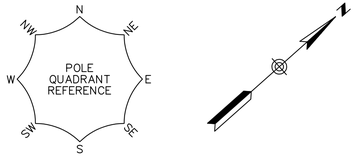
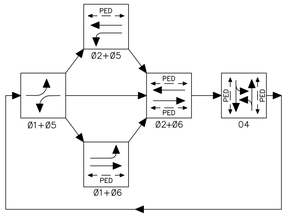
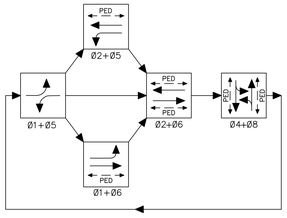
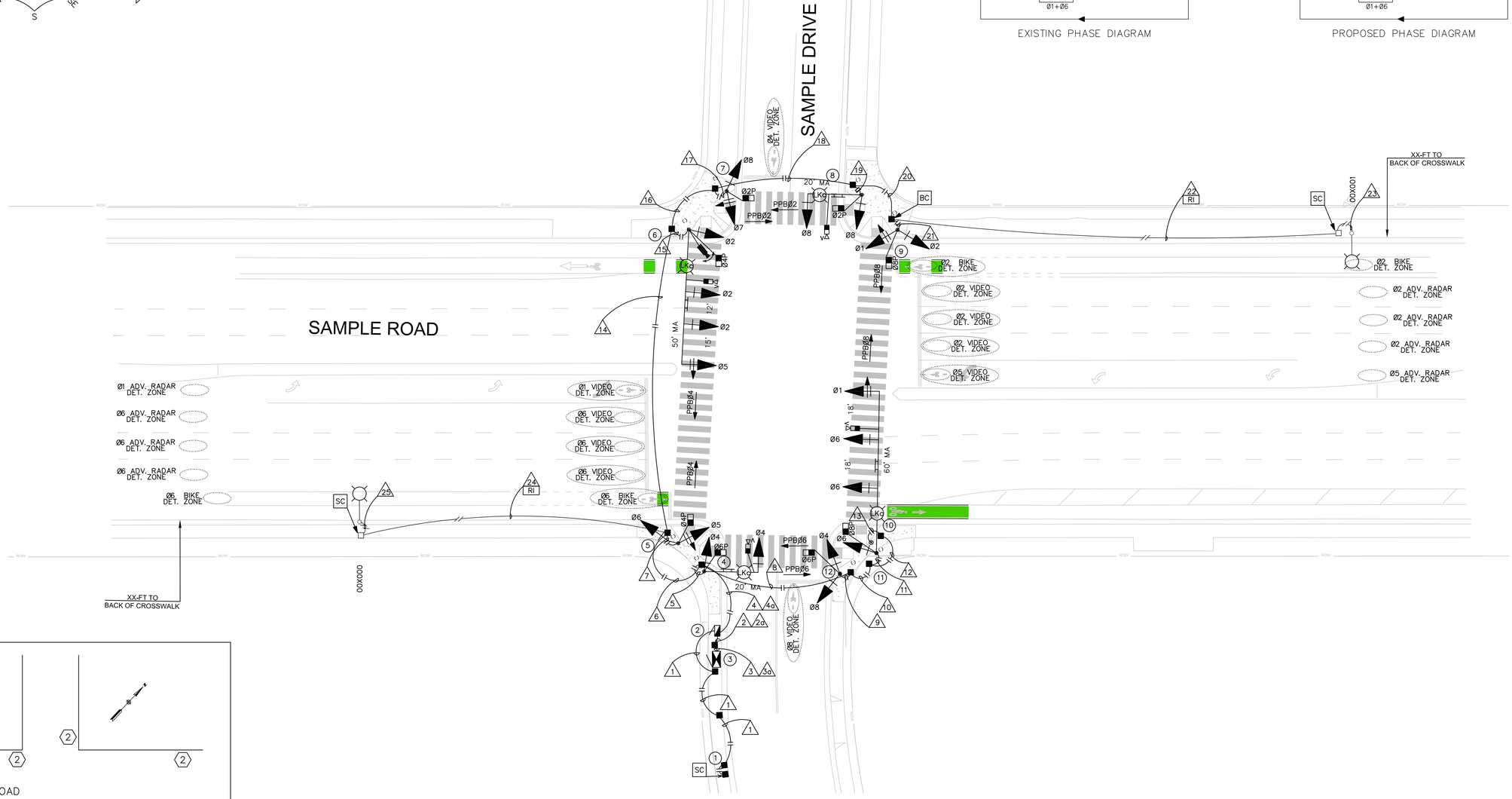


