EXHIBIT 2

RE-BID

CITY OF SANTA ANA

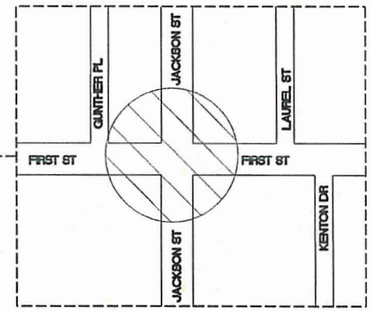
PUBLIC WORKS AGENCY

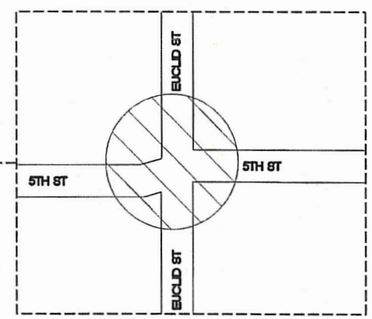
PROJECT NO.: 18-6919

FEDERAL PROJECT NO.: HSIPL 5063(190)

FIRST STREET AND JACKSON STREET AND 5TH STREET AND EUCLID STREET TRAFFIC SIGNAL MODIFICATION

NO SCALE





SHEET INDEX		
SHEET	DESCRIPTION	PLAN NO.
	TITLE SHEET	
1	TRAFFIC SIGNAL MODIFICATION ON FIRST ST AND JACKSON ST	TF-06741
2	TRAFFIC SIGNAL INTERCONNECT ON FIRST STREET FROM HARBOR BLVD TO JACKSON ST	TF-06742
3	TRAFFIC SIGNAL MODIFICATION ON 5TH ST AND EUCLID ST	TF-06742

Underground Service Alert
of Southern California
CALL: TOLL FREE 811
TWO WORKING DAYS
BEFORE YOU DIG

NOTICE TO CONTRACTOR

PURSUANT TO ASSEMBLY BILL 3019 NO EXCAVATION PERMIT IS VALID UNLESS THE CONTRACTOR CONTACTS AND OBTAINS AN INQUIRY I.D. NUMBER FROM "UNDERGROUND SERVICE ALERT" (1-800-422-4133) AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING EXCAVATION.

APPROVALS:

10/20/2021
EXECUTIVE DIRECTOR — DATE
PUBLIC WORKS AGENCY

10/20/21
EDWIN "WILLIAM" GALVEZ, PE — DATE
CITY ENGINEER

PREPARED UNDER THE SUPERVISION OF:

9/22/21
ZDENEK KEKULA, PE — R.C.E. NO. 66219 — DATE
PRINCIPAL CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER — ZDENEK KEKULA — NO. C66219 — EXP. 6-30-22 — CIVIL — STATE OF CALIFORNIA

FIRST STREET AND JACKSON STREET AND 5TH STREET AND EUCLID STREET TRAFFIC SIGNAL MODIFICATION - 18-6919 - HSIPL 5063(190)

POLE SCHEDULE

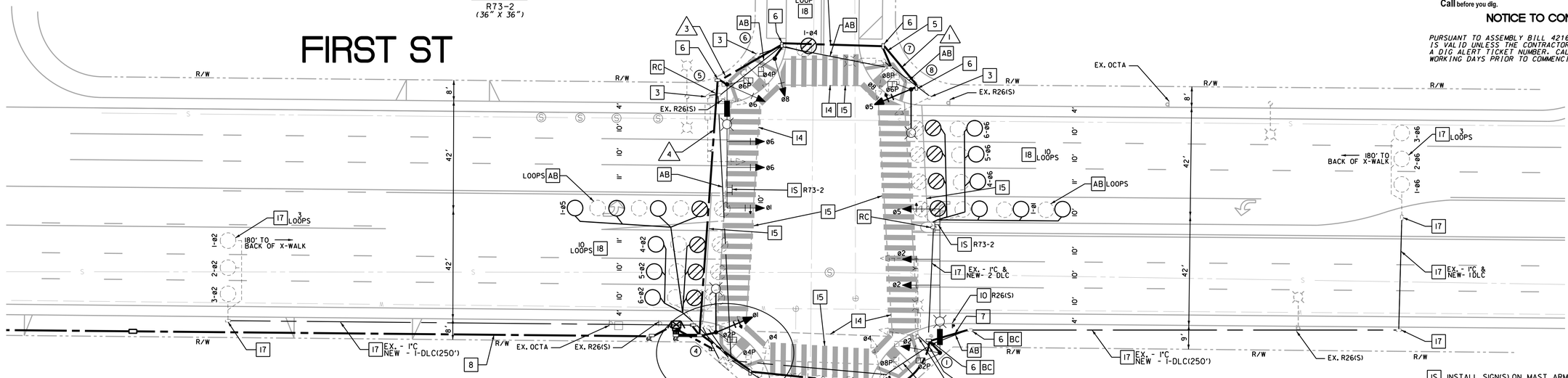
NO.	▲ STANDARD DESCRIPTION	SIG. MA	LUM. MA	+ LUMINAIRE	R.S.N.S. LEGEND	SIGNAL MOUNTING VEHICLE	• PED	A.D.A. PPB TYPE	PHASE	QUAD	REMARKS
(1)	29-5-100 (N)	55' (N)	15' (N)	LED (N)	(N) Jackson ST 100S	3-MAS Ø0	SV-I-T(N)	SP-I-T(N)	B	8	W	F=20'
(2)	TYPE I-A	-	-	-	-	-	TV-I-T	SP-I-T	B	2	N	
(3)	TYPE 15	30'	15'	LED	(N) IST ST 350OW	-	SV-I-T	SP-I-T	B	2	N	
(4)	TYPE 15TS(N)	-	15' (N)	LED (N)	-	-	SV-I-T(N)	SP-I-T(N)	B	4	E	
(5)	29-5-100 (N)	50' (N)	15' (N)	LED (N)	(N) Jackson ST 100N	3-MAS Ø0	SV-I-T(N)	SP-I-T(N)	B	4	E	F=20', STRAIGHT LMA
(6)	TYPE I-A (N)	-	-	-	-	-	TV-I-T(N)	SP-I-T(N)	B	6	S	
(7)	TYPE 15	30'	15'	LED	(N) IST ST 340OW	-	SV-I-T	SP-I-T	B	6	S	
(8)	TYPE 15TS(N)	-	15' (N)	LED (N)	-	-	SV-I-T(N)	SP-I-T(N)	B	8	W	STRAIGHT LMA

ALL EQUIPMENT IS EXISTING UNLESS NOTED OTHERWISE. (N)=NEW.
• PEDESTRIAN HEADS SHALL BE COUNTDOWN TYPE.
* LED LUMINAIRES SHALL BE LEOTEK GREENCOBRA SERIES PER SPECIAL PROVISIONS.
▲ CONTRACTOR SHALL POT HOLE ALL POLE LOCATIONS PRIOR TO ORDERING POLES.

