

PLANS OF PROPOSED EAST BLVD AND CENTER ST EXISTING TRAFFIC SIGNAL MODIFICATIONS TO FLASHING YELLOW ARROW

FOR REVIEW PURPOSE ONLY

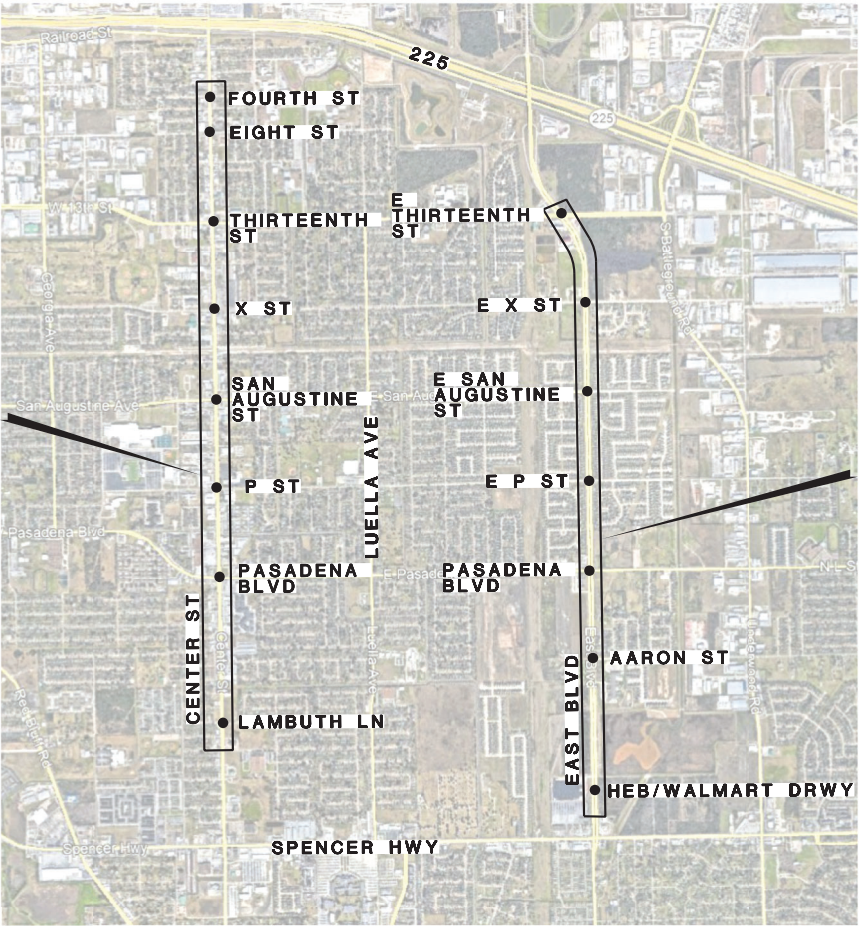


HARRIS COUNTY

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CENTER ST SITE LIMITS

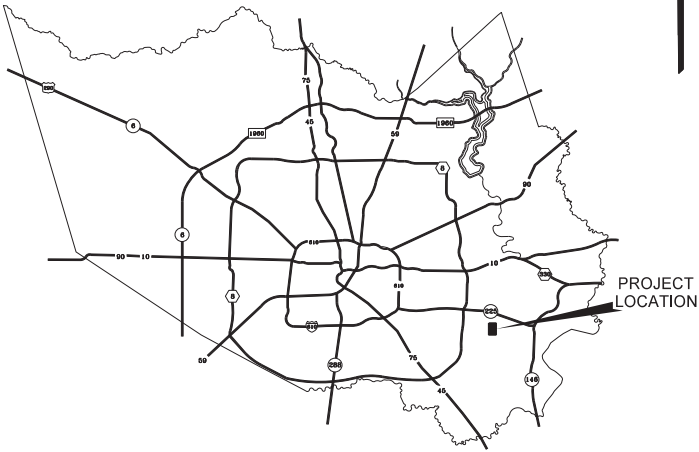


PROJECT VICINITY MAP
N.T.S.



5225 KATY FREEWAY, SUITE 400 HOUSTON, TX 77007
(713) 862-8848 TBPE NO. F-8934

PROJECT LOCATION
EAST BLVD KEY MAPS •538-M,R,V,Z
CENTER ST KEY MAPS •538-F,K,P,T,X



8/27/2021

GENERAL NOTES, SUMMARY OF WORK AND SPECIFICATIONS

PART 1 - GENERAL

Traffic Control

Contractor shall provide adequate traffic control when working in or around the traffic signals and are blocking a lane of traffic. Traffic control shall be in accordance with the Texas MUTCD and shall be coordinated with the City of Deer Park in advance.

Sequence of Work

All work on East Boulevard shall be completed and accepted by the City of Deer Park prior to commencing work on Center Street. Contractor shall not begin work on Center Street until authorized by the City of Deer Park.

PART 2 – SUMMARY OF WORK

General Description

The Scope of Work for this project shall consist of providing all supplies, support services, data, labor, tools, materials, equipment, supervision, construction and all else required to prepare the site, remove and replace designated existing traffic signal LED modules with new LED Modules as per the construction plans and make modifications in the controller cabinets as required. The intent of this work is to modify the designated signals to provide Flashing Yellow Arrow indications for the northbound and southbound left turn movements.

Work Locations

The following intersections are included:

East Boulevard at (7 locations):

- East Thirteenth St
- East X St.
- East San Augustine St.
- East P St.
- Pasadena Blvd.
- Aaron St.
- HEB/Walmart Driveway

Center Street at (8 locations):

- Fourth St.
- Eighth St.
- Thirteenth St.
- X St.
- San Augustine St.
- P St.
- Pasadena Blvd.
- Lambuth LN.

General Work Description (All Intersections)

The following work items shall be performed at all fifteen (15) intersections:

- Replace existing northbound and southbound left turn traffic signal LED modules with new LED modules with arrows.
- Remove existing overhead “LEFT ON ARROW ONLY” or “LEFT TURN SIGNAL” signs and install new “LEFT TURN YIELD ON FLASHING YELLOW ARROW” signs.
- Remove existing conflict monitor and replace with new LCD MMU516 w/ ethernet for flashing yellow arrow.
- Re-program all controllers to accommodate the Flashing Yellow Arrow left turn movements while maintaining the existing coordination timing currently programmed into the two corridors.

Specific Work Description (Per Intersection)

In addition to the work described above under General Work Description the following additional items of work are required per intersection:

EAST BLVD AT THIRTEENTH ST

- Furnish and install load switch and load capacitor per direction of flashing yellow arrow.

CENTER ST AT FOURTH (4) ST

- Furnish and install load switch and load capacitor per direction of flashing yellow arrow.
- Replace existing controller with new controller.

CENTER ST AT EIGHTH (8) ST

- Furnish and install load switch and load capacitor per direction of flashing yellow arrow.
- Replace existing controller with new controller.

CENTER ST AT X ST

- Replace existing controller with new controller.

CENTER ST AT E PASADENA ST

- Replace existing controller with new controller.

PART 3 – SPECIFICATIONS

LED Module

Description - All new traffic signal head LED Modules shall conform to Harris County Specification Item 690, Traffic Signal Heads, in particular Section 690.7 Optical Systems and shall be a Duralight Model JXJ300-07(G,R or Y) or equal.

Measurement and Payment – Traffic Signal LED Modules shall be paid by each module and shall include the removal of the existing modules and a new molded neoprene gasket.

Controller

All new traffic signal controllers shall be PROD, 980, TS-2, E-Net, EE PCB, V6 manufactured by Trafficware and shall be capable of running the Flashing Yellow Arrow left turn configuration.

Measurement and Payment – Traffic Signal Controller shall be paid by each controller furnished and installed and shall include the programming of the existing signal timing sequence which includes an existing coordinated timing configuration.

Conflict Monitor

All new conflict monitors shall be MMU2-16LE manufactured by Eberle Design, Inc. or equal.

Measurement and Payment – Conflict Monitor shall be paid by each conflict monitor furnished and installed and include configuring the monitor for each intersection.

Reprogram Intersection

Description – This work consists of all work at the intersection including work in the controller cabinet to make the necessary revisions to the hardware/software to implement the Flashing Yellow Arrow (FYA) configuration. This work includes but is not limited to installation of the necessary hardware, reprogramming the controller to run the FYA sequence and maintaining the existing coordinated timing for each corridor.

Measurement and Payment – Reprogram Intersection shall be paid by each intersection.

Signs


Description – This item shall govern for aluminum signs which are of one piece construction with reflectorized face. The signs shall conform to Harris County Specification Item 624, Aluminum Signs.

Measurement and Payment – Signs shall be paid by each sign furnished and installed and shall include the removal of the existing sign and all mounting hardware.


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8/27/2021 12:49:39 PM kkozakis

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EAST BLVD AND CENTER STREET																		
ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL	CENTER ST @								EAST BLVD @						
				4th St	8th St	13th St	X St	San Augustine St	P St	Pasadena Blvd	Lambuth LN	E 13th St	E X St	E San Augustine St	E P St	Pasadena Blvd	Aaron St	H.E.B/ Walmart
1	REMOVE EXISTING LED MODULE AND FURNISH AND INSTALL RED ARROW LED MODULE	EA	31	2	2	2	2	2	2	2	1	4	2	2	2	2	2	2
2	REMOVE EXISTING LED MODULE AND FURNISH AND INSTALL YELLOW ARROW LED MODULE	EA	62	4	4	4	4	4	4	4	2	8	4	4	4	4	4	4
3	REMOVE EXISTING LED MODULE AND FURNISH AND INSTALL GREEN ARROW LED MODULE	EA	31	2	2	2	2	2	2	2	1	4	2	2	2	2	2	2
4	REMOVE EXISTING SIGN AND FURNISH AND INSTALL "LEFT TURN YIELD ON FLASHING YELLOW ARROW" SIGN (R10-17T) (30" X 30")	EA	31	2	2	2	2	2	2	2	1	4	2	2	2	2	2	2
5	FURNISH AND INSTALL CONTROLLER - PROD, 980, TS2-2, E-NET, EE PCB, V61	EA	4	1	1	0	1	0	0	1	0	0	0	0	0	0	0	0
6	FURNISH AND INSTALL CONFLICT MONITOR, MMU2-16LE w/ Ethernet for Flashing Yellow Arrow	EA	15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	FURNISH AND INSTALL LOAD SWITCH AND CAPACITOR	EA	6	2	2	0	0	0	0	0	0	2	0	0	0	0	0	0
8	REPROGRAM INTERSECTION	EA	15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1



5225 KATY FREEWAY, SUITE 400 HOUSTON, TX 77007
(713) 862-8848 WWW.MIDTOWNENGINEERS.COM
TBPE NO. F-8934

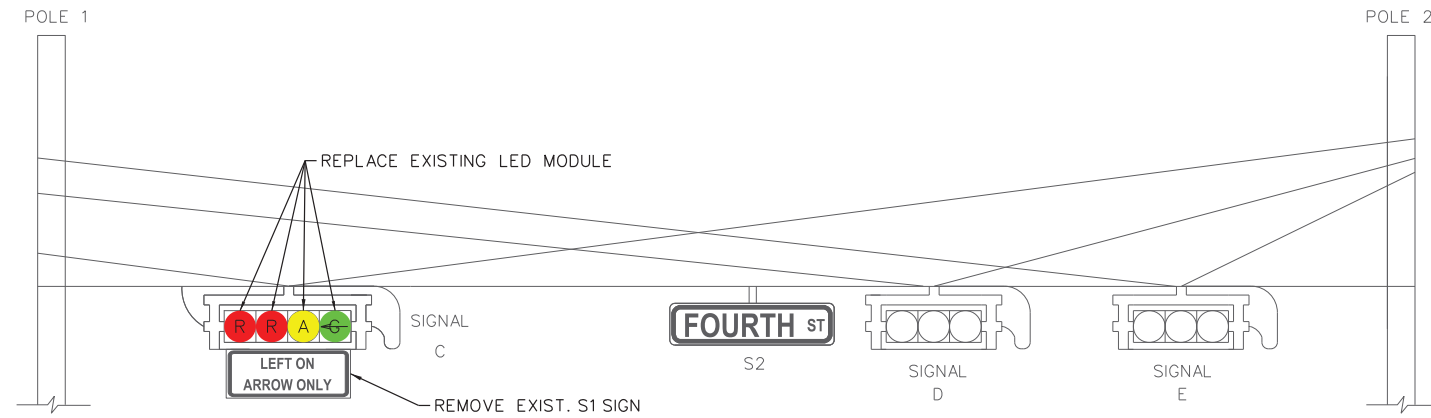


8/27/2021

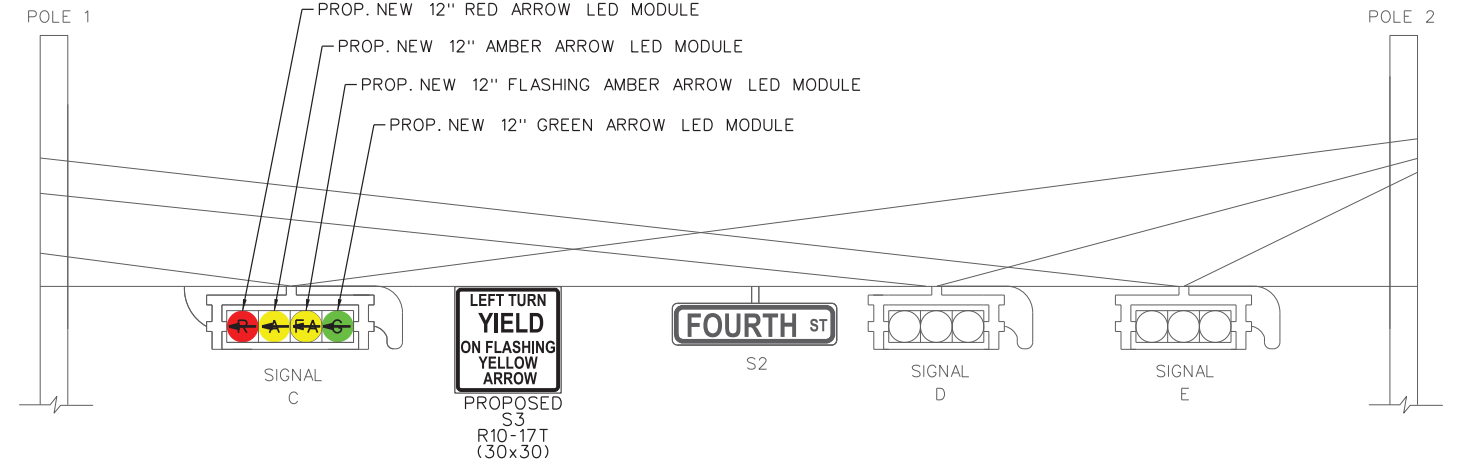
EAST BLVD AND CENTER ST EXISTING TRAFFIC SIGNAL
MODIFICATIONS TO FLASHING YELLOW ARROW

BASIS OF ESTIMATES

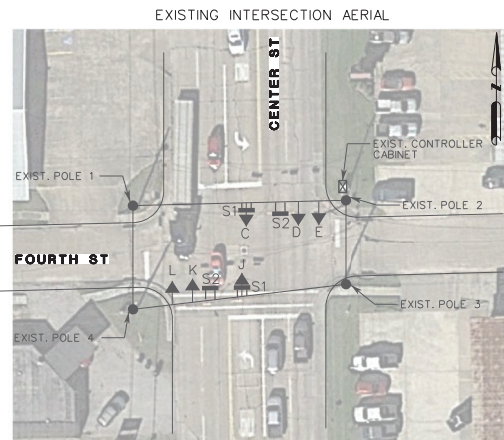
DATE: 8/27/2021	JOB NO. DEER - 4531	SHEET NO: 4 / 19
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EXISTING: NORTHBOUND ON CENTER ST AT FOURTH ST.

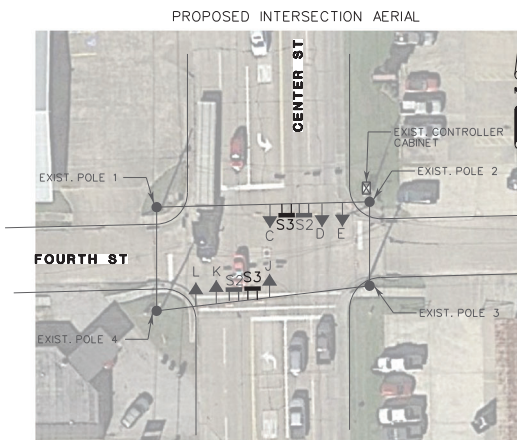


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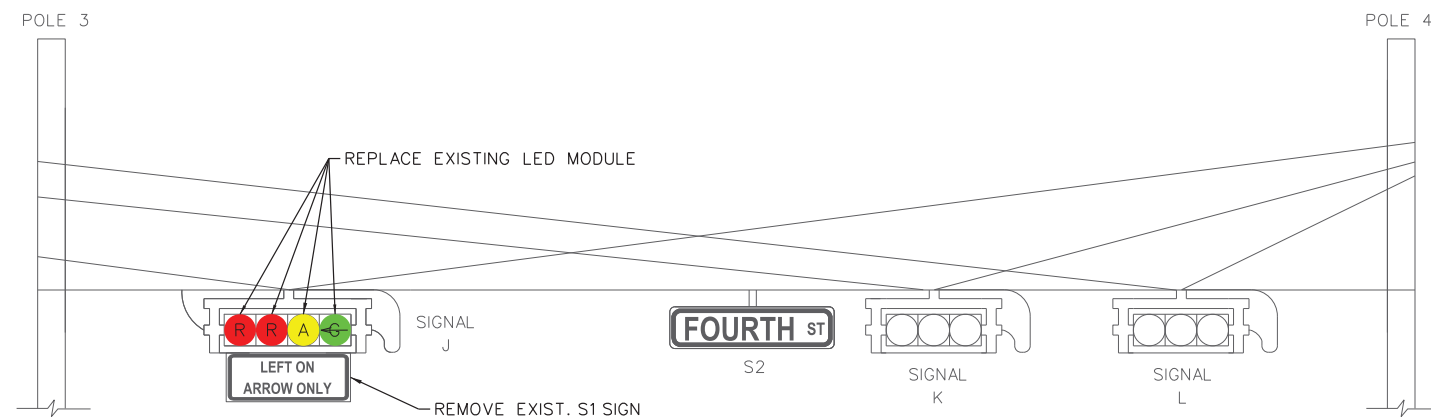


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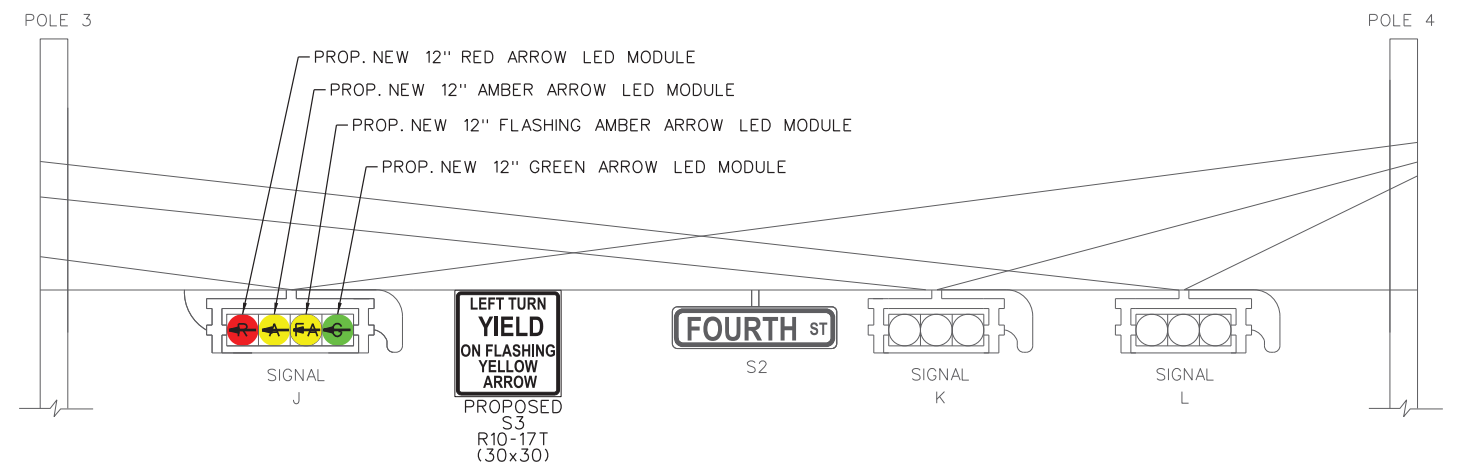
- LEGEND**
- ➡ SIGNAL HEAD
 - POWER POLE/STEEL STRAIN POLE
 - ▮ OVERHEAD SIGN
 - ▮ PROP. OVERHEAD SIGN