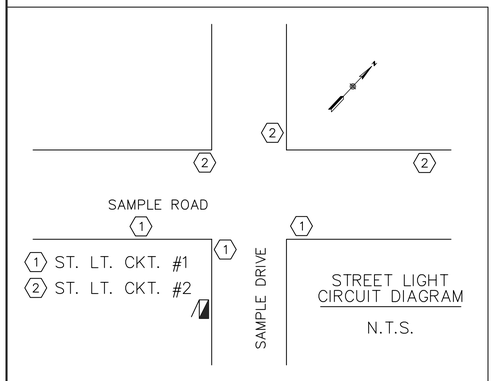


EXISTING PHASE DIAGRAM



PROPOSED PHASE DIAGRAM





811 CALL 811
AT LEAST TWO DAYS BEFORE YOU DIG
Know what's below. Call before you dig.

20' 0' 20' 40'
1 INCH = 20 FEET

CONSULTANT'S INFORMATION

Date:	January 1, 2025
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File:	

		DESIGN BY	DESIGN DATE	CITY APPR.	APPR. DATE
◇	REVISIONS				

PLAN
FOR THE IMPROVEMENT OF
TITLE OF PROJECT
SHEET DESCRIPTION
CSJ SHOP NO. XXXX
SAN JOSE CALIFORNIA

PERMIT # 25-XXXXXX
PROJECT # 3-XXXXX
PROJECT INSPECTOR: NAME HERE
VOICE MAIL: (408) 975-XXXX

DOT – TRAFFIC SIGNALS/SIGNAL OPERATIONS — NAME — DATE
DOT – DEVELOPMENT REVIEW — NAME — DATE
ADDITIONAL APPROVAL — NAME — DATE
PROJECT ENGINEER — NAME — DATE
DPW – ELECTRICAL — NAME — DATE
DOT – INTELLIGENT TRANSPORTATION SYSTEMS — NAME — DATE

DEPARTMENT OF PUBLIC WORKS
SAN JOSE, CALIFORNIA

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

APPROVED BY MATTHEW LOESCH
DIRECTOR OF PUBLIC WORKS

SHEET XX OF XX

REV. DATE MARCH 2025

1. CONTRACTOR SHALL FURNISH FOUR (4) ITERIS VANTAGE VECTOR HYBRID UNITS WITH ONE (1) VANTAGE NEXT CCU OR APPROVED EQUAL. THE ENTIRE DETECTION SYSTEM SHALL CONSIST OF A SHELF–MOUNTED CENTRAL MANAGEMENT DEVICE, DETECTION SENSORS, VIDEO MONITOR, AND ALL ASSOCIATED CONDUCTORS AND CABLING. EQUIPMENT SHALL BE AS SPECIFIED IN SECTION 86–5.01E "MULTI–SENSOR DETECTION SYSTEM" OF THE PROJECT SPECIFICATIONS.

   THE SENSOR SHALL BE MOUNTED ON THE SIGNAL MAST ARMS AS SHOWN ON THE PROJECT PLANS. IF THERE IS A LEFT TURN LANE, MOUNT THE SENSOR BETWEEN THE LEFT TURN LANE AND THRU LANE OR PER MANUFACTURER'S SPECIFICATIONS.

   THE SHIELDED CAT6 CABLE SHALL BE CONTINUOUS WITH NO SPLICES FROM THE SENSOR TO THE TRAFFIC SIGNAL CABINET. CONTRACTOR SHALL PROVIDE 10 FEET OF SLACK AT THE PULLBOX ADJACENT TO THE POLE THAT THE SENSORS ARE MOUNTED ON.