SIGN LEGEND

OCTA	OCTA BUS STOP
R26(S)	NO STOPPING ANY TIME (12"X18")
R73-2	LEFT AND U-TURN ARROW (36"X36")

R73-2
(36" X 36")



MODIFIED 332 CABINET FOUNDATION DETAIL

FOR ANCHOR BOLT DETAILS SEE CALTRANS STANDARD PLAN ES-3C

PHASE DIAGRAM

	GROUP A		GROUP B	
RING 1	Ø1	Ø2	Ø3 NOT USED	Ø4
RING 2	Ø5	Ø6	Ø7 NOT USED	Ø8

TYPICAL PHASE SEQUENCE

Ø1·Ø5 → Ø1·Ø6 / Ø2·Ø5 → Ø2·Ø6 → Ø4·Ø8

RE-BID

GRAPHIC SCALE: 1"=20'

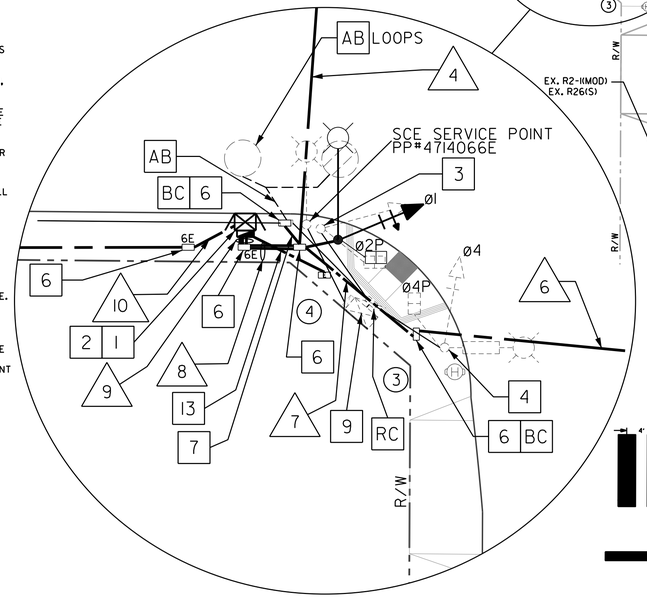
811 Know what's below. Call before you dig.
Underground Service Alert of Southern California
TWO WORKING DAYS BEFORE YOU DIG
www.DigAlert.org

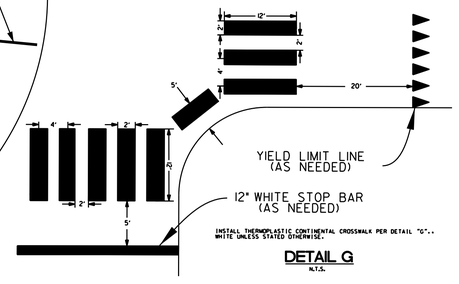
NOTICE TO CONTRACTOR

PURSUANT TO ASSEMBLY BILL 4216 NO EXCAVATION PERMIT IS VALID UNLESS THE CONTRACTOR CONTACTS AND OBTAINS A DIG ALERT TICKET NUMBER. CALL 811 AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING EXCAVATION.

