

AGENDA REPORT

Traffic & Public Safety Commission

MEETING DATE: November 12, 2020

PREPARED BY: Abraham Bandegan

DEPARTMENT DIRECTOR: Lillian Doherty

DEPARTMENT: Development Services

CITY MANAGER: Pamela Antil

SUBJECT:

Approval of the Traffic Signal Design at the Intersection of La Costa Avenue and N Vulcan Avenue

RECOMMENDED ACTION:

Staff recommends the approval of the traffic signal design and recommends the traffic signal to the City Council for final approval

BACKGROUND:

The City has received several requests from the residents to evaluate the safety and mobility at the intersection of La Costa Avenue and N Vulcan Avenue. The intersection is currently a One Way Stop Control with N Vulcan Avenue stopped at the intersection.

Staff conducted a signal warrant analysis and the report and results of the analysis were presented to the Traffic and Public Safety Commission on March 9, 2020. Commission supported the findings and directed staff to begin designing the traffic signal.

ANALYSIS:

The traffic signal analysis at the intersection of La Costa Ave and N Vulcan Ave showed that multiple signal warrants were met at the location. The City asked its Consultant to finalize the design of the traffic signal. The new proposed traffic signal will include left turn pockets for W/B La Costa Ave, bike lanes and a proposed walkway along La Costa Ave. The proposed design for the traffic signal is shown in **Attachment 1**.

Upon approval by Traffic and Public Safety Commission, the new signal and the required funding will need to be approved by the City Council.

ENVIRONMENTAL CONSIDERATIONS:

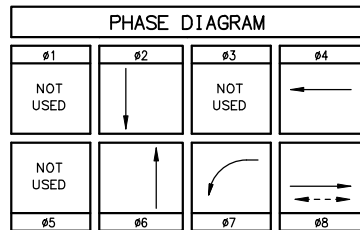
The proposed intersection improvements have been evaluated with the warrant analysis report. The modification and the addition of the new traffic signal will improve mobility and Level of Service (LOS) and will not have a significant environmental impact.

ATTACHMENTS:

1 – Traffic Signal Design at the intersection of La Costa Ave and N Vulcan Ave

* CONDUCTOR SCHEDULE					
AWG SIZE OR CABLE TYPE	POLE OR CIRCUIT	CONDUIT RUNS			
		1	2	3	4
3 CSC	POLE - A #2, #7, #8P, #8PPB			1	1
	POLE - B #4, #6, #7		1		1
	POLE - C #6		1		1
12 CSC	POLE - D #2, #8, #8P, #8PPB		1	1	1
			1	1	1
			1	1	1
TOTAL 3 CSC / 12 CSC		1	2	2	2
NO. 6	SIGNAL SERVICE		2	2	2
NO. 8	GROUND	1	1	1	1
NO. 10	SAFETY LIGHTING	2	2	2	2
NO. 12	11SNS	2	2	2	2
TYPE "B" DLC	#4	3	3	3	3
	#6		2	2	2
	#7	1	1	1	1
	#8			3	3
TOTAL DLC		4	4	9	9
EMERGENCY VEHICLE DETECTOR CABLE		1	2	1	3
WIRELESS RADIO (CATSE)				1	1
CONDUIT SIZE (INCHES)		3"	3"	3"	2-3"
CONDUIT FILL (%)		14	24	8	23

DETECTOR ASSIGNMENT			
DETECTOR	PHASE	SLOT	FIELD TERMINAL
1	8 ADV		
2	8 BK		
3	8		
4	4 ADV		
5	4 BK		
6	4		
7	7		
8	6		
9	6		