   A REPRESENTATIVE THAT IS CERTIFIED BY THE MULTI–SENSOR DETECTION SYSTEM SHALL BE ON THE JOB–SITE TO SUPERVISE THE INSTALLATION AND CONFIGURE THE DETECTION SYSTEM TO MEET THE REQUIREMENTS OUTLINED IN THE PROJECT PLANS.

   THE DETECTION SENSOR SHALL BE INSTALLED BY FACTORY–CERTIFIED INSTALLERS AS RECOMMENDED BY THE SUPPLIER AND DOCUMENTED IN INSTALLATION MATERIALS PROVIDED BY THE SUPPLIER. PROOF OF FACTORY INSTALLATION SHALL BE PROVIDED.

2. CITY STAFF SHALL DISCONNECT EXISTING SIC CABLES FROM EXISTING CABINET AND ALSO PULL BACK.

   WESTBOUND SIC WILL BE PULLED BACK TO NEARBY BOX AT LOCATION 15. EASTBOUND SIC BETWEEN SAMPLE DR. AND SAMPLE WAY ALONG SAMPLE RD. WILL BE REMOVED.

   CITY STAFF WILL ALSO INSTALL NEW CONTRACTOR–FURNISHED INNERDUCT IN CONDUIT RUN 27 OVER EXISTING FIBER. CONTRACTORS SHALL INSTALL NEW SIC IN NEW INNERDUCT BETWEEN SAMPLE DR AND SAMPLE RD USING UNUSED CELL IN CONDUIT RUN 22.

   CITY STAFF SHALL COMPLETE REMAINING SIC PULLS AND TERMINATIONS INSIDE CABINETS NOTE 2 ON SHEET 48

   FOR MORE DETAILS ON INSTALLATION OF NEW SIC BETWEEN SAMPLE DR. AND SAMPLE RD. CONDUIT RUNS ARE FOR THIS LOCATION ONLY. SEE SAMPLE RD PLANS FOR CONTINUATION OF CONDUIT ROUTES.

   CONTRACTORS TO SCHEDULE AND COORDINATE WITH CITY STAFF AT DOT.ITS.SUPPORT@SANJOSECA.GOV FOR DISCONNECTION AND PULLING BEFORE PERFORMING NEW SIC INSTALLATION WITH A MINIMUM OF FIVE (5) BUSINESS DAYS NOTICE PRIOR TO INSTALLATION. ALL SIC WORK LISTED ABOVE SHALL BE COMPLETED WITHIN 5 BUSINESS DAYS.

3. CONTRACTOR SHALL MAINTAIN EXISTING FIBER OPTIC CABLES IN CONDUIT RUNS 21 AND 22. FIBER OPTIC CABLE IS CONTINUOUS FROM HIGHWAY 101 TO SAMPLE EXPRESSWAY AND CANNOT BE SPLICED. IF FIBER OPTIC CABLE IS DAMAGED, THE ENTIRE RUN MUST BE REPLACED.

4. THE TRAFFIC SURVEILLANCE CAMERA SYSTEM SHALL BE MOUNTED APPROXIMATELY SIX INCHES BELOW THE TOP OF THE POLE SHAFT IN THE SE QUADRANT AT LOCATION 8.

   CONTRACTOR SHALL PROVIDE A MINIMUM OF 20 LINEAL FEET OF EACH OF THE DATA/CONTROL AND POWER CABLES, SEALED, LABELED AND COILED IN THE TRAFFIC SIGNAL CONTROLLER CABINET.

5. CONTRACTOR SHALL INSTALL TWO–INCH WIDE YELLOW RETROREFLECTIVE TAPE ON THE BORDER OF ALL VEHICLE SIGNAL HEAD BACKPLATES.

6. CONTRACTOR SHALL PULL AND LEAVE SERVICE LOOPS OF CAT6 COMMUNICATION CABLE AND SEGMENT CONTROLLER POWER CABLE TO THE TOP OF THE STREETLIGHT POLE AT LOCATION 13. CONTRACTOR SHALL COIL 20' OF THE CAT6 COMMUNICATION CABLE IN THE TRAFFIC SIGNAL CONTROLLER CABINET AT LOCATION 3 AND COIL 20' OF SLACK OF SEGMENT CONTROLLER POWER CABLE IN THE SERVICE CABINET AT LOCATION 2. THE ENDS OF THE CONDUCTORS SHALL BE INSULATED AS IF FOR A SPLICE TO PROTECT THE ENDS FROM DAMAGE AND UNINTENTIONAL ENERGIZATION. STREET LIGHT COMMUNICATION CABLES SHALL BE TERMINATED IN SERVICE AND CONTROLLER CABINET BY CSJ FORCES.