GENERAL NOTES

1. ALL TRAFFIC SIGNAL, HIGHWAY LIGHTING, SIGNING AND STRIPING SHALL CONFORM TO THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, STANDARD PLANS AND SPECIFICATIONS DATED 2018 EDITION, SANTA ANA STANDARD PLANS AND THE SPECIAL PROVISIONS FOR THE PROJECT.
2. ALL ABBREVIATIONS AND SYMBOLS USED ARE SHOWN ON CALTRANS STANDARD PLAN NO.'S A-10A, A-10B, ES-1A, ES-1B AND AS DEFINED ON THE PLAN.
3. UTILITIES SHOWN ON THESE PLANS ARE CORRECT AND ACCURATE TO THE EXTENT OF AVAILABLE RECORDS AND KNOWLEDGE. THE CONTRACTOR, HOWEVER, IS REQUIRED TO TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE OR INTERFERE WITH SUCH FACILITIES. CONTACT USA DIG ALERT AT 811AT LEAST 2 WORKING DAYS IN ADVANCE.
4. ALL NEW CONDUITS SHALL BE PVC SCHEDULE 80. ALL STUB OUT CONDUIT FOR LOOPS, SHALL BE 2". ALL CONDUITS FROM POLE TO ADJACENT PULL BOX SHALL BE PER CALTRANS STD. PLAN. ALL OTHER CONDUITS SHALL BE 3" MINIMUM UNLESS NOTED OTHERWISE. ALL FITTINGS INTO PULL BOX SHALL BE 45-DEGREE SWEEPS.
5. ALL SIGNAL CABLES SHALL BE RUN CONTINUOUSLY FROM TERMINAL BLOCK TO CABINET. INDIVIDUAL SIGNAL CONDUCTORS AND MULTIPLE SAFETY LIGHTING CONDUCTORS MAY BE SPLICED IN PULL BOXES. ALL CONDUCTORS, CABLES, LOOP WIRES AND LEAD- INS SHALL BE LABELED PER THE SPECIAL PROVISIONS.
6. ALL LOCATIONS OF DETECTOR LOOP, SIGNAL POLE AND CABINET REQUIRE ENGINEER'S APPROVAL PRIOR TO SAW CUTTING OR EXCAVATION.
7. DETECTOR LOOPS SHALL BE 6-FOOT DIAMETER, TYPE E PER CALTRANS STD. PLAN ES-5B. FRONT LOOP (CENTER OF LOOP) TO BE PLACED 4-FOOT BEHIND BACK OF CROSSWALK. LOOPS IN THE SAME LANE SHALL BE PLACED 16 FEET APART (CENTER TO CENTER). ALL LOOPS TO BE CENTERED IN THE TRAVEL LANE, EXCEPT WHERE CURB LANE IS WIDER THAN 10 FEET, PLACE LOOP'S CENTER AT 5.5 FEET FROM THE ADJACENT LEFT LANE LINE. ALL LOOPS MUST BE TESTED BEFORE FILLING SAW CUTS.
8. ALL PULL BOXES SHALL BE CONCRETE AND PLASTIC LINED. LID SHALL BE LIGHT WEIGHT AND LABELED PER CITY OF SANTA ANA STD. PLAN NO. 1501. PULL BOX SHALL BE NUMBER 6, UNLESS NOTED OTHERWISE.
9. ALL NEW VEHICLE AND PEDESTRIAN HEADS SHALL BE OF LIGHT EMITTING DIODE (LED) TYPE PER THE SPECIAL PROVISIONS. ALL NEW VEHICLE HEADS SHALL BE 12" WITH BACKPLATE. MOUNT ALL VEHICLE AND PEDESTRIAN HEADS AWAY FROM THE TRAFFIC SIDE OF THE POLE WHERE POSSIBLE.
10. CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDELINE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND CABLES REQUIRED FOR THE INTENDED OPERATION.
11. UNLESS NOTED OTHERWISE, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIAL AND EQUIPMENT REQUIRED.
12. TEMPORARY OVERHEAD WIRING, INCLUDING SIGNAL INTERCONNECT IS REQUIRED TO MAINTAIN SIGNAL OPERATION DURING MODIFICATION OF EXISTING TRAFFIC SIGNAL SYSTEM PER THE SPECIAL PROVISIONS.
13. REMOVE SIGN AND POST, SANDBLAST LEGENDS AND CONFLICTING STRIPING AS SHOWN ON THE CHANNELIZATION PLAN AND SIGNAL PLAN MUST BE COORDINATED.
14. ALL STRIPING SHALL CONFORM TO THE CITY OF SANTA ANA STANDARD PLAN NO. 125 (A THROUGH E). ALL ITEMS OR DETAILS NOT COVERED IN THE CITY STANDARD PLANS SHALL CONFORM TO THE APPLICABLE SECTIONS OF THE STATE OF CALIFORNIA STANDARD PLANS AND SPECIFICATIONS DATED 2018 EDITION.
15. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE THERMOPLASTIC. ALL CURB MARKINGS AND MEDIAN NOSE MARKINGS SHALL BE PAINT UNLESS NOTED OTHERWISE.
16. ALL NEW SIGN(S) MUST BE INSTALLED ON NEW 2"X2" PERFORATED AND GALVANIZED METAL POST(S) UNLESS NOTED OTHERWISE. ALL SALVAGED SIGN(S) SHALL BE DELIVERED TO THE CITY CORPORATE YARD. CONTACT CITY MAINTENANCE AT (714)647-3339 PRIOR TO DELIVERY.
17. ALL CONFLICTING STRIPING, PAVEMENT MARKINGS, AND RAISED PAVEMENT MARKERS SHALL BE REMOVED EVEN IF NOT SHOWN ON THE PLAN. REMOVAL OF STRIPING AND PAVEMENT MARKINGS SHALL BE DONE BY GRINDING. ALL DAMAGED PAVEMENT DUE TO REMOVAL SHALL BE REPAIRED AS NECESSARY TO MAINTAIN A SMOOTH AND UNIFORM SURFACE.





DETAIL G
N.T.S.

CONSTRUCTION NOTES

1. INSTALL TYPE 332L TRAFFIC SIGNAL CABINET ASSEMBLY WITH ECONOLITE COBALT RACKMOUNT CONTROLLER AND LATEST ECONOLITE FIRMWARE PER SPECIAL PROVISIONS. THE CABINET ASSEMBLY SHALL BE EQUIPPED FOR 8-PHASE OPERATION INCLUDING GTT OPTICOM EVP GPS MODEL 764 PHASE SELECTOR. INSTALL FOUNDATION AS REQUIRED.
2. INSTALL NEW DUAL METER SERVICE CABINET PER SPECIAL PROVISIONS. RE-USE EXISTING SCE METER.
3. REMOVE AND DISCARD TRAFFIC SIGNAL POLE, VEHICLE HEAD(S), AND LUMINAIRE(S). REMOVE FOUNDATION COMPLETE.
4. REPLACE EXISTING VEHICLE HEAD(S), PED HEAD(S), PUSH BUTTON(S), RSNS(S) AND LUMINAIRE(S) PER POLE SCHEDULE.
5. INSTALL 3"C WITH NEW CONDUCTORS PER CONDUCTOR SCHEDULE.
6. INSTALL NEW OR REPLACE EXISTING PULLOX WITH NEW NO.6 OR NO.6E PULLBOX.
7. INSTALL 2"C WITH NEW DETECTOR LOOP CABLE (DLC) CONDUCTORS PER CONDUCTOR SCHEDULE..
8. INSTALL NEW 3" CONDUIT AND FIBER OPTIC CABLE AS SHOWN. REFER TO INTERCONNECT PLAN SHEET 2 FOR DETAILS.
9. REMOVE AND DISCARD EXISTING TYPE "P38" TRAFFIC SIGNAL CABINET, AND REMOVE FOUNDATION COMPLETE. CITY TO SALVAGE CONTROLLER AND OTHER EQUIPMENT INSIDE CABINET.
10. INSTALL NEW SIGN(S) AND POST(S) PER CITY OF SANTA ANA STD. PLAN NO. 1504-A & 1504-B.
12. INTERCEPT EXISTING CONDUIT RUN WITH NEW SCE PULLBOX. SPLICE CABLE IN PULLBOX.
13. INSTALL NEW 3"C WITH 3#8 AWG CONDUCTORS.
14. REMOVE EXISTING CONFLICTING STRIPING.
15. INSTALL THERMOPLASTIC CONTINENTAL CROSSWALK PER DETAIL "G", WHITE UNLESS STATED OTHERWISE.
16. INSTALL OR REFRESH DOUBLE YELLOW LINE PER CITY OF SA STD. NO. 1125B-1, DETAIL "4".
17. PROTECT IN PLACE.
18. FURNISH AND INSTALL 6' DIAMETER CIRCULAR LOOP DETECTOR. FIRST LOOP BEHIND LIMIT LINE SHALL BE TYPE "D" CIRCULAR LOOPIN' VEHICLE LANE AND TYPE "Q" IN BIKE LANE. ALL OTHER LOOPS SHALL BE TYPE "E" ROUND LOOP PER CALTRANS STD. PLAN ES-5B. INSTALL NEW 2" PVC STUB OUT IF NECESSARY. SEE GENERAL NOTE 7.