PROPOSED INTERSECTION AERIAL

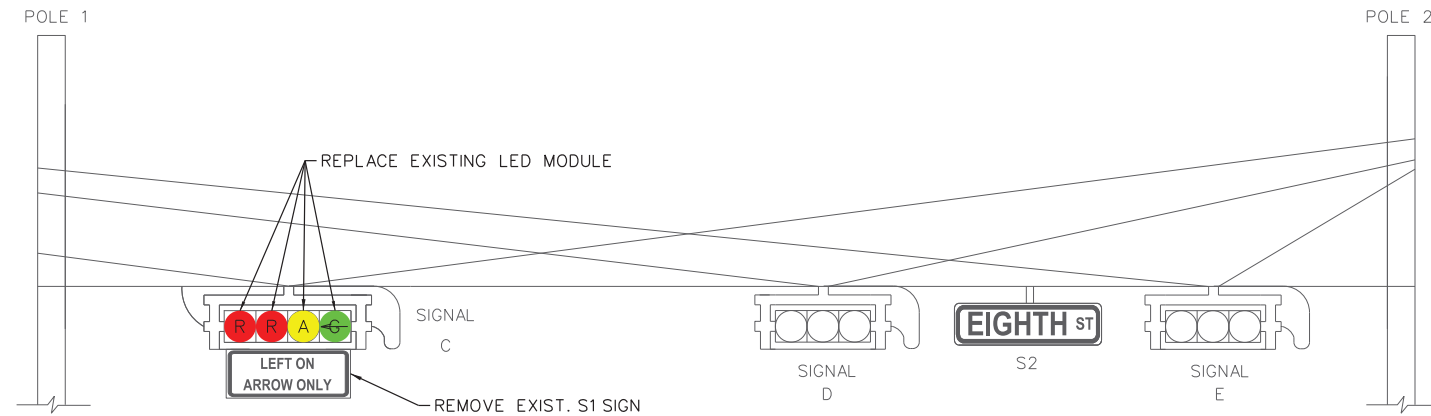


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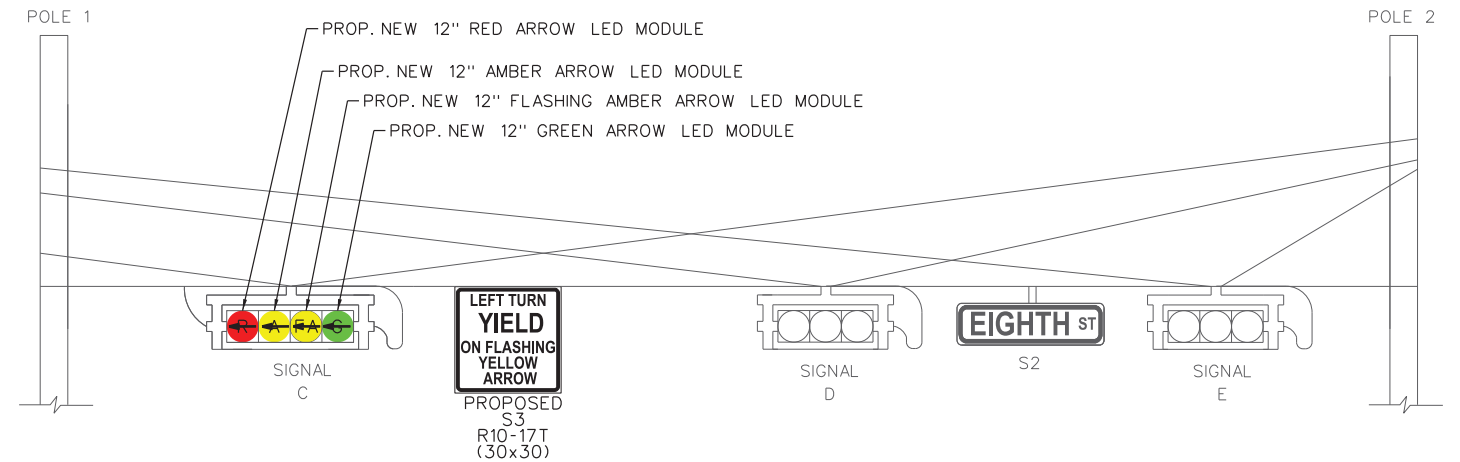


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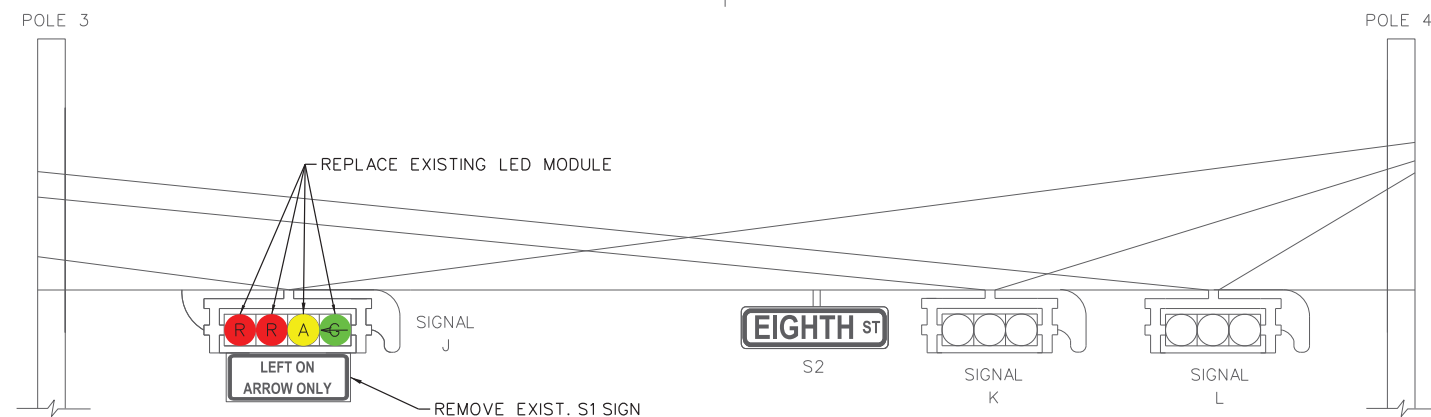
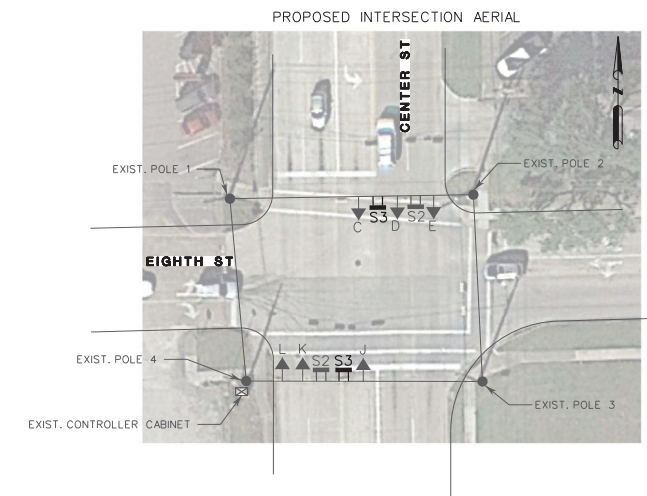
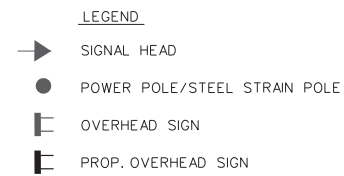
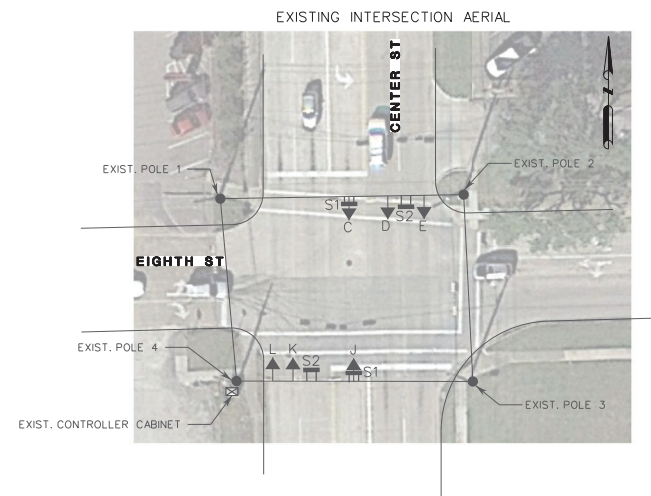
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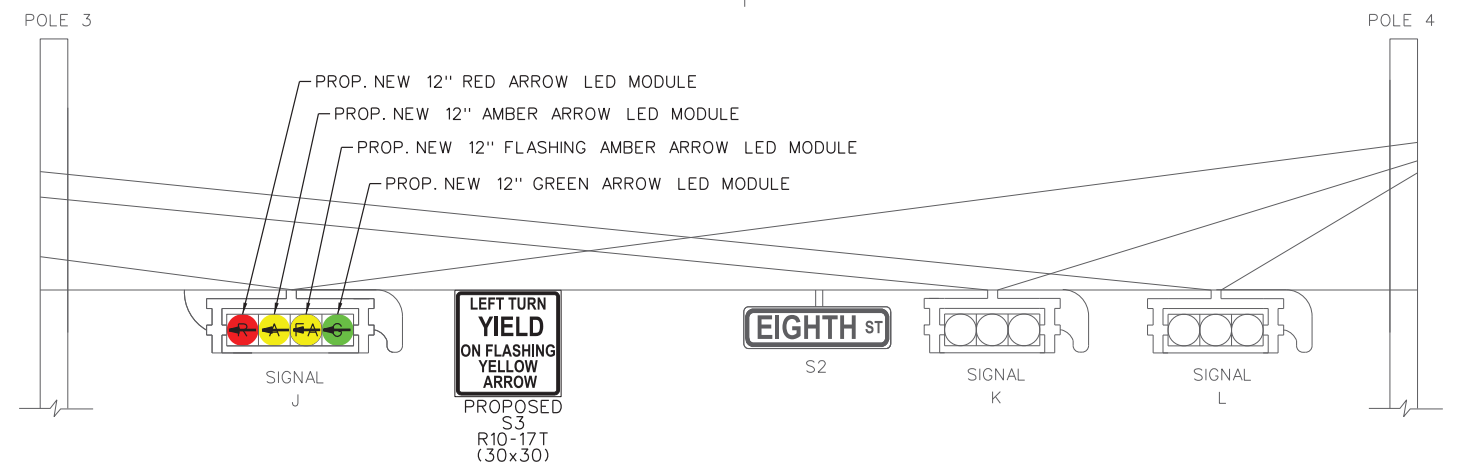
EXISTING: NORTHBOUND ON CENTER ST AT EIGHTH ST.



PROPOSED: NORTHBOUND ON CENTER ST AT EIGHTH ST.

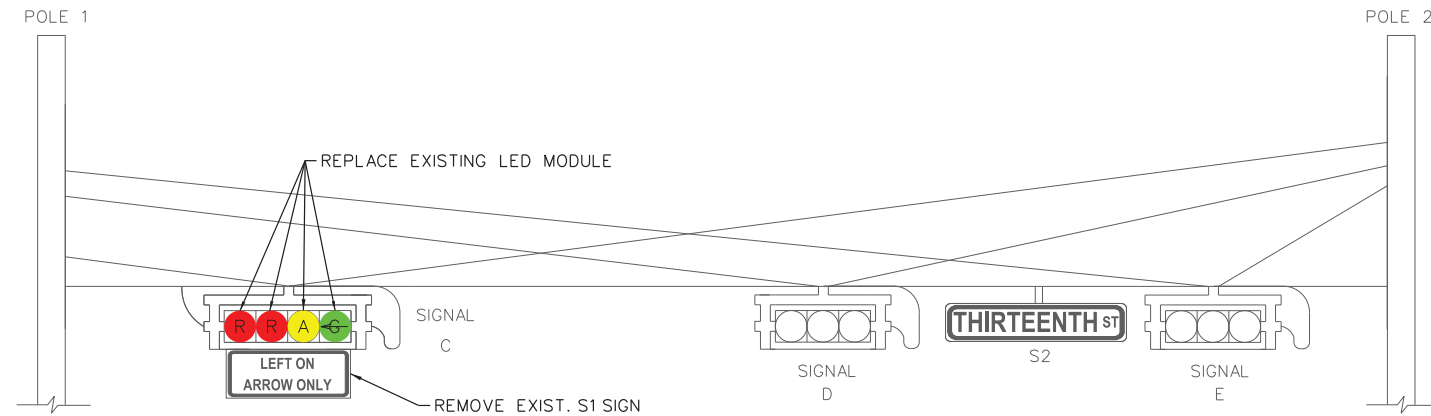


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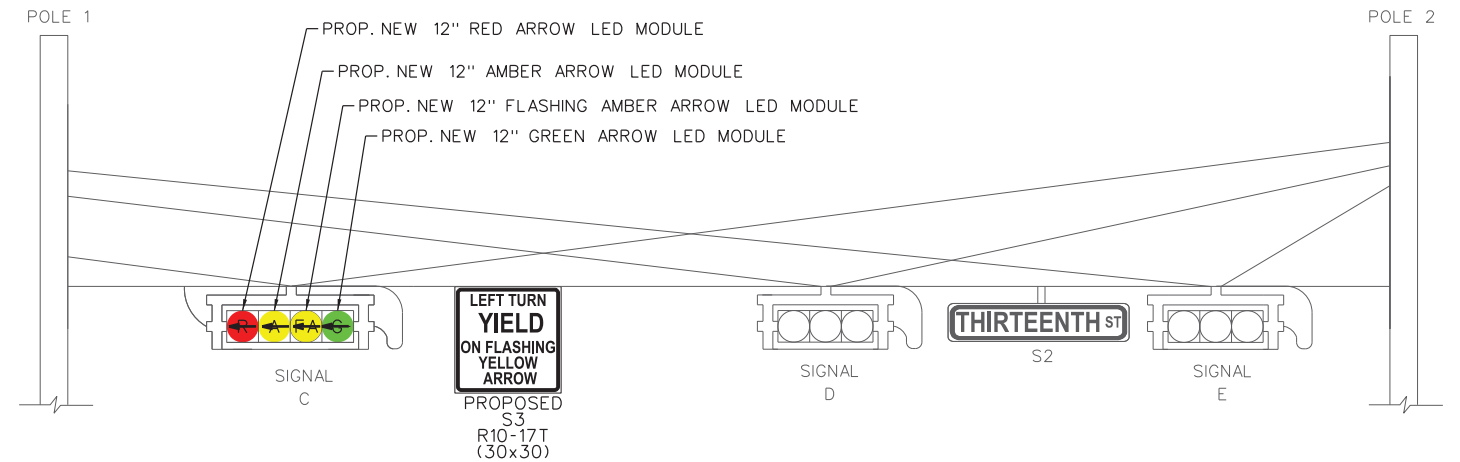


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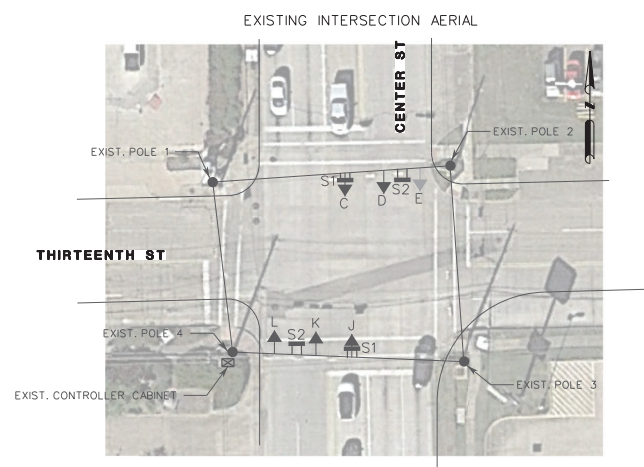
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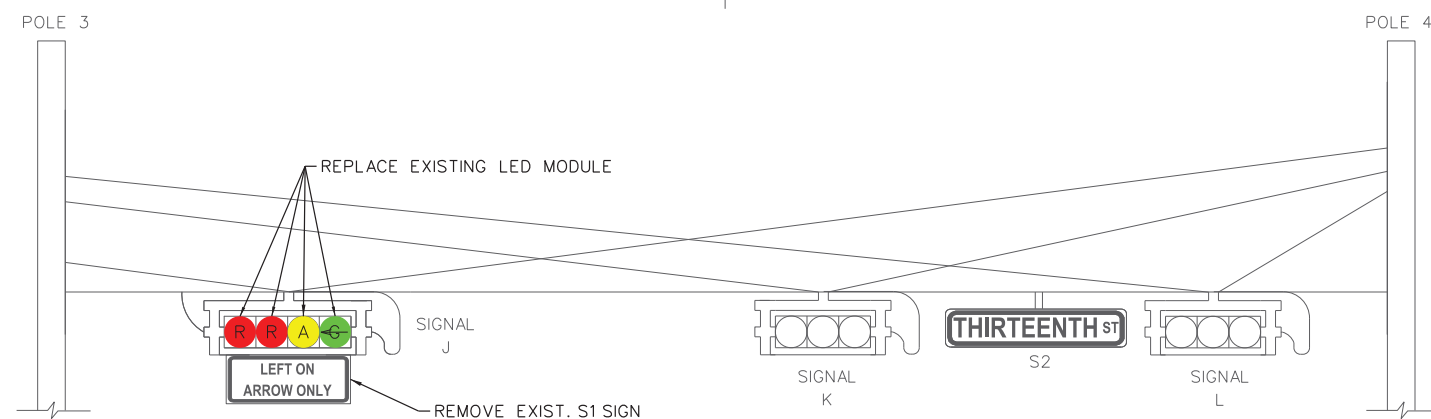
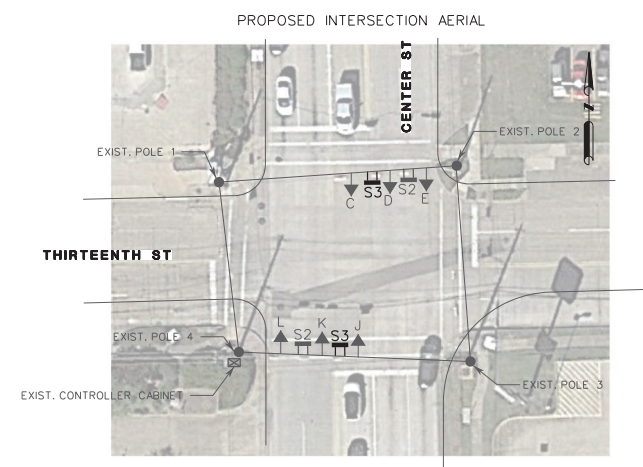
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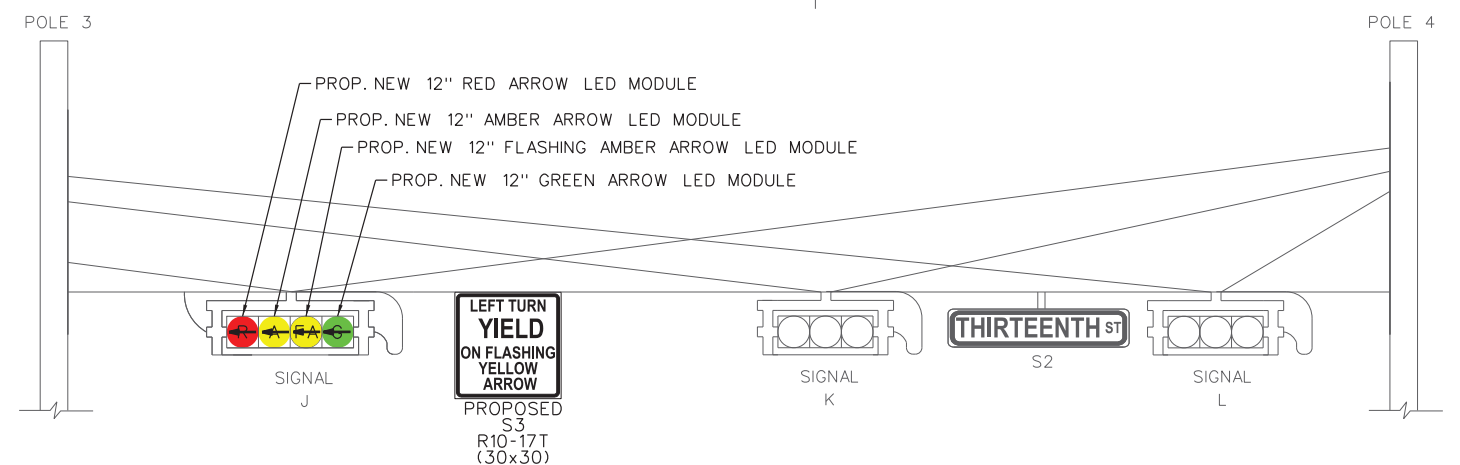
PROPOSED: NORTHBOUND ON CENTER ST AT THIRTEENTH ST.