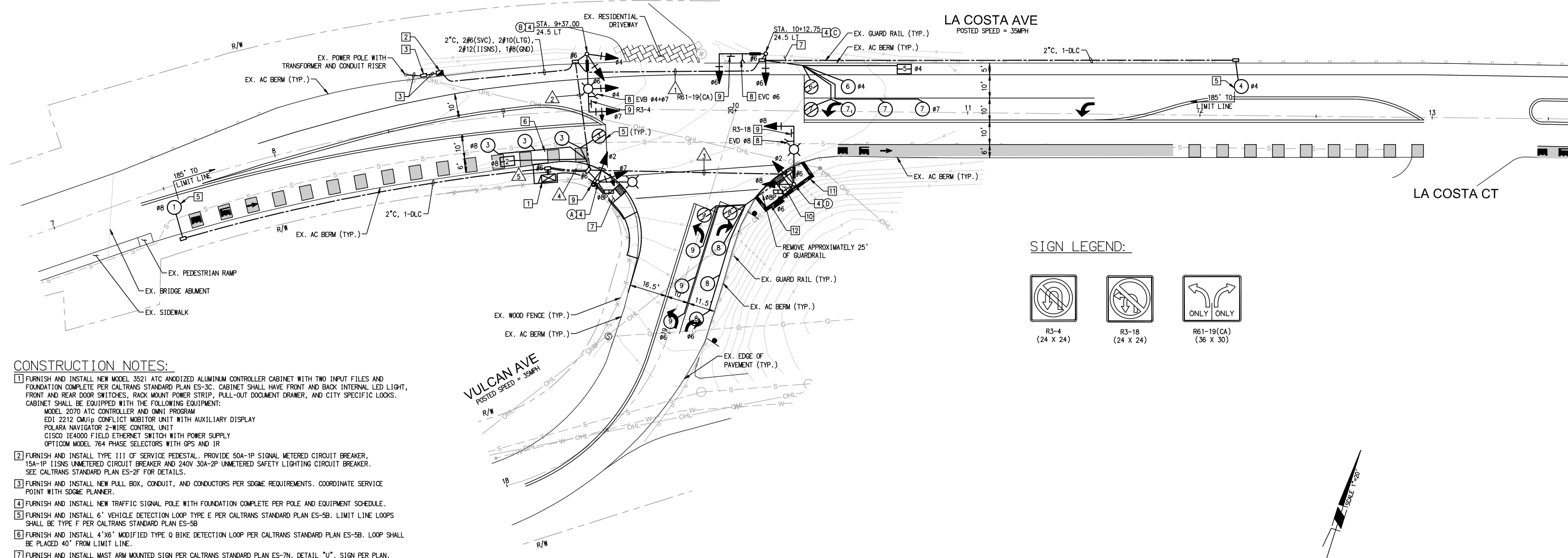
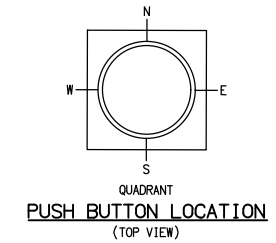
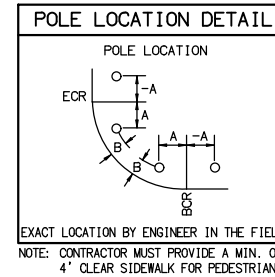


LA COSTA AVE POSTED SPEED LIMIT 35 MPH
VULCAN AVE POSTED SPEED LIMIT 35 MPH

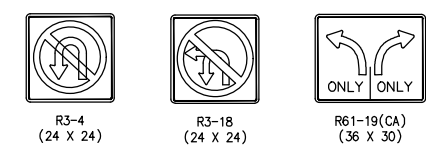
* POLE AND EQUIPMENT SCHEDULE															
No.	TYPE	STANDARD			LED LUMINAIRE	VEHICLE SIG MTG		PED SIG	PPB			POLE LOCATION		SIS	REMARKS
		HEIGHT	SIG. M.A.	LUM. M.A.		MAST ARM	POLE		MTG	PHASE	QUAD	A	B		
(A)	15TS	30'	-	15'	100W	-	SV-2-T	SP-1-T	#8	N	16'	5'	-	-	
(B)	19-4-100	30'	25'	15'	100W	2-MAS	SV-2-T	-	-	-	SEE PLAN		Vulcan Ave	-	
(C)	16-3-100	18'-6"	20'	-	-	1-MAS	SV-1-T	-	-	-	SEE PLAN		La Costa Ave	-	
(D)	17-3-100	30'	25'	15'	100W	1-MAS	SV-2-T	SP-1-T	#8	N	8'	7'	Vulcan Ave	-	

* ALL EQUIPMENT IS NEW

NOTE: CONSTRUCT POLE STANDARDS TO CALTRANS 2018 STANDARDS. POTHOLE ALL POLE LOCATIONS PRIOR TO ORDERING POLES. CONTRACTOR SHALL SUBMIT MATERIALS CUT SHEETS PRIOR TO ORDERING OF MATERIALS.

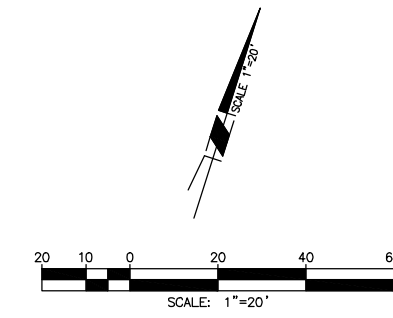


SIGN LEGEND:



CONSTRUCTION NOTES:

- FURNISH AND INSTALL NEW MODEL 3521 ATC ANODIZED ALUMINUM CONTROLLER CABINET WITH TWO INPUT FILES AND FOUNDATION COMPLETE PER CALTRANS STANDARD PLAN ES-3C. CABINET SHALL HAVE FRONT AND BACK INTERNAL LED LIGHT, FRONT AND REAR DOOR SWITCHES, RACK MOUNT POWER STRIP, PULL-OUT DOCUMENT DRAWER, AND CITY SPECIFIC LOCKS. CABINET SHALL BE EQUIPPED WITH THE FOLLOWING EQUIPMENT:
MODEL 2070 ATC CONTROLLER AND OMNI PROGRAM
EDI 2212 MULTI-CONFLICT MONITOR UNIT WITH AUXILIARY DISPLAY
POLARA NAVIGATOR 2-WIRE CONTROL UNIT
CISCO IE4000 FIELD ETHERNET SWITCH WITH POWER SUPPLY
OPTICOM MODEL 764 PHASE SELECTORS WITH GPS AND IR
- FURNISH AND INSTALL TYPE 111 OF SERVICE PEDESTAL. PROVIDE 50A-1P SIGNAL METERED CIRCUIT BREAKER, 15A-1P 11SNS UNMETERED CIRCUIT BREAKER AND 240V 30A-2P UNMETERED SAFETY LIGHTING CIRCUIT BREAKER. SEE CALTRANS STANDARD PLAN ES-2F FOR DETAILS.
- FURNISH AND INSTALL NEW PULL BOX, CONDUIT, AND CONDUCTORS PER SDG&E REQUIREMENTS. COORDINATE SERVICE POINT WITH SDG&E PLANNER.
- FURNISH AND INSTALL NEW TRAFFIC SIGNAL POLE WITH FOUNDATION COMPLETE PER POLE AND EQUIPMENT SCHEDULE.
- FURNISH AND INSTALL 6' VEHICLE DETECTION LOOP TYPE E PER CALTRANS STANDARD PLAN ES-5B. LIMIT LINE LOOPS SHALL BE TYPE F PER CALTRANS STANDARD PLAN ES-5B.
- FURNISH AND INSTALL 4'x6' MODIFIED TYPE Q BIKE DETECTION LOOP PER CALTRANS STANDARD PLAN ES-5B. LOOP SHALL BE PLACED 40' FROM LIMIT LINE.
- FURNISH AND INSTALL MAST ARM MOUNTED SIGN PER CALTRANS STANDARD PLAN ES-7N, DETAIL "U". SIGN PER PLAN.
- FURNISH AND INSTALL EVC DETECTOR WITH MOUNTING AND CABLING.
- FURNISH AND INSTALL ENCOM WIRELESS RADIO FOR COMMUNICATION.
- CONSTRUCT CURB RAMP TYPE C PER SDRSD G-29 WITH TRUNCATED DOMES PER SDRSD G-30.
- CONSTRUCT CMU RETAINING WALL PER SDRSD XX.
- FURNISH AND INSTALL HAND RAIL PER CALTRANS STANDARD PLAN XX.

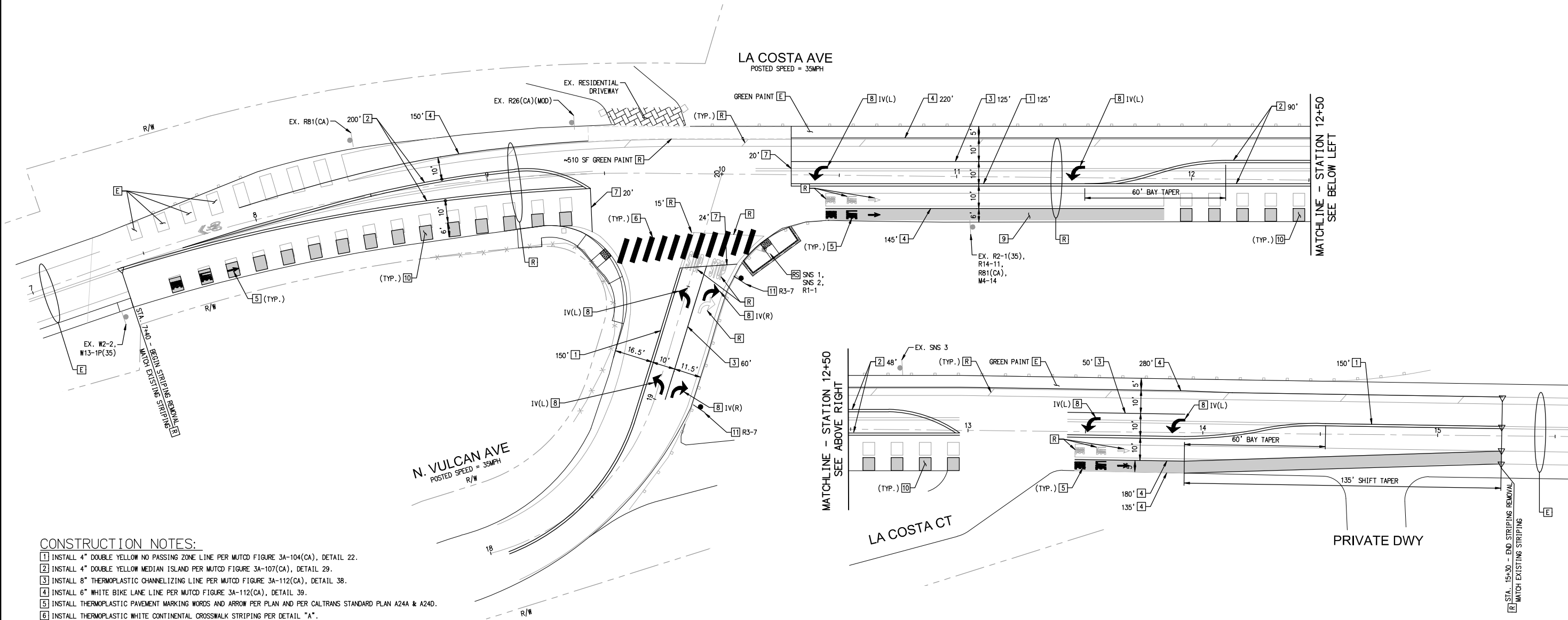


Underground Service Alert
Dig Alert
CALL BEFORE YOU DIG
CALL TOLL FREE
811

Nov 05, 2020 - 2:59pm R:\Shared With MA_STC Data\Projects\Encinitas\170525_Ar-Needed Civil_Engineering\CADD\DWG\0625.0020_Vulcan-La Costa\07_Engineering\CADD\DWG\0625.0020_DLV_04_15.dwg

REVISIONS	APPROVED	DATE	REFERENCES	DATE	BENCHMARK	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY	APPROVALS	CITY OF ENCINITAS ENGINEERING DEPARTMENT	DRAWING NO.	
						HORIZONTAL N/A VERTICAL N/A	NT	AA	NT	RECOMMENDED BY: _____ DATE: _____ R.C.E. NO. 74667 NICHOLAS M. MINICILLI EXP. 12-31-2021	APPROVED BY: _____ DATE: _____ R.C.E. NO.:	PUBLIC IMPROVEMENT PLANS FOR: LA COSTA AVENUE AND N. VULCAN AVENUE TRAFFIC SIGNAL INSTALLATION	XX-XXX SHEET 4 OF 4

Nov 05, 2020 - 2:59pm R:\Shared With Me\STC Data\Projects\Encinitas\170525_ As-Needed Civil Engineering\0525.0020_Vulcan-La Costa\07_Engineering\CADD\07A\0525.0020_DLV_03_SS.dwg
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CONSTRUCTION NOTES:

- [1] INSTALL 4" DOUBLE YELLOW NO PASSING ZONE LINE PER MUTCD FIGURE 3A-104(CA), DETAIL 22.
- [2] INSTALL 4" DOUBLE YELLOW MEDIAN ISLAND PER MUTCD FIGURE 3A-107(CA), DETAIL 29.
- [3] INSTALL 8" THERMOPLASTIC CHANNELIZING LINE PER MUTCD FIGURE 3A-112(CA), DETAIL 38.
- [4] INSTALL 6" WHITE BIKE LANE LINE PER MUTCD FIGURE 3A-112(CA), DETAIL 39.
- [5] INSTALL THERMOPLASTIC PAVEMENT MARKING WORDS AND ARROW PER PLAN AND PER CALTRANS STANDARD PLAN A24A & A24D.
- [6] INSTALL THERMOPLASTIC WHITE CONTINENTAL CROSSWALK STRIPING PER DETAIL "A".
- [7] INSTALL 12" THERMOPLASTIC SOLID WHITE LIMIT LINE PER CALTRANS STANDARD PLAN A24G.
- [8] INSTALL THERMOPLASTIC PAVEMENT MARKING ARROW PER CALTRANS STANDARD PLAN A24A, ARROW PER PLAN.
- [9] PAINT AREA GREEN ENNIS-FLINT 985206 GREEN STANDARD FAST DRY WATERBOURNE TRAFFIC PAINT WITH REFLECTIVE GLASS BEADS.
- [10] INSTALL CONFLICT ZONE PAINT WITH 6" DASHED WHITE LINE PER CALTRANS STANDARD PLAN A20D, DETAIL 39 AND GREEN PAINT. SEE DETAIL "B".
- [11] FURNISH AND INSTALL SIGN AND POST PER PLAN. BOTTOM OF SIGN SHALL BE A MINIMUM OF 7' ABOVE FINISHED SURFACE.
- [E] EXISTING STRIPING TO REMAIN.
- [R] REMOVE EXISTING CONFLICTING STRIPING.

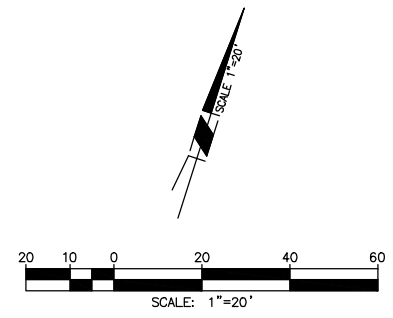
SIGN LEGEND:

EXISTING:

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PROPOSED:

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Underground Service Alert
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CALL BEFORE YOU DIG
CALL TOLL FREE
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REVISIONS	APPROVED	DATE	REFERENCES	DATE	BENCHMARK	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY	APPROVALS	CITY OF ENCINITAS ENGINEERING DEPARTMENT	DRAWING NO.
						HORIZONTAL 1"=30' VERTICAL N/A	PLANS PREPARED UNDER SUPERVISION OF	RECOMMENDED	APPROVED	PUBLIC IMPROVEMENT PLANS FOR: LA COSTA AVENUE AND N. VULCAN AVENUE TRAFFIC SIGNAL INSTALLATION SIGNING & STRIPING	XX-XXX	
							5865 AVENIDA ENCINAS, #142B CARLSBAD, CA 92008 PH: 760-602-4290 WWW.STCTRAFFIC.COM	BY: _____ DATE: _____ R.C.E. NO. 74667	BY: _____ DATE: _____ R.C.E. NO. _____		SHEET 3 OF 4	