall operate over a nominal input voltage range of 89 to 264 VAC at 50 or 60 Hz and shall have three internal terminals for the line, neutral, and ground conductors of standard, off-the-shelf power cable such as IMSA signal cable. Sensors that require proprietary power cable are not compliant with

this specification. Sensors shall be powered from the transportation field cabinet or from street light luminaires as specified by the contract documents.

1.3 Nexus (or approved equal)

The Nexus shall consist of a ruggedized, field hardened computing device that mounts in and interfaces with transportation field cabinets. The Platform shall be supplied with one Nexus per intersection or in quantities specified by the contract documents. Nexus units shall support up to 10 Sensors per intersection in any combination of Sensor Type 1 and Sensor Type 2.

Nexus units shall include an Nvidia processor (or equal), two 8P8C Ethernet receptacles, Wi-Fi communications, one DA-15 synchronous serial communications port conformant to NEMA TS 2 Section 3.3.1 (Port 1 Physical and Protocol), and a front panel menu-driven user interface with a backlit display and navigation buttons.

The Nexus shall interoperate with NEMA TS 1, NEMA TS 2, Model 33x, ITS, and ATC transportation field cabinets and support the NEMA TS 2 and ITS/ATC cabinet synchronous serial bus protocols. It shall be capable of logging all communications on the synchronous serial bus including frames transmitted by other secondary stations, detect the cabinet I/O protocol currently in use (TS 2 or ITS/ATC) in order to automatically configure the synchronous serial port, and detect any other I/O interface units (BIUs or SIUs) currently in use in order to prevent duplicate synchronous serial bus address assignments.

1.4 Auxiliary Components

1.4.1 Nexus Power & Communications Assembly (or approved equal)

The Nexus Power & Communications Assembly shall reside in the transportation field cabinet. It shall comprise a DIN rail to which the following components are mounted:

- Terminal blocks for utility power
- Power supply for Nexus
- Cellular modem
- Firewall router

The cellular modem shall be capable of switching between all major mobile network operators without changing the SIM card.

1.4.2 Sensor Power Assembly

The Sensor Power Assembly shall reside in the transportation field cabinet to protect and condition power for either 4 or 6 Sensors. It shall comprise a DIN rail to which the following components are mounted:

- Terminal blocks
- Surge suppressor
- Circuit breakers
- Web relay

1.4.3 Antenna

The Antenna shall facilitate all wireless communications at the transportation field cabinet, including Wi-Fi, cellular, and GPS. It shall comprise nine antennas housed in a single IP67 enclosure that creates a weathertight seal when mounted to the transportation field cabi-net, and nine cables terminated with SMA male connectors.

2 Software

2.1 Embedded Software

Embedded software shall support over-the-air (OTA) updates.

2.2 Nexus User Interface (or approved equal)

Nexus units shall provide a browser user interface for viewing real-time data, viewing historical data, and editing configuration data. The browser user interface shall be compatible with the current versions of browsers based on the WebKit (Safari), Blink (Chrome, Edge), and Gecko (Firefox) rendering engines. Access to the Nexus browser user interface shall be restricted to designated users using username and password authentication.

2.3 Mobility OS (or approved equal)

The Platform shall include a cloud portal (“Mobility OS”). Mobility OS shall be hosted on AWS in the US or Canada using discrete servers for each infrastructure owner/operator (IOO). The IOO’s server shall not contain any other IOO’s data, and none of the IOO’s data shall reside on any other IOO’s server. Cloud portals that combine data from multiple IOOs on a single server are not compliant with this specification.

Mobility OS shall provide a browser user interface for viewing real-time data, viewing historical data, and editing configuration data. The browser user interface shall be compatible with the current versions of browsers based on the WebKit (Safari), Blink (Chrome, Edge), and Gecko (Firefox) rendering engines.

Access to Mobility OS shall be restricted to designed users using username and password authentication. Mobility OS shall support single sign on (SSO) from the IOO’s directory.

The Platform shall include Mobility OS for five years or for the term otherwise specified by the contract documents.

2.4 Communications

All data transmitted by the Platform between Sensors, Nexus units, and Mobility OS shall occur over virtual private networks (VPNs) using AES-256 encryption. Wi-Fi communications shall employ WPA2-AES security. Sensor–Nexus communications shall use Wi-Fi or Ethernet as specified by the contract documents.

3 Functionality

3.1 Detection

The Platform shall detect the passage and presence of traffic in zones located between 30 ft and 720 ft from the Sensors and report the occupancy of each zone via inputs of transportation

field cabinets. It shall be possible to associate each detection zone with one or more inputs, and it shall be possible to associate multiple detection zones with the same input. When a detection zone is occupied by traffic of the selected characteristics (class, speed, etc.), it shall be considered actuated, and its inputs shall be ON; otherwise, its inputs shall be OFF.

The Platform shall support the full input functionality of NEMA TS 1, NEMA TS 2, Model 33x, ITS, and ATC transportation field cabinets, such that inputs can be mapped in actuated signal controllers to detectors, programmable logic, or any other input function supported by the controller.

To minimize Sensor–Nexus communications, all processing required to detect, classify, and track objects shall occur in the Sensor.

Detection accuracy shall be at least 98% under typical environmental conditions, where "detection accuracy" is time with no false calls or missed calls versus total time, expressed as a percentage. The Platform's detection accuracy shall have been evaluated at a minimum of six traffic control signals, each owned and operated by a different IOO on roadways open to the public. Evaluations performed at test beds, closed tracks, academic institutions, research laboratories, signal maintenance shops, and other such facilities and environments not open to public travel shall not be used to satisfy this requirement. Upon request, the Manufacturer shall provide engineering reports for the evaluations that include descriptions of their methodologies and results. The reports shall be attested by a licensed Professional Engineer employed by the Manufacturer.

3.1.1 Sensor Fusion

The Sensor shall fuse video and radar, continually evaluating and comparing video and radar data to achieve optimal detection for the current environmental conditions, traffic, and detection zones. Detection shall not be affected by a loss of either video alone or radar alone, whether due to environmental conditions, malfunctions, or otherwise. Platforms with separate video detection zones and radar detection zones or those that otherwise treat video and radar as independent, non-fused sensors are not compliant with this specification.

3.1.2 Classification

The Platform shall classify each object as an automobile, truck, bus, motorcycle, bicycle, or pedestrian.

3.1.3 Tracking

The Platform shall track the position (lane, phase, and distance to stop line) and trajectory (direction and speed) of each object.

3.1.4 Intelligent False Call Rejection

The Platform shall not actuate detection zones occupied by vehicles that are not moving with the prevailing flow of traffic, including vehicles that are performing road work, disabled, or illegally parked. This functionality prevents these vehicles from registering demand and unnecessarily calling or extending phases.

3.1.5 Failsafe Operation

Upon any anomaly that affects its ability to provide accurate detection, including but not limited to hardware or communications failures, the Platform shall default to a safe condition via constant calls or other mechanism supported by the transportation field cabinet.

3.2 V2X

The Platform shall support connected vehicle applications and connected intersection operation in accordance with relevant industry standards and guidelines including CTI 4001, CTI 4501, J2735, J2745, NTCIP 1202, and NTCIP 1218. It shall be capable of generating SPAT data for all makes and models of actuated signal controllers and transportation field cabinets, including those without built-in SPAT or TSCBM generation capabilities, and SDSMs for non-connected road users per SAE J3224.

3.3 Turning Movement Counts

The Platform shall detect maneuvers made by traffic at the intersection and classify them as right turns, through movements, left turns, U-turns, and pedestrian crossings (“Turning Movement Counts”). Turning Movement Counts shall be generated automatically upon installation of the Platform from object detection rather than detection zone actuations so as not to require setup or configuration of detection zones specifically for counts.
Turning Movement Counts shall be uploaded to Mobility OS. A graphical user interface (GUI) for retrieval and analysis of Turning Movement Counts shall be provided in Mobility OS. The GUI shall support filtering Turning Movement Counts by date/time for either a single period or two periods (for side-by-side comparisons), by maneuver (left, through, right, etc.), by class (car, truck, bus, etc.), and by approach. The GUI shall support downloads of Turning Movement Counts in CSV and PDF formats aggregated in 15 minute, 1 hour, and 1 day bins.

3.4 Dilemma Zone Detection

The Platform shall detect vehicles in the dilemma zone (“Dilemma Zone Detection”). Dilemma Zone Detection shall be implemented via Dilemma Detection Zones, where a Dilemma Detection Zone has a user-defined location (upstream and downstream distances from the stop line), speed range, and extension time. Each Dilemma Detection Zone shall be capable of being associated with one or more inputs in the transportation field cabinet.
When a vehicle enters a Dilemma Detection Zone and the speed of the vehicle is within the range of speeds for said Dilemma Detection Zone, the Platform shall actuate the inputs associated with the Dilemma Detection Zone for the associated extension time. By associating the inputs with extension detectors in the actuated signal controller, phases can be extended until vehicles are clear of the dilemma zone.

3.5 Pedestrian Protection

The Platform shall detect pedestrians in the crosswalk (“Ped Protection”). Ped Protection shall be implemented via Ped Protection Zones drawn over crosswalks. Each Ped Protection Zone shall be capable of being associated with one or more inputs in the transportation field cabinet. The Platform shall actuate the inputs associated with the Ped Protection Zone when the zone is occupied by a pedestrian. By associating the inputs with detectors in the actuated signal controller, vehicle phases, pedestrian phases, and signal intervals can be extended, and custom logic can be implemented to enable other responses.