- LEGEND**
- ➡ SIGNAL HEAD
 - POWER POLE/STEEL STRAIN POLE
 - ▬ OVERHEAD SIGN
 - ▬ PROP. OVERHEAD SIGN





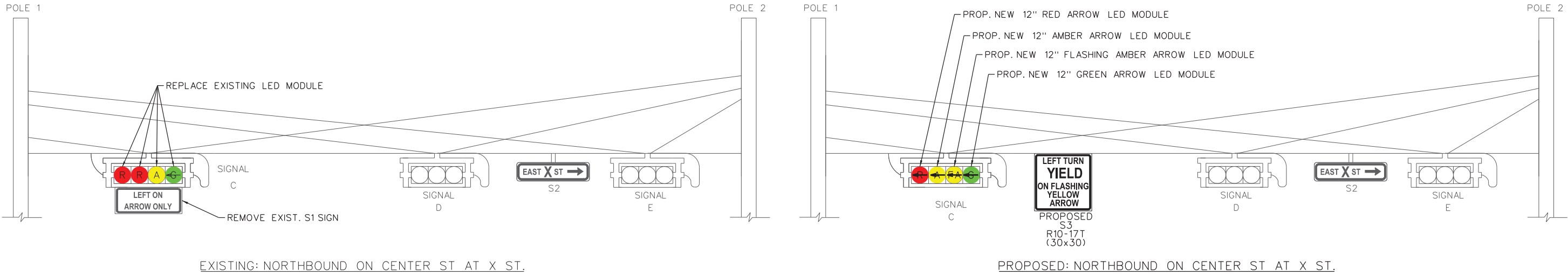
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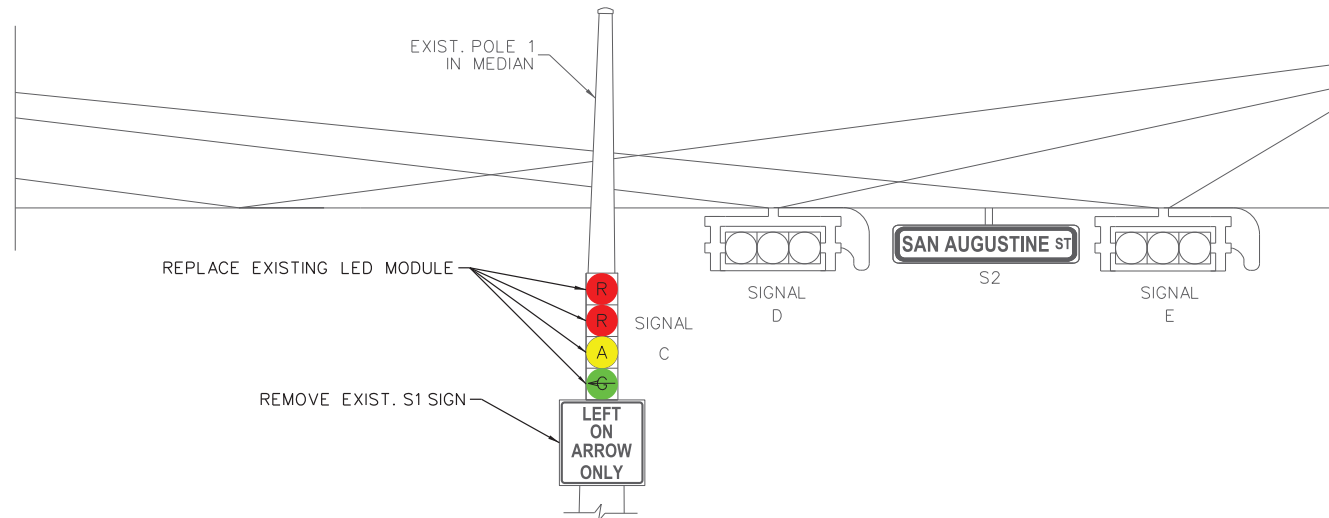


PROPOSED: SOUTHBOUND ON CENTER ST AT THIRTEENTH ST.

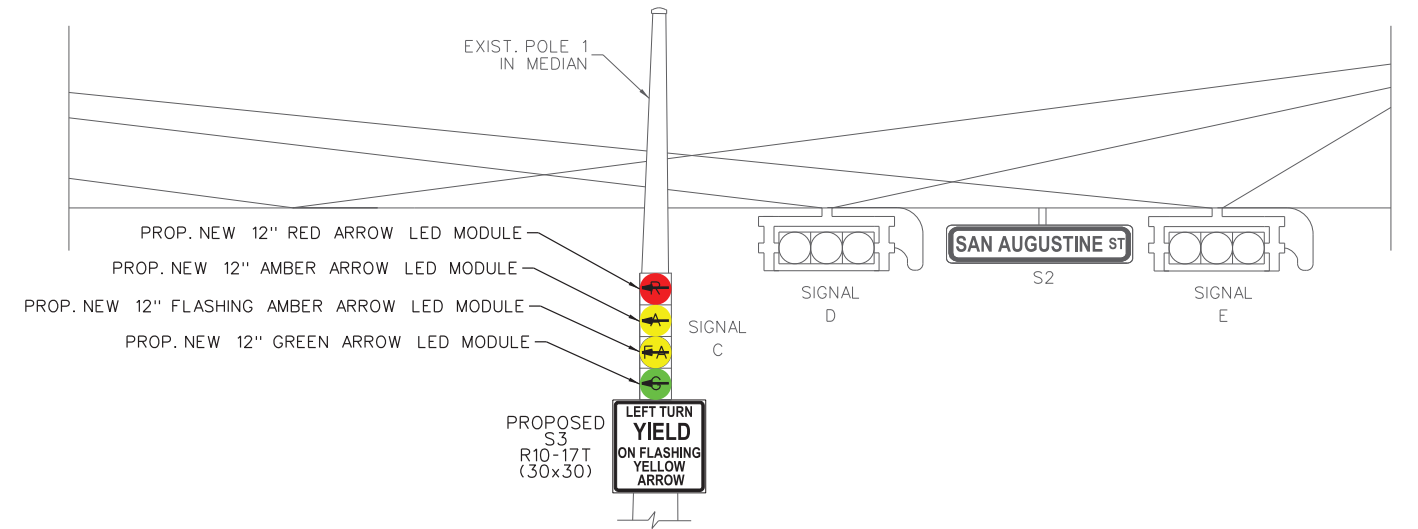
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8/27/2021 12:59:12 PM kkozaris

 5225 KATY FREEWAY, SUITE 400 HOUSTON, TX 77007 (713) 862-8848 WWW.MIDTOWNENGINEERS.COM TBPE NO. F-8934		 Terry L. McDaniel 8/27/2021		EAST BLVD AND CENTER ST EXISTING TRAFFIC SIGNAL	
				MODIFICATIONS TO FLASHING YELLOW ARROW	
				CENTER ST AT THIRTEENTH ST EXISTING AND PROPOSED LAYOUT	
DATE: 8/27/2021	JOB NO. DEER - 4531	SHEET NO: 7 / 19			

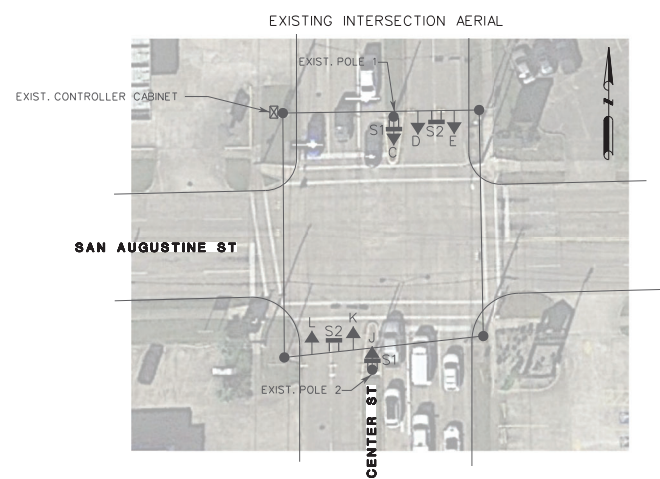




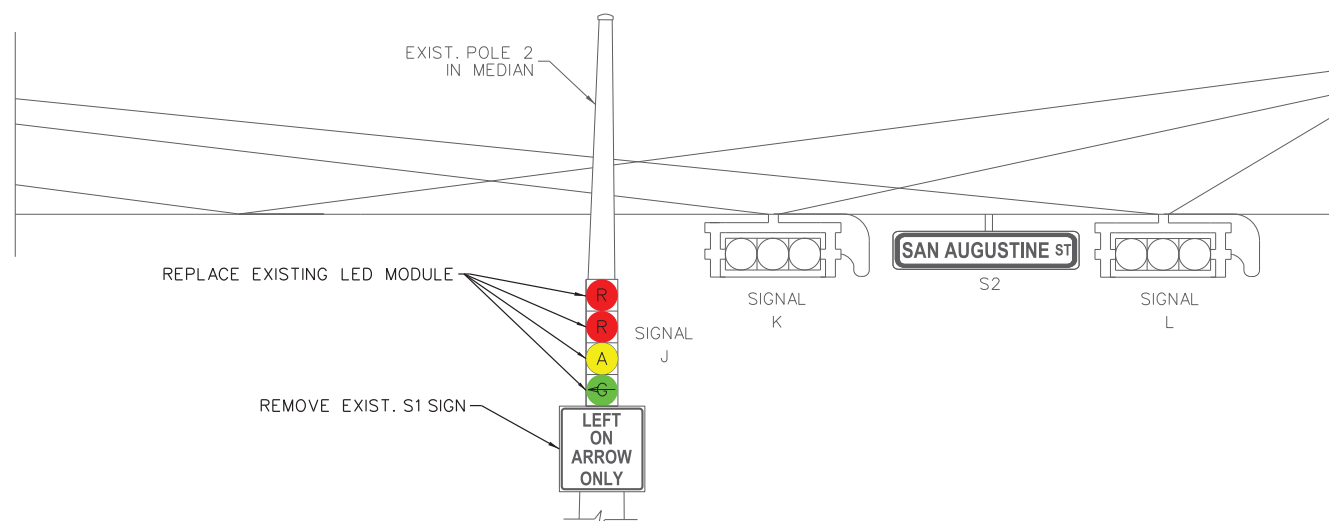
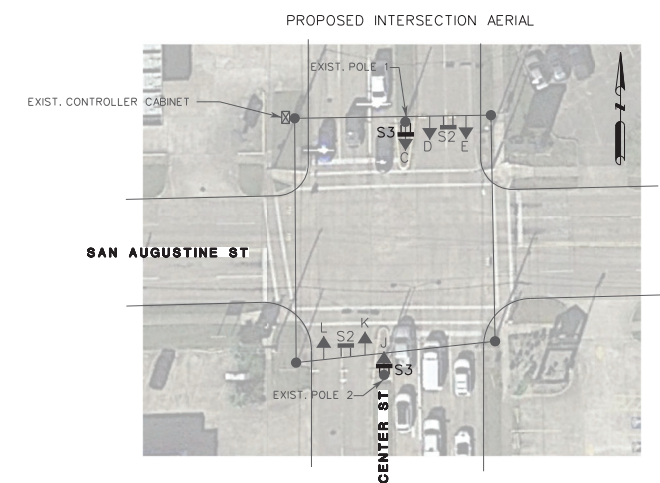
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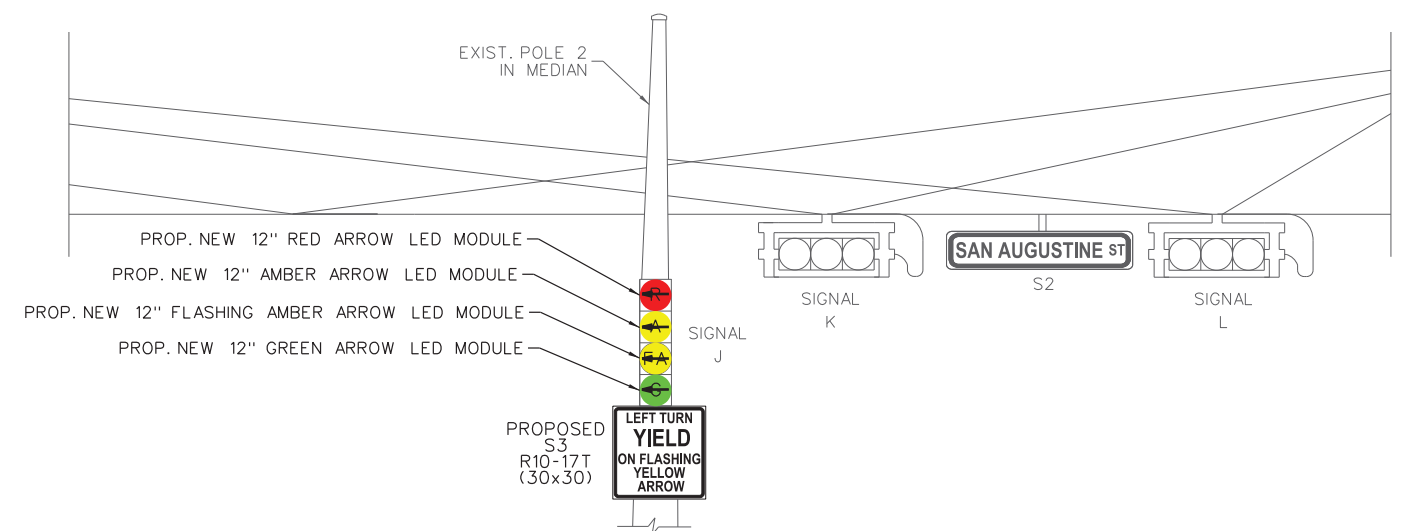
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- LEGEND**
- ➡ SIGNAL HEAD
 - POWER POLE/STEEL STRAIN POLE
 - ▬ OVERHEAD SIGN
 - ▬ PROP. OVERHEAD SIGN