IS INSTALL SIGN(S) ON MAST ARM.
AB ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS.
BC INSTALL PULL BOX IN EXISTING CONDUIT RUN.
RC EQUIPMENT OR MATERIAL TO BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR.

CONDUCTOR SCHEDULE

AWG	CIRCUIT/CONDUCTORS/CABLE	RUN NO. 1	2	3	4	5	6	7	8	9	10
POLE 1	CSC 3	-	-	-	-	I	I	I	I	I	-
	CSC 12	-	-	-	-	I	I	I	I	I	-
POLE 2	CSC 3	-	-	-	-	-	I	I	I	I	-
	CSC 12	-	-	-	-	-	I	I	I	I	-
POLE 3	CSC 3	-	-	-	-	-	-	I	I	I	-
	CSC 12	-	-	-	-	-	-	I	I	I	-
POLE 4	CSC 3	-	-	-	-	-	-	-	I	I	-
	CSC 12	-	-	-	-	-	-	-	I	I	-
POLE 5	CSC 3	-	-	-	I	-	-	-	I	I	-
	CSC 12	-	-	-	I	-	-	-	I	I	-
POLE 6	CSC 3	-	-	I	I	-	-	-	I	I	-
	CSC 12	-	-	I	I	-	-	-	I	I	-
POLE 7	CSC 3	-	I	I	I	-	-	-	I	I	-
	CSC 12	-	I	I	I	-	-	-	I	I	-
POLE 8	CSC 3	I	I	I	I	-	-	-	I	I	-
	CSC 12	I	I	I	I	-	-	-	I	I	-
#10	LUMINAIRE	2	2	2	2	2	-	4	4	4	-
DLC	Ø1 DETECTOR	-	-	-	-	I	I	I	I	I	-
	Ø2 DETECTOR	-	-	-	I	-	-	-	I	I	-
	Ø4 DETECTOR	-	-	I	I	-	-	-	I	I	-
	Ø5 DETECTOR	-	-	-	-	-	-	I	I	I	-
	Ø6 DETECTOR	-	-	-	-	I	I	I	I	I	-
	Ø8 DETECTOR	-	-	-	-	-	I	I	I	I	-
	TOTAL	-	-	I	I	2	3	3	6	6	-
120 STRAND SMFO		-	-	-	-	-	-	-	-	-	I
6PR#22 INTERCONNECT		-	-	-	-	-	-	-	-	-	-
EVP CABLE		-	-	-	-	-	-	-	-	-	-
CCTV		-	-	-	-	-	-	-	-	-	-
PULLTAPE		I	I	I	I	I	I	I	I	I	-
CONDUIT		4"	4"	4"	4"	4"	4"	4"	2-4"	2-4" 2"	4"

ALL CONDUIT AND CONDUCTORS SHALL BE NEW UNLESS NOTED OTHERWISE.
(E)=EXISITNG

FED. PROJ. NO: HSIPL 5063(190)

PROJECT NO. 18-6919: TRAFFIC SIGNAL MODIFICATION AT FIRST ST AND JACKSON ST - FEDERAL PROJECT NO: HSIPL 5063(190)

K:\#traffic\PROJECTS* 1st-Jackson and 5th-Euclid Signal Modifications-18-6919-HSIPL 5063(190)\#Drawings\#Drawings-1st at Jackson TS Mod

FILE NO.: TF-06741

REVISIONS

NUMBER	DATE	INITIALS	DESCRIPTION	APPROVED	INSTALLED

REFERENCES

BENCHMARK NO.: ELEV.:

CONSTRUCTION COMPLETED: TURN - ON:

REGISTERED PROFESSIONAL ENGINEER ZDNEK KEKULA NO. C66219 EXP. 6-30-22 CIVIL STATE OF CALIFORNIA

		DATE
PREPARED UNDER THE SUPERVISION OF:	ZdenaK KeKula PRINCIPAL CIVIL ENGINEER RCE NO.:66219	04/2022
	DESIGNED:MC DRAWN:MC CHECKED:ZK	04/2022
REVIEWED FOR CONSTRUCTABILITY:	PRINCIPAL CIVIL ENGINEER RCE NO.:62968	04/2022
RECOMMENDED FOR CONSTRUCTION:	ZdenaK KeKula PRINCIPAL CIVIL ENGINEER RCE NO.:66219	04/2022