7. CONTRACTOR SHALL COORDINATE WITH SMARTWAVE (SANJOSESUPPORT@SMARTWAVE.US) TO RELOCATE WIFI EQUIPMENT FROM SALVAGED POLE TO NEW POLE AT THIS LOCATION. CONTRACTOR SHALL PROVIDE CAT6 CONDUCTORS FROM TOP OF POLE TO NEW CONTROLLER CABINET, WITH ENOUGH SLACK TO CONNECT TO WIFI EQUIPMENT ON LUMINAIRE MAST ARM AND CONTROLLER CABINET. RELOCATION WILL NEED TO OCCUR ON THE DAY OF THE ACTIVATION TO MINIMIZE DOWNTIME OF WIFI EQUIPMENT.

8. SEE NOTE 5 ON SHEET 42 FOR CUT AND REMOVAL OF 24SM CABLE. CONTRACTOR SHALL THEN TAKE EXISTING PRE–TERMINATED 24SM CABLE AND CONNECT FROM NEW CABINET AT LOCATION 3, PULL THROUGH CONDUIT RUN 26 AND 27. CONTRACTOR SHALL SPLICE 24SM CABLE TO EXISTING 144SM CABLE AT LOCATION 15. SEE FIBER OPTIC SPLICE DETAIL B ON SHEET 43.

   CONTRACTOR TO SCHEDULE AND COORDINATE FIBER OPTIC INSTALLATION, DISCONNECT AND RECONNECT WITH TRAFFIC SIGNAL CABINET INSTALLATION SO WIFI EQUIPMENT WILL NOT BE DOWN MORE THAN TWENTY–FOUR (24) HOURS.

CONDUIT AND CONDUCTOR SCHEDULE

CIRCUIT DESCRIPTION		1	2	2a	3	3a	4	4a	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
CONDUIT RUN IDENTIFIER		1	2	2a	3	3a	4	4a	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
CONDUIT SIZE		2½"	2½"	2½"	3"	3"	3"	3"	2½"	3"	2"	3"	2"	3"	2½"	3"	2"	3"	2½"	3"	2"	3"	2"	3"	2½"	3"	2"	3"	2"	3"	2"																	
CONDUIT STATUS		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C																	
CONDUCTOR SIZE AND QUANTITY OR CABLE TYPE																																													
SERVICE	#3/0	3																																												
CONTROLLER FEEDER	#6		1																																										
CONTROLLER NEUTRAL	#6		1																																										
ST. LT. CKT. #1	#8		2	2			2	2	2	2		2		2	2													2	2															
ST. LT. CKT. #2	#8		2				2			2								2	2	2		2	2	2		2	2																		
VEH. Ø1	#14				3	3	3	3		3		3		3	3			3		3		3		3	3																			
VEH. Ø2	#14				3		3			3								3	9	3		3		3	3																			
VEH. Ø4	#14				3		3		6		3	3																															
VEH. Ø5	#14				3		3			3	3							3	3																							
VEH. Ø6	#14				3	3	3	3		3	3	3		3	9																											
VEH. Ø8	#14				3	3	3	3		3		3	3					3		3	3	3	6																			
PED. Ø2	#14				2		2			2								2		2	2	2	2																			
PED. Ø4	#14				2		2			2	2							2	2																							
PED. Ø6	#14				2	2	2	2	2			2	2																													
PED. Ø8	#14				2	2	2	2		2		2		2	2			2		2		2		2	2																	
NEUTRAL	#14								3		3		3		5				5		3		3		3																
NEUTRAL	#10				1	1	1	1		1		1		1		1		1		1		1		1		1		1														
PPB Ø2	#14				2		2			2								2		2	1	1	1																			
PPB Ø4	#14				2		2			2	1							1	1																							
PPB Ø6	#14				1	1	1	1	1			1	1																													
PPB Ø8	#14				1	1	1	1		1		1		1		1	1	1		1		1		1	1																	
PPB COMMON	#14				6	2	6	2	1	5	1	2	1	1		1	1	4	1	3	1	2	1	1	1																	
Ø8 APS CABLE															1	1	1																									
SPARES	#14				3	3	3	3		3		3		3		3		3		3		3		3		3		3														
EQUIPMENT GROUND	#8		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1														
VIDEO Ø1 + Ø6 DET.	CABLE					1		1				1		1	1																											
VIDEO Ø2 + Ø5 DET.	CABLE				1		1			1								1	1																							
VIDEO Ø4 DET.	CABLE				1		1		1																																	
VIDEO Ø8 DET.	CABLE				1		1			1								1		1		1	1																			
CCTV DATA & POWER	CAT6				1		1			1								1	1																							
INNERDUCT					1	1	1	1		1		1		1		1		1		1		1		1		1		1														