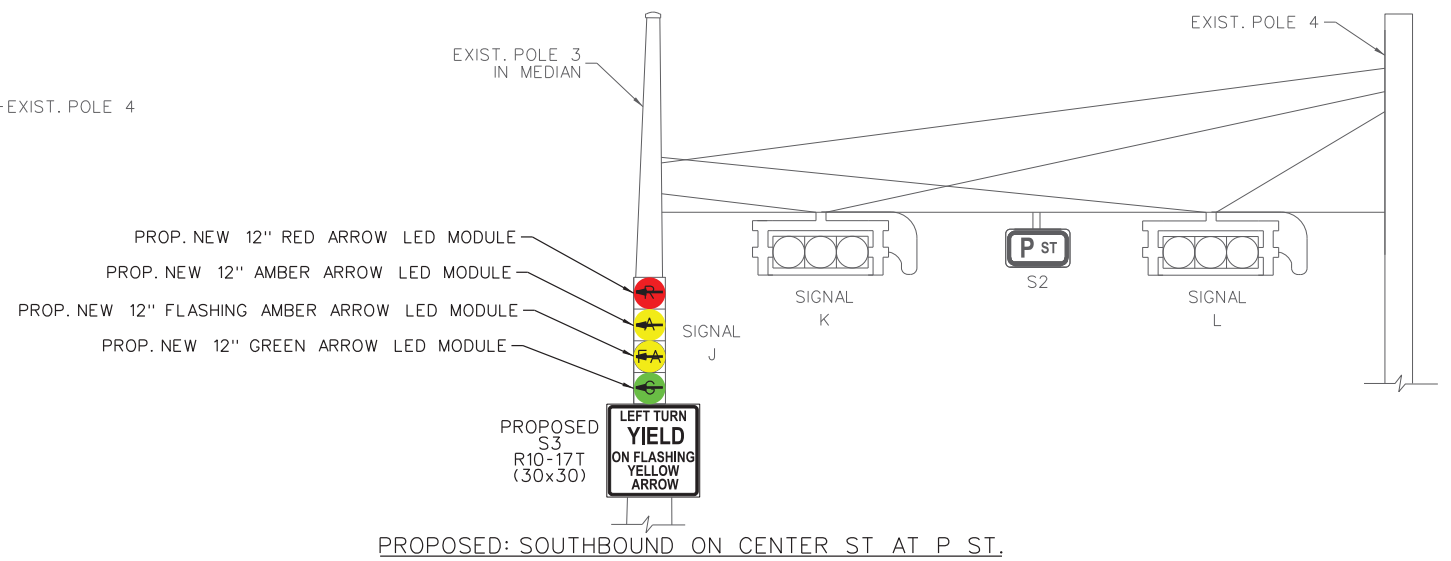
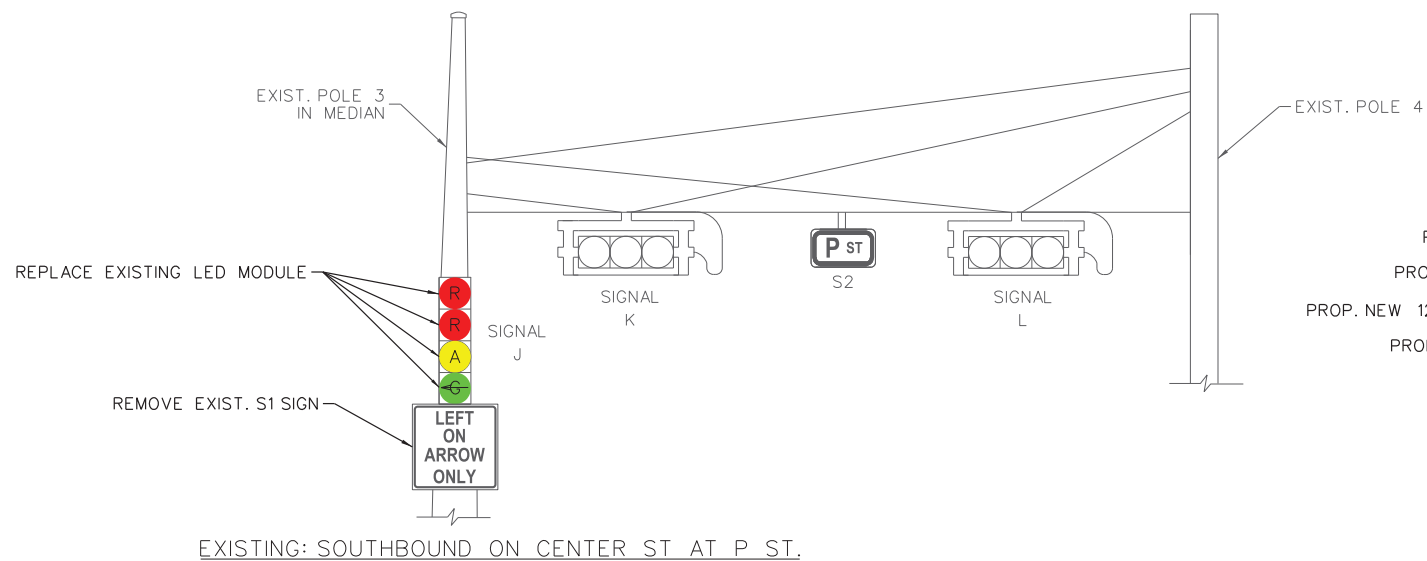
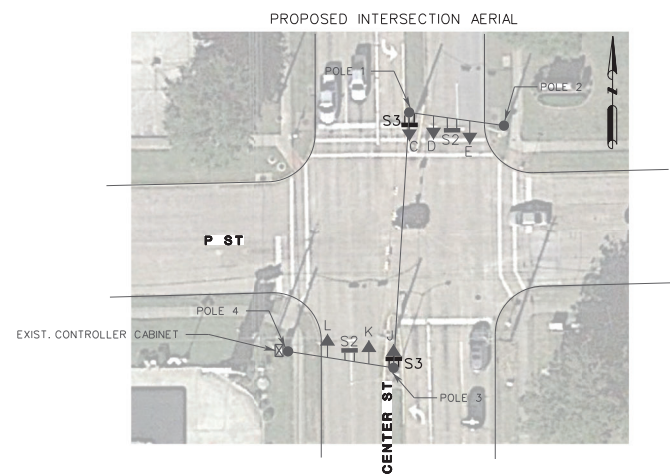
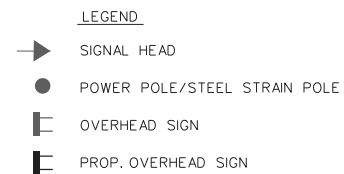
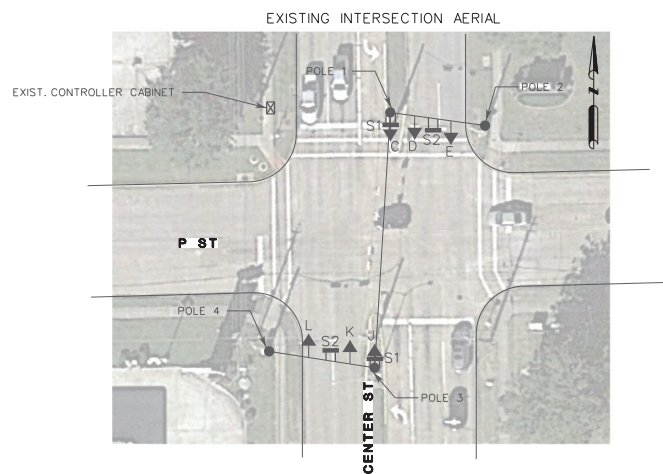
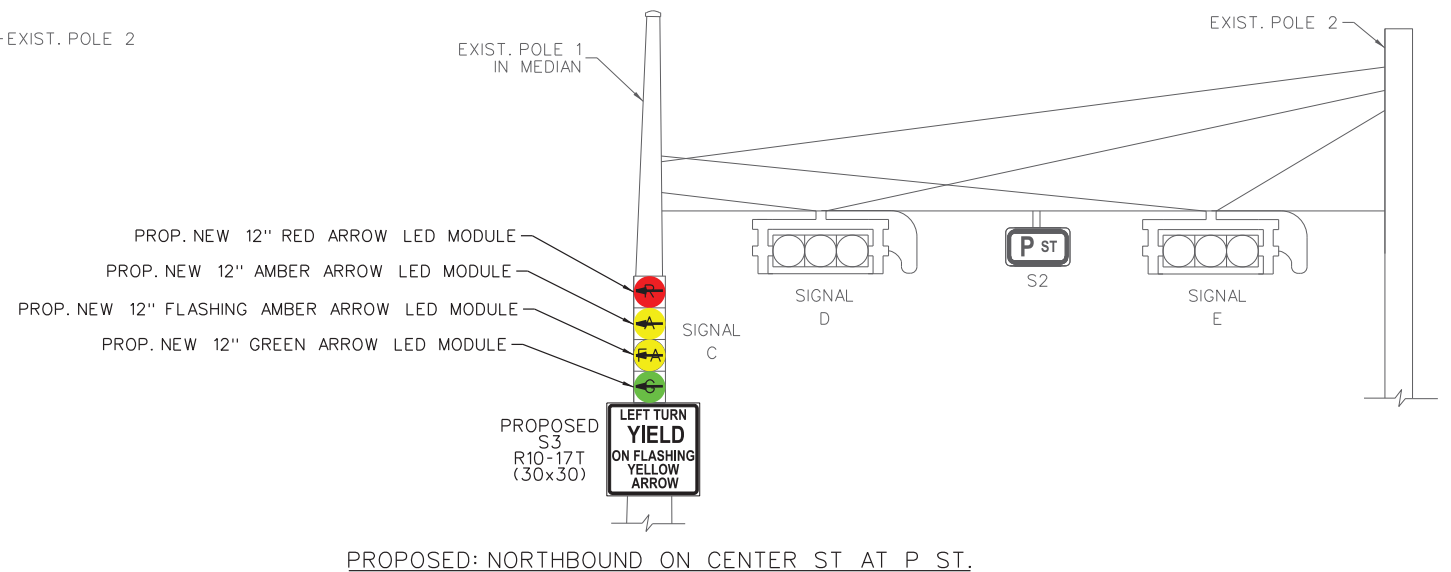
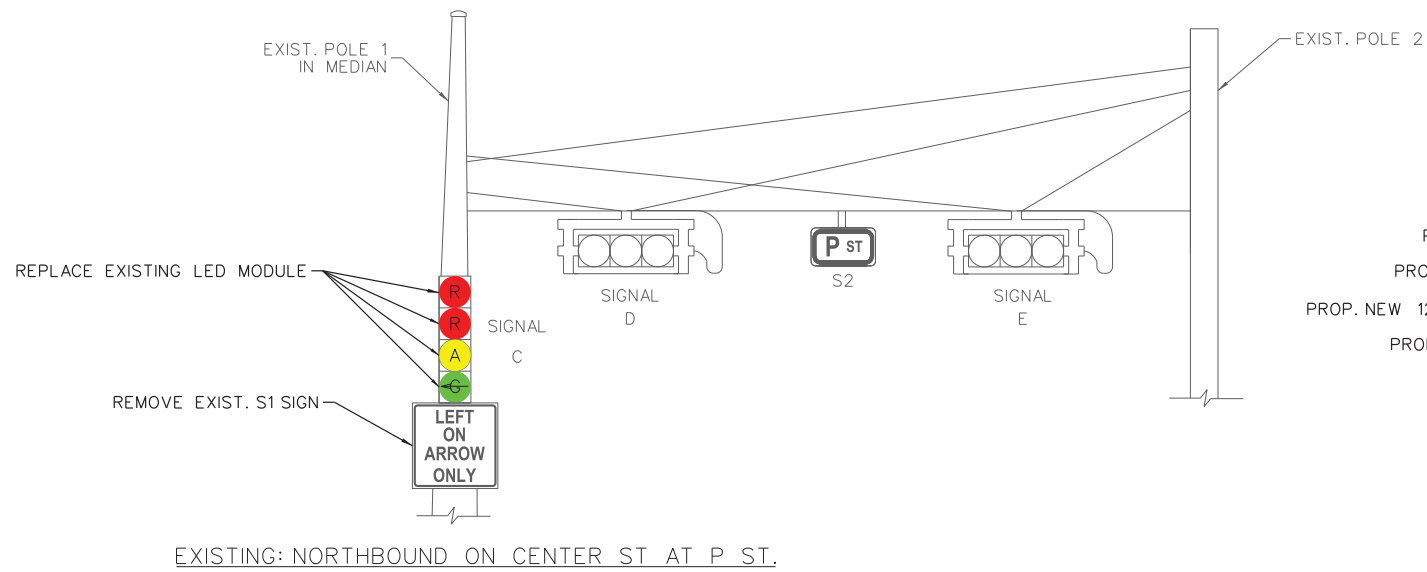


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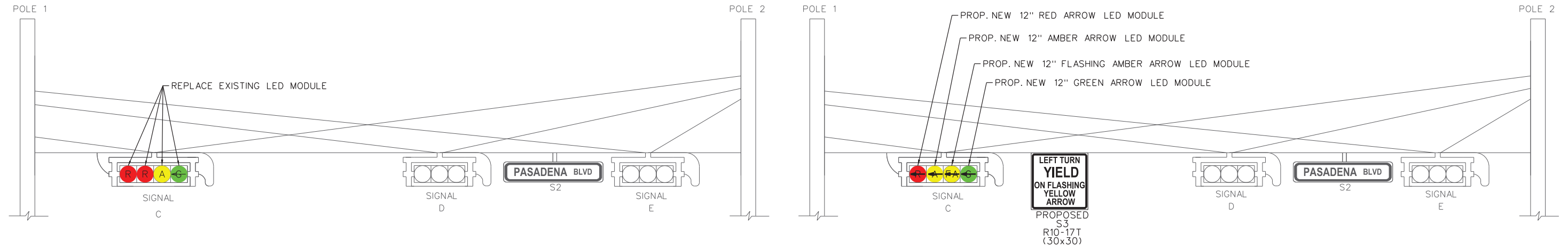


PROPOSED: SOUTHBOUND ON CENTER ST AT SAN AUGUSTINE ST.

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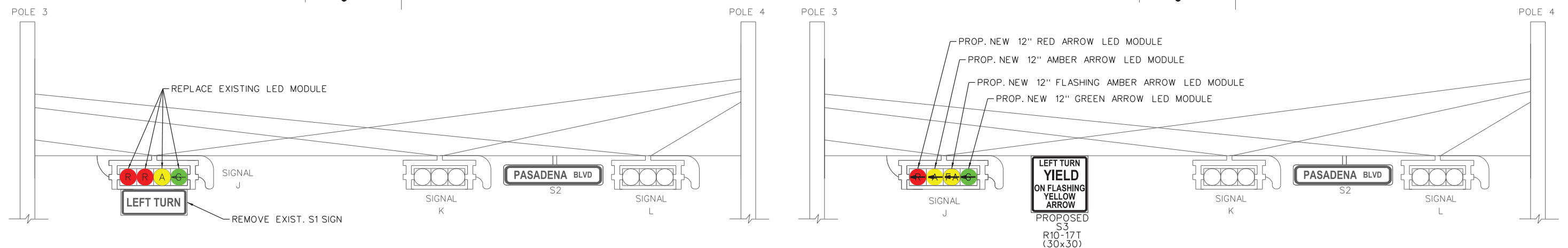
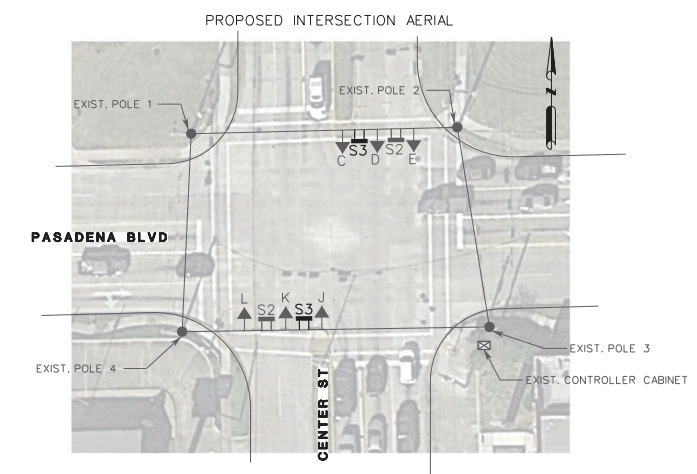
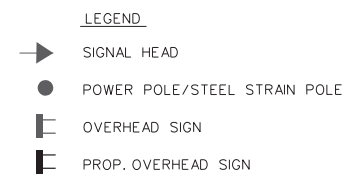
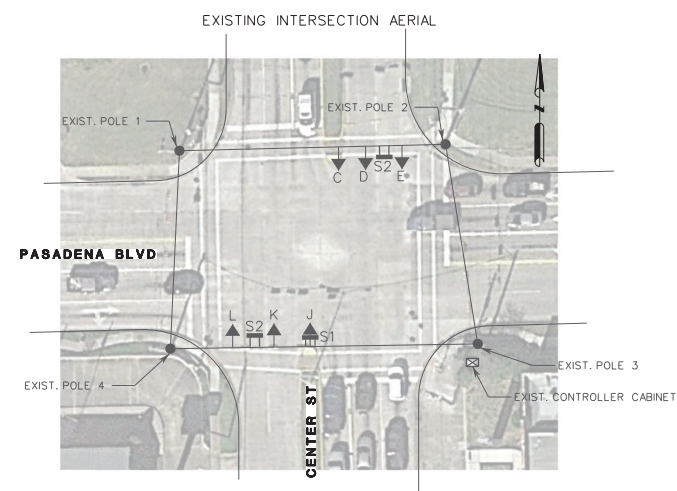


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EXISTING: NORTHBOUND ON CENTER ST AT PASADENA BLVD.

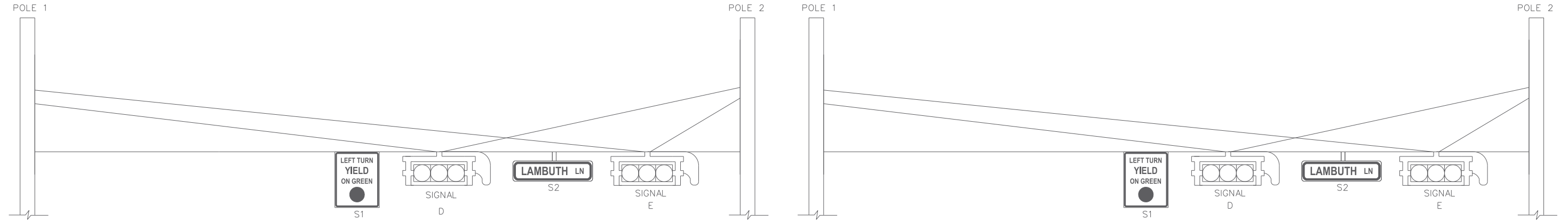
PROPOSED: NORTHBOUND ON CENTER ST AT PASADENA BLVD.



EXISTING: SOUTHBOUND ON CENTER ST AT PASADENA BLVD.

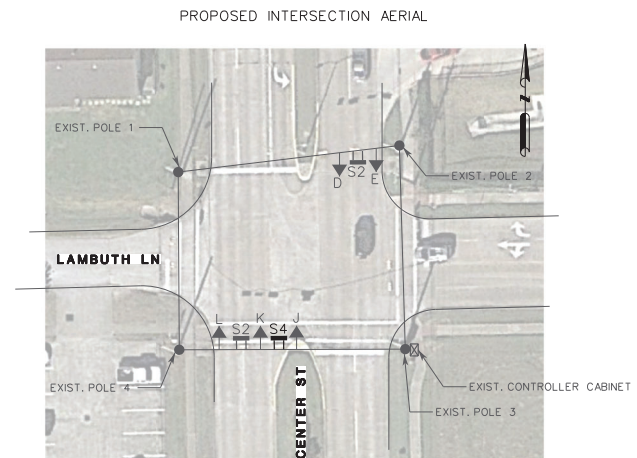
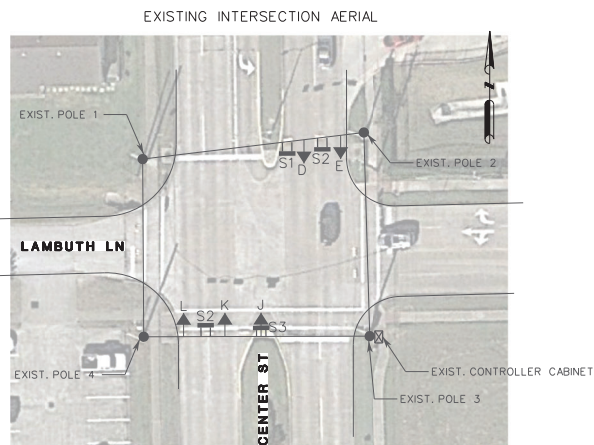
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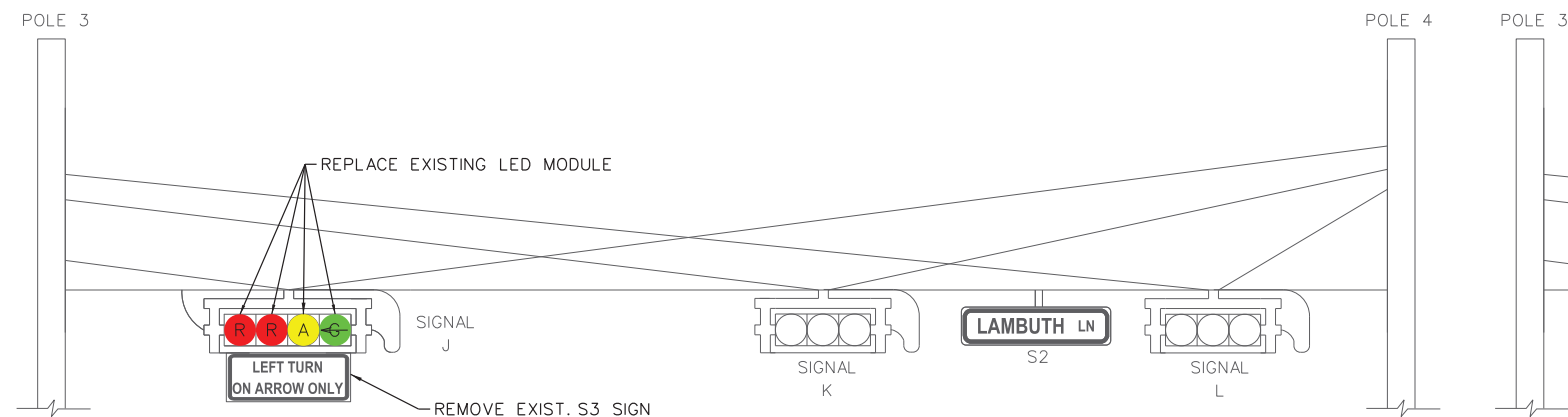
EXISTING: NORTHBOUND ON CENTER ST AT LAMBUTH LN.

PROPOSED: NORTHBOUND ON CENTER ST AT LAMBUTH LN.