TRAFFIC SIGNAL MODIFICATION

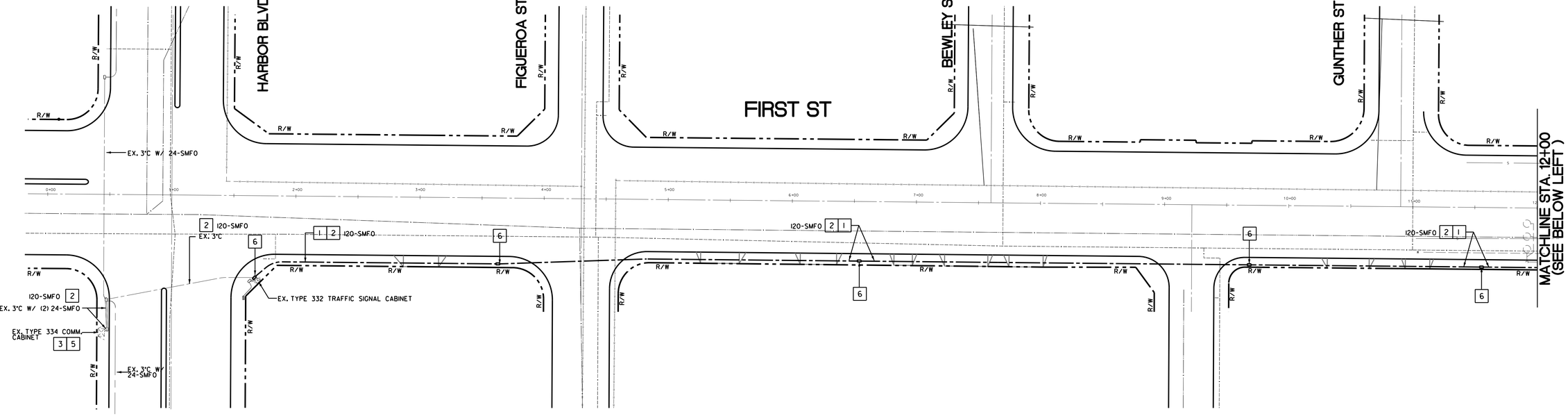
FIRST STREET AND JACKSON STREET

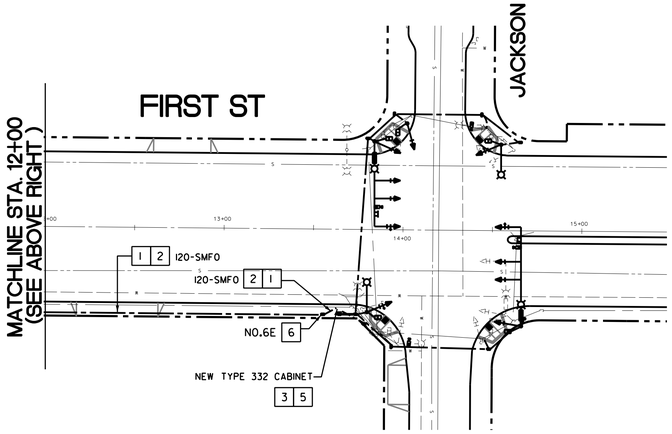
XA-01

PUBLIC WORKS AGENCY
CITY OF SANTA ANA

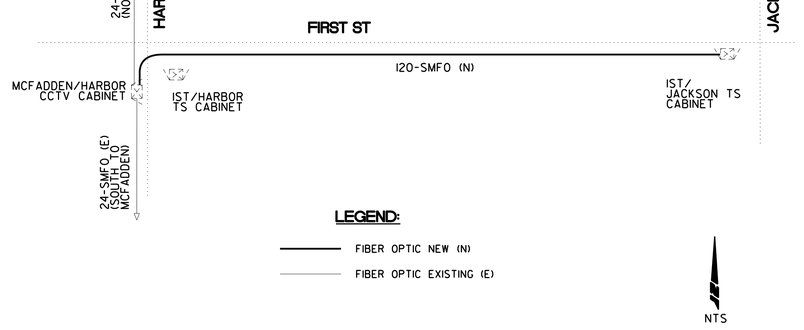
SHEET 1 OF 3

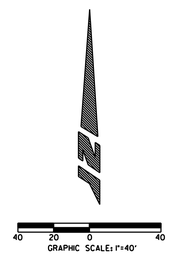
RE-BID





FIBER OPTIC SCHEMATIC





CONSTRUCTION NOTES

1. INSTALL 3" PVC CONDUIT.
2. INSTALL FIBER OPTIC CABLE IN NEW OR EXISTING CONDUIT AS SHOWN. COIL 15' OF FIBER OPTIC CABLE IN EACH PULLBOX.
3. INSTALL NEW CORNING CLOSET CONNECTOR HOUSING PER SPECIAL PROVISIONS AND TERMINATE FIBER OPTIC CABLE WITH SC ENDS AS DIRECTED BY ENGINEER.
4. TERMINATE FIBER OPTIC CABLE IN EXISTING CORNING CONNECTOR HOUSING WITH SC ENDS AS DIRECTED BY ENGINEER.
5. INSTALL FIBER OPTIC AND IP COMMUNICATIONS HARWARE PER SPECIAL PROVISIONS.
6. INSTALL NO.6 OR NO.6E PULLBOX AS SHOWN.

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PROJECT NO. 18-6919: TRAFFIC SIGNAL MODIFICATION AT FIRST ST AND JACKSON ST

K:\#rcaffi\c#PROJECTS#_1st-Jackson and 5th-Euclid Signal Modifications-18-6919-HSIPL 5063(190)#Drawings#Drawings-1st of Jackson TS Mod

FILE NO.: TF-06741

REVISIONS						REFERENCES	
NUMBER	DATE	INITIALS	DESCRIPTION	APPROVED	INSTALLED	BENCHMARK NO.:	ELEV.:
						CONSTRUCTION COMPLETED:	

REGISTERED PROFESSIONAL ENGINEER — ZDNEK KRAUS — NO. C66219 — EXP. 6-30-22 — CIVIL — STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF:	ZdenaK KaKuda PRINCIPAL CIVIL ENGINEER RCE NO.:66219 DESIGNED:MC/CR DRAWN:MC/CR CHECKED:ZK	DATE 10/2021 10/2021
REVIEWED FOR CONSTRUCTABILITY:	PRINCIPAL CIVIL ENGINEER RCE NO.:62968	10/2021
RECOMMENDED FOR CONSTRUCTION:	ZdenaK KaKuda PRINCIPAL CIVIL ENGINEER RCE NO.:66219	10/2021

XA-02

TRAFFIC SIGNAL INTERCONNECT

FIRST STREET

HARBOR BLVD TO JACKSON ST

PUBLIC WORKS AGENCY
CITY OF SANTA ANA

SHEET 2 OF 3

RE-BID

POLE SCHEDULE

NO.	▲ STANDARD DESCRIPTION	SIG. MA	LUM. MA	+ LUMINAIRE	R.S.N.S. LEGEND	SIGNAL MOUNTING VEHICLE	SIGNAL MOUNTING • PED	A.D.A. PPB TYPE	PHASE	QUAD	REMARKS
①	19-1-70	15'	12'	LED	(N) Euclid ST 500N	-	SV-1-T	SP-1-T	B (N)	4	E	-
②	15TS (N)	-	15'(N)	LED (N)	-	-	SV-1-T (N)	SP-1-T(N)	B (N)	6	S	25'H POLE, 15' STRAIGHT LMA
③	29-5-100 (N)	45'	15'(N)	LED (N)	(N) 5TH ST 510OW	3- MAS Ø8	SV-1-T (N)	SP-1-T(N)	B (N)	6	S	F=15'
④	TYPE 1-A	-	-	-	-	-	TV-1-T	SP-1-T	B (N)	8	W	-
⑤	15TS	-	12'	LED	(N) Euclid ST 400N	-	SV-1-T	SP-1-T	B (N)	8	W	-
⑥	15TS (N)	-	15'(N)	LED (N)	-	-	SV-1-T (N)	SP-1-T(N)	B (N)	2	N	25'H POLE, 15' STRAIGHT LMA
⑦	29-5-100 (N)	45'	15'(N)	LED (N)	(N) 5TH AVE 520OW	3- MAS Ø8	SV-1-T (N)	SP-1-T(N)	B (N)	2	N	F=15'
⑧	TYPE 1-A	-	-	-	-	-	TV-1-T	SP-1-T	B (N)	4	E	-

ALL EQUIPMENT IS EXISTING UNLESS NOTED OTHERWISE. (N)=NEW.
• PEDESTRIAN HEADS SHALL BE COUNTDOWN TYPE.
+ LED LUMINAIRES SHALL BE LEOTEK GREENCOBRA SERIES PER SPECIAL PROVISION.
▲ CONTRACTOR SHALL POT HOLE ALL NEW POLE LOCATIONS PRIOR TO ORDERING POLES.