3.6 Automated Traffic Signal Performance Measures

The Platform shall provide automated traffic signal performance measures (ATSPMs). ATSPMs shall be generated automatically upon installation of the Platform from object detection rather than detection zone actuations so as not to require setup or configuration of detection zones specifically for ATSPMs.
ATSPMs shall be supported for all makes and models of actuated signal controllers and transportation field cabinets, including those that do not natively support high-resolution data logging. ATSPMs shall run in parallel with and not interfere with any third-party ATSPMs that use the high-resolution data logging facilities of the actuated signal controller.
A GUI for retrieval and analysis of ATSPMs shall be provided in Mobility OS. The GUI shall support filtering ATSPMs by date/time for either a single period or two periods (for side-by-side comparisons) and by classification (car, truck, bus, etc.). The GUI shall support downloads of ATSPMs in CSV and PDF formats.
The following ATSPMs shall be provided:

- Average vehicle delay
- Maximum vehicle delay
- Level of service
- Pedestrian delay
- Arrivals on green/red
- Level
- Purdue phase termination
- Split monitor
- Peak hour, peak hour factor, design hour factor, and directional factor

3.7 Incident Detection

The Platform shall detect incidents that disrupt the normal flow of traffic, including but not limited to crashes, road work, and disabled vehicles. A time-stamped log of incidents shall be available in Mobility OS, and the Platform shall provide notifications of incidents via Mobility OS, email, text, and/or phone call. The means of delivering notifications shall be user-customizable per incident type.

3.8 Timing Optimization

The Platform shall provide real-time, distributed adaptive signal control (“Timing Optimization”). Timing Optimization shall be supported for all makes and models of actuated signal controllers and transportation field cabinets. Timing Optimization shall use data from object detection rather than detection zone actuations so as not to require setup or configuration of detection zones specifically for optimization.

Timing Optimization shall support a variety of intersection-level and corridor-level strategies including balanced delay reduction, progression, crossing arterial coordination, queue management during oversaturation, transit prioritization, pedestrian prioritization, maximal throughput, queue management on freeway off ramps, optimization of non-through movements, preemption recovery, and tightly spaced intersection management. Multiple strategies shall be capable of being in effect simultaneously. Cycle lengths shall be optimized and implemented on a per-Intersection basis so as not to require a common cycle length along the corridor.

A GUI for configuring, controlling, and monitoring Timing Optimization shall be provided in Mobility OS.

3.9 Red Light Running Analytics

The Platform shall collect and store data about vehicles that enter the intersection (cross the stop line) on yellow and red including classification (car, truck, or bus), movement, approach, signal interval (yellow change interval, red clearance interval, or red phase off interval), distance, speed, and time after yellow.
A GUI for retrieval and analysis of the data shall be provided in Mobility OS. The GUI shall provide side-by-side comparisons of data from two periods facilitating before/after comparisons, a variety of textual and graphical views, and video clips of each event.

3.10 Remote Controller Access

The Platform shall provide access in Mobility OS to the browser user interface of actuated signal controllers and all functionality thereof as implemented by the manufacturer of the actuated signal controller such as status monitoring, timing parameter editing, configuration load/save, and controller front panel emulation.

3.11 Streaming Video

The Platform shall provide high-definition RTSP video streams in H.264 AVC and H.265 HEVC encodings for each Sensor and a quad view that combines streams from four Sensors.
Detection zone boundaries (outlines) shall be displayed in the video streams using one of two colors depending on whether the zone is actuated.
Traffic signal state shall be displayed in the video streams using icons located on the downstream (intersection) side of the stop line at each approach lane. The color of the signal state icons shall reflect the state of the associated phase, and the icons shall be labeled with the phase number.

3.12 Cellular Connectivity

The Platform shall include cellular data for five years or for the term specified by the contract documents.

4 Service & Support

4.1 Live Monitoring

The Manufacturer shall provide live, continuously staffed 24/7 monitoring of the Platform for five years or the term specified by the contract documents. The Platform shall be monitored for abnormalities, anomalies, performance, reliability, faults, incidents, alarms, and severe weather events. Monitoring by personnel who are on call during personal time, performing other tasks, or otherwise not solely dedicated to monitoring is not compliant with this specification. Personnel shall be knowledgeable in the principles and practices of traffic engineering, traffic control devices, and traffic signal equipment.

4.2 Installation Support

The Manufacturer or their designated representative shall provide on-site turn-on assistance, Monday through Friday, with a minimum one-week advance notice.

4.3 Technical Support

The Manufacturer shall provide 24/7 technical support via email and telephone for five years or the term specified by the contract documents.

4.4 Documentation

The Manufacturer shall provide electronic manuals in PDF or HTML formats that include installation, configuration, operation, troubleshooting, and maintenance information.

4.5 Training

The Manufacturer shall provide a maximum of two virtual training sessions per IOO of a maximum of three hours per session. The sessions shall include installation, configuration, operation, troubleshooting, and maintenance information. Instructors shall be certified by the Manufacturer.

4.6 Software Updates

The Platform shall include updates to the embedded and cloud software for five years or the term specified by the contract documents.

5 Warranty

The Manufacturer shall warrant that all Manufacturer-supplied equipment and material is free from material and workmanship defects for five years or the term specified by the contract documents (“Hardware Warranty Period”). The Hardware Warranty Period shall start when the equipment is received by the IOO.
During the Hardware Warranty Period, the Manufacturer or their designated representative shall repair or replace, at no cost to the IOO, defective equipment and material. The Manufacturer or their designated representative shall maintain an adequate inventory of equipment and material to support warranty claims.

6 Manufacturer Certifications

The Manufacturer shall maintain SOC 2 Type II and ISO 27001 (Information Security Management) certifications and provide them on request.

7 Measurement and Payment

The Platform shall be measured in units of each and paid at the contract unit price per each.
The price shall include furnishing and installing the following components:

- Three Sensor Type 1
- One Sensor Type 2
- One Nexus
- One Nexus Power & Communications Assembly
- One Sensor Power Assembly
- One Antenna

The price shall include all work required to test and confirm proper operation of the individual components and integrate them as a complete system.

CITY OF LEMOORE

FOX STREET & 19TH AVENUE ROADWAY REPAIRS

GENERAL CONSTRUCTION NOTES

1. EXISTING UTILITIES AND EXISTING IMPROVEMENTS MAY BE SHOWN AT APPROXIMATED LOCATIONS DUE TO THE AVAILABLE RECORD INFORMATION AT THE TIME OF PLAN PREPARATION. OTHER UTILITY LINES MAY EXIST. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES BY POTHOLING OR LOCATING SERVICES "811" IF FOUND NECESSARY.

2. THE CONTRACTOR SHALL NOTIFY ALL CORRESPONDING UTILITY COMPANIES AND CALL "811" AT LEAST 48 HOURS BEFORE THE COMMENCEMENT OF ANY WORK WHICH MAY REQUIRE UTILITY VERIFICATION. ADDITIONALLY, THE CONTRACTOR WILL SUPPLY SOUTHERN CALIFORNIA GAS COMPANY WITH A CONSTRUCTION SCHEDULE AND NOTIFY OF ANY PRE-CONSTRUCTION MEETINGS.

3. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY OR SUBSTRUCTURE SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. NO CERTIFICATIONS IS MADE AS TO THE ACCURACY OR THOROUGHNESS OF THESE RECORDS. APPROVAL OF THESE PLANS BY THE CITY OF LEMOORE DOES NOT CONSTITUTE A REPRESENTATION OF THE ACCURACY OR COMPLETENESS OF LOCATION OR THE EXISTENCE OR NONEXISTENCE OF ANY UNDERGROUND UTILITY OR SUBSTRUCTURE WITHIN THE LIMITS OF THE PROJECT.

4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW THE FULL SET OF PLANS FOR ANY DISCREPANCIES AND OMISSIONS PRIOR TO THE COMMENCEMENT OF WORK. IF ANY DISCREPANCIES BETWEEN THESE PLANS AND THE FIELD ARE IDENTIFIED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WORK NOT IN CONFORMANCE WITH THE PLANS OR IN CONFLICT WITH ANY CODE.

5. AN APPROVED SET OF PLANS MUST BE AVAILABLE ON THE JOB SITE AT ALL TIMES.

6. THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

7. ALL WORK SHALL BE PERFORMED IN CONFORMANCE WITH THE PROVISIONS IN THE CALTRANS STANDARD SPECIFICATIONS AND PLANS DATED 2024, ALONG WITH THE CITY OF LEMOORE STANDARD DRAWINGS.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL MATERIALS, FABRICATIONS, EQUIPMENT, APPLIANCES, TRANSPORTATION, SERVICES, AND LABOR NECESSARY FOR THE CONSTRUCTION, ERECTION, AND INSTALLATION OF ALL WORK INDICATED ON THESE DRAWINGS AND/OR OUTLINED IN EACH SECTION OF THE SPECIFICATIONS.

9. FOR THE DURATION OF THE WORK, THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN AS MAY BE REQUIRED, ALL NECESSARY BARRICADES AND RAILINGS, LIGHTS, WARNING SIGNS, AND SIGNALS, AND SHALL TAKE ALL OTHER PRECAUTIONS AS MAY BE REQUIRED TO SAFEGUARD PERSONS, THE JOB SITE AND ADJOINING PROPERTY, AGAINST INJURIES AND DAMAGE OF ANY NATURE.

10. THE CONTRACTOR AND EACH SUBCONTRACTOR SHALL GIVE THEIR PERSONAL ATTENTION TO THE WORK, BE RESPONSIBLE FOR THE LAYOUT AND CORRECTNESS OF THEIR WORK AND COOPERATE WITH EACH OF THE VARIOUS TRADES TO OBTAIN A NEAT FINISHED AND WORKMANLIKE JOB.