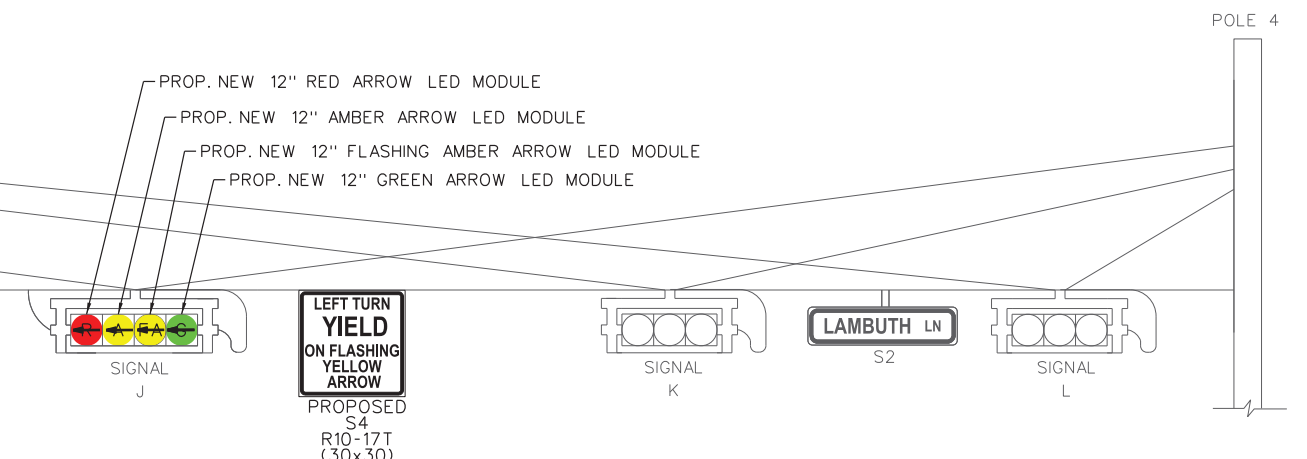


LEGEND

- ➡ SIGNAL HEAD
- POWER POLE/STEEL STRAIN POLE
- ▬ OVERHEAD SIGN
- ▬ PROP. OVERHEAD SIGN

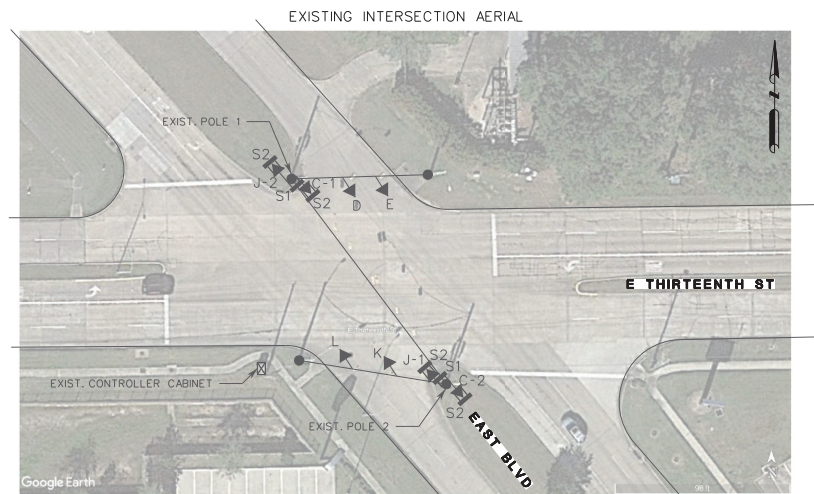
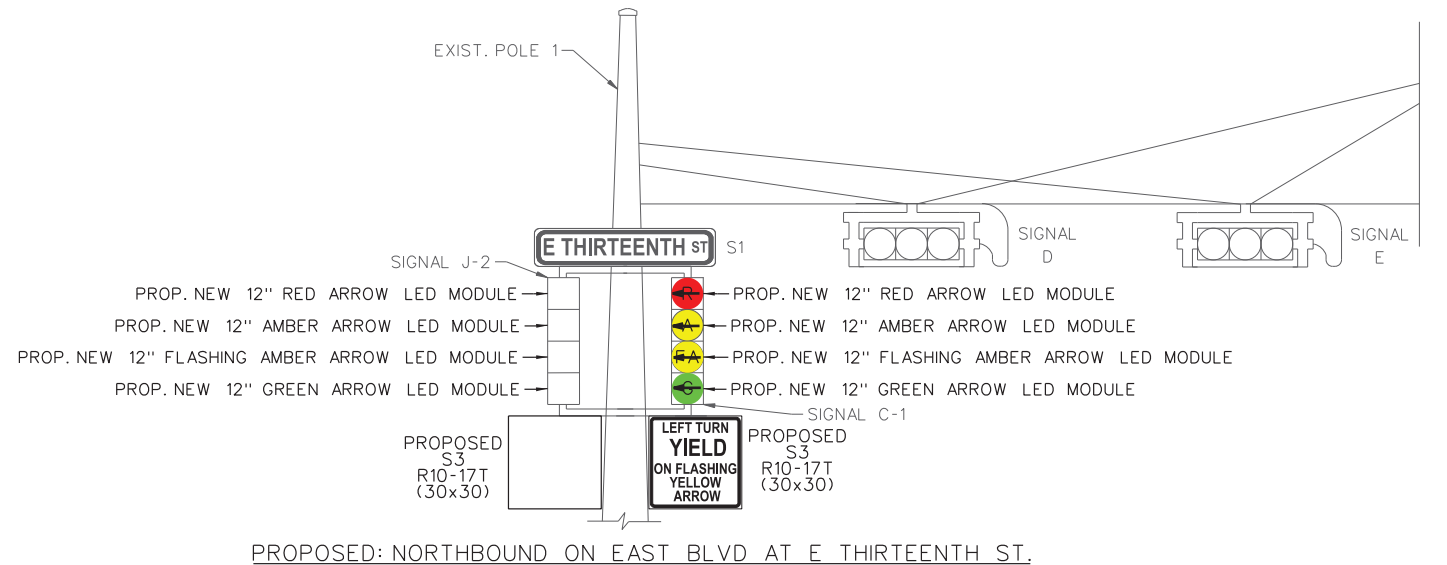
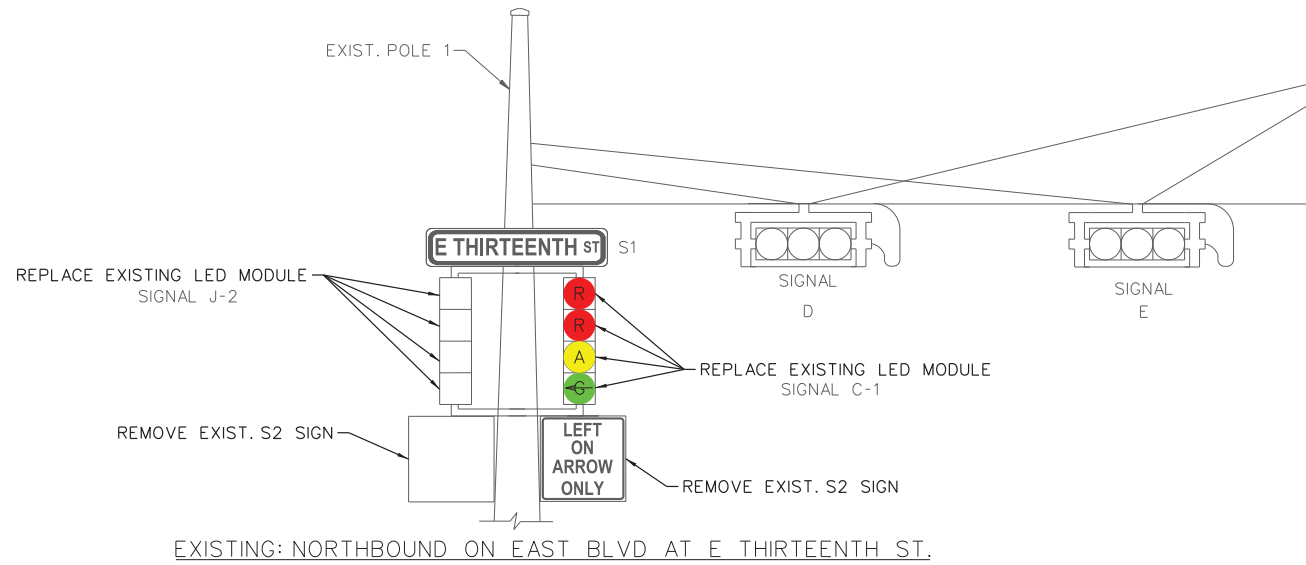


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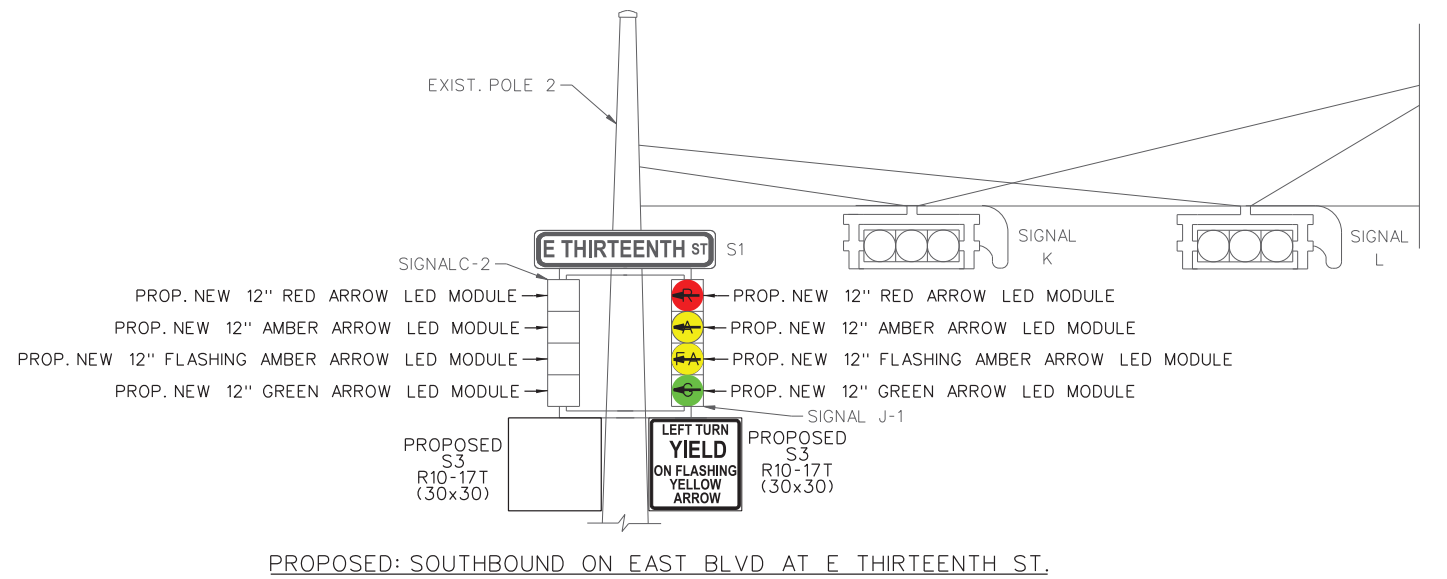
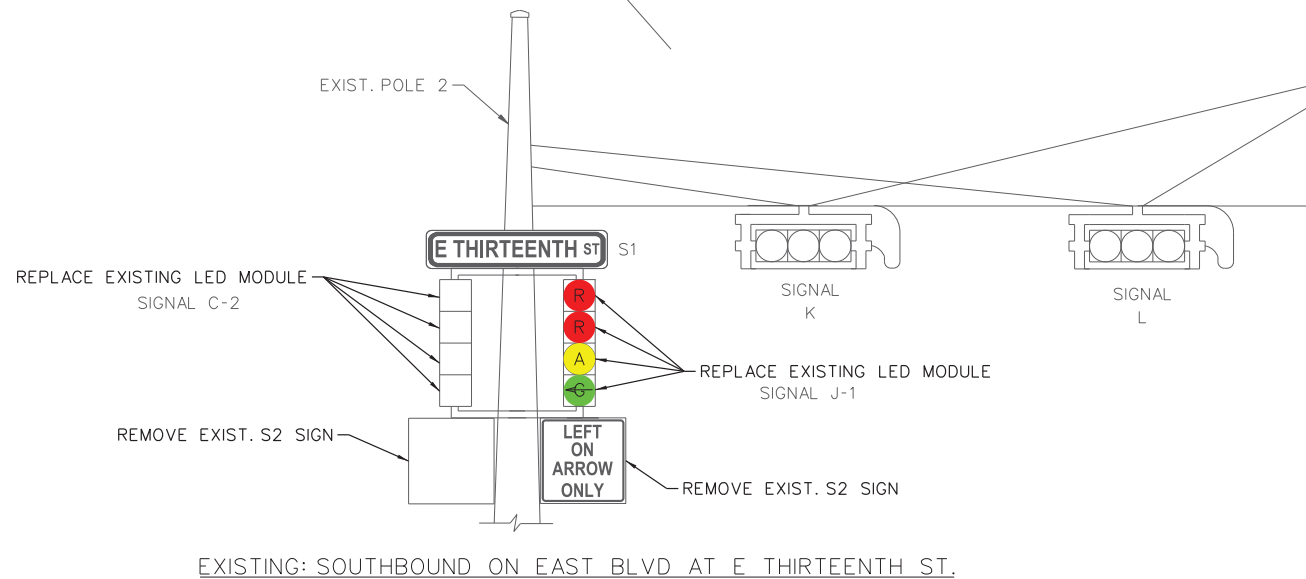
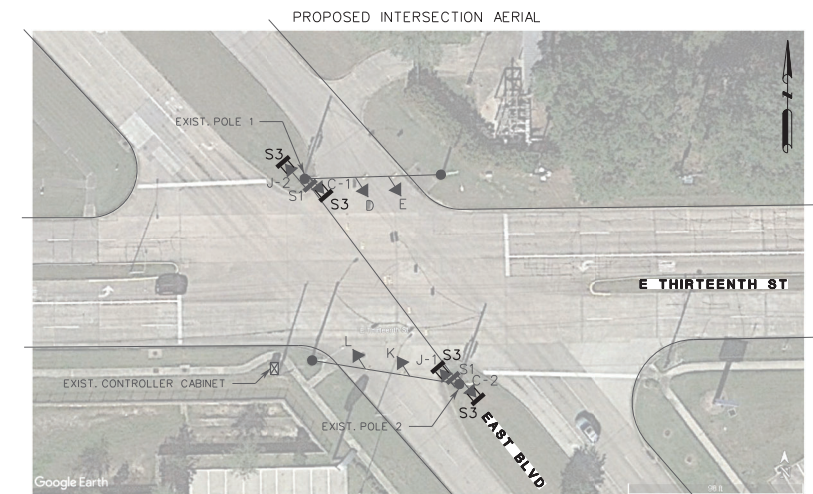


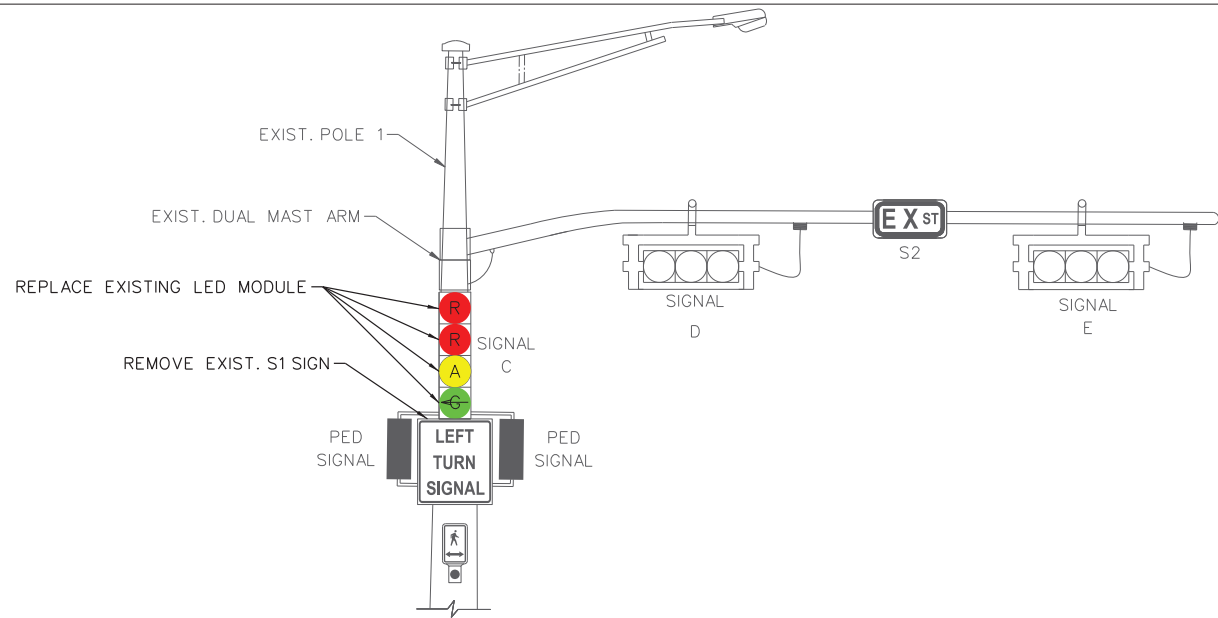
PROPOSED: SOUTHBOUND ON CENTER ST AT LAMBUTH LN.

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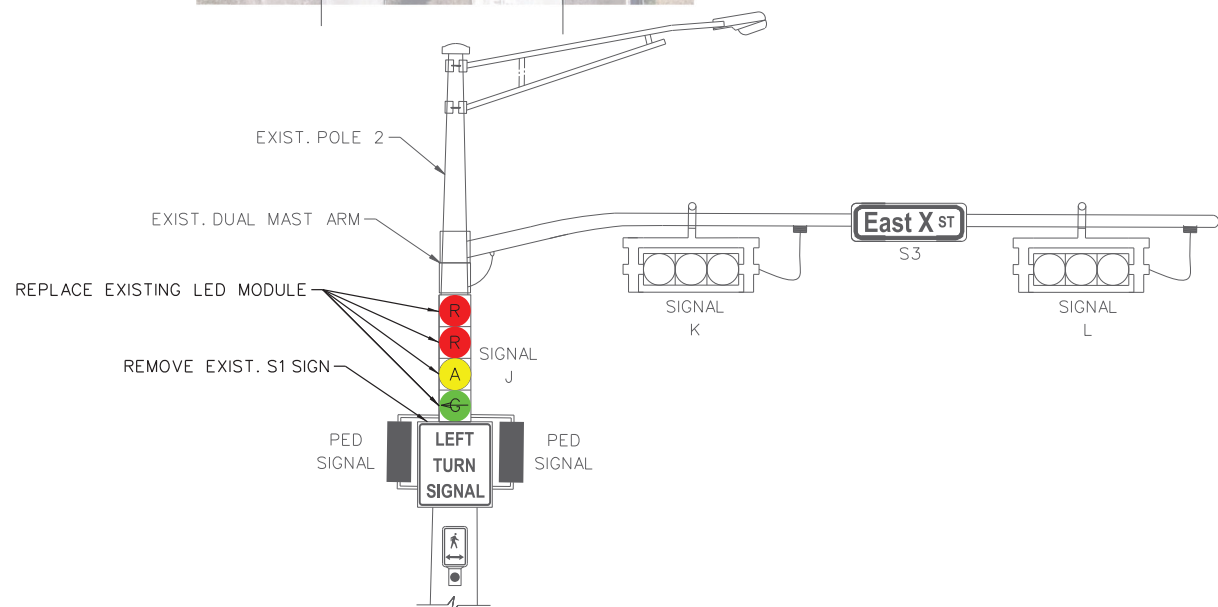
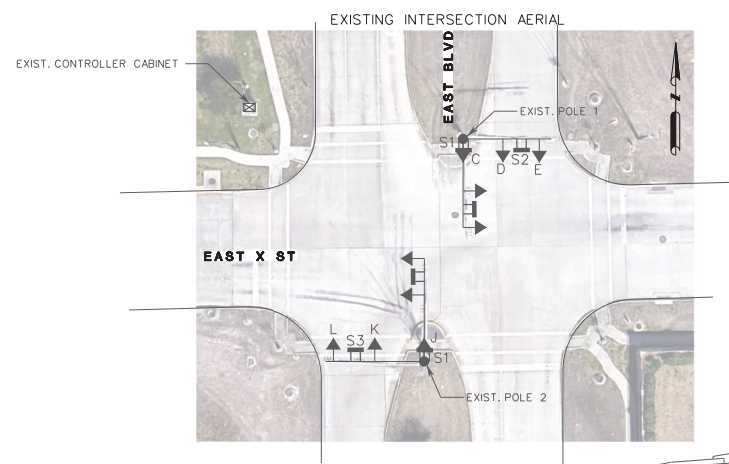


- LEGEND**
- SIGNAL HEAD
 - POWER POLE/STEEL STRAIN POLE
 - OVERHEAD SIGN
 - PROP. OVERHEAD SIGN



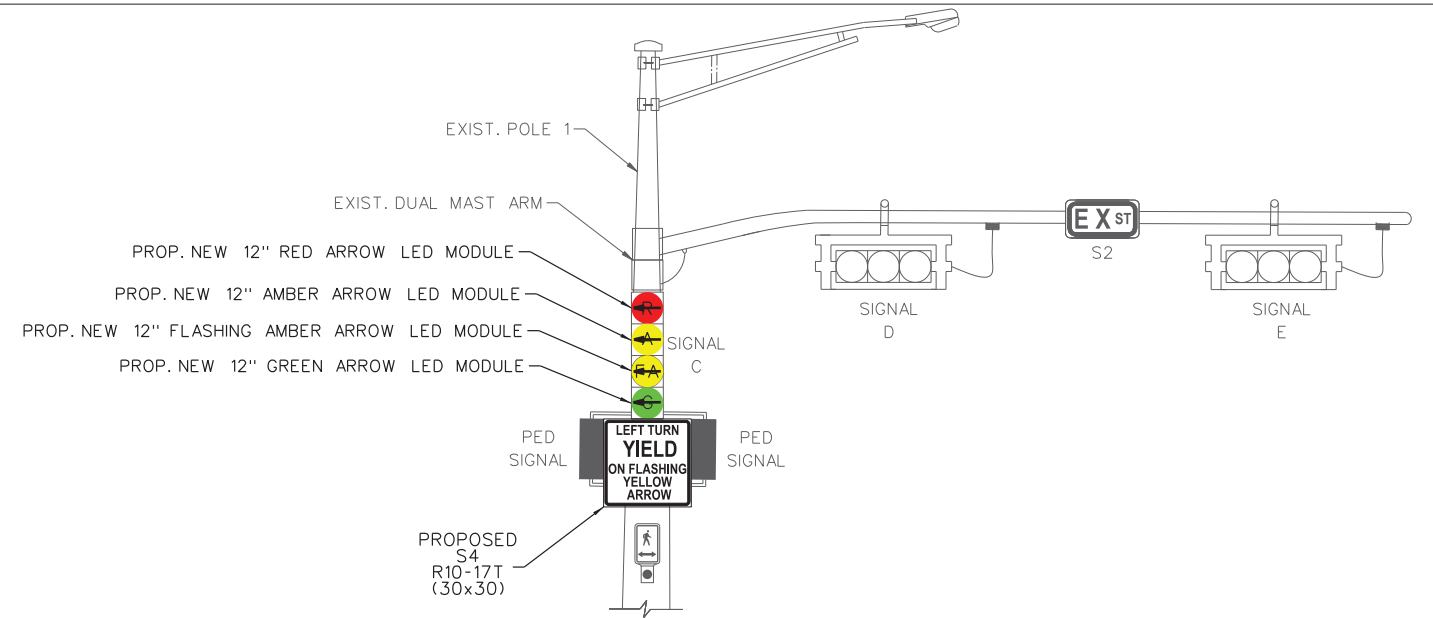


EXISTING: NORTHBOUND ON EAST BLVD AT EAST X ST.