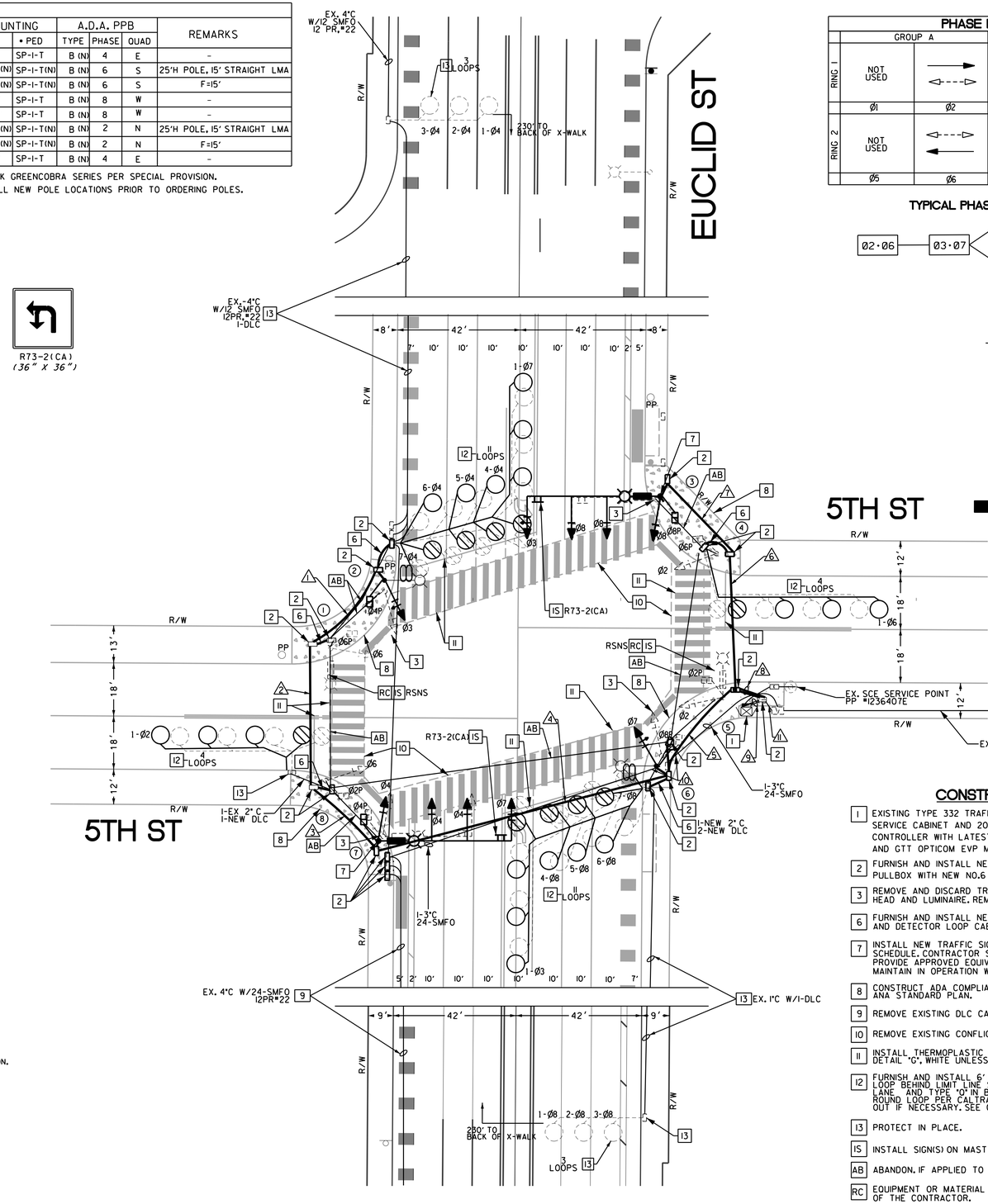
CONDUCTOR SCHEDULE

AWG	CIRCUIT/CONDUCTORS/CABLE	RUN NO. 1	2	3	4	5	6	7	8	9	10	11
POLE 1	CSC 3	-	1	1	1	1	-	-	1	1	-	-
	CSC 12	-	1	1	1	1	-	-	1	1	-	-
POLE 2	CSC 3	1	1	1	1	1	-	-	1	1	-	-
	CSC 12	1	1	1	1	1	-	-	1	1	-	-
POLE 3	CSC 3	-	-	-	-	-	1	1	1	1	-	-
	CSC 12	-	-	-	-	-	1	1	1	1	-	-
POLE 4	CSC 3	-	-	-	-	-	1	-	1	1	-	-
	CSC 12	-	-	-	-	-	1	-	1	1	-	-
POLE 5	CSC 3	-	-	-	-	-	-	-	1	1	-	-
	CSC 12	-	-	-	-	-	-	-	1	1	-	-
POLE 6	CSC 3	-	-	-	-	1	-	-	1	1	-	-
	CSC 12	-	-	-	-	1	-	-	1	1	-	-
POLE 7	CSC 3	-	-	-	1	1	-	-	1	1	-	-
	CSC 12	-	-	-	1	1	-	-	1	1	-	-
POLE 8	CSC 3	-	-	1	1	1	-	-	1	1	-	-
	CSC 12	-	-	1	1	1	-	-	1	1	-	-
#10	LUMINAIRE	2	2	2	2	2	2	2	4	4	-	-
DLC	Ø2 DETECTOR	-	-	1	1	1	-	-	1	1	-	-
	Ø3 DETECTOR	-	-	-	-	1	-	-	1	1	-	-
	Ø4 DETECTOR	2	2	2	2	2	-	-	2	2	-	-
	Ø6 DETECTOR	-	-	-	-	-	1	-	1	1	-	-
	Ø7 DETECTOR	1	1	1	1	1	-	-	1	1	-	-
	Ø8 DETECTOR	-	-	-	-	1	-	-	1	1	-	-
	TOTAL	3	3	4	4	6	1	-	7	7	-	-
24 STRAND SMFO		-	-	-	-	-	-	-	-	-	1(E)	1
12PR#22 INTERCONNECT		-	-	-	-	-	-	-	-	-	2(E)	1(E)
48 - SMFO		-	-	-	-	-	-	-	-	-	1(E)	1(E)
12 - SMFO		-	-	-	-	-	-	-	-	-	1(E)	1(E)
EVP CABLE		-	-	-	-	-	-	-	-	-	-	-
COHU CCTV CMERA		-	-	-	-	-	-	-	-	-	-	-
CONDUIT		4"	4"	4"	4"	4"	4"	4"	4"	2-4" (E) 2-4"	3"(E)	-
PULLTAPE		1	1	1	1	1	1	1	2	2	-	-