11. THE CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT AT ALL TIMES AND IS NOT LIMITED TO NORMAL WORKING HOURS. THIS INCLUDES THE SUPERVISION AND SAFETY OF ALL PERSONS AND PROPERTY WITHIN THE PROJECT SITE FROM POTENTIAL HAZARDS RESULTING FROM CONSTRUCTION ACTIVITIES.

12. TO THE FULLEST EXTENT PERMITTED BY LAWS AND REGULATIONS, CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS OWNER AND ENGINEER, AND THE OFFICERS, DIRECTORS, MEMBERS, PARTNERS, EMPLOYEES, AGENTS, CONSULTANTS AND SUBCONTRACTORS OF EACH AND ANY OF THEM FROM AND AGAINST ALL CLAIMS, COSTS, LOSSES, AND DAMAGES (INCLUDING BUT NOT LIMITED TO ALL FEES AND CHARGES OF ENGINEERS, ARCHITECTS, ATTORNEYS, AND OTHER PROFESSIONALS AND ALL COURT OR ARBITRATION OR OTHER DISPUTE RESOLUTION COSTS) ARISING OUT OF OR RELATING TO THE PERFORMANCE OF THE WORK, PROVIDED THAT ANY SUCH CLAIM, COST, LOSS, OR DAMAGE IS ATTRIBUTABLE TO BODILY INJURY, SICKNESS, DISEASE, OR DEATH, OR TO INJURY TO OR DESTRUCTION OF TANGIBLE PROPERTY (OTHER THAN THE WORK ITSELF), INCLUDING THE LOSS OF USE RESULTING THEREFROM BUT ONLY TO THE EXTENT CAUSED BY ANY NEGLIGENT ACT OR OMISSION OF CONTRACTOR, ANY SUBCONTRACTOR, ANY SUPPLIER, OR ANY INDIVIDUAL OR ENTITY DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM TO PERFORM ANY OF THE WORK OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE.

13. DO NOT SCALE DRAWINGS. IF UNABLE TO LOCATE DIMENSIONS FOR ANY ITEM OF WORK, CONTACT THE ENGINEER FOR DIRECTION BEFORE PROCEEDING.

14. ALL DAMAGE TO AREAS AND/OR PROPERTY NOT SPECIFICALLY PART OF THE PROJECT SITE CAUSED DURING CONSTRUCTION ACTIVITIES WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RETURN TO PRE-CONSTRUCTION CONDITIONS.

15. CHANGES TO THE APPROVED DRAWINGS SHALL BE MADE BY ADDENDUM OR A CHANGE ORDER SIGNED BY THE ENGINEER AND APPROVED BY THE PUBLIC WORKS/ENGINEERING OFFICIALS.

16. DUST AND DEBRIS CONTROL MEASURES SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT - DISTRICT REGULATION VIII - FUGITIVE DUST RULES. THE CONTRACTOR SHALL PROTECT WORKERS FROM EXPOSURE TO VALLEY FEVER DURING DEMOLITION AND CONSTRUCTION OPERATIONS BY COMPLYING WITH APPLICABLE REGULATIONS, INCLUDING CALIFORNIA LABOR CODE §6709. THIS SHALL INCLUDE PROVIDING ANNUAL VALLEY FEVER TRAINING TO EMPLOYEES AND PRIOR TO ANY SOIL-DISTURBING WORK. TRAINING SHALL COVER TRANSMISSION, RISK FACTORS, SYMPTOMS, PREVENTION METHODS, AND THE USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE). THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL MEASURES AND MONITOR SITE CONDITIONS TO ENSURE THEIR EFFECTIVENESS. WHEN DUST CANNOT BE ADEQUATELY CONTROLLED, THE CONTRACTOR SHALL PROVIDE NIOSH-APPROVED RESPIRATORS OR OTHER APPROPRIATE PPE. SUSPECTED WORK-RELATED CASES SHALL BE PROMPTLY REPORTED IN ACCORDANCE WITH CALOSHA REQUIREMENTS.

17. IN ORDER TO REDUCE NOISE IMPACTS FROM THE CONSTRUCTION PROJECT, ALL CONSTRUCTION ACTIVITIES SHALL ONLY OCCUR BETWEEN THE HOURS OF 7:00 AM AND 4:30 PM.

18. THE CONTRACTOR SHALL PREPARE AND SUBMIT A TEMPORARY TRAFFIC CONTROL PLAN FOR REVIEW AND APPROVAL BY THE CITY AND THE ENGINEER PRIOR TO ANY WORK IN THE STREET RIGHT-OF-WAY. CONSTRUCTION AREA SIGNS FOR TEMPORARY TRAFFIC CONTROL SHALL BE FURNISHED, INSTALLED, MAINTAINED, AND REMOVED WHEN NO LONGER REQUIRED IN CONFORMANCE WITH THE PROVISIONS IN SECTION 12, " TEMPORARY TRAFFIC CONTROL DEVICES," OF THE STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS.

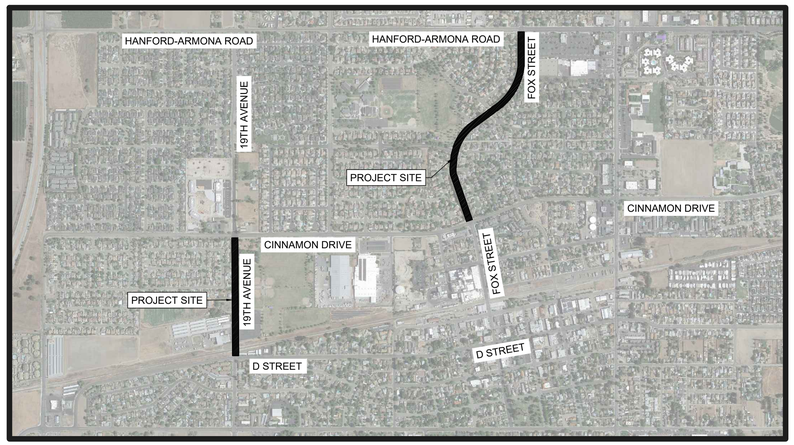
19. CONTRACTOR SHALL SUBMIT A MONUMENTATION PERPETUATION PLAN TO BE APPROVED BY THE ENGINEER BEFORE COMMENCING WORK.

20. CONTRACTOR TO PROVIDE TEMPORARY REFLECTIVE MARKERS AND TO PROTECT IN PLACE AFTER INSTALLATION. ANY MARKER THAT IS DAMAGED AND IS NO LONGER REFLECTIVE SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL HAVE THE OPTION OF PLACING TEMPORARY MARKERS IMMEDIATELY AFTER ROADWAY TREATMENT TO AVOID REFLECTIVE MARKER DAMAGE.

21. CONTRACTOR SHALL ISSUE NOTICE OF WORK TO RESIDENTS 72 HOURS PRIOR TO COMMENCEMENT OF WORK. NOTICE SHALL BE SUBMITTED FOR APPROVAL PRIOR TO DISBURSEMENT.

22. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH ANY PUBLIC AGENCY THAT MAY BE IMPACTED SUCH AS REFUSE, SCHOOL DISTRICT, LOCAL TRANSIT AUTHORITY, POLICE DEPARTMENT, FIRE DEPARTMENT, AND OTHER PUBLIC SERVICES.

23. CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING NO PARKING SIGNAGE 72 HOURS PRIOR TO WORK AND THE REMOVAL OF PARKED VEHICLES WITHIN PROJECT LIMITS.



VICINITY MAP

CITY OF LEMOORE

N

N.T.S

MONUMENTATION PERPETUATION REQUIREMENTS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONUMENTATION AND/OR BENCHMARKS WHICH WILL BE DISTURBED OR DESTROYED BY CONSTRUCTION. ANY MONUMENT OR BENCHMARK FOUND TO BE DISTURBED OR DESTROYED WILL BE THE REASONABILITY OF THE CONTRACTOR AND PAID BY THE CONTRACTOR TO REPLACE SUCH MONUMENT OR BENCHMARK. SUCH POINTS SHALL BE REFERENCED AND REPLACED WITH APPROPRIATE MONUMENTATION BY A LICENSED LAND SURVEYOR OR A REGISTERED CIVIL ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING. A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED BY THE LICENSED LAND SURVEYOR OR CIVIL ENGINEER AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT (BUSINESS AND PROFESSIONS CODE SECTION 8771).

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND RECEIVE THE ENGINEER'S APPROVAL TO COMMENCE WORK ONCE ALL EXISTING ROADWAY MONUMENTS HAVE BEEN NOTED & PROTECTED IN PLACE.

SCOPE OF WORK

THE PURPOSE OF THIS PROJECT IS TO IMPROVE TRAVEL ALONG SEGMENTS OF 19TH AVENUE AND FOX STREET WITHIN THE CITY OF LEMOORE AND PROVIDE INCREASED SAFETY FOR DRIVERS, PEDESTRIANS, AND BICYCLISTS. THE SEGMENT FOR FOX STREET IS APPROXIMATELY 1/2 MILE LONG WHILE THE SEGMENT FOR 19TH AVENUE IS APPROXIMATELY 1/3 MILE LONG.

FOX STREET REPLACES CONCRETE CURBS, GUTTERS, AND SIDEWALKS DAMAGED BY TREE AND/OR STUMP ROOTS. TREES AND/OR STUMPS THAT HAVE DAMAGED THE CONCRETE FACILITIES WILL BE REMOVED, ROOTS GRINDED, AND REPLACED WITH 15 GALLON CHINESE PISTACHE TREES.