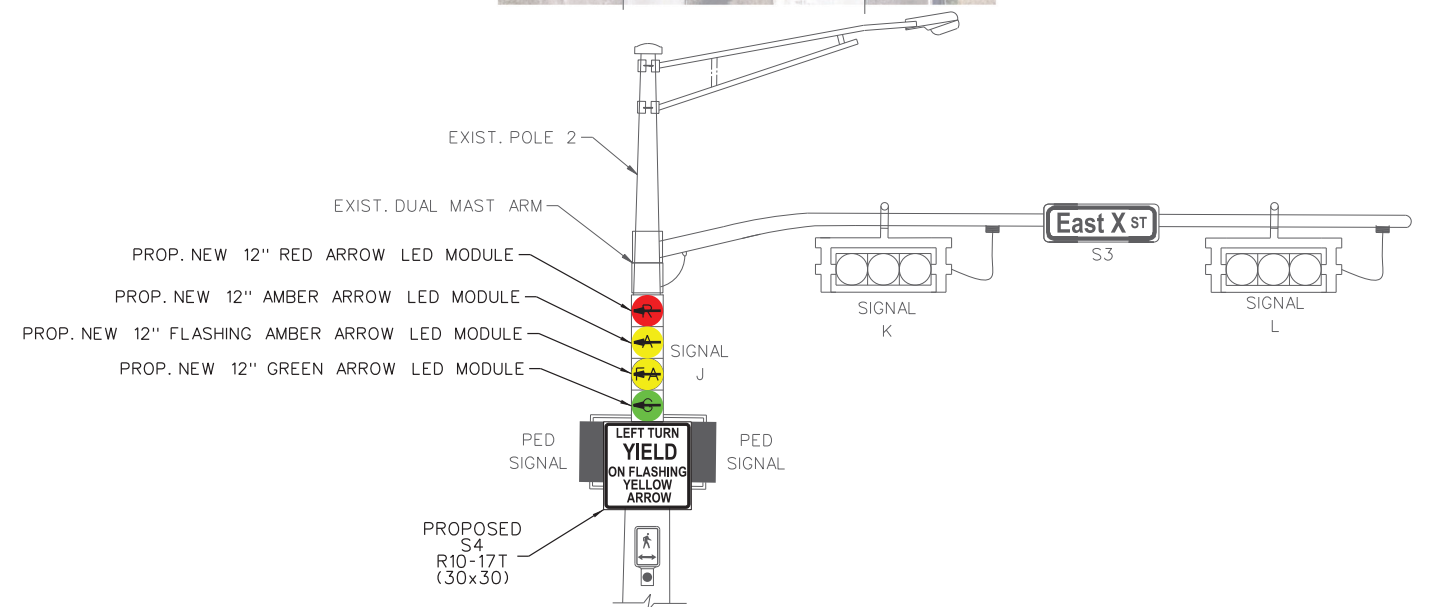
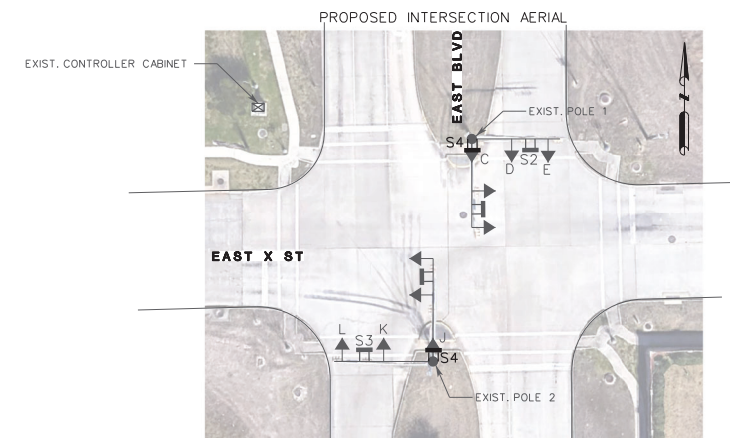


EXISTING: SOUTHBOUND ON EAST BLVD AT EAST X ST.

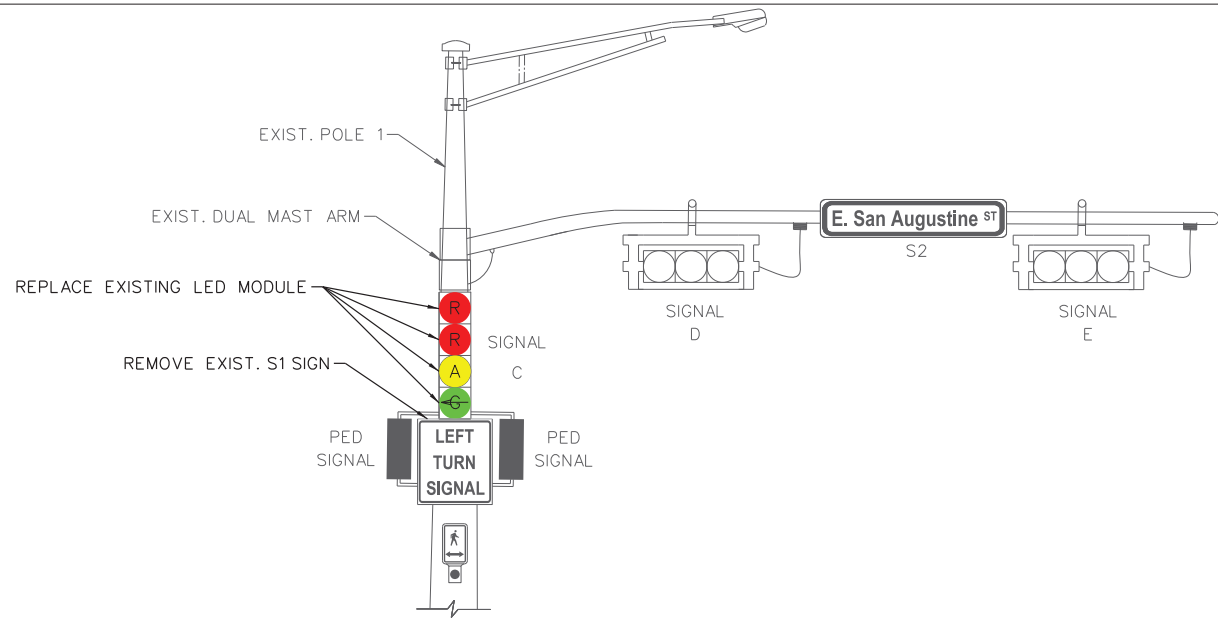
- LEGEND**
- ▶ SIGNAL HEAD
 - POWER POLE/STEEL STRAIN POLE
 - OVERHEAD SIGN
 - PROP. OVERHEAD SIGN



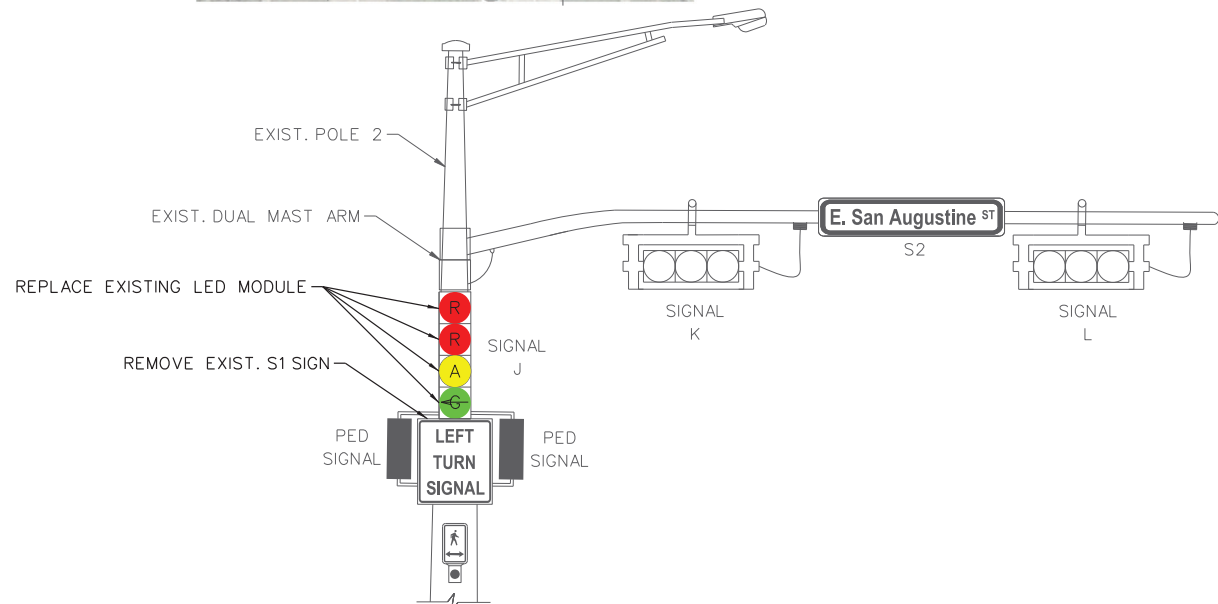
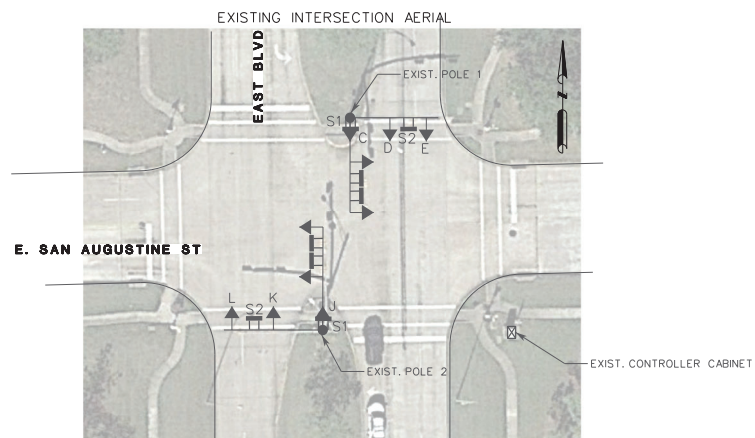
PROPOSED: NORTHBOUND ON EAST BLVD AT EAST X ST.



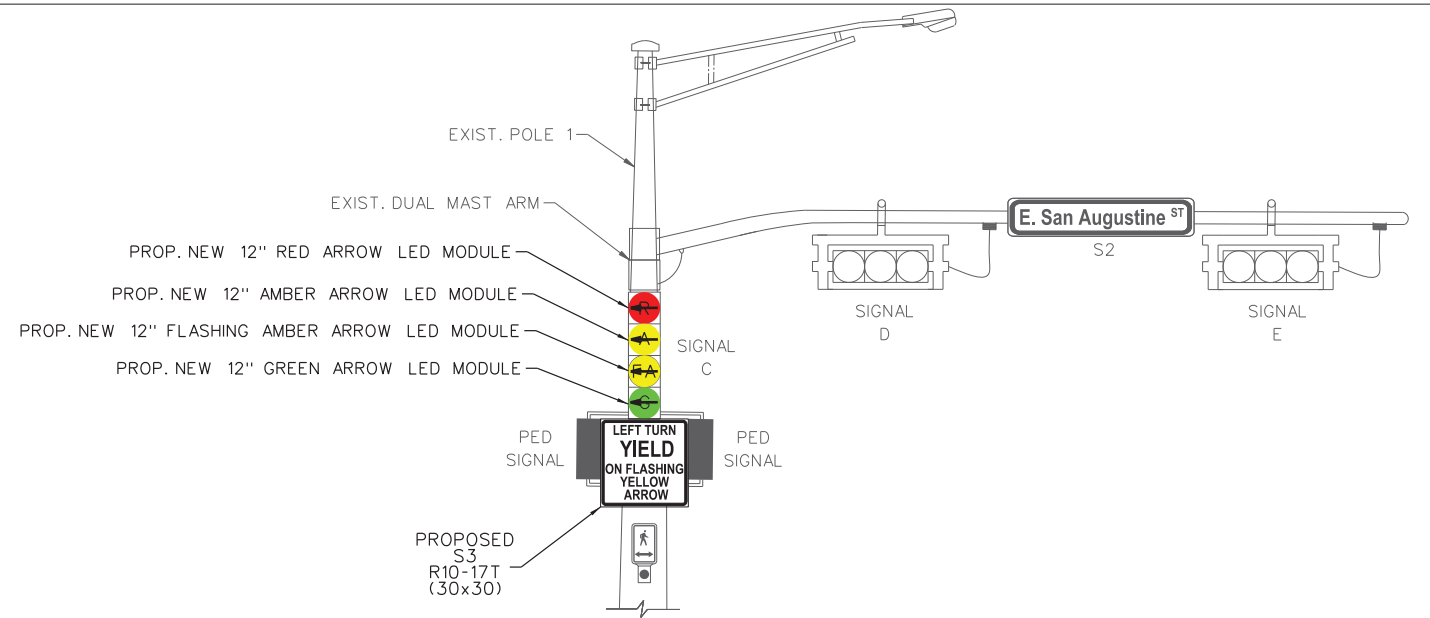
PROPOSED: SOUTHBOUND ON EAST BLVD AT EAST X ST.



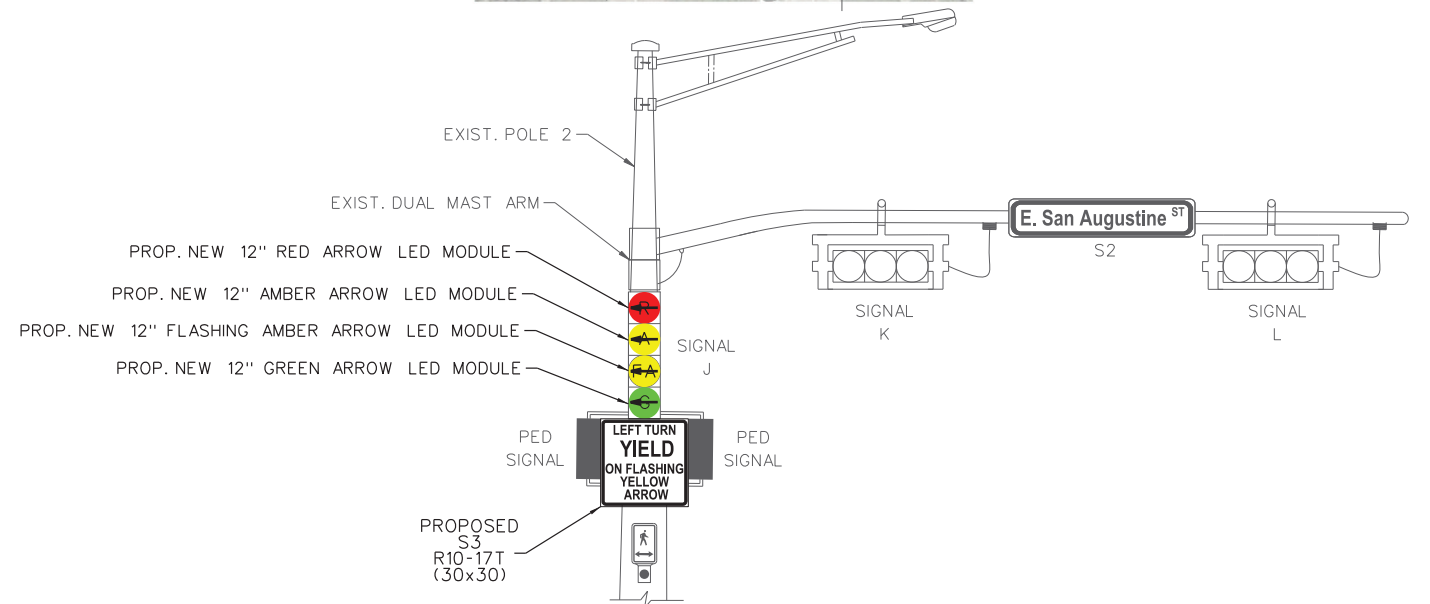
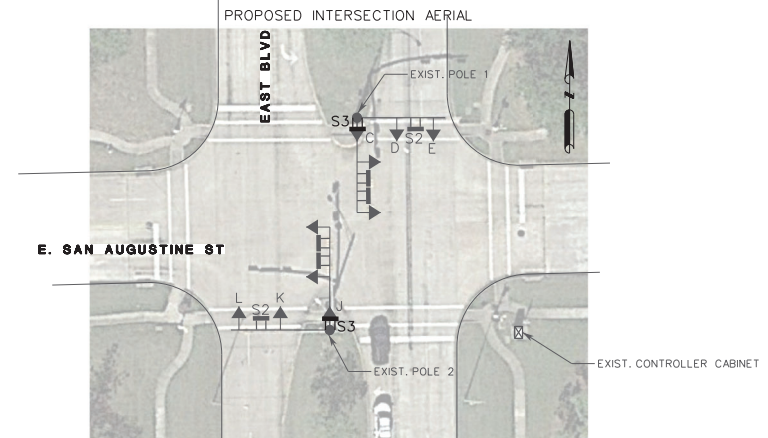
EXISTING: NORTHBOUND ON EAST BLVD AT E. SAN AUGUSTINE ST.



EXISTING: SOUTHBOUND ON EAST BLVD AT E. SAN AUGUSTINE ST.