ALL CONDUIT AND CONDUCTORS SHALL BE NEW UNLESS NOTED OTHERWISE.
(E)=EXISITNG

GENERAL NOTES

1. ALL TRAFFIC SIGNAL, HIGHWAY LIGHTING, SIGNING AND STRIPING SHALL CONFORM TO THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, STANDARD PLANS AND SPECIFICATIONS DATED 2018 EDITION, SANTA ANA STANDARD PLANS AND THE SPECIAL PROVISIONS FOR THE PROJECT.
2. ALL ABBREVIATIONS AND SYMBOLS USED ARE SHOWN ON CALTRANS STANDARD PLAN NO.'S A-10A, A-10B, ES-1A, ES-1B AND AS DEFINED ON THE PLAN.
3. UTILITIES SHOWN ON THESE PLANS ARE CORRECT AND ACCURATE TO THE EXTENT OF AVAILABLE RECORDS AND KNOWLEDGE. THE CONTRACTOR, HOWEVER, IS REQUIRED TO TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE OR INTERFERE WITH SUCH FACILITIES. CONTACT USA DIG ALERT AT 811AT LEAST 2 WORKING DAYS IN ADVANCE.
4. ALL NEW CONDUITS SHALL BE PVC SCHEDULE 80. ALL STUB OUT CONDUIT FOR LOOPS, SHALL BE 2". ALL CONDUITS FROM POLE TO ADJACENT PULL BOX SHALL BE PER CALTRANS STD. PLAN. ALL OTHER CONDUITS SHALL BE 3" MINIMUM UNLESS NOTED OTHERWISE. ALL FITTINGS INTO PULL BOX SHALL BE 45-DEGREE SWEEPS.
5. ALL SIGNAL CABLES SHALL BE RUN CONTINUOUSLY FROM TERMINAL BLOCK TO CABINET. INDIVIDUAL SIGNAL CONDUCTORS AND MULTIPLE SAFETY LIGHTING CONDUCTORS MAY BE SPLICED IN PULL BOXES. ALL CONDUCTORS, CABLES, LOOP WIRES AND LEAD- INS SHALL BE LABELED PER THE SPECIAL PROVISIONS.
6. ALL LOCATIONS OF DETECTOR LOOP, SIGNAL POLE AND CABINET REQUIRE ENGINEER'S APPROVAL PRIOR TO SAW CUTTING OR EXCAVATION.
7. DETECTOR LOOPS SHALL BE 6-FOOT DIAMETER, TYPE E PER CALTRANS STD. PLAN ES-5B. FRONT LOOP (CENTER OF LOOP) TO BE PLACED 4-FOOT BEHIND BACK OF CROSSWALK. LOOPS IN THE SAME LANE SHALL BE PLACED 16 FEET APART (CENTER TO CENTER). ALL LOOPS TO BE CENTERED IN THE TRAVEL LANE, EXCEPT WHERE CURB LANE IS WIDER THAN 10 FEET, PLACE LOOP'S CENTER AT 5.5 FEET FROM THE ADJACENT LEFT LANE LINE. ALL LOOPS MUST BE TESTED BEFORE FILLING SAW CUTS.
8. ALL PULL BOXES SHALL BE CONCRETE AND PLASTIC LINED, LID SHALL BE LIGHT WEIGHT AND LABELED PER CITY OF SANTA ANA STD. PLAN NO. 150. PULL BOX SHALL BE NUMBER 6, UNLESS NOTED OTHERWISE.
9. ALL NEW VEHICLE AND PEDESTRIAN HEADS SHALL BE OF LIGHT EMITTING DIODE (LED) TYPE PER THE SPECIAL PROVISIONS. ALL NEW VEHICLE HEADS SHALL BE 12" WITH BACKPLATE. MOUNT ALL VEHICLE AND PEDESTRIAN HEADS AWAY FROM THE TRAFFIC SIDE OF THE POLE WHERE POSSIBLE.
10. CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDELINE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND CABLES REQUIRED FOR THE INTENDED OPERATION.
11. UNLESS NOTED OTHERWISE, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIAL AND EQUIPMENT REQUIRED.
12. TEMPORARY OVERHEAD WIRING, INCLUDING SIGNAL INTERCONNECT IS REQUIRED TO MAINTAIN SIGNAL OPERATION DURING MODIFICATION OF EXISTING TRAFFIC SIGNAL SYSTEM PER THE SPECIAL PROVISIONS.
13. REMOVE SIGN AND POST, SANDBLAST LEGENDS AND CONFLICTING STRIPING AS SHOWN ON THE CHANNELIZATION PLAN AND SIGNAL PLAN MUST BE COORDINATED.
14. ALL STRIPING SHALL CONFORM TO THE CITY OF SANTA ANA STANDARD PLAN NO. 1125 (A THROUGH E). ALL ITEMS OR DETAILS NOT COVERED IN THE CITY STANDARD PLANS SHALL CONFORM TO THE APPLICABLE SECTIONS OF THE STATE OF CALIFORNIA STANDARD PLANS AND SPECIFICATIONS DATED 2018 EDITION.
15. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE THERMOPLASTIC. ALL CURB MARKINGS AND MEDIAN NOSE MARKINGS SHALL BE PAINT UNLESS NOTED OTHERWISE.
16. ALL NEW SIGN(S) MUST BE INSTALLED ON NEW 2"X2" PERFORATED AND GALVANIZED METAL POST(S) UNLESS NOTED OTHERWISE. ALL SALVAGED SIGN(S) SHALL BE DELIVERED TO THE CITY CORPORATE YARD. CONTACT CITY MAINTENANCE AT (714)647-3339 PRIOR TO DELIVERY.
17. ALL CONFLICTING STRIPING, PAVEMENT MARKINGS, AND RAISED PAVEMENT MARKERS SHALL BE REMOVED EVEN IF NOT SHOWN ON THE PLAN. REMOVAL OF STRIPING AND PAVEMENT MARKINGS SHALL BE DONE BY GRINDING. ALL DAMAGED PAVEMENT DUE TO REMOVAL SHALL BE REPAIRED AS NECESSARY TO MAINTAIN A SMOOTH AND UNIFORM SURFACE.