THIS PROJECT CONTAINS AN OVERLAY FOR FOX STREET BETWEEN HANFORD-ARMONA ROAD AND HANOVER AVENUE. A MICRO-SURFACING TREATMENT WILL CONTINUE FROM HANOVER AVENUE TO CINNAMON DRIVE. 19TH AVENUE CONTAINS AN OVERLAY BETWEEN CINNAMON DRIVE AND D STREET. BOTH 19TH AVENUE AND FOX STREET WILL CONTAIN SIGNAGE, STRIPING, AND MARKING ADJUSTMENTS.

INDEX OF PLANS

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COMCAST
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A&M CONSULTING ENGINEERS

ENGINEERING PLANS FOR:
CITY OF LEMOORE
FOX STREET & 19TH AVENUE ROADWAY REPAIRS

SHEET TITLE:
COVER SHEET

REVISIONS
NO. 2 ADDENDUM 2

SCALE: N.T.S.
JOB NO: 224-036
QA/QC: OM
FILE: 224_036_COVER.DWG
DATE: 9/17/2025

SHEET NO.
1
OF 31

LEGEND

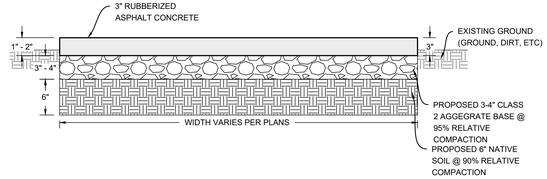
- PROPOSED RUBBERIZED ASPHALT CONCRETE PER DETAIL 1 ON THIS SHEET. CONSTRUCT 3" ASPHALT CONCRETE OVER 3-4" OF 95% RELATIVE COMPACTION CLASS 2 AGGEGRATE BASE AND 6" OF 90% RELATIVE COMPACTION NATIVE SOIL
- PROPOSED DETECTABLE WARNING SURFACES PER CITY STANDARD C-4D ON SHEET 28
- RELOCATED WOODEN POST
- EXISTING TREE
- EXISTING WOODEN POSTS
- EXISTING UTILITY POLE
- EXISTING ASPHALT CONCRETE

CONSTRUCTION NOTES

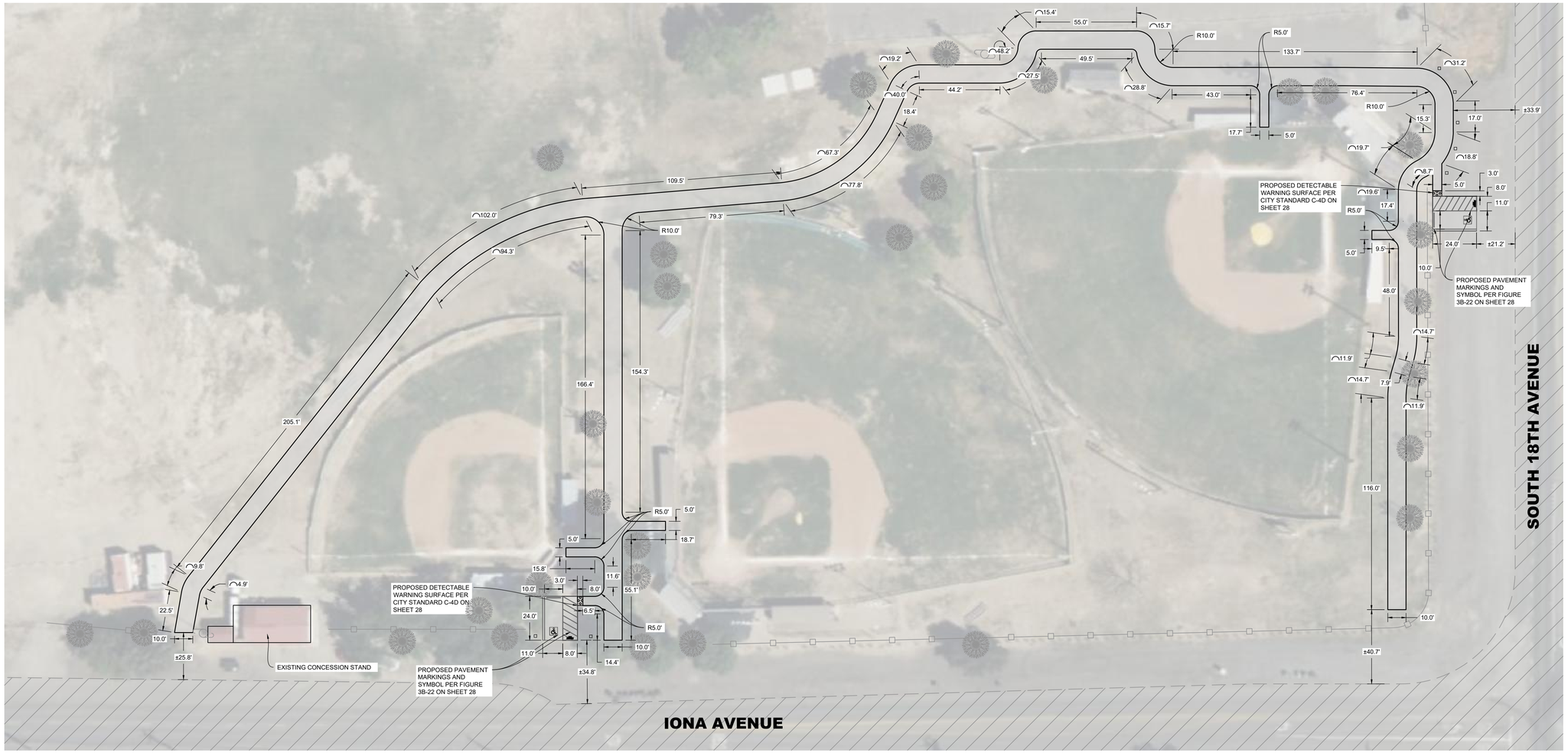
1. LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATED. CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES BEFORE COMMENCEMENT OF WORK. NO ADDITIONAL PAYMENT SHALL BE AUTHORIZED FOR DAMAGES RESULTING FROM IMPACTS TO EXISTING UTILITIES.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT UTILITY COVERS AND ENCASEMENT WITHIN THE CONSTRUCTION WORK TO PREVENT DAMAGES. NO ADDITIONAL PAYMENT SHALL BE AUTHORIZED FOR DAMAGES TO UTILITY COVERS
3. ALL DIMENSIONS ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY DIMENSIONS PRIOR TO CONSTRUCTION.
4. CONTRACTOR SHALL EXCAVATE EXISTING GROUND INCLUDING BUT NOT LIMITED TO: GRASS, NATIVE SOIL, ETC IN ORDER TO INSTALL ASPHALT CONCRETE.
5. CONTRACTOR SHALL DAYLIGHT ASPHALT CONCRETE TO EXISTING GROUND AT ENTRANCES TO PARKING SPOTS FOR DISABLED PERSONS FOR EASE OF ACCESS.
6. CONTRACTOR SHALL REMOVE AND RELOCATE WOODEN POSTS TO SPECIFIED LOCATIONS PER PLANS TO ALLOW PASSAGE FOR TRAIL AND/OR PARKING.
7. ALL STRIPING AND PAVEMENT MARKING SHALL CONFORM TO CALTRANS STANDARD PLANS (2024 REVISED STANDARD PLAN RSP) AND THE LATEST EDITION OF THE CA 2014 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD).

ESTIMATED QUANTITIES OF ASPHALT

BID ADDITIVE 3 - LEMOORE LITTLE LEAGUE		
SQUARE FEET	CUBIC FEET	TONS ASPHALT
15365	3842	279



DETAIL 1 - ASPHALT INSTALLATION (N.T.S.)



LEMOORE LITTLE LEAGUE
SCALE: 1" = 30'

N

811 Know what's below. Call 811 before you dig.

REGISTERED PROFESSIONAL ENGINEER — ZACHARY T. MUNIZ — No. 98165 — CIVIL — STATE OF CALIFORNIA

A&M CONSULTING ENGINEERS

ENGINEERING PLANS FOR:
CITY OF LEMOORE
FOX STREET & 19TH AVENUE ROADWAY REPAIRS

SHEET TITLE:
LEMOORE LITTLE LEAGUE (ADDITIVE 3)

REVISIONS
NO. 2 ADDENDUM 2

SCALE: AS SHOWN
JOB NO: 224-036
QA/QC: OM
FILE: 224_036_LLL_HPARK.DWG
DATE: 9/17/2025

SHEET NO.
27
OF 31

LEGEND

PROPOSED RUBBERIZED ASPHALT CONCRETE PER DETAIL 1 ON SHEET 27. CONSTRUCT 3" ASPHALT CONCRETE OVER 3-4" OF 95% RELATIVE COMPACTION CLASS 2 AGGREGATE BASE AND 6" OF 90% RELATIVE COMPACTION NATIVE SOIL.

EXISTING TREE

EXISTING ASPHALT CONCRETE

CONSTRUCTION NOTES

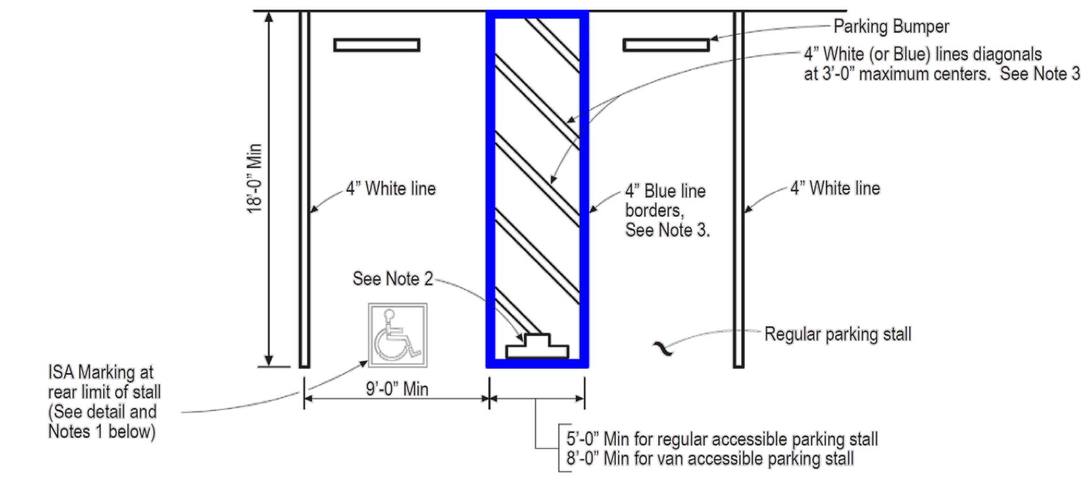
1. LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATED. CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES BEFORE COMMENCEMENT OF WORK. NO ADDITIONAL PAYMENT SHALL BE AUTHORIZED FOR DAMAGES RESULTING FROM IMPACTS TO EXISTING UTILITIES.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT UTILITY COVERS AND ENCASEMENT WITHIN THE CONSTRUCTION WORK TO PREVENT DAMAGES. NO ADDITIONAL PAYMENT SHALL BE AUTHORIZED FOR DAMAGES TO UTILITY COVERS
3. ALL DIMENSIONS ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY DIMENSIONS PRIOR TO CONSTRUCTION.
4. CONTRACTOR SHALL EXCAVATE EXISTING GROUND INCLUDING BUT NOT LIMITED TO: GRASS, NATIVE SOIL, ETC IN ORDER TO INSTALL ASPHALT CONCRETE.

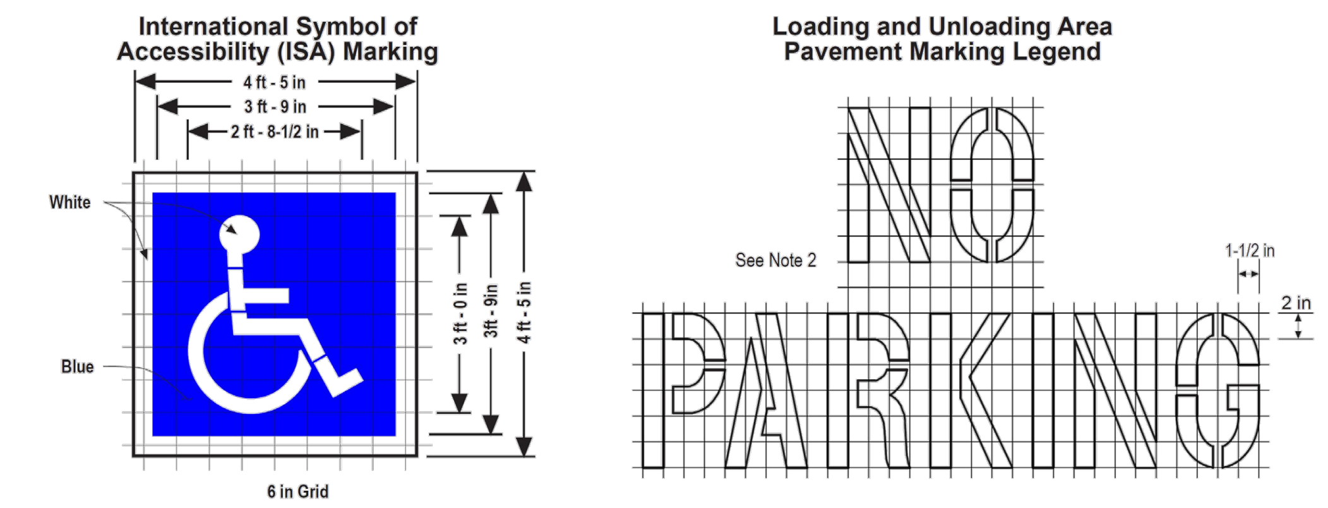
ESTIMATED QUANTITIES OF ASPHALT

ADDITIVE 3 - HERITAGE PARK		
SQUARE FEET	CUBIC FEET	TONS ASPHALT
15711	3928	285

HERITAGE PARK
SCALE: 1" = 50'

N





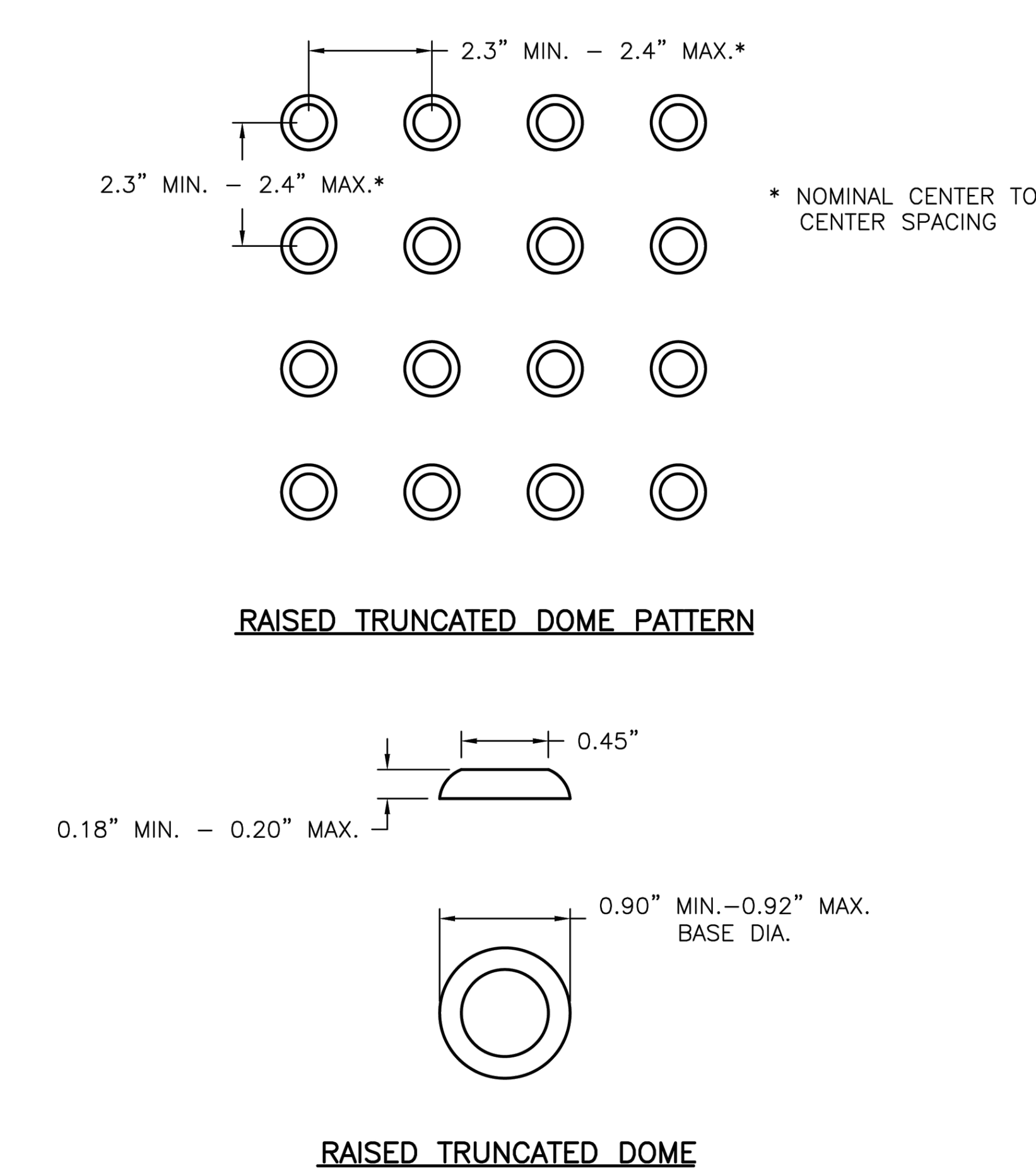
MUTCD NOTES:

1. The design details for this symbol, legends, and related markings are shown in the Department of Transportation's Standard Plans. See Standard Plan A24C for square unit area for the ISA marking.
2. The words "NO PARKING" shall be painted in the loading and unloading area in white letters no less than 12 in high on a contrasting background and located so that it is visible to traffic enforcement officials. See Standard Plan A24E for square unit area for "NO PARKING" legend.
3. Loading and unloading area border shall be marked in blue paint. The hatched lines shall be painted a suitable contrasting color to the parking space. Blue or white paint is preferred.

NOTES:

1. ALL LETTERS AND NUMBERS SHOULD BE IN CONFORMANCE WITH THE STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS APPROVED BY DEPARTMENT OF TRANSPORTATION.
2. THE DESIGN DETAILS FOR VARIOUS WORDS ARE ALSO SHOWN IN DEPARTMENT OF TRANSPORTATION'S STANDARD PLANS.
3. CONTRACTOR MAY USE CITY STENCIL

FIGURE 3B-22 (CA) - CALTRANS DISABLED PERSONS PARKING SYMBOL AND PAVEMENT MARKINGS
(N.T.S.)



NOTES:

1. DETECTABLE WARNING SURFACE SHALL BE INSTALLED AT THE BOTTOM OF ALL CURB RAMPS.
2. DETECTABLE WARNING SURFACE SHALL BE THE FULL WIDTH OF RAMP AND SHALL BE A MINIMUM OF 36 INCH IN DEPTH.
3. DETECTABLE WARNING SURFACE SHALL BE PREMIXED "FEDERAL YELLOW" COLORED POLYMER COMPOSITE MATERIAL.
4. ALL DETECTABLE WARNING PANELS INSTALLED WITH NEW IMPROVEMENTS SHALL BE WET SET TYPE/CAST IN PLACE TYPE PANELS.
5. IN RETROFIT TYPE SITUATIONS ON EXISTING SURFACES THE CITY WILL ALLOW RETROFIT TYPE WARNING PANELS. PANELS SHALL BE GLUED AND BOLTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. BOTTOM OF PANELS SHALL BE FLUSH AGAINST THE ADJACENT CONCRETE SURFACE.

FILE: C-4D.DWG

DETECTABLE WARNING SURFACE DETAIL	Rev.	Date: 12/17/19 City Engineer	STD. NO. C-4D

Know what's **below.** **Call 811 before you dig.**

ENGINEERING PLANS FOR:
CITY OF LEMOORE
FOX STREET & 19TH AVENUE ROADWAY REPAIRS
SHEET TITLE:
HERITAGE PARK (ADDITIVE 3)

A & M CONSULTING ENGINEERS

REGISTERED PROFESSIONAL ENGINEER ORFIL MUNIZ 88165 CIVIL STATE OF CALIFORNIA

REVISIONS
NO. 2 ADDENDUM 2

SCALE: AS SHOWN
JOB NO: 224-036
QA/QC: OM
FILE: 224_036_LLL_HPARK.DWG
DATE: 9/17/2025

SHEET NO.
28
OF 31

DEMOLITION NOTES

1. LOOP DETECTORS ON HANFORD-ARMONA RD AND SOUTHBOUND FOX ST (FOX ST, NORTH OF INTERSECTION SHALL BE ABANDONED IN PLACE.
2. NORTHBOUND FOX ST (FOX ST, SOUTH OF INTERSECTION) LOOP DETECTORS SHALL BE REMOVED BY GRINDING.
3. DETECTOR LOOP WIRING SHALL BE REMOVED FROM EXISTING CONDUITS AND CONTROLLER CABINET.
4. ALL AREAS NOT CLEARLY MARKED FOR DEMOLITION OR GRINDING THAT BECOME DAMAGED OR DESTROYED IN THE PROCESS OF CONSTRUCTING THE IMPROVEMENTS, SHALL BE REPLACED IN-KIND AT THE CONTRACTORS OWN EXPENSE.
5. SAWCUT EXISTING CONCRETE AND ASPHALT CONCRETE PAVEMENT WITH NEAT CLEAN EDGE LINES.
6. ANY CONTRACTOR PERFORMING WORK ON THIS PROJECT SHALL FAMILIARIZE THEMSELVES WITH THIS SITE AND SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES RESULTING DIRECTLY OR INDIRECTLY FROM THEIR OPERATIONS, WHETHER OR NOT SUCH FACILITIES ARE SHOWN ON THESE PLANS.

LEGEND

- GRIND 0.30' AND DISPOSE OF EXISTING ASPHALT CONCRETE PAVEMENT
- EXISTING STREET LUMINAIRE
- EXISTING CONTROLLER CABINET
- EXISTING TRAFFIC SIGNAL HEAD
- EXISTING PULLBOX
- EXISTING LOOP DETECTOR D
- EXISTING LOOP DETECTOR E

FOX ST.

HANFORD-ARMONA RD.

HANFORD-ARMONA RD.

EXISTING MCCAIN MODEL 170E CONTROLLER SHALL BE REMOVED & SALVAGED TO CITY CORPORATE YARD AND REPLACED WITH NEW MCCAIN ATC FLEX CONTROLLER (OR APPROVED EQUAL) PER MANUFACTURER RECOMMENDATIONS. INSTALL NOTRAFFIC NEXUS UNIT (OR APPROVED EQUAL) IN CABINET PER MANUFACTURER RECOMMENDATIONS. SEE SHEET 31 FOR DETAILS. CONTRACTOR SHALL INSTALL ALL OTHER APPLICABLE WIRING AND EQUIPMENT NECESSARY TO CREATE A FUNCTIONING AND OPERABLE SYSTEM. SYSTEM SHALL BE IN WORKING ORDER.

FOX ST.

811 Know what's below. Call 811 before you dig.

N

0 20 40 Feet

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER T. MUNIZ — 58165 — CIVIL — STATE OF CALIFORNIA

A&M CONSULTING ENGINEERS

ENGINEERING PLANS FOR:
CITY OF LEMOORE
FOX STREET & 19TH AVENUE ROADWAY REPAIRS
SHEET TITLE:
TRAFFIC SIGNAL - DEMOLITION (ADDITIVE 4)

REVISIONS
NO. 2 ADDENDUM 2

SCALE: 1" = 20'
JOB NO: 224-036
QA/OC: CM
FILE: 224_036_TS FOX.DWG
DATE: 9/17/2025

SHEET NO.
29
OF 31

CONTRACTOR NOTES

1. VIDEO DETECTION ZONES SHOWN ARE APPROXIMATE AND SHALL BE INSTALLED BY A NOTRAFFIC REPRESENTATIVE (OR APPROVED EQUAL).
2. CITY TO PROVIDE EXISTING PLAN AND/OR TIMING SHEETS TO CONTRACTOR.

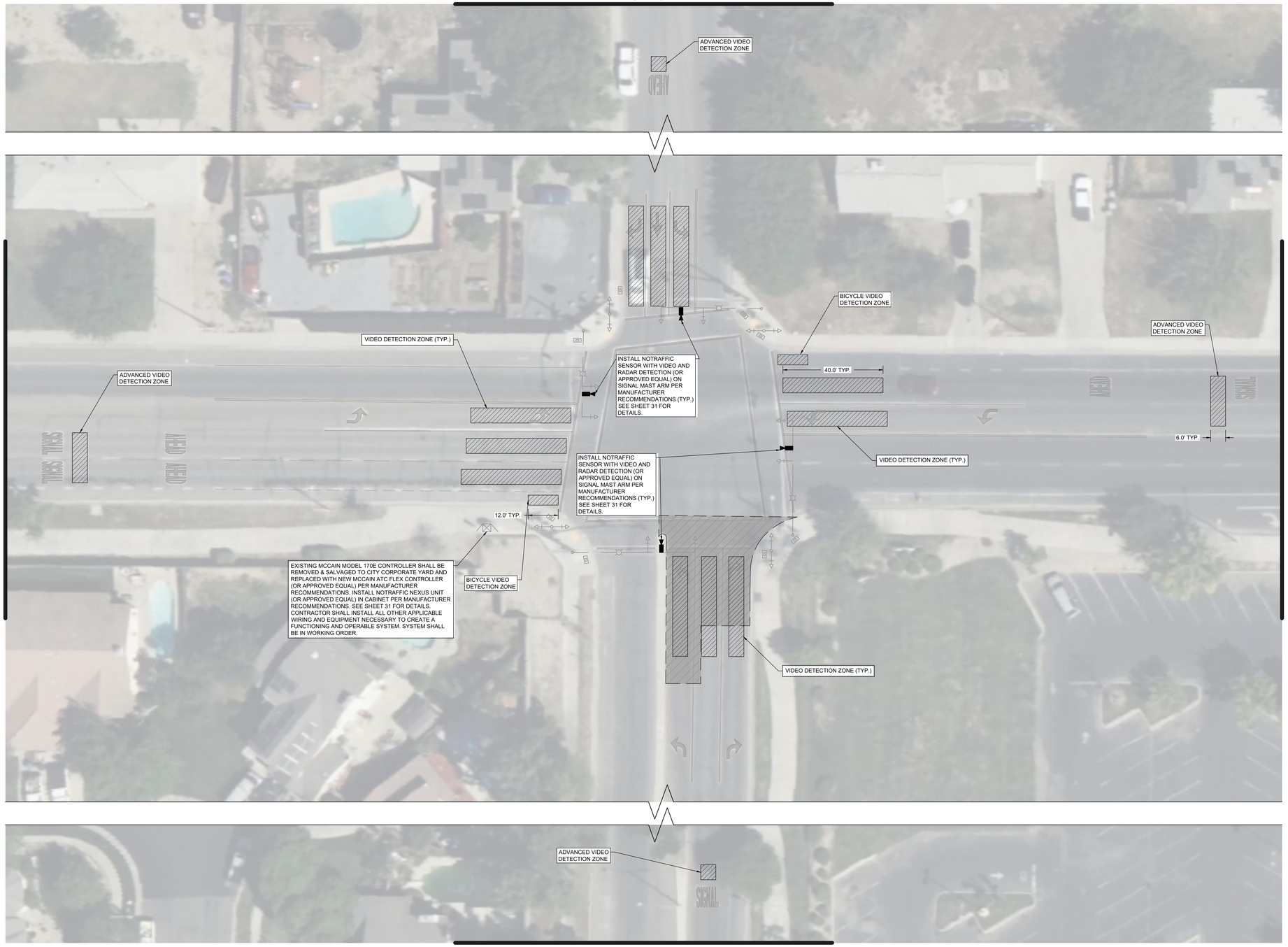
LEGEND

- EXISTING STREET LUMINAIRE
- EXISTING CONTROLLER CABINET
- EXISTING TRAFFIC SIGNAL HEAD
- EXISTING PULLBOX
- INSTALL NOTRAFFIC SENSOR WITH VIDEO AND RADAR DETECTION (OR APPROVED EQUAL) ON SIGNAL MAST ARM PER MANUFACTURER RECOMMENDATIONS (TYP.) SEE SHEET 31 FOR DETAILS.
- REMOVE AND REPLACE 0.30' HMA TYPE A OVER EXISTING AGGREGATE BASE COMPACTED 12" AT 95% RELATIVE COMPACTION.
- VIDEO DETECTION AREA

FOX ST.

HANFORD-ARMONA RD.

HANFORD-ARMONA RD.



FOX ST.

N

0 20 40 Feet

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER J. MUNIZ — 58165 — CIVIL — STATE OF CALIFORNIA

A&M CONSULTING ENGINEERS

ENGINEERING PLANS FOR:
CITY OF LEMOORE
FOX STREET & 19TH AVENUE ROADWAY REPAIRS
SHEET TITLE:
TRAFFIC SIGNAL - IMPROVEMENTS (ADDITIVE 4)

REVISIONS
NO. 2 ADDENDUM 2

SCALE: 1" = 20'
JOB NO: 224-036
QA/QC: CM
FILE: 224_036_TS FOX.DWG
DATE: 9/17/2025

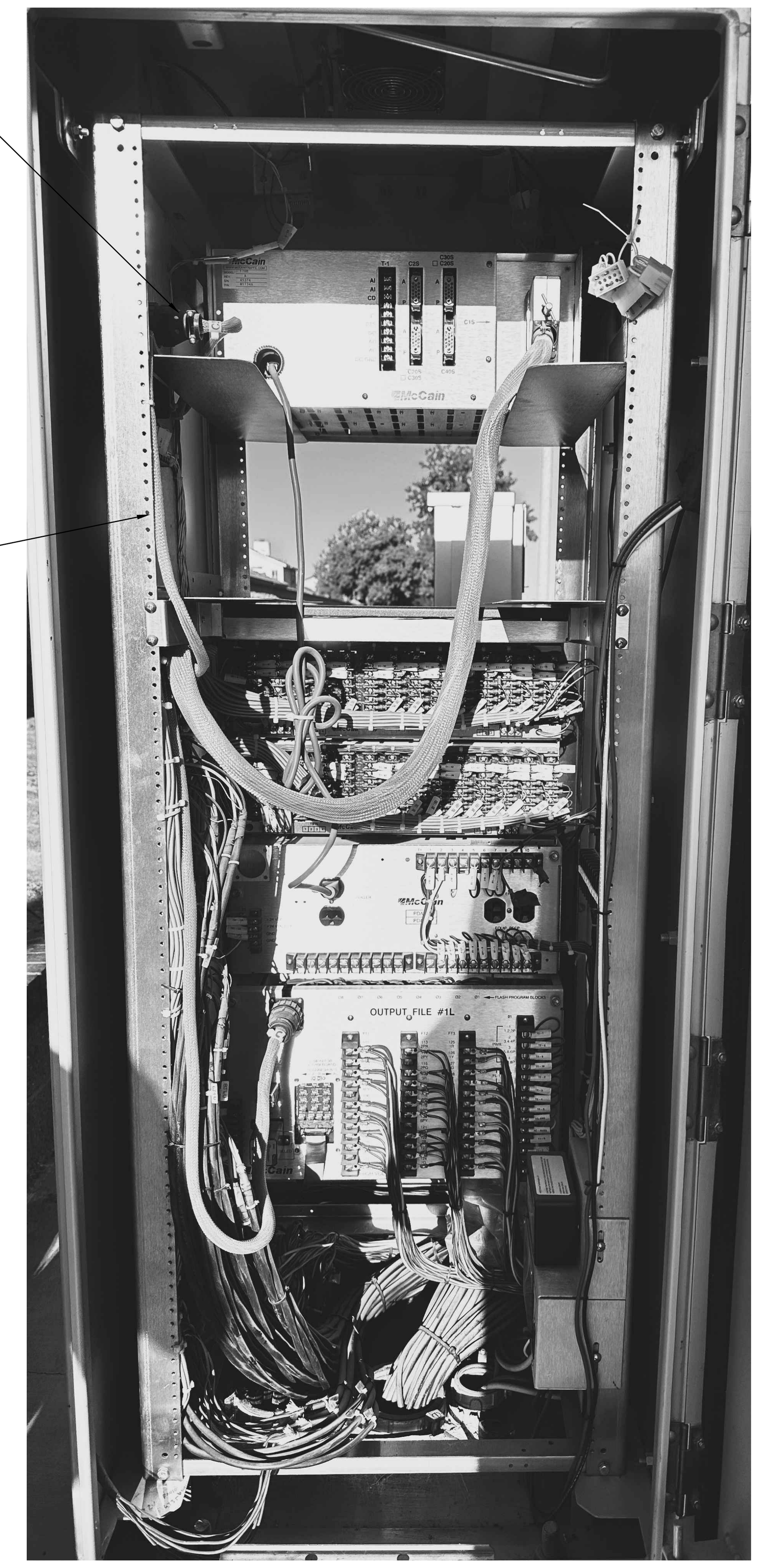
SHEET NO.
30
OF 31

EXISTING MCCAIN MODEL 170E CONTROLLER SHALL BE REMOVED & SALVAGED TO CITY CORPORATE YARD AND REPLACED WITH MCCAIN ATC FLEX CONTROLLER (OR APPROVED EQUAL) PER MANUFACTURER RECOMMENDATIONS. AND ALL OTHER APPLICABLE WIRING AND EQUIPMENT TO CREATE A FUNCTIONING SYSTEM. SYSTEM SHALL BE IN WORKING ORDER.

INSTALL NOTRAFFIC NEXUS UNIT (OR APPROVED EQUAL) PER MANUFACTURER RECOMMENDATIONS AND ALL OTHER APPLICABLE WIRING AND EQUIPMENT TO CREATE A FUNCTIONING SYSTEM. SYSTEM SHALL BE IN WORKING ORDER.

EXISTING CABINET - FRONT VIEW

N.T.S.



EXISTING CABINET - BACK VIEW

N.T.S.

SWARCO

McCAIN ATC FLeX® CONTROLLER

(OR APPROVED EQUAL)

The McCain ATC FLeX Controller is part of SWARCO McCain, Inc.'s widely-adopted ATC eX Controller Series. Built in full compliance with the ATC 6.25 standard, the McCain ATC FLeX Controller is perfectly designed for any ATC, Caltrans, and NEMA cabinet. The rugged and powerful controller is available in shelf and rack mount versions, and it includes a host of features offering flexibility to agencies as their needs evolve.

KEY BENEFITS

- Displays multiple status screens at the same time
- Provides local remote access for technical support
- Compatible with ATC, CALTRANS and NEMA cabinets
- Creates extra space in traffic cabinet and allows for a small cabinet footprint
- Supports application software from multiple vendors

PRODUCT DESCRIPTION

The McCain ATC FLeX Controller is equipped with an oversized, 16-line screen that features auto-contrast, making the screen legible in all conditions. Split-screen options allow users to view the operational status of the intersection and make timing adjustments simultaneously.

The controller's front panel design makes it easy to connect, program, and update the unit in any environment. Quick data transfers, firmware upgrades, and log retrievals can be completed via USB port directly from the front panel. Optional integrated wireless connectivity allows users to access local software through a web interface[1].

The McCain ATC FLeX Controller has a robust Linux operating system that provides a flexible, open-architecture that can support software from multiple vendors. For applications including intersection control, ramp metering, arterial master, or reversible lane control, check out SWARCO McCain's Omni eX® Intersection Control Software[2].

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STANDARD FEATURES

Operating System
- Linux

Microprocessors
- Freescale PowerQUICC II Pro microprocessor

Memory
- 1GB Main Memory
- 128 MB NAND Flash
- 16 MB NOR Flash
- 2 MB SRAM

APPLICABLE STANDARDS

- NEMA TS 2-2003 v2.06
- ATC 6.25

OPTIONS

- Custom D connectors
  - ATC FLeX NEMA TS 2 Type 2 configurations[3]
- International Input Voltage: 190 VAC to 253 VAC, 50 Hz (±3 Hz)

INTERFACES

Communication Interfaces
- SDLC ports (2)
- Serial (ASYNC) on front panel (3)
- ENET 1: 100 Base-T Ethernet switch, 1 uplink, and 1 additional port
- ENET 2: 100 Base-T Ethernet port dedicated for local communications
- Wi-Fi enabled (optional); uses ENET 2

Front Panel Interfaces
- Display: 16 lines x 40 characters
- Keyboard: 7 x 4 keypad (28 key)
- Datakey
- USB ports (2)
- SD Card Slot

Cabinet Interfaces
- ATC cabinets
- Caltrans cabinets
- ITS cabinets
- NEMA cabinets

SOFTWARE

Compatible with McCain Omni eX® Intersection Control Software[2] as well as third party software.

GENERAL SPECIFICATIONS

SPECIFICATIONS				
Compatibility	ATC Cabinet	Caltrans	NEMA TS 2 Type 1	NEMA TS 2 TYPE 2
Dimensions[4]:	12.5"W x 5.25"H x 7"D	19"W x 5.25"H x 7"D	12.5"W x 7.75"H x 7"D	12.5"W x 8.75"H x 7"D
Form Factor:	Shelf mount configuration. EIA rack mount compatible with Caltrans version only.			
Power:	89 VAC to 135 VAC, 60 Hz (±3 Hz)			
Environment:	Operating Temperature: -34°C to +74°C | Humidity: 0 to 95% (non-condensing)			
Weight[5]:	7.1 lbs	8.1 lbs	7.45 lbs	8.25 lbs
VIEW				
Front:				

[1]For users with Wi-Fi option, proper network, and software.
[2]See separate data sheet for details.
[3]For CALTRANS, SIEMENS EPAC, Traconex 390. More options available.
[4]Dimensions rounded to the nearest .01"
[5]Approximate

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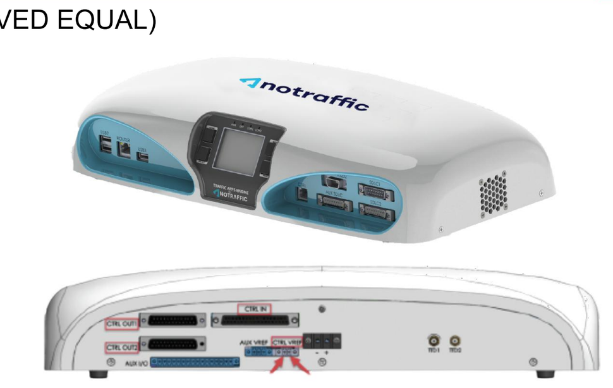
Nexus

Technical Specifications

(OR APPROVED EQUAL)

The NoTraffic™ Nexus Unit is installed in the cabinet at each intersection. It receives traffic demand data from the local sensors units, and places detection calls to the existing traffic controller.



	Specifications and Features
Temp & Humidity	-30°F to +165°F, up to 95 % RH per NEMA TS2 (-34.4 degree celsius + 73.8 degree celsius)
Ingress Protection	ezo per EC-60529
Dimensions	L 17.56 in. × W 9.28 in. × H 3.43 in L 44.60 cm. × W 23.57 cm.× H 8.71 cm.
Weight	5 lb. 8 oz. (2.5 kg)
Detector 1/0	NTCIP, SDLC, NEMA TS-1 & TS-2, ABC, or Caltrans C1/C11 SDLC (BIU/SIU)
Regulatory	FCC
Cloud Communications	3G/4G/CELLULAR
Wi-Fi	Wi-Fi -IEEE 802.11a/n/ac 5GHz
Bluetooth	Bluetooth v4.2 +EDR, Class 1, 2 and 3
Power	89V-264 VAC 50/60Hz
Max Consumption	40W
Mounting	NEMA TS-2 style, Caltrans 332, Shelf mounting, rack mounting available on request
Additional Ports	5X ethernet, 2X USB 2.0 and 1X USB 3.0

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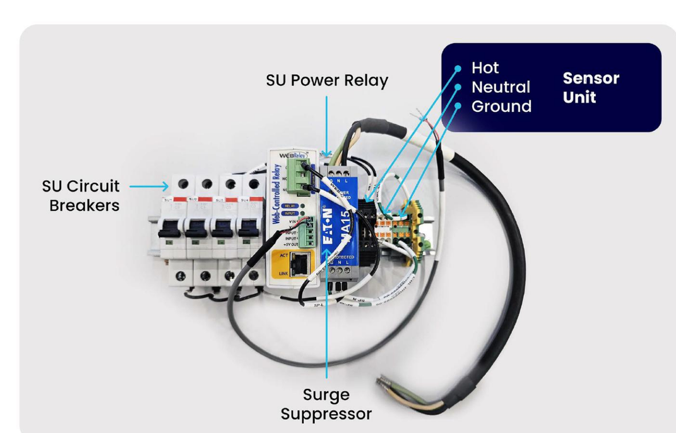
DIN Rail - Power DIN

Technical Specifications

(OR APPROVED EQUAL)

The DIN Rails are power and communication hubs of the NoTraffic™ AI Mobility Platform. The Power DIN rail will be used in deployments where the power to the Sensor Units is obtained via the cabinet.



	Specifications and Features
Temp & Humidity	-30°F to +165°F, up to 95 % RH per NEMA TS2 (-34.4 degree celsius + 73.8 degree celsius)
Dimensions	L 10"
DIN Rail	TS 35 X 7.5 slotted DIN Rail
Weight	3 lbs
Wi-Fi	Wi-Fi – IEEE 802.11a/n/ac 5GHz
Power	89V-264 VAC 50/60Hz
Max Consumption	40W
Mounting	8" spacing for Mounting in NEMA Cabinets with T-Nuts. Purchase a 19" adaptor if needed.
Other Features	Power Relay for Remote Power Cycle of Sensor Units

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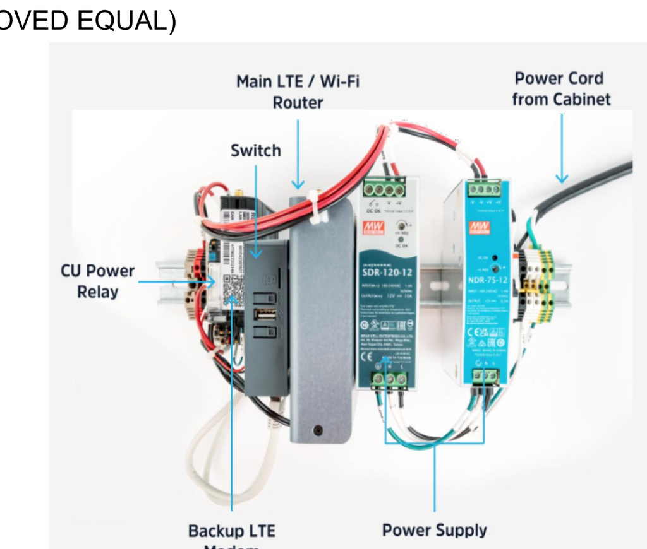
DIN Rail (Main DIN)

Technical Specifications

(OR APPROVED EQUAL)

The DIN Rails are power and communication hubs of the NoTraffic™ AI Mobility Platform. The Main DIN Rail will be used in all deployments, regardless of the power to the Sensor Units.



	Specifications and Features
Temp & Humidity	-30°F to +165°F, up to 95 % RH per NEMA TS2 (-34.4 degree celsius + 73.8 degree celsius)
Dimensions	L 14"
DIN Rail	TS 35 X 7.5 slotted DIN Rail
Weight	3 lbs
Regulatory	FCC
Communication	3G/4G
Wi-Fi	Wi-Fi – IEEE 802.11a/n/ac 5GHz
Power	89V-264 VAC 50/60Hz from Cabinet
Max Consumption	40W
Mounting	8" spacing for Mounting in NEMA Cabinets with T-Nuts
Switch	Five 10/100/1000 Ethernet ports

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Sensor Datasheet

(OR APPROVED EQUAL)

The NoTraffic™ Sensor fuses video and radar with AI to deliver precise, real-time detection and classification of everything from pedestrians to trucks. With weather-penetrating technology, it accurately monitors and counts traffic in all conditions. Its single object-based output provides detailed location, speed, lane, and classification data.

Typical Configuration

Included per Intersection: 1x Type 2 Sensor with built-in C-V2X RSU *
3x Type 1 Sensors (one per addtl. approach)

Detection

Video: 1080p @ 10 FPS, H.264 (AVC)
Radar: 60 GHz (V Band)
Classifications: Pedestrians, bicycles, motorcycles, cars, buses, trucks, and custom classifications
All-weather: Clear, fog, rain, snow, sun glare, night, etc.
Accuracy: Detection 99.5%
Counts 95–105%
Range: 720 ft (220 m)

Power

Supply: 89–264 VAC @ 50/60Hz
Consumption: 15 W typical, 18 W maximum

Certifications & Regulation

FCC Part 15

Communications

Connectivity: Type 1: Ethernet, Wi-Fi
Type 2: Ethernet, Wi-Fi, C-V2X 5.9 GHz Safety Band

Environmental

Temperature & Humidity: −30 F to 165 F @ up to 95% RH per NEMA TS 2 (−34 C to 74 C)
Ingress Protection: IP67, Salt Fog per MIL-STD 810
Shock & Vibration: 1.5 Grms operational, 5 G Endurance per IEC-60068-2, NEMA TS 2 Transportation Testing per ISTA2

Physical Dimensions

Size (L x W x H): 15-3/4" x 7-7/8" x 6-3/4" (400 mm x 200 mm x 190 mm)
Weight: Type 1: 6 lb 13 oz (3.1 kg)
Type 2: 7 lb 15 oz (3.6 kg)

Mounting

Brackets: 4" Saddle
Location: Mast arms or span wire strain poles
Height: 18 – 33 ft (5.5 – 10 m)

* V2X activation subscription required – available through the Mobility Store

REGISTERED PROFESSIONAL ENGINEER ORFIL MUNIZ 88165 CIVIL STATE OF CALIFORNIA

A & M CONSULTING ENGINEERS

ENGINEERING PLANS FOR:

CITY OF LEMOORE

FOX STREET & 19TH AVENUE ROADWAY REPAIRS

SHEET TITLE:

TRAFFIC SIGNAL - DETAILS (ADDITIVE 4)

REVISIONS

NO.	
2	ADDENDUM 2

SCALE: N.T.S.
JOB NO: 224-036
QA/QC: OM
FILE: 224_036_TS FOX.DWG
DATE: 9/17/2025

SHEET NO.

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