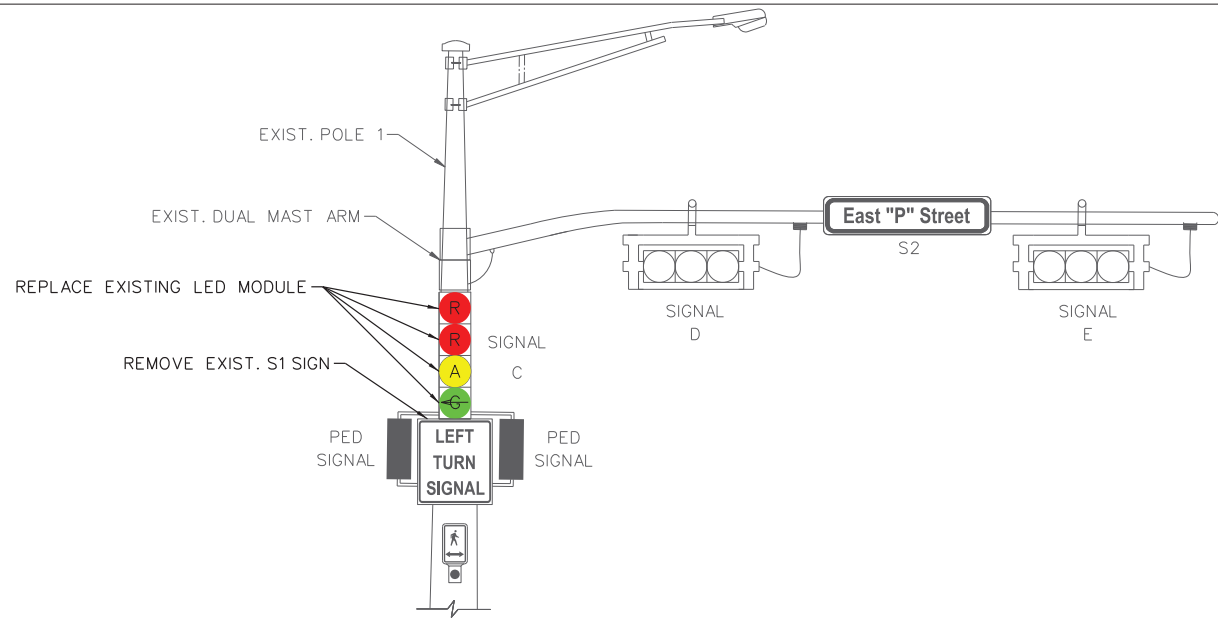


PROPOSED: NORTHBOUND ON EAST BLVD AT E. SAN AUGUSTINE ST.

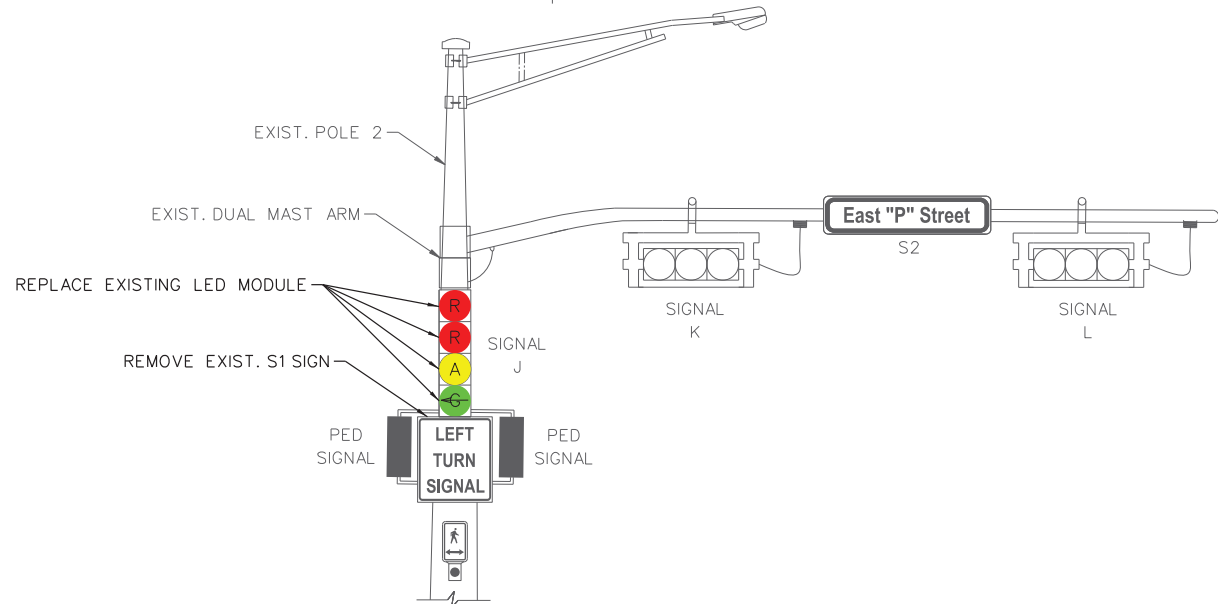
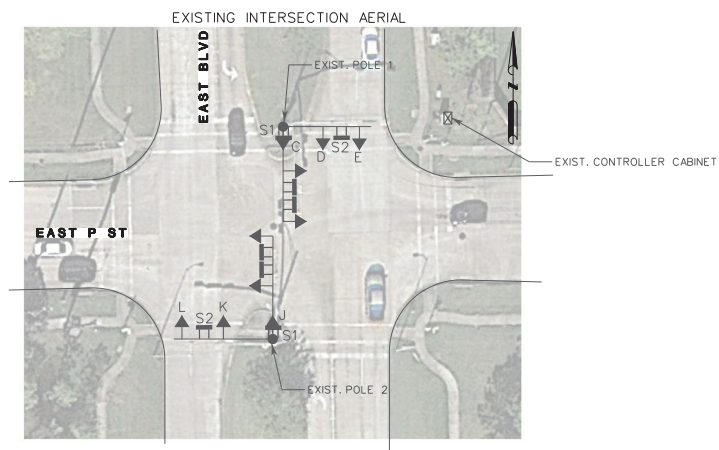


PROPOSED: SOUTHBOUND ON EAST BLVD AT E. SAN AUGUSTINE ST.

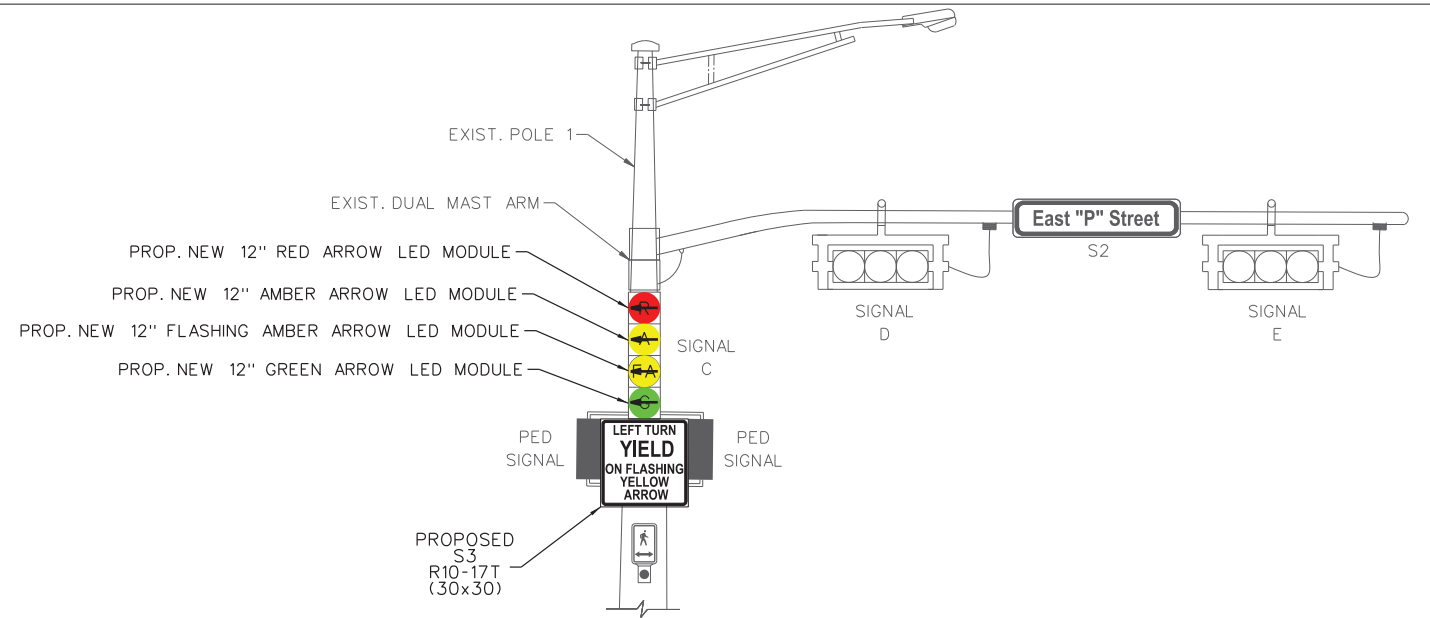
- LEGEND
- ▶ SIGNAL HEAD
 - POWER POLE/STEEL STRAIN POLE
 - OVERHEAD SIGN
 - PROP. OVERHEAD SIGN



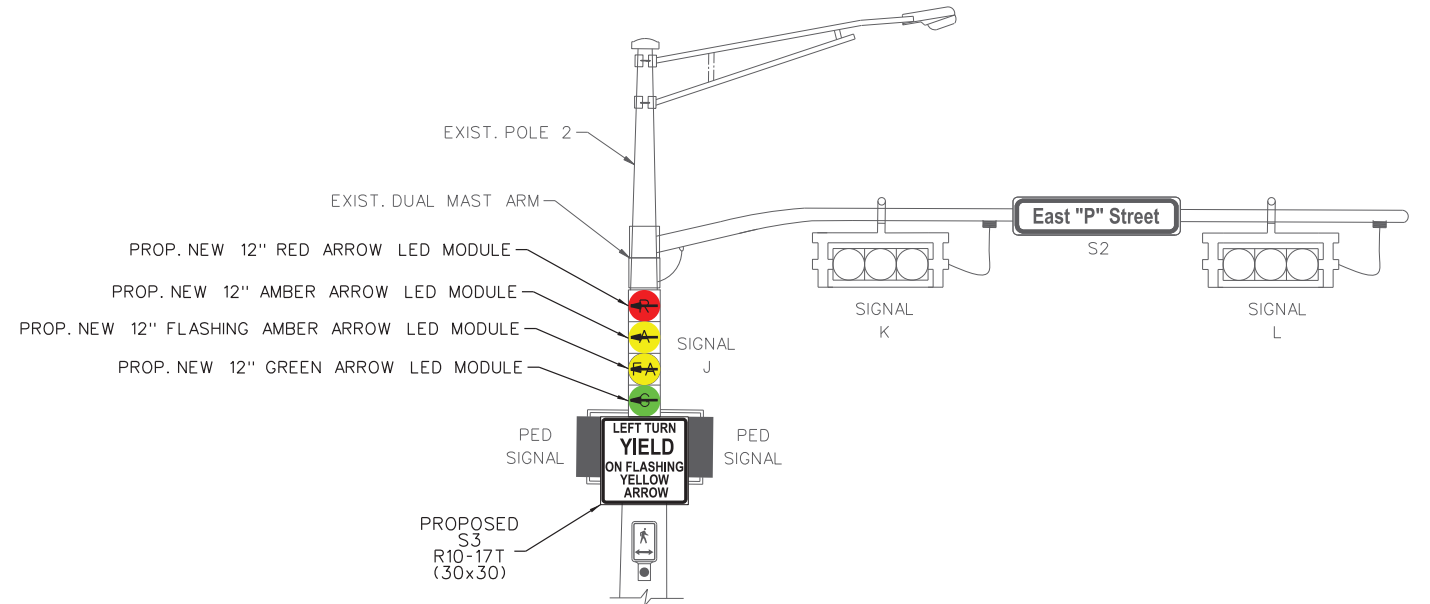
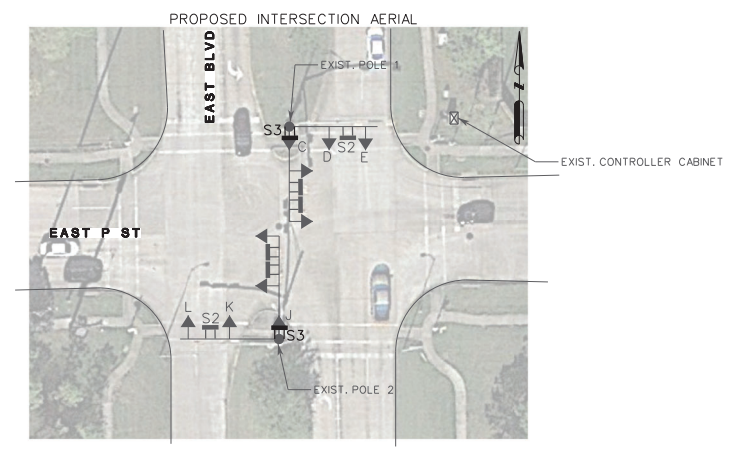
EXISTING: NORTHBOUND ON EAST BLVD AT EAST P ST.



EXISTING: SOUTHBOUND ON EAST BLVD AT EAST P ST.



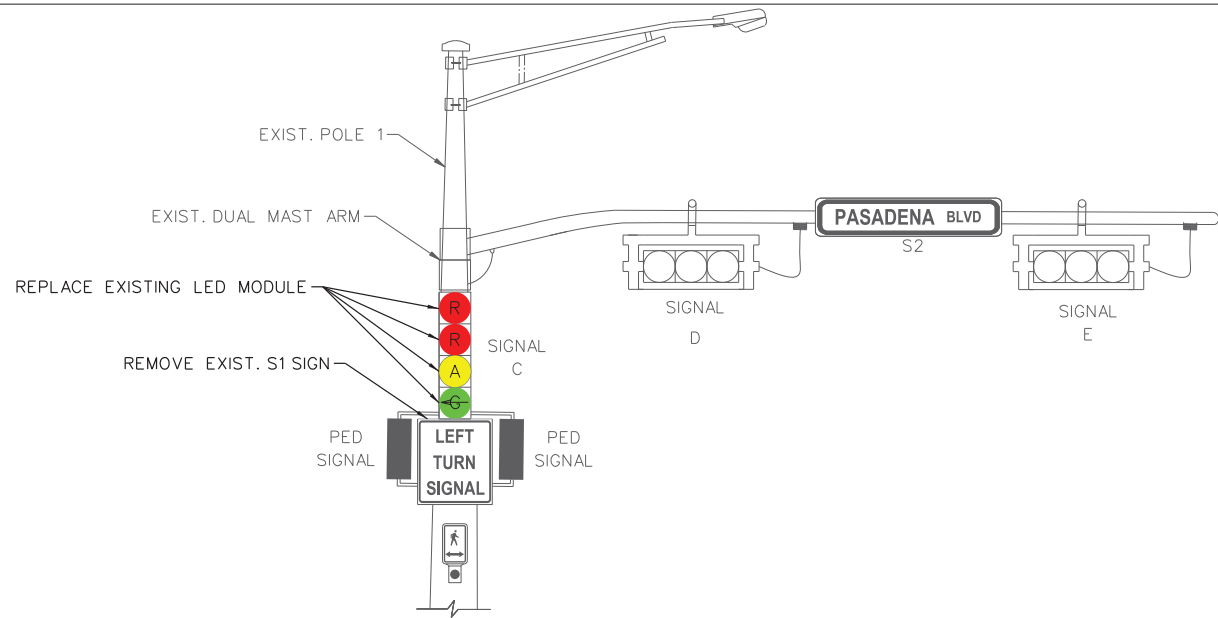
PROPOSED: NORTHBOUND ON EAST BLVD AT EAST P ST.



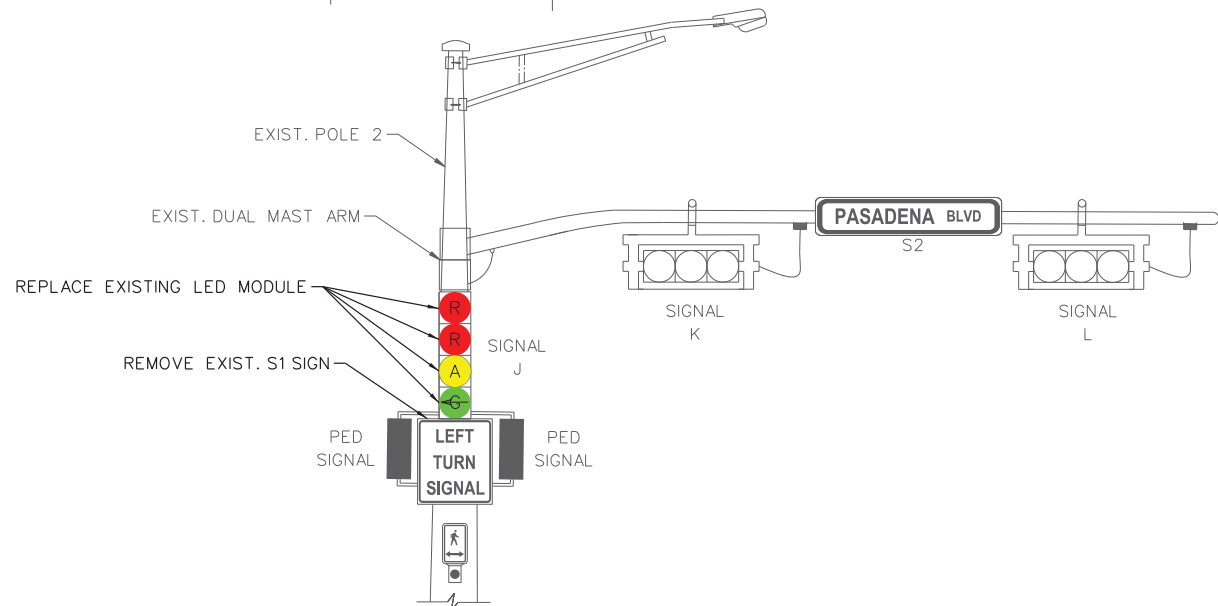
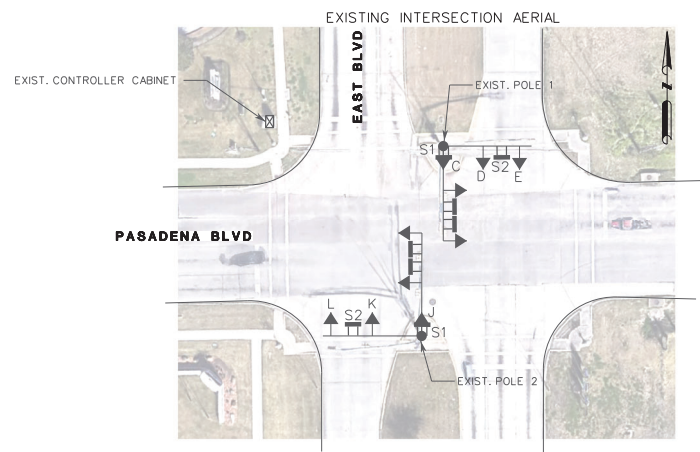
PROPOSED: SOUTHBOUND ON EAST BLVD AT EAST P ST.