R73-2(CA)
(36" X 36")

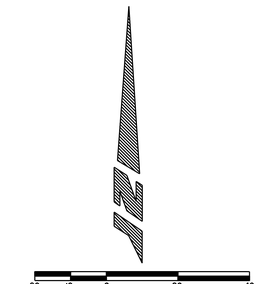
PHASE DIAGRAM

	GROUP A		GROUP B	
RING 1	NOT USED			
	Ø1	Ø2	Ø3	Ø4
RING 2	NOT USED			
	Ø5	Ø6	Ø7	Ø8

TYPICAL PHASE SEQUENCE

INSTALL THERMOPLASTIC CONTINENTAL CROSSWALK PER DETAIL "G".. WHITE UNLESS STATED OTHERWISE.

DETAIL G
N.T.S.



CONSTRUCTION NOTES

1. EXISTING TYPE 332 TRAFFIC SIGNAL CONTROLLER ASSEMBLY WITH TYPE IIB SERVICE CABINET AND 2070 CONTROLLER. INSTALL NEW COBALT RACKMOUNT CONTROLLER WITH LATEST EOS ECONOLITE FIRMWARE PER SPECIAL PROVISIONS, AND GTT OPTICOM EVP MODEL 764 PHASE SELECTOR.
2. FURNISH AND INSTALL NEW NO.6 OR NO.6E PULLBOX OR REPLACE EXISTING PULLBOX WITH NEW NO.6 OR NO.6E PULLBOX.
3. REMOVE AND DISCARD TRAFFIC SIGNAL POLE, VEHICLE HEAD(S), PED HEAD AND LUMINAIRE. REMOVE FOUNDATION COMPLETE.
6. FURNISH AND INSTALL NEW 2" CONDUIT. FURNISH AND INSTALL TRAFFIC SIGNAL AND DETECTOR LOOP CABLE, AS NEEDED.
7. INSTALL NEW TRAFFIC SIGNAL POLE IN EXISTING POLE LOCATION PER POLE SCHEDULE. CONTRACTOR SHALL TEMPORARILY MOVE EXISTING POLE OR PROVIDE APPROVED EQUIVALENT POLE TO A TEMPORARY LOCATION AND MAINTAIN IN OPERATION WITH OVERHEAD WIRING DURING CONSTRUCTION.
8. CONSTRUCT ADA COMPLIANT WHEEL CHAIR RAMP PER CITY OF SANTA ANA STANDARD PLAN.
9. REMOVE EXISTING DLC CALBES.
10. REMOVE EXISTING CONFLICTING STRIPING.
11. INSTALL THERMOPLASTIC CONTINENTAL CROSSWALK PER DETAIL "G", WHITE UNLESS STATED OTHERWISE.
12. FURNISH AND INSTALL 6' DIAMETER CIRCULAR LOOP DETECTOR. FIRST LOOP BEHIND LIMIT LINE SHALL BE TYPE "D" CIRCULAR LOOP IN VEHICLE LANE AND TYPE "D" IN BIKE LANE. ALL OTHER LOOPS SHALL BE TYPE "E" ROUND LOOP PER CALTRANS STD. PLAN ES-5B. INSTALL NEW 2" PVC STUB OUT IF NECESSARY. SEE GENERAL NOTE 7.
13. PROTECT IN PLACE.
15. INSTALL SIGN(S) ON MAST ARM.
AB. ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS.
RC. EQUIPMENT OR MATERIAL TO BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR.

811 Know what's below. Call before you dig.
Underground Service Alert of Southern California
TWO WORKING DAYS BEFORE YOU DIG
www.DigAlert.org

NOTICE TO CONTRACTOR

PURSUANT TO ASSEMBLY BILL 4216 NO EXCAVATION PERMIT IS VALID UNLESS THE CONTRACTOR CONTACTS AND OBTAINS A DIG ALERT TICKET NUMBER. CALL 811 AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING EXCAVATION.

FED. PROJ. NO.: HSIPL 5063 (190)

PROJECT NO. 18-6919: TRAFFIC SIGNAL MODIFICATION AT EUCLID ST AND 5TH ST- FEDERAL PROJECT NO: HSIPL 5063(190)

K:\#TRAFF\C#PROJECTS#5TH AT EUCLID - SIGNAL MODIFICATION-18-6919-HSIPL 5063(190)

FILE NO.: TF-06742

REVISIONS

NUMBER	DATE	INITIALS	DESCRIPTION	APPROVED	INSTALLED

REFERENCES

BENCHMARK NO.: XX-XXX-XX ELEV.: NNN.NN' NAVDYY

CONSTRUCTION COMPLETED: TURN - ON:

REGISTERED PROFESSIONAL ENGINEER ZDNEK KEKULA NO. C66219 EXP. 6-30-22 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF:	Zdenek Kekula PRINCIPAL CIVIL ENGINEER RCE NO.:66219	DATE 04/2022
REVIEWED FOR CONSTRUCTABILITY:	DESIGNED: RC DRAWN: RC CHECKED: ZK	04/2022
		04/2022
	PRINCIPAL CIVIL ENGINEER RCE NO.:62968	
RECOMMENDED FOR CONSTRUCTION:	Zdenek Kekula PRINCIPAL CIVIL ENGINEER RCE NO.:66219	10/2021

XA-01

TRAFFIC SIGNAL MODIFICATION

EUCLID STREET AT 5TH STREET

PUBLIC WORKS AGENCY
CITY OF SANTA ANA

SHEET 3 OF 3