STREETLIGHT LUMINAIRE SCHEDULE

FIXTURE	DESCRIPTION	WATTAGE
Lkc	LEOTEK ECOBRA CAT#EC4–15M2–MV–NW–3–GY–700–PCR7CR–WL OR EQUAL	124

LED LUMINAIRE INSTALLATION NOTES

LED LUMINAIRES SHALL BE FURNISHED WITH AN ANSI 7–WIRE PHOTOCONTROL RECEPTACLE AND SHALL HAVE A NEMA TWISTLOCK OWLET LUCO–P7 CONTROL MODULE.

EACH LED LUMINAIRE SHALL BE FURNISHED WITH A FACTORY INSTALLED FIXTURE WATTAGE LABEL ON THE HOUSING SUCH THAT IT IS LEGIBLE FROM THE GROUND AFTER INSTALLATION. CONTRACTOR SHALL PROVIDE WATTAGE NEXT TO THE CORRESPONDING STREETLIGHT SYMBOL ON THE AS–BUILT IMPROVEMENT PLAN.

EACH OWLET LUCO MODULE SHALL BE SHIPPED WITH A MINIMUM OF THREE (3) UNIQUE NETWORK ID STICKERS. ONE (1) NETWORK ID STICKER SHALL BE AFFIXED TO THE LUMINAIRE CONTROLLER. ONCE THE LUMINAIRE IS INSTALLED, CONTRACTOR SHALL (2) AFFIX ONE OF THE ID STICKERS NEXT TO THE CORRESPONDING STREETLIGHT SYMBOL ON THE AS–BUILT IMPROVEMENT PLAN, AND (3) AFFIX ANOTHER STICKER TO A FLAG TIE MARKER, AS SPECIFIED BELOW. TIE THE MARKER TO CONDUCTORS INSIDE THE HANDHOLE OF THE STREETLIGHT/ TRAFFIC SIGNAL POLE.

THE FLAG TIE MARKER SHALL BE 6 INCHES WITH A 1⅛ INCH X ⅝INCH FLAG, GREEN COLOR. NELCO PRODUCTS PART #N–6C OR EQUAL.

SERVICE CABINET EQUIPMENT SCHEDULE

☒ NEW ☐ EXISTING ☐ TYPE III ☒ TYPE IIIM

ITEM	QUAN–TITY	CURRENT RATING	POLES	CIRCUIT VOLTAGE	METERING STATUS
MAIN CIRCUIT BREAKER	1	100A	2	240V	METERED
MAIN CIRCUIT BREAKER	1	100A	2	240V	UNMETERED
TRAFFIC SIGNAL CIRCUIT BREAKER	1	60A	1	120V	METERED
STREETLIGHT CONTROL CIRCUIT BREAKER	1	15A	1	120V	UNMETERED
STREETLIGHT CIRCUIT BREAKER	3	30A	2	240V	UNMETERED
IRRIGATION CONTROL CIRCUIT BREAKER	1	10A	1	120V	METERED
SPARE CIRCUIT BREAKER	1	20A	2	120V	METERED
STREETLIGHT CIRCUIT BREAKER	1	30A	1	120V	UNMETERED
METER SOCKET	1	100A			

POLE AND EQUIPMENT SCHEDULE

LOCATION	POLE TYPE	POLE STATUS	FOUNDATION TYPE	FOUNDATION STATUS	POLE MOUNTED VEHICLE SIGNAL(S) QTY.	POLE MOUNTED VEHICLE SIGNAL(S) MNTG. TYPE	POLE MOUNTED VEHICLE SIGNAL(S) QUADRANT	POLE MOUNTED VEHICLE SIGNAL(S) LENS DIA.	POLE MOUNTED VEHICLE SIGNAL(S) STATUS	SIGNAL MAST ARM LENGTH	SIGNAL MAST ARM STATUS	MAST ARM VEHICLE SIGNAL(S) QTY.	MAST ARM VEHICLE SIGNAL(S) MNTG. TYPE	MAST ARM VEHICLE SIGNAL(S) STATUS	PEDESTRIAN SIGNAL(S) QTY.	PEDESTRIAN SIGNAL(S) MNTG. TYPE	PEDESTRIAN SIGNAL(S) QUADRANT	PEDESTRIAN SIGNAL(S) STATUS	PEDESTRIAN PUSH BUTTON(S) QTY.	PEDESTRIAN PUSH BUTTON(S) TYPE	PEDESTRIAN PUSH BUTTON(S) QUADRANT	PEDESTRIAN PUSH BUTTON(S) STATUS	LUMINAIRE ARM LENGTH	LUMINAIRE ARM STATUS	LUMINAIRE TYPE	LUMINAIRE STATUS	PULL BOX(ES) SIZE NO.	PULL BOX(ES) STATUS	VEHICLE DETECTOR(S) TYPE	VEHICLE DETECTOR(S) STATUS	CONTROLLER CABINET TYPE	CONTROLLER CABINET STATUS	SERVICE CABINET TYPE	SERVICE CABINET STATUS	STREET NAME SIGN TYPE	STREET NAME SIGN STATUS	REMARKS	LOCATION
1																												6	E F											*PG&E TYPE 2 BOX	1
2			IIIM	C																								*6	C					IIIM	C				2
3			P	C																								7	C			P	C						3
4	17–3–100	C	CIDH	C	1	SV–1	NE	12"	C	20'	C	1	MAS	C	1	SP–1	N	C	1	APS	N	C	12'	C	LED	C	6	C	VIDEO	C					2–SIDE	C		4
5	1B	C	I	C	2	TV–1 TV–1	NE NW	12"	C C						1	SP–1	E	C	1	APS	E	C					6	C								5
6	29–5–100	C	CIDH	C	1	SV–1	SE	12"	C	50'	C	2	MAS	C	1	SP–1	E	C	1	APS	E	C	12'	C	LED	C	6	C	VIDEO	C					2–SIDE	C	SEE NOTE 4	6
7	IB	C	I	C	1	TV–1 TV–1	NE SE	12"	C C						1	SP–1	S	C	1	APS	S	C					6	C								7
8	17–3–100	C	CIDH	C	1	SV–1	SW	12"	C	20'	C	1	MAS	C	1	SP–1	S	C	1	APS	S	C	12'	C	LED	C	6	C	VIDEO	C					2–SIDE	C		8
9	1B	C	I	C	1	TV–1 TV–1	SE SW	12"	C C						1	SP–1	W	C	1	APS	W	C					6	C								9
10	PPBPOST	C	PPB POST	C															1	APS	W	C					6	C								10
11	60–5–100	C	CIDH	C	1	SV–1	NW	12"	C	60'	C	2	MAS	C	1	SP–1	W	C	1				12'	C	LED	C	6	C	VIDEO	C					2–SIDE	C		11
12	1B	C	1	C	1	TV–1 TV–1	SW NW	12"	C C						1	SP–1	N	C	1	APS	N	C					6	C								12
13	10B	C	2	C																			12'	C	LED	C	5	C								13
14	10B	C	2	C																			12'	C	LED	C	5	C								14
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DEPARTMENT OF PUBLIC WORKS
SAN JOSE, CALIFORNIA

CITY OF SAN JOSE CAPITAL OF SILICON VALLEY

APPROVED BY MATTHEW LOESCH
DIRECTOR OF PUBLIC WORKS

SHEET XX OF XX

REV. DATE MARCH 2025