LEGEND

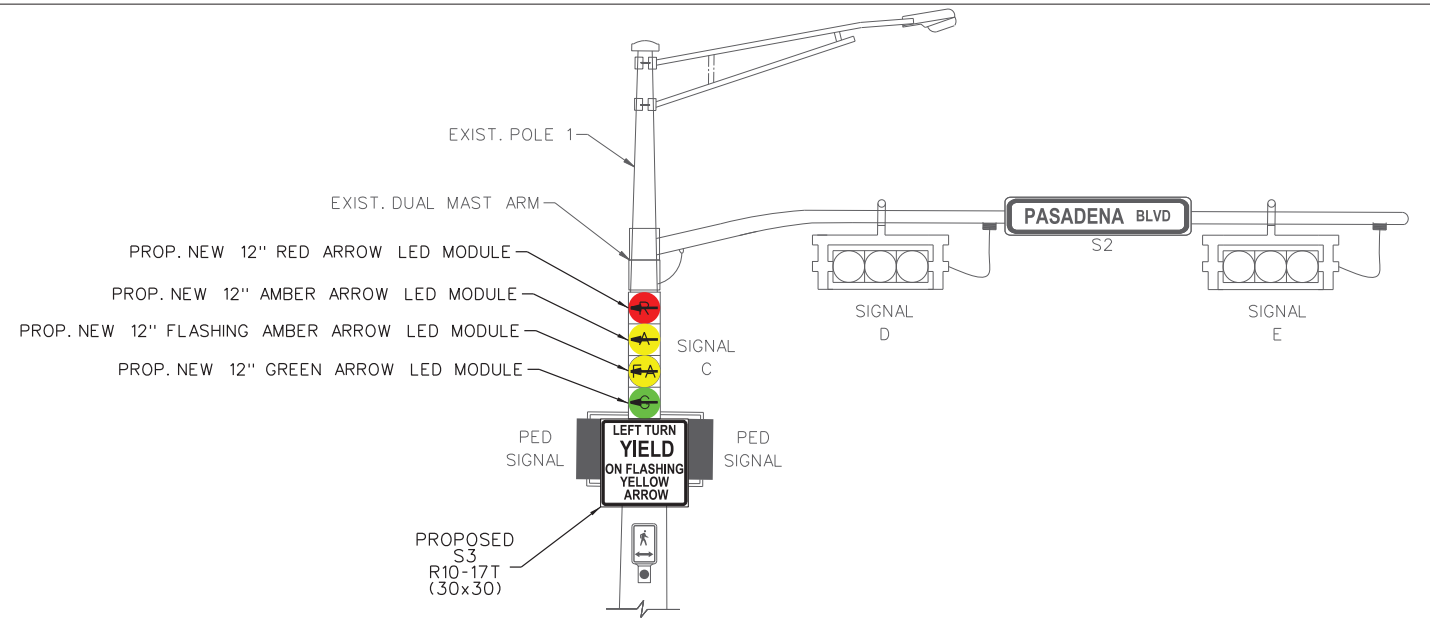
- ▶ SIGNAL HEAD
- POWER POLE/STEEL STRAIN POLE
- OVERHEAD SIGN
- PROP. OVERHEAD SIGN



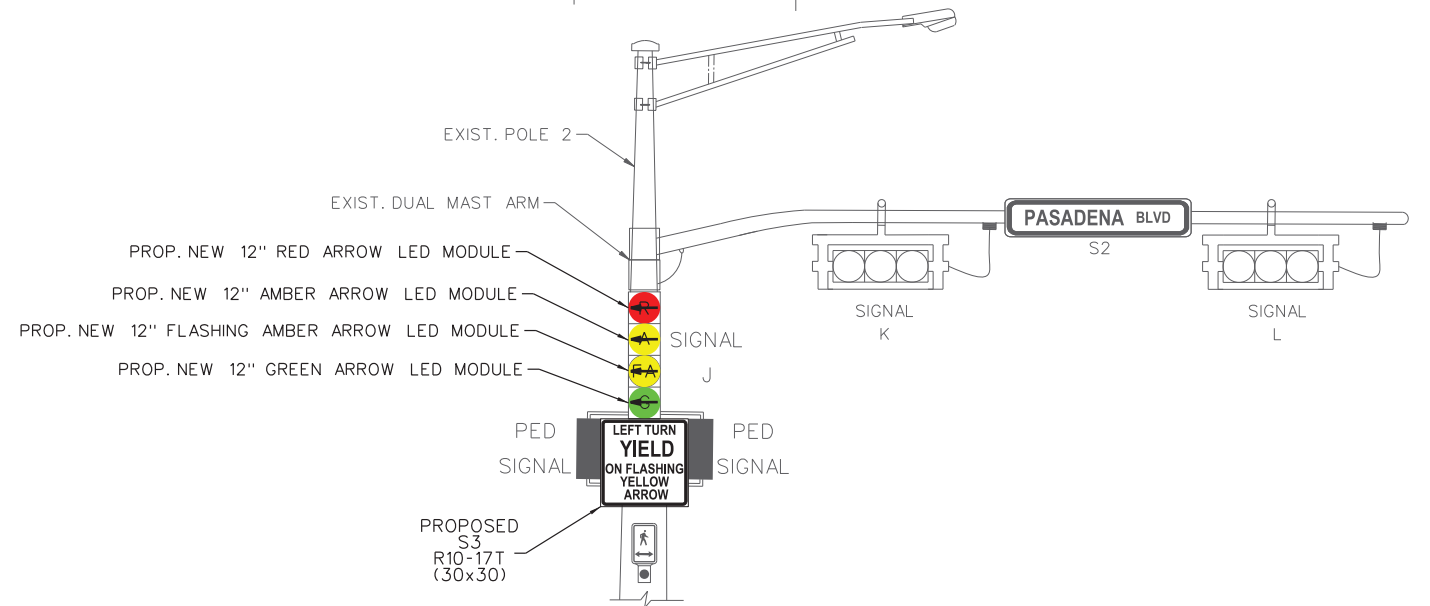
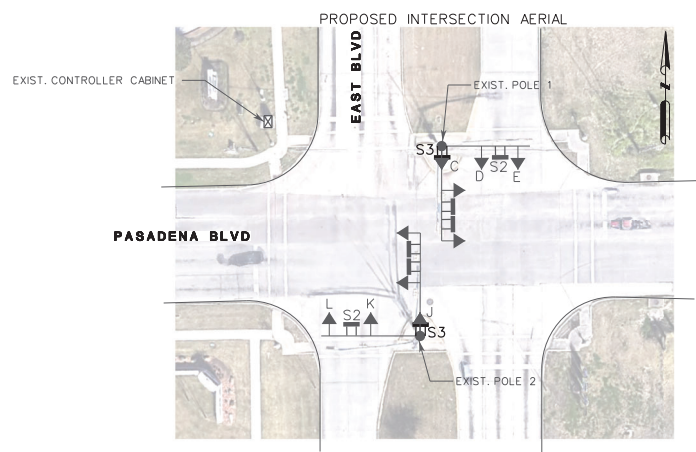
EXISTING: NORTHBOUND ON EAST BLVD AT PASADENA BLVD.



EXISTING: SOUTHBOUND ON EAST BLVD AT PASADENA BLVD.



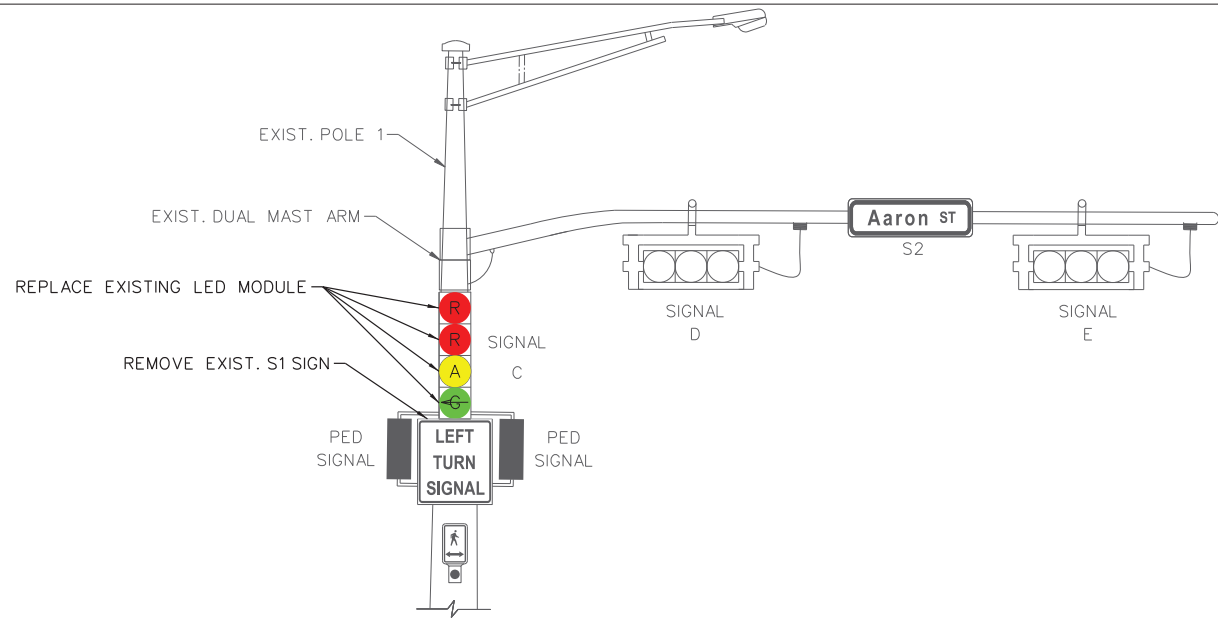
PROPOSED: NORTHBOUND ON EAST BLVD AT PASADENA BLVD.



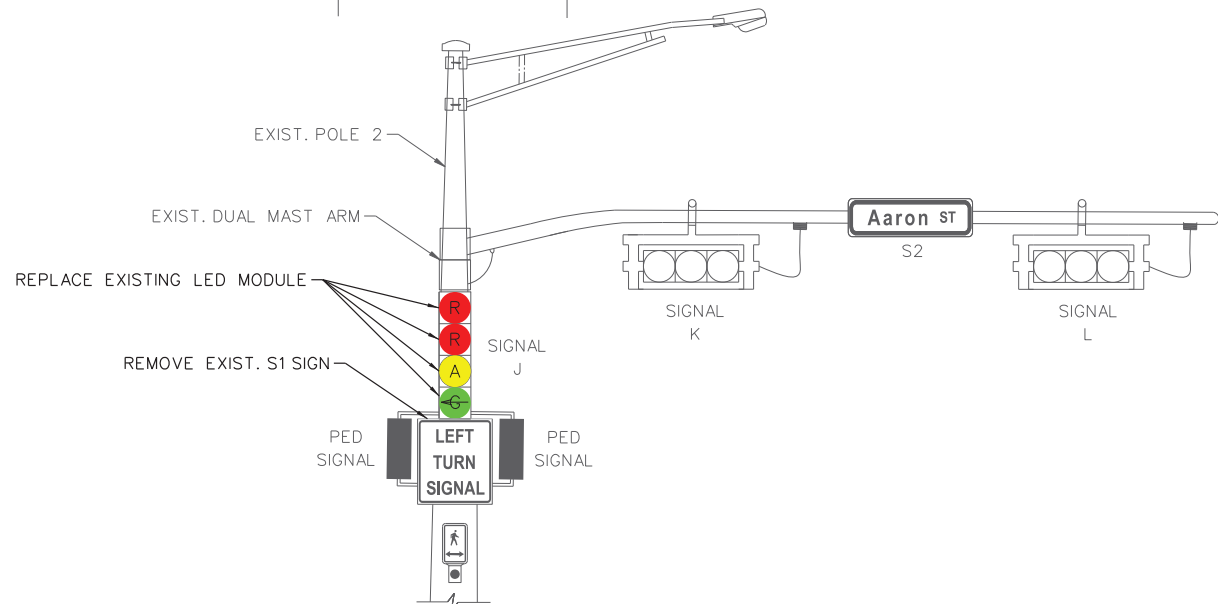
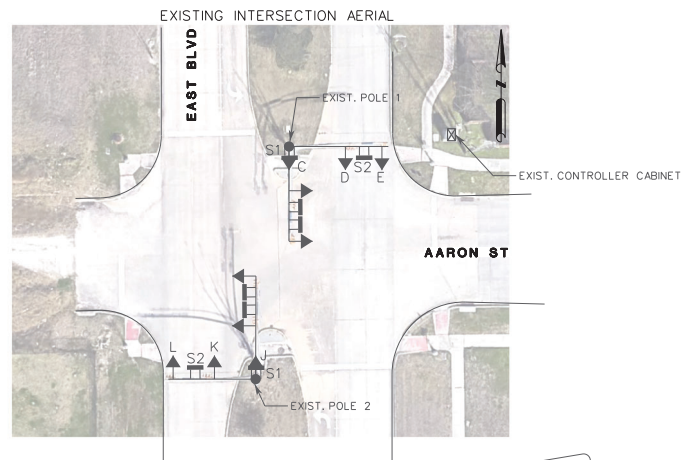
PROPOSED: SOUTHBOUND ON EAST BLVD AT PASADENA BLVD.

LEGEND

- ▶ SIGNAL HEAD
- POWER POLE/STEEL STRAIN POLE
- OVERHEAD SIGN
- PROP. OVERHEAD SIGN

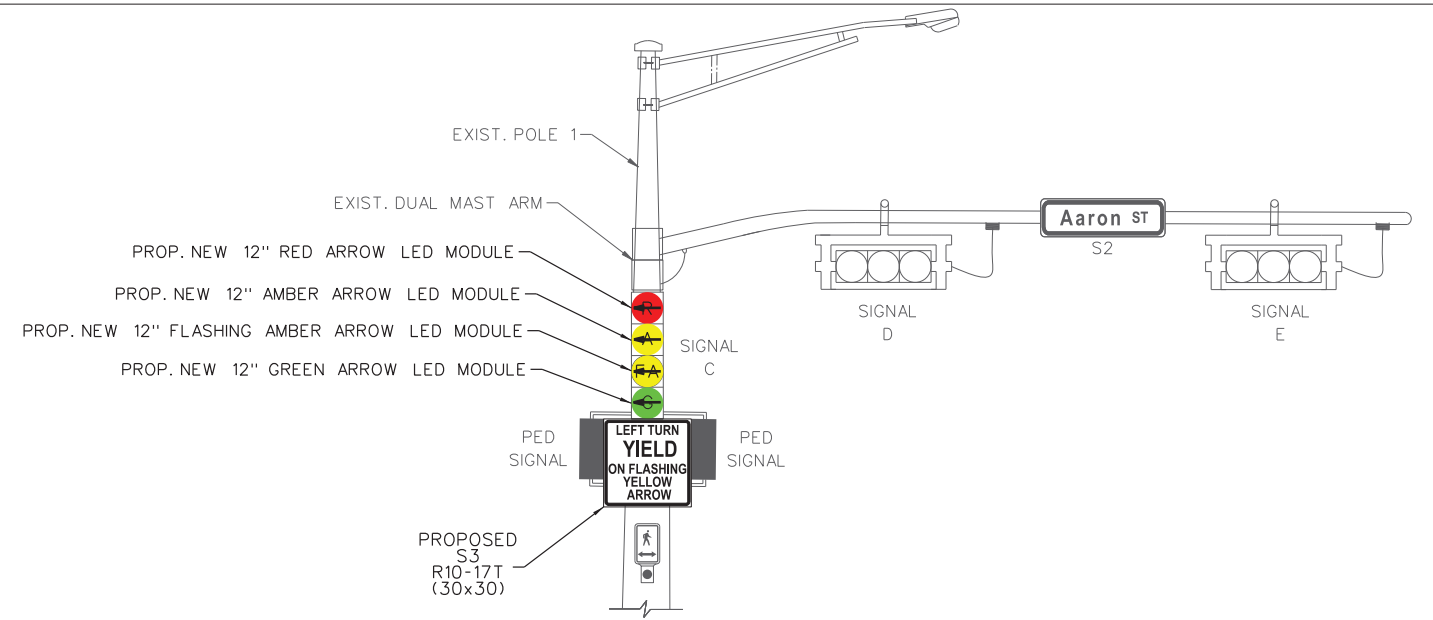


EXISTING: NORTHBOUND ON EAST BLVD AT AARON ST.

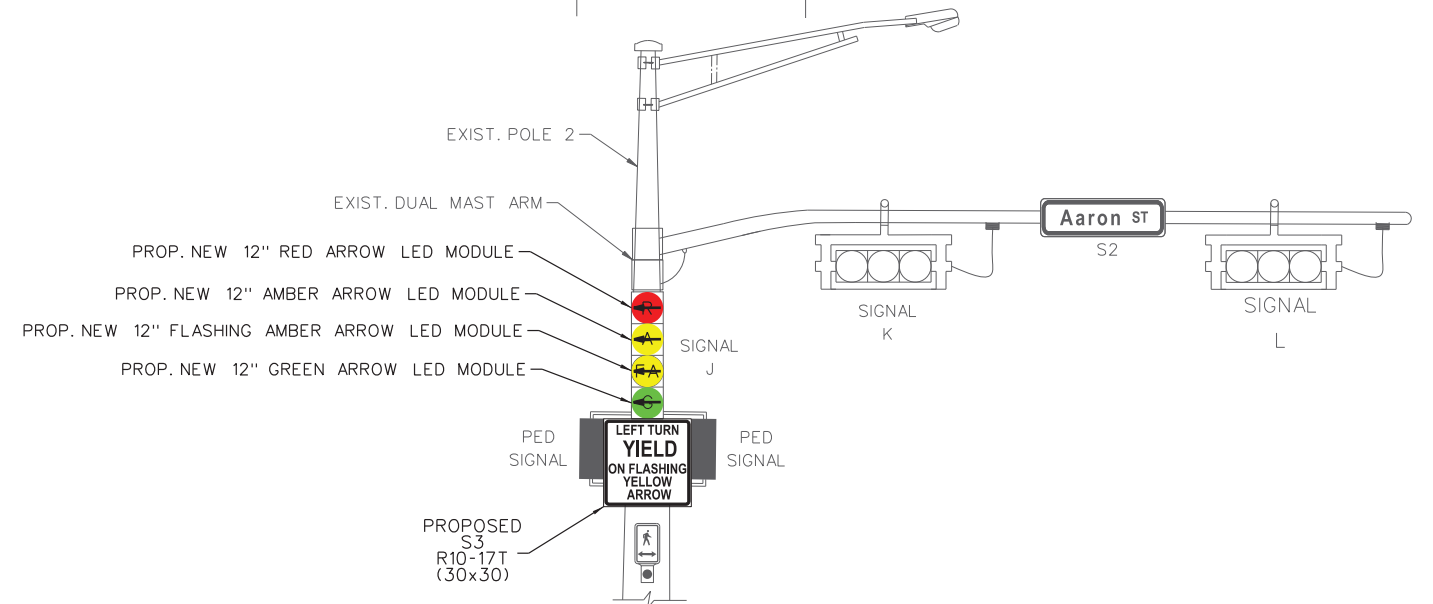
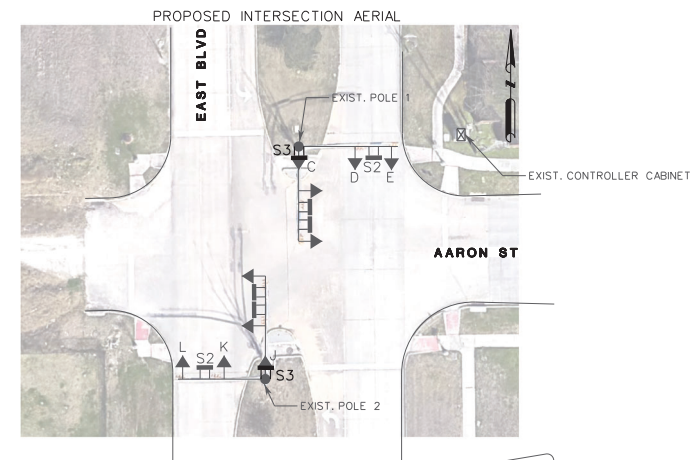


EXISTING: SOUTHBOUND ON EAST BLVD AT AARON ST.

- LEGEND**
- ▶ SIGNAL HEAD
 - POWER POLE/STEEL STRAIN POLE
 - OVERHEAD SIGN
 - PROP. OVERHEAD SIGN



PROPOSED: NORTHBOUND ON EAST BLVD AT AARON ST.



PROPOSED: SOUTHBOUND ON EAST BLVD AT AARON ST.

P:\DEER-453\DCN\PP\19_Prop East Blvd at Aaron St.dgn
8/27/2021 1:52:35 PM kkozaris

 Midtown Engineers, LLC 5225 KATY FREEWAY, SUITE 400 HOUSTON, TX 77007 (713) 862-8848 WWW.MIDTOWNENGINEERS.COM TBPE NO. F-8934	 Terry L. McDaniel 8/27/2021	EAST BLVD AND CENTER ST EXISTING TRAFFIC SIGNAL		SHEET NO: 18 / 19
		MODIFICATIONS TO FLASHING YELLOW ARROW		
		EAST BLVD AT AARON ST		
		EXISTING AND PROPOSED LAYOUT		
DATE: 8/27/2021	JOB NO. DEER - 